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Value Relevance of Non-GAAP Measures in Norway

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Value Relevance of Non-GAAP Measures in Norway

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Summary

This Preliminary Thesis Report contains insight about the subject, previous research literature and hypotheses which will be tested in the Master Thesis. The Preliminary Thesis Report and Master Thesis Report conclude the Master of Science in Business, major in Business Law, Tax and Accounting at BI Norwegian Business School.

The Preliminary Thesis Report is structured in the following sections: First, an introduction to the topic and related theory. The second section provides a literature review of previous research. The third section presents the intended methodology for the Master Thesis Report. Lastly, we present a brief plan for our Master Thesis progress in the fourth section.

1. Introduction

1.1 The Concept of Non-GAAP Measures

“An alternative performance measure is a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework” (ESMA, 2016). Alternative performance measures (APM), also called non-GAAP measures¹, can typically be found as unaudited and adjusted figures (e.g. underlying EBIT, earnings excluding non-recurring and special items, “core-earnings”, adjusted earnings) which is not incorporated in either national Generally Accepted Accounting Principles (GAAP), nor International Financial Reporting Standards (IFRS). The companies that report non-GAAP measures claim that such figures will provide a more accurate measure of the company's financial position. Non-GAAP measures were first commonly used in the U.S., which later were adopted in Europe and other countries. The increasing use of non-GAAP measures has been extensively discussed by professionals and academics since firms started to use these measures.

1.2 The Concerns and Regulation of Non-GAAP Measures

In May 2002, The International Organization of Securities Commission (IOSCO) was the first organisation to voice concerns about the use of non-GAAP measures in Europe and issued cautionary advice about the use of non-GAAP reporting (Isidro & Marques, 2015, p. 97). This advice was similar to the Securities and Exchange Commission's (SEC) advice, issued in the U.S. in 2001. The voiced concerns were that the non-GAAP measures can mislead and confuse investors. In 2005, the Committee of European Securities Regulators (CESR), the predecessor to the European Securities and Markets Regulators (ESMA) issued recommendations in regards to the use of non-GAAP measures, and classified the measures into two categories: "(1) measures derived from audited financial statements, and (2) measures not derived from audited financial statements" (Isidro & Marques, 2015, p. 97). In 2009, the European Financial Reporting Advisory Group (EFRAG), raised new concerns due to the inconsistent and obscure use of non-GAAP measures (Isidro & Marques, 2015). The inconsistency leads to less

¹ Non-GAAP/APM may also be referred to as; pro forma, "core", "street", underlying, adjusted.

comparable financial measures for valuing and forecasting. Regulations and auditing of financial statements help to ensure that analyst and investors can make informed decisions, due to higher levels of comparability (Isidro & Marques, 2015).

In recent years, SEC has tried to regulate and restrict the use of non-GAAP measures. SEC (2016) issued new Compliance and Disclosure Interpretations (CDIs) in 2016 to further regulate the use of adjusted measures. In Europe, there has been little or no regulation and monitoring of non-GAAP reporting (Isidro & Marques, 2015, p. 95). In European accounting standard setting, the International Accounting Standards Board (IASB) issued “best practices” regarding the use of non-GAAP measures. ESMA however, has published Guidelines on Alternative Performance Measures in 2015 (ESMA, 2016).

1.3 The Fundamental Problem of Financial Accounting Theory

“Given that there is only one bottom line, the fundamental problem of financial accounting theory is how to design and implement concepts and standards that best combine the investor-informing and manager performance-evaluating roles for accounting information” (Scott, 2015, p. 24). Resulting in a trade-off between the measurement perspective and the information perspective. The information perspective emphasises on signalling, where contracting and stewardship is the focus. Whereas the measurement perspective’s objective is to provide decision-useful information to investors and improve future predictions about the company (Scott, 2015). The aim is to ensure that the information helps to establish more efficient capital markets (i.e. avoid information asymmetry). The fundamental problem in accounting might be the reason why we observe an increased use of non-GAAP measures since this reporting can provide investors with more accurate and more value relevant information than GAAP measures do alone.

1.4 The Value Relevance Concept

If the value relevance is high it is suggested by Francis, Lafond, Olsson, and Schipper (as cited in Beisland, 2009, p. 7) to reduce risk, which sequentially leads to lower cost of equity which in turn, leads to increased investments. From this view, more value relevance might have macroeconomic consequences because of the consequently lower cost of equity. The value relevance studies help to identify whether accounting measures can be informative and useful for decision making. Value relevance can be investigated by considering the statistical association

between the information in the financial statements and share prices. The association can be used to assess whether the information in financial statements has the ability to capture or summarise information that affects share prices (Francis & Schipper, 1999, p. 327).

1.5 Our Motivation for the Study

We want to study whether non-GAAP reporting by listed companies at the Oslo Stock Exchange (OSE) are value relevant for investors. There is some previous research on the subject in Europe but we were unable to find studies of value relevance of non-GAAP measures in Norway. SEC has issued regulations over the years to reduce the use of non-GAAP measures and enhance its position alongside GAAP (SEC, 2015). Today, non-GAAP reporting is a current topic of high interest internationally, SEC, EMSA and IASB has non-GAAP reporting on their agenda (Bernhoft, 2016). There are different opinions among researchers and professionals about non-GAAP measures' value relevance (Bhattacharya, Black, Christensen & Larson, 2003; Bradshaw & Sloan, 2002; Doyle, Jennings & Soliman, 2013). Our study is motivated by these different views, absence of studies on the topic in Norway, and the increasing criticism and regulations. The research topic is in our opinion of high relevance since our hypothesis; that non-GAAP measures are value relevant, is an argument against reduced use of non-GAAP measures.

2. Literature Review

In the late 1960's, both Ball and Brown (1968) and Beaver (1968) established evidence that share prices reflect information in the financial statements. It is a common notion within the field of value relevance that Ball and Brown (1968) and Beaver (1968) were the predecessors to modern value relevance studies.

Kothari (2001) reviewed at the time existing literature on the relationship between capital markets and financial statements, referred to as capital market-based accounting research (CAMBAR). Kothari (2001) found that market efficiency tests regarding accounting information, fundamental analysis, and value relevance of financial reporting were of primary interest to researchers. Further, the evidence provided in these studies could be helpful for investment decisions, accounting standard setting and corporate financial disclosure decisions, i.e. this type of research is relevant for stakeholders, such as investors.

Another review conducted by Holthausen and Watts (2001) focused on the value relevance literature motivated by standard setting, criticises the previous literature's contribution. The critique was because of the literature's focus on equity valuation and lack of descriptive theory to interpret the empirical associations. In addition, Holthausen and Watts (2001) did not agree with the assumption that accounting provides insightful information to equity valuation which was used in many of the reviewed research papers. Barth, Beaver, and Landsman (2001) disagreed with Holthausen and Watts (2001) criticism. Barth et al. (2001, p. 98) argued that: "the empirical implementations of extant valuation models can be used to address questions of value relevance despite their simplified assumptions". Barth et al. (2001, p. 98) further concluded that value relevance studies investigate whether the accounting figures reflect information used to value a company's equity, not estimate the value of the company.

Despite the previous value relevance literature on standard setting as discussed above, the value relevance configuration as a field of research has been subject to other areas and questions of interest as well, such as earnings management, smoothing of earnings, informativeness, accounting quality, fair values compared to historical cost figures and research on non-GAAP measures.

There have been many studies on a variety of non-GAAP reporting issues. One area of high interest is non-GAAP's usefulness in terms of information sharing, in addition to predicting performance and earnings. Investigations on the informational quality of the I/B/E/S² reported EPS (e.g. Doyle, Lundholm, & Soliman, 2003; Landsman, Miller, & Yeh, 2007) emphasised on excluded items (e.g. non-recurring, non-cash, otherwise unimportant) from companies' expenses. The exclusions were categorised into special items, such as restructuring charges, and other exclusions, such as amortisation of goodwill (Doyle et al., 2003). Doyle et al. (2003) found that companies which have a high level of exclusions in non-GAAP earnings, consequently have lower future cash flow. They also found that the market might not appreciate the impact the excluded items has on future cash flow and that the market instead, seems to be fooled by non-GAAP earnings.

² Institutional Brokers' Estimate System (I/B/E/S)

Further, when firms use a trading strategy based on excluded expenses, it is shown that firms experience a higher abnormal profit in the years following the earnings announcement (Doyle et al., 2003). Landsman et al. (2007) tested whether the excluded items were irrelevant for forecasting and the excluded items' predictability. Overall, the research found evidence of mispricing of both positive and negative exclusions and special items, and that this over-valuation and under-valuation is in accordance with Doyle et al.'s (2003) market-inefficiency evidence. Both Doyle et al. (2003) and Landsman et al. (2007) concluded that the use of non-GAAP earnings should be warranted. Further, Landsman et al. (2007), in accordance with Cornell and Landsman (2003) suggest that companies should follow the Sarbanes-Oxley Act of 2002. This act suggests a way of documenting GAAP and non-GAAP figures to make investors able to assess the forecasting and pricing implications that the excluded items might have.

Bhattacharya et al. (2003) investigated the informativeness and performance of non-GAAP earnings, using actual reported non-GAAP measures in the firms' press releases. The main finding was that non-GAAP measures are perceived to be the closest measure of the real "core earnings", however, Bhattacharya et al. (2003) found that investors and analysts have opposing views on the informativeness of the earnings announcements.

One of the drivers for research on non-GAAP measures has been the criticism non-GAAP reporting has received in the U.S. and recently in Europe. Previous studies on non-GAAP reporting can be divided into two groups (Entwistle, Feltham, & Mbagwu, 2010) where the first group investigates "street" earnings, which used analysts' forecasts, such as I/B/E/S estimates as a proxy for the actual non-GAAP measures (Bradshaw & Sloan, 2002; Doyle et al., 2003). The second group studied information from actual manager reported non-GAAP measures (Bhattacharya, Black, Christensen, & Larson, 2003; Black & Christensen, 2009; Marques, 2006).

A common concern regarding non-GAAP reporting is that it can be used by managers to mislead investors and influence analysts. Black and Christensen (2009) investigated whether US managers used non-GAAP measures to meet strategic earnings targets. Their research suggested that non-GAAP measures do not consistently reflect recurring income and that non-GAAP measures can be used to

signal smoother earnings. The indication that non-GAAP measures are used to influence analysts, forecasts and investors are supported by findings in the European study by Isidro and Marques (2015). The European study provided evidence that non-GAAP reporting often was used with a strategic intention. The study showed that, in 72 percent of the cases, non-GAAP earnings exceeded GAAP earnings. Further, the study indicated that when GAAP earnings do not reach earnings goals, the likelihood for firms to report non-GAAP measures increased. The concerns about misleading non-GAAP measures are supported by Doyle et al. (2013), who found evidence of managers' use of non-GAAP to "meet or beat" analyst expectations.

Standard setters and regulators use a lot of time to find the best earnings measures. Cornell and Landsman (2003) claimed that the discussion among regulators to find the most appropriate earnings measure is misguided and that the disclosure of these measures is of more interest. Cornell and Landsman (2003) argued that firms should be free to use any earnings measure they find appropriate. However, when valuing companies, investors need an adequate disclosure of the underlying business which is comparable across companies. Therefore, Cornell and Landsman (2003) concluded that guidelines regarding non-GAAP disclosure are necessary. Because of the worries that investors can be misled by non-GAAP measures when lacking a clear and commonly used definition among firms, SEC has issued regulations in the U.S. There are some researchers discussing the regulations and monitoring of non-GAAP and adjusted earnings. Heflin and Hsu (2008) found that SEC's regulations reduced firms use of non-GAAP measures to improve the firm's perception of performance. The authors also found a reduction in the use of non-GAAP measures to communicate permanent earnings due to the increased regulations. This is supported by Marques (2006) who discussed the frequency and usefulness of non-GAAP financial measures. Marques (2006) found that the market reacted positively to non-GAAP earnings announcements after SEC's Regulation G in 2003.

SEC has questioned and debated whether to reduce non-GAAP reporting (SEC, 2015). A popular framework in accounting-based research is to study the value relevance to test whether a measure is better than others. US studies have shown that non-GAAP measures have a higher value relevance than GAAP figures (Albring, Cabán-García, & Reck, 2010; Bradshaw & Sloan, 2002; Entwistle et al.,

2010). Investigations have used I/B/E/S as a proxy for non-GAAP and/or actually reported non-GAAP measures. Bradshaw and Sloan (2002) study found an increasing number of cases where there were differences in reported numbers and non-GAAP earnings, and that those non-GAAP earnings usually exceeded the GAAP earnings. The findings were that non-GAAP earnings estimates provided by analysts reflected stock prices better than reported GAAP numbers. This acknowledgement of the value relevance of non-GAAP measures is consistent with Albring et al.'s (2010) findings. They concluded that non-GAAP earnings measures in the U.S. capital market are more strongly associated with stock prices and returns than GAAP operating earnings and consequently more value relevant. Entwistle, Feltham, and Mbagwu (2010) found results that supported Albring et al. (2010) conclusion. Entwistle et al. (2010) found that non-GAAP measures are the most value relevant estimate, followed by I/B/E/S earnings, and lastly GAAP earnings. A study of the value relevance of non-GAAP earnings in South Africa (Venter, Emanuel, & Cahan, 2014), where non-GAAP measures are mandatory, found that non-GAAP earnings are more value relevant than GAAP earnings. Consequently, supporting much of the US studies.

Among non-GAAP studies, Malone, Tarca, and Wee (2015) claimed to be the first to study the relationship between non-GAAP reporting and the measurement requirements of IFRS. They investigated if non-GAAP measures are useful when forecasting future earnings. Despite the growing criticism of non-GAAP measures, Malone et al. (2015) study indicated that non-GAAP measures are helpful rather than misleading when forecasting future performance, which applied especially for the professional investors.

There has been little to no regulation and monitoring of non-GAAP reporting in Europe according to Isidro and Marques (2015). They further pointed out that national regulations may vary across the European countries and stated: "In a context where regulation has little influence over disclosure decisions, the institutional and economic conditions of the firm's country become critical forces in shaping managers' disclosure choices" (Isidro & Marques, 2015, p. 95). Our motivation to study the value relevance of non-GAAP measures in Norway is based on a few such studies in Norway and other European countries. Previous value relevance studies of non-GAAP measures from the U.S. might not be generalisable

to a Norwegian sample since Norway has a smaller economy and because of differences in regulations and accounting systems. The motivation is strengthened by the fewer regulations of non-GAAP measures in Europe compared to the U.S. In addition, many of the previous studies used analyst estimates as proxies for non-GAAP measures, which is additional motivation to collect actual management reported non-GAAP figures.

3. Research Methodology

In this section, we will provide the methodology that is intended for the master thesis, the research questions and hypotheses.

3.1 Research Questions and Hypotheses

After reviewing existing literature on capital market-based research, we found that the value relevance is widely used to investigate relationships between accounting figures and share prices. Most of the value relevance studies use a linear regression model to examine the association between share prices and accounting amounts and testing the significance of the estimated coefficients. Motivated by the gap in the previous literature we formulated the following research question(s):

Research Question (RQ) 1 - Is the disclosure of non-GAAP measures by Norwegian companies on the Oslo Stock Exchange more value relevant than GAAP measures from an investor's perspective?

The aim of our research is to assess the value relevance of firms reported non-GAAP measures from an investor's perspective. Therefore, we will test the following hypotheses:

Hypothesis 1 - Non-GAAP measures provides more explanatory power of the financial position than GAAP measures.

Hypothesis 2 - Non-GAAP measures are more value relevant than GAAP measures.

3.2 Research Design

The design we see fit based on the research question(s) is a quantitative design to test a relatively large sample and if there is a statistical relationship between the financial reported figures, the disclosed non-GAAP measures and the companies' share prices using the value relevance models (deducted from prior models by: Feltham & Ohlson, 1995; Ohlson, 1995). We will do so, by trying to find empirical evidence of non-GAAP reporting's value relevance in Norway.

We intend to use the price model and return model to check whether non-GAAP measures has a higher association with the companies share prices. The price model and return model enables one to assess the financial figures ability to provide information by looking at the models explained variation represented by the regressions residual sum of squares (R^2), in addition, considering the statistical significance of estimated coefficients. The price model is used to check whether the accounting figure studied is reflected in the company's value. The return model is used to investigate what is reflected in changes in value over a chosen time period (Barth et al., 2001).

3.3 Data Collection & Sample Selection

Data collection will be conducted by gathering historical stock price information about the companies listed on the OSE and collect information about non-GAAP measures in the companies' financial statements.

Statistically, it is desired that the sample consists of a large part of or the entire population (Stock & Watson, 2012). There are about 220 listed companies on OSE. Due to time optimisation, we will use the 100 largest companies when selecting our sample with data from the available last five years to enable inferences from the study. Our goal is to apprehend 500 firm-year observations for our investigation to gain a large enough sample. This is because these large companies are more likely to report non-GAAP figures. Choosing only OSE-listed companies ensures comparability since they report in accordance with IFRS and the additional Norwegian laws and regulations. Further, the chosen timeline is due to available time and resources.

3.4 Data Analysis

Data analysis will be conducted by using statistical tools to find descriptive statistics and to figure out if the non-GAAP measures provide insightful information to the Norwegian market.

4. Estimated Progress for Our Master Thesis

Intended Timeline for our Master Thesis Progress:

January/February:

- Start the Master Thesis Report process

February/March:

- Write theory/literature review
- Prepare a pilot for data collection
- Start preparations for data collection

April:

- Collect data
- Analyse data and interpret results

May/June:

- Write conclusion from findings
- Write/improve introduction and literature review
- Write overall conclusion, introduction and abstract

July/August:

- Final improvements and proofreading
- Hand-in the Master Thesis Report

5. References

- Albring, S. M., Cabán-García, M. T., & Reck, J. L. (2010). The value relevance of a non-GAAP performance metric to the capital markets. *Review of Accounting and Finance*, 9(3), 264-284. doi:10.1108/14757701011068066
- Ball, R., & Brown, P. (1968). An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research*, 6(2), 159-178. doi:10.2307/2490232
- Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: another view. *Journal of Accounting and Economics*, 31(1), 77-104. doi:10.1016/S0165-4101(01)00019-2
- Beaver, W. H. (1968). The Information Content of Annual Earnings Announcements. *Journal of Accounting Research*, 6(3), 67-92.
- Beisland, L. A. (2009). A Review of the Value Relevance Literature. *The Open Business Journal*(2), 7-27. doi:10.2174/1874915100902010007
- Bernhoft, A.-C. (2016). Alternative resultatmål; aktuelt om finansiell rapportering. *Revisjon og regnskap*, 86(5), 24-26.
- Bhattacharya, N., Black, E. L., Christensen, T. E., & Larson, C. R. (2003). Assessing the relative informativeness and permanence of pro forma earnings and GAAP operating earnings. *Journal of Accounting and Economics*, 36(1-3), 285-319. doi:<http://dx.doi.org/10.1016/j.jacceco.2003.06.001>
- Black, D. E., & Christensen, T. E. (2009). US Managers' Use of 'Pro Forma' Adjustments to Meet Strategic Earnings Targets. *Journal of Business Finance & Accounting*, 36(3/4), 297-326. doi:10.1111/j.1468-5957.2009.02128.x
- Bradshaw, M. T., & Sloan, R. G. (2002). GAAP versus The Street: An Empirical Assessment of Two Alternative Definitions of Earnings. *Journal of Accounting Research*, 40(1), 41-66. doi:10.1111/1475-679X.00038
- Cornell, B., & Landsman, W. R. (2003). Accounting Valuation: Is Earnings Quality an Issue? *Financial Analysts Journal*, 59(6), 20-28.
- Doyle, J. T., Lundholm, R. J., & Soliman, M. T. (2003). The Predictive Value of Expenses Excluded from Pro Forma Earnings. *Review of Accounting Studies*, 8(2), 145-174. doi:10.1023/A:1024472210359

-
- Entwistle, G. M., Feltham, G. D., & Mbagwu, C. (2010). The Value Relevance of Alternative Earnings Measures: A Comparison of Pro Forma, GAAP, and I/B/E/S Earnings. *Journal of Accounting, Auditing & Finance*, 25(2), 261-288. doi:10.1177/0148558X1002500205
- ESMA. (2016). *ESMA reminds issuers Alternative Performance Measures Guidelines come into force on 3 July 2016* Retrieved from <https://www.esma.europa.eu/press-news/esma-news/esma-publishes-new-ga-alternative-performance-measures-guidelines>
- Francis, J., & Schipper, K. (1999). Have Financial Statements Lost Their Relevance? *Journal of Accounting Research*, 37(2), 319-352.
- Heflin, F., & Hsu, C. (2008). The impact of the SEC's regulation of non-GAAP disclosures. *Journal of Accounting and Economics*, 46(2-3), 349-365. doi:<http://dx.doi.org/10.1016/j.jacceco.2008.07.002>
- Holthausen, R. W., & Watts, R. L. (2001). The relevance of the value-relevance literature for financial accounting standard setting. *Journal of Accounting and Economics*, 31(1-3), 3-75. doi:[http://dx.doi.org/10.1016/S0165-4101\(01\)00029-5](http://dx.doi.org/10.1016/S0165-4101(01)00029-5)
- Isidro, H., & Marques, A. (2015). The Role of Institutional and Economic Factors in the Strategic Use of Non-GAAP Disclosures to Beat Earnings Benchmarks. *European Accounting Review*, 24(1), 95-128. doi:10.1080/09638180.2014.894928
- Kothari, S. P. (2001). Capital markets research in accounting. *Journal of Accounting and Economics*, 31(1), 105-231. doi:10.1016/S0165-4101(01)00030-1
- Landsman, W. R., Miller, B. L., & Yeh, S. (2007). Implications of Components of Income Excluded from Pro Forma Earnings for Future Profitability and Equity Valuation. *Journal of Business Finance & Accounting*, 34(3-4), 650-675. doi:10.1111/j.1468-5957.2007.02033.x
- Malone, L., Tarca, A., & Wee, M. (2015). *Non-GAAP earnings disclosures and IFRS*.
- Marques, A. (2006). SEC interventions and the frequency and usefulness of non-GAAP financial measures. *Review of Accounting Studies*, 11(4), 549-574. doi:10.1007/s11142-006-9016-x
- Scott, W. R. (2015). *Financial accounting theory* (7th ed.). Toronto: Pearson.

-
- SEC. (2015). *Maintaining High-Quality, Reliable Financial Reporting: A Shared and Weighty Responsibility [Keynote Address]* Retrieved from <https://www.sec.gov/news/speech/keynote-2015-aicpa-white.html>
- SEC. (2016). Non-GAAP Financial Measures. Retrieved from <https://www.sec.gov/divisions/corpfin/guidance/nongaapinterp.htm>
- Stock, J. H., & Watson, M. W. (2012). *Introduction to Econometrics* (3rd ed.): Pearson.
- Venter, E. R., Emanuel, D., & Cahan, S. F. (2014). The Value Relevance of Mandatory Non- GAAP Earnings. *Abacus*, 50(1), 1-24.
doi:10.1111/abac.12020