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Revenue recognition under IFRS 15

A critical evaluation of predefined purposes and implications for improvement

Sascha Haggenmüller

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Abstract

This study investigates problems and major challenges that may arise during the implementation of IFRS 15 and assesses the likely impact on firms' profitability and performance. Scientific discussions on IFRS 15 are far from reaching an in-depth understanding of the implementation issues and various interpretations of the new standard as previous research projects were conducted at a point in time that only allowed a preliminary and superficial assessment as companies were not yet prepared to implement the new standard. This study aims to provide a significantly deeper level of detail and profound insights as it was conducted during the time that IFRS 15 became effective.

The author applies a qualitative approach. Based on a constructivist paradigm, qualitative data is gathered through 15 semi-structured in-depth interviews in Germany with auditors, mainly certified public accountants with outstanding experience in IFRS 15, and accountants involved or in charge of the implementation of IFRS 15 in their companies. The interview guide was developed based on the implications from other accounting studies, theoretical concepts and knowledge gaps identified in the literature review. A qualitative analysis of the 2017 annual reports of the German DAX 30 companies is conducted to triangulate the results related to the likely impact on firms' profitability and performance.

The results of the study indicate that IFRS 15 is mainly addressing specific industries, which had difficulties in applying previous IFRS revenue recognition requirements due to missing or unspecific guidance forcing them to use standards outside of IFRS. Due to its complexity, however, IFRS 15 also affects companies with simple business models and its implementation may be unexpectedly time-consuming, work-intensive and difficult without leading to material changes. Although no indication is detected that earnings management or manipulation may be related to the adoption of IFRS 15, the standard still requires interpretation and professional judgment that may be subject to erroneous or divergent accounting for transactions. Although IFRS 15 appears to be necessary, it is anticipated that it rather represents a complex combination of various existing standards and consequently fails to help the profession. Therefore, the predefined purposes of IFRS 15 formulated by the IASB are, at minimum, questionable from a practical viewpoint.

Author’s Declaration

I hereby declare that this dissertation entitled “Revenue recognition under IFRS 15 – A critical evaluation of predefined purposes and implications for improvement”, submitted to the University of Gloucestershire in accordance with the requirements of the degree of Doctor of Business Administration in the School of Business and Management, is my own original work and, to the best of my knowledge and belief, contains no material previously published except where acknowledgement is made.

I certify that the substance of this dissertation has not, either in whole or in part, already been or is not currently being submitted for any other degree at this or any other university.

I certify that any help received in preparing this dissertation and all sources used have been acknowledged.

Signature of Candidate:

Sascha Haggenmüller
Master of Arts (M.A.)
Munich, Germany
April 2019

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List of Abbreviations

AAA	American Accounting Association
AEM	Accruals-based earnings management
AG	Aktiengesellschaft (German for “stock corporation“)
ARC	Accounting Regulatory Committee
ASOBAT	A Statement of Basic Accounting Theory
ASU	Accounting Standards Update
BC	IASB Basis for Conclusion
BDL	Bund Deutscher Leasinggesellschaften (Association of German Leasing Companies)
BilReG	Bilanzrechtsreformgesetz
BilRUG	Bilanzrichtlinie-Umsetzungsgesetz
BRIC	Brazil, Russia, India, China
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CPA	Certified Public Accountant
DAP	Delivered at Place (Incoterm)
DM	Deutschmarks
DPR	Deutsche Prüfstelle für Rechnungslegung (German Financial Reporting Enforcement Panel)
DRSC	Deutsche Rechnungslegungs Standards Committee (Accounting Standards Committee of Germany)
EC	European Commission
e.g.	Exampli gratia (for example)
EFRAG	European Financial Reporting Advisory Group
EITF	Emerging Issues Task Force (of the FASB)
ERP	Enterprise-Resource-Planning

ESMA	European Securities and Markets Authority
et seqq.	and the following
EU	European Union
EUR	Euro
F	IASB Framework
FASB	Financial Accounting Standards Board
FRRP	Financial Reporting Review Panel
GAAP	Generally Accepted Accounting Principles
HFM	Hyperion Financial Management
HGB	Handelsgesetzbuch (German Commercial Code)
i.a.	Inter alia (among others)
IAS	International Accounting Standards
IASC	International Accounting Standard Committee
ICS	Internal control system
i.e.	id est (that means)
IFAC	International Federation of Accountants
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standard
IKS	Internes Kontrollsystem (Internal control system / ICS)
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
KoR	Zeitschrift für internationale und kapitalmarktorientierte Rechnungslegung (Magazine for capital market oriented and international accounting)
NAS	Non-audit services
NYSE	New York Stock Exchange
OEM	Original Equipment Manufacturer

ÖPR	Österreichische Prüfstelle für Rechnungslegung (Austrian Financial Reporting Enforcement Panel)
para.	Paragraph
PoC	Percentage-of-completion
PPA	Purchase Price Allocation
PP&E	Property, Plant and Equipment
REM	Real Earnings Management
R&D	Research & Development
SAS	Spanish Accounting Standards
SEC	Securities and Exchange Commission
SFAC	Statement of Financial Accounting Concepts
SIC	Standard Interpretation Committee
SME	Small and medium-sized enterprises
SOP	Statement of Position (under US GAAP)
SOX	Sarbanes-Oxley Act
SSP	Stand-alone selling price
TEG	Technical Expert Group
TRG	Transition Resource Group
UAE	United Arab Emirates
UK	The United Kingdom
US	The United States of America
USD	US-Dollar
VFE-Lage	Vermögens-, Finanz- und Ertragslage (Assets, financial and earnings position)
WP	Wirtschaftsprüfer (CPA)

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1. Introduction

The objective of this chapter is to introduce the study and the structure of this thesis. The chapter consists of six subsections. The first subsection provides the background and rationale of the study. The second subsection explains the research aim and questions. The third subsection outlines the applied research methodology. The fourth subsection highlights constraints and limitations and the fifth subsection illustrates the structure of this thesis. The chapter is closed with remarks on the vocabulary used and the conclusion.

1.1 Background and rationale

In the 1990s and the early years of the twenty-first century, globalization on an unprecedented scale took place. The reason was the rapid development of information technology improving communication and leading to a reduction of transaction costs and increased economies of scale (Holban & Aldea, 2009; Tysiac, 2014). “Along with the globalization of business comes globalization of the language of business: accounting.” (Holban & Aldea, 2009, p. 87). At that time, the former IASC improved its IFRS and gained international attention and acceptance (Camfferman & Zeff, 2007).

In May 2014, the IASB and FASB jointly issued IFRS 15 – Revenue from Contracts with Customers, which implies a new model for revenue recognition (Tong, 2014). After having been initially effective from periods beginning on or after 1 January 2017, IFRS 15 is applied from 1 January 2018 and supersedes all previous revenue recognition requirements according to IFRS, mainly IAS 11 – Construction Contracts, IAS 18 – Revenue as well as related interpretations (Peters, 2016).

Revenue has always been one of the most important financial figures for investors in their decision-making process and illustrates the development and growth of companies (Zhang, 2005). Therefore, it was often subject to manipulation. Recent studies confirm that different incentives are a key factor in revenue reporting to external stakeholders and earnings management (e.g. Judd, 2015; Lim, 2016; Son & Lim, 2017; Stice, Stice, Stice, & Stice-Lawrence, 2016). Examples for manipulation are ‘round tripping’ of contracts to increase revenues, ‘buy-and-hold’ transactions, in which early customer purchases are not really sales, and ‘principal vs. agent’ transactions, in which transactions are reported on a gross basis although the real revenue earned was only a commission on that gross price (Ciesielski & Weirich, 2011).

In the US, ambiguity of the two main criteria has led to numerous cases of fraud over the last three decades, although the intention of SFAC No. 5 was to provide clear principles for revenue recognition (Gallistel, Phan, Bartlett, & Dodd, 2012). The most famous and significant cases related to corporate earning manipulation were Tyco International (misappropriation of USD 400m), WorldCom (false financial reporting with a subsequent loss to investors of about USD 11bn) and Enron (USD 3bn of undisclosed losses) (Basundara & Chariri, 2014).

It is argued that the new revenue standard was necessary to remove inconsistencies and weaknesses in previous revenue recognition requirements in IFRS and US GAAP as well as to create a single set of high-quality global accounting standards (Peters, 2016).

IFRS 15, para. BC2 states that

> US GAAP comprised broad revenue recognition concepts and detailed guidance for particular industries or transactions, which often resulted in different accounting for economically similar transactions . . . [and] the previous revenue Standards in IFRS had different principles and were sometimes difficult to understand and apply to transactions other than simple ones. In addition, IFRS had limited guidance on important topics such as revenue recognition for multiple-element arrangements. Consequently, some entities that were applying IFRS referred to parts of US GAAP to develop an appropriate revenue recognition accounting policy.

Therefore, the joint project of the FASB and IASB to develop a common revenue standard for IFRS and US GAAP was pursued. According to IFRS 15, para. BC3, the new standard would

(a) Provide a more robust framework for addressing revenue recognition issues;
(b) Improve comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets;
(c) Simplify the preparation of financial statements by reducing the amount of guidance to which entities must refer; and

(d) Require enhanced disclosures to help users of financial statements better understand the nature, amount, timing and uncertainty of revenue that is recognized

However, the introduction of IFRS 15 in May 2014 raised a vast number of questions due to its apparent significance for some industries and high degree of complexity. Not only is there uncertainty, but also very limited academic research available on IFRS 15.

1.2 Research aim and questions

Due to the limited level of existing knowledge in this field and the research questions, the study aims to rigorously investigate potential implementation issues based on the perceptions and opinions of very experienced auditors and accountants and to assess the likely impact IFRS 15 will have on the financial statements. Hereby, the research focuses on the practical implications for affected companies, auditors, standard setters and other stakeholders.

An early study to investigate the application of the new exposure draft of IFRS 15 shows that managers had difficulties in both applying the new principles-based IFRS 15, but also rules-based US GAAP requirements to revenue recognition topics (McCarthy, 2012). A survey by GAAPweb (2015) reveals that over a third of the 300 participants in the study conducted in the UK were not aware and over half of them not prepared for changes in revenue recognition requirements according to IFRS. Later studies in other countries confirm these findings, e.g. the research of Lim, Devi, and Mahzan (2015), Benavides (2015), Khamis (2016), Peters (2016) and Forshay (2017). This implies that accountants have difficulties and are unfamiliar with IFRS 15 although IFRS 15 has been introduced in May 2014 and effective from periods starting on or after 1 January 2018.

It may be complex to implement the standard in various sectors, and there is a high potential for various interpretations and professional judgment necessary in order to adopt it (Benavides, 2015; Forshay, 2017; Khamis, 2016; Lim et al., 2015; Peters, 2016). Other studies indicate that the adoption and implementation of IFRS 15 is a complex, time-consuming and costly project for every company and not only requires an adjustment of IT and ERP systems, but also of the mindset of the accountants (Dalkilic, 2015). Tysiac (2017) states that a governance structure, a steering committee and executive sponsorship across the key functions finance, IT, IR and tax, including thorough documentation, is crucial for a successful implementation. IFRS 15 has a significant impact on accountants due to new requirements for the determination of the transaction price, whether a financing component affects the transaction price, the separation of performance obligations, the respective allocation of the transaction price, as well as new extensive disclosures (Khamis, 2016).

Stakeholders need to understand all implications as IFRS 15 has effects on one of the most important KPIs in financial reporting (Peters, 2016). Due to the importance of revenue as a KPI and its direct impact on other financial relations and bottom-line earnings, companies cannot afford to incorrectly apply the new requirements (Tysiac, 2017). This is especially important as financial officers view earnings as the most important figure communicated to stakeholders (Graham, Harvey, & Rajgopal, 2005).

These studies Benavides (2015); (Dalkilic, 2015; Forshay, 2017; Khamis, 2016; Peters, 2016; Tysiac, 2017) address potential implementation issues, interpretations and the effects on firms' profitability and performance only on an undetailed level and have major limitations due to their study design and early timing. There is little comprehensive research on which detailed steps are taken by companies to implement IFRS 15, such as considering and changing IT and ERP systems, personnel training and education, processes and other key functions, as well as how employees or external auditors perceive the conversion process. As the implementation process is expected to be at a later stage compared to previous studies (Benavides, 2015; Dalkilic, 2015; Forshay, 2017; Khamis, 2016; Peters, 2016; Tysiac, 2017) due to the effective date 1 January 2018, it is important to gain a deeper and more detailed understanding. Therefore, the first research question is stated as follows:

> **Research Question 1:** How do auditors and accountants perceive the implementation of IFRS 15 in practice?

Additionally, potential different interpretations and professional judgment necessary to apply IFRS 15 are only defined on a preliminary and theoretical basis. However, there has been no examination how factors such as language, scope and complexity of IFRS 15 affect interpretation and therefore comparability of IFRS financial statements. Furthermore, interpretation in accounting standards is not only related to professional judgment applied to account for specific transactions, but also to the question how the scope of interpretation is used for earnings management or accounting discretion. Previous studies found that standard precision alone is not connected to a different reporting decision, but that the incentives are the decisive factor (Lim, 2016). This raises the question as to whether the scope of interpretation available in some areas still provides opportunities for the application of accounting creativity. Therefore, the second research question of this study is formulated as follows:

> **Research Question 2:** What are the major interpretational areas within IFRS 15 and to what extent do these imply a risk for manipulation?

This raises further questions about the potential impact on the figures within financial statements. With respect to potential effects of the adoption of IFRS 15 on figures within financial statements, previous studies illustrate that the most affected industries are those with complex or long-term contracts such as telecommunications, pharmaceutical, construction, or aerospace (e.g. Peters, 2016). However, previous studies (e.g. Forshay, 2017; GAAPweb, 2015; Khamis, 2016; PwC, 2016) were conducted at an earlier stage and indicate that many companies were still insufficiently prepared for the adoption of the new revenue recognition requirements. Therefore, there is still no structured and detailed assessment of the likely impact on firms' profitability and performance available that addresses the effects on the figures within financial statements. This defines the third research question:

> **Research Question 3:** What is the likely impact of IFRS 15 on firms' financial statements and therefore their profitability and performance?

With respect to the first research question, a comprehensive understanding of participants' perceptions with respect to the implementation of IFRS 15 is sought. This includes an assessment of the main drivers for IFRS 15 readiness as well as the analysis of details regarding project planning and scheduling, practical examples on the organizational structure and procedures, as well as major challenges.

The expected output of the second research question is to understand the critical issues within IFRS 15 when it comes to interpretations or professional judgment of the principles-based standard. The aim is to identify and define critical areas and assess which potential the new standard provides for earnings management or manipulation. The study purposes to assess if those areas are just areas that require interpretation due to their principles-based nature or if they provide room for accounting creativity or manipulative actions.

The third question aims to analyze the likely impact on firms' profitability and performance. Due to the timing of the research, an empirical assessment is not possible as financial statements are not expected to be available before the first quarter of 2019. However, it is expected that companies can estimate the impact, especially on the figures in the financial statements, disclosures and key performance indicators.

By applying a structured literature review focusing on literature surrounding the research topic and a qualitative approach, this dissertation is expected to deliver a significant contribution to knowledge in the field of the largely unexplored topic of IFRS 15 and will therefore form a substantial foundation for further research.

1.3 Method of study

The author sees reality as contextually and historically and/or socially defined and therefore as subjective, relativist and non-material. This implies a relativistic ontology (Bisman, 2010). This set of beliefs and the explorative nature of the research questions require an elaboration on individual experiences (Gallard & Cartmell, 2014). Epistemologically, the applied constructivist approach focuses on "what people, individually and collectively, are thinking and feeling" (Easterby-Smith, Thorpe, & Lowe, 1991, p. 24) in order to handle the complexity of the real-life phenomena and to conduct the in-depth analysis required to achieve the research aim.

The data is gathered through semi-structured interviews, implying a dialogue between the interviewee and the interviewers, and allows a comparison of the interview results (Cousin, 2009). Semi-structured interviews with open-ended questions represent a powerful method for capturing opinions and offer flexibility to explore issues as they arise because they are not limited to a predefined scope (Silverman, 2015).

Each question within the interview guide was either developed by identifying knowledge gaps or considering findings and implications of previous studies in the course of the critical literature review. In this research study, special attention is paid to factors surrounding the research topic. This is particularly important for topics with limited literature available in order to make a contribution to knowledge (Moustakas, 1994).

An empirical analysis involving a review of financial statements before and after the implementation of IFRS 15 is not possible as the effective date of the standard is for periods beginning on or after 1 January 2018 (Ernst & Young, 2016). However, as companies are obliged to publish information with respect to their status quo and expectation of the impact of IFRS 15 in accordance with IAS 8, the results addressing the third research question based on the semi-structured interviews are complemented by the preliminary results described by DAX 30 companies in their latest available annual reports as of the time this dissertation was prepared.

The interviews were audio recorded and transcribed. Content analysis, including a coding technique, is applied to break down the data into themes in order to organize and analyse them (Bell & Bryman, 2007). Although views may differ due to the various backgrounds, expertise and sectors, patterns and themes in the captured qualitative data by coding and categorizing the transcripts are identified (Coffey & Atkinson, 1996). The use of NVivo 12 provides an efficient approach to data analysis and avoids any anticipation of how the data should be interpreted (Alcock & Iphofen, 2007). Saturation was reached by interview number 12 of 15 as no significant new information was forthcoming (Marshall, Cardon, Poddar, & Fontenot, 2013; Pitney & Parker, 2009) based on the coding scheme.

1.4 Constraints and limitations

Although the methodology for this research project has been constructed in a sensitive and careful way and significant pilot work undertaken, potential limitations of the results need to be taken into consideration.

The major constraints and limitations include the sample size in qualitative research. The sample size of this research project is comprised of semi-structured interviews with six auditors and nine accountants; therefore, results may have been different if a larger or smaller sample size had been applied. However, the sample size was sufficient to achieve saturation by observing that no material new information was forthcoming (Marshall et al., 2013; Pitney & Parker, 2009).

Fontana and Frey (2005) mention that there is potentially always some transfer of beliefs, attitudes and feelings during semi-structured interviews from the interviewer to the interviewee. This limitation was addressed by avoiding suggestive follow-up questions, confirmatory questions or similar issues, and the interview guide was taken as a basis in every interview including follow-up questions.

Due to the various sectors and results, a limitation with respect to the depth of the research may be present. Furthermore, there is limitation on a German view, supported by one partially American view, as all interviews were conducted with German participants having their primary work location in Germany.

Research validity and reliability can be generally criticized in the context of qualitative research due to the different focus compared to quantitative research (e.g. Altheide, Johnson, Denzin, & Lincoln, 1998; Lincoln & Guba, 1985; Rubin & Rubin, 2011). The research shows that certain issues and results cannot be transferred to certain industries or expert or accountant groups as the circumstances are different in various companies, industries, business structures and processes and otherwise dependent on employees' competencies, education, training, available resources and other factors.

1.5 Structure of the thesis

The thesis comprises seven chapters.

This chapter outlines the background and the rationale of the research topic, the research problem and the aim and objectives. Furthermore, the method of the study, including its constraints and limitations, is illustrated.

Chapter 2 and Chapter 3 represent the literature review divided into two chapters. Chapter 2 is descriptive to present an overview of the history and background of IFRS as well as previous and current revenue recognition requirements in order to provide the reader with the necessary context and technical basis for the later findings. Subsequently, Chapter 3 reviews literature of major importance to the topic in order to indicate areas which require further examination, as well as to contribute to current knowledge (Ticehurst & Veal, 2000).

Chapter 4 presents an overview of relevant theoretical frameworks focusing on a critical literature review with respect to Institutional Theory in the accounting context.

The theory is used as a lens for a potential contribution to explanations of the phenomenon under investigation as institutional isomorphism can be a useful tool for the understanding of organizational life (DiMaggio & Powell, 1983).

Chapter 5 examines scientific research approaches and justifies the selection of the constructivist paradigm and the selection of qualitative data in order to meet the requirements for the research questions. Furthermore, the boundaries and advantages of qualitative interviewing are illustrated. The development of the interview guide as well as the manual and software-supported content analysis techniques are transparently explained. Finally, the chapter critically examines quality criteria and outlines ethical aspects.

Chapter 6 presents and discusses the insights gathered in the course of the semi-structured interviews. The results are classified based on the codes applied during the content analysis and aggregated into major themes that represent the contribution to knowledge. Furthermore, findings from previous studies are critically assessed and updated where possible. The triangulation of research results by reviewing the last available annual financial statements of the DAX 30 companies complements this chapter.

Chapter 7 concludes the study by reflecting on the research aim and objectives, limitations and potential for further research and providing a story of the researcher's journey and personal development throughout the research project.

1.6 Remarks on vocabulary

IFRS have both a broad and a narrow meaning. In the narrow sense, IFRS are the new series of standards that the IASB is developing and issuing as the successors of IAS, issued by the IASC, the IASB's predecessor. In the broad context, which is also applied within this dissertation, IFRS refer to the definition as per IAS 1, para. 7, stating that IFRS are comprised of IFRS, IAS, IFRIC Interpretations and SIC Interpretations.

Within this dissertation, the terms 'previous IFRS', 'old standards', 'previous standards' or similar refer to IAS 11 – Construction Contracts and IAS 18 – Revenue, as well as related interpretations IFRIC 13 – Customer Loyalty Programs, IFRIC 15 – Agreements for the Construction of Real Estate, IFRIC 18 – Transfer of Assets from

Customers and SIC 31 – Revenue – Barter Transaction Involving Advertising Services.

‘Current requirements’, ‘New requirements’, ‘New IFRS on revenue recognition’ or similar mean IFRS 15 – Revenue from Contracts with Customers applicable from 1 January 2018. As this thesis was written partially before and after the effective date of IFRS 15, this distinction is important.

With respect to the reference to specific paragraphs in IFRS, e.g. if it is referred to IFRS 15, paragraph 35, it is abbreviated as IFRS 15, para. 35 or IFRS 15.35. The same applies for the Basis for Conclusions, which means that BC50 means ‘Basis for Conclusions, paragraph 50’, and the IASB Framework, which means that F5 means ‘IASB Framework, paragraph 5’.

GAAP always refers to the local accounting law in the specific country, e.g. ‘German GAAP’ meaning the local German accounting law according to the German Commercial Code and ‘US GAAP’ meaning the local American accounting law.

1.7 Conclusion

This chapter provides a summary for the research background as well as the research aim and the research questions. Furthermore, the research methodology and method are introduced. These explanations represent the foundation of the thesis.

2. IFRS: History, background, and revenue recognition requirements

The purpose of this chapter is to present an overview of the history and background of IFRS, as well as their revenue recognition requirements, in order to provide the context for the investigation.

2.1 History and background of IFRS

The following subsection aims to provide a brief description of the historical development of IFRS, as well as their principles and impact on the worldwide accounting profession.

2.1.1 Terminology

Accounting, in general, or accountancy, is the measurement, processing and communication of financial information about economic entities (Needles, Powers, & Crosson, 2013). Accounting processes are often referred to as time consuming, painstaking, meticulous, and even boring in order to have a reliable statement of a company's financial position (Edwards, 2013). Financial accounting is "aimed at reporting, in a somewhat aggregated way, the (economic) performance of the firm to essential external users such as shareholders, bankers, creditors, customers, unions, tax authorities, etc." (Stolowy & Lebas, 2006, p. 10). All transactions are materialized and valuated considering financial and non-financial information of source documents. The reporting is structured through financial statements, generally including a balance sheet, income statement, cash flow statement, statement of changes in stockholders' equity and notes (Kinney & Raiborn, 2012).

Financial statements are prepared for and presented to numerous external users or stakeholders by a vast number of enterprises. Although financial statements generally consist of the previously mentioned parts, a variety of social, economic and legal circumstances by different countries lead to material differences of the elements of financial statements, i.e. assets, liabilities, equity, and income as well as related disclosures (e.g. Bae, Tan, & Welker, 2008; Hellman, 1993; Pope & Rees, 1992; Pope & Walker, 1999).

These differences result from a variety of different GAAPs. GAAPs are used to accomplish the objectives of measurement, timing of recognition, disclosure or presentation. The two basic principles are recognition and disclosure. Recognition principles determine the timing and the measurement of items and need to be reflected numerically. Disclosure principles deal with factors that are not always numeric and include qualitative information for the decision-making process of the addressees of the financial statements. Qualitative information within financial statements comprise explanations regarding accounting principles, contingencies, and uncertainties, which are needed to be able to fully understand the financial presentation of a company (Epstein, Nach, & Bragg, 2009).

The first attempt to create GAAPs started in 1930, primarily as a consequence of the stock market crash of 1929 and the belief that an absence of financial reporting requirements contributed to speculations that lead to the crash (Zeff, 2005). Over time, different GAAPs have been developed in various countries. The consequence was that financial statements were not comparable and difficult for external addressees to interpret (Wiecek & Young, 2009). One example for accounting differences is from 1993, when Daimler Benz AG was the first German company to be listed on the New York Stock Exchange (NYSE), which made it obligatory to report their financial statements under US GAAP. While under German GAAP, the company reported a net income of DM 615 million in the financial year 1992, this was a loss of DM 1,839 million under US GAAP (Carmona & Trombetta, 2008). Another example from 1993 is British Airways, which reported a profit of USD 333 million under UK GAAP in contrast to profits of only USD 168 million under US GAAP (Sherman, Young, & Collingwood, 2003).

2.1.2 History and implementation of IFRS

In 1973, after substantiating and improving GAAPs, the International Accounting Standard Committee (IASC) was founded by 16 professional accountancy bodies in the countries Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, UK and US. Sir Henry Benson, who had the idea for the IASC, realized in the 1960s, when a rise of the number of multinational companies could be observed, that a comparison of financial statements from different parts of the world was necessary and therefore a harmonization of different GAAPs across the nations (Camfferman &

Zeff, 2007). After its foundation, the IASC began to issue flexible accounting standards. However, those were only taken seriously by developing countries. Nevertheless, another purpose was to give smaller nations a basis, on which they could develop their own accounting standards (Paul & Burks, 2010). Street and Shaughnessy (1998) summarize that the main two purposes of the IASC were to formulate and publish the public interest accounting standards as well as to promote their acceptance and observance and to pursue the improvement and harmonization of regulations, accounting standards, and procedures relating to the presentation of financial statements.

In the 1980s and 1990s, when the globalization became even more significant, the IASC improved its standards to a level of quality that gained the attention and respect of national and regional regulators, national standard-setters, major multinational companies, and leading accountancy bodies (Camfferman & Zeff, 2007).

In 2000, major restructuring activities took place in the organization and the formal links with professional accounting bodies were cut. The result was the foundation of the IASB, a “free-standing non-governmental organization, funded by voluntary contributions and the sales of publications” (Raffournier & Walton, 2003, p. 35), which superseded the former IASC and is the standard-setting body of the IFRS Foundation. International organizations such as G20, World Bank, IMF, Basel Committee, IOSCO, and IFAC have publicly supported global accounting standards. As of February 2019, 166 jurisdictions used IFRS (IFRS Foundation, 2018, 2019a).

The mandatory adoption of IFRS in the EU was one of the largest regulatory experiments in financial reporting ever undertaken. EC 16/06/2002 required almost all listed firms in a regulated market to comply with IFRS in their consolidated financial statements no later than 2005 (Christensen, Lee, & Walker, 2007). This decision of the EC affected around 7,000 companies (Zeff, 2008). In 2004, the regulation was implemented into German law (para. 315a in the German Commercial Code) in the course of the Accounting Reform Law (BilReG) (Haller, Ernstberger, & Froschhammer, 2009). This was a necessary step by the EU to achieve capital market integration and to work towards convergence of financial reporting not only across Europe, but also the rest of the world. However, the European Commission has to endorse every standard before they are mandatory within the EU and can therefore reject any or parts of any IFRS if the criteria for endorsement is not met. This endorsement mechanism is a two-tier process consisting of a political and a technical level. The political tier is the Accounting Regulatory Committee composed of representatives from EU governments. The technical tier became the TEG of EFRAG (Zeff, 2008). An example for a rejection of parts of IFRS happened when the EC endorsed all IFRS, but not IAS 32 and IAS 39, in the course of the ongoing protests and discussions in September 2003. However, after discussions of the committees, the EC followed the recommendation by the ARC and endorsed a carved-out version of IAS 39 (Armstrong, Barth, Jagolinzer, & Riedl, 2009).

With respect to the US, the FASB and the IASB issued the Norwalk Agreement in 2002 as a result of the growth of global markets, the desire for one set of financial statements and the demand for one common global reporting language (Paul & Burks, 2010). This implied that the two boards "make their existing financial reporting standards fully compatible as soon as is practicable [and] to coordinate their future work programs to ensures that once achieved, compatibility is maintained" (Pacter, 2005, p. 73). In November 2007, the SEC allowed foreign filers in the US to prepare a submission of IFRS financial statements without a reconciliation to US GAAP (Paul & Burks, 2010). The auditors were surprised about the immediate approval by the SEC and it was speculated that there was pressure from the Department of the Treasury receiving criticism from sources within the EU. Furthermore, there was the threat that also the EU might require a reconciliation from US GAAP to IFRS financial statements for US companies listed in Europe (Zeff, 2008). Another source of pressure may have been the Sarbanes-Oxley Act (SOX) of 2002 (Zeff, 2008). In the aftermath of Enron filing the largest bankruptcy claim in the history of the US, SOX was the answer to public skepticism regarding the accuracy of financial statements and the conduct of high-ranking executives. Those new requirements seemed to be effective, resulting in a series of scandals that unfolded after its introduction, i.a. WorldCom, Globa Crossing, Adelphia Communications, and Tyco, resulting in a loss of public confidence and a material decline in the stock market (B. Kim, 2003).

The SEC was also working on an opportunity of IFRS adoption for non-listed companies. In December 2007, a Concept Release was issued providing an option to all US public companies to use IFRS instead of US GAAP, however, it did not include any explanations as to whether the adoption of IFRS might become obligatory. In fact, Big 4 accounting firms argued for the adoption of only one single set of high-quality, globally-accepted accounting standards. The Financial Accounting Foundation and the FASB agreed with this concept, however, without wanting to have an interim period, in which US companies could either use US GAAP or IFRS (Zeff, 2008). Today, IFRS are still not allowed to be used by US public companies, but convergence efforts are taking place, which is also represented by the US GAAP standard ASC 606, which is, considering minor deviations, the same as IFRS 15.

2.1.3 IFRS development process

According to the IFRS Foundation Due Process Handbook as of June 2016, there are six mandatory steps before the IASB and its Interpretation Committee can issue a standard:

a) Debating any proposals in one or more public meetings;
b) exposing for public comment a draft of any proposed new Standard, proposed amendment to a Standard or proposed Interpretation – with minimum comment periods;
c) considering in a timely manner those comment letters received on the proposals;
d) considering whether the proposal should be exposed again;
e) reporting to the Advisory Council on the technical programme, major projects, project proposals and work priorities; and
f) ratification of an Interpretation by the IASB.

Further steps are specified in the Constitution that are not mandatory and include:

a) Publishing a discussion document (for example, a Discussion Paper) before an Exposure Draft is developed;
b) establishing consultative groups or other types of specialist advisory groups;
c) holding public hearings; and
d) undertaking fieldwork (IFRS Foundation, 2016a, p. 14)

Although not being a mandatory step, projects start with a discussion paper that includes issues, alternatives and the Board's preliminary conclusions on the direction of the fundamental principle of the project. The completed discussion paper is published in order to receive comments on it. Those comments are analyzed by the Board staff. After that, the Board staff issues the exposure draft, which is also published for comments. Based on this, the standard is issued. After issuing a standard, the Board allows a time period for users to get familiar with the new standard and to adjust system settings (Alali & Cao, 2010).

2.2 Previous revenue recognition requirements under IFRS

Up to the end of 2017, there are two basic IFRS for revenue recognition as well as four corresponding interpretations:

- IAS 11 – Construction Contracts
- IAS 18 – Revenue
- IFRIC 13 – Customer Loyalty Programmes
- IFRIC 15 – Agreements for the Construction of Real Estate
- IFRIC 18 – Transfer of Assets from Customers; and
- SIC-31 – Revenue – Barter Transactions Involving Advertising Services

2.2.1 The amount of revenues

The definition for 'revenue' is based on the IASB's Framework, which has the purpose to provide a clear and coherent basis for financial accounting under IFRS (Lennard, 2007). According to F4, para. 29 "income encompasses both revenue and gains. Revenue arises in the course of the ordinary activities of an entity and is referred to by a variety of different names including sales, fees, interest, dividends, royalties, and rent." A similar definition can be also found in IAS 18, para. 7. IAS 18, para. 8 states the following:

> Revenue includes only the gross inflows of economic benefits received and receivable by the entity on its own account. Amounts collected on behalf of third parties such as sales taxes, goods, and service taxes as well as value added taxes are not economic benefits, which flow to the entity, and thus do not result in increases in equity. Therefore, they are excluded from revenue.

Additionally, F4, para. 30 states that "gains represent other items that meet the definition of income and may, or may not, arise in the course of the ordinary activities of an entity." Revenues are generally recorded at the cash amount received or expected to be received or, in the case of non-monetary exchanges, at their cash equivalent (Ernst & Young, 2017b). An example would be the revenue of a car parts dealer. If the dealer sells ten tires for EUR 100 each, revenue of EUR 1,000 is recognized. But if the same dealer gains EUR 1,000 out of a successful stock investment, it would not be a core operating activity and thus classified separately.

2.2.2 Timing of revenue recognition

However, not only the amount of revenue to be recognized is important, but also the point or points in time when revenue is to be recognized and reported. The underlying realization principle not only requires a conducted sale, but also a certain degree of performance by the respective vendor. As there are numerous and sometimes inconsistent rules, two broad approaches for recognizing revenue emerged, i.e. the critical event and the accretion approaches being appropriate under particular circumstances (Ernst & Young, 2017b).

According to the critical event theory, revenue is recognized when the responsible business person makes the most critical decision or when a company is performing the most critical task during the earnings process. In practice, the critical event of most businesses is the sale of goods or services (Chatfield & Vangermeersch, 2014) as applied by IAS 18.

The accretion concept of income assumes that some portion of profit is earned during the phases of a company's operating cycle. Examples for this approach are the proportional performance method and the PoC method (Chatfield & Vangermeersch, 2014) as applied by IAS 11.

2.2.3 IAS 11 – Construction Contracts

IAS 11 was implemented in 1995 after having been revised in 1993 and deals with the accounting treatment of revenues and costs arising from construction contracts. Activities in connection with construction contracts often relate to different accounting periods, which makes it necessary to provide guidelines regarding the allocation of revenues and costs to those periods in which construction and assembly work are conducted. A construction contract being in place is the central criterion to apply IAS 11 for revenue recognition purposes and its central methodology PoC. According to IAS 11, para. 3, a construction contract is defined as "a contract specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology, and function or their ultimate purpose or use." The term 'specifically negotiated' is considered by IFRIC 15. With respect to its focus on real estate, IFRIC 15, para. 11 points out that construction contract for real estate is in place when "the buyer is able to specify the major structural elements of the design of the real estate before construction begins and/or specify major structural changes once construction is in progress". However, IFRIC 15, para. BC6 explicitly states that the conclusions of the interpretation can also be adapted to other branches in accordance with IAS 8 – Accounting policies, changes in Accounting Estimates and Errors (Ernst & Young, 2017b). According to IAS 11, para. 22, the outcome of the construction contract needs to be estimated reliably in order to apply the PoC method (Hellman, 2008, p. 86). Epstein and Jermakowicz (2008) describe the method as that the contract costs incurred at a specific point in time compared to the total cost determine the stage of completion, which results in the reporting of revenue, expenses and profit attributed to the proportion of work completed (see Appendix 1: IAS 11 application example).

According to IAS 11, para. 39 disclosures with regard to the amount of contract revenue recognized as revenue in the period, the methods used to determine the contract revenue recognized in the period, and the methods used to determine the stage of completion for contracts in progress are required. Furthermore, the aggregate cost incurred, recognized profits, the number of advances received, and the amount of retentions in accordance with IAS 11, para. 40 have to be disclosed. On the statement of financial position, a disclosure of the gross amounts due from customers as an asset and gross amounts due to customers for contract work as liability in line with IAS 11, para. 42 is required (Epstein & Jermakowicz, 2010).

IAS 11 and the PoC method are responsible for a significant increase in stockholders' equity in the course of the mandatory adoption of IFRS in Germany (Haller et al., 2009). This effect implies a risk that can also be seen with respect to the interpretation of the requirements of IAS 11 and therefore the determination to apply IAS 11 or IAS 18 as the respective standard. IASB (2011) emphasizes the material differences between IAS 11 and IAS 18, which may lead to materially deviating financial statements depending on which standard is applied.

2.2.4 IAS 18 – Revenue

IAS 18 is the main source of authoritative literature on revenue recognition and was issued in 1982 followed by a revision in 1993. However, IAS 18 does not address many of the complex transactions of modern businesses. As a consequence, other standards also address revenue recognition issues, e.g. IAS 17, IFRS 4, SIC 31, IFRIC 13, IFRIC 15 and IFRIC 18 (Ernst & Young, 2017b).

“Revenue shall be measured at the fair value of the consideration received or receivable” (IAS 18, para. 9). According to the definition in IAS 18, para. 7, “fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction.” Thus, it is the price determined by agreement between the parties, as well as taking into account possible trade discounts and volume rebates (IAS 18, para. 10). Determining the fair value is treated in the separate IFRS 13. IFRS 13, para. 9 defines fair value as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”

Besides the amount, which should be recognized as revenue, IAS 18 deals with the requirements or the point of time when revenue should be recognized. To a certain extent, these requirements vary for the different categories (sale of goods, rendering of services, and interest, royalties, and dividends) considered within IAS 18. However, the amount of revenue has to be measured reliably and it needs to be probable that the economic benefits associated with the transaction will flow to the entity (IAS 18, para. 14, IAS 18, para. 20, IAS 18, para. 29). Another requirement is that the entity has transferred the significant risks and rewards of ownership of the goods to the buyer (IAS 18, para. 14). The point in time is specifically important with regard to revenue recognition on an accrual basis around the reporting date.

The point of sale is probably the most widely used basis for revenue recognition applied to regular sale of goods transactions, leaving uncertainties like the possible return of goods, the failure to collect the sales price or any future liabilities in terms of any express or implied customer warranties out of consideration. In practice, the point of sale is usually the point of delivery, although the significance of uncertainties can lead to different inconsistencies, especially with regard to acceptance periods and the related delay of revenue recognition (Ernst & Young, 2014).

Concerning the rendering of services area, there is also an accretion approach, which means revenue recognition during the process of production (Ernst & Young, 2015). This approach works like the PoC method under IAS 11 described in subsection 2.2.3 and stated in IAS 18, para. 21.

For interest, royalties, and dividends, different methods have to be used according to IAS 18, para. 29 and IAS 18, para. 30. For interest, the effective interest method as set out in IAS 39, para. 9 and IAS 39, para. AG5 to AG8 should be taken into account. Royalties are recognized on an accrual basis in accordance with the relevant agreement and dividends when the shareholder's right to receive payment is established.

For disclosures, IAS 18, para. 35 needs to be considered. According to that paragraph, the accounting policy for recognizing revenue and the amount of the different types of revenue should be disclosed.

Current research criticizes the limited guidance provided by IAS 18, especially with respect to variable considerations, multiple-element arrangements, licensing and warranties and inadequate disclosures resulting in significant judgments and estimates leading to potential inconsistencies (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014). The distinction between IAS 11 and IAS 18 and transactions that may be accounted under the wrong standard further impose a risk (e.g. IASB, 2011; McKee & McKee, 2013). From a practical viewpoint, various studies furthermore illustrate that financial managers were largely misapplying the requirements (e.g. Bierstaker, Kopp, & Lombardi, 2016; Ismail, 2014; McCarthy, 2012).

2.2.5 Related interpretations

IFRIC is the interpretative body of the IASB and examines and reviews IFRS and the IASB framework in order to announce interpretations with respect to accounting issues that might receive divergent or unacceptable accounting behavior due to missing authoritative guidance (Johansson & Ringius, 2008).

IFRIC 13 – Customer Loyalty Programmes was developed in the course of the identification of a problem by the IFRIC within IAS 18 as IAS 18, para. 13 and para. 19 suggest two different ways of accounting for customer loyalty programs, such as bonus points or miles (Johansson & Ringius, 2008). IAS 18, para. 13 states that each transaction is usually applied separately, but "in certain circumstances, it is necessary to apply the recognition criteria to the separately identifiable components of a single transaction in order to reflect the substance of the transaction". Therefore, if a customer receives EUR 2 bonus on a sold good with an amount of EUR 100, EUR 98 are considered as revenue. In contrast, if costs are not identifiable in an obvious way, compensations for the sale of goods are considered as debt.

IFRIC 15 – Agreements for the Construction of Real Estate was specifically created for the real estate development sector. Such projects are long-term projects and are financed by deposits of the buyers before the transfer to them after the completion. The problem was that different companies accounted differently for revenues from real estate projects, either under IAS 18, i.e. after the completion and transfer of the object, or IAS 11 applying PoC (Dylag & Kucharczyk, 2011). This is related to the subjective judgment of whether the buyer is able to specify the major structural elements of the design of the real estate before construction begins and/or is able to do so during the construction phase (Dylag & Kucharczyk, 2011). Ismail (2014) provides an empirical study on 113 property companies with 15 additional interviews with auditors and accountants in Malaysia and finds out that only 2 of 133 companies have adopted the IFRIC 15 method. This may not be representative, but an indicator that also the interpretations might have included inconsistencies and weaknesses.

According to Ernst & Young (2017b), IFRIC 18 – Transfer of Assets from Customers is applicable if an item of property is received from a customer which the entity will use to connect to a network or to provide it to the continuous access to a good or service. Examples for this are provision of electricity, gas, or water. If the transfers are not government grants (IAS 20 – Accounting for Government Grants and Disclosure of Government Assistance) or assets used in a service concession (IFRIC 12 – Service Concession Arrangements), and therefore out of scope of IFRIC 18, and the definition of an asset as per the Framework is met, then the asset is measured at fair value or at cost on initial recognition.

SIC 31 – Revenue – Barter Transactions Involving Advertising Services deals with the circumstances in which a seller can reliably measure revenue at the fair value of advertising services received or provided in a barter transaction (Ernst & Young, 2017b).

These interpretations imply that IAS 11 and IAS 18 have major inconsistencies and weaknesses and previous revenue recognition requirements are not up to date, especially with respect to complex transactions of modern companies (Tong, 2014).

2.3 New revenue recognition requirements under IFRS

This subsection provides an overview of the development of IFRS 15 – Revenue from Contracts with Customers as well as the technical content in order to provide the technical background for the critical literature review in Chapter 3.

2.3.1 History of IFRS 15

The convergence project of the IASB and the FASB can be traced back to the Norwalk Agreement in 2002, as well as the Memorandum of Understanding (MoU) in 2006. These already included an initiative for a joint project on revenue recognition in order to eliminate inconsistencies and weaknesses in previous revenue recognition requirements, as well as to account for increasingly complex transactions (Khamis, 2016). These two agreements were the foundation for the commitment to develop a common set of high quality standards (Dalkilic, 2015). Whilst IAS 18 and IAS 11 could lead to a different treatment for similar transactions, US GAAP contains numerous general and industry-specific revenue recognition requirements (Olsen & Weirich, 2010).

In June 2010, exposure draft (ED/2010/6) was issued as well as the revised exposure draft (ED/2011/6) in November 2011. Almost 1,000 comment letters were received on the 2010 exposure draft (Lamoreaux, 2012). In May 2014, the IASB and FASB published the new joint standard, which virtually replaces all of the guidance on revenue recognition in previous standards under US GAAP and IFRS (Khamis, 2016). This is of major importance for the further understanding of IFRS 15 as IFRS 15 is not only issued as the new revenue recognition standard according to IFRS, but also as the new revenue recognition standard according to US GAAP, which is named ASC 606. However, there are 10 minor differences as identified by KPMG (2017b).

Overall, it took more than eleven years for the FASB and IASB to develop and publish this joint standard for revenue recognition (Tysiac, 2014). Originally, it was planned that the standard will be effective for reporting periods beginning after 15 December

2016 for US companies that are publicly listed or after 1 January 2017 for companies that use IFRS in general. Although this was already more than two years ahead at the time when the standard was published, the effective period was postponed to periods starting on or after 1 January 2018 (Peters, 2016) on 9 July 2015 after the mounting concerns of prepares had been raised (Rutledge, Karim, & Kim, 2016).

2.3.2 Scope of IFRS 15

IFRS 15 does not apply to lease contracts (Currently, IAS 17 – Leases and IFRS 16 – Leases from 1 January 2019) and financial instruments and contractual rights or obligations (IFRS 9 – Financial Instruments, IFRS 10 – Consolidated Financial Statements, IFRS 11 – Joint Arrangements, IAS 27 – Consolidated and Separate Financial Statements, IAS 28 – Investments in Associates and Joint Ventures). Furthermore, nonmonetary exchanges between entities in the same line of business to facilitate sales to customers are excluded. In contrast, dividends and interests are excluded by IFRS 15, but were part of IAS 18 (Peters, 2016).

Peters (2016) states that there might be cases in which elements of specific contracts might fall within the scope of IFRS 15 whereas other parts might be excluded. In those cases, the other standard(s) are applied at first and IFRS 15 is applied afterwards. If the other standard(s) do(es) not explain the separation, IFRS 15 will be applied. Also, a portfolio approach of similar contracts is possible if this portfolio approach does not lead to material differences compared to an individual treatment of all contracts.

2.3.3 Concept of IFRS 15 – The five-step model and disclosures

According to IFRS 15.BC3, the purpose of the new revenue recognition standard is to

a) Provide a more robust framework for addressing revenue recognition issues;
b) Improve comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets;
c) Simplify the preparation of financial statements by reducing the amount of guidance to which entities must refer; and
d) require enhanced disclosures to help users of financial statements better understand the nature, amount, timing and uncertainty of revenue that is recognized

The standard is applied by using a core five-step model to analyze transactions and to provide guidance for revenue recognition. An illustration of the key steps is provided in the following table as well as in the further sections (also see Appendix 2: IFRS 15 application example).

Table 1: Five-Step Revenue Recognition Model (Yeaton, 2015, p. 52)

Five-Step Revenue Recognition Model	
Steps according to the Standard	**Examples of potential estimates or judgments required by the Standard**
Step 1: Identify contract with a customer	**IFRS 15, para. 9-21** Evaluating customary business practices to determine whether oral or implied contracts exist. Determining whether collectability is probable.
Step 2: Identify the performance obligations in the contract	**IFRS 15, para. 22-30** This is an area that will require a great deal of judgment and may present significant implementation challenges.
Step 3: Determine the transaction price	**IFRS 15, para. 46-72** For many companies, the determination of the transaction price will be significantly different from previous practice. Variable consideration, if not directly observable, will need to be estimated.
Step 4: Allocate the transaction price to the performance obligations in the contract	**IFRS 15, para. 73-90** The stand-alone selling price of each distinct good or service promised in a contract will need to be estimated if not readily observable.
Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation	**IFRS 15, para. 31-45** The determination of whether a performance obligation is transferred over time or at a point in time.

2.3.3.1 Identification of the contract(s) with the customer

Al-Shatnawi (2017) provides further details regarding the core five-step model of IFRS 15. Step 1, the identification of a contract with a customer is fulfilled if the following five criteria are met:

- Consent of the contract parties on the terms of the contract, in writing or orally or according to the generally-accepted practices within the business sector.
- The potentials for determining the rights of the contract parties as regards the goods transferred from one party to another in the contract.
- It is possible to determine the settlement provisions that are relating to the good provided by the establishment to the customer.
- The contract has commercial substance.
- It is possible that the establishment procures the return as a result of the contract of selling the good, taking into consideration the ability and desire of the customer to pay back (p. 381).

This definition, however, implies that contracts need to be enforceable by law in order to recognize the rights and obligations arising from that contract (IFRS 15, para. BC31). This is of major importance as there are many different definitions for the term 'contract' in IFRS literature. One example is the definition of a contract in connection with IAS 32 – Financial Instruments, which implies that a contract must not necessarily be enforceable by law (Peters, 2016).

IFRS 15, para. 17 provides further criteria, similar to those in the previous IAS 11 – Construction Contracts, which require a combination of contracts (Tong, 2014). IAS 18 did not contain any guidance regarding when contracts need to be combined. Therefore, contracts meeting those criteria will be combined despite having not been under IAS 18 (Peters, 2016). The standard also allows an entity to account for portfolios if it can reasonably expect that the effects are not materially different compared to having accounted for each individual contract (Tong, 2014).

IFRS 15, para. 18 addresses contract modifications. Generally, those imply a change in the scope, price or both of a contract and are approved by the parties (Tong, 2014). In that respect, IAS 18 did not contain guidance. In IFRS 15, contract modifications are not only defined, but it also includes detailed guidance regarding their consideration (Peters, 2016).

2.3.3.2 Identification of the performance obligations in the contract

One of the core features of IFRS 15 is the concept of performance obligations (Tong, 2014). IFRS 15, para. 22 requires the consideration of separate performance obligations, distinct goods or services, based on the criteria of IFRS 15, para. 27, i.e. if goods are profitable to the customer on their own and are readily available resources. However, IFRS 15, para. 27b adds that this analysis has always to be conducted in the context of the contract. The same good or service might be distinct in the one contract and not distinct in the other contract (Peters, 2016). According to IFRS 15, para. 22, distinct performance obligations, which are satisfied over time as one single performance obligation, are substantially similar and have the same patterns of transfer (Peters, 2016). The combination of non-distinct goods or services is conducted up to the point until a separate performance obligation is identifiable (Peters, 2016). IAS 18, para. 13 only required that transactions are broken down in certain circumstances. Therefore, this feature of IFRS 15 represents one of the most significant changes (Peters, 2016).

2.3.3.3 Determination of the transaction price

Al-Shatnawi (2017) describes the third stage as the stage in which the transaction price represents the obligations of the entity in the contract. The transaction price is generally the return that is expected to be received from a sale of goods or services. Peters (2016) mentions that the price in a contract might be influenced by variable considerations, significant financing components, non-cash considerations (IFRS 15, para. 66-69) or considerations payable to customers (IFRS 15, para. 70-72).

IFRS 15, para. 53 and 54 state that variable consideration either has to be estimated based on the expected value or the most likely amount (Peters, 2016). The so-called constraint of variable consideration implies that a variable consideration is only considered in the transaction price if it is highly probable that there is no significant reversal of revenue as soon as the uncertainty is resolved. This is stated in IFRS 15, para. 56 (Peters, 2016). In IAS 18 a variable consideration is generally deferred until the payment is received from the customer. As an estimation is sufficient according to IFRS 15, revenue is probably recognized earlier (Peters, 2016).

A significant financing component is in place if the timing of payment does not match to the corresponding transfer of goods or services, either payments in advance or provided financing to their customer(s) (Peters, 2016). According to IFRS 15, para. 64, transaction prices shall be adjusted by a discount rate applicable to a separate financing transaction and either considered as interest expenses or interest revenues presented separately from the original revenue from the contract (IFRS 15, para. 65). This has the purpose to correctly present the revenue. The term 'significant' in connection with financing components is defined in the requirements as per IFRS 15, para. 62. However, if the period between the transfer and the payment does not exceed a year, no adjustment for the time value of money is necessary according to IFRS 15, para. 63. This will reduce adjustments for the time value of money compared to the previous requirements in IAS 18, para. 11 (Peters, 2016).

Petersen, Bansbach, Dornbach, and KLS Accounting (2015) explain that non-cash considerations are to be considered at their fair value. If the fair value is not available or cannot be reliably estimated, the market price needs to be taken into account. Changes in values are to be considered according to the regulations of variable consideration.

Considerations payable to customers reduce the revenues except for a separate performance obligation, which is considered as a regular purchase (Petersen et al., 2015).

2.3.3.4 Allocation of the transaction price to the performance obligations

After the transaction price has been determined, it must be allocated between the different distinct performance obligations according to the relative stand-alone selling price method as explained in IFRS 15, para. 75 (Peters, 2016). The stand-alone selling prices, either observable or estimated, are the prices a customer would pay for a promised good or service if it was sold separately to him (Peters, 2016). The stand-alone selling prices are added-up in order to calculate the proportion each distinctive good or service has in relation to the total amount. Variable consideration, however, does not need to be related to all distinctive performance obligations in a contract, but only to some of them. IFRS 15, para. 85 describes when variable consideration only relates to a single performance obligation (Peters, 2016). This is deemed to be complex and work-intensive which is underpinned by the complaints from entities the IASB received, which are included in IFRS 15, para. BC287-288.

2.3.3.5 Revenue recognition when (or as) the entity satisfies a performance obligation

The criteria for the recognition of revenue as the last step of the process are different between IFRS 15 and IAS 18. Whereas IAS 18, para. 14 states that revenue is only recognized when risks and rewards have all been transferred to the buyer, IFRS 15, para. 33 follows the control principle, which means the ability to direct the use of and obtain substantially all of the benefits from an asset. As control might be already in place while an entity still carries risks related to the transfer, different times of revenue recognition may occur (Peters, 2016). The IASB expects more consistent decisions from that principle. This is in line with the comments of a majority of respondents to the 2010 and 2011 Exposure Drafts according to IFRS 15, para. BC119.

One special issue, however, is the decision if a performance obligation is satisfied over time or at a point of time. In order to verify if revenue has to be recognized over time, one needs to assess if one of the criteria in IFRS 15, para. 35 is met, which is either that performances are simultaneously received and consumed by the customer, the customer obtains control as the creation or the enhancement is progressing and if there is no alternative use for the entity (Peters, 2016). This might lead to changes compared to the previous criteria according to IAS 11.

2.3.3.6 Disclosures

The new standard requires both qualitative and quantitative information to be disclosed about contracts with customers including judgments and estimates applied, revenue segmented in categories and performance obligations still effective at the end of the period (Tong, 2014). Further disclosures are obligatory for contract balances, performance obligations, transaction price allocated to the remaining performance obligations, significant judgments in the application of the standard, determining the timing of satisfaction of performance obligations and determining the transaction price and the amounts allocated to performance obligations (Tong, 2014).

2.4 Conclusion

The joint project of the FASB and the IASB on IFRS 15 is one of the largest projects with a major impact for many companies worldwide. Dalkilic (2015) summarizes the differences between the old and the new standard in the following table:

Table 2: Comparison of standards (Dalkilic, 2015, p. 10)

Under previous IFRS	**Under IFRS 15**
Multiple standards and interpretations	A single, converged standard
Separate models for different types of revenue (e.g. construction, goods and services)	A single model for revenue across all sectors
IAS 18 – Revenue, underpinned by concept of risks and rewards	A control-based model, in line with other IFRS
Fair value used to measure consideration	Consideration measured as being the amount to which the company expects to be entitled
Diversity in whether companies recognize revenue at a point in time or over time	Revenue recognized over time only if criteria specified in IFRS 15 – Contracts with Customers, are met; otherwise revenue recognized at the point in time when the customer obtains control of the good or service
No detailed guidance on measuring the revenue to be recognized when variable amounts are in place	Variable consideration included only if there is a valid expectation or other facts and circumstances indicating that the entity's intention is to offer a price concession to the customer

Tong (2014) mentions seven major areas in which IFRS 15 affects previous practice:

- Long-term contracts with customers: The PoC method similar to IAS 11 is only applicable if the customer has control over the asset in the course of its development, the asset has no alternative use for the entity and the entity has an enforceable right to payment for the performance completed to date (see IFRS 15, para. 35 – 37).

- Identification of separate performance obligations: For distinct goods and services, the contract needs to be divided into separate performance obligations. This may lead to different units under the new standard compared to the units identified under previous practice (see IFRS 15, para. 26 – 30).
- Licensing and rights to use: Under current practice, the guidance for licenses is very broad and has led to a diversity of accounting approaches for licenses. IFRS 15 requires an entity to evaluate if the license within a contract is distinct. In case the license is distinct, it is considered as a separate performance obligation. Otherwise it is accounted for as a part of the performance obligation to supply goods or services. Independent from which case applies, an entity needs to analyze whether the criteria for a satisfaction of the performance obligation over time are in place or not (see IFRS 15, para. B52 – B56).
- Product warranties: Under previous practice, warranties are considered as a provision in the course of a cost accrual. Under the new requirements, a warranty might be a separate performance obligation if it is a service component that is priced or negotiated separately (see IFRS 15, para. B28 – B33).
- Use of estimates: The use of estimates is required at a more extensive level due to the determination and allocation of the transaction price on the basis of stand-alone selling prices. Previous practice required to defer revenue recognition when observable prices were not available for upgrades or additions. IFRS 15 requires an entity to estimate stand-alone selling prices (applying a market assessment, cost plus margin or a residual approach) for the goods or services in the contract (see IFRS 15, para. 76 – 80).
- Accounting for costs: The accounting requirements for costs are included in the new IFRS 15, e.g. that incremental costs to obtain a contract and costs for anticipated contracts can be included in the contract costs (see IFRS 15, para. 91 – 98).
- Disclosures: Disclosure requirements under the new IFRS 15 require a significantly higher level of detail than under previous requirements, especially with regard to more disaggregated information about recognized revenue and the performance obligations remaining at the end of the reporting period (see IFRS 15, para. 110 – 129).

Tong (2014) points out that IFRS 15 would correct the weaknesses and deficiencies of previous revenue recognition standards and that the effects depend on the transaction type and entity. The five-step model “would result in systematic and consistent revenue recognition, and thus enhances the comparability characteristic of financial statements.” (Tong, 2014, p. 19)

This chapter presented an overview of the history and the background of IFRS and their revenue recognition requirements in order to provide the context for the investigation. The chapter’s purpose was to enable the reader to interpret any findings from the following literature review and to understand the perceptions outlined in the semi-structured interviews. The overview of the development and the accounting background of IFRS 15 assists the reader in understanding the technical implications of previous studies and the background for various analyses regarding interpretations and professional judgment. The broader look on IFRS in Chapter 2 ensures that also results of previous studies surrounding the research topic can be understood as the following literature review considers research surrounding the research topic based on the explanations of Moustakas (1994).

3. Literature review

The aim of this chapter is to review literature that is already in existence and of great importance to the topic in order to indicate areas, which require investigation (Ticehurst & Veal, 2000). A literature review provides an in-depth analysis of the research conducted in the field and is the first important step in the theory development process (Yawar & Seuring, 2017). According to Hart (1998), the literature review is of major importance as the researcher explores ideas and theories related to the topic, narrows down and defines the research problem and knowledge gap and also assesses further potential research areas. Additionally, the researcher focuses on a distinction of designs, methodologies, and findings of previous studies from which new knowledge can be created (Moustakas, 1994). Moustakas (1994) further mentions that a contribution to knowledge and a structuration of the research is only possible by an identification of factors surrounding the research topic. This explanation of Moustakas (1994) is of high importance in light of the research questions as there literature related to the research questions is only available to a very limited extent.

This literature review consists of four main sections synthesizing the content of studies, which are addressing areas that are surrounding the research topic. For the largely unexplored topic, a three-fold approach was developed. At first, the research questions are divided into six main categories surrounding the research topic. After that, the results of the literature review are structured in four main sections in an order that connects closely related results within the six categories. As the third step, the findings of those sections are related back to the three research questions in order to outline the identified knowledge gaps and relevant insights for each research question. This structure aims to grasp the relevant knowledge around the research topic by retaining a focused approach.

3.1 Previous IAS on revenue recognition

The previous IFRS and related interpretations for revenue recognition are set out in two standards, namely IAS 18 – Revenue and IAS 11 – Construction Contracts as well as related interpretations. IFRS 15, however, includes comprehensive application guidance and illustrative examples, including the Basis for Conclusions (Dalkilic, 2015).

The purpose of this chapter is to provide an overview of studies with respect to previous standards on revenue recognition in order to critically assess the need for a new comprehensive revenue recognition standard. Furthermore, previously identified inconsistencies and weaknesses are to be determined. However, the exploration of the following studies clearly outlines major inconsistencies and weaknesses. These inconsistencies and weaknesses are mainly congruent, i.e. missing guidance for variable consideration, multiple-element arrangements, licensing agreements and warranties as well as insufficient disclosures (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014). Wüstemann and Kierzek (2005) also conclude that there are inconsistencies in the previous revenue recognition requirements.

IASB (2011) points out that IAS 11 and IAS 18 are materially different. This may lead to varying financial statements depending on which standard is applied. Additionally, IASB (2011) states that existing requirements do not include detailed guidance for variable considerations and rules for the time value of money. Thus, some companies may not consider the present value of money. Lastly, disclosures are inadequate and lack cohesion with the disclosure of other terms in the financial statements, e.g. many companies present revenue in isolation so that addressees of the financial statements may not be able to relate revenue to the company's financial position (IASB, 2011). McKee and McKee (2013, p. 64) agree and summarize that "materially different amounts of revenue might be recognized from a performance obligation, depending upon the revenue recognition method adopted."

Tong (2014) points out that it is difficult to apply the previous standards to multiple element arrangements and arrangements that contain variable considerations. Procházka (2009) agrees that the main weakness of IAS 18 is missing guidance with respect to multiple-element contracts. The standard requires a separation of transactions into individually identifiable elements, but does not explain how to divide the transaction into individual components and to quantify them. In the opinion of Procházka (2009, p. 16), standard-setters should "define the economic nature of revenue, determine what the amount of revenue should represent, clarify when the revenue arises with regard to different informational potential of each revenue recognition model [and] explore the behavioral model describing the users' perception of revenue-generating process."

Furthermore, Tong (2014) mentions that there is limited guidance on transactions such as licensing and warranties that include a service component. Lastly, the disclosure requirements are not sufficient for investors to understand the financial position of a firm. Khamis (2016) also mentions that there is limited guidance with respect to multiple-element arrangements, variable considerations, licensing agreements and warranties including a service component. Furthermore, disclosures do not provide sufficient transparency to stakeholders in order to understand an entity's revenue as well as underlying judgments and estimates (Khamis, 2016). Jones and Pagach (2013) reach a similar conclusion explaining that the guidance in current IFRS revenue recognition requirements is difficult to understand and to apply to complex revenue transactions and the disclosures being inadequate and inconsistent with other standards' requirements. Furthermore, they mention that there is a lot of transaction and industry-specific accounting guidance. Although these studies (IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; McKee & McKee, 2013; Procházka, 2009; Tong, 2014) have different aims and objectives, they agree on major inconsistencies and weaknesses within the old standards that may lead to a wrong application by different users.

Resulting difficulties in practice are presented in McCarthy (2012). The study shows that both in a rules-based and principles-based revenue recognition scenario, very few participants in a case study correctly calculated the amount of revenue to be considered. Although there are limitations, McCarthy (2012, p. 22) demonstrates "that few participants correctly answered the revenue amount and neglected to apply the guidance fully . . . [and that] it is still unclear if a rules-based standards or principles-based standard improves the quality of financial reporting." A similar study was undertaken by Bierstaker et al. (2016) in the US. The study aims to investigate the ability of 176 US financial managers to appropriately apply the revenue recognition standard under IFRS. US financial managers were either misapplying revenue recognition under IFRS or did not understand the standard. A significant need for additional IFRS support was identified as just 40% of participants selected the correct answer under IFRS when given the relevant guidance (Bierstaker et al., 2016). Although these studies (Bierstaker et al., 2016; McCarthy, 2012) were conducted in the US where financial managers are rather used to rules-based standards, it seems that inconsistencies and weaknesses may have led to difficulties in applying previous IFRS revenue recognition requirements.

Studies focused on interpretations of previous revenue recognition requirements are scarce. A study by Ismail (2014) focuses on IFRIC 15 in the context of Malaysia's financial reporting convergence journey for companies in the property development sector. It is an empirical study on 113 property companies with 15 additional interviews with auditors and accountants. Only 2 of 133 companies have adopted the IFRIC 15 method and concerns were raised about revenue recognition in IFRIC 15 (Ismail, 2014). Despite its limited representativeness, the findings of Ismail (2014) raise doubts with respect to the aim of IFRIC to provide interpretations for accounting issues that may receive divergent or unacceptable accounting behavior due to missing guidance (Johansson & Ringius, 2008).

Most of the studies (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014) addressing previous revenue recognition requirements were not particularly related to one of the both standards, i.e. IAS 11 or IAS 18. However, Haller et al. (2009) named IAS 11 as one of the standards responsible for a significant increase in stockholders' equity in the course of the mandatory adoption of IFRS in Germany, mainly due to the PoC method. This can be linked to the explanations of IASB (2011) that IAS 11 and IAS 18 are materially different, which might lead to a significantly varying financial statements depending on which standard is applied.

Major inconsistencies and weaknesses within the old revenue recognition standards IAS 11 and IAS 18 imply a need for new revenue recognition standard. However, whether a new standard is necessary is usually not outlined or the subject of the investigation. Only Wüstemann and Kierzek (2005) mention that the previous standards should have been improved instead of developing a comprehensively new standard. However, this conclusion was made nine years before the introduction of IFRS 15.

3.2 Revenue recognition under IFRS 15

Research on IFRS 15 is widely conducted by professional bodies and institutions. However, their research is mostly related to technical accounting and implementation questions (e.g. Deloitte, 2014, 2015; Ernst & Young, 2014, 2015, 2016; KPMG LLP, 2016). Academic research is largely not available as the standard is effective from periods beginning on or after 1 January 2018.

3.2.1 Importance and relevance of IFRS 15

Revenue recognition requirements are of high importance and relevance. That is shown by an analysis of various studies in Henry and Holzmann (2009). Based on a study that focused financial statement restatements by public companies between 1997 and 2002, 38 percent of restatements were related to problems with revenue recognition (Henry & Holzmann, 2009). Furthermore, there were a high number of class-action lawsuits because of improper revenue recognition and, as a consequence, significant changes in revenue recognition policies after the implementation of SOX (Henry & Holzmann, 2009). Another study illustrates that more than 50 percent of revenue-related restatements resulted from timing problems or from considering fictitious revenues (Henry & Holzmann, 2009). This is in line with a study conducted by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) finding out that more than half of the financial reporting frauds among US public companies between 1987 and 1997 involved overstating revenue (Phillips Jr, Luehlfing, & Daily, 2001). "When there are problems in a company's financial statements, investors are more concerned about revenue recognition than any other reporting issue." (Dalkilic, 2015, p. 81). Zhang (2005) emphasizes the importance of revenue as the single largest item in the profit and loss statement of a company and therefore its importance to investors' decision-making process and role as a metric for growth and future prospect of a company. The importance for the topic with a similar way of argumentation is addressed in other studies (Eccles, Holt, & Fell-Smith, 2005; Edel Lemus, 2014; Holzmann & Ramnath, 2013; Sondhi & Taub, 2008) as well. Therefore, it appears to be one of the major issues for accountants and standard-setters (Zhang, 2005).

Peters (2016) links this to IFRS 15 and explains that the standard affects the top line and, as forecasts need to be correct, it is crucial to report correct information to stakeholders. Peters (2016) further adds to the importance and relevance of IFRS 15 and states that entities even plan to cooperate with their competitors. It is also recommended that entities should not delay their initial impact assessment just because they do not expect major changes. Compared to previous requirements, IFRS 15 consists of more complex rules and it not only takes time to understand the requirements, but also their practical application to each single contract (Peters, 2016). As revenue recognition is a critical topic due to both errors and potential fraud (Henry & Holzmann, 2009) and investors are concerned about revenue recognition in financial reporting (Dalkilic, 2015), the new revenue recognition standard and its impact is of high relevance and importance.

3.2.2 IFRS 15 readiness

After the first publication of IFRS 15, numerous research projects on the readiness level were initiated and reveal that both companies preparing their financial statements according to IFRS and professionals within the audit or consulting sector are either not ready for the implementation of IFRS 15 (Forshay, 2017; GAAPweb, 2015; Khamis, 2016; PwC, 2016; Tysiac, 2017) or not fully prepared (Benavides, 2015; Ernst & Young, 2017a).

In the article of Tysiac (2017) from March 2017, a KPMG survey regarding IFRS 15 readiness is mentioned in which a KPMG partner describes IFRS 15 implementation as the “moment of truth” (Tysiac, 2017, p. 69). In the course of this survey, 515 corporate financial reporting executives in the US were asked regarding IFRS 15 readiness as of December 2016. At that time, 19% have not begun implementing the new standard, 62% worked on the assessment of the accounting impacts and only 13% were actually implementing the standard. 4% were developing system requirements, 2% were selecting software vendors and only 1% was finished with the implementation (Tysiac, 2017). The study of GAAPweb (2015) was conducted earlier with a similar aim, but focusing on UK businesses in 2014. Nevertheless, the findings are in line with Tysiac (2017) as over a third of the participants were not even aware of any changes affecting revenue recognition and only 27% of respondents thought that IFRS 15 might impact their organization (GAAPweb, 2015) although IFRS 15 was issued in May 2014. The survey of GAAPweb (2015) further shows that 52% of respondents were not prepared at all, 35% have reviewed the requirements set by the new standard, 9% started to assess the likely impacts and only 4% already established a project team. Although this study was conducted at a very early stage of the IFRS 15 adoption process and therefore is only representative to a limited extent, it is still noteworthy that a significant number of respondents did not analyze the standard at all notwithstanding that it was published and available to the public audience. More representative results are delivered by the 2016 revenue recognition survey conducted by PwC (2016). In August 2016, more than 700 executives from diverse industries were surveyed with respect to the stage of their companies in the implementation phase, pressing challenges, biggest impacts and how resources are managed (PwC, 2016). It turned out that 22% have not started an assessment and 65% were still in the assessment phase. Just 13% were in the implementation phase, however, 50% of those were below 50% completion. As the results of the KPMG survey in the US as of December 2016 (Tysiac, 2017) and the PwC survey in the UK as of August 2016 (PwC, 2016) are very similar, the readiness level appears to have been low only about one year before the effective date.

Forshay (2017) pursues a similar objective, however, focusing on the rather small western New York area and 50 local CPA firms. Although only six responses and only two complete responses, of which one was related to the new leasing standard due to a misunderstanding, are not a representative sample size, Forshay (2017) identifies that only 30% of the clients of this audit firm were prepared for the new standard.

Khamis (2016) is not directly addressing IFRS 15 readiness as it focuses on the perceptions of Egyptian preparers and auditors with respect to the level of familiarity, standard clarity and ease of application with a stronger focus on a qualitative approach. However, the interviews with 31 auditors and 34 preparers also show that the participants were not familiar with IFRS 15 although the standard had been issued (Khamis, 2016). Although Peters (2016) aims to verify challenges theoretically identified in practice rather than readiness, the study confirms the finding regarding unfamiliarity with IFRS 15 also from the perspective of Belgian practitioners. Lim et al. (2015) represents a similar study researching the differences between preparers and auditors in their levels of understanding, standard clarity, and ease of application across different business segments and sectors. Despite the regional focus on Malaysia, the results are comparable as accountants and auditors were not prepared to adopt IFRS 15 (Lim et al., 2015). Benavides (2015) adds that the postponement of the effective date from 1 January 2017 to 1 January 2018 reduces the pressure as neither the boards nor companies were prepared for an adoption at the original effective date.

Although these studies (Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Lim et al., 2015; Peters, 2016; Tysiac, 2017) differ in their aim, objectives, timing and focus on different specific geographical regions, the progress with respect to IFRS 15 implementation and the familiarity of stakeholders appears to be rather low. This also explains why the depth of insights in Khamis (2016), Peters (2016) and Lim et al.

(2015) is limited and implies the danger that assessments of research participants may be biased.

Despite its early timing, GAAPweb (2015) not only addresses the overall readiness level of UK companies, but also differentiated between different industries. It was concluded that participants from energy, technology and telecommunications in particular were aware of IFRS 15 (GAAPweb, 2015). Tysiac (2014) aims to provide early insights with respect to affected industries naming telecommunications, software and real estate as the main affected sectors. Peters (2016) expects a major impact for businesses within the sectors telecommunications, pharmaceuticals and aerospace. An implication of these results may be that rather significantly affected companies may have a higher awareness of the new requirements than less impacted ones.

Ernst & Young (2017a) concentrates on the consistency in the application of IFRS 15 with respect to the question what information financial institutions and especially banks were planning to disclose in their financial statements. Although the remaining results are not material for the present research project, a significant result was that most of the participants expressed a preference for the modified retrospective transition method and that all but one participant planned to adopt IFRS 15 as of the effective date 1 January 2018. This result may be connected to the rather low progress level of companies.

These studies' (Ernst & Young, 2017a; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Lim et al., 2015; Peters, 2016; Tysiac, 2017) results are indicators that companies in different locations and from different industries do not seem to be on a readiness level, which would be expected for the implementation of a new accounting standard. Still, awareness and readiness may be affected by the significance of the impact IFRS 15 may cause based on a first assessment, e.g. due to the industry (GAAPweb, 2015; Peters, 2016; Tysiac, 2014).

3.2.3 Potential effects of IFRS 15

Studies on potential effects due to IFRS 15 are limited with respect to the level of detail and mostly provide information on a qualitative basis explaining that the impact depends on the industry, the understanding of the new standard and the related use of professional judgment (Oyedokun, 2016; PwC, 2016; Tysiac, 2014). Independent from the industry, disclosures play a significant part in the course of the implementation and application of the new standard and also other issues such as indirect effects on taxes (Campbell, 2017; Oyedokun, 2016; Tysiac, 2017).

Oyedokun (2016) mentions that, although the definition for revenue is simpler in IFRS 15 than in IAS 18, the new standard provides much greater detail in many respects. However, “the lack of bright lines will result in the need for increased judgment.” (Oyedokun, 2016, p. 23). Oyedokun (2016) recommends an early study and understanding of the standard by all stakeholders. Tysiac (2017) is in agreement with Oyedokun (2016) and summarizes that revenue impacts key analytical ratios and bottom-line earnings and that companies may even conduct discussions related to likely effects with their investors, especially if implementation is an issue. A detailed quantification in academic literature is not provided. PwC (2016) confirms that by showing that 72% of respondents explained that quantification of adjustments will be very difficult (25%) or somewhat difficult (47%).

Oyedokun (2016) points out that the standard has an effect on almost all entities with respect to the increasing requirements for disclosures. Tysiac (2017) agrees with respect to the requirements for the notes to the financial statements and mentions that the SEC will look for detailed qualitative and quantitative disclosures in 2016 filings as well as about the impact of the new standard in 2017.

Besides the standard’s significance and disclosure requirements, Oyedokun (2016) also emphasizes that the effect from the standard depends on the industry and the business model without going into further detail. Tysiac (2014), however, mentions three industries with major impacts, telecommunications, software and real estate companies. Although being a comparably early paper, Tysiac (2014) provides some technical reasons why those different sectors are affected, e.g. telecommunication companies recognize more revenue when the handset is provided and less revenue when services are billed and professional judgment applied with respect to incremental acquisition costs and upfront direct costs to fulfil contracts. Software companies may experience changes as licenses that provide access to intellectual property are recognized over time whereas licenses that only provide a right to use intellectual property are considered upfront at a specific point in time. The criteria provided for distinction requires professional judgment (Tysiac, 2014). For real estate companies, Tysiac (2014) explains that there is no clear guidance whether or not a sales takes place based on passing control to the purchaser. Furthermore, “new benchmarks for recognition over time", depending on the reimbursement for costs incurred and reasonable profit, "disaggregation of performance obligations", e.g. should embedded services accounted as separately, and "nonrecourse seller financing", as the seller has to apply judgment if the purchaser is creditworthy enough (Tysiac, 2014, p. 43).

It is important to consider that these initial assessments of Tysiac (2014) were conducted on an only theoretical and technical level. About two years later, PwC (2016) finds out that almost two thirds of the survey participants do not expect a material impact to their income statement. This means that figures may not materially change for a large number of companies, but disclosures are expected to be more extensive in future financial statements (Oyedokun, 2016; Tysiac, 2017). Errors and potential fraud (Henry & Holzmann, 2009) and concerns of investors in financial reporting (Dalkilic, 2015) may also be limited. However, this would also question the relevance and importance of IFRS 15.

Campbell (2017) follows a different research aim and reviews tax implications of IFRS 15. Indirect effects on deferred taxes may arise as revenues for software contracts are expected to be accelerated due to the fact that the price has to be allocated to each performance obligation based on the stand-alone selling price. This may lead to higher book tax differences. Furthermore, the new standard my lead to changes in foreign tax credits as well as state and local tax appointment. Other important areas are uninstalled products, customer change orders, warranties and claims, transfer-of-control issues, measuring the progress of a contract and tax accounting methods (Campbell, 2017). Although Campbell (2017) addresses a very specific area with respect to IFRS 15, no detailed quantification is provided. This is comparable to other studies (Oyedokun, 2016; PwC, 2016; Tysiac, 2014).

Although the significance of IFRS 15 is explained (Oyedokun, 2016; Tysiac, 2017), studies lack considerable details with respect to potential effects due to IFRS 15. This is reflected in practice as even in 2016 companies still had problems to quantify the effect (PwC, 2016). However, the effect on the revenue figure itself may be limited for a large number of companies (PwC, 2016). Rather, extended disclosure requirements could be important (Oyedokun, 2016; Tysiac, 2017).

3.2.4 IFRS 15 implementation

The review of literature related to the implementation of IFRS 15 on an organizational level not only revealed that IFRS 15 may have accounting implications, but also goes far beyond accounting due to the necessity of new systems and processes (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017).

McCarthy (2012) aims to find out if the convergence of US GAAP and IFRS in the area of revenue recognition would result in an improvement of the quality of financial statements. McCarthy (2012) based the analysis on the IASB's and FASB's exposure draft on revenue from contracts with customers and was therefore conducted at a comparably early stage. This may limit the representativeness of the results of the study obtained by a case experiment with 127 highly-experienced financial managers. However, the results indicate that experienced financial managers had difficulties in applying both the rules-based and the principles-based standards to a fairly simple software revenue transaction due to inconsistent interpretation of the guidance (McCarthy, 2012). However, no further details are provided. In addition to a case study approach, Khamis (2016) applies interviews and a questionnaire with 31 auditors and 34 preparers in Egypt and finds out that participants believed that judgments are needed for numerous questions, e.g. for the determination of the transaction price for a performance obligation, financing components, separation of performance obligations and the allocation of the transaction price (Khamis, 2016). The new accounting requirements may be difficult to understand and to apply, which might lead to several interpretations and different outcomes (Peters, 2016).

Despite the fact that GAAPweb (2015) illustrates that a limited number of respondents were prepared for IFRS 15 implementation, it provides information on IFRS 15 implementation issues explaining that 30% of participants expect the biggest challenge in the allocation of revenue and accounting estimates while 17% suppose that the implementation of new systems and processes would be problematic. Further 14% mentioned presentation and disclosure requirements as the central challenge. PwC (2016) further analyzes challenges on the organizational level and finds out that 68% of firms stated that revisions to systems and associated controls would be either very difficult or somewhat difficult. 23% expect to see a high impact, 31% a moderate impact on IT systems and almost 60% expect between USD 0.5 to 1m of incremental costs. This implies that accounting questions have been analyzed in the course of the assessment process and that the implementation itself becomes the central issue compared to GAAPweb (2015). Tysiac (2014) confirms this by mentioning that expensive new systems are needed as an additional layer of accounting between billing and payment and ledger systems.

GAAPweb (2015) and PwC (2016) do not provide further details with respect to the organizational structure in the course of the implementation of IFRS 15. Tysiac (2017) clarifies the challenges of the implementation process and concludes that a governance structure including a steering committee and executive sponsorship across the key departments of finance, IT, investor relations and tax is necessary. Furthermore, clearly defined working groups and documentation are of major importance. Dalkilic (2015) further aims to clarify the question how to revise IT and ERP systems and summarizes that the five-step revenue recognition model needs to be transferred into the IT and ERP landscape as well as the change in mindset needs to be transported throughout the firm. Oyedokun (2016) confirms the presumption regarding information technology systems, but also adds potential changes with processes and the internal control landscape having to be considered by entities in order to be capable to manage new data and the change in financial reporting. The relevance for such implementation efforts is also taken up by Peters (2016) pointing out that IFRS 15 goes beyond the accounting dimension and requires continuous monitoring from entities, even after the completion of the implementation.

Certain structures and knowledge, however, are not only necessary within the companies, which are adopting IFRS 15, but also by auditors or consultants being affected by the new standard. Forshay (2017) mentions that it is crucial to train CPA firms' staff and that the planning phase for assurance services might increase by approximately one hour per engagement. With respect to further external support, however, PwC (2016) shows that 63% of participants expected to leverage existing resources rather than hiring more individuals or consultants.

IFRS 15 seems to have a very high impact on businesses, requires training of employees and careful planning to ensure that all required data is captured. Most importantly, businesses need to understand that the whole business is affected and not just the accounting department (Weaver & Woods, 2015). However, the level of detail provided by these studies (Forshay, 2017; GAAPweb, 2015; Khamis, 2016;

Peters, 2016; PwC, 2016; Tysiac, 2017) is limited due to their study design and timing and therefore may be biased or based on presumptions of research participants rather than direct experiences.

3.3 Adoption and implementation of IFRS

The adoption of IFRS is subject to numerous theoretical and empirical examinations in order to explore the costs and benefits as well as influential factors throughout the implementation process. The results of various studies based on stakeholders' perceptions show that the adoption of IFRS might lead to high financial costs, but also to benefits such as decreased cost of capital and attraction of foreign investors (Abdullah, Naser, & Al-Duwaila, 2017).

3.3.1 Push towards accounting harmonization

Bae et al. (2008) focuses on differences in accounting standards across countries as well as foreign analysts' ability to follow and forecast accuracy. The analysis of 44,000 forecasts for 4,200 firms in 49 countries between 1998 and 2004 finds that GAAP differences are negatively associated with both foreign analysts' ability to follow and forecast accuracy. They even matter to financial analysts, who specialize in collection, analyzing, and disseminating financial information (Bae et al., 2008). This may imply that IFRS as one single set of accounting standards improve foreign analysts' ability to follow and forecast accuracy. However, Carmona and Trombetta (2008) argue that the openness and flexibility of IFRS might imply some problems for the comparability of accounting figures and measures and may be even subject to fraud. Nevertheless, the principle-based notion has enabled the worldwide application of IFRS, which makes a new understanding of accounting and audit professions necessary (Carmona & Trombetta, 2008).

To analyze the net cost or benefit of IFRS adoption from a different perspective, Armstrong, Barth, Jagolinzer, and Riedl (2010) aim to gain insights into investors' expectations and to assess whether investors reacted differently to specific IFRS adoption events. The study considers data from 3,265 EU companies for all sixteen events between 2002 and 2005. Investors in Europe reacted positively to events, which supported the probability that IFRS are adopted in the EU, and negatively to events, which meant the opposite. Those reactions are positive for both banking and non-banking institutions, and investors generally expect net benefits in connection with IFRS adoption. Furthermore, information quality improvement and information asymmetry reduction is pertinent (Armstrong et al., 2010). Although focusing on a different aim and stakeholder group, this conclusion is in line with the findings of Bae et al. (2008). However, Brüggemann, Hitz, and Sellhorn (2013) critically review extant empirical literature on the economic consequences of mandatory IFRS adoption in the EU and conclude that empirical research generally fails to find evidence for an increase of comparability through IFRS adoption. Comparability may be questioned, but literature still claims that IFRS seem to avoid substantial reporting and measurement differences (Carmona & Trombetta, 2008). Furthermore, there is evidence that IFRS have a positive effect on capital markets and the macroeconomic level (Brüggemann et al., 2013).

Chua and Taylor (2008) aim to understand this ever-increasing push towards the international harmonization of accounting standards, particularly in the context of the wide acceptance of IFRS. Under consideration of institutional factors, the study concludes that political and social considerations were key factors in the development and diffusion of IFRS (Chua & Taylor, 2008). Considering institutional pressures on IFRS adoption as well, Pownall and Wieczynska (2016) evaluate the assertion that EU companies began using IFRS by 2005 when the EU adopted IFRS. They conducted an empirical study in the EU with three subsamples of approximately 20,000 companies. The result is that the usage of local GAAP has declined between 2005 and 2009 from 35% to 16%, which is nontrivial. Moreover, the probability of using IFRS is significantly higher if the company is being traded in EU-regulated markets, prepares fully consolidated financial statements and has a more diversified corporate structure. In summary, Pownall and Wieczynska (2016) find that even when IFRS adoption was mandatory, EU firms do not necessarily comply with the rule in a nontrivial percentage of cases.

The review of literature shows that there is disagreement with respect to the costs and benefits of IFRS adoption and implementation. Institutional pressures are an influential factor with respect to IFRS adoption worldwide, and stakeholders react positively to it (Armstrong et al., 2010; Chua & Taylor, 2008). However, IFRS adoption is also not necessarily connected to better comparability (Brüggemann et al., 2013; Carmona & Trombetta, 2008). Although institutional pressures seems to be an influential factor with respect to IFRS adoption, EU firms may not have perceived a level of pressure, which would have forced them to comply with IFRS (Pownall & Wieczynska, 2016).

3.3.2 Effect on quality as well as profitability and performance

An analysis of studies generally assessing effects of IFRS adoption may provide further insights with respect to potential effects due to IFRS 15. Soderstrom and Sun (2007) conduct a literature review on adopting different GAAPs and the widespread IFRS adoption in Europe and summarize that accounting quality after IFRS adoption in Europe is dependent on the quality of the standards, legal and political system of the country, and financial reporting incentives. Having a similar aim, but approaching it empirically, Gassen and Sellhorn (2006) analyze the determinants of voluntary IFRS adoption by publicly traded German companies between 1998 and 2004. They reach a similar conclusion that the voluntary adoption of IFRS for German companies was influenced by the size of the company, international exposure and dispersion of ownership; the adoption was especially attractive for young companies which initially went public after the mid-1990s (Gassen & Sellhorn, 2006). According to Soderstrom and Sun (2007), incentives may be financial market development, capital structure, ownership structure and the tax system, which is similar to the assessment of Gassen and Sellhorn (2006).

Horton, Serafeim, and Serafeim (2013) leave the question whether there is an improvement of the information environment of companies. However, if there is an improvement, it aims to investigate which attributes of IFRS lead to it. The empirical analysis of 2,235 mandatory and 635 voluntary adopters indicates that forecast accuracy of mandatory adopters increases more compared to non-adopters or voluntary adopters. This is due to the comparability benefits of IFRS, especially for firms of which the accounting treatment diverges the most from IFRS (Horton et al., 2013). This is connected to earnings quality, which implies more persistent, less predictable and more conditionally conservative earnings, but earnings are of higher quality under IFRS. Furthermore, IFRS adopters have a lower level of information asymmetry, e.g. on the German equity market relative to their German counterparts (Gassen & Sellhorn, 2006).

Aside from the studies (Gassen & Sellhorn, 2006; Horton et al., 2013; Soderstrom & Sun, 2007) focusing on accounting quality questions, further studies (Callao, Jarne, &

Laínez, 2007; Haller et al., 2009; Landsman, Maydew, & Thornock, 2012) aim to assess the effects on profitability and performance of companies due to IFRS adoption. Haller et al. (2009) analyze the differences between German GAAP and IFRS by applying a quantification of the effects of the first-time adoption of IFRS of German companies in their reporting practices. The result was a statistically significant increase of equity and net income. The main impact on equity was caused by adjustments due to IAS 11, IAS 16, IAS 17, IAS 19, IAS 27 and IAS 37 while IFRS 3 affected net income (Haller et al., 2009). Therefore IAS 11 as one of the previous revenue recognition standards appears to have an effect on financial statements. While Haller et al. (2009) focus on Germany, Callao et al. (2007) aim to determine the effect on the adoption of IFRS on the relevance of financial reporting in Spain. An empirical analysis of IBEX 35 firm financial statements as of 30 June 2005 reveals that the image of Spanish firms differs significantly after the application of IFRS instead of Spanish Accounting Standards (SAS), especially with respect to the balance sheet, mostly within debtors, cash and cash equivalents, equity, long-term and total liabilities, and in the income statement mainly in operating income because of revenues and expenses and certain reclassifications of extraordinary items (Callao et al., 2007). Furthermore, book values are different from market values under both standards, however, IFRS leads to book values more in line with market values in the medium- to long-run. Applying a significantly larger sample in different countries, Landsman et al. (2012) use 21,700 firm-year earnings announcements for approximately 6,100 companies in 27 countries and investigate the effect of IFRS adoption through a portfolio investment lens. The study illustrates that firms from IFRS adopting countries have a larger increase in abnormal return volatility, abnormal trading volume and information content compared to non-adopting countries. Further indirect effects arise through a reduction of reporting lags, an increase of the numbers of analysts that are following the companies and an increased foreign portfolio investment (Landsman et al., 2012). Although there might be material effects on the financial statements of companies, the acceptance and benefits of IFRS to stakeholders appear to be reasonable.

3.3.3 Implementation of IFRS

IFRS adoption and implementation also imply implementation issues on an organizational level. Weaver and Woods (2015) point out that there is a significant level of quantitative research with a focus on financial effects through IFRS adoption, but the process of adoption on a reporting entity level and the challenges are not widely researched, and that further qualitative research on an organizational level is necessary. Despite different aims and geographical focuses, numerous studies (Adetoso, 2014; Al-Mannai & Hindi, 2015; Albu et al., 2013; Faraj & El-Firjani, 2014; Fox, Hannah, Helliar, & Veneziani, 2013; Kumar, 2015; Loyeung, Matolcsy, Weber, & Wells, 2016; Nurunnabi, 2017; Odia & Ogiedu, 2013; Phang & Mahzan, 2017; Tsai, Chu, Chang, Lee, & Huang, 2015; Weaver & Woods, 2015) analyzing the issues due to the implementation of IFRS on an organizational level exist.

Although focusing on IFRS for SMEs, which contain simplifications compared to the full IFRS based on recommendations of criteria to classify SMEs (Müller, 2016) and different countries, the investigation of Albu et al. (2013) agree with the findings of Odia and Ogiedu (2013) that personnel training and the multiplication of reporting systems are of major importance and therefore responsible for the majority of costs. This is in line with Loyeung et al. (2016) examining implementation errors in the course of the first-time adoption of new accounting standards focusing on IFRS adoption in Australia. The higher the quality of the CFO and auditors, the less implementation errors occur (Loyeung et al., 2016).

Weaver and Woods (2015) explores the challenges of implementing IFRS on an organizational level, focusing on perceptions of six auditors and eight consultants with experience from over 170 transition projects in UK, EU, Canada and Australia. Entities were mostly not, or not sufficiently, prepared for the transition to IFRS due to (1) a lack of education and training and (2) the perception that the transition was the sole responsibility of the accountant(s). In line with the previously mentioned studies (Albu et al., 2013; Loyeung et al., 2016; Odia & Ogiedu, 2013), the successful IFRS conversion projects are defined by an early start, a clearly defined plan using project management techniques, provision of the relevant training to everybody, the required sponsorship of the project and inclusion of the wider business into the transition (Weaver & Woods, 2015).

Still on an organizational level, but addressing country-specific differences during IFRS adoption, Fox et al. (2013) focuses on the UK, Ireland and Italy to examine the opinions of stakeholders on costs and benefits of IFRS adoption. Interviews with 32 corporate stakeholders show that the implementation of IFRS varies from country to country as Italians in this study spent more time and money on understanding the principles of IFRS and their assessment of potential effects compared to UK stakeholders that had higher costs for consulting and engaging with the IASB (Fox et al., 2013). Language barriers and cultural factors influence the translation and interpretation of IFRS (Weaver & Woods, 2015). This question is taken up by Rotberg (2016) measuring the influence of culture on IFRS adoption for 94 countries for which the required data for the analysis was available. In contrast to Weaver and Woods (2015) and the implications of Fox et al. (2013), no relationship between culture and the decision to adopt IFRS was identified, which is also supported by Clements, Neill, and Stovall (2010) (Rotberg, 2016). Odia and Ogiedu (2013) take a broader view by reviewing literature by countries and analyzing identified issues and challenges associated with IFRS adoption. Numerous factors to ensure an effective IFRS implementation are named, including, but not limited to, a careful planning process and extensive public education, allocation of resources, a legal and regulatory support system and institutional support with strong management systems. Furthermore, the communication has to be effective and responsive to ensure a well-developed corporate governance and transparency (Odia & Ogiedu, 2013). Further points mentioned are (1) the availability of consultative groups and continual training of auditors, regulators, analysts and other users, (2) that everybody concerned has to learn a new language and a new way of working, and (3) that all must understand that an IFRS conversion is not a one-time event but rather an ongoing project (Odia & Ogiedu, 2013).

These studies (Albu et al., 2013; Fox et al., 2013; Loyeung et al., 2016; Odia & Ogiedu, 2013; Rotberg, 2016; Weaver & Woods, 2015) are dealing with IFRS implementation in multiple countries or larger regions. There is also research with respect to country-specific investigations regarding implementation and adoption of IFRS, especially in developing countries (Adetoso, 2014; Al-Mannai & Hindi, 2015; Bahadır, Demir, & Öncel, 2016; Faraj & El-Firjani, 2014; Kumar, 2015; Nurunnabi, 2017; Phang & Mahzan, 2017). Although this study does not focus on developing countries, various implications from developing countries may be useful for the research project.

Faraj and El-Firjani (2014) analyze challenges and difficulties in the course of IFRS adoption of Libyan companies listed on the Libyan stock market. Eleven participants' answers reveal that most entities took into account existing laws and regulations. However, this does not lead to any sanctions due to a lack of enforcement or mechanisms of the Libyan Stock Exchange or external auditors (Faraj & El-Firjani, 2014). Auditors' perspectives regarding IFRS adoption on the African continent are examined by 123 questionnaires answered from audit staff and partners of professional services firms in Nigeria (Adetoso, 2014). There are also country-specific factors, such as the ethical environment and insufficient compliance, including sanctions for companies not following the rules and the fact that local standards were easier to apply than IFRS in Nigeria (Adetoso, 2014). Nurunnabi (2017) identifies similar issues in Bangladesh based on three interview rounds with 75 auditors in 2010, 2012 and 2014 and an analysis of enforcement documents between 1998 and 2010. Accountancy and adopting firms seem to be able to continue their work as no sanctions for violating rules or professional ethics are in place in these countries (Adetoso, 2014; Faraj & El-Firjani, 2014; Nurunnabi, 2017). With respect to institutional pressures, coercive isomorphism should be more proactive in Bangladesh according to Nurunnabi (2017).

Although country-specific issues may be pertinent, challenges are still similar, i.e. that there are no or inadequate training programs by the companies, no IFRS accounting education in general and a lack of adequate skills, awareness and capabilities among accountants for an IFRS conversion in Libya (Faraj & El-Firjani, 2014). Related to Nigeria, training of personnel and the complexity of the conversion project are also major challenges (Adetoso, 2014). Kumar (2015) discusses the challenges and opportunities for Indian companies facing IFRS convergence. The results comply with previous studies that education is of high importance and disclosure and reporting systems need to be adapted to IFRS requirements. Al-Mannai and Hindi (2015) study the extent of IFRS adoption by the 44 listed companies in the Qatar exchange, as well as their challenges during the implementation of IFRS. Likewise, the level of education and the professional skills of the staff are pointed out as two main challenges. Phang and Mahzan (2017) confirm the same for Malaysian firms based on 150 questionnaires answered by publicly listed companies, i.e. on the importance of proper preparation and a collaboration of all parties involved. Furthermore, coercive forces from stakeholders (especially regulators) influence the participants' preparedness for

IFRS implementation significantly, which can be in turn related to the criticism of insufficient coercive isomorphism and therefore preparation in Bangladesh by Nurunnabi (2017).

Bahadır et al. (2016) investigate the problems and possible consequences of IFRS adoption in Turkey. The questionnaire answered by 90 companies resulted in the finding that the transition to IFRS is a costly, complex and burdensome process from a Turkish perspective and that major challenges are a lack of implementation guidance, sector adapted regulations and application of fair value. Kumar (2015) also addresses problems with fair value accounting in India due to the market circumstances.

These studies dealing with IFRS implementation on the level of multiple countries (Albu et al., 2013; Fox et al., 2013; Loyeung et al., 2016; Odia & Ogiedu, 2013; Rotberg, 2016; Weaver & Woods, 2015) or developing countries (Adetoso, 2014; Al-Mannai & Hindi, 2015; Bahadır et al., 2016; Faraj & El-Firjani, 2014; Kumar, 2015; Nurunnabi, 2017; Phang & Mahzan, 2017) illustrate various conditions that must be in place when adopting IFRS depending on the culture, education and regulatory forces. On an organizational level, the IT system may be one of the most important factors in the context of IFRS 15 implementation (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017). Tsai et al. (2015) address the significance of IT systems also with respect to an overall IFRS conversion and find that effective IT governance and the system quality of an ERP system can improve the effectiveness of the IFRS implementation.

The main factors and challenges for companies conducting an IFRS conversion are culture, education of stakeholders as well as relevant IT systems within companies. Due to the complexity of IFRS conversion, a clearly defined project management process needs to be implemented.

3.4 Interpretation and judgment within IFRS

As IFRS are principles-based standards, interpretation and professional judgment within various transactions play a central role in applying the standards. This has led to numerous studies dealing with factors beyond the impact from various interpretations of accounting guidelines and professional judgment (e.g. Derun, 2017; Kulikova, Grigoryeva, & Gubaidullina, 2014; Martinsson & Edqvist, 2013; A. N. Scott, 2014), probability or uncertainty expressions (e.g. Benavides, 2015; Duh & Huang, 2012; Hellman, 2008; Huerta, Petrides, & Braun, 2016) or language or translation effects (e.g. Doupnik & Richter, 2003; Huerta et al., 2016; A. N. Scott, 2014).

3.4.1 Principles-based standards and professional judgment

Alali and Cao (2010) discuss issues related to the inconsistent interpretations and implementations of IFRS as principle-based accounting standards and conclude that various countries tend to interpret IFRS based on national interests and biases, thereby reducing reliability and credibility due to multiple interpretations. Especially in the US, researchers are sometimes skeptical of the adoption of principle-based standards compared to rules-based US GAAP standards. Gallistel et al. (2012) aim to present further recommendations for improvement of the convergence effort and also conclude that consistency and comparability across firms, industries, and nations may be problematic as the new revenue recognition standard lacks much of the current US GAAP specific guidelines for different transactions.

However, the study of McCarthy (2012) finds out that revenue recognition decisions by financial managers are more accurate under a principles-based scenario than under a rules-based scenario. This is in line with previously cited studies , which conclude that (1) the imprecision of principle-based standards may be more effective in stopping biased financial reporting than rules-based standards (Psaros & Trotman, 2004), (2) there is less aggressive reporting under a principles-based standard (Agoglia, Doupnik, & Tsakumis, 2011), (3) a move to principles-based standards results in improved financial reporting quality under consideration that also auditors have to take that step (Jamal & Tan, 2010) and (4) the use of principle-based standards might lead to lower dispersion in reporting outcomes (D. L. Collins, Pasewark, & Riley, 2012).

Due to their nature, principles-based standards require professional judgment. Derun (2017) defines professional judgment as

> a well-grounded judgment under uncertainty, which is based on professional knowledge and skills of an accountant. This judgment is introduced in the case of the absence of the normative and legal document that describes the method of accounting for the appropriate accounting object, the presence of methodological alternatives of its implementations or a direct order to apply this

> judgment in making reliable financial statements that will be used by the parties concerned for the sound decision-making (p. 28)

A similar definition is provided by Kulikova et al. (2014), who define professional judgment as

> a proved opinion of a professional accountant given under conditions of uncertainty during qualification, cost measurement, classification and evaluation of economic facts significance for purpose of accounting reporting based on the available at the this point entire, true and objective information and peculiarities of managing subject's functioning (p.62)

One technical example of an impact caused by changes in interpretation and application of accounting standards is presented by Martinsson and Edqvist (2013). They analyze how the changes in interpretation and application of IAS 19 para. 83 resulted in new accounting practice in Sweden. IAS 19 para. 83 requires that the discount rate for the purpose of discounting post-employment benefit obligations should be based on high-quality corporate bonds, or government bonds' interest rates if not available in the country in question (Ernst & Young, 2017b). An analysis of all listed companies in NASDAQ OMX Stockholm Large Cap combined with four interviews with Big 4 Audit firms and one bank found that companies started to use the yield on mortgage bonds instead of government bonds (yield on corporate bonds is not a market in Sweden), although it was not a stated alternative in IAS 19 para. 83. The main explanations for that are the changes in the bond markets, principle-based regulation, incentive-driven accounting practitioners and the fact that companies strive for legitimacy by imitating each other (Martinsson & Edqvist, 2013).

Although principles-based standards like IFRS are generally deemed to be less precise, there is consensus in the literature that principles-based standards lead to higher quality in reporting (Agoglia et al., 2011; D. L. Collins et al., 2012; Jamal & Tan, 2010; McCarthy, 2012; Psaros & Trotman, 2004). Criticism comes from US researchers who may be biased due to the rules-based regulations within US GAAP (Gallistel et al., 2012). Nevertheless, a critical perspective needs to be taken due to national interests and biases in the course of the interpretation of IFRS (Alali & Cao, 2010).

3.4.2 Language and probability and uncertainty expressions

Interpretation is often not just related to certain guidance, but also in connection with language and translation issues. A. N. Scott (2014) identifies some of the factors that may influence the interpretation and application of IFRS and establishes a framework for the consideration of translation challenges in the course the development, adoption and application of IFRS. A. N. Scott (2014) applies a qualitative approach that draws on the disciplines of linguistic and cultural studies. Davidson and Chrisman (1993, p. 7) mention that a "perfect translation may not be achievable. Furthermore, "there is a risk that the process of translation will change or lose meaning from the original version" (Nobes, 2006, p. 237). This is in line with the explanations of Camfferman and Zeff (2007), who state that language is a threat to the homogenous interpretation of accounting standards and could influence the comparability of accounting information. Translation and culture are two major factors which could harm the objective interpretation and application of IFRS (Tsakumis, Campbell Sr, & Doupnik, 2009).

Besides the limited amount of studies dealing with the translation of accounting standards, the main issue with respect to language and translation seems to result from the interpretation of probability and uncertainty expressions in the context of different languages. Probability and uncertainty expressions are widely used within IFRS. Doupnik and Richter (2003) examine the 33 IAS for which the IASC produced a German translation in 1997 and identify the following uncertainty expressions:

Table 3: Uncertainty expressions in IAS (Doupnik & Richter, 2003, p. 20)

English	German	IAS (#-Paragraph)
virtually certain	so gut wie sicher	10-17
reasonable assurance	angemessene Sicherheit	20-7
assurance	Gewissheit	16-10
expected	erwartet voraussichtlich	9-19; 11-22, 36; 16-7 4-4, 7
sufficient certainty	hinreichende Sicherheit	16-10
reasonably likely	nach vernünftigen Annahmen wahrscheinlich	22-48

probable	wahrscheinlich hinreichend wahrscheinlich	9-17; 10-8, 16; 11-11, 23- 24, 32, 36; 12-24;34; 16-8, 24; 22-27, 52, 55, 58 18-14, 20, 29, 34
likely	voraussichtlich wahrscheinlich	4-11 11-34
with the prospect	mit der Aussicht	9-6
insufficient certainty	unzureichende Sicherheit	9-18
not probable	nicht wahrscheinlich	11-34
no longer probable	nicht mehr wahrscheinlich nicht mehr erwartet voraussichtlich nicht mehr	12-56 22-47 9-25
unlikely	aller Wahrscheinlichkeit nach nicht	12-36
not expected	nicht erwartet	16-61
seriously in question	sehr zweifelhaft	11-34
remote	Wahrscheinlichkeit äußerst gering	10-9

The fact that single words such as ‘remote’ are translated into a three-word phrase ‘Wahrscheinlichkeit äußerst gering’ (literal translation = ‘probability extremely small’) indicates a lack of equivalence and inconsistency. ‘Likely’ is translated in two different words, ‘voraussichtlich’ and ‘wahrscheinlich’. Furthermore, two different English expressions, ‘likely’ and ‘expected’ are translated into ‘voraussichtlich’, and ‘likely’ and ‘probable’ are both translated into ‘wahrscheinlich’. This suggests that ‘likely’, ‘expected’ and ‘probable’ have a similar meaning in Germany (Doupnik & Richter, 2003). In total, 1,434 German and US CPAs were surveyed in a questionnaire in different languages. Doupnik and Richter (2003) find that (1) language and culture affect the interpretation of uncertainty expressions and extreme probability expressions, (2) the translation from English to German results in significant differences in interpretation and (3) non-native English speakers are less confident in interpreting uncertainty expressions.

A similar study based on the uncertainty expressions developed by Doupnik and Richter (2003) was conducted by Duh and Huang (2012) in Taiwan to examine how auditors and accounting standard-setters interpret uncertainty expressions and the effects of some proposed factors on reducing interpretative variations. 292 partners, senior managers and managers of 17 audit firms were surveyed. The study confirms that interpretation for the uncertainty expressions are quite diverse at both individual and firm levels. Only the educational level is helpful to reduce interpretative variations (Duh & Huang, 2012).

Du, Alford, and Smith (2016) also focus on probability in the context of the differences of prior definitions of ‘probable’ in IFRS and US GAAP. They conducted an experiment with 89 upper-level undergraduate students from large private universities in the US, 60% of them having an average of 2.4 years of work experience. The result was that numeric percentages assigned to likely (US GAAP) and more likely than not (IFRS) are not significantly different and suggest that the financial statement preparers will evaluate the collectability threshold in a consistent manner (Du et al., 2016). Although there is no consensus in the mentioned studies, Huerta et al. (2016) provide a new context for the interpretation of probability expressions in accounting standards and further reveals influential factors. The study investigates probability and uncertainty expressions in light of frame-switching, which “is observed in bicultural individuals, those acculturated to two cultures, who among other things, are bilingual in the languages associated with each of the cultures” (Huerta et al., 2016, p. 1). This means that the reaction to something depends on the language in which individuals are thinking. The study was conducted with 276 undergraduate accounting students from a university in the US and in Mexico by Americans interpreting standards in English, Mexican-Americans interpreting standards in English, Mexican-Americans interpreting standards in Spanish, and Mexicans reading standards in Spanish. The results show that frame-switching theory in accounting makes sense as the language used influences the participants’ frame of reference (Huerta et al., 2016).

Although Du et al. (2016) conclude that an application in their case study was conducted in a consistent manner, Huerta et al. (2016) and Duh and Huang (2012) illustrate the significance and complexity of probability and uncertainty expressions within IFRS. But not only probability and uncertainty expressions are crucial with respect to the interpretation of IFRS. Hellman (2008) investigates how the conservatism principle is applied under IFRS. In a case experiment with three companies in Sweden, he finds that making judgments with respect to probabilities and other estimates increases the opportunity for temporary conservatism consistent with previous conservative accounting treatments before the implementation of IFRS in many jurisdictions. This mix of consistent and temporary conservatism may lead to different interpretations and make the information less relevant to users (Hellman, 2008).

The review indicates that probability and uncertainty expressions are important and become even more significant in connection of language and translation contexts, which are again connected to cultural circumstances.

3.5 Manipulative actions in IFRS

Interpretation and professional judgment may lead to different results in accounting for transactions, which implies a certain scope for manipulation. In order to assess manipulation in IFRS, it is important to understand the incentives or motivations for managers to report aggressively. There are numerous studies, which try to deepen the understanding for earnings management (e.g. Capkun, Collins, & Jeanjean, 2016; Dewi & Herusetya, 2016; Giedt, 2017; Graham et al., 2005; Judd, 2015; Lim, 2016; Pustylnick, Temchenko, & Gubarkov, 2017; Son & Lim, 2017; Stice et al., 2016), fraudulent actions (e.g. Lau & Ooi, 2016) and to assess the influence the adoption or implementation of IFRS has in the context of earnings management or manipulation (e.g. Basundara & Chariri, 2014; Dahlén & Lindberg, 2017; Mikovã, 2015).

The first way to manage earnings is through a deviation from the regular business operations in order to affect the cash flow. This is called real earnings management (REM). The second variant is to steer the level of accruals in order to report the desired level of earnings. This approach is connected to professional judgment and defined as accrual-based earnings management (AEM) (Joosten, 2012).

3.5.1 Motivation and incentives for earnings management

Graham et al. (2005) deal with the understanding of earnings benchmarks or earnings trends and what factors motivate managers to exercise discretion or even sacrifice economic value. In a questionnaire sent to 401 financial executives and 20 additional in-depth interviews under consideration of positive accounting theory, the study ascertains that financial officers view earnings, not cash flows, as the most important metric reporting to outsiders (Graham et al., 2005). Graham et al. (2005) find that the background for the motivation of managers is that they meet or beat earnings benchmarks in order to create confidence on the capital market, maintain or increase stock prices, improve the reputation of the management team and impart growth prospects for the company. The study reveals that 75% of the surveyed managers would even sacrifice economic value and use accounting discretion in order to meet financial targets and show smoother earnings in order to suggest stability and lower risks of their business. In case of fraud, according to a study by Lau and Ooi (2016) in Malaysia, capital raising exercises, closeness to defaulting on debt repayments and sustaining equity overvaluations were motives. In addition, Judd (2015) finds out that companies with complex revenue recognition processes, high growth and low institutional monitoring have a higher probability that revenues are manipulated in order to meet or beat revenue forecasts.

Stice et al. (2016) have different research objectives, but a similar context, and aim to find out if managers have a preference to report revenue numbers under consideration of just above base-ten thresholds. Research in psychology shows that consumers experience e.g. the price of EUR 2.99 as substantially lower than the price of EUR 3.00 (Brenner & Brenner, 1982). Transferring that to financial reporting would mean that external stakeholders would view a revenue figure of EUR 99m significantly lower than revenues of EUR 100m. Also, the classification of a company, which generates revenues amounting to a three-digit million figure, might have a higher visibility of external investors or press and therefore enjoys increasing publicity. Not least, those factors can lead to an increase of the stock price as investors might be more likely to invest (Barber, Odean, & Zhu, 2008). Stice et al. (2016) analyze that phenomenon by using all Compustat (database of financial, statistical and market information) firms from 1950 to 2014 and Osiris (comprehensive database of financial information, ratings, earnings estimates, stock data and news a global publicly listed companies) from 1982 and 2014 with base-ten threshold applications. The study shows that the above-described phenomenon, coming from evolutionary biology, has a measurable effect on the actions of managers, financial analysts, news media and market participants (Stice et al., 2016).

Also the reaction of the capital markets to earnings management efforts contains important information. Dewi and Herusetya (2016) investigate how the capital market responses to AEM, REM and strategic revenue recognition. The study is based on 748 firm-years data of public listed companies on the Indonesian Stock Exchange

(IDX) from 2004 to 2009. The results indicate that markets react negatively to REM and included typical REM techniques analyzed by Joosten (2012). Lim (2016) confirms these findings and summarizes that the revenue trend is the driving factor or the main incentive for aggressive reporting. The level of aggressiveness in reporting is determined by the types of incentives and a managers' ability to report aggressively under the respective standard. Although being conducted empirically with 128 financial managers in Malaysia, the study by Lim (2016) provides relevant insights regarding the connection between earnings management, interpretation and professional judgment under accounting standards as well as the revenue figure.

The studies of Dewi and Herusetya (2016) and Judd (2015) also address the role of the auditor with respect to manipulation. AEM and strategic revenue recognition did not seem to have a negative impact in Indonesia and may be detected by the auditor (Dewi & Herusetya, 2016). From a more general perspective, employing auditors with industry expertise lowers the risk for manipulated revenues (Judd, 2015). Depending on the incentives and the environmental factors, manipulation may be a risk, especially in light of revenue (Barber et al., 2008) as earnings may seem more important than cash flows to external addressees (Graham et al., 2005).

3.5.2 Earnings management techniques

With respect to REM, Joosten (2012) mentions R&D expenses and selling, general and administrative expenses as tools for a deviation from operating and investing activities through changing those expenses. According to IFRS, research expenses are immediately expensed. Therefore, postponing or shifting research projects to different periods can increase earnings. Professional judgment can be applied for development costs as they can also be capitalized under the fulfilment of certain prerequisites as per IAS 38, para. 57. Overproduction, provision of price reductions to increase the volume of sales and building up inventory to lower costs of goods sold are further measures to influence earnings (Roychowdhury, 2006). Another way to boost earnings is to sell fixed assets if they are sold with a profit. Xu, Taylor, and Dugan (2007) and Dye (2002) further mention the restructuring of operating and investing activities after altering them, e.g. by the acquisition of businesses or the usage of leasing. Joosten (2012) mentions further tools such as repurchasing stocks in order to realize an increase of earnings per share or financial instruments, e.g. hedging activities or debt-to-equity swaps.

In contrast, AEM is strongly related to accounting regulations, such as IFRS, and includes professional judgment (Joosten, 2012). Officially, accruals have the purpose to reflect revenue and expenses in the period when they actually incur, independent from the actual cash inflow or outflow. However, they can be also used to manipulate the income under the requirement of discretion in accounting standards, e.g. for bad debt, asset impairments and salvage value of long-term assets (Joosten, 2012). Giedt (2017) focuses accrual-based earnings management on the three accrual accounts related to revenue, which are accounts receivable, current deferred revenues and long-term deferred revenues. Based on the analysis of almost 89,200 US firm-year observations, it turned out that specifically extending models for the detection of accrual-based earnings management by those three accruals linked to revenue increases the detection probability (Giedt, 2017).

An empirical study in order to examine fraudulent financial reporting cases in order to identify the reasons for alleged financial misreporting as well as the motives and main techniques used was conducted in Malaysia based on the published enforcement actions by the Securities Commission of Malaysia between 1998 and 2012 (Lau & Ooi, 2016). It finds that the most common attempt throughout the companies was to overstate their reported revenue by recognizing fictitious sales from non-existent customers. Those companies often had a consequential number of manipulations and in some cases also embarked on masking manipulations (Lau & Ooi, 2016). Although few reported cases were available, some cases may not have been detected yet and only Malaysian cases were analyzed, it serves as a good indicator for fraud techniques. The study of Pustylnick et al. (2017) on approximately 4,500 financial statements of US companies shows different results. Within the fraud sample, random companies were more likely to manipulate expenses, leaving revenue constant or just changing it slightly. Another different result regarding revenue manipulation provides the study of Son and Lim (2017). The empirical study employed 29,520 firm-year observations of US-companies and aimed to investigate whether a firm’s growth is associated with its likelihood of meeting or beating analyst revenue forecasts. The study separates revenue management into revenue manipulation and revenue expectation management, showing that both are effective mechanisms to achieve zero or positive revenue surprises. Revenue manipulation is more connected to growth firms in order to meet or beat analyst forecasts while revenue expectation management is less utilized by growth firms.

Overall, there are various manipulation techniques while AEM is connected to a better presentation of earnings. However, manipulation is often conducted by influencing expenses to boost income (Pustylnick et al., 2017) whereas revenue is often manipulated by a recognition of fictitious sales (Lau & Ooi, 2016). This is in line with Son and Lim (2017) mentioning that upward revenue manipulation may not be sustainable in the long-run and can mislead users' decision making.

3.5.3 Earnings management in the context of IFRS

To relate earnings management to the topic under investigation, studies on the effect of the adoption of IFRS to earnings management in various countries are explored (Basundara & Chariri, 2014; Capkun et al., 2016; Dahlén & Lindberg, 2017; Mikovã, 2015; Myers, Schmardebeck, Seidel, & Stuart, 2016).

Basundara and Chariri (2014) provide an empirical study based on a sample from companies listed in the Indonesian Stock Exchange applying the Beneish M-Score in order to assess potential differences of earnings management issues before and after IFRS adoption. It turns out that there is no significant difference in Indonesia before and after IFRS adoption based on the Beneish M-Score. A similar study was conducted in Europe using 771 companies' data during 2000 to 2013 with the aim to investigate if IFRS reduced earnings management and which effect it has on it (Mikovã, 2015). The results for Germany and the UK are comparable to the results in Indonesia based on the study of Basundara and Chariri (2014). However, it turned out that IFRS moderately contributes to accounting and reporting quality and a reduction of earnings manipulation in France (Mikovã, 2015). Dahlén and Lindberg (2017) also conducted a study similar to Basundara and Chariri (2014) and Mikovã (2015), but focusing on companies in Sweden, Denmark and Finland that changed from GAAP to IFRS. The focus there is on REM and AEM. In contrast to Basundara and Chariri (2014) and Mikovã (2015), the results show that under IFRS REM is a factor, specifically in the production sector, meaning from no REM under local GAAP to manipulation of production under IFRS (Dahlén & Lindberg, 2017). However, this link is difficult to draw as REM is related to real business decisions instead of manipulating figures applying professional judgment.

The aim of Lim (2016), among other things, is to examine the impact of different levels of accounting standard precision on managers' revenue management intentions. The study was conducted in Malaysia with 128 surveyed financial managers. Lim (2016) finds that different levels of standard precision alone did not make a difference in managers' financial reporting decision, but that incentives are more important as described in subsection 3.5.1. Incentives may be to meet or beat important benchmarks, which is part of the aim of the study of Myers et al. (2016). It investigates managerial discretion and earnings management on ASU 2009-13/14. The study was conducted considering data of approximately 1,600 companies that adopted the new standards and found no evidence that managers use discretion to manage earnings or revenue to meet or beat important earnings or revenue benchmarks following the adoption of ASU 2009-13/14. The results indicate that managers generally use the increased discretion afforded under the new standards in accordance with the stated purpose of the standards, which is an improvement of quality and value relevance of reported earnings (Myers et al., 2016). Therefore, discretion may not only be connected to a manipulation of earnings, but also to a more correct reflection of business transactions.

Capkun et al. (2016) are in line with Lim (2016) and Myers et al. (2016) and use the data of approximately 3,850 firms from 29 countries (mostly from the EU), which transitioned to IFRS between 1994 and 2009. The authors conclude that earnings management (smoothing) after 2005 (mandatory IFRS adoption and transition to new IFRS) took place compared to before 2005 for early adopters transitioning from old to new IFRS, late adopters transitioning from local GAAP to new IFRS and mandatory adopters transitioning from local GAAP to new IFRS (Capkun et al., 2016). This implies that the change in IFRS allows greater freedom to use professional judgment as well as accounting discretion and early voluntary adopters had incentives to attract outside capital and did not want to take the risk to manipulate earnings (Capkun et al., 2016). This confirms the argumentation of Myers et al. (2016) with respect to discretion, which may be used to better reflect business transactions, and that incentives are a more important factor for earnings management (Lim, 2016). Overall, IFRS may provide more freedom for discretion compared to other GAAPs, but mostly do not lead to manipulative actions (Basundara & Chariri, 2014; Mikovã, 2015) or even improve accounting quality (Myers et al., 2016).

3.6 Knowledge gap and research questions

Chapter 3 aims to highlight the key studies and important research findings related to the topic under investigation. The following sections relate the main findings and research designs of previous studies to the research questions of the study:

1. How do auditors and accountants perceive the implementation of IFRS 15 in practice?
2. What are the major interpretational areas within IFRS 15 and to what extent do these imply a risk for manipulation?
3. What is the likely impact of IFRS 15 on firms' financial statements and therefore their profitability and performance?

3.6.1 Perceptions regarding the implementation of IFRS 15

There are only two studies dealing with perceptions regarding the implementation of IFRS 15 (Khamis, 2016; Peters, 2016). However, the qualitative research of Khamis (2016) only examines the perceptions of Egyptian preparers and auditors and Peters (2016) just takes into account experiences of Belgian preparers of accounting managers. Both studies have significant limitations as the findings of Peters (2016) are based on only 18 answered surveys and one interview with a CFO in Belgium. The limited number of respondents is not representative for both the whole Belgium business world as well as IFRS 15 in general. Furthermore, the multiple-choice questions in the survey were not result-oriented due to the limited number of respondents and also the design of the questionnaire lead only to results from a relative point of view. Peters (2016) provides numerous recommendations on further research, e.g. to undertake a more focused study on particular accounting issues such as variable consideration or on particular industries and a study on quantified impacts of IFRS 15. Furthermore, the same study would gather more accurate and concrete information if done during a later academic year (Peters, 2016). These limitations and recommendations imply a knowledge gap with respect to an investigation regarding the perceptions of not only accountants, but also auditors with respect to the implementation of IFRS 15 at a later stage. Khamis (2016) focuses on the perceptions of accountants and auditors through interviews, a case study and a questionnaire, but concentrates only on Egypt, which may not be a representative country. Also in this case, a similar study at a later stage appears to be reasonable. Khamis (2016) explicitly states a recommendation for further studies regarding the impact of IFRS 15 on the transparency of financial reporting, the relationship between IFRS 15 to recognize revenue and earnings management and the effect of IFRS 15 on analysts forecast accuracy, which is related to the second research question of this study.

Weaver and Woods (2015) concentrate on challenges with IFRS transition in the UK, EU, Canada and Australia. They point out that there is a significant volume on quantitative research on the financial effect of IFRS implementation, but the adoption of IFRS on an organizational level is not widely researched (Weaver & Woods, 2015). Even after the introduction of IFRS 15, not even general challenges on an organizational level are widely researched. Weaver and Woods (2015) recommend further qualitative studies at the organizational level to add to the literature on IFRS transition, which implies a need for a qualitative study on the implementation of IFRS 15 on the organizational level. Further qualitative studies on IFRS implementation issues on the organizational level focus on country-specific issues and have a small number of interview partners (e.g. Fox et al. (2013) in Italy and UK, Faraj and El-Firjani (2014) in Libya and Nurunnabi (2017) in Bangladesh). Other studies on IFRS implementation issues on an organizational level follow an empirical approach and are also mostly related to country-specific issues (e.g. Phang and Mahzan (2017) in Malaysia, Bahadır et al. (2016) in Turkey, Adetoso (2014) in Nigeria, Loyeung et al. (2016) in Australia and Al-Mannai and Hindi (2015) in Qatar).

Khamis (2016) and Peters (2016) imply results that are valuable for the present study. The main findings are that entities are still unfamiliar with IFRS 15 and the method of revenue recognition, which might lead to misstatements. Furthermore, the implementation is supposed to go beyond the accounting dimension, needs constant monitoring and is difficult, complex, time-consuming and costly. Another important point are the areas, which require significant judgment, e.g. determination of transaction price, separation of performance obligation, allocation of transaction price and the consideration of financing components. Entities are cooperating with competitors and should not delay their initial assessment (Khamis, 2016; Peters, 2016). The implications from critically reviewing the literature on IFRS adoption in general could play an important part during the implementation of IFRS 15. Weaver and Woods (2015) explicitly state that new standards such as IFRS 15 need a significant amount of training and planning to ensure that sufficient data is captured and consideration of the wider business implications is achieved. These findings are supported by Odia and Ogiedu (2013), who add that there must be a communication system, consultative groups available, continuous training of stakeholders and that it needs to be clarified that it is not a one-time event, but an ongoing project.

Especially with respect to IFRS 15, challenges and implementation issues for companies are theoretically and superficially identified and analyzed. On the IFRS-side in general, challenges and issues are analyzed and narrowed down to major topics. However, no research was conducted that analyzes perceptions of auditors and accountants regarding the implementation and its challenges in detail to assess major drivers for IFRS 15 readiness, progress issues, project planning and scheduling with respect to the preparation, workstreams, internal and external stakeholders and their training, as well as practical implications due to technical issues and on the organizational structure and procedures. This creation of new information and contextualization of existing issues represents a significant contribution to knowledge.

3.6.2 Different potential interpretations and manipulation in IFRS 15

Khamis (2016) recommends further studies on the impact of IFRS 15 on transparency of financial reporting, the relationship between IFRS 15 to recognize revenue and earnings management and the effect of IFRS 15 on analysts' forecast accuracy. These suggestions are related to the second research question. The areas in which significant judgment is necessary are important factors regarding the potential interpretations in IFRS 15 and might also imply earnings management, manipulation or even fraudulent actions.

The explanation of Doupnik and Richter (2003) based on their examination of the 33 IAS for which the IASC produced a German translation in 1997 illustrate that interpretation is not just accounting-related, but starts with the translation from accounting standards, which may lead to significantly different interpretations of uncertainty expressions. That is why there is a recommendation for future studies not just on other languages and cultures, but especially insofar that further studies could examine whether those interpretations would result in different decisions (Doupnik & Richter, 2003). IFRS 15 is a new standard and therefore the findings of Doupnik and Richter (2003) imply an important path of research in connection with the research question regarding different potential interpretations. There may be a probability that non-native English speakers might interpret uncertainty expressions differently than English native speakers when applying the new IFRS 15. The findings of Duh and Huang (2012) confirm that implication as their study indicates that the interpretations for the uncertainty expressions developed by Doupnik and Richter (2003) might be quite different at both individual and firm levels. They recommend a further study that focuses on an expanded set of uncertainty expressions. Therefore, as IFRS 15 contains uncertainty expressions, the findings and recommendations of the two authors imply a knowledge gap on how those expressions may lead to different interpretations in the course of the application of IFRS 15.

To determine the extent of the significance of uncertainty expressions within IFRS 15, a structured search for uncertainty expressions in the standard leads to the following result:

Table 4: Uncertainty expressions Doupnik and Richter (2003) in IFRS 15

Uncertainty expression based on Doupnik and Richter (2003)	**Number of main paragraph in IFRS 15**
Reasonable	54
Expected	9d, 52a, 57b, 61bi, 95c, 100
Probable	9e, 13, 56, 57
Likely	53b
not expected	57b
Significant	13, 29, 38, 56, 57, 60, 61, 62, 100, 110, 118, 119

The analysis reveals that probability and uncertainty expressions are also present in IFRS 15 and might have an impact on the interpretation of both native and especially non-native English speakers. Typically, IFRS are subject to the highest risk of differences in interpretation and application (A. N. Scott, 2014). As stakeholders should be more aware of translation issues, further research is necessary to determine the impact of potential different applications and interpretations of accounting standards (A. N. Scott, 2014) and therefore also IFRS 15.

Especially the term ‘probable’ was subject to previous investigations regarding its interpretation by students. While Du et al. (2016) do not discover a difference in the collectability threshold in the course of the convergence of IFRS and US GAAP, Huerta et al. (2016) reveal that the application of frame-switching theory to accounting, i.e. that the decision-making process is influenced by the language in the same culture, makes sense. This implies that interpretation of actual transactions might be different from the interpretation of accounting standards.

Kulikova et al. (2014) point out that

> Conceptual bases of preparation and presentation of financial report turn out to be ideal vision of financial reporting which in practice can be achieved . . . This is proved by the fact that financial reporting is largely based on assessments, judgments, since significant role in formation of accounting financial reporting belongs to professional judgment of an accountant. (p. 62)

It can be concluded that interpretation plays a crucial part in the application of IFRS 15, however, there is no detailed research to which extent there is and in which major areas interpretation and professional judgment have a significant impact. Therefore, this study contributes to the literature.

Principles-based standards such as IFRS provide a wider spectrum for the use of professional judgment and interpretation compared to rules-based standards such as US GAAP and therefore potentially imply ways to apply earnings management or manipulation techniques. One example for this is that the fair value principle in IFRS was subject to manipulation (B. J. Williams, 2016). Numerous studies analyze the factors and circumstances for applying earnings management and the role of IFRS for earnings management strategies (e.g. Basundara & Chariri, 2014; Dahlén & Lindberg, 2017; Mikovã, 2015). Although all of those studies apply an empirical approach, they lead to different results, i.e. that there is no significant difference of earnings manipulation in Indonesia before and after IFRS adoption (Basundara & Chariri, 2014), IFRS improve reporting quality and reduces earnings manipulation in France, no difference in Germany or UK and that IFRS contribute to accounting quality (Mikovã, 2015). Furthermore, IFRS may also lead to higher REM compared to GAAP in Scandinavian countries (Dahlén & Lindberg, 2017). This implies that there is no clear and objective connection between an increase or decrease of earnings management and IFRS and that the degree of earnings management is rather connected to other factors. The analysis indicates that revenue manipulation may be higher for firms with complex revenue recognition, high growth firms and firms with low institutional monitoring (Judd, 2015) and that also circumstances such as the based-ten legacy (Stice et al., 2016) or generally to meet or exceed analyst revenue forecasts (Son & Lim, 2017) play an important part, but that also often revenue is left constant and expenses are more likely to be manipulated (Pustylnick et al., 2017). In other countries such as Malaysia, however, fictitious sales from non-existing customers were still used to overstate reported revenue (Lau & Ooi, 2016), but also that not the standard precision itself, but especially the incentives for managers are an important factor (Lim, 2016). The different results illustrate that an application of earnings management or manipulation techniques depends on incentives, the impression a company wants to make to market participants.

These findings, however, were not applied to a specific IFRS or a specific topic such as revenue recognition under IFRS yet. The present study aims to analyze manipulation or earnings management in the context of IFRS 15 and therefore aims assess the risk of manipulation in the standard. Therefore, the research question is not only addressing different interpretation or professional judgment areas within IFRS 15, but also focuses on potential areas for an overstatement of revenues. Therefore, the study contributes to knowledge with respect to the question whether it is possible to manipulate revenues under IFRS 15 and to which degree it is done in practice.

3.6.3 The likely impact of IFRS 15 on firms' profitability and performance

The third research question forms the connection between implementation issues and various interpretations to measurable effects on the profitability and performance of affected entities. The study focuses on the likely impact of IFRS 15 on firms' profitability and performance as IFRS 15 financial statements are not expected to be available before the end of the first quarter of 2019. This is due to the fact that the effective period was postponed to periods starting on or after 1 January 2018 (Peters, 2016) in July 2015 after concerns of preparers having been raised (Rutledge et al., 2016). However, companies are obliged to publish information with respect to their status quo and expectation of the impact of IFRS 15 in accordance with IAS 8. Therefore, the preliminary results described by DAX 30 companies in their latest available annual reports are added to the analysis in order to triangulate the research results.

Industries, which will be potentially most affected, have been identified. Peters (2016) expects a limited number of industries, mainly the telecommunications, pharmaceuticals and aerospace industry. Especially in companies or industries with complex contracts such as long-term service contracts or multiple-element arrangements, the standard could have a major effect on the amount and/or timing of revenue recognition, which is often related to the construction, manufacturing and customized software industry (Tong, 2014). Peters (2016) indicates that various industries rank the relevance of each of the five steps of the five-step model of IFRS 15 and the relevance of various accounting issues differently, i.e. accounting for contract modifications, the distinct character of a good/service, accounting for contract costs, accounting for variable consideration, significant financing components and new disclosure requirements. However, this is only done for a very limited number of companies, only in Belgium and without providing further in-depth insights.

As studies also reveal that most of the adopters in different countries were not yet ready for the adoption (e.g. Lim et al. (2015) in Malaysia, Benavides (2015) in the US, Khamis (2016) in Egypt and Peters (2016) in Belgium), this implies that a thorough quantification of the likely impact on firms' profitability and performance was not feasible so far. That is in line with the recommendations for further studies by Peters (2016), which mentions not only that research on particular technical areas or industries could be conducted, but especially a study on quantified impacts of IFRS 15 on the financial statements of entities. As an empirical study is not possible as IFRS 15 financial statements of companies are not publicly available yet, this study still expects deeper and more valuable insights due to its timing as previous studies may have been conducted too early during the IFRS 15 adoption process. This is in line with the recommendation by Peters (2016) explicitly stating that a similar study would gather more accurate and concrete information if done in 2017 or later.

Therefore, the present study contributes to the knowledge due to the fact that the timing seems to be reasonable to obtain a first assessment of stakeholders regarding quantified expected impacts. Additionally, this contribution is supported by an analysis of the preliminary results described by DAX 30 companies in their latest available annual reports.

3.7 Conclusion

There is a gap in the literature in two regards. Firstly, there is no indication of people's perceptions and experiences in companies adopting IFRS 15 or in professional service companies. Secondly, a focused approach has not yet been taken to analyze different interpretations or the risk for manipulation that may be subject to misinterpretation and misuse of the standard. To address that gap and the questions raised therein, this research project aims to explore an uncovered, faithful, and authentic account of perceptions in order to gain insights into the effectiveness and efficiency of IFRS 15 in the context of its predefined purposes and firms' profitability and performance.

The objective of this chapter was to review the literature that is already available and of major importance to the topic in order to identify areas which require further investigation (Ticehurst & Veal, 2000). Furthermore, this subsection contributes to knowledge in the context of the research questions as current literature is analyzed in a new context. The completion of the review was decided to be completed when no new concepts were found in the set of articles in line with the statements of Webster and Watson (2002).

4. Theoretical framework

The role of theory within research is to work as a guide for the researcher during the development of research questions, the evaluation of research methods and the interpretation of findings about the topic under investigation (Mathews & Perera, 1996). Due to the nature of this research, the purpose is not to make a contribution to theory. However, a critical review and systematic application of a theoretical framework ensures a substantive and theoretically informed contribution to professional knowledge and practice (Lester, 2004). Studies indicate that culture is an influential factor during the adoption and implementation of IFRS (e.g. Weaver and Woods (2015) and Phang and Mahzan (2017)) as well as interpretation and judgment of the international standards (A. N. Scott (2014) and Doupnik and Richter (2003)). Hofstede's work regarding a "country classification on five work-related cultural values, power distance, uncertainty avoidance, masculinity-femininity, individualism-collectivism, and Confucian work dynamics, has been frequently cited by researchers in the past few decades." (Wu, 2006, p. 33). Furthermore, decision-usefulness theory is applied. D. Perera (2016) outlines that the objective of accounting under the decision-usefulness paradigm is to aid the decision-making process of users of financial statements under the provision of useful and relevant accounting data. In addition, it was observed that studies draw on Institutional Theory (e.g. Chua & Taylor, 2008; Maroun & van Zijl, 2016; Martinsson & Edqvist, 2013; Nurunnabi, 2017; Phang & Mahzan, 2017), as well as the Positive Accounting Theory (e.g. Graham et al., 2005; Martinsson & Edqvist, 2013; Soderstrom & Sun, 2007). Those two theories represent major theories in scientific literature to explain accounting choice (Collin et al., 2009).

The purpose of this chapter is to critically review theoretical concepts related to the research topic as well as to discuss and justify institutional theory as a suitable lens, which contributes to the interpretation and understanding of the research results.

4.1 Institutional theory

According to Nurunnabi (2017), there are numerous disputes over the definition of the term 'institution'. "Social institutions form an element in a more general concept, known as social structure." (Wells, 1970, p. 3), are "prescribed patterns of correlated behavior" (Foster, 1981, p. 908) or are "the rules of the game in society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic" (North, 1990, p. 3). Furthermore, "if institutions are the rules of the game, organisations and their entrepreneurs are the players. Organisations are made up of groups of individuals bound together by some common purpose to achieve certain objectives" (North, 1994, p. 361).

4.1.1 Conception of DiMaggio and Powell

Institutional theory aims to explain rules, symbols and beliefs as well as the wider environment of an organization (W. R. Scott, 1987; W. R. Scott & Meyer, 1994). The theory focuses on the assumption that organizations need to conform to institutional rules and norms to legitimize their existence (DiMaggio & Powell, 1983). As one of the central studies on modern sociological institutionalism, DiMaggio and Powell (1983) state that each organization is influenced by its organizational environment. That means that organizations in a similar environment should be comparable with respect to their behavior, including the structures, choices and designs. DiMaggio and Powell (1991) further point out that internal structures reflect the rules and procedures perceived to be right by society. The version of the institutional theory of DiMaggio and Powell (1983) has been named as neo-institutional theory and focuses on "The way action is structured and order made possible by shared systems of rules that both constrain the inclination and capacity of actors to optimize as well as privilege some groups whose interests are secured by prevailing rewards and sanctions" (p. 22). These changes of organizational practices such as administrative practices or accounting processes are explained through the three mechanisms through which institutional isomorphic change occurs: (1) Coercive isomorphism, (2) Mimetic isomorphism and (3) Normative isomorphism (DiMaggio & Powell, 1983, 1991). While the three types might overlap in some settings, they rather lead to different outcomes due to different conditions (DiMaggio & Powell, 1991).

DiMaggio and Powell (1983) define that "Coercive isomorphism results from both formal and informal pressures exerted on organisations by other organisations upon which they are dependent and by cultural expectations in the society within which organisations function" (p. 150). Mimetic isomorphism occurs when "standard responses to uncertainty" (DiMaggio & Powell, 1991, p. 67) take place, i.e. that organizations start to look at other organizations that are seen as successful or as leading organizations within the field and start to mimic them. DiMaggio and Powell (1983) describe normative isomorphism as the effect from an increasing professionalization of organizations due to personnel transfers, standardized training and education of employees or the movement of companies to provide comparable services as their competitors.

4.1.2 Previous studies on institutional theory

Over the last three decades, a number of studies (e.g. Aldemir & Uysal, 2017; Carpenter & Feroz, 1992; Carruthers, 1995; Covaleski, Dirsmith, & Michelman, 1993; Dillard, Rigsby, & Goodman, 2004; Goddard, Assad, Issa, Malagila, & Mkasiwa, 2016; Hines, McBride, Fearnley, & Brandt, 2001; M. Hussain & Hoque, 2002; Irvine, 2008; Judge, Li, & Pinsker, 2010; Mezias & Scarselletta, 1994; Phang & Mahzan, 2017), which use institutional theory or apply it to various problems within accounting, were undertaken. Most of these studies acknowledge institutional theory as useful to explain and interpret various accounting developments or changes.

Mezias (1990) represents an empirical study on the Fortune 200 between 1962 and 1984, applying various economic models and an institutional model, and concludes that the institutional model increases the informative value or meaningfulness over and above the models that were dominating the applied economics literature at that time. Mezias and Scarselletta (1994) examine 120 financial reporting problems discussed by the EITF between 1984 and 1988 with a focus on the decision-making process. Also in this case, evidence for the importance of institutional theory components was found. Carpenter and Feroz (1992) aim to explain the public-sector incentives for the adoption for US GAAP in the state of New York in the US. As there is no substantiated reason identified that US GAAP significantly changed the state's financial information or practices, the authors draw on economic and sociological theories in order to find an explanation for the phenomena. They conclude that the decision of New York to adopt US GAAP was driven by institutional isomorphism and therefore also use and acknowledge a central component of institutional theory (Carpenter & Feroz, 1992). By applying an institutional perspective to extend the conceptualization of case-mix accounting systems for hospitals in the US, Covaleski et al. (1993) conclude that the institutional perspective makes a significant contribution to case-mix accounting in the American health-care context. Later studies also apply institutional theory for the explanation of the development of accounting systems, e.g. Aldemir and Uysal (2017). They apply the three defined forms of isomorphism as defined by DiMaggio and Powell (1983) to the historical milestones of the development of the Turkish accounting policy throughout the 19th century.

Studies particularly applying an institutional perspective on the adoption of IFRS are Irvine (2008), Judge et al. (2010) and Phang and Mahzan (2017). Irvine (2008) applies the institutional theory framework to the national level of the UAE and the changes of their financial reporting system. Coercive, normative, and mimetic pressures by the World Bank, multinational companies, the IASB, the influence of Big 4 firms and its various international trading partners led the UAE to converge their financial reporting system to IFRS in order to gain legitimacy in global markets, access to capital markets, develop economically and increase wealth (Irvine, 2008). Judge et al. (2010) investigate 132 developing, transitional and developed economies and examines the IFRS adoption behavior of various economies from an institutional viewpoint. Besides their findings that foreign aid, import penetration and level of education are factors for IFRS adoption, they also conclude that coercive, normative, and mimetic pressures are in place, and the adopters rather seek social legitimacy than follow an economic logic (Judge et al., 2010). Phang and Mahzan (2017) investigate 150 publicly listed companies in Malaysia and also find that especially coercive pressures from regulatory forces influence the implementation of IFRS.

The review of these studies related to IFRS (Irvine, 2008; Judge et al., 2010; Phang & Mahzan, 2017) indicate that IFRS may be an important factor to gain legitimacy. Its importance to various nations can be derived based on the potential that decisions to adopt it are rather done for legitimacy reasons than considering pure economic factors. However, Carruthers (1995) and Hines et al. (2001) focus on the legitimization of organizations from different perspectives. Carruthers (1995) examines substantial decoupling in the light of organizational legitimacy as well as the audience for organizational appearances. Such an examination is of major importance as models giving raise to organizations are often based on so-called ‘rationalized myths’ in order to reflect certain positions, policies, programs, and procedures to external stakeholders and audiences, however, having no effect on task activities or organizational participants, i.e. work activities are decoupled from rule systems (W. R. Scott, 1995). Carruthers (1995) concludes that accounting is one of those features that can legitimize organizations by showing rationality and efficiency to external stakeholders. Hines et al. (2001) focus on potential myth-making of the FRRP in the UK with the goal to establish and also maintain its legitimacy. They compare the stated aims and objectives as well as procedures of the FRRP with the practical experiences of stakeholders, gathering information from semi-structured interviews with 12 company representatives and four partners from audit firms in the UK. Without negating that the FRRP is an effective regulator, Hines et al. (2001) find that there were cases with less serious issues than publicly stated by the FRRP which provides some evidence that the panel contributed to myth-making.

Based on the review of studies in accounting applying an institutional perspective, it can be concluded that institutional theory finds acceptance and often serves as an explanatory basis for accounting developments on micro and macro levels. Therefore, critiques or assessments of institutional theory in general are reviewed. An early review of leading contributor's and empirical studies of institutional theories used in the course of organizational analysis is conducted by W. R. Scott (1987). The study concluded that institutional theory is at an early stage of its development process and suggests that arguments should not be seen opposing to rational or efficiency arguments, but rather as completion or contextualization of them. The aforementioned study of Mezias (1990) agrees with that statement. More than a decade later, Dillard et al. (2004) offer criticism as they argue that institutional theory has only focused on the outcome rather than the process of institutionalization, i.e. putting very little attention on how institutional practices are established, appropriated or also eventually de-institutionalized. Dillard et al. (2004) propose a social theory-based framework for grounding and expanding institutional theory to more articulated institutionalization processes. Their expanded framework addresses the dynamics of enacting, embedding and changing organizational features and processes. They suggest to expand the focus of institutional theory based accounting research to reflect a more comprehensive representation (Dillard et al., 2004). Carruthers (1995) agrees and criticizes that institutional theory neglects the dynamics of power as it was ignored in early institutional theory (Lawrence, 2008). Lawrence (2008) cites a story of Holm (1995) that illustrates the relationship between power and institutions, dealing with the fishermen and the fish merchants of Norway. The fishermen wanted to restrict the supply of herring to realize better prices. Therefore, they had to set up a rule system that allowed them to market their herring collectively. If the assumption is made that the fishermen in this situation were rational and acted individually, it cannot be accounted for establishment and successful organization of the rule system without legal protection. Rather the fact that the fishing was concentrated from a timing and geographical perspective, the fishermen came from the same area with same social backgrounds and same technology reflects the pattern of interaction (Holm, 1995). Those social and cultural mechanisms, i.e. surveillance and shaming, represent the power of institutions (Lawrence, 2008).

Another example of power in that context would be to enforce the institution or the organization by police and the legal system of the Norwegian state, which would solve the free-rider problem. This means that institutions are always connected to the power of actors, i.e. institutional control, institutional agency, and institutional resistance, representing the limits on institutional control and agency (Lawrence, 2008). Munir (2015) captures that issue and elaborates on the fact that the theory needs to be further developed with respect to the way power operates within social life and criticizes that institutional theorists take the larger system for granted. As an example, Munir (2015) mentions that e.g. the financial crisis would be not analyzed correctly without considering capitalism, elite interests and corporate and managerial power. The concept of power has been used to analyse the introduction of financial management and cost allocations, respectively (Collier, 2001; Modell, 2002). Thereby, power has an enabling and a conflicting character. Collier (2001) addresses the enabling side of power, which contributes to the minimization of conflicts by facilitating "loose coupling, by providing a consensus between, and a context for action that accommodated both institutional and technical demands" (p. 480). On the other hand, the constraining character of power is explained by the resistance to change (Collier, 2001; Modell, 2002).

Institutional theory is relevant for an analysis of organizations, which are confronted with uncertainties and therefore compete for institutional legitimacy (DiMaggio & Powell, 1983). Therefore, it aims to explain rules, symbols and beliefs as well as the wider environment of an organization (W. R. Scott, 1987; W. R. Scott & Meyer, 1994).

4.2 Discussion

This subchapter discusses the theoretical concepts related to the research topic and justifies the conclusion why institutional theory is chosen as a lens for data analysis within this study.

4.2.1 Critical assessment of further theoretical concepts

If professional judgment in standards is required, national culture plays a significant role in the application and interpretation of IFRS (e.g. Doupnik & Riccio, 2006; Doupnik & Richter, 2003; Schultz & Lopez, 2001; Tsakumis, 2007). This implies the danger that inconsistent interpretation or application of IFRS may impact the comparability of financial statements. Furthermore, Tsakumis et al. (2009) point out the language and translation challenges in the context of the interpretation of IFRS. However, various authors (e.g. Borker, 2012a; Clements et al., 2010; Han et al., 2010; Hope, 2003; Orij, 2010; Schultz & Lopez, 2001) legitimately criticize the classic cultural dimension models for its view that culture is the only factor for the analysis of various accounting topic. This is also due to today's interconnectedness and interdependence (Borker, 2013). As this study takes place in Germany and uses German data, the cultural dimensions of Germany are the only factor for a substantiation of or challenging the results. However, this may be the only major insight the theory provides as studies applying Hofstede's cultural dimensions (e.g. Borker, 2012a; Clements et al., 2010; Han et al., 2010; Hope, 2003; Orij, 2010; Schultz & Lopez, 2001) rather focus on country comparisons. As this study only uses data and insights of German research participants, no country comparison is part of this research. Therefore, Hofstede's cultural framework will not be used as the major theoretical framework to interpret and understand results, not least as Orij (2010) explicitly criticizes that cultural data may need a refinement and cultural differences are sometimes a too simplistic tool for a country comparison (Schultz & Lopez, 2001)

Positive Accounting Theory aims to predict accounting choices based on hypotheses and assumptions. Kaya (2017) summarizes that Positive Accounting Theory is dependent on other hypotheses, i.e. efficient market hypothesis, the capital assets pricing model and agency theory. In line with Kaya (2017), the review of papers results in the finding that researchers are mostly trying to predict accounting choices only with respect to managements' incentives, the capital structure of the firm and its exposure to public oversight. Positive Accounting Theory has been subject to serious criticism on research methods and theoretical foundations used, as well as its economic bases and philosophy of science for years (Boland & Gordon, 1992; Chambers, 1993; Christenson, 1983; Dechow et al., 2010; Fields et al., 2001; Milne, 2002; Sterling, 1990). It can be concluded that its acceptance cannot be proven. With respect to this study, applying Positive Accounting Theory as a framework to explain research results would mainly be related to an assessment of the risk for manipulation as part of the second research question. Furthermore, due to its positivistic nature, Positive Accounting Theory is often applied within studies with large sample sizes in order to test the hypotheses (Beattie, Brandt, & Fearnley, 1999; Dechow & Sloan, 1991; M. Healy & Perry, 2000; Verrecchia, 1983). Due to the early timing of IFRS 15 and the nature of the research questions, no significant insights would be expected by applying Positive Accounting Theory to this research.

While Positive Accounting Theory focuses on the existence of accounting, decision-usefulness addresses the standard-setters to choose the best alternative for the measurement and presentation of accounting data. Decision-usefulness is rooted in the ontology of standard economics and therefore suffers from serious shortcomings as a policy or research rationale. If the focus is on individual decision-making, decision-usefulness theory cannot be applied (P. F. Williams & Ravenscroft, 2015). In the context of this study, the aim is not to assess the degree of decision-usefulness of IFRS 15. If the aim of the study would be an assessment of the decision-usefulness of IFRS 15, the early timing within the implementation process would not lead to major insights as practitioners are still unexperienced with the standard. Furthermore, no IFRS 15 financial statements are available at the moment. Therefore, the significance of decision-usefulness theories for the purpose of this study is also limited.

The illustrated theoretical concepts are acknowledged due to the fact that they are often applied within accounting-related studies. However, in light of the research questions of this study, the focus on research participants within Germany and the early timing in the implementation and interpretation process of IFRS 15, it is expected that none of these theoretical concepts would provide the most suitable lens to interpret and analyse the research results.

4.2.2 Justification of institutional theory as the theoretical lens

Accounting has been seen as a social and institutional practice intrinsic to, and constitutive of, social relations since the 1980s (Hopwood & Miller, 1994). This is due to the complexity of linkages between accounting and other managerial practices in the course of the creation of costs and returns and the definition of profits and losses to which various stakeholders react or actors and agents have to respond (Hopwood & Miller, 1994).

It is anticipated that IFRS 15 goes far beyond accounting due to the necessity of adjustments of accounting systems and processes, which affect corporate departments across the entire business (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017). From a theoretical perspective, however, institutions "show resilience towards attempts of change" (Kaiser, 2014, p. 3). The tool to understand organizational life in the context of this research is institutional isomorphism as defined within the institutional theory according to DiMaggio and Powell (1983). Institutional theory has been used and widely accepted among accounting researchers (e.g. Chua & Taylor, 2008; Maroun & van Zijl, 2016; Martinsson & Edqvist, 2013; Nurunnabi, 2017; Phang & Mahzan, 2017) to explain various phenomena in accounting on a micro and macro level by applying the three mechanisms through which isomorphic change occurs, i.e. coercive, mimetic and normative isomorphism. Especially as institutional theory may serve as a powerful explanation for both individual and organizational action, it appears to be valuable to this research (Tina Dacin, Goodstein, & Richard Scott, 2002).

Decisions relating to IFRS adoption and application may be partially attributed to the need to enhance legitimacy and not just to pure economic factors (Irvine, 2008; Judge et al., 2010; Phang & Mahzan, 2017). Organizational change in the case of IFRS 15 was driven by the general reform of the revenue recognitions requirements initiated by the IASB. The previous requirements have been in place since the beginning of the introduction of IFRS. IFRS 15 was introduced in May 2014 and became effective on 1 January 2018. As organizational changes were a response to the regulatory change, institutional theory provides a useful theoretical framework how the implementation and interpretation of the new standard took place in order to cope with the external pressures. Furthermore, the enabling and constraining aspects of power in the adoption of IFRS 15 are considered as this contributes to understand how power is used to implement the new standard. The resistance of employees with respect to the adoption of a new standard will show whether the participants were able to mobilize power to resist the change (Modell, 2002).

4.3 Conclusion

The purpose of this chapter was to provide a guide for the research with respect to the further development of the research questions, the evaluation of research methods and the interpretations of later findings (Mathews & Perera, 1996). Four theoretical frameworks are introduced and discussed. Institutional theory is expected to provide useful insights and further sensitize for aspects surrounding the research topic. Considering the complexity of a variety of factors such as culture, language and translation issues, legitimization and myth-making of organizations, the chapter provided a significantly larger context for, and constant reflection on, the research design, interpretation of results and contribution to knowledge.

5. Research methodology and design

The aim of this chapter is to describe and justify the methodology to collect, analyze, scrutinize and interpret data related to the research questions.

5.1 Philosophical foundations and contextualization

"[O]ntologies, epistemologies and methodologies have fundamental implications for how research agendas are put together, what is considered important to study and how studies are conducted . . ." (Shepherd, 2014, p. 14). This subsection aims to provide an overview of the philosophical approaches serving as context and a foundation for further discussion and link them to this study.

5.1.1 The ontological question

Ontology describes the existing world or what is there (Guba & Lincoln, 1994). According to Easterby-Smith, Thorpe, and Jackson (2012), there are four different ontologies implying different views on the existing world. Those are realism, internal realism, relativism, and nominalism. The two major ontological views, which need to be differentiated, are realism and relativism. In this context, a materialistic view is associated with realism, whereas an idealistic view is linked to relativism.

The materialistic view is a highly objectivist view of a common and single reality, which exists independently of human thought and perception. According to a materialistic view, the external world can be accurately described and causally explained (Bisman, 2010). Easterby-Smith et al. (2012) describes it as a world where facts exist that can be revealed.

In contrast, reality is contextual and historically and/or socially defined within the idealistic view. Therefore, it is subjective, relativistic, and non-material. It is rather internally experienced, interpreted or constructed by the human mind (Bisman, 2010); in other words facts depend on viewpoints of the observer (Easterby-Smith et al., 2012).

In addition, internal realism and nominalism exist and are also briefly illustrated for the sake of completeness. According to Easterby-Smith et al. (2012), internal realism assumes that a single reality exists, but that it is never possible for scientist to access it. Therefore, only indirect evidence can be gathered to explain fundamental processes. Comparable to relativism, nominalism also follows an idealistic view, but is more extreme in assuming that every reality is a creation of people and that therefore no truth exists.

5.1.2 The epistemological question

The epistemological question deals with the relationship between the knower or would-be knower and what can be known. In other words, it puts emphasis on how knowledge is generated and the meaning (Guba & Lincoln, 1994). The two major concepts regarding epistemology are positivism and constructivism (Easterby-Smith et al., 2012)

The idea of positivism is that the world exists externally and should be measured objectively rather than from a subjective perspective (Easterby-Smith et al., 2012). Auguste Comte, a French philosopher and founder of the discipline of sociology and the doctrine of positivism, said that all good intellectualls had repeated that there can be no real knowledge but that, which is based on observed facts (Easterby-Smith et al., 2012). Consequently, ontological positivists believe in an external and objective reality and epistemologically generate knowledge through observations of that external reality.

In contrast, constructivists view the reality as subjective and internal, because it is socially constructed and influenced by the meanings of people. Therefore, no facts or measurements are in focus, but “what people, individually and collectively, are thinking and feeling, and attention should be paid to the ways they communicate with each other, whether verbally or non-verbally” (Easterby-Smith et al., 2012, p. 24)

There are discussions examining if ontology and epistemology are interrelated. It is abided that ontology and epistemology have to be distinguished. The basic distinction is that ontology is the nature of reality (Hudson & Ozanne, 1988) and epistemology is the relationship between the researcher and the reality (Carson, Gilmore, Perry, & Gronhaug, 2001). Nevertheless, it is ascertained that the ontological viewpoint shapes the epistemological belief with regard to how the knowledge can be generated and how the relationship between the researcher and the subject is characterized (Killam, 2013).

5.1.3 The methodological question

"Methodology refers to the way we go about discovering knowledge in a systematic way. It is more specific and practice-based than epistemology. A methodology is driven by the researcher's ontological and epistemological beliefs." (Killam, 2013, p. 9). A distinction of methodologies based on ontology and epistemology is made between deductive, inductive, and abductive procedures.

Deductive procedures are linked to positivist epistemologies and consist of testing a hypothesis through the collection of mostly quantitative data. The outcome of the process is a conclusion by the researcher, explicative, predictive, and/or extrapolative based on findings in past researches. In contrast, inductive procedures are connected to constructivist epistemologies and consist of an observation of the research object in order to formulate hypotheses. "These hypotheses are expressed in the form of abstract rules or principles of action, which can be extrapolated to explain and predict new experimentations or situations." (Savall & Zardet, 2011, p. 18). Therefore, an inductive approach provides a greater depth of understanding and meaning and is more context-bounded. The third methodology, abduction, consists of an interpretation by the observer. According to Savall and Zardet (2011) based on various authors cited in their book, the principal difference between induction and abduction is that, whilst induction is a logical inference, which attributes an a priori of consistency to the discovery, within abduction the discovery receives an explanatory or comprehensive status that will require further testing before tending toward the status of a rule.

5.1.4 Research paradigms

Guba and Lincoln (1994) define paradigms as follows:

> A paradigm may be viewed as a set of basic beliefs (or metaphysics) that deals with ultimates or first principles. It represents a worldview that defines, for its holder, the nature of the world, the individual's place in it, and the range of possible relationships to that world and its parts, as, for example, cosmologies and theologies do. (p. 107)

Fundamentally, the overlap of ontology, epistemology, and methodology form the research paradigm. According to H. Collins (2010) "The list of recognised paradigms includes: positivism, realism, interpretivism, objectivism, subjectivism, pragmatism, functionalism, radical humanist, and radical structuralist." (p. 38).

5.1.5 Discussion of research paradigms in accounting

According to Bisman (2010), "accounting and finance research has been, and continues to be, dominated by objectivist ontology." (p.6). This statement implies that accounting is objective and hypotheses can be statistically tested to produce generalizable findings (Bisman, 2010). The literature review confirms that positivist or empirical studies are widespread within accounting research practice. Additionally, the critical review of theories adapted in accounting research illustrates that there was a movement towards the development of positive accounting theories.

However, a paradigm debate started in the early 1990s. Bisman (2010) cites Ryan, Scapens, and Theobald (2002) and states that "a battleground between researchers with different and often unstated methodological assumptions about the nature of reality, the role of theory and the significance of empirical experimentation" (p. 7) emerged. This discussion relates to ontology and the related question if a materialistic/positivistic or an idealistic/constructivist philosophy is suitable, which also affects the epistemological question.

Hopwood (1983) states that accounting is not simply a technical craft:

> Accounting is neither a static nor a homogeneous phenomenon. Over time, all forms of accounting have changed, repeatedly becoming what they were not. Accounting, moreover, is not a homogeneous craft. Both management and financial accounts are characterized by an amazing diversity, both within a national culture and even more so across different national contexts . . . All too apparently accounting is a phenomenon which is what it isn't and can become what it wasn't! (p. 289)

In the course of the analysis or the critical examination of accounting standards, especially with respect to principles-based standards such as IFRS, hermeneutics are important. However, generalizations are often relevant to shape or improve practice and policies, which justified materialistic or positivistic research designs. "Consequently, studies examining human behaviours in connection with, or as a reaction to, accounting information could well benefit from applying multiple or mixed research methods." (Bisman, 2010, p. 7). Multiple or mixed research methods mean that quantitative and qualitative methodologies, which include the scientific objectivity and therefore generalizability as well as subjectively build up contexts leads, in the view of Bisman (2010), to the research paradigm of critical realism. Also, in other technical fields this research paradigm plays an important part in aiming to overcome the "deadlock between scientific realism and antirealism" (Sanchez, 1992, p. 157). However, that means that positivistic researchers have to accept that accounting is idealized to a certain degree.

The present study agrees with the view of Bisman (2010) as multiple of mixed research methods considering the scientific objectivity and subjectively developed context are purposeful, not least as IFRS need interpretation and judgment. However, Bisman (2010) rather addresses research methods applicable to technical accounting questions. This is in line with the statement that many of the studies available in accounting take a rather technical perspective (Hopwood, 1983). Furthermore, Bisman (2010) does not include the fact that different authors have different ontologies and epistemologies that influence the methodology (Killam, 2013). However, the explanations of Bisman (2010) appear to be useful in order to demonstrate that this study differentiates itself from previous accounting studies with respect to its depth and exploratory nature.

5.2 Research approach and design

As IFRS 15 is a largely unresearched topic, the objective of this research project is to resolve questions that have not been subject to previous research. Therefore, the research approach has an exploratory nature (Klein & Richey, 2007). The following subsection clarifies that statement and provides a justification to use a constructivist research approach in order to answer the research questions. Later in this subsection, research methods and data collection techniques are compared in order to select the most suitable one in light of the research questions.

5.2.1 Paradigm

Uma and Roger (2009) state that an exploratory study has the characteristic little is known about a specific topic or little information is available on how similar research on a similar topic was conducted by other researchers. This applies to the present study as there are only two similar studies available, but with a significantly lower degree of depth and materially greater limitations underlying their research approach (Khamis, 2016; Peters, 2016). Therefore, the researcher has to conduct extensive preliminary work to become familiar and gain an understanding of the research problem (Uma & Roger, 2009), i.e. diagnose the situation, screen other alternatives and discover new ideas (Zikmund, 2012). As observed by Hopwood (1983) in the 1980s and also identified in the literature review and theoretical discussion, most of the accounting studies adopt a rather technical perspective, often not probing the rationales for development that occurred, but also presuming a functionalist and sometimes even progressive interest. The main difference of this study, which makes it exploratory, is that it takes into account a variety of other factors connected to accounting issues such as change management aspects, language and translation issues, culture that affects interpretation and also incentives and earnings management in the course of the application of accounting regulations such as IFRS. Furthermore, the research questions require an approach that is able to "elaborate on the experiences of individuals [and] understand unique situations or groups of individuals" (Gallard & Cartmell, 2014, p. 102). A positivist approach would tend to prefer pure quantitative methods that are not suitable to the exploratory nature of the investigation. A constructivist approach allows flexibility because it focuses on the subjective experience of research participants and creates new knowledge rather than testing hypotheses (Gallard & Cartmell, 2014). This implies that there is a certain expectation that further research will be undertaken in order to come up with evidence for an identified phenomenon (Klein & Richey, 2007).

Within constructivism, the truth is a particular belief system existent in a specific context (Guba & Lincoln, 1994). It is a philosophical paradigm based on an idealistic ontology and a subjectivist epistemology. Constructivism is comparable to critical theory building as ideologies, values, and beliefs behind a research result are affected by a variety of realities that individuals construct in their mind (M. Healy & Perry, 2000). Creswell (2013) states that constructivists develop a variety of subjective meanings with respect to a certain objective or thing. A researcher needs to focus on the complexity of views rather than narrowing meanings down into categories or ideas and rely on the views of the participants, taking into account the background of the researcher in the interpretation of findings (Creswell, 2013). The definition of reality in the mind of individuals needs to be understood, reconstructed, analyzed and criticized in order to generate meaningful findings (Guba & Lincoln, 1994). Shadish (1995) states that constructivist approaches construct knowledge about reality instead of constructing the reality itself.

5.2.2 Research methodology

Amongst researchers (e.g. Creswell & Clark, 2007; Hakim, 2000; Jackson, 1999), it is common two distinguish quantitative and qualitative data collection techniques. The following subsection provides basics about those two approaches and an excursus to mixed methods. Afterwards, a justification for employing a qualitative approach is provided.

5.2.2.1 Quantitative approach

The quantitative approach is connected to the positivist research approach (Sarantakos, 2012) and suitable for an examination of large numbers of research objects or subjects (Johnson & Onwuegbuzie, 2004). The focus of quantitative approaches lies on precise testing and statistical analysis of the obtained data. Therefore, the results can often be presented by graphs or tables (Jackson, 1999). Allan and Skinner (1991) address primary and secondary data in quantitative research. In quantitative research, secondary data is often used in order to develop models or hypotheses or illustrate existing theories. After that, primary data is collected to confirm or negate those theories. Data in quantitative approaches is mostly gathered through questionnaires, surveys and experiments, which can become very complex by employing multiple techniques and variables (Ticehurst & Veal, 2000). Quantitative data provides broad generalizable findings based on the analysis of large data population (M. Healy & Perry, 2000). Although this study does not apply a quantitative approach, it should be briefly addressed that the analysis of previous studies indicate that the major, if not the predominant, proportion of accounting research (e.g. Christensen et al., 2007; Judd, 2015; Kasztelnik, 2015; McCarthy, 2012; Mikovã, 2015; Myers et al., 2016) do so.

5.2.2.2 Qualitative approach

The qualitative approach covers a wide range of epistemological positions as well as theoretical frameworks and therefore numerous different research approaches. Therefore, it is multidimensional and pluralistic with respect to paradigms (Punch, 2013). However, as qualitative research is linked to the aim to understand human experience, it is mostly connected to critical theory and constructivist paradigms (Donalek, 2005). Qualitative data collection results in more detailed data, but on a significantly smaller population, e.g. people or cases (Patton, 2002). Furthermore, it focuses on images, explanations and descriptions of human behavior and perceptions instead of facts and figures and therefore on the understanding and extraction of the meaning of participants' experiences, thoughts and explanations from their own view (Jackson, 1999). According to Greener (2008), there are eight principal qualitative methods: Case study, ethnographic research/participant observation, focus groups, interviews (structured, semi-structured, unstructured), life history research, participant diaries and structured observation. The focus is on the spoken or written word and therefore on the richness of information that could not be derived from results in the structure of a table of statistics (Jackson, 1999). The literature review explores some qualitative studies (e.g. Albu et al., 2013; Dahawy et al., 2002; Fox et al., 2013; Khamis, 2016; Lim et al., 2015; Nurunnabi, 2017). Studies such as Khamis (2016) do not lead to measurable and objective results, but provide insights into a specific topic that can be subject to further positivist research.

5.2.2.3 Mixed methods

A mixture of both methods is called 'mixed method research' and is often debated within the literature. Supporters of the mixed methods (e.g. Clark, Creswell, Green, & Shope, 2008; Tashakkori & Teddlie, 2008) address the criticisms raised. Furthermore, other authors defend mixed methods claiming that a differentiation takes away the attention of the researcher from the real issue and reduces access, validity and reliability of data (e.g. Gummesson, 2003). Mixed method researchers may enrich their results compared to qualitative or quantitative only approaches (Tashakkori & Teddlie, 2008). In theory, the advantage of the mixed method approach would be that, if a researcher understands the strengths and weaknesses of a quantitative and qualitative approach in the light of the own research project, the techniques can be combined in a way to maximize the strengths and minimize the weaknesses (Rank, 1992). Johnson and Onwuegbuzie (2004) think adding qualitative interviews to experiments as a manipulation check and add the participants' meaning to the problem enriches the study and avoids potential problems. One example for a mixed methods approach in the context of IFRS research is Peters (2016) employing predominantly questionnaires, but adding one interview with a CFO.

5.2.2.4 Discussion and justification of the constructivist approach

Every approach, quantitative, qualitative, and mixed has major advantages and disadvantages. The majority of researchers still uses either qualitative or quantitative approaches and believes that techniques should be not used together (Johnson & Onwuegbuzie, 2004). Lincoln (1990) illustrates examples in which the attempt to use mixed methods failed in results. This is also due to the fact that the qualitative variables cannot be included into predictive or regression models (Creswell, 2013). Rallis and Rossman (2003) add that a mixed research design may be very time-consuming and requires methodological skills often not found in one individual.

Johnson and Onwuegbuzie (2004) state that the driver for the technique employed are the research questions. The two first research questions in this study are implying a constructivist or qualitative research design in order to handle the complexity of the real-life phenomena and to conduct the in-depth analysis required to meet the research questions. The review of accounting literature with a focus on the application of theoretical frameworks illustrates that accounting is not a research area, particularly not in light of the research questions of this study, which allows many assumptions. A consideration of the complexity of a variety of factors such as culture, language and translation issues, legitimization and myth-making of organizations provides a significantly larger context for and constant reflection on the research design, interpretation of results as well as the contribution to knowledge. The third objective might suggest an empirical test by conducting a review of financial statements before and after the implementation of IFRS 15. However, due to the time the study takes place and the effective date of the new standard (Ernst & Young, 2017b), IFRS 15 financial statements are not yet available. Therefore, the third research question is also connected to qualitative data in order to assess the likely and not the real impact of the new standard on the figures within financial statements.

The selected approach allows the researcher to interact effectively with the participants of the study and to collect in-depth insights from different angles regarding the implementation, interpretation and likely impact of IFRS 15. Quantitative data collection is not an option as it does not fit to the ontological view of the researcher and is not compatible with the research questions. Furthermore, the topic is not widely researched and no quantifiable data can be collected. A mixed method approach is also rejected due to unavailability of quantitative data and that there is no identifiable advantage in light of the research questions. Furthermore, it would result in significant time and resource issues without an appropriate increase of the quality of the study.

5.2.3 Research method

Semi-structured interviews are the most appropriate technique for data collection within this research project. Furthermore, document analysis is used to support the findings in the course of the semi-structured interviews. The justification for this decision is provided within this subsection.

5.2.3.1 Interview types

Interviews can be differentiated into three different interview types:

Table 5: Range of interviews (Roulston, 2010, p. 14)

Structured interviews	Semi-structured interviews	Unstructured interviews
The interviewer follows scripted questions in a particular sequence	Interview protocol is used as a “guide” and questions may not always be asked in the same order; the interviewer initiates questions and poses follow up “probes” in response to the interviewee’s description accounts	Both interviewer and interviewee initiate questions and discuss topics
The interviewee chooses responses from a range of fixed options that are coded	The interviewee selects own terms to formulate answers to questions; responses are	The interviewee selects own terms to participate in free-flowing conversation

quantitatively; responses are provided by interviewer	guided by the interviewer's questions	
Asymmetrical structure	Asymmetrical structure	Possibly less asymmetrical structure
Data analyzed via deductive analysis for hypothesis testing in multivariable studies	Data analyzed via inductive analytical methods for descriptions and interpretations in interpretive studies	Data analyzed via inductive analytical methods for descriptions and interpretations in interpretive studies

A structured interview employs a predefined set of questions. Participants of the interview process are asked to select their answer from a predefined list of answers (Roulston, 2010). Therefore, those types of interviews can be conducted with all research participants in a consecutive order and minimize any influence from the interviewer on the results. Roulston (2010) mentions that researchers using structured interviews should not deviate from the script, although this imposes some danger as the interviewee may not understand questions. Leedy and Ormrod (2001) point out that structured interviews are mostly used in quantitative research and that unstructured interviews are employed in qualitative research. Semi-structured interviews may be appropriate for both methods.

The term unstructured interview is often replaced by informal conservational, in-depth, non-structured or ethnographic interview, however, for the explanatory purposes in this subsection, 'unstructured interview' is used as a term for this interview type. Unstructured interviews do not underlie any formal interview guide. Minichiello, Aroni, Timewell, and Alexander (1990) define unstructured interviews as interviews in which neither the question nor the answer categories are predetermined. Corbin and Morse (2003) refer to this type of interview as unstructured interactive interviews and mention that participants are required "to tell their story as the see it, feel it, experience it. As such, participants determine where to begin the narrative, what topics to include or exclude, the order in which topics are introduced, and the amount of detail." (p. 339). Therefore, unstructured interviews are suitable to understand the behavior of people (Bernard & Bernard, 2012). Due to the spontaneous generation of questions and the interaction that leads to unforeseeable results, unstructured interviews are often used as an additional source of data within research, whereas semi-structured interviews may be used as the single source of research data (Longhurst, 2003).

Although informal conversational, unstructured, semi-structured and structured interviews may be used in qualitative research (see e.g. Patton, 2002 for a detailed overview), all interview types used in qualitative research are open-ended, i.e. do not have response options or categories provided by the interviewer (Jackson, 1999). As soon as people's perceptions and thoughts are in the focus in qualitative research, defined answers would limit the data collection and richness, and therefore participants should have the freedom to compose their answers to open-ended questions (Mishler, 1991). However, this also implies the danger that answers of participants might result in contradictory, incomprehensible or irrelevant results (Reis & Judd, 2000).

5.2.3.2 Discussion and justification of semi-structured interviews for the research

Longhurst (2003) defines semi-structured interviews as follows:

> A semi-structured interview is a verbal interchange where one person, the interviewer, attempts to elicit information from another person by asking questions. Although the interviewer prepares a list of predetermined questions, semi-structured interviews unfold in a conversational manner offering participants the chance to explore issues they feel are important. (p. 143)

Fylan (2005) explains that semi-structured interviews are suitable for research on the 'why'-question rather than questions such as 'how many' or 'how much'. The reason is that semi-structured interviews provide flexibility by providing the opportunity to change questions and areas discussed and therefore gain a better understanding of the research question. The researcher finds out what is of major importance for the participant. This makes the approach suitable for the exploration of more complex research questions (Fylan, 2005). Semi-structured interviewing provides the researcher the opportunity to take the interviewee's perspective and understand his or her world views as researchers cannot observe everything, i.e. feelings, thoughts, intentions, behaviors and similar attributes (Patton, 2002). There is an interaction taking place between the researcher and the research participant that provides opportunities to receive more accurate responses and also forces people to answer certain questions. An observation of the respondents provides further significant information, which can be used for the analysis (Pedhazur & Schmelkin, 2013), making semi-structured interviews more valuable to this study. As the research questions are focusing on the perception and experience of people, structured interviews would provide an insufficient degree of freedom and flexibility and fail to explore key topics and major themes, which might not have been considered as relevant and important beforehand (Mukherjee, 1997). Unstructured interviews would not allow sufficient focus on the key topics in order to compare responses among research participants. Semi-structured interviews are suitable when the researcher has only one chance to conduct an interview with a participant and when participants are high-level bureaucrats and elite members of a community as in this study focused on an efficient use of their time. Semi-structured interviews demonstrate that that the researcher has full control over what he expects from the interviewee, but leaves necessary freedom (Bernard, 2017).

5.2.3.3 Supplementary document analysis

"Organisational and institutional documents have been a staple in qualitative research for many years. In recent years, there has been an increase in the number of research and journal articles that mention document analysis as part of the methodology." (Bowen, 2009, p. 27). A document analysis can be part of an interview-based project as documents contribute to addressing the research questions by providing background information or in case of the present research complement the findings gathered through the semi-structured interviews (Yanow, 2006). Document analysis can be seen as any other qualitative methods as it requires an examination and interpretation of the documents in order to generate a meaning, understanding and empirical knowledge (Bowen, 2009). To combine semi-structured interviews with a supplementary document analysis is a triangulation of methodologies which increases the validity of the research (Denzin, 2017). While document analysis may serve various purposes, it may also serve as supplementary research data. This is also the case in the present research project. Bowen (2009) describes studies that used this approach to corroborate the data gathered in semi-structured interviews. Although complementary document analysis is additional work, triangulation by using this method is realized in a very efficient way. Furthermore, it is a cost-effective and a stable way to gather additional data. Documents are unaffected by the research process and often publicly available (Bowen, 2009). However, the present research does not represent a mixed method research, but rather one focusing on semi-structured interviews with supplementary selective document analysis.

5.2.4 Data collection

This subsection provides an overview of the data collection technique. The subsection illustrates the sampling approach for research participants within this study. Furthermore, the data collection process is outlined by transparently explaining the activities with respect to the pilot study and a detailed justification for each question within the interview guide as well as the incorporated changes in the course of the pilot study. In the last part of the subsection, the rationale for the data analysis and presentation techniques as well as their implementation approach are provided.

5.2.4.1 Sample size

The identification and justification of a sample size in qualitative studies is a difficulty, which is subject to discussions as various factors and conditions, individual to each study, exist. Therefore, specific recommendations or rules are not specifically available (Morse, 2000). However, authors try to provide guidelines and also examine sample sizes within qualitative research projects. Mason (2010) investigates 560 PhD studies using qualitative approaches and qualitative interviews with respect to their sample sizes. The study shows that the most common sample sizes were 20 and 30, followed by 40, 10, and 25 and a high proportion shows multiples of ten. Hine and Carson (2007) suggests 35 interviews, Carson et al. (2001) 30 interviews in order to provide a credible picture. Guest, Bunce, and Johnson (2006) mentions that six interviews may be sufficient to obtain meaningful results and useful interpretations, however, limiting the results by stating that six to twelve interviews may also be not enough to achieve a desired outcome. Pitney and Parker (2009) provide an overview of seven qualitative studies between 1994 and 2006 resulting in sample sizes ranging from 7 to 36 research participants.

Khamis (2016) conducts a study on IFRS 15 by interviewing 31 auditors and 34 preparers of financial statements in Egypt, resulting in a total of 65 interviews. Maroun and van Zijl (2016) conducted 23 interviews in South Africa in the course of a study on IFRS adoption. The same number is used by Albu et al. (2013) investigating the adoption of IFRS for SMEs in four Eastern European countries. Fox et al. (2013) analyze IFRS implementation in Italy and the UK and incorporates the experience of 32 corporate stakeholders in the course of semi-structured interviews. With 11 research participants, Faraj and El-Firjani (2014) represent the lower end with respect to IFRS studies. The higher end represents Nurunnabi (2017) with three rounds of interviews in 2010, 2012 and 2014 with a total of 75 auditors in Bangladesh. However, there is neither a rule for a sample size in qualitative research nor a specific recommendation as every study is different (Morse, 2000; Patton, 2002).

The difficulty of identifying and justifying the sample size within research is generally handled by the concept of saturation (Glaser & Strauss, 1967). Marshall et al. (2013) state that this concept was originally developed for grounded theory studies, but is applicable to all research projects which use interviews as their primary data source. Applying the data saturation concept means that new participants are brought into the study until the data set is complete. Indications for a complete data set are data replication or redundancy, i.e. when nothing new is being added (Marshall et al., 2013). Pitney and Parker (2009) describe this saturation or redundancy of data point as the moment when the researcher does not encounter new information or continually encounters the same information. Smith, Flowers, and Larkin (2009) state that the guideline would be three to 16 participants in interpretative phenomenological studies depending on the academic significance, i.e. undergraduate to larger-scale funded projects. This sample size provides the necessary width to develop cross-case generalities, but also permitting individuals within the sample to be given a defined identity rather than being subsumed into an anonymous group in which the depth of the gathered data would be lost (Robinson & Smith, 2010).

It may be difficult to identify the point of data redundancy or when the research is completed as new data always adds something new (Mason, 2010). In the course of the review of 560 PhD studies, Mason (2010) concludes that PhD researchers either do not fully understand the saturation concept and conduct a fairly large number of interviews or they understand the concept of saturation, but conduct more interviews to not take any risk when their work is challenged. Therefore, researchers should try to be fully aware of the concept within their qualitative research in order to understand the limitations and scope of their work, but also with respect to the defense of results.

5.2.4.2 Sampling technique

One major objective in choosing research participants is that their relevance needs to be justified. This may lead to goal conflicts as e.g. a job description of a participant would help the researcher to justify the choice for a specific research subject. However, as the main focus is on the anonymity of the research participants, no further job description or relation to an organization is provided (Wiles, Crow, Heath, & Charles, 2008).

As qualitative research is emergent, findings, which are not expected by the researcher, might occur. It may then be necessary to interview participants, who were not originally considered. However, the sampling strategy is driven by the purpose of the research. Therefore, the general category of sampling is purposive sampling (Pitney & Parker, 2009). According to Welman and Kruger (1999), purposive sampling is the most important kind of non-probability sampling. It targets people, who are particularly knowledgeable about the issues under investigation (Engel & Schutt, 2014). This is crucial as in-depth insights and richness of data can only be ensured if research participants possess a sufficient level of competence facing a highly complex topic. “Participant selection should have a clear rationale and fulfil a specific purpose related to the research question, which is why qualitative methods are commonly described as ‘purposive’” (Cleary, Horsfall, & Hayter, 2014, p. 14).

Pitney and Parker (2009) provide an overview of several subtypes of purposeful sampling techniques, e.g. criterion sampling, typical sampling, maximum variation sampling, deviant sampling, snowball sampling and total population sampling. Convenient and snowball sampling are suitable in this study. Convenience sampling is a sampling technique “in which individuals who fit the criteria of the study are identified in any way possible” (Emerson, 2015, p. 2). By applying snowball sampling, also often referred to as chain, network or nominated sampling, researchers aim to be directed by participants to other participants, who meet the criteria of the study (Pitney & Parker, 2009).

The participants for the purposes of this study were selected on the basis of their profound experience through the management or direct engagement in IFRS 15 consulting or adoption projects. Similar to the study of Khamis (2016), a differentiation between auditors and accountants is implemented. Auditors are defined as executives in the audit or financial accounting advisory area within professional service companies with an extraordinary knowledge of IFRS 15. These individuals have participated in IFRS expert groups and/or conducted consulting or audit projects involving the implementation of IFRS 15. Accountants are determined as executives in finance departments, who are (co-)responsible for the implementation of the new revenue recognition requirements in their company and have comprehensive knowledge of IFRS 15. This reflects the purposive sampling strategy due to the technical complexity of the topic (Emerson, 2015). Specific criterion sampling is not necessary as hard facts like age, experience in the job or similar do not necessarily reflect the experience auditors and accountants have with IFRS 15. A convenient sample is aggregated from suitable volunteers within the professional network of the researcher (Johnson & Christensen, 2008). Furthermore, snowball sampling through recommendations or directions to other potential interviewees is implemented (Pitney & Parker, 2009).

The first approach to potential interview partners available in the network of the researcher was conducted between 3 December 2017 and 8 December 2018. 28 people were contacted via email. 23 of those were approached by using a convenient sampling from suitable people within the professional network of the researcher (Johnson & Christensen, 2008). Five further potential interviewees were acquired by recommendations or directions by applying snowball sampling (Pitney & Parker, 2009).

From contacting those 28 people, twelve interview participants resulted, seven accountants and five auditors. These interviews were conducted in December 2017 (four interviews), January 2018 (five interviews), February 2018 (two interviews) and March 2018 (one interview). Time constraints have been an issue around the turn of the year as either the preparation of the yearly financial statements or the audit of the financial statements usually takes place. Furthermore, some interviewees assessed their own expertise with respect to IFRS 15 as not sufficient enough to participate in this research project.

A second initiative to acquire potential interview partners was conducted between 28 January and 4 February 2018 after most of the interviews of the first round were conducted. 18 further people were contacted via email. The people were also identified by applying a convenient sampling within the professional network of the researcher (Johnson & Christensen, 2008), however, as they were not suitable due to their job descriptions, eight of them were asked regarding recommendations (Pitney & Parker, 2009). Due to further time constraints, limited expertise or not having suitable contact persons, additional three interview partners could have been acquired. All the interviews with interview partners acquired in the second contact initiative were conducted in March 2018. Of these three interviewees, two were accountants and one was an auditor.

The final and anonymous list of participants is illustrated in the following table:

Table 6: List of research participants

Code	**E / A***	**Job title**	**Type of enterprise**	**Job description and interviewee information**
P1	E	Manager / German CPA	Audit / Consulting	• Year of birth: 1989 • More than four years of work experience • Manager and German CPA in an audit and IFRS consulting firm • Theoretical knowledge of IFRS 15 from preparation for CPA exam and practical knowledge due to consulting work at clients implementing IFRS 15
P2	A	Manager Accounting Policy Department	Automotive industry	• Year of birth: 1986 • More than six years of work experience • Manager Accounting Policy department at a large automotive company and German CPA • Co-responsible for IFRS 15 implementation in the company; IFRS 15 occupies around 50% of working time; therefore, extensive experience with the standard
P3	A	Deputy Head of Accounting	Leasing provider	• Year of birth: 1986 • More than twelve years of work experience • Deputy Head of Accounting at a leasing provider • Co-responsible for IFRS 15 implementation, however, company rather

				affected by IFRS 9 and IFRS 16, but analysis on potential impact conducted
P4	A	Manager Corporate Accounting	Automotive industry	• Year of birth: 1987 • More than four years of work experience • Manager Corporate Accounting at a large automotive company and audit experience • Co-responsible for IFRS 15 implementation and more experience with IFRS 15 than with any other standard
P5	E	Manager / German CPA / PhD	Audit / Consulting	• Year of birth: 1984 • More than nine years of work experience • Manager and German CPA in an audit and IFRS consulting firm; holds a doctorate degree in accounting • Profound practical and theoretical knowledge due to consulting work at clients implementing IFRS 15
P6	A	Manager Accounting & Tax	Semiconductor industry	• Year of birth: 1989 • More than seven years of work experience • Manager Accounting & Tax in a semiconductor company and experience in auditing • Co-responsible for IFRS 15 implementation which occupied around 25% of working time
P7	E	Senior Manager / German CPA and tax advisor / PhD	Audit / Consulting	• Year of birth: 1977 • More than 15 years of work experience • Senior Manager and German CPA in an audit and IFRS consulting firm; holds a doctorate degree in accounting • Profound practical and theoretical knowledge due to consulting work at clients implementing IFRS 15
P8	A	Senior Finance Specialist	Software provider	• Year of birth: 1983 • More than nine years of work experience

				• Senior Finance Specialist at a software provider and German CPA with auditing experience • IFRS 15 implementation occupied around 100% of working time; therefore, extensive experience
P9	A	Director Finance & Controlling	Food industry	• Year of birth: 1975 • More than 18 years of work experience • Director Finance & Controlling in a large food industries company • Responsible for IFRS 15 implementation on group level; therefore, profound experience with IFRS 15
P10	A	Division CFO	Software	• Year of birth: 1969 • More than 25 years of work experience • CFO of a division in a large software enterprise • No detailed technical experience with IFRS 15, but confronted with the regulations in practical questions; therefore, profound experience with IFRS 15
P11	E	Self-employed consultant	Consulting	• Year of birth: 1965 • More than 16 years of work experience in accounting after a different career • Self-employed IFRS consultant serving clients in US GAAP / IFRS conversions and interim controlling projects • Detailed technical and practical experience with IFRS 15 due to conversion projects at clients
P12	E	Senior Manager / German CPA	Audit / Consulting	• Year of birth: 1979 • More than eleven years of work experience • Senior Manager, German CPA and tax adviser in an audit and IFRS consulting firm

				• Profound practical and theoretical knowledge due to consulting work at one client implementing IFRS 15
P13	A	Accounting Policy department	Automotive industry	• Year of birth: 1976 • More than 13 years of work experience • Previously auditor and German CPA in an audit firm; working within the accounting policy department at an automotive manufacturer • Implementation of IFRS is the major task of the interviewee; besides IFRS 9 and IFRS 16, IFRS 15 implementation was an important issue within the last years
P14	A	Division Head of Accounting	Mechanical engineering	• Year of birth: 1986 • More than ten years of work experience • Head of Accounting in a division of a large mechanical engineering company • Not familiar with the details of the standard, however, a lot of practical experience due to the responsibility to implement IFRS regulations in the division and discussions with auditor
P15	E	German CPA / US CPA / Tax Adviser / Senior Advisor (self-employed)	Consulting	• Year of birth: 1956 • More than 36 years of work experience • Senior advisor after having been an Audit Partner in a large audit firm for many years • Profound practical and theoretical knowledge due to consulting work at clients and due to writing two essays with respect to early stages of IFRS 15

* E = Auditor / A = Accountant

A reason for the relatively low number of interviewees compared to the number of people approached is the complexity of the topic. Many potential participants refused to participate as they have not the required experience according to their own opinion. Furthermore, time constraints due to the busy season in accounting occurred as the interviews were conducted between December 2017 and March 2018. In order to avoid history effects and as further efforts to find interview candidates were not successful, the interviews were stopped in March 2018. Furthermore, 15 interviews are a suitable number based on the saturation principle of Pitney and Parker (2009) as no new information was forthcoming within the last three interviews conducted.

The interview participants consisted of accountants and preparers and of people, who are specialists within this field. Therefore, the quality of interviewees is very high which leads to a representative and comprehensive sample size. Having achieved an interview participant number of 15 is within the average range stated by Robinson (2014) for phenomenological studies. Furthermore, the sample size is supported by sample size tests of Patton (2002) focusing on usefulness, credibility and availability of personnel.

5.2.4.3 Data collection process

An interview guide with three main sections based on the research questions was prepared. Additionally, one brief section with questions regarding the previous revenue recognition requirements according to IFRS was added in order to enable the researcher to draw a comparison. In addition, a section for introductory purposes and in order to receive background information on the respondent was implemented. Lastly, a summary and conclusion chapter in order to assess implications for improvement as well as to summarize the interview was incorporated. Each of the three sections that are related to one research question end with an assessment of the connected predefined purpose stated in IFRS 15.BC3. Therefore, the interview guide is based on an integrated approach reflecting each research question based on the literature review, the research aim and the title of the research project. The interview guide was slightly adjusted for different stakeholder groups, i.e. auditors and accountants. Table 9 in subsection 5.2.4.3.2 illustrates the rationale of the interview questions and documents the changes to them in the pilot phase.

5.2.4.3.1 Pilot study

Based on the definition of other authors mentioned, Y. Kim (2011) defines a pilot study as

> a small-scale methodological test conducted to prepare for a main study and is intended to ensure that methods or ideas would work in practice . . . the key feature of the definition of a pilot study does designate a small-scale study designed to inform a main study (p. 2)

According to Sampson (2004), pilot work is invaluable for qualitative research due to the fact that it unveils potential gaps before lots of time is invested in the research project. Due to the high complexity of the topic, one open discussion about the interview guide was conducted with one auditor (German CPA with approx. five years of work experience). This led to adjustments of the interview questions in context of the answerableness and feasibility. After that, pilot interviews with one auditor (German CPA with approx. nine years of work experience and PhD) and one accountant (Deputy Head of Accounting at a bank) were conducted at the end of November 2017. The pilot interviews have the purpose to adjust certain parts of the interview approach and guide. Furthermore, the pilot interviews were conducted in order to assess the understanding of interview questions of research participants, especially due to the high complexity of IFRS 15. The results of the pilot study were not included in the results of this research project. Implementing this kind of pilot study was essential in order to find issues and barriers in recruiting participants, reflect on the researcher’s own skills and to modify interview questions (Y. Kim, 2011).

5.2.4.3.2 Development of interview guide

The following table illustrates the rationale for each interview question and the changes due to the pilot work. The questions in the following table provide the framework. The questions were slightly adjusted to be eligible for auditors and accountants during the actual interviews.

Table 7: Preparation and adjustments of the basis for the interview guide

Section 1: Background information (3 minutes acc. to pilot study)		
Findings from literature review / rationale	**Interview question**	**Changes due to pilot results**
Basic background questions in order to assess the interviewee's knowledge and familiarity with the topic under investigation (Biebrach, 1986).	Please describe your academic and educational background.	n/a
Basic background questions in order to assess the interviewee's knowledge and familiarity with the topic under investigation (Biebrach, 1986).	Please describe your work experience with respect to previous professions and your current role in your company.	n/a
	Please provide the industry and the size of the company you are working for.	Added question regarding the industry and size of the company the interviewee is working for as this was not necessarily included in the answer.
Basic background questions in order to assess the interviewee's knowledge and familiarity with the topic under investigation (Biebrach, 1986).	Please elaborate on your exposure to and your experience with IFRS 15.	n/a
Basic demographic and numeric data to assess the interviewees' level of experience and maturity. Scaling makes it possible to relate the age and the work experience to the provided results during the interview in case necessary.	Please provide your year of birth as well as number of years of work experience.	n/a
Section 2: Previous IFRS on revenue recognition (7 minutes acc. to pilot study)		

Findings from literature review / rationale	Interview question	Changes due to pilot results
Basic background questions in order to assess the interviewee's knowledge and familiarity with the topic under investigation (Biebrach, 1986). Scaling makes it possible to compare the provided values at a later stage to assess the depth of information provided in this section and quality of information provided in the course of comparisons between IFRS 15 and the previous IAS 11, IAS 18 and related interpretations.	How would you describe your familiarity with the previous revenue recognition requirements, IAS 11, IAS 18 and related interpretations on a scale from 1 to 5? (1 means 'Rudimentary knowledge', 3 means 'Good theoretical, but less practical experience', 5 means 'Profound practical and theoretical knowledge')	Added a scale to answer this question as it appeared easier to be answered for the interviewee and for the researcher to evaluate the results, especially for challenging potential results on questions that compare IFRS 15 to the previous standards.
The literature mentions that there may be difficulties with respect to the decision which standard, IAS 11 or IAS 18, had to be applied (IASB, 2011). The question aims to find out the interviewee's opinion with respect to the previous revenue recognition standards according to IFRS in order to assess the context of the later answers with respect to IFRS 15.	Might there be problems with respect to the distinction when IAS 11 and IAS 18 had to be applied? If yes, please describe your experience.	Specified question as pilot interviews showed that this is potentially not a material issue. Therefore, question begins with a yes/no answer.
Studies show that the level of clarity of IAS 11 and IAS 18 might not be sufficient for complex transactions (Bierstaker et al., 2016; Ismail, 2014; McCarthy, 2012). The question aims to find out the interviewee's opinion with respect to the previous revenue recognition standards according to IFRS in order to assess the context of the later answers with respect to IFRS 15.	How would you describe the level of clarity of the guidance those standards provide for complex transactions? Please describe your experience.	Specified question in order to firstly receive a clear statement and then a description of the interviewee's experience.
Make sure not to miss information that may not have been covered by previous questions. Furthermore, a brief summary	Would you like to add on inconsistencies and weaknesses within IAS 11 and IAS 18 and related	Pilot interviews showed that interviewees are happy to add some

demonstrates the major issues from the interviewee's perspective again.	interpretations in the course of a brief conclusion?	more information to this brief interview section. Therefore, this question was added to give them the chance to do so and to not miss relevant information.
Section 3: Implementation of IFRS 15 (35 minutes acc. to pilot study)		
Findings from literature review / rationale	**Interview question**	**Changes due to pilot results**
Studies from between 2014 and 2017 show that companies were either not prepared or not fully prepared for the adoption of IFRS 15 (Benavides, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Lim et al., 2015; Peters, 2016). The questions seek to find answers why this is the case and to which extent it is possible to relate it to specific sectors and sizes of companies. Scaling makes it possible to draw conclusions on the IFRS 15 readiness as of December 2017 (directly before the effective date) and critically assess the results during the interview.	On a scale of 1 to 5, where would you see the 'IFRS 15 readiness' of companies/your company as of December 2017?	Status quo as of December 2017 (the month before the effective date of IFRS 15) instead of the term 'today' to avoid history effects.
	Are there companies with a specific size or within a specific industry that are outliers? *(Question asked to accountants only if more business segments are within their corporation)*	Specified question; question was too broad before as it was asking for industries and sizes of companies below or above the average value of readiness.
	Please describe how the readiness level developed from May 2014 to December 2017.	Simplified question as it was too complex before, because it was asking for early and late adopters as well.
	What are or were the major reasons that some companies/your company	Deleted question what the reasons were for companies

	were/was not or not fully prepared as of the effective date of IFRS 15?	that were well prepared as this is mostly the opposite of the answer to this question and will be indirectly addressed with later questions with respect to the IFRS 15 implementation project planning and scheduling.
The literature concludes that IFRS 15 goes far beyond accounting (Dalkilic, 2015) and that a governance structure including a steering committee, executive sponsorship across key departments (finance, IT, IR, tax) as well as clear defined working groups are necessary for its implementation (Tysiac, 2017). Furthermore, it is concluded that continuous monitoring is necessary after implementation (Peters, 2016). The questions aim to find out how an IFRS 15 implementation should look like in detail and how the required structures have to be maintained within the business organization.	How does an IFRS 15 implementation project need to be set up from an organizational and processual perspective? *(Question for accountants asks regarding the setup with respect to their company)*	A clarification was necessary that this question is only related to the implementation of IFRS 15. Question before was too broad. Therefore, it was clarified that the focus is on the organizational and processual perspective.
	Which departments have to be included in the course of an IFRS 15 implementation and which tasks do they specifically have? *(Question for accountants asks regarding the setup with respect to their company)*	Added question on departments as this question was partly not specifically answered in the course of the pilot interviews.
	What is the scope of the steering committee in the course of IFRS 15	Separate question with respect to the steering committee as it turned out in pilot interviews that it

	implementation and how is it comprised?	may be a very important instance.
	Which further organizational and procedural considerations are important in the course of IFRS 15 implementations?	Added question to make sure that nothing is missed. Interviewees in the pilot phase were happy to add or summarize issues in the course of an IFRS 15 implementation project.
	To which extent is it necessary to keep the governance structure and working groups in the further processes?	This question was added separately as it was not fully clear if the questions before are only related to the implementation or also the further processes.
	Please describe a best or worst practice experience from your practical experience. *(Question asked to accountants only if more business segments are within their corporation)*	Specific question for auditors in order to come close to the point of developing a best practice model for IFRS 15 implementation in order to challenge it against the answers of accountants.
Previous studies show that IT systems, processes and the internal control landscape have to be adjusted (Benavides, 2015; GAAPweb, 2015; Tysiac, 2017). Furthermore, the five-step model of IFRS 15 needed to be considered within the IT	To what extent were the five steps from the five-step model of IFRS 15 considered within the IT system landscape?	Specified question through the term 'to what extent' as the pilot interviews showed that this question was a yes

systems (Dalkilic, 2015). The questions aim to find out how IT systems, processes and internal control landscape specifically change in the course of the adoption of IFRS 15.		and no answer before.
	To what extent are there e.g. new IT modules or how do single IT applications specifically change due to the implementation of IFRS 15?	Question before asked regarding changes of IT system from a general perspective and was too unspecific. Therefore, question was specified.
	To what extent are new process steps implemented or processes changed in key departments due to IFRS 15 implementation?	Question before asked regarding changes of key processes from a general perspective and was too unspecific. Therefore, question was specified.
	Please describe how the internal control landscape changed due to the implementation of IFRS 15 and which new controls are developed and which are redundant?	n/a
Previous studies superficially conclude that IFRS 15 affects more than just the accounting within companies (Dalkilic, 2015; Peters, 2016). This question aims to assess and find out details about this statement to evaluate the underlying reasons.	How are other areas than accounting specifically affected by IFRS 15?	Changed the position of the question as it is somehow related to the previous set of questions from which the interviewee may pick up some thoughts.

	Are the specific areas where difficulties or a lack of understanding occurs due to the changes through IFRS 15?	Question was separated from previous question to not lead to an unstructured answer. Additionally, lack of understanding was added to explore further potential reasons for difficulties.
Studies show that training and education of employees and stakeholders of IFRS 15 is a major challenge for companies doing an IFRS conversion (Adetoso, 2014; Faraj & El-Firjani, 2014; Odia & Ogiedu, 2013; Weaver & Woods, 2015) or apply previous or the new IFRS 15 on revenue recognition (Bierstaker et al., 2016). Other factors such as hiring consultants (Forshay, 2017; Weaver & Woods, 2015) or a cooperation with competitors (Peters, 2016) may also be an issue. This question assesses to which extent companies implement training on IFRS 15 and to which extent other factors may support the implementation, e.g. consultants or cooperation with other companies.	To what extent are employees specifically trained in the course of IFRS 15 implementations for IFRS 15?	Question before was too unspecific as it asked for training on IFRS 15 in general.
	How would you describe the necessity of consultants in the course of the implementation of IFRS 15 and in which areas may they be of major importance?	Question slightly reformulated to make it easier to understand it.
	Please describe the scope and areas consultants are hired for during IFRS 15 implementation.	n/a
	What is the focus of training for auditors or consultants with respect to IFRS 15? OR Please describe the competence of your auditor or external consultants with respect to IFRS 15.	Question slightly reformulated to make it easier to understand it. Question for accountants added to challenge the

		results from the answers of auditors.
	To what extent do companies cooperate with competitors in the course of the implementation of IFRS 15?	Question slightly reformulated to make it easier to understand it.
The SEC expects a huge number of qualitative and quantitative disclosures within financial statements under IFRS 15 (Tysiac, 2017). Furthermore, disclosures are seen as a major challenge in the course of IFRS 15 implementation (Ernst & Young, 2017a; GAAPweb, 2015; Kasztelnik, 2015; Tysiac, 2017). These questions seek to gain an understanding how important disclosures are seen by companies in the course of IFRS 15 implementation, how they prepare for the new disclosure requirements and how they practically implement the new requirements. Scaling with respect to additional hours, costs and/or a percentage value makes it possible to approx. quantify the additional efforts and relate it back to the answers provided.	How do companies specifically prepare for the IFRS 15 disclosures? Please provide examples.	Question slightly reformulated to make it easier to understand it.
	What do companies have to disclose at least to meet the minimum requirements of IFRS 15? OR What is your impression of what you have to disclose to meet the minimum requirements of IFRS 15?	n/a
	How do companies manage to ensure the completeness of disclosures under IFRS 15 within their IT systems?	Specified question as the question before was generally asking how disclosures are reflected in the IT system.
	How would you describe the additional effort for disclosures under IFRS 15 in comparison to IAS 11, IAS 18 and related interpretations? Please provide the number of additional hours, costs and a percentage value.	Question was added to draw a comparison. Previous question was deleted asking for disclosures for external stakeholders and was included at a

		later stage of the interview guide.
This question seeks to summarize the key statements in the interview section and also to critically evaluate the predefined purposes stated in IFRS 15.BC3. This relates the research question to the title of the research project.	The IASB states in IFRS 15. IN5 that IFRS 15 simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. Please comment on this statement.	Simplified question as the formulation was complicated before.
Make sure not to miss information that may not have been covered by previous questions.	Which further points would you like to add with respect to your experiences with the implementation of IFRS 15?	Pilot interviews showed that interviewees are happy to add some more information to this interview section. Therefore, this question was added to give them the chance to do so and to not miss relevant information.
Section 4: Different potential interpretations within IFRS 15 (25 minutes acc. to pilot study)		
Findings from literature review / rationale	**Interview question**	**Changes due to pilot results**
Studies show that earnings management to meet or beat analyst forecasts or in the light of other incentives for financial managers may be an issue (Graham et al., 2005; Khamis, 2016; Son & Lim, 2017; Stice et al., 2016). This question intends to assess how the new IFRS 15 can be used as a tool to achieve this and how the opportunities to apply earnings management are less or more pertinent compared to the previous revenue recognition standards according to IFRS.	In which major or specific areas have there been opportunities for discretion through interpretation or judgment within IAS 11, IAS 18 and related interpretations from your perspective?	Reformulated question in a softer way as terms such as ‘manipulation’ or ‘loopholes’ may have a deterrent effect. Question was also formulated simpler.

Previous studies define the determination of the transaction price for a performance obligation, financing components, separation of performance obligations and the respective allocation of the transaction price as the major technical challenges under IFRS 15 (Campbell, 2017; Khamis, 2016). As these previous studies were conducted at an earlier point in time, the question wants to critically evaluate if these categories are still valid and if other categories emerged in the course of the adoption of IFRS 15.	To what extent do you see potential for interpretation and judgment in those areas?	Simplified question as question before was slightly misleading if those categories need to be described only.
	To what extent would you add further critical areas of IFRS 15 with respect to major interpretation and judgment?	Added as separate question to ensure that a complete overview of challenging areas is provided by interviewees.
Previous studies show that probability and uncertainty expressions in combination with different languages and translations may lead to various interpretations in the course of the interpretation of accounting standards (Doupnik & Richter, 2003; Duh & Huang, 2012; A. N. Scott, 2014; Weaver & Woods, 2015). This question aims to assess the amount of probability and uncertainty expressions and their influence on the robustness of the new IFRS 15.	To what extent do you consider this topic relevant to IFRS standards in general?	Pilot interviews showed that this was not an issue for interviewees. Therefore, this question was added before the major question in order to be able to assess the relevance.
	To what extent does IFRS 15 use probability and uncertainty expressions in major issues and how can those lead to different interpretations?	Specified previous questions in order to find out if uncertainty and probability expressions are an issue within IFRS 15.
Studies show that standard precision alone did not make a difference in managers' financial reporting decision, but that the level of aggressiveness in reporting is determined by the types of incentives and as a manager's ability to report aggressively	Where do you see the major levers for discretion within IFRS 15?	Simplified and reformulated question in a softer way as terms such as 'earnings management' may

under the respective standard (Judd, 2015; Lim, 2016; Martinsson & Edqvist, 2013; Soderstrom & Sun, 2007). This question intends to carefully assess the level of discretion and/or manipulation possible under the new IFRS 15 itself as other studies also show that aggressive reporting is not that pertinent anymore as there were too many scandals before (McCarthy, 2012).		have a deterrent effect.
	Could you please explain if IFRS 15 could be a tool to defend intended reporting outcomes?	Simplified formulation of question.
	How would you describe the level of discretion possible under IFRS 15 compared to IAS 11, IAS 18 and related interpretations?	Replaced 'earnings management' with 'discretion' to avoid a deterrent effect.
Various studies illustrated in (Myers et al., 2016) and other studies shows that the use of discretion may play and important part in financial reporting (Dahlén & Lindberg, 2017; Giedt, 2017; Weaver & Woods, 2015). Furthermore, managers use discretion in meeting or beating targets (Graham et al., 2005). This also affects comparability and therefore the comparability can be questioned (Bordeman, 2017). The issue of effective contracting with customers and suppliers also plays a role in that regard (Hail, Leuz, & Wysocki, 2010), especially as revenue manipulation is more likely in companies with complex revenue recognition (Judd, 2015). This question aims to find out if companies are aware of discretion under IFRS 15 and how it is used in order to improve or modify the revenue figure.	Do you experience companies implementing specific measures to use discretion under IFRS 15?	Replaced as previous question was too unspecific asking about loopholes that are used. Furthermore, a deterrent effect by the term 'loophole' should be avoided.
	Do companies specifically modify contracts or standard contracts?	Replaced as previous question was too unspecific asking about loopholes the standard implies. Furthermore, a deterrent effect by the term 'loophole' should be avoided.
	Are there many options under IFRS 15 to modify contracts in favour of the company?	Replaced as previous question was too unspecific asking about loopholes in IFRS 15 compared to

		previous standards. Furthermore, a deterrent effect by the term ‘loophole’ should be avoided.
	How can companies use specific designs of contracts for discretion in the context of the requirements for revenue recognition at a point of time or over time?	Question added due to discussion in pilot phase on that topic.
Interpretations and professional judgment are widely discussed in accounting literature, especially in the context of IFRS (Capkun et al., 2016; Derun, 2017; Hellman, 2008; Khamis, 2016; Kulikova et al., 2014; D. Perera, 2016; A. N. Scott, 2014; Tysiac, 2017; Weaver & Woods, 2015). The questions aim to answer operational questions how the judgments are reflected in practice under the new standard, especially as revenue is one of the most important KPIs for external stakeholders.	How are interpretations and professional judgment under IFRS 15 transparently illustrated and documented?	Simplified formulation of the question to make it more precise.
	On which documents or documentation do you specifically focus on or do you think is of major importance?	Question added after pilot interviews to receive more specific answers how documentation or documents look like.
	To what extent are major judgments or interpretations under IFRS 15 conducted or documented in the IT systems.	Simplified formulation of the question to make it more precise.
	To what extent are major judgments or interpretations under IFRS 15 controlled or considered within the internal control system?	Specified question with respect to internal controls as it was too broad before.

	How have judgments and interpretations under IFRS 15 specifically be disclosed and prepared? Can you provide an example?	Specified question with respect to disclosures under IFRS 15.
This question seeks to summarize the key statements in the interview section and also to critically evaluate the predefined purposes stated in IFRS 15.BC3. This relates the research question to the title of the research project.	The IASB states in IFRS 15.BC3 that IFRS 15 removes inconsistencies and weaknesses in previous revenue recognition requirements and provides a more robust framework guidance that would be useful in addressing revenue recognition issues. Please comment on this statement.	Simplified question as the formulation was complicated before.
Make sure not to miss information that may not have been covered by previous questions.	Which further points would you like to add with respect to your experiences with different interpretations and judgments under IFRS 15?	Pilot interviews showed that interviewees are happy to add some more information to this interview section. Therefore, this question was added to give them the chance to do so and to not miss relevant information.
Section 5: Likely impact on firms' profitability and performance (13 minutes acc. to pilot study)		
Findings from literature review / rationale	**Interview question**	**Changes due to pilot results**
Studies show that the impact because of IFRS 15 depends on the industry and the business model (Lim et al., 2015). Especially three industries, telecommunications, software, and real estate companies are	It is said that especially three industries, telecommunications, software and real estate, are impacted through the	Simplified question as it was too broad to answer within pilot interviews.

affected (GAAPweb, 2015; Kasztelnik, 2015; Peters, 2016). This question aims to provide details for these previous assessments and to provide a basis for later potential quantitative research on IFRS 15.	introduction of IFRS 15. To which extent is that correct?	
	To what extent are other industries significantly impacted? OR To which extent is your sector specifically affected?	Separate question on other industries to not miss potential other information that was not explored before.
The studies of Khamis (2016) and (Peters, 2016) provide details which industries are mostly affected by IFRS 15 from a qualitative perspective. This question aims to quantify initial potential changes through IFRS 15 from a relative and absolute standpoint. A quantitative research project at a later stage may build on those findings.	Could you please provide examples for revenue changes due to the introduction of IFRS 15?	Simplified question as it was misleading in the course of pilot interviews. Furthermore, this question was repositioned as it was not well placed in the order before.
The studies of Khamis (2016) and (Peters, 2016) provide details which industries are mostly affected by IFRS 15 from a qualitative perspective. Therefore, this question seeks to find answers if a new set of KPIs or at least a change may be possible.	To what extent to you see the necessity to radically revise KPI systems because of IFRS 15, i.e. to change, create or delete KPIs?	Revisited as question before may have been misleading as it was implying a focus on KPIs for bonus schemes.
	Which industry-specific KPIs do you use as a performance indicator and change through IFRS 15?	Added question to explore if IFRS 15 affects leading performance indicators within different industries.
	Which KPIs do companies focus on in the course of the conversion to IFRS 15?	Question added after pilot in order to gain more insights

		with respect to KPI changes.
	To what extent do analysts change their views with respect KPI analyses?	Question added after pilot in order to gain more insights with respect to KPI changes.
The SEC expects a huge number of qualitative and quantitative disclosures within financial statements under IFRS 15 (Tysiac, 2017). Furthermore, disclosures are seen as a major challenge in the course of IFRS 15 implementation (Ernst & Young, 2017a; GAAPweb, 2015; Kasztelnik, 2015; Tysiac, 2017). These questions complete the question from the previous section with respect to the question how the notes will specifically change within financial statements.	To what extent will the extent of disclosures change under IFRS 15 in financial statements in comparison to previous requirements under IAS 11, IAS 18 and related interpretations?	Specified as question before was too broad asking for qualitative and quantitative disclosures with respect to systems, processes and internal control systems
	How will disclosures with respect to contracts or other constellations specifically look like in practice?	Question added to gain a deeper understanding about disclosures. Furthermore, pilot interviews showed that questions with respect to disclosures should be rather simply formulated and narrowly defined.
The complexity of IFRS 15 is not only an issue for auditors and accountants, but also for other external stakeholders, who make decisions based on financial statements (Dalkilic, 2015; Graham et al., 2005; Tysiac, 2017). These questions complete the questions from the previous section with respect to the major areas companies need	How do you think external stakeholders may interpret changes through IFRS 15?	Question added in the course of opening a separate debate as an entry question
	Which detailed explanations and disclosures are necessary	Question added to gain a deeper understanding about

to inform their external stakeholders in order to ensure an efficient understanding of the impact.	under IFRS 15 in order for external stakeholders to make the right decisions?	disclosures. Furthermore, pilot interviews showed that questions with respect to disclosures should be rather simply formulated and narrowly defined.
	To what extent are shifts through IFRS 15 specifically explained in order for external stakeholders to be able to understand them?	Question added to gain a deeper understanding about disclosures. Furthermore, pilot interviews showed that questions with respect to disclosures should be rather simply formulated and narrowly defined.
	How do the new disclosure requirements under IFRS 15 affect window dressing?	Question added to relate it back to interpretation of IFRS 15.
This question seeks to summarize the key statements in the course of the interview section and also to critically evaluate the predefined purposes stated in IFRS 15.BC3. This relates the research question to the title of the research project.	The IASB states in IFRS 15.BC3 that IFRS 15 improves comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets and provides more useful information to users of financial statements through improved disclosure requirements.	Simplified question as the formulation was complicated before.

	Please comment on this statement.	
Make sure not to miss information that may not have been covered by previous questions.	Which further points would you like to add with respect to the likely impact on profitability and performance of companies under IFRS 15?	Pilot interviews showed that interviewees are happy to add some more information to this brief interview section. Therefore, this question was added to give them the chance to do so and to not miss potential additional information.
Section 6: Summary and conclusion (7 minutes acc. to pilot study)		
Findings from literature review / rationale	**Interview question**	**Changes due to pilot results**
This question forms a reassessment of the previous answers, especially with respect to criticism, as it reflects again on the critiques provided by the interviewee. Furthermore, this question answers a part of the title of the research project, which is the implications of improvement.	Based on your experience, which major areas of IFRS 15 would or could require improvements?	n/a
	Could you please elaborate why improvement potential exists in these areas?	n/a
	How would you specifically implement these improvements?	n/a
	Do you see further central weaknesses of IFRS 15?	Question added to make sure not to miss potential areas of implications for improvement.
Wüstemann and Kierzek (2005) specifically mention that the previous standards should	Was it necessary to introduce the entirely new	Simplified question to make sure to

have been improved instead of developing a comprehensively new standard. However, this conclusion was made nine years before the introduction of the largely final version of IFRS 15. These questions aim to reflect on the criticism of IFRS 15 again and form the basis of a final conclusion with respect to a summary of the research questions.	IFRS 15 or do you think a modification of IAS 11, IAS 18 and related interpretations would have been sufficient?	receive the information necessary, i.e. a yes/no answer. The answer challenges the answers on modifications given before.
	Please justify your explanation.	Question added in order to make sure that qualitative information and arguments are provided on the question before.
	Could you please provide an overall conclusion based on your experience and your opinion on IFRS 15?	Question added to again make the interviewee to bring forward his or her most important issues.
Make sure not to miss information that may not have been covered by previous questions.	Which further points would you like to add with respect to IFRS 15 which were not discussed during the interview, but which are of major relevance for you?	Pilot interviews showed that interviewees are happy to add some more information to this interview section. Therefore, this question was added to give them the chance to do so and to not miss relevant information.

5.2.4.3.3 Scaling

Some of the questions above use scales as part of the answer. “A scale is a device for assigning units of analysis to categories of a variable. The assignment is usually done with numbers, and questions are used a lot as scaling devices.” (Bernard, 2017, p. 318). There are four questions within the interview guide that use a scaling technique:

1) “Please provide your year of birth as well as number of years of work experience.” This question aims to provide data with respect to the maturity and the experience of the interviewees. This reflects a simple scale based on single indicators and a device for scaling people. Furthermore, the respondent is the principal source of measurement error. Therefore, the researcher does not assign units based on the own judgment and therefore avoids mistakes due to measurement errors (Bernard, 2017).The goal is to relate the age and the years of work experience of the interviewee to the provided results and therefore draw potential conclusions.
2) “How would you describe your familiarity with the previous revenue recognition requirements, IAS 11, IAS 18 and related interpretations on a scale from 1 to 5? (1 means ‘Rudimentary knowledge’, 3 means ‘Good theoretical, but less practical experience’, 5 means ‘Profound practical and theoretical knowledge’)”. This question makes it possible to assign people to five categories with respect to their knowledge of the old standards. The purpose of this simple scale with single indicators is the same as in the first illustrated question (Bernard, 2017) and aims to critically assess the results or potential expressions that are containing a comparison of IFRS 15 to old standards, especially with respect to potential improvements of IFRS 15.
3) “On a scale of 1 to 5, where would you see the ‘IFRS 15 readiness’ of companies/your company as of December 2017?”. This question enables the researcher to assess the IFRS 15 readiness also from a quantitative perspective as previous studies already indicated that companies are not prepared or not fully prepared for the conversion (Benavides, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Lim et al., 2015; Peters, 2016). Hence, it updates the previous findings and also provides a context for further insights.
4) “How would you describe the additional effort for disclosures under IFRS 15 in comparison to IAS 11, IAS 18 and related interpretations? Please provide the

number of additional hours, costs and a percentage value." This scale can be seen as an index scale based on 100% or 1 for the effort for disclosures under previous requirements and represents a more robust result than just based on qualitative information due to the criterion referenced approach (Bernard, 2017).

These scaling questions may add to the qualitative data provided and help with structuring the themes and patterns identified. As the focus of the study is qualitative, they do not represent mixed methods.

5.2.4.3.4 Interview process

Pitney and Parker (2009) point out that interviews need to be conducted effectively in order to obtain rich and valuable information about the experiences, beliefs, attitudes and perceptions of people. "Effective interviews address the central aspects of the study and attempt to collect information related to all research questions." (Pitney & Parker, 2009, p. 45). Based on the guide of Schatzmann and Strauss (1973) and Kvale (1996), Pitney and Parker (2009) provide five important components for the interview set-up, i.e. to provide the interviewee with a framework for the study, to set the tone for a relationship and help the interviewee to feel comfortable, to ask the interview questions and then follow up for in-depth information, to conclude the interview with the lessons learned and obtain permission for a follow up if necessary and to thank participants for having the opportunity to learn from their experiences.

These factors are considered within the interview guide and the interview setup. Every interviewee, who was interested in participating in the study, was provided with two pages of information with respect to the participation process, i.e. the Informed Consent Cover Letter (see Appendix 4). A further document with respect to the framework and the basis to make the interviewee to feel comfortable was the Informed Consent Release Letter (see Appendix 5) to explain the anonymity and to document the participation of each interviewee by him or her signing and sending back the document. Furthermore, the interviewees were offered to ask any questions beforehand and anonymity was emphasized in the course of further email or phone contact. The interview questions were asked and, based on the interview guide, answers were followed-up to receive in-depth information. After the interview, participants were provided with the opportunity to discuss the interview. At the end, the researcher thanked participants for their time, their valuable insights and the chance to learn from their participation. Furthermore, every interviewee was provided with a small present a few weeks after the participation to show the respect and thank them for their support.

The interview process is summarized in the following table:

Table 8: Interview process

Code	E / A*	Interview time (minutes)	Date of interview
P1	E	104	5 December 2017
P2	A	80	19 December 2017
P3	A	62	19 December 2017
P4	A	86	20 December 2017
P5	E	74	9 January 2018
P6	A	77	10 January 2018
P7	E	57	22 January 2018
P8	A	60	25 January 2018
P9	A	52	30 January 2018
P10	A	55	15 February 2018
P11	E	93	16 February 2018
P12	E	40	6 March 2018
P13	A	50	7 March 2018
P14	A	70	8 March 2018
P15	E	80	23 March 2018

* E = Auditor / A = Accountant

5.2.4.3.5 *Transcribing and translating data*

The interviews mostly took place by phone (only P10 took place in person). This was mainly due to time and resource constraints because of full-time project work by the researcher in various parts of Germany. In order to ensure a good quality of the phone interviews, high-quality technology was used. This included using Skype for Business for the interview calls together with a Jabra Speak 510 speakerphone. The interviews were recorded with an Olympus VN-741PC voice recorder.

All interviews were recorded, transcribed verbatim and validated by the researcher by listening to every record a second time and correcting any errors identified. Furthermore, interviewees were asked if the transcript should be provided to them for further validation. None of the interviewees requested this option, which is the reason why no further changes to the transcripts were incorporated. After that, the electronic recordings were destroyed. The average time for each of the 15 interviews was 70 minutes and the average word count of the English transcripts is approx. 7,900.

In order to ensure transparency with respect to a comprehensive research project, each of the interview transcripts was translated from German into English with the aim to keep the verbatim character of the German transcript in order to ensure the authenticity for the English reader. The provided access to both the original and the translated transcripts ensures the opportunity to verify the nature of the research and therefore increases transparency and makes the researcher accountable for the translation (Nikander, 2008). However, in order to make sure that no major data is lost due to translation, the first manual data analysis and coding process took place based on the German transcripts. Just for citing or analyzing the patterns within the dissertation, the translated parts were used as a basis, but derived from the manually conducted markings on the German transcript.

5.2.4.3.6 *Selection of documents for triangulation purposes*

The document analysis serves for triangulation purposes and in order to further enrich the data obtained in the semi-structured interviews (Bowen, 2009). A comprehensive empirical analysis of the effects due to IFRS 15 based on changes on financial statements is not possible due to the timing of the research project and is therefore excluded. However, companies, which are preparing their financial statements in accordance with IFRS, need to disclose information with respect to standards not yet adopted in accordance with IAS 8, para. 30. Therefore, annual reports of companies contain qualitative information on the status quo and the potential effects due to IFRS 15. Therefore, the research includes information on large and complex companies, which are preparing their financial statements in accordance with IFRS and whose annual reports are publicly available as well as shortly published after their financial statement reporting date.

In Germany, this is the case for the DAX30 companies. The DAX30 index combines the performance of the 30 largest German companies in terms of order book volume and market capitalization (S. M. Hussain, 2011). All the 2017 annual reports of the 30 largest companies in Germany were available and every company incorporated explanations regarding the implementation and potential effects through IFRS 15 in accordance with IAS 8, para. 30. Those explanations are directly relatable to the third research question.

5.2.5 Data analysis

"'Analysis' . . . involves breaking data down into bits, and then 'beating' the bits together . . . [and] the core of qualitative analysis lies in these related processes of describing phenomena, classifying it, and seeing how our concepts interconnect." (Dey, 2003, p. 31).

The analysis of a new phenomenon should be "understood as a complex system . . . that cannot meaningfully be reduced to a few discrete variable and linear, cause-effect relationships." (Johnson & Christensen, 2008). Qualitative data mostly consists of words rather than numbers and is therefore challenging. Ghauri, Gronhaug, and Kristianslund (1995) emphasize that by saying that the number of observations is quite low, but so rich that it may happen that the researcher is drawn in the sheer volume of cases. Difficulties may also arise because of the fact that data collection and analysis are often done at the same time and therefore the research problem may change (Ghauri et al., 1995).

5.2.5.1 Data analysis process

A summary of the major issues with respect to data analysis is provided by Affare (2017) considering statements by other authors. It may be challenging to arrange and organize various observational records into meaningful patterns the researcher can work with (Dooley, 1990). Therefore, it is necessary to apply an accepted and appropriate process in order to gather the results the research is actually capable of revealing. The analysis of qualitative data has to be started as soon as an interview is conducted (Dooley, 1990). However, there are different perspectives on how to appropriately process qualitative data analyses. Miles and Huberman (1994) divide the data analysis process into three separate steps, i.e. data reduction, data display and conclusion drawing and verification. The reduction of data means putting hand notes into a modified form in order to later compress and arrange it. Mostly, it is text, which represents the qualitative data. Miles and Huberman (1994) illustrate a qualitative data analysis model with six steps, i.e. data organization, generating categories, themes and patterns, data coding, testing the emergent understandings, searching for alternate explanations, and report writing. Based on those theories, Sarantakos (1998) introduces his five step qualitative data analysis approach, which is designed for the analysis of interview data. Therefore, this approach is appropriate for this research project and is therefore applied. The following table illustrates the five steps and how they were specifically followed:

Table 9: Five-step qualitative data analysis approach

Step	**Considerations for the research project**
Transcription	The interviews were recorded with an Olympus Digital Voice Recorder VN-741PC and were transcribed verbatim in German by hearing to the interviews in half-speed. A transcribing software was not used in order to obtain a feeling for the extracted information at an early stage.
Checking and editing	After a first German transcript of the interview, the transcript was verified against the audio files and edited where necessary. Furthermore, the first correlations and relationships within the data were identified in the course of listening to the interviews again on real speed. No participant chose to use the option that the transcript is sent to him/her again. Therefore, no objections by participants against the transcript were received. Based on the German transcripts, each transcript was translated into English in order to provide full transparency for the reader (see Appendix 6) and to have the required translations for citations within the thesis available.

Analysis and interpretation	The relevant sections of the transcriptions were at first analyzed manually by hand by comparing specific parts of each transcript to each other and also by analysis unit (e.g. auditors or accountants). As a second step, the coding scheme prepared based on the German transcripts was transferred to NVivo 12 and applied to the English translations of the transcripts.
Generalization	Differences and similarities in the meanings, results and findings of all interviews were identified. Again, a distinction between auditors' and accountants' experiences and opinions were made.
Verification	The interpretations and findings were validated again be reviewing the relevant parts of the transcripts after completing the writing.

5.2.5.2 Content analysis

According to Cole (1988), content analysis is a method to analyze written, verbal or visual communication messages (Elo & Kyngäs, 2008). The data comprises approx. 118,300 words. Therefore, content analysis is the core data analysis tool as "The aim is to attain a condensed and broad description of the phenomenon, and the outcome of the analysis is concepts or categories describing the phenomenon. Usually, the purpose of those concepts or categories is to build up a model, conceptual system, conceptual map or categories" (Elo & Kyngäs, 2008). This is achieved by employing an inductive approach for the process of analysis, i.e. moving from the specific to the general which means exploring particular instances and combining them into a larger general statement (Chinn & Kramer, 1999).

Hsieh and Shannon (2005) point out that that "the question of whether a study needs to use a conventional, directed, or summative approach to content analysis can be answered by matching the specific research purpose and the state of science in the area of interest with the appropriate analysis technique." (p. 1286). Directed content analysis is rather connected to a deductive data analysis approach with the goal to validate or extend an already existing theory. Summative content analysis is used to identify and quantify certain words to analyze manuscripts or textbooks (Hsieh & Shannon, 2005). In order to identify core patterns and themes to reach a final conclusion based on the data in the light of the fact that existing theory or research literature is limited, a conventional content analysis approach is employed. This allows the flexibility to derive categories and the names for the categories from the data itself. This approach is therefore inductive (Hsieh & Shannon, 2005).

After reading the interview transcripts repeatedly, data was read word by word to identify codes (Miles & Huberman, 1994). Words that may imply key concepts or thoughts were marked within the transcripts. The next step included making notes of the researcher's impressions, thoughts and initial analysis. This initial coding included an assignment of a different sub-category with an ascending order to each relevant segment of information. After this classification, the segments were classified into their sub-categories and those sub-categories were again allocated to higher categories. This iterative process leads to labels for codes that are sorted into categories based on the linkage or relations of different codes (Hsieh & Shannon, 2005). This bottom-up approach was at first done for each of the interview sections that relate to the research questions in order to ensure that linking the sub-categories back was firm. In a second step, parts from other interview sections including examples for the other research questions were reviewed.

Table 10: Coding process

Step	**Data**	**Action**
Read through transcripts	118,300 words of English translation of transcripts	Initial read through transcribed text and understand the acquired qualitative data.
Initial coding and labelling	216 segments of information	Labelling of all segments of information to manually create categories based on the German transcripts.
Reduce overlap and redundancy	123 categories	Another review of the codes indicated significant potential for aggregation and reduction of overlaps.
Grouping	26 categories	Group the aggregated codes manually in Excel that form the basis for the subchapters in the dissertation.

Results	16 themes	Create a model with the most important categories reflecting the subtitles for the contribution to knowledge chapter based on the manual grouping in Excel.

The initial coding frame with different segments of information was developed parallel to the read-through of the transcripts. This was realized by using an ascending number of codes, reusing this codes in further transcripts in case the same information was used or extending the list in case new findings were observed. Furthermore, the initial coding frame was prepared on the highest level of detail possible and down to single sentence basis.

In the grouping step, the structure and underlying content of the codes were reviewed. This was conducted by re-grouping the codes into higher categories or similar subcategories. This ensured a reconnection to the research questions. This categorization was conducted based on the German transcripts of the 15 interviews in Excel and imported into NVivo 12 (QSR International). The advantages of NVivo illustrated by Zamawe (2015) were experienced in the course of the present research topic. This study summarizes some of the advantages of NVivo and also analyses twelve other studies critically evaluating the advantages of NVivo. NVivo proved as very useful with respect to the research project as it ensured the flexibility to re-code or re-group certain parts of the interviews. It allows one to delete, copy, move or combine nodes without affecting the transcripts by only clicking a few buttons. NVivo does not influence the design of the research, but that the presence of nodes in NVivo support thematic analysis approaches. Especially with respect to discovering themes, it has an advantage as the burden of copy-cut-paste work in the course of manual coding can be saved and the same result realized more efficiently. Furthermore, NVivo ensures transparency with respect to the research design by transparently illustrating the codes used and applied to the transcripts (see Appendix 7 for nodes used in this research project).

The following table represents the final 16 categories of which 12 are allocated to the three major research questions. Four categories are identified with respect to findings on the previous revenue recognition standards and serve as a supplementary and introductory part in the course of the analysis to provide the context based on the old standards.

Table 11: Identified themes based on qualitative analysis

Research question		Theme		Subsec.
n/a - supplementary themes		1	Distinction between IAS 11 and IAS 18	6.1.1
		2	Missing or unspecific guidance	6.1.2
		3	Practical considerations	6.1.3
		4	Necessity for new revenue recognition standard	6.1.4
1	How do auditors and accountants perceive the implementation of IFRS 15 in practice?	5	Assessment of IFRS 15 readiness	6.2.1
		6	Project planning and scheduling	6.2.2
		7	Identified challenges	6.2.3
		8	Implications for organizational structure and procedures	6.2.4
		9	Paradigm shift of revenue recognition	6.2.5
2	What are the major interpretational areas within IFRS 15 and to what extent do these imply a risk for manipulation?	10	Change of revenue recognition principle	6.3.1
		11	Five-step model applications	6.3.2
		12	Influential factors for interpretation and discretion	6.3.3
		13	Robustness of the IFRS 15 framework	6.3.4
3	What is the likely impact of IFRS 15 on firms' financial statements and therefore their profitability and performance?	14	Conversion method	6.4.1
		15	Impact on financial statements	6.4.2
		16	Before and after IFRS 15	6.4.3

In addition, a second project was set up in NVivo 12 in order to work with the 2017 annual reports of the DAX30 companies in Germany. After downloading all the annual reports as PDFs, they were imported into NVivo 12. All reports were screened by using the term ‘IFRS 15’. Based on a simple coding scheme with five central nodes in NVivo, the identified information was coded into the categories information on the readiness, potential effect or likely impact, technical issues, disclosures and the transition method used by the companies. This data was collected in a structured way and complemented the analysis in relation to the third research question.

5.2.5.3 Data presentation

Miles and Huberman (1994) develop the data reduction and data display phases mentioned before, which help to present the comments of the research participants in extended text form and summarized tabulated form if required. All transcripts are disclosed in Appendix 6 in both languages, the original verbatim German version and the translated verbatim English version in order to provide full transparency. The presentation takes place considering two major steps provided by Miles and Huberman (1994). The data reduction is implemented by a generalization of the responses and a presentation of the representative response samples. If a variety of responses was provided, each of the different perspectives is given. The samples are presented in extended text format in tables, but cleansed of irrelevant words or complex sentence structures. In the data display phase, the responses to each question are organized, standardized and compiled to summarize the results and findings for each research question. The responses of the relevant findings are presented as citations in tables based on their categorization and their relevance as perceived by the researcher.

5.3 Quality criteria

The main criteria from quantitative research are “objectivity, reliability and validity from experimental-statistical and hypothesis-testing research and from psychometrics (tests, questionnaires, scales and so on).” (Steinke, 2004, p. 184). According to Morse, Barrett, Mayan, Olson, and Spiers (2002), leading qualitative researchers, however, argue that reliability and validity as quality criteria only work within quantitative research (e.g. Altheide et al., 1998) . Therefore, suggestions of new criteria for qualitative research are made by some authors (e.g. Lincoln & Guba, 1985; Rubin & Rubin, 2011). However, Steinke (2004) states that the reliability and validity concept can be used in all scientific approaches as to validate is to investigate, to check, to question, and to theorize. These steps are of major importance in every research and ensure rigor.

5.3.1 Reliability and validity in qualitative research

Morse et al. (2002) summarize the major steps of the history of quality criteria within qualitative research. While the term 'rigor' is most often used to be addressed within quantitative research approaches, 'trustworthiness' is the parallel term, i.e. qualitative rigor. While rigor is achieved by internal validity, external validity, reliability, and objectivity within a quantitative paradigm, trustworthiness in qualitative research is acquired through credibility, fittingness, auditability, and confirmability (Guba, 1981) or credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). In order to achieve trustworthiness, specific actions such as negative cases, peer debriefing, prolonged engagement and persistent observation, audit trails and member checks need to be implemented (Guba, 1981). Morse et al. (2002) expresses major concerns with respect to alternative terminology and the development for standards for qualitative research to assess rigor. It was shown that authors confused the term e.g. as a criterion to test the quality of the research design. Furthermore, a tendency can be seen that qualitative researchers try to focus on the tangible outcomes of their research rather than illustrating the applied verification strategies. They argue that the strategies to ensure rigor must be implemented in the qualitative research process itself as investigator responsiveness, methodological coherence, theoretical sampling and sampling adequacy, an active analytical stance and saturation are corrective measures within the process and ensure reliability and validity of the research project (Morse et al., 2002).

One of the major concerns of qualitative researchers is to convince the stakeholders of their research. This is due to statements such as "if qualitative studies cannot consistently produce valid results, then policies, programs, or predictions based on these studies cannot be relied on." (Maxwell, 1992, p. 279). This research generalizes findings based on the perceptions and experiences from the research participants. Allan and Skinner (1991) states that a qualitative study's results are externally valid if the conclusions drawn can be generalized with respect to a broader population. This means that qualitative research increases its validity if findings based on the generally small population of research participants in qualitative studies could be recognized by other people.

With respect to reliability, Kwok and Sharp (1998) state that

> Reliability can be defined broadly as the degree to which measures are free from errors and therefore yield consistent results. It is a necessary (though not sufficient) condition for validity, and unreliable measures attenuate (lessen) the correlation between measures. In fact, when results conflict with existing findings, unreliable measures probably contributed to the discrepancies. (p. 139)

Golafshani (2003) argues that quantitative and qualitative studies have different purposes and therefore the concept of reliability is irrelevant within qualitative studies. Stenbacka (2001) even claims that reliability is misleading in qualitative studies as if a qualitative study discussed with reliability cannot be of high quality (Golafshani, 2003). However, various authors argue that validity and reliability are two factors to be considered within qualitative research (Morse et al., 2002). Lincoln and Guba (1985) suggest to use the term ‘dependability’ in qualitative research as synonymous to reliability and inquiry audit as one measure to achieve it. Dependability is also linked with consistency of data which is achieved by a constant verification of raw data, data reduction products, and process notes (Golafshani, 2003). However, Lincoln and Guba (1985) state that there cannot be validity without reliability and Patton (2002) mentions that reliability is a consequence of validity in a study (Golafshani, 2003). Therefore, the argumentation goes back to trustworthiness and validity.

5.3.2 Implemented measures for validity and reliability

LeCompte and Goetz (1982), Kirk and Miller (1986) and Silverman (2015) provide suggestions how to maintain reliability in qualitative research which were followed by this study.

Before the pilot interviews, the preliminary interview guide prepared in October/November 2017 was discussed with one auditor.

Table 12: Overview pilot discussion

Code	E / A*	Job title	Type of enterprise	Job description and interviewee information	Pilot discussion date	Pilot discussion time (minutes)
PI1	A	E	Manager / German CPA	• Year of birth: 1989 • More than four years of work experience • Manager and German CPA in an audit and IFRS consulting firm • Theoretical knowledge of IFRS 15 from preparation for CPA exam and practical knowledge due to consulting work at clients implementing IFRS 15	3 November 2017	Approx. 30

Based on the explanations of Sampson (2004) and Y. Kim (2011), pilot studies with two participants were conducted in order to test the questions and compare two results from the interviews. This reflects the traditional concept of reliability. The pilot interviews were conducted by phone with one auditor and one accountant and were not included in the research results.

Table 13: Overview pilot interviews

Code	E / A*	Job title	Type of enterprise	Job description and interviewee information	Pilot interview date	Pilot interview time (minutes)
PI2	A	Deputy Head of Accounting	Leasing provider	• Year of birth: 1986 • More than twelve years of work experience	20 November 2017	67

				• Deputy Head of Accounting at a leasing provider • Co-responsible for IFRS 15 implementation, however, company rather affected by IFRS 9 and IFRS 16, but analysis on potential impact conducted		
PI3	E	Manager / German CPA / PhD	Audit / Consulting	• Year of birth: 1984 • More than nine years of work experience • Manager and German CPA in an audit and IFRS consulting firm; holds a doctorate degree in accounting • Profound practical and theoretical knowledge due to consulting work at clients implementing IFRS 15	21 November 2017	71

Another important point is the focus on verbatim report in order to base the analysis and interpretation on facts. This was ensured as all interviews were audio recorded and transcribed. The transcripts were offered to be provided to the research participants for validation purposes. None of the participants chose this option. Independent verification was possible until the end of the research project as copies of the validated transcripts were stored at a secure place. Furthermore, the pilot studies ensured that the probability of uncertainty was excluded.

To maintain consistency throughout the fieldwork, an interview guide was prepared comprising topics and subject areas to maintain consistency throughout the interviews with various participants. However, there were interview guides for each stakeholder group to appropriately address certain topics or perceptions from their view. Furthermore, the researcher was aware about other certain factors, such as not interrupting participants or the interview, never suggesting, agree or disagree with an answer, not interpreting during the interview and not improvising.

Further recommendations with respect to using multiple researchers to compare results or to use participant researchers were not implemented as only one researcher was available in the course of the study.

With respect to validity, which includes reliability as described before, the suggested measures by Sandelowski (1986) were considered and rigorously followed in the course of the fieldwork. Careful records of decisions made are kept and transparently described within this subsection. Furthermore, audio recordings and transcripts as described before were kept. In the course of the analysis, it was avoided to just report patterns in the answers as exceptions have the same relevance within this study. Moreover, the researcher was sensitive with respect to the case if an identification with the experiences from a research participant is pertinent in order to maintain a clear distinction. Also, the interview set-up could be chosen by research participants in order to make sure that all important factors are present. History effects were excluded by the aim to conduct all interviews within a short time period of three months. As there was only one observer and the interviews took place mostly by phone, the risk that concepts may be understood differently by different researchers in different settings was eliminated. The combination of semi-structured interviews with the supplementary document analysis of the 2017 annual reports of the DAX30 companies in Germany triangulates the findings and increases the validity of the research (Denzin, 2017).

Overall, due to the relevance, depth and potentially high influence the research may achieve, the quality criteria are one of the major issues throughout the whole research project and rigorously considered.

5.4 Ethical considerations

Quality of research is complemented by ethical considerations throughout the research (Tracy, 2010). This subsection provides an overview of ethical considerations with respect to this research. An illustration of general ethical issues provides the basis for understanding for the outlined ethics framework for this research project. The aim of these considerations is the maximum protection for the research participants providing their insights in the course of this research project.

5.4.1 Ethics in research

There is a series of ethical obligations with respect to actions and abilities of the researcher. Dandago (2015) provides the following overview:

> Ethical issues of integrity, honesty, independence, objectivity, confidentiality and competence are to be demonstrated by a scholar while conducting any type of research. Specifically, all researches should be free from the following ethical problems: plagiarism, and even self-plagiarism; falsification of results/data; harming the subjects or misrepresentation of respondents' positions; poor literature review; and incompetence in the topic chosen for research. (p. 38)

Veal (2006) further describes that ethical considerations are partly obvious for moral persons, however, that it is worth mentioning them in a more detailed sense. Competence of the researcher is reflected by doing research in a field in which adequate training was received. Otherwise it may harm research participants, the reputation of the research organization and may be a waste of time or other resources. The literature review needs to be conducted on a thorough and detailed level in order to make sure that the research was not conducted elsewhere. Furthermore, it is highly unethical to use data of others without due acknowledgement and permission as this would lead to plagiarism. A falsification of results is also unethical. With respect to research participants, Veal (2006) mentions that no harm should befall the research subjects, the subjects should take part freely and on the basis of informed consent.

5.4.2 Ethics framework

The design of an ethical framework underlying the qualitative research approach has to be defined before the conduct of the research. Key ethical issues for the conduct of this research project can be identified in the University of Gloucestershire's handbook 'Research Ethics: A Handbook of Principles and Procedures'. Researchers need to ensure that physical, social and psychological well-being of research participants is ensured. Also towards other researchers, researchers have to act responsible and respectful (University of Gloucestershire, 2008).

Veal (2006) and University of Gloucestershire (2008) mention informed consent as another important ethical factor. This was ensured by the fact that all interviewees were informed that their participation depends on their decision and that they could withdraw from the interview at any time. Another important issue is the anonymity of research participants as well as the confidentiality of information (University of Gloucestershire, 2008). This is also important to maintain confidentiality (Wiles et al., 2008). Confidentiality is not only secured by keeping the research participant's anonymity, but also to not disclose information deliberately or accidentally. This can be secured by not discussing information with others and present findings in a way that the research participant can be identified (Wiles et al., 2008).

The ethical requirements were considered in the course of the study by offering the research participants the choice of the location where the interview should take place. Original documents, transcripts and digital media were stored in a secure manner in a secure place and were destroyed after the accomplishment of the research project. This was provided for by the Informed Consent Cover Letter (Appendix 4) and Informed Consent Release Letter (Appendix 5), which were handed out to the interviewees before the interview took place.

To ensure the accuracy of reporting information, it was offered to the research participants to hand them out the recorded and transcribed interviews to prove validity. Additionally, the researcher provided the opportunity to contact him with regard to any issues that may arise.

6. Analysis and results

This chapter illustrates the findings addressing the three research questions of the study in the course of the semi-structured interviews based on the 16 themes identified and the supplementary document analysis. The findings from the interviews are categorized and linked back to the literature review and theoretical framework. Based on the results of the study, a critical evaluation of the predefined purposes stated in IFRS 15, para. BC3 is conducted and justified. Additionally, implications for improvement of IFRS 15 are presented.

6.1 Previous revenue recognition requirements under IFRS

A critical assessment of the previous revenue recognition requirements is not related to a research question of this study. However, it is important to understand them in order to provide a context for the rationale for the creation of IFRS 15. Therefore, the identified themes are not related to a research question, but classified as supplementary themes as outlined in subsection 5.2.5.2 and the following table.

Table 14: Identified supplementary themes

Research question	Theme		Subsec.
n/a - supplementary themes	1	Distinction between IAS 11 and IAS 18	6.1.1
	2	Missing or unspecific guidance	6.1.2
	3	Practical considerations	6.1.3
	4	Necessity for new revenue recognition standard	6.1.4

Due to the complexity of revenue recognition according to IFRS and potential different stages of knowledge of the participants, a scaling of the knowledge level of the old revenue recognition requirements was conducted based on the answers to question Q2.1 within the interview guide. This scaling is considered in the course of the analysis of the following key topics. However, it represents a subjective estimation by the participants. The lower (higher) average of the auditors' assessment is at 3.7 (4.0), which means expertise in theory and practice. The following table illustrates the assessment of auditors and accountants.

Table 15: Interviewees' familiarity with previous IFRS on revenue recognition

Code	E /A*	Scale**	Comment
P1	E	2.0	n/a
P2	A	3.5 – 4.0	n/a
P3	A	3.0	Theoretical knowledge, but not really used the standards for a longer period of time.
P4	A	3.0 – 4.0	Interviewee distinguishes the scale for each standard. IAS 11 (4.0) due to profound experience from previous job, IAS 18 (3.0), interpretations (1.0) as never used in practice.
P5	E	3.0 – 4.0	n/a
P6	A	3.0	Rather experience with IAS 18 than with IAS 11 in practice, however, interviewee knows how PoC according to IAS 11 works from a technical perspective.
P7	E	5.0	n/a
P8	A	3.0	n/a
P9	A	4.0	No specific experience with IAS 11 as mainly IAS 18 issues due to the business model.
P10	A	n/a	Not specifically studied the old standards. Just dealt with them from a practical perspective or due to their consequences.
P11	E	3.0 – 4.0	n/a
P12	E	4.0	n/a
P13	A	5.0	n/a
P14	A	3.0	No detailed knowledge with respect to the formulation within the standards as the finance team in parent company responsible for detailed accounting questions. However, practical experience with regulations.

P15	E	5.0	Experience in specific industries, such as plant constructors, real estate and software industry with project work. Very comprehensive theoretical and practical experience.

* E = Auditor / A = Accountant

** 1.0 = Rudimentary knowledge, 3.0 = Good theoretical, but less practical experience, 5.0 = Profound practical and theoretical knowledge

6.1.1 Distinction between IAS 11 and IAS 18

This subsection addresses ‘Theme 1: Distinction between IAS 11 and IAS 18’ as part of the supplementary themes. The literature (IASB, 2011; McKee & McKee, 2013) related to theme 1 concludes that a wrong distinction between IAS 11 and IAS 18 may lead to materially different financial statements as transactions may be accounted under the wrong standard. The potential significance of the difference is represented by Haller et al. (2009) indicating that the stockholders’ equity due to the mandatory adoption of IFRS in Germany increased significantly due to the percentage-of-completion method according to IAS 11.

Two auditors (P1 and P7) do not mention explicit problems or experiences in their practical work with respect to the distinction between IAS 11 and IAS 18. Limitations are made by two auditors (P5 and P12). Specific cases related to construction contracts are explained by two auditors (P11 and P15).

Table 16: Supplementary analysis: Theme 1 - Evidence 1

Code	E /A*	Quote
P1	E	. . . there were . . . only few . . . problems . . . you actually have the clear distinction between the sale of products . . . and the provision of services over a period of time . . . under IAS 11. So, the distinction was relatively clear from my point of view.
P7	E	Actually not really . . . this order-related long-term production was . . . delimited on both sides . . . the clients actually always knew exactly in which standard they were.
P5	E	From a practical view, I have no . . . cases . . . Sure, you can always think about that you have a . . . borderline [case] and then [there is] the decision: Do I use IAS 18 or IAS 11? . . . you can always think about that.

P12	E	Well, I know we had some discussions on individual contracts. But where the crux of the matter was, I can't remember . . .
P11	E	IAS 11 is often interpreted . . . very stringent. It's about long-term construction contracts or long-term contracts and this term long-term is not defined in . . . detail. There are different interpretations, even the different audit firms have different interpretations . . . Partly, contracts that are settled within six months were interpreted as long-term or the PoC method was used. I believe that this was the crux of IAS 11, where there were problems of delimitation from IAS 18 . . . and to differentiate, also what is a service contract and what is actually a creation of a good, there were partly also different opinions.
P15	E	. . . in the field of property development . . . : Do I build a large apartment house with 20 apartments, which I then realize according to PoC . . . [or] . . . which I actually sell off the shelf to investors, to private owners for own use with corresponding realization at a certain point in time. This has always been an issue with respect to the differentiation.

* E = Auditor / A = Accountant

The accountants' opinions are less specific, but similar to the auditors' ones. Three accountants (P2, P10 and P13) are in line with the auditors' opinion, two accountants (P4 and P6) can imagine issues in theory, but do not have practical experiences. Only P8 describes a distinction problem specifically with respect to consulting services contracts.

Table 17: Supplementary analysis: Theme 1 - Evidence 2

Code	**E /A***	**Quote**
P2	A	. . . I do not see any problems . . .
P10	A	. . . there were . . . existing rules on how we do it . . . One is the subject of . . . revenue in transition and transformation projects . . . and the other one is . . . reselling . . . These are the two main fields, which concern us and which were also relatively well defined in the past as to when a revenue can be recognized and how and [we] . . . had [our] . . . approach and it was not necessary to . . . question it. That was relatively clear. The old regulations were actually well-established, best practice.

P13	A	No, so IAS 11 . . . was never an issue. Long-term contract manufacturing is not our professional passion as an automobile manufacturer. In this respect, we are . . . not affected by IAS 11 at all.
P4	A	. . . I have not experienced it myself . . . But I do believe that problems could arise in practice.
P6	A	. . . there could be problems . . . I would say that depends on the case . . . Already when I meet any key criteria to fall into percentage-of-completion . . . above all, I think the contractual arrangement is difficult.
P8	A	. . . especially . . . in the consulting business: When am I in IAS 18, when am I in IAS 11?

* E = Auditor / A = Accountant

Besides the statement of P8, which is not further detailed, the research participants largely disagree with the literature (IASB, 2011; McKee & McKee, 2013) from a practical perspective. IASB (2011) addresses the issue that IAS 11 and IAS 18 are materially different, which might lead to varying financial statements. The implication of this conflicting view may be that there could be difficulties in making the distinction as the contractual arrangement is important (P6). However, in practice, there may be no issues, especially not in industries for which IAS 11 is irrelevant (P13) or due to best practice (P10). McKee and McKee (2013) state that there may be significant differences depending on the revenue recognition method adopted. However, this appears to be a theoretical problem and rather depends on the business transaction.

6.1.2 Missing or unspecific guidance

This subsection addresses 'Theme 2: Missing or unspecific guidance' as part of the supplementary themes. The literature related to theme 2 raises criticism due to missing guidance in the previous standards for variable consideration, multiple-element arrangements as well as insufficient disclosures. Furthermore, licensing agreements and warranties are stated in the literature (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014).

Six research participants confirm that by addressing these general technical problem areas. Accountant P11 summarizes the inconsistencies and weaknesses from a general perspective focusing on the principles-based concept of IFRS.

Table 18: Supplementary analysis: Theme 2 - Evidence 1

Code	E /A*	Quote
P4	A	[The guidance] was not clear to me, so this particular topic of multiple-element business was not clearly regulated in my opinion . . . From my point of view, it was not enough guidance.
P5	E	. . . it just lacks in that regard . . . [The previous revenue recognition standards] are missing many regulations . . . theoretically, there were more uncertainties.
P7	E	Rather blurry . . . especially the topics multiple-element [arrangements], variable considerations . . . Well, the [previous] standard was rather . . . rudimentary . . .
P8	A	. . . they were rather unclear . . . you had inconsistencies . . .
P9	A	Well, . . . there haven't been many specifications, . . . issues [for improvement] would be for example these variable considerations.
P15	E	. . . the old standards, of course, there were always indistinctnesses and uncertainties and the guidelines were not so terribly clear . . . the standards IAS 11 and IAS 18 . . . were not so clear. Otherwise there would have been no need to resort to . . . other jurisdictions.
P11	E	IFRS . . . are written very principle-based and so you have a lot of room for interpretation, which of course . . . is reflected in different accounting policies. An enterprise would interpret and account for the same contract differently. . .

* E = Auditor / A = Accountant

Three accountants (P2, P8 and P13) explain specific cases from their practical experience related to missing or unspecific guidance for tooling in the automotive industry, inconsistencies between different IFRS, licensing agreements as well as mobile phone contracts.

Table 19: Supplementary analysis: Theme 2 - Evidence 2

Code	E /A*	Quote
P2	A	I see [weaknesses] only . . . for the accounting for tooling, since there's nothing for that existing in the standard. That is derived from the IFRIC, which I think is more or less a crutch, because nothing better is available. So accordingly, I really only see weaknesses in . . . the accounting for tooling for automotive suppliers.
P8	A	. . . Delimitation . . . you had an own definition under IAS 11 for . . . what is an onerous contract vs. IAS 37 . . . you had inconsistencies . . .
P13	A	With regard to licenses . . . I can . . . comprehend this or with telecommunications . . . With regard to license accounting, . . . IAS 18 has been given half a sentence [for accounting for licenses]. Or in telecommunications . . . dividing the transaction price . . . becomes more useful for the external addressee. A mobile phone sells and then only recognize a euro turnover for it, although everyone knows that a mobile phone is worth more than one euro.

* E = Auditor / A = Accountant

Jones and Pagach (2013) mention that there is a lot of transaction and industry-specific guidance under previous revenue recognition requirements, e.g. IFRIC interpretations. P7 and P15 confirm that IFRICs were in place to cover industry-specific issues not covered by IAS 11 or IAS 18. Additionally, other standards such as US GAAP and their interpretation were used in practice in case IFRS were not sufficient. P7, P11 and P15 specifically mention EITF 00-21 and P8 SOP 97-2 from the software industry's perspective.

Table 20: Supplementary analysis: Theme 2 - Evidence 3

Code	E /A*	Quote
P7	E	[There] were . . . IFRIC topics or even earlier . . . you . . . had to refer to declarations . . . and you needed accompanying literature and . . . supplementary statements of the individual institutions . . . EITF 00-21 [was] this first declaration . . . [for] multi-element arrangements.
P8	A	. . . in the software industry you not only have IAS 18 and IAS 11, because there are no specific standards for it . . ., but also the former SOP 97-2, . . . because . . . there

		is no specific regulation. But there are specific rules in other accounting standards that you have to take into account.
P11	E	IAS 18 . . . was so soft that US GAAP has been used . . . How often companies have used EITF 00-21 to interpret how to account for multi-component contracts. US GAAP has always been used, [but] . . . IAS 18 did not prescribe that you had to apply IAS 8 over to US GAAP. That was not strictly demanded.
P15	E	This was only necessary because the standard was unclear. And almost more importantly, . . . they have always also used US GAAP . . . with the justification according to IAS 8: We have no standards. We have gaps. I have to fill in the blanks . . . Or in the later environment, IFRS has also adopted US GAAP interpretations. Modified, but actually almost taken over . . . The area of vendor-objective specific evidence came from US GAAP.

* E = Auditor / A = Accountant

Within the literature, EITF 00-21 – Revenue Arrangements with Multiple Deliverables is only mentioned in connection with US GAAP (Carmichael, 1998). SOP 97-2 was meant for software and software-related transactions such as licensing, selling, leasing or other marketing software under US GAAP and was issued in 1997 (Carmichael, 1998). Vendor-objective specific evidence mentioned by P15 was a central principle of SOP 97-2 focusing on the fair market value of an item sold individually in contrast to the sales value of the item sold as part of a multiple-element bundle (Kerr, Gillett, Sandoz, & Wilcox, 2009). That means that guidance of other GAAP was applied in order to be able to account for certain transactions under the old standards as even the IFRS interpretations did not appear to be sufficient.

The results confirm the current knowledge with respect to technical inconsistencies and weaknesses (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014) in the old standards. However, these studies provide more detail than the participants and mentions specific technical issues, i.e. missing guidance for variable consideration, multiple-element arrangements, licensing agreements and warranties as well as insufficient disclosures. Furthermore, even IFRIC interpretations to avoid divergent or unacceptable accounting behavior due to missing authoritative guidance (Johansson & Ringius, 2008) may not have been sufficient to account for certain transactions according to the results. However, no tendency is identified that divergent or unacceptable accounting behavior was in place.

6.1.3 Practical considerations

This subsection addresses ‘Theme 3: Practical considerations’ as part of the supplementary themes and addresses the previously identified technical problem areas from a practical viewpoint. Although having different research aims, literature related to theme 3 (e.g. Bierstaker et al., 2016; Ismail, 2014; McCarthy, 2012) provides insights that financial managers have problems with the application of revenue recognition standards based on country-specific case studies. This is the case for Malaysian financial managers applying IFRIC 15 (Ismail, 2014) and US financial managers applying previous IFRS recognition requirements (Bierstaker et al., 2016) or generally rules-based or principles-based standards on revenue recognition (McCarthy, 2012) on specific business transactions.

Auditors do not confirm that by not mentioning any specific issues. Rather, they emphasize that a best practice under the old standards emerged over time (P1, P5, P7 and P12). Just one auditor (P11) is slightly more critical with respect to the old standards and also IFRS in general.

Table 21: Supplementary analysis: Theme 3 - Evidence 1

Code	E /A*	Quote
P1	E	. . . if you have fewer regulations then you can interpret them more reasonable based on the ratio legis, as it is in the German Commercial Code. Maybe that's why I got along so well. So from a practical point of view, I also had no difficulties or issues with clients, although of course . . . there was no new application of those standards here at clients which they would have done only in the context of an IFRS conversion. It was mostly the case that you served companies that have been using IFRS for some time already and therefore did not notice the implementation of IAS 11 and IAS 18 and which problems existed back then. But my feeling was that this was not a problem in the daily business . . . The concepts that were pursued by the old standards were not fundamentally wrong and have also been proven through many years of practice that these are both practical and have led . . . to appropriate solutions.
P5	E	. . . you had discretion . . . if I even go into the IAS 11 or not. And . . . in the application itself again, in the progress measurement, etc . . . but a concrete application example I do not have right now.

P7	E	. . . the standard itself was rather . . . rudimentary and you needed accompanying literature and the . . . supplementary statements of the individual institutions [but] over the years, a best practice has developed.
P12	E	I thought they were okay. I did not find them very detailed, but I found them okay.
P11	E	I'd say there were interpretation problems. They always exist in IFRS accounting, because the standards are . . . written very principle-based . . . which . . . is reflected in different accounting policies . . . so, these interpretations from US GAAP have been included. [For example] service contracts: How should they be accounted for? . . . IAS 18 stated that it would take a pro rata share over the term of the contract. Of course, this doesn't help much if you have a multiple element contract. How do you deal with it?

* E = Auditor / A = Accountant

The accountants have similar opinions also referring to a best practice that emerged over time. P9 confirms that by providing an example how variable prices are automatically considered in the accounting system. Furthermore, P13 adds that the room for interpretation under the old standards made it easier in practice to come up with individual solutions.

Table 22: Supplementary analysis: Theme 3 - Evidence 2

Code	**E /A***	**Quote**
P3	A	Well, they were very clear to me . . . because they . . . had a best practice that has been established for years . . . and thus it was easier to work with compared to the new standard . . . in terms of inconsistencies or weaknesses, there is not much to say . . ., because many issues have been revealed through practice and literature, which is not stated in the standard.
P9	A	. . . this topic . . . variable prices has always been an issue. We have also solved this technically in the SD module of SAP. You can enter conditions there . . . and the system . . . cuts sales and . . . builds a repayment obligation, which has to be settled at the end when the final settlement is made with the customer.
P10	A	[It was] relatively well defined in the past as to when . . . revenue can be recognized and how . . . and it was not necessary to constantly question it . . . The old regulations were actually well-established, best practice.

P13	A	The big advantage is . . . that there is room for manoeuvre . . . to draw up one's own policies, which must of course comply with the superordinate regulations of the standard-setter, but one has the opportunity to come up with solutions, which, if you ask me, is in principle preferable to having strict regulations.

* E = Auditor / A = Accountant

Various studies address earnings management or manipulation in the context of the adoption or implementation of IFRS (Basundara & Chariri, 2014; Dahlén & Lindberg, 2017; Mikovã, 2015) lead to the result that IFRS may at least slightly improve the accounting quality. These studies are based on large samples of company data in different countries. While Basundara and Chariri (2014) focuses on companies in Indonesia and Dahlén and Lindberg (2017) on Sweden, Mikovã (2015) analyses European data. No significant difference with respect to earnings management could be identified before or after IFRS adoption. Still, professional judgment may be used, e.g. for accrual-based earnings management (Joosten, 2012). Accountant P4 confirms that. Auditors P1 and P11 add potential deviations between input-based and output-based methods applied under IAS 11.

Table 23: Supplementary analysis: Theme 3 - Evidence 3

Code	**E /A***	**Quote**
P4	A	Well, with IAS 18, I can either produce in stock or I can load it on my trucks and let them drive around on the balance sheet date. . . I've seen it before.
P1	E	IAS 11 offered the opportunity of calculating performance progress according to input- or output-based methods . . . Well, companies should of course always choose the one [method], which can be best observed or leads to the best result, but . . . you can say . . . there are now quite a lot of costs incurred internally, or you say output-based, the degree of completion is already higher than what has been incurred so far in terms of . . . percentage costs, but the degree of completion is already actually higher, so you recognize more revenue. Therefore, . . . IAS 11 was the standard that could have been used to make significant modifications.
P11	E	IAS 11 . . . allows me to design timing . . . by using input- or output-based methods.

* E = Auditor / A = Accountant

Overall, it appears that the application in practice was not a major difficulty as a best practice has been established over time. However, this does not imply that the previous revenue recognition requirements represent a robust framework. Companies might have accounted differently or used various interpretations around cut-off dates or by applying the PoC method.

6.1.4 Necessity for a new revenue recognition standard

This subsection addresses 'Theme 4: Necessity for a new revenue recognition standard' as part of the supplementary themes. Wüstemann and Kierzek (2005) provide first thoughts about the new revenue recognition project. Wüstemann and Kierzek (2005) explicitly mention inconsistencies and weaknesses of the previous standards and conclude that those triggered the project, but recommend that the previous standards should have been improved instead of developing a comprehensively new standard. However, it needs to be considered that this assessment was done nine years before the introduction of IFRS 15.

Auditor P5 mentions that the necessity for the new standard is a philosophical discussion. This comment reflects the deviating assessments of the other auditors. P1, P7, P12 and P15 value the old standards and think a modification would have been enough. P11 sees a need for the new standard due to the age of IAS 11 and IAS 18 and the consideration of US GAAP and its interpretation in the course of their application.

Table 24: Supplementary analysis: Theme 4 - Evidence 1

Code	E /A*	Quote
P5	E	. . . [It] is . . . philosophical: Is it any better . . . as the German Commercial Code . . . to create a crisp set of rules and then . . . need a lot of guidance, or . . . based on single cases . . . [with] a lot of rules and . . . still . . . guidance because . . . the difficult issues are . . . individual circumstances . . . I cannot respond to every single issue, but that's a philosophical question.
P1	E	The concepts that were pursued by the old standards were not fundamentally wrong and have also been proven through many years of practice that these are both practical and have led . . . to appropriate solutions. And in areas where there was some backlog demand in the old standards, a modification, in my opinion, would have made sense, but would have also been sufficient . . . Therefore, you could have

		actually built on the existing regulations and have a look where is there still room for interpretation and improvements . . . I believe that from the basic concept it would have been possible to adhere to IAS 11 and IAS 18 and to expand the relevant regulations by explicit disclosures in the notes and possibly also by a few . . . clarifications . . . But otherwise this could have been maintained.
P7	E	I honestly did not necessarily see the need. I think there was a fairly steady state in the big topics. [It would] . . . have been possible with surgical intervention, [but] I cannot judge that conclusively now . . . It should have been unified [and] . . . segmented . . . industry-specific.
P12	E	I don't think it was necessary. It would have been possible to sharpen the old standards a little bit, but it would not have been necessary to start a new project of many years' duration.
P15	E	Was it necessary to introduce it? Basically, no. What could have been done, and perhaps should have been done, is to revise the existing standards. Perhaps to have industry-specific standards . . ., make them clearer, especially for particularly affected sectors . . .
P11	E	Well, you have to imagine how long IAS 18 exists already . . . Since 1993 and now we're in 2018 . . . we have now lived without this standard for decades with the crutches of US GAAP . . . Often used EITF . . . That won't help. I think we are rid of such standards. In this respect, I would say that I believe there is an explicit benefit.

* E = Auditor / A = Accountant

An interpretation of the auditors' opinions with respect to the question if a new standard was necessary may be a philosophical one as P5 explains. However, none of the auditors mention that the previous standards could have been maintained unchanged and at least recommended some modifications, e.g. industry-specific guidance, more guidance or a clearer structure.

Assessments by accountants depend on the industry. Opinions favoring the previous standards are provided by P2, P4 and P 13 (automotive industry), P6 (Semiconductor industry), P9 (Food industry) and P14 (Mechanical engineering). These industries represent mass or serial production and therefore less complex revenue streams. Therefore, no issues were encountered under the previous standards.

Table 25: Supplementary analysis: Theme 4 - Evidence 2

Code	E /A*	Quote
P2	A	Absolutely not necessary . . . more accurate interpretations for certain industries, . . . would have been enough . . . you could have added a few IFRICs or SICs for specific industries or businesses . . . Such as the telecommunications industry or the construction industry . . . IFRIC 15, for example, once existed for real estate. In my view, that would have been enough . . . I do not know now how a Telekom thinks about that, but that is my perspective.
P4	A	So we did it wrong before? So when it comes to multi-element business, if I . . . think of T-Mobile, which . . . sells the mobile phone and . . . the contract, . . . such constructions, . . . I say okay, makes sense. But was it wrong before? And . . . this topic of customer-specific series production. . . it was not wrong from my point of view.
P6	A	So with us . . . it would not have been necessary, you could have saved money and we would have had a lot of less work.
P9	A	. . . for our . . . problem areas a modification of the old standards would have been enough. I understand, of course, that certain . . . things that now affect telecommunications and software simply needed to be clarified . . . I suspect that outside of telecommunications and software, a few clarifications on how to deal with certain issues would have been sufficient.
P13	A	I am sure you could have done that by means of an amendment . . . under IAS, I don't think it would have been really necessary . . .
P14	A	Well, we felt comfortable as it was and I think we were well positioned at group level as well and . . . would never have heard that . . . ambiguities arise from the figures, because the standards are confusing . . . So I can't say that from my point of view . . . that I was hoping for a change . . . I would see that as a conclusion. To put it in plain English: I didn't need it . . .

* E = Auditor / A = Accountant

In contrast, P8 and P10 as accountants working in the software industry state that IFRS 15 was necessary. This is justified as other interpretations do not have to be used anymore (P8) and that it even increases the discipline in the market (P10).

Table 26: Supplementary analysis: Theme 4 - Evidence 3

Code	E /A*	Quote
P8	A	For the software industry [it was necessary] in order to have a uniform standardized set of rules and not just any patchwork of interpretations and standards, so yes.
P10	A	I think that's . . . good. . ., because it . . . helps . . . to increase discipline overall in the market as regards the subject of revenue recognition. [Therefore,] I think so, because with the new standard the pressure is simply greater on the auditors and the accountants.

* E = Auditor / A = Accountant

The comments of auditor P11 and the accountants represent a tendency that a new standard was only necessary for industries with complex business models and revenue streams that had to use other regulations such as US GAAP. This interpretation is supported by statements of two accountants working in the software industry (P8 and P10) being one industry with complex multi-element arrangements (Tysiac, 2014).

Overall, the participants confirm the findings in the literature with respect to technical inconsistencies and weaknesses (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014). IFRIC interpretations created in order to avoid divergent or unacceptable accounting behavior because of that (Johansson & Ringius, 2008) also may not have been sufficient. Professional judgment may be used e.g. for accrual-based earnings management (Joosten, 2012). However, the literature (Basundara & Chariri, 2014; Dahlén & Lindberg, 2017; Mikovã, 2015) states that IFRS at least slightly improved the accounting quality or kept it unchanged depending on the country. Companies might have accounted differently or used various interpretations around cut-off dates or by applying the PoC method. However, no tendency is identified that divergent or unacceptable accounting behavior was in place. Overall, it seems that the application in practice in Germany was not a major difficulty as a best practice has been established over time, especially by the use of other accounting standards such as US GAAP and their interpretations.

6.2 IFRS 15 implementation

This subsection summarizes the research results with respect to research question 1, i.e. how auditors' and accountants' perceive the implementation of IFRS 15 in practice. As outlined in subsection 5.2.5.2, the following themes were identified related to research question 1.

Table 27: Identified themes related to research question 1

Research question		Theme		Subsec.
1	How do auditors and accountants perceive the implementation of IFRS 15 in practice?	5	Assessment of IFRS 15 readiness	6.2.1
		6	Project planning and scheduling	6.2.2
		7	Identified challenges	6.2.3
		8	Implications for organizational structure and procedures	6.2.4
		9	Paradigm shift of revenue recognition	6.2.5

6.2.1 Assessment of IFRS 15 readiness

This subsection addresses 'Theme 5: Assessment of IFRS 15 readiness' related to research question 1. This subsection provides an update on the IFRS 15 readiness as of December 2017 and therefore ultimately before the effective date 1 January 2018. Furthermore, it analyzes the drivers affecting IFRS 15 readiness.

6.2.1.1 Update as of December 2017

To assess the IFRS 15 readiness of companies as of December 2017, the interviewees were asked to classify their perception with respect to their own company (accountants) or clients (auditors) on a scale from 1 to 5. It turns out that the accountants estimate that their companies on average between 3.7 and 3.9, i.e. analysis finished and implementation started. In contrast, the auditors assess the IFRS 15 readiness of their clients between 2.4 and 2.9, which means analysis almost finished, but not yet implemented. The following table illustrates the results.

Table 28: Assessment of IFRS 15 readiness as of December 2017

Code	E /A*	Scale**	Comment
P1	E	2.0	Neither the analysis was completed nor the implementation done according to the auditor.
P2	A	4.5 – 5.0	The company was mostly finished, however, the company was waiting for a feedback of its auditor on one important topic.
P3	A	n/a	IFRS 15 was not really considered as a separate topic in the course of the implementation of new IFRS as not material for the leasing business.
P4	A	3.0 – 4.0	The company was implementing the changes that are necessary, however, was waiting for feedback from their auditors.
P5	E	3.0 – 4.0	One client rather 3.0, another client rather 4.0.
P6	A	5.0	Company was already finished with the assessment of disclosures, but had to discuss changes with subsidiaries. However, company was fully prepared.
P7	E	2.0 – 3.0	n/a
P8	A	5.0	n/a
P9	A	4.0	Business model relatively simple with respect to revenue recognition. Only challenge were variable considerations due to different forms of rebates.
P10	A	4.0	n/a
P11	E	2.0	Companies were not well prepared.
P12	E	3.5	Further than three, but not yet 4.0.
P13	A	5.0	n/a
P14	A	3.0	The major issues are analyzed and evaluated. However, company does not yet feel fully prepared with respect to putting the findings into the processes.
P15	E	2.0 – 3.0	Interviewee states that there is no experience with respect to a single case in which a client addressed the topic completely

			besides just theoretical. Clients mostly did not deal with the subject of disclosures and presentation.

* E = Auditor / A = Accountant

** 1.0 = Analysis not started; 3.0 = Analysis mostly finished, but largely not implemented; 5.0 = Implementation finished

Although these assessments may be influenced by subjectivity, there is a tendency that auditors perceive the readiness lower than the companies themselves. However, the assessment from the accountants represents a certain progress compared to earlier studies stating that approx. a fifth of the participants had not started and around two-thirds were in the assessment phase as of December 2016 and August 2016, respectively (PwC, 2016; Tysiac, 2017). The present study shows that the accountants who participated in this study, are mostly within the implementation phase and have finished the assessment phase, but also that the companies are not yet finished with the implementation of IFRS 15 as of December 2017 despite the effective date 1 January 2018.

6.2.1.2 Drivers influencing IFRS 15 readiness

The companies under investigation are hardly finished with the implementation of IFRS 15. Benavides (2015) mentions that the postponement of the effective date by one year reduced the pressure for all organization affected by IFRS 15 as nobody was prepared for an adoption on the original effective date. The participants, who mention this move of the effective date by one year, do not perceive it as a material factor for the readiness as of December 2017, but agree that it was providing time.

Table 29: Analysis related to research question 1: Theme 5 - Evidence 1

Code	**E /A***	**Quote**
P1	E	I believe that the issue of postponing the effective date by one year was not the essential factor.
P2	A	Although I was not [at my current company] . . . at the time, the postponement of the effective date was not relevant for the project. That has only given some time buffer.
P11	E	There were different groups . . . the IASB and the FASB met with industry or different industries and discussed specific topics. You can see how much conversation and

		interpretation was needed to clarify how the standard should be interpreted in different industries. It is also no coincidence that the standard has been postponed several times or taken so long to be adopted at all. It's also a major intervention in the corporate world.

* E = Auditor / A = Accountant

Missing awareness or underestimation of the conversion work is stated as one of the major drivers for the readiness level as of December 2017. An explanation provided by the auditors is that companies may come to the conclusion that the impact is not material in a first high-level analysis and then do not focus on the issue anymore.

Table 30: Analysis related to research question 1: Theme 5 - Evidence 2

Code	**E /A***	**Quote**
P1	E	. . . the companies were . . . not familiar . . . and did not see what really needed to be done with respect to conversion work and what extent the changes due to IFRS 15 have . . . and also the issue that most industries in which the daily business is not just retailing or selling, . . . almost all contracts need to be examined. That was just not taken into consideration . . . The resulting implementation and recording difficulties for existing contracts and business models have been . . . underestimated.
P5	E	I would say that the main reason is that . . . one underestimates . . . the effort . . . because one first analysis may lead to the conclusion that it has no . . . big impact . . . Especially, if you are in the area where you . . . sell . . . many standard products . . . you just get in trouble, because you realize that the whole analysis is still a lot of work. That was, I think, the main point that companies underestimated that.
P7	E	They . . . had only a very bad . . . preparation for the . . . project . . . I think, the need to adjust to it has not been seen so much before in practice. That was also the term practice shock, which I mentioned earlier.
P11	E	. . . many may underestimate this. But at the end of the day, it's a delimitation topic: When do I post sales? It is not the case that I am being prevented from recognizing revenue in general, but it is simply a question of when I am going to recognize revenue. And most companies probably don't see that as the serious . . . aspect to work intensively on it and do an analysis . . . I would interpret this . . . that one does not take the topic seriously, because it is only about delimitation issues.

* E = Auditor / A = Accountant

In contrast, the same reason is a success factor in case companies were better prepared. The issue of being aware and not underestimating the topic of IFRS 15 implementation was mentioned by both auditors and accountants in a positive context.

Table 31: Analysis related to research question 1: Theme 5 - Evidence 3

Code	E /A*	Quote
P1	E	If companies were well prepared, it is because of easier contract structures and because these companies have recognized the relevance [and] due to their size and their international orientation, they were very sensitized to this topic and were well prepared from the outset.
P2	A	Then . . . the project . . . was . . . in my . . . goal plan as well as in [the one] of the managers, too. So, there was a lot of emphasis being clean and compliant in that respect. I think it was clear to everyone that this is a lot of work for us, because we are a conglomerate and have to analyze so many business divisions and business transactions and also contracts. So, to some extent it was clear to us that this would be even more difficult for us than for others, who may serve only one business field. That's why the awareness . . . and also the respect for it was very high.
P4	A	Awareness is a very big issue for me. I mentioned earlier that our household division is very far progressed, because they simply knew from the outset that there would be a big effect on sales revenue and that is why from the very beginning they were behind the idea of simply understanding and implementing IFRS 15.
P6	A	Awareness was definitely pertinent on board level.

* E = Auditor / A = Accountant

Awareness of the topic of IFRS 15 is, among others, driven by the impact or the affectedness IFRS 15 has on companies. In case a first analysis results in an immaterial effect on revenues, awareness is lower. In case the impact is higher, the pressure is higher to work on the implementation of IFRS 15.

Table 32: Analysis related to research question 1: Theme 5 - Evidence 4

Code	E /A*	Quote
P4	A	I call it affectedness . . . This is a huge issue in the automotive sector . . . [and], in the worst case this leads to adjustments . . . of processes, leads to a revenue shift . . . [As] the subgroup is very much affected, . . . they are very well on board.

P13	A	If it had turned out that our sales revenues would decrease by 10% at Group level, then it would probably also be noticed at other levels. But when you realize that it's a lot of work, but . . . it's not going to change much . . . the pressure was not really great from the highest level. It was just important to make this conclusion: Are we impacted and how high?

* E = Auditor / A = Accountant

This underestimation of required conversion work may cause significant delays and explains why companies were not finished with the implementation as of December 2017. By implication, awareness is mentioned as a positive attribute for companies that are finished with the implementation as of December 2017. This is also reflected by a study on IFRS 15 readiness conducted in 2015 that shows that one third of the participants were not aware of any changes with respect to revenue recognition under IFRS, only a fourth expected any impact on their organization and just 4% already established a project team (GAAPweb, 2015). Even in 2016, a large number of companies had not started or were still in the assessment phase (PwC, 2016; Tysiac, 2017). Further studies with a different research aim and country-specific focuses conducted 2016 also confirm that stakeholders were not familiar with the requirements of IFRS 15 (Khamis, 2016; Peters, 2016). Based on the results of this study, a first analysis may lead to the result that the impact by IFRS 15 is rather limited. This may result in little awareness and therefore an underestimation of the conversion work, which limits the pressure to start with the conversion work early.

Awareness and affectedness may be influenced by the industry and size of the respective company. The literature claims that the impact depends, among other factors, on the industry the company is operating in (Oyedokun, 2016; PwC, 2016; Tysiac, 2014). The telecommunication, pharmaceutical and construction industry is mentioned by Peters (2016). Tong (2014) states that IFRS 15 could have a major effect with respect to the construction, manufacturing and customized software industry. Tysiac (2014) expects telecommunications, software and real estate as the main affected sectors. The following table provides a summary of industry-specific explanations provided throughout each semi-structured interview. As information was provided in relation to various questions, quotes are not illustrated.

Table 33: Analysis related to research question 1: Theme 5 - Evidence 5

Code	E /A*	Summary of industry-specific explanations provided
P1	E	The interviewee mentions that the impact of IFRS 15 depends on the size and industry of companies. Within the clients of P1, there is a large textile company that was well prepared as the company is large and internationally oriented. Therefore, the sensitivity for the topic was existing. Furthermore, P1 mentions mechanical engineering as another industry, which is impacted by IFRS 15.
P2	A	P2 states that due to the company the person is working in is a conglomerate with many different industries, they were aware that IFRS 15 implies a lot of work due to the analysis of various business transactions. Especially affected are the automotive and consumer goods industry within this conglomerate with the automotive sector being less prepared as there were still discussions about some issues with their auditors.
P3	A	P3 provides insights with respect to the leasing or banking sector. Overall, the sector is not affected by IFRS 15 as it is rather affected by other new standards. However, P3 mentioned that they are externally affected by their customers in case of IFRS 15-specific questions.
P4	A	P4 is working in a conglomerate with many sectors and industries. The household sector was prepared for IFRS 15 on time. Rather, problems could be observed within the IT, medical and automotive sector.
P5	E	P5 does not specifically address industries or sectors within the explanations, but assesses the awareness as important even if the company has a simple business model as the analyses still have to be conducted.
P6	A	P6 works for a company within the semiconductor industry selling one product. Therefore, the business model is rather simple. The interviewee states that there are no major problems due to that simplicity.
P7	E	P7 emphasizes issues within the automotive industries and connected difficulties in implementing the standard. Additionally, P7 mentions telecommunications, energy and mechanical engineering as further industries that are affected by the new standard.
P8	A	P8, who is working in the software industry, also states that the company is significantly affected by IFRS 15.

P9	A	P9 works for a food industries company in the B2B sector selling products with only few after sales services. As the business model is assessed as simple by P9, there is hardly any impact by IFRS 15 unless in special transactions.
P10	A	IFRS 15 affects the IT company P10 is working for with respect to transition and transformation projects.
P11	E	For P11, the automotive and telecommunications industry are the major industries affected by IFRS 15.
P12	E	P12 sees the construction and service engineering industry as the most affected ones.
P13	A	P13 is working within the automotive industry and does not see a significant influence of IFRS 15 due to the fact that the company is an OEM within the automotive industry and no automotive supplier and therefore has a rather simple business model.
P14	A	P14 works in the most affected company among the interviewees with respect to the relative quantifiable effect on the financial statements. It is a mechanical engineering company building production lines.
P15	E	P15 expects the highest impact for pharmaceutical, telecommunications and large-scale plant manufacturers. In addition, P15 mentions media companies, the telecommunications sector, IT and also the construction sector.

* E = Auditor / A = Accountant

The assessment by the participants confirms studies with respect to the relevance of the industry (Oyedokun, 2016; PwC, 2016; Tysiac, 2014). As within other studies (Peters, 2016; Tong, 2014; Tysiac, 2014), research participants expect the largest impact on the construction, pharmaceutical, telecommunications and software industry. One exception is the automotive industry not assessed as critical by the literature, however, potentially being included within the manufacturing sector (Tong, 2014). Despite the specifics of different business models, the affected industries have rather complex contracts such as long-term service contracts or multiple-element arrangements in common (Peters, 2016; Tong, 2014). Some participants also address this matter focusing on the business model and the underlying contracts instead of the specific industry.

Table 34: Analysis related to research question 1: Theme 5 - Evidence 6

Code	E /A*	Quote
P2	A	. . . the subgroups that have . . . simple business transactions, that means we're selling a mass standard products . . . we were done relatively quickly there, because . . . there were . . . no application problems.
P3	A	. . . we have little to do with it . . . in the banking world, in fact it did not happen to us, because we have [no] . . . long-term contract manufacturing.
P6	A	I would say yes [that there is an impact on] . . . certain industries, no for others. So . . . for the telecommunications industry and for the construction industry and . . . for an aircraft manufacturer or whatever . . . all the major projects.
P15	E	. . . it tends to be more of an issue in case we are looking at a plant manufacturer or a long-term manufacturer. Less for the serial manufacturer, because in fact not much will change.

* E = Auditor / A = Accountant

The research indicates that many companies underestimated or were not fully aware of the work that is required by IFRS 15. Awareness for the topic is partly driven by the impact or the degree of impact of the companies. The impact or degree of impact is influenced by the industry the company is operating in. The research confirms the literature that the more complex a business model is, the higher is the impact and the work required by IFRS 15 (Peters, 2016; Tong, 2014).

6.2.1.3 Disclosures

Auditors criticize that disclosures are affecting the IFRS 15 readiness negatively. As companies are often still working on analyzing and implementing the technical requirements of IFRS 15, disclosures have not been in the focus. Auditors emphasize that issue also in light of the fact that the DPR and ESMA focus disclosures for 2018 audits.

Table 35: Analysis related to research question 1: Theme 5 - Evidence 7

Code	E /A*	Quote
P1	E	The . . . disclosures [are] . . . not yet specifically focused in the implementation process, because so far, many companies want to confine themselves on the ‘if’ and ‘how’ of the implementation and . . . unfortunately forget that in the second step, also many disclosures have to be made, especially with regard to the conversion. That is also the new focus of the audit by the DPR this year and also the ESMA, the European panel . . . and therefore it should actually be a very exciting topic how the new disclosures are . . . implemented in a high quality . . . I think that companies are rather too late in that regard.
P7	E	[Companies prepare only] . . . rudimentary . . . you are . . . waiting eagerly . . . for those who have to publish their financial statements at first, [e.g. what] Siemens, which has the year-end date 30 September, or what SAP, which is often a pioneer, . . . are disclosing . . . and . . . inform how other large companies deal with the topic of reporting.
P12	E	I don't know. We are still at the very beginning of the disclosures to the financial statements. From our project point of view.
P15	E	But disclosures come after everything . . . I don't have a single case where the client had already really addressed the subject, except in theory . . . ESMA and the DPR, have also made clear that . . . they do not allow . . . to be fobbed off with general formulations when it comes to the question: Effects of future, not yet implemented standards in accordance with IAS 8 . . .

* E = Auditor / A = Accountant

Accountant P2 and P4 confirm that the disclosure requirements need to be analyzed and their inquiry implemented in the reporting process within 2018 in order to make sure to be prepared for the preparation of the financial statements for 2018.

Table 36: Analysis related to research question 1: Theme 5 - Evidence 8

Code	E /A*	Quote
P2	A	So far [we prepared] very rudimentary. That is our focus . . . in the calendar year 2018. Well, we know roughly what we have to bring . . . but we have not gone into the detailed analysis, just because the project progress was unfortunately not smooth . . . That will be our project for 2018.

P4	A	[We prepared] Quite rudimentary and bad, that means briefly skipped . . . what is required, so that we . . . have some information in our guideline, which we have recently published to the subgroups, that we can . . . give them a guideline. But the topic of disclosures is quite rudimentary, runs somewhere along the way.

* E = Auditor / A = Accountant

Other accountants have further progressed with respect to disclosure requirements under IFRS 15. The companies of P6, P9 and P13 have a readiness level of 5.0. P9 assesses the company's readiness level of 4.0. These readiness assessments also reflect their progress on the implementation of disclosure requirements under IFRS 15.

Table 37: Analysis related to research question 1: Theme 5 - Evidence 9

Code	**E /A***	**Quote**
P6	A	Well, the few issues that affect us are going to be calculated next week [January 2018] . . . and there is . . . a process how it should be done in the future. So, we still have to talk . . . with the subsidiaries and brief them, . . . but . . . there would be enough people in our company to make it work. So, we wouldn't have any problems.
P8	A	The . . . disclosure information was translated . . . [and] you say: Okay, this is our initial suggestion, that's what we want to include . . . This is always a sensitive issue in coordination with the auditor. So, we really went into every paragraph and concluded: That are our notes.
P9	A	. . . for the next year's financial statements . . . we have already outlined the notes to the next year's financial statements, worded them . . . which we can then discuss with the auditor.
P13	A	[The disclosures are] only a part of IFRS 15 . . . Of course, it was also necessary to ensure that the disclosures in the notes are . . . obtained by appropriate queries from the Group companies. But this had to be clarified just as much as all the other questions arising due to IFRS 15.

* E = Auditor / A = Accountant

While PwC (2016) concludes that two-thirds of the surveyed companies do not expect a material impact to their income statement, Oyedokun (2016) emphasizes that the standard has an effect on almost all entities due to the increasing requirements for disclosures. Tysiac (2017) mentions that the SEC will look for detailed qualitative and quantitative disclosures. The significance of disclosures is confirmed by the evidence from the semi-structured interviews. On the one hand, auditors emphasize the audit focus of DPR and ESMA. On the other hand, at many companies the implementation of disclosure requirements is still outstanding. Although in 2015 only a negligible number of companies expected disclosure requirements to be the central challenge (GAAPweb, 2015), companies are not yet progressed with the implementation of IFRS 15 disclosure requirements.

6.2.2 Project planning and scheduling

This subsection addresses 'Theme 6: Project planning and scheduling' related to research question 1. This subsection begins with an analysis on the preparation for IFRS 15 implementation. Workstreams included in the implementation process are analyzed. A detailed stakeholder analysis completes the examination of the project planning and scheduling of an IFRS 15 implementation.

6.2.2.1 Preparation

One auditor (P1) and one accountant (P4) mention that the preparation should start significantly earlier than the standard's introduction date. In the case of IFRS, this means before May 2014. Furthermore, they address that companies have the opportunity to participate in the IFRS 15 creation process commenting on the exposure drafts of IFRS 15. The statements imply that the option to generate awareness for the standard even before its introduction may be reasonable.

Table 38: Analysis related to research question 1: Theme 6 - Evidence 1

Code	E /A*	Quote
P1	E	That means long before the EU endorsement, the current IASB announcements and topics must actually be on the agenda and the development has to be . . . foreseen and observed before the standards are issued by the IASB . . . that . . . it can be assessed to what extent, even if it is only very roughly, there is an impact on the company.

P4	A	[Companies have] . . . the opportunity to comment ahead of time on the standard, and . . . it's always the same companies, [which] . . . actually always use this possibility. Not only did we fail to do so, but . . . also . . . others . . . to act on it on time, because I think it is difficult to actually take into account all the effects on practice in advance, . . . if you write such a new standard. In my opinion, this is simply impossible.

* E = Auditor / A = Accountant

Planning ahead and being aware of the potential impact of IFRS 15 is important as the regulators expect specific disclosures, which increases the pressure on both the companies and the auditors as addressed by the auditors P7 and P15.

Table 39: Analysis related to research question 1: Theme 6 - Evidence 2

Code	**E /A***	**Quote**
P7	E	If there is stated [in the notes to the financial statements]: We have no idea about it. Then that would be bad. And if there is stated: We have an idea, we know exactly what happens, but nobody can present a single document, which also plausibly underpins the whole and makes it verifiable, then we have a problem, too. So, there is a bit of pressure on that . . .
P15	E	Because now, when I give my sales forecast, I need to know: Does it have an effect? This was also triggered by the fact that . . . the regulators . . . ESMA and the DPR . . . made clear . . . do not allow . . . to be fobbed off with general formulations . . ., but that one must then know very specifically shortly before they come into force: What is the result?

* E = Auditor / A = Accountant

In order to understand the cycle for the IFRS 15 implementation project, the interview transcripts were screened for project starting points stated by the interviewees. Two major groups emerge. One the one hand, companies that addressed the topic already early in or before 2016 and on the other hand companies that addressed the issue in late 2016 or after 2016. Each group’s members can also be related to their readiness assessments. Auditors P1, P7, P11 and P15 assess the readiness level of their clients between 2.0 and 3.0, i.e. partly not finished with the analysis of the impact and not started with the implementation as of December 2017. These auditors explain that the project was not initiated before the middle or the end of 2016 although the standard was introduced in May 2014.

Table 40: Analysis related to research question 1: Theme 6 - Evidence 3

Code	E /A*	Quote
P1	E	Well, it was definitely not a continuous process, it was a very slow to no process at the beginning and I would say that in most companies . . . until the middle of last year [2016] actually nothing has happened and only then the topic has gained momentum . . . [Ideal] would of course be a company, which would have finished the process almost completely by the end of 2016, as, if in 2018 IFRS 15 figures are reported for the first time, of course, the year 2017 has to be adjusted as well. Therefore, of course it would be perfect if the company had already been fully prepared for this by the end of 2016.
P7	E	I would say . . . by the end of 2016, hardly anyone has thought about it. It came up for the first time that . . . the management report or in the notes . . . should . . . give . . . an outlook . . . what the consequences are for the financial statements. When you . . ., as an auditor, came around the corner a little bit more forcefully . . . they started slowly . . ., but not yet at its full power . . . I'd say until the end [of] . . . 2016 almost zero.
P11	E	I would say prepared in the last minute . . . They have . . ., really close to the end, they have begun to analyze how they have to . . . [account for] their individual contracts . . .
P15	E	Constant development I would say: No . . . 2016 is over . . . Up to that time, this was not really an issue . . .

* E = Auditor / A = Accountant

The accountants P6, P8 and P13 assess their companies' readiness level as 5.0, which means that they are finished with the analysis and the implementation of IFRS 15 as of December 2017. The company of P6 has a simple business model and therefore is less affected, however, the effects were already known by the end of 2016. The companies of P8 and P13 already started with the IFRS 15 conversion project after the standard was introduced in May 2014 and reached full readiness in December 2017.

Table 41: Analysis related to research question 1: Theme 6 - Evidence 4

Code	E /A*	Quote
P6	A	My boss has [known in] 2015 . . . what the standard looks like, that it won't affect us intensively . . . the effects that it will have were already clear in 2016. That was actually one of my first tasks.
P8	A	I think that in 2014 the topic may not have been addressed in detail, but in 2015, 2016, 2017 it was steadily increasing . . . from the level of detail. But it's not the case that it was not initiated until, let's say, 2017, but . . . was a continuous process due to the significance of the topic.
P13	A	. . . I'd describe that [process of implementation] . . . as linear . . . since May 2014 fairly linearly increased from zero to the readiness by 31 December 2017 . . . A project group has been set up with the publication of the standard . . . and before that in the IFRS method group . . . they have already considered and thought about it: Which way could it go? And in the project group, all sub-areas of the Group were involved and the individual topics of the standard were then dealt with

* E = Auditor / A = Accountant

In contrast, the companies or clients of the other participants, i.e. P2, P4, P9, P12 and P14, that are in between those two upper and lower end readiness levels, mostly started in 2016 working on the topic throughout 2017.

Table 42: Analysis related to research question 1: Theme 6 - Evidence 5

Code	E /A*	Quote
P2	A	. . . so the topic has been red-hot since . . . July 2016 . . . With respect to the timeline, real progress has been made in calendar year 2017 and also at the end of 2016.
P4	A	From my point of view, we have made the greatest progress in 2017. Well, I know that the whole project was started here in 2015 with first workshops and trainings . . . But . . . the critical points didn't come up until the beginning of the year [2017] . . .
P5	E	One client has . . . started in 2016 . . . Moreover, the other client . . . did not start until 2017. So actually very late.
P9	A	That was a constant process . . . This clarity came to light somewhere in the summer of 2017, when we received feedback on whether or not there were . . . [relevant issues].

P12	E	This happened mainly in 2017. They have done a little bit before, but very rudimentary, very slow. Not very focused either. So I would say in the 12 months in 2017, 90% of the status where they are at the end of the year were reached.
P14	A	The strongest progress . . . took place . . . in 2017. I know it was discussed in 2016 . . ., we have talked about it: What is the standard about? . . . We talked about those things, but . . . the greatest progress in analysis and also in the writing of guidelines has taken place in 2017.

* E = Auditor / A = Accountant

The significance for starting early and creating the right project structures is also emphasized within project management theory. "The Planning Phase may be considered as the most time consuming phase and at the same time the most rewarding one if done properly." (Abbasi & Al-Mharmah, 2000, p. 106). Successful IFRS conversion projects generally have an early start and a defined plan using project management techniques (Weaver & Woods, 2015). The research participants confirm that general statement with respect to the conversion to IFRS 15 as the readiness level is directly related to the starting point of the implementation. The beginning of the implementation at the introduction date in 2014 worked out well for some participants while a start towards the end of 2016 seems to be too late.

6.2.2.2 Workstreams

This subsection aims to provide details on an IFRS 15 implementation project on the organizational and personnel level. This includes three major areas, i.e. to understand IFRS 15, to understand the business and finally merge the understanding of the business with IFRS 15 know-how.

6.2.2.2.1 Understand IFRS 15

At the beginning of an IFRS 15 implementation project, it is important to understand the new standard from an accounting perspective. Although the literature states that IFRS 15 goes far beyond accounting (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017), accounting is still the most important department at the beginning as new concepts and regulations need to be understood.

Table 43: Analysis related to research question 1: Theme 6 - Evidence 6

Code	E /A*	Quote
P1	E	I think that an IFRS 15 group must be highly integrated into the company, which means that it is not a purely technical group. This may be the case in the beginning working on concepts . . . [With respect to] The implementation group, which . . . at first deals with the implementation of the new regulations within the accounting department . . . the technical expertise needs to be focused.
P2	A	We had a team in the holding . . . from the accounting department . . . We've answered all the key technical questions.
P13	A	A project group has been set up with the publication of the standard . . . [and] in the project group, all sub-areas of the Group were involved and the individual topics of the standard were then dealt with. The project group members were from the divisions and then there was of course the representation from the headquarter, thus in particular then by myself and colleagues from the headquarter.
P15	E	The project lies . . . in the finance department, and that is from where you include the necessary departments . . . This is obvious, because it is all about standards and reporting, and also about reporting later on in terms of publication, disclosures, explanations from a qualitative or quantitative standpoint.

* E = Auditor / A = Accountant

In order to carry the content of the standard into each division, subsidiary or department, the accounting department on group level mostly develops a new or adjusts the current accounting guideline in order to provide a manual how to address and treat transactions or revenue streams under IFRS 15. The accounting guidelines may be extensive (P4 and P6) and serve as the translation of an accounting standard to transfer the requirements into the whole organization.

Table 44: Analysis related to research question 1: Theme 6 - Evidence 7

Code	E /A*	Quote
P2	A	. . . we have a central accounting guideline where we virtually roll out our view of things on IFRS 15 . . . on a high-level basis for all subgroups and if the subgroups need specific guidelines . . . then those are coordinated with us and then serve as an appendix to our general accounting policy.
P4	A	Accounting Guideline [and] . . . there are also subgroup-specific guidelines, in other words guidelines that were prepared by the subgroups themselves, of course discussed with us and . . . the auditors . . . our guideline is . . . a high-level framework [with] . . . 40 pages, so it is also extensive.
P5	E	. . . from the whole analysis and as a standard documentation, [results the] . . . accounting guideline . . . where it is stated how the whole stuff should be accounted for (P5).
P6	A	Accounting Guideline, contracts and our conversion memorandum. In the end, it had about 50 or 60 pages . . . We . . . went through the complete standard and explained why this is true or . . . not true.
P8	A	The guideline . . . [and] documents that support this . . . It's the guideline plus there are extra accounting memos . . . for certain issues, which can be found in the guideline plus some base for conclusion . . .
P9	A	. . . we also have an accounting guideline, which is not IFRS 15 specific, but encompasses all topics . . . [and] we . . . clarify the topic IFRS 15 . . .
P12	E	There is an accounting guideline. They have defined different types of revenue streams, where the units have to classify their existing contracts and then document why they believe that it falls into the type of order with an accounting sequence defined by the group.
P13	A	From an accounting point of view, I definitely think that this policy, this Group policy on IFRS 15 accounting, was the most important document for revenue recognition.
P14	A	. . . the Group has been essentially working with the standards and formulated recommendations for action in a separate IFRS 15 . . . guideline for the Group . . . I know we have a team in the parent company, I would say, group accounting, who has worked intensively on the standards and the preparation of these guidelines.

P15	E	The companies, we are talking about large corporations that have international subsidiaries, this work is done in one place, namely in the corporate headquarters. The user outside receives an accounting guideline where this is processed.

* E = Auditor / A = Accountant

As the accounting guidelines or similar documents stipulate the treatment of various transactions or revenue streams, the preparation of those is a major step in the course of an IFRS 15 implementation project. The responsibility to prepare these guidelines has the accounting department on group level. Therefore, the accounting department on group level is demanded at first and initiates the operative process of the implementation of IFRS 15.

6.2.2.2.2 Understand the business

As outlined in subsection 6.2.1.2, the business model is of major relevance according to the research participants. This is in line with previous studies (Oyedokun, 2016; PwC, 2016; Tysiac, 2014). Affected industries have rather complex contracts such as long-term service contracts or multiple-element arrangements (Peters, 2016; Tong, 2014). Therefore, the accounting department needs to understand the business model. This may start with basic analyses, e.g. a regular process analysis focusing on how the sales process is actually working. Mahadevan (2000) Scheer, Deelmann, and Loos (2003) argues

> that a business model is a unique blend of three streams that are critical to the business. These include the value stream for the business partners and the buyers, the revenue stream and the logistical stream. Value stream identifies the value proposition for the buyers, sellers and the market makers and portals in an Internet context. The revenue stream is a plan for assuring revenue generation for the business and the logistical stream addresses various issues related to the design of a supply chain for the business. (p.11)

The analysis of revenue streams may include a general analysis of the sales process, but especially an examination of the material contracts. These contracts need to be allocated to the different revenue streams. In order to ensure an effective and efficient processing of this phase, the required departments or people within the company need to be consulted. As the business model is in the focus, these people are mostly within the divisions or subsidiaries as these handle the operative or daily business. Furthermore, contracts are often prepared in the operative units.

Table 45: Analysis related to research question 1: Theme 6 - Evidence 8

Code	E /A*	Quote
P2	A	There were at least two contact persons in each division . . . with whom conversations were conducted . . ., the business models were discussed, we called that revenue streams. So, . . . a process analysis was conducted, focusing on what is actually done, how the sales process is working.
P4	A	The sales people were our contact persons when it really came down to the doing, so when we went into the analysis of the individual revenue streams. Then, we turned to the sales department to analyze the contracts, to help us understand the contracts, to understand the business.
P11	E	Then the individual contract and revenue streams . . .must be checked to see how this new standard will affect the individual revenue streams. Contract after contract. You can also cluster it and say: I have certain revenue streams . . ., revenue A, revenue B and revenue C, have certain contractual constellations, and these contractual constellations have to be analyzed with regard to the standard.

* E = Auditor / A = Accountant

A well-functioning and up to date contract management system is important with respect to contract analysis and simplifies the process. This may be a system which allows multiple parallel users to work on the creation, negotiation and management of contracts (Harmes, Jensen, & Tominna, 2004). Participants mention effective and efficient contract management as one of the decisive factors for a successful IFRS 15 implementation, especially as all material contracts, which have been made worldwide or in different divisions need to be reviewed.

Table 46: Analysis related to research question 1: Theme 6 - Evidence 9

Code	E /A*	Quote
P6	A	I think the advantage is . . . in our case . . . [that] everything that has affected long-term contracts . . . was collected centrally, is already at a central location. That means that I only had to walk one door further and was able to get the contracts, in other

		words very good contract management . . . we have a contract database where you can look up: Which customer, which duration, when and how long you negotiated . . . and thus you could . . . make a full check of all contracts . . .
P12	E	It was relevant in the project insofar, because it was about . . . screening of the contracts and . . . difficult to get the information you need to run an analysis from all existing systems. So actually a big IT problem much earlier.
P15	E	Do I have a contract? This very first step requires an inventory, which is necessary . . . What I see . . . is that both [IFRS 15 and IFRS 16] taken together are the triggers that you start much more with electronic scan archiving, recognition systems. Not only because of IFRS 15, but . . . I rather do it comprehensively from the beginning

* E = Auditor / A = Accountant

The views of the auditors and accountants with respect to the understanding of the business lead to a detailed contract analysis with the help of the people with the required competence and a well-functioning and up to date contract management system. Those two key factors represent major success factors.

6.2.2.2.3 Merge business and IFRS 15 know-how

It is important to merge the understanding of the revenue streams with the theoretical know-how of IFRS 15. With respect to the provided insights by the interviewees, there are various tools. The participants mention questionnaires, interview guides, checklists or similar methods containing the information based on the theoretical analysis of IFRS 15. These are carried in the specific departments in order to receive the necessary feedback.

Table 47: Analysis related to research question 1: Theme 6 - Evidence 10

Code	**E /A***	**Quote**
P2	A	. . . after the process analyses, where we talked about the business, we then only talked about theory in connection with the standard ... and how we can put our business transactions and business processes . . . under the standard.

P5	E	So, . . . our instrument are these questionnaires from the contract analysis . . . [and] the documentation of revenue streams. Basically, it is also important that this agrees with our understanding of the individual . . . business activities.
P6	A	At the beginning, . . . I had a meeting with the head of sales and the deputy head of sales and went through . . . a kind of questionnaire . . . I read the standard, I wrote a questionnaire for myself on all points and went through it with those guys just paragraph by paragraph.
P7	E	. . . I would have actually found it desirable that the accounting, which should actually be informed about this subject the most, that they develop . . . a kind of checklist or a questionnaire, which would have been filled out by sales in an understandable manner . . . Accounting . . . would have to disassemble the standard, somehow make a checklist, which then can be used by the other parts in the company.
P9	A	. . . in the second step started the interview phase, where we have identified what we believe to be the most important influencing factors and then approached the divisions. Showed them one or two charts, what the main innovations are and asked them to simply review their contracts and give us feedback as to what they identify the relevant special features.
P12	E	Besides the guideline, they have this revenue stream typology. You have to imagine this like an Excel sheet for every essential order, where it is entered: Criterion 1 is fulfilled, criterion 2 is fulfilled here and that's why we end up with order type number 12 . . . and that results in a separation of performance obligations and no PoC for example.

* E = Auditor / A = Accountant

Tysiac (2017) concludes that a governance structure including a steering committee, as well as executive sponsorship across the key departments finance, IT, investor relations and tax, is necessary. Furthermore, clearly defined working groups and documentation are of major importance. The literature states that IFRS 15 goes far beyond accounting due to the necessity of new systems and processes (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017). The research confirms that and provides further details. The accounting department may start with a theoretical analysis, a pre-assessment of the classification of revenue streams and a discussion with further departments or needs to understand the business before conducting any further analyses. An up to date contract management is helpful to conduct the project effectively and efficiently. Furthermore, it is important to merge the understanding of the business with the technical IFRS know-how in order to make sure that all transactions are accounted for correctly. In order to achieve this, a close collaboration between the accounting department and other required departments within each company is important.

6.2.2.3 Stakeholder analysis

This subsection starts with an analysis of intra-group aspects in connection with the implementation of IFRS 15. After that, internal stakeholders are examined, followed by an analysis of potential external stakeholder groups such as consultants and auditors. The subsection concludes with the findings with respect to training of internal and external stakeholders.

6.2.2.3.1 Intra-group aspects

The interviews reveal that a differentiation with respect to stakeholder groups starts with the question if stakeholders are working on group level or within divisions or subsidiaries as differences among those stakeholder groups were encountered. The purpose of this subsection is to underscore the fact that perceptions and opinions of the accountants may be different depending on which level they are employed.

Whilst the project is controlled and driven on group level with respect to technical know-how and executive sponsorship, required details on revenue streams or contracts are obtained from subsidiaries or divisions. The subsidiaries apply IFRS 15 on a daily basis, however, based on the accounting guideline or other documents provided by the group. Accountants P3, P10 and P14 are employed within divisions or subsidiaries of group companies. Accountants P2, P4, P6, P8, P9 and P13 are working within the parent or holding company of their companies. Auditors are rather unaffected as they audit and consult parent companies and subsidiaries of groups.

Among the accountants employed on subsidiary or division level, P3 refers to the disclosure requirements by the parent company and that their completeness is ensured on parent level. P10 provides extensive explanations about the relationship and responsibilities between the parent company and the division and emphasizes that the topic was carried out on group level until July 2017. Therefore, P10 is rather concerned with the business implications itself than with the details of previous or current IFRS revenue recognition requirements. This is the same with P14 mentioning that the employees hardly ever read standards in detail on subsidiary level, but work with the guideline provided by the group. Also, disclosures are not a major technical issue on subsidiary level as those are obtained on group level.

Table 48: Analysis related to research question 1: Theme 6 - Evidence 11

Code	E /A*	Quote
P3	A	We have received additional disclosure requirements, but . . . We saw . . . quickly that we . . . have the data for it . . . and we do not even look at it, but . . . wait . . . at the end of the day: Which number wants . . . our parent company and how . . . ?
P10	A	From a business point of view, . . . I'm close to the projects, the business etc. and the new contracts . . . So, in July 2017 this started with respect to the local units. Previously, the topic was carried [out] . . . centrally . . . The accounting department on group level is the nucleus, . . . the local accounting departments are the long arm of the group's central accounting department, and they then drive it towards finance. Finance . . . deal with controlling and business management . . . get in touch with the business. So, this is . . . the chain of command, at least as far as these issues are concerned . . . we do not have an accounting guideline in that sense. We have a Group Reporting Definition . . ., but with respect to accounting, the Holy Grail is in the group.
P14	A	I don't know that much about the standards in detail . . . This is a little bit due to our approach within the Group. We hardly ever read the standards ourselves. In our case, the central finance department . . . defines financial statement guidelines for us . . . also . . . [explaining] how to deal with things in HGB and IFRS . . . I think that the Group auditor is also the one who defines the audit instructions for the local auditors and there was certainly a close exchange of opinions. I can't imagine it otherwise. But I wasn't personally involved. But we on the level of our company or subsidiary, we have not hired a consultant . . . We calculate the figures according to IFRS and report them to the Group consolidation system, but we are not dealing with the notes to the financial statements according to IFRS.

* E = Auditor / A = Accountant

Accountants working on holding or parent company level complement this view from the other direction. The projects are commonly steered on group level by the group accounting department, which communicates with appointed contact persons in each subsidiary or division. Furthermore, the parent or holding company prepares the IFRS 15 guideline or similar documents as well as all other guidance for the subsidiaries and divisions. This also implies that potential interpretations or discretionary decisions are made on group level and not individually by single accountants within single subsidiaries. Furthermore, the necessary queries and also the adjustment of the reporting package to acquire the required data for the financial statements is controlled on group level. The analysis of revenue streams, however, is done in close collaboration with the different departments on group and subsidiary level.

Table 49: Analysis related to research question 1: Theme 6 - Evidence 12

Code	**E /A***	**Quote**
P2	A	We had a team in the holding that came from the accounting department . . . [and] we analyzed the problem areas with the business units. There were at least two contact persons in each division [being] responsible for the implementation of IFRS 15 in their subgroup . . . I cannot even say more about the subgroups, because . . . I never attended in conversations again, after we had our conversations and distributed the messages . . . so we have a central accounting guideline where . . . the discretion or our opinion is consolidated . . . and that is also aligned with the auditors.
P4	A	This is controlled by us from the accounting principles department. In the subgroups . . . we always have a project manager . . . and . . . a number of colleagues who are involved in the project . . . but we decide . . . [how] we see it for the standard case [and] . . . it's not that we leave our subgroups all the freedom, but that in cases where deviations from the standard are made . . . a consultation with us is necessary.
P6	A	. . . we wrote a group-wide memo. We've analyzed it . . . at corporate headquarters and . . . I flew to the respective locations and discussed it with them all, discussed it with the auditors on site . . . [and] the lead was definitely in the headquarter . . .
P8	A	Well, the discretion is . . . predefined by the group level . . . [and] documented from above via the guideline.
P9	A	Well, we did . . . the first step . . . at the headquarters [and] . . . tried to identify the . . . special features . . . and then approached the divisions . . . and asked them to . .

		. review their contracts and give us feedback . . . and assessed, if there are application cases . . . I mean, they know their contracts.
P13	A	We can only pour the guidance of the IASB into a . . . group policy. I cannot judge to what extent this will be done by the divisions . . ., what consequences it will have for them, whether they will say that they are doing something else . . . I don't want to rule it out, but I haven't heard anything about it.

* E = Auditor / A = Accountant

The auditors confirm the issue of decentralized tasks. They mention the parent issuing accounting guidelines and selectively consulting different departments on the level of each subsidiary or division for further inquiries. P15 addresses issues with respect to different group structures and that the headquarters need to consider and plan which information can be obtained centrally.

Table 50: Analysis related to research question 1: Theme 6 - Evidence 13

Code	**E /A***	**Quote**
P5	E	. . . there should of course be a central group, which takes care of it. But of course, within decentralized organized corporations, it does make sense that there are again responsible parties at subsidiaries . . ., [but] it is the question, whether you manage this in the individual corporations . . . only on the basis of a guideline.
P11	E	In the companies where I worked in and followed the implementation, it was located relatively high in the hierarch . . . Because the aim was to achieve uniform accounting in the individual segments throughout the Group.
P15	E	Is this information that can be collected centrally? . . . Collecting the information centrally is easier, because that's where the people I know do it centrally anyway . . . Companies that work with shared service centers in this area and are further developed will of course have it easier, because they have all the information, the whole accounting is available in one, two, three, four places, compared to if they are decentralized. There is no one-size-fits-all . . . [With respect to] The . . . large corporations that have international subsidiaries, this work is done in . . . the corporate headquarters. The user outside receives an accounting guideline where this is processed . . . The external auditor also works against this Accounting Guideline . . . and does not confirm the accuracy of the standard in this sense.

* E = Auditor / A = Accountant

Whilst the perceptions and opinions are closer to the standard and its theoretical adoption on group level, the perception on subsidiary level may be more practice and business-oriented rather than to specific sections of IFRS 15. It is important to consider this during the implementation of IFRS 15 to clearly distribute tasks and competencies. Furthermore, it may be helpful to assess which information can be obtained centrally depending on the data and system access available on group level.

6.2.2.3.2 Internal stakeholders

The auditors state that an IFRS 15 project group has to be highly integrated in the company and not only comprise of accountants. However, as mainly accounting has the technical expertise and understanding of IFRS and the reporting processes, the main responsibility is within the accounting department. Accounting needs to analyze the standard from a technical viewpoint and prepare guidelines, technical memorandums and translate the requirements of IFRS 15 into practice. Accounting is mostly the department that is aware of new standards or accounting requirements and therefore needs to initiate the project.

Table 51: Analysis related to research question 1: Theme 6 - Evidence 14

Code	**E /A***	**Quote**
P1	E	I think that an IFRS 15 group must be highly integrated into the company, which means that it is not a purely technical group . . . in any case, the accounting department has to be integrated . . . [and] must bring in the knowhow of the standard.
P5	E	. . . there should of course be a central group, which takes care of it. But of course . . . you have to do that quite comprehensively . . . from a structural viewpoint . . . [With respect to] . . . the organizational structure, . . . I would have actually found it desirable that the accounting [departments], which should actually be informed about this subject the most, . . . develop a guideline [and/or] . . . a kind of checklist or a questionnaire . . .
P7	E	. . . organizationally I would ask: Who is affected at all? In my opinion, this is not just the accounting . . . So . . ., at first demand controlling . . . [to find out] who . . . I have to get to the table first, to manage . . . all that.
P15	E	The theory says that practically all or almost all areas in the company have to be involved, because revenues and top line have an impact on many things . . . In practice, however, I think . . . [the] project . . . is . . . in the finance department . . .

		and that is from where you include the necessary departments . . . This is obvious, because it is all about standards and reporting . . . and also about . . . publication, disclosures, explanations from a qualitative or quantitative standpoint.

* E = Auditor / A = Accountant

Accountants confirm the structure of project groups comprising of employees from various departments, but also that accounting is the central department with respect to the technical competence, mostly located on group level with specific contact persons in the accounting departments of the local entities.

Table 52: Analysis related to research question 1: Theme 6 - Evidence 15

Code	**E /A***	**Quote**
P2	A	Involved [was the] . . . accounting policy or accounting department . . . [and] in the subgroups . . . of course the accountants . . . who are then available for technical questions . . . we . . . on the holding level . . . available for . . . technical questions, if the business groups cannot solve it themselves.
P8	A	[We have] . . . a team that exclusively takes care of this topic . . . and at the same time you had a team that was in charge of the technical implementation . . . Then the project [is] split up again into different sub-areas depending on the . . . line of business . . . and the cost side is also considered separately . . . So this was a comprehensive project.
P9	A	The accounting department on group level is the nucleus . . . and . . . the local accounting departments are the long arm of the group's central accounting department, and they then drive it towards finance. So accounting was the main driver at the beginning . . .
P13	A	A project group has been set up with the publication of the standard . . . And in the project group, all sub-areas of the Group were involved and the individual topics of the standard were then dealt with. The project group members were from the divisions and then there was of course the representation from the headquarters.
P14	A	I know we have a team in the parent company [within] . . . group accounting, who has worked intensively on the standards and the preparation of these guidelines.

* E = Auditor / A = Accountant

The inclusion of controlling is driven by explaining and incorporating potential changes in the internal and external reporting. However, also further functions such as system changes or valuations are assumed by controlling.

Table 53: Analysis related to research question 1: Theme 6 - Evidence 16

Code	E /A*	Quote
P2	A	Controlling . . . was of course included at holding level . . . because . . . the question arose: How do we design a monthly report [and] . . . what are the effects on key figures? They were . . . strongly involved.
P4	A	For example, we have included controlling from the holding company because IFRS 15 has an impact on a number of key performance indicators.
P6	A	. . . then . . . the controlling that they process the effects transparently also for the management.
P8	A	Then . . . the involvement . . . of the controlling department that they know: How are . . . the numbers changing?
P9	A	. . . and the controlling department . . . where we had changes that had to be implemented in the system. It is . . . important that we proceed in the FI and CO areas in a smart way.
P14	A	Of course, . . . controlling . . . because . . . controlling in our company also assumes certain functions such as inventory valuation and this is . . . essentially affected in our company.

* E = Auditor / A = Accountant

Controllers may assume different roles within companies as their roles and responsibilities may be broad and different. According to Horváth, Gleich, and Seiter (2015) referring to the Institute of Management Accounting, these include managing functions that are critical to business performance, supporting organizational management and strategic development, providing accurate and insightful information for better decisions, ensuring that organizations operate with integrity and proper governance, planning for the long-term and helping to ensure sustainability and safeguarding the interests of the organization and its key stakeholders. This broad understanding and a variety of possible tasks is also reflected in the views of the research participants.

System changes may also be implemented by the IT department and not by the controlling department. Therefore, the IT department may be included in the course of the implementation of IFRS 15. Depending on the business model and the impact, only slight system changes due to new accounts to be considered in the accounting or consolidation system or even new tools in the course of allocation rules or timing of revenue recognition in case of complex contracts may be necessary.

Table 54: Analysis related to research question 1: Theme 6 - Evidence 17

Code	**E /A***	**Quote**
P1	E	In addition, of course, the IT department is an essential factor, which . . . at least later in the integration must be involved, since . . . revenue and its recognition should . . . be reflected in the system.
P2	A	Of course, our . . . IT dealing with the consolidation system . . ., because of the new balance sheet items, system adjustments in the consolidation tool are necessary.
P6	A	. . . the consideration . . . Whether we're going to adjust the entire SAP system . . . because of our changes and . . . the decision has been made . . . that once a quarter the adjustment is made and pulled from the system on the basis of a business warehouse report. In that regard, we had briefly talked with the IT department, so the IT was involved for a short while.
P8	A	. . . you had a team that was in charge of the technical implementation . . . connected with a new tool or to adapt the tool to the IFRS 15 regulations . . . [such as] other allocation rules, other times when you realize revenue.
P12	A	The [accounting] department coordinates with IT. They [explain] . . . the IT department what is needed. IT makes suggestions on how to implement this. Whether this is possible with the given systems. Whether you need new systems that can be connected via interface. Whether to change complete systems.

* E = Auditor / A = Accountant

The tax department may be included in case of questions with respect to deferred taxes. One auditor provides contractual assets according to IFRS 15 which may be non-existent in other GAAPs and may lead to deferred taxes as one example.

Table 55: Analysis related to research question 1: Theme 6 - Evidence 18

Code	E /A*	Quote
P7	E	. . . tax colleagues come around the corner, because for them . . . with . . . a contractual asset . . . the subject of deferred taxes . . . will become significantly more important.

* E = Auditor / A = Accountant

The sales department appears to be the most affected department besides the accounting department. Most of the interviewees extensively discuss the roles and responsibilities of the sales department in the context of an IFRS 15 implementation. The reason for this is that the understanding of the business model and the experience from contract negotiations is much higher in the sales department compared to the accounting department. Furthermore, the accounting department needs to ensure the completeness of all contracts to be reviewed and classified under the new revenue recognition rules.

Table 56: Analysis related to research question 1: Theme 6 - Evidence 19

Code	E /A*	Quote
P1	E	. . . individual business units such as the sales department have to be involved in order to relate the . . . business transactions, contract designs and revenues that occur in the company accordingly . . . Especially in large companies, it is the case that the people in accounting do not have an overview of all framework agreements and . . . special contracts . . . The sales department actually has to do a review and have a look which sales models are currently being pursued and also in the near future [and] . . . is required [as it] . . . makes the contracts with the customer . . .
P5	E	Well, . . . in addition to accounting, of course, it is the sales department, that those, who . . . negotiate the contracts . . . are included. And their task . . . is rather . . . that together you can identify in which areas potential effects could arise [and] . . . [which] potential application areas of IFRS 15 . . . are new . . .
P7	E	. . . sales would have the task to reflect on the contracts . . .
P11	E	As I said before, there were other departments, especially the sales department, the sales controllers and the sales people . . ., who are negotiating contracts with customers . . . Simply to generate a sensitivity for these new standards.

P12	E	I think the sales [employees] . . . know the details of the contracts. They are responsible for the entire content of the contract . . . for 90% of the orders that have to be assessed later in accordance with IFRS 15, normally sales and project management is involved.

* E = Auditor / A = Accountant

The accountants have a similar view and understanding for the rationale to include the sales department in the implementation process. Especially in the course of the contract review or the reflection of contract contents, the sales department, depending on the group structure within the operative division, is of major importance.

Table 57: Analysis related to research question 1: Theme 6 - Evidence 20

Code	**E /A***	**Quote**
P4	A	The sales people were our contact persons when it really came . . . to the doing, so when we went into the analysis of the individual revenue streams. Then, we turned to the sales department to analyze the contracts, to help us understand the contracts, to understand the business.
P6	A	Sales was of course involved when it came to the contracts as a whole and, in particular, to any specific questions about the contracts.
P9	A	We had a strong focus on . . . the sales department. So, we went into the divisions . . . and we talked . . . and introduced to them, where we see the main innovations and asked them to analyze if this applies to them . . . [and] when you're talking to the sales manager of a division . . . [you can be sure] they know their contracts.
P10	A	[We have] . . . involved, not only the pure sales department, but also those who look after the existing customer business . . . [as] they . . . read the contract they sell letter by letter . . . Therefore, sales of course, processing, client management . . . Then the colleagues doing . . . contract operations. These are the colleagues who ultimately invoice on the basis of the contracts and information from the deliveries. They must also know . . . the new approaches, new booking transactions are also necessary.

* E = Auditor / A = Accountant

Depending on the approval steps and sales processes within companies, the legal department might also be relevant during contract analysis due to their legal understanding of single agreements. This may include exclusive rights, rights to terminate and certain legal obligations that may affect revenue recognition.

Table 58: Analysis related to research question 1: Theme 6 - Evidence 21

Code	E /A*	Quote
P5	E	Maybe . . . the legal department . . . to assess, whether . . . a contract has an exclusive right or . . . a right to terminate . . . That may be, but not necessary in standard cases.
P7	E	[Important is also] . . . the legal department . . .: What does that mean with respect to contractual implications?
P8	A	Then . . . incorporation of legal . . . to evaluate: What are my performance obligations? How do I have to evaluate them? Are they somehow distinct or non-distinct? What are my legal obligations?
P10	E	We have also involved . . . legal, . . . because they are confronted with the issues in the contracts and have to be aware of them.

* E = Auditor / A = Accountant

Tysiac (2017) concludes that a steering committee is necessary for IFRS 15 implementation. A steering committee could be defined as consisting of senior management from different corporate functions, project management and other representatives enabling senior management to monitor the project team's decisions by having ratification and approval rights on all major decisions (Somers & Nelson, 2001). From a theoretical viewpoint, auditors P1 and P5 are in line with that definition for a steering committee, especially with respect to the management role or the relatively high hierarchical position within the company to have the necessary assertiveness. However, a steering committee was not in place for IFRS 15 implementation purposes according to the auditors P7 and P12 as one company relied on their auditors as external drivers or informal appointment of a steering committee took place.

Table 59: Analysis related to research question 1: Theme 6 - Evidence 22

Code	E /A*	Quote
P1	E	The steering committee should definitely be equipped with management members, just to set the right balance and to inform the management from the outset.
P5	E	. . . of course it would be someone technical . . . from the controlling or accounting department. A person who has to have a very high position within the company [and] knows the single divisions of the company . . ., but . . . can also look after the whole . . . [project] from a political perspective [and] . . . has the assertiveness. That means that . . . if . . . it partially stagnates . . ., . . . the person takes drastic measures . . . [So,] . . . the steering committee . . . should essentially be from corporate controlling or accounting . . . and . . . comprise a person at a higher level of management . . .
P7	E	[A steering committee] . . . did not exist. It was rather the case [that] . . . one has relied very much on the auditors or consultants [and] . . . said: You have the know-how, you also know how it is done somewhere else, you have to illustrate the best practices . . . But that there was really something done internally, . . . I do not really see that.
P12	E	There was no steering committee . . ., but . . . there are a few project managers sitting together and driving it down into the organization . . . But just not appointed as a steering committee.

* E = Auditor / A = Accountant

The perception of the accountants partially refers back to the affectedness and size of companies. If companies are large, have defined group structures and are significantly affected by the topic, a steering committee may exist (P8 and P14). If the impact is low or negligible and there are smaller corporate structures, it is common that no steering committee is in place (P2, P3, P4, P6, P13)

Table 60: Analysis related to research question 1: Theme 6 - Evidence 23

Code	E /A*	Quote
P8	A	You . . . have a steering committee above, which includes representatives from the accounting and IT department . . . within the . . . board area, who are reporting to the CFO. That means . . . head of accounting, head of controlling, [so,] . . . it is always the CFO plus one level beneath the CFO, who are leading all those departments. They were included in the steering committee.

P14	A	It was implemented on holding level. Well, . . . this steering committee would actually go up to the commercial management in the holding company. So there was a team that dealt with it and the head of group accounting and the chief financial officer of the group . . . I would consider . . . as a steering committee. They certainly drove the project.
P2	A	There was a steering committee with the head of our department Corporate Controlling and Accounting . . . to whom of course was reported monthly, how the progress is and also, if necessary, he entered the discussion with the auditors . . .
P3	A	We basically have the requirement in our company that we . . . have for these projects . . . a steering committee . . . However, [the impact of] . . . IFRS 15 was the smallest level. As a result, project control has been kept to a minimum. That meant for us, there was also no steering committee. There was also no real budget for the project . . . If we have other IFRS projects, it includes the management, head of department, project manager and IT . . .
P4	A	. . . I'd rather see our [group accounting] department [as] . . . some sort of steering committee. So . . ., there was an information to the division manager, the CFO, but . . . the whole project was directed by us.
P6	A	. . . we do not have some international committees, steering committees and other things [as] . . . there are 30 people in our headquarters. Everything is . . . very lean . . . So the project was a two men project [and] . . . there has already been a lot of reporting to the board of directors . . .
P13	A	The . . . results of this project . . . were [presented] in the higher levels . . . Policy decisions . . . had to be made. This has . . . taken place at a higher level. That was . . . every three months . . . In this respect, all levels of the Group were involved.

* E = Auditor / A = Accountant

The conclusion of Tysiac (2017) that a steering committee is needed in the course of an IFRS 15 implementation is not seen as a necessary requirement by the companies in the transition. Rather only in significantly affected companies and a decent size, a steering committee may be formally implemented.

Rather than having a steering committee appointed for the implementation of IFRS 15, management involvement, especially with respect to strategic decisions for revenue recognition and reporting, may be in place. This is especially important with respect to strategic decisions with respect to revenue recognition and to drive the project. This supports the statement of Tysiac (2017) that working groups need clear directions and responsibilities in order to move forward with respect to a conversion to IFRS 15.

Table 61: Analysis related to research question 1: Theme 6 - Evidence 24

Code	E /A*	Quote
P1	E	. . . the top management is required or has to think about how the company's future revenue recognition has to look like, how they intend to do it, whether they want to pursue progressive accounting policies or whether they are taking a more conservative approach.
P6	A	[It] . . . was . . . the requirement from the management: . . . it is a new standard, it is an important standard [and] . . . we don't want to get around it . . . So we had a clear management requirement that there should not be mumbled . . . [However,] . . . the Management Board will not be pleased to present details which long-term contracts are already in place and to what extent . . . in such a competitive industry . . . When we get around to disclose it, we will try, but I don't think we will get around it.

* E = Auditor / A = Accountant

A summary of the projects structures going beyond accounting is provided by three auditors and accountants emphasizing the comprehensive project structures necessary to implement IFRS 15 successfully, i.e. that different departments work closely together and collaborate in order to manage the issues.

Table 62: Analysis related to research question 1: Theme 6 - Evidence 25

Code	E /A*	Quote
P3	A	With us that is . . . sales, legal department, accounting, [if] . . . you want to . . . check the new contract type then always these three departments are working together.
P4	A	Controlling, accounting, sales, legal department. Accounting and controlling definitely rather technically oriented.
P5	E	. . . essentially, . . . of the departments that normally have nothing to do with . . . IFRS, would be specifically the sales department.
P6	A	Sales, a little bit of controlling and then accounting.

P11	E	Legal, sales and accounting. I would put the emphasis there regarding training and analysis.
P12	E	It was planned to have a coordination between sales or legal and accounting.

* E = Auditor / A = Accountant

A comprehensive project such as IFRS 15 ties up a lot of resources within a company. Furthermore, the demand for people with cross-disciplinary competencies is high and could be a critical success factor. The lack of capacity due to the daily business and lack of personnel with the necessary accounting background from other departments may be a problem and could harm a successful IFRS 15 implementation.

Table 63: Analysis related to research question 1: Theme 6 - Evidence 26

Code	E /A*	Quote
P4	A	With regard to the less well-prepared subgroups, I would say that this is due to both the resources and the people behind them.
P11	E	In general, this is a resource problem that many companies simply do not have the resources. That many may underestimate this.
P12	E	Lack of technical expertise among the divisions. That's a big problem. So they just don't recognize problems. That's the problem. And there is a lack of capacity and people who deal with the accounting issue locally.

* E = Auditor / A = Accountant

The research participants agree with the literature (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017) that an IFRS 15 project group has to be highly integrated in the company and not only comprised of accountants. This includes executive sponsorship across the key departments finance, IT and tax, as well as clear defined working groups and documentation (Tysiac, 2017). A revision of IT and ERP systems as described by Dalkilic (2015) is necessary in a sense that the new accounts contract assets and contract liabilities need to be considered within the accounting and consolidation software. However, new tools only seem to be necessary in case of complex contracts or business transactions. Therefore, the early expectation of PwC (2016) that revisions to systems and associated controls may be difficult is not confirmed. Rather, the expectation of GAAPweb (2015) in which less than a fifth of research participants expected problems with respect to the implementation of new systems and processes can be confirmed. In general, interpretational questions as described by Khamis (2016) may be challenging to implement in practice and lead to the fact that IFRS 15 goes beyond the accounting dimension (Peters, 2016). Nevertheless, participants perceive the accounting department as the nucleus of an IFRS 15 implementation project. Besides the accounting department, the sales department has major roles and responsibilities in the context of an IFRS 15 implementation in a support role contract content and structuring. Moreover, their understanding of the business model and experience from contract negotiations is important. Campbell (2017) mentions potential book tax differences, which are confirmed by the estimation of the interviewees related to the effect on deferred taxes. Therefore, the tax department may be included. Controlling, IT and tax may selectively be included for certain questions. This depends on the business model and the impact of IFRS. Tysiac (2017) concludes that a steering committee is necessary for IFRS 15 implementation. Research participants do not comply with that view as only significantly affected companies of a significant size may imply a steering committee for IFRS implementation purposes. In other cases, management involvement for strategic purposes may be sufficient.

6.2.2.3.3 External stakeholders

Peters (2016) expects that entities cooperate with competitors in order to receive external support in case of issues. The interviewed accountants state that only an informal exchange of issues takes place with colleagues working in other companies or subsidiaries or at meetings at different societies. Major details and numbers are not exchanged, nor is there specific cooperation with competitors in order to successfully implement IFRS 15.

Table 64: Analysis related to research question 1: Theme 6 - Evidence 27

Code	E /A*	Quote
P2	A	Not with competitors . . ., but with befriended companies. This happens at a working group level or at a level from my previous job as an auditor . . . You do not talk about

		numbers there. You're really talking about theoretical things. So, often a qualitative discussion, less related to specific practical details . . .
P4	A	Rather less. So . . ., if you know someone, . . . also deals with the topic, then one of them might ask. But it is not the case that we are now sharing a great deal with each other.
P8	A	Yes, there are in the software industry, German users in accounting for software. We are constantly exchanging with them [regarding] . . . certain accounting topics . . . and how the corresponding . . . issues are dealt with and interpreted.
P13	A	We . . . exchange information with other manufacturers . . . like what the status quo was, . . . call and talk to each other about how things are, where problems arise [and] . . . the most important background, when you ask me, was simply to find out whether problems were identified that perhaps had not yet been identified. That was actually the most important thing that was taken out of it.

The auditors confirm these explanations as none of the auditors experienced any specific cooperation. In line with the accountants' opinions, open discussions take place with respect to specific problems, but no contract details or specific numbers are disclosed.

Table 65: Analysis related to research question 1: Theme 6 - Evidence 28

Code	**E /A***	**Quote**
P1	E	I am not aware of any direct cooperation. It's just . . . that the companies are looking: Are there already companies that use IFRS 15 and how have they dealt with the problem areas, what have they written in their financial statements and can you orientate on it? . . . Companies then rather look more for themselves, how they would implement that for themselves.
P5	E	I've rarely seen it . . . Well, . . . you could cooperate . . . with respect to the question: How do you deal with point x, y? But I've seen that rarely so far, because . . . many companies are very different in the single setup and therefore have other effects because of IFRS 15 and [are] . . . reluctant to disclose contract details.
P15	E	The board members talk relatively openly about topics in corresponding circles, the Schmalenbach Society, or in the corresponding circles that exist.

* E = Auditor / A = Accountant

Peters (2016) claims that entities plan to cooperate with their competitors. The present research study, however, negates that. A discussion with other companies rather takes place on an informal basis.

Consultants are another potential external stakeholder group. The auditors partially recommend a consultant for certain tasks, but mostly see the potential that very specific project parts are outsourced by the company. Furthermore, from their practical experience, they do not see a commonality that companies hire consultants for the implementation of IFRS 15.

Table 66: Analysis related to research question 1: Theme 6 - Evidence 29

Code	**E /A***	**Quote**
P1	E	On the one hand, the consultants can bring the possibly non-existent knowhow into the company at the first place . . . [as they] have understood IFRS 15, . . . are also aware of the individual exceptions . . . In that regard, the first step is certainly the adaptation of the IT systems, which will mostly only be possible via an external service provider or consulting companies . . . and also methods are introduced, which the consultants . . . have, because they have already accompanied projects more frequently and therefore . . . can use knowledge from other enterprises. [However] . . ., all I know is that consultants are hired for IT projects . . . [, but] for the rest, the projects are sometimes conducted without external expertise.
P5	E	Well, it's going to be difficult without consultants [and] . . . it makes sense, if you . . . have the contract analysis done by a consultant . . . However, I think that this in a cost area where many companies, even larger ones, say they do not want to spend that on a single standard . . . I've rarely heard a complete contract analysis was done by them because it would be very extensive.
P11	E	I would say heretically: No one understands the own business better than the company itself in terms of contract preparation . . . [Therefore,] . . . the consultant . . . may be helpful . . . about when revenues have to be delimited, for a certain reason: How can I avoid that? What bypass options do I have? Which passages can I reformulate or how can I negotiate with my customer that I can recognize my revenue earlier and do not have to wait until the entire contract has been concluded? [However,] . . . you can't send an average consultant, but that must really be consultants, who come from the industry, to know the individual problems.

* E = Auditor / A = Accountant

A survey conducted by PwC (2016) shows that 63% of participants would be leveraging existing resources rather than hiring more individuals or consultants. At the time this survey was done, it seemed that external consulting for IFRS 15 may be important, but will not be common for IFRS 15 implementation projects. The insights provided by the auditors do not imply a different view and show that consultants are rather not hired for IFRS 15 implementation purposes.

The insignificance of consultants is confirmed by the accountants. Indeed, the study reveals that the accountants refer to their auditor. The auditor seems to have an important role and can be seen as a part of the extended project team, however, under consideration of the required auditors' independence. Beattie et al. (1999) investigate auditor independence in the UK and finds out that the four most important factors influencing auditor independence are regulatory enforcement mechanism, regulatory rights and requirements surrounding auditor change, importance of non-audit services and economic significance of clients. With respect to support during IFRS 15, especially the importance of non-audit services may be important and needs to be considered. Therefore, the support of auditors is limited to an independent assessment of certain issues, but they generally accompanied their clients throughout the financial year and actively participated in discretionary discussions or the review of accounting guidelines.

Table 67: Analysis related to research question 1: Theme 6 - Evidence 30

Code	E /A*	Quote
P2	A	. . . we've assigned an audit engagement to our auditors, who . . . accompany us in our project [and] . . . as soon as we've analyzed everything . . . and agreed on the notes . . . with our auditors, . . . we'll . . . update our accounting guideline . . . the discretion or our opinion is consolidated in this directive and that is also aligned with the auditors.
P4	A	We involved the auditor [and] had . . . given an extra assignment to . . . accompany the implementation of IFRS 15 [and] . . . are . . . in a constant exchange with them [and] . . . looked at every single revenue stream per subgroup and discussed in detail with the auditor how we assess the accounting . . . The Accounting Guideline . . . and . . . subgroup-specific guidelines [were] . . . discussed with us and . . . the auditors.

P6	A	. . . we wrote a group-wide memo. We've analyzed it . . . at corporate headquarters . . . I flew to the respective locations and discussed it with them all . . . the auditors on site . . . I have to say that we have worked a lot with the auditors in this context, that means having a mutual exchange.
P8	A	The team has . . . actively coordinated with the auditor, yes. It was a continuous process with respect to the preparation of this guideline . . . and then the disclosure information was translated . . . and then of course . . . the discussion, in particular: How do I know how revenue is now disclosed? What level of detail of revenues? This is always a sensitive issue in coordination with the auditor. So, we really went into every paragraph and concluded: That are our notes. Are those good enough for you?
P9	A	. . . the auditor wanted to be informed about the progress from time to time. That means that we have summarized the status and discussed it with him. But this was no support, it was just to take the auditor with us that he can also assess the information in the notes with regard to the impact . . . we have written a memo with respect to the notes . . . summarized the results of our analysis and interviews in a presentation, which we presented to the auditors.
P13	A	Of course, we did all these policies in close coordination with our auditor. We had to . . . align on them . . . The department, National Office, International Office, was always included [which] . . . is understandable, if the standard does not exist for a long time, then the auditor has to form an opinion.
P14	A	Just yesterday we exchanged views with our auditor . . . the group has now stipulated that for the full scope entities, where we belong to, . . . the local auditor will . . . have another look . . . at this restatement. However, not only as a standard audit like: He tick marks the figures and leaves again, but rather in a discussion [where we] . . . sat together for a few hours and explained to him what we were doing and how we assess it.

* E = Auditor / A = Accountant

The auditors additionally confirm the understanding and the situations explained by the accountants describing the constant exchange with their auditor on specific questions. This may be related to the exchange of checklists, reviewing contracts, having discussions about technical questions, but also necessary to issue an audit opinion. One auditor (P5) addresses auditor independence and the resulting limits of support.

Table 68: Analysis related to research question 1: Theme 6 - Evidence 31

Code	E /A*	Quote
P1	E	This is . . . likely to take place in consultation with the auditor as the big . . . accounting firms already have checklists that also cover IFRS 15, including the notes. In that regard, it will probably also happen that often the checklists are passed to the client that he can already take a look . . . in advance.
P5	E	I hardly believe that there are many companies [doing the implementation] . . . without the involvement of their auditor. Well, then you just do not call that consulting, but reviewing by auditors [but] the one who audits, cannot conduct the contract analysis . . ., because then I intervene . . . in the preparation . . . which I am not allowed to do . . .
P7	E	. . . we have placed not insignificant projects at different clients and have now considered that as conditional to a certain extent . . . that we can . . . issue an audit opinion.
P12	E	. . . we were also active as auditors as consultants . . . We have analysed operational contracts, conducted discussions on site at major identified subsidiaries and analysed the main contracts together with the company . . . and then at the end we checked the assessment of the company again before the individual companies sent it to the group and then we were involved in evaluating the results of the subsidiary units. But we didn't do the project management.

* E = Auditor / A = Accountant

However, no additional non-audit service projects are placed at clients that would be of major economical substance for audit firms according to accountant P6 and auditor P15. This may imply that auditors do not specifically see sales potential by placing non-audit services, but rather accompanied the project in order to ensure regulatory compliance. The low economic potential also affirms the finding that external consulting is not relevant in the course of IFRS 15 implementations.

Table 69: Analysis related to research question 1: Theme 6 - Evidence 32

Code	E /A*	Quote
P6	A	We received an own invoice for this, but that was less than EUR 5,000, so that was really nothing.

P15	E	Often you discuss questions with your auditor . . ., but no projects come out that have volume. This may be an exchange of ideas, a review of guidelines . . . But that is more, I would say, if you are generous, general support of an existing client. Also have not seen . . . that projects and fees are created. There are certain large projects in areas where . . . much is being changed [and] . . . business models need to be re-evaluated.

* E = Auditor / A = Accountant

The main external stakeholder accompanying the project is the auditor, however, rather as part of the audit than placing IFRS 15 implementation support projects. External consulting is insignificant and even less important than stated in the previous survey conducted by PwC (2016), stating that around two-thirds of the participants would rather leverage internal resources. Cooperation with competitors is also not confirmed and therefore the findings provided by Peters (2016) are not confirmed.

6.2.2.3.4 Training of stakeholders

Training for auditors and other auditors rather aims to create a technical understanding of the five-step model, but not in the course of very detailed, practice-oriented training tailored for different hierarchical levels with an ensuing compliance approval test or similar. Training may take place as classroom trainings or web-based learnings, but also through learning by doing.

Table 70: Analysis related to research question 1: Theme 6 - Evidence 33

Code	**E /A***	**Quote**
P1	E	. . . the trainings for auditors are aiming . . . to create an understanding of the regulations of IFRS 15 . . . and . . . the five-step model of IFRS 15 . . . And then there are . . . the first practice reports from companies that . . . tell in which areas problems typically occur.
P5	E	. . . I think that was first of all to understand this five-step model, . . . to understand where the important issues are, and then it was aimed that you can . . . advise the client . . . are able to make a first assessment . . . There is little training in the sense that . . . a week of IFRS training [is done].

P7	E	This is actually more learning by doing . . . I have already attended at trainings, but then there is . . . no compliance check or test or approval that . . . you are IFRS 15 . . . approved . . .
P11	E	. . . the trainings are very superficial, [i.e.] Powerpoint slides, but . . . retraced the individual contract modalities in detail.
P12	E	On the technical level . . . Web-based learnings and classroom trainings, but again: What does the standard actually say? Where do you have to look to be able to make a classification later on? What are the key points?

* E = Auditor / A = Accountant

With respect to the auditors' experience related to their clients, it is stated by them that there is mostly no specific IFRS 15 training, but training and information about IFRS 15 rather takes place in the course of regular IFRS updates. Training is predominantly conducted by the group accounting department in order to generate awareness and spread it throughout the company to i.e. divisions or subsidiaries.

Table 71: Analysis related to research question 1: Theme 6 - Evidence 34

Code	E /A*	Quote
P1	E	I think . . . that you only offer training for employees as soon as all this is done. It's obvious that this is already too late to train the staff in 2018 . . ., but . . . there have been relatively few trainings or even no trainings at the clients I know.
P5	E	It always depends . . . at the larger clients, that is part of the training measures that are issued by the headquarters [comprising] yearly updates with respect to IFRS . . . and within that framework . . . an extra training conducted with respect to IFRS 15.
P12	E	Employees in different departments are addressed . . . [and] an IFRS 15 representative for each division or subgroup. . . is . . . responsible for identifying the employees for whom IFRS 15 training courses make sense. This is not only accounting, but also . . . people from sales, legal, etc. . . . Whether they . . . also participate is another question, but they are nominated.
P15	E	No systematic training. In the course of overall innovations, this is a section like leasing and other topics, too. But specific IFRS 15 training courses, no.

* E = Auditor / A = Accountant

Accountants confirm that understanding. Additionally, training depends on the relevance and the impact the topic has on the company. Some companies provide regular IFRS updates or trainings while others provide supporting documents to the internal stakeholders. There is normally no limitation that only accountants can attend IFRS training in companies, however, mostly accountants do so.

Table 72: Analysis related to research question 1: Theme 6 - Evidence 35

Code	E /A*	Quote
P2	A	. . . we from the [group] accounting department . . . have three to four . . . IFRS trainings, a year worldwide . . . where we invite staff in our regional centers and train them . . . and at the regular updates or trainings . . . a . . . focus was also on IFRS 15 . . .
P3	A	No one was trained for IFRS 15 because we kept the project small . . .
P4	A	. . . in the context of the IFRS trainings . . . IFRS 15 is . . . an issue [and] . . . the subgroups . . . are also kept up to date by us.
P8	A	. . . because [IFRS 15 is] so important to us we have . . . trainings . . . at group level . . ., which are also recorded and then there is a roll-out . . . all over Europe, all over Asia . . . And then also each line of business trains their employees, for example . . . the sales department, controlling . . ., but to also sensitize other people . . .
P9	A	. . . we . . . have an annual . . . training for the accounting staff . . . of the divisions, where we present the subject . . . and . . . hand out . . . two pages of special features according to IFRS 15 . . . where they should keep their eyes open . . . This means creating a little bit of sensitization in the company.
P10	A	The Group . . . did some training with the accountants . . . It was then made a bit more practice-oriented . . . for business finance . . . However, we do not now expect that every controller . . . can [deal with] IFRS standards . . .
P13	A	[The training] was open [and] . . . everyone could go there who . . . was interested in it. Of course, it was explicitly meant for the accountants, but there were also a lot of controllers.

* E = Auditor / A = Accountant

The literature is in agreement about the importance of stakeholder training during IFRS conversion projects (Adetoso, 2014; Faraj & El-Firjani, 2014; Odia & Ogiedu, 2013; Weaver & Woods, 2015). Although these studies took place at difference countries with different stakeholders, i.e. auditors in Nigeria (Adetoso, 2014), accountants in Lybia (Faraj & El-Firjani, 2014), auditors in UK, EU, Canada and Australia (Weaver & Woods, 2015) or based on literature worldwide (Odia & Ogiedu, 2013), education of stakeholders is one of the common success factors for IFRS conversions. While these studies address IFRS trainings' importance in the context of conversions from local GAAP to IFRS, IFRS 15-specific training activities are rather not taking place. Instead, the standard is illustrated and explained during regular IFRS updates. Even auditors do not have specified trainings with ensuing compliance reports. There is only one exception related to one software company with complex business transactions experiencing major impact due to IFRS 15 (P8).

6.2.3 Identified challenges

This subsection addresses 'Theme 7: Identified challenges' related to research question 1. This subsection aims to provide details with respect to the complexity and other specific issues of stakeholders in the course of the implementation of the standard. Technical or interpretational questions are not illustrated in this subsection as this is part of the analysis with respect to different potential interpretations of IFRS 15.

6.2.3.1 Complexity of IFRS 15

Before IFRS 15, there were different IFRS for revenue recognition, i.e. IAS 11, IAS 18 and related interpretations (IASB, 2011). With IFRS 15, companies only need to consider one standard instead of various different ones. However, the auditors mention that IFRS 15 was created for specific industries that encountered issues under the old standards due to missing or unspecific regulations, but that the IASB now tried to consider all industries under one standard. Especially as all companies, also small or medium-sized companies with simple business models, need to analyze their contracts and business model considering the new regulations and the five-step model. This leads to extensive work.

Table 73: Analysis related to research question 1: Theme 7 - Evidence 1

Code	E /A*	Quote
P1	E	Although the company only has to focus on one standard and no longer . . . on two and . . . a few SIC interpretations or IFRIC . . ., the new standard is considerably more extensive and significantly more complex compared to the previous rules . . .
P5	E	. . . I only have to use one standard. On the other hand, . . . I have to . . . run . . . everything . . . also . . . simple cases . . . through this model . . . Maybe it makes it easier to handle, but from the amount of work I would say it is not . . . less.
P7	E	There must be . . . industry-specific standards. That will not be possible otherwise. You cannot torment [highly complex companies] . . . the same way as the more or less . . . trader who . . . also [has to apply] . . . IFRS. [Therefore,] . . . it has an insane impact on small and medium-sized corporations [and] . . . you cannot go with one-size-fits-all in 2018 . . . The . . . specification of the markets through the whole globalization, through many other niche activities has accelerated so much that it is actually no longer up to date to [have one] . . . standard which is the same for all [companies] . . .
P11	E	IFRS 15 is a lot more voluminous than . . . IAS 18 or IAS 11 or the individual interpretations may be even together. If you take the pages including Conclusions and Basis of Conclusions, I would say that IFRS 15 has become much thicker than the individual standards put together . . . Standards should, in my opinion . . . not be longer than . . . 100 pages.

* E = Auditor / A = Accountant

The opinion of the accountants with respect to the scope of IFRS 15 is in line with the opinion of the auditors. The reduction to one standard instead of various different ones and the aim to provide regulations for various industries focusing on complex ones does not lead to a simplification of revenue recognition issues, but rather to an increased scope.

Table 74: Analysis related to research question 1: Theme 7 - Evidence 2

Code	E /A*	Quote
P2	A	[IFRS 15] . . . is very . . . wide-spread, perhaps in order to stuff all industries in it. Maybe that's the main problem of the standard, but . . . then you would have to do

		that with different revenue recognition standards for different industries and not stuff everything in one standard.
P3	A	. . . cutting it down does not always mean that a standard is simpler . . . due to the length . . . there are. . . significant uncertainties . . . So, . . . condensation is not always the best way . . . because just make five out of one . . . does not mean it has better quality . . .
P4	A	Simplified by the fact that I now only have one standard, but it is of course difficult to apply a universal model or statements to different industries. In my view, this makes it difficult to implement . . .
P6	A	I believe that [the IASB has] . . . been very specialized in certain industries . . . [which] . . . brought the companies with simple business models into a lot of problems, which would not have been necessary . . . did not exist especially under IAS 18.
P13	A	. . . a lot of things are . . . regulated in detail, which leads to the fact that you have to look at a lot of things, because the standard prescribes them . . . and it leads to a very high level of complexity.

* E = Auditor / A = Accountant

One driver for complexity is the length and the scope of IFRS 15. To consider all the specific regulations and to know what to include or exclude in the own analysis means a lot of work for auditors and accountants. Having one standard does not necessarily improve or simplify the preparation of financial statements as its scope is quite extensive compared to earlier standards.

Another major issue that is highlighted by both auditors and accountants is the way IFRS 15 is written. Participants perceive it as a theoretical and also theoretically written construct that is difficult to apply in practice.

Table 75: Analysis related to research question 1: Theme 7 - Evidence 3

Code	E /A*	Quote
P2	A	. . . the project has . . . dragged on for a long time, because the standard is written in a very theoretical way . . . not . . . accurately . . . Correspondingly, after the process analyses . . . we . . . only talked about theory in connection with the standard . . . and how we can put our business transactions and . . . processes . . . under the standard . . .

P4	A	. . . IFRS 15 is . . . a . . . theoretical construct and the people, who end up with the doing, . . . have a lack in understanding the issues. That's why I think it will be a long way to go until everyone, who uses it, understands, what he does and why he does it . . . So from my point of view, I think that . . . not only theoreticians should write the standard.
P7	E	. . . often I have heard the subject matter, even from people who have been in business for a long time, that the standard was almost . . . unreadable . . . difficult to read, difficult to understand, because it is written in a very abstract way.
P11	E	. . . standards . . . are often written in such a complicated way . . . my . . . concern at the IASB is to make the standards more understandable . . . with wording that . . . the average reader understands and can implement them. To bring in examples, to design standards much more purposefully than to cobble them together with various committees at the highest theoretical level. In my opinion, this is the IASB's greatest shortcoming . . .
P15	E	. . . nobody works with [IFRS 15] . . . in that regard, because the standards are, in principle, not really readable. They're unreadable. There are companies that apply IFRS, but they do not have a single IFRS standard text, except at Group headquarters, because they say: I can't work with that anyway.

* E = Auditor / A = Accountant

The research reveals that IFRS 15 is too extensive and written in a theoretical and complex way. Accountants and auditors even think the standard is unreadable and therefore difficult to apply. It is evident that the goal of having one standard does not guarantee that it easier to apply in practice to various different industries and transactions. Technical errors due to that complexity are brought up by P4 and P5. The issue of customer-specific serial production may be perceived as a technical error as the criterion in IFRS 15, para. 35c may lead to a percentage of completion method to be applied for regular production processes.

Table 76: Analysis related to research question 1: Theme 7 - Evidence 4

Code	E /A*	Quote
P4	A	We have short production cycles, so I don't know how many parts per minute fall from the machine and then . . . to [recognize] . . . the revenue . . . not when I deliver, but at the moment the part falls from the machine, doesn't make any sense from our

		point of view . . . It is a mistake in the standard and . . . it wasn't . . . intended by the standard-setter and as a result we have to adjust the processes . . .
P7	E	[There are] . . . technical errors in the standard . . ., for example . . . customer specific serial production is under certain circumstances simply not a case for revenue recognition over a period of time, this is just nonsense . . .

* E = Auditor / A = Accountant

The scope and wording of the standard seem to be major drivers for its complexity including a risk for technical errors making it difficult to apply. Especially in practice and in the course of a conversion to IFRS 15, numerous questions and issues arise due to this complexity resulting from the aim to consider all business transactions of every industry under one standard.

6.2.3.2 Practical implications

The standard is perceived to be written in a theoretical way, difficult to read and has a large scope. Therefore, an analysis may be very extensive. In connection with a low degree of awareness and underestimation, many stakeholders were surprised by some of the IFRS 15 requirements. P7 summarizes that under the term 'practice shock'. The consequence in certain cases was even additional effort necessary in the course of the implementation. According to the auditors, however, the additional effort is mainly expected within the transition period and decreases after.

Table 77: Analysis related to research question 1: Theme 7 - Evidence 5

Code	E /A*	Quote
P1	E	I think a fixed estimation cannot made . . ., especially what arises in the transition period. Nevertheless, in some cases this means an immense conversion effort for the companies that are more significantly affected by it . . .
P5	E	A weakness from the point of view of many companies, is that it caused a lot of work, but perhaps also, . . . because . . . certain knowledge is not available, which became necessary due to the implementation . . . For the auditor, it's a lot of work, but it also generates . . . business.

P7	E	The conversion effort will be rather big in the transition period, . . . and then it will go back to a level where it may be a little bit more.
P12	E	I think [it is] . . . a lot of effort and [binds] capacity and also costs a company to get more information in the notes . . . Whether the standard-setter also wanted this is at least questionable.
P15	E	In any case, it will be more effort than before. Especially since I'm not just talking about quantitative figures . . . I don't know if it was necessary to put everything on a new basis, which also made a lot of effort and in principle took 10 years.

* E = Auditor / A = Accountant

Accountants mostly agree with the statements of the auditors. Some of the accountants (P2 and P4) are even quite emotional about the additional effort, especially as they do not see any value-add. Furthermore, disclosure requirements are mostly mentioned as the main driver for the additional effort as in most cases the figures do not change materially.

Table 78: Analysis related to research question 1: Theme 7 - Evidence 6

Code	**E /A***	**Quote**
P2	A	. . . we do not earn one single Euro more . . . That's just administration and costs a lot of money . . . I definitely believe that the disclosures in the notes expand a lot, that much more is needed, and that much more work is required in each division to meet the requirements of the notes and to have the data . . . We know this very well, that there is still a huge mountain of work ahead of us [in 2018] . . . and that this is going to be anything but . . . trivial . . . I would just like to state that . . . the cost of implementation and . . . being compliant with IFRS 15 in no way reflect the benefits . . . there's . . . a large mismatch . . . that [is] . . . not justified.
P4	A	I do not see the added value of having to recognize sales revenues earlier . . . was it wrong before? And . . . this topic of customer-specific serial production . . . it was not wrong from my point of view. After all, the business model should be reflected and not be changed.
P13	A	The bottom line is that . . . in 2017 the effects will be very insignificant. But you still have a lot of work with the standard [and] . . . you have to . . . implement all these sub-areas of financing components, repurchase agreements, contract liabilities and all these regulations, which did not exist under IAS 18 . . . that meant a lot of extra

		work . . . [Furthermore,] . . . the disclosures in the notes are much more extensive under IFRS 15 than under IAS 18, and we had to query, implement several new accounts . . . So, at least twice as much effort.
P14	A	I mean, we represent things . . . differently, which . . . does not bring us any improvement in the processes and is . . . rather more effort and we don't profit from it that much . . . Well, I mean, if I'm going to invest the working time and try: Where can I optimize processes? . . . Then I see the . . . purpose behind it. [Now] . . . there is a question: Was this, more or less, really necessary?

* E = Auditor / A = Accountant

In contrast, P10 perceives IFRS 15 as supportive for the business model within the software industry. As no revenue can be recognized by reselling products, sales people do not generate revenues without a high margin for this software company anymore.

Table 79: Analysis related to research question 1: Theme 7 - Evidence 7

Code	**E /A***	**Quote**
P10	A	. . . I think this is also an opportunity to make it clear to the sales department that we are trying to generate business, which has added value. An added value not only for the benefit of shareholders or stakeholders, but also for the benefit of the customer . . . We approach these things in the future . . . differently . . . [For example, the question if I can] . . . sell the provider's licenses within a framework contract . . ., I can of course do that, [but] . . . in the end I don't generate any added value for the company. I have to talk to the client about that: What's your added value if I do that? How can we define this added value together? Maybe if I can customize this . . . sell you an implementation project? . . . Of course, . . . we can still do . . . pure reselling . . . We simply do not have these high revenue figures . . . generated from them. The business model is actually reflected by the standard . . . That's why we want sales people and client managers to focus on selling consulting services. This is just an issue you drag around... I believe that the standard supports the business model insofar as some colleagues may understand that it is really only a business you drag and not a focus.

* E = Auditor / A = Accountant

However, if certain transactions do not generate any revenue anymore, success-based remuneration may be an issue in many companies, especially for sales people. Compensation or bonus plans or any other performance-related remuneration may be realigned in case numbers change due to IFRS 15. As accounting is often not a central topic within other departments, this may lead to a lack of understanding.

Table 80: Analysis related to research question 1: Theme 7 - Evidence 8

Code	**E /A***	**Quote**
P1	E	. . . the performance-related compensation has to be aligned. That means, if it is now possible to recognize revenue much earlier or maybe it is no longer possible to recognize revenue that early, then these are certainly . . . things that need to be considered for the whole company or for all who are paid dependent on the company’s performance or who have a variable bonus.
P8	A	. . . that's . . . the question . . . in the sales department. How do I compensate my sales department and if this is done on the basis of my revenue and I no longer have this restriction on cash accounting . . . then . . . the sales force is compensated for something which the customer may not pay.
P11	E	There was a lot of lack of understanding, because . . . as a salesman your performance is measured based on revenue . . . [and] if revenue cannot be recognized, because a certain regulation prohibits you from doing so, then there is often a lack of understanding. It's really about the monetary aspect, where people say: I've made a contract here, but I don't get my commission, because no revenue can be recognized.

* E = Auditor / A = Accountant

The additional effort for the implementation of IFRS 15, lack of recognition of a value-add and the potential effect on remuneration for various employees, who are paid on the company’s success, lead to a lack of understanding of stakeholders. Especially the sales departments do not understand the required changes and effects. Although it is important for the implementation process, it generally has hardly any touchpoints with accounting. The sales department and other departments therefore show a lack of understanding. This is on the one hand due to the additional work required by the contract analysis and on the other due to a potential interference in the business as certain agreements done via email or verbally due to a good customer relationship may be disturbed because of new revenue recognition regulations. The interviewees are agreeing that accounting requirements should not interfere with the business itself, but only reflect it.

Table 81: Analysis related to research question 1: Theme 7 - Evidence 9

Code	E /A*	Quote
P2	A	Yes absolutely! So, there was a lack of understanding within all areas . . . to turn everything upside down, to analyze everything, for not a single Euro more of revenues . . .
P5	E	. . . in sales . . . contracts are lived more than written down, so that . . . you made a contract at some time years ago and that is then simply changed by verbal agreements, by e-mails, by meetings over and over again and . . . there is . . . the incomprehension that you would intervene in a well-working customer relationship . . . and say: Make another correct contract, in which everything is written down, that you can also analyze this or ... another example: Avoid certain things that are very complicated or very difficult for us to consider . . . Of course, . . . someone, who has to be flexible in order to be able to respond to the customer . . . this leads to misunderstanding, because accounting is supposed to reflect and accounting should not interfere with the actual business model.
P6	A	Of course, the sales department was not happy either. Of course, they were also very busy looking for all the contracts.
P7	E	[Sales employees] . . . say: This is an accounting topic, so the accountants should take care of it. That's not my business.
P8	A	. . . in sales for example [as] . . . you have a stronger reallocation between different lines of services that you didn't have before. That leads . . . to a lack of understanding . . .
P12	E	Sales does not understand the problem. There is a lack of technical knowledge and understanding of what the contracts have to look like in the end, so that the accounting department can depict them correctly. And they have such a . . . rejection, they don't want to deal with the subject.

* E = Auditor / A = Accountant

Aside from IFRS 15 itself, external reasons may negatively contribute to the lack of understanding pertinent in the various departments. Many auditors do not have a defined opinion or provide a profound commitment with respect to complex technical questions. For many companies, waiting for advice or a final decision due to the insecurity by the auditor means a potential delay and leads to further problems.

Table 82: Analysis related to research question 1: Theme 7 - Evidence 10

Code	E /A*	Quote
P2	A	. . . the problem with auditors is, if there's nothing existing with respect to any opinion, if not one omitted or wrote a comment, then . . . they do not agree that fast.
P4	A	The problem is that . . . the auditing firms . . ., they are very theoretically oriented and the problems that . . . arise in practice are . . . not seen . . . and what we find . . . incredibly disturbing is actually [that] . . . there is still no ready-made opinion on IFRS 15 . . . and we just can't get on with the project because we're waiting for a decision . . . by the auditor.
P6	A	. . . we had a lot of discussions with the auditors. They were always rowing in both directions . . . I [also] think that the commentary situation is still very, very low at the moment . . .
P9	A	[With respect to] . . . contract assets, there were . . . often discussions whether we have contract assets or not. So that didn't seem . . . to be clear how the interpretation of this looks like [and] . . . the auditor could not say anything clear as well. They also contradicted each other in the discussions.
P13	A	No, there was a lot of discussion. We also exchange information with other manufacturers and the customer feedback was confirming that . . . The department, National Office, International Office, was always included, because . . . questions . . . could not be explained 100 percent from the standard. This is understandable, if the standard does not exist for a long time, then the auditor has to form an opinion.

* E = Auditor / A = Accountant

Auditors often do not mention that they may have a lack of experience and knowledge due to the complexity of the standard. However, one auditor (P7) discusses some of the issues from an auditor's point of view. P7 confirms that clients are often waiting for explanations or best practice stories. Furthermore, P7 mentions that the technical expertise is still on a rudimentary level and that this is not only a German, but a global issue.

Table 83: Analysis related to research question 1: Theme 7 - Evidence 11

Code	E /A*	Quote
P7	E	[The companies] . . . have been . . . waiting, how specific the consulting companies position themselves and mostly waited for translations first, for practical hints, for best practice stories how to make the change a bit easier or simpler . . . [The knowledge] . . . is still . . . improvable . . . level [and] . . . there is . . . a lot of uncertainty [and] . . . many expert calls . . . on different levels . . . I think that's not a German-specific problem . . . but . . . in total . . . with respect to the implementation of IFRS 15 . . . a global problem

* E = Auditor / A = Accountant

The interviews show that the standard is highly complex due to its scope or length as well as complicated and theoretical wording making it difficult to implement and causing major additional effort. Accountants and auditors often do not recognize a value-add resulting from the standard in contrast to the high effort necessary. The complexity leads to surprises and therefore significant delays in the implementation. Auditors also struggle with respect to having clear opinions and therefore may even slow down the process.

6.2.4 Implications for organizational structure and procedures

This subsection addresses ‘Theme 8: Implications for organizational structure and procedures’ related to research question 1 and aims to provide insights by the research participants with respect to potential influence on internal control systems, IT systems and processes due to IFRS 15.

6.2.4.1 Internal controls

Oyedokun (2016) states that internal controls need to be adjusted in the course of the implementation of IFRS 15, especially in order to be capable of managing new data and the change in financial reporting. This is also mentioned by PwC (2016) showing that the majority of research participants in that study expected that a revision of the internal controls would be either very difficult or somewhat difficult. In contrast, accountants do not mention implications for the internal control system due to IFRS

15. Just P14 addresses the matter without being able to provide further details that at least an audit of the internal control system will take place in 2018. P4 explains that this depends on a potential change due to the requirements with respect to customer-specific serial production, but rather expects the legal department, contract management and sales to be affected.

Table 84: Analysis related to research question 1: Theme 8 - Evidence 1

Code	E /A*	Quote
P2	A	There are no new requirements in our holding . . . It was strictly the intention not to align the business model to the standard [and therefore] . . . in our . . . catalog of internal controls, nothing has been adjusted.
P4	A	In my opinion, this also depends on how the topic of customer-specific series production continues. If we get to the point where we have to realize revenue over a period of time and . . . the deviation . . . would be material to the consolidated financial statements . . ., then . . . other departments must . . . be involved, especially the legal department, contract management and sales.
P8	A	. . . it's the same as before that . . . four eyes principles and things like that will continue to be . . . and . . . there's no change . . . from the basic setup.
P14	A	That has not yet been put into practice so far to be honest. This is actually our next step . . ., because we have to do it again this year . . . as we will have another internal control system audit this year in summer. I have to deal with it . . . anyway.

* E = Auditor / A = Accountant

Auditors confirm that and do not mention specific changes of the internal control system. However, they provide additional insights regarding potential changes of the internal control system. These potential changes relate back to a closer collaboration between other departments, e.g. sales, and accounting in the course of contract pre-checks in order to avoid disadvantageous revenue recognition, comparing and controlling the allocated transaction price with the individual selling price or in general implementing pre-checks for accounting purposes.

Table 85: Analysis related to research question 1: Theme 8 - Evidence 2

Code	E /A*	Quote
P1	E	I think the classic controls you have are still there, such as the credit check for customers [and] . . . three-way match of the invoice, delivery note and . . . incoming payments . . . It could . . . be stipulated that two or more sales employees could . . . close certain types of contract that could lead to a potentially disadvantageous revenue recognition for the company . . . Also, one could think about that, if the allocation of the transaction price on the different performance obligations . . . deviates too much from the individual selling prices, . . . that . . . it comes to a further or downstream control dealing with the question why actually such a strong deviation of the individual components or performance obligations exists.
P5	E	Well, I do not think [that the ICS changes] at the moment. I could imagine . . . next year, when . . . you . . . maybe adjust them in the course of the revenue recognition.
P7	E	Well, they will change, but they have not changed yet . . . as of December 2017 . . . [With respect to] the whole topic of accounting . . ., sales must also be . . . [included as] . . . it cannot be the case that . . . controlling and accounting do everything alone . . . A clear control [would be that] . . . there [is] something like a pre-check on . . . contracts . . . to be closed under IFRS 15.

* E = Auditor / A = Accountant

Just P10 provides insights with respect to specific changes related to the previously described issues of reselling contracts for which no revenues can be realized. An additional check is implemented by the accounting department in case a transaction exceeds a certain value limit in order to exclude material effects beforehand.

Table 86: Analysis related to research question 1: Theme 8 - Evidence 3

Code	E /A*	Quote
P10	E	We create templates which say: If you come across the topic transition in sales or a reselling element in the contract, the following checklist is to be reviewed [and] . . . that once such a transaction is pertinent [it] . . . is being examined accordingly, and we have also set a value limit beyond that, for which it is obligatory to have this transaction checked separately by the accounting department. At least until further notice.

* E = Auditor / A = Accountant

Oyedokun (2016) forecasts changes of the internal control system of companies in the course of the implementation of IFRS 15. This is in line with the explanations provided by PwC (2016). In contrast, the research evidence indicates that no material changes of the internal control system are implemented as of the beginning of 2018. Accountants emphasize that previous approval requirements and standard internal controls remain unchanged. Auditors could imagine certain potential changes, implying a closer collaboration between other departments and accounting. It may be too early in the implementation process to draw a final conclusion, especially due to the limited readiness of companies. However, the findings illustrate that internal controls are not a focus topic in the course of the implementation of IFRS 15.

6.2.4.2 Information technology systems

Further authors (Dalkilic, 2015; Oyedokun, 2016) state that information technology systems need to be revised in order to manage data in the course of the new requirements. Dalkilic (2015) explains that the five-step revenue recognition model needs to be transferred into the IT and ERP landscape. In addition, Oyedokun (2016) finds that the IT and ERP systems need to be revised in order to comply with IFRS 15.

In line with their opinions on internal control systems, auditors do not experience major information technology changes, e.g. new IT modules or different IT processes because of IFRS 15. Specific changes are only related to the reporting or consolidation system or the reporting packages, e.g. considering contract assets and contract liabilities as new lines items or incorporating changes to ensure a correct inquiry of disclosures from subsidiaries. P15 mentions the importance of an effective contract management in order to ensure transparency and an efficient contract exchange, e.g. between departments, in the future application.

Table 87: Analysis related to research question 1: Theme 8 - Evidence 4

Code	E /A*	Quote
P5	E	Except that reporting structures were adjusted in a sense that additional information was included, I would not know any significant adjustments.
P7	E	The keyword again is contractual asset, because . . . perhaps a new account mapping needs to be implemented . . . for . . . contractual assets with all the implications . . . Also on a deferred tax level . . . [Generally,] my knowledge is . . ., at

		least in the companies . . . I know, that this is still . . . a substantive approach, where you . . . query topics over individual departments and compile that in Excel lists.
P11	E	I don't know about modules. It is . . . a matter of accruing revenue and realizing it in installments or . . . completely at the end. In other words, you need a way to track when the appropriate time is when you can recognize revenue. So I need some indicators and reports that get you to realize the revenue . . . In most cases, I would say that this is not necessarily a big issue . . .
P12	E	It was relevant in the project insofar, because it was about the . . . screening of the contracts and . . . it was . . . difficult to get the information you need to run an analysis from all existing systems. So actually a big IT problem much earlier. But now . . . in my opinion the disclosure information is more of a topic . . . and the question how I get the information from the subsidiary units . . . This means not so much the five-step model itself, but rather . . . to have the data together, that means contract management.
P15	E	I think you have to distinguish between two things in that regard, whether you ask: Were there new modules, new systems? Overall, I think, rather less. There's an area where you can see effects. It starts . . ., when you are in stage one: Do I have a contract? This very first step requires an inventory, which is necessary . . . that you start . . . with electronic scan archiving, recognition systems . . . This is the only area where I see newer systems. Otherwise it will be more a question of existing reporting systems: What information do I need to request? At what point? What do I already have and can I use accordingly? . . . In other words, it is not new modules but rather adjusting existing ones, possibly by adding new lines, new information.

* E = Auditor / A = Accountant

Accountants that are hardly affected by IFRS 15 (P4, P6, P9 and P13) are in line with the assessment of the auditors and do not see the necessity of a fundamental revision of the IT landscape, but rather slight adjustments with respect to line items and their consolidation. More affected companies (P8 and P14), in contrast, consider IT changes as necessary. These may be new modules, for example a tool for new allocation rules and points of revenue realization as well as calculation support tools for complex transactions requiring thorough analyses.

Table 88: Analysis related to research question 1: Theme 8 - Evidence 5

Code	E /A*	Quote
P4	A	We have the HFM team . . . and . . . discussed . . . just the balance sheet accounts we need . . . and for the information in the notes, it will be done in the same way that we will include the questions in the questionnaire . . . as mandatory questions.
P6	A	I mean, the consideration was how we're going to make the conversion, at what level . . . and then . . . the decision has been made . . . that once a quarter the adjustment is made and pulled from the system on the basis of a business warehouse report . . . So IT-wise nothing changed at all and the bookings already existed before.
P9	A	Well, now there haven't been many specifications, but in principle we thought about how to prevent us from having . . . strong revenue volatility . . ., so that this topic of dealing with variable prices has always been an issue. We have also solved this technically in the SD module of SAP . . . We have had this before and we continue to use it for IFRS 15 . . . And a second case is actually a pure presentation issue. It's about . . . contract assets . . . I would say, that this change in accounting can actually be managed centrally. I don't need to intervene in the operative process in the ERP module.
P13	A	. . . it was not necessary to intervene in the IT systems. As a rule, however, revenues are still to be recognized at the same time and in the same amount as before . . .
P8	A	. . . a new tool or to adapt the tool to the IFRS 15 regulations, other allocation rules, other times when you realize revenue . . . you had an own team that . . . implements the tool . . . the reason was IFRS 15 . . . to introduce this module, but it was also used for old GAAP . . . I . . . have to reproduce . . . in the . . . system: What is a performance obligation . . . ? Does this come from a material number or . . . a sales order? How do I define them? How do I cluster them and . . . what is my transaction price? What is . . . my SSP and how do I allocate? I have to feed this to the system . . .
P14	A	There are a few sister entities that act as pilots . . . certain . . . technical aids are provided . . . that the things do not have to be calculated manually in the future. Where I can set a few parameters and the corresponding entries in the month-end closing are then calculated.

* E = Auditor / A = Accountant

The consolidation tools or reporting package is focused in the course of the implementation of IFRS 15, but only to ensure that the relevant information for disclosures or the new line items contract assets and contract liabilities is obtained from subsidiaries.

In case companies are significantly affected, an adjustment of modules or supporting tools may support revenue recognition in the future. P8 indicates that new IT modules may be in place for the consideration of new allocation rules or recognition times reflecting all steps of the five-step model underlying IFRS 15 in an IT system. P14 is not aware of the details of new software applications as other subsidiaries serve as a pilot. No insights from group perspective can be provided to the previously described intra-group issues, but it does support specific calculations.

The forecast changes of information technology systems due to IFRS 15 as explained within the literature (Dalkilic, 2015; Oyedokun, 2016) are not confirmed by the research participants. However, in line with the assessment with respect to internal controls, the readiness level of the companies needs to be considered. Nevertheless, auditors recommend an effective contract management to ensure efficient processing during the implementation and the application of IFRS 15.

6.2.4.3 Processes

Auditors do not experience or expect any specific changes related to processes in the course of IFRS 15 implementation or application. Rather, they explain that companies may think of potential steps or changes of processes. From a general process perspective, IFRS 15 seems to force departments to approach each other and work in a more integrated manner, e.g. with respect to the preparation of contract templates, preliminary contract classifications for accounting purposes done by sales employees or pre-checks and ensuing clearing in accounting if certain contents would lead to an unfavorable revenue recognition.

Table 89: Analysis related to research question 1: Theme 8 - Evidence 6

Code	E /A*	Quote
P1	E	How need contract templates to be designed that they also actually comply the company's goal . . . under the new IFRS 15 and how can this be implemented in a manner that the customers also accept the changes? And that is certainly the most significant point where I would say, adjustments in the process were made or are still to be made.

P5	E	It would be conceivable that one . . . says: The sales employee must . . . conclude his negotiations, when the contract is signed, then . . . conduct a . . . first classification and then, if he recognizes that there is a new feature or there is a peculiarity that he has not seen so far, then passes this information on accordingly.
P11	E	So I saw that the sales department was forced to submit all contracts to accounting and the accounting department then cross-read the contracts . . . I would say that accounting is now . . . involved in the contract preparation process . . . and proactively taking part in . . . the preparation of the contract. Simply because sales people cannot interpret like accountants and the standard in the same way as an accountant . . . I'll give you an example: A company has implemented that they have a monthly segment meeting at the end of each month . . . Every month, the new projects and opportunities are discussed with accounting . . . And there is also a checklist that is filled out by accounting and then they send it to the sales department or sales controlling and only if this checklist has been handed over to sales controlling by accounting, the contract can be signed or received. So these are the organizational changes that have taken place . . .
P15	E	I can imagine, outside my own personal experience . . . that means there must be steps and processes . . . and . . . [it] must be clearer in accounting: What does the contract say? . . . There, the departments have to move closer together . . . In the [complex] industries I can imagine that there must be such processes and areas. In brackets: Always should have been. It has often been the case so far that accounting was surprised that contracts already existed, but then no one said it. This is certainly triggered by the standard that you share more information.

* E = Auditor / A = Accountant

Accountants provide comparable insights. The close collaboration between key departments accounting, controlling, sales and partially legal is of major importance to make sure that contracts are prepared in a favorable way for a smooth processing by accounting. The importance of an effective contract management system is also mentioned in that respect.

Table 90: Analysis related to research question 1: Theme 8 - Evidence 7

Code	**E /A***	**Quote**
P6	A	. . . now the processes are set up that, in case a new long-term-agreement is concluded, legal gives us the information and there is now also a guideline with discount agreements etc., that the conditions described in the contracts . . . must

		always be reported to us immediately . . . so for the legal department there is an instruction now that they have to send us every new contract that is longer than a period of one year [and] . . . there is the instruction to sales: If there is any deviation from these general contracts, this has to be reported to us immediately.
P10	A	. . . we're looking at . . . transition and . . . transformation [projects for which it] . . . is difficult to show . . . added value or revenue . . . We will have to make sure that we also describe these trades separately in the contracts and, if possible, even if they are not paid in advance, to price them, so that the customer also sees the added value to cover this price in advance over project durations with a respective margin and a termination fee . . . I think this is also an opportunity to make it clear to the sales department that we are trying to generate business, which has added value . . . That's why we want sales people and client managers to focus on selling consulting services . . . I believe that the standard supports the business model.

* E = Auditor / A = Accountant

Besides potential system changes, other studies (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tsai et al., 2015; Tysiac, 2017) also discuss the impact on companies' processes in the course of the implementation of IFRS 15 due to numerous accounting implications and the management of new data. Dalkilic (2015) specifically mentions IT and ERP processes in line with the challenges identified by PwC (2016). Key departments may work closer together, which leads to new or revised processes (Tysiac, 2017). Peters (2016) especially addresses continuous monitoring, even after the completion of the implementation. Khamis (2016) expects process changes rather with respect to various judgments required to account for certain transactions. However, processes may also change on auditor side with respect to the planning phase for assurance services that may increase slightly per engagement (Forshay, 2017). No significant confirming insights providing further detail to these assumptions are gathered by the present research. Contrary statements rather imply that IFRS 15 is not that significant that it changes internal control systems, IT systems or processes of companies. Slight adjustments are rather in line with the explanation of a closer collaboration of departments (Tysiac, 2017) and close monitoring (Peters, 2016) rather than significant changes in the form of IT or ERP systems, internal controls or processes. Changes are kept to a minimum in order to avoid any interference in the business due to accounting regulations.

6.2.5 Paradigm shift of revenue recognition

This subsection addresses 'Theme 9: Paradigm shift of revenue recognition' and serves as a concluding chapter for the research insights addressing research question 1. Besides other statements of auditors and accountants, especially auditor P7 specifically mentions a paradigm shift in the course of the closer collaboration of key departments.

Table 91: Analysis related to research question 1: Theme 9 - Evidence 1

Code	E /A*	Quote
P7	E	Until now, the . . . topic of accounting, controlling, bookkeeping [was based] . . . in the . . . accounting, [but] in the future, sales must also be in there. After all, it cannot be the case that . . . controlling and accounting do everything alone. If you take a look at the large companies, then we do not talk about one, two or a three digit numbers of contracts that are closed, but those are really huge contracts that cannot be corrected or adapted afterwards, but that must happen already at the contract initiation, in sales already . . . As strange as that may sound, but we now have a paradigm shift and the new standard has already had a not insignificant impact.

* E = Auditor / A = Accountant

Research question 1 addresses the question of how auditors and accountants perceive the implementation of IFRS 15. IFRS 15 may significantly influence companies' revenue recognition processes, however, whether a paradigm shift is in place is evaluated in this subsection. Despite the progress with respect to the implementation compared to earlier studies (PwC, 2016; Tysiac, 2017), companies are often still in the implementation phase as of the effective date 1 January 2018. After the first publication of IFRS 15, research projects on the readiness level were conducted and show that adopters and auditors were either not ready for the implementation of IFRS 15 (Forshay, 2017; GAAPweb, 2015; Khamis, 2016; PwC, 2016; Tysiac, 2017) or not fully prepared (Benavides, 2015; Ernst & Young, 2017a). As shown by the present study, many companies underestimated or were not fully aware of the work that is required by IFRS 15. This lack of awareness may be driven by the industry the company is operating in was the more complex a business model is, the higher is the impact and the work required by IFRS 15 (Oyedokun, 2016; Tysiac, 2014). While Oyedokun (2016) does not mention any specific industry, Tysiac (2014) emphasizes a major impact for telecommunications, software and real estate companies. Even if IFRS 15 has no material effect on the financial statements, extensive disclosure requirements need to be considered (Oyedokun, 2016; Tysiac, 2017). These findings are in line with the present research study as the complexity could be confirmed for software companies and the requirements for extended disclosures.

Successful implementation projects have an early start and a defined plan (Weaver & Woods, 2015). This statement regarding general IFRS conversions is confirmed and applicable to the implementation of IFRS 15. Due to the required merge of business and accounting understanding, a close collaboration between the accounting department and other departments is important. This explains why IFRS 15 goes far beyond accounting (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017). The stakeholder analysis reveals that the accounting department drives the project. Significant support of the sales department is required due to business and contract knowledge. Depending on the setup of a company, other departments such as controlling, legal, IT or tax need to be involved. Externally, only auditors are of major importance. No significant external support is used in line with other surveys stating that companies rather leverage their internal resources than external consultants (PwC, 2016). Training activities with respect to IFRS 15 are included in regular IFRS 15 updates rather than having specific IFRS 15 training. Even for auditors, training focuses on the basic understanding of the five-step model and further underlying concepts. The literature emphasizes the importance of stakeholder training rather with respect to general IFRS conversion projects from local GAAP in different countries (Adetoso, 2014; Faraj & El-Firjani, 2014; Odia & Ogiedu, 2013; Weaver & Woods, 2015).

Compared to more than one standard for revenue recognition before (IASB, 2011), IFRS 15 is just one standard including all requirements for revenue recognition. However, research participants emphasize that its scope and wording are the major drivers for its complexity. This is also reflected by insights describing that even auditors are struggling with the requirements.

Due to new disclosure requirements and line items, i.e. contract asset and liabilities, limited adjustments of the reporting package or consolidation tools are necessary. The research does not reveal further major implications on IT systems. Exceptions may be significantly affected companies using new IT modules to support new allocation requirements and realization times. No significant impact on the internal control system of companies can be identified. Processes also do not materially change, although a closer collaboration between different departments can be identified in the course of the implementation and application of IFRS 15. Therefore, the findings of the literature related to numerous accounting implications, the management of new data as well as changes to ERP and IT systems, internal controls and processes (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tsai et al., 2015; Tysiac, 2017) are not confirmed by this study.

An interpretation of the results may be that IFRS 15 has no major effects on most companies, especially on those with simple business models. If complex revenue streams are in place, companies may have to put higher efforts in the analysis of IFRS 15. However, to understand and analyze the standard in its full extent, much more time is necessary than most of the companies considered for it. Companies that are finished with the implementation as of the effective date started earlier than those companies which are not finished.

Institutional factors may contribute to the explanation of the underestimation and resultingly late starting point for the implementation. Coercive isomorphism as per DiMaggio and Powell (1983) is important for successful IFRS implementation (Nurunnabi, 2017). Institutional theory is often applied to questions with respect to a change from local GAAP to IFRS, e.g. Irvine (2008) finding that the UAE converged to IFRS in order to gain legitimacy in global markets, Judge et al. (2010) concluding that coercive, normative, and mimetic pressures influenced the decision for IFRS adoption in developing countries and Phang and Mahzan (2017) identifying that coercive pressures have the highest influence on the respondents' preparedness to implement IFRS in their study in Malaysia. This search for legitimacy by developing countries seems not to be applicable to the well-developed companies in this study in Germany and therefore institutional pressures may have been lower to put pressure on the adoption of IFRS 15. Due to the introduction of IFRS 15 in May 2014, companies estimated to have sufficient time to implement IFRS 15. A similar approach by the peer organizations may lead to an underestimation of the effort necessary. Little mimetic pressure on the companies in Germany by other organizations or normative pressure by auditors may have contributed to the low readiness level as of December

2017. Therefore, institutional theory contributes to the explanation for implementation issues in connection with IFRS 15.

6.3 Interpretation of IFRS 15

This subsection presents the insights with respect to research question 2, i.e. to understand potential different interpretations and the risk for manipulation in IFRS 15. As outlined in subsection 5.2.5.2, the following themes were identified related to research question 2.

Table 92: Identified themes related to research question 2

Research question		**Theme**		**Subsec.**
2	What are the major interpretational areas within IFRS 15 and to what extent do these imply a risk for manipulation?	10	Change of revenue recognition principle	6.3.1
		11	Five-step model applications	6.3.2
		12	Influential factors for interpretation and discretion	6.3.3
		13	Robustness of the IFRS 15 framework	6.3.4

6.3.1 Change of revenue recognition principle

This subsection addresses ‘Theme 10: Change of revenue recognition principle’ related to research question 2.

Basic IFRS principles were discussed in the semi-structured interviews to introduce the topic of IFRS 15 interpretation. Materiality is addressed by some of the auditors which may affect the interpretation of IFRS 15. According to Hodgdon, Hughes, and Street (2011), the IASB Framework defines materiality as follows:

> Information is material if omitting it or misstating it could influence decisions that users make on the basis of financial information about a specific reporting entity. In other words, materiality is an entity-specific aspect of relevance based on the nature or magnitude, or both, of the items to which the information relates in the context of an individual entity’s financial report. Consequently, the Board

cannot specify a uniform quantitative threshold for materiality or predetermine what could be material in a particular situation. (p.420)

There is no uniform threshold for materiality within IFRS 15, which implies a high degree of subjectivity with respect to the decision if a certain information is material (Hodgdon et al., 2011). With respect to IFRS 15, the materiality approach provides room for interpretation for insignificant transaction amounts or to exclude certain disclosures. The materiality approach seems to be a key element for the interviewed auditors, especially with respect to omit certain information in the disclosures, and therefore influences the extent of disclosures required for external reporting under IFRS 15.

Table 93: Analysis related to research question 2: Theme 10 - Evidence 1

Code	**E /A***	**Quote**
P1	E	The term materiality is certainly a key element inherent within IFRS, because even if you wanted to create IFRS notes without a materiality aspect, it would probably take several hundred pages to capture really all the disclosures within the notes. But then the question always is: To what extent are these material? Therefore, even under this aspect, which actually inherent everywhere in the IFRS, a reduction can take place, which is certainly useful to achieve results appropriate for users at the end . . . So, the concept is certainly inherent to the standards and also an important part of the standards, without which certainly nothing would work.
P7	E	. . . IAS 1 - substance over form, economic approach, materiality, economic approach, . . . then it will be exciting, if you have a client who is smart and pulls back on it and says: Look here, there are others reasons in the materiality approach . . . So, I do not think it really goes into trickery, but, I believe, there will be tough discussions going . . .
P15	E	. . . with regard to disclosure overload, a little simplification in the area and more materiality in disclosures, you will say in places: In theory, the information is there, but it is not relevant to decisions and therefore not essential, we will omit it. This will certainly be the case more strongly than before, especially against the background of the discussion on the subject of overload in the notes.

* E = Auditor / A = Accountant

Another concept of principle-based standards and therefore also with respect to the interpretation of IFRS 15 are probability and uncertainty expressions. Doupnik and

Richter (2003) identify 16 uncertainty expressions through an analysis of the translation of 33 extant IAS in German as of 1997. Auditors are aware of probability and uncertainty expressions within IFRS 15, but do not state that their interpretation is a major issue. A reason may be that IFRS 15 is a joint project with the FASB and is therefore more extensive and descriptive than previous standards. P12 adds that probability and uncertainty expressions are rather important for documentation purposes as it is difficult to translate the term probable in percentage values in the context of a business transaction.

Table 94: Analysis related to research question 2: Theme 10 - Evidence 2

Code	E /A*	Quote
P1	E	These [expressions] . . . certainly exist . . ., for example, if it comes to a reversal of revenues . . . this is, for example, one of those key issues where I would say you can argue endlessly about. Otherwise, I would say that the standard does not overly strain those terms.
P5	E	In general, they are very relevant, but that is the case, I believe, for any accounting system in which I . . . have to . . . account for something or not in uncertain situations. Then I always have discretion . . . and . . . uncertainties. I think that's . . . almost impossible to eradicate.
P11	E	If it doesn't work at all, then US GAAP standards are applied and you say: . . . We lean on US GAAP in accordance with IAS 8 because we know not better. For me, it is not helpful to have these standards in principle-based form, and I believe that IFRS 15 now is a standard, which I believe, has been going away from this.
P12	E	[Probability and uncertainty expressions are an issue] Only from the documentation perspective and in case of doubt, when lawyers are on board to give an assessment, but . . . In my experience, this is more a question of documentation than of real assessment.
P15	E	I've seen reports from clients who, with a 51 percent probability, have [um] ... forecast certain outputs. No human can do that . . . So, this is more of an academic subject that you might find yourself in borderline areas when you . . . are in areas relating to statistical expectations . . . Think of areas where I may not have the most likely outcome, but a probability weighted approach. It may play a role there. But otherwise, they always have the most probable value and in doubt you can never refute if someone says: I estimate just under 50 percent or I estimate 40 percent or

		60 percent, you can never really refute if it is not completely outrageous or stupid. Therefore, . . . there were no special features specific to IFRS 15.

* E = Auditor / A = Accountant

Accountants provide similar insights and do not have specific concerns about probability and uncertainty expressions in IFRS 15. They rather perceive it as a general issue accountants have to deal with in the course of the application of IFRS, e.g. for provisions and other valuation questions.

Table 95: Analysis related to research question 2: Theme 10 - Evidence 3

Code	E /A*	Quote
P6	A	I think it's difficult. Although I have to say again that this was not the big issue for us, because most of the effects were clear. So, it was not an additional burden during the conversion.
P8	A	This is generally a topic in practice: What is probable? . . . to express that in percentages . . ., then to apply that from the practice . . ., that is of course generally a topic . . . not only for IFRS 15, but also for provisions and other valuations.
P9	A	. . . we had . . . no problems, especially as far as revenue recognition is concerned. If we have to make such estimates, we usually have . . . long-term relationships and histories with the B2B customers and can actually derive from history what is likely . . .
P13	A	Solutions had to be developed to deal with these different terms. It's a subject that's a little annoying [um] ... that there is a different probability value in almost every standard. More likely than not, significant effect and [um] ... these are very soft terms that have to be translated into a corporate policy on how to deal with them.

* E = Auditor / A = Accountant

As stated in the basis of conclusions within IFRS 15, the guiding principle for assessing the transfer of a good or service under the previous central standard IAS 18 was the transfer of the risks and rewards of ownership. For IFRS 15, the IASB and FASB decided that an entity should assess the transfer of a good or service with a customer obtaining control of a good or service. The reason for this is that the assessment for a transfer of the risks and rewards of ownership of a good or service may be very difficult and could conflict with the identification of performance obligations (e.g. in case of two elements in a contract with one retaining some risk at the specific company) according to IFRS 15, para. BC118. However, risks and rewards can still be helpful for a determination when the transfer of control takes place (IFRS 15, para. BC154). The new control principle was not specifically discussed during the interviews, but influences revenue recognition decisions. Doupnik and Richter (2003) find out that language and culture affects the interpretation of uncertainty expressions and extreme probability expressions. However, with respect to IFRS 15, the interpretation of those is not a major issue.

6.3.2 Five-step model applications

This subsection addresses 'Theme 11: Five-step model applications' related to research question 2. This subsection aims to provide insights in which areas interpretation may be difficult as well as to what extent it is possible and how companies apply different interpretations within the five-step model. Furthermore, perceptions related to use potential different interpretations for earnings management are analyzed.

6.3.2.1 Identification of the contract with the customer

Some research participants mention that the identification of the contract may be an issue as it is difficult to detect a clear definition for the term 'contract' within the standard. Accountants P2 and P4 state questions such as if an order or a nomination letter in the automotive industry or if a framework agreement is a contract as per the definition of IFRS 15. Auditors P1 and P15 also mention that the definition of a contract may not be clear without further going into detail. This means that in practice, interpretational questions may already arise with respect to basic definitions.

Table 96: Analysis related to research question 2: Theme 11 - Evidence 1

Code	E /A*	Quote
P2	A	It actually starts earlier . . . with the topic: What is a contract? So, we have . . . the opinion that a contract is always an order and, for example, in the automotive industry a so-called nomination letter is not a contract.

P4	A	It starts how you define a contract. So even if you look at the Big 4, they have different definitions . . . for example, when I think of a framework agreement: Does the framework agreement . . . establish a contract in accordance with IFRS 15 or not?

* E = Auditor / A = Accountant

A similar issue may be definition of the customer. Auditors P1 and P7 mention that the definition of the customer is discussed at their clients. Furthermore, accountants P2 and P4 point out that the definition of the customer is an issue with respect to the question if the customer is a legal entity or the legal entity and all related parties. Especially with respect to further accounting questions such as customer-specific products, this may influence the path along the five-step model for specific business transactions.

Table 97: Analysis related to research question 2: Theme 11 - Evidence 2

Code	**E /A***	**Quote**
P2	A	What is the customer? Is the customer the entire group of companies? Is it the legal entity? Because . . . the [respective] paragraph [in IFRS 15] is very much focused on a payment claim, which is of course always against a legal entity . . . We have the opinion that the customer should be always defined as a legal entity. This means that Volkswagen AG is a different customer than Volkswagen Inc.
P4	A	Right now we're discussing the definition of the client. So [is] the client . . . a legal entity or is it a legal entity including related parties, that is not clear from our point of view . . . [and] not clearly regulated.

* E = Auditor / A = Accountant

Another discussion topic are the requirements for a combination of contracts. A criterion for contract combinations is that the contracts need to be entered at or near the same time with the same customer according to IFRS 15, para. 17. Auditors mention the combination of contracts may be an interpretational area. Auditor P5 adds that is implies a potential for discretion as contracts are never signed on the date they are actually getting into force. Accountant P4 also sees room for interpretation with respect to the interpretation what near or the same time may mean.

Table 98: Analysis related to research question 2: Theme 11 - Evidence 3

Code	E /A*	Quote
P4	A	How do I interpret that a contract with the same customer, which is relatively clear, has to be concluded with the same customer, but from a timing perspective? . . . we interpret it very narrowly at the moment and say: Okay, the contract has to be closed at the same time. This is our interpretation at the moment and it leads to a different consideration at one point or another.
P5	E	. . . there is . . . a possibility of discretion . . . in the combination of contracts, because . . . IFRS 15 is quite strict in terms of the combination of different contracts. If I say: I am now making two contracts that belong together economically in one day or I make those with a distance of two weeks . . . Contracts are rarely actually signed on the date, . . . [which] . . . is . . . shown at the bottom of the contract . . . And of course, this is also an uncertainty in the interpretation and at the same time an area for discretion.

* E = Auditor / A = Accountant

The insights show that step one implies some areas that may require professional judgment mainly relating from potentially different understandings of the contract or the customer or undefined terms such as near or same time. This may lead to a different accounting treatment of certain transactions.

6.3.2.2 Identification of performance obligations

IFRS 15, para. 22 requires an entity to separate the goods or services promised in a contract with a customer that are distinct. According to IFRS 15, para. 27, distinct means that the customer can benefit from the good or service on its own or with other resources that the customers has available already and the promise to transfer the good or service to the customer is separately identifiable from other promises in the contract.

6.3.2.2.1 Distinct goods or services

A number of participants outline that the same transaction or contract may be interpreted differently and still would be reasonable. According to the auditors, the separation of performance obligations and the practical application of the criterion of distinct goods or services may require interpretation. The points raised by the auditors last from the general question when goods or services are distinct from each other or specific questions if e.g. service components are to be seen as separate performance obligations.

Table 99: Analysis related to research question 2: Theme 11 - Evidence 4

Code	E /A*	Quote
P1	E	When are different performance obligations actually distinct from each other? Due to the fact [that] there is . . . a lack of definite rules and . . . one can summarize and / or separate several performance obligations and then of course can come to an earlier or later time where revenue is recognized . . . Of course, then . . . there are some discretion opportunities to what extent there are . . . individual performance obligations or just one performance obligation . . .
P11	E	I would say there are major problems with this separation. Is that part of a contract? Is it a stand-alone product or how do you have to look at the components? . . . I believe that there could be major discussions, including with the auditor.
P12	E	Separation of service obligations is a big question. Integrated performance obligation, yes or no? I think you can argue very well . . . in one way or another.

* E = Auditor / A = Accountant

Especially in case of multiple-element arrangements, the previous standards did not provide profound guidance (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014). Procházka (2009) emphasizes that the main weakness of the previous IAS 18 was that it also requires a separation of a transaction into individually identifiable performance obligations, but does not explain how to divide the transaction into individual elements. The research participants confirm the better and more detailed guidance IFRS 15 provides for multiple-element arrangements compared to the previous standards.

Table 100: Analysis related to research question 2: Theme 11 - Evidence 5

Code	E /A*	Quote
P4	A	I did not think it was clear to me, so this particular topic of multi element arrangements was not clearly regulated in my opinion. Comparing this with IFRS 15 . . ., I did not find any clear rules. From my point of view, it was not enough guidance . . . especially within the telecommunications industry . . . you could, in my opinion . . ., . . . influence when you recognize the revenue. So in my opinion there were no clear rules, which could . . . lead to revenue being recognized later, revenue being recognized earlier.
P5	E	I now have fewer options [for discretion] under IFRS 15 than under IAS 18. If I now think of multi-element arrangements, for example a mobile phone contract: . . . I had the opportunity before via this cash constraint clause that I can only recognize revenue to that extent, which actually was the cash flow. In that area, I had more leeway than now, that I could shift that back and forth. Now, it is rather the fact that the standard tells me in . . . detail, what I actually have to do . . .
P11	E	. . . service contracts: How should they be accounted for? . . . IAS 18 stated that it would take a pro rata share over the term of the contract. Of course, this doesn't help much if you have a multiple element contract . . . Today you have a standard that tells you more explicitly how to separate the individual components into their individual parts.
P15	E	. . . for example [for] . . . the topic multiple elements . . . you always considered US GAAP standards [as] . . . IAS 11 and IAS 18 . . . still left a lot of scope open, because they were not so clear . . . IFRS has also adopted US GAAP interpretations . . . What is settled today with respect to separation of performance obligations.

* E = Auditor / A = Accountant

Accountants also experience issues with respect to the definition of the criterion for a separation of performance obligations. In practice, it may be difficult to e.g. interpret transport services, licenses, warranties or services as separate performance obligation applying the guidance in IFRS 15, para. 22, which requires to separate goods or services in a contract with a customer that are distinct.

Table 101: Analysis related to research question 2: Theme 11 - Evidence 6

Code	E /A*	Quote
P4	A	. . . in the IT area . . . we . . . have turned the adjustment screw at the end, whether we . . . have a license that we give, that means for the use of a software and . . . the maintenance service is separable or not. If one . . . have argued one way or the other, both would have been plausible . . .
P6	A	. . . there was room for interpretation in everything to some extent, if you . . . have separate performance obligations, we had also looked at it: Is the transport service now an obligation of its own or not? When is it a separate benefit obligation? . . . Or when is a warranty obligation a separate performance obligation.
P8	A	What is my obligation to perform? How . . . can I divide them, can I combine them, . . . is the unit distinct or non-distinct? . . . There is . . . a certain amount of room for interpretation and, . . . where there are discussions, I always see this as room for interpretation.
P9	A	We've only [had the issue of separation] . . . once . . ., and we're still discussing whether this is relevant . . . in the fruit area . . . where we . . . develop recipes with the customer and this is of course a service that goes on for a longer period. But otherwise we really only have the transport . . . the assurance regarding the product quality . . .
P13	A	What . . . do I delimit, for example, for my service, maintenance and extended warranty contracts? This has been a very difficult subject, in other words the separation of . . . obligations. But, as I said, these are issues that have led to a lot of effort and work and coordination with the auditor.
P14	A	When it came to the separation of performance obligations, we had extensive discussions and it [took a] . . . long time before we reached an agreement . . . we have a product that is completely assembled here and in principle is taken care of beforehand, in other words goes into operation at some point and is then delivered. Of course, we have . . . discussed . . .: Is a third party without our support able to put this machine into operation, which is a decisive feature for the separation of performance obligations?

* E = Auditor / A = Accountant

IFRS provides more extensive guidance and criteria for a separation of performance obligations compared to IAS 18, which indeed required a separation performance obligations, but did not provide further details on how to divide the transaction into individual elements (Procházka, 2009). Still, there are interpretational questions raised by both auditors and accountants with respect to the criterion of distinct goods of services.

6.3.2.2.2 Alternative use

A company satisfies performance obligations and recognizes revenue over time if one of the three requirements of IFRS 15, para. 35 is met. The concept of the alternative use is new in IFRS 15 and exists due to IFRS 15, para. 35c, which says that an entity satisfies a performance obligation and recognizes revenue over time if it creates an asset without an alternative use and has an enforceable right to payment for performance completed to date. According to IFRS 15, para. 36, no alternative use is given, if an entity is either restricted contractually and practically from directing the asset for another use.

Accountants P2 and P4 were in discussions with their auditors that this paragraph was actually meant for mechanical engineering companies to maintain the PoC method. This implies an industry-specific criterion, which may not be meant for other industries, but leads to problems with respect to the question if customer-specific products are in place.

Table 102: Analysis related to research question 2: Theme 11 - Evidence 7

Code	**E /A***	**Quote**
P2	A	We were very much in discussions with our auditors, then got the message that the paragraph was actually meant for mechanical engineering companies . . .
P4	A	I had heard, IFRS 15.35c was introduced so that mechanical engineering companies can continue to apply PoC, that means recognize revenue over a period of time.

* E = Auditor / A = Accountant

Companies may be able to recognize revenue earlier as the concept requires a company to rule out the requirements for a revenue recognition over time before revenue can be recognized at a point in time. Auditor P15 addresses this inverted principle compared to previous standards.

Table 103: Analysis related to research question 2: Theme 11 - Evidence 8

Code	E /A*	Quote
P15	E	At the beginning, there was talk of PoC being dead . . . And . . . in the meantime, . . . it is not uncommon for them to recognize revenue even earlier than before, because they have . . . reversed the order . . . and . . . say about checking the criteria: Tickmark, requirements fulfilled, that is, recognition over time . . . and don't even ask if recognition at a point in time may be more appropriate.

* E = Auditor / A = Accountant

The concept of the alternative use may lead to problems for businesses working in other areas in which a revenue recognition over time has never been an opportunity. Auditors emphasize that issue with respect to potential different interpretations or even earnings management by modifying contracts to steer towards a revenue recognition over time or at a point in time or payment claims that contain a margin.

Table 104: Analysis related to research question 2: Theme 11 - Evidence 9

Code	E /A*	Quote
P1	E	[It] . . . starts with the preparation of the contract or with these three criteria, which enable a revenue recognition over a period of time. And exactly towards this can be worked in the contract, whether these three criteria are met or whether they should just not be met. Depending on that, . . . an optimization through the contract preparation in one direction or another is of course possible, without that too much has to be modified with respect to the risk assumption or the actual contents of the contract.
P5	E	I . . . see a significant point . . . in the distinction of . . . recognition over a period of time or at a point of time . . . for example, you have a contract that says: You receive for a tool . . . just the replacement for the cost . . . and then you have a contract or maybe even in the same contract it is stated that you receive a part price for the parts that are made with the tool . . . Well, with margin I might have a recognition over a period of time. Without a margin, I have no recognition over a period of time, because IFRS 15 requires for a recognition over a period of time that this unconditional payment obligation or payment claim must also contain a margin . . . Of course, I have leeway . . .
P7	E	Well, one question is the . . . alternative use, right . . . You produce any part and you have to distinguish the parts afterwards . . .: Is it . . . a contractual asset or is it an

		asset, which I have produced on stock, where I now have no concrete underlying contract . . . if you have a . . . contract . . ., then it is a contractual asset, but then you have to realize the hidden reserves and then you have to show the corresponding margin. But if you do not have the same topic then you will stay on the cost of production for example.
P12	E	So we actually had this fact with this criterion of over time realization and the question: What if I have no claim to . . . receipt of consideration with a regular profit margin? . . . This has turned out to be very, very cumbersome, in order to come to a conclusion and say: Have we fulfilled the criterion, yes or no? . . . That was . . . a long discussion.

* E = Auditor / A = Accountant

Some accountants were surprised by the concept of the alternative use. It may be an issue for companies providing customer-specific products, which are manufactured in serial production, e.g. automotive suppliers. Accountants P2 and P4 react emotionally about this topic as, according to them, it is ineffectual to recognize revenue over time as the manufacturing process takes only a few hours. P6 working in the semiconductor industry states that over time recognition could have been implemented in the company if the management would have wanted to without being wrong. This implies room for interpretation. In case a satisfaction over time results, significant additional effort to implement new processes and adjust the IT landscape may be required.

Table 105: Analysis related to research question 2: Theme 11 - Evidence 10

Code	E /A*	Quote
P2	A	. . . if you are an automotive supplier, who produces a wearing part that is of course only produced for one customer . . . you are suddenly in the area of revenue recognition over a period of time for a part that is produced for two hours and that is absolute insanity . . . That is exactly the point where we are currently still in discussion: What is an alternative use? . . . if you're ready to say: Okay, we cannot get out of that issue, the next thing to decide is how to measure progress. How do you measure the progress of a part that takes two hours to produce?
P4	A	. . . my company has a [lot of] . . . customer-specific serial production, where IFRS 15.35c presumably leads to the fact that we will . . . have to record . . . revenue over a period of time that we had previously recorded at a point in time and this topic was only raised . . . at the beginning of the year [2017]. It surprises you a little bit. So

		none of us had expected it to happen . . . In my opinion, the automotive industry and the OEMs have been completely forgotten.
P6	A	I believe what cost us most of our time during the analysis was the question: Do we have to realize at a point of time or do we have to realize over a period of time, in other words customer-specific series production? But we were lucky that there are some dealers who simply buy our products . . . at very . . . similar prices . . . [but] if we would have tried everything and . . . definitely wanted to recognize revenue over a period of time. I don't know if someone would have hindered us, because it's always a matter of justification . . .

* E = Auditor / A = Accountant

Step two of the five-step model implies room for interpretation with respect to the criterion of distinct performance obligations and customer-specific serial production based on the concept of the alternative use, which seems to have been meant of the mechanical engineering industry to maintain PoC and now affecting other industries such as the automotive sector. As the order is inverted to firstly assess criteria for revenue recognition over time before considering if a realization at a point in time is more appropriate, there may be room for interpretation and discretion. As a result, revenue recognition may take place earlier compared to before.

6.3.2.3 Determination of the transaction price

The major principle for the determination of the transaction price is that the price is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer (IFRS 15, para. 47). However, according to IFRS 15, para. 48, effects such as variable consideration, constraining estimates of variable consideration, financing components, non-cash considerations and considerations payable to a customer need to be considered.

6.3.2.3.1 Variable consideration

Missing guidance for variable consideration was an issue under previous standards as there was no guidance available on how to account for transactions containing a variable component such as rebates or bonus payments (IASB, 2011; Khamis, 2016;

Peters, 2016; Tong, 2014). IFRS 15 provides more extensive guidance compared to the previous standards. However, variable consideration within IFRS 15 provides room for interpretation according to the auditors as it is an estimation and a discussible topic, e.g. with respect to experience values or other judgmental decisions. Furthermore, variable considerations are only to be included in the transaction price if it is highly probable that a significant reversal in the amount will not occur (IFRS 15, para. 56) and therefore imply an probability expression (Doupnik & Richter, 2003). According to auditor P15, however, complex variable considerations affect a smaller percentage of companies than one would expect.

Table 106: Analysis related to research question 2: Theme 11 - Evidence 11

Code	E /A*	Quote
P1	E	. . . variable consideration . . . are only to be . . . included, if it is highly probable that there is no reversal . . . many companies would skip that, if they are being cautious and say that it is not highly probable that these revenues will be reversed, because ultimately it is a very difficult discretionary decision where you . . . can say: Now we . . . have such high certainty that there is no reversal, one could almost consider whether some obligations may be needed to be taken out completely, because one says, such a correction can never be excluded. However, that is another thing, where companies can argue about [um] the quota of the last few years and then say: Well, in our case that actually never leads to a reversal of revenues that is why we always recognize it completely . . . this is, for example, one of those key issues where I would say you can argue endlessly about.
P15	E	These are always the examples you read when you talk about penalties or incentives . . . There is certainly room for manoeuvre here, although . . . [this] certainly affects a much smaller percentage of companies than with the examples you see in the literature . . . In practice, it is not the case that every second company has such business models, but this probably affects relatively little in terms of the percentage of companies.

* E = Auditor / A = Accountant

Accountants agree based on their insights provided on variable considerations. Besides the discretionary potential that is brought up by the accountants P4 and P8 on a general basis, the company of P9 deals with the whole range of retroactive and prospective discounts and assesses variable consideration based on experience values. However, this treatment of variable considerations is similar compared to the method under the previous requirements and therefore the complexity rather results from the business model than from the standard. This implies that room for interpretation exists as the accounting treatment has not been changed by the company of P9.

Table 107: Analysis related to research question 2: Theme 11 - Evidence 12

Code	**E /A***	**Quote**
P4	A	. . . I'm not allowed to include [variable considerations] until they're likely . . . when I think of the transaction price, when I take into account variable components, and to what extent I take them into account, it can of course lead to a different interpretation depending on how you want it to be.
P8	A	Determination of transaction price . . . is stated in the contract with the exception of: You have some sort of variability in the contract, then of course this is . . . discretionary . . . say you have included any bonus malus agreements, that is then appropriately discretionary or you have . . . certain variable payment arrangements, . . . which depend somehow on a transaction volume or something like that . . ., you have discretion when you have to use an estimate.
P9	A	. . . we have . . . staggered rebates, which are also prospective . . . [by] e.g. the first 100 pieces cost x and the next 100 pieces cost y . . . and then the discussion: How do we deal with that? Is it just a variable price component? I have to estimate how much they will purchase from us. Do I get the actual price and consider it from the beginning or do you say the first 100 pieces is a contract and I have an option for another 100 pieces at the other price? That was . . . the discussion where we're just trying to . . . avoid this . . . and say: Okay, we have a variable price, then we just need to estimate how much quantity will be purchased and what is the average price . . . If we have to make such estimates, we usually have . . . long-term relationships and histories with the B2B customers and can actually derive from history what is likely . . . So that we can actually always make good assessments . . .

* E = Auditor / A = Accountant

A subcategory of variable considerations is return obligations. According to IFRS 15, para. 55, the company has to recognize a refund liability if the entity expects to refund some or all of the consideration to the customer. P5 comments on that issue related to mass businesses and uncertainties what proportion of deliveries are returned. In that regard, an assessment on which percentage is returned by a client is difficult and professional judgment decisions may not be objectively challenged. P11 addresses nomination fees in the automotive industry which may also be divided in fixed and variable parts in the course of negotiations and therefore to be considered in the context of the recognized revenue.

Table 108: Analysis related to research question 2: Theme 11 - Evidence 13

Code	E /A*	Quote
P5	E	I would . . . think of . . . [it] in . . . a mass business: What percentage goes back? But even the question, if I . . . take a look at individual transactions and . . . I have a right of return . . . and then . . . the consideration: Is this too uncertain . . . that I may recognize revenue . . . not only proportionately, but possibly not at all . . . that would be an area where there is . . . large discretion . . . but also insecurity.
P11	E	You have to think about it: OEM x sells a few hundred thousand units a year . . . So that you, of course, ... then they negotiate and say: You give me a higher nomination fee or we divide the nomination fee into a fixed amount and a variable amount. The variable amount is . . . a problem for the vendor. How do you deal with the variable amount? May I take it already or may I take it only . . . when the reasons for this variability are given . . .

* E = Auditor / A = Accountant

Although previous standards lack specific guidance (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014) and IFRS 15 aims to improve that, variable consideration implies room for interpretation and can lead to different outcomes by applying different interpretations. Return obligations and variable parts of nomination fees further complicate an objective assessment by the accountants and also auditors. However, rebates may also be treated the same way as before due to interpretational decisions as illustrated by the example of the company of accountant P9.

6.3.2.3.2 Financing components

A significant financing component is in place if there is a significant benefit of financing the transfer of goods or services to the customer, regardless of whether it is explicitly stated in the contract or not (IFRS 15, para. 60). A practical expedient is in place that an entity does not need to adjust the amount of consideration if it expects that the period between transfer of the promised goods or services and when the customer pays for it is less than one year (IFRS 15, para. 63).

Financing components are not seen as a significant issue in the eyes of the auditors. This is either due to the use of the practical expedient or due to low interest rates. Furthermore, if there is a long-term contract, advance or down-payments are normally issued in order to finance a longer project.

Table 109: Analysis related to research question 2: Theme 11 - Evidence 14

Code	E /A*	Quote
P5	E	. . . currently financing a purchase is not the big issue . . . but if I have that, of course I also have the leeway, especially in terms of materiality, that I say . . . at a low interest rate . . . for that to become essential that needs to be a very large transaction, but then I have a lot of leeway.
P12	E	Financing components . . . is not of greater importance . . . But I think . . . you can . . . split it into smaller contracts, with the interest rate you can play. I think there are possibilities. But it's not a relevant issue for me and my client right now.
P15	E	I see the topic of financing components as less of an issue, simply not at all at today's interest rates . . . In the meantime, it is more common practice for payments that are large enough, not to enter into . . . pre-financing, but rather [implement] . . . corresponding advance payments. So according to the theoretical motto: I have a ten million order, pre-finance it, will receive my payments over five years, have to discount it. The normal model is: If I have a ten million project over five years, then I pay the appropriate advance payments.

* E = Auditor / A = Accountant

Accountants agree on that and do not perceive financing components as a significant interpretational area. P6 adds that the market situation is very good and therefore so are resulting payments due to negative interest rates.

Table 110: Analysis related to research question 2: Theme 11 - Evidence 15

Code	E /A*	Quote
P6	A	Due to the fact that it is a good market situation, we get more and more prepayments at the moment, whereby the prepayments are not needed from a company's point of view. Rather the opposite, because at the moment you pay negative interest, and actually only serves, as client have often broken the contracts in the past, . . . that we just have a kind of deposit. In principle, we do not want the money at all, we just want to have a means of forcing the customer to buy the products, even if this . . . situation changes again. That could be used for discretionary purposes and we were lucky that at similar times, not many, but a few contracts were signed . . . where a deposit has been agreed for one customer at the same product price and no down payment has been agreed for the other customer. Of course, you can show that the deposit does not provide any kind of financing for the company.

* E = Auditor / A = Accountant

Within the third step, determination of the transaction price, variable consideration, i.e. rebates, discounts or similar contractual arrangements, is the main area for interpretation and discretionary decision. With respect to financing components, Khamis (2016) names the assessment whether or not a financing component included in a contract is significant and would lead to an adjustment of the transactions as a major judgmental area. Peters (2016) names financing components in the context of long-term contracts that may event result in a modification of the accounting practices of e.g. construction entities, but finds out that variable consideration and contract modifications are more complex. This study reveals that financing components are no major issue due to low interest rates and the good economic condition as of 2018.

6.3.2.4 Allocation of transaction price

The objective of step four is to allocate the transaction price to each distinct good or service in an amount that depicts the amount of consideration to which the entity expects to be entitled in exchange for transferring the promised goods or services to the customer on a relative stand-alone selling price basis (IFRS 15, para. 73 – 74).

6.3.2.4.1 Stand-alone selling price

The relative stand-alone basis is realized by determining the stand-alone selling price at contract inception of the distinct good or service underlying each performance obligation in the contract and allocate the transaction price in proportion to those stand-alone selling prices (IFRS 15, para. 76). If a stand-alone selling price is not observable based on e.g. list prices, an estimation needs to be made considering all information such as market conditions, entity specific factors and information about the customer or class of customer (IFRS 15, para. 78).

Some of the auditors expect room for interpretation with respect to the calculation of the stand-alone selling price, especially if there are not market prices available. This may be the case for customer-specific products, e.g. model-specific navigation systems as stated by P11. Additionally, discretion may be an issue as entities might take the advantage to bundle certain obligations to achieve a higher or lower price instead of the stand-alone selling price. However, auditor P15 mentions that such estimations in IFRS are pertinent and therefore this is not an innovation.

Table 111: Analysis related to research question 2: Theme 11 - Evidence 16

Code	E /A*	Quote
P1	E	The allocation on the basis of the individual selling prices is of course not always possible or then something, if certain parts are already sold in packages that are subject to a discount, then this discount must be proportionately taken into account again . . . Here is the question . . . whether companies somehow take advantage of it by bundling different obligations, which then lead to a higher or lower price instead of the stand-alone selling price.
P5	E	[With respect to the] Allocation of the transaction price . . . I have substantial leeway, because the question: What is the market . . . price for one or the other? Also, where do I have a significant deviation from this? I mean, nobody starts to allocate a price again . . . because of 10.50 Euro . . . and then perhaps to pull it forward or push it backwards or whatever . . . I have quite some leeway there.
P7	E	. . . I am currently at my automotive client . . . I have any tooling expenses, which I will remunerate by the part price. Then you have to make a reasonable estimate: . . . how many parts are delivered? If the single part might cost 1.20 Euro more, ok, point taken. But the question is: What do I expect? So what's going to be . . . my quantitative number that I want to or will achieve with that . . . That could be an issue in the individual case . . .

P11	E	I would say that the automotive industry is an interesting example: All the navigation systems are of course sold with different margins and prices . . . For model 1, 2 and 3, regardless of which functionality the thing has, the price per unit is calculated. There could . . . be difficulties to set a fixed price or sales price for the individual product.
P15	E	. . . there were no special features specific to IFRS 15. What has been there so far is really there as well. This also applies to the question of fair value estimation in the allocation. Of course, there are estimates and you also have to deal with estimates. But that's nothing new.

* E = Auditor / A = Accountant

The accountants' perceptions depend on the business model, but to determine a stand-alone selling price for various products may indeed be difficult. P6 works in a one-product company, which therefore has a fairly simple business model, but due to different negotiated prices, it is difficult to define a stand-alone selling price for each product group. P9 does not have experience with it, but expects difficulties if no stand-alone selling price is identifiable. P13 explains difficulties from an automotive perspective with respect to a delimitation of prices for service, maintenance and extended warranty contracts. P14 mentions that their advantage was that performance obligations such as production support and warranty extension were priced in the quotation system and therefore, step four was relatively easy. However, the company also provides services free of charge to customers which actually have a value. Therefore, the calculation also may become more complex.

Table 112: Analysis related to research question 2: Theme 11 - Evidence 17

Code	**E /A***	**Quote**
P6	A	I . . . found it difficult because of the fact that . . . you have different prices for different customers through negotiation skills . . . and some customers can force you to different prices more quickly, because you simply have a higher dependence on one company . . . I found it extremely difficult to find a standard transaction price per product group.
P9	A	In determining the transaction price, where I . . . have to do the separation in service and product components, I would expect . . . [as] there are no individual transaction prices, that there is a lot of discretion.

P13	A	What concrete amount do I delimit, for example, for my service, maintenance and extended warranty contracts? This has been a very difficult subject, in other words the separation of payment obligations.
P14	A	. . . we have . . . assembly and . . . production support and warranty extension, and in these cases it was still easy for us to determine transaction prices in the first step, because we actually have prices for these items in the quotation system . . . It becomes more difficult if you do things that you actually provide to the customer free of charge, however, which actually have a value, because then you change the overall calculation.

* E = Auditor / A = Accountant

Overall, the difficulty and degree of interpretation depends on whether estimations are necessary and if prices are available objectively in a system or on a market. However, such estimations are not a new concept. Peters (2016) connects the determination of the transaction price to variable consideration, which confirms the present study. Khamis (2016) also connects it to the other variables in the course of the five-step model. Therefore, the present study complies with these findings and concludes that the determination of the transaction price is neither a major interpretational issue nor a new concept in IFRS.

6.3.2.4.2 Allocation to performance obligations

Some auditors and accountants mention that the allocation of the transaction price to the performance obligations is dependent on the previous steps. Therefore, there is a connection between the various steps that implies potential to interpret in favor of the goal or desired outcome and error potential.

Table 113: Analysis related to research question 2: Theme 11 - Evidence 18

Code	E /A*	Quote
P2	A	The allocation of the transaction price is . . . a consequence of the other steps, but could also be influenced separately . . . [If] You . . . suddenly have more performance obligations, you . . . have . . . the problems with the transaction price, because you have to cut it most likely, then you have . . . the subsequent problem of allocation in step four, so you get into a vicious circle . . .

P7	E	Allocation of the transaction price: This results from the other steps. This is not the issue.
P11	E	I also believe that it depends on how individual the products are and how the pricing is for the individual products. And it depends on which components you've identified . . . So it's all interrelated, how detailed you will be in your component name and interpretation, the more complex the pricing and allocation becomes.
P15	E	Allocation naturally has room for interpretation. Is always the question: Do I have one or more performance obligations? . . . Especially where you have several or many service obligations it is often so, think of power plants or large projects, you do not necessarily have the market prices, so that in turn you are dependent on fair values in another category, so don't just say mark to market, but rather mark-to-model consideration, in other words a calculation. There is certainly also room for maneuver in this respect.

* E = Auditor / A = Accountant

If there is only one performance obligation, the application is fairly simple. The more performance obligations and less available prices, the more complex the practical application of the model will be. This is in line with Peters (2016) stating that the allocation of the transaction price appears to be very difficult in the new model, but mainly due to the requirements about variable consideration. Therefore, the connection between the various steps and step four being the result of the previous ones appears to be a logical conclusion.

6.3.2.5 Revenue recognition

The company recognizes revenue when the performance obligation is satisfied by transferring it to the customer. If the performance obligation is satisfied over time, the entity has to measure the progress towards its satisfaction based on input or output factors, i.e. e.g. units produced or costs incurred or machine hours used (Khamis, 2016). In case a point in time realization is pertinent, the transfer of control is the decisive point in time a recognition can take place. Indicators are mainly that the seller has a right to receive the payment, the customer has the legal title and physical possession of the good or service, the customer accepts the good or service and also that the customer is assuming risks and rewards of ownership (Khamis, 2016).

6.3.2.5.1 Measuring progress of performance obligations

The over-time realization may be discretionary based on the method used. The point-in-time realization may also imply room for interpretation as the point in time of transfer of control can be influenced. The over-time realization is brought up by accountant P4 in connection with customer-specific serial production and the question how to measure the progress of a part that has short production cycles. P7 adds that this may lead to significant changes as there would not be cut-off issues anymore as revenue recognition would be triggered as soon as a part is finished in the production cycle. P14 explains that the production of an assembly line including putting it into an operational state now may be seen as separable which leads to a revenue recognition at a point in time instead of over a period of time and therefore to a delay of revenue recognition.

Table 114: Analysis related to research question 2: Theme 11 - Evidence 19

Code	E /A*	Quote
P4	A	How do I measure the progress of my performance [obligations]? Input- or output-oriented? Here, . . . of course, are discretionary decisions, if you end up with . . . an output-based opportunity and then started interpreting . . . what does the standard mean by units delivered, units produced? So I can't take units delivered and end up with the same result. That was a subject we discussed, long and wide . . .
P7	E	Now . . . in . . . 2018, in January, they . . . no longer have the entire cut-off issue, but now the focus is . . . on the end of production and as soon as a part falls off the assembly line and is finished, profit realization is triggered if a contract is behind it. That means that they would have . . . a huge revenue wave . . . [in January 2018].
P14	A	. . . in one area, we have a product that is completely assembled here and . . . goes into operation at some point and is . . . delivered. Of course, we have . . . discussed it: Is a third party without our support able to put this machine into operation, which is a decisive feature for the separation of performance obligations? Then, we decided to consider this as separable, because ... if someone has the know-how, he can do it. Now in the field of automation, we had to make a decision at the end of the day, and that is the main change for us under IFRS 15, that we have to say here: Okay, basically, without the support, with respect to automation, a bunch of steel, poles and belts leave our company, but this is not really a finished product and the product is only produced on the construction site. This is also a topic where PoC would not be completely unfamiliar . . . In this case it is . . . the case that no one will be able to do this without our support. So the opinion is here that we of course no longer have

		any separation of performance obligations, and thus we have a significant delay in the recognition of sales revenue and also effects on earnings . . . in the future.

* E = Auditor / A = Accountant

6.3.2.5.2 Contract costs

There are incremental costs of obtaining a contract and costs to fulfilling a contract. Incremental costs of obtaining a contract can be capitalized if the entity expects to recover these costs and if these costs would not have been incurred if the contract had not been obtained (IFRS 15, para. 91 – 94). Costs to fulfil a contract can only be capitalized if three criteria are met. These criteria are that the costs relate directly to a contract, generate or enhance resources that will be used in satisfying performance obligations in the future and are expected to be recovered (IFRS 15, para. 95). There is room for interpretation in those regulations with a potential effect on the balance sheet by the decision of whether costs are capitalized or expensed.

Table 115: Analysis related to research question 2: Theme 11 - Evidence 20

Code	**E /A***	**Quote**
P4	A	. . . depending on how I define a contract . . . or from when I say that I have a contract, I have either contract costs or not. So when I talk about pay to play fees, for example.
P6	A	. . . especially with respect to the costs . . . what is cost to fulfil a contract? What is cost to obtain a contract? . . . of course . . . there is room for interpretation . . ., because I can capitalize more costs than before.

* E = Auditor / A = Accountant

6.3.2.5.3 Transaction-specific interpretational areas

Regulations for principal-agent relationships were discussed in the course of the interviews. IFRS 15, para. B34 – B38 provides guidelines for principal versus agent considerations. These imply that an entity needs to determine whether its performance obligation is to provide the good or service itself (principal) or to arrange another party to provide the good or service (agent). An entity is a principal and records revenue on a gross basis if it controls the promised good or service before transferring it to the customer and an agent recording revenue with the net amount it retains as a commission if its task is the arrangement for the customer to provide goods or services. Accountant P4 refers to the IT sector within the conglomerate the participant is working for and phrases principal-agent considerations as a grey zone within IFRS 15 as the IT provider still wants to recognize gross revenues. Accountant P10 is also working in the IT sector dealing with transformation and transition topics that are influenced by principal-agent considerations. Auditor P15, in contrast, commends the principal-agent considerations within IFRS 15 as they did not specifically exist in the previous standards. Principal-agent issues were not addressed in the previous revenue recognition requirements, however, opinions on it are divergent and decisions may still be judgmental.

Table 116: Analysis related to research question 2: Theme 11 - Evidence 21

Code	E /A*	Quote
P4	A	. . . the principal agent issue . . . is certainly a gray zone. It is . . . clear that the IT industry, which has shown gross revenues so far, wants to continue to show gross revenues.
P15	E	What I also like is the topic Principal-Agent, which has been such a grey area before. These are things that are better.

* E = Auditor / A = Accountant

The previously mentioned problem with respect to the concept of the alternative use is addressed by auditors and accountants in specific industries. On the one hand, it depends on how a customer or a contract is defined by the company. Furthermore, as P2 points out, it is an overall B2B issue, because the business model is often based on customer-specific products. P2 and P4 see room for manipulation as a production on stock may already be revenue in case the customer sends an order. P6 solved the issue of customer-specific serial production by justifying an alternative use through the fact that also deals are buying their products and at comparable prices. P6 emphasizes that the company could have also found reasons to implement a realization over a period of time. P9 explains the delimitation of customer-specific serial production with respect to modifications of products and many discussions with the auditor resulting from that. Auditor P5 considers customer-specific serial production or the concept of the alternative use according to IFRS 15, para. 35c as a technical error in the standard. Auditor P15 emphasizes this issue in the context of the trend that production cycles have more pre-production cycles, e.g. modules, which are customer-specific. Therefore, revenue recognition could take place earlier.

Table 117: Analysis related to research question 2: Theme 11 - Evidence 22

Code	E /A*	Quote
P2	A	. . . in the customer specific . . . [serial] production, I see huge room for manipulation. As soon as you fall under it, you almost already record a stock of finished products as revenue and then you only need one order . . . So we were told that that . . . [IFRS 15, para.] 35c exists to not forget mechanical engineering companies. Sure, I can understand that. But then you could have solved it simply by pointing to a long-term production because a machine is not built in a day. But a sealing ring is.
P4	A	I was at a seminar three weeks ago, for example, where IFRS 15 was the topic, where this topic of customer-specific series production came up and . . . of the 70 people, . . . 50 of them heard about it for the first time and . . . they've lost their jaws . . . So I actually believe [with respect to] that this topic of serial production . . . it is then easy to ask the customer . . . to send out the order already . . . I mean he has no expense or financial disadvantage from it while we . . . produce on stock, then simply could recognize revenue. So you could change the periods as much as you like, which means that you can shift a lot back and forth . . .
P6	A	So, what I believe what cost us most of our time during the analysis was the question: Do we have to realize at a point of time or do we have to realize over a period of time, in other words customer-specific series production? . . . if we would have tried everything and had said that we definitely wanted to recognize revenue over a period of time. I don't know if someone would have hindered us, because it's always a matter of justification . . .
P9	A	We've only seen it once in one area . . . and we're still discussing whether this is relevant . . . that's in the fruit area. There are cases where we . . . develop recipes with the customer and this is of course a service that goes on for a longer period . . . We had a lot of discussions with the auditor and have now come to the conclusion that there is no contract asset to account for. You have to consider whether this is a customer-specific production, so everything goes off the production line and then it is modified for a customer individually. But that's like when a customer says: But I want my car to be red, then they make it red . . . Except for one case we succeeded in making sure that you don't get into the area of customer-specific production. But in that regard, my impression was that the auditors are also not fully competent.

P5	E	[There are] . . . technical errors in the standard . . ., for example, customer specific serial production is under certain circumstances simply not a case for revenue recognition over a period of time, this is just nonsense.
P15	E	. . . customer-specific serial production. Or you could put it the other way around: Standard contract manufacturing using modular design. And there is always a clear trend in technology, as far as feasible, via prefabrication, via modules, via sections. And this no longer completely finished, but coming into a pre-production with subsequent assembly. There could be the trend that it even goes in one direction, faster than before.

* E = Auditor / A = Accountant

Another issue may be research and development activities for a customer. This topic is especially addressed by auditor P11, who is primarily dealing with the topic of revenue recognition within automotive companies. Careful judgment to determine whether research and development activities are distinct or non-distinct is required. Depending on that judgment, the result is that the research and development services are, in case being non-distinct, included in the transaction price and recognized based on the progress of the performance obligation, or, in case being distinct, recognized separately via milestone payments.

Table 118: Analysis related to research question 2: Theme 11 - Evidence 23

Code	**E /A***	**Quote**
P11	E	[There are] . . . contract constellations . . . where there are also research and development topics, where the customer . . . makes down payments . . . let me give you an example: [Companies] . . . manufacture navigation devices for the individual vehicle manufacturers. And the individual car manufacturers subsidize . . . basic research for or development . . . for . . . their . . . special navigation devices. And there's the question: Is that . . . stand-alone or is it a part of the whole contract? That means, will this be settled with the units that I finally sell? . . . How is this ... remuneration for this research and development work classified?

* E = Auditor / A = Accountant

Additionally, the area of tooling may be complex. KPMG (2017a) points out that judgment is required to assess the nature of a tooling arrangement. The questions that need to be addressed are if a supplier sells a tool, leases a tool to the customer or the entity develops a tool as its own asset, i.e. if it is under the scope of IFRS 15, IFRS 16 – Leases or development of an own asset under the scope of IAS 16 – Property, Plant and Equipment. According to the auditors P5 and P7, this is not clearly stated in the standard and may require interpretation.

Table 119: Analysis related to research question 2: Theme 11 - Evidence 24

Code	**E /A***	**Quote**
P5	E	. . . I can try that I . . . come from a recognition over a period of time to a recognition at a point of time . . . one significant industry that I know is the automotive industry in terms of tooling subsidies that are now rather . . . realized at a point in time, which of course already leads to a . . . preference of sales. But as I said, it compensates for that, because . . . over the longer period of time I will have the same . . . revenues again . . .

* E = Auditor / A = Accountant

Another point raised by accountant P4 is the accounting for cloud services under IFRS 15. P4 states that no guidance could be found for cloud computing transactions within IFRS 15 and therefore an orientation on US GAAP was necessary again. This can be related back to the previous findings on industry-specific guidance. Jones and Pagach (2013) addressed transaction and industry specific guidance under previous revenue recognition requirements. Interviewees confirm earlier in this study that indeed IFRICs were in place before to cover industry-specific issues, but other standards such as US GAAP and their interpretation were used in practice in case IFRS were not sufficient. This seems to be the case even for IFRS 15, at least for cloud computing questions.

Table 120: Analysis related to research question 2: Theme 11 - Evidence 25

Code	**E /A***	**Quote**
P4	A	. . . the future is increasingly cloud computing, and I've been looking at contracts in our IT division . . . with cloud services or with cloud solutions that were sold to customers . . . [and] I had to orientate myself towards US GAAP, because . . . I couldn't . . . cover it with IFRS 15. That was too much interpretation, where I didn't know which way to go.

* E = Auditor / A = Accountant

Moreover, accountant P6 addresses the issue of consignment warehouses and the respective revenue recognition under IFRS 15. IFRS 15 implies room for interpretation and flexibility with respect to consignment stocks as revenue is not considered at the withdrawal time anymore. Therefore, the delivery can be influenced around reporting dates to increase or decrease revenue.

Table 121: Analysis related to research question 2: Theme 11 - Evidence 26

Code	E /A*	Quote
P6	A	I think we could [apply discretion] . . . so we have in our contracts certain delivery limits for consignment stocks, that it says for example we can't have more than 100,000 items . . . in the warehouse . . . But we can now actually determine the exact time when delivery will take place. So, if the customer, let's say, has ordered 100,000 pieces . . . we can . . . influence it around the quarter, which would not have been possible before, because the revenue would have been recognized on the withdrawal.

* E = Auditor / A = Accountant

However, consignment agreements can also include agreements, which may have an effect on the recognition of revenue based on the transfer of control, e.g. if the product is controlled by the seller until a specific event such as the sale to the end customer (PwC, 2017). This implies room for different interpretation, especially as IFRS 15, para. B77 states that consignment arrangements comprise a delivery to a dealer or a distributor before the sale to the end customer.

Table 122: Analysis related to research question 2: Theme 11 - Evidence 27

Code	E /A*	Quote
P6	A	I find sometimes there wasn't enough information . . . available to . . . present the facts correctly . . . For example, the issue of consignment stocks: I don't think that's so prominently presented . . . in the application guidance at the end of the standard . . .

* E = Auditor / A = Accountant

These further transaction-specific interpretational areas such as principal-agent considerations, customer-specific serial production, tooling, cloud services, research and development activities or incremental costs imply room for interpretation and discretion. This adds to the current literature (Khamis, 2016; Peters, 2016) focusing on a high-level analysis of challenges within the five-step model without providing further details on this level.

6.3.3 Influential factors for interpretation and discretion

This subsection addresses ‘Theme 12: Influential factors for interpretation and discretion’ related to research question 2. This subsection aims to summarize insights of auditors and accountants expect or apply earnings management under IFRS 15.

6.3.3.1 Earnings management

As described in the stakeholder analysis in subsection 6.2.2.3, management involvement may be required for a successful implementation of IFRS 15. However, not only from the perspective to drive the implementation, but also to carry the company’s goal into the organization (Auditors P1 and P11). Another factor may be that companies do not want to position themselves worse after the implementation from a key performance indicator perspective (P3). Accountant P4 states that the new standard may be increasingly used for revenue cosmetics.

Table 123: Analysis related to research question 2: Theme 12 - Evidence 1

Code	E /A*	Quote
P1	E	How need contract templates to be designed that they also actually comply the company's goal also under the new IFRS 15 . . . [as] the companies all have a vision or all have a goal . . . with respect to their accounting policy . . . and . . . this also influences . . . the implementation process . . . by saying: How can one target or another target, being a smoothing of revenues or progressive revenue recognition, may be even better implemented under this standard than before.
P11	E	. . . any long-term contracts. They all have to be . . . scrutinized at an early stage in order to steer the negotiations in the right direction so that both sides, the customer and the supplier . . . have a win-win situation, because it is often the case that customers want to exhaust budgets . . . and the counterparty, the supplier, wants to recognize revenue as early as possible.

P3	A	With the new standard, everyone tries to position themselves in such a way that their key figures are not worse than before, tend to be even better or are more in line with the company.
P4	A	I can well imagine that many companies now increasingly [um] use the new standard for profit and revenue cosmetics, I'm sure.

* E = Auditor / A = Accountant

Many participants suppose that the room for interpretation or manipulative actions is higher under IFRS 15 although its guidance is more extensive than under the previous standards. This can be partially justified by the fact that IFRS 15 is a new standard and a best practice has yet to develop. This is confirmed by Peters (2016) stating that the unfamiliarity with IFRS 15 may lead to a negative opinion and therefore biased answers. This is in line with the finding that accountants interviewed for purposes of this study emphasize that manipulation is not used in their companies. They have rather tried to avoid changes and keep the impact immaterial.

Table 124: Analysis related to research question 2: Theme 12 - Evidence 2

Code	E /A*	Quote
P2	A	I want say . . . that . . . we would never use that . . ., but I can well imagine that many companies . . . increasingly . . . use the new standard for profit and revenue cosmetics, I'm sure. We will not do it because . . . we really do not want to change anything . . . [and] may also be lucky that our business is doing . . . very well. Accordingly, we have no incentive.
P3	A	. . . maybe . . . [IFRS 15] allows the same leeway as every other standard before. Only now you have a new playground. It will simply take years again until a market opinion has been consolidated for certain topics. What if I don't have a real market price? What are realistic margins . . .? . . . also . . ., what was the auditor's own experience in his industry?
P4	A	I believe that every standard offers possibilities and I do not exclude IFRS 15 . . . But IFRS 15 does, however, still open up opportunities. So it is not the case that all discretionary opportunities have now been eliminated . . . Where a gap may have been closed, another gap opens up.

P6	A	I don't suppose we'd ever use that lever, because that wouldn't be typical of our company, but . . . that had completely surprised all of us, because actually it leaves more room for maneuver than before.
P9	A	I would say that there is more room for maneuver . . . I just think that by the fact that you still have a wide range of estimation bandwidths . . . you're just opening up a new room as far as all the estimations are concerned.

* E = Auditor / A = Accountant

The auditors do not have a uniform opinion. While P1 thinks that IFRS 15 provides more discretionary opportunities, P5 assesses that IFRS 15 has less room for interpretation. P7 again states that it depends on the best practice that will develop over time. However, the identified areas for professional judgment and the room for interpretation and discretion is to be seen from a practice perspective and not only from an academic viewpoint. P15 explains that interpretation and discretion takes place beforehand and once when setting up a guideline.

Table 125: Analysis related to research question 2: Theme 12 - Evidence 3

Code	**E /A***	**Quote**
P15	E	The essays or theory sometimes assume this: There sits someone who wants to manipulate. He's taking advantage of all the discretion. In real life, however, especially when there are such discretionary opportunities, structures and processes must be created . . . Take a software product, a complete system with PC, with hardware, with software, with implementation, with setting it up. Is the hardware just a commodity with a margin of zero, because my intellectual performance, my added value lies in the subsequent implementation and setting it up and make it run . . . or is my added value in the planning and conceptual design of the project and afterwards the implementation is just a process. There they can certainly have certain room for interpretation on the time axis . . . and then through allocation. But, as I said, this cannot be done in practice today like this and tomorrow differently. But conceptually, yes.

* E = Auditor / A = Accountant

6.3.3.2 Practical application

Rather than applying professional judgment and discretionary decisions for an improvement of the financial situation, the accountants tend to avoid changes of IFRS 15 and try to keep the impact immaterial. Therefore, the room for interpretation or discretion is used in a different way. Furthermore, the accountants emphasize that they would not use specific levers IFRS 15 provides.

Table 126: Analysis related to research question 2: Theme 12 - Evidence 4

Code	E /A*	Quote
P2	A	. . . I can well imagine that many companies . . . increasingly . . . use the new standard for profit and revenue cosmetics, I'm sure. We will not do it because . . . we really do not want to change anything . . .
P4	A	[IFRS 15] . . . is a huge issue in the automotive sector [and] . . . in the worst case this leads to adjustments or must lead to adjustments of processes, leads to a revenue shift. You want to avoid that at the moment . . . in the household division . . . and in the IT sector . . . we want to . . . adjust the contracts to a certain extent . . . in order to avoid problems arising from IFRS 15 . . . Well, . . . we are . . . applying discretion, but not with the purpose to increase our . . . revenue, but . . . just trying to be . . . creative in order to . . . to keep the effects . . . in the subgroups as little as possible.
P6	A	[It] . . . was . . . the requirement from the management: . . . it is a new standard, it is an important standard . . ., if the majority say there's a change, then we'll make it . . . So we had a clear management requirement that there should not be mumbled . . .
P9	A	. . . we have . . . one issue so far and this is the subject of options and the distinction between options and prospective discounts . . . where we're just trying to get out, so to avoid this option area . . . we thought about how to prevent us from having . . . strong revenue volatility, . . . so . . . this topic of dealing with variable prices has always been an issue. We have also solved this technically in the SD module of SAP . . . We have had this before and we continue to use it for IFRS 15.
P13	A	Of course, the wish was in many ways that we could continue as before, because . . . the changes . . . are insignificant. And why should I turn a huge wheel for . . . something that's insignificant . . . [and] when the ideal procedure is already in the process . . .

P14	A	. . . we have always discussed . . . PoC, because . . . we also have a second important business field within our group, automation . . . of production lines and that is definitely a topic where you are within plant construction . . . But we have . . . always tried to find the arguments in the past together with the Group in such a way that we get around the issue.

* E = Auditor / A = Accountant

Auditors P5, P11 and P12 confirm the avoidance strategy of many companies. They explain that customers expect solutions and opportunities to avoid changes in the revenue recognition process due to IFRS 15.

Table 127: Analysis related to research question 2: Theme 12 - Evidence 5

Code	E /A*	Quote
P5	E	So you try . . . to use the interpretation so that you just do not have to apply IFRS 15 in that way.
P11	E	. . . the customers demand solutions and workarounds or possibilities . . . to keep their old process. Or to set the standard for their advantages. Of course, it can also be that the standard gives you the opportunity to recognize revenue earlier than in the past.
P12	E	So we actually had this fact with this criterion of over time realization and the question: What if I have no claim to . . . receipt of consideration with a regular profit margin? . . . We do not yet have a solution on how to avoid this . . ., because . . . you know what you would have to write in the contract to meet the criteria, but you don't think the customers will sign it.

* E = Auditor / A = Accountant

In light of the potential interpretational areas, which may be also influenced by contract design, P12 raises an important point with respect to contract modifications in practice. P12 states that customers may not sign amended contracts to avoid changes or to use them to improve the top line in favor of the company. Implementing changes to the contracts is theoretically possible, however, in practice factors such as bargaining power and the content need to be considered. Auditor P7 and accountants P4 and P14 confirm that and add the bargaining power of customers, especially OEMs in the automotive sector, as critical and therefore explain that it is impracticable to modify contracts for accounting purposes.

Table 128: Analysis related to research question 2: Theme 12 - Evidence 6

Code	**E /A***	**Quote**
P4	A	You could [modify contracts], but it's the question of course, what the customer wants . . . We can't sell it to anyone else. That is what it says . . . and we . . . do not have market power. The customer is the one, who has the power. Even if we wanted to change [the contract] . . . to avoid having to recognize it at some point in time, I do not think we could.
P7	E	The problem is that I do not . . . serve any Daimler, BMW or Siemens . . . that would have the . . . power to unilaterally change contracts, but if you have suppliers or rather Tier 1 customers those will not be able to unilaterally adjust contracts with an OEM without the risk of subsequently experiencing a material adverse effect on their business.
P12	E	So there'll be an attempt to design [the contracts] . . . But . . . it is unclear to what extent customers will accept this.
P14	A	In the long run, it is particularly important to talk to the sales department about whether or not . . . [a] contract should be prepared in a different way . . . there is the question . . .: To what extent does the customer allow us to include accounting elements in the contract? Automobile manufacturers . . . have great market power . . .

* E = Auditor / A = Accountant

Auditor P15 emphasizes that contracts are not made or changed for accounting reasons, no matter which standard is to be applied. That means that contracts are not manipulated for IFRS 15-specific reasons, but rather with respect to Incoterms or other business purposes. This confirms the previous findings that accounting does not have the purpose to interfere in the daily business, but to reflect the economic value of business transactions.

Table 129: Analysis related to research question 2: Theme 12 - Evidence 7

Code	E /A*	Quote
P15	E	I don't make a contract just for accounting reasons . . . If I have a certain contract that is good, then I do not only change it because of the accounting, so that I can perhaps recognize revenue earlier. I'm not taking any risks with it . . . But I have . . . seen a specific case where . . . people have said: I have amended the contracts . . . by thinking about the question of bill and hold and by thinking about whether I want to change the Incoterms. That way I can get around the financial reporting date . . . [and] push or shift sales . . . However, this is not an issue specific to IFRS 15 . . . At the beginning, there was a discussion . . . whether . . . I could enter into a recognition over a period of time . . . on the basis of pure agreements . . . In the meantime, however, the opinion has become generally accepted: If it has no substance, even a purely formal agreement does not help to fulfil the criteria. I do not believe that IFRS 15 has given rise specifically to any practice-relevant new scope beyond the general scope I had given the examples.

* E = Auditor / A = Accountant

6.3.4 Robustness of the IFRS 15 framework

This subsection addresses ‘Theme 13: Robustness of the IFRS 15 framework’ and serves as a concluding chapter for the research insights addressing research question 2.

From an academic viewpoint, there are areas that provide room for interpretation and require professional judgment. Auditors and accountants are aware of those areas and indeed perceive them as critical. However, no participant mentions areas in which significant judgment was applied to improve the financial situation. Interpretation and judgment is rather used in order to avoid changes. This implies that the chances to change the revenue figure are limited compared to the stated risk for manipulation. IFRS 15 may lead to a revenue shift, but it does not provide a way to realize higher or lower revenues over the total period.

Table 130: Analysis related to research question 2: Theme 13 - Evidence 1

Code	E /A*	Quote
P8	A	[The revenue is] . . . not higher or lower . . . It's rather [the question] . . . through the control concept: When do I show revenue? Time of performance?

P13	A	. . . at the end of the day, it's a delimitation topic: When do I post sales? It is not the case that I am being prevented from recognizing revenue in general, but it is simply a question of when I am going to recognize revenue.

* E = Auditor / A = Accountant

Overall, interpretation of IFRS 15 is influenced by basic IFRS principles such as materiality as there is no unified threshold for materiality (Hodgdon et al., 2011). Another topic discussed are probability and uncertainty expressions based on the 16 expressions identified by {Doupnik, 2003 #101@@author-year}. According to the auditors and accountants, those expressions certainly play a part within IFRS, but are not a major issue with respect to IFRS 15. The major principle of IFRS 15 is the control principle, which supersedes the previous risk and rewards principle. The control principle is codified within the five-step model, which is the core guideline for the accounting for each revenue transaction under IFRS 15.

Within step one, findings are that the definition of a contract and the customer is not clearly outlined and may lead to different potential interpretations. Another issue in step one is the criteria for a combination of contracts with respect to entering contracts near or the same time. These issues may lead to a different treatment of the same transactions. Step two implies potential for interpretation and discretion related to the separation of performance obligations. Furthermore, the concept of the alternative use may lead to difficulties in practice. With respect to step three, variable consideration is discussed as a potential source for different professional judgment. Financing components are analyzed as they are mentioned as potential interpretational issue in current literature (Khamis, 2016; Peters, 2016). However, this research study reveals that financing components are not perceived as a discretionary area within IFRS 15 due to a practical expedient and low interest rates. Step four implies the identification of a stand-alone selling price for the single performance obligations. This may be challenging if there are no market prices available. However, this represents a general problem within IFRS. As the allocation to performance obligations is highly dependent on previous steps, the error potential accumulates in that step. Revenue is recognized when the control is transferred based on input or output factors (Khamis, 2016).

IFRS 15 as a comprehensive revenue recognition standard was developed by the IASB requiring all companies to adopt the five-step model. Revenue is important to the investors' decision-making process due to its role as a metric for growth and future prospect (Zhang, 2005). IFRS 15 is another principles-based standard considering all industries and business transactions. Interviewees partially assess the room for interpretation as higher under IFRS 15 although the guidance is more extensive. Nevertheless, an avoidance strategy to keep everything unchanged is pursued. Interpretation and discretion mostly takes place beforehand during setting up a guideline.

6.4 Likely impact on firm's profitability and performance through IFRS 15

As outlined in subsection 5.2.5.2, the following themes were identified related to research question 3.

Table 131: Identified themes related to research question 3

Research question		**Theme**		**Subsec.**
3	What is the likely impact of IFRS 15 on firms' financial statements and therefore their profitability and performance?	14	Conversion method	6.4.1
		15	Impact on financial statements	6.4.2
		16	Before and after IFRS 15	6.4.3

The study focuses on the likely impact of IFRS 15 on firms' profitability and performance as there are no published financial statements available yet which objectively outline effects from IFRS 15 adoption. This is due to the fact that the effective period was postponed to periods starting on or after 1 January 2018 (Peters, 2016) in July 2015 after concerns of preparers having been raised (Rutledge et al., 2016). Therefore, it is expected that published financial statements of companies will not be available before the first quarter of 2019.

6.4.1 Conversion method

This subsection addresses 'Theme 14: Conversion method' related to research question 3 and aims to provide findings with respect to the preferred conversion method of companies.

The majority of the accountants use the modified retrospective method. IFRS 15, para. C3 allows two methods, which are either the full retrospective method by presenting each prior reporting period as it would have been accounted for under IFRS 15 or modified retrospective method presenting the cumulative effect of initially applying IFRS 15. There were no detailed discussions regarding the transition methods or further explanations by the accountants or auditors. Only P9 states that the reason for applying the modified retrospective method is to not confuse people with the only minor effects and instead briefly describe the effects to generate transparency.

Table 132: Analysis related to research question 3: Theme 14 - Evidence 1

Code	E /A*	Quote
P9	A	We will . . . apply prospectively, so we are not doing any adjustments to the previous year's figures, but will . . . start to carry out this new revenue recognition [standard] from the first month of the financial year [2018]. With the minor effects, you'd only confuse people if you increased last year's revenues by 10 million euros and would then briefly describe the conversion effects. But there's no break in it . . ., whether this one million of profits . . . appears again in one year or another. That really does not matter. So, if anyone wants to read the shifts, they are explained.

* E = Auditor / A = Accountant

The company of P13 adopts IFRS 15 by using the full retrospective method, but uses expedients for the quarterly financial statements as many disclosures are not yet needed.

Table 133: Analysis related to research question 3: Theme 14 - Evidence 2

Code	E /A*	Quote
P13	A	I . . . have to say that . . . we have to do most of these disclosures in the notes to the financial statements as of December 31, 2018 since we have chosen the first-time application 1 January 2018, retrospective application . . . In our quarterly financial statements for the first quarter 2018, many notes to the financial statements are not yet to be done which the standard only requires on an annual basis.

* E = Auditor / A = Accountant

In order to provide further basis of analysis, the latest annual financial statements of the German DAX 30 companies were screened with respect to the transition method applied by those companies. The following table illustrates the methods for each company.

Table 134: Document analysis: Transition methods of DAX 30 companies

Company (annual report)	**Transition method**	**Comments (if applicable)**
adidas (2017)	Modified retrospective	adidas uses the practical expedient offered in IFRS 15 and the transition relief available as this reduces the workload to analyze contracts with customers.
Allianz (2017)	Modified retrospective	n/a
BASF (2017)	Modified retrospective	n/a
Bayer (2017)	Modified retrospective	n/a
Beiersdorf (2017)	Full retrospective	n/a
BMW (2017)	Full retrospective	Exemption allowing contracts fulfilled prior to 1 January 2018 not to be newly assessed in accordance with IFRS 15 has been applied.
Commerzbank (2017)	n/a	n/a
Continental (2017)	Modified retrospective	Use of practical expedient of IFRS 15, para. C5 to not restate contract modifications prior to the transition period.
Covestro (2017)	Modified retrospective	n/a
Daimler (2017)	Full retrospective	Exemption allowing contracts fulfilled prior to 1 January 2018 not to be newly assessed in accordance with IFRS 15 has been applied.
Deutsche Bank (2017)	n/a	n/a
Deutsche Börse (2017)	Modified retrospective	n/a
Deutsche Post (2017)	Modified retrospective	n/a
Deutsche Telekom (2017)	Modified retrospective	Exemption allowing contracts fulfilled prior to 1 January 2018 not to be newly assessed in accordance with IFRS 15 has been applied. The company will provide an explanation of the reasons for the changes in items in the statement of financial position and the income statement for the current period as a result of applying IFRS 15 for the first time.
E.ON (2017)	Modified retrospective	n/a
Fresenius (2017)	Modified retrospective	Company is continuing to evaluate accounting policy options.
Fresenius Medical Care (2017)	Modified retrospective	Company is continuing to evaluate accounting policy options.
HeidelbergCement (2017)	Modified retrospective	Exemption allowing contracts fulfilled prior to 1 January 2018 not to be newly assessed in accordance with IFRS 15 has been applied.

Henkel (2017)	Modified retrospective	n/a
Infeneon (2017)	Modified retrospective	n/a
Linde (2017)	Modified retrospective	n/a
Lufthansa (2017)	Modified retrospective	n/a
Merck (2017)	Modified retrospective	Exemption allowing contracts fulfilled prior to 1 January 2018 not to be newly assessed in accordance with IFRS 15 has been applied.
Munich Re (2017)	n/a	n/a
RWE (2017)	Modified retrospective	n/a
SAP (2017)	Modified retrospective	n/a
Siemens (2017)	Full retrospective	n/a
ThyssenKrupp (2017)	Modified retrospective	Exemption allowing contracts fulfilled prior to 1 October 2017 not to be newly assessed in accordance with IFRS 15 has been applied.
Volkswagen (2017)	Modified retrospective	n/a
Vonovia (2017)	n/a	As the new standard has no impact in terms of amount, there is no need to select a transitional approach.

Besides Mercedes-Benz, BMW and Siemens, all DAX 30 companies apply the modified retrospective method and additionally use the practical expedients provided by IFRS 15. This is in line with the findings of the survey of Ernst & Young (2017a) concluding that most of the participants expressed a preference for the modified retrospective transition period. Commerzbank, Deutsche Bank and Munich Re are not commenting in detail on IFRS 15 as other standards are in the focus, i.e. IFRS 9 for banks and IFRS 17 for insurance companies.

Institutional factors may be an explanation for the fact that a majority of DAX 30 companies and the companies of interviewees applied the modified retrospective conversion method. This may also be in line with the explanations with respect to underestimation and resulting late starting point for the implementation. A late starting point for implementation may be a reason why only a modified retrospective application was possible. In contrast, the company of interviewee P13 started with the transition to IFRS 15 ultimately after the introduction of IFRS 15 in May 2014 and applied a full retrospective approach. Coercive isomorphism as per DiMaggio and Powell (1983) is of major importance for a successful IFRS implementation (Nurunnabi, 2017). While Irvine (2008), Judge et al. (2010) and Phang and Mahzan

(2017) identify the search for legitimacy by developing countries, this may not apply to the companies analyzed within this study which are all German and very well developed. However, as institutional pressures for the adoption of IFRS 15 seems to be rather low as most of the companies started the implementation too late, a majority of institutions in the peer group may also have applied a modified retrospective approach. In addition, the belief that a modified retrospective approach may be a simpler model by most of the companies may be explained by institutional pressures.

6.4.2 Likely impact on financial statements

This subsection addresses 'Theme 15: Impact on financial statements' related to research question 3 and aims to assess the likely impact IFRS 15 has on financial statements.

6.4.2.1 Quantification

The auditors have difficulties to provide a detailed quantification of revenue shifts. If a quantification is possible, it is rather immaterial despite the effort in the course of the transition to IFRS 15. It also depends on the industry and has a more significant effect on balance sheet items than on revenues.

Table 135: Analysis related to research question 3: Theme 15 - Evidence 1

Code	**E /A***	**Quote**
P5	E	In that regard one significant industry that I know is the automotive industry in terms of tooling subsidies that are now rather . . . realized at a point in time . . . revenues are less affected . . . It is not a large effect there. I would say ten million euros to eight, nine billion Euros of revenue. That is . . . rather low, however, with respect to balance sheet positions . . . 200 million euros due to a balance sheet reduction in the group compared to a total balance . . . of two billion euros.
P7	E	I cannot quantify that yet, it's too early for that. We have to wait a little bit longer. But based on the conversion status of my clients I would say: It is too early.
P11	E	That's not that much. I have to say that these [clients] were also US GAAP mandates and . . . in US GAAP . . . little has happened besides the fact that many interpretations have been summarized in one standard . . . In this respect, I don't know why people get so jittery when the standard . . . shifts revenues from one year to the next.

P12	E	They won't be material. Much ado about nothing in the end is the conclusion at the moment. No, that won't be material . . . I think it's a challenge that . . . has little effect on my client's figures . . .
P15	E	Let's talk about a sales shift of one to two percent. We're not talking about ten percent. One wonders: Why all this? . . . If you had a free mobile phone in the telecommunications industry . . . that the mobile phone does not generate any revenue was simply wrong, if one approaches with economic expertise.

* E = Auditor / A = Accountant

From the accountants' point of views, revenue shifts are also mostly immaterial, even in sectors that are seen as the most affected ones, i.e. software (P8) and real estate (P12) (Tysiac, 2014). However, in single cases there may be significant revenue decreases (P4). Furthermore, a significant decrease of revenue will happen in the software company P10 is working in, mainly due to principal versus agent considerations in hardware reselling business, and within the mechanical engineering company P14 is working for due to a significant later realization of revenues and profits as no over-time realization for certain products is possible anymore.

Table 136: Analysis related to research question 3: Theme 15 - Evidence 2

Code	**E /A***	**Quote**
P2	A	Well, below one percent decrease in revenue, but the rest are shifts . . . So, we . . . have . . . a shift from the customer specific mass production . . . Then we have a shift from the accounting for tooling . . . and from development projects . . . So . . ., [a] high two-digit million amount . . . [which is] about 1.5 percent of revenues that . . . shift forward.
P4	A	. . . in our household division we're talking about just under 60 million Euros . . . [which is] no impact on earnings but a decline in revenues of approximately 7 percent compared to 2016 . . . With regard to the others, we are talking about an equity effect of . . . [due to] customer-specific serial production . . . just under 20 million Euros on equity [which is under 1 percent on group level].
P6	A	I believe that it will have little effect on us . . . the Q2 sales revenues, which would be recognized due to consignment stock deliveries, would have been shifted to Q1 . . ., but I have the same effect from Q3 to Q2 . . . That will be below one percent . . .

P8	A	. . . it has no significant impact on revenues. So, despite the numerous adjustments, the number itself does not change much, that means less than 2 percent. Where it has an impact is on the cost side, because I can capitalize more costs than before . . .
P9	A	. . . we're talking about peanuts . . . in the end we're talking about one million shifting from one year to another with . . . [a] ten million revenue effect on a few billion of revenues . . .
P10	A	I believe between four and five percent, revenue correction downwards . . . That . . . pro forma earnings are calculated in 2017 and . . . it only affects . . . revenue and incoming orders . . . to about 4 to 5 percent.
P13	A	Only for the contract liabilities. That is what will be essential, because we simply show all deferred revenues, the largest item, no longer separately as deferred revenues, as deferred income, but as contract liability. This can also be seen in the balance sheet, because it is a separate balance sheet item introduced by IFRS 15. But there's not really anything going on in the income statement.
P14	A	. . . we have already considered contract liabilities with an amount of . . . 10 to 15 percent of annual revenues . . . we now have a significantly later realization of revenues and profits . . . And . . . a more erratic realization. If you have realized with the delivery of . . . subcomponents and now realize . . . in one block, which consisted of 15 partial deliveries in the past, then of course you do not have the regularity in revenue development.

* E = Auditor / A = Accountant

The profit and loss statement or the revenue figure is often not significantly affected, but rather balance sheet items. Therefore, discussions also addressed the impact on inventories or WIP, accounts receivable and the introduced balance sheet items contract assets and contract liabilities. There may be shifts between inventories and contract assets, which include a profit margin. Furthermore, there is a relationship between a contract asset and a receivable. According to IFRS 15, para. BC323, the boards decided that if an entity satisfies a performance obligation without having an unconditional right to consideration, a contract asset should be recognized. A receivable is to be recognized if an unconditional right to consideration is in place. This provides the user of the financial statement a figure for the risk associated with the entity’s rights in a contract (IFRS 15, para. BC323).

Table 137: Analysis related to research question 3: Theme 15 - Evidence 3

Code	E /A*	Quote
P6	A	We will have the new contract assets and contract liabilities positions . . . what was previously in the inventories will be added to the contract assets plus a profit margin.
P7	E	You produce any part and you have to distinguish the parts afterwards . . .: Is it . . . a contractual asset or is it an asset, which I have produced on stock, where I now have no concrete underlying contract . . . [If] it is a contractual asset, . . . you have to realize the hidden reserves and . . . show the corresponding margin. But if you do not have the same topic then you will stay on the cost of production for example.
P14	A	The retained earnings are not that large in our case, because we then also activated the inventories for these things, which we had to take out of the sales revenue.

* E = Auditor / A = Accountant

In order to triangulate the results in the course of the semi-structured interviews, the likely impact is also analyzed based on the disclosures on the first-time adoption of IFRS 15 in the latest available annual reports of the DAX 30 companies.

Table 138: Document analysis: Likely impact on DAX 30 companies

Company (annual report)	Basic KPI (EUR bn)	Impact
adidas (2017)	Revenue: 21.2 Total assets: 14.5	Balance sheet prolongation in the low three-digit million range due to increase in return provision, initially recognized return asset and potential adjustment of retained earnings. No significant changes in the timing or amount of revenue recognized. Timing and measurement of sales-based licensing-out of trademarks and royalties is also similar. Insignificant contract assets and contract liabilities and adjustment of retained earnings.
Allianz (2017)	Revenue: 109.6 Total assets: 901.3	No significant impact as timing and presentation of revenue recognition is similar.
BASF (2017)	Revenue: 64.5 Total assets: 78.8	New item contract liabilities in balance sheet and therefore reclassification of approx. EUR 0.1bn expected. No further effects expected.
Bayer (2017)	Revenue: 35.0 Total assets:	Decrease of less than 1.2% and 0.2% in annual net sales and less than 6.2% and 1.0% in annual EBIT in 2018 and 2019, respectively in Animal Health segment. Decrease of less than 0.04% in

	82.2	annual net sales and less than 0.2% in annual EBIT in 2018 in the Pharmaceuticals segment.
Beiersdorf (2017)	Revenue: 7.1 Total assets: 8.2	IFRS 15 will not have any material impact on the consolidated financial statements.
BMW (2017)	Revenue: 98.7 Total assets: 193.5	Decrease of Group revenue as at 1 January 2017 of EUR 0.5bn. Timing of revenue recognition increases revenues as at 1 January 2017 by approx. EUR 0.1bn. EBIT margin of the Automotive segment in 2017 will improve by 0.3 percentage points.
Commerzbank (2017)	Revenue: 4.2 Total assets: 452.5	IFRS 15 will not have any material impact on the consolidated financial statements.
Continental (2017)	Revenue: 44.0 Total assets: 37.4	Increase of inventories of about EUR 0.02bn and contract assets of EUR 0.02bn. First-time adoption of IFRS 15 leads only to immaterial effects.
Covestro (2017)	Revenue: 14.1 Total assets: 11.3	IFRS 15 will not have any material impact on the consolidated financial statements.
Daimler (2017)	Revenue: 164.3 Total assets: 255.6	Increase of equity of EUR 0.1bn in the opening balance sheet for 1 January 2017. No major impact on the Group's profitability, liquidity and capital resources expected.
Deutsche Bank (2017)	Revenue: 12.4 Total assets: 1,474.7	IFRS 15 will not have any material impact on the consolidated financial statements.
Deutsche Börse (2017)	Revenue: 2.8 Total assets: 135.1	IFRS 15 will not have any material impact on the consolidated financial statements (Equity changes of EUR 0.01bn as of 1 January 2018).
Deutsche Post (2017)	Revenue: 62.6 Total assets: 38.7	Principal-agent reclassifications will reduce revenue by an amount of EUR 0.2bn from 1 January 2018 onwards. Separate disclosure of contract assets and contract liabilities leads to change of presentation.
Deutsche Telekom (2017)	Revenue: 75.0 Total assets: 141.3	Cumulative increase of retained earnings between EUR 2.2bn and EUR 2.6bn expected.
E.ON (2017)	Revenue: 38.0 Total assets: 56.0	Revenues and cost of materials will decrease without resulting in any earnings effects by between EUR 4bn and EUR 6bn.
Fresenius (2017)	Revenue: 33.9	Decrease of revenue by EUR 0.5bn for 2017 expected without any effect on net income. No

	Total assets: 53.1	material contract assets or contract liabilities expected from the implementation of IFRS 15.
Fresenius Medical Care (2017)	Revenue: 17.8 Total assets: 24.0	Decrease of revenue by EUR 0.5bn for 2017 expected without any effect on net income. No material contract assets or contract liabilities expected from the implementation of IFRS 15.
HeidelbergCement (2017)	Revenue: 17.3 Total assets: 34.6	IFRS 15 will not have any material impact on the consolidated financial statements.
Henkel (2017)	Revenue: 20.0 Total assets: 28.3	Increase of other current assets and other current provisions. Decrease of equity of EUR 0.1bn expected. Minor impact on sales and cost of sales expected.
Infeneon (2017)	Revenue: 7.1 Total assets: 9.9	IFRS 15 will not have any material impact on the consolidated financial statements.
Linde (2017)	Revenue: 17.1 Total assets: 33.5	Reduction of revenue and cost of sales by around EUR 0.4bn. Therefore, operating margin increases while operating profit will remain unchanged.
Lufthansa (2017)	Revenue: 35.6 Total assets: 36.3	Retained earnings will decrease by approx. EUR 0.5bn. Revenue and expenses expected to be reduced by EUR 2.1bn.
Merck (2017)	Revenue: 15.3 Total assets: 35.6	IFRS 15 will not have any material impact on the consolidated financial statements.
Munich Re (2017)	Revenue: 49.1 Total assets: 265.7	IFRS 15 will not have any material impact on the consolidated financial statements.
RWE (2017)	Revenue: 44.6 Total assets: 69.1	Decrease of revenue and cost of materials in the Grid division by about EUR 2.5bn and therefore no impact on income.
SAP (2017)	Revenue: 13.6 Total assets: 34.8	Net positive impact on operating profit of EUR 0.2bn due to higher capitalization of sales commissions (EUR 0.2bn). Increase of trade receivables and contract liabilities of EUR 0.6bn to EUR 0.7bn in the 2018 opening balance sheet.
Siemens (2017)	Revenue: 83.0 Total assets: 133.8	Reduction of reported revenue by approx. EUR 0.2bn. Industrial business profit margin expected to decline by 0.1 percentage points.
ThyssenKrupp (2017)	Revenue: 41.4 Total assets:	IFRS 15 will not have any material impact on the consolidated financial statements.

	35.0	
Volkswagen (2017)	Revenue: 230.7 Total assets: 422.2	IFRS 15 will not have any material impact on the consolidated financial statements.
Vonovia (2017)	Revenue: 3.4 Total assets: 37.5	IFRS 15 will not have any material impact on the consolidated financial statements.

The review of the annual financial statements for the financial year 2017 of the DAX 30 companies confirms the assessment of the auditors and accountants related to the quantification of the impact of the transition to IFRS 15. IFRS 15 will not have a major effect on financial statements. It is rather a presentation issue with respect to the new accounts contract assets and contract liabilities. The most affected companies from a financial perspective in Germany are Deutsche Telekom (telecommunications), E.ON (energy) and Lufthansa (aviation).

According to the annual financial statement 2017 of Deutsche Telekom, the major effects result from multiple-element arrangements (e.g. mobile contract plus phone) with subsidized products delivered in advance. Therefore, a larger portion of the total consideration is attributable to the phone delivered in advance, which requires earlier revenue recognition. Additionally, a contract asset results from that. Sales commissions for customer acquisition costs are capitalized and recognized over the estimated customer retention period. This results in an increase of retained earnings due to higher revenue on the conclusion of new contracts and lower selling expenses. The findings on telecommunications are in line with explanations in the semi-structured interviews as well as the literature (Peters, 2016; Tysiac, 2014). The effect of E.ON results from the revision criteria for principal/agent relationships for pass-through costs for the promotion of renewable energies. The pass-through costs are no longer recognized as sales revenue with an offsetting taking place in the cost of materials. This can also be related to the literature (Ciesielski & Weirich, 2011) as well as to the case explained by accountant P10 working in the software industry and having the same issue with the resale of products under principal-agent considerations. The effect in the financial statements of Lufthansa results from a revaluation of obligations under the Miles & More program because of the introduction of a revised data model due to IFRS 15 for the total number of miles outstanding. The contractual liability will be higher and the miles that expire in a given year will be recognized as collected pro rata rather than directly through profit and loss. This effect results from the changed procedure compared to the previous requirements according to IFRIC 13 (Lavi, 2016). Furthermore, rebooking fees are shifted from the transaction date to the date of use and ticket revenue, and airport fees received and airport invoices will no longer be recognized in the income statement.

Although IFRS 15 is far more extensive and descriptive than its predecessors, changes to the figures are immaterial for the vast majority of investigated companies. Studies on the potential effects through IFRS 15 adoption conclude that the impact depends on the industry, the understanding of the new standard and the related use of professional judgment (Oyedokun, 2016; PwC, 2016; Tysiac, 2014). However, even for industries for which a significant change was expected, no material change occurs. PwC (2016) indicates that 72% of respondents say that quantification of adjustments will be very difficult, but 64% do not expect a material impact to their income statement. The present research study confirms these findings. Nevertheless, the professional judgment required to apply IFRS 15 may imply some danger that inconsistent interpretation or application can impede the comparability of financial statements.

6.4.2.2 Key performance indicators

Due to the limited likely impact on the revenue figure, KPIs are not expected to change materially. One factor that may influence KPIs may be the introduced accounts contractual assets and contractual liabilities related to working capital. Besides that, no material change in KPIs is expected by the research participants.

Table 139: Analysis related to research question 3: Theme 16 - Evidence 1

Code	**E /A***	**Quote**
P2	A	. . . what is about to change is working capital because of the contract assets and contract liabilities. They will be added . . ., but actually with respect to definitions nothing else than the working capital.
P4	A	. . . contract assets . . . must . . . be taken into account in working capital management . . ., but . . . the effects are . . . insignificant . . . Of course, this will result in an adjustment of the key performance indicators then. That’s why we also included the controlling in the meanwhile . . .

P6	A	Contract assets and contract liabilities we . . . have as a key figure through the consignment stocks. Effectively, this will change by the fact that what was in the inventories now comes into the contract assets plus a profit margin. But working capital changes will be minimal.
P13	A	. . . the contract liabilities . . . will be essential, because we . . . show all deferred revenues . . . no longer separately as deferred revenues . . . but as [a] contract liability. This can also be seen in the balance sheet, because it is a separate balance sheet item introduced by IFRS 15.

* E = Auditor / A = Accountant

It is not expected that a redefinition or an elimination of KPIs is necessary. The accountants confirm that understanding by stating no reasons that a KPI systems would need to be redefined or changed.

Table 140: Analysis related to research question 3: Theme 16 - Evidence 2

Code	E /A*	Quote
P4	A	Well, working capital is of course a control relevant variable for us and the issue of contract assets . . . has an influence on it . . . revenues are also a control-relevant variable for us, . . . but . . . the household product division will report the main effect on sales revenues internally in accordance with IFRS 15.
P6	A	EBITDA is our key performance indicator, but it will not change significantly.
P8	A	No [change is necessary] . . ., because the key performance indicator system is based on revenue and not . . . on margin and . . . is partly more steered by order intake than on actual revenue, which is recorded.
P9	A	. . . our [KPI is] . . . rather ROCE, so we look at the return on the capital employed. It’s a pretty capital-intensive . . . business. That's why this is not so much the revenue figure that we are looking at than the return on capital employed.
P10	A	Well, we're clearly working with revenue and [um] ... and the operating margin . . . But . . . this actually affects revenues and with respect to the margin it only has an impact on the relative margin. We're actually assuming that this will increase the relative margin and . . . even if we don't do any reselling at all, the relative margin

		will increase . . . If we can sell operations . . . then the relative margin will not change, but sales will increase accordingly.

* E = Auditor / A = Accountant

Even if there would be changes, KPI systems of the companies do not need to be revised. It is rather necessary to provide the necessary explanations and comparative figures for internal and external stakeholders presented in the disclosures within the notes to the financial statements.

Table 141: Analysis related to research question 3: Theme 16 - Evidence 3

Code	**E /A***	**Quote**
P7	E	It's a one-off effect, you have more sales and more supplies . . . and that will be adjusted again next year. You just have to be able to read and interpret it, but that you completely rewrite it, I do not think so.
P11	E	I'd say the KPIs as such . . . don't have to adapt. You have to reinterpret them accordingly . . . this can of course be that there is a need for explanations as to why certain key figures . . . are no longer comparable with the previous year. Simply because the accounting logic has changed. So the . . . interpretation is important.
P15	E	. . . for someone who calculates key figures, it's all the same as before. Whether you are . . . talking about revenues, EBITDA, segments . . . you only have to interpret and . . . the history . . . these companies would have to educate . . . analysts and the capital market.

* E = Auditor / A = Accountant

Still, there is the question if those changes, even though they may be rather immaterial, are understandable for addressees of the external financial reporting and how the stakeholders perceive the information they need to make the correct decisions. Some of the research participants refer to the notes to the financial statements with the relevant disclosures in order to understand the impact of IFRS 15 and the KPIs depending how transparently they are presented and to what extent they are understood.

Table 142: Analysis related to research question 3: Theme 16 - Evidence 4

Code	E /A*	Quote
P5	E	. . . the shareholder . . . can . . . retrieve the information internally . . . [and] has no problems. For the external stakeholder, it really depends on the notes. That is the problem. What is being done and how much information is provided?
P7	E	. . . it depends on how well or how bad the preparer of the financial statements has set up and how . . . generously the auditor has tolerated it.
P8	A	That should be possible, if they read the notes . . . basically the goal is that also external stakeholders understand this, whereby there are for analysts and others also . . . specific announcements . . .
P10	A	In the third quarter, it was already announced what we are doing . . . I also assume that if the annual results are announced . . ., . . . the final restatement result will probably be published, it will be compared, and if that has any impact on the further development of business, the three-year plan or whatever . . . I don't think that the external person will go into the depths of use cases or bookings, but the relevant things are [there] . . .

* E = Auditor / A = Accountant

Revenue is seen as one of the most important KPIs for stakeholders (Peters, 2016) and has a direct impact on other financial relations and bottom-line earnings (Tysiac, 2017). Tysiac (2014) mentions the sector-specific KPI ‘ARPU’ (average revenue per user) in the telecommunications sector that may no longer be representative as revenue no longer represents cash flows. Thus, new metrics may be necessary to quantify and describe the amount of cash collected per user according to Tysiac (2014). Besides this unique case in telecommunications described years before the effective date of IFRS 15, no insights were gathered that a revision or change of KPI systems is necessary as revenue itself is not materially changing. However, no telecommunications company has been included in the sample which could challenge or confirm the finding in Tysiac (2014).

6.4.2.3 Disclosures

Notes to the financial statements are mentioned as an important tool being able to understand the movements as an external addressee. Some of the research participants mention movement tables as one part of their notes to the financial statements in order to provide an explanation for the changes through IFRS 15.

Table 143: Analysis related to research question 3: Theme 16 - Evidence 5

Code	E /A*	Quote
P2	A	. . . as we chose the modified retrospective transition method, . . . in the annual report 2018, the statement how the balance sheet and income statement would have looked like if IFRS 15 had not existed [is required] . . .
P5	E	The shifts need to be clearly explained. Of course, the first year is helping enormously that I say: How would my revenues look like, what would my balance sheet positions look like . . . that I can . . . compare and in the future . . . have a year before. That will be very important.
P6	A	. . . we would have to state . . . each individual balance sheet item . . . before the application of IFRS 15, then . . . [a] reconciliation and . . . under application of IFRS 15 how it has to look like and . . . the effect on equity.

* E = Auditor / A = Accountant

The auditors have no uniform opinion about the disclosures to the financial statements according to IFRS 15. However, they agree that the scope the notes have under IFRS 15 is probably higher. However, some auditors are skeptical about the extent to which important information is disclosed. P15 sees an advantage in the more qualitative descriptions required, especially in the light of more complex business models.

Table 144: Analysis related to research question 3: Theme 16 - Evidence 6

Code	E /A*	Quote
P1	E	. . . IFRS 15 . . . requires several disclosures, which . . . certainly . . . represent a larger scope than previously necessary . . . [and] requires that significant discretionary decisions are disclosed. Therefore, I think that there is an obligation for companies to disclose this information . . . I do not think that [the scope of the notes] can be quantified across all industries . . . But it will increase.

P5	E	. . . I think that it . . . will not be as much more as you might think at first, because . . . the goal is . . . not to write too much in the notes. So maybe content-wise later . . . it will be two pages more, but then what information is in there . . . will probably be limited.
P7	E	One can certainly illustrate the things in a complicated way . . ., but if you want to operate . . . reasonably reputable accounting, then it must . . . represent that . . . reasonably trained legal users in a reasonable, acceptable time understands what has happened there.
P12	E	I would expect approximately double the amount . . . that [is] what I would expect.
P15	E	Especially for the public, . . . companies that have more complex business models . . . describe their business model, the process of realizing revenue more clearly . . . Until now it had only been stated that in principle revenues are recognized when the risk and rewards were transferred . . . Today, you often find much more meaningful and clearer explanations . . . I am not talking about the data graveyards in the notes, but I am talking of the accounting policies, where they now describe qualitatively and comprehensibly for a competent reader what they have actually done.

* E = Auditor / A = Accountant

Among the accountants, there is a uniform opinion that the extent to which the notes will increase. While P6, P8 and P13 speak of way more extensive disclosures, P9 expects only little change. However, it can be seen that the disclosures are an important factor for each company, independent of how complex the business model is. P6 and P13 are less affected by IFRS 15 from their business model, but expect extensive disclosures.

Table 145: Analysis related to research question 3: Theme 16 - Evidence 7

Code	**E /A***	**Quote**
P6	A	[The notes] . . . definitely extended considerably. They will therefore be considerably longer at the end of the year. Not only during the transition phase, but also in the future . . . I would say that we now have perhaps one and a half pages and then one and a half more. About twice that much . . . the Management Board will not be pleased to present details which long-term contracts are already in place and to what extent . . ., especially in such a competitive industry.

P8	A	. . . the aggregation or disaggregation of the revenues . . . that's what I think . . . the most important and then the . . . illustration of the development of contract assets, liabilities and . . . the corresponding explanations . . . like . . . how performance obligations are defined and then . . . what are the typical performance obligations in the company? How do you determine the stand-alone selling price . . . how do I recognize my revenue . . . and how do I apply certain . . . things, for example . . . to what extent do I use the . . . the simplifications . . .?
P9	A	. . . what we are doing is actually adding to existing tables and texts, that's all. Maybe we're talking about half a DIN A4 page.
P13	A	When I ask for more disclosures, it is difficult to say that it will no longer provide information. The question is simply whether this information is useful for decision-making. Personally, I would say no in many respects, but I cannot, of course, say no to all the notes. But I can definitely say that . . . they overshot the target. You always have to worry: . . . I am now making a disclosure that makes no sense at all for us, but the standard demands and the auditor demands proof of this and that leads to extra effort and the benefits of the additional disclosure is then rather limited.

* E = Auditor / A = Accountant

In addition to the assessment of the auditors and accountants regarding the extent to which additional disclosures will be required, the following table summarizes the assessments of the DAX 30 companies according to their annual financial statements 2017, if any.

Table 146: Document analysis: Disclosures of DAX 30 companies

Company (annual report)	**Assessment of disclosure requirements**
adidas (2017)	Company has updated internal policies and IT systems in order to collect the information for new IFRS 15 disclosures. The company does not expect a significant increase of disclosures in the consolidated financial statements.
Allianz (2017)	n/a
BASF (2017)	Additional quantitative and qualitative disclosures are expected in the notes.
Bayer (2017)	n/a
Beiersdorf (2017)	Standard introduces new, extensive disclosures in the notes according to the company.
BMW (2017)	n/a

Commerzbank (2017)	n/a
Continental (2017)	n/a
Covestro (2017)	n/a
Daimler (2017)	n/a
Deutsche Bank (2017)	n/a
Deutsche Börse (2017)	The extent of disclosures is expected to be expanded.
Deutsche Post (2017)	The extent of disclosures is expected to be expanded.
Deutsche Telekom (2017)	n/a
E.ON (2017)	n/a
Fresenius (2017)	n/a
Fresenius Medical Care (2017)	n/a
HeidelbergCement (2017)	Additional quantitative and qualitative disclosures are expected in the notes.
Henkel (2017)	Quality and scope in the disclosures in the notes to the financial statements is expected to be expanded.
Infeneon (2017)	Additional quantitative and qualitative disclosures are expected in the notes.
Linde (2017)	Quantitative and qualitative information will be provided on contractual assets and liabilities from contracts with customers.
Lufthansa (2017)	New rules according to IFRS 15 require quantitative and qualitative disclosures in the notes according to the company, such as separate items for contractual assets and liabilities and the cumulative amount of unfilled performance obligations from all relevant customer contracts.
Merck (2017)	System adaptations were necessary due to expanded disclosure requirements in the notes to the consolidated financial statements.
Munich Re (2017)	n/a
RWE (2017)	Presentation and disclosure requirements under IFRS 15 are more detailed according to the company. The Company reviewed the new disclosure requirements and implemented system modifications and processes in order to comply with the new requirements.
SAP (2017)	According to the company, it is not practicable to estimate whether any of the additional disclosure requirements will be material to readers of financial statements.
Siemens (2017)	Additional quantitative and qualitative disclosures are expected in the notes.
ThyssenKrupp (2017)	n/a
Volkswagen (2017)	Far more extensive disclosures in the notes to the financial statements are expected.

Vonovia (2017)	n/a

DAX 30 companies, which commented on the new disclosure requirements, provide neutral expressions and describe that the scope of quantitative and qualitative disclosures additions will increase. Adidas is the only exception stating that no increase is expected. According to the literature, disclosures are important with respect to IFRS 15 (Campbell, 2017; Oyedokun, 2016). (Tysiac, 2017) states that the SEC expects detailed qualitative and quantitative disclosures about the impact of the new standard in 2017. Companies may even conduct discussions related to likely effects with their investors, especially if implementation is problematic. Oyedokun (2016) points out that the standard has an effect on almost all entities with respect to the increasing requirements for disclosures.

This research study confirms that disclosure requirements are one of the focus areas with respect to the conversion to IFRS 15. Both the insights of the research participants and the analysis of DAX 30 annual reports show that disclosures will be more extensive, especially with respect to qualitative disclosures and during the transition period.

6.4.3 Before and after IFRS 15

This subsection addresses ‘Theme 16: Before and after IFRS 15’ and serves as a concluding chapter for the research insights addressing research question 3.

The research strategy for research question 3, i.e. to evaluate the likely impact on firms’ profitability and performance through IFRS 15, was twofold. On the one hand, the topic was discussed during semi-structured interviews. However, to triangulate the results, document analysis is applied by a review of the annual financial statements of the DAX 30 companies in Germany as companies are obliged to provide disclosures relating to changes in accounting policies by new standards or interpretations according to IAS 8, para. 28.

A majority of the interviewees and the DAX 30 companies apply the modified retrospective transition method using practical expedient. This confirms the expectation of the survey conducted by Ernst & Young (2017a). Under this method, not each prior reporting period is presented as it would have been accounted for under IFRS 15, but the cumulative effect in retained earnings. This is a likely impact on the financial statements in 2018.

Previous studies conclude that the impact depends on the industry, the understanding of the new standard and the use of professional judgment (Oyedokun, 2016; PwC, 2016; Tysiac, 2014). Some research participants had difficulties to provide a detailed quantification of revenue shifts. If a quantification was possible, the impact on revenue is rather immaterial, even for accountants within industries that are highly affected, e.g. software and real estate (Tysiac, 2014). Balance sheet items may be affected, e.g. working capital due to the introduced accounts contract assets and contract liabilities. The triangulation by reviewing the DAX 30 companies' annual financial statements 2017 largely confirmed those results. The most affected companies are Deutsche Telekom (telecommunications) with an increase of retained earnings of 3.0 to 3.5 percent relatively to the revenues, E.ON (energy) with a decrease of revenues and cost of materials of 10.5 to 15.7 percent, however without any earnings effect, and Lufthansa (aviation) with a reduction of revenues by 5.9 percent.

Revenue is one of the most important KPIs for stakeholders (Peters, 2016) and has a direct impact on other financial relations (Tysiac, 2017). The study finds out that no material changes to KPI systems are necessary, also not with respect to contractual assets and contractual liabilities in context of working capital. Research participants confirm that they do not redefine or change KPI systems. It is rather necessary to provide the required explanations and comparative figures.

Notes to the financial statements are a major issue in light of IFRS 15 (Campbell, 2017; Oyedokun, 2016; Tysiac, 2017). Research participants mainly mention movement tables as one of the central part of their disclosures. Furthermore, the participants agree that the scope of the disclosures within the notes of financial statements will increase under IFRS 15. However, it could be between the addition of few sentences or double the pages. DAX 30 companies describe the impact on the notes to the financial statements in a neutral way, i.e. that more disclosures are expected. Adidas is the only exception by stating that no significant increase of disclosures is expected.

Revenues and earnings are mostly not affected. The balance sheet may slightly change due to the introduction of the line items contract assets and contract liabilities.

During the transition phase, the cumulative effect is considered within retained earnings in case the modified retrospective conversion method is applied. Disclosures may include more qualitative and quantitative descriptions and be more extensive. However, figures within financial statements will not materially change under IFRS 15.

6.5 Implications for improvement of IFRS 15

The auditors identify areas of IFRS 15, which would have potential for improvement. P1 mentions that certain terms should be defined more specifically in order to minimize opportunities for discretion. Auditor P5 has a similar opinion, but rather related to probability and uncertainty expressions. Another point of criticism is the customer-specific serial production, which should be fundamentally questioned according to P1 and reflects a technical error according to P5. P5 recommends to add guidance and exclude transactions that comprise a large number of similar and rather less high-value products from a revenue recognition over time. P1 states that the guidance of IAS 11 should be reviewed again for these purposes. P7 emphasizes that industry-specific guidance would be necessary, i.e. by describing the major interpretational issues for each industry and providing the related guidance. P11 and P15 mention that the complexity and the length of IFRS 15 should be reduced and an executive summary for major topics may be helpful.

Table 147: Analysis related to implications for improvement: Evidence 1

Code	**E /A***	**Quote**
P1	E	I think . . . in some areas . . . the terms used should be defined in order to minimize discretion opportunities and . . . the underlying concepts should be questioned . . . fundamentally again, especially in terms of revenue recognition over a period of time, whether the three key criteria are really the ones when it comes to a revenue recognition over a period of time . . . or if you cannot orientate again on the IAS 11.
P5	E	. . . a little bit more guidance in areas in which I have uncertainties, for example, with respect to return obligations . . . When do I reach the point that it's so uncertain that I'm really not yet allowed to recognize revenue and when is it safe enough for example . . . technical errors in the standard . . ., for example, customer specific serial production is under certain circumstances simply not a case for revenue recognition over a period of time, this is just nonsense . . . I would . . . exclude that if

		I have a large number . . . of similar and rather less high-value products, then this is not a case of revenue recognition over a period of time.
P7	E	. . . sector or industry specific application guidance . . . I mean, you do not have to take . . . 100,000 facts . . ., you can also reduce them in each industry to the three to five typical facts, that you . . . analyze them case-related and say: What happens if that and that is pertinent . . . I mean, if I . . . think about the automotive sector, I see . . . four . . . topics that are the same everywhere . . .: Nomination fee, . . . tooling, . . ., . . . research and development . . . and . . . [to] take the actual retrieval times as revenue realization time . . .
P11	E	. . . I believe the complexity . . . because . . . [IFRS] are often written in such a complicated way . . . my . . . concern at the IASB is to make the standards more understandable . . . that . . . the average reader understands and can implement them. To bring in examples, to design standards much more purposefully than to cobble them together with various committees at the highest theoretical level. In my opinion, this is the IASB's greatest shortcoming in that the standards are considered too complex.
P15	E	I don't have specific areas. I still find it . . . written excessively complex. Maybe you could . . . structure . . . all the standards and then . . . add other implementation guidance. When people take a look once they are almost immediately lost in detail, which makes it difficult and in principle almost only readable for specialists. This may now be a comment, also for other standards, for example, if you think of IFRS 9. Especially IFRS . . . lacks a bit of the . . . executive summary for some areas.

* E = Auditor / A = Accountant

Accountants P2 and P4 also criticize customer-specific serial production as a highly problematic area, which should be solved by stating in IFRS 15 that it only relates to long-term production and to machines. P2, P4, and P8 mention issues such as not defined terms, e.g. contract or specific terms for types of costs. This is related to the advice provided by auditor P1. Other issues are connected to the underlying principle of IFRS 15, i.e. the separation of performance obligations, and the resulting complexity. P9 states that the complexity could only be reduced if the underlying concept would be revised.

Table 148: Analysis related to implications for improvement: Evidence 2

Code	E /A*	Quote
P2	A	. . . the contract definition in step one . . . could have been much clearer [and] . . . [the definition of the] transaction price . . . [but] what hits us the most is [IFRS 15, para.] 35c . . . In case of [IFRS 15, para.] 35c, I would definitely lean back on IAS 11 . . . we were told that . . . [IFRS 15, para.] 35c exists to not forget mechanical engineering companies. Sure, I can understand that. But then you could have solved it . . . by pointing to a long-term production because a machine is not built in a day.
P4	A	IFRS 15.35c . . . affects us most. For me, the standard is a theoretical construct in which it was tried to . . . set uniform standards . . . and leads to unbelievable problems in practice. It is a theoretical construct with which the practice has to live and struggle . . .
P6	A	More guidance on practical issues. I think . . . there was room for interpretation in everything to some extent, if you . . . have separate performance obligations, we had also looked at it: Is the transport service . . . an obligation of its own or not? When is it a separate benefit obligation? What percentage of sales must it account for? There's room for interpretation everywhere. Or when is a warranty obligation a separate performance obligation and when do I have to assign an extra transaction price? . . . Well, from a consultant's point of view, I imagine it to be difficult and from an auditor's point of view.
P8	A	. . . when it comes to interfaces to other standards, especially as far as the interface to IFRS 9 is concerned . . . and then with respect to . . . costs . . . [as] the standard somehow refers to incremental and non-incremental costs, other standards refer to direct and indirect costs . . .
P9	A	. . . if you want to stick to the . . . concept . . . that the contracts are broken down into their performance obligations . . . you will inevitably run into the subject of estimation: What is the transaction price? Which of the following applies to performance obligation at a point in time or over a period of time? There's not much you can do about it. At best, one could proceed quite radically and say: You don't do that, but go in the other direction and say: This separation doesn't have to take place . . . That means taking out some of the complexity.

* E = Auditor / A = Accountant

6.6 Critical evaluation of predefined purposes of IFRS 15

The predefined purposes of IFRS 15 are documented in IFRS 15, para. BC3. IFRS 15, para. BC3 states, amongst other things, that IFRS 15 simplifies the preparation of financial statements by reducing the amount of guidance to which an entity must refer.

The auditors do not agree and react critically with respect to this statement. They summarize that this purpose is academically fulfilled as there is only one standard instead of various standards for revenue recognition. However, IFRS 15 is extensive and complex which negates this statement in practice. Every company is impacted by a tremendous amount of work during the implementation for the standard. A reduction of the amount of guidance seems no to be given as only the group accounting department works with the standard until it is incorporated in the group accounting guideline. Therefore, this statement is not relevant for a majority of stakeholders.

Table 149: Analysis related to evaluation of predefined purposes: Evidence 1

Code	E /A*	Quote
P1	E	Well, I cannot agree with that. Although the company only has to focus on one standard and no longer has to focus on two [standards] and . . . a few SIC interpretations or IFRIC are withdrawn, the new standard is considerably more extensive and significantly more complex compared to the previous rules and, according to my opinion, leaves even more room for different interpretations . . .
P5	E	[The statement] Is correct in that regard that I only have to use one standard. On the other hand, . . . I have to actually run at least everything . . . also with respect to . . . very simple cases about which I had never thought that much . . . through this model . . . Maybe it makes it easier to handle, but from the amount of work I would say it is not necessarily less. I cannot imagine that.
P7	E	[That is] . . . out of touch with reality. There must be . . . created a way to . . . industry-specific standards. That will not be possible otherwise . . . if you . . . take a look at a M-DAX or even below M-DAX oriented company . . . [with a] simple business model . . . I mean, accounting should never degenerate into an end in itself . . . that you are employing hordes of people, just to work out information that is not relevant to decision-making or . . . investors.
P11	E	I wouldn't agree with that. IFRS 15 is a lot more voluminous than . . . IAS 18 or IAS 11 or the individual interpretations . . . together . . . And to browse through it and take the contracts . . . and analyze them, especially in a large corporation with different revenue streams, I would say . . . the standard has become rather more complex

		and incomprehensible in my opinion . . . It is . . . no coincidence that the standard has been postponed several times or taken so long to be adopted . . . It's . . . a major intervention in the corporate world.
P12	E	. . . I do not see any simplification given the effect of the change with the issues that are coming up. I believe that once the processes have been rearranged, perhaps there will be. But I think it's gonna take a while. Well, I don't think it's done with a year's conversion. It's gonna take a while for this to really work. Until a best practice develops.
P15	E	From a purely academic point of view, of course, it is easier to have a standard . . . in comparison to two standards, IFRICs, perhaps adding one or two US GAAP . . . however, in practice: The companies, we are talking about large corporations that have international subsidiaries, this work is done in one place, namely in the corporate headquarters. The user outside receives an accounting guideline where this is processed. Once he has it, he doesn't care if there are ten interpretations behind it, if that was an interpretation of the headquarters that interpreted it, or if they used US GAAP. There is a directive that must be complied with . . . in practice, this only affects the specialists or group accounting . . . This goal is an academic goal that may sound good, but in practice it is not terribly relevant as a goal, as a reason why I am doing that.

* E = Auditor / A = Accountant

Accountants agree with the auditors and state that this purpose may be fulfilled from a theoretical viewpoint, but not in practice. Whilst P6 works in a company with a simple business model, P8 works for a complex software company. P6 states that tremendous amount of work is necessary although nothing changes due to the simple business model. P8 finds the standard to be helpful in the complex software industry as no further US GAAP standards or interpretations need to be used to account for certain transactions.

Table 150: Analysis related to evaluation of predefined purposes: Evidence 2

Code	**E /A***	**Quote**
P2	A	The preparation of financial statements is not simplified, but rather complicated, so that someone who was not in this project like me, actually no longer understands, if everything is implemented exactly as it is stated in there.

P3	A	. . . cutting it down does not always mean that a standard is simpler. Many things may have been dropped, but new terminology has been introduced which is sometimes also more than badly defined due to the length and thus there are . . . significant uncertainties with respect to the standard. So, for me personally, condensation is not always the best way . . . because just make . . . [one out of five] . . . does not mean it has better quality, but . . . offers new room for interpretation.
P4	A	Simplified by the fact that I . . . only have one standard, but it is . . . difficult to apply a universal model or statements to different industries. In my view, this makes it difficult to implement in the end.
P6	A	. . . I would say . . . the standard is good for . . . highly complex companies and I think they have very good guidelines, but that companies that produce one product or standard products . . . the standard has already led to a high degree of complexity.
P8	A	This is certainly true for the software industry. It actually does get easier because you have a standard and not . . . IAS 11, 18 and . . . the US standards that had to be applied.
P9	A	. . . we have the advantage that we are not affected by many issues. In this respect, we don't have a big increase in complexity, but I do believe that this separation of performance obligations . . . is a significant additional effort.
P10	A	. . . I think [the accountant] . . . would basically say: I see a higher effort through implementation, control, new approaches, etc. I guess the first half year is definitely not less work. If it will be less work in the long-term will be seen.
P13	A	That is not true . . . just because I no longer have different standards, IAS 11, IAS 18, IFRIC and SIC . . . doesn't do me any good if the guidance on IFRS 15 is three times longer than these old standards put together. Then this statement makes no sense.

* E = Auditor / A = Accountant

IFRS 15, para. BC3 states, amongst other things, that IFRS 15 provides a more robust framework for addressing revenue issues.

Auditors do not have a uniform opinion with respect to that predefined purpose. One the one hand, the guidance in IFRS 15 is extensive and addresses many different technical topics. However, this leads to high complexity, which may also increase the room for interpretation and judgment.

Table 151: Analysis related to evaluation of predefined purposes: Evidence 3

Code	E /A*	Quote
P1	E	I would also rather take a critical view of this because, in my opinion, IFRS 15 does not provide a more robust framework than the old standards. It is certainly pursuing a new concept, but it is not the more solid or the clearer guidance in that respect.
P5	E	I would emphasize that. That certainly. The problem is, if I create such a new standard . . . it has some weaknesses, I am not questioning that. This one also has a few very obvious weaknesses, but some things just become aware when I write a standard and before I have just not regulated many things or just very general and then ... yes, they may not have been so obvious but in practice they existed.
P7	E	A relatively exclusive interpretation . . . Now you have to . . . philosophize in what rank number or in which section of IFRS 15 you are . . . So that it removes inconsistencies . . . would . . . only be possible with industry-specific standards. But you cannot go with one-size-fits-all in 2018 . . . that's not possible. The . . . specification of the markets through the whole globalization, through many other niche activities has accelerated so much that it is actually no longer up to date to get a . . . standard . . . for all . . .
P11	E	I'd say yes to that. This goes back to the subject of telecommunications, which has just been based on US GAAP. Now that you have codified US GAAP into IFRS . . . In this respect, I say that the scope for maneuver has been reduced and the decisions are based on more concrete examples. I would agree with that . . . I . . . agree with the statement. But only for IFRS. In my opinion, nothing has happened with US GAAP.
P12	E	Partly, I would deny that. In some areas, I think it is already heading in the right direction, because it is simply clearer. But I do not believe that there is less room for discretion. That's the point for me. More guidance, certainly more robust, much clearer, but not less discretionary.
P15	E	So conceptually . . . to a certain degree: Yes. But simply because of the fact that I now have a standard . . . where everything is in it . . . I sometimes [just] do not understand them when I read them . . . There are areas I like that are regulated. The whole topic: Do I have a contract? The whole topic: Awareness of multiple elements. Awareness or regulations for the separation of performance obligations. What I also like is the topic Principle Agent, which has been such a grey area before. These are things that are better. Some others, however, are not necessarily.

* E = Auditor / A = Accountant

The notion amongst accountants is that IFRS 15 provides more detailed regulations, but only for certain industries. Furthermore, it is criticized that not all industries can be reflected by one standard (P2, P4 and P6). P8 states that IFRS 15 is helpful for the software industry as it provides more guidance and eliminates the issue to use other standards such as US GAAP, EITF or SOP in order to account for specific transactions. P9 states that IFRS 15 has new discretionary potential compared to the old standards, which had different discretionary potential.

Table 152: Analysis related to evaluation of predefined purposes: Evidence 4

Code	E /A*	Quote
P2	A	. . . the idea . . . to bring . . . [IFRS 15] in was maybe a success, can be justified, but the implementation was really, really bad . . . Maybe, as I said earlier, maybe there's just too many interpretations and discretions, because the . . . [standard is] wide-spread . . . in order to stuff all industries in it. Maybe that's the main problem of the standard . . . If you want to do it, then you might have solved it as in US GAAP, because then you could have become more concrete in each standard with more precise specifications.
P4	A	I think . . . that IFRS 15 has more regulations . . . which makes it incredibly difficult to put it into practice, because . . . you can't put all the business transactions under one standard. So that's what I think you can see very well in our company, because we are so broadly diversified . . .
P6	A	I would say yes for certain industries, no for others. So for the telecommunications industry . . . for the construction industry and . . . for an aircraft manufacturer or . . . all the major projects, I would say with certainty. But in the case of standard mass production I would say they missed the mark a little bit, because if . . . we . . . see the example of a screw manufacturer who always produces screws for special companies and which can't be used by anyone else, this manufacturer would be obliged to realize revenue over a period of time . . . that's a little funny somehow.
P8	A	I would . . . agree with that statement, because it's quite possible to go through the standard based on principles and therefore relatively consistent . . . This is certainly easier than before. This is a . . . structured model, where you . . . have to crawl through step-by-step.
P9	A	I would say yes and no. I think that in IAS 18 many things were not clearly described, which must be taken into account. On the other hand, as they are now in IFRS 15, . . . there is still room for discretion with respect to the whole separation. So, in

		principle, we have replaced the fact that things are not regulated by a regulation which, however, also implies discretionary decisions.
P13	A	I'd have to say partial-part . . . in some areas . . . I can say: Yes, that may be true, but in principle this is also negated by the many detailed regulations . . . I would not want to sign that it is 100 percent right, but it's also not 100 percent wrong.
P14	A	I think it . . . gives a clearer picture and . . . delimitation . . . of when [revenue has] . . . to be realized.

* E = Auditor / A = Accountant

IFRS 15, para. BC3 states, amongst other things, that IFRS 15 improves the comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets and provides enhances disclosures to help users of financial statements to better understand the nature, amount, timing and uncertainty of revenue that is recognized. Auditors perceive that predefined purpose rather critical. There is still room for interpretation. This does not contribute to a better comparability. However, P11 mentions that comparability will be better as the former US GAAP interpretations are codified within the IFRS 15. P1 and P5 raise concerns if the notes provide for interpretations or discretion. The qualitative disclosures are praised by auditor P15.

Table 153: Analysis related to evaluation of predefined purposes: Evidence 5

Code	E /A*	Quote
P1	E	. . . in some cases this means an immense conversion effort for the companies that are more significantly affected by it, and, compared to this, the question arises whether this large conversion effort actually leads to increased transparency or whether the many implicit options, which also exist in IFRS 15, even tend to reduce the desired comparability . . . I would not say that comparability is increased . . . there are certainly improvements in the notes that you are writing . . . more, but the comparability of revenues is still not increased.
P5	E	With exceptions, theoretically yes. Practically, you have to see . . . I would say better information, especially more comparable information, but . . . it depends on how these discretion in the end is being exercised and lived in the end. And the question remains, to what extent do the notes catch up for that or make it comprehensible.

P7	E	We have to wait and see what the practice makes of it. This cannot be imposed by the standard-setter . . ., if he formulates . . . such a compliant and interpretative standard as . . . IFRS 15 in its present form . . . If you demand clear statements and say: That . . . must come, then you have a clear comparability, but . . . that is formulated . . . discretionary. If . . . that it is better comparable than before, I do not know.
P11	E	I'd agree with that . . . US GAAP is very descriptive . . . how you have to do something. This did not exist in IFRS. And because there was no such thing, they have always helped themselves . . . [by the] use US GAAP . . . therefore, there is much more evidence to support the fact that the balance sheet has been properly prepared than there was in the past, and in this respect I would argue that the comparability . . . has . . . increased.
P12	E	. . . comparability . . . is questionable because of the . . . very . . . discretionary decisions. But I think the . . . notes . . . certainly contribute to this. Improved information.
P15	E	Comparability I would say . . . not necessarily. There may be aspects, but not that I see them. Better information: Yes, especially by the fact that I am now explaining revenues more in general about how revenues are generated . . . That . . . [is] . . . more clearly now. I refer better information to the qualitative part. Whether the data graveyards, which are now demanded, really bring more results. Honestly, I'm not convinced.

* E = Auditor / A = Accountant

Accountants mostly agree with the view of the auditors. Better comparability is difficult to assess as there is room for interpretation and judgment within IFRS 15. With respect to the more extensive disclosure requirements, some accountants do not have profound knowledge yet. P6 and P13 are critical about that. While P6 believes that analysts may not understand the disclosures, P13 thinks that the disclosure requirements under IFRS 15 are rather too extensive.

Table 154: Analysis related to evaluation of predefined purposes: Evidence 6

Code	E /A*	Quote
P2	A	. . . the question arises again: Who reads the notes that thoroughly? I believe that the notes . . . make sense for the transition period . . . to show the comparative period . . ., because that is actually essential for understanding the net assets, financial

		position and results of operations . . . But . . . if it is then in a well-established IFRS 15 state, the comparability is no better than under IAS 18 and IAS 11 . . . that depends on the interpretations and discretions.
P4	A	From my point of view . . . no. So, in my opinion, the . . . comparability is not improved . . . You still have room for maneuver and you have some new room for maneuver. It starts how you define a contract. So even if you look at the Big 4, they have different definitions . . . In my opinion, comparability will not be improved.
P6	A	I believe that in some industries there is more comparability than in the past, and especially with regard to the recognition of revenues over a period of time, there are so many notes to the financial statements that it will undoubtedly improve. Better for the stakeholders, but . . . I doubt that our analysts . . . understand exactly the IFRS 15 disclosures in the notes.
P8	A	. . . comparability . . . basically yes, . . . whereas there is . . . room for interpretation . . . the standard may want to create transparency, but at the end of the day, . . . management reporting is based on . . . non-IFRS figures. It is the question then: Do I have transparency or not.
P9	A	Well, it's quite right, by having concrete regulations now, which are of course being forced upon companies . . . I just think that by the fact that you still have a wide range of estimation bandwidths . . . it is still difficult to analyze the individual year and compare it with the competitor . . . So, it's probably more comparable now, but you're just opening up a new room as far as all the estimations are concerned.
P10	A	I would have to . . . compare two . . . use-cases, which are . . . the same. Then look at it and see how one person deals with it, how does the other deal with it. Is this transparent in the market? I don't think so.
P13	A	. . . there are definitely areas where . . . it leads to the fact that the accounting . . . will become more uniform . . . The more useful information depends on what the addressee wants to have . . . I would say that . . . people have overshot the target, certainly as far as the information in the notes is concerned . . . The question is . . . whether this information is useful for decision-making. Personally, I would say no in many respects, but I cannot, of course, say no to all the notes. But I can definitely say that I just feel . . . that they overshot the target.
P14	A	. . . the discretion . . . is not so small. I believe that there are still many opportunities, which make comparability difficult. I don't know, it's hard for me to judge at the moment.

* E = Auditor / A = Accountant

According to IFRS 15, para. BC3, the new standard would

(a) Provide a more robust framework for addressing revenue recognition issues;
(b) Improve comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets;
(c) Simplify the preparation of financial statements by reducing the amount of guidance to which entities must refer; and
(d) Require enhanced disclosures to help users of financial statements better understand the nature, amount, timing and uncertainty of revenue that is recognized

The research reveals that neither the auditors nor the accountants confirm the predefined purposes of IFRS 15. The aim to create a more robust framework appears to have resulted in a more extensive and complex standard, which is difficult to apply. Due to the complexity and judgment necessary to apply it, comparability may still not be given. A simplification is also not realized as IFRS 15 bundles all requirements and interpretations in one standard, but has a large scope and is theoretically written which increases complexity significantly. Enhanced disclosures are mostly confirmed by the participants. However, disclosure requirements are partially also criticized as being too extensive or difficult to understand for external addresses.

7. Conclusion

This chapter concludes the research project with a critical reflection on the research aim and objectives, major implications, limitations of the research, potential areas for further research, the relevance of the topic as well as a reflection of the personal research journey of the researcher.

7.1 Reflection on the research aim and objectives

The following table summarizes the research questions and related themes identified in the course of the qualitative data analysis as outlined in subsection 5.2.5.2.

Table 155: Identified themes based on qualitative analysis

Research question		Theme		Subsec.
n/a - supplementary themes		1	Distinction between IAS 11 and IAS 18	6.1.1
		2	Missing or unspecific guidance	6.1.2
		3	Practical considerations	6.1.3
		4	Necessity for new revenue recognition standard	6.1.4
1	How do auditors and accountants perceive the implementation of IFRS 15 in practice?	5	Assessment of IFRS 15 readiness	6.2.1
		6	Project planning and scheduling	6.2.2
		7	Identified challenges	6.2.3
		8	Implications for organizational structure and procedures	6.2.4
		9	Paradigm shift of revenue recognition	6.2.5
2	What are the major interpretational areas within IFRS 15 and to what extent do these imply a risk for manipulation?	10	Change of revenue recognition principle	6.3.1
		11	Five-step model applications	6.3.2
		12	Influential factors for interpretation and discretion	6.3.3

		13	Robustness of the IFRS 15 framework	6.3.4
3	What is the likely impact of IFRS 15 on firms' financial statements and therefore their profitability and performance?	14	Conversion method	6.4.1
		15	Impact on financial statements	6.4.2
		16	Before and after IFRS 15	6.4.3

7.1.1 Supplementary analysis of previous standards

The discussions with the 15 participants provide relevant insights and views on the old standards reflected by themes 1 to 4 in the previously illustrated table. The supplementary themes are not related to a specific research question, but rather to provide context for the rationale to introduce IFRS 15.

Theme 1 - Distinction between IAS 11 and IAS 18:

The literature (IASB, 2011; McKee & McKee, 2013) states that an incorrect distinction between IAS 11 and IAS 18 may lead to different financial statements as transactions may be accounted under the wrong standard. The potential significance of the difference is shown by Haller et al. (2009) indicating that IAS 11 led to an increase in stockholders equity after its mandatory adoption in the EU. The research participants do mostly not agree with the literature (IASB, 2011; McKee & McKee, 2013) from a practical viewpoint. The reason for this may be that the contractual arrangement is important and, for many participants, IAS 11 was irrelevant due to the business model.

Theme 2: Missing or unspecific guidance

The literature (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014) criticizes missing guidance in the previous standards, mainly for variable consideration, multiple-element arrangements, licensing agreements and warranties, as well as insufficient disclosures. The research reveals that guidance of US GAAP, EITF and SOP was applied in order to account for some complex transactions for which no guidance was available in IFRS and therefore confirms the findings of the literature (e.g. IASB, 2011; Jones & Pagach, 2013; Khamis, 2016; Procházka, 2009; Tong, 2014) with respect to technical inconsistencies and weaknesses. Even IFRIC interpretations to avoid divergent or unacceptable accounting behavior (Johansson & Ringius, 2008) seemingly failed to provide the required industry-specific guidance.

Theme 3: Practical considerations

The literature (e.g. Bierstaker et al., 2016; Ismail, 2014; McCarthy, 2012) shows that financial managers had problems to correctly apply revenue recognition standards to specific business transactions. Although the literature (Basundara & Chariri, 2014; Dahlén & Lindberg, 2017; Mikovã, 2015) largely agrees that IFRS improve accounting quality, professional judgment may not only lead to errors, but may also be used for accrual-based earnings management (Joosten, 2012). This research study does not confirm those findings as no major practical issues were named by the participants and a best practice seems to have developed over time. Furthermore, no significant findings with respect to earnings management were identified.

Theme 4: Necessity for a new revenue recognition standard

Wüstemann and Kierzek (2005) conclude that the inconsistencies and weaknesses of previous standards triggered the project for IFRS 15, but that the previous standards should have been improved instead of developing a comprehensively new standard. The auditors and accountants only perceive IFRS 15 as necessary for companies with complex business models, e.g. software. Nevertheless, different accounting for similar transactions may have happened, but no tendency for divergent or unacceptable behavior was identified. Overall, it seems that the application in Germany was not a major difficulty as a best practice has been established.

7.1.2 Implementation of IFRS 15

The first research question aims to provide an understanding of participants' perceptions with respect to the implementation of IFRS 15 reflected by themes 5 to 9. Its purpose was to gather insights with respect to the implementation of IFRS 15 by addressing the main drivers for IFRS 15 readiness and conducting analyses of details regarding project planning and scheduling, encountered challenges and practical implications on the organizational structure and procedures.

Theme 5: Assessment of IFRS 15 readiness

One contribution of the study is the update of IFRS 15 readiness of companies as of December 2017. Most of the companies were still not finished with the implementation of IFRS 15 as of December 2017. Compared to the literature, however, some progress could be identified since December 2016 (PwC, 2016; Tysiac, 2017). The literature rarely provides reasons why the progress is often limited. The study contributes in that respect and finds out that awareness is one of the major issues. Many companies underestimated the amount of work necessary to conduct a successful implementation of IFRS 15. Awareness is driven by the initial assessment of the impact on or degree of impact on the companies. In cases where a first analysis lead to a low numeric effect on revenues, awareness was lower. Furthermore, the analysis indicates that, in case the initial assessment leads to a high affectedness, the progress is significantly further as of December 2017. However, the awareness and degree of impact are often influenced by the industry or sector of the specific company. Current literature (Oyedokun, 2016; PwC, 2016; Tysiac, 2014) is aware that the impact depends, among other factors, on the industry the company is operating in. The analysis illustrates that the more complex a business model is, the higher the impact and the work required to comply with IFRS 15. However, those companies may be better prepared as the awareness is also higher from the outset. Furthermore, the study addresses the subject of disclosures in the context of IFRS 15 readiness. The available literature (Campbell, 2017; Oyedokun, 2016) concludes that disclosures are of major relevance under IFRS 15. The study reveals that companies were still not prepared for the disclosures under IFRS 15. Especially the auditors were rather critical about that as the DPR and ESMA focus disclosures in the course of 2018 audits. Accountants largely confirm that the implementation of the disclosure requirements is planned for 2018.

Theme 6: Project planning and scheduling

Insights into IFRS 15 project planning and scheduling represent another major contribution to knowledge as there is no literature available that provides an in-depth analysis what the implementation challenges for companies from an organizational viewpoint are (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; Tysiac, 2017). Many companies initiated the project rather late. Companies which were not well prepared started their IFRS 15 assessment before the middle or the end of 2016. Firms that have been finished with the implementation as of December 2017 already knew the effects by the end of 2016 and started the conversion project with the introduction of the standard in May 2014. Another contribution to knowledge by this research project is provided by a detailed analysis of the perceptions and opinions of auditors and accountants with respect to workstreams and required stakeholder groups for a successful IFRS 15 implementation. Current literature (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017) concludes that IFRS 15 has numerous accounting implications and goes far beyond accounting due to the necessity of systems and processes, but lack in detail with respect to the reasons on an organizational level. As a first step and from a project management perspective, the standard has to be screened and translated into an accounting guideline. The next major step is to understand the business, i.e. the revenue streams and different transactions, before a merger between the business knowledge and the technical IFRS 15 know-how needs to take place. Various stakeholders need to be included in an IFRS 15 conversion project. The IFRS 15 project group needs to be highly integrated in the company. The major departments involved need to be accounting for technical questions, the preparation of guidelines and technical memorandums and to translate the requirements of IFRS 15 into practice. Accounting also functions as the lead department as the major competency from a technical perspective is stored there. The controlling or tax department and the IT department due to potential system changes or generating the awareness for potential changes were closely related to accounting and supported the projects. Besides the expected departments for accounting topics, the sales department seems to be the second central department for a successful implementation of IFRS 15 as sales people have a better understanding of the business model and the contracts sales employees negotiated with customers. With respect to the negotiation and preparation of contracts, the legal department may also be important. A steering committee as mentioned by Tysiac (2017) was not a major focus by many companies. Cooperation with competitors regarding the implementation of IFRS as described by Peters (2016) was also not used in a large scale, but rather an exchange of issues or problems in an informal way or in the course of meetings at different societies have been used. External consultants for the implementation of IFRS 15 were not hired in most cases. The external sparring partner for companies were the auditors with whom specific interpretations, decisions or other factors were discussed and aligned. However, those potential agreed-upon procedures or consulting services under consideration of auditor independence were rather immaterial and did not lead to a major fee generation or additional business of auditors. The training of stakeholders took place on a technical level. Auditors were trained in the course of classroom training or web-based learnings in order to understand the implications of the five-step model. Training of accountants depended on the size of the company and the affectedness. Larger international corporations provided IFRS training or updates, mainly for accounting or controlling employees. The importance of stakeholder training in context of an IFRS conversion project as well as a careful planning process and allocation of resources is also outlined by the literature (Albu et al., 2013; Odia & Ogiedu, 2013). These findings provide a significant contribution to knowledge compared to current literature (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017) as the level of detail provided explains why IFRS 15 goes far beyond accounting during its implementation and application, but also limits the topicality.

Theme 7: Identified challenges

Major challenges identified in the course of the semi-structured interviews was the high degree of complexity of IFRS 15. Major drivers for the complexity are the scope of IFRS 15 as the document has a length of about 350 pages including appendices. Another factor was the very theoretical way IFRS 15 is written, which made it difficult to apply in practice. Practical implications were a significant additional effort for the implementation of IFRS 15 by a different perception of the value-add of the standard. Mixed perceptions or opinions were gathered, e.g. that an accountant working in the software industry sees IFRS 15 rather positively while two accountants working in the automotive area were negatively surprised by the requirements of IFRS 15 and reacted emotionally as they did not see any added value. Therefore, the value-add depends on the business model and also the individual perception by each stakeholder. Especially a lack of understanding in the sales department could be identified as accounting is usually not a major topic that the sales department is confronted with. Additionally, auditors were in many cases still quite unfamiliar with IFRS 15 and not able to make final decisions in the implementation process. This frustrated many companies or made the implementation process rather difficult. The new insights regarding the complexity of IFRS 15 and the actual opinion regarding practical application and the value-add represent another contribution to knowledge.

Theme 8: Implications for organizational structure and procedures

While Oyedokun (2016) mentions that internal controls need to be adjusted in the course of the implementation of IFRS 15, the present research study finds out that internal controls were not a major issue. Auditors might think of potential changes in the future, however, no specific change at companies could be observed. Furthermore, IT systems are an issue according to the present literature (Dalkilic, 2015; Oyedokun, 2016). It turned out that an effective contract management, which may be supported by a document management system, is of high importance in the IT context. This implies that not just accounting systems are important, but that the dependency on effective IT systems start much earlier. With respect to IT systems, the literature does not provide sufficient details. In contrast, this study is quite specific as it finds that the focus is rather on accounting-specific reporting tools than an implementation of new systems or IT modules. The reporting package and the underlying systems were slightly adjusted due to the new accounts contract assets and contract liabilities. Specific IT applications, which were introduced in companies in single cases, were an administration tool for multiple-element arrangements at a software company and a not further defined tool at a mechanical engineering company. With respect to processes, the study found that a more integrated collaboration between different departments may take place in companies. This includes that sales employees conduct initial accounting classifications during the preparation of contracts, pre-checks or pass information through to the accounting department or that new contracts are generally provided to the accounting department for an assessment. This study contributes to the literature (Dalkilic, 2015; Oyedokun, 2016) as a structuration and further details are provided with respect to internal controls, IT systems and processes.

Theme 9: Paradigm shift of revenue recognition

This study provides an in-depth view on major issues previously identified by the literature. However, it also seems that the impact on companies is rather limited than previously assessed (Dalkilic, 2015; Forshay, 2017; GAAPweb, 2015; Khamis, 2016; Peters, 2016; PwC, 2016; Tysiac, 2017). This is indicated by the finding that IT systems and processes as well as internal controls were only affected to a limited and expected extent. A major point was the closer collaboration between the different departments in the course of the implementation of IFRS 15. However, it is unclear if this is a paradigm shift in accounting or just a cause resulting from the implementation of a complex standard. It seems that IFRS 15 has no major effects on most companies, especially on those with simple business models. To understand and analyze the standard, more time is necessary than most of the companies considered for it.

7.1.3 Different potential interpretations and risk of manipulation

The second research question aims to provide an examination of potential different interpretations and the risk of manipulation in IFRS 15 reflected by themes 10 to 13. The purpose is to understand practical experiences related to interpretations or professional judgment. An understanding of the potential the new standard provides for earnings management or manipulation was sought and to which degree this may imply a risk.

Theme 10: Change of revenue recognition principle

Various different interpretations of IFRS 15 may be influenced by underlying IFRS principles, e.g. the materiality approach. The interviewees explained the influence this may have on IFRS 15 issues as there is no unified threshold for materiality (Hodgdon et al., 2011), e.g. by shortening notes to the financial statements. A further issue discussed during the interviews and relating to general IFRS issues were probability and uncertainty expressions based on the 16 expressions identified by Doupnik and Richter (2003). According to the auditors and accountants, those expressions certainly play a part within IFRS, but were not a major issue with respect to IFRS 15. Having assessed the relevance of such expressions in the context of IFRS 15 is a contribution to knowledge as existing literature does not provide this contextualization.

Theme 11: Five-step model applications

Little academic literature is available with respect to the application of the five-step model on an organizational level. A high-level identification of application issues, e.g. the determination of the transaction price, financing components, the separation of performance obligations and the allocation of the transaction price, was provided by Khamis (2016) and Petersen et al. (2015). This study provides a contribution to knowledge with respect to potential different interpretations as literature surrounding the research topic is critically reviewed (Moustakas, 1994). This is especially the case for the review of literature with respect to various interpretations of accounting guidelines and professional judgment from a general perspective (Derun, 2017; Kulikova et al., 2014; Martinsson & Edqvist, 2013; A. N. Scott, 2014), probability and uncertainty expressions (Benavides, 2015; Duh & Huang, 2012; Hellman, 2008; Huerta et al., 2016) or language or translation effects (Doupnik & Richter, 2003; Huerta et al., 2016; A. N. Scott, 2014). Transferred to the new and largely unexplored IFRS 15, this study ensures a profound analysis of potential issues. Within step one, major findings were that the definition of a contract and the definition of the customer is not clearly outlined and may lead to different potential interpretations as the starting point of revenue recognition may be influenced. Another issue in step one was the criteria for a combination of contracts with respect to the entering of contracts near or the same time. These issues may lead to a different treatment of the same transactions. Step two implies potential for interpretation and discretion. A significant number of research participants emphasize that the criterion of goods or services being distinct from each other for a separation of performance obligations may be a source of error and a discretionary tool for companies. The concept of the alternative use was criticized due to problems in businesses in which PoC was not an issue before. Auditors and accountants specifically mentioned this topic in light of potential earnings management. With respect to step three, variable consideration was discussed as a potential source for different professional judgment. The central criterion that variable consideration shall be included in the transactions price if it is highly probable that a significant reversal in the amount will not occur implies a probability and uncertainty expression (Doupnik & Richter, 2003). Further estimations with respect to return obligations and nomination fees, e.g. in the automotive sector, include further potential for discretion. Financing components were analyzed as they are mentioned as one potential interpretational issue in current literature (Khamis, 2016; Peters, 2016). However, this research study revealed that financing components are not perceived as a problematic area within IFRS 15 due to a practical expedient and low interest rates. The allocation of the transaction price (step four) to the single performance obligations includes the identification of a stand-alone selling price for the single performance obligations. According to the interviewees, this may be challenging if there are no market prices available. However, this is a general problem within IFRS and not only with respect to IFRS 15. As the allocation to performance obligations is highly dependent on previous steps, the error potential accumulates in that step. Revenue recognition (step five) takes place at a point in time when transfer of control takes place or over time based on input or output factors (Khamis, 2016). Although the other steps have a higher influence with respect to discretionary options, the timing may also be influenced in certain cases, e.g. by the method applied to realization over time and a different interpretation for the transfer of control. Contract costs that are capitalized or not may have a further effect on the balance sheet. The analysis of the five-step model represents a significant contribution to knowledge as major problems in the course of the practical application were identified by applying contexts from surrounding topics (Moustakas, 1994). Furthermore, perceptions of auditors and accountants were gathered compared to only theoretical findings.

Theme 12: Influential factors for interpretation and discretion

This study provides insights of auditors and accountants with respect to further interpretational areas. Another point of criticism were different terms for costs, which may confuse accountants. The concept of the alternative use is strongly connected to the issue of customer-specific serial production and was even perceived as a technical error by some of the research participants. High discretionary potential is pertinent in that case as under certain conditions both a revenue recognition over time or at a point in time may be justified depending on the argumentation. Research and development activities for customers may be an issue with respect to the discussion if the services are separable or not. Tooling was another area that can, based on the assessment of the nature of the transaction, lead to different interpretations as it is not clearly outlined in the standard. Accounting for cloud services may also be problematic as, according to one accountant, no guidance is available in the standard. Furthermore, consignment transactions may imply discretionary potential as certain formulations within consignment agreements may lead to an earlier transfer of control. These insights with respect to potential interpretations within IFRS 15 are representing a contribution to knowledge as they are based on practical opinions and experiences of auditors and accountants. In order to assess the relevance of these interpretational areas, the study analyses them also in light of earnings management. As no literature was available that addresses earnings management under IFRS 15, a review of the literature surrounding the research topic was necessary (Moustakas, 1994). According to the literature, earnings management is mostly connected to the level of institutional monitoring (Judd, 2015), base-ten legacy (Stice et al., 2016) or generally to meet or exceed analyst revenue forecasts (Son & Lim, 2017). In that regard, incentives for the acting persons are important (Lim, 2016). Although many interviewees were convinced that the room for interpretation or manipulative actions is higher under IFRS 15 despite the extensive guidance, nobody seems to implement strategies to use it for earnings management. Rather, an avoidance strategy to keep the accounting processes unchanged was pursued by the accountants. It is very important to understand that interpretation and discretion mostly takes place beforehand in large corporations during set-up of a group-wide guideline rather than druing the daily business. Furthermore, discretion by contract modifications may be possible in theory, but in reality the bargaining power plays a crucial part and normally contracts are not changed only for accounting reasons.

Theme 13: Robustness of the IFRS 15 framework

IFRS 15 as a comprehensive revenue recognition standard was developed by the IASB requiring all companies to adopt the five-step model. It provides room for interpretation and discretionary decisions. If this amounts to more or less compared to the old standards is difficult to assess as a best practice emerged under the old standards. However, the interpretational and discretional potential for earnings management is very limited as revenues are just shifted from one period to the other rather than increasing or decreasing revenues or margins. It turns out that accountants pursue an avoidance strategy, i.e. trying to leave processes and accounting for certain transactions the same as before rather than to include discretionary decisions or use room for interpretation for manipulative reasons. No indications that bonus plans, debt/equity ratio or the size of the company affect accounting choices under IFRS 15. This view represents a significant contribution to knowledge not yet identified.

7.1.4 Likely impact on firms’ profitability and performance

The third research question aims to assess the likely impact on firms’ profitability and performance reflected by themes 14 to 16. Estimations on the quantification of the effect on the figures in the financial statements, disclosures in the notes as well as potential effects on key performance indicators are aimed to be gathered in order to address that research question as an empirical analysis was not necessary due to the timing of the study.

Theme 14: Conversion method

A contribution to knowledge regarding the likely impact on firms' profitability and performance is provided by an analysis of the chosen conversion methods as the cumulative effect may only be considered in retained earnings in case of the modified retrospective approach. Most of the accountants chose the modified retrospective approach. Furthermore, the analysis of the DAX 30 companies' 2017 annual financial statements revealed that besides Mercedes-Benz, BMW and Siemens, all companies applied the modified retrospective method and used the practical expedients provided by IFRS 15. This is in line with the findings of the survey of Ernst & Young (2017a). Commerzbank, Deutsche Bank and Munich Re are not commenting in detail as IFRS 9 for banks and IFRS 17 for insurance companies are of more importance with respect to their business models. With respect to the likely impact, it is probable that companies prefer to present the cumulative effect in retained earnings rather than full IFRS 15 financial statements on a full retrospective basis.

Theme 15: Impact on financial statements

Previous studies (Oyedokun, 2016; PwC, 2016; Tysiac, 2014) conclude that the impact depends on the industry, the understanding of the new standard and the use of professional judgment. The research participants sometimes had difficulties in providing a detailed quantification of revenue shifts. If a quantification was possible, the impact on revenue was rather immaterial, even for companies within industries that are highly affected according to the literature (Tysiac, 2014). Balance sheet items may be affected by the level of working capital due to the newly introduced accounts contract assets and contract liabilities, but a detailed quantification was mostly not provided. The triangulation by reviewing the DAX 30 companies' 2017 annual financial statements largely confirmed the results. The most affected companies were Deutsche Telekom (telecommunications) with an increase of retained earnings of 3.0 to 3.5 percent relatively to the revenues, E.ON (energy) with a decrease of revenues and cost of materials of 10.5 to 15.7 percent, however without any earnings effect, and Lufthansa with a reduction of revenues by 5.9 percent. In order to complement the analysis, the present research study analyzes the potential effects in light of key performance indicators of companies. Revenue is one of the most important KPIs for stakeholders (Peters, 2016) and has a direct impact on other financial relations (Tysiac, 2017). The study finds that no material changes to KPI systems were necessary, also not with respect to contractual assets and contractual liabilities in the context of working capital. Research participants confirmed that they did not see any reason to redefine or change current KPI systems. In some cases, it was rather necessary to provide the required explanations and comparative figures. This further contributes to current knowledge and the question what relevance KPIs have in the context of revenue recognition. Notes to the financial statements seem to be a major issue in light of IFRS 15 (Campbell, 2017; Oyedokun, 2016; Tysiac, 2017). Research participants mainly mentioned movement tables as one of the central part of their notes in order to provide the previously described changes. Furthermore, there was the mostly unified opinion that the scope of the disclosures within the notes of financial statements according to IFRS is expected to increase under IFRS 15, although there was some skepticism as to whether all important information would be disclosed. A quantification of the extent led to different explanations among the research participants between a few more sentences and double the amount. DAX 30 companies were only describing the impact on the notes to the financial statements in a neutral way, i.e. that more disclosures were expected. Adidas was the only exception by stating that no significant increase of disclosures is expected.

Theme 16: Before and after IFRS 15

The bottom-line is that financial statements are not expected to materially change under IFRS 15. The balance sheet appearance may slightly change due to the introduction of contract assets and contract liabilities. During the transition phase, the cumulative effect is considered within retained earnings in case the modified retrospective conversion method is applied. Disclosures might include more qualitative and quantitative descriptions and will be more extensive, depending on the business model and the company. The findings with respect to the appearance of financial statements and showing that IFRS 15 is potentially not that significantly impacting companies' financial statements is a significant contribution to knowledge. This is contrary to previous literature (Tysiac, 2014), especially published ultimately after the introduction of the new standard, which expected material impacts due to IFRS 15. However, the DAX 30 assessment and insights by the research participants represent the view of the German participants. The previously described avoidance strategy was expected to be reflected in the likely impact on the financial statements.

7.1.5 Overall results

A critical evaluation of the predefined purposes of IFRS 15 as stated in IFRS 15, para. BC3 based on the applied research method led to the result that the predefined purposes by the IASB are at least questionable. Auditors and accountants do not agree with the statement that IFRS 15 simplifies the preparation of financial statements by reducing the amount of guidance to which an entity must refer as the standard was perceived as very extensive and complex and therefore required a lot of work in the course of the analysis. Furthermore, this statement might only relate to people directly dealing with the standard IFRS 15 as accountants often only work with an accounting guideline as the major document after having incorporated the required changes due to IFRS 15.

The predefined purpose that IFRS 15 provides a more robust framework for addressing revenue issues is also viewed critically by the accountants and auditors as the complexity of the standard also contributes to interpretation and discretionary potential. Certain affected industries, however, assessed the framework as more robust, especially if it was necessary to work with US GAAP or other standards due to missing guidance in IFRS. Overall, revenues are mostly shifted and not increased or decreased significantly by interpretational decisions. This generally limits the topicality of interpretational issues.

Improved comparability of revenue recognition practices and improved information due to enhanced disclosures are also perceived rather critically by the participants. Comparability may not increase as there is still room for interpretation within IFRS 15, i.e. that one entity accounts differently for the same transaction as another entity. With respect to disclosures, it depends which information is provided on a quantitative and qualitative level and to what extent specific interpretational and discretionary decisions are transparently and comprehensibly explained for the financial statement addressee. Therefore, the predefined purposes of IFRS 15 are also questionable in that regard. This may change in the upcoming years as soon as a best practice will have developed for certain questions.

IFRS 15 is a principles-based, fairly complex and extensive standard aiming to provide guidance to every industry and transaction. Therefore, the underlying concept affects every industry. If one would have wanted to decrease the complexity, the fundamental concept needed to be reviewed. As no best practice has been developed yet, stakeholders are often insecure with respect to technical questions.

7.2 Major implications

This study has major theoretical and practical implications. Significant practical implications for similar projects can be derived from the research results. Furthermore, institutional theory was chosen in order to contribute to explanations in the context of the present research.

7.2.1 Practical implications

The thesis shed light on the implementation and interpretation issues from a practical viewpoint as well as questions related to the likely impact due to IFRS 15. The findings of this thesis therefore have value for practitioners, mainly auditors and accountants, but also standard-setters and addressees of financial statements. Furthermore, the findings may be helpful to optimize the implementation process and, moreover, general administrative processes within companies.

IFRS 15 was introduced in May 2014 and became effective for periods beginning on or after 1 January 2018. The companies investigated in the course of this study were hardly finished with the implementation of IFRS 15. This is due to the fact that a first assessment may have led to the conclusion that the impact is rather negligible. Nevertheless, significant work may be required to achieve the readiness for a new accounting standard. Companies, which were finished with the implementation in December 2017, started the IFRS 15 conversion project immediately after the standard has been introduced in May 2014. Companies, which were on a lower readiness level as of December 2017, started approximately two years later as they underestimated the required effort. The managerial implications for accountants and companies obliged to implement new IFRS can be related to the project management phases as described by Kerzner and Kerzner (2017), i.e. (1) project initiation, (2) project planning, (3) project execution, (4) project monitoring and control and (5) project closure.

The first managerial implication is that accountants must not underestimate the effort and resources required to implement complex new IFRS and prepare a well-defined project management plan at an early stage. Therefore, even before a new IFRS is introduced, i.e. with the first review of an exposure draft of a new standards, the implementation project should be initiated. This includes the assignment of a project manager and a determination of the basic requirements.

Project planning should at the latest take place as soon as a new standard is introduced as by then its regulations are officially adopted and published. There may be amendments by the standard-setter, e.g. the clarifications to IFRS 15 based on ED/2015/6 as of July 2015 (Tokara, 2015), which, however, do usually not represent material changes. Project planning includes a definition of the work requirements (Kerzner & Kerzner, 2017). With respect to IFRS 15, major work requirements were to combine the analysis of the different types of transactions or revenue streams of a company with the technical accounting requirements of the standard. These could vary for further standards addressing other business transactions as different knowledge and input may be necessary. However, it is equally important to address these questions immediately after a new standard is introduced. This first high-level assessment determines the quality and quantity of work. In order to understand the different types of transactions or revenue streams, a detailed customer contract analysis was necessary for the implementation of IFRS 15. Factors such as the degree how detailed and transparent contracts are documented may significantly affect the workload. Transferred to other IFRS, which will be introduced and become obligatory in the future, this means that the scope and focus areas of the work to be conducted need to be defined with the introduction of a new standard. As a part of this, the required resources for the implementation project are determined (Kerzner & Kerzner, 2017). In order to understand the types of transactions or revenue streams in the context of IFRS 15, significant support from the sales department was necessary. That means that a complex new IFRS cannot be introduced and analyzed by the accounting department only, but that the accounting department rather serves as the nucleus and receives support and collects information from other departments. The accounting department and the management need to drive and manage the project, but other departments need to be included at an early stage. Close collaboration and open communication are of major importance. Based on the definition of the work requirements, the quality and quantity of work and the resources needed, a scheduling of the activities and evaluation of risks should be carried out. A potential deadline for the implementation may be the effective date of a new standard in order to provide enough headroom for adjustments of the project plan during project monitoring and control. As the research indicated, companies, which started with the conversion immediately after the introduction of IFRS 15 in May 2014, were completed with the assessment and the implementation of IFRS 15 before the effective date. As IFRS 16 – Leases has been introduced in January 2016 being effective for periods beginning on or after 1 January 2019 and IFRS 17 – Insurance Contracts in May 2017 being effective for periods beginning on or after 1 January 2021, companies already have to be within the assessment or implementation phase for these two standards in order to ensure a successful implementation. Furthermore, as the assessment and implementation of more than one standard may run in parallel, clearly defined project teams as described before become even more important.

The implementation of a new IFRS should not be considered as a task, which is exclusively conducted by the accounting department. This implicates that technical training, not only for accountants, but also for employees of other departments, may be another success factor for a smooth implementation. This study indicates that IFRS 15 implementations may be less problematic if emplyees within the sales department have at least basic accounting knowledge as this increases the understanding and therefore the willingness to support the transformation. A managerial implication is that accounting should not be seen and communicated as the exclusive responsibility of the accounting department as the major task is to translate every business transaction into measurable and understandable figures. Training, which is specifically addressing questions that are relevant for various departments, may sensitize and provide the technical understanding for staff not having a background in accounting.

Another implication for practitioners is the necessary sponsorship by the management. The management should communicate the significance and importance of new IFRS to all stakeholders. The study illustrates that, if the management does not represent the understanding and seriousness for the implementation of IFRS 15, the involved departments follow that attitude. Therefore, a motivational and supportive communication of the targets and the connected chances and risks has to be on the agenda of the management for each new IFRS.

Even in case the impact due to a new accounting standard is negligible and no material changes may be required, the implementation always implies a chance to reflect on the company's accounting and administrative processes. One research participant explained that IFRS 15 hardly affected the company's processes or the figures within the financial statements, but instead the analysis of the business transactions revealed that the company had errenous processes and did not correctly account for a usual type of revenue stream already in the past. Therefore, even in the event that the impact and therefore the awareness may be rather low, taking the implementation seriously provides an opportunity to reflect on and potentially improve processes. This is also related to the implication that an investment in a new or an improvement of the existing document management system may be worthwile to be considered as it not only facilitates the implementation of an IFRS, but also the everyday operations.

Another implication for practicioners is derived from the finding that consultants for the implementation were hardly hired by companies, however, adopting companies had difficulties to provide the required capacities in order to ensure a successful implementation. A managerial implication may be to actually think about mandating consultants, which are specialists from a methodological, conceptual and technical perspective with respect to new IFRS in order to reduce the workload for employees within the company. The research indicates that the first major result of the implementation process is a company-specific accounting guideline addressing the requirements of the new accounting standard. Therefore, an understanding of the standard itself may not be a critical success factor as accountants usually only work with the standard itself during the definition and the setup of the accounting guideline. The investment in consultants in order to achieve that first result in a timely manner may not be more expensive compared to tying up substantial capacities within the accounting and, in the case of IFRS 15, the sales department. This represents a usual make-or-buy decision, which may be worthwile to be discussed by the management.

Another managerial implication is to consider an investment in a sophisticated document management system for important documents, e.g. customer contracts. This enables an organization to provide all the required information to the project team in a timely and transparent manner enabling users to access information anytime and anywhere (Hartono et al., 2018). The study indicates that research participants perceived a digital document management system as a success factor during the implementation of IFRS 15. Therefore, the adjustments of accounting systems due to the implementation of new IFRS may be of less significance with respect to IT capabilities than actually ensuring that documents are available at any time. In addition and especially with regard to global companies, the availability of contracts or documents in English within a document management system may be a critical success factor as well. As companies are largely affected by questions regarding digitalization strategies (Urbach & Röglinger, 2019), a sophisticated document management system should represent one measure.

For auditors, IFRS 15 bears significant opportunities and threats. An opportunity is that the implementation of IFRS 15 provides a chance to strengthen relationships with clients and the respective level of trust. This can be achieved by accompanying clients and emobdying a sparring partner throughout the implementation rather than maintaining an auditor-client relationship, which is sometimes characterized by professional distance. Furthermore, implementing an IFRS in a pragmatic and goal-oriented way may further contribute as a client expects fast and competent decisions. A limiting factor in that regard and of major importance is to consider auditor independence (Beattie et al., 1999), however, this does not impede being a reliable and supportive provider.

A crucial factor and therefore a threat if not taken seriously is to have a high level of technical and practical competence as an auditor. Competence is vital from both a technical and especially from a practical perspective, i.e. being able to apply the requirements of IFRS 15 to business transactions or revenue streams. The study indicates that accountants were often frustrated in case a feedback or a decision to be taken by the auditor consumed a lot of time, mainly because the competence of the auditor was not sufficient to make a clear decision. In order to not harm the client relationship and jeopardize the own reputation as a professional services firm, auditors should attend the relevant training in order to acquire the competence and experience at an early stage of the introduction of standards. Auditors have to perceive this as an investment as no material additional business may be expected due to auditor independence. Auditors are eligible to approve the accounting guideline or review if the accounting for revenue streams takes place accordingly, however, they are prohibited to operationally analyze contracts or prepare and post adjustments in the accounting system. Therefore and as mentioned above, the focus has to be on firm and swift decisions and the maintenance of the client relationship for the future by being a competent sparring partner.

Another implication for auditors is the potential for new sales channels, especially for auditors that are resigning a mandate and therefore are not limited by auditor independence anymore. This is especially important in the light of auditor rotation in Europe (Hopt, 2015). Auditors, who have to leave long-term clients, could acquire new business by using these long-term relationships, their knowledge of and experience with the respective company, as well as their competence to place potential IFRS implementation support services. The potential for such projects is not insignificant as the study indicates that the implementation of new IFRS may take years as it includes various different departments and processes. Furthermore, it also may open up further business opportunities for professional services companies as other areas of improvement within the administrative or accounting processes of a company may be identified.

Another managerial implication is related to the competence and therefore the training of auditors and consultants. The study indicates that the knowledge of IFRS 15 is usually delivered via web-based learnings and IFRS updates, but that no intense workshops or training based on real-life examples including an objective accreditation is in place. It appears to be important that training programs should be set up based on specific case studies and may even be related to specific industries and sectors in order to acquire the necessary competence. This would improve the provision of support to the customer and to come up with firm decisions. Furthermore, the project management aspects, change management implications and communication requirements should be addressed during these training sessions. It seems that a comparably simple IFRS update and web-based learnings do not deliver the required knowledge. A curriculum comprising a certificate that enables an auditor to be an IFRS 15 specialist may be worthwile to be considered.

The research also has implications for the standard-setters, i.e. the IASB and the FASB. Auditors and accountants criticize the increasing scope, wording and resulting complexity of IFRS 15. There may be potential to formulate the guidelines in a simpler way in order to prevent various interpretations by the adopters and resulting difficulties. Furthermore, a reflection on the scope and complexity is necessary in order to provide guidance for the accounting of specific transactions, especially in light of the predominantly negligible effects. Standard-setters should prepare standards considering practical and not just theoretical implications in order to improve the practicability during the implementation and further application. This is especially important as companies and accountants do not work with the standards on a daily basis, but usually only once during the implementation by setting up an accounting guideline. The simpler accounting standards are formulated, the simpler is the translation from the standard into the company-specific accounting guideline.

This also implies that the standard-setter could reflect on the own strategy during the design and formulation of accounting standards. IFRS 15 rather appears to be a hotchpotch of various different previous standards from different jurisdictions than a new concept for revenue recognition. Many participants of this study mentioned that industry-specific guidance may be more purposeful than the attempt to integrate all existing business models and revenue streams into one standard. Furthermore, providing an executive summary at the beginning of every standard may be supportive in order to make it possible for practicioners to analyze the basic requirements within a very short period of time. An idea for the future strategy for setting up accounting standards would be to implement an executive summary followed by the general concept of analyzing and allocating basic business transactions. After that, various specific guidance for specific sectors and industries could be provided as appendices, which would reduce the amount of work and increase the effectiveness and efficiency during the implementation.

The standard-setter could also challenge the standard creation process. Many practicioners complained that IFRS 15 is written in a theoretical and complicated way and that the adoption and application in practice is difficult. Standard-setters could not only consider stakeholders' remarks based on comment letters (IFRS Foundation, 2016b), but could include more stakeholders in the preparation process itself. Furthermore, industry-specific workshops would help to prepare industry-specific guidance. However, rather than designing a new standard creation process, this implication represents an impulse for the standard-setters to review their own approach.

IFRS 15 may be a hotchpotch of previously existing interpretations from US GAAP and IFRS and has only immaterial effects. Therefore, the question of whether IFRS 15 is an incisive innovation or just old wine in new skins is left open and may be answered after a few periods of IFRS 15 adoption. However, the managerial implications for stakeholders are of major importance, especially as these can be transferred to questions regarding the implementation of further standards such as IFRS 16 – Leases and IFRS 17 – Insurance Contracts.

7.2.2 Theoretical implications

This subchapter analyses the changes in the course of the implementation of IFRS 15 using the theoretical framework of institutional theory as outlined in chapter 4.

Institutional theory as originally invented by DiMaggio and Powell (1983) assumes that institutional isomorphism with its three mechanisms, coercive, mimetic and normative pressure, is a useful tool for the understanding of organizational life and development. The main argument of DiMaggio and Powell (1983) is that isomorphism makes organizations to look similar. Many studies acknowledge institutional theory as useful to explain and interpret accounting developments or changes (e.g. Aldemir & Uysal, 2017; Carpenter & Feroz, 1992; Carruthers, 1995; Covaleski et al., 1993; Dillard et al., 2004; Goddard et al., 2016; Hines et al., 2001; M. Hussain & Hoque, 2002; Irvine, 2008; Judge et al., 2010; Mezias & Scarselletta, 1994; Phang & Mahzan, 2017).

IFRS 15 is a regulatory change by the IASB, which represents a coercive isomorphic pressure (DiMaggio & Powell, 1983). From a coercive perspective, regulatory changes made the companies to adopt similar organizational structures during the implementation of IFRS 15. As the implementation of IFRS 15 required significant knowledge about the business transactions and revenue streams, the accounting department was forced to closely collaborate with the sales department. Therefore, the new organizational structure required other forms of collaboration amongst departments.

Head office control is also deemed to be another sort of coercive pressure (Fligstein, 1990). The headquarters started to set up new accounting guidelines, which implies that head office control was an influential driver for change within the organizations (Fligstein, 1990). As per the examples within this study, the head offices' accounting departments were the only departments directly working with IFRS 15. The analysis of the standard resulted in new group-wide accounting guidelines, which the subsidiaries had to follow. Therefore, the head offices forced all subsidiaries to adopt the same accounting requirements.

Although the head office also provided guidelines for revenue recognition before the implementation of IFRS 15, the new requirements impacted the original organizational values and cultures. Employees within the accounting department on group level and the subsidiaries had developed best practices for the accounting of various revenue streams. These established best practices within the organizations were replaced by new requirements, insecurity, uncertainty and tasks for departments, which potentially never directly had to deal with accounting requirements before. This resulted in resilience towards change, limited understanding and in some cases frustration as employees did not recognize the added value of the new standard.

Although the study indicates that companies did not cooperate with competitors in the course of the implementation of IFRS 15, an informal exchange of information or questions regarding the accounting for specific transactions took place. This represents mimetic pressure, which mostly occurs due to a major innovation (Tuttle & Dillard, 2007). Companies adopting IFRS 15 often did not experience normative influences by auditors as auditors were often not able to provide a final and swift decision regarding the accounting for certain transactions. As IFRS 15 still implies room for interpretation, mimetic isomorphism may be in place as companies informally exchange information when they experience insecurity.

However, normative isomorphism due to professional groups involved during the implementation of IFRS 15 influenced the changes within the accounting guidelines and collaboration between different departments. The results of this research reveal that auditors functioned as the sparring partner for companies in order to legimitize the changes within the accounting guidelines (DiMaggio & Powell, 1983). The auditors being confronted or actively involved during the implementation of IFRS 15 were mostly working on group level, which forced the subsidiaries and auditors of the subsidiaries to comply with the new revenue recognition requirements. This provided power to the group accountants. As professionals are a key source of normative isomorphic pressures, their values, norms and rules supported the institutionalization of the new accounting guidelines (DiMaggio & Powell, 1983).

Power was transferred to the head offices, which increased their control over the subsidiaries. This is represented by the fact that the new standard itself is only analysed by the headquarters with the aim to create or adjust the accounting guideline, which has to be used by all subsidiaries. However, the study found that avoidance strategies were mostly pursued by exploiting room for different interpretations in order to remain the accounting for revenue transactions unchanged. This implies a resistance to change. In many cases, the participants were concerned about the new revenue recognition requirements and did not perceive any value-add. It appears that the communication by the management or the headquarters transported the obligation to implement the new standard. Therefore, training courses or meetings rather seemed to be a necessity instead of gathering knowledge to change for the better. This is strongly related to the finding that management involvement and executive sponsorship are key success factors for a successful implementation as it appears that management failed to present potential benefits or communicate the required changes as a chance to improve. This is especially the case for the sales departments, which had a limited degree of understanding for the changes. On the other hand, one participant stated that the implementation of IFRS 15 also represents a chance to review existing processes and accounting approaches. This implies a chance for modification, improvement or efficiency increases in administrative functions. Furthermore, closer collaboration between different departments making accounting an interdisciplinary task implies a chance to work closer together in large corporations. In case the management members would have promoted these positive aspects of the implementation of a new IFRS, resilience to change may have been smaller.

Power can have both a supporting or constraining character (Collier, 2001; Modell, 2002). The mobilized power by the headquarters forced and enabled the organizations to implement the requirements of IFRS 15 in the accounting guideline and the processes. Based on the resistance of the employees to implement the changes as no value-add was perceived, this power supported the implementation of the requirements, which may not have been possible otherwise. However, the resistance also led to a significant delay with respect to the readiness of companies, which is reflected by the low readiness levels as of 2016 (GAAPweb, 2015; PwC, 2016; Tysiac, 2017) and December 2017 as discovered during this study. The discussed intra-group considerations within this thesis represent the different perceptions of stakeholders based on their location within the company hierarchy. The appreciation of people working in subsidiaries and especially in other departments was very limited, which implies that these employees perceived the implementation of IFRS 15 as a head office imposition.

However, the resistance of employees was ineffective as the management driven by coercive pressures eventually created processes and structures that ensured that the readiness is achieved as soon as the financial statements for periods beginning on or after 1 January 2019 have to be prepared in accordance with IFRS 15. This confirms that employee resistance is limited unless sufficient power is mobilized to resist the change (Modell, 2002).

The analysis demonstrates that institutional pressures created a need for institutional change showing that the new requirements of IFRS 15 were in conflict with the values of the employees, especially with those working in other departments and therefore never or only rarely having been confronted with accounting issues in the past. This conflict was solved by the concept of power in order to realize the implementation and the acceptance of the new accounting requirements by all subsidiaries and employees. Normative pressures by the auditors accompanying the transformation additionally promoted the topic and spread it into the organizations. This illustrates the interplay between power relations and isomorphism via the various forms of pressure. Employees, who did not support and therefore resisted the change, were unable to mobilize enough power to represent an effective opposition.

In contrast, institutional theory also provides another way of argumentation for the limited awareness of companies after the introduction of IFRS 15 (GAAPweb, 2015) and the low readiness level as of 2016 (PwC, 2016; Tysiac, 2017) and as of December 2017 as identified by this study. Although all the three isomorphic pressures, i.e. coercive, mimetic and normative, were in place during the implementation of IFRS 15, they appeared to be effective rather late. Coercive pressure could have been increased by the regulators as the initial effective date 1 January 2017 as the only deadline after the introduction in May 2014 may represent sufficient time for an implementation. Especially in case the likely impact and the awareness by a company is low, the resilience to change (Kaiser, 2014) may be higher than the pressure. As the competence of auditors throughout the implementation process was also limited in many cases, which is supported by the finding that accountants were often frustrated as decisions or opininos by the auditors consumed a significant amount of time due to insecuritiy, a promotion of the requriements of the new standard was probably not happening ultimately after the introduction by the IASB. Therefore, the degree of normative pressure immediately after the introduction of IFRS 15 was also limited. In case of insecurity, the study provided insights that accountants and auditors may informally exchange formation about the accounting treatment of complex transactions. In case peer organizations were not further progressed with the implementation process or able to provide relevant insights to support these decisions, mimetic pressures may have been rather low as well. An implication of this may be that the standard-setter and also the management could increase pressure in order to initiate and finish IFRS implementation projects earlier and with less problems or even surprises. Standard-setters could incorporate obligatory milestones for companies, which need to be presented in the financial statements already two or three years before the implementation of a new standard. These could include, but are not limited to, disclosure of the likely impact on financial statements based on a first analysis, description of the implementation process and a transparent illustration of achieved and outstanding milestones during the assessment and implementation phase of an IFRS implementation project. Auditors may have to be certified for certain standards based on real-life case studies and more intensive training already before or immediately after the introduction of new IFRS. This could increase the promotion by professionals within organizations and therefore normative pressures. Mimetic pressure may be a logical consequence as all organizations within a peer group would be further progressed after the introduction of a new standard. Although this represents a different way of argumentation with respect to the explanatory power of institutional theory's pressures that cause isomorphism, it also supports the mechanisms for the alignment of organizations as described by the framework.

Institutional theory within this study was applied to contribute to the explanation for the question why the IFRS 15 readiness of companies was still limited as of December 2017 and why amost of the companies struggeled during the implementation and interpretation process. The analysis of institutional factors and intra-organizational power contributes to an understanding of the organizational change taking place during the adoption of IFRS 15. Although institutional theory should not be considered in isolation or as the only explanatory factor for the organizational change, it delivers valuable insights. Therefore, this study adds to the literature of various other authors, who accept institutional theory to explain and interpret accounting developments or changes (e.g. Aldemir & Uysal, 2017; Carpenter & Feroz, 1992; Carruthers, 1995; Covaleski et al., 1993; Dillard et al., 2004; Goddard et al., 2016; Hines et al., 2001; M. Hussain & Hoque, 2002; Irvine, 2008; Judge et al., 2010; Mezias & Scarselletta, 1994; Phang & Mahzan, 2017) and apply it for management accounting research (Collier, 2001; Modell, 2002).

7.3 Limitations

For the reasons explained in subsections 5.2.2.4 and 5.2.4.2, the study employs semi-structured interviews with nine accountants and six auditors. Johnson and

Onwuegbuzie (2004) state that the driver for the employed technique are the research questions. The research questions of the study imply a constructivist research design in order to handle the complexity of the real-life phenomena. The third research question might suggest an empirical test, but, due to the time the study took place and the effective date of the new standard (Ernst & Young, 2017b), IFRS 15 financial statements have not yet been available. The semi-structured interviews allow the researcher to interact effectively with the participants of the study and to collect in-depth insights from different angles regarding the implementation, interpretation and likely impact of IFRS 15. The participants of this study needed to possess a sufficient level of competence facing a highly complex topic. To combine semi-structured interviews with a supplementary document analysis represents a triangulation of methodologies, which increases the validity of the research (Denzin, 2017). However, the research project encounters several limitations.

A first limitation is that the generalizability of the findings is difficult as these are bound to the perceptions of 15 auditors and accountants from Germany. Therefore, the findings may be only generalizable for this sample of German companies. Furthermore, some researchers would assess this amount of interviews as comparably small. However, there is neither a rule for a sample size in qualitative research nor a specific recommendation (Morse, 2000; Patton, 2002). The guidelines for a sufficient sample size for interviews in qualitative studies range from six (Guest et al., 2006) to 40 (Mason, 2010). The impact due to this limitation is not significant as the aim of the research project is to understand the issues and challenges caused by IFRS 15 from a practical viewpoint and not to generate results specifically for one industrial sector, certain businesses or transactions or a particular stakeholder group. Furthermore, the concept of saturation was applied during the study (Glaser & Strauss, 1967). 15 interviews were sufficient based on the saturation principle of Pitney and Parker (2009) as no material new information was identified within the last three interviews. Another point why this limitation is rather insignificant is the quality of interviewees. One of the major challenges was to find participants that were experienced in both project management and the technical content of IFRS 15. Many potential participants refused to participate in the study as either one of the two requirements were not met according to their self-assessment. Therefore, the quality of interviewees was ensured and the major focus rather than the sole number of participants.

A second limitation is that the study has only focused on insights related to IFRS 15 provided by German auditors and financial managers as well as the DAX 30 companies in their 2017 annual financial statements. As there has been no opportunity yet to assess the impact of IFRS 15 based on annual reports, an empirical study may yield further insights. An empirical study may also include a larger sample than the one employed in this research project. This limitation is rather significant as a study on the impact of IFRS 15 on financial statements may deliver different results, especially for sectors or industries that may be affected at a larger scale. However, the review of the likely impact based on the 2017 annual financial statements of the DAX 30 companies and the assessment of the 15 research participants illustrated that the impact is rather negligible, even for large and complex companies. However, another study considering more companies within different sectors and industries and in other countries may provide different results.

The third limitation of this study results from the lack of focus on a specific industry or industries. Major findings related to the implementation and interpretation of IFRS 15 can be related to specific industries and may not be relevant for other industries. Further in-depth analyses for significantly affected industries and technical application issues may have provided further insights or different perceptions depending on the project planning and scheduling of IFRS 15 implementation of other companies. This limitation represents a general limitation to the contribution to knowledge of this study. However, this is due to the aim of this research project, which was not to come up with definite or industry-specific results, but with a general and detailed understanding of a largely unexplored topic. An industry-specific study may rather be the next step in the course of further research in order to assess if the results provided by this study are relevant.

A fourth limitation may result from the effective date of the standard, 1 January 2018. Due to its timing, this study has only addressed the perceptions of auditors and accountants during the implementation or assessment phase and therefore before the preparation of IFRS 15 financial statements. Therefore, a similar study conducted at a later point in time may be necessary before any objective trends can be derived. Especially emotional reactions by research participants and surprises imply the presumption that more time is needed for auditors and accountants to incorporate the standard in the daily accounting work and to develop a best practice. This is a significant limitation with respect to the contribution to knowledge of this study as this may have also been the case when previous IFRS were introduced and implemented within companies. Many participants emphasized that the previous standards were easy to apply, however, not because their guidance was of high quality, but as a best practice has been developed throughout the years. It needs to be considered that the results of this study may be significantly different in case done in a later academic year, e.g. in 2020, when IFRS 15 is implemented and the first audit of IFRS 15 financial statements is finished as well as major technical and processual questions are answered. It can be expected that, as soon as a best practice will have established for the application of IFRS 15, some of the problems identified in the course of this research will be resolved.

Potential subjective interpretation represents the fifth limitation of this study. The findings of this study are not of a general nature and, therefore, can produce bias (Yin, 2009). However, the aim of the study was not to deliver typicality. Rather, it is supposed to provide insights and patterns that form themes. Even though the German transcripts were read repeatedly and data was read word by word to identify codes (Miles & Huberman, 1994) with an ensuing analysis with NVivo 12 (QSR International), subjective interpretation of quotations bears risks and may have diverged from the participant's intention at any given time. As the measures implemented as described in chapter 5 were strictly followed and the research was conducted on the highest level of awareness of these implications, subjective interpretations were kept at a low level. However, due to the nature of the research, subjective interpretations may affect some of the findings presented in this thesis.

The research design may imply theoretical limitations. It reflects the complex nature of and determined by the research questions (Miles & Huberman, 1994) and the fact that the development of a coherent theory is difficult. However, to strive for simple cause-and-effect relations or black-and-white recommendations in the context of real-life phenomena tends to be too complex. Therefore, the focus of the study is to develop thought-provoking impulses and new perspectives leading to potential further research.

Its limitations notwithstanding, this dissertation is the attempt to gain an understanding of the experiences of auditors and accountants on an organizational level regarding the new revenue recognition standard IFRS 15. Despite the complexity of the subject, this study contributes to theory generation how the implementation of IFRS 15 is perceived, its potential different interpretations and its likely impact. Still, it has to be acknowledged that the subject of the research was unique, no industrial focus was implemented and the macro- and micro-environmental context was fixed to Germany. Due to these reasons, any other context of this research may have produced different research results. Taking the micro- and macro-environmental factors as well as stakeholder contexts into account, the findings may not be transferrable to other countries, not least due to potential cultural differences. The limitations of the study imply the need for further research in the field of the implementation of new IFRS, not least to answer the question of the generalisability of the research findings.

7.4 Future research

The limitations of this study represent potential for future research in different disciplines. These are explained in the following section.

This study aims to shed light into a largely unexplored research topic from a practical viewpoint. As this study was the first study of its kind in Germany and conducted at a point in time in which the new IFRS 15 became effective, it provides a profound and broad basis for further qualitative and quantitative research.

First of all, this study has only addressed the perceptions of auditors and accountants before the preparation of the first IFRS 15 financial statements. The emotional reactions and surprises described by the research participants imply that more time may be needed before results become more objective and potentially more significant for practicioners. Therefore, this study provides a profound basis for a replication of a similar study in a later academic year extending the post-effective date by a sufficient time frame, presumably after the first quarter of 2020 or incorporating interviews in more rounds with a defined distance in between each other.

As described within chapter 4, cultural values of Hofstede (1980) as a theoretical framework were excluded as this study focuses on Germany as the only country for data collection. However, this implies a potential for further research by conducting a country comparison on the perceptions and opinions of practicioners during the implementation of IFRS 15 or other upcoming standards. This may be even more interesting with respect to various potential interpretations and the risk for manipulation as different countries or cultures may come up with different results for the accounting treatment of specific transactions.

Another call for further research is done with respect to the fact that the findings are related to the perceptions of German accountants that are working for global companies, however, their parent company is German or their workplace is in Germany. In contrast to the aforementioned proposal for future research based on a country comparison of perceptions and opinions and practicioners, a similar study focusing on another country might provide interesting results. As far as known, Khamis (2016) is the only comparable study conducted in Egypt, however, at a significantly earlier point in time, which causes significant shortcomings.

Findings related to potential different interpretations and the risk of manipulation indicate that practicioners experience different problematic accounting areas in the context of IFRS 15 in various industries. This implies a significant potential for further research on either a detailed sectorial examination of technical issues or a comparison of technical issues amongst various sectors. In that regard, especially significantly affected sectors based on the literature review may be worthwile to be considered, but potentially also other sectors, which may not have been identified by the literature. This also includes special attention to areas, which represent a significant change compared to previous standards, e.g. with respect to the identified problem automotive suppliers have in the context of customer-specific serial production and the issue of the alternative use that may lead to a revenue recognition over a period of time rather than at a point in time although the manufacturing takes place on a piece-by-piece basis.

While these calls for further research are related to qualitative studies, there is also significant potential for empirical studies, especially as the first IFRS 15 financial statements are expected to be available throughout the fiscal year 2019. Large sample quantitative studies could empirically test the different findings of the study, e.g. if the impact through IFRS 15 is indeed mostly negligible. Such studies would contribute to verify and complement the context-specific themes identified and provide the necessary results in order to complement the research efforts initiated by this study through an assessment of the likely impact on firms' profitability and performance due to IFRS 15 before actual financial statements are available.

Further potential for future research can be derived based on the fact that numerous other standards will be introduced. The interviews indicate that auditors and accountants were also faced with IFRS 9 and are or will be faced with the implementation of IFRS 16 and IFRS 17. The findings within this study may not only be important in the context of IFRS 15, but for the adoption of new IFRS in general, e.g. incorporating an effective and efficient contract management process, having employees in key positions, who understand both the accounting and the business perspective, and supporting a cross-functional collaboration and exchange of knowledge. IFRS generally provide potential for further research on the organizational level (Weaver & Woods, 2015), which may be picked up by employing a similar research approach to other IFRS.

From a theoretical perspective, this study applies institutional theory in order to explain and interpret results. Further accounting studies should be conducted applying instutional theory as a lens and in order to expand the understanding not only for the three forms of pressure that cause isomorphism, but also the intra-organizational phenomenon of power in the course of implementation projects. The theory proved to be quite useful for an explanation for various phenomena in both directions and may be worthwile to be enriched with further studies applying it.

On the other hand, other theoretical frameworks may be interesting in the course of future studies, depending on the nature of research questions. Positive Accounting Theory might proof useful for further insights with respect to the prediction of accounting choice in the context of IFRS 15 or other IFRS if applied at a point in time when the implementation will be completed and the standard will have been applied for some financial years. Furthermore, the cultural dimensions of Hofstede (1980) could provide valuable insights in the course of a country comparison related to the interpretation and the risk of manipulation with respect to IFRS 15. Decision-usefulness theory is worthwile to be addressed in an IFRS 15 context as well, especially in the course of empirical studies or country comparisons. Also in this case, this will produce further insights when done at a later point in time.

The numerous potential and calls for further research illustrate that this study represents an attempt to improve the understanding of a largely unexplored academic topic. The results of this study provide a thoroughly researched and broad basis in order to conduct the illustrated further research and shed additional light into areas, which are of high significance for companies, accountants, auditors, managers and other stakeholders.

7.5 My research journey

In the last chapter of this thesis, the researcher switches to the I-perspective for reflection purposes.

The doctoral thesis not only produced new knowledge and contributes to scientific research related to IFRS, but also affects myself as a researcher and as a person. I want to reflect on that journey within that last subsection of the dissertation. A selection of various opportunities to pursue a doctorate led me to the Doctor of Business Administration program at the University of Gloucestershire via the IHP offices in Munich as the program made sense to me and seemed to fit in my personal and professional life. As I was living in Heidelberg in Germany at that time, I chose the Cologne Cohort 5 and started with around 15 other DBA students in May 2015. The required knowledge for the further DBA work was provided during eight classroom-sessions between May 2015 and July 2016. Due to a very strict time management and my own deadlines, I was able to follow my plan appropriately using the time available outside my professional life and to finish all formative and summative papers for each module on time. In the second half of 2016, I was working on my RD1 and handed it in in its final version at the end of January 2017. The RD1 was approved in April 2017. After that, I started to review relevant literature and write the first chapters of the dissertation. Between November 2017 and April 2018, the focus was on conducting the interviews, their transcription, translation and analysis as well as writing the methods chapter. In April and May 2018, I finished documenting the results within my dissertation. After that, continuous reviews were conducted and adjustments incorporated in close collaboration with my supervisors until the date of completion.

Reflection provided me with insights on my strengths and weaknesses. I learned about myself that I am very efficient and structured, which represent the characteristics of a driver and guardian personality. I accepted that I am less imaginative in many things than I thought I would be, but it also made me work on my weaknesses. I brainstorm more and try to develop new ideas and to see things that other people may not see. The journey additionally provided me with an understanding of my own stress resistance. The time between November 2017 and April 2018 was the most work-intensive phase of my life up to that point and a strong social partitioning took place. I put a lot of pressure on myself working day and night and on the weekends to achieve my own deadline, which was a submission of the draft to my first supervisor exactly three years after beginning the doctorate, i.e. May 2018. Time was often limited due to my job in consulting, including many national and international travels and long working hours. This made me know my partner, family and friends even better and showed me that I can always rely on them. Especially the tailwind provided by my partner by understanding that I had less time or a busy mind was crucial for the success of this project.

Technically, I knew the principles of IFRS from a practical perspective as I have been auditing companies, which are preparing their financial statements according to IFRS, or supporting clients in the course of IFRS conversions. Due to my change of jobs in July 2016, I lost the exposure to IFRS to a certain extent as the focus switched to strategic, operational and financial restructuring. In retrospect, I value that as an advantage as expertise may have led to bias. Therefore, maintaining an open mind and asking unbiased questions seemed to be helpful in this study. The inclusion and review of topics and other concepts surrounding the research topic allowed a differentiating view on a topic that may have been waved aside as solely technical. The new standards IFRS 9, IFRS 15, IFRS 16 and IFRS 17 are the result of longstanding work of the IASB with the aim to create standards covering every industry and transaction. In a broader sense, it can be seen that current trends do not just change business models and their complexity, they also change the focus of accounting standards, which are adjusting to the modern world of the 21st century.

The various types of input and the constant reflection has been changing me as a person. I try to challenge discussions more and to apply a broader and deeper way of thinking considering alternative ideas and explanations. The acquired understanding of philosophical concepts helps to classify opinions and approaches. Having been working scientifically motivates me to teach at a university and share knowledge with others. Hearing myself on interview records showed me my weaknesses and provides the basis to improve my interviewing capabilities. At the end of my research journey, I am impressed how this project affected my idealism, my personality and my capabilities as a critical thinker.

The reflexive process was crucial for my research project as it made me understand the development steps of my study and myself as a person. At the same time, it has been keeping up the motivation to follow through with the project and ambitious timeline. In a metaphorical sense, this can be applied to the words of Soren

Kierkegaard, a Danish philosopher living in the 19th century, stating that “Life can only be understood backwards, but it must be lived forwards.” (Mumpower & Ilchman, 1988, p. 3). Today, I have to admit that the journey may be its own reward, even for goal-driven personalities.

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Appendix 1: IAS 11 application example

The following example demonstrates the PoC method. For the construction of a luxury yacht a contract price of EUR 80,000,000 is agreed. The duration for the construction and building of the luxury yacht is five years. The overall costs are estimated with an amount of EUR 44,000,000. For each period, the percentage-of-completion has to be calculated.

Year	**1**	**2**	**3**	**4**	**5**
Total contract value	80,000,000	80,000,000	80,000,000	80,000,000	80,000,000
Estimated total costs	44,000,000	50,000,000	56,000,000	56,000,000	56,000,000
Actual costs	4,400,000	4,600,000	10,600,000	19,600,000	16,800,000
Cumulated costs	4,400,000	9,000,000	19,600,000	39,200,000	56,000,000
PoC	10%	18%	35%	70%	100%
Cumulated recognized revenues	8,000,000	14,400,000	28,000,000	56,000,000	80,000,000

The PoC method generally allows adjustments for estimations as illustrated with increasing estimated total costs in the second and third period. The PoC is calculated on that new cost basis then and is 18% in the second year. In contrast, under the completed-contract method, revenue, expenses, and subsequently gross profit are deferred until the completion of a contract, when the projects are of short duration. However, IFRS do not permit the use of the completed-contract method if costs cannot be estimated reliably. Instead it specifies that revenue should be recognized equal to contract costs incurred (Stickney, Weil, Schipper, & Francis, 2009).

Appendix 2: IFRS 15 application example

Example as provided in Dyson (2015):

The example deals with ‘Bravo Agency’ (hereinafter: ‘Bravo’), which is a nonprofit organization, providing payroll, human resources, bookkeeping, and general management services to a company named “Alpha Health Clinic” (hereinafter: ‘Alpha’) as per a signed contract between the parties as of January 1, 2018. The Management fees are 10% of Alpha’s revenues. For additional services regarding addressing regulatory matters and Office of Management and Budget (OMB), Bravo charges EUR 200 per hour. If the contract is terminated by Alpha for other reasons than Bravo’s nonperformance, a penalty payment of 10% of the latest year’s revenues will be applicable. Bravo submits its invoices on a monthly basis based on the estimates of Alpha’s revenues prepared by Bravo’s bookkeeping services and regulatory services provided. The adjustment in order to reach the 10% of the total revenue presented in Alpha’s audited financial statements for the years is processed via a final invoice.

Step 1: A signed contract, which identifies each party’s rights and obligations as well as payment terms is in place. Also, the management fee is certain. Commercial substance is present as specified services are transferred. The legal enforceability is ensured by the signatures of all parties and represents the probability that Bravo will collect the amounts owed by the customer.

Step 2: The contract has two performance obligations, management and assistance services to regulatory matters as requested. Although Bravo does not have to provide such assistance, the promise alone is sufficient to be a performance obligation.

Step 3: All of the consideration for Bravo is variable as management fees are the agreed percentage of Alpha’s revenues and the regulatory assistance is pertinent as requested by Alpha. Bravo estimates an amount of EUR 1,000,000 for the transaction price for management services in 2018 as this is 10 percent of the estimated revenues of EUR 10,000,000 with Alpha in 2018. Regulatory assistance has no transaction price as it is highly uncertain if those assistance services are requested. In this example, Alpha’s audited revenues are EUR 9,500,000. Therefore, the price for 2018 is overstated by EUR 50,000.

Step 4: In 2018, Bravo allocates EUR 1,000,000 to management services and no amount to regulatory assistance. Uncertainties are subsequently resolved, as Bravo provides 400 hours of regulatory assistance and therefore considers EUR 80,000 in additional revenue. EUR 50,000 are considered as a change in estimate in management services revenue in 2019.

Step 5: As Alpha simultaneously receives and consumes the benefits of Bravo’s management services, revenue is recognized over time. Regulatory assistance revenues are not recognized over time as they are provided as requested.

Appendix 3: Interview Guides

Topic:	"Revenue recognition under IFRS 15 – A critical evaluation of predefined purposes and implications for improvement"
Participants:	Sascha Haggenmüller – DBA Candidate (Interviewer) Px
Date:	dd mmmmmm, 201x, h.mm am/pm
Format:	Semi-structured in-depth interview Questions for each stakeholder group, Auditors (E) and Accountants (A)

a) Interview Guide – Auditors

Background information (10 minutes)

E Q1.1 Please describe your academic and educational background.

E Q1.2 Please describe your work experience with respect to previous professions and your current role in your company.

E Q1.3 Please elaborate on your exposure to and your experience with IFRS 15.

E Q1.4 Please provide your year of birth as well as number of years of work experience.

Previous IFRS on revenue recognition (7 minutes)

E Q2.1 How would you describe your familiarity with the previous revenue recognition requirements, IAS 11, IAS 18 and related interpretations on a scale from 1 to 5? (1 means 'Rudimentary knowledge', 3 means 'Good theoretical, but less practical experience', 5 means 'Profound practical and theoretical knowledge').

E Q2.2 May there occur problems with respect to the distinction when IAS 11 and IAS 18 had to be applied? If yes, please describe your experience.

E Q2.3 How would you describe the level of clarity of the guidance those standards provide for complex transactions? Please describe your experience.

Would you like to add on inconsistencies and weaknesses within IAS 11 and IAS 18 and related interpretations in the course of a brief conclusion?

Implementation of IFRS 15 (35 minutes)

E Q3.1 On a scale of 1 to 5, where would you see the 'IFRS 15 readiness' of companies as of December 2017?

E Q3.1-1 Are there companies with a specific size or within a specific industry that are outliers?

E Q3.1-2 Please describe how the readiness level developed from May 2014 to December 2017.

E Q3.1-3 What are or were the major reasons that some companies were not or not fully prepared as of the effective date of IFRS 15?

E Q3.2 How has an IFRS 15 implementation project be set up from an organizational and processual perspective?

E Q3.2-1 Which departments have to be included in the course of an IFRS 15 implementation and which tasks do they specifically have?

E Q3.2-2 What is the scope of the steering committee in the course of IFRS 15 implementations and how is it comprised?

E Q3.2-3 Which further organizational and processual considerations are important in the course of IFRS 15 implementations?

E Q3.2-4 To which extent is it necessary to keep the governance structure and working groups in the further process?

E Q3.2-5 Please describe a best or worst practice experience from your practical experience.

E Q3.3 To what extent were the five steps from the five-step model of IFRS 15 considered within the IT system landscape?

E Q3.3-1 To what extent are there e.g. new IT modules or how do single IT applications specifically change due to the implementation of IFRS 15?

E Q3.3-2 To what extent are new process steps implemented or processes changed in key departments due to IFRS 15 implementation?

E Q3.3-3 Please describe how the internal control landscape changed due to the implementation of IFRS 15 and which new controls are developed and which are redundant?

E Q3.4 How are other areas than accounting specifically affected by IFRS 15?

E Q3.4-1 Are the specific areas where difficulties or a lack of understanding occurs due to the changes through IFRS 15?

E Q3.5 To what extent are employees specifically trained in the course of IFRS 15 implementations for IFRS 15?

E Q3.5-1 How would you describe the necessity of consultants in the course of the implementation of IFRS 15 and in which areas may they be of major importance?

E Q3.5-2 Please describe the scope and areas consultants are hired for during IFRS 15 implementation.

E Q3.5-3 What is the focus of training for auditors or consultants with respect to IFRS 15?

E Q3.5-4 To what extent doe companies cooperate with competitors in the course of the implementation of IFRS 15?

E Q3.6 How do companies specifically prepare for the issue IFRS 15 disclosures? Please provide examples.

E Q3.6-1 What do companies have to disclose at least to meet the minimum requirements of IFRS 15?

E Q3.6-2 How do companies manage to ensure the completeness of disclosures under IFRS 15 within their IT systems?

E Q3.6-3 How would you describe the additional effort for disclosures under IFRS 15 in comparison to IAS 11, IAS 18 and related interpretations? Please provide the number of additional hours, costs and a percentage value.

E Q3.7 The IASB states in IFRS 15. IN5 that IFRS 15 simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. Please comment this statement with respect to the above mentioned.

Which further points would you like to add with respect to your experiences with the implementation of IFRS 15?

Different potential interpretations within IFRS 15 (25 minutes)

E Q4.1 In which major or specific areas have there been opportunities for discretion through interpretation or judgment within IAS 11, IAS 18 and related interpretations from your perspective?

E Q4.2 Previous studies define the determination of the transaction price for a performance obligation, financing components, separation of performance obligations and the respective allocation of the transaction price as the major technical challenges under IFRS 15. To what extent do you see potential for interpretation and judgment in those areas?

E Q4.2-1 To what extent would you add further critical areas of IFRS 15 with respect to major interpretation and judgment.

E Q4.3 Previous studies show that probability and uncertainty expressions in combination with different languages and translations may lead to various interpretations in the course of the interpretation of accounting standards. To what extent do you consider this topic as relevant within IFRS standards in general?

E Q4.3-1 To what extent does IFRS 15 use probability and uncertainty expressions in major issues and how can those lead to different interpretations?

E Q4.4 Where do you see the major leverages for discretion within IFRS 15?

E Q4.4-1 Could you please explain if IFRS 15 could be a tool to defend intended reporting outcomes?

E Q4.4-2 the level of discretion possible under IFRS 15 compared to IAS 11, IAS 18 and related interpretations?

E Q4.5 Do you experience companies implementing specific measures to use discretion under IFRS 15?

E Q4.5-1 Do companies specifically modify contracts or standard contracts?

E Q4.5-2 Are there many options under IFRS 15 to modify contracts in favour of the company?

E Q4.5-3 How can companies use specific designs of contracts for discretion in the context of the requirements for revenue recognition at a point of time or over time?

E Q4.6 How are interpretations and professional judgment under IFRS 15 transparently illustrated and documented?

E Q4.6-1 On which documents or documentation do you specifically focus on or do you think are of major importance?

E Q4.6-2 To what extent are major judgments or interpretations under IFRS 15 conducted or documented in the IT systems?

E Q4.6-3 To what extent are major judgments or interpretations under IFRS 15 controlled or considered within the internal control system?

E Q4.6-4 How have judgments and interpretations under IFRS 15 specifically be disclosed and prepared? Can you provide an example?

E Q4.7 The IASB states in IFRS 15.BC3 that IFRS 15 removes inconsistencies and weaknesses in previous revenue recognition requirements and provides a more robust framework guidance that would be useful in addressing revenue recognition issues. Please comment this statement with respect to the above mentioned.

Which further points would you like to add with respect to your experiences with different interpretations and judgments under IFRS 15?

Likely impact on firms' profitability and performance through IFRS 15
(13 minutes)

E Q5.1 It is said that especially three industries, telecommunications, software and real estate, are impacted through the introduction of IFRS 15. To which extent is that correct?

E Q5.1-1 To what extent are other industries significantly impacted?

E Q5.2 Could you please provide examples for revenue changes due to the introduction of IFRS 15?

E Q5.3 To what extent to you see the necessity to radically revise KPI systems because of IFRS 15, i.e. to change, create new or delete KPIs?

E Q5.3-1 Which industry-specific KPIs do you use as a performance indicator and change through IFRS 15?

E Q5.3-2 Which KPIs do companies focus on in the course of the conversion to IFRS 15?

E Q5.3-3 To what extent do analysts change their views with respect KPI analyses?

E Q5.4 To what extent will the extent of disclosures change under IFRS 15 in financial statements in comparison to previous requirements under IAS 11, IAS 18 and related interpretations?

E Q5.4-1 How will disclosures with respect to contracts or other constellations specifically look like in practice?

E Q5.5 How do you think may external stakeholders interpret changes through IFRS 15?

E Q5.5-1 Which detailed explanations and disclosures are necessary under IFRS 15 in order that external stakeholders make the right decisions?

E Q.5.5-2 To what extent are shifts through IFRS 15 specifically explained in order that external stakeholders can understand them.

E Q5.5-3 How do the new disclosure requirements under IFRS 15 affect window dressing?

E Q5.6 The IASB states in IFRS 15.BC3 that IFRS 15 improves comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets and provides more useful information to users of financial statements through improved disclosure requirements. Please comment this statement with respect to the above mentioned.

Which further points would you like to add with respect to the likely impact on profitability and performance of companies under IFRS 15?

Summary and conclusion (7 minutes)

E Q6.1 Based on your experience, which major areas of IFRS 15 would or could require improvements?

E Q6.1-1 Could you please elaborate why improvement potential exists in these areas?

E Q6.1-2 How would you specifically implement these improvements?

E Q6.1-3 Do you see further central weaknesses of IFRS 15?

E Q6.2 Was it necessary to introduce the entirely new IFRS 15 or do you think a modification of IAS 11, IAS 18 and related interpretations would have been sufficient?

E Q6.2-1 Please justify your explanation.

E Q6.3 Could you please provide an overall conclusion based on your experience and your opinion on IFRS 15?

Which further points would you like to add with respect to IFRS 15 which were not discussed during the interview, but which are of major relevance for you?

b) Interview Guide – Accountants

Background information (10 minutes)

A Q1.1 Please describe your academic and educational background.

A Q1.2 Please describe your work experience with respect to previous professions and your current role in your company.

A Q1.2-1 Please provide the industry and the size of the company you are working for.

A Q1.3 Please elaborate on your exposure to and your experience with IFRS 15.

A Q1.4 Please provide your year of birth as well as number of years of work experience.

Previous IFRS on revenue recognition (7 minutes)

A Q2.1 How would you describe your familiarity with the previous revenue recognition requirements, IAS 11, IAS 18 and related interpretations on a scale from 1 to 5? (1 means ‘Rudimentary knowledge’, 3 means ‘Good theoretical, but less practical experience’, 5 means ‘Profound practical and theoretical knowledge’).

A Q2.2 May there occur problems with respect to the distinction when IAS 11 and IAS 18 had to be applied? If yes, please describe your experience.

A Q2.3 How would you describe the level of clarity of the guidance those standards provide for complex transactions? Please describe your experience.

Would you like to add on inconsistencies and weaknesses within IAS 11 and IAS 18 and related interpretations in the course of a brief conclusion?

Implementation of IFRS 15 (35 minutes)

A Q3.1 On a scale of 1 to 5, where would you see the 'IFRS 15 readiness' of your company as of December 2017?

A Q3.1-1 Are there specific industries or business segments that are outliers?

A Q3.1-2 Please describe how the readiness level developed from May 2014 to December 2017.

A Q3.1-3 What are or were the major reasons that your company was not or not fully prepared as of the effective date of IFRS 15?

A Q3.2 How is your IFRS 15 implementation project set up from an organizational and processual perspective?

A Q3.2-1 Which departments have been included in the course of an IFRS 15 implementation and which tasks do they specifically have?

A Q3.2-2 Should there have been other departments included as well from your perspective and if yes, why?

A Q3.2-3 What is the scope of the steering committee in the course of your IFRS 15 implementation and how is it comprised?

A Q3.2-3 Which further organizational and processual considerations are important in the course of your IFRS 15 implementation?

A Q3.2-4 To which extent is it necessary to keep the governance structure and working groups in the further process?

A Q3.3 To what extent were the five steps from the five-step model of IFRS 15 considered within your company's IT system landscape?

A Q3.3-1 To what extent are there e.g. new IT modules or how do single IT applications specifically change due to the implementation of IFRS 15?

A Q3.3-2 To what extent are new process steps implemented or processes changed in key departments due to IFRS 15 implementation?

A Q3.3-3 Please describe how the internal control landscape changed due to the implementation of IFRS 15 and which new controls are developed and which are redundant?

A Q3.4 How are other areas than accounting specifically affected by IFRS 15?

A Q3.4-1 Are the specific areas where difficulties or a lack of understanding occurs due to the changes through IFRS 15?

A Q3.5 To what extent are employees in your company specifically trained for IFRS 15?

A Q3.5-1 Which employees in which departments are addressed in the course of those training?

A Q3.5-2 To what extent is there a necessity for external consultants in the course of the implementation of IFRS 15 and in which areas are they especially necessary?

A Q3.5-3 Please describe the competence of your auditor or external consultants with respect to IFRS 15.

A Q3.5-4 To what extent does your company cooperate with competitors in the course of the implementation of IFRS 15?

A Q3.6 How does your company specifically prepare for the issue IFRS 15 disclosures? Please provide examples.

A Q3.6-1 What is your impression you have to disclose to meet the minimum requirements of IFRS 15?

A Q3.6-2 How does your company manage to ensure the completeness of disclosures under IFRS 15 within their IT systems?

A Q3.6-3 How would you describe the additional effort for disclosures under IFRS 15 in comparison to IAS 11, IAS 18 and related interpretations? Please provide the number of additional hours, costs and a percentage value.

A Q3.7 The IASB states in IFRS 15. IN5 that IFRS 15 simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. Please comment this statement with respect to the above mentioned.

Which further points would you like to add with respect to your experiences with the implementation of IFRS 15?

Different potential interpretations within IFRS 15 (25 minutes)

A Q4.1 In which major or specific areas have there been opportunities for discretion through interpretation or judgment within IAS 11, IAS 18 and related interpretations from your perspective?

A Q4.2 Previous studies define the determination of the transaction price for a performance obligation, financing components, separation of performance obligations and the respective allocation of the transaction price as the major technical challenges under IFRS 15. To what extent do you see potential for interpretation and judgment in those areas?

A Q4.2-1 To what extent would you add further critical areas of IFRS 15 with respect to major interpretation and judgment.

A Q4.3 Previous studies show that probability and uncertainty expressions in combination with different languages and translations may lead to various interpretations in the course of the interpretation of accounting standards. To what extent do you consider this topic as relevant within IFRS standards in general?

A Q4.3-1 To what extent does IFRS 15 use probability and uncertainty expressions in major issues and how can those lead to different interpretations?

A Q4.4 Where do you see the major leverages for discretion within IFRS 15?

A Q4.4-1 Could you please explain if IFRS 15 could be a tool to defend intended reporting outcomes?

A Q4.4-2 the level of discretion possible under IFRS 15 compared to IAS 11, IAS 18 and related interpretations?

A Q4.5 Do you experience companies implementing specific measures to use discretion under IFRS 15?

A Q4.5-1 Are contracts or standard contracts specifically modified?

A Q4.5-2 Are there many options under IFRS 15 to modify contracts in favour of your company?

A Q4.5-3 To what extent does your company use specific designs of contracts for discretion in the context of the requirements for revenue recognition at a point of time or over time?

A Q4.6 How are interpretations and professional judgment under IFRS 15 in your company transparently illustrated and documented?

A Q4.6-1 To what extent are major judgments or interpretations under IFRS 15 conducted or documented in your IT systems?

A Q4.6-2 Which documents or documentation do you specifically consider as important?

A Q4.6-2 To what extent are major judgments or interpretations under IFRS 15 controlled or considered within the internal control system?

A Q4.6-3 How have judgments and interpretations under IFRS 15 specifically be disclosed and prepared?

A Q4.7 The IASB states in IFRS 15.BC3 that IFRS 15 removes inconsistencies and weaknesses in previous revenue recognition requirements and provides a more robust framework guidance that would be useful in addressing revenue recognition issues. Please comment this statement with respect to the above mentioned.

Which further points would you like to add with respect to your experiences with different interpretations and judgments under IFRS 15?

Likely impact on firms' profitability and performance through IFRS 15
(13 minutes)

A Q5.1 It is said that especially three industries, telecommunications, software and real estate, are impacted through the introduction of IFRS 15. To which extent is that correct?

A Q5.1-1 To what extent is your sector specifically affected?

A Q5.2 Could you please provide examples for revenue changes due to the introduction of IFRS 15 in your financial statements?

A Q5.3 To what extent to you see the necessity to radically revise your KPI system because of IFRS 15, i.e. to change, create new or delete KPIs?

A Q5.3-1 Which industry-specific KPIs do you use as a performance indicator and change through IFRS 15?

A Q5.3-2 Which KPIs does your company focus on in the course of the conversion to IFRS 15?

A Q5.3-3 To what extent do analysts change their views with respect KPI analyses?

A Q5.4 To what extent will the extent of disclosures change under IFRS 15 in financial statements in comparison to previous requirements under IAS 11, IAS 18 and related interpretations?

A Q5.4-1 How will disclosures with respect to contracts or other constellations specifically look like in practice?

A Q5.5 How do you think may external stakeholders interpret changes through IFRS 15?

A Q5.5-1 Which detailed explanations and disclosures are necessary under IFRS 15 in order that external stakeholders make the right decisions?

A Q.5.5-2 To what extent are shifts through IFRS 15 specifically explained in order that external stakeholders can understand them.

A Q5.5-3 How do the new disclosure requirements under IFRS 15 affect window dressing?

A Q5.6 The IASB states in IFRS 15.BC3 that IFRS 15 improves comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets and provides more useful information to users of financial statements through improved disclosure requirements. Please comment this statement with respect to the above mentioned.

Which further points would you like to add with respect to the likely impact on profitability and performance of companies under IFRS 15?

Summary and conclusion (7 minutes)

A Q6.1 Based on your experience, which major areas of IFRS 15 would or could require improvements?

A Q6.1-1 Could you please elaborate why improvement potential exists in these areas?

A Q6.1-2 How would you specifically implement these improvements?

A Q6.1-3 Do you see further central weaknesses of IFRS 15?

A Q6.2 Was it necessary to introduce the entirely new IFRS 15 or do you think a modification of IAS 11, IAS 18 and related interpretations would have been sufficient?

A Q6.2-1 Please justify your explanation.

A Q6.3 Could you please provide an overall conclusion based on your experience and your opinion on IFRS 15?

Which further points would you like to add with respect to IFRS 15 which were not discussed during the interview, but which are of major relevance for you?

Appendix 4: Informed Consent Cover Letter

Dear _________________,

I am a student at the University of Gloucestershire, Cheltenham/England, working on a Doctor of Business Administration degree. I am conducting an exploratory research study entitled: **Revenue Recognition under IFRS 15 – A critical evaluation of predefined purposes and implications for improvement**

The purpose of the research study is to explore the perceptions of auditors and accountants with expertise and extensive experience with respect to implementation and interpretation issues of the new revenue recognition standard IFRS 15 and its impact on firms' profitability and performance.

Your participation will involve a live audiotape interview (see interview overview on page 2) expected to last between 60 and 90 minutes. I will transcribe the recorded interviews for further analysis to determine visual patterns and to identify themes. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, you can do so without penalty or loss of benefit to yourself. The results of the research study may be published, but your name will not be used, and your results will be maintained in confidence. The research materials will be destroyed by shredding and incineration after completion of the study.

In this research, there are no foreseeable risks to you. Although there may be no direct benefit to you, the possible benefit of your participation could result in new knowledge useful to financial regulators, financial auditors, corporate audit committees, accounting professionals, and academia.

If you have any questions concerning the research study, please do not hesitate to contact me on my mobile (+49 160 9495 1421) or via email (sascha.haggenmueller@gmail.com).

Yours sincerely,

Sascha Haggenmüller

Interview overview

Anticipated duration: (90 minutes)

Section 1: Background information (3 minutes)

- Interviewee's educational and professional background
- Demographic and numeric data for later evaluation

Section 2: Previous IFRS on revenue recognition (7 minutes)

- Brief review of IAS 11, IAS 18 and related interpretations
- Split in various standards and distinction
- Complex transactions under IAS 11, IAS 18 and related interpretations

Section 3: Implementation of IFRS 15 (35 minutes)

- IFRS 15 readiness
- Project setup for implementation of IFRS 15
- IT systems, business processes and internal control system changes due to IFRS 15
- Inclusion of other departments and potential problems or lack of understanding in the course of implementation of IFRS 15
- Training of employees and hiring of consultants for implementation of IFRS 15
- Practical considerations due to disclosure requirements under IFRS 15

Section 4: Different interpretations in IFRS 15 (25 minutes)

- Major areas of interpretation and professional judgment within IFRS 15
- Probability and uncertainty expressions under IFRS 15
- Major areas and measures (e.g. contract modification) for discretion under IFRS 15
- Conduct and documentation of judgment in systems, processes and internal controls and disclosure of interpretations and judgment

Section 5: Likely impact on firms' profitability and performance (13 minutes)

- Sectors and industries affected by IFRS 15
- Revenue changes/shifts through IFRS 15
- Revision or change of KPIs due to IFRS 15
- Extent and appearance of disclosures under IFRS 15

Section 6: Summary and conclusion (7 minutes)

- Areas for potential improvement of IFRS 15
- Overall assessment and conclusion

Appendix 5: Informed Consent Release Letter

Researcher:

Sascha Haggenmüller, a Doctoral Learner at the University of Gloucestershire, Cheltenham/England, and an independent researcher, has been given permission by the University of Gloucestershire to conduct a research study on the implementation and interpretation issues of the new revenue recognition standard IFRS 15 and its likely impact on firms' profitability and performance.

Interviewee:

I, ________________________, have volunteered to participate in this research study.

My participation in the study is voluntary and confidential. I understand that

1. I may refuse to participate or withdraw at any time without any consequences.
2. Research records, recorded interviews, list of interviewees are confidential.
3. Results of the research study may be published, and my name will not be used.
4. My results for this study will be maintained in confidence.
5. There are no foreseeable risks to me for participating in this study.
6. Sascha Haggenmüller (study researcher) has explained this study to me and answered my questions regarding my voluntary participation.

There are no other agreements, written or verbal, related to the study beyond that expressed in this consent and confidentiality letter. By signing this form, I acknowledge that I understand the nature of the study, the potential risks to me as a participant, and the means by which my identity will be kept confidential. My signature on this form also indicates that I am 18 years old or older and that I give my permission to voluntarily serve as a participant in the study described.

Signature of the interviewee: ________________________ Date: _______________

Appendix 6: Exemplary interview transcript

Transcript - P15 (Auditor)

German (original)	**English** (translated)
Bitte beschreiben Sie Ihren ausbildungstechnischen und akademischen Hintergrund.	*Please describe your academic and educational background.*
Ausbildung Diplom-Kaufmann an einer Universität. Dann in den 1980er Jahren Bestellung zum Steuerberater und ein Jahr später Bestellung zum Wirtschaftsprüfer. Dann Ende der 1990er Bestellung mit Lizenz CPA in den USA. So viel zum Thema Ausbildung.	Education as a business graduate at a university. Then, in the 1980s, appointed as tax adviser and one year later as a German Certified Public Auditor. Then at the end of the 1990s licensed CPA in the US. That's it with respect to education.
Bitte beschreiben Sie Ihre Berufserfahrung in Bezug auf mögliche vorherige Stationen und die momentane Rolle in Ihrem Unternehmen.	*Please describe your work experience with respect to previous professions and your current role in your company.*
Tätigkeit war beginnend in den 1980er Jahren bis vor ein paar Jahren im Bereich der Big 4. Immer im Bereich der Wirtschaftsprüfung, Assurance, Assurance-nahe Tätigkeiten. Viel auch Projektgeschäft und Erstellungs- und Umstellungsarbeiten. Seit zwei bis drei Jahren habe ich [ähm] … daneben auch noch einen Lehrauftrag in Accounting an einer Hochschule. Das mal in a nutshell zum Hintergrund. Und im Prinzip immer … in dem Bereich mit viel Spaß tätig gewesen.	I worked from the 1980s to a few years ago in the Big 4, always in the field of auditing, assurance, assurance-related activities. Also, a lot of project business and preparation of financial statements and conversion work. Since two to three years, I've been [um] ... holding a teaching position in accounting at a university. That is my work experience in a nutshell. And in principle I have always been enjoying working in this field.
Wie stark sind sie dem Thema IFRS 15 in Ihrem Beruf ausgesetzt und wie würden Sie auf dieser Basis Ihre Erfahrung mit dem Standard beschreiben?	*Please elaborate on your exposure to and your experience with IFRS 15.*
Ich habe zum Thema IFRS 15 auch zwei Aufsätze verfasst, die vielleicht nicht das sind, was sie hören wollen, weil ich immer gefragt habe: Alter Wein in neuen Schläuchen? Oder ändert sich wirklich was? Aber das war natürlich teilweise ein bisschen schon provokant und geht auch in das Thema rein: Critical evaluation. Der Standard bzw. das Projekt läuft ja beim IASB schon sehr, sehr lange. Das heißt im Vorfeld, bevor der Standard auch letztendlich [ähm] …	I have also written two essays on IFRS 15 which may not be what you want to hear, because I have always asked: Old wine in new tubes? Or is really something changing? But that was of course a bit provocative and also goes into the topic: Critical evaluation. The IASB has been running the standard or the project for a very, very long time. That means, in advance, before the standard was also finally [um] ... approved, implemented via the various

approved, implementiert wurde über die verschiedenen Exposure Drafts, da haben wir theoretisch relativ viel gemacht über Seminare, Veranstaltungen, interne Weiterbildung Mitarbeiter, Mandantenseminare und auch beim IFRS-Kongress in Wien. Aus der Zeit stammen die beiden Aufsätze. Der eine in Bezug auf die Idee, der andere zu einem Zeitpunkt als der Standard verabschiedet war. Aber noch nicht endorsed bzw. anwendbar. Es war also theoretisch und noch nicht praxisbezogen. [Ähm] … Mittlerweile habe ich bei einigen Mandanten beobachtet, dass sie mit ... Umstellungsarbeiten begonnen haben. Konkret in der Telekommunikationsbranche, wo die meisten Umstellungen wohl kommen werden, habe ich keine praktische Erfahrung. Ich habe zwar früher einmal die Deutsche Telekom betreut, das aber schon seit vielen Jahren nicht mehr mache. Und bei den übrigen Mandanten lag der Fokus bisher immer nur auf den reinen Auswirkungen auf die Höhe der Umsätze und damit der Forderungen. Weniger [ähm] … auf den Fragen Presentation und Disclosure, wo ich glaube, dass, wenn überhaupt, wahrscheinlich die meisten Implikationen und Herausforderungen liegen werden. Soweit würde ich sagen: Erfahrung ja, aber immer wieder mit dem Ergebnis: So furchtbar spannend ist das Thema nicht. Interessant war damals immer eines zu sehen: Viele der Änderungen, die jetzt [ähm] …, ich sage mal der kleinen Änderungen, die sich durch IFRS 15 ergeben, sind, wenn man ehrlich ist, nicht unbedingt reine IFRS 15-Änderungen, sondern Dinge, die man jetzt, weil man stärker fokussiert ist, explizit angeht mit dem Thema, eigentlich schon nach altem Recht, eigentlich auch nach HGB, auch durch BilRUG getriggert, das in einen Rucksack gepackt hat und dann alles unter IFRS 15 verpackt hat, weil es damit gut zu verkaufen ist, wenn ich eben Dinge habe, die ich theoretisch vielleicht schon immer hätte machen müssen, können, sollen.	exposure drafts, we have theoretically done a lot via seminars, events, internal training for employees, client seminars and also at the IFRS Congress in Vienna. The two essays date from this period. One in relation to the idea, the other at a time when the standard was approved. But not yet endorsed or applicable. So, it was theoretical and not yet practice-oriented. [Um] ... Meanwhile I have observed at some clients that they have... have started the conversion work. However, I have no practical experience specifically in the telecommunications industry, where most of the changes are likely to come. I used to serve Deutsche Telekom, but have not done so for many years. And for the other clients, the focus has so far only ever been on the pure effects on the amount of sales and thus of receivables. Less [um] ... on the questions Presentation and Disclosure, where I believe that, if at all, probably most implications and challenges will be implied. So far, I would say: Experience yes, but again and again with the result: The topic is not that terribly exciting. There was always one interesting thing to see back then: Many of the changes that have now [um] ..., I would say that the small changes that result from IFRS 15 are, if you are honest, not necessarily pure IFRS 15 amendments, but things that are now, because you are more focused, explicitly approached with the subject, actually already according to the old standards, actually also according to HGB, also triggered by BilRUG, which packed everything in a backpack and then packed everything under IFRS 15, because it is good to sell, if I have things, which I theoretically perhaps always should have been doing, could have be doing, should have been doing.
Bitte geben Sie Ihr Geburtsjahr sowie die Anzahl der Jahre Ihrer Berufserfahrung an.	*Please provide your date of birth as well as number of years of work experience.*
Geburtsjahr 1956 und Berufserfahrung … jetzt muss ich rechnen … 36 Jahre.	Year of birth 1956 and work experience … I have to calculate … 36 years.

Wie würden Sie Ihre Kenntnisse in Bezug auf IAS 11, IAS 18 und zugehörige Interpretationen auf einer Skala von 1 bis 5 einschätzen? (1 bedeutet ‚Ganz rudimentäre Kenntnisse', 3 bedeutet ‚Gute theoretische Kenntnisse, aber weniger Praxiserfahrung', 5 bedeutet ‚Umfassende praktische und theoretische Kenntnisse').	*How would you describe your familiarity with the previous revenue recognition requirements, IAS 11, IAS 18 and related interpretations on a scale from 1 to 5? (1 means 'Rudimentary knowledge', 3 means 'Good theoretical, but less practical experience', 5 means 'Profound practical and theoretical knowledge').*
Also alte Standards, die waren ja jahrzehntelang in Kraft. Da habe ich viel Erfahrung. Auch mit Anlagenbauern, PoC in der Immobilienbranche. Auch in der Softwarebranche mit Projektarbeiten. Also da würde ich die praktische Erfahrung, also die praktische und theoretische Erfahrung als sehr umfassend bezeichnen.	Well, the old standards, they were in force for decades. I've had a lot of experience. Also with plant constructors, PoC in the real estate sector. Also in the software industry with project work. So, I would describe the practical experience, the practical and theoretical experience, as very comprehensive.
Kann es aus Ihrer Sicht zu Problemen in Bezug auf die Unterscheidung kommen, wann IAS 11 und wann IAS 18 angewendet werden muss? Wenn ja, bitte beschreiben Sie Ihre Erfahrungen.	*May there occur problems with respect to the distinction when IAS 11 and IAS 18 had to be applied? If yes, please describe your experience.*
Die Erfahrung habe ich gemacht, ja, und zwar insbesondere im Bereich der Immobilienbranche und zwar dort im Bereich von Bauträgergeschäft, [ähm] … Errichtung von Wohneigentumshäusern mit vielen Einheiten: Baue ich ein großes Apartmenthaus mit 20 Apartments, die ich dann nach PoC grundsätzlich realisiere, Variante 1? Oder baue ich wie ein Serienfertiger 20 Apartments, die ich faktisch vom Regal weg verkaufe an Anleger, an Eigennutzer mit entsprechender zeitpunktbezogenen Realisierung. Das ist immer wieder ein Abgrenzungsthema gewesen.	I have made the experience, yes, especially in the field of real estate, namely in the field of property development, [um] ... construction of residential houses with many units: Do I build a large apartment house with 20 apartments, which I then realize according to PoC, option 1? Or, like a serial production company, I build 20 apartments, which I actually sell off the shelf to investors, to private owners for own use with corresponding realization at a certain point in time. This has always been an issue with respect to the differentiation.
Wie würden Sie die Klarheit der Richtlinien beschreiben, die IAS 11, IAS 18 und zugehörige Interpretationen in Bezug auf komplexe Transaktionen zur Verfügung stellen? Bitte beschreiben Sie Ihre Erfahrungen.	*How would you describe the level of clarity of the guidance those standards provide for complex transactions? Please describe your experience.*
Bei den alten Standards gab es natürlich immer wieder Unschärfen und Unsicherheiten und da waren die Leitlinien nicht so furchtbar klar. Das sehen sie an zwei Punkten: Zum einen, dass es auch den einen oder anderen IFRIC gab, also Interpretationen. Die wurde	With the old standards, of course, there were always indistinctnesses and uncertainties and the guidelines were not so terribly clear. You can see this at two points: On the one hand, that there were also one or the other IFRIC, in other words interpretations. This

erst notwendig, weil der Standard unklar war. Und fast noch wichtiger, auch wenn das in den letzten Jahren ein bisschen abgenommen hat, dass man in den ersten Jahren in manchen Branchen, Software gehört dazu, immer auch sehr stark US GAAP genutzt hat mit der Begründung gemäß IAS 8: Wir haben keine Standards. Wir haben Lücken. Müssen die Lücken füllen. Und dann schaue ich ... zum Beispiel gerade das Thema Multiple-Elements, Aufteilung. Da habe ich dann immer auf US GAAP-Standards geschaut. Also insoweit waren die Standards IAS 11 und IAS 18 … haben immer noch viel Spielraum offengelassen, weil sie so klar nicht waren. Sonst hätte kein Bedürfnis bestanden, auf … andere Rechtskreise, US GAAP, wie bereits erwähnt, zurückzugreifen. Oder im späteren Umfeld dann teilweise auch, hat sich IFRS quasi auch US GAAP Interpretationen quasi zu Eigen gemacht. Zwar modifiziert, aber eigentlich fast übernommen in Anführungszeichen.	was only necessary because the standard was unclear. And almost more importantly, even if this has decreased a little in recent years, that in the first years in some industries, software is part of it, they have always also used US GAAP very strongly with the justification according to IAS 8: We have no standards. We have gaps. I have to fill in the blanks. And then I see for example … especially the topic multiple elements, separation. So, you always considered US GAAP standards. So, in this respect, the standards IAS 11 and IAS 18... still left a lot of scope open, because they were not so clear. Otherwise there would have been no need to resort to... other jurisdictions, US GAAP, as already mentioned. Or in the later environment, IFRS has also adopted US GAAP interpretations. Modified, but actually almost taken over in quotation marks.
Wo sehen Sie die IFRS 15 readiness von Unternehmen zum Stand Dezember 2017 auf einer Skala von 1 bis 5? 1 bedeutet ‚Analyse nicht begonnen', 3 bedeutet ‚Analyse überwiegend abgeschlossen, aber zu großen Teilen nicht implementiert', 5 bedeutet ‚Implementierung abgeschlossen'.	*On a scale of 1 to 5, where would you see the 'IFRS 15 readiness' of companies as of December 2017? 1 means 'Rudimentary knowledge', 3 means 'Good theoretical, but less practical experience', 5 means 'Profound practical and theoretical knowledge'.*
Eine Vorbemerkung dazu: Dadurch, dass ich … seit mittlerweile zwei Jahren freiberuflich arbeite, habe ich nicht mehr das gleiche Volumen wie früher von den betreuten Mandanten her. Also insoweit rein mengenmäßig ein bisschen weniger Fälle, über die ich reden kann. Wobei ich ja immer noch auch über viele Jahre, über zwei Jahre jetzt, viele Reviews gemacht habe. Zwar nicht als Verantwortlicher, aber als Review-Partner gesehen habe. Ich würde sagen maximal auf einer … zwei … zwei bis drei maximal sehen. Dabei schließe ich das Thema Telekommunikation aus als Branche, weil, wie gesagt, da weiß ich, vom Hörensagen, ohne selber involviert zu sein, dass da die Unternehmen sehr viel weiter waren. Hintergrund ist, dass man sich in der Regel immer fokussiert hat auf die unmittelbaren Auswirkungen auf die Höhe der Umsatzerlöse und die entsprechenden Bilanzpositionen und	I would like to make a preliminary remark: Since I have been working as a freelancer for two years now, I no longer have the same volume of clients as earlier. Therefore, less cases to talk about in terms of quantity. But I still did many reviews over many years, over two years now. Not as the responsible Partner, but as a Review Partner. I would say maximum on ... two ... two to three maximum. I exclude the topic of telecommunications as an industry because, as I said, I know from hearsay, without being involved myself, that the companies were much further along. The background is that, normally, the focus has always been on the direct impacts on the level of revenues and the corresponding balance sheet items and say on the topics of presentation and disclosures: This will be done when we prepare the first disclosures. In the case of the client, who I have concretely in mind,

zu den Themen Presentation und Disclosures sagt: Das kommt dann, wenn wir den ersten Anhang machen. Bei dem Mandanten, die ich konkret vor Augen haben, sich auf gut Deutsch damit noch nicht damit befasst haben. Aber hat Auswirkungen und zwar deswegen: Ich bin in der Phase der Prognose von Geschäftsergebnissen auf Basis von entsprechenden Key Indicators. Da muss ich wissen wie hoch ist mein Umsatz und Ergebnis. Aber Disclosures kommt alles erst hinterher. Da habe ich im Prinzip keinen einzigen Fall, wo der Mandant schon, außer rein theoretisch, das Thema schon wirklich mal adressiert hatte.	they have not yet dealt with it in plain language. But it has consequences, and that's why: I am in the phase of forecasting business results on the basis of corresponding key indicators. I need to know how high my revenues and earnings are. But disclosures come after everything. In principle, I don't have a single case where the client had already really addressed the subject, except in theory.
Bitte beschreiben Sie, wie sich die IFRS 15 readiness zwischen Mai 2014 und Dezember 2017 entwickelt hat.	*Please describe how the readiness level developed from May 2014 to December 2017.*
Die Vorbemerkung mache ich jetzt: Das sind natürlich meine Erfahrungen konkret. Das muss nicht notwendigerweise allgemein-repräsentativ sein. Das ist der Charakter eines Interviews. Stetige Entwicklung würde ich sagen: Nein. Am Anfang war das alles furchtbar weit weg und, wenn man jetzt sagt: Das steht vor der Türe. Wir müssen im Zuge der Jahresabschlüsse 2017 spätestens Prognosen und Ausblicke machen für Lagebericht und alles. Dann muss man spätestens in dem letzten halben bis dreiviertel Jahr vor Jahresende, also nach dem Motto: 2016er Abschluss ist rum, jetzt fangen wir mal an … rangehen. Bis dahin war das an sich kein wirkliches Thema. Vielleicht außer dem Thema, rein akademisch, dass man mal beim Aufsichtsrat sagt: Wir haben da große Projekte, erfahrene Ressourcen, aber wirklich gearbeitet: Nein. Sondern erst jetzt, wo es sein musste. Denn, wenn ich jetzt meine Umsatzprognose abgebe, muss ich wissen: Hat es Auswirkungen? Das wurde auch dadurch getriggered, das war jetzt erstmals für den 2017er Abschluss, dass auch die Regulatoren, angefangen von der ESMA und die DPR, klargemacht haben, [ähm] … dass sie sich bei der Frage: Auswirkungen künftiger, noch nicht implementierter Standards gemäß IAS 8 nicht mit allgemeinen Formulierungen abspeisen lassen, sondern, dass man dann kurz vor Inkrafttreten schon sehr konkret wissen muss: Was kommt raus?	I'll make a preliminary remark now: These are of course my experiences in concrete terms. This does not necessarily have to be generally representative. That's the character of an interview. Constant development I would say: No. In the beginning, everything was terribly far away and if you now say: This is just around the corner. In the course of the 2017 financial statements, we must make forecasts and outlooks in the management report and so on. Then you have to start at the latest in the last half to three quarters of the year before the end of the year, according to the motto: 2016 is over, now let's get started ... Up to that time, this was not really an issue in itself. Perhaps apart from the topic, from a purely academic point of view, you might have said to the Supervisory Board: We have great projects there, experienced resources, but really worked on it: No. Just now, because it had to be. Because now, when I give my sales forecast, I need to know: Does it have an effect? This was also triggered by the fact that it was for the first time for the 2017 financial statements, that the regulators, starting with ESMA and the DPR, have also made clear that [um] ... that they do not allow themselves to be fobbed off with general formulations when it comes to the question: Effects of future, not yet implemented standards in accordance with IAS 8, but that one must then know very specifically shortly

Das war sicherlich auch nochmal Trigger. Insoweit war es, wenn sie von 2014 anfangen, eher flach die Kurve, nicht viel passiert, bis es jetzt sein musste in den letzten sechs, acht, neun Monaten vor Jahresende.	before they come into force: What is the result? I'm sure that was a trigger as well. So far, if you take a look from 2014, rather a flat curve, not much had to happen, until now in the last six, eight, nine months before year-end.
Wie muss eine IFRS 15-Implementierung aus Ihrer Sicht organisatorisch und prozessual aufgebaut sein?	*How has an IFRS 15 implementation project to be set up from an organizational and processual perspective?*
Die Theorie sagt, dass praktisch alle oder fast alle Bereiche im Unternehmen involviert sein müssen, weil eben gerade Umsatz und Top-Line auf vieles Auswirkungen hat. Dazu gehört Public Relations, dazu gehört auch Personal, Führungskräfte, [ähm] … Marketing, Vertrieb. Denn wie ich die Verträge mache, habe ich nachher Auswirkungen. Dazu gehört auch Einkauf, wenn ich entsprechende Verträge auch mache, und nicht zuletzt die Finanzabteilung. In der Praxis aber, glaube ich, ich habe die Reihe eben bewusst gewählt, von hinten her aufgezäumt. Das Projekt liegt, wenn es ein richtiges Projekt ist, was es aber auch ist, im Finanzbereich, und dort zieht man halt die notwendigen, Klammer auf, die, die sich nicht entziehen können, mit dazu. Typischerweise kommt dort meines Erachtens [ähm] neben dem Thema die reine Finanzabteilung. Das liegt auf der Hand, weil es da um den Standard und um das Reporting geht, auch um das Reporting geht später in Bezug auf Offenlegung, Disclosures, Erläuterung qualitativ oder quantitativ. Dann vielleicht den Vertrieb so ein bisschen, denn die machen die Verträge, die später abgebildet werden müssen. Wobei das branchenabhängig ist. Bei Unternehmen, die eher im Bereich Serienfertigung sind, also gar nicht so furchtbar betroffen sein werden von den Zahlen, ist es allenfalls eine Informationsabfrage, also kein intensives Involvieren. Und das zweite, da geht es auch in den Bereich der Incentivierung und Vergütung von Führungskräften, weil das ja auch oft auf Umsatz und das Wachstum indiziert ist, weil das je nach Industrie zu anderen Boni führen kann. Aber auch dann wiederum, tendenziell ist auch eher das Thema dort, wenn wir bei einem Anlagenbauer sind oder bei einem	The theory says that practically all or almost all areas in the company have to be involved, because revenues and top line have an impact on many things. This includes public relations, includes personnel, executives, [um] ... marketing, sales. Because the way I do the contracts, I have an effect later. This also includes purchasing, if I also make appropriate contracts, and last but not least the finance department. In practice, however, I think I deliberately chose the sequence the other way round. The project lies, if it is a real project, which it is, in the finance department, and that is from where you include the necessary departments, in brackets, those who cannot avoid it. Typically, in my opinion [um], besides that topic, there is the pure finance department. This is obvious, because it is all about standards and reporting, and also about reporting later on in terms of publication, disclosures, explanations from a qualitative or quantitative standpoint. Then, perhaps, sales a little bit, because they make the contracts that have to be considered later. However, it depends on the industry. For companies that are more in the serial production sector, which will not be so terribly affected by the figures, it is mostly a request for information, no intensive involvement. And secondly, there is also the area of incentives and remuneration for managers, because this is often also indicated by revenues and growth, and this can lead to other bonuses depending on the industry. But even then, it tends to be more of an issue in case we are looking at a plant manufacturer or a long-term manufacturer. Less for the serial manufacturer, because in fact not much will change.

Langfristfertiger. Weniger beim Serienfertiger, weil sich da faktisch nicht viel ändern wird.	
Inwieweit sehen Sie die Notwendigkeit, diese Projektstrukturen und Arbeitsgruppen im Rahmen der weiteren Anwendung von IFRS 15 aufrecht zu erhalten?	*To which extent is it necessary to keep the governance structure and working groups in the further process?*
Gut, also, [ähm] … am Ende ist es irgendwann abgeschlossen. Es bringt ja auch nichts, das ständig laufen zu lassen. Also abgeschlossen [ähm] … wenn ich das Management mal erwähne, also sprich, bei allem, was auch bei Standards oder bei Unternehmensbereichen, wo es gar nichts neues gibt, muss man immer wieder eine gewisse Maintenance, gewisse Checks, hat sich das Geschäftsmodell geändert, immer wieder mal wieder evaluieren, immer wieder mal haben. Aber für das Projekt, würde ich sagen, besteht die Notwendigkeit nicht. Wenn es eingeführt, implementiert und umgesetzt ist, dann wird das wahrscheinlich keine großen Effekte mehr haben. Jetzt rede ich wiederum von dem Bereich, der wohl eine Vielzahl, vielleicht eine Mehrzahl, der normalen Industrie betrifft. Wenn sie in einem Bereich sind wie … Software [ähm] … Ich weiß, dass bei der SAP, da hat die Abteilung Revenue Recognition eine zweistellige Mitarbeiterzahl oder eine höhere zweistellige Mitarbeiterzahl. Oder gehen sie in den Bereich Telekommunikation, wo die Verträge und die Vereinbarungen sehr oft individuell sind. Ein großer Anlagenbauer, der ein Kraftwerk baut, wird niemals einen Standardvertrag haben. Ein Serienfertiger oder ein kleiner Anlagenbauer, der, was weiß ich, mit kürzeren Laufzeiten oder Größen arbeitet, werden sich ja auch Verträge, Accounting-Auswirkungen irgendwann standardisieren oder harmonisieren. Bei den großen Branchen, da gehört die Telekom dazu und auch die großen Anlagenbauer, da wird es ein Dauerthema sein. Aber das war an sich bisher auch schon so, bis zu einem gewissen Grad so, weil es gibt keine zwei gleichen Projekte.	Well, [um] ... in the end, it will be finished at some point. There's no point in keeping it running all the time. So, being over [um] ... when I mention management, in other words in everything that is also standard or in business areas where there is nothing new, you always have to have a certain maintenance, certain checks if the business model has changed, again evaluate, again and again. But for the project, I would say there is no need. If it is adopted and implemented, it is unlikely to have any major effects. Now I am talking again about the area which affects a large number, perhaps a majority, of normal industry. If you are in an area like ... software [um] ... I know that at SAP, the revenue recognition department has a double-digit number of employees or a higher double-digit number. Or take a look at the telecommunications sector, where contracts and agreements are very often individual. A large plant constructor building a power plant will never have a standard contract. A mass producer or a small plant manufacturer who, whatever, works with shorter terms or sizes will eventually standardize or harmonize contracts and accounting effects. With the major industries, Deutsche Telekom is one of them and also the major plant manufacturers, it will be an ongoing issue. But that was already the case before to a certain extent, because there are no two identical projects.
Inwieweit werden die fünf Schritte im Rahmen des Fünf-Schritte-Modells des IFRS 15 in der IT-Systemlandschaft berücksichtigt?	*To what extent were the five steps from the five-step model of IFRS 15 considered within the IT system landscape?*

Also [ähm] … ich glaube, da müssen sie zwei Dinge unterscheiden, ob sie fragen: Gab es neue Module, neue Systeme? Insgesamt, glaube ich, weniger. Es gibt einen Bereich, wo man Auswirkungen sieht. Das fängt jetzt an und zwar, wenn sie in der Stufe eins sind: Habe ich einen Vertrag? Dieser allererste Schritt fordert eine Inventarisierung, die notwendig ist. Jetzt kommt der IFRS 16 ein Jahr später, aber läuft auch schon. Da hat das Thema Inventarisierung noch viel mehr Auswirkungen, weil das noch mehr Grundlage ist. Weil da viel mehr Unternehmen betroffen sind, dass sie Änderungen haben werden. Was ich sehe ist, wenn man das jetzt zusammenfasst, dass das beides zusammen genommen der Trigger ist, viel stärker in die elektronische Scan-Archivierung, Erkennungssysteme einsteigt. Nicht nur wegen IFRS 15, sondern weil ich es durch IFRS 16 sowieso brauche, mache ich es gleich richtig. Das ist der einzige Bereich, wo ich auch neuere Systeme sehe. Ansonsten wird es eher die Frage sein, im Bereich bestehender Reporting-Systeme: Welche Informationen muss ich abfragen? An welcher Stelle? Was habe ich bereits und kann entsprechend verwerten? Denn viele der Zahlen, die offengelegt werden müssen oder der Breakdown, habe ich die schon irgendwie in der Buchhaltung. Und was kommt neu dazu? Also eher nicht neue Module, sondern eher bestehende, gegebenenfalls um neue Zeilen, neue Informationen aufbohren. Nicht bei jeder Angabe, das ist auch klar. Vertragsmanagement nicht nur wegen IFRS 15, sondern gerade zusammen mit IFRS 16, weil IFRS 16 ist vom Stellenwert, zumindest meines Erachtens und wie es die Unternehmen sehen, noch viel wichtiger.	So [um] ... I think you have to distinguish between two things in that regard, whether you ask: Were there new modules, new systems? Overall, I think, rather less. There's an area where you can see effects. It starts now, when you are in stage one: Do I have a contract? This very first step requires an inventory, which is necessary. IFRS 16 comes one year later, but it is already underway. There the topic of inventory is of even higher importance, because that is even more the necessary basis. Because there are many more companies affected as they will have changes. What I see, if you summarize that, is that both taken together are the triggers, that you start much more with electronic scan archiving, recognition systems. Not only because of IFRS 15, but because I need it through IFRS 16 anyway, I rather do it comprehensively from the beginning. This is the only area where I see newer systems. Otherwise it will be more a question of existing reporting systems: What information do I need to request? At what point? What do I already have and can I use accordingly? Because many of the numbers that need to be disclosed or the breakdown, do I already have them somehow in the bookkeeping system. And what's added? In other words, it is not new modules but rather adjusting existing ones, possibly by adding new lines, new information. Not with every disclosure, that too clear. Contract management not only because of IFRS 15, but especially together with IFRS 16, because IFRS 16 is of even greater importance, at least in my opinion and as the companies see it.
Inwieweit werden durch die IFRS 15 Implementierung in Schlüsselabteilungen neue Prozessschritte implementiert bzw. Prozesse verändert?	*To what extent are new process steps implemented or processes changed in key departments due to IFRS 15 implementation?*
Wie gesagt, meine persönliche Erfahrung ist überwiegend jetzt unter dem IFRS 15 in Unternehmen, die nicht so furchtbar stark davon betroffen sind, weil sie tendenziell [ähm] … eher zeitpunktbezogen tätig sind. Da gab es kleinere Auswirkungen in Bereichen, was viele Konzernunternehmen haben, wenn	As I said, my personal experience with IFRS 15 is predominantly in companies that are not so terribly affected by it, because they tend to [um] ... are recognizing rather at a point in time. There were smaller effects in areas, which many group companies have when you think about licenses, in other

sie über Lizenzen, also Royalties nachdenken, weil sie … da unter Umständen … durchaus andere Realisierungszeitpunkte haben, was nicht immer intuitiv ist in dem Bereich. Aber das ist bei meinen Unternehmen nicht die Haupttätigkeit, sondern eher so eine Arrondierung. Ich kann mir vorstellen, außerhalb meiner eigenen persönlichen Erfahrung, bei Unternehmen, ich habe die Branchen angesprochen, Telekommunikation, Anlagenbau, dass es dort dauerhaft an sich auch Themen geben kann, also Schritte und Prozesse geben muss, die Verträge, die bisher erstmal abgeschlossen werden und dann erst relevant wurden, wenn die erste Rechnung geschrieben wurde, früher auch [ähm] … einmal vom Rechnungswesen klarer sein muss: Was steht drin? Und von denen, die die Verträge auch handeln. Da muss man enger zusammenrücken, weil zu einem früheren Zeitpunkt schon Abbildungen, Aussagen, und auch Darstellungen, auch was kommt später noch raus an Umsatzrealisierung für bereits angearbeitete Verträge? Da rutscht man enger zusammen. In den Branchen kann ich mir vorstellen, dass es solche Prozesse und Abschnitte geben muss. Klammer auf: Hätte an sich schon immer bisher sein müssen. Es war nicht selten der Fall bisher, dass das Rechnungswesen überrascht war, dass es schon Verträge gab, aber es hat dann keiner gesagt. Das ist sicherlich durch den Standard getriggert, dass man da mehr Information shared.	words royalties, because they ... because they may ... have different points in time where revenue is recognized, which is not always intuitive in this area. But this is not the main activity of my companies, but rather such an additional area. I can imagine, outside my own personal experience, at companies, I have mentioned the industries, telecommunications, plant construction, that there can also be permanent issues there, that means there must be steps and processes, the contracts that have been concluded for the first time and only became relevant when the first invoice was written, also [um] ... must be clearer in accounting: What does the contract say? And of those people who also take care of the contracts. There, the departments have to move closer together, because at an earlier point in time already illustrations, statements, and also representations, also what results as revenue from contracts already worked on? You slide closer together. In the industries I can imagine that there must be such processes and areas. In brackets: Always should have been. It has often been the case so far that accounting was surprised that contracts already existed, but then no one said it. This is certainly triggered by the standard that you share more information.
Gibt es aus Ihrer Sicht spezifische Bereiche, in welchen die Veränderungen durch IFRS 15 Schwierigkeiten bzw. auch Unverständnis hervorbringen?	*Are the specific areas where difficulties or a lack of understanding occurs due to the changes through IFRS 15?*
Also … positiv, ich rede jetzt aus meiner Erfahrung, eher nein. Weil die Frage … wenn sie in Richtung Evaluierung denken: Was bringt der neue Standard [ähm] … bei all denen jetzt, bei denen sich nicht wahnsinnig viel ändert. Da reden wir mal über ein bis zwei Prozent Umsatzverschiebung. Wir reden nicht über zehn Prozent. Da fragt man sich: Wozu das Ganze? Also ist es wirklich notwendig, hochkomplexe, sicherlich in manchen Branchen berechtigte, Dinge zu machen … wie gesagt: Wenn sie in der	Well ... positive, I'm explaining it based on my experience, rather not. Because the question ... if you think in the direction of evaluation: What does the new standard [um] … bring for all those who don't change a lot right now. Let's talk about a sales shift of one to two percent. We're not talking about ten percent. One wonders: Why all this? So it is really necessary to do highly complex things, certainly justified in some industries ... as I said: If you had a free mobile phone in the telecommunications

Telekommunikationsbranche bisher ein Handy gratis hatten … dass das Handy keinen Umsatz bringt war einfach falsch, wenn man mit ökonomischem Sachverstand rangeht. Aber, [ähm] … dass sie deswegen einen riesen Aufstand über zehn Jahre machen mit viel mehr Disclosures auch, wo ich ganz offen sage: Das haben wir im Bereich der Finanzinstrumente nach IAS 39 schon gehabt und, ich schätze mal, das ist im Bereich der Pensionen auch schon so. Da werden viele, viele Disclosures offengelegt, die einfach als Leser, ich sage es jetzt überspitzt, wenn ich darf, mich einfach nicht interessieren. Die ich überlese. Es gibt Zahlenfriedhöfe. Wenn sie sich manche Early Adopter von IFRS 15 anschauen, da sehen sie ganz viele Tabellen. Wenn sie das einfach lesen als geneigter interessierter Investor oder … Leser: Was sagt ihnen das? Das gleiche wie manche Feinheiten im Bereich von IAS 19 oder IAS 39. Das bringt nicht wirklich was. Die Gefahr besteht, ja. Noch eine Ergänzung: Wo ich mir vorstellen kann, wo es viel bringt. Gerade jetzt auch für die Öffentlichkeit, für Investoren, für den Kapitalmarkt, ist bei Unternehmen, die komplexere Geschäftsmodelle haben, weil [ähm] … die zum einen gezwungen sind, und das theoretisch auch bisher schon, aber nicht so richtig gemacht haben, dass sie ihr Geschäftsmodell, den Prozess wie sie Umsatz realisieren, deutlicher beschreiben, sodass man es auch versteht. Bisher war da nur gestanden, dass im Prinzip Umsatz realisiert wird, wenn die Gefahr übergegangen ist und [ähm] … nach Leistungsfortschritt gemacht wird. Also relativ knapp. Heute finden sie oft sehr viel aussagefähigere und deutlichere Dinge. Gerade, wenn es um Frage von Multiple Elements geht und Gewährleistungsfragen, die eine Rolle spielen, und Lizenzen, da finden sie bessere Beschreibungen qualitativer Art. Ich rede jetzt nicht von dem Zahlenfriedhof im Anhang, sondern ich rede in den Accounting Policys, wo sie jetzt mal qualitativ beschreiben und für einen kompetenten Leser nachvollziehbar beschreiben, was sie eigentlich gemacht haben. Da sehe ich einen Vorteil.	industry ... that the mobile phone does not generate any revenue was simply wrong, if one approaches with economic expertise. But, [um] ... that they are therefore making a huge project over ten years with many more disclosures, where I also say quite frankly: We have already had this in the area of financial instruments in accordance with IAS 39 and, I guess, that is also already the case in the area of pensions. Many, many disclosures are required which, simply as a reader, I exaggerate it now, if I may, simply do not interest me. Which I do not read. There are data graveyards. If you take a look at some early adopters of IFRS 15, there are many tables. If you just read it as an interested investor or... reader: What does that tell you? The same as some subtleties in the area of IAS 19 or IAS 39. There is this danger. One more thing: Where I can imagine, where it may be very positive. Especially for the public, for investors, for the capital market, at companies that have more complex business models, because [um] ... they on the one hand are forced, and theoretically already before, but have not done it, that they describe their business model, the process of realizing revenue more clearly, so that it is understood. Until now it had only been stated that in principle revenues are recognized when the risk and rewards were transferred and [um] ... is made according to the progress of performance obligations. So relatively short. Today, you often find much more meaningful and clearer explanations. Especially when it comes to multiple elements and warranty issues that play a role, and licenses, you will find better descriptions of a qualitative nature. I am not talking about the data graveyeards in the notes, but I am talking of the accounting policies, where they now describe qualitatively and comprehensibly for a competent reader what they have actually done. I see an advantage there.

Inwieweit werden Mitarbeiter im Rahmen von IFRS 15-Umstellungen gezielt für IFRS 15 geschult?	*To what extent are employees specifically trained in course of IFRS 15 implementations for IFRS 15?*
Jetzt rede ich wieder mit dem Vorbehalt, dass ich über ein paar Unternehmen spreche, wo die Auswirkungen nicht so furchtbar groß sind, und da ist die Antwort: Nein. Keine systematischen Schulungen. Im Zuge von Neuerungen insgesamt ist das ein Abschnitt wie Leasing und andere Themen auch. Aber gezielt IFRS 15-Schulungen, nein. Natürlich unter Berücksichtigung, dass ich jetzt nicht in den Branchen in den letzten zwei, drei Jahren Erfahrungen hatte, die wahrscheinlich furchtbar stark betroffen sein werden.	Now I'm talking again with the remark that I'm talking about a few companies where the effects are not so terrible, and there's the answer: No. No systematic training. In the course of overall innovations, this is a section like leasing and other topics, too. But specific IFRS 15 training courses, no. Of course, taking into account that I have not had experience in the industries in the last two or three years, which will probably be significantly affected.
Wie würden Sie die Notwendigkeit von Beratern im Zuge der Implementierung von IFRS 15 beschreiben und in welchen Bereichen können sie besonders erforderlich sein?	*How would you describe the necessity of consultants in course of the implementation of IFRS 15 and in which areas may they be of major importance?*
Auch hier kann ich nur wiedersagen: Die Antwort dem ähnelt, was ich eben schon gesagt habe. Bei den Unternehmen, die nicht gravierend betroffen sind, ich wiederhole mich, glaube ich nein. [Ähm] … Oft bespricht man dann zwischendurch mal Fragen mit seinem Abschlussprüfer, aber da kommen keine Projekte raus, die Volumen haben. Das sind vielleicht mal ein Gedankenaustausch, ein Review von Richtlinien. Da ist ein Entwurf, den schaut man sich mal an. Aber das ist eher, würde ich sagen, wenn man großzügig ist, allgemeine Betreuung eines bestehenden Mandanten. Da kommen keine Projekte, wo ich sagen muss: Ich brauche großartig Berater. Das einzige, wo ich es schon mal gesehen habe: Wenn Unternehmen gar keine Zeit haben, auch nicht, eine Richtlinie selber zu schreiben. Ich source das quasi aus, weil ich keine Zeit habe. Es ist nicht so schwierig, was da kommt in den normalen in Anführungszeichen. Da sehe ich auch keinen Bedarf für Projekte. Habe auch keine gesehen. Habe auch nicht gesehen, jetzt mal aus Sicht einer Wirtschaftsprüfungsgesellschaft gesprochen, Projekte und Honorare kreiert werden. Es gibt bestimmte große Projekte in Bereichen, wo, wie gesagt, viel umgestellt wird, viel [ähm] … Geschäftsmodelle neu evaluiert werden	Again, I can only say again: The answer is similar to what I have just said. As far as the companies are not seriously affected, I am repeating myself, I do not believe so. [Um] ... Often you discuss questions with your auditor in between, but no projects come out that have volume. This may be an exchange of ideas, a review of guidelines. There's a draft, let's have a look at it. But that is more, I would say, if you are generous, general support of an existing client. There are no projects where I have to say: I need great consultants. The only time I've ever seen it: If companies don't have time, not even to write a policy themselves. I'm kind of sourcing this out because I don't have time. It's not so difficult what comes in normal conditions in quotation marks. I don't see any need for projects there either. Haven't seen any either. Also have not seen, now spoken from the point of view of an auditing company, that projects and fees are created. There are certain large projects in areas where, as I said, much is being changed, much [um] ... business models need to be re-evaluated. Still mainly telecommunications and the large-scale plant manufacturers or media companies, yes.

müssen. Immer noch stark Telekommunikation und die Großanlagenbauer oder Medienunternehmen, ja.	
Welchen inhaltlichen Fokus haben Schulungen für Wirtschaftsprüfer oder Berater in Bezug auf IFRS 15?	*What is the focus of training for auditors or consultants with respect to IFRS 15?*
Ja gut … intern ist natürlich schon seit zwei, drei Jahren das Thema IFRS 15 ein Thema, das zwingend auch als Pflichtschulung geschult wird, ja. [Ähm] … Wobei dann in der Regel auch so zusammen mit anderen Themen. Also es ist nicht so, dass das eine Mehrtagesschulung ausmacht. Das ist, wenn es hochkommt, mal ein halber Tag im Rahmen einer Ein-, Zwei-, Dreitagesschulung und dann auch immer wieder mal. Bisher ist da eher die Fachseite im Fokus, weil von Best-Practice konnten wir bisher noch gar nicht sprechen. Und natürlich wird dann auch eher das behandelt, Mandant sagt: Ich habe keine Auswirkungen. Jetzt prüfe ich ob er keine hat. Also muss ich auch dann, wenn ich eine Erwartungshaltung habe, dass nicht viel rauskommt, ich meine … sie wissen, wie es in dem Beruf zugeht, müssen sie auch dokumentiert nachweisen, dass sie die richtigen Fragen gestellt haben und sich auch als Außenstehender selbst davon überzeugt haben, dass es eben keine wesentlichen Auswirkungen gibt. Insoweit muss man da auch alles durchdeklinieren diese ganzen fünf Schritte, auch wenn ich vom Bauchgefühl sage: Die ersten drei sind im Konkreten gar nicht relevant. Aber ich muss einfach durchgehen durch den Prozess einmal.	Yes well ... internally, of course. IFRS 15 has been a topic for two or three years now, which must also be trained as compulsory training, yes. [Um] ... However, usually also together with other topics. Well, it's not like it's a multi-day course. That is, if at all, sometimes half a day in the context of a one, two, three-day training and then again from time to time. So far, the focus has tended to be on the technical side, because we have not yet been able to speak of best practice. And of course, it is more likely to be dealt with, client says: I have no effects. Now I will check if he doesn't have any. So even if I have expectations that results will be not material, I mean ... you know how the job works, you must also prove in a documented way that you have asked the right questions and have convinced yourself as an outsider that there are no significant effects. In this respect, everything has to be considered throughout these five steps, even if I for example say from my gut feeling: The first three are not relevant at all in concrete terms. But I just have to go through the process once.
Inwieweit kooperieren Unternehmen im Rahmen der Implementierung von IFRS 15 mit Wettbewerbern?	*To what extent do companies cooperate with competitors in course of the implementation of IFRS 15?*
Also Geschäftsgeheimnis ist es nicht. [Ähm] … Austausch da, wo es relevant ist. Aber wenn ich jetzt an die Mandanten denke, die ein, zwei Prozent Umsatzveränderung haben. Für die ist es kein großes Thema. Aber wenn ich die Frage jetzt allgemeiner formuliere. Das weiß ich in anderen Bereichen auch aus eigener Erfahrung. Beim IFRS 15 eben nicht so. Leasing ist zum Beispiel auch so ein Thema. Da tauscht man sich auf	Well, it's not a trade secret. [Um] ... Exchange in areas where it is relevant. But now when I think about the clients who have a change in revenues of one or two percent. It's not a big deal for them. But if I may formulate the question more general. I know this from my own experience in other areas. Not so much with respect to IFRS 15. Leasing, for example, is one such topic. On the company side, there is a very open

Unternehmensseite sehr offen aus. Manchmal offener als man als Wirtschaftsprüfer denkt. Wir sind zur Verschwiegenheit verpflichtet. Da reden die Vorstände relativ offen über Themen in entsprechenden Kreisen, Schmalenbach-Gesellschaft oder in den entsprechenden Zirkeln, die es da gibt.	exchange taking place. Sometimes more open than you think as a Certified Public Accountant. We are bound to secrecy. The board members talk relatively openly about topics in corresponding circles, the Schmalenbach Society, or in the corresponding circles that exist.
Wie haben sich Unternehmen im Speziellen auf das Thema IFRS 15-Anhangangaben vorbereitet? Bitte nennen Sie einige Beispiele.	*How do companies specifically prepare for the issue IFRS 15 disclosures? Please provide examples.*
Also … mit dem Standard arbeitet hier keiner, weil die Standards sind ja im Prinzip nicht wirklich lesbar. Was man dabei [ähm] … Also ich sehe hier zwei Punkte, wobei die Arbeit wird teilweise erst noch kommen. Das eine ist [ähm] … es gibt ja jede Menge Anhangschecklisten nach IFRS. Also jede Menge heißt: Alle Big 4 haben welche, es gibt kommerzielle, wo man im Prinzip, die [ähm] … niedrig, vierstellige Anzahl von theoretisch denkbaren auf einer 100-seitigen Checkliste hat. Und die wird immer relativ aktuell gehalten von den Wirtschaftsprüfungsgesellschaften, von den kommerziellen Anbietern. Das heißt, da ist heute im Prinzip alles drin, was IFRS 15 fordert. Das heißt die nehmen Unternehmen und schauen, entweder unternehmensseitig im Rahmen einer Vorprüfung oder auch von Wirtschaftsprüferseite aus: Was haben die Unternehmen für Angaben bereits? Manche Angaben, die ja verlangt werden nach IFRS 15, sind ja insoweit redundant, als sie schon nach alten Vorschriften schon zu machen waren. Vielleicht an anderer Stelle, aber es ist ja nicht alles komplett neu. Wo habe ich die Informationen bereits und wo habe ich die Information noch nicht? Wenn ich sie noch nicht habe, dann kommt ein rotes Kreuz dran und dann schaue ich: Wo bekomme ich die in meinem System her? Habe ich die in meinem ERP System? Sind die Informationen schon da und muss ich sie nur erheben weltweit? Man muss ja überlegen: Disclosures müssen ja, und die meisten Unternehmen sind ja nicht nur in Deutschland tätig, weltweit erhoben, geprüft, währungsumgerechnet, verdichtet, konsolidiert werden. So wird hier die Vorgehensweise sein. Wobei auch eines ein Thema sein wird, dass man ... Hand in Hand	So ... nobody works with the standard in that regard, because the standards are, in principle, not really readable. What you [um] ... Well I see two points here, although some of the work is yet to come. The one is [um] ... there are a lot of disclosure checklists according to IFRS. Well, a lot means: All Big 4 have them, there are commercial ones, where in principle, the [um] ... low, four-digit number of theoretically conceivable ones on a 100-page checklist. And this is always kept relatively up-to-date by the auditing companies, by the commercial providers. In other words, everything that IFRS 15 requires is basically included in there today. This means that the companies take it and take a look, either on the company side as part of a preliminary audit or also from an auditor's point of view: What information do companies already have? Some disclosures, which are required under IFRS 15, are redundant as they were already required to be made under old regulations. Maybe elsewhere, but it's not all completely new. Where do I already have the information and where do I not yet have it? If I don't have it yet, then I put a red cross there and then I look: Where do I get it in my system? Do I have them in my ERP system? Is the information already there and do I just have to collect it worldwide? One has to think about it: Disclosures must be, of course, and most companies are not only active in Germany, they are collected, audited, currency converted, aggregated and consolidated worldwide. That is the procedure. However, one thing will also be an issue that one ... with regard to disclosure overload, a little simplification in the area and more materiality in disclosures, you will say

mit den vielen Feinheiten geht ja auch, im Hinblick auf Disclosure-Overload, ein bisschen Vereinfachung in dem Bereich und mehr Wesentlichkeit bei Disclosures wird man an Stellen sagen: Theoretisch ist die Information da, aber ist nicht entscheidungsrelevant und damit nicht wesentlich, lassen wir weg. Das wird sicherlich, gerade vor dem Hintergrund der Diskussion über das Thema Overload im Anhang, stärker kommen als bisher.	in places: In theory, the information is there, but it is not relevant to decisions and therefore not essential, we will omit it. This will certainly be the case more strongly than before, especially against the background of the discussion on the subject of overload in the notes.
Wie stellen Unternehmen die Vollständigkeit der Anhangangaben unter IFRS 15 innerhalb der IT-Systeme sicher?	*How do companies manage to ensure the completeness of disclosures under IFRS 15 within their IT systems?*
Der zweite Schritt wäre dann, die roten Kreuze ins Reporting Package zu übertragen. Wobei dann kommt die zweite Frage: [Ähm] … Sind das Informationen, die man zentral erheben kann? Das … oder wo ich sagen muss: Ich muss rausgehen an alle Tochtergesellschaften. Zentral erheben ist einfacher, weil da machen es die Leute, die ich sowieso kenne, zentral. Wenn ich rausgehe, muss ich über Formulare, Anweisungen, [ähm] … Schulungen, Nachverfolgung, Kontrolle nachdenken und das wird sicherlich davon abhängen wie das Rechnungswesen strukturiert ist. Unternehmen, die in dem Bereich mit Shared Service Centern arbeiten und da weiter entwickelt sind, werden es natürlich einfacher haben, weil da haben sie an ein, zwei, drei, vier Stellen die ganzen Informationen, die ganze Buchhaltung ist vorhanden, als wenn es sie jetzt dezentral aufgestellt sind. Da gibt es kein one-size-fits-all. Ich habe einen Mandanten vor meinem geistigen Auge, der das Ganze in zwei Shared Service Centern sehr kompetent, sehr verlässlich abarbeiten. Da wird es immer deutlich einfacher sein, weil da zwei, drei Leute sind, die haben alle Daten verfügbar. Andere Unternehmen, wenn sie 60 Gesellschaften oder, ich rede von den ganz großen manchmal, wenn sie von einer ABB mit 1.000 Tochtergesellschaften denken oder einer LBBW mit 2.000 Tochtergesellschaften, wenn die dezentral haben, dann wird es spannend. Und dann kommt das Thema: Dann müssen sie auch den Prüfer involvieren. Dann gibt das Aufwand. Dann müssen die auch abschichten: Wer muss denn überhaupt	The second step would be to transfer the red crosses to the Reporting Package. And then the second question comes: [Um] ... Is this information that can be collected centrally? That ... or where I have to say: I have to reach out to all the subsidiaries. Collecting the information centrally is easier, because that's where the people I know do it centrally anyway. When I reach out, I have to go through forms, instructions, [um] ... training, tracking, control and that will certainly depend on how the accounting is structured. Companies that work with shared service centres in this area and are further developed will of course have it easier, because they have all the information, the whole accounting is available in one, two, three, four places, compared to if they are decentralized. There is no one-size-fits-all. I have a client in my mind who works on the whole thing very competently, very reliably in two shared service centres. It will always be much easier because there are two or three people who have all the data available. Other companies, if you have 60 companies or, I'm talking about the very big ones sometimes, if you think of ABB with 1,000 subsidiaries or LBBW with 2,000 subsidiaries, if they would work decentralized, then it will be exciting. And then comes the topic: Then they must also involve the auditor. Then there's effort. They'll have to pile up: Who of the many small ones has to at all [um] ... deal with the subject. Where does it even become relevant? Can I pile up what I'm doing? This makes it much more complex. As far as that

von vielen kleinen überhaupt [ähm] ... an das Thema ran. Wo wird es überhaupt relevant. Kann ich abschichten was ich mache? Da wird es dann deutlich aufwendiger. Insoweit wird, wie aufwendig das sein wird, sehr stark davon abhängen wie man organisiert ist. Und eins ist auch klar: Je dezentraler ich bin, umso eher wird die Bereitschaft da sein darüber nachzudenken: Ist denn die Information, die eine Checkliste noch verlangt, wirklich material? Material im Sinne von quasi qualitativ entscheidungserheblich. Wenn die Antwort wäre: Nein, dokumentierbar nein, dann kann ich es einfach auch bleiben lassen.	is concerned, how complex it will be will depend very much on how you are organised. And one thing is also clear: The more decentralized I am, the sooner the willingness to think about it will be there: Is the information that a checklist still requires really material? Material in the sense of quasi qualitatively decision-important. If the answer was: No, documentable not, then I can just drop it.
Wie würden Sie den zusätzlichen Aufwand für Anhangangaben unter IFRS 15 im Vergleich zu IAS 11, IAS 18 und zugehörigen Interpretationen beschreiben? Bitte geben Sie hierzu zusätzliche Stunden, Kosten bzw. einen Prozentwert an.	*How would you describe the additional effort for disclosures under IFRS 15 in comparison to IAS 11, IAS 18 and related interpretations? Please provide the number of additional hours, costs and a percentage value.*
Es wird auf jeden Fall mehr Aufwand sein als früher. Vor allem, weil ich ja nicht nur über quantitative Zahlen rede. Wenn das mal eingeschwungen und im Reporting implementiert ist, bewegt sich dieser Mehraufwand gegen sehr wenig bis null. Wenn ich aber qualitativ erläutern muss und ich habe eine Reihe von Anhangangaben, die neu sind, wo ich ja wirklich nicht nur Zahlen abliefern muss, sondern auch erläutern, erklären muss, das bleibt in der Regel Handarbeit. Da wird ein gewisser Mehraufwand immer da sein. Das prozentual zu schätzen ist schon deswegen schwierig, weil es schon schwierig ist die Frage … wie aufwendig, was kostet ein Anhang überhaupt, zu machen. Nur dann können wir über prozentualen Mehraufwand sprechen.	In any case, it will be more effort than before. Especially since I'm not just talking about quantitative figures. Once this is in place and implemented in reporting, this additional effort is close to zero. However, when I have to explain in qualitative terms and I have a number of new disclosures, where I really do not only have to provide figures, but also explain them, that usually remains manual work. There will always be a certain amount of extra work. It is difficult to estimate the percentage because the question is difficult ... how expensive it is to prepare the notes. Only then can we talk about additional expenditure as a percentage.
Das IASB schreibt in IFRS 15.BC3, dass IFRS 15 die Erstellung von Abschlüssen durch die Verringerung des Umfangs der Vorschriften, auf welche sich ein Unternehmen beziehen muss, vereinfacht. Bitte kommentieren Sie dieses Statement im Rahmen eines Fazits zu dem bisher Gesagten.	*The IASB states in IFRS 15. BC3 that IFRS 15 simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. Please comment this statement with respect to the above mentioned.*
Wenn ich jetzt zunächst mal sage: Stimme ich dem zu, ja oder nein? Dann wäre meine Aussage: Nein. Stimme nicht zu. Nicht im Sinne von 100 Prozent oder 0 Prozent,	Now, if I say: Do I agree with that, yes or no? Then my statement would be: No. Don't agree. Not in the sense of 100 percent or 0 percent, black or white, but a tendency to

schwarz oder weiß, aber Tendenz eher nein. Vor dem Hintergrund: Man muss sich hier vor allem vor Augen halten: Rein akademisch ist es natürlich einfacher, einen Standard zu haben mit meinetwegen, ich weiß nicht, 200 Seiten all in gegenüber zwei Standards, IFRICs, ergänzend vielleicht nochmal die ein oder andere US GAAP Interpretation … Da ist es sicherlich deutlich [ähm] … unkomplexer, einen, wenn auch ausführlichen, umfangreichen Standard zu haben. Aussage eins. Aussage zwei in der Praxis aber: Die Unternehmen, wir reden über Konzerne, die international Tochtergesellschaften haben, wird diese Arbeit an einer Stelle gemacht, nämlich in der Konzernzentrale. Der Anwender draußen kriegt eine Accounting-Richtlinie, wo das bearbeitet wird. Wenn er die einmal hat, ist dem egal, ob dahinter zehn Interpretationen stehen, ob das eine Interpretation der Zentrale war, die das jetzt ausgelegt hat, oder ob sie auf US GAAP zurückgegriffen haben. Da gibt es eine Richtlinie, die einzuhalten ist. Auch der Wirtschaftsprüfer draußen arbeitet gegen diese Accounting Guideline, Accounting Manual und er bestätigt nicht die Richtigkeit vom Standard in dem Sinne. Also insoweit … und wenn es einmal eingespielt ist [ähm] …, dann habe ich etablierte Prozesse. Die Vereinfachung, weil ich jetzt sage: Ich schaffe die alten ab und mache einen neuen ist, wenn man völlig neu anfängt, kann man sich dem Thema einfacher nähern. Aber in der Praxis betrifft das sowieso nur die Spezialisten oder Konzernrechnungswesen, die mit dem Thema sowieso leichter umgehen als jetzt der Buchhalter draußen bei einer mittelständischen Tochtergesellschaft oder Vertriebsgesellschaft. Also die Erleichterung ist, glaube ich, nicht so sehr da. Vor allem, wenn ich ganz ehrlich bin: Wie viel wird in der Praxis, wenn es einmal dokumentiert ist, noch mit den Standards gearbeitet. Die sind nicht lesbar. Es gibt Unternehmen, die wenden IFRS an, haben aber, außer in der Konzernzentrale, keinen einzigen IFRS-Standardtext, weil die sagen: Damit kann ich sowieso nicht arbeiten. Dieses Ziel ist ein akademisches Ziel, das sich vielleicht gut anhört, aber in der Praxis ist dieses als Zielvorgabe, als Begründung, warum ich das	rather no. Against the background: One has to keep in mind here above all: From a purely academic point of view, of course, it is easier to have a standard with, if you want so, I don't know, 200 pages all in, in comparison to two standards, IFRICs, perhaps adding one or two US GAAP interpretations ... There it is certainly significantly [um] ... less complex to have one, albeit extensive and detailed, standard. Statement one. Statement two, however, in practice: The companies, we are talking about large corporations that have international subsidiaries, this work is done in one place, namely in the corporate headquarters. The user outside receives an accounting guideline where this is processed. Once he has it, he doesn't care if there are ten interpretations behind it, if that was an interpretation of the headquarters that interpreted it, or if they used US GAAP. There is a directive that must be complied with. The external auditor also works against this Accounting Guideline, Accounting Manual and does not confirm the accuracy of the standard in this sense. So as far as that goes ... and once it's worked in [um] ..., then I have established processes. The simplification, because I say now: I get rid of the old ones and make one new one, if you start from scratch, you can approach the topic more easily. But in practice, this only affects the specialists or group accounting, who deal with the subject more easily anyway than the accountant outside at a medium-sized subsidiary or sales company. So the relief is, I think, not so much there. Especially if I'm completely honest: Once documented, how much is still worked with the standards in practice? They're unreadable. There are companies that apply IFRS, but they do not have a single IFRS standard text, except at Group headquarters, because they say: I can't work with that anyway. This goal is an academic goal that may sound good, but in practice it is not terribly relevant as a goal, as a reason why I am doing that.

Thema mache, nach meiner Einschätzung nicht furchtbar relevant.	
In welchen wesentlichen oder spezifischen Bereichen gab es aus Ihrer Sicht innerhalb von IAS 11, IAS 18 und zugehörigen Interpretationen Möglichkeiten, die Umsatzzahl durch Interpretations- oder Ermessensspielräume zu beeinflussen?	*In which major or specific areas have there been opportunities for discretion through interpretation or judgment within IAS 11, IAS 18 and related interpretations from your perspective?*
Ja gut, ein Thema waren diese Multiple Elements, ja. [Ähm] … Das, was ich heute unter Aufteilung später geregelt habe, irgendwo, ich weiß nicht, im Schritt drei oder vier. Früher war es ja so: Da habe ich im Prinzip keine Regelung gehabt nach IFRS. Insbesondere in Branchen, die Lösungen anbieten, also z. B. Softwarebranche ganz prominent. Da gab es verschiedene Elemente und da ich da kaum Guidance hatte, konnte ich natürlich bei der Frage ..., und da es oftmals noch individualisierte Produkte waren, konnte ich nicht über relative Fair Values Marktpreise rechnen. Da habe ich sehr hohe Spielräume gehabt. Angefangen von einer Residualmethode. Aus US GAAP kam dann der Bereich Vendor-objective specific evidence. Da gab es sicherlich hohe Unschärfen. Wenn ich bei einem IT-Projekt sage: Wo liegt die Wertschöpfung bei Multiple Elements. Liegt die bei der Ausführung am Ende oder liegt die am Anfang in der Planung? Da konnte ich schon beeinflussen, ich unterstelle mal nicht manipuliert, aber beeinflussen. Und da habe ich dann deutlich explizitere Regelungen, Klammer auf, immer wenn diese Fragestellungen im konkreten Geschäftsmodell relevant sind.	Yes, well, one topic was these multiple elements, yes. [Um] ... What is settled today with respect to separation of performance obligations, somewhere, I don't know, in step three or four. It used to be like that: In principle, I did not have any regulation according to IFRS. Especially in industries that offer solutions, such as the software industry. There were different elements and since I had hardly any guidance there, I could of course with the question …, and since there were often still individualized products, I could not calculate market prices with relative fair values. I had a lot of room for interpretation there. Starting with a residual method. The area of vendor-objective specific evidence came from US GAAP. There was certainly a lot of blurring there. When I say in an IT project: Where is the value add of the multiple elements? Is that at the end of the execution or is it at the beginning of the planning? I could influence, I do not assume manipulate, but influence. And there I have clearly more explicit regulations, in brackets, whenever these questions are relevant in the concrete business model.
Vorherige Studien definieren die Bestimmung des Transaktionspreises, Finanzierungskomponenten, Separierung von Leistungsverpflichtungen und die entsprechende Allokation des Transaktionspreises als die wesentlichen fachlichen Herausforderungen unter IFRS 15. Inwieweit sehen Sie in diesen Bereichen Potenziale für Interpretations- oder Ermessensspielräume?	*Former studies define the determination of the transaction price for a performance obligation, financing components, separation of performance obligations and the respective allocation of the transaction price as the major technical challenges under IFRS 15. To what extent do you see potential for interpretation and judgment in those areas?*
Bei der Bestimmung des Transaktionspreises sind sie im Schritt zwei. Bei variabler Vergütung, ja. Bei variabler erfolgsabhängiger	So we actually had this fact with this criterion of over time realization and the question: What if I have no claim to [um] ... receipt of

Vergütung. Das sind immer die Beispiele, die sie ja lesen, wenn sie über Pönale oder Incentivierung reden. Da gibt es sicherlich und wir sind noch nicht bei der Aufteilung. Wir sind beim Gesamttransaktionspreis. Da gibt es sicherlich Spielräume, wobei das von der Anzahl her … sicherlich einen deutlich geringeren Prozentsatz von Unternehmen betrifft wie bei den Beispielen, die sie in der Literatur lesen. Da lesen sie immer: Wenn ich schneller fertig bin, krieg ich pro Tag so und so viel. Bei Verzögerung muss ich so und so viel bezahlen. In der Praxis ist es nicht so, dass jedes zweite Unternehmen solche Geschäftsmodelle hat, sondern das betrifft von der Anzahl her wahrscheinlich relativ wenig was den Prozentsatz angeht. Aber das ist halt eine Einschätzung. Dieselbe Einschätzung, die sie auch nach IFRS 3 haben bei Earn-Outs oder ähnlichem. Da kann man sicherlich, ich sage mal, manipulierend vorgehen in Anführungszeichen, indem ich sage: Ich bin sehr optimistisch, sehr pessimistisch, ohne, dass man es wirklich widerlegen kann. Also variable Vergütung sehe ich hier als Thema.

Das Thema Finanzierungskomponenten sehe ich weniger als ein Thema, einfach bei den heutigen Zinssätzen sowieso nicht. Es müsste sehr wesentlich sein und dann ist es auch so, dass man ... mittlerweile ist es eher Gang und Gäbe, wenn die Zahlungen groß genug sind, nicht in Finanzierungen eintritt, Vorfinanzierungen, sondern, dass man dann über entsprechende Abschlagszahlungen sehr eng dabeibleibt. Also nach dem Motto theoretisch: Ich habe einen zehn Millionen-Auftrag, finanziere den vor, werde über fünf Jahre meine Zahlungen bekommen, muss es abzinsen. Das normale Modell ist: Wenn ich einen zehn Millionen Projekt über fünf Jahre habe, dann zahle ich entsprechende Abschlagszahlungen.

Also [ähm] … bei der Separierung der Leistungsverpflichtungen zu Anfang mehr, als ich es heute sehen würde. Am Anfang waren die Horrorbeispiele: Wenn sie ein Haus bauen. Sie geben privat ein Haus in München in Auftrag. Dann haben sie [ähm] … dann haben sie ein Gewerk Kellergeschoss, ein Gewerk Erdgeschoss, ein Gewerk Innenausbau und alles das wird unterschiedlich realisiert. Da war ja am

consideration with a regular profit margin? Or the question: Do I have one or don't I have one? Because in the US, for example, this is regulated separately in each state, as there is a remuneration regulation. This has turned out to be very, very cumbersome, in order to come to a conclusion and say: Have we fulfilled the criterion, yes or no? Not so black and white. That was also a long discussion. We do not yet have a solution on how to avoid this or not, because of course you don't know... so you know what you would have to write in the contract to meet the criteria, but you don't think the customers will sign it. That was a bigger issue.

I see the topic of financing components as less of a issue, simply not at all at today's interest rates. It would have to be very material and then it is also the case that one ... In the meantime, it is more common practice for payments that are large enough, not to enter into financing, pre-financing, but rather to stay very close to it by means of corresponding advance payments. So according to the theoretical motto: I have a ten million order, pre-finance it, will receive my payments over five years, have to discount it. The normal model is: If I have a ten million project over five years, then I pay the appropriate advance payments.

Well, [um] ... for the separation of performance obligations at first more than I would see today. In the beginning, there were the horror examples: If you build a house. You commission a private house in Munich. Then you have [um] ... then you have one trade basement, one trade ground floor, one trade interior finishing and all this is realized differently. At the beginning, there was a bit of the fear, starting with reasons: When the basement is finished, do I already have my own use? When a new contractor would be in place, could he use the cellar or something similar? In the meantime, however, I think it has become clearer that they have shifted the whole thing to the argument from the customer's point of view: What is the [um] ... the summary, because he wants a solution and [um] ... and in that case, I don't want a cellar and an interior, I want a house. So, planning services, integration services and even coordination services are also an integral part, which you

Anfang so ein bisschen die Befürchtung, angefangen mit Begründungen: Wenn der Keller fertig ist, habe ich da bereits eigenständige Verwertungsmöglichkeiten? Wenn ein neuer Bauunternehmer kommt, kann er denn Keller verwerten oder ähnliches? Mittlerweile haben sie aber, was, glaube ich, deutlicher geworden ist, das Ganze dahinverlagert, dass man dem Argument aus Sicht des Kunden: Was ist die [ähm] … die Zusammenfassung, weil er eine Lösung will und [ähm] … und in dem Fall will ich nicht einen Keller und einen Innenausbau, sondern ich will ein Haus haben. Also auch Planungsleistungen, Integrations-, selbst Koordinationsleistungen integraler Bestandteil sind, die man nicht nur als Commodity sieht, die man leicht austauschen kann, sodass man glaube ich das Thema Atomisierung, was am Anfang die Sorge war, in viele Leistungsverpflichtungen, sehe ich heute eher weniger. Gibt Beispiele, die man immer wieder in den Standards liest, wie Gewährleistungen oder Customer Loyalty Programs. Das mag eher noch ein Thema sein, aber das sind sehr spezielle Punkte oder Themen. Ich glaube, die Denke und das entspricht der allgemeinen Erfahrung, wenn man aus dem Wirtschaftsleben … der Kunde möchte in der Regel Lösungen und keine Einzelleistungen. Was wollen sie kaufen? Wollen sie wirklich einen Keller und einen Innenausbau? Oder wollen sie ein Haus kaufen? Also … mittlerweile, würde ich sagen, sehe ich das sehr spezifisch geregelt. Sie müssten natürlich, bleiben wir bei meinem etwas konstruierten Beispiel, sie müssten natürlich objektiv darlegen, dass der Kunde nicht wirklich ein Haus wollte, sondern dass er die einzelnen Gewerke wollte. Da mag es Grenzfälle geben. Da mag es Grenzfälle geben bei Unternehmen. Wenn ich an eine BASF denke, bei der ich viel zu tun hatte in meinem Leben. Was ich sage ist öffentlich, ist kein Geheimnis. Die haben intern ganze Abteilungen von Architekten. Das heißt, wenn sie ein Baugewerk machen, kann ich mir mittlerweile vorstellen, dass die verschiedene Gewerke haben wollen, weil sie sagen: Die Koordination, Bauleistung, Überwachung, da haben wir unsere angestellten Architekten. Die haben Dutzende von Architekten angestellt. Das ist aber auch wieder von der	do not only see as commodities, which you can easily exchange, so that I believe the topic of atomization, which was the concern in the beginning, in many performance obligations, I see rather less today. There are examples, which one reads again and again in the standards, like warranties or customer loyalty programs. This may still be more of a topic, but these are very specific points or topics. I believe the thinking and this corresponds to the general experience when you come from the business world ... the customer usually wants solutions and not individual services. What do you want to buy? You really want a basement and an interior? Or do you want to buy a house? So ... meanwhile, I would say, I see that regulated very specifically. You, would of course, let us stick to my constructed example, you would of course have to objectively demonstrate that the customer did not really want a house, but that he wanted the individual trades. There may be borderline cases. There may be borderline cases in companies. When I think of a BASF where I've had a lot to do in my life. What I say is public, it's no secret. They have internal departments of architects. That is, if they do a building, I can now imagine that they want to have different trades, because they say: Coordination, construction work, supervision, there we have our employed architects. They hired dozens of architects. However, this is also infinitesimally small in terms of the number of cases. In the majority of cases, the customer would not want to say: I do not provide these integration services myself, but I buy them as well. And with that you have the bracket around that you actually have one performance obligation. There may be borderline cases. But when they now think plain vanilla and when you think about evaluating standards, I do not think we should look at and focus on special cases, but rather on the multitude, the critical mass. In the meantime, I see the trend to be less of a topic. [Um] ... Allocation naturally has room for interpretation. Is always the question: Do I have one or more performance obligations? If what I said earlier was correct, namely that the trend is towards one overall performance obligation rather than many small atomized

Anzahl der Fälle verschwindend klein. Das ist in der Mehrzahl der Fälle will der Kunde nicht sagen: Diese Integrationsleistungen erbringe ich selbst, sondern die kaufe ich mit ein. Und damit haben sie die Klammer darum, dass sie an sich eigentlich eine Leistungsverpflichtung haben. Da mag es Grenzfälle geben. Aber wenn sie jetzt plain vanilla denken und wenn sie über Evaluierung von Standards nachdenken, sollte man meines Erachtens nicht auf Spezialfälle schauen und darauf abstellen, sondern eher auf die Vielzahl, die kritische Masse. Da sehe ich mittlerweile den Trend, weniger ein Thema sein. [Ähm] … Allokation hat natürlich Spielräume. Ist immer die Fragestellung: Habe ich eine Leistungsverpflichtung oder mehrere? Wenn das, was ich sage, vorhin richtig war, dass der Trend dahingeht, eher eine Gesamtleistungsverpflichtung als viele atomisierte kleine, geht die Bedeutung der Allokation auch deutlich zurück. Weniger Verpflichtungen, weniger Allokation. Natürlich habe sie dort, wo sie auch mehrere Leistungsverpflichtungen haben, schon noch ein Thema. Einfach wäre es, wenn sie Marktpreise haben. Gerade da, wo sie mehrere oder viele Leistungsverpflichtungen haben ist es oft so, denken sie an Kraftwerke oder an Großprojekte, haben sie nicht unbedingt die Marktpreise, sodass sie dann doch wiederum auf Fair Values in einer anderen Kategorie angewiesen sind, also sprich auch nicht nur Mark to market, sondern eher Mark to Model-Betrachtung, also auf Kalkulation. Da gibt es sicherlich dann wiederum auch Ermessensspielräume. Wobei ich auch hier sage: Die Aufsätze oder Theorie geht ja manchmal davon aus: Da sitzt jemand, der möchte manipulieren. Der nutzt alle Spielräume aus. Im faktischen Leben muss man aber, gerade, wenn es solche Spielräume gibt, Strukturen und Prozesse schaffen, die eine gewisse Zwangsläufigkeit beinhalten, dass nicht jeder sagen kann: Oh, in dem Fall gefällt mir das nicht, ich mache es anders. Da sind dann oftmals die Vorgaben oder Abläufe verdrahtet, sodass ich nicht ausweichen kann. Ansonsten kriege ich auch unter internen Kontrollen, IKS-, Compliance-Aspekten nichts gebacken. Theoretisch … der, der am Schreibtisch sitzt, einen Fall beurteilt, kann manipulieren. Aber oft dann	ones, the importance of allocation will also decline significantly. Fewer performance obligations, less allocation. Of course, where you also have several service obligations, you already have an issue. It would be easy if you had market prices. Especially where you have several or many service obligations it is often so, think of power plants or large projects, you do not necessarily have the market prices, so that in turn you are dependent on fair values in another category, so don't just say mark to market, but rather mark-to-model consideration, in other words a calculation. There is certainly also room for maneuver in this respect. Whereby I also say here: The essays or theory sometimes assume this: There sits someone who wants to manipulate. He's taking advantage of all the discretion. In real life, however, especially when there are such discretionary opportunities, structures and processes must be created that contain a certain inevitability that not everyone can say: Oh, in that case, I don't like it, I do it differently. The specifications or processes are often connected so that I cannot avoid them. Otherwise I can't get anything done with respect to internal controls, ICS and compliance aspects. Theoretically, the person sitting at a desk judging a case can manipulate. But this often no longer is the case when a system, processes are implemented. Well, there's some discretion there. I don't see this room for maneuver in day-to-day business when I say: Yes, I can do as I please today, tomorrow, but rather when I put it on: How do I define my processes? But there is a certain volume. Especially if they have to answer the question, even if they think PPAs or something similar: Where is the added value from a company's point of view? Take a software product, a complete system with PC, with hardware, with software, with implementation, with setting it up. Is the hardware just a commodity with a margin of zero, because my intellectual performance, my added value lies in the subsequent implementation and setting it up and make it run, option 1, or is my added value in the planning and conceptual design of the project and afterwards the implementation is

nicht mehr, wenn ein System, Prozesse implementiert sind. Also da gibt es einen gewissen Spielraum. Wobei diesen Spielraum sehe ich dann weniger im Tagesgeschäft, dass ich sage: Ja ich kann jetzt nach Gusto heute so, morgen so machen, sondern eher beim Aufsetzen: Wie definiere ich meine Prozesse? Aber da gibt es ein gewisses Volumen. Vor allem, wenn sie die Frage beantworten sollen, auch, wenn sie PPAs oder ähnliches denken: Wo liegt die Wertschöpfung aus Sicht eines Unternehmens. Nehmen sie ein Softwareprodukt ein komplettes System mit PC, mit Hardware, mit Software, mit Implementierung, mit zum Laufen bringen. Liegt da die Hardware nur bei als Commodity mit einer Marge null, weil meine geistige Leistung, meine Wertschöpfung in der anschließenden Implementierung und zum Laufen bringen liegt, Variante 1. Oder liegt meine Wertschöpfung in der Planung und Konzeptionierung des Projektes und hinterher ist auch die Umsetzung nur ein Abarbeiten. Da können sie auf der Zeitachse sicherlich ... und dann über eine Allokation gewisse Spielräume haben. Aber die sehe ich deswegen, weil man das ja auch, wie gesagt, in der Praxis nicht heute so und morgen so machen kann. Konzeptionell ja.	just a process. There they can certainly have certain room for interpretation on the time axis ... and then through allocation. But, as I said, this cannot be done in practice today like this and tomorrow differently. But conceptually, yes.
Inwieweit würden Sie noch weitere kritische Bereiche in IFRS 15 im Hinblick auf wesentliche Interpretations- oder Ermessensspielräume noch ergänzen?	*To what extent would you add further critical areas of IFRS 15 with respect to major interpretation and judgment?*
Ja, also ein Bereich … wobei, da bin ich noch nicht ganz sicher, weil ich es, wie gesagt, in der Praxis erst zeigen muss. Am Anfang war ja die Rede davon: PoC ist tot. Also schlagwortartig. Dann hat sich eingespielt über die verschiedenen Regelungen: Ja, mittlerweile kann man wohl in vielen Fällen weitermachen wie bisher. Und dann ist mittlerweile auch ein Thema, dass man sagt, es [ähm] … dürfte gar nicht selten vorkommen, dass sie sogar früher Umsatz realisieren als bisher, weil sie natürlich die Reihenfolge umgedreht haben. Bisher sagen sie: Wenn die Voraussetzungen erfüllt sind für zeitraumbezogen, dann ja, und zeitpunktbezogen ist nur die Priorität zwei. Wenn sie über Frage der anderweitigen	Yes, so an area ... although, I'm not quite sure yet, because, as I said, it needs to show itself in practice first. At the beginning, there was talk of PoC being dead. Well, in a catchphrase. Then it got used to the different regulations: Yes, in many cases it is now possible to continue as before. And then, in the meantime, there is also a topic that is said to be [um] ... it is not uncommon for them to recognize revenue even earlier than before, because they have of course reversed the order. So far you say: If the prerequisites are fulfilled for over time recognition, then yes, and time-related is only priority two. If you think about the question of the alternative use or alone perhaps even prohibition of use of started

Verwertbarkeit oder alleine vielleicht sogar Verwertungsverbote von angefangenen Leistungen, können sie leichter sagen konzeptionell, da habe ich keine praktische Erfahrung: Sie kommen schneller in eine zeitraumbezogene als eine zeitpunktbezogene in Bereichen … vielleicht in Bereich Immobilien, vielleicht im Bereich Lizenzen, Softwarelizenzen, Einmallizenzen versus laufende Lizenzen. Da könnten sie in Bereiche kommen, wo sie sogar, und das war an sich nicht intendiert, früher Umsatz realisieren als bisher, weil sie einfach über das Abprüfen der Kriterien sagen: Tickmark, Voraussetzungen erfüllt, also zeitraumbezogen ... und fragen gar nicht, ob zeitpunktbezogen vielleicht richtiger wäre. Aber das ist nicht so sehr durch meine persönliche Praxiserfahrung, sondern eher von dem, was ich so bisher an Diskussionen mitbekommen habe. Wenn sie nicht im Bereich Großanlagen sind, sind sie häufig auch bei auftragsspezifischer Fertigung in modularer Bauweise. [Ähm] … Und haben sie damit schon realisiert, wenn sie sagen, VW hat das Getriebe, das sie später im Audi und auch im Touareg einbauen können, liegt am Lager, ist damit die Leistung schon erbracht? Da kann man anfangen nachdenklich zu werden. Oder kundenspezifische Serienfertigung. Oder man könnte es auch umgekehrt formulieren: Serienmäßige Auftragsfertigung über modulare Bauweise. Und es gibt in der Technik immer einen klaren Trend, soweit machbar, über Vorfertigung, über Module, über Abschnitte. Und das dann nicht mehr fertig gebaut, sondern ich in eine Vorproduktion mit anschließender Montage komme. Da könnte der Trend sein, dass es sogar in eine Richtung geht, schneller als bisher. Da fehlt mir die praktische Erfahrung bisher.	performance obligations, you can easily say conceptually, there I have no practical experience: You come faster into a revenue recognition over a period of time than at a point in time in areas ... perhaps in the area of real estate, perhaps in the area of licenses, software licenses, one-time licenses versus current licenses. There you could even, and this was not intended to be the case, recognize revenue earlier than before, because you simply say about checking the criteria: Tickmark, requirements fulfilled, that is, recognition over time … and don't even ask if recognition at a point in time may be more appropriate. But this is not so much due to my personal practical experience, but rather from what I have heard so far in discussions. If you are not in the field of large plants, you are often in the area of customer specific production in modular design. [Um] ... And have you already realized revenue when you say that VW has the gearbox that they can later install in the Audi and also in the Touareg on stock, has the performance obligation already been fulfilled? You can start to think about it. Or customer-specific serial production. Or you could put it the other way around: Standard contract manufacturing using modular design. And there is always a clear trend in technology, as far as feasible, via prefabrication, via modules, via sections. And this no longer completely finished, but coming into a pre-production with subsequent assembly. There could be the trend that it even goes in one direction, faster than before. I don't have the practical experience yet.
Inwieweit verwendet IFRS 15 „probability and uncertainty expressions“ im Rahmen zentraler Fragestellungen und wie können diese bspw. zu unterschiedlichen Interpretationen führen?	*To what extent does IFRS 15 use probability and uncertainty expressions in major issues and how can those lead to different interpretations?*
Also eher untergeordnet. Natürlich haben sie die gleichen Ermessenspielräume wie auch woanders, das war aber auch bisher schon so. Das theoretische more likely than not, 51 Prozent, ist sowieso, ich sage es jetzt etwas	Well, rather inferior. Of course, they have the same discretionary powers as elsewhere, but that was the same so far. The theoretical more likely than not, 51 percent, is anyway, I say it a little bold now, if I may, is a sham

plakativ, wenn ich darf, ist sowieso eine Augenwischerei. Scheinheilig. Ich habe Gutachten gesehen bei Mandanten, die mit einer Wahrscheinlichkeit von 51 Prozent bestimmte [ähm] … bestimmte Ausgänge prognostizieren. Das kann kein Mensch. Und in der Praxis ist es dann auch so: Im Zweifel, wenn ich sage wahrscheinlich, und ich kann, wenn ich eine subjektive Einschätzung komme, Herr Haggenmüller, kann ich nicht sagen, richtig oder falsch. Dann schätze ich halt 60 Prozent oder 70 Prozent anstatt 51 Prozent. Also das ist eher ein akademisches Thema, dass man vielleicht mal in Grenzbereichen, wenn sie wirklich in Bereichen sind in Bezug auf das Gesetz der großen Zahlen rein statistischen Erwartungen [ähm] … zugänglich sind, ja. Denken sie an Bereiche, wo ich vielleicht nicht den most likely outcome habe, sondern einen probability weighted approach. Dort kann es sein, dass es vielleicht mal eine Rolle spielt. Aber ansonsten haben sie immer den wahrscheinlichsten Wert und im Zweifel können sie nie widerlegen, wenn einer sagt: Ich schätze knapp 50 Prozent oder ich schätze 40 Prozent oder 60 Prozent, können sie nie wirklich widerlegen, wenn es jetzt nicht völlig hanebüchen oder blödsinnig ist. Deswegen, das war jetzt eine lange Antwort auf eine kurze Frage, da waren jetzt keine IFRS 15-spezifischen Besonderheiten. Das was bisher war, ist dort auch wirklich genauso vorhanden. Auch bei der Frage: Fair Value Schätzung bei der Aufteilung. Natürlich sind es Schätzungen und sie müssen auch mit Schätzungen hantieren. Aber das ist nichts Neues.	anyway. Hypocritical. I've seen reports from clients who, with a 51 percent probability, have [um] ... forecast certain outputs. No human can do that. And in practice it is also like this: In case of doubt, when I say probably, and when I come to a subjective assessment, Mr Haggenmüller, I cannot say right or wrong. Then I guess 60 percent or 70 percent instead of 51 percent. So, this is more of an academic subject that you might find yourself in borderline areas when you really are in areas relating to statistical expectations [um] ... accessible, yes. Think of areas where I may not have the most likely outcome, but a probability weighted approach. It may play a role there. But otherwise, they always have the most probable value and in doubt you can never refute if someone says: I estimate just under 50 percent or I estimate 40 percent or 60 percent, you can never really refute if it is not completely outrageous or stupid. Therefore, that was a long answer to a short question, there were no special features specific to IFRS 15. What has been there so far is really there as well. This also applies to the question of fair value estimation in the allocation. Of course, there are estimates and you also have to deal with estimates. But that's nothing new.
Inwieweit beherbergt IFRS 15 wesentliche Hebel für gezielte Gestaltung?	*Where do you see the major levers for discretion within IFRS 15?*
Da habe ich zwei Antworten [lacht]. Die eine Antwort ist: Nein. Weil eins setzt sich immer mehr durch. Das sehen sie auch ganz stark, wenn sie in den Bereich Leasing gehen. Das ist kein IFRS 15-spezifisches Thema. Ich mache einen Vertrag nicht nur wegen Accounting. Also: Wenn ich einen bestimmten Vertrag habe, der gut ist, dann ändere ich den nicht nur wegen dem Accounting ab, damit ich vielleicht früher Umsatz zeigen kann. Gehe ich damit keine Risiken ein. Paradebeispiel:	I have two answers. The one answer is: No. Because one thing is getting more and more popular. You also see this very strongly when you take a look into the leasing area. This is not an issue specific to IFRS 15. I don't make a contract just for accounting reasons. So: If I have a certain contract that is good, then I do not only change it because of the accounting, so that I can perhaps recognize revenue earlier. I'm not taking any risks with it. A prime example: I can

Ich kann Umsatz dann zeigen, ich mache es jetzt ein bisschen nicht ganz präzise, wenn sie für bestimmte Gewerke eine Abnahme gemacht haben. Mit der Abnahme beginnen auch Gewährleistungsfristen zu laufen. Die werden einen Teufel tun, die Verträge zu ändern und mir Risiken ins Haus zu holen, bevor ich abarbeiten konnte, nur, um Umsatz zu zeigen. Dann ist es halt so. Oder nehmen sie nochmal das Thema Leasing. Man sagt auch: Der einfachste Weg rauszukommen ist, die Grundmietzeit zu kürzen. Einfach eine Reihe von Kurzläufern machen. Dann würde der Mandant jedoch sagen: Moment mal, wenn ich bisher eine zehnjährige Grundmietzeit für einen guten Standort in der Fußgängerzone von München habe, dann nicht wegen dem Accounting, sondern weil ich mir den Standort sichern will. Ich geh jetzt nicht als Accounting-Gründen da hin, verkürze die Laufzeit, um später das Leasing wieder als short term off-balance zu kriegen. Also da gibt es eine klare Tendenz. Ich habe aber auch gerade einen konkreten Fall gesehen, wo man, ich würde jetzt fast manipulativ nennen, gesagt hat: Ich habe die Verträge insoweit geändert, das, was ich jetzt aber sage, ist nicht IFRS 15-spezifisch, indem ich einmal über die Frage bill and hold nachdenke und indem ich darüber nachdenke, ob ich die Incoterms verändern will. Damit kann ich um den Stichtag herum, indem ich einfach meinetwegen von [ähm] … Free on Board auf Ex Works gehe, kann ich zum Beispiel vielleicht bei einer Woche, zwei, Lieferzeit, wenn das verschippert wird, auf einen anderen Kontinent, schon Umsatz pushen oder verschieben. Das habe ich jetzt gerade vor Kurzem beim Mandanten gesehen. Die machen auch mit bill and hold-Vereinbarungen, was dem ersten widerspricht, was ich gerade gesagt habe. Natürlich, mit bill and hold als auch mit Incoterms sind ja auch Gefahrtragungsaspekte verbunden. Das ist aber kein IFRS 15-spezifisches Thema. Speziell IFRS 15 sehe ich hier nicht. Am Anfang war mal in Diskussion, ob ich zum Beispiel durch reine Vereinbarungen, wie eine angefangene Leistung darf nicht weiterverwertet werden, also ein rechtgeschäftliches Verwertungsverbot, alleine deswegen schon in eine	recognize revenue, I do it now a little less precise, if you have made an acceptance for certain trades. Warranty periods shall also commence upon acceptance. They'll would never change the contracts and bring risks into my company before I could work off, just to recognize revenue. Then that's the way it is. Or take the subject of leasing again. You also say: The easiest way to get out is to shorten the basic rental period. Just make a series of short runners. But then the client would say: Wait a minute, if I have a ten-year basic rental period for a good location in the pedestrian zone of Munich, it is not because of accounting, but because I want to secure the location for myself. I am not changing that for accounting reasons, shortening the term in order to move the leasing off-balance due to the short-term contract. So, there is a clear tendency. But I have also just seen a specific case where, I would almost call it manipulative, people have said: I have amended the contracts to that extent, but what I am now saying is not IFRS 15-specific, by thinking about the question of bill and hold and by thinking about whether I want to change the Incoterms. That way I can get around the financial reporting date by just going from [um] ... Free on Board to Ex Works, I can, for example, perhaps at one week, two, delivery time, if this is shipped to another continent, already push or shift sales. I saw that at one client just a short while ago. They also make bill and hold agreements, which contradicts the first thing I just said. Of course, with bill and hold as well as with Incoterms, risk bearing aspects are concerned. However, this is not an issue specific to IFRS 15. I do not see IFRS 15 in particular here. At the beginning, there was a discussion as to whether, for example, I could enter into a recognition over a period of time discussion on the basis of pure agreements, such as a commenced service, in other words a legal ban on exploitation of a started performance obligation. In the meantime, however, the opinion has become generally accepted: If it has no substance, even a purely formal agreement does not help to fulfil the criteria. I do not believe that IFRS 15 has given rise specifically to any practice-relevant new

zeitraumbezogene Diskussion reinkomme. Mittlerweile hat sich aber eher die Meinung durchgesetzt: Wenn es keine Substance hat, hilft auch eine reine formelle Vereinbarung nicht, um damit die Kriterien zu erfüllen. Ich glaube, dass sich durch den IFRS 15 hier spezifisch keine praxisrelevanten neuen Spielräume ergeben haben über die allgemeinen, ich hatte die Beispiele genannt, hinaus.	scope beyond the general scope I had given the examples.
Wie würden Sie die Möglichkeit des Gestaltungsspielraums unter IFRS 15 im Vergleich zu IAS 11, IAS 18 und zugehörigen Interpretationen beschreiben?	*How would you describe the level of discretion possible under IFRS 15 compared to IAS 11, IAS 18 and related interpretations?*
Sie fragen ja nicht nach der absoluten Wahrheit, sondern nach Einschätzungen. [Ähm] … Also meine Einschätzung … ist: Wenn sie heute bei null anfangen, dass sie bei IFRS 15, weil sie mehr Regelungen explizit geregelt haben als früher, Stichworte unklare Begriffe, mehrere Standards, mehr Interpretationen notwendig, andere Standardsetter. Heute haben sie alles versucht zu regeln. Insoweit … ist das sicherlich … besser, weil ich, wie gesagt, einfach mal aufgeräumt habe. Wenn sie es für die Praxis sagen, ob es große Auswirkungen hatte, ich glaube vieles, was man jetzt unter IFRS 15 vielleicht macht, war bisher schon ein Thema, wurde aber aufgrund der Unschärfe von HGB kommend, über die verschiedenen Standards nicht wirklich wahrgenommen. Ich könnte jetzt plakativ sagen: Meine Erfahrung bezieht sich auf viele Umstellungsprojekte von HGB auf IFRS, weil viele der Effekte keine HGB auf IFRS-Differenzen waren, sondern praktisch HGB auf richtiges HGB und dann kommt IFRS oben drauf. Insoweit glaube ich nicht, dass jetzt IFRS 15 der große Wurf ist, dass wir dort alles anders machen als bisher und alles grundsätzlich viel sauberer haben. Wir haben einfach, ich glaube, mit allerdings viel Aufwand, wo man nach der Berechtigung fragen könnte, einfach mal [ähm] … praktisch eine Großreinigung gemacht in dem Bereich und einfach eine neue Basis gelegt, die sich aber in der Praxis, wiederum von einigen Branchen und Disclosures abgesehen, gar nicht so furchtbar auswirken werden. Deswegen meinte ich auch. Sie kennen aus früheren Aufsätzen noch Schlagworte, die da	You're not asking for the absolute truth, but for assessments. [Um] ... Well, my assessment ... is that if you start from scratch today that you have explicitly regulated more regulations than before through IFRS 15, keywords are unclear terms, several standards, more interpretations necessary, other standard setters. Today, you tried to fix everything. In this respect ... this is certainly ... better, because, as I said before, I simply cleaned up. If you say in practice whether it has had a major impact, I believe that much of what is now perhaps being done under IFRS 15 has already been an issue, but due to the blurriness of the HGB, it was not really perceived via the various standards. I could say boldly now: My experience refers to many conversion projects from HGB to IFRS, because many of the effects were not HGB to IFRS differences, but practically differences by HGB to the right HGB and then IFRS comes on top. In this respect, I do not believe that IFRS 15 is now the big deal, that we are doing everything differently than before and that everything is basically much cleaner. We just, I think, with a lot of effort, where you could ask for the legitimacy, just [um] ... practically a large-scale cleaning made in this area and simply laid a new basis, which in practice, however, apart from some industries and disclosures, will not have such a terrible effect. That's why I thought You know catchwords from earlier essays, for example: Old wine in new tubes.

vorkamen, zum Beispiel: Alter Wein in neuen Schläuchen.	
Auf welche Dokumente bzw. Dokumentationen legen Sie ein spezielles Augenmerk bzw. erachten Sie für besonders wichtig?	*On which documents or documentation do you specifically focus on or do you think are of major importance?*
Gut [ähm] … Accounting Guideline zum einen, aber auch die Frage: Wie ist der Prozess aufgesetzt? Nur eine Guideline. Ich mache ich hier eine tolle Guideline. 300 Seiten oder bei Großkonzernen 2.000 Seiten und schicke ich die raus. Dann beachtet die grundsätzlich überhaupt keiner. Also ich schaue mir den Prozess an. Die muss auch ankommen und gerade beim erstmaligen, … wenn es keine Veränderung gibt, dann ist es für die Fläche nicht mehr interessant. Wenn es Veränderungen gibt: Wie stelle ich sicher, dass sie ankommen? Dass dann in gewisser Weise Schulungen, Informationen erfolgen. Dass sensibilisiert wird dafür. Dass im Rahmen der Prüfung lokal dann gezielt darauf geschaut und geprüft wird, ob es eingehalten wird. Ich glaube, da ist der Prozess relevant, wie es aufgesetzt wird. Wenn beim Prozess rauskommt, es gibt keine Veränderungen oder keine wesentlichen Veränderungen, dann bleibt die Guideline ja auch im Prinzip unverändert. An sich liegt hier die Hauptarbeit lange vor der Prüfung beim Konzernabschlussprüfer in der Zentrale.	Well, [um] ... Accounting Guideline on the one hand, but also the question: How is the process set up? Just a guideline. I set up a great guideline. 300 pages or 2,000 pages for large corporations and I send it out. Then basically nobody pays any attention to it. So I look at the process. It has to arrive, and especially at the first, ... if there is no change, then it is no longer interesting. If there are changes: How do I make sure they arrive? That then, in a certain way, training, information takes place. Making people aware of it. In the course of the audit, we then take a targeted look locally to see whether it is being complied with. I think the process is relevant, the way it is set up. If the process shows that there are no changes or no significant changes, then the guideline remains basically unchanged. In itself, the main work here lies at the Group auditor at headquarters long before the audit.
Das IASB schreibt in IFRS 15.BC3, dass IFRS 15 Inkonsistenzen und Schwachstellen vorheriger Standards beseitigt und einen robusteren Orientierungsrahmen liefert, um Umsatzrealisierungssachverhalte zu adressieren. Bitte kommentieren Sie dieses Statement im Rahmen eines Fazits zu dem bisher Gesagten.	*The IASB states in IFRS 15.BC3 that IFRS 15 removes inconsistencies and weaknesses in previous revenue recognition requirements and provides a more robust framework guidance that would be useful in addressing revenue recognition issues. Please comment this statement with respect to the above mentioned.*
Also konzeptionell ... bis zu einem gewissen Grad: Ja. Aber allein aufgrund des Tatbestandes, dass ich jetzt wieder einen Standard habe, wo alles drin ist. Ja … wenn sie allerdings manche Feinheiten haben, das sage ich jetzt mal mit leichtem Augenzwinkern, verstehe ich die manchmal nicht, wenn ich sie gelesen habe. Ich bin nicht sicher, ob sie schon sagen können, wenn sie den Standard gelesen habe jede Zeile	So conceptually ... to a certain degree: Yes. But simply because of the fact that I now have a standard again where everything is in it. Yes ... but if they have some subtleties, I say this with a slight wink, I sometimes do not understand them when I read them. I'm not sure if you can already say if you’ve read the standard, understand every line what is meant by that. I don't know if I would believe you if you said that, I don't expect an answer

verstehen, was gemeint ist damit. Ich weiß nicht, ob ich ihnen glauben würde, wenn sie das behaupten, ich erwarte keine Antwort jetzt, aber sie wissen was ich meine. Manchmal hat man dann aber auch zu viel zu feinjustiert entsprechend geregelt. Es gibt Bereiche, die ich gut finde, dass die geregelt sind. Das ganze Thema: Habe ich einen Vertrag? Das ganze Thema: Bewusstsein für Multiple-Elements. Bewusstsein oder Regelungen für die Aufteilung. Was ich auch gut finde ist das Thema Principle Agent, was bisher eher so eine Grauzone war. Das wären Dinge die besser sind. Manche andere aber nicht unbedingt. Also gemischte Antwort: Bis zu einem gewissen Grad ja, aber 100 Prozent alles erreicht? Teilweise ein bisschen über das Ziel hinausgeschossen.	now, but you know what I mean. Sometimes, however, you have adjusted too much too finely. There are areas I like that are regulated. The whole topic: Do I have a contract? The whole topic: Awareness of multiple elements. Awareness or regulations for the separation of performance obligations. What I also like is the topic Principle Agent, which has been such a grey area before. These are things that are better. Some others, however, are not necessarily. So, mixed answer: To a certain extent yes, but 100 percent everything achieved? Partially a bit overshot the target.
Man sagt, dass insbesondere drei Branchen, Telekommunikation, Software und Immobilien durch die Einführung von IFRS 15 betroffen sind. Inwieweit ist das aus Ihrer Sicht korrekt?	*It is said that especially three industries, telecommunications, software and real estate, are impacted through the introduction of IFRS 15. To which extent is that correct?*
Ja.	Yes.
Inwieweit sind aus Ihrer Sicht noch andere Branchen signifikant betroffen?	*To what extent are other industries significantly impacted?*
Ja, also Branchen ja … wo es noch Auswirkungen noch geben kann, wobei da habe ich noch nicht unbedingt die große praktische Erfahrung, ist im Bereich Big Pharma, also sprich, wenn es um Forschungskooperationen geht. Kooperationen [ähm] …, die dann oft zwei-, dreistellige Millionenbeträge, Kostenbeiträge, F&E-Entwicklungen. Stehen da dann Leistungen dahinter oder ist nur cost sharing? Das ist ein Bereich … da bin ich aber nicht sicher, ob es Auswirkungen gibt. Das könnte ein Bereich sein, wenn sie mich konzeptionell fragen, wo man genauer hinschauen muss. Also sprich der ganze Bereich von … den finden sie häufig im Bereich von Pharmaindustrie, Forschungs- und Entwicklungskooperationen.	Yes, well, industries yes ... where there may still be effects, although I do not necessarily have the great practical experience, is in the field of big pharma, when it comes to research cooperations. Cooperations [um] ..., which are then often in the double or triple-digit millions, cost contributions, R&D developments. Are there services behind it or is just cost sharing? That's one area... but I'm not sure there are any effects. This could be an area if you ask me conceptually where to look more closely. So, the whole area of ... you often find it in the area of pharmaceutical industry, research and development cooperations.
Können Sie im Rahmen von Beispielen unter Angabe der Branche Umsatzbewegungen	*Could you please provide examples for revenue changes due to the introduction of IFRS 15?*

durch die Einführung von IFRS 15 quantifizieren?	
Also [ähm] … da wurde ja lang genug nachgebessert im Standard. Bis hinauf zu solchen Fragen, dass man [ähm] … Wertberichtigungen nicht mehr im Umsatz kürzt, sondern doch in die Kosten nehmen kann unter bestimmten Voraussetzungen, dass man PoC nicht totgemacht hat. Also da ist lang genug gebastelt werden. Bis auf die genannten Branchen würde ich das so bejahen.	Well, [um] ... the standard has been improved long enough. All the way up to questions like that ... value adjustments are no longer reduced in revenues, but can be included in costs under certain conditions, that PoC has not been killed. Plenty of time was used to build it. Except for the industries mentioned, I would say yes.
Inwieweit sehen Sie die Notwendigkeit, Kennzahlensysteme aufgrund von IFRS 15 grundlegend zu überarbeiten, sprich Kennzahlen zu verändern, neu zu schaffen bzw. zu streichen?	*To what extent to you see the necessity to radically revise KPI systems because of IFRS 15, i.e. to change, create new or delete KPIs?*
Nein, wiederum mit den vorher gemachten Branchenvorbehalten. In bestimmten Branchen ja. Also eine Telekom muss anders rangehen als bisher. Ich glaube nicht, dass sie andere Kennzahlen brauchen als bisher. Ich glaube, dass die Interpretation von Kennzahlen eine andere ist als bisher. Also für jemanden, der Kennzahlen rechnet, ist das alles das Gleiche wie bisher. Ob sie jetzt über Umsätze, EBITDA, Segmente reden … nur sie müssen Interpretation und damit die Historie und die Interpretation im Zeitablauf, im Zeitvergleich, da müssten diese Unternehmen Erziehung, in Anführungszeichen, bei Analysten und Kapitalmarkt betreiben. Aber das Thema haben sie auch zum Beispiel massivst, wenn sie an das Thema Leasing jetzt denken. Das ist hier nicht das Thema, aber die Frage ist exakt die gleiche. Die Eigenkapitalquote wird ceteris paribus sinken. Ceteris paribus. Brauche ich deswegen eine andere Definition vom Eigenkapital? Ich könnte mir jetzt vielleicht gesponnen vorstellen, dass ich meine Eigenkapitalquote bereinigt um Leasing mache, aber das halte ich für Blödsinn. Da wird eher das Thema sein, dass man sagen muss: Wenn bisher 20 Prozent normal waren über die Benchmarks, sind es vielleicht jetzt noch 18 Prozent, die normal sind. Also eher diese erzieherische Leistung. Und wenn sie jetzt über den Umsatz und auch die Umsatzentwicklung und damit auch an die Planung und Prognosen denken, dann hat	No, again with the previously made remarks on industries. In certain industries, yes. So, Telekom has to take a different approach than before. I don't think they need different metrics than before. I believe that the interpretation of key figures is different than before. So for someone who calculates key figures, it's all the same as before. Whether you are now talking about revenues, EBITDA, segments ... you only have to interpret and thus the history and the interpretation over time, in time comparison, these companies would have to educate, in quotation marks, analysts and the capital market. But you also have this topic on a massive scale, for example, when you think of the subject of leasing now. That is not the issue here, but the question is exactly the same. The equity ratio will decrease ceteris paribus. Ceteris paribus. Do I therefore need a different definition of equity? I could imagine now, perhaps spun, that I would adjust my equity ratio for leasing, but I think that is nonsense. It's more of a subject that it needs to be said: If so far 20 percent were normal as a benchmark, perhaps now it is still 18 percent that are normal. This is rather educational achievement. And if you now think about revenue and revenue development, and thus also about planning and forecasts, then of course a telecom says [um] ... so far: The mobile phones did not generate any revenue when a contract was signed, revenue was recognized later. This

natürlich eine Telekom, die bisher [ähm] … sagt: Die Handys haben beim Abschluss eines Vertrages keinen Umsatz gebracht, Umsatz kam später. Das ist jetzt bereits alles verfrühstückt, weil sie das Handy entsprechend mit dem fair value bewerten müssen. Dann kriegen sie am Anfang mehr, später weniger Umsatz. Das hat natürlich Auswirkungen auf Prognosen und Wachstums-Stories.	is all done now, because you have to value the mobile phone accordingly with the fair value. Then you have higher revenue at the beginning and less later. This of course has an impact on forecasts and growth stories.
Inwieweit wird sich der Umfang der Anhangangaben unter IFRS 15 im Abschluss im Vergleich zu den vorherigen Anforderungen unter IAS 11, IAS 18 und zugehörigen Interpretationen verändern?	*To what extent will the extent of disclosures change under IFRS 15 in financial statements in comparison to previous requirements under IAS 11, IAS 18 and related interpretations?*
Also, ich glaube, es wird, zunächst mal ceteris paribus, mehr Angaben geben. Mehr Angaben einfach, weil … einiges an Mehrangaben gefragt wird. Ob das kompensiert wird, dass ich woanders ein bisschen kürzen kann, weiß ich nicht. Dazu kommt auch eines: Die Bereiche Umsatz waren, wenn ich die ganz Großen mal rausnehme, bisher schon eine Schwachstelle bei Regulatoren, wenn man sagt: Die Erläuterungen zum Thema Umsatzrealisierung sowohl als Accounting-Policy als auch dann Erläuterungen waren … knapp. Knapp, um nicht zu sagen: Zu knapp. Und wenn ich jetzt, ich hätte vorher schon mehr machen müssen, wenn jetzt aber auch verlangt wird, dass ich mehr mache, und man schaut als Regulator drauf, wird da auch mehr kommen. Ich erwarte aber keinen Quantensprung von 20 Seiten zusätzlich, aber es wird schon mehr geben. Wird auch ein bisschen davon abhängen, ob Unternehmen, was ich befürworten würde, mehr tabellarisch offenlegen, oder ob sie die ganzen Zahlen mehr im Fließtext machen. Fließtext ist viel schwerer zu lesen, muss ich auch mehr schreiben, als eine intelligente Tabelle.	Well, I think there will be, for now, ceteris paribus, more disclosures. More information simply because ... some additional information is requested. Whether this will be compensated for, that I can cut a little somewhere else, I do not know. In addition to this, there one thing: When I take out the really big ones, the area of revenue recognition was already a weak point of regulators when you consider: The explanations on the topic of revenue recognition both as an accounting policy and then explanations were ... short. Short, not to say too short. And if now, I should have done more before, but now there is also a demand for me to do more, and you look at it as a regulator, more will come. But I don't expect a quantum leap of 20 extra pages, but there will be more. Will also depend to some extent on whether companies, which I would support, disclose more in tabular form or whether they make the integers more in continuous text. Continuous text is much harder to read, I also have to write more than an intelligent table.
Das IASB schreibt in IFRS 15.BC3, dass IFRS 15 die Vergleichbarkeit der Umsatzrealisierungspraxis verbessert und Adressaten von Abschlüssen nützlichere Informationen durch verbesserte Anhangangaben zur Verfügung stellt. Bitte kommentieren Sie dieses Statement im	*The IASB states in IFRS 15.BC3 that IFRS 15 improves comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets and provides more useful information to users of financial statements through improved disclosure requirements. Please*

Rahmen eines Fazits zu dem bisher Gesagten.	*comment this statement with respect to the above mentioned.*
Vergleichbarkeit würde ich sagen … jetzt wiederum im Sinne von schwarz-weiß: Nein, nicht unbedingt. Es mag Aspekte geben, aber nicht, dass ich das sehe. Bessere Informationen: Ja, insbesondere durch den Bereich, dass ich jetzt an sich überhaupt den Umsatz mehr erläutere, wie Umsatz gelegt wird. Selbst ein großer Anlagenbauer hat bisher nur gesagt: Wir machen nach Leistungsfortschritt. Wie messe ich den? Da sehen sie sicherlich, auch bei manchen Frühanwendern, die man gesehen hat, wird da lieber mehr geschrieben. Auch, wenn man interessiert ist daran: Wie macht denn ein Unternehmen seinen Umsatz? Dass das einfach deutlicher ankommt. Ich beziehe bessere Informationen auf den qualitativen Teil. Ob die Zahlenfriedhöfe, die jetzt verlangt werden, wirklich zielführend mehr bringen. Ganz ehrlich: Bin ich nicht davon überzeugt.	Comparability I would say ... now again in the sense of black and white: No, not necessarily. There may be aspects, but not that I see them. Better information: Yes, especially by the fact that I am now explaining revenues more in general about how revenues are generated. Even a large plant manufacturer has so far only described: We recognize revenue based on the progress of performance obligations. How do I measure it? As you can see, even with some early adopters that you have seen, they prefer to write more there. Even if you are interested: How does a company generates its revenue? That this simply more clearly now. I refer better information to the qualitative part. Whether the data graveyards, which are now demanded, really bring more results. Honestly, I'm not convinced.
Welche wesentlichen Bereiche von IFRS 15 müssten bzw. könnten aus Ihrer Erfahrung heraus verbessert werden?	*Based on your experience, which major areas of IFRS 15 would or could require improvements?*
Ich habe keine ganz spezifischen Bereiche. Ich finde es teilweise nur immer noch [ähm] … übermäßig komplex geschrieben auch. Vielleicht könnte man ein bisschen mehr … es gibt da Standards, die sind da deutlich anders … über Standards und dann auch … auch Basis for Conclusion und dann noch über andere Implementation Guidance ein bisschen mehr strukturieren. Wenn Leute auch nur einmal darauf schauen sind sie fast gleich verloren im Detail, was es schwierig macht und im Prinzip fast nur Spezialisten lesbar. Das mag jetzt eine Anmerkung sein, auch für andere Standards, wenn sie zum Beispiel an IFRS 9 denken. Gerade der IFRS 15 [ähm] … fehlt ein bisschen so die gefühlte Executive Summary für manche Bereiche. Aber das ist eher subjektiv was ich sage.	I don't have specific areas. I still find it partly just [um] ... written excessively complex. Maybe you could do a bit more ... there are standards that are clearly different ... to structure a bit more, all the standards and then also ... the Basis for Conclusion and then add other implementation guidance. When people take a look once they are almost immediately lost in detail, which makes it difficult and in principle almost only readable for specialists. This may now be a comment, also for other standards, for example, if you think of IFRS 9. Especially IFRS 15 [um] ... lacks a bit of the felt executive summary for some areas. But that's more subjective of what I'm saying.
War es notwendig, den umfassend neuen IFRS 15 einzuführen oder denken Sie, dass eine Modifikation von IAS 11, IAS 18 und zugehörigen Interpretationen ausreichend gewesen wäre?	*Was it necessary to introduce the entirely new IFRS 15 or do you think a modification of IAS 11, IAS 18 and related interpretations would have been sufficient?*

War es notwendig ihn einzuführen? Grundsätzlich nein. Was man durchaus hätte machen können, vielleicht auch machen sollen, die bestehenden Standards überarbeiten. Vielleicht um branchenspezifische Standards … es gibt ja auch nach IFRS den ein oder anderen Aspekt in dem Bereich, gerade für besonders betroffene Branchen klarer zu stellen, dass da nicht völlig freie Wildbahn herrscht. Aber ansonsten weiß ich nicht, ob es notwendig war, alles auf neue Beine zu stellen, was auch relativ viel Aufwand gemacht hat und im Prinzip 10 Jahre gedauert hat. Also wenn sie mich fragen und ich müsste ankreuzen: War es notwendig? Ja oder nein, dann würde ich sagen: Nein es war nicht notwendig. Wenn ich als Unterfrage sage: War es überhaupt nicht notwendig, würde ich sagen: Nein. Viele der Gedanken sind schon gut. Gerade zum Beispiel dieses Prinzipal-Agent, solche Themen. Die sind schon … die gab es bisher fast gar nicht. Die sind schon deutlich geworden. Dass man vieles auch explizit aufschreibt. Auch, dass ich die Accounting Policy klarer treten muss. Wie schreibt man es jetzt auf? Hätte der alte Standard das auch schon hergegeben, wenn ich eine entsprechende Enforcement gemacht hätte, natürlich. Insoweit dadurch einen neuen Standard habe, der im Blickpunkt steht, der stärker enforced wird, manche Sachen erreiche, die ich auch durch ein reines Anwenden der alten Standards hätte erreichen können. Beispiel: Eine aussagefähige Accounting Policy im Bereich Umsatzrealisierung.	Was it necessary to introduce it? Basically, no. What could have been done, and perhaps should have been done, is to revise the existing standards. Perhaps to have industry-specific standards ... there are one or two aspects in this area under IFRS, make them clearer, especially for particularly affected sectors, that there is no not guidance. But otherwise I don't know if it was necessary to put everything on a new basis, which also made a lot of effort and in principle took 10 years. So if you ask me and I have to cross: Was it necessary? Yes or no, then I would say: No it wasn't necessary. If I answer the sub-question: Was it not necessary at all, I would say: No. Many of the thoughts are good. This principal agent, for example, such topics. They're already... they hardly ever existed before. They have become clear. That many things are also written down explicitly. Also, that I need to clarify the accounting policy. How do you write it down? Would the old standard also have been capable of providing for it, if I had enforced it, of course. As far as I have a new standard in focus, which is enforced more, some things can be achieved, which I could also have achieved by simply applying the old standards. Example: A meaningful accounting policy for revenue recognition.

Appendix 7: NVivo 12 coding scheme for qualitative analysis

Name	Files	References
Changes through IFRS 15		
Internal controls	11	14
IT systems	15	60
Processes	14	47
Reporting Package	11	21
Combine business and technical know-how		
Communication	7	8
Questionnaire	6	11
Use cases	2	4
Complexity of IFRS 15		
Scope of IFRS 15	13	38
Technical errors	3	5
Theoretical construct	5	11
Wording of IFRS 15	13	24
Conversion method		
Fully retrospective	3	3
Modified retrospective	3	3
Education of stakeholders		
Training	15	29
External resources		
Auditors	15	81
Consultants	15	26
Cooperation	15	20
Five-step model application		
Allocation of transaction price	13	21
Alternative use	10	41
Construction contracts	7	16
Contract combination	6	11
Contract costs	3	6
Definition of a contract	6	11
Definition of the customer	6	13
Determination of transaction price	13	23
Financing components	13	15
Input or output factors	2	4
Multiple-element arrangements	8	26
Nomination fees	3	7

Name	Files	References
Progress of performance obligations	6	8
Return obligations	6	8
Revenue recognition	7	10
Separation of performance obligations	14	47
Service (components)	6	16
Stand-alone selling price, market price	11	21
Useful life	1	1
Variable consideration	10	27
Warranty	8	15
IFRS 15 principle		
Case law	3	9
Control	3	3
Invoicing	5	9
Materiality	5	6
Probability and uncertainty expressions	15	21
Influence from size and sector of company		
Impact	10	14
Size and sector of company	15	140
Internal resources		
Accounting department	14	76
Controlling department	12	25
IFRS 15 project team	14	25
Intra-group considerations	13	70
IT department	7	9
Legal department	11	24
Management involvement	13	29
Resources	7	9
Sales department	14	72
Sensitivity	5	6
Steering committee	12	19
Tax department	2	2
Issues of stakeholders		
Additional effort	12	42
House opinions	10	19
Lack of understanding	11	14
Remuneration	3	3
Value-add	4	8
Notes to the financial statements		
Disclosure requirements	12	52

Name	Files	References
Movement tables	5	7
Other issues identified		
Cloud services	2	2
Consignment	1	10
Customer-specific serial production	8	31
Goal of the company	3	5
Guidance	8	24
Incoterms	3	4
Licenses	5	8
Manipulation	11	23
Not defined terms	8	22
Principal-Agent considerations	5	7
Research & Development	5	11
Room for interpretation	15	129
Sale-and-leaseback	1	1
Tooling	3	11
Window dressing	8	9
Paradigm shift		
Best Practice	10	20
Industry-specific standard	5	6
Paradigm shift	1	2
US GAAP	7	23
Project preparation		
Exposure Draft	2	2
Pressure	2	2
Process of implementation	15	100
Project structure	2	2
Quantification		
Contract assets	8	22
Contract liabilities	10	28
External addressee	14	32
Inventory	6	13
KPI	15	30
Management report	2	2
Quantification of impact	15	50
Working capital	4	7
Readiness assessment		
Awareness	9	17
Disclosures	15	62

Name	Files	References
Postponement of effective date	4	4
Readiness	15	25
Transparency and comparability		
Avoidance	10	22
Bargaining power	5	9
Comparability	15	18
Robust framework	1	1
Timing of revenue recognition	11	26
Transparency	4	4
Understand the business		
Contract analysis	11	28
Contract management	6	8
Contract templates	14	63
Revenue streams	12	37
Understand the standard		
Guideline	15	51
Technical know-how	15	42
Technical memorandum	7	13