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A Literature Review of IFRS 15

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Abstract

The purpose of this paper is to provide the reader with an overview of the implementation of the International Financial Reporting Standard (IFRS) 15 *Revenue from Contracts with Customers*. IFRS 15 was first issued in May 2014, following a twelve-year joint project between the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB). It was aimed at improving the comparability of revenue recognition between entities, industries, jurisdictions, and capital markets. Changes IFRS 15 imposes on the identification of performance obligations and the treatment of long-term contracts and variable considerations will affect revenue recognition practices the most. Empirical evidence has shown that companies whose main activities can be described as regular retail sales transactions were not affected. The construction and telecommunications industry report a significant increase in revenue while aviation companies report a decrease in revenue and retained earnings. The costs of applying IFRS 15 were significant across the board, but this did not motivate companies to change the way their contracts are structured. Lastly, earnings management was found to be impeded by the introduction of IFRS 15.

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1. Introduction

International Accounting Standards (IAS) 18 and 11 were last revised during the comparability and improvement project in 1993 (Zhu, 2015). This led to the revenue recognition standards being outdated and not suitable for recognizing the revenue of emerging business models (Dalkiliç, 2014). Additionally, these standards lacked guidance on the recognition of revenue which led companies from the same industry to account for transactions that were economically similar in different ways (Onie, Ma, Spiropoulos, & Wells, 2023).

Both the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) had accounting standards regarding revenue recognition that needed to be improved (Wüstemann & Kierzek, 2005). This motivated the boards to sign the Norwalk agreement in 2002 where they stated that they would jointly create accounting standards that were more compatible and of higher quality. The main goal of this joint project was to improve the comparability of revenue recognition between entities, industries, jurisdictions, and capital markets (Dalkiliç, 2014).

After a twelve-year-long joint project, International Financial Reporting Standard (IFRS) 15 *Revenue from Contracts with Customers* was issued in May 2014 by the IASB (Deloitte, n.d.). The FASB published ASC topic 606 *revenue recognition* at the same time, but the focus of this literature review is IFRS 15. The standard is required to be adopted for financial years beginning on or after January 1st, 2018, with early adoption being permitted. The importance of the implications of IFRS 15 can be found in several areas.

Firstly, the conceptual framework published in 2010 by the IFRS Foundation (2021, *conceptual framework*) states that the main goal of financial reporting is to provide useful information to stakeholders such as existing and potential investors. According to a survey of over 400 executives conducted by Graham, Harvey, and Rajgopal (2005), profit was found to be the most important performance measure followed by revenue. The changes that IFRS 15 imposes on the revenue recognition process will therefore be of great importance to stakeholders as a change in revenue recognition has the potential to affect both revenue and profits.

Secondly, one of the goals of IFRS 15 is to improve the comparability and consistency of revenue recognition which would in extent also impede the practice of earnings management (Dalkiliç, 2014). Earnings management has been shown to negatively affect the firm's

investment decisions and subsequently the firm's value in the long term (McNichols & Stubben, 2008). This adds a second element of importance to the stakeholders.

Lastly, the IASB is obligated to conduct a post-implementation review to investigate the effect newly implemented standards have on accounting practices and financial statements (IFRS Foundation, 2016). This literature review could assist in determining the overall impact of IFRS 15.

In summary, this thesis aims to grant stakeholders the opportunity to assess the literature that has been published on the effects of IFRS 15. An overview of papers on the effects of IFRS 15 will also be of importance to the IASB as they further evaluate the impact of their standard.

The main difference between the old and new revenue standards can be found in the way revenue is measured and recognized (Dalkiliç, 2014). While the previous standards had different models for recognizing revenue, IFRS 15 uses one comprehensive revenue recognition model for all contracts with customers. The five-step model provides a step-by-step guide to determining the timing and amount of revenue recognition (Deloitte, n.d.).

According to Tong (2014), changes in the identification of performance obligations and the treatment of long-term contracts and variable considerations will affect revenue recognition practices the most. Ciesielski and Weirich (2015) predict that the changes IFRS 15 imposes on current revenue recognition practices will affect the companies from the telecommunication, healthcare and technology industries the most.

As the main objective of the IASB is to serve stakeholders, limiting the research to only accounting effects does not convey the full effect of accounting standards. How entities adjust their operations because of a change in accounting standards is also of importance to the stakeholders and standard-setting bodies. Therefore, the empirical evidence on the effects of IFRS 15 post-implementation will be separated into accounting effects and real effects.

Empirical evidence has shown that most companies chose to adopt the simplified method more frequently as it was easier and less complex to implement (KPMG, 2019). The changes IFRS 15 has made to the recognition and measurement of revenue do not lead to a significant adjustment of revenue or retained earnings for most firms. Especially companies whose main activities can be described as regular retail sales transactions reported not to be affected by IFRS 15. However, some companies from the construction and telecommunications industries did report an increase in revenue (Napier & Stadler, 2020; Kabir & Su, 2022). Napier

and Stadler (2020) show that the disclosures regarding revenue have increased significantly between 2017 and 2018. Even though most companies are not fully compliant with the required disclosures (Boujelben and Kobbi-Fakhfakh, 2020).

Evidence on the real effect of IFRS 15 is limited. The costs of applying IFRS 15 were significant across the board, but this did not motivate companies to change the way their contracts are structured. Only some companies from the telecommunications industry changed their contract structure but left existing contracts intact.

Onie et al. (2023) find that significantly affected companies had a lower explanatory power of earnings before adopting IFRS 15 than companies who reported not being affected by IFRS 15. While this difference is still noticeable post-IFRS 15, it has reduced slightly. Additionally, earnings management has been reported to be lowered by IFRS 15. According to Tutino, Regoliosi, Mattei, Paoloni, and Pompili (2019), earnings management before IFRS 15 is common in the telecommunication industry but a reduction is visible after the introduction of IFRS 15. Piosik (2021) reports that IFRS 15 significantly mitigated the practice of entities increasing discretionary revenues to meet financial goals.

This literature review has shown that the introduction of an accounting standard can have a broad array of effects. Not only does a new accounting standard affect the way financials are measured and presented but it also has the potential to affect the way entities operate. The problem with the research on the accounting effects of IFRS 15 however, is that the samples are often too small. This led to some sectors being underrepresented in the samples. Future research could use bigger samples, but this still poses a problem as smaller companies use the modified retrospective method more often. This method does not allow researchers to evaluate the exact effect of IFRS 15 on revenue. Moreover, the widespread adoption of IFRS 15 implies that research on the topic is dispersed across countries with diverse economies.

This literature review is structured as follows: Chapter 2 will cover the predecessors of IFRS 15, the reasons for developing the new revenue recognition standard and the proposed models for revenue recognition. Chapter 3 covers the five-step model, transition methods and disclosure requirements. Chapter 4 will address the differences between the old and new revenue standards, how this affects current revenue recognition practices and their implications for specific industries. Chapter 5 will discuss the empirical evidence of the real and accounting effects of IFRS 15. This thesis concludes with a summary of the reviewed topics. Appendix A shows the twelve most important papers that have been used in this literature review.

2. The introduction of IFRS 15

The FASB produces accounting standards for public and private companies in the United States whereas the IASB is focused on developing globally accepted accounting and sustainability disclosure standards. It should be noted that the focus of this literature review lies on the revenue standards produced by the IASB. However, the FASB was heavily involved in the process of creating IFRS 15 which means that including them in the conversation on IFRS 15 is essential. This chapter will cover the predecessors of IFRS 15, the reasons for developing the new revenue recognition standard and the proposed models for revenue recognition.

The preceding revenue standards

The predecessors of IFRS 15 consisted of several standards and interpretations. IAS 18 *construction contracts* focussed on revenue recognition for construction companies while IAS 11 *revenue* was the common revenue recognition standard applied across all other industries. The additional guidance provided by the IFRS interpretation committee on IAS 11 and IAS 18 that were subsequently replaced were IFRIC 13 *customer loyalty programmes,* IFRIC 15 *Agreements for the construction of real estate* and IFRIC 18 *Transfers of assets from customers* (Deloitte, n.d.). IFRIC 13 guides accounting for companies that work with customer loyalty programmes. IFRIC 15 gives additional insight into whether the construction of real estate should be accounted for using IAS 11 or IAS 18. IFRIC 18 provides guidance on how to account for revenue in case an entity receives a property plant or equipment with which they are obligated to connect the customer to a network (Deloitte, n.d.).

Motivation for new revenue standards

IAS 18 and IAS 11 were last revised during the comparability and improvement project in 1993 (Zhu, 2015). This led to the revenue standards being outdated and not suitable for recognizing the revenue of emerging business models (Dalkiliç, 2014). The previous standards also lacked guidance on the recognition of revenue which led companies from the same industry to account for transactions that were economically similar in different ways. The disclosures required by IAS 18 and IAS 11 also proved to be insufficient in informing stakeholders (Dalkiliç, 2014). Most importantly, however, the revenue standard was not compatible with other revenue standards.

The concept of revenue under U.S. Generally Accepted Accounting Principles (U.S. GAAP) was broad and required significant interpretation (Munter, 2011). The FASB had more than 100 separate guidelines for recognising revenue. Revenue recognition practices thus varied per industry which led to transactions that were economically similar being accounted for in different ways. Like the revenue standards from the IASB, the revenue standards from the FASB lacked comparability across industries.

The joint revenue project

Both the FASB and IASB had accounting standards regarding revenue recognition that needed to be improved (Wüstemann & Kierzek, 2005). This motivated the boards to sign the Norwalk agreement in 2002 where they stated that they would jointly create accounting standards that were more compatible and of higher quality. The main goal of this joint project was to improve the comparability of revenue recognition between entities, industries, jurisdictions, and capital markets (Dalkiliç, 2014).

During the project, several revenue recognition models were taken into consideration. This led Wüstemann and Kierzek (2005) to analyse two different revenue recognition models that were considered by the boards and to propose their revenue recognition model. The alternative approaches to the recognition of revenue all evolved around recognizing income as the change in assets and liabilities (Wüstemann & Kierzek, 2005).

The asset and liability fair value approach

The first alternative approach to revenue recognition is the asset and liability fair value approach. This is the main approach that was explored by the IASB and FASB between 2002 and 2004 as they believed it had the potential to resolve the issues of the previous standards. Using this approach, revenue is measured as the change in the fair value of assets and liabilities and is not based on transaction-based criteria. The changes in the fair value of contractual assets and liabilities could occur at any time as long as the changes can be measured reliably. In practice, this approach led to the recognition of revenue at the conception of a contract without an entity having to perform any performance obligations. Wüstemann and Kierzek (2005) therefore stated that the relevance and reliability of this approach is questionable.

The asset and liability performance approach

The asset and liability performance approach has been under investigation by the FASB since May 2005 (Wüstemann & Kierzek, 2005). This approach is closely related to the fair value approach. However, instead of allocating the fair value measurement to performance obligations, it allocates the amount of consideration offered by a customer to each performance obligation. The allocated consideration is made up of the standalone selling price of completing a performance obligation. When the consideration is higher than the sum of the standalone prices of all performance obligations, the difference is distributed among the standalone selling prices. Where the fair value approach might recognize revenue at the conception of the contract, this approach will only recognize revenue when or as the performance obligations are satisfied. The current revenue recognition model used in IFRS 15 shows a resemblance to the asset and liability approach performance approach.

The asset and liability transaction approach

The third approach to revenue recognition is the asset and liability transaction approach which was developed by Wüstemann and Kierzek (2005). Rather than developing a completely new revenue recognition standard, they believed that by building upon the existing standards, they could solve the inconsistencies in the existing practices. Wüstemann and Kierzek (2005) therefore also argue that a complete overhaul of the revenue standards, as proposed by the boards, is not necessary. Using this approach, revenue is recognized when the enterprise obtains the right to consideration in exchange for substantially completing its performance obligation.

The final product

An exposure draft of the final revenue standard was published on the 14th of November 2011. Stakeholders were invited by the boards to voice their opinions on the proposal by use of comment letters. Input by affected parties was requested by the boards to minimize unintended effects of the standard. The proposal attracted significant comments and it took another 3 years to publish the final version of the revenue recognition standard.

IFRS 15 *revenue from contracts with customers* and ASC topic 606 *revenue recognition* were issued in May 2014 by the IASB and FASB respectively. The standard was supposed to be implemented for financial years beginning on or after January 1st 2017, with early adoption being permitted. The delay of IFRS 15 to January 1st, 2018, was announced by the IASB in 2015 (Deloitte, 2015).

3. IFRS 15: The five-step plan, disclosures and transition methods

To give a formal overview of the workings of IFRS 15 this chapter extensively discusses the five-step model. The five-step model guides companies in determining the timing and amount of revenue recognition (Deloitte, n.d.). This chapter also covers the transition methods companies were required to choose from and the disclosure requirements of IFRS 15.

Step 1: Identify the contract with a customer

The first step in the revenue recognition process is identifying the contract with the customer. The definition of a customer and a contract is essential for determining when to apply IFRS 15. A customer is a party who enters a contract with an entity to receive goods or services that are the output of the entity's ordinary activities in exchange for consideration. Other accounting standards will be applied to contracts with a party that cannot be identified as a customer. Delivery of goods or services that cannot be described as the output of an entity's ordinary activities will also fall outside the scope of IFRS 15. A contract is an agreement between two or more parties that creates performance obligation(s) and enforceable rights. An example of a performance obligation within a contract is the delivery of a clothing item. The enforceable right that is connected to this performance obligation could be the right to payment. There are several other criteria a contract should adhere to. The contract must be approved by all engaged parties and the rights of each of these parties should be communicated or stated within the contract as well as the payment terms. Another criterion is that the contract should be of commercial substance, meaning that the result of the contract should affect the future cashflows of an entity. It should also be probable that the entity, which has an enforceable right to consideration, will indeed receive this consideration on the specified date in the contract. If contracts are signed at the same time and are dependent on one another the contracts should be combined as if they were one contract (IFRS Foundation, 2021, *IFRS 15*).

Step 2: Identify the performance obligations in the contract

The second step is identifying the performance obligations within the contract as described in IFRS 15.22 (IFRS Foundation, 2021, *IFRS 15*). A performance obligation can either be a pledge from one party to transfer a distinct good or service to a customer or a series of distinct goods and services that are of the same nature. A good or service can be described as distinct if it is possible to consume the good or service independently or in conjunction with previously

delivered goods or services. Furthermore, all performance obligations that are identified within a contract need to be able to be separated (IFRS Foundation, 2021, *IFRS 15*).

Step 3: Determine the transaction price

The third step in the revenue recognition process is to determine the transaction price. The transaction price is equal to the consideration an entity expects to receive as the result of the delivery of a good or service. Two types of consideration that make up the transaction price are fixed consideration and variable consideration. Consideration is variable when the amount is dependent on future occurrences which is the case with performance-based bonuses, discounts and fines. An entity needs to judge the potential outcome of a contract to estimate these variable considerations. These judgements should not result in a significant revenue reversal, meaning that an entity should only recognize variable considerations if the outcome is highly probable (IFRS Foundation, 2021, *IFRS 15*).

Step 4: Allocate the transaction price

After having determined the transaction price, the next step is to allocate this transaction price to the performance obligations that were identified in step two. The transaction price needs to be distributed using the standalone selling price of completing each of the performance obligations. If there is no standalone selling price available, the entity is allowed to use other methods. These methods include the adjusted market assessment approach, expected cost plus a margin approach and residual approach. The residual approach is only permitted under limited circumstances. A discount which is related to the overall transaction price is distributed among the performance obligations on a relative standalone selling price basis. If the discount is only related to specific performance obligations, the entity is allowed to subtract the discount from the standalone selling price of these performance obligations. If the time gap between the exchange of goods and services and the transfer of consideration exceeds twelve months, the consideration must be discounted over time. Alternatively, IFRS 15:63 offers a practical expedient for when this time difference is shorter than one year (IFRS Foundation, 2021, *IFRS 15*).

Step 5: Recognize revenue when or as performance obligations are satisfied

The fifth and final step in the revenue recognition process is that the entity should recognize revenue when or as a performance obligation is satisfied. The focal point of IFRS 15 is that control needs to be transferred in order for a performance obligation to be considered satisfied.

Previous revenue recognition standards focus on the transferral of economic risks and rewards rather than control. While the transferral of risks and rewards is still an indicator of the transfer of control under IFRS 15, it is not the sole indicator. Control can be transferred at a point in time or over a period of time. According to IFRS 15:32, revenue should be recognized over a period of time if one of the following criteria is met: the benefits which are provided by the entity are received and consumed by the customer simultaneously; the entity's performance results in the creation or enhancement of an asset that is already being controlled by the customer as it is being created; and the entity's performance does not generate an asset that could be used for other purposes, the entity has a legally enforceable right to payment for the performance that has been completed to date. If at least one of these criteria is met, control is transferred over time and revenue should therefore also be recognized over time. If none of these criteria are met, control is considered to be transferred at a point in time and revenue will therefore also be recognized at a point in time.

At what point in time the transfer of control takes place can be determined by using several indicators. Examples of indicators include the right to payment, the transfer of legal title, the transfer of physical possession, the transfer of risk and rewards related to the asset, and acceptance of the asset by the customer, the right to payment, the transfer of legal title, the transfer of physical possession, the transfer of risk and rewards related to the asset, and acceptance of the asset by the customer. These are examples of indicators that influence the timing, but this is not an exhaustive list according to IFRS 15:38 (IFRS Foundation, 2021, *IFRS 15*).

Disclosures

The disclosure requirements concerning the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers have grown substantially (Dalkiliç, 2014). The main items IFRS 15:8 requires to be disclosed in the financial statement are: revenue from contracts with customers separated from other revenue sources; opening and closing balance of receivables, contract assets and contract liabilities; performance obligations, including when the entity typically satisfies its performance obligations and the transaction price that is allocated to the remaining performance obligations; significant judgments concerning revenue and changes in those judgments; and finally, the transition method (IFRS Foundation, 2021, *IFRS 15*).

Transition methods

To ensure that the financials in the annual reports from different periods are still comparable, companies are obligated to use either the modified retrospective method or the full retrospective method (Deloitte, 2016). The full retrospective method requires companies to report their revenue figures as if IFRS 15 was always in effect (IFRS Foundation, 2021, *IFRS 15*). Revenue from previous years will be adjusted and reported under the new revenue standard. The modified retrospective method entails that the cumulative effect of IFRS 15 is recognized on the date of initial application. This will lead to an adjustment to the retained earnings in the opening balance of the reporting entity as of the initial application date (KPMG, 2019).

4. The implications of IFRS 15

This chapter will cover the differences between the old and new revenue standards, how this affects current revenue recognition practices and their implications for specific industries.

Differences between old and new revenue standards

The main difference between the old and new standards can be found in the way revenue is measured and recognized, the number of required disclosures and the amount of guidance that is provided (Dalkiliç, 2014). The main differences regarding the recognition of revenue between standards will be discussed first.

While the previous standards had different models for recognizing revenue, IFRS 15 uses one comprehensive revenue recognition model for all contracts with customers. IAS 18 focuses on the transfer of risks and rewards to determine when to recognize revenue. IFRS 15 uses the concept of control to determine when revenue should be recognized. The transfer of risks and rewards is still regarded as one of the indicators that control is transferred. However, it is not the only indicator under IFRS 15. IAS 11 and IAS 18 use fair value as a measure of consideration while consideration is measured as the amount a company expects to be entitled to under IFRS 15. Under the new standard, revenue will only be recognized at a point in time if it does not satisfy any of the criteria mentioned in Chapter 3. This will lead to more revenue being recognized over time as compared to the previous standards. Previous standards did not guide the recognition of variable consideration while IFRS 15 states variable consideration can only be recognized if it is highly probable that no revenue reversals will take place (Dalkiliç, 2014).

IFRS 15 is expected to provide more comprehensive application guidance as the IASB aims to move from principle-based accounting to rule-based accounting (Tong, 2014). For that reason, Dalkiliç (2014) compared the number of pages the new standard provides on guidance with the total number of pages the preceded standards and interpretations provided. Dalkiliç (2014) shows that guidance regarding the standard interpretation of the accounting standard has not increased significantly. However, the number of pages dedicated to guiding the application of IFRS 15 and illustrative examples has increased exponentially. The basis for conclusions section in the new standard where the IASB explains its stance on the new requirements has also grown substantially. It can be concluded that IFRS 15 provides more guidance than previous standards regarding revenue.

Implications for current revenue recognition practices

Now that the most important differences between the revenue standards have been discussed this literature review continues with an overview of how these changes will affect the recognition of revenue in practice. According to Tong (2014), changes in the identification of performance obligations and the treatment of long-term contracts and variable considerations will affect revenue recognition practices the most.

As step five of the new revenue recognition model has shown, revenue can only be recognized at a point in time if it does not satisfy any of the criteria stated in Chapter 3. According to Tong (2014), revenue from long-term contracts with customers will therefore be recognized over time more often as opposed to being recognized at a point in time. The contracts that Tong (2014) expects to be affected the most are construction, manufacturing and customized software contracts. The recognition of revenue on these contracts will follow the percentage of completion (PoC) method which Tong (2014) claims will lead to revenue being recognized sooner than before.

The increased separation of performance obligations within contracts could lead to more detailed segmentation of contracts as compared to current practices (Tong, 2014). This change does not necessarily lead to an overall increase or decrease in the amount of revenue that is recognized at different stages by an entity. This is entirely dependent on the way the contract is set up. Additionally, entities will start having to determine whether a license of intellectual property is a distinct performance obligation. The entity will then have to determine if the now separated performance obligations are satisfied over time or at a point in time and account for that accordingly (Tong, 2014).

Under the current standard, revenue is deferred if observable prices for performance obligations are not available. IFRS 15, in comparison to previous standards, allows companies to use other estimation methods if the standalone selling price is not available (IFRS Foundation, 2021, *IFRS 15*). In practice this would lead to entities being able to recognize revenue earlier as they now have a transaction price, they can allocate to the completed performance obligation (Tong, 2014).

Tong (2014) concludes that simple contracts for sales of goods will not be affected. Long-term service contracts and contracts with multiple performance obligations are expected to be influenced more significantly by IFRS 15. Tong (2014) states that industries that are characterised by such contracts are more likely to be affected but does not state any specific industry.

How IFRS 15 will impact the revenue recognition of different industries

The changes that IFRS 15 imposes on current revenue recognition practices have been used by Ciesielski and Weirich (2015) and Dalkiliç (2014) to hypothesize which industries will be impacted the most. This paragraph not only outlines these industries but will also illustrate how the revenue recognition of their transactions will change.

The main industry discussed by Dalkiliç (2014) and Ciesielski and Weirich (2015) is the telecommunication industry. This industry is made up of wireless phone companies, cable companies and satellite companies. It is characterised by long-term contracts and contracts with multiple performance obligations (Ciesielski and Weirich, 2015). An example of a transaction in this industry is one where the customer receives a phone with an internet connection and pays for this service monthly over a period exceeding one year. Because the contract is exceeding one year, the consideration needs to be discounted over time as explained in step four of the revenue recognition model. Additionally, the phone and internet connection are now two separate performance obligations. The consideration will be allocated to each performance obligation which could result in a change in the recognition of revenue. Telecommunication companies will also need to start recognizing variable considerations before all uncertainties are eliminated as opposed to the current standard where uncertainties must be eliminated before revenue can be recognized (Ciesielski and Weirich, 2015).

The technology industry contains a wide variety of companies. This makes it challenging to identify a change in revenue recognition that would affect all companies. Ciesielski and Weirich (2015) still considered it to be an industry at risk of being affected by

IFRS 15. Because having a stand-alone selling price for a performance obligation is unusual in the tech industry, revenue was deferred under the previous standard. IFRS 15 allows companies to use other estimation methods if the standalone selling price is not available leading to revenue being recognized earlier (Tong, 2014). Furthermore, companies in the technology sector bundle many different software applications together in one transaction. According to IFRS 15, all these software applications must have their own standalone price as they are separate performance obligations.

Services provided by the healthcare sector are comparable to those of the technology sector on a contractual level (Ciesielski and Weirich, 2015). Like the technology industry, their business practices involve contracts with multiple performance obligations and a combination of goods and services. The healthcare sector also contains pharmaceutical companies that in some cases will start having to recognize their license of intellectual property as a separate performance obligation (Tong, 2014).

What research clearly illustrates is that the revenue a company recognises can be affected by the new revenue standard in distinct ways. Ciesielski and Weirich (2015) state the importance of empirical research as they claim it is impossible to evaluate the effect of IFRS 15 on the recognition of revenue without knowledge on the way an entity constructs its contracts. What the cumulative effect of IFRS 15 would be on the exact revenue figures is therefore not discussed.

5. Empirical evidence on the effects of IFRS 15

This literature review continues with an extensive overview of research conducted on the effects of IFRS 15 post-implementation. Napier and Stadler (2020) developed a framework to identify and classify the various effects of new or amended accounting standards. The most important distinction they make is between accounting and real effects. This distinction will be used in this chapter to structure the empirical evidence on the effects of IFRS 15. In the context of this research, accounting effects are defined as changes in the recognition, measurement, presentation and disclosure of revenue. When these changes cause an entity to adjust its operations or affect its cashflows, it is referred to as having real effects.

The conceptual framework published by the IASB states that the main goal of financial reporting is to provide useful information to stakeholders (IFRS Foundation, 2021, *conceptual framework*). As the main objective of the IASB is to serve stakeholders, limiting the research

to only accounting effects does not convey the full effect of accounting standards. How entities adjust their operations as a result of a change in accounting standards is also of importance to the stakeholders and standard-setting bodies. Therefore, this chapter will start a discussion on the accounting effects of IFRS 15 followed by the real effects IFRS 15 has had on companies.

5.1 Accounting Effects

The chosen transition method is discussed first as it affects the way revenue is presented in the annual report. What follows is an analysis of how the changes to the recognition and measurement of revenue express themselves in the revenue that is reported by entities. The chosen transition method plays an important role in this analysis. The accounting effects conclude with an evaluation of how IFRS 15 affected the number of disclosures and to what extent companies complied with the disclosure requirements.

Presentation of revenue

The first accounting effect is related to the change in presentation. As discussed in Chapter 3, IFRS 15 could be implemented by using either the modified retrospective method or the full retrospective method. The full retrospective method required companies to alter the revenue figures of previous years in accordance with the new revenue standard. The modified retrospective method resulted in an adjustment of the retained earnings on the date of the initial application. Using this method, revenue figures from previous years were not adjusted. The chosen transition method thus affected the presentation of revenue figures in the annual report.

Kabir and Su (2022) show that only 21.97% of their sample consisting of 396 companies listed in Australia and New Zealand adopted the full retrospective method. 45.71% used the more popular modified retrospective method whereas 32.32% did not explicitly report any transition method. Napier and Stadler (2020) find that among large European firms, 25% report using the full retrospective method. Kabir and Su (2022) claim that larger firms tend to use the full retrospective method more frequently than smaller firms due to the complexity and costs of this transition method. According to Kabir and Su (2022), this also explains why more companies from the sample of Napier and Stadler (2020) used the full retrospective method. The companies from the Kabir and Su (2022) sample were on average smaller than those of the Napier and Stadler (2020) sample.

The research by Boujelben and Kobbi-Fakhfakh (2020) focuses on the telecommunication and construction industry and found that close to half of their sample chose the full retrospective method. This discrepancy with previous research can be explained by the fact that companies that were affected the least by IFRS 15 were also less likely to report a transition method (KPMG, 2019). As was seen from research by Ciesielski and Weirich (2015), telecommunication and construction companies were expected to be affected the most by IFRS 15.

Recognition and measurement of revenue

The changes IFRS 15 imposes on the recognition and measurement of revenue has already been discussed in Chapter 3. However, it was still unclear if these changes would result in a significant increase or decrease in reported revenue. What follows is an overview of research concerning the effect of IFRS 15 on reported revenue and retained earnings.

Kabir and Su (2022) investigate the effect of IFRS 15 on companies listed in Australia and New Zealand. 63.38% of their sampled firms stated that IFRS 15 did not have a material impact on their financial statement. The 36.62% of firms who reported that IFRS 15 did materially affect their financial statements, disclosed this impact in the notes to the financial statement. As predicted by Ciesielski and Weirich (2015), companies whose main activities can be described as regular retail sales transactions reported not to be impacted by IFRS 15.

When companies use the full retrospective method, they adjust the revenue figures from previous years in accordance with IFRS 15. This enabled Kabir and Su (2022) to calculate the exact difference in revenue that entities reported under the new and old revenue standards. The impact on revenue was most significant for the construction sector as companies in this sector reported on average, 14.31% more revenue. According to Kabir and Su (2022), this increase can be explained by the fact that revenue from the construction of real estate is recognized over time more often under IFRS 15 as opposed to previous standards. Companies within the IT sector reported an average decline in revenue of 7.02%. Kabir and Su (2022) hypothesize this is caused by the increase in the separation of performance obligations. The sectors whose revenue was affected the least were the utilities, industrials and communication services sectors (Kabir & Su, 2022). The research by Kabir and Su (2022) not only showed that IFRS 15 affected the revenue of some companies, but also illustrated that other items such as cost of goods sold, contract liabilities and profit after tax were also materially affected.

Napier and Stadler (2020) examined whether IFRS 15 has had a significant effect on retained earnings, profits and revenue. They used a sample of larger European firms that were included in the STOXX Europe 50. Napier and Stadler (2020) claim that the introduction of IFRS 15 on accounting numbers was mostly insignificant except for companies in the telecommunications and aviation industry. The retained earnings of telecommunication companies Deutsche Telekom, Vodafone and Telefónica were significantly higher under the new standard. Aviation companies Airbus and Safran saw large negative adjustments to their retained earnings. The effect of IFRS 15 on revenue was also insignificant for most companies according to Napier and Stadler (2020). Only 13% of sampled companies reported a revenue adjustment bigger than 1%. The revenue adjustment percentage is calculated by taking the adjustment of revenue as a percentage of revenue under IFRS 15. The adjustment was mostly negative with 10 companies reporting a decrease bigger than 1% and 5 companies reporting an increase bigger than 1%. Once again, the aviation company Airbus stands out with a revenue reduction of 13.12%. Airbus explains this significant reduction in revenue by referring to the IFRS 15 ruling which orders them to recognize revenue at a point in time rather than over a period of time (Napier & Stadler, 2020)

A sample of 66 companies from the Australian Stock Exchange (ASX) was used by Onie, et al. (2023) to investigate the effect of IFRS 15 on financial reporting. Similarly to Napier and Stadler (2020), Onie et al. (2023) focussed on the effect of IFRS 15 on retained earnings. 43 firms reported no material impact of IFRS 15 on their retained earnings. Of the 23 firms that did report a material impact of IFRS 15, 18 reported a decline in retained earnings whereas 5 firms reported an increase in retained earnings. On average the retained earnings decreased by 1.91%. Onie et al. (2023) did not find that an industry was affected more significantly and concluded that the effect of IFRS 15 was immaterial for most firms.

Disclosure requirements on revenue

Dalkiliç (2014) points out that IFRS 15 significantly increases the number of required disclosures. The extent of the information entities need to provide in their notes to the financial statement is already discussed in Chapter 3. What this part of the accounting effects talks about is the quantity with which disclosures regarding revenue have increased and the extent to which companies comply with the disclosure requirements.

IAS 8.28 requires companies to report extensively on accounting policies that are not yet in effect but are expected to affect their accounting practices in the future (Deloitte, n.d.). This motivated Mattei and Paoloni (2019) to analyse the quality and quantity of the disclosures telecommunication companies provide regarding the implementation of IFRS 15. From this content analysis, Mattei and Paoloni (2019) conclude that most sampled companies dedicate significant effort to disclose the potential effect of IFRS 15. The number of disclosures regarding IFRS 15 also increased significantly between the annual reports from 2016 and 2017. What this shows that IFRS 15 has affected the disclosures even before the standard came into effect.

Napier and Stadler (2020) find that among European listed companies the average number of pages regarding revenue disclosures doubled between 2017 and 2018. Of the 48 sampled companies, 21 saw an increase in revenue disclosures whereas only 1 company decreased their disclosures regarding revenue. This company changed their business unit structure leading to an adjustment to its operating segments. Napier and Stadler (2020) conclude that the disclosure regarding revenue significantly increases due to the introduction of IFRS 15.

Boujelben and Kobbi-Fakhfakh (2020) investigate whether companies within the telecommunication and construction industry comply with mandatory disclosures. The two major findings Boujelben and Kobbi-Fakhfakh (2020) highlight is that none of the 22 sampled companies appear to be fully compliant with the IFRS 15 disclosure requirements. The disclosure requirements all companies comply with are the separation of revenue with customers from other sources of revenue and the description of performance obligations.

The second major finding is that companies from the telecommunication industry are more compliant than companies from the construction industry. However, Boujelben and Kobbi-Fakhfakh (2020) note that this discrepancy could be explained by the fact that telecommunication companies are characterised by their complex contract structure and as such are required to disclose more information concerning revenue. This finding is in accordance with an analysis by KMPG (2019) which showed that companies that were affected the least by IFRS 15 also provided the least number of disclosures.

5.2 Real Effects

As discussed, new or amended accounting standards can have more than just accounting effects. The real effects of accounting standards are mostly related to changes in operations and cash flows. Additionally, the reaction of shareholders to the introduction of IFRS 15 will be discussed as this also has a real effect on companies.

Implementation and application costs

Napier and Stadler (2020) retrieved empirical evidence from annual reports and interviewed preparers to find out whether IFRS 15 was expensive to implement. They concluded that the costs of applying IFRS 15 were significant across the board. Costs mainly occurred because of the increased separation of performance obligations within contracts. Telecommunications companies reported having to develop new computer software in order for them to track whether performance obligations were satisfied. This complexity caused them to incur even more costs when applying IFRS 15 compared to companies with less complex contract structures (Napier & Stadler, 2020).

Contractual changes

As shown above, the complexity of a contract might cause an entity to incur more costs when applying IFRS 15. This could encourage entities to alter the way they construct contracts to limit these application costs. Furthermore, previous revisions in accounting standards have shown that companies are willing to change their contract structure to make them appear more favourable to entities outside of the organisation (Napier & Stadler, 2020). Especially when accounting for revenue, which is an important measure of financial performance, adjusting contracts to appear more appealing to investors is tempting (Graham et al., 2005). According to Napier and Stadler (2020), only a limited number of companies took IFRS 15 into account when drafting new contracts. These companies were primarily from the telecommunication industry.

Value relevance of earnings

Value relevance refers to the usefulness of information stated in the financial statements to the decision-making process of investors (Imhanzenobe, 2022). IFRS 15 aimed to improve the comparability of revenue recognition between entities, industries, jurisdictions, and capital markets which would promote the value relevance of financial statements (Dalkiliç, 2014). Onie et al. (2023) research whether IFRS 15 has indeed led to a change in the value relevance

of retained earnings. A sample of 94 companies that were listed on the Australian Stock Exchange (ASX) in 2018 was used. This sample was divided into companies that reported significant changes in retained earnings due to IFRS 15 and companies that reported not being affected by IFRS 15. Onie et al. (2023) created these two distinct groups as they were also interested in finding out which group would notice the biggest difference in value relevance before and after IFRS 15. Onie et al. (2023) find that significantly affected companies had a lower explanatory power of earnings before adopting IFRS 15 than companies who reported not being affected by IFRS 15. While this difference is still noticeable post-IFRS 15, it has reduced slightly. Onie et al. (2023) cautiously suggest that IFRS 15 has therefore had the desired effect of improving the value relevance of retained earnings.

Earnings management

Earnings management can be described as the use of accounting techniques to make your financial statements look more appealing to investors or as a way for managers to achieve performance targets (Tuovila, 2023). One of the goals of IFRS 15 was to improve the comparability and consistency of revenue recognition, which in turn would also help combat the practice of earnings management (Dalkiliç, 2014). This motivated Tutino et al. (2019) to investigate whether IFRS 15 has had the desired effect on earnings management. Tutino et al. (2019) purposely use telecommunication and utility companies in their sample as previous research has pointed to these industries as being most and least affected by IFRS 15. If the extent of earnings management decreases between these industries Tutino et al. (2019) contribute this to the introduction of IFRS 15. To distinguish between normal and abnormal accruals in the financial statements, which is considered to be an indicator of earnings management, Tutino et al. (2019) use the Jones Model. According to Tutino et al. (2019), earnings management before IFRS 15 is common in the telecommunication industry but a reduction is visible after the introduction of IFRS 15. In contrast to the telecommunications industry, the extent of earnings management among companies in the utility industry stayed insignificant.

An alternative approach to uncovering earnings management is analysing changes in discretionary revenue (Stubben, 2010). Piosik (2021) examines whether companies increase discretionary revenue when other financial measurements such as revenue, operating income and net earnings do not align with the financial forecasts of analysts. But most importantly, if the introduction of IFRS 15 influences this type of earnings management. The rule-based

approach of IFRS 15 should impede the use of this type of earnings management. A sample of 46 companies from the Warshaw Stock Exchange (WSE) was used. Piosik (2021) found that companies increase their discretionary revenue when they fail to meet the operating income and net earnings expectations as forecasted by financial analysts. Piosik (2021) reports that IFRS 15 significantly mitigated the practice of entities increasing discretionary revenues to meet financial goals. If earnings management was reduced more in certain industries was not discussed by Piosik (2021).

Stock price reactions

Aladwan (2019) investigates whether the early adaptation of IFRS 15 has affected the revenue and stock prices of companies in Jordan. The paper by Aladwan (2019) only focuses on companies in Jordan that chose to adopt the standard on the 1st of January 2017. These companies were known as early adopters. The sample contains 23 Jordan-listed companies from the mining, construction and engineering industries. Aladwan (2019) chose these industries as he expected them to be affected the most by IFRS 15. The study concluded that the revenue figures and stock prices for these companies declined significantly after the implementation of IFRS 15. Additionally, Aladwan (2019) uses a simple regression analysis to compare the correlation between stock prices and revenue before and after the implementation of IFRS 15. It was found that the correlation between stock prices and revenue figures decreased. It should be noted that this research is limited to a small sample of companies who chose to adopt IFRS early. Therefore Aladwan (2019) calls for more research on the effects of accounting standards and stock prices.

6. Conclusion

The purpose of this literature review was to assess the full effect of IFRS 15. This process started with analysing the differences between IFRS 15 and the previous revenue recognition standards.

The main difference between the old and new standards can be found in the way revenue is measured and recognized, the number of required disclosures and the amount of guidance that is provided (Dalkiliç, 2014). While the previous standards had different models for recognizing revenue, IFRS 15 uses one comprehensive revenue recognition model for all contracts with customers. The five-step model provides a step-by-step guide to determining the timing and amount of revenue recognition.

The disclosure requirements concerning the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers have grown substantially (Dalkiliç, 2014). The number of pages dedicated to guiding the application of IFRS 15 and illustrative examples has increased exponentially. The basis for conclusions section in the new standard where the IASB explains its stance on the new requirements has also grown substantially. The increase in additional guidance can be explained by the fact that the IASB aims to move from principle-based accounting to rule-based accounting with IFRS 15.

According to Tong (2014), changes in the identification of performance obligations and the treatment of long-term contracts and variable considerations will affect revenue recognition practices the most. Simple contracts for sales of goods will not be affected. Ciesielski and Weirich (2015) predict that the changes IFRS 15 imposes on current revenue recognition practices will affect the companies from the telecommunication, healthcare and technology industries the most. These predictions have been used by researchers to focus their attention on specific industries.

As the main objective of the IASB is to serve stakeholders, limiting the research to only accounting effects does not convey the full effect of accounting standards. How entities adjust their operations because of a change in accounting standards is also of importance to the stakeholders and standard-setting bodies. Therefore, the empirical evidence on the effects of IFRS 15 post-implementation was separated into accounting effects and real effects. The accounting effects will be discussed first.

The presentation of revenue figures was affected by IFRS 15 and the choice of transition method. Companies chose to adopt the simplified method more frequently as it was easier and less complex to implement (KPMG, 2019). However, the chosen transition method was dependent on the size of the company and its industry.

The changes IFRS 15 has made to the recognition and measurement of revenue do not lead to a significant adjustment of revenue or retained earnings for most firms. Especially companies whose main activities can be described as regular retail sales transactions reported not to be affected by IFRS 15. However, some companies did report a significant increase in their revenue or retained earnings. Companies from the construction and telecommunications industry report a significant increase in revenue (Napier and Stadler, 2020; Kabir and Su, 2022). A select number of aviation companies saw a decrease in their revenue and retained earnings while telecommunications companies increased their retained earnings significantly.

Napier and Stadler (2020) show that the disclosure regarding revenue increased significantly between 2017 and 2018. This finding is in accordance with expectations set by Dalkiliç (2014) who pointed out that IFRS 15 would significantly increase the number of required disclosures. However, the disclosures regarding revenue should have increased even more. Boujelben and Kobbi-Fakhfakh (2020) find that, out of a sample of construction and telecommunication companies, no company is fully compliant with the disclosure requirements set by IFRS 15.

Evidence on the real effect of IFRS 15 is limited. The costs of applying IFRS 15 were significant across the board, but this did not motivate companies to change the way their contracts are structured. Only some companies from the telecommunications industry changed their contract structure but left existing contracts intact (Napier and Stadler, 2020).

Onie et al. (2023) find that significantly affected companies had a lower explanatory power of earnings before adopting IFRS 15 than companies who reported not being affected by IFRS 15. While this difference is still noticeable post-IFRS 15, it has reduced slightly. Additionally, earnings management has been reported to be lowered by IFRS 15. According to Tutino, Regoliosi, Mattei, Paoloni, and Pompili (2019), earnings management before IFRS 15 is common in the telecommunication industry but a reduction is visible after the introduction of IFRS 15. Piosik (2021) reports that IFRS 15 significantly mitigated the practice of entities increasing discretionary revenues to meet financial goals.

Aladwan (2019) shows that the revenue and stock prices for his sampled companies declined significantly after the implementation of IFRS 15. Furthermore, the correlation between stock prices and revenue figures decreased after IFRS was introduced. It should be noted that this research is limited to a small sample of companies who chose to adopt IFRS early.

This literature review has shown that the introduction of an accounting standard can have a broad array of effects. Not only does a new accounting standard affect the way financials are measured and presented but it also has the potential to affect the way entities operate. The problem with the research on the accounting effects of IFRS 15 is that the samples are often too small. Especially when the sample is distributed over 11 Global Industry Classification Standard Sectors (CIGS). This led to some sectors being underrepresented in the samples. Future research could use bigger samples, but this still poses a problem as smaller companies use the modified retrospective method more often. This method does not allow researchers to

evaluate the exact effect of IFRS 15 on revenue. Moreover, the widespread adoption of IFRS 15 implies that research on the topic is dispersed across countries with diverse economies.

A segment of IFRS 15 research that should also be expanded upon is compliance with disclosure requirements. Boujelben and Kobbi-Fakhfakh (2020) used a small sample of telecommunication and construction companies which is not representative of all complying companies.

The effect of IFRS 15 on stock prices is a section of real effects that should also be expanded upon. The goal of financial reporting is to provide useful information to stakeholders so knowledge of how these stakeholders evaluate the new accounting standard is essential.

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Appendix A

Author(s)	Title	Published	Journal	Research Question	Sample	Main Findings
Aladwan, M.	Fluctuations of stock price and revenue after the early adoption of IFRS 15, revenue from contracts with customers.	2019	Italian Journal of pure and applied mathematics	Has the early adoption of IFRS 15 affected the revenue and stock prices of companies in Jordan?	23 Jordan-listed companies	-The revenue and stock price of companies declined significantly after the implementation of IFRS 15. -The correlation between stock prices and revenue figures decreased.
Boujelben, S., & Kobbi-Fakhfakh, S.	Compliance with IFRS 15 mandatory disclosures: an exploratory study in telecom and construction sectors.	2020	Journal of Financial Reporting and Accounting,	To what degree do European Union listed groups comply with the IFRS 15 mandatory disclosures?	22 European Union listed groups from the telecommunication and construction industry	-None of the 22 sampled companies are fully compliant with the IFRS 15 disclosure requirements. -The companies from the telecommunication industry are more compliant than companies from the construction industry
Ciesielski, J. T., & Weirich, T. R.	Revenue recognition: how it will impact three key sectors.	2015	Journal of Corporate Accounting & Finance,	How will IFRS 15 impact three key sectors?	No sample	-Companies from the telecommunication, healthcare and technology industries will be impacted the most by IFRS 15.

Dalkiliç, A. F.	The real step in convergence project: A paradigm shift from revenue recognition to revenue from contracts with customers.	2014	International Journal of Contemporary Economics and Administrative Sciences	No research question, an overview of the creation of IFRS 15 and its consequences.	No sample	-Previous revenue standards lacked guidance on the recognition of revenue which led companies from the same industry to account for transactions that were economically similar in different ways. -The main goal of the joint revenue project was to improve the comparability of revenue recognition between entities, industries, jurisdictions, and capital markets
Kabir, H., & Su, L.	How did IFRS 15 affect the revenue recognition practices and financial statements of firms? Evidence from Australia and New Zealand.	2022	Journal of International Accounting, Auditing and Taxation	How did IFRS 15 affect the revenue recognition practices and financial statements of firms?	396 companies listed in Australia and New Zealand	-Most companies use the modified retrospective method. -Larger firms tend to use the full retrospective method more frequently than smaller firms due to the complexity and costs of this transition method. -The impact of IFRS 15 on revenue was most significant for the construction sector.

						-Other items such as cost of goods sold, contract liabilities and profit after tax were also materially affected by IFRS 15.
Mattei, G., & Paoloni, N.	Understanding the potential impact of IFRS 15 on the telecommunication listed companies, by the disclosures' study.	2019	International Journal of Business and Management	Exist a direct correlation between the potential impact of IFRS 15 and the quantity and quality information provided in the annual reports elaborated for the two years before the adoption of a new standard?	13 telecommunications companies listed in Spain and Italy	-Most sampled companies dedicate significant effort to disclose the potential effect of IFRS 15. -The quantity of disclosures regarding IFRS 15 increased significantly between the annual reports from 2016 and 2017.
Napier, C. J., & Stadler, C.	The real effects of a new accounting standard: the case of IFRS 15 Revenue from Contracts with Customers.	2020	Accounting and Business Research	How did entities address the impact of a new financial reporting standard?	48 companies from the STOXX Europe 50.	-25% of sampled firms report using the full retrospective method. -The effect IFRS 15 on accounting numbers was mostly insignificant except for companies in the telecommunications and aviation industry.

Onie, S., Ma, L., Spiropoulos, H., & Wells, P.	An evaluation of the impacts of the adoption of IFRS 15 Revenue from Contracts with Customers.	2023	Accounting & Finance	After transition to IFRS 15, are there differences in the relevance of information in financial reports, and earnings in particular, for firms where the impact of the new standard was the greatest and those with little to no impact?	A sample of 94 companies listed on the Australian Stock Exchange (ASX)	-The retained earnings of most companies were not affected by IFRS 15. -Significantly affected companies had a lower explanatory power of earnings prior to adopting IFRS 15 than companies who reported not to be affected by IFRS 15.
Piosik, A.	Revenue recognition in achieving consensus on analysts' forecasts for revenue, operating income and net earnings: The role of implementing IFRS 15. Evidence from Poland.	2021	Procedia Computer Science	Did reporting entities increase discretionary revenue when their pre-managed income narrowly misses the consensus on income forecasts prepared by analysts?	46 companies from the Warshaw Stock Exchange (WSE)	-Companies increase their discretionary revenue when they fail to meet the operating income and net earnings expectations as forecasted by financial analysts. -IFRS 15 significantly mitigated the practice of entities increasing discretionary revenues to meet financial goals.

Tong, T. L.	A review of IFRS 15 Revenue from contracts with customers	2014	Çevrimiçi	How will IFRS 15 affect revenue recognition practices?	No sample	-Changes in the identification of performance obligations and the treatment of long-term contracts and variable considerations will affect revenue recognition practices the most.
Tutino, M., Regoliosi, C., Mattei, G., Paoloni, N., & Pompili, M.	Does the IFRS 15 impact earnings management? Initial evidence from Italian listed companies.	2019	African Journal of Business Management	Does the IFRS 15 impact earnings management?	88 Italian-listed companies	-Earnings management prior to IFRS 15 is common in the telecommunication industry. -A reduction in earnings management in the telecommunication industry is visible after the introduction of IFRS 15. -The extent of earnings management among companies in the utility industry stayed insignificant.
Wüstemann, J., & Kierzek, S.	Revenue recognition under IFRS revisited: conceptual models, current proposals and practical consequences.	2005	Accounting in Europe	No research question, an overview of proposed revenue recognition models.	No sample	-A complete overhaul of the revenue recognition standards, as proposed by the FASB and IASB, is not necessary.