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**THE IMPACT OF IFRS ADOPTION ON THE FINANCIAL RATIOS OF  
NORWEGIAN PUBLIC LISTED COMPANIES**

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Abstract <p>The standards of accounting are critical in determining the quality of financial statements and the financial outcomes of a public listed company. Recently, many organisations have moved from the GAAP (Generally accepted accounting principles) accounting to the IFRS (International Financial Reporting Standards) accounting. The IFRS are more robust, transparent and informative compared to the GAAP, which differ from one country to another.</p> <p>Therefore, the aim of this investigation was to identify the implications of IFRS application on the metrics that denote the financial position of publicly listed entities in Norway, such as, the profitability, liquidity, solvency and market ratios. The specific objectives investigated how the IFRS impacts the profitability, liquidity solvency and the market ratios of the Norwegian companies. The previous studies identified by literature review noted that the IFRS was positively correlated with the financial ratios.</p> <p>This research applied the quantitative research design and examined 10 Norwegian companies. Data was collected from the annual reports and the financial statements of the publicly listed companies on NASDAQ. Correlation and regression tests were carried out to ascertain the impact that the application of the various IFRS standards had on financial ratios.</p> <p>The study established that IFRS positively affected profitability and led to better liquidity outcomes. It also led to the attainment of better solvency ratios and better market ratios. The main strength of this study was that it attained all the research objectives. However, its limit was that its sole focus was on Norwegian companies hence generalisability of the findings to other companies outside of Norway was challenging.</p>			
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Additional information			

## Table of Contents

CHAPTER 1: INTRODUCTION .....	5
1.1 Background or historical information about the IFRS adoption .....	5
1.2 Justification of the study .....	7
1.3 Specific research objectives .....	8
1.4 Structure of the study .....	9
CHAPTER 2. CONCEPT OF IFRS AND FINANCIAL RATIOS .....	10
2.1. IFRS .....	10
2.1.1. Overview of IFRS.....	10
2.1.2. IFRS framework .....	14
2.1.3. Major IFRS requirements .....	15
2.2. Financial ratios .....	17
2.2.1. Major financial ratios.....	20
2.2.2. Significance of financial ratios to different stakeholders .....	24
2.2.3. Shortcomings of financial ratios.....	26
CHAPTER 3: IFRS IMPACT FACTORS.....	29
3.1. Theories .....	29
3.2. Benefits of IFRS adoption.....	30
3.3. Principle-based approach .....	31
3.4. Fair value accounting .....	31
3.5. Consolidation of financial accounts .....	32
3.6. Transparency .....	32
3.7. IFRS Adoption in Norway .....	33
3.8. Major differences between IFRS and NGAAP .....	35
3.9. Empirical review of IFRS adoption and financial ratios.....	36
CHAPTER FOUR: RESEARCH METHODOLOGY .....	39
4.1 Introduction .....	39
4.2 Research design.....	39
4.3 Research strategy.....	40
4.4 Data collection.....	41
4.5 Data collection process.....	41
4.6 Data analysis .....	42
4.7 Research ethics .....	42

4.8 Summary .....	42
CHAPTER FIVE: RESULTS AND ANALYSIS.....	44
5.1 Introduction .....	44
5.2 The descriptives.....	44
5.3 The correlation analysis .....	46
5.4 The regression analysis .....	49
5.4.1 The effect of the IFRS on the profitability ratios of Norwegian companies ....	49
5.4.2 The effect of IFRS on the liquidity ratio of the Norwegian companies .....	52
5.4.3 The impact of IFRS on the solvency ratios .....	53
5.4.4 The impact of the IFRS on the market ratios of Norwegian companies .....	56
5.5 Summary .....	58
6.0 CHAPTER SIX: DISCUSSION AND CONCLUSION.....	59
6.1 Discussion .....	59
6.2 Recommendations .....	61
6.3 The weaknesses .....	63
6.4 Recommendations for further studies .....	63
REFERENCES .....	65

## **CHAPTER 1: INTRODUCTION**

### **1.1 Background or historical information about the IFRS adoption**

Globalisation has profoundly impacted the organisations' financials, financing, and financial practices, especially due to activities such as foreign direct investments, subsidiaries, and operations by foreign companies, which diminish the effectiveness of the local accounting standards and practices. Economic globalisation manifested through the internationalisation of firms and international economic activities engaged by companies through cross border trade and multinational corporations have been a dominant force in creating a need for international accounting practices (Winney, et al., 2010). The local accounting practices, otherwise known as the GAAP (Generally Accepted Accounting Principles) standards, rarely meet the financial need and expectations standards of the international investors and stakeholders interested in the financial information of the business. As per Judge, Li & Pinsker (2010), the main challenge with the local or national accounting standards is that they are highly prone to misinterpretation and misconception as different countries have different accounting standards, which lead to financial misinformation. The international financial standards are therefore an attempt to develop uniform accounting practices and information that can be applied by international organisations to eliminate misunderstanding and misinformation related to the financial information. The chief merit of the International Financial Reporting Standards (IFRS) is that it provides international legitimacy and credibility to the financial reports produced by the company (Baba, 2013). This advantage gives the company access to international investors who can easily read and interpret financial information compiled using the IFRS standards. The IFRS standards, however, are yet to be fully adopted by many countries since adoption of the the standards usually affects the company bottom-line in myriad ways.

According to Isa (2014), various factors drove the adoption of IFRS standards. Some of these factors were related to the individual firms, while other are related to the nature of international standards. Study by Sharma Joshi and Kansal (2017) noted that the IFRS adoption mostly depended on the firm's financial capacity and capability since the adoption

was costly and required finances be set aside for employee training, acquisition of new accounting software and system as well as the costs involved in modification of internal control systems to suit the IFRS standards. Apart from the cost, another critical component that was identified to influence and affect the adoption of IFRS is the complexity of the IFRS systems. As per Inusah and Dwommor (2018) has as certain degree of complexity, which made its adoption controversial and demanding on companies. The adoption required extensive knowledge of the standards concerning fair value requirements, assessments, and recognition standards, as well as the frequency of the financial reporting and comparability of financial information. According to Tsunogaya, Hellmann & Scagnelli (2015), this complexity requires immense knowledge and skills which may not be available to most companies hence the hesitation to opt for the financial reporting standards. Most importantly, the IFRS tends to be incompatible with some of the company's accounting software and systems, which add to the complexity of the IFRS reporting. The national regulations on fiscal matters such as taxation may also be distinct from the IFRS thus adding complexity to the IFRS standards.

The country of interest in this report is Norway has been compliant to the international financial standards since 2002 when the country adopted the IFRS standards for EU countries. This implies that the country has had a long experience in IFRS as the main reporting standards (IFRS Norway, 2019). However, these IFRS apply mostly for publicly listed companies which have subsidiaries and have to report consolidated financial statements. The IFRS or local GAAP can be applied in case of companies which do not have subsidiaries (IAS 2019). However, SMEs and other small entities are not obliged to use the IFRS standards and can apply the local GAAP standards in their financial reporting. Norway stock exchange or Oslo stock exchange has over 120 companies that are listed on the stock exchange making it one of the largest bourses in Europe. The companies listed in the bourse had a market capitalization of NOK 4.64 trillion as of 2018 (Oslo Borse, 2019). It is also one of the largest stock exchanges in the globe as it was established in 1819. Some of the key companies in the stock exchange are MOWI and Equinor.

## **1.2 Justification of the study**

The main essence of this study is to bridge the gap between the existing literature concerning the factors that lead to the adoption of the IFRS. As per Kubickova and Jindrichovska's (2012) study, the IFRS adoption was determined by social cultural, political and economic factors. Another study by Shima and Yang (2012) noted that the IFRS adoption was driven by political factors especially the globalisation factors which forced companies seeking for growth to adopt the international practices. However, Walid and Olfa (2018) noted that most of this study fell short of examining the internal factors related to the company and how these internal factors influenced the specific companies' adoption of the IFRS standards.

More specifically, a considerable number of previous studies like that of Walid and Olfa (2018) mostly focused on identification and review of the various factors that influenced the adoption of IFRS but failed to identify whether the adoption of the different IFRS standards and any implications on the financial ratios of the publicly listed companies. Some of the studies like the one by Shima and Yang (2012) noted that the IFRS led to reduced earnings management and also led to increased transparency but did not state whether the use of IFRS instead of GAAPs led to improved financial performance in the organisations or not. This study, therefore, bridges these gaps by seeking to establish if the adoption of the IFRS activities such as the training of the employees on IFRS, spending costs on IFRS and adopting regulatory system that is favourable led to the improved financial ratios of the companies. Tsunogaya, Hellmann & Scagnelli (2015) and Zakari (2014) noted that even if there were studies that related to the IAS and the financial ratios these studies were not focused on the Norwegian companies. Hence, this study could be essential in connecting this gap and recognising the factors that influenced the adoption of IFRS amongst the Norwegian companies and how the adoption of these standards impacted the financial ratios of the Norwegian public companies.

Practically, this study could be of much essence to the Norwegian public companies as it informed them whether the application of the IFRS standards was beneficial to the bottom-line (Kubickova and Jindrichovska, 2012). It helped the companies to understand whether

the dedication of resources and assets towards the IFRS activities such as internal and external audits, frequent, transparent reporting, as well as the acquisition of systems and infrastructure compatible with IFRS was a worthy financial investment or cost (Ball, 2006). This would help the companies determine whether they would prioritise IFRS adoption activities or not. It could also help to determine whether the progressive adoption of various standards had positive implications on the bottom-line of the company or not and hence inform the board on whether to adopt these standards or not.

The study on IFRS also very necessary to the investors as it could help the investors determine the credibility of the company based on its financial standards it applied (Ye, Xue and Yang, 2016). The findings would help the participants know whether the companies using the IFRS reporting standards experienced better financial ratios and whether this meant better returns for the investors or not. The study would help the investors identify whether the adoption and application of IFRS standards was an indicator of good financial reporting. The research could also help the Norwegian investors to quickly determine whether the companies were practicing earning management and the types of costs incurred by companies that were reusing the IFRS standards (De George, Li and Shivakumar, 2016).

### **1.3 Specific research objectives**

The specific objectives of this study are:

1. To investigate the impact of IFRS adoption profitability ratios of Norwegian public listed companies
2. To determine how IFRS adoption influence liquidity ratios of Norwegian public listed companies
3. To examine how IFRS adoption influence the solvency ratios of Norwegian public listed companies



#### **1.4 Structure of the study**

The first part of this research was the introduction that opened the thesis by highlighting the historical background of the IFRS and the Norwegian public listed companies. It also highlighted the factors that made the study essential, as well as the structure of the study. Chapter 2 highlights the literature review and mostly focused on the theoretical concepts concerning the IFRS, and the financial ratios. The third chapter presents the previous studies demonstrating how various aspects and considerations of IFRS adoption such as cost impacted the different financial ratios of public listed companies. The fourth chapter shows the research methodology applied in this inquiry. The fifth chapter highlighted the findings which answered the research objectives. The sixth chapter was the discussion, and the final part is a conclusion which showed the strengths and weakness of the research including areas that future study on IFRS should focus on during policy development.

## **CHAPTER 2. CONCEPT OF IFRS AND FINANCIAL RATIOS**

This chapter is concerned with critically reviewing the concept of IFRS from a theoretical standpoint, including its definition and key differences with other standards, as well as key characteristics. The chapter also highlights the theorised significance of IFRS, while also pointing out views that criticise its applicability. The chapter then discusses financial ratios, focusing on the most-commonly used financial ratios within publicly traded companies, including profitability, liquidity, and solvency ratios. This study takes a stakeholder approach, thereby looking at ratios that not only have repercussions to investors but also to other stakeholders of the company, such as employees, the management team and customers. Later, the strengths and weaknesses of using financial ratios are also examined, focusing on the views in the extant empirical literature.

### **2.1. IFRS**

#### **2.1.1. Overview of IFRS**

The economies of all countries are built on business operations by individuals and organisations. The larger the business, the more the need for meticulousness in keeping the records of transactions, which is why, at some point in the growth of a business, a professionally trained accountant becomes an indispensable necessity. For publicly trading companies, their sizes are such that they require not just an accountant, but an accounting department, which concerns itself with all the organisation's accounting needs. While traditional accounting focused primarily on the recording and reporting of financial transactions about the business, Nobes (2011) notes that the rapid growth in businesses over the past century has led to a rapid increase in more nuanced accounting fields, such as managerial accounting, tax accounting, cost accounting, external auditing<sup>1</sup>, and financial accounting. These fields represent different needs of accounting information, and as a result, the formats used to present the accounting information may differ, even if the primary financial facts are the same. Beyond this, different organisations may opt to use

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<sup>1</sup> In this case, auditing qualifies as one of the fields of accounting as per its definition by Power (1999), who defines it as the process of systematically examining financial records of an organisation to determine the extent to which the statements and disclosures presented by the company give a fair representation of the reality.

different accounting templates, and in a broader perspective, different governments may consider varying accounting, which may also create disunity among financial reports across countries. Questions therefore arise. How do organisations ensure consistency within their own subsidiaries in different countries? Which accounting field gives the relevant accounting report for public consumption? And for managers? Who is to say that one company's accounting approach is the better one?

The term International Financial Reporting Standards, simply IFRS, refers to the set of standards developed to provide a universal language through which organisations can communicate the details of their accounts understandably and comparably across the globe (Perramon and Amat, 2006). The standards are developed and governed by the International Accounting Standards Board (IASB), which in 2001 replaced the International Accounting Standards Committee (IASC)<sup>2</sup>. The IASB is a body overseen by the IFRS Foundation, a non-profit organisation whose main objective is to develop and promote IFRS standards through regular updates geared towards increasing accounting transparency, efficiency, and accountability to stakeholders. Headed by a 22-member board of trustees, the foundation is not only concerned with setting out financial reporting standards but also providing guidelines on International Accounting Standards (IAS), as well as interpretations of both IFRS and IAS by the various committees<sup>3</sup> under its mandate (IFRS, 2018). According to the foundation's website, as of 2019, it was headquartered in London, UK. According to its own description, IASB notes that its main objective is to provide a point of convergence for accounting standards used by different countries by creating global accounting standards (IFRS, 2019). Whether this goal has been achieved remains a subject of debate among both scholars and business leaders, and the subject is examined more closely in chapter 3.

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<sup>2</sup> IASC was formed in London, UK, in 1973, following the collaboration of accounting bodies coming from ten different countries. The countries represented in the very first committee were Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the UK and the USA. Various countries continued to join the committee in the subsequent years and by 2001, when it was replaced by the IASB, it had 104 countries represented (Gowthorpe and Amat, 2003).

<sup>3</sup> Other than publications by the IFRS and prior IAS standards adopted by IASB, IFRS standards also include interpretations from two main bodies. They are Standing Interpretations committee (SIC) and International Financial Reporting Interpretations Committee (IFRIC) (IFRS, 2012).

Daske et al. (2013) note that, before IFRS standards, publicly traded organisations were guided by the IAS standards. While the first international accounting standard, IAS 1, was issued in 1975<sup>4</sup>, the last one, IAS 41, was published in 2000, after which there was a switch to IFRS. Agreeably, Mazars (2018) adds that 2003 saw the first adoption of the new standard, IFRS 1, and by 2018, 16 standards have been published, ending with IFRS 16, which became effective in January 2019. This will be followed by IFRS 17, which will be effective starting in January 2021 (Cohn, 2017). Each new publication is done after significant consultations have been made with relevant industry players, including corporations, SMEs, scholars, and experts, as well as government regulators across various countries (CFO Innovation, 2018). Similarly, even after initial drafts have been exposed and amendments made to it, the standards are only deemed effective after a specific date, which can be negotiated by interested parties. When this happens, the IASB can delay the effective date, as seen in the case of IFRS 17, whose effective date was successfully protested by lobbyists from January 2021 to January 2022 (CFO Innovation, 2018).

Notably, Johansson et al. (2016) point out that, rather than replace entire accounting procedures used by organisations, each new edition of the IFRS standards focuses on a specific subject area, proposing amendments to that area while leaving others intact. For instance, IFRS 14, 15 and 16 concentrate on regulatory deferral accounts, revenue from contracts with customers, and leases respectively. Further, it can be seen that IFRS 1, titled “First-time Adoption of International Financial Reporting Standards,” was designed for use by organisations adopting the standards for the very first time. The three interrelated goals of IFRS 1 include encouraging transparency and comparability, providing a starting point for companies adopting the international system, as well as ensuring such an organisation enjoys benefits that far outweigh the cost of taking this step. Others that focus on accounting rules and procedure include IFRS 4 and 17 (insurance), IFRS 15 and 20 (revenue) IFRS 13 (fair value) IFRS 2 (shares). And IFRS 8 (segment reporting). By comparison, reporting on issues related to the balance sheet are found in IFRS 17 and 16, which deal with lease accounting, while reporting on separate and consolidated financial

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<sup>4</sup> The first IAS standard, IAS 1, was titled *Disclosure of Accounting Policies*, and has undergone various revisions. It was adopted by IFRS in 2001 and a revised edition was reissued in 2007, with the latest revision, which took place in 2018, set to be effective starting January 2020.

statements are reported within the guidelines of IFRS 10 (PwC, 2019). Section 2.1.2 examines the contents of these frameworks further to bring out their major differences and links with the previous IAS standards.

The adoption of IFRS standards continues to spread globally, with 140 jurisdictions requiring them as the legal reporting standards as of 2019. According to Johansson et al. (2016), away from North America and European Union, the standards are also used by South Africa, Brazil, South Korea, Hong Kong, Australia, Malaysia, Pakistan, Russia, Chile, Philippines, Turkey and all of the countries in Arab States gulf (including Qatar, Saudi Arabia, Oman, Kuwait and Bahrain). Notably, however, Nobes (2011) maintains that IFRS standards may differ locally from jurisdiction to jurisdiction. Leuz (2011) argues that such a loop hole may lead to vast differences between standards, but Nobes (2011) disagrees, pointing out that IFRS standards are all aligned based on regular surveys by IFRS, as well as working in partnership with The World Bank and International Federation of Accountants. Due to strong support from the EU, major intergovernmental bodies like the World Bank, as well as its endorsements by various leading economies, the IFRS continue to remain an internationally popular but also relevant accounting standard (World Bank, 2019).

At this point, it is necessary to emphasise that while IFRS has been adopted by many countries globally, it is a compulsory standard for EU. This follows the regulations issued by the EU in 2002, which required the standards to be in use by listed companies by 2005 (EU Parliament, 2002). On the contrary, in the USA, it is not only not compulsory to use the standards, but it is also a government that domestic public companies or SMEs not use it, as it is not permitted. According to the Financial Accounting Standards Board (FASB), the US regulator, domestic companies are required to use US GAAP as opposed to IFRS, as per the Security Exchange Committee (SEC) regulations (FASB, 2016). While efforts have been made to align the two standards, IFRS is seen to be highly based on principles, whereas US GAAP is based on rules (SEC, 2019). For foreign companies with operations in the US, the use of IFRS is permitted. As a result, some 500 foreign companies registered with the US SEC currently use IFRS in conjunction with the US GAAP (IFRS, 2019b).

### **2.1.2. IFRS framework**

Financial reporting, according to the IFRS, is guided by a regularly revised and updated framework. For instance, according to IFRS (2019), the last conceptual framework was published in 2010, and it has been replaced by the revised framework published in 2018, with the expectation that it will be active starting 2010. Before breaking down the significance of the framework, it is imperative to understand that IFRS standards work alongside other standards, the most notable of them being IAS standards. As Malriat (2009) rightly puts it, while there has been a consistent improvement of IFRS standards to make them holistic, a significant percentage of accounting principles are still not covered by the IFRS, which leaves various gaps among accounting managers and executive managers. Christensen, Lee and Walker (2008) opine that these gaps can be filled in multiple ways. One of them it to consider IFRS guidelines in related areas, and apply similar definition into the lacking area. Another way is to fall back onto IAS standards. Citing an instance, Ball (2006) points out that IFRS lacks a clear guideline regarding foreign currencies. For this reason, IAS 21 and IAS 29 are used. Similarly, as regard accounting policies and errors, taxes, and earnings per share, IAS 8, IAS 12, and IAS 33 are relied upon respectively.

Despite this usage of IAS in tandem with IFRS, sometimes it is found that a policy is not covered. Alfredson (2004) argues that this is one of the main reasons the IFRS framework is made. More particularly, the framework performs the function of setting objectives and concepts that guide financial reporting. KPMG (2018) also adds that the framework is the basis upon which the IASB develops new standards of accounting. IFRS (2018) confirms these two functions of the framework, highlighting the eight critical areas covered in the latest edition.

The first two chapters of the framework present the are objectives of financial reporting, qualitative characteristics of useful financial information, and descriptions of the boundaries of a reporting entity. These three chapters form the reasons why reporting standards are necessary and the role they serve in society. This is followed by the chapter on the definition of basic accounting terms (equity, liabilities, assets, expenses, income) and how these definitions were arrived at; considerations for accountants to include or

remove an item in the financial statements, and guidance on when using them is appropriate. As seen, therefore, these three areas are focused on giving practical accounting guides. The last two sections of the framework focus on the presentation and maintenance of the financial records (IFRS, 2018). Despite its broad scope, the framework is not the Standard, and where there is a conflict between the two, the standard takes precedence. This is because the framework should only come into use when the IFRS standard fails to provide the relevant accounting guideline, reiterates Ogiedu (2011).

While the scope of the framework is enormous, the sections relevant to this study are those which directly concern with financial ratios. Specifically, chapter three of the framework focuses on financial reporting and the first part of it, which is financial statements, further focuses on the two core statements of financial performance, which are statements of financial position and statement of performance, alongside other statements such as cash flows, distribution of shareholders, and risk statements (Winney et al., 2011). Because financial ratios, which form a core focus of this study, are closely tied to elements of financial statements, chapter for the reporting framework also becomes essential.

The IFRS framework points out five key elements, which include assets, liabilities, equity, income, and expenses, and with a conflicting perception of each of these elements, organisations may report contradictory financial accounts, as Ogiedu (2011) points out rightly. A critical example is a change in the definition of what an asset is. According to the previous framework, an asset was defined as “a resource controlled by an entity as a result of past events from which economic benefits are expected to flow.” However, in the new definition, it is defined as economic resources controlled by an entity as a result of past events. The same was seen in the definition of liabilities, expenses, and income.

### **2.1.3. Major IFRS requirements**

To comply with IFRS principles, many requirements need to be met. IFRS (2019b) broke down the fundamental IFRS requirements, finding that they can be grouped into seventeen main categories, each representing a single publication of the IFRS, beginning with IFRS1. According to the principles, a reporting entity is required to include four statements in its financial statement, and these are statements of financial position, comprehensive income,

equity changes, cash flows. Together with these, it is also necessary to include notes that offer a summary of the policies used when making the statements. It is further required that an organisation which changes its policy publish a comparison of the financial position statements before and after the change. Winney et al. (2011) add that it is further required that companies publish consolidated financial statements for each subsidiary under its control.

Regarding accounting for acquisitions and goodwill, the standards require a transaction to have an entity mentioned as the acquiring entity, and this entity is then expected to point out the fair value of both liabilities and assets, including intangible assets, acquired<sup>5</sup>. When this happens, the consideration of goodwill is made as to the difference between assets and liabilities, although it is essential to note that goodwill impairment is allowed, while goodwill amortization is not allowed (Winney et al., 2006). IAS36 guides the consideration of goodwill.

Entities are also expected to measure property, plant and equipment, and in this case, two things are essential to note. Firstly, in case the PPE is revaluated, all surpluses are recorded as equity and not income, while any depreciation is considered as a cost and included in the income statement.<sup>6</sup> In cases where the business is a joint venture or other forms of contractual agreements as per IAS 31, they are required to follow one of two accounting methods. The first is consolidation, in which case the financial statements are reported for the joint venture; while the second is using the equity approach where each investor's share is accounted for separately.<sup>7</sup>

There are also particular requirements for inventory and receivables, as outlined in IFRS7. With inventory, organisations must state the net realisable value, while also using the lower of cost as directed in the US GAAP principles. However, the cost, in this case, is not merely buying price, but also searching, transportation, storage and other costs associated with having the product or service at their present location. On the other hand, payables and

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<sup>5</sup> This is noted in IFRS3.41.

<sup>6</sup> This is as per the standards given in IAS 16.48

<sup>7</sup> In 2013, IFRS 11 updated this particular requirement, so that joint ventures, such that in special circumstances, it would be possible to make accounts as if there does not exist any joint venture by avoiding consolidation.



receivables undergo fair value reporting, with the option for amortisation, discounting, and impairment.<sup>8</sup> IFRS 8 and 9 deal with borrowing and provisions, respectively, while IFRS 10 outlines the requirements for revenue. From IFRS 10 to 17, the standards are concerned with requirements regarding revenue, employee costs, share-based payments, income tax, cash flows, leases, fair value and amortised costs respectively. With regards to income tax, organisations are expected to consider taxes as a liability in the balance sheet, while differed taxes are recognised as a capital allowance (Wells, 2019).

## **2.2. Financial ratios**

As discussed in section 2.1, large corporations have accounting departments whose sole purpose is to track, record, report financial transactions of the company, while helping the management to cut costs and maximise profits. While not all of the data is made public, publicly traded companies are obligated by law to issue particular financial records, and these are clearly outlined in specific country's accounting regulations. Because of their sheer sizes, if they follow the required regulations to the letter, some end up companies issuing reports that are dozens or hundreds of pages long, complete with footnotes, risk assessments and assumptions (Upadhaya, Munir and Blount, 2014). Interested stakeholders are free to examine these statements to understand the organisational performance, which they make require to make decisions regarding investments, employment, lending, acquisition, mergers, as the situation may require. But organisational performance analysis goes beyond looking at individual company's reports for the published period, and include examining financial as well as non-financial performance both across time, and across industries. According to Varshney and Maheshwari (2010), where matters of financial performance are concerned, financial analysts look at the company's sales, profits, debts, assets, long-term investments, and other metrics. The important question here is how does one compare all these different aspects? How adequate are the comparative tools in comparing financial data of companies from year to year, from industry to industry, and from country to country?

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<sup>8</sup> The guidelines for dealing with debtors and creditors are clearly laid out in IAS 18.

The question of the significance of financial ratios in measuring organisational is not a new one. Susan (2003) argues that many studies have been conducted which aimed at determining whether financial ratios are relevant and practical measures of evaluating performance, and found that most stakeholders rely on such measures for two reasons. First, it makes it possible to determine an organisation's performance and growth, based on its historical performance. Secondly, it makes it possible for them to determine whether the organisation is competing favourably with rival companies, partners, and even unrelated companies within the same industry. These views are supported by Chandra (2007), who also adds that financial ratios generally provide a clearer picture of the health of the company, making it possible not only for the management to make boardroom decisions but also for shareholders to buy or sell their stocks. Nenide, Pricer, and Camp (2003) further point out that the use of financial ratios is not limited to specific industries or organisation sizes, and this makes them very popular among both large multinationals as well as start-up small and medium scale businesses (SMEs).

Finch (2005) offers a straight forward definition of the term, arguing that a ratio is a comparison of one number to the other mathematically through division. Thus, a financial ratio is the comparison of figures retrieved from financial statements. Spathis and Doumpos (2002) go a step further, pointing out that a financial ratio is a companion of financial statement figures to gain some insight regarding the performance of the company. Agreeably, Nedine et al. (2003) add that each financial ratio needs to have some meaning attached to it, making it essential as a tool to business managers as it summarises the behaviour of an organisation while. As ratios, Chien and Danw (2004) contend that they can be presented in three main ways in reports. First, they may be expressed as decimals or percentages. According to Spathis et al. (2002), it is typical for financial ratios to be presented as a percentage if it is usually more than 1, such as price-to-earnings ratio, whereas ratios that consistently remain less than, such as profit margins 1 are most likely to be presented using percentages. For this reason, it is crucial to understand what each ratio means, as well as what it tells about the health of the company.

Chandra (2007) argues that it is also critical to understand the sources of financial ratios. The organisation's financial statements, which are formal records of the organisation's

position, profitability, ownership, and transactions, provide the only reliable source of information about the company's finances. Traditionally, the financial statements are usually comprised of four key reports, which are a statement of changes in equity, statement of income and loss, statement of cash flows as well as a statement of the company's financial position (also known as the balance sheet). As such, it may be a challenge to calculate financial ratios if an organisation fails to create or publicise its financial information.

However, Williams et al. (2008) argue that accessibility may not be the only challenge. This is because organisations may create financial statements, but select to use different accounting approaches in doing so. To highlight this point, one may consider two companies A and B, whereby companies A and B have the same total assets, and therefore, are equal in size. Suppose A as \$100 million in current assets and B has \$150 million in current assets, it would be expected that B is more liquid than A. Nevertheless, a case may be found where A is more liquid than B. This can happen if company A decided to write down old inventory to account for declining value, as well as reduced its accounts receivables by 25% to eliminate bad debts, while company B never makes these adjustments. Efforts have been made to introduce standards and guidelines that may bring uniformity to the accounting of company accounts, some of which include GAAP, IFRS, and IAS, making it necessary for management accountants to familiarise themselves with such regulations in order to discharge their roles more effectively (Chien and Danw, 2004).

The process of breaking down and reviewing financial statements using financial ratios is referred to as financial ratio analysis (Schroeder et al., 2010). According to Chandra (2007), more than 44 financial ratios were in use three decades ago, with the number increasing over time. Thus, as Chien and Danw (2004) rightly put it, understanding the accounting procedures plays a direct role in influencing how the company's ratios are understood and interpreted. This makes it a challenge for a non-expert to grasp and use the data because of information overload, especially if one wanted to compare several years of a company's performance or even different companies in the same industry. As a result, scholars have come up with groups to help categorise these ratios as briefly discussed below.

Nedine et al. (2003) argue that four main categories of ratios are used by analysts, which are liquidity, profitability, activity and leverage ratios. Groppelli and Nikbakht (2000) add a fifth category, called market ratios, whereas O'Sullivan and Sheffrin (2003) add a sixth category called capital budgeting ratios. Schroeder, Clark and Cathey (2010) also group the ratios into six major categories. However, they depart from the ones mentioned, and instead use sales ratios, profitability ratios, asset management ratios, financial structure ratios, liquidity management ratios and expense analysis ratios. Irrespective of the typology used, the important concern, according to Williams et al. (2007), is to understand how to calculate each category and interpret it rightly.

### **2.2.1. Major financial ratios**

#### **Profitability ratios**

Profitability ratios, also known as profit margin ratios, compare the various components of income against sales (Robinson et al., 2015). This means that they measure how well the organization is using its assets to make a profit. According to Saleem and Rehman (2011), the profitability ratios are usually used by companies to measure their use of assets as well as control of expenses to generate a suitable rate of return. Lartey et al. (2013) explain that the ratios give an idea of what constitutes the company's income and often expressed as part of each sale. Lartey et al. (2013) identify the main profitability ratios to include gross profit margin, operating profit margin and net profit margin. However, Groppelli and Nikbakht (2000) further include return on equity (ROE), return on assets (ROA), return on capital (ROC), as well as return on capital employed (ROCE) into this category. According to Spathis and Doumpos (2002), some analysts even include the risk adjusted return on capital as well as the efficiency ratio.

However, Nenide et al. (2003) argue that, in terms of popularity in the market, the first three profitability ratios are considered. In the view of Robinson et al. (2015), the gross profit margin is the ratio of income to sales, which shows the amount of money from sales is left after deducting the cost of goods. Further, the operating profit margin is the ratio of operating profit compared to sales, which indicates how much of each dollar from sales is remaining after deducting operating expenses (Lartey et al., 2013).

Net profit margin, on the other hand, is the ratio that measures the company's net income against sales, thereby indicating how much of the sales are left after all the expenses are deducted. Not only can it show the company's net profit in comparison to the previous years' profit margins, but it can also be compared with the net profit margins of rival companies. Robinson et al. (2015) summarized profitability ratios as the performance ratios used to assess the organization's ability to generate profit from sales, equity and assets.

### **Liquidity ratios**

According to Kirkham (2012), liquidity is a reflection of the company's ability to meet its obligations in the short term while using the assets that can be readily converted to cash. As such, the assets that can be easily converted into cash within a short period are often known as liquid assets and listed in the company's financial statements as current assets (Vodova, 2011). Notably, Vodova (2011) argues that current assets are often called the working capital since they represent the resources required by the company for the day-to-day operations of the firm in the long-term. The liquidity ratios identified include a working capital ratio (or current ratio), quick ratio (or acid test ratio), and times interest earned (Lartey et al., 2013). According to Groppelli and Nikbakht (2000), other useful liquidity ratios are the operating cash flow and cash ratios.

Vodova (2012) contends that of the ratios identified, the current ratio, which compares current assets to current liabilities, is the most often used in liquidity tests. Its central significance is to measure the organization's ability to pay its short-term liability using only its current assets, or how efficient an organisation can be at repaying short term debts. Agreeably, Kirkham (2012) emphasizes that the current ratio is a critical measure of liquidity since short liabilities are often due within the shortest period, thereby giving the company limited time to raise funds needed. Šarlija and Harc (2012) define quick ratio as the ratio between current assets fewer prepayments and inventories, and current liabilities. They go further to argue that it is responsible for measuring the ability of the organization to pay its current liabilities when dues by using only the quick assets, and this is its main difference with the current ratio (Lartey et al., 2013). The ratio is essential especially to creditors because it indicates the liquidity of the firm.

Finally, the time's interest earned ratio, also referred to as interest coverage ratio, is the coverage ratio, which measures the proportional amount of income which can be applied to cover the expenses of interest in the future (Vodova, 2011). To this end, Kirkham (2012) summed the liquidity ratios as the financial ratios which focus on the firm's ability to pay the bills whenever they are due.

### **Solvency ratios**

Khidmat and Rehman (2014) opine that the solvency ratio, also known as the debt ratios or leveraging, ratios measures or quantify the company's ability to pay back the long-term debt. On the other hand, Penttinen et al. (2011) described leveraging ratios as the ratios which are used to evaluate the level of financial risk the organization has taken. As such, the solvency ratios measure the level of financial leverage applied by the organization as well as the company's ability to fully service its debt obligations (Ucal & Oksay, 2011). According to Khidmat and Rehman (2014), the solvency ratios include debt ratio, debt to equity ratio and equity ratio. Gropelli and Nikbakht (2000) add the debt service coverage ratio, interest coverage ratio (otherwise referred to as times interest earned ratio), as well as long-term debt to equity ratio.

Accordingly, Ucal and Oksay (2011) assert that the debt to equity ratio is a financial liquidity ratio, which makes the comparison between the organization's total debt against the total equity. Further, the debt to equity ratio indicates the percentage of the firm financing which originates from the investors and creditors. As such, a higher debt to equity ratio means that the organization is using more creditor's financing compared to investor's financing (Penttinen et al., 2011). Moreover, Kidmatt and Rehman (2014) explain that the equity ratio is often considered as the solvency or investment leverage ratio used to measure the amount of assets that are primarily financed by the shareholders' investment through comparing the total equity in the organization to the total assets. Furthermore, the debt ratio is another solvency ratio that measures the organisation's total liabilities as a percentage of the total assets (Ucal & Oksay, 2011). Essentially, the debt ratio indicates the organization's ability to able to pay off its liabilities using the assets. Therefore, solvency ratios measure the financial leverage of the company.

## **Market ratios**

According to Mohamad and Saad (2010), the market prospects ratios, which are also known as valuation ratios, measure the response of the investors to the ownership of the stock of the firm as well as the cost of issuing the stock. On a slightly different view, Maditinos et al. (2011) argue that market ratios indicate how the market values the company stocks in regards to specific measures of the firm fundamentals like cash flow, dividends, earnings, and book value. In essence, these are the ratios looked at by the investors on a day-to-day basis as they tend to change with change in stock prices (Edmans, 2011). The primary valuation ratios include earnings per share (EPS), price to earnings (P/E) ratio, dividend yield and dividend pay-out ratio (Mohamad & Saad, 2010). While these are the popular ratios, Gropelli and Nikbakht (2000) further argue for the use of price sales ratio, cash flow ratio, and price to sales ratio.

According to Edmans (2011), the earning per share is the market prospect ratio responsible for measuring the amount of net income earned for every outstanding stock of share. That it is the amount of money that each share would attract in case all the profits were paid out to the outstanding shares by the end of the year. The price earnings ratio is a market valuation ratio that calculates the value of the stock in the market compared to its earnings by making a comparison of the market price per share against the earnings per share (Maditinos et al., 2011). On the other hand, the dividend pay-out ratio is responsible for measuring the proportion of the net income, which is paid to the shareholders in terms of dividends at the end of the financial year (Mohamad & Saad, 2010). Finally, Edmans (2011) describes dividend yield as the financial ratio which measures the number of cash dividends distributed among the common shareholders compared to the market value for each share. Hence, the market ratios are concerned with the shareholders' return on investment as well as the relationship between the value of investment and return.

## **Capital budgeting ratios**

While the categories of ratios mentioned so far rely on historical data in the financial statements, capital budgeting ratios take a different approach. As Chien and Danw(2004) rightly point out, capital budgeting refers to the process of determining the ability of an

organisation to fund its short-term and long-term investments, including the production of new products, purchasing new machinery, plant, and equipment, or conducting research and development. Williams et al. (2008) support this definition but adds that capital budgeting goes beyond checking organisation capacity, to looking at the ability of the organisation to make returns on such investments. This additional perspective is vital as it helps determine how much capital should be invested, which investment has the highest opportunity cost, and what methods of funding are appropriate, based on the organisation's goals and strategy. Chien and Danw (2004) aver that the uniqueness of capital budgeting is that it predicts future possibilities, which makes it necessary to have ratios that can estimate future performance, hence justifying the use of capital budgeting ratios.

Popularly used ratios in this category are net present value (NPV), profitability index, equivalent annuity, modified rate of return, and Internal rate of return (Chandra, 2007). In addition to these, Spathis and Doumpos (2002) have also noted the increasing popularity of the payback period, accounting rate of return, equivalent annual costs and average accounting return. The Present Net Value refers to the cash flows discounted at the cost of capital, whereby any investment with a positive NPV is potentially acceptable. This ratio is useful when comparing the best option out of multiple projects that may achieve the same goal for an organisation, where only one is needed to achieve this goal. When the discount rate gives an NPV of zero, this is referred to as internal IRR, and it may be used similarly to the NPV method. Chandra (2007) further posits that the equivalent annuity method is also derived from the NPV when it is divided by the annuity factor. This allows the comparison of projects with similar cash inflows but different completion periods, such as when one project takes 8 years and the second project takes 12 years to complete.

### **2.2.2. Significance of financial ratios to different stakeholders**

According to Palepu and Healy (2013), the usage of the financial ratios varies depending on the organisation stakeholders. Chandra (2007) supports this view and adds that, as per the stakeholder theory, stakeholders comprise not only the management and employees of the company but also investors, customers, rival companies, government agencies, the community, lenders, and potential investors. Various classifications exist, which group



stakeholders into internal and external, primary and secondary, powerful and influential, among others. Because of the varying categories, each stakeholder group has their varying interests in the organisation, and the financial ratios mentioned above is only relevant if it answers their particular questions.

The managers use the financial ratios for different reasons from the external investors interesting in buying the shares of the company. For the investors, one of the uses of financial ratios is to help them compare the company's financial results to those of the competitors within the industry and adjust their investment portfolio (De Franco et al., 2011). According to Robison et al. (2015), the comparison with other similar firms in the industry helps highlight the strength and weaknesses of the firm concerning other firms in the industry. For the management, using financial ratios may provide them information about non-performing divisions, projects, markets, products, among others, which helps the company identify areas for improvement. Banks and lenders, on the other hand, would be interested in evaluating the risk profile of a company as a basis of making decisions regarding credibility, premiums, and leverage to ask for while offering a loan product. Chien and Danw (2004) argue that such a step often requires the input for the advanced statistical models to combine different kinds of business events as well as identify financial characteristics (Palepu & Healy, 2013). For instance, most companies have used the ratios in conjunction with statistical models to measure the relationship between the differences in the financial ratios across risk premiums on the bonds (Saleem & Rehman, 2011). By contrast, the ratios may be used by government agencies and regulators to forecast the corporate bond ratings which have been published.

For potential investors, Lartey et al. (2013) also contend that the financial ratios have can be used to understand the profitability of the firm as the ratios can determine the extent to which the company is profitable. For instance, ratios such as the return of equity and return on assets help to comprehend the capability of the company to make earnings. The two ratios demonstrate how the company uses its investors' funds. This is different from how the HR may use the ratios to improve employee performance, as they may use the ratios to analyse the operational efficiency of the company in terms of human capital (De Franco et al., 2011). On the other hand, for companies considering business expansion through

acquisitions, the ratios such as account receivables turnover and inventory turnover ratio can be compared to other peers in the industry, which helps evaluate the firms that have better management compared to one another (Palepu & Healy, 2013).

### **2.2.3. Shortcomings of financial ratios**

While they have a wide range of uses with significance to all stakeholder groups in an organisation, financial ratios are not without their main shortcomings. Wiklund et al. (2010) points out that, though the financial ratios are useful to the organization for various reasons, it is imperative for the users to understand the limitation of the selected ratio, as failure to do this directly leads to misinterpretation or misplacement of facts, which in turn results to poor decision-making. The limitations of financial ratios are caused by several factors, including an overreliance on financial reports, restriction to quantitative data, complexity, as well as limited comparability.

First, the ratios are limited because they are based on accounting figures, which are themselves generated from the accounting records. The problem with this is that accounting records can be manipulated by the company's management, especially when there is an incentive to hide poor performance. While public companies are expected to have measures to prevent accounting fraud, such as hiring independent external auditors, this may be inadequate to prevent fraud, thereby making financial ratios a poor tool for evaluating performance. For instance, notable cases in the past three decades include Sybase, Cedant, Lehman Brothers, and Olympus under Ernst & Young; Enron and WorldCom under Arthur Andersen; and Bernard Madoff, which was being audited by Frierling & Horowitz (Farrell, 2017).

Secondly, as noted earlier, organisations may use varying accounting standards from one another, as well as from one year to the other. Brooks and Mukherjee (2013) add that the differences in accounting methods that relate to depreciation, amortisation, and estimation of life of assets can bring problems for carrying out comparability even when the companies are in the same industry. This diversity in accounting practice limits the applicability of financial ratios, requiring the need for standardisation across the national, regional or even global levels (Brooks & Mukherjee, 2013).

Further, Shahwan (2015) argues that financial ratios do not help make reliable conclusions because they are strictly quantitative, which means that they are unlikely to capture company information where the data may not be easily broken down into monetary units like they do profits and sales. Such data include employee satisfaction with a company and customer perceptions with a brand, which requires different methodologies for collecting and analysing company data. Nedine et al. (2003) contend that to make financial ratios useful for understanding an organisation's performance, they should be used alongside other qualitative measures of performance.

According to Wiklund et al. (2010), another limitation of financial ratios with the inherent difficulty of comparability. This is because, in addition to the problem of varying accounting standards mentioned, organisations may publish different sets of ratios, making it difficult to compare specific vital relationships. To deal with this limitation, Chandra (2007) argues that users can either use the financial reports, data co calculate all the ratios they want, which may be a challenge for non-experts. An alternative would be to use reliable databases such as Morning Star, Nasdaq, Market Watch, and Yahoo Finance, and these may sometimes require paid subscriptions, thus proving costly to the users.<sup>9</sup>

Moreover, the financial ratios are also limited by the prevailing inflation rates (Lartey, 2013). As a result of inflation, the financial figures and historical cost-based financial statements mostly do not reflect the prevailing value figures more so in cases where different enterprises purchase the assets at different periods. Given that the financial ratios do not consider inflation adjustment, the calculated ratios become deceptive and distorted (Saleem & Rehman, 2011). In their study, Lartey et al. (2013) also found that the financial ratios are limited because they only consider the position of the organization for a specific date. As such, the ratios can cause disparity among users since the values used are dependent on income statement and costs.

It is clear from the preceding discussion that IFRS has undergone a notable evolution. Since it took over from IAS and for the past two decades, it has continued to help streamline the

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<sup>9</sup> A major limiting factor with using paid subscriptions is that a user may only require a one-time use of the services, while most of the platforms offer a subscription-based platform that charges usage monthly.

accounting environment on an international scale, with the increasing number of countries complying with the standards and the continuous publication of additional standards only making it more reliable and efficient as a standard. Despite its limitations, IFRS remains relevant in the dynamic international business environment, making it relevant to be studied and understood. At the same time, financial ratios continue to be one of the quickest methods of summarising and analysing company performance. Different stakeholders have their perspectives on which ratios best paint the organisation's picture, and for this reason, different categories of ratios exist. However, it faces many limitations, two of them being the use of diverse accounting approaches and accounting fraud. It is concluded that the use of international standards by organisations may help deal with some of the problems faced by using financial ratios.

With the current understanding of the significance and uses of both IFRS and financial ratios, and noting their limitations in practice, attention now turns to the question of how, if at all, IFRS has influenced the adoption of financial ratios. However, before looking at the Norwegian case study, which is the focus of section 4, it is imperative to critically examine the literature on how these impacts can be understood and assessed, as well as what frameworks are most relevant in this process.

## **CHAPTER 3: IFRS IMPACT FACTORS**

The previous chapter has established a foundation for the concepts of IFRS and the main aspects of financial performance, together with the main strengths and weaknesses of each. But to what extent are the two concepts linked together? Looking at both the theoretical and practical perspectives, this chapter focuses on the critical review of literature on IFRS and how it relation with financial performance. The first section focuses on a critical review of two main theories frequently used in underpinning the subject, namely: new institutional theory and agency theory. This is followed by an examination of IFRS adoption in Norway and the benefits this is expected to provide to organisations. The discussion then narrows down its focus to critically review how IFRS adoption impacts financial ratios, and to what extent this occurs by examining empirical evidence. The last section is the hypothesis development.

### **3.1. Theories**

Two main theories explain the relevance of using IFRS standards among organisations, especially publicly listed organisations, and they are New Institutional Theory and Agency Theory. New Institutional Theory is of the position that organisations survive in the market only if they conform to the set of systems and rules set to govern their operations within that environment (). In national and international business environments, various factors may require conformity, including political, legal, economic, sociocultural and technological factors (Wahunic,2012). Rodrigues and Craig (2007) strongly argues that the main motivators for businesses for profit to conform are their drive to make economic gain and their obligation to operate within the government and industry regulations. In the present case, IFRS can be considered as a factor that influences the very existence of a business organisation, especially in countries where it is a government requirement such as in the EU. At the same time, even where it is not an absolute requirement, IFRS may offer organisations some advantages, especially the advantage to have uniform accounting standards, which is critical for organisations with multiple operations across different markets. While this theory points out the need to conform as a must-do step for organisations, Wahyunic (2012) argues that the main reason for countries or organisations adopting IFRS should be its potential economic benefit to both the country and

organisation. Supporting this perspective is Touron (2005) who earlier noted that EU countries were coerced into submitting to the rules, noting that such pressure may sometimes lead to resistance. This theory highlights the significance of examining and questioning the advantages of using IFRS, especially where organizational profits are concerned.

Agency theory posits that whenever owners rely on managers to perform services on their behalf, there arises a conflict of interest between the two parties, which may lead to problems in their relationship. In this arrangement, the owners are principals and the managers are agents, and the conflicts that are most likely to arise are the differing views between the two groups as to what the goal of the organisation should be (Barako, Hancock & Izan, 2006). While managers expect that the activities carried out in their organisations should focus entirely on creating long-term value, managers often want to focus on short-term performance such as profits and dividends, which better highlights their performance as organisation heads. Additionally, the two groups are so motivated because owners gain through increased corporation value, where managers gain through salaries and bonuses, which are pegged on annual performance (Al-Shammari, 2005). One way of dealing with the agency problem is minimizing the powers of the management as well as emphasizing on transparency. In the context of publicly listed organisations, the interest groups increase to include not only managers and major stockholders, but also consumers, minor shareholders, bondholders, the government, the community as well as employees of the organisation. Because it provides a standard that clearly stipulate the roles of managers and their duty to conduct fair and regular reports of the company's performance, IFRS contributes to the performance of an organisation from the perspective of all stakeholders, making this theory relevant to the present study.

### **3.2. Benefits of IFRS adoption**

The previous chapter showed that the number of countries and organisations adopting IFRS standards have continued to increase rapidly. In the EU, it is the reporting standard for all countries and companies, and in the US, while it is not allowed for domestic companies, 500 companies registered with the SEC use it. Further, in Africa and Asia, many countries have already adopted the standard, bringing the total jurisdictions under IFRS to 140 as of

2019 (IASB, 2019). But what do these countries and the companies stand to gain, specifically, from their adoption of these standards. The benefits of IFRS can be dissected by examining its main features and the benefits of each feature. Blanchette, Racicot and Girard (2011) classify the characteristic of IFRS into four distinct groups, which are: use of a principle-based approach, fair value reporting, improved transparency as well as consolidation.

### **3.3. Principle-based approach**

Prior to the introduction of IFRS, most accounting and reporting procedures followed a rules-based approach, the focus of which was detailed and in-depth prescription of accounting and reporting rules that prescribe each step companies must follow. On the contrary, IFRS takes a principle-based approach, which means that it deviates from reliance on rules and instead focuses on principles. () points out that what this means is IFRS relies on interpretation rather than letter of the law; or substance over form. Simply, IFRS allows the management to apply some discretion in implementation of the standards, the standards only providing a broad-brush stroke within which the reporting must be done.

This approach has one main advantage, which is its ability to offer flexibility to the management. This is in contrast to the rule-based approach, in which the management is constrained by inflexibility, making it a challenge to align objectives of the organisation to the regulatory requirement. Providing an example of organizational control based on equity consolidation, () notes that SFAS 94, which was published in 1987 by FASB, requires the organisation to attain more than 50% of outstanding voting shares for there to be control and a decision be considered a majority decision. In contrast, IAS 27 requires that control be defined as the power to govern operating and financial policies of an organisation in such a manner that it benefits from the activities it carries out. However, it is helpful to note that the distinction between rule-based and principle-based approaches may not always be direct as standards sometimes mix both approaches.

### **3.4. Fair value accounting**

Organisations can take two main approaches when reporting the assets under its statements. The first is cost accounting, and this perspective argues that the management should

consider all the historical costs of an asset when measuring their value. This approach is used by most GAAP principles in different countries. On the contrary, fair value accounting requires assets to be measured at fair value, which means considering the profits and losses it contributes to the firm or measuring amortized costs where the investment matures. IFRS uses the fair value accounting as outlined in IAS 39. Fair value accounting under IFRS also guides how liabilities are measured.

The main advantage of using fair value accounting to organisations is that it offers a more accurate view of the company's balance sheet (). () argues that fair value approach may suffer from the problem of volatility, as pegging the balance sheet, and specifically fixed assets and long-term liabilities, on profits and losses. But the impact of this problem can be limited through the use of statement of comprehensive income. Blanchette et al. (2011) argue that using comprehensive income approach makes it possible for the organisation to measure fair value within the balance-sheet while at the same time, eliminating volatility of the income statement.

### **3.5. Consolidation of financial accounts**

IFRS requires organisations to consolidate their incomes and assets into one financial report whenever they are reporting their returns. What this means, according to (), is that organisations have the obligation to report the profitability, position as well as cash flows including those of their subsidiaries in various industries or countries. The significance of this approach is that the organisation is mandated to the fair value of their liabilities and assets at the same time, thus bringing in the concept of fair-value adjustments. Another main significance of consolidation is that it influences how the organisation views minority interest. The IFRS provides that minority shareholders even in subsidiaries be noted, and since the value of these subsidiaries are also noted, it implies that minority shareholders become part owners of the consolidated organisation. Such a provision is absent in most GAAPs used by countries yet to adopt IFRS.

### **3.6. Transparency**

An organisation is argued to be transparent if it is seen to be offering clarity regarding its operations, it is easily understood by regulators and other interest groups and it is free of



deception (Piklington, 2017). Lack of transparency has been the interest of many theoretical and empirical studies, forming the focus of efficient market hypothesis (EMH). The EMH hypothesises that the prices of assets in organisations is a true reflection of all available information. This implies that investors in the securities market cannot beat the market with a consistent prediction after adjusting for risk, which leads to them requiring new information. In reality some information about listed companies are usually available to the public and readily accessible, while some other information are usually both unavailable publicly and hard to access privately, which creates strong-form and semi-strong form market efficiencies (See, for example, Fama, (1970) for the seminal work on the subject). When publicly traded companies make it hard for information to be accessed, those closer to the source of information may gain unfair advantage, whereas a transparent organisation makes it possible for investors to have equal opportunities in the market (Piklington, 2017).

Beyond investor needs, customers, employees as well as the government may also require to know exactly what the organisation does to generate revenue, how it spends its money and what it does about issues like environmental conservation, employee safety and customer protection (IASB, 2001). The benefits of IFRS in this regard is that it specifies the important information which companies must share with the public, thus levelling the playing field for all stakeholders. On the other hand, Paulinus, Ethelbert and Jones (2018) criticise this particular wholistic reporting characteristic of IFRS, arguing that it may lead to information overload with hundreds of complex financial jargons and hundreds more of convoluted notes and assumptions. To avoid this challenge, the present study limits itself to financial statements, referring only to notes where it is absolutely necessary.

### **3.7. IFRS Adoption in Norway**

Norway uses the IFRS standards. As part of the EU, the use of IFRS standards in Norway came about following the adoption of these standards for all EU countries as per the 2002 EU Act, which adopted the existing IAS regulations and all its future revisions and provisions in the new IFRS. The deadline for listed companies in Norway to move to the use of IFRS was 2005, while the deadline for listed companies that traded only debt securities by the passage of this regulation was set at 2007. Consequently, all audited

reports and accountants reports of companies that are under the EU regulation are required to note that the reports published by the company are “in accordance with IFRS as adopted by the EU” (IASPlus, 2019).

In Norway, an organisation may either be required or permitted to use IFRS standards. Various provisions exist that show whether an organisation fits the required or permitted criteria, where the latter means the organisation has a choice to use IFRS or not. According to IFRS (2019c), the extent of Norway’s IFRS application is such that all domestic public companies are required to use the standards. However, for foreign companies, two provisions apply. If the foreign company is from another European country, then the company has to report using IFRS standards while operating in Norway, as per the EU adoptions of 2002. On the other hand, if the foreign company is not from Europe but its securities and stocks are traded in the Norwegian market, then the IFRS standards are permitted but not required. It is important to note that foreign companies are only allowed to use their local accounting standards if such standards are assessed by the EU and deemed equivalent to IFRS standards (IFRS, 2019d).

A number of cases also exist in which the IFRS may not be required or permitted for adoption by a company that operates Norway. First, IFRS is not required or permitted for SMEs. Instead SMEs use regulations developed by the finance ministry (IFRS, 2019d). However, the Ministry of Finance (2015) noted that, as of 2019, discussions were ongoing as to whether SMEs ought to be regulated using IFRS standards. These new regulations will be called *IFRS for SMEs*, which have already been adopted by UK since 2013 (Deloitte, 2019). Second, some listed companies do not trade their securities in the public market. For such companies, the IFRS may be avoided and the company has the option of using the local GAAP, but they may also use IFRS standards if they so wish. Third, while IFRS standards are required for listed companies which trade in regulated markets such as Oslo Axess and Oslo Børs, stocks that trade in the unregulated market such as Merkur Market do not apply IFRS standards (IFRS, 2019d).

### **3.8. Major differences between IFRS and NGAAP**

A majority of countries have an accounting standard irrespective of whether they use IFRS. In most jurisdictions, it these principles are adopted from the Generally Accepted Accounting Principles (GAAP), with each country making some changes to suit the local market and appending the country's name before the GAAP to distinguish its principles from the generic ones. In Norway, the local GAAP is the Norwegian Generally Accepted Accounting Principles, or NGAAP, as regulated by the issued by the Norwegian Accounting Standard Board (NASB), which was founded in 1989 (Gjerde, Knivsflå and Sættem 2008). Gjerde et al. (2008) go further to point out that IFRS and NGAAP have several differences, which may not only influence the performance reported by the company, but also the value that the company appears to have based on the differences in reporting.

Stenheim and Madsen (2017) categorise these differences into two main issues. On one hand, NGAAP are found to be focused on using cost accounting procedures which gives weight to revenues of the company. By contrast, IFRS uses fair value reporting, which directs its attention mostly towards creating a balance between revenue and assets. The main differences between these approaches are on how they consider assets and liabilities, as well as revenue as a variable for internal rate of return (Dichev, 2008). (Gjerde, 2008) further adds that revenue approach reports book equity values and earnings in the income statement, and in the balance sheet, the assets and liabilities are recorded together with deferred and accrued cost and revenues which are not exactly assets and liabilities (Kvifte, 2003). This is not the case with the balance-orientation used in IFRS.

To illustrate this difference, Stenheim and Madsen (2017) note that in NGAAP, assets and liabilities are measured at historical cost, whereas in IFRS, most assets and liabilities are measured at fair value, including property, plant and equipment, intangible assets and investments, as directed by IAS 16, IAS 38 and IAS 40 respectively. According to IAS 39 and IAS 41, financial instruments and biological assets are also measured at fair value when using IFRS, which is not the case with NGAAP. Close to these issues is another major difference between the two standards, which regards amortization. In NGAAP, amortization is done for both intangible assets and goodwill throughout the life of the

assets. On the contrary, IFRS allows intangible assets and goodwill stated to have indefinite useful lives to be reported without amortization, but with a provision for impairment testing each year.

### **3.9. Empirical review of IFRS adoption and financial ratios**

A growing number of studies have examined the impacts of IFRS adoption on organisation financial performance, which is where financial ratios are derived from. Bellas, Toudas and Papadatos (2007) studied how IAS standards influenced the financial statement reporting of companies in Greece. Their study compared IAS standards with the Greek Accounting Standards (GAS), and sampled data from the country's listed companies for the year 2004, just before the mandatory shift to international standards took effect. They found that GAS focused on cost accounting while IAS focused on fair value accounting, and as a result, liabilities and assets were more highly priced in the latter standards. The study found that shifting net income from GAP to IAS leads to a significant impact on the company's performance, while changing the book value lacks notable impact. The study supports the conclusions of Charalambos Spathis, Eleftheria Georgakopoulou (2007), who earlier found that IFRS adoption has a direct impact on the key financials reported by Greek companies.

Lantto and Sahlstrom (2009) studied the impacts of IFRS adoption on key financial ratios focusing on Finnish companies. They look at current ratios and operating cash flow to current liabilities, or NCFO, as well as gearing ratios, profitability ratios and quick ratios. Their study finds that there is a significant impact of IFRS adoption to accounting ratios, including profitability, liquidity and gearing ratios. They further argue that this impact is not simply the result of a shift to IFRS standards, but also the strict adoption of these stands by accounting and reporting regulators. Their findings are supported by a later study by Latridic (2010) who focused on US firms and how the switch from UK GAAP influenced their performance, concluding that IFRS adoption improved accounting quality and directly influenced the financial ratios.

Taking a broader approach, Chen et al. (2010) focuses on the entire EU and aim to find out how IFRS adoption influenced the accounting indicators. Their study comprised 15 listed

companies across different EU countries. They found a direct link between the two aspects. However, their sample size was significantly small for the study conducted to make it generalisable and reliable. Focusing on the same subject matter in the same region, Devalle et al. (2010) sampled a much larger number of companies, having a final pool of 3,721 firms across five EU countries. This study looked specifically at the impact of IFRS on share prices as well as other financial indicators and concluded that there was a direct impact. While the findings were more reliable and generalisable, this study fails to look at financial ratios, which is the focus of the present study.

Li (2020) studied the EU market's adoption of IFRS on the financials of the organisation by focusing on cost of equity, which affects profitability ratios. The study also took a broader perspective, examining more than 1,000 companies listed in various stock exchanges across EU over an extended period of 10 years ending in 2006. The study found that IFRS adoption led to reduced equity costs, thereby boosting profits, which in turn lead to higher profitability and more positive ratios. Their findings mirror those of Armstrong et al. (2010) who also studied the EU market and looked at how IFRS influenced financial ratios and quality. This study found a positive link between IFRS adoption and financial ratios of the company. The study also agrees with an earlier study by Barth et al. (2008), whose findings showed that IFRS adoption led to reduced earnings smoothing and minimal earning management to suit targets. Further, it also led to faster recognition of losses.

These studies give useful insights regarding the link between IFRS and organisation performance, suggesting that there is a high likelihood to find positive change when organisations adopt IFRS standards. A majority of the literature is from Europe, but little has been done regarding Norwegian market particularly. Additionally, while some of the studies have argued that financial ratios have directly affected when IFRS is adopted by a listed firm, none of them has focused particularly on the key ratios of profitability, liquidity and solvency. This literature review has inspired the research hypothesis for this study as follows.

H1: IFRS adoption has a positive and significant impact on profitability ratios of Norwegian public listed companies

H2: IFRS adoption has a positive and significant influence on liquidity ratios of Norwegian public listed companies

H3: IFRS adoption has a positive and significant impact on the solvency ratios of Norwegian public listed companies

This chapter has discussed the theories and practice surrounding IFRS. The next chapter focuses on the study methodology.

## **CHAPTER FOUR: RESEARCH METHODOLOGY**

### **4.1 Introduction**

This chapter outlines the research methodology that is applied to identify how the IFRS standards influence and determine the financial ratios of Norwegian public companies. It looks into the most appropriate research design, most appropriate research strategy and data collection strategy as well as the most appropriate data analysis strategy to be used by the researcher. The section discusses the various research methods and techniques and explains the most appropriate technique or methodology that can be used in the research and why the method can be selected for the research.

### **4.2 Research design**

There are two major forms of designs utilized in academic investigations and they entail the qualitative and quantitative research design. The quantitative research design focuses on the collection and assessment of verifiable and measurable information about a given construct that is of interest to the research. The main advantage of quantitative research design is that it enables the researcher to obtain factual information that can be verified and ascertained (Bell, 2014). It also enables the researcher to obtain accurate information concerning various constructs being assessed in the study. However, the quantitative research tends to be informative and does not reveal new information or new theories. The other design is the qualitative design which is concerned with the collection of non-measurable information about a particular phenomenon. It involves collection of huge data that is wordy, expressive, perceptual and includes nonverbal information about the phenomena. It works in instances where the researcher is interested in gaining deeper insights about given phenomena. It also applies in instances where the researcher is examining new phenomena which has limited insights and explanations (Berg, 2004).

The quantitative research design is highly preferred in this study mostly because the aim of this research is to assess and determine how the IFRS standards impact the financial ratios of public companies. The financial ratios are quantitative constructs and have to be measured quantitatively in order to obtain accurate ratios that portray the actual financial status of Norwegian companies. In addition, the quantitative research design ensures that the data cannot be manipulated or influenced to suit the preferences of the researcher which

makes the findings of quantitative research more reliable and accurate (Creswell, 2013). The quantitative research also applies for this research because it helps in identifying the impact of one variable on another variable. It is also consistent with positivity and works in instances where the researcher is interested in objectivity and having answers that are not biased as needed in this research (Collis and Hussey, 2009).

### **4.3 Research strategy**

This is the process that is used by the researcher to identify the relevant sources of information related to the phenomena. Two strategies that are usually used are the case studies and the surveys. Surveys focus on a subsection of the population of interest and use it to represent the entire phenomena (Punch, 2013). Surveys are preferred in instances where the researcher has access to many participants or replicas of the phenomena. It also works where the phenomena or subsection of the phenomena is readily available and has similar characteristics. On the other hand, case studies focus on one element or case and then use it to represent the entire phenomena. Case studies work in instances where the phenomenon is not readily available and there are few replicas that can be identified by the researcher as each case is unique (Creswell, 2013). In this study, case study strategy is preferred because the constructs under investigation are unique and different from each other. For instance, the public companies in Finland are different and have different governance practices, they have different customers and operate in different industries. This makes it necessary to use case study in order to factor in these differences. Case study is also advantageous because it zeroes on a few cases and obtains in-depth information about a phenomena enabling the researcher to obtain new information and that may have been missed out by previous researchers (Lewis, Thornhill & Saunders, 2006). Case study enables unearthing of much information about the phenomena.

Case study of interest in this study is the Stora Enso which is a bio chemical company. It is selected for this research mostly because it is a publicly listed company. This means that the company's information is publicly available as it publishes all the information related to its operations on its annual financial statements that are sent out to the shareholders every



year (Taylor, 2006). It is also a company that has been using IFRS standards of accounting hence the need to include it in this study. The company's application of IFRS standards can be verified on the audits reports published along its annual statements. The company has been in operation for more than 15 years.

#### **4.4 Data collection**

There are two data collection techniques that could be applied in academic investigations and they are the primary data collection and secondary data collection. The primary data collection involves the collection of information directly from the actual sources (Punch, 2013). It applies in instances where the sources are available and can be easily traced. The secondary data collection collects historical information or reports that have been reported or collected by a different entity other than the researcher. It applies in instances where it is costly to identify and collect information from the primary sources (Collis and Hussey, 2009). It also works in instances where there is information about the phenomena and the information is readily available from publicly accessible sources. This research prefers to use the secondary data collection method as the primary sources are not readily available. Also, time constraints make it hard to collect historical information about Stora Enso directly from the financial managers and auditors. Moreover, the information needed on the financial performance of the company is publicly available hence no need to replicate the process.

#### **4.5 Data collection process**

To collect the data, the researcher prefers to collect the information from the publicly available sources such as company websites and finance databases which have the information and annual financial statements of the company such as the OSE website (Bell, 2014). The researcher has collected the annual statements from the company's websites. The statements for the past ten years since 2019 to 2009 have been selected. The researcher then calculates the major ratios based on this statements. The researcher also collects information on the type of IFRS being used and the extent in which the IFRS standards are being applied by the company each year. The reports selected are those that are not older

than the past 10 years. The reports selected are those written in English language. Also the reports must have all the needed financial information required to calculate the financial ratios. The reports must have information on the current assets, balance sheets, cash flow statement, financial statements, profit and loss accounts in order to have comprehensive information about the company. Other information that has been collected includes EBITDA (Creswell, 2013). The data on IFRS is to be collected and rated based on the IFRS standards used by the company.

#### **4.6 Data analysis**

After the collection of data, the next step is the analysis of the collected data. The data analysis mostly focuses on assessing the collected in order to examine whether it provides responses to the research questions (Punch, 2013). In order to do this the researcher has to use Microsoft EXCEL to collect data on the various financial metrics. The EXCEL has to be used to calculate averages of each ratio for the past ten years. Once this is done, the ratios are then entered in SPSS in order to find out the correlation between the IFRS standards and the financial ratios. The software is further applied in determining the impact that IFRS has on the financial ratios. The data from excel has to be keyed in on the SPSS data view and then the regression test have to be applied to identify this impact. Positive regression variables indicate that the IFRS has positive impact on the financial ratios and vice versa.

#### **4.7 Research ethics**

This research applies research ethics especially the principle of confidentiality. No personal information has been provided. All information that includes personal names and addresses has been anonymised. Also the research adheres to the principles of honesty and accuracy by ensuring that all the data is derived from the financial reports of Stora Enso and that none of the information is fabricated or inaccurate (Bell, 2014).

#### **4.8 Summary**

In summary, this chapter has identified the research methodologies applied in this research. It has noted that quantitative research design was applied in the research. It has noted that case study strategy is the most appropriate strategy and the secondary data is the most

relevant and appropriate data collection strategy since the data was collected from the reports and online sources. The data has been analyzed using SPSS which has been used to identify the relationship between various variables and to assess the implications of each construct on the financial ratios. Research ethics have been observed in this research especially the ethics reacted to privacy and the confidentiality.

## CHAPTER FIVE: RESULTS AND ANALYSIS

### 5.1 Introduction

This chapter presents the outcomes of this investigation. The chapter shows the financial ratios outcomes, the IFRS outcomes, as well as an analysis of how IFRS element impacts the financial ratios. The first section contains the descriptives which are descriptions of the mean of each item and what the specific averages mean for the research constructs. The third part is the correlations analysis and it examines the correlation between the IFRS figures and the financial ratios. It shows how each variables interrelate with each other. The fourth section evaluates the implications that the IFRS has on the financial ratios using the regression analysis. It evaluates the impact of IFRS on the profit, liquidity, solvency and market ratios.

### 5.2 The descriptives

This section evaluates the information that describes how each construct is considered. The section looks into means of each items and what the mean implies. The first ratio that is being evaluated is the profitability ratios. The ratio assesses the profitability of the Norwegian companies using the operating profit margin ratio. The table below shows the mean of the operating profit margin applied in the assessment of profitability ratios is 0.347. The mean implies that the Norwegian companies had high net margins of 34% of the gross revenues made by the company.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
OperatingMargin	11	.08	.71	.3427	.22486
Valid N (listwise)	11				

On the case of current ratio which demonstrates the liquidity of the Norwegian companies, the mean of the item is 0.7855 which is slightly below the recommended ratio of 1:1 of

having more cash than liabilities. This means that most of the Norwegian companies have more current liabilities than cash and cash equivalents.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
CurrentRatio	11	.54	1.20	.7855	.18080
Valid N (listwise)	11				

The solvency ratios are being assessed by looking into the debt to equity ratio of ten Norwegian companies. The study notes that the mean of this aspect is 0.7409 which implies that the company has slightly more equity and debt. This implies that the companies have sound financial management and that they were founded on debt.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
DebtToEquity	11	.58	.93	.7409	.12012
Valid N (listwise)	11				

On the market ratios, the researcher has used the P/E ratio to assess the market value of the company. The average P/E is 0.7373 and it means that the stocks are undervalued and that the investors are likely to obtain higher earnings for their investment in the Norwegian companies.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
PriceToEquity	11	.58	.98	.7373	.11959
Valid N (listwise)	11				

The other aspect that has been evaluated is the IFRS standards that are being used by the Norwegian companies. The IFRS are rated from 0-10 based on the whether the company

is compliant with all IFRS standards the highest being compliance to IFRS 17. Most of the companies are compliant as the mean of this item is 0.7034 which is an above average mean and it means that most of these companies are compliant with most of the IFRS accounting requirements.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
IFRS	11	.52	.97	.7034	.14137
Valid N (listwise)	11				

### **5.3 The correlation analysis**

The second level of analyses that is being used in this study is the correlation. It seeks to assess and determine the relationship between the variables that are of interest in this research. The section evaluates how the ratios correlate with the IFRS. The values that are above 0.5 indicate strong correlation while those that are below 0.5 indicate presence of weak connection between the two items. The figures and values that are negative indicate that there are negative correlations between the two items.

On the relationship that exists among IFRS and the profitability ratio and more specifically the operating margin, the study establishes that there is positive weak correlation between the two constructs. This is because the correlation value is 0.358 and it is below the benchmark of 0.5. Apart from the correlation, the table below shows whether the correlation is statistically essential or not. The relationship is considered to be essential if the Sig value does not exceed 0.01 and it is not significant if it exceeds 0.01. From the table below the sig value is 0.280 which is above 0.01 and it means that the relationship is not statistically essential.

### Correlations

		IFRS	Operating Margin
IFRS	Pearson Correlation	1	.358
	Sig. (2-tailed)		.280
	N	11	11
OperatingMargin	Pearson Correlation	.358	1
	Sig. (2-tailed)	.280	
	N	11	11

On the relationship that exists between the IFRS standards applied by Norwegian companies and the liquidity ratios, cash ratio is used. The outcomes are as shown by the table below. From the figure, the correlation is 0.565 which is slightly above 0.5 and it indicates that there is positive correlation between the IFRS practices adhered to by the Norwegian companies and their cash ratio. The study further assesses whether the relationship between IFRS and cash ratio is statistically essential. The findings in the table below shows that the Sig value is 0.070 which is above the threshold of statistical essence of 0.01. This shows that the association between IFRS and current ratio as well as liquidity ratio is not statistically significant among the Norwegian companies.

### Correlations

		IFRS	CurrentRatio
IFRS	Pearson Correlation	1	.565
	Sig. (2-tailed)		.070
	N	11	11
CurrentRatio	Pearson Correlation	.565	1
	Sig. (2-tailed)	.070	
	N	11	11

The investigation further seeks to assess the interaction that exists amongst the IFRS practices in Norwegian public companies and the solvency ratios. The solvency ratio that is being applied is the debt to equity ratio. The correlation values of the two constructs is 0.959 which is a very strong correlation. It shows that the IFRS standards have strong

association with the debt to equity which represents the solvency ratios. This implies that the IFRS is strongly correlated with the solvency ratios and it shows that IFRS standards are being used to protect the Norwegian companies from solvency. On whether the relationship amongst the two variables has any statistical relevance, the Sig value derived from the results is 0.000 which is below the threshold of 0.01 and it demonstrates that the relationship is statistically relevant.

### Correlations

		IFRS	DebtToEquity
IFRS	Pearson Correlation	1	.959**
	Sig. (2-tailed)		.000
	N	11	11
DebtToEquity	Pearson Correlation	.959**	1
	Sig. (2-tailed)	.000	
	N	11	11

\*\* . Correlation is significant at the 0.01 level (2-tailed).

On how the IFRS is correlated or associated with the market ratios, this association is being assessed by looking into the correlation between the IFRS and the price-to-equity ratios. The study identifies that the correlation of the two constructs is 0.980 which is a very strong correlation that indicates that IFRS is strongly associated with the positive debt to equity among the Norwegian companies. It also implies that there is positive relationship between the IFRS practices and the market ratios. On if the association between the IFRS practices by Norwegian companies have any impact on the price to equity ratios, the sig value is 0.000 which is below the statistical threshold. This means that the relationship amongst the two constructs has statistical relevance.



### Correlations

		IFRS	PriceToEquity
IFRS	Pearson Correlation	1	.980**
	Sig. (2-tailed)		.000
	N	11	11
PriceToEquity	Pearson Correlation	.980**	1
	Sig. (2-tailed)	.000	
	N	11	11

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## 5.4 The regression analysis

The next level of assessment assesses the impact that the application of the IFRS practices has on the financial ratios of Norwegian companies. The impact can be identified through the regression analysis of the select financial ratios and IFRS. The regression model shows the various items, such as the model summary, the Anova and the coefficient table. The model summary and the regression figures shows the extent of the impact of one variable on the other. Most importantly the regression assessment mostly seeks to identify whether the impact of the independent variable is positive or negative. Positive values indicate that the impact is positive while negative values indicate that the impact of the independent variable is negative.

### 5.4.1 The effect of the IFRS on the profitability ratios of Norwegian companies

Based on this, this research undertakes regression analysis of the IFRS and the profitability ratio which in this case is operating profit-margin (OPM) and the analysis identifies the following. The adjusted R square for the IFRS and operating profit margin is 0.031 as per the model table. This means that change of one in the IFRS standards results in a change of 3.1% in the operating-margin. Based on this, it is clear that IFRS has minimal impact on the operating margins and profitability of the Norwegian companies.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.358 <sup>a</sup>	.128	.031	.22132

a. Predictors: (Constant), IFRS

The other item that assesses the impact of IFRS on the profitability ratios is the ANOVA model table. This table mostly tests and assesses whether the impact is significant or not. From the Anova table, the researcher has further identified that the sig value is 1.322 which is slightly above 1.0 which is the level that demonstrates that the impact of the independent variable on the dependent variable is significant. Therefore, the impact is slightly significant.

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.065	1	.065	1.322	.280 <sup>a</sup>
	Residual	.441	9	.049		
	Total	.506	10			

a. Predictors: (Constant), IFRS

b. Dependent Variable: Operating Margin

The assessment further evaluates the relationship between the two variables by looking into the regression model. The regression model provides the regression equation that demonstrates how the IFRS impacts the operating margin and the profitability ratios of the Norwegian companies. From the analysis, the beta constant is 0.358. The regression equation is as follows:  $\text{stock prices} = -0.058 + 0.569 \text{ operating margin} + \epsilon$ . This implies that a change of 1 in the IFRS standards results in 0.569 change in the operating profit margin. This means that the IFRS has positive impact on the operating margin and the profitability ratios of the Norwegian companies.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.058	.355		-.163	.874
IFRS	.569	.495	.358	1.150	.280

a. Dependent Variable: OperatingMargin

This means that IFRS did have an average positive impact on the profitability of the company and as it mostly served to enhance the profits and the operating margin of the companies. This is in line with the expectation that having high IFRS standards would result into high profitability. However, IFRS standards and practices on prudence, EBTD, tax payment and interest mean that the company may incur higher operating expenses than if they are not practicing the IFRS standards hence the reason why the IFRS standards do not have very high impact on profit margins of the Norwegian public companies. The higher the level of IFRS practices put into use, the higher the likelihood of low profitability and low operating margins. This is due to revenue recognition strictness that mostly recognise revenue after payment and not after sale. This is in agreement with the previous study by De George, and Shivakumar (2016) who notes that that organisations have the obligation to report the profitability, cash position as well as cash flows including those of their subsidiaries in various industries or countries. The significance of this approach is that the organisation is has to undertake fair value assessment of their liabilities and assets at the same time, thus bringing in the concept of fair-value adjustments of profitability of the company. Apart from the concerns of the investor, IASB (2001) holds that IFRS also assists the customers, employees as well as the government. This is because these stakeholders may also require to know exactly what the organisation does to generate revenue, how it spends its money and what it does about issues like environmental conservation, employee safety and customer protection. The benefits of IFRS in this regard is that it specifies the important information which companies must share with the public, thus levelling the playing field for all stakeholders.

### 5.4.2 The effect of IFRS on the liquidity ratio of the Norwegian companies

The other aspect of interest in this study is the regression analysis of IFRS and the liquidity ratio that is assessed using the cash ratio of the Norwegian companies. From the analysis, the model summary shows that the adjusted r square is 0.244. This implies that a change in one aspect of the IFRS results in 24.4% variance in the cash ratio.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565 <sup>a</sup>	.320	.244	.15718

a. Predictors: (Constant), IFRS

From the Anova, the study notes that F statistic of the two variables is 4.231 which shows that the impact of IFRS on the cash ratios and liquidity of Norwegian companies is slightly important. This means that the IFRS has small positive influence on the cash ratios of the Norwegian entities.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.105	1	.105	4.231	.070 <sup>a</sup>
	Residual	.222	9	.025		
	Total	.327	10			

a. Predictors: (Constant), IFRS

b. Dependent Variable: CurrentRatio

To further ascertain the kind of impact that the IFRS have on the liquidity and specifically the current ratios of the Norwegian company, the research has to apply the regression models to ascertain and evaluate this relationship. The study identifies that the beta constant is 0.565. The regression equation is as follows:  $IFRS\ standards = 0.277 + 0.723\ current\ ratio + \epsilon$ . This implies that a change of 1 in the IFRS standards results in positive

0.723 change in the current ratios of the Norwegian companies. This implies that the IFRS standards have positive influence on the current ratios of the Norwegian companies.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.277	.252		1.099	.300
	IFRS	.723	.352	.565	2.057	.070

a. Dependent Variable: CurrentRatio

From the above analysis, using the model summary, the F statistic in the ANOVA and the regression model, it is evident that the IFRS has positive influence on the liquidity ratios of the publicly listed companies in Norway. This means that enhancement in the IFRS standards being used by the company leads to increased or enhanced liquidity ratios among the Norwegian companies especially due to the fair value accounting practices that show the correct value of assets and liabilities of the company. This is in line with the previous study of Blanchette et al. (2011) who notes that IFRS requires assets to be measured at fair value. This means considering the profits and losses contributed by the firm or measuring amortized costs where the investment matures. The main advantage of using fair value accounting to organisations is that it offers a more accurate view of the company's balance sheet. Li (2010) argues that fair value approach may suffer from the problem of volatility, as pegging the balance sheet, and specifically fixed assets and long-term liabilities, on profits and losses. Nevertheless, the impact of this problem can be limited through the use of statement of comprehensive income.

### **5.4.3 The impact of IFRS on the solvency ratios**

The research has further sought to evaluate the impact that the IFRS standards have on the leverage or solvency ratios of the Norwegian companies. This is done through the model summary, the F-statistic and the regression framework. From the model table, it is evident that the adjusted r-square for the two variables was 0.910 which implies that a variance of one aspect of the IFRS led to 91% change in the debt to equity ratios.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.959 <sup>a</sup>	.919	.910	.03599

a. Predictors: (Constant), IFRS

The assessment on the implications of IFRS on the solvency ratios is also done using the F-statistics, where the values above one means that the independent variable had positive impact on the dependent construct. In this case, the outcomes indicate that the F-statistic for the IFRS and the debt-to-equity is 102.419 which highly above the threshold of 1 indicating positive impact of IFRS on the debt to equity ratio.

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.133	1	.133	102.419	.000 <sup>a</sup>
	Residual	.012	9	.001		
	Total	.144	10			

a. Predictors: (Constant), IFRS

b. Dependent Variable: DebtToEquity

The impact of the IFRS, on solvency has also been assessed using the regression model of the IFRS and the debt to equity, where the b constant is 0.128. The model equation for the two variables is as follows: IFRS standards = 0.168 + 0.815 current ratio +  $\epsilon$ . This implies that a change of 1 in the IFRS standards results in positive 0.815 change in the debt to equity ratio of the public listed Norwegian companies.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.168	.058		2.913	.017
IFRS	.815	.080	.959	10.120	.000

a. Dependent Variable: DebtToEquity

Based on the above three metrics that is; model summary, the F statistic, and the regression equation. It is clear that the IFRS positively impacts the solvency ratios and specifically the debt to equity ratio. It implies that a positive variance in the IFRS standards leads to positive change in the solvency ratios. This means that the stricter the Norwegian companies are in implementing any of following the IFRS guidelines, the more they improve their solvency ratios and reduce debts and while increasing the equity of the companies. This is in line with the previous study of Pilkington (2017) who has held that IFRS creates transparency and makes the organisation to be seen as offering clarity regarding its operations. It makes the financial statement of the company easily understood by regulators and other interest groups and it is free of deception. Lack of transparency has been the interest in many theoretical and empirical studies, forming the focus of efficient market hypothesis (EMH). The EMH hypothesises that the prices of assets in organisations is a true reflection of all available information. This implies that investors in the securities market cannot beat the market with a consistent prediction after adjusting for risk, which leads to them requiring new information. In reality some information about listed companies are usually available to the public and readily accessible, while some other information is usually both unavailable publicly and hard to access privately, which creates strong-form and semi-strong form market efficiencies. When publicly traded companies make it hard for information to be accessed, those closer to the source of information may gain unfair advantage, whereas a transparent organisation makes it possible for investors to have equal opportunities in the market (Piklington, 2017).

#### 5.4.4 The impact of the IFRS on the market ratios of Norwegian companies

The researcher further seeks to make evaluations of the IFRS and the impact it has on the market ratios. In order to do this, the researcher applies the model summary, the F statistic and the regression equation. The model summary shows that the adjusted r square is 0.960 which means that a variance of 1 in IFRS could lead to a 96% change to the market ratios especially the P/E ratios. This indicates that the market is very sensitive to the standards of accounting being applied by the public companies.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.980 <sup>a</sup>	.960	.956	.02511

a. Predictors: (Constant), IFRS

The evaluation on impact of the IFRS on the market ratios through ANOVA presents the F statistic where the F statistic value above 1 indicates that the independent construct has some level of impact on the dependent construct. From the ANOVA table below, the F statistic is 217.839 which shows high levels of the impact. It means that the market is highly sensitive to the changes and variances in the accounting practices as the F-Statistic is very strong and high compared with other previous financial ratios such as the profitability, liquidity and the market ratios.



**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.137	1	.137	217.839	.000 <sup>a</sup>
	Residual	.006	9	.001		
	Total	.143	10			

a. Predictors: (Constant), IFRS

b. Dependent Variable: PriceToEquity

The impact of the IFRS on market ratios using the regression equation shows the regression model to be as follows:  $IFRS\ standards = 0.154 + 0.829\ Price\ to\ Equity\ ratio + \epsilon$ . This implies that a change of 1 in the IFRS standards results in positive 0.829 change in the price to equity (P/E) ratio of the public listed Norwegian companies.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.154	.040		3.834	.004
	IFRS	.829	.056	.980	14.759	.000

a. Dependent Variable: PriceToEquity

From the above, it is evident that the IFRS has positive impact on the market ratios, this is because all the metrics that is the adjusted r square, F-statistic, and regression model show that the IFRS positively impacts the P/E ratio. In fact, the IFRS has the highest impact on the market ratio compared with other ratios. This means that the IFRS standards has high impact on the perception that the market has on the company's value in the market. It implies that efforts and actions that enhance the IFRS compliance increases the trust and valuation that the market has on the publicly listed companies. This is in line with the previous study of Lantto and Sahlstrom (2009) that has highlighted that the impacts of IFRS adoption on key financial ratios. It notes that IFRS has very high influence on the market ratios especially P/E ratio. They further argue that this impact is not simply the result of a shift to IFRS standards, but also the strict adoption of these standards by auditors and reporting regulators. IFRS also enhanced the market ratios due to its role in solving the

agency problem in publicly listed organisations. This is because in the context of publicly organisations, the interest groups increase to include not only managers and major stockholders, but also consumers, minor shareholders, bondholders, the government, the community as well as employees of the organisation. IFRS provides a standard that clearly stipulate the roles of managers and their duty to conduct fair and regular reports of the company's performance, IFRS contributes to the performance of an organisation from the perspective of all stakeholders, making this theory relevant to the present study. This serves to enhance the confidence that stock holders and the market have with the company especially if the company has the fair standards of accounting and information disclosures that keep the shareholders and all interest groups informed and up to date about the organisations financial operations. Therefore, IFRS enhances the corporate governance practices of the organisations which increases the shareholders' confidence and eventually leads to the improved market ratios due to the improved market confidence in the company's management.

### **5.5 Summary**

The research has identified that each element especially the financial ratios that is profitability, liquidity, solvency and market ratios are above average implying that the Norwegian companies perform well. The study has also analysed the findings by looking at the correlation variables and how they imply regarding the association among the independent and the dependent variables. The results show that the IFRS standards have positive association with the profitability liquidity solvency and market ratios. Most importantly, the study identified that the relationship between IFRS and the market ratios is stronger amongst the solvency ratios and market ratios. The study further shows the implications that the IFRS has on the financial ratios. It shows that the IFRS positively determines the profitability ratios although the impact is very small. IFRS has a small impact on the liquidity ratios. However, the impact on the solvency ratios is very high. The impact of IFRS is even higher for the market ratios as the market is very interested in the IFRS standards practices as they come with transparency and fair assessment of the company's assets hence the investors cannot not be misled to invest in a company.

## **6.0 CHAPTER SIX: DISCUSSION AND CONCLUSION**

### **6.1 Discussion**

This section discusses the findings of the study by highlighting the specific outcomes of the study and evaluating whether they effectively respond to the research objectives or not. The section further makes recommendations on what can be improved in regard to the IFRS standards so that the application of these standards can be more effective among the publicly listed companies. The section further highlights the flaws of the research and how future research can overcome these flaws.

The discussion mostly seeks to evaluate whether the study is successful in attaining the specific aims at the start of the study and whether they are effective in the research answers of the study. This research provides the answers to the first objective which involves investigating the kind of implications that IFRS has on the profitability ratios. This study uses the operating margin ratio and notes that the IFRS positively influences the operating margin ratios although the influence is small. The lower profit margins by Norwegian companies can be attributed to the fact that IFRS standards mean that the organisation is transparent in the way it earns and declares revenues and income. This means that the companies cannot inflate or exaggerate their income. The companies usually declare the correct expenses and make disclosures related to the operating expenses of the company. This eventually makes the operating margins to subside. However, the findings were congruent with the preceding studies by De George and Shivakumar (2016) who note that that organizations have the obligation to report the profitability, and cash flows including those of their subsidiaries in various industries or countries. This gives confidence to the shareholders and makes the customers have more trust in the sustainability of the business due to the disclosures made by the company in regard to the nature of its operations. It also makes the organisation sustainable based on its revenues and transactions with other businesses and customers.

The research also achieves the second research objective of this study, the research identifies that the IFRS positively impacts the liquidity ratios. The research notes that the impact is positive which means that a change in the IFRS positively impacts the liquidity ratios of the public companies. The higher the application of IFRS, the higher the likelihood

of the business retaining high levels of cash and engaging in prudent practices that ensures that the company has high cash equivalents that cater for the current and short term debts. This finding is in line with extant literatures by Blanchette et al. (2011) and Li (2010) who argue that IFRS requires assets to be measured based on fair value. For current assets and liabilities, this means disclosing the cash instruments as well as cash and non-cash liabilities that are due in the short terms or within a duration of less than three months. It also means making frequent assessment and evaluation of the current assets in order to make fair value assessments which means considering the profits and losses expected within the short term by measuring amortized costs and investments that are about to mature.

The research also realises the third research goal of determining the impact of IFRS on the solvency ratios. The study finds that application of IFRS highly impacts the solvency ratios and specifically the debt to equity ratio. The study notes that the higher the application of IFRS standards by the public companies, the more prudent and effective the solvency ratios. Companies which are more careful and prudent in disclosing debts and equity mostly ensure that the debts by the companies are within repayable metrics. This implies that the higher the strictness, fair value assessment and prudent accounting practices enhances the comparability of the companies and makes the investors aware of debt ratios and debt burden undertaken by the company. Due to this, companies tend to be careful not to engage too much debt based financing. Also the ratios indicate that most of the companies are debt financed as they have higher debt than equity which implies that the companies are transparent. This proves that the companies have high standards of accounting in order to impress the financiers as misinformation would result high penalties. This is in line with the previous study of Pilkington (2017) who holds that IFRS creates transparency and offers clarity regarding the firm's financing operations. It eliminates deception and provides the investors, regulators and other interest groups confidence.

This research has come to the fourth research concern of investigating the implications that the IFRS have on the market ratios. This is mostly on how the IFRS impacts the shareholders and potential shareholders of the company. From the study, is evident that the shareholders are concerned with the market ratios and are highly influenced by the

application of IFRS accounting rules. It identifies that the application of IFRS leads to high P/E ratios. This is due to the fact that shareholders invest in companies which they are sure about. They want to invest in companies that are transparent and provide fair value assessment of their assets and liabilities. The IFRS provides the desired transparency in accounting practices which increases the shareholders' confidence and improves the valuation of the company in the stock market. This is in agreement with the findings of Lantto and Sahlstrom (2009) who highlights the impacts of IFRS adoption on key financial ratios focusing on Norwegian companies. Their research finds that there is a significant impact of IFRS adoption to accounting ratios, including profitability, liquidity and gearing ratios. They further argue that this impact is not simply the result of a shift to IFRS standards, but also the strict adoption of these standards by accounting and reporting regulators. IFRS also enhances the market ratios due to its role in solving the agency problem in publicly listed organisations. In the context of publicly organisations, the interest groups increase to include managers and major stockholders, consumers, minor shareholders, bondholders, the government, the community as well as employees of the organisation. IFRS provides a standard that clearly stipulates the roles of managers and their duty to conduct fair and regular reports of the company's performance which enhances the confidence of the market investors.

## **6.2 Recommendations**

The following are the recommendations based on the above discussion and analysis. The recommendations are centred around the four objectives and seeks to identify how the IFRS standards can enhance the financial ratios of the company. The first recommendation is for the Norwegian companies to improve their own IFRS standards related to revenue recognition especially IFRS 15 which stipulates how revenues should be recognised. As per these standards, for revenue to be recognized, contract has to exist between customers and the business. There should also be delivery of the product or service to customers and evidence of payment. It includes evaluation of the prices paid and determining whether there was value for money and the timing of the contract payments. In the financial reports, the companies can make disclosures of the type of contract that exist between the

organisation and customers and whether the business has effectively been meeting its obligations according to customers' expectation. This helps in representing the true and correct revenues made the business as well as in auditing the revenue generation process to identify gaps and issues that could hamper revenue generation and collection in the companies. Therefore, this report recommends that Norwegian companies to enhance and apply the IFRS 15 practices in order to enhance the relationship and the impact that the IFRS has on the Norwegian public companies.

The second recommendation that is suggested in the research relates to the enhancement of the IFRS standards related to the liquidity in order to enhance the liquidity of the Norwegian companies. As it has earlier been identified in the means, the liquidity of the Norwegian companies is not very high. This means that the companies need to enhance the policies and standards related to the liquidity in order to experience higher liquidity ratios as IFRS positively affects the liquidity ratios. In order to do this, the Norwegian companies have to focus on the implementation of the IFRS 7. These IFRS standards mostly indicate that the companies should make disclosures on the financial instruments that are owned or held by the company and the risk which these instruments pose to the company. The disclosures should reveal how the financial instruments impact the financial position of the company and the cash flow to the company in general. In addition, the disclosures should reveal credit risk and loan receivables and other instruments owned by the organisation that may be of risk in relation to the market factors. These disclosures are very necessary in helping the investors and the stakeholders identify the liquidity risk and the extent in which it can affect the financial position and approaches that can be used to manage the identified risks.

The third recommendation relates to the improvement and application of IFRS related to the debt and solvency issues. From the study on the Norwegian companies it has been identified that the IFRS have positive impact on the solvency ratios. This means that a slight change in the IFRS could positively or negatively impact the solvency of the Norwegian companies. To enhance these ratios and ensure that the company has high debt-to-equity ratios, the IFRS 9 relates to the equity and debt have to be applied. The most important element that has to be adhered to is fair value assessment of assets to ensure that

the value given to the company's assets are of fair value and market value. The other aspect has to be used is the IFRS 9 standards on the disclosure of equity investments such as long term investments and the criteria to be used in the impairment of assets. Transparency in this enhances the investor's confidence in the organisation and leads to additional equity.

The fourth recommendation relates to the fourth objective of enhancing the market ratios of the Norwegian public companies. In order to for the Norwegian companies to enhance its IFRS that are related to market ratios, the companies must adhere to the IFRS standards that are related to market ratios such as the IFRS 13 on the fair value accounting that spells measurement the fair value of the company's assets and liabilities. This helps in presenting true picture of the companies' assets and liabilities which is crucial to the investors who want to invest in the company.

### **6.3 The weaknesses**

The main weakness that has been encountered in the process of undertaking this study is that the study has mostly focused on the Norwegian public companies which means that the findings are not applicable to non- Norwegian companies. It also limits the application of the findings to publicly listed companies since the study investigated companies that are listed in the stock exchange. The other limitation was that the study did not specifically connect the specific IFRS standards with a particular outcome as it has assessed the IFRS standards in their entirety yet different companies in different industries apply the IFRS differently. For instance, banks need have to have higher liquidity compared with manufacturing and production companies yet the study did not have such distinction hence the findings may not be applicable to all companies and in all industries.

### **6.4 Recommendations for further studies**

This research recommends that future studies use a wider and bigger sample that includes public and private companies in EU countries and other jurisdictions that apply the IFRS standards. This can lead to outcomes that are generalizable and useful to all companies

irrespective of the country and location where the company is located. The other aspect that has to be put into consideration is for future research to investigate whether the specific IFRS standards had impact on some specific market ratios. For instance, future studies can investigate whether the application of FRS 13 has any impact on the P/E ratios of the Norwegian companies. This can help in making the findings of the study more specific and applicable to specific financial aspects of the company.



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