Comparability of Financial Reports: A Literature Review of Most Recent Studies

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**Abstract:** Financial statement comparability has for a long time been one of the main points of interest of financial accounting research. Recent studies and particularly those that followed De Franco et al.’s (2011) influential paper were mostly focused on putting to use the results of the financial reporting process to measure the level of accounting comparability and thus the comparability of financial results between companies. This working paper makes a short survey of recent studies that measure comparability of financial statements. As such it describes and comments on four important studies that introduced measuring concept for this problem. Second part of the research deals with classification of recent different streams of literature in this field. In conclusion, It also sums up what has already been achieved in comparability research.

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**Keywords and phrases:** Financial statements, comparability, IFRS, literature review

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Contents
1. Introduction and methodology ................................................................. 4
2. Findings and Discussion of results .............................................................. 5
   2.1 Four main studies that establish and enhance measuring standards of financial reporting comparability ........................................................................... 5
   2.2. Recurring subjects in accounting comparability research ......................... 8
Bibliography ...................................................................................................... 12
1. Introduction and methodology

The main motive for conducting this literature research has been the desire to explore in more details the trends in contemporary accounting literature that are connected to the problem of financial statement comparability. This issue is in especially important in regard to conducting studies that for example rely on calculating and comparing value of companies that are based in accounting data and financial statements of the companies. Accounting comparability has been on the forefront of the international standard setting agencies for at least for the past twenty years. As such, it is listed among the desirable properties of financial accounting information in the Conceptual Frameworks of both the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) that are the main regulatory bodies for International Financial Reporting Standards (IFRS). Studies on comparability in financial reporting are numerable, and the number of such studies has only been increasing in the recent years, especially after the adoption of the International Financial Reporting Standards (IFRS) in the European Union (EU) and the proposed adoption of the IFRS in the US. The period that is the covered in this paper are studies published in journals that hold top rank (4 or 4*) according to the ranking of Association of Business Schools (ABS) in the field of Accounting. As of the end of 2015, those are: “The Accounting Review”, “Accounting, Organizations and Society”, “Journal of Accounting and Economics”, “Journal of Accounting Research”, “Contemporary Accounting Research” and “Review of Accounting Studies”. These journals all have a high impact factors and are at the forefront of accounting research for the past twenty years, and are as such good source for spotting trends and hot topics in accounting research. Also, they are all included in the list of top 45 research journals, according to the Financial Times Research Rank. The table below shows the list of the articles and the relevant scores and ratings taken from ABS ranking report (2015).

<table>
<thead>
<tr>
<th>ISSN</th>
<th>Journal title</th>
<th>Ratings</th>
<th>Standardized scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001-4826</td>
<td>The Accounting Review</td>
<td>4*</td>
<td>4 4 1.106 2.372 2.255</td>
</tr>
<tr>
<td>0361-3682</td>
<td>Accounting, Organizations and Society</td>
<td>4*</td>
<td>4 4 0.799 1.412 3.139</td>
</tr>
<tr>
<td>0165-4101</td>
<td>Journal of Accounting and Economics</td>
<td>4*</td>
<td>4 4 1.923 4.551 3.126</td>
</tr>
<tr>
<td>0021-8456</td>
<td>Journal of Accounting Research</td>
<td>4*</td>
<td>4 4 1.32 3.323 2.437</td>
</tr>
<tr>
<td>0823-9150</td>
<td>Contemporary Accounting Research</td>
<td>4 3 3 -0.07 1.025 1.007</td>
<td></td>
</tr>
<tr>
<td>1380-6653</td>
<td>Review of Accounting Studies</td>
<td>4 4 4 0.32 1.343 0.69</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Ratings and standardized score of top six ranked accounting journals, according to ABS rankings

The time-frame that is covered by this study is the period of the past twenty years (1995-2015). The main reason for selecting this particular period is that the year 1995 is the year when very
influential study by Ohlson (1995) was published, which became the focal point of most accounting research since then, especially in regard to the problem of fundamental value and valuation. After limiting research to this specific timeframe and this specific list of journals, author used Scopus, EBSCO and Web of Science databases to identify the relevant studies and articles in accordance to the methodology set and explained above. The terms that were used for the search include various combination of terms “financial statement”, “comparability” and “fundamental value”. The results of the database searches produced list of 1327 articles in “The Accounting Review” since 1995, out of which 25 were deemed relevant for the topic and selected for the further detailed research. “Accounting, Organizations and Society” yielded 1670 articles, out of which 41 were selected, “Journal of Accounting and Economics” had 1283 articles in the same period, out of which 37 were selected. The rest of the journals – “Journal of Accounting Research”, “Contemporary Accounting Research” and “Review of Accounting Studies” had 294, 797 and 530 articles in this timeframe, out of which 22, 8 and 11 articles were selected, respectively. The total number of reviewed articles that entered the second stage of the research is thus 144.

2. Findings and Discussion of results

Selected papers approach to the subject of comparability from different perspectives, and it can be argued that only a smaller number of them deal with comparability of financial statements directly. What is easily distinguished is that of those that do deal with comparability directly, there are two basic approaches to the problem. First one is the older approach, that is based on the comparability of financial inputs (accounting rules, choice of reporting methods etc.). In contrast to that, newer approach takes different stance and it is evident that recently there has been a shift in the focus of research, and that the research is now mostly focused on the comparability of the outputs of the financial reporting process, most notably of earnings. In that regard and as mentioned in the important study by De Franco et al. (2011), the output-based approach to measuring accounting comparability has no less than three advantages in comparison to the input-based approach: 1) it is more objective because it does not require the selection and weighing of the inputs; 2) it is more relevant for users as they are more focused on the output; and 3) in practical terms it is much easier to implement due to the better availability of the data.

2.1 Four main studies that establish and enhance measuring standards of financial reporting comparability

Except for the paper by De Franco et al. (2011) which is a good starting point to describe and discuss general idea of measuring financial statement comparability, there are three more important papers that take the same output-based approach (based on link between earnings and stock prices) and provide significant contribution to the research of the problem. First of those is a paper by Yip and Young (2012) which in order to measure comparability explores the aspects of similarity and dissimilarity in financial reporting. Second paper is paper by Bhojraj and Lee (2002) proposes a measurement of comparability that is based in valuation perspective. Paper by Kim et al. (2013) is the third important study, which considers a comparability measure constructed to be relevant for debt market participants.
When it comes to comparability of financial statements in accounting research, the study by De Franco et al. (2011) can probably be seen as one of the most influential paper written recently. The main contribution of this study lies in the introduction of an output-based methodology in measuring comparability. Studies on financial statement comparability before this mainly use a comparison of financial statement inputs. These studies are, for example, concerned with the similarity of accounting rules in different countries or accounting systems (Nobes, 2001) or the equivalence of financial statement methods used by the firms (van der Tas, 1988). De Franco et al. (2011) take a different approach and focus on the output of the financial reporting process, such as earnings. Moreover, De Franco et al. (2011) state that the similarity in these financial reporting numbers does not necessarily mean that financial reporting practices are similar. Instead, they give recommendations about how to ingrate economic events into earnings, and use them as an indicator for comparability in financial accounting statements. Therefore, the new comparability measure has its base in the premise that “for a given set of economic events, two firms have comparable accounting systems if they produce similar financial reporting numbers” (De Franco et al., 2011). In practical terms, his method of measuring the similarity between financial reports by looking at earnings and controlling for economic events uses two proxies. First, it uses stock returns as a proxy for economic events, and as the proxy for financial statement outputs, it uses earnings. Also, it is assumed that earnings are a linear function of returns and that estimation of the parameters of this function can be established through firm-specific time-series regressions. As a result, the measure of comparability, named and labeled ‘similarity of accounting functions’ between different firms, is calculated as the negative value of the average difference between the expected earnings using firm’s functions together with firm’s economic events over the previous four years. By holding economic events constant for the two firms, it is supposed to yield a pairwise comparability score that is not biased by any economic dissimilarity between the two firms. The pairwise measures between a firm and all its benchmark firms in the same industry are then combined into firm-year-specific summary measures, which are calculated as the mean or median of a firm’s comparability with (some of) its industry peers.

Second important paper mentioned above is the study done by Yip & Young (2012). This study builds on the output-based financial statement comparability measurement first introduced by De Franco et al. (2011), and their contribution consists of refining the measurement of the construct under consideration. They do this by emphasizing that the increased similarity of similar firms as well as the decreased similarity of dissimilar firms can both increase overall financial statement comparability in the cross-section. They use three different measures of financial statement comparability. It includes adjusted version of De Franco et al.’s (2011), used on different data and different timeframe. To assess both sides of accounting comparability, they use each of the measures on variations of different and similar cross- and within-country firms, with similarity in the matching being based on industry affiliation. Their results show that similar firms became more similar across countries after IFRS was adopted in the country, and in contrast, no consistent results on the difference within-country comparability are found.

What is also worth mentioning is that the difference between the studies by De Franco et al. (2011) and Yip and Young (2012) is evident also in the cross-country focus of the latter study. While De Franco et al. (2011) solely use data from the companies based in USA, Yip and Young (2012) use data from 17 European countries. This means that besides their focus on the similarity and difference aspect of comparability, they also separate a within-country from a cross-country dimension.
Besides the modified De Franco et al. measure, Yip and Young (2012) use a measure on the degree of information transfer as a proxy for comparability. This shows the effect that surprises in earnings announcements of announcing firms have on the stock returns of non-announcing firms. It is examined through linear regression models using four samples: two within-country samples with firms from similar or different industries and two between-country samples for the similarity and the difference facet.

Third study discussed here is the study conducted by Bhojraj and Lee (2002), which presents a method for the selection of comparable firms based on valuation theory and applied to accounting multiples. The method is designed to improve selection of comparable firms’ methods for analysts and researchers, which relies only on size and industry in many cases. Bhojraj and Lee (2002) refer to their approach to identifying comparable firms as the ‘warranted multiple method’. Two widely used reference multiples are considered: the price-to-book ratio and the enterprise-value-to-sales ratio. The method of warranted multiples is motivated by fundamental valuation theory. The residual income model can be used to obtain an expression of the price-to-book ratio as a function of the cost of equity capital, current book value of equity, and expectations on the future return on equity and on the future book value. Similarly, the residual income model provides an expression for the enterprise-value-to-sales ratio as a function of the cost of capital, current total sales, and expectations on future operating profit margin and on the payout ratio. Bhojraj and Lee (2002) explain that the explanatory variables chosen for the cross-sectional regressions approximate the determinants of the price-to-book and the enterprise-value-to-sales ratio identified by the residual income model. They then state that the results indicate that the warranted multiples method strongly outperforms standard matching methods that are often based only on similarity in size and industry. An out-of-sample validation of the method compares the explanatory power of models relating future price-to-book and enterprise-value-to-sales ratios to a set of ex ante measures based on alternative definitions of comparable firms.

Fourth study, by Kim et al. (2013), in contrast to the previously described studies, proposes two measures of comparability specifically designed to be relevant for debt market participants and to examine the role of comparability in debt markets. These measures are based on a database compiled by Moody’s, which provides adjusted financial accounting data for the purpose of rating valuation. Moody’s adjusts the financial statements in Financial Metrics in order to ‘[…] improve the comparability of financial statements’ (Kim et al., 2013, p. 788). The results of the analyses conducted by Kim show that the measures of comparability are positively associated with bond liquidity. This lends support to the view that comparability helps in reducing information asymmetries. In other words, Kim et al. (2013, p. 785) argue that comparability enables ‘[…] less informed investors to conduct simple and standardized but still effective financial analyses’. The authors further argue that there is a possible limitation of this metric in that it is only available for firms with publicly traded bonds, and as such is limited mostly on larger firms. If size was systematically related to the determinants or consequences of comparability, such limitation could pose a problem in empirical research examining comparability as an independent or dependent variable. Also worth mentioning is that unlike De Franco et al. (2011), Yip and Young’s (2012), and Bhojraj and Lee’s measures, Kim et al.’s (2013) measures can also be used for firms with unlisted equity. This could be advantageous as such firms represent an area only scantily explored by comparability research thus far. However, since their measures require firms to instead have publicly traded.
2.2. Recurring subjects in accounting comparability research

Another important finding from this analysis is that it can be observed that there are two main streams of research present in contemporary literature. The first large stream of studies deals with the comparability problems from the aspect of adoption of IFRS in different countries, in most number of cases in European ones. After the introduction of mandatory IFRS reporting regime for stock listed companies in the EU has been made in 2005, it was expected that between-company aspect of comparability across various countries was expected to adjust to this new reality. As mentioned above, Yip and Young (2012) examine this problem in 17 European countries, but there are more studies that can be classified and categorized in this literature stream. Most papers that are relevant for this are reviewed and systematized in the following table:

<table>
<thead>
<tr>
<th>Study</th>
<th>Comparability measurement</th>
<th>Sample period</th>
<th>Data</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barth et al. (2012)</td>
<td>Based on DeFranco (2011) – regression of earnings on returns</td>
<td>1992-2009</td>
<td>Between 27 countries</td>
<td>Study focuses on effects that IFRS adoption has on comparability</td>
</tr>
<tr>
<td>Brochet et al. (2013)</td>
<td>Based on DeFranco (2011) – regression of earnings on returns</td>
<td>2003-2006</td>
<td>Within UK</td>
<td>Separates comparability effects of IFRS adoption from effects of improvements in earning quality</td>
</tr>
<tr>
<td>Cascino&amp;Gassen (2015)</td>
<td>Based on DeFranco (2011) – regression of earnings on returns</td>
<td>2001-2008</td>
<td>Between 29 countries</td>
<td>Shows that IFRS requirement doesn’t automatically lead to higher between country comparability</td>
</tr>
<tr>
<td>DeFond et al. (2011)</td>
<td>Uses own method based on nr. of industry peers</td>
<td>2003-2007</td>
<td>Between 14 EU countries</td>
<td>Tests if increase in industry peers after IFRS implementation is concurrent with increase in foreign mutual fund ownership</td>
</tr>
<tr>
<td>Horton et al. (2013)</td>
<td>Uses own method based on analyst portfolio changes after IFRS introduction</td>
<td>2001-2007</td>
<td>46 countries all over the world</td>
<td>Study find improvement in information environment after IFRS adoption</td>
</tr>
<tr>
<td>Neel (2015)</td>
<td>Based on DeFranco (2011) – regression of earnings on returns</td>
<td>2001-2008</td>
<td>Between 41 countries</td>
<td>Shows that IFRS adoption leads to capital-market benefits</td>
</tr>
<tr>
<td>Yip&amp;Young (2012)</td>
<td>Based on DeFranco (2011), Ohlson (1995) and own</td>
<td>2002-2007</td>
<td>17 European countries</td>
<td>Study finds increased between country comparability</td>
</tr>
</tbody>
</table>

Table 2. Studies dealing with the problem of comparability of financial statements from the IFRS adoption perspective
Study conducted by Barth et. al (2012) focuses on the comparability of IFRS and GAAP (Generally accepted accounting principles) firms after their countries adopted IFRS, by using a procedure similar to the one used by De Franco et al. (2011) to examine the level to which IFRS adopters report similarly to US GAAP firms. Authors conduct an empirical study across countries, which is largely different from the US-based industry comparison from the study done by De Franco et al. (2011). Their findings are confirming their hypotheses, and Barth et al. (2013) find that adoption of IFRS is associated with the accounting sums of adopters becoming more similar to those of adopted companies and less similar to those of non-adopting firms. Apart from this, the results also show that adopters generally exhibit increases in liquidity and share turnover after IFRS adoption.

Cascino and Gassen (2015) go in the similar direction on the comparability of accounting standards by emphasizing the moderating effect that compliance has on the relation between IFRS adaption and accounting comparability. By using two modified versions of De Franco et al.’s (2011) similarity of accounting functions, they measure comparability across firms from 29 different countries, and they examine whether the comparability across countries increases after the countries adopted IFRS in their officially sanctioned practices. Their two comparability measures are based on the relation between returns and net income, and on the association between cash flows from operations and net income.

Study by Neel (2015) examines the synergetic effect of reporting quality and comparability on capital-market variables. This study hypothesizes and proves that the firms with high reporting quality experience capital-market benefits after they adopted IFRS. Neel’s (2015) measures for economic outcomes are Tobin’s Q (as a proxy for firm value) and the proportion of trading days with zero daily stock returns (for illiquidity). His primary reporting quality measure is the firm-level correlation between accruals and cash flows from operations, which is replaced by an accruals-quality measure by Dechow and Dichev (2002).

Contrary to many examined papers, DeFond et al. (2011) are not concerned with the comparability of accounting standards. They are interested in effects due to changes in foreign mutual fund ownership that could follow an increase in comparable reporting after the introduction of mandatory IFRS reporting requirements. They hypothesize that increases in the uniformity of accounting standards attract more FDI in countries with credible implementation mechanisms in place. DeFond et al. (2011) measure changes in the degree of uniformity as the industry specific ratio between the number of industry peers uniformly using IFRS, and the number of industry peers using the local accounting standard in 2003. Following this measurement concept, industries with few industry peers prior to IFRS adoption and many industry competitors after IFRS adoption show increase in uniformity. The main empirical results show that international investments did indeed increase for companies that exhibited a large boost in uniformity at the industry-level and that are subject to credible IFRS implementation at the country-level.

Similarly, study by Horton et al. (2013) deals with the change to the information environment upon the introduction of mandatory IFRS reporting regimes. Horton et al. (2013) hypothesize and show that mandatory IFRS adoption is followed by comparability and information quality benefits. This measurement of comparability is based on changes to analysts’ firm portfolios and predictions for different groups of portfolio changes. They argue that comparability is likely to increase for these firms. Accordingly, for analysts experiencing such portfolio changes due to the introduction of IFRS reporting requirements, they expect and find forecast accuracy to significantly increase.
Study by Brochet et al. (2013) tests the indirect capital market benefits that IFRS adoption brought about through enhanced financial statement comparability. Capital-market benefits are measured as the reduction in abnormal returns to insider purchases. The analysis focuses on a sample of UK firms around IFRS adoption. They argue that IFRS had negligible differences and that IFRS adoption would therefore provide a natural experiment to test the effect of enhanced comparability across a larger set of firms in the absence of effects due to changes in the quality of the accounting standards. The main results show that IFRS adoption leads to significant capital market benefits. Conclusively, findings indicate that capital-market benefits exist for comparable firms after IFRS adoption.

Second important stream of research is concerned with the determinants of comparability and with events that led to a change in comparability. All important papers that were examined in this study are listed below in table 3.

<table>
<thead>
<tr>
<th>Study</th>
<th>Comparability measurement</th>
<th>Variables</th>
<th>Sample period</th>
<th>Data</th>
<th>Content</th>
</tr>
</thead>
</table>
| De Franco et al. (2011) | Own method – regression of earning to returns | Indep.: Comp. measurement  
| Francis et al. (2014) | Based on DeFranco (2011) – regression of earnings on returns, and total signed accruals | Indep.: dummy variable for firms audited by one audit.  
| Kim et al. (2013) | Proposes two measures of comparability with industry peer groups | Indep.: comp. measur.  
Dep.: traded bonds bid-ask spread | 2005-2010 | US   | Study finds effect of accounting comparability on the cost of public debt                                                               |
Table 3. Studies dealing with determinants and consequences of comparability

<table>
<thead>
<tr>
<th>Study</th>
<th>Comparability measurement</th>
<th>Variables</th>
<th>Sample period</th>
<th>Data</th>
<th>Content</th>
</tr>
</thead>
</table>

In the study conducted by Land and Lang (2002) we can find evidence of accounting standards becoming more similar across countries over time. In line with the research of De Franco et al. (2011), this study shows that the concept of comparability has to capture similar accounting practices at the same time as economic factors need to be held constant. They operationalize the identification of comparability effects differently, by using a more indirect approach. As the indirect approach to measuring comparability is potentially biased due to omitting correlated variables, Land and Lang (2002) conduct a large number of analyses to confirm the robustness of their results. Their evidence is interpreted as being an indication of increased accounting standards convergence across different countries over time.

Study by Francis et al. (2014) examines whether the style of audit is related to accounting comparability, and they investigate whether companies audited by the same consultants display more comparable financial statements than those not audited by same auditors. The main contribution of this paper is identification of economic institutions as a determinants of accounting comparability. They use different methodological approaches to explore the role of auditors in the determination of comparability. Final results show that the auditor-fixed effects are jointly zero is rejected, suggesting that audit style plays a significant role in determining comparability.

Study by Young and Zeng (2015) calculates the difference between the valuation error when peers are selected based on accounting data, and when peers are selected by industry. They find that the difference between these two valuation errors rises after IFRS adoption, which is congruent with the view that accounting comparability is the main driver of the increase in valuation accuracy. Moreover, and consistent with a positive association between comparability and valuation accuracy, results show that the peers selected using the warranted multiples method exhibit more similar economic characteristics following IFRS adoption. Finally, the extent to which reporting practices materially differed before the IFRS requirements were introduced is estimated, with the results showing that the improvement in valuation accuracy after IFRS adoption is concentrated in firms with the lowest level of pre-IFRS alignment.


