

Full Length Research Paper

Does the IFRS 15 impact earnings management? Initial evidence from Italian listed companies

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The purpose of the present work was to gauge the extent of the impact on earnings management derived from the adoption of International Financial Reporting Standards (IFRS) 15 as well as detecting whether the impact will be similar in different industries. To provide empirical evidence that earnings management is more frequent in some industries and less frequent in others by means of a statistical analysis, a sample of Italian listed companies in the period 2001-2017 was observed. Specifically, companies belonging to two sectors were selected: “Telecommunications” and “Utilities”. The Jones Model was applied. The statistical analysis brought to light that earnings management practices are “commonly adopted” in the “Telecommunications” industry, which is consequently highly impacted by the introduction of IFRS 15. That being said, the lesson learned from this study is that the implementation of the new principle, written to discipline the accountancy of revenues, and its consequences, must be carefully analyzed and monitored by the regulators, as well as correctly adopted by managers, as the determined revenues could have an impact on the pre-existing earnings management practices. The scientific contribution of the present research also concerns the predictions on the behavior of managers that can be foreseen considering the agency theory; therefore, knowing *ex-ante* in which industries earnings management has a high impact, provides the option to foresee the hypothetical moves of the managers in the implementation of IFRS 15.

Key words: earnings management, discretionary accruals, IFRS 15, telecommunications, utilities.

INTRODUCTION

Since 1973, there has been a worldwide trend to standardize the accounting principles. Over the last few years, the need to harmonize accounting rules has risen in Europe too. As a result, the European Commission started issuing directives to the member states. The objective of the European Union (EU) is to facilitate the development and efficiency of European financial

markets. The application of different accounting standards in each Member State has, in fact, in the past determined a low degree of comparability of financial reporting among companies located in different European States, constituting a deterrent in the development of these markets. The European accounting legislation (that is Directives n. IV and VII, respectively on the subject of the

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annual financial statements and consolidated financial statements), which is applied differently in each member State, was no longer adequate to ensure this objective.

In this regard, the European Union Parliament decided to promote, and progressively to make mandatory, for the fiscal years starting after 1 January 2005, the adoption of International Accounting Standards (IAS/IFRS), elaborated by the International Accounting Standards Committee (IASC) – initially by a group of professional accountants, and subsequently by a board called International Accounting Standards Board (IASB), which is an internal committee of the global organization for accountancy (International Federation of Accountants – IFAC).

The European Union decided to focus its attention on IAS/IFRS as an answer to its previously set ideas, such as (Preface to IFRS, 2018):

1. *“develop [...] high quality, understandable and enforceable global accounting standards [...], that require high quality, transparent and comparable information [...] to help participants in the world's capital markets and other users [...]”*;
2. *“promote the use and rigorous application of those standards”*;
3. *“bring about convergence [...]”*.

These are also the reasons why IAS/IFRS achieved such an extraordinary success persuading almost 100 Countries to adopt them (Ball, 2006).

Moreover, many studies showed that adopting IFRS, firms act optimally and promote financial reporting quality and investor interests (Fields et al., 2001). Other researches, some with empirical evidence, show that the adoption of the IFRS reduces the level of earnings management (Rudra and Bhattacharjee, 2011; Cai et al., 2008) since this set of standards limits the management's opportunistic discretion (Barth et al., 2008) and, consequently, the adoption of IFRS decreases the use of discretionary accruals (Guenther et al., 2009).

In this scenario, the current, major change in the IAS/IFRS' panorama is represented by the adoption of two new standards as IFRS 9 *“Financial instruments”* and IFRS 15, titled *“Revenue from contracts with customers”*. These standards have become mandatory from the 1st January 2018. The present work focuses on IFRS 15, because, it can be considered one of the crucial issues for companies, considering that revenues are both easily examined and one of the primary earnings subject to discretion (Stubben, 2010).

The aim of the present work was to evaluate the impact of IFRS 15 on earnings management and question whether the level of impact will be different according to the industrial sector of the entities.

In the past, the Big-Four companies (KPMG, Ernst and Young, Deloitte and PricewaterhouseCoopers) have hypothesized that a different level of impact of IFRS 15

could exist considering specific features of the industries, which directly influence the revenues, however the impact of this on earnings management remains unverified.

Therefore it seemed useful to provide empirical evidence in specific industries where earnings management is more frequent, followed by an attempt to evaluate the benefit obtained from the correct and adequate introduction of the IFRS 15. The paper is structured as follows. The next section reviews academic literature on the impact of IAS/IFRS adoption on earnings management and its possible future effects within different industries. The following section is dedicated to explaining the empirical research; in detail, the background research is presented, such as the literature and information necessary to create the basis for the research, the methodology used for the analysis is described, the variables, the sample and the regression used as well as the findings and an initial discussion about the results. The paper ends by reporting the main conclusions and explaining the limitations.

LITERATURE REVIEW

The adoption of accrual-based accounting is considered necessary because it is able to provide a complete picture of the financial transactions of the business, recording all period transactions. The system, being based on a complete record of the financial matter, discloses correct profit or loss for a specific period; above all when compared to a cash-based system, in which transactions are recorded only when cash is received or paid, accrual accounting could be considered less vulnerable in a real management practices perspective since monetary flows systems are easier to manage. This is one of the reasons why IFRS are based on accrual accounting.

The latter point is widely agreed upon in the main literature. Goldman and Brashares (1991) believe that a full-accrual accounting system emphasizes the transparency of financial statements and allows a faithful representation of corporate performance; similarly, Vinnari and Näsi (2008), argue that the adoption of accrued-based system, such as the IAS/IFRS system, is able to limit the use of creative accounting. The term *“creative accounting”* refers to the use of the flexibility in accounting principles in order to manipulate the presentation and/or valuation of financial statement items (Jameson, 1988). Consequently, budget editors can show stakeholders whatever they find more convenient, hiding the company's actual performance. Given that such practices rely on the interpretation of accounting principles, it remains very difficult to establish when they are bound to illegality (Amat et al., 1998).

Considering that IFRS are standards elaborated on an

accrual basis, the adoption of these principles is widely supported by mainstream literature, even though each author provides a different reason, i.e. Corsi and Mancini (2010) highlight its superiority over, for example, the Generally Accepted Accounting Principles (GAAP), which are not “rigorous” enough, leaving high degrees of freedom in implementing earnings management policies. Jeanjean and Stolowy (2008) assert that implementing IFRS simplifies the comparison of companies’ financial performance across different countries.

Focusing on earnings management has brought to light the ongoing debate in literature started in 1980, when many authors started developing models to highlight the persistence of the phenomenon (Healy, 1985; De Angelo, 1986; Jones, 1991; Dechow et al., 1995; Dechow and Dichev, 2002; Tutino and Pompili, 2017). Two main earnings management categories can be identified:

- 1) *Accruals* management, related to the possibilities offered by the accounting standards (professional judgments), aiming at “obscuring” or “masking” true economic performance (Dechow and Skinner 2000),
- 2) *Real activities* manipulation, occurring when managers undertake actions that change the timing or structuring of an operation, investment, and/or financing transaction in an effort to influence the output of the accounting system (Gunny, 2010).

By relating the IAS/IFRS and the earnings management some authors have realized that the quality that would place IAS/IFRS above local GAAP is the reduction in costs for investors to assess the quality of the information reported in IFRS compliant financial statements. In fact, the greater comparability of the financial statements would make it possible to identify any earnings management action in a timely manner, reducing the possibility of opportunistic behavior by managers. Mechelli and Cimoni (2012) highlight the ability of the IAS/IFRS to fill in local legislative gaps relating to particular events that must be reported in the financial statements. For example, the presence of “gaps” in enforcement mechanisms could weaken, or even nullify, the positive effects of the new standards.

Other authors such as Leuz and Verrecchia (1999), Ashbaugh and Pincus (2001), Leuz (2003) pointed out that the greater disclosure required applying the IFRS for the financial statements preparation would result in reduction of opportunistic behavior.

Nevertheless, different and conflicting conclusions resulted in many investigations carried out in this specific field.

Barth et al. (2008), observing the quality of “budget numbers” before and after the adoption of IFRS on a sample of 327 companies that opted for voluntary implementation between 1994 and 2003, a lower earnings management was found, along with a greater value relevance and a timelier recognition of losses

following the introduction of international accounting standards, translating into higher quality financial statements than those prepared with local GAAP. Daske et al. (2008), examining the economic consequences of adopting IFRS on a sample of 3.800 first-time adopters in 26 different countries, found a positive correlation between the introduction of IFRS, market liquidity and the market valuation. Differently, Armstrong et al. (2010) analyzed the potential impact on stock market price with the adoption of IFRS. The results showed a positive correlation underlying a positive (negative) market reaction with the increase (decrease) in the probability of IFRS adoption. The combination of these results shows that, at least for early adopters, companies could benefit from the adoption of IFRS. Iatridis (2010) drew similar conclusions observing a sample of listed companies in the UK: the adoption of IFRS is able to reduce the possibilities of earnings management as it leads to a timelier and value relevant recognition of losses.

While with the exact opposite idea, Capkun et al. (2016), showed that early adopters of IFRS had incentives to increase the transparency of their reporting in order to attract outside capital, and, therefore, earnings management (smoothing) went down after voluntary IFRS adoption, while those firms that waited until IFRS reporting became mandatory in EU countries lacked incentives for transparent reporting, leading to increases in earnings management (smoothing) after mandatory IFRS adoption. Meaning that IAS/IFRS standards that went into effect in 2005, permit greater flexibility in application and thus contribute to greater earnings management. A similar conclusion can also be found in Ugrin et al. (2017) where the authors demonstrated that a uniform association between IFRS adoption and earnings management across countries does not exist, in fact sometimes, IFRS create an environment that allows for financial manipulation. Similarly, another contribution elaborated by Ewert and Wagenhofer (2005) found a significant increase in income-increasing earnings management after IFRS adoption amongst firms based in countries that are more power distant, uncertainty avoidant, individualistic, short-term oriented, and indulgent.

Therefore, from a theoretical point of view, there are no doubts about the benefits of the IAS/IFRS adoption.

Following the same path of the literature, an attempt was made to find any evidence on the potential different impact of IAS/IFRS observing different industries (Daske et al., 2013; Munter, 2016). The rationale for the investigation emerges following the mandatory adoption, starting from 1 January 2018, of a specific accounting standard related to the revenue components valuation: IFRS 15.

The impact of the adoption of this new IFRS may have a significant effect on the financial statements of many entities as the amount of revenues and contract costs

Table 1. IFRS 15 and Impact on Financial Statement Quality: The “Big-Four” Expectations.

Sector	KPMG ^{a)}	EY ^{b)}	Deloitte ^{c)}	PWC ^{d)}
Insurance	Medium	Medium/Low	N/A	N/A
Building and construction	Medium	Medium/High	Medium	Medium
Retail and consumer goods	Medium	Medium	Medium	Medium
Licensors*	Medium/high	N/A	Medium	Medium
Real estate	Medium	N/A	Medium	Medium
Technology	Medium	N/A	Medium/Low	High
Telecommunication	High	High	High	High
Energy (mining, oil and gas)	Medium	Medium	Low	Low
Transport	Medium	N/A	N/A	Low

a) KPMG (2016, May), “Revenue - Issues in depth”, available at www.kpmg.com.

b) Ernst and Young (2016, April), “Revenue from contracts with customers, A summary of IFRS 15 and its effects”, available at www.ey.com.

c) In this case the papers of each sector were analyzed and the relative judgment was taken from the analysis of each. The key element to arrive at the aforesaid judgment was the level of risk of error associated with the steps of the IFRS 15 model.

d) PriceWaterhouseCoopers (2014, June), “IFRS 15: implementation challenges”, available at from www.pwc.com.

* media, life science, franchisors.

and/or the timing of their recognition may differ significantly from current practice. The application of the new standard will have effects on all IFRS adopter entities and on the most significant item of their financial statements that is revenues.

To understand whether the impact of this new principles will be the same on all industries, the specific sectors guide lines was used, which is available on the web sites of the Big-Four.

Table 1 summarizes what has been analyzed. In particular, the opinions provided by the “Big-Four” are consistent, with the exception of specific industries like “Technology” and “Energy”. The Telecommunications sector is the most affected, while an average impact is expected for the other sectors.

Referring to the North American Industry Classification System (NAICS) used in this work (NAICS is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data), the Energy sector can be considered as a subsector of the Utilities sector. Which, in fact, is made up of companies operating in the following areas (i) electric bulk power transmission and control; (ii) fossil fuel electric power generation; (iii) natural gas distribution; (iv) other electric power generation (Table 1).

In this regard, several studies have been conducted on the “Insurance” and “Banking” industries (Firoz et al., 2011; Agostino et al., 2011; Post et al., 2007; Helfenstein et al., 2004; Bischof, 2009); other studies analyzed the companies in the “Manufacturing” industry (Colwyn and Luther, 2005). Currently few researches are focused on the impact of the adoption of IAS/IFRS on earnings management in the “Telecommunications” and “Utilities” industries.

EMPIRICAL RESEARCH

Background

As previously stated, this paper proposes a comparative analysis aimed at highlighting the amount of discretionary accruals present in two different industries with a different degree of sensitivity to the application of IFRS 15: “Telecommunications” and “Utilities”.

The objective of the analysis is to understand whether the application of IAS/IFRS could increase the quality of accounting information and decrease the earnings management policies. In this regard the Agency Theory approach must be considered (Jensen and Meckling, 1976) in accordance with the shareholders need to delegate the management considering specific skills and knowledge (Zanobio, 2012), showing that the Agency Theory makes several predictions regarding the managers of behavior (Iatridis, 2010).

The need for this analysis arose observing the numerous changes made over the last few years by the international standard setters aimed at improving the set of accounting standards whose continuous process of updating has led to the introduction of the IFRS 15. The new accounting principle provides rules for revenues recognition that are profoundly different from the ones provided by the IAS 18, regarding the definition of revenues’ amount, contract costs and the timing of their recognition.

The application of the new standard will have significant effects on the financial statement of entities adopting IFRS (Ballarin, 2017), but not limited to the revenues items. The following analysis will be explained, being based on the earnings management model proposed by Jones (1991), it aims at identifying the status of Italian listed companies, until 2017. The analysis, concurrently with the analysis of the “Big-Four”, compares the Telecommunication and Utilities industries, respectively identified as a high sensitive and a medium/low sensitive industry to the introduction of the new IFRS 15.

The statistical activity focuses on the analysis of the context of the application of the new IFRS 15, considering that revenues, albeit not considered as subject to manipulation are subordinate to the new principle, and play a fundamental role with regard to earnings management practices, as a proxy for the measurement of the conditions of the companies.

Establishing the introduction of IFRS 15 and the potential impact on earnings management opportunities can provide indications to a large number of stakeholders (such as shareholders, policy makers, auditors, etc.) providing them with indications of manipulation in the financial statements of specific industries.

Methodology

Accrual Model

The discretionary share of total accruals has been used in order to identify a proxy to take earnings management into account. In fact, the "accruals management" analysis perspective has been adopted in this paper.

The Jones Model (Jones, 1991) has been adopted in order to identify the amount of total accruals, distinguishing between discretionary and non-discretionary accruals, using the discretionary part as a proxy for measuring the presence and extent of earning management practices. The manipulation of the balance data sheet can be carried out through different methods, including the use of discretionary accruals, changes in accounting treatments and changes to the capital structure: the present analysis focuses exclusively on the use of accruals. In agreement with Jones (1991), the amount of total accruals has been calculated as the variation in Non-Cash Working Capital before the Income Tax Payable minus Total Depreciation and Amortization Expense.

The Change in Non-Cash Working Capital Before Income Tax Payable was calculated as the Change in Current Assets, Net of Cash and Short-Terms Investments minus the Change in Current Liabilities Net of the Current Share of Long-Term Loans and the change in the Payable Income Taxes.

The total accruals formula is reported below:

$$TA_t = [\Delta Current Assets_t - \Delta Cash_t] - [\Delta Current Liabilities_t - \Delta Current Maturities of Long Term Debt_t - \Delta Income Taxes Payable_t - Depreciation and Amortization Expense_t] \quad (1)$$

According to Jones (1991) and De Angelo (1986), total accruals and relative year by year variations can be broken down as below:

$$\Delta TA_t = (TA_t - TA_{t-k}) = (DA_t - DA_{t-k}) - (NDA_t - NDA_{t-k}) \quad (2)$$

Where,

- TA_t = Total Accrual at the time "t"
- TA_{t-k} = Total Accrual at the time "t-k"
- DA_t = Discretionary Accrual at the time "t"
- DA_{t-k} = Discretionary Accrual at the time "t-k"
- NDA_t = Non-Discretionary Accrual at the time "t"
- NDA_{t-k} = Non-Discretionary Accrual at the time "t-k"

The previous subdivision of total accruals, in agreement with De Angelo (1986), is based on the assumption that change of non-discretionary accrual is almost non-existent; therefore, the difference in total accruals is exclusively due to changes in discretionary accruals levels.

The Jones model, therefore, is based on the assumption that at the period "t" there is no earning management and, therefore, the difference in total accruals between the period "t" and the period "t-k" is necessarily due to the existence of non-discretionary accruals, showing a potential presence of earnings manipulation.

In order to verify the relationship between the economic conditions of the companies and the level of accruals, Jones (1991) introduces the following equation:

$$TA_{i,t}/A_{i,t-1} = \alpha[1/A_{i,t-1}] + \beta_{1i}[\Delta REV_{i,t}/A_{i,t-1}] + \beta_{2i}[PPE_{i,t}/A_{i,t-1}] + \varepsilon_{i,t} \quad (3)$$

Where, $TA_{i,t}$ = Total Accrual at the time "t" for company "i"; $A_{i,t-1}$ = Total Asset at the time "t-1" for company "i"; $\Delta REV_{i,t}$ = Revenues at the time "t" minus revenues at the time "t-1" for company "i"; $PPE_{i,t}$ = Gross Property, Plan and Equipment at the time "t" per for company "i"; $\varepsilon_{i,t}$ = Error term in year "t" for firm "i"

α , β = Statistical coefficient for independent variables; $i = 1, \dots, N$ firm index and $t = 1, \dots, T_i$ year index for the years included in the estimation period for firm i.

The inserted dependent variables have the following meaning:

- The PPE are included in order to monitor the non-accrual quota deriving from the recognition of discretionary write-downs; furthermore, the Depreciation has been included in the calculation of the total accruals;
- Revenues were mainly included as indicator of the economic conditions of the companies. Furthermore, as for PPE, the manipulation of Revenues is linked to the change in non-cash working capital used to calculate total accruals".

The error term obtained by the regression of Equation (3) can be explained as follows:

$$\varepsilon_{i,p} = TA_{i,p}/A_{i,p-1} - (\alpha[1/A_{i,p-1}] + \beta_{1i}[\Delta REV_{i,p}/A_{i,p-1}] + \beta_{2i}[PPE_{i,p}/A_{i,p-1}]) \quad (4)$$

The Equation (4) expresses the level of discretionary accrual for each year "p" and was used to determine their amount in the companies in the observed industry.

Comparison Model

As described above we use the discretionary part of accruals as a proxy for measuring the presence and extent of earning management practices. Specifically, in accordance with Jones (1991) the following equation to define the level of discretionary accruals has been used:

$$\varepsilon_{i,p} = TA_{i,p}/A_{i,p-1} - (\alpha[1/A_{i,p-1}] + \beta_{1i}[\Delta REV_{i,p}/A_{i,p-1}] + \beta_{2i}[PPE_{i,p}/A_{i,p-1}]) \quad (4)$$

It should also be emphasized that the Jones Model does not consider revenues as an element that is subject to discretionary accrual, but rather as a control variable explaining the variation of discretionary accrual linked to the varying conditions in which firms operate. In light of this, considering the exclusion of the analysis of revenue manipulations that is assumed to be present and significant, the model is aimed at investigating the *presence* and *persistence* of earning management practices, not directly carried out on the revenue component in the industry observed.

Once the amount of discretionary accruals for the selected samples has been determined, the two selected industries were compared using the "Welch's t-test" (or unequal variances t-test). This statistical test is conducted by comparing the squared averages of the identified discretionary accruals and it is used to test the hypothesis that two populations have equal means.

Variables

The following Table 2 shows all the variables observed for each company and used in order to define discretionary level of accruals using Equation 4.

Table 2. The set of variables.

Labels	Meaning
ΔCASH_t	Change in cash and cash equivalents between year t and year t-1
ΔCA_t	Change in current asset between year t and year t-1
ΔCL_t	Change in current liabilities between year t and year t-1
ΔDCL_t	Change in current portion of long term debt between year t and year t-1
ΔTAX_t	Changes in Tax Payable between year t and year t-1
DEP_t	Depreciation for year t
ΔREV_t	Changes in Revenues between year t and year t-1
PPE_t	Property, Plant and Equipment for year t
TA_t	Total asset for year t

Sample

The initial sample, which has been extracted from DataStream, consists of 88 Italian listed companies, operating in 17 different sectors, observed during the 2001-2017 period. The sectors chosen for the analysis were selected from the studies carried out by the “Big-Four”. A specific analysis focused on industries mostly affected by the new IFRS in term of measurement, recognition and disclosure of revenue rules.

Using this analysis as a template for selecting the industries, the “Telecommunications” industry was chosen, predicting it would be highly affected by the introduction of IFRS 15, while for the “Utilities” industry the IFRS was expected to have low impact. The “Telecommunications” industry consists of companies operating in the following areas: (i) motion picture and video production; (ii) newspaper publishers; (iii) software publishers; (iv) television broadcasting; (v) wired telecommunications carriers.

The “Utilities” industry consists of companies operating in the following areas (i) electric bulk power transmission and control; (ii) fossil fuel electric power generation; (iii) natural gas distribution; (iv) other electric power generation.

As reported by the “Big-Four” analysis, the “Telecommunication” industry presents the following areas as highly impacted by the advent of IFRS 15:

- (i) Contract modifications;
- (ii) Accounting for handsets and other separate performance obligations;
- (iii) Significant financing components;
- (iv) Allocation of revenue on a relative standalone selling price basis;
- (v) Revenue recognition on a portfolio basis; and
- (vi) Costs incurred to obtain a contract.

Referring to the “Utilities” industry (power, oil & gas and etc.), the “Big-Four” focus on the following areas:

- (i) Contract evaluations to determine if in scope of IFRS 15, leases, financial instruments or another standard;
- (ii) Production sharing contracts and concession arrangements;
- (iii) Fixed and provisionally priced arrangements;
- (iv) Contracts for the delivery of commodities over multiple periods;
- (v) take-or-pay, minimum capacity or long term supply contracts.

Following the choice of the two observed industries, the final sample is made up of 23 listed companies, distributed as follows:

- 1) 13 operating in the Telecommunication industry,
- 2) 10 operating in Utilities industry.

Considering the availability of the information for the considered period, the total observations are 303 firm-year.

RESULTS

Statistical tests were conducted, with the support of “R” software, to investigate the existence of a significant difference between the extent of the discretionary accruals for the companies in the “Telecommunications” industry compared with those operating in “Utilities” industry.

First of all, the equation 4 was regressed (OLS) introducing an intercept for statistical purpose and the results were utilized to estimate the discretionary portion of the accruals. The Appendixes 1 to 7 reports some descriptive statistics made to represent the extent and the distribution of the total and discretionary accruals in the two industries among the considered period.

Then, as mentioned above, the differences existing between the two sub-samples were tested. In order to do so, the “Welch’s t-test” was conducted, also known as the unequal variances t-test, a two-sample location analysis which is used to try the hypothesis that two populations have equal means. In order to carry out these statistics, the squared averages of the identified discretionary accruals were compared. The use of the accruals squared allows for the comparison taking into account their magnitude without considering their positive or negative sign.

Table 3 synthesizes the results of the analysis. As can be seen from the reported results, the difference between the averages of the two industries is very significant (p-value <0.05) meaning that the discretionary accruals show a higher average impact in the Telecommunication industry compared with the value reported for Utilities sector.

Given these results, it is possible to affirm that the Telecommunication industry is more affected by earnings management behavior than the Utilities industry. This must be read together with the analysis made by the Big-

Table 3. Summary of results.

Test	Industries	
	Telecommunications	Utilities
Mean	0.013875809	0.004870635
T: 3,2533		
DF: 216,13		
P-value: 0,001324		

four in order to better analyze and understand the possible impact related to the application of the IFRS15.

DISCUSSION

The results show that within the industries influenced by the introduction of the IFRS 15, the Telecommunications one is more impacted by earnings management practices than the Utilities. The different levels of earnings management within the diverse industries is confirmed by the papers found in the literature. As for the Telecommunications industry, some authors deem it worth studying due to the existing degree of earnings management variation across industries (Lee et al., 2008); at the same time, the “Utilities” industry has a strictly regulated accounting data, (Healy and Wahlem, 1999) which could be considered one of the reasons why earnings management is less evident if compared with others sectors.

These results must also be analyzed simultaneously with the results carried out by the “Big-Four” reports on the impact of IFRS 15 in order to draw appropriate conclusions for the stakeholders, and the policy makers’ perspective must be taken into consideration. As stated above the “Big-Four” analysis shows that the “Telecommunication” industry presents some areas that are highly impacted by the advent of IFRS 15 (for example accounting for handsets and other separate performance obligations; significant financing components; allocation of revenue on a relative standalone selling price basis; revenue recognition on a portfolio basis) and given the results obtained from the analysis it is possible to affirm that these aspects could be responsible for the level of earnings management.

Therefore, the introduction of the IFRS 15 should benefit the industries where earnings management is more frequent such as the Telecommunications industry.

It must be mentioned that the Jones model, used as the basis to calculate total accruals and discretionary accruals, does not consider the discretionary component of revenues, which are instead used as a proxy to define the economic conditions of sample companies. From the existing literature on the topic it is however possible to assume that revenues are widely affected by earnings

management policies, since they are often the basis for determining the annual bonuses.

Conclusion

High quality accounting standards have been introduced by IASB and FASB in order to improve worldwide quality of financial reporting. Existing evidence allows for the assertion that these accounting standards are able to reduce the level of earnings management (Rudra and Bhattacharjee, 2011; Cai et al., 2008; Mechelli and Cimoni, 2012) and, consequently, decrease the use of discretionary accruals (Guenther et al., 2009).

Given this scenario, the present study, starting from the introduction of IFRS 15 “Revenue from contracts with customers”, looked for evidence of earnings management in a sample of Italian public firms and, specifically, knowing that the possible effects of the introduction of IFRS 15 could be different in each industry, in the present study was considered the Telecommunications industry, as considered highly influenced by the IFRS 15, and Utilities industry, that is considered an industry low impact.

Given these results, based on the earnings management model proposed by Jones (1991) - whose goal is identifying the total amount of accruals, distinguishing between discretionary and non-discretionary, using the discretionary part as a proxy for measuring the presence and extent of earnings management practices – this study was conducted with the first aim to identify the *status* of Italian listed companies in terms of earnings management, before the introduction of IFRS 15. In order to do so the study considered the aforementioned industries, hence two samples impacted by the IFRS 15 to different extents.

Once the findings on the amount of discretionary accruals were obtained, the analysis proceeded with a comparison between the two industries selected.

The analysis demonstrated that the Telecommunications industry is impacted by earnings management practices to a greater extent than the Utilities industry. These results should be analyzed simultaneously with the results from by the “Big-Four” analysis concerning the impact of the introduction of IFRS 15. Albeit in this project the revenues are not considered as an object of manipulation, they are one of the factors that can affect the level and extent of the discretionary accruals. That said, the implementation of the principle, and its consequences, must be carefully analyzed and monitored by the regulators, as the determined revenues could have an impact on the pre-existing earnings management practices.

As previously mentioned, the scientific contribution of the present research concerns the possibility to predict the behavior of managers by considering the Agency Theory (Iatridis, 2010); therefore, knowing *ex-ante*, which

industries have highly influenced earnings management, makes it possible to predict the hypothetical moves of the managers in the implementation of IFRS 15.

LIMITATIONS AND FUTURE RESEARCHES

At present the research presents some limitations. A first limitation is related to the small numbers of industries observed, which are, in essence, only two. Even though the total number of observations is high, all companies analyzed belong to only two industries. The analysis could be extended to a greater number of industries and companies in order to provide a more complete overview of the presence and the persistence of earnings management policies in different Italian companies' typologies.

A second limitation is related to the consideration of the revenues as a non-discretionary component. Regarding this specific topic, a part of the literature disregarded this limit (Dechow et al., 1995); other authors adopted a different approach, building models in which revenues are definitively considered but not all accruals are considered (Stubben, 2010).

In the next steps of the analysis, the results deriving from the application of these models in the analyzed sectors will be presented.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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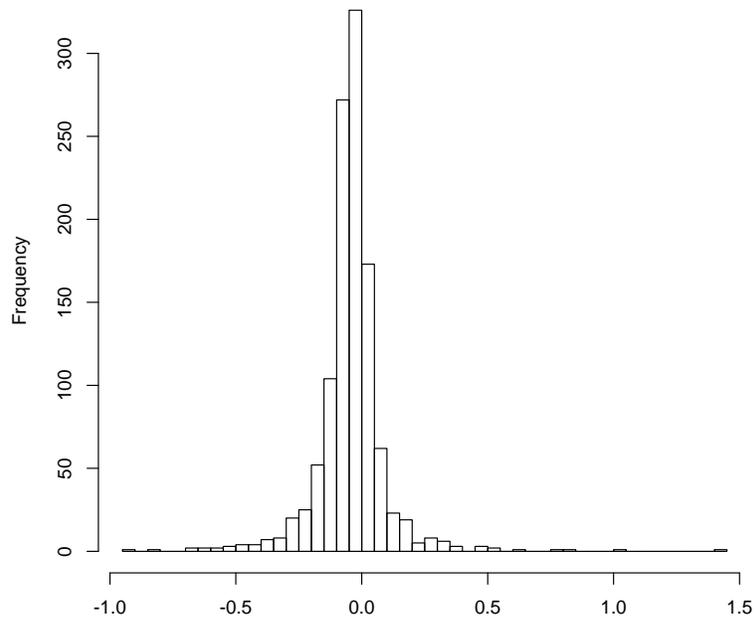
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APPENDIX

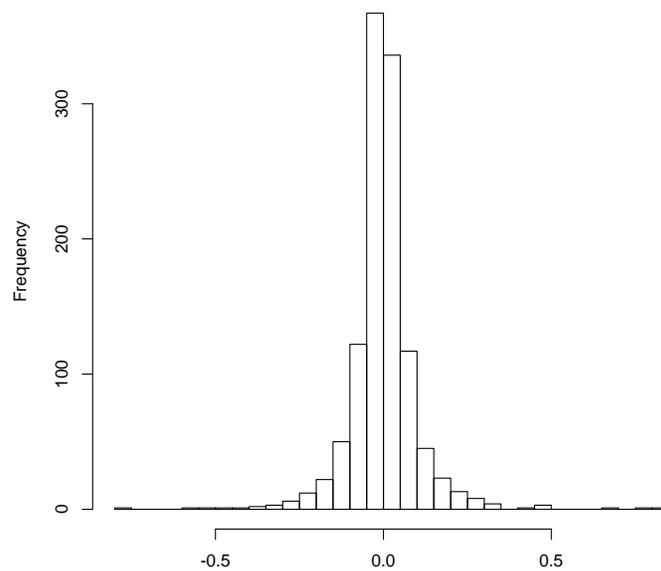
This appendix is provided with the aim of supplying some details regarding the extent of the Total Accruals and the Discretionary Accruals in the Telecommunication and Utilities industries, as well as on their distribution in the considered period (2001-2017). Hence, the following histograms report the frequency of the accruals while the boxplots report the minimum, maximum and mean value of the accruals for each year.

The following graphic shows the frequency of the Total Accrual for the full sample among the period 2001-2017.

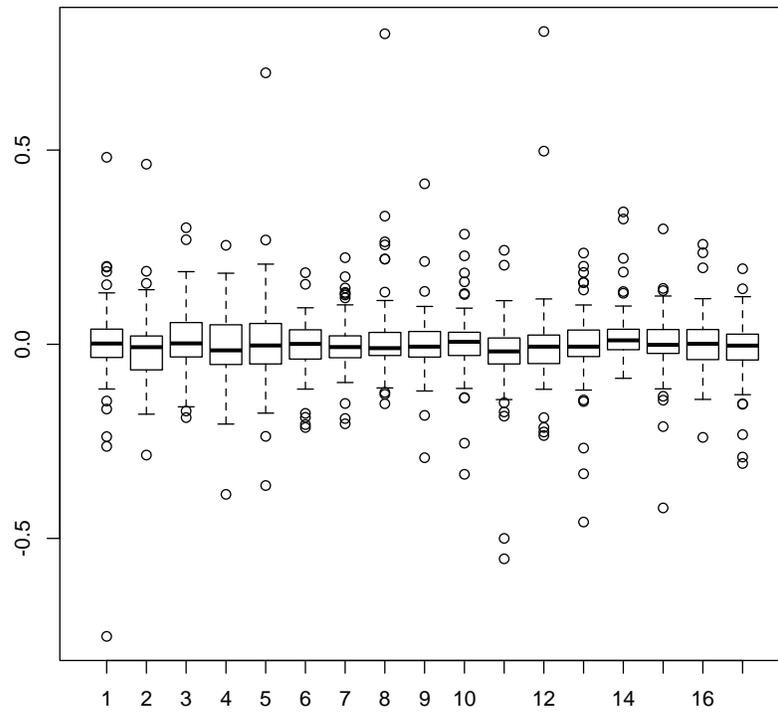


Graph 1. Frequency of total accruals.

The following graphics shows the frequency of the Discretionary Accruals for the same sample and period and their distribution for each year.

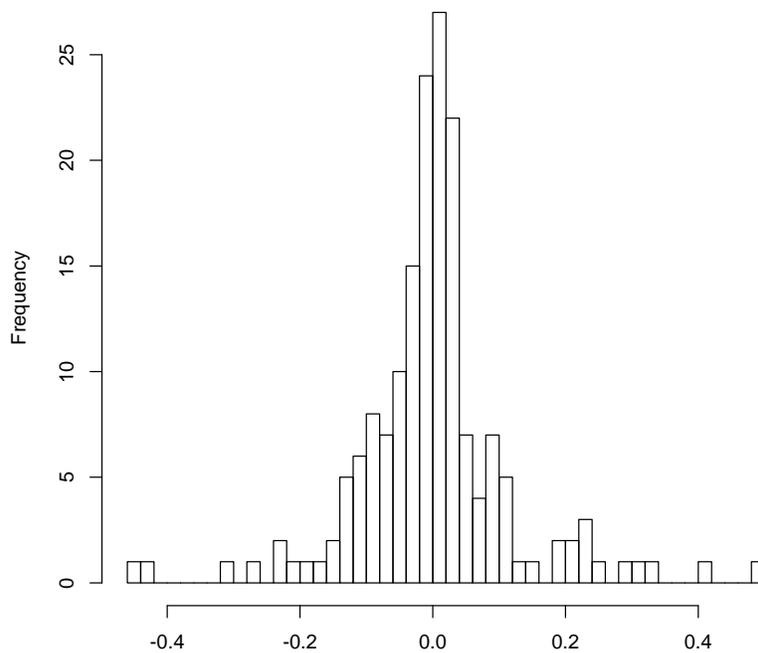


Graph 2. Frequency of discretionary accruals.

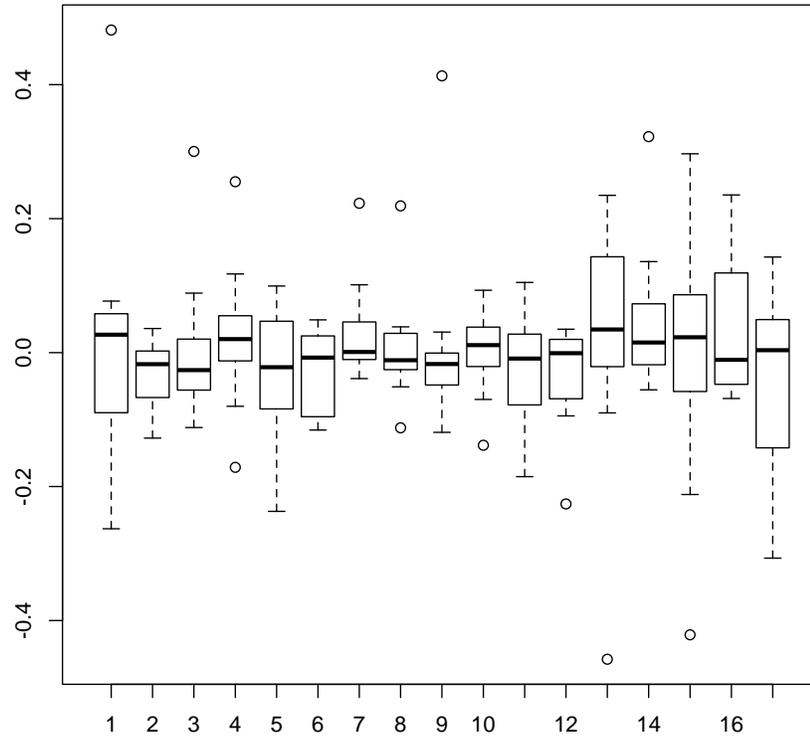


Graph 3. Distribution of Discretionary Accruals.

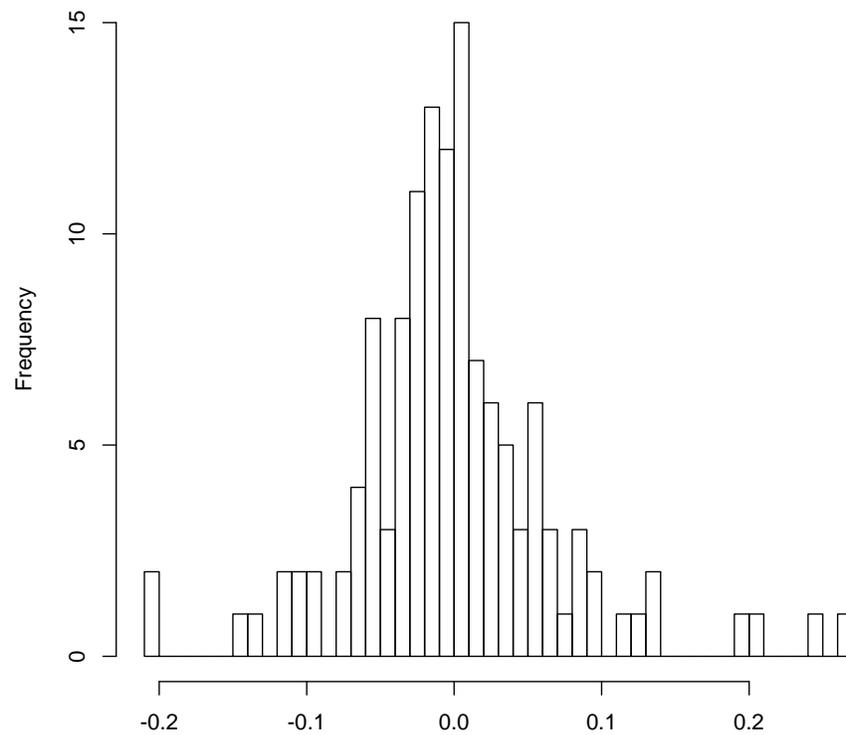
With specific reference to the two different industries Graphs 4 and 5 show the frequency and distribution of Discretionary Accruals for Telecommunication industry and Graphics 6 and 7 show the frequency and distribution of Discretionary Accruals for the Utilities industry.



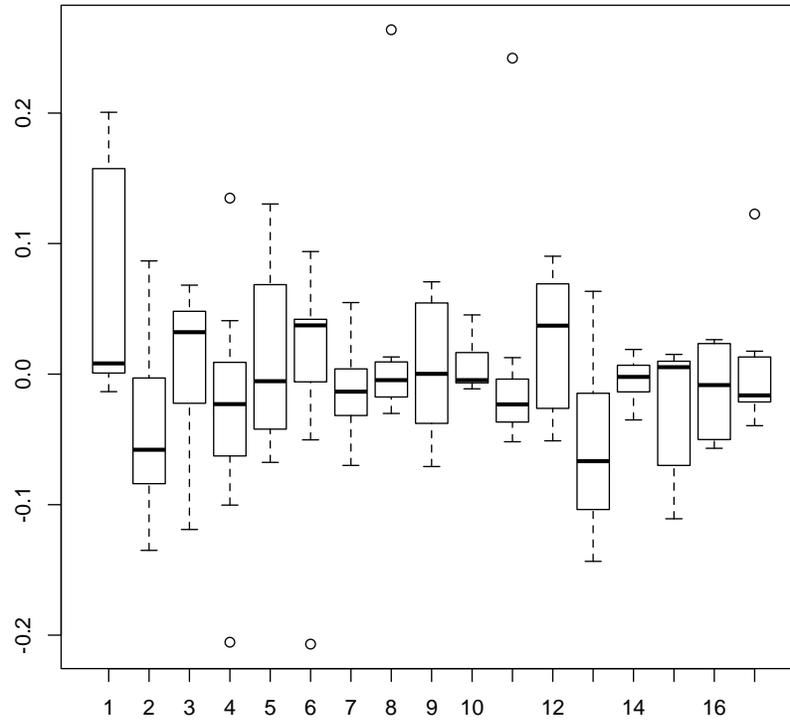
Graph 4. Frequency discretionary accruals – telecommunication.



Graph 5. Distribution of discretionary accruals – telecommunication.



Graph 6. Frequency of discretionary accruals – utilities.



Graph 7. Distribution of discretionary accruals – utilities.