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The Impact of IFRS 8 on Segment Disclosure Practice: Panel Evidence from Italy

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Abstract

The study examines the effectiveness of IFRS 8, effective since 2009, in relation to both the magnitude of segment disclosures and the firms' characteristics that might affect the disaggregated disclosure policies decisions, on Italian listed companies during the period 2008-2012.

The results show that on average, the new standard did not lead to relevant changes in the segment disclosures as previously stated under IAS 14R, thus demonstrating inconsistency with the expectations of the IASB. In addition, we demonstrated, by employing a fixed-effect regression, that the magnitude of segment disclosure is negatively associated with growth rate, size, profitability and ownership diffusion.

The present study contributes to the extant literature in terms of the PIR review, discussing the effectiveness of IFRS 8 some years after adoption, and not merely considering the first year, where the results may be affected by the learning curve effect in countries less familiar with Anglo-Saxon accounting.

Keywords: Segment reporting, IFRS 8, segment disclosure, management approach, PIR of IFRS

1. Introduction

Since 2009, companies reporting under IFRS 8 (IASB, 2006) had to guarantee any reporting segment identified on the basis of the internal organization (i.e. the way decisions reflect the decision-making sub-structures and the items used by the Chief Operating Decision Maker - CODM).

This method, known as *management approach,* replaced the *management approach with a risk-and-rewards safety net* and the criterion to prepare the segmental reporting under IAS 14R (IASB, 1997), effective until 2008. Unlike the past, this allows managers complete freedom to identify reporting segments only on the basis of the company decision making process. In other words, the implementation of IFRS 8 has increased the managerial discretion both to define the operating segment and to define the extent and evaluation criteria of the segment information disclosure (Véron, 2007; Katselas and Kang, 2011).

In fact, the preparation of financial statements had to recognize the operating segments preliminarily on the internal organization under IAS 14R too. However, in the reportable phase, they were required to disclose segment information by both business segments (line-of-business, LoB) and geographical areas (GEO), according to specific requirements but regardless of whether the operating segment identified in accordance with the internal corporate structure which could coincide with a business segment or a geographical area.

Using this method, the IASB promoted disaggregated information based on the internal organization of a company and, at the same time, comparable external information defining a set of criteria both to recognize the segment and to disclosure the accounting items in the reports.

Furthermore, in introducing the *management approach*, the IASB wants, amongst other things, to contribute to more relevant segment information, allowing the users to analyze firms' performance through the management view, to support a better consistency between the segment information represented in Financial Statements and the information disclosed in the internal Management Reports, as well as the ability to promote a cost reduction by producing this kind of information (IASB, 2012; Nichols at al., 2013).

On one hand, this is most important for the users, especially considering that previous literature has provided proof of the importance of segment reporting for investors and other users (Kinney, 1971; Collins, 1976, Hayes et al., 1996, Street et al., 2000, Givoly et al., 2000). On the other hand, however, there is a considerable risk to end up with both a loss of useful information as well as an impairment of financial reporting comparability; moreover allowing segment information might lead to management manipulation or inconsistency due to the vagaries of management fads (Véron, 2007). The auditors too, in some interviews, declared IFRS 8 as being an area where they had experienced difficulties in regard to the audit (Dunne et al., 2008, p. 115).

From the IASB viewpoint, the implementation of this criterion in a pure form, taken up by US-GAAP SFAS 131 (FASB, 1997), will result in several improvements on segment reporting, along the lines of the introduction of SFAS 131 which replaced SFAS 14,

increasing the number of segments and data available (IASB, 2013).

Nevertheless, contrary to what occurred when SFAS 131 (based on *management approach*) replaced SFAS 14 (based on *risk-rewards approach*), IFRS 8 and IAS 14R are not so different. IAS 14R already encouraged the use of the management approach if the criteria of similar risk and rewards were met; so, in many cases, the two approaches do not necessarily lead to a different definition of segments.

In addition, with regard to the magnitude of segment disclosure information, IFRS 8 reduces the mandatory information content, subordinating to the discretion of management, implying the need for an external user to understand the entity performance depending on the extent of the segment reporting the preparers provide.

Against that background, IFRS 8 was considered to be a problematic standard (Dunne et al., 2008, p. 111). Therefore, the present research investigates IFRS 8 post implementation practices in the reporting disclosure of Italian listed companies, in order to detect any significant change both in the number of reporting segments and in the *magnitude* of the provided information. In addition, focusing our attention on the number of information items and distinguishing between mandatorily and voluntarily disclosed items, the study also attempts to examine whether the sign and extent of the detected changes is dependent on specific characteristics of the firms in accordance to the *proprietary cost theory*, which has proved that companies have less incentive to provide voluntary segment disclosure in the presence of disclosure-related costs due to the complexity preparation of such information and the risk in providing useful information to competitors.

The present study originates from the consideration that previous studies have limited their analysis to the first year adoption (Nichols et al., 2012; Crawford et al., 2012; Pisano-Landriana, 2012; Kang-Gray, 2013) that usually can be affected by the learning curve effect, especially in those countries less familiar with the Anglo-Saxon accounting (Alexander and Archer, 2000) scheme prevailing in the IFRS format, as is often the case throughout Continental Europe. Therefore, this study observes the changes in segmental reporting disclosure over the period 2008 (the last year before the implementation of IFRS 8) to 2012.

The research is relevant in terms of the Post-Implementation Review (Ewert et al, 2012; IASB, 2012), contributing to discussion about the real impacts of changes in international financial reporting standards and in terms of understanding as to whether the higher discretion to define the content of the segment information under IFRS 8 rather than IAS 14R is affected by some specific characteristics of the firm and governance mechanisms expressing proprietary costs.

Since previous studies demonstrate that the expected impact of the transaction on IFRS varies from country to country depending on the starting point, characteristics and culture of each country and that the volume of the disclosure is one of the elements that might change in relation to the selected country's particular characteristics (Dunne et al., 2008, p. II), we contribute to the international debate on IFRS 8 post implementation in regard to the Italian experience.

We have selected Italy for two reasons. First, Italy is one of the European countries that provided segmental reporting under IAS 14R before transiting to IFRS 8. Second, Italy is a country that presents many differences with Anglo-Saxon countries (Nobes, 1998, 2006; Ali-Hwang, 2000) where IAS/IFRS originates, in terms of legal system, accounting system, principle in accounting evaluation, ownership diffusion and primary readers of the balance sheet (Zambon, 1996; Macchioni, 2007, Devalle et al., 2010).

Considering methodology, the present research stands apart from others on the same topic as we employ the fixed-effect regression model, which allows for both firm-specific variations and time trends in segment disclosure level during the test period, providing more reliable results than the OLS regression (Hisiao, 2003).

The findings confirm that the implementation of IFRS 8 did not lead to the expected changes declared by the IASB. Our findings reveal that, in terms of a number of operating segments disclosed and of the magnitude of the segment disclosure, the implementation of IFRS 8 did not result in significant changes compared to the segmental reporting provided under the replaced standard IAS 14R.

In addition our study shows that, in the aftermath of the effectiveness of the new standards, the firms' characteristics that affect the extent of the segment disclosure are growth rate, size, profitability, and ownership diffusion.

From this scope, the remainder of this paper is organized as follows. Section 2 reviews the literature and main differences on segment disclosures under IAS 14R and IFRS 8. Section 3 develops the hypotheses for the study. In Section 4, the research methodology is explained, whilst the empirical findings are presented and discussed in Section 5. Section 6 presents the summary and conclusions of the study.

2. Theoretical Background

2.1. Literature review

Recent literature (Nichols et al., 2012; Crawford et al., 2012; Pisano-Landriana, 2012; Kang-Gray, 2013) has proved that the adoption of IFRS 8 in Continental European Countries has not resulted in a significant increase in the average number of reporting segments that have normally remained unchanged upon implementation of the new standard. However, little attention has been devoted to the magnitude of the information provided for each reporting segment (Nichols et al., 2013; Crowford at al., 2012). Indeed, when similar studies have been carried out in the US, where the adoption of SFAS 131 changed the segment reporting definition criterion (Harris, 1998) in much the same way IFRS 8 has done with respect to IAS 14R, the outcome has been significantly different. In that context, a relevant increase in the number of reporting segments and in the magnitude of provided information has been substantiated (Berger and Hann, 2003; Herman and Thomas, 2000; Street at al., 2000; Ettredge at al., 2005). Similar studies conducted in Australia and in Jordan addressed the same results upon the implementation of IFRS 8 on the number of segments conducted in the US (Kang and Gray, 2013; Mardini at al., 2012).

The issue is of particular relevance since previous literature has shown that companies and financial analysts have been particularly concerned with the disclosure of sensitive information, especially at segment level (Emmanuel and Garrod, 1987; Boersema and Van Weelden, 1992; Deppe and Omer, 2000), because at this level management is more likely to make use of disclosure policies so as not to lose its competitive arm (AICPA, 1994; Harris, 1995, 1998; Hayes and Lundholm, 1996; Sanders at al., 1999) and sometimes to mask dismal performance in certain segments (Botosan and Standford, 2005).

Introduced by the management approach, the higher management discretion in deciding the magnitude of segment information to provide leads us to focus our attention on the amount of items voluntarily disclosed.

In accordance with the Signaling Theory (Spence, 1973; Morris, 1987) and the Agency Theory (Jensen and Meckling, 1976) companies have incentives to voluntarily provide information to the market in order to achieve some economic benefit (such as - reducing information asymmetry, improving liquidity, lowering the cost of capital) (Kim and Verrecchia, 1994), but these incentives are limited by disclosure-related costs, as supported by the Proprietary Cost Theory (Grossman, 1981; Milgrom, 1981; Verecchia, 1983; Dye, 1986; Wagenhofer, 1990). In this view, previous studies on the topic showed that these costs might be due to two aspects (Prencipe, 2004, Prather-Kinsey and Meek, 2004; Pisano-Landriana, 2012). The first is the technical complexity of defining the operating segment and identifying the transfer prices and allocate assets, liabilities and overheads amongst the different segments, especially when the reported segments do not correspond to internal organizational divisions (Mautz, 1968; Boersema and Van Weelden, 1992; Epstein and Mirza, 1998). The second is the risk to reveal to the stakeholders the existence of weaknesses and opportunities that could reduce their own advantage (Harris, 1995, 1998; Hayes and Lundholm, 1996).

On the basis of what we have stated, the proprietary cost theory may be useful in understanding the specific characteristics and/or governance mechanisms of the firm which affect the level of segment disclosure provided in reducing the usefulness of IFRS 8, in order to enable users to see the entity through the eyes of management (IASB, 2012).

2.2. IFRS 8 vs IAS 14R: main differences

As we have already stressed above, the most important innovative element of IFRS 8 in respect to IAS 14R is the introduction of the *management approach* that appears to lead potential changes in preparing the segment disclosures under three aspects:

1) recognition of the operating segment;

2) mandatory accounting items to disclose;

3) evaluation criteria.

About the point *sub 1)* under IFRS 8 requirements are such that management does not need to recognize the operating segments on the basis of risks and rewards but only in accordance with the internal organization structure of the firm..

Nevertheless, as IAS 14R already encouraged the use of a management view that meets the test of similar risks and rewards, the implementation of the new standard in some cases might produce some differences in the operating segments. Actually, IFRS 8 does not lead to necessary changes in the number of sectors represented, but surely gives major discretion for management to decide which segments to report.

In relation to the point *sub 2)*, IFRS 8 leads towards the removal of the presentation of segment information along two axes. The presentation of segment information must now be identical to that offered to management. In addition, with regard to the accounting items, the new standard, meeting a principle based approach, reduces the mandatory items to indicate in the reports and stresses what is to be disclosed, being only the items included in the measure of segment profit or loss reviewed by the chief operating decision maker. The mandatory items are merely a measure of the segment *profit and loss* and *total assets* without specifying if a "measure of *profit and loss*" means the operating segment EBIT or EBITDA or Net Income and so on. Similar comments could be made relating to the expression "the measure of *total assets*". We wonder if it is necessary to indicate just an overall value of assets or to detail the assets. Moreover, all the items required as being mandatory under 14R (i.e. segment liabilities, depreciation and amortization and so on), under IFRS 8 have to be published if they are used by the CODM to allocate the resources. In the Table below it is possible to see a comparison between the items required under IFRS 8 and IAS 14R.

Table 1 - *Accounting Items required under IFRS 8 and IAS 14R*

	IAS 14R	*IFRS 8*
a) Revenues	Yes	*Subordinated**
b) Revenues from transactions with other operating segments of the same entity	Yes	*Subordinated**
c) material items of income and expense disclosed in accordance with Paragraph 86 of IAS 1 Presentation of Financial Statements	*Just encouraged*	*Subordinated**
d) Depreciation and amortisation	Yes	*Subordinated**
e) Material non-cash items other than depreciation and amortisation	Yes	*Subordinated**
f) Interest revenue and interest expense	*Just encouraged*	*Subordinated**
g) The entity's interest in the profit or loss of associates and joint ventures accounted for by the equity method	Yes	*Subordinated**
h) Income tax expense or income	Yes	*Subordinated**
i) Segment result	Yes	*Subordinated**
j) Total Assets	Yes	Yes
k) The amount of investment in associates and joint ventures accounted for by the equity method	Yes	*Subordinated**
l) The amounts of additions to non-current assets other than financial instruments, deferred tax assets, postemployment, benefit assets (see IAS 19 Employee Benefits paragraphs 54 to 58) and rights arising under insurance contracts.		
m) Liabilities	Yes	*Subordinated**
n) Reconciliations	Yes	Yes
Capital additions	*Just encouraged*	*Not indicated*
Other profitability measures	*Just encouraged*	*Not indicated*
Cash flow	*Just encouraged*	*Not indicated*
Entity-wide disclosure - Information about product and services	*Not indicated*	Yes
Entity-wide disclosure - Information about geaografical areas	*Not indicated*	Yes
Entity-wide disclosure - Information about major customers	*Not indicated*	Yes

* Subordinated *means that the data is required just if included in the segment results and reviewed regularly provided by the CODM.*

Also in this case, there is evidence of the discretion attribute for management to decide on the disclosures to publish in the segment reports, with the risk of producing information difficult to compare and manipulated.

At the same time, conclusions lead to the realization that the items should be evaluated with the same criteria used internally.

The conceptual framework, delineated above, represents the reason to verify the effects that the adoption of IFRS 8 has had in the segment disclosed and published in Italian listed companies.

3. Hypothesis Development

As we have already stressed, there are three research questions related to this study:

1) What are the new segment disclosure characteristics before and after the adoption of IFRS 8?

Under IFRS 8 the segment disclosures should show consistency along the same lines as followed for internal decision making and not necessarily organized in the business or geographic area with the same level of risks and rewards.

To this end, we observe if the number of operating segments represented is changed after the introduction of IFRS 8.

On the basis of previous studies and the results of these considerations, our hypothesis is the following:

H_1: The introduction of IFRS 8 should bring an increase in the number of represented segments.

2) Which items were disclosed on firms' segment reporting and what is the magnitude of segment disclosure provided by firms'?

As seen in the previous Section, the implementation of IFRS 8 reduces the mandatory items to indicate in the segment reports, delegating the choice of the extent of the disclosure to the management decision-making process.

For this reason, in this paper we want to verify whether and how the level of both mandatory and voluntary disclosure provided is changed. In this case, as the main studies evidence that the level of disclosure is affected by the problem of the sensitive information (Harris, 1998; Ettredge et al., 2002; Pitrosky, 2003; Tsakumis et al., 2006; Hope et al., 2009, Botosan and Standford, 2009), we are not able to formulate a specific hypothesis and are limited to observe eventual changes.

3) What are specific firm characteristics associated to the level of segment disclosure?

In relation to this research question, we verify whether both the "*mandatory*" disclosure level and the "*voluntary*" disclosure level are associated with some specific firm characteristics.

We decided to investigate these disclosure contents discretely, due to the fact that

implementing IFRS 8 had reduced the number of mandatory items required in the segmental reporting and the level of segment disclosure which was mandatory under IAS 14R, and had subordinated their representation as these elements are used by the CODM. Under IFRS 8, it might be considered as a voluntary disclosure.

For this reason, we want to observe whether the level of the "*mandatory*"[1] disclosure *pre*- and *post*- IFRS implementation is affected by particular factors of the firm.

Then, we verify whether there is an association between the specific firm characteristics selected and the voluntary disclosure level.

In addition, we observed whether the selected determinants might explain the differential between the magnitude of the voluntary disclosure and mandatory one.

Among the firm's characteristics, we have chosen two variables that might be proxies of proprietary costs, growth rate and the entity industry market share, and other control variables that the previous literature proved to be relevant in affecting the level of the segment disclosure such as size, profitability and ownership diffusion.

Growth rate

Prencipe (2004) clearly highlights that competitive costs arising from disclosing segment information tends to be high for growing companies. This means that the entity either works in a growing market or could enter into a new profitable market. In these cases, the segmental reporting may reveal growing opportunities, leading the entity to lose its own competitive advantage.

Therefore we can state the following hypothesis:

$H_{2\text{-}a}$: there is a negative relation between the *'mandatory'* segment information disclosure and the growth rate.

$H_{2\text{-}b}$: there is a negative relation between the *'voluntary'* segment information disclosure and the growth rate.

$H_{2\text{-}c}$: there is a negative relation amid the differential between *'voluntary and mandatory'* segment information disclosure and the growth rate.

Level of industry competition

Previous studies on the theoretical model of managers' disclosure decisions on segmental reporting could be discrete in two fields. The first states that in less competitive industries firms are inclined to provide less disclosure (Darrough and Stoughton, 1990; Newman-Sansing, 1993; Gigler,1994; Hayes-Lundholm, 1996, Pisano-Landriana, 2012) while the second argues that firms are inclined to provide less information in presence of more rivals (Wagenhofer, 1990; Darrough, 1993). With regard to this aspect, there is the argument that the segmental disclosure decision policies depend on different aspects, which is illustrated as

[1] We speak of mandatory disclosure because the IFRS 8 indicates the mandatory items to represent in an operating segment and regains the remaining mandatory items under IAS 14-R specifying that they have to report if they are useful for the CODM.

the predicted relation between voluntary disclosures and competition, which is likely to be context sensitive.

On this basis, we assume that there is a relation between the level of the disclosure and the level of competition in the industry, but no specific sign will be assigned *ex ante* to that one.

We use the Herfindal index (Harris, 1998), as a proxy of the level of the industries competition.

$H_{3\text{-}a}$: there is a relation between the *'mandatory'* segment information disclosure and the level of industries competition.

$H_{3\text{-}b}$: there is a relation between the *'voluntary'* segment information disclosure and the level of industries competition.

$H_{3\text{-}c}$: there is a relation between the differential between *'voluntary and mandatory''* segment information disclosure and the level of industries competition.

Profitability

Even if it is diffused, the idea that communicates positive performance could be a worthy signal for investors (Signaling Theory) (Singhvi-Deasi, 1971; Raffournier, 1995; Glam-Street, 2003; Naser, 1998), as an indicator of good investment quality, it is widely demonstrated that competitive costs connected to the segmental disclosure increase if the entity profitability increases. So, as we have already highlighted for the "growth rate" variable, for high profitability level, the segmental disclosure might lead to sensitive information (Emmanuel and Garrod, 1997) which could reveal profiting opportunities. On this basis, proving segmental disclosure might be considered as disincentive in the case of high profitability.

So, considering also the previous researches (Kelly, 1994; Leutz, 1999; Prencipe, 2004) on the relation between segment disclosure and competitive disadvantage, we can state the following hypothesis:

$H_{4\text{-}a}$: there is a negative relation between the *'mandatory'* segment disclosure level and firm profitability.

$H_{4\text{-}b}$: there is a negative relation between the *'voluntary'* segment disclosure level and firm profitability.

$H_{4\text{-}c}$: there is a negative relation between the *'voluntary and mandatory''* segment disclosure level and firm profitability.

Size

Previous studies (Cooke, 1991; Wallace-Naser-Mora, 1994; Raffournier, 1995; Street-Gray, 2002; Botosan, 1997) show a positive relation between the degree of disclosure information and firm size (Singhvi-Deasi, 1971; Firth, 1979). In this case, it is likely that in the largest companies, providing a boarder segment disclosure does not necessarily imply an increase in costs.

Specifically, for the present study, it is important to remember that our sample is composted of Italian listed companies that in general terms are classified as medium-sized enterprises, and as such they might be affected in terms of rising costs by a wider extent of segment disclosure.

Nevertheless, since most previous empirical researches show a positive relation between segment disclosure and firm size (Salamon-Dhaliwal, 1980; Bradbury, 1992; Mitchell-Chia-Loh, 1995; Herrmann-Thomas, 1996; Prather-Kinsey-Meek, 2004; Prencipe, 2004), we have to state the following hypothesis:

$H_{5\text{-}a}$: there is a positive relation between the *'mandatory'* segment disclosure level and firm size.

$H_{5\text{-}b}$: there is a positive relation between the *'voluntary'* segment disclosure level and firm size.

$H_{5\text{-}c}$: there is a positive relation between the *'voluntary and mandatory'* segment disclosure level and firm size.

Ownership diffusion

Another element considered as a potential determinant of the level of segment disclosure was the ownership diffusion which could be viewed as a variable strictly linked to the governance of the firm.

Previous studies demonstrated that a higher ownership diffusion brings a need for higher information of stakeholders, in order to reduce information asymmetries and maintain equity (Mckinnon-Dalimunthe, 1993). In the same way we can consider the segment information as being another instrument to narrow the gap between management and investors. So, we can state the following hypothesis:

$H_{6\text{-}a}$: there is a positive relation between the *'mandatory'* segment information disclosure and ownership diffusion.

$H_{6\text{-}b}$: there is a positive relation between the *'voluntary'* segment information disclosure and ownership diffusion.

$H_{6\text{-}c}$: there is a positive relation between the *'voluntary and mandatory'* segment information disclosure and ownership diffusion.

4. Methodology

4.1. Sample Selection

The empirical analysis of the application of IFRS 8 was conducted on a random sample consisting of 128 Italian non-financial listed companies. We examine listed companies because these must prepare financial statements and notes consistent with IAS/IFRSs only.

In this study, we only selected non-financial companies because financial companies face additional requirements from industry regulators such as the Bank of Italy or IVASS, which

may not be faced by non-financial companies. Our definition for financial companies includes banks, financial services and insurance companies.

The sample was selected on Borsa Italiana and its size was calculated by placing the confidence level at 95% and confidence interval at 5%. So, in a population of 195 non-financial firms, we have selected 128 firms.

The research has been conducted over the period 2008-2012. As we want to observe what changes occurred in identifying and representing the segment information in compliance with IFRS 8, 2008 has been considered as the last year of application of IAS 14R, whilst the year 2009 as the year in which IFRS 8 has been introduced. The choice of observing also the next three-years between 2010-2012 arises from the fact that in 2009 many firms, even if declared respectful of IFRS 8 requirements, might not have modified the presentation of segment information. The companies, in fact, might not have had the time to adapt their informative systems, because of the strict interval between the homologation of the standard (November of 2007) and its effectiveness (January of 2009). Moreover, it is preferable to extend the observations relating to the implementation of the new standard over one year to try to limit the distorting effects that may arise from the application of IAS/IFRS in non-Anglo-Saxon countries (Alexander and Archer, 2000; Nobes, 2003, 2004). Considering a postponed application of the new standard, we decided to analyze financial statements published until 2012 too, trying to examine the effects of the new standard *pre-* and *post-* implementation.

4.2. Data analysis and model specification

The data analysis has been conducted among three phases linked to the research questions. The first one has been oriented to understand if the introduction of IFRS 8 had modified the way in which to report segment information of Italian listed companies, by implementing management approach, increasing the data disaggregation, or maintaining a conservative position justified by the proprietary costs theory.

In particular, we examine whether the implementation of the new standard has led to some changes in the number and/or the definition of the represented operative segments. Specifically, each year we examined in the segment reporting has been modified referring to:

- The number of segments;
- The definition of the published segment (LoB or Geo).

Previous researches showed that the introduction of management approach brought about a high increase in the number of represented segments.

In the second phase, we observed which accounting items are represented in the segment reports and whether the number and the kind of accounting items disclosed, either mandatorily or voluntarily, is changed.

To this end, we have individuated a check-list of items potentially disclosed considering, first of all, the items required under IFRS 8/IAS 14R (regardless of their being mandatory), and then, specifying those in the main categories of the balance sheet common to all type of firms

(e.g. total assets were articulated in tangible assets, intangible assets and so on). The detail of the items considered in the check-list is reported in the following Table.

Table 2 - *Check-list of segment disclosure mandatory (in bold) and voluntary items potentially disclosed*

	Sample									
	2008	%	2009	%	2010	%	2011	%	2012	%
Revenue from external customers										
Other operating income other than Revenue from external customers or other segments										
Revenue from transactions with other operating segments										
Material items of income and expense disclosed in accordance with IAS 1 (just encouraged)										
Variable and fixed costs/Direct and indirect costs										
Operating Costs (in general or in detail) other than Employee Costs										
Employee Costs										
Depreciation/Amortization										
Amortization										
Depreciation										
Material non-cash items other than Depreciation/Amortization										
Provisions										
Interest revenue and expense (just encouraged)										
Interest revenue										
Interest expense										
Equity method and JV income										
Income tax expense/benefit										
Segment Result										
Income (generic difference R-C)										
Operating Income o EBIT										
Added Value										
EBITDA or EBITDA adjusted or Gross Margin										
Net Operating Margin										
Contribution Margin										
Income before taxes										
Net Income										
Minority Interest										
Total Asset										
Investment in associates and JV accounted for by the Equity Method										
Differed tax assets										
Postemployment assets										
Rights arising under insurance contracts										
Tangible Assets										
Intangible Assets										
Goodwill										
Trade receivable and loans										
Financial Assets										
Total Liabilities										
Debts and Loans										
Financial Liabilities other than Loans										
TFR and Pension Funds										
Provisions										
Equity										
Reconciliations										

In the third phase of this paper, we examine whether there is a relationship between the level of segment disclosure and some specific factors of the firm, in order to understand, in the perspective of the theoretical framework of the Proprietary Costs Theory, if there are some elements which represent a disincentive in providing this information to the market.

As we noted,,by introducing the management approach, IFRS 8 has reduced the mandatory

items required (substantially the Segment Result and the Assets), subordinating the representation of all other items mandatorily required under IAS 14R for their effective use for CODM decision-making. Hence for external users it is difficult to understand if information is omitted because it is not used by the CODM or due to the fact that management does not want to provide such detail. .For this reason, we conducted this analysis on two levels, observing both the levels of *'mandatory'* disclosure and of *'voluntary'* disclosure. In other words, the implementation of IFRS 8 has increased the discretion of management, as well as on disclosure, therefore the segment disclosure problems, which under IAS 14R were analyzed as compliance problems, might be framed as voluntary disclosure policies problems under IFRS 8.

From this prespective, we specify the following fixed-effect regression models:

$$MandSDI_{it} = \beta_0 + \beta_1 GROWTH_{it} + \beta_2 HHI_{it} + \beta_3 ROA_{it} + \beta_4 SIZE_{it} + \beta_4 OWN_{it} + \beta_5 IFRS8_{it} + year/industry\ fixed\ effect + \varepsilon_{it} \quad (1)$$

$$VoluntSDI = \beta_0 + \beta_1 GROWTH_{it} + \beta_2 HHI_{it} + \beta_3 ROA_{it} + \beta_4 SIZE_{it} + \beta_4 OWN_{it} + \beta_5 IFRS8_{it} + year/industry\ fixed\ effect + \varepsilon_{it} \quad (2)$$

$$\Delta VDS\text{-}MDS = \beta_0 + \beta_1 GROWTH_{it} + \beta_2 HHI_{it} + \beta_3 ROA_{it} + \beta_4 SIZE_{it} + \beta_4 OWN_{it} + \beta_5 IFRS8_{it} + year/industry\ fixed\ effect + \varepsilon_{it} \quad (3)$$

We define all the variables included in the models in Table 3.

As stressed in the following Table, one portion of data is collected from the AIDA database and CONSOB website whilst other data has been hand-collected from the balance sheets of each company.

Table 3 - *Definition of variables included in the regression model*

Variables	*Definition*
MandSDI	Mandatory Segment Disclosure Index, measured as an index that indicate the detail level of *i*-companies at the end of each year *t*.
VoluntSDI	Voluntary Segment Disclosure Index, measured as an index that indicate the detail level of *i*-companies at the end of each year *t*.
ΔVDS-MDS	The differential between the number of voluntarily items and the mandatory one weighted by the differential between the total voluntary and total mandatory items.
GROWTH	Growth rate, measured as percentage increase of the sales of *i*-companies at the end of each year *t*. (*source*: *AIDA*)
HHI	Level of industry competition of *i*-companies that work in the *j*-industry, measured as the Herfindahal Index.
ROA	Profitability, measured as the return on investment of *i*-companies at the end of each year *t*. (*source*: *AIDA*)
TA	Company size, measured as the natural log of total assets of *i*-companies at the end of each year *t*. (*source*: *AIDA*)
OWN	Ownership diffusion, measured of percentage of share controlled by the unknown shareholders (percentage lower than 25%) (*source*: *Consob*)
IFRS 8	*Dummy* variable assuming the value of 1 if the entity i presents the segmental reporting under IFRS 8; 0 otherwise.
$\beta_1, \beta_2 \ldots \beta_n$	Regression coefficient
ε_0	Standard error

Our dependent variable, the degree of mandatory/voluntary segment disclosure, was measured using a disclosure index methodology (Cooke, 1991; Haniffa and Cooke, 2002). We used the check-list developed in Table 2 as explained above. For the mandatory disclosure we considered merely the items in bold less those 'only encouraged' by the IFRS 8,

while we used all of the voluntary ones,.

Consistent with previous studies (e.g. Wallace and Naser, 1995; Cook, 1991; Haniffa and Cooke, 2002), the segment disclosure index (SDI) for each company was measured using a dichotomous procedure, whereby an item is scored 1 if it is disclosed or 0 if it is not disclosed. To minimize the possibility of penalizing companies for disclosures that were not applicable or relevant, a review of the entire segment reports was undertaken (e.g. Wallace and Naser, 1995; Haniffa and Cooke, 2002). After scoring the entire segment reports, the total disclosure score was divided by the total possible score for each company to produce a disclosure compliance index.

In our model we used a panel dataset, so we employed the fixed-effect regression as we wanted to reduce the problem of the pooled methods.

The OLS regression, in fact, assumes that model parameters remain constant across all of the firms, but the presence of systematic differences between firms could imply that the disturbance terms across the whole dataset will fulfill the assumption required for OLS estimation. In other words, as each entity has its own individual characteristics that may or may not influence the predictor variables (i.e. the business practices of a company may influence its stock price), the fixed effect removed the effect of those time-invariant characteristics from the predictor variables so we could assess the predictors' net effect. With specific regard to the object of this study, it is known that firm-specific accounting policy choices and/or the issue of industry-specific cash cycles could have an impact on corporate financial position, so we preferred to employ a regression model that might reduce the problems of disturbance terms produced by those time-invariant firm characteristics (Green, 1997).

On the basis of the previous assumptions, it is evident that the limit of this method is that it is impossible to include in the model regressors assuming a constant value inside of observations relating to the individual, because might imply a collinearity problem and the inefficiency of the estimators (Hisiao, 2003).

We selected the fixed-effect method over the random-effect method on the basis of the results of the Hausman test.

5. Empirical Findings

In this Section we show the results related to each research question.

5.1. What are the new segment disclosure characteristics before and after the adoption of IFRS 8?

The empirical analysis, reported in Table 4, showed that in the National context, referring to the year of transition from IAS 14R to IFRS 8, only 15% of firms increased the number of represented operative segments, whilst 77% did not have any changes in numbers, and 8% even decreased the number of represented segments.

Table 4 - *Changes in the number of represented segments in the transition from IAS 14R to*

IFRS 8

	Full sample					
	Increase	%	Decrease	%	Unchanged	%
Years 2008-2009 (IFRS 8 replaced IAS 14R)	19	15%	10	8%	99	77%
Years 2009-2010	11	9%	12	9%	105	82%
Year 2010-2011	12	9%	6	5%	110	86%
Year 2011-2012	10	8%	8	6%	110	86%

It is interesting that, when declared, one of the most recurrent reasons reported to justify the changes of the number of segments represented was to define operating segments whose boundaries are easily overlapping with those of a CGU, so as to clarify to users how Goodwill was attributed when shown in the balance sheet.

In the years 2009-2010, 9% of the sample displayed a decrease in the number of represented segments, while only 9% showed an increase. The remaining parts (82%) were unchanged in the number of segments. In the years 2010-2011 and 2011-2012, even though 86% of the firms did not change the number of reportable segments the percentage of companies that have increased the number of reportable segments (respectively 9% and 8%) is higher than companies showing a decrease (respectively 5% and 6%).

Table 5 shows the number of segments published, for 2008 (under IAS 14R) and 2009-2012 (under IFRS 8) of the sample companies. Examining our findings, we can observe that in the years 2008-2009, the number of segments represented on average, an increase from 3.5 to 3.7, and remained the same on average over the years 2009-2011, while decreasing in the years 2011-2012, from 3.7 to 3.6.

Our results are consistent with the other studies conducted on European Continental Countries, even if our understanding is that these changes might be considered as not relevant.

Table 5 - *Number of represented operative segments in the sample companies in the years 2008, 2009, 2010, 2011, 2012*

No. of represented segments	No. companies who represent J operating segments				
	IAS 14R	IFRS 8			
	2008*	2009	2010	2011	2012
1	11	10	9	10	9
2	35	29	27	30	30
3	25	27	31	26	30
4	28	31	32	30	28
5	16	18	15	18	16
6	4	3	3	3	6
7	2	2	5	3	4
8	3	3	3	5	3
9	3	3	1	1	0

10	0	1	1	1	1
10+	1	1	1	1	1
TOT.	128	128	128	128	128

** The No. of the segments is referred to the segment reported as primary sector.*

Descriptive Statistics

Years	Sample MEDIAN	Sample MEAN
2008	3	3,5
2009	3	3,7
2010	3	3,7
2011	3	3,7
2012	3	3,6

Our findings lead us to evaluate that in the year of transition from IAS 14R to IFRS 8, there was an increase on average in the number of operating segments from 3.6 to 3.7.

This result is consistent with previous studies on SFAS 131 and IFRS 8. Nevertheless, we note that the magnitude of change in Anglo-Saxon Countries (Hermann and Thomas, 2000; Street at al., 2000; Kang and Gray, 2013) is higher than in the Continental Countries (Nichols et al., 2012; Crawford at al., 2012; Pisano and Landriana, 2013) even if we thought the change could not be considered relevant, so we had to refuse the H_1 hypothesis.

This should not be a surprising result, because, as we already stated, the approaches of IAS 14R and IFRS 8 are not in contrast. A segmental reporting under IAS 14R requirements can be also consistent with that of IFRS 8, if what has been published is really what management use in their decision-making..

The declared effects on the number of reportable segments are not verified in the National context. In our understanding, this is consistent with the substantial continuity of the use of the *management approach*. Previous studies (Street at al., 2000; Street and Nichols, 2002; Berger and Hann, 2003; Prather-Kinsey and Meek, 2004), in fact, proved that there was an increase in the number of reported segments when the accounting standard only requires to move from a risk-return approach (SFAS 14 and IAS 14) to a management approach, or in its complete version (SFAS 131), or in a hybrid version followed by IAS 14R (management approach with risk and rewards safety net). Differently, in the transition from the IAS 14R to IFRS 8, we see a substantial continuity of approach that does not imply a relevant increase in the number of the reportable segments but merely a higher discretion in the definition of the operative segments than shown in the past.

5.2. Which items were disclosed on the firms' segment reporting and what is the level of segment disclosure?

The results relative to this research question are shown in the Table below. It is important to highlight that our items analysis is limited to the disaggregated information of the enterprises of the sample less those reporting a single segment (as showed in the Table 5).

Table 6 - Mandatory *and* Voluntary *Disclosure level in the companies of the sample*

	Sample									
	2008	*%*	*2009*	*%*	*2010*	*%*	*2011*	*%*	*2012*	*%*
Revenue from external customers	**117**	**99%**	**118**	**99%**	**119**	**98%**	**118**	**99%**	**119**	**99%**
Other operating income other than Revenue from external customers or other segments	32	27%	30	25%	29	24%	30	25%	29	24%
Revenue from transactions with other operating segments	**35**	**30%**	**36**	**31%**	**41**	**34%**	**40**	**34%**	**39**	**33%**
Material items of income and expense disclosed in accordance with IAS 1 (just encouraged)	**64**	**55%**	**68**	**58%**	**69**	**58%**	**68**	**58%**	**65**	**55%**
Variable and fixed costs/Direct and indirect costs	68	58%	69	58%	70	59%	69	58%	69	58%
Operating Costs (in general or in detail) other than Employee Costs	37	32%	40	34%	40	34%	41	35%	41	34%
Employee Costs	48	41%	48	41%	51	43%	49	42%	48	40%
Depreciation/Amortization	**22**	**19%**	**23**	**19%**	**23**	**19%**	**21**	**18%**	**21**	**18%**
Amortization	68	58%	70	59%	70	59%	69	58%	69	58%
Depreciation	51	44%	50	42%	52	44%	48	41%	50	42%
Material non-cash items other than Depreciation/Amortization	**32**	**27%**	**31**	**26%**	**30**	**25%**	**30**	**25%**	**30**	**25%**
Provisions	24	21%	22	19%	21	18%	20	17%	21	18%
Interest revenue and expense (just encouraged)	**17**	**15%**	**15**	**13%**	**16**	**13%**	**16**	**14%**	**17**	**14%**
Interest revenue	20	17%	37	31%	41	34%	42	36%	38	32%
Interest expense	3	3%	11	9%	11	9%	11	9%	11	9%
Equity method and JV income	4	3%	12	10%	12	10%	13	11%	12	10%
Income tax expense/benefit	**16**	**14%**	**25**	**21%**	**29**	**24%**	**29**	**25%**	**27**	**23%**
Segment Result	**112**	**96%**	**113**	**96%**	**113**	**95%**	**113**	**96%**	**114**	**96%**
Income (generic difference R-C)	17	15%	20	17%	22	18%	22	19%	22	18%
Operating Income o EBIT	83	71%	88	75%	89	75%	88	75%	87	73%
Added Value	2	2%	3	3%	2	2%	3	3%	3	3%
EBITDA or EBITDA adjusted or Gross Margin	53	45%	59	50%	59	50%	58	49%	59	50%
Net Operating Margin	4	3%	4	3%	6	5%	6	5%	5	4%
Contribution Margin	5	4%	3	3%	5	4%	5	4%	5	4%
Income before taxes	17	15%	27	23%	31	26%	31	26%	31	26%
Net Income	25	21%	32	27%	36	30%	35	30%	36	30%
Minority Interest	13	11%	11	9%	13	11%	12	10%	12	10%
Total Asset	**104**	**89%**	**98**	**83%**	**96**	**81%**	**94**	**80%**	**92**	**77%**
Investment in associates and JV accounted for by the Equity Method	30	26%	30	25%	32	27%	30	25%	28	24%
Differed tax assets	10	9%	8	7%	9	8%	9	8%	9	8%
Postemployment assets	1	1%	3	3%	3	3%	3	3%	4	3%
Rights arising under insurance contracts	0	0%	0	0%	0	0%	0	0%	0	0%
Tangible Assets	50	43%	56	47%	56	47%	53	45%	51	43%
Intangible Assets	37	32%	45	38%	44	37%	41	35%	40	34%
Goodwill	10	9%	11	9%	11	9%	11	9%	10	8%
Trade receivable and loans	15	13%	20	17%	19	16%	18	15%	19	16%
Financial Assets	22	19%	24	20%	23	19%	22	19%	23	19%
Total Liabilities	**97**	**83%**	**82**	**69%**	**78**	**66%**	**77**	**65%**	**75**	**63%**
Debts and Loans	12	10%	16	14%	16	13%	16	14%	18	15%
Financial Liabilities other than Loans	14	12%	13	11%	13	11%	13	11%	14	12%
TFR and Pension Funds	14	12%	11	9%	10	8%	9	8%	9	8%

Provisions	10	9%	12	10%	13	11%	11	9%	12	10%
Equity	21	18%	17	14%	16	13%	14	12%	15	13%
Reconciliations	**81**	**69%**	**82**	**69%**	**85**	**71%**	**83**	**70%**	**84**	**71%**

No. of items disclosed in median and in mean

Descriptive Statistics

		Sample MEDIAN	Sample MEAN
MANDATORY	2008	7	6,41
	2009	7	6,26
	2010	7	6,29
	2011	7	6,25
	2012	7	6,17
VOLUNTARY	2008	12	12,96
	2009	13	13,45
	2010	13	13,63
	2011	13	13,43
	2012	13	13,29

No. of companies that changed the number of items disclosed

	Mandatory items disclosed					
	Increase	%	Decrease	%	Unchanged	%
Years 2008-2009 (IFRS8 replaced IAS 14R)	16	14%	17	15%	83	72%
Years 2009-2010	6	5%	10	9%	101	86%
Year 2010-2011	3	3%	5	4%	110	93%
Year 2011-2012	4	3%	10	9%	103	88%
	Voluntary items disclosed					
	Increase	%	Decrease	%	Unchanged	%
Years 2008-2009 (IFRS8 replaced IAS 14R)	37	32%	22	19%	57	49%
Years 2009-2010	15	13%	14	12%	88	75%
Year 2010-2011	7	6%	6	5%	105	89%
Year 2011-2012	8	7%	13	11%	96	82%

With regard to the *mandatory* disclosure, we observed a decrease on average of the *mandatory* items disclosed in the year of the transition (from 6.41 to 6.26) that continued even in subsequent years. Also in this case, our results referred to the year of transition as being consistent with the studies conducted in European Countries (Nichols at al., 2012; Crawford at al., 2013). However, it is different to others conducted in Anglo-Saxon Countries (Herrmann and Thomas, 2000; Street et al., 2000). Particularly, as showed in the Table 6, we noted a progressive decrease of some items such as *total assets* and *liabilities*, and the tendency to maintain the magnitude of the information on income data. The results are consistent with previous research, in which it was demonstrated that companies tend to

provide less items regarding *total assets*, *liabilities*, *capital expenditure*, *equity method assets*, *equity method profit* (Herrmann and Thomas, 2000; Street et al., 2000; Nichols et al., 2012; Crawford et al., 2012) while in general providing more income data such as *depreciation and amortization*, *interest revenue*, *interest expense* (Herrmann and Thomas, 2000; Street et al., 2000; Crawford et al., 2012).

Focusing, then, on *voluntary* disclosure, we could notice, in the year of transition, an increase on average of the items disclosed (from 12.96 to 13.45), this data has a slight increase over 2010 (13.63) and undergoes a slight decrease in 2011 (13.43) and 2012 (13.29).

In addition, our results showed that many firms in 2008, still under IAS 14R, tended to publish their segment information in accordance to the internal information system used by management to make decisions, and not consistently with the accounting criteria. Many companies provided their costs classified not by nature but in accordance with the variability of costs or other managerial criteria. Only in 2008, 58% of the firms of the sample classified our costs in variable and fixed costs/*direct and indirect costs*; 71% provided the EBIT, 45% presented Gross Margin/EBITDA, and 4% the Contribution Margin). In the following years, we observed that the percentages of Italian companies that reported the EBIT and the Gross Margin tended to increase. Our results are consistent with previous studies that proved that firms in accordance with the management approach, tend to increase the number of income measures published (Nichols at al., 2012).

It follows that even under IAS 14R it was possible to perceive a partial application of the management approach.

Even though the management approach with a risks-and-rewards safety net was the theoretical starting point of IAS 14R, the choice to present segment information in a reclassified form could be seen as an indication that already with the former principle, the segment reporting was the expression of an internal management perspective, lately openly adopted by IFRS 8.

The implementation of IFRS 8 in the 2009 did not cause considerable changes in the represented disclosure.

Although almost all of the elements showed an increase in the number of firms who decided to represent them, these increases are not particularly significant in percentage terms.

In particular we have the case of Assets, where we can denote that the firms tended to increase the represented information about the non-current assets being intangibles, goodwill, financial investment and others.

Specifically, in the case of goodwill we observed that the number of companies in the sample that provided this intangible asset in the segment report in fact increased, and this is consistent with the idea that the more transparency advocated by using the management approach could help users to better understand the accounting policies regarding the allocation of goodwill, the impairment test and so forth.

This could be seen as the effort by part of the firms to give more information about strategic items, with more transparency and reducing the informative gap with their stakeholders.

5.3. What are the specific characteristics of the firm associated with the level of segment disclosure?

The empirical analysis pointed out whether an association between the segment voluntary disclosure score and the variables listed below exists.

The Table 7 and 8 show the descriptive statistics and the Peason correlation from which we note that there is not multicollinearity between the independent variables selected (the coefficient is lower than 0.8).

Table 7 - *Descriptive statistics*

Variables	*Mean*	*Std. Dev.*	*25%*	*50%*	*75%*	*No. Obs.*
MandDSI	.6403748	.1819177	.5	.7	.8	587
VoluntSDI	.3067973	.1201917	.23	.3	.39	587
ΔVoluntSDI-MandSDI	.2086862	.1201917	.1211765	.182353	.2694118	587
GROWTH	.480438	6.266145	-.1172	-.003	.107	640
HHI	.2023546	.1832221	.095129	.106114	.213036	640
TA	5.669099	.7994611	5.133152	5.503321	6.156614	640
ROA	.4935647	15.74865	-1.86	-.07	4.12	640
OWN	.3910047	.1656062	.27	.37	.45	640

Table 8 - *Pearson correlation matrix*

Variables	*MandDSI*	*VoluntSDI*	*ΔVoluntSDI-MandSDI*	*GROWTH*	*HHI*	*TA*	*ROA*	*OWN*
MandDSI	1.0000							
VoluntSDI	0.6927***	1.0000						
ΔVoluntSDI-MandSDI	0.4352***	0.9508***	1.0000					
GROWTH	0.0068	0.0092	0.0085	1.0000				
HHI	0.1959***	0.1923***	0.1559***	-0.0030	1.0000			
TA	0.0411	-0.0250	-0.0492	0.0332	-0.0081	1.0000		
ROA	-0.0609	-0.0565	-0.0443	-0.0011	-0.0907**	0.0316	1.0000	
OWN	0.0636	-0.0108	-0.0408	-0.0644*	0.1523***	0.2238***	0.0271	1.0000

****Statistically significant at 1%; ** Statistically significant at 5%; * Statistically significant at 10%*

The table 9 shows the fixed-effect regression results related to the Model [1], Model [2] and the Model [3]. We proved directly the robust results to take to control the heteroscedasticity and the autocorrelation of residuals.

Table 9 - *Linear regression robust results*

		Full Sample		
	Expected Sign	*Model [1]*	*Model [2]*	*Model [3]*
Intercept		1.286795 (4.76)***	.7916588 (4.20)***	.6436618 (3.29)***
GROWTH	–	-.0019653 (-1.43)	-.0003314 (-1.90)*	-.0004848 (-1.92)*
HHI	–	-.2527079 (-1.22)	-.1067441 (-1.25)	-.1288237 (-1.40)
TA	+	-.1056563 (-2.28)**	-.0770849 (-2.34)**	-.0685923 (-1.99)**
ROA	+/–	-.0010391 (-2.74)***	-.0005279 (-1.99)**	-.0003763 (-1.46)
OWN	+	-.0641921 (-1.17)	-.1013345 (-2.27)**	-.1124043 (-2.28)**
IFRS 8	+	-.0157746 (-1.33)	.010027 (1.11)	.0176232 (1.85)*
R^2 Adj (%)		84	80	78
F-statistics		2.24**	2.26**	2.73***
Obs.		571	571	571

**** Statistically significant at 1%; ** Statistically significant at 5%;* Statistically significant at 10%*

The results of the multiple regression showed that the regression Model [1], the regression Model [2] and the regression Model [3] are significant (the p-value of the single Model are respectively <0.05, <0.05 and <0.01) and present an R^2 adjusted respectively equal to 84%, 80% and 78%.

With regard to the firms' characteristics that affect the magnitude of the *mandatory disclosure*, the regression Model [1] results explained that only the firm size, TA (p<0.05), and the profitability, ROA (p<0.05), are significant factors in clarifying the variations in the segment disclosure level amongst Borsa Italiana listed firms, with a negative coefficient, whilst the other variables did not significantly explain the variation of the extent of the disclosure. So we only accept $H_{5\text{-}a}$, and refuse $H_{4\text{-}a}$.

With reference to firm size (TA), our findings are inconsistent with previous studies on corporate disclosure (Cooke, 1991; Wallace et al., 1994; Botosan, 1997; Street and Grey, 2002) and on segment disclosure (Bradbury, 1992; McKinnon, 1993; Prencipe, 2004; Prather-Kinsey and Meek, 2004). This might be justified by the fact that the IFRS 8 required a number of mandatory items lower than the IAS 14R, assigning the choice to provide the mandatory items required under the previous standard to the management discretion. So the negative coefficient might be considered as an effect of a higher use of the discretion management in the years following the implementation of the IFRS 8, as showed in Table 6.

For this reason, we reject $H_{4\text{-}a}$.

Regarding profitability, our findings are consistent with the area of literature which supports the view that competitive costs deriving from a large magnitude of disclosure tend to increase as the profitability of the reporting entity increases (Cowan et al., 1987; Belkaoui and Karpik, 1989; Kelly, 1994; Leuz, 1999). So we accept $H_{3\text{-}a}$.

The results of the Model [2] demonstrated that the voluntary magnitude of the segment disclosure is affected by the growth rate ($p<0.1$) and the ownership diffusion ($p<0.05$), which presents beside the firm size ($p<0.05$) and profitability ($p<0.05$), as already stressed a few lines before.

GROWTH presents a negative association with the VoluntSDI. Our finding, consistent with previous research (Prencipe, 2004), supported the argument that when companies increase their market share they might be afraid of losing their competitive advantage, thus deciding to provide less information. This result confirms our hypothesis ($H_{2\text{-}b}$) and in particular underlines that the proprietary costs might be deterrent for management in providing more segment information, as explain in the previous section 3.

OWN, also has a negative relationship with the VolunSDI. Our result, is inconsistent with the previous literature (Prencipe, 2004, Pisani-Landriana, 2012) which suggested that a lesser concentration of the ownership leads to management not providing high level segmental information. Therefore, we refuse $H_{5\text{-}b.}$

The purpose of running the fixed-effect regression for Model [3] was also to examine whether the magnitude of the difference between segment mandatory disclosure and voluntary disclosure is affected by some specific characteristics of the enterprise.

The findings of Model [3] showed that the Differential Disclosure Index presents a negative association with GROWTH ($p<0.1$), TA ($p<0.05$) and OWN ($p<0.05$), while it has a positive relationship with IFRS 8 ($p<0.01$).

These results, actually, lead us to state that, despite the reduction of the segment mandatory items (such as liabilities, assets, etc.), firms tend to reduce the gap between segment mandatory and voluntary items provided in the presence of a high growth rate, large size and a greater ownership diffusion. These findings confirm that the proprietary costs affect the management choices in relation to the magnitude of voluntary disclosure to be provided. (we accept $H_{2\text{-}c}$). The evidence of the negative association between the Differential Disclosure Index with TA (we refuse $H_{5\text{-}c}$) and OWN (we refuse $H_{4\text{-}c}$) might suggest to us that the larger the firm and more diffused the ownership, leads to the management having more discretion to decide which communication policy to adopt, as in the sample observed, justified by the idea of providing less information when the profitability is good. Our findings highlight that the difference between segment mandatory and voluntary items represented is affected by major discretion introduced by the management approach under IFRS 8 (we accept $H_{6\text{-}c}$).

6. Summary and Conclusions

The objective of this paper was to investigate the effects of the implementation of IFRS 8 in

the first year of application and in the following years..

The findings showed that Italian listed companies do not significantly modify their way of providing segment information.

In regard to the number of reportable segments, we showed that it has increased on average very slightly,and therefore is not to be considered relevant and inconsistent with the amount demanded under the IASB (IASB, 2012).

In terms of the items disclosed by the operating segment, with regard to *mandatory* disclosure, we provided that *mandatory* items had on average slightly decreased. It is particularly interesting to note that firms tend to reduce disclosure of disaggregated information on total assets and total liability. Whilst, in regard to voluntary disclosure we found on average a slight increase in the items provided, even if considered as being not relevant. In addition, we noted also that over the period 2008 – 2010, both mandatory and voluntary disclosure evidenced an increase that had suffered a slight decline up until 2012.

So, our findings are consistent with the other empirical research conducted on firms that have implemented IFRS 8 replacing IAS 14R.

In the present study we also attempted to understand if there was a relationship between the magnitude of disclosure and some characteristics of the firms.

The extent of mandatory and voluntary disclosure presents a negative relationship with the TA and ROA. Inconsistently with previous research on the topic, we noted that the bigger companies, or more profitable ones, might lead to a greater use of the discretion allowed by management towards IFRS 8, evidencing the trend of the firms to reduce the item disclosures. In addition, focusing on voluntary disclosure, we also found that the extent of disclosure is negatively associated with growth rate and ownership diffusion. These findings, in our understanding, might be justified through a general trend by management not to increase the disaggregated information provided and instead to reduce it when firms are in a phase of beating of the market, in order not to unveil any outside sensitive information that could have arisen due to loss of competitive advantage.

From our understanding, and inconsistent with the previous studies, the negative association between the magnitude of the disclosure and the OWNER seemed to highlight the high agency costs that may emerge between management and a widely diffused proprietary structure (Jensen and Meckling, 1976; Kim, 1993; Verrecchia 2001; Healy and Palepu, 2001), that could more easily make a greater use of the discretion allowed by the introduction of a pure "management approach". In this sense, Luez (2004) states that when agency costs increase and the level of outside equity rises, firms with dispersed ownership structures are more likely to communicate through public disclosures, however we do not forget that the IASs/IFRSs origin as a set of international GAAP expresses the cultural and economic characteristics of the public companies which operate in the Anglo Saxon Countries (Joo-Lang, 1994; La Porta et al., 1997; Nobes, 1998, 2006; Ali-Hwang, 2000). Italy, indeed, is classified in the European Continental cluster characterized by a legal system of civil law mainly oriented towards the protection of the outsiders (creditors, in particular), guaranteed

principally by the use of the prudence principle in accounting evaluation and that it is difficult to change to accommodate the IFRSs (Zambon, 1996; Macchioni, 2007). Furthermore, few diffused owner structures have implied that in Italian traditional accounting theory the primary readers of the balance sheet are mainly lenders rather than revenue authorities (Devalle et al., 2010).

If we consider that these statements are true, it is conceivable that managers identify the lenders and not the investors as being the primary readers of the balance sheet, and do not feel it is possible to bring about significant changes in segment reporting in relation to additional disclosures and transparency of the segment information.

Generally speaking, our results seem consistent with a prior study on the ED IFRS 8 (Katselas et al., 2011), that revealed that larger firms, firms with more than three segments, and relatively profitable firms operating in an environment of high competition, were more likely to lobby in favor of ED 8.

Our analysis showed that the introduction of IFRS 8 significantly influenced the differential between the number of voluntarily items and also the number of mandatory ones, and just as since 2009, the mandatory disclosure is strongly influenced by the discretion of management.

In summary, as already stressed in the paper, our results are unsurprisingly inconsistent with the expectations declared by the IASB (IASB, 2012), due to the fact that these expectations of the IASB originate from previous studies on the introduction of the *management approach* of SFAS 131 replacing the *risk and the reward approach* of the SFAS 14, whilst the implementation of IFRS 8 implies the *management approach* in rather than the *management approach and risk and reward safety net*. In other words, IAS 14R and IFRS 8 actually have the same starting point (the eye of management) which, in particular conditions, might lead to different ways of representing segment disclosure. For this reason, it is reasonable that the impact of IFRS 8 on firms that provided segment disclosure under IAS 14R is more restrained than the one verified in replacing SFAS 14 with SFAS 131. This is confirmed also by other similar studies in other IAS-compliant countries (Crawford et al., 2012, Kang and Gray, 2013; Nichols et al., 2012). Empirically, previous studies demonstrate results similar to the IASB's expectations regarding the effects of the implementation of IFRS 8, in terms of the number of reportable segments and the researches on the effect of the replacement of the IAS 14 by IAS 14R. Nichols et al. (2007) affirm that both standards, SFAS 131 and IAS 14R, have resulted in an increased number of reportable segments.

So the main innovative aspect of IFRS 8, the introduction of the management approach, should be viewed from a theoretical perspective..

First of all, the discretion allowed to managers, to define the magnitude of the segment information to provide and observed in the descriptive statistic analysis conducted by the new standard, which suggests the existence of a risk of an abuse of this power. As mentioned several times, under IFRS 8, the segmental mandatory items required were reduced compared to the ones required under IAS 14R, therefore the management should represent only the items they actually use in the decision-making process.

Secondly, we note that the management approach, introduced under IFRS 8, seems to be in contrast with the general evaluation criteria used in the IAS/IFRSs Financial Reporting model, oriented to provide to users information which is reliable, verifiable and "objective". Specifically, while the IAS/IFRSs Financial Reporting model is more and more oriented towards verifiable information, the segmental reporting is provided by information "through the eye of management" which is more subjective and more difficult to verify.

In our understanding, the one way to justify this divergence might be the attempt to provided to the external users not only some operative decision-making tool, but also the allocation criteria regarding any accounting data (for example Goodwill and the way to apply the impairment test), difficult to decipher if we consider merely the corporate information.

In other words, the segmental disclosure, with the introduction of the management approach, being the main novelty of IFRS 8, can no longer retain a separateness between management accounting and financial accounting, but represents an intersection.

So the disaggregated information, complementing the information traditionally contained in the annual document, is for users, especially external, not only an indispensable tool in the understanding the company's performance, but a way in which to understand how they have been allocated certain accounting items and to ensure a greater consistency between the information regarding corporate financial information, segment information and notes. In the notes, in fact, users often fail to find the detail level required to be able to understand logical processes followed by management in the evaluation of financial statements.

On the one hand we justify this view, from the choice made by the IASB in terms of segment reporting, and on the other hand, from our understanding this choice seems to be inconsistent with certain principles issued in respect of the reporting entity. Premising that we do not treat the problem, as the issue is far more complex than one can summarize in a few lines as it is not the scope of this paper, it is important to highlight it as such, according to the IASB, in the definition of the *reporting segment* (ED, Reporting Entity, 2010).

«A portion of an entity could qualify as a reporting entity if the economic activities of that portion can be distinguished objectively from the rest of the entity and financial information about that portion of the entity has the potential to be useful in making decisions about providing resources to that portion of the entity. For example, a potential equity investor could be considering a purchase of a branch or division of an entity» (par. RE6).

In some cases it seems possible to overlap the concept of the *reporting entity* and *operating segment*. If this is a real possibility, then a reporting entity should prepare its own report in compliance with the IAS/IFRS, without opportunities to derogate to the criteria replacing them with management accounting criteria.

Our findings highlight, from a practical point of view, the empirical analysis conducted on the relationship between segment disclosure level and specific firm characteristics, where the determinants that lead companies to provide more information are the same. At corporate level, we find incentive to disclosure to be more ownership diffused, whilst the factor that is a disincentive to disclose more information, is the increased growth towards the concern of

losing a firm's competitive advantage.

References

Alexander, D., and Archer S. (2000). On the myth of "Anglo-Saxon" financial accounting. *The International Journal of Accounting*, 35(4), 539-557

Ali, A., and Hwang, L. S. (2000). Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research*, 1-21.

American Institute of Certified Public Accountants (AICPA), 1994. *Improving Business Reporting*. A Customer Focus (New York: AICPA).

Belkaoui, A. and Karpik, P.G., Determinants of the corporate decision to disclose social information. *Accounting, Auditing and Accountability Journal*, 1989. 2(1).

Berger, P.G., and Hann, R. (2003). The Impact of SFAS N°131 on Information and Monitoring. *Journal of Accounting Research*, 41(2), 163-223.

Boersema, J. M., and Van Weelden, S. J. (1992). *Financial reporting for segments*. Canadian Institute of Chartered Accountants.

Botosan, C.A. (1997). Disclosure and the cost of equity capital. *The Accounting Review*, 72(3), 323-349 .

Botosan, C.A., and Stanford, M. (2005). Managers' Motives to Withhold Segment Disclosures and the Effect of SFAS No.131 on Analysts' Information Environment. *The Accounting Review*, 80(3), 751-772.

Bradbury, M.E. (1992). Voluntary disclosure of financial segment data: New Zealand Evidence. *Accounting and Finance*, 32(1), 15-26.

Collins, D.W. (1976). Predicting earnings with sub-entity data: Some further evidence. *Journal of Accounting Research*, Spring, 163-177.

Cooke, T.E. (1991). An assessment of voluntary disclosure in annual report of Japanese Corporation. International *Journal of Accounting*, 26(3), 174-189.

Cowen, S.S., Ferreri, L.B., and Parker, L.D. (1987). The impact of corporate characteristics on social responsibility disclosure: a typology and frequency-based analysis. *Accounting,Organizations and society*, 12(2), 111-122.

Crawford, L., Extance, H., Hellier, C. and Power, D. (2012). *Operating segments: the usefulness of IFRS*. Edinburgh, ICAS Insight, the Institute of Chartered Accountants in Scotland.

Darrough, M., and Stoughton, N. (1990). Financial Disclosure Policy in an Entry Game. *Journal of Accounting and Economics* 12(1), 219-243.

Darrough, M. (1993) Disclosure Policy and Competition: Cournot vs. Bertrand. *The Accounting Review*, July, 534-561.

Deppe, L. and Omer, S. C. (2000). Disclosing disaggregated information. *Journal of Accountancy*, 190(3), 47-52.

Devalle, A., Onali, E., and Magarini, R. (2010). Assessing the value relevance of accounting data after the introduction of IFRS in Europe. *Journal of International Financial Management and Accounting*, 21(2), 85-119.

Dhaliwal, D. (1997). Disclosure Regulations and Cost of Capital. *Southern Economic Journal*, 45.

Dye, R. A. (1986). Proprietary and nonproprietary disclosures. *Journal of Business*, 331-366.

Dunne, T., Fifield, S., Finningham, G., Fox, A., Hannah, G., Helliar, C., Power, D., and Veneziani, M. (2008). *The Implementation of IFRS in the UK, Italy and Ireland*. Institute of Chartered Accountants of Scotland.

Ettredge, M., Kwon, S. Y., and Smith, D. (2002). Competitive harm and companies' positions on SFAS No. 131. *Journal of Accounting, Auditing and Finance*, 17(2), 93-109.

Ettredge, M.L., Kwon, S.Y., and Smith D.B. (2005), The impact of SFAS No. 131 business segment data on the market's ability to anticipate future earnings. *The Accounting Review*, July, 80 (3), 773-804.

Emmanuel, C., and Garrod, N. (1992). *Segment Reporting: International Issues and Evidence*. Hertfordshire, Prentice Hall ICAEW.

Ewert, R. and Wagenhofer, A. (2012). Using Academic Research for the Post-Implementation Review of Accounting Standards: A Note. *Abacus*, 48(2), 278-291.

Firth, M. (1979). The disclosure of information by companies. *Omega*, 7(2), 129-135.

Garrod, N.W., and Emmanuel, C.R. (1987). An empirical analysis of the usefulness of disaggregated accounting data for forecasts of corporate performance. *Omega*, 15(5), 371-382.

Gigler, F., (1994). Self-Enforcing Voluntary Disclosures. *Journal of Accounting Research*, Autumn, 224-240.

Glaum, M., and Street, D. L. (2003). Compliance with the disclosure requirements of Germany's new market: IAS versus US GAAP. *Journal of International Financial Management and Accounting*, 14(1), 64-100.

Givoly, D., Hayn, C., and D'souza J. (2000). Measurement errors and information content of segment reporting. *Review of Accounting Studies*, 4(1), 15-43.

Green W.E. (1997). *Econometric analysis(*3rd ed.*)*. New York,NJ: Prentice-Hall, International Edition.

Grossman, S. (1981). The Role of Warranties and Private Disclosure about Product Quality. *Journal of Law and Economics*, 24(3), 461-483.

Hayes, R. M., and Lundholm, R. (1996). Segment reporting to the capital market in the presence of a competitor. *Journal of Accounting Research*, Autumn, 261-279.

Haller, A., Nobes, C., Cairns, D., Hjelström, A., Moya, S., Page, M., and Walton, P. (2012). The effects of accounting standards–a comment. *Accounting in Europe*, 9(2), 113-125.

Haniffa, R. M., and Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), 317-349.

Harris, M. S. (1998). The association between competition and managers' business segment reporting decisions. *Journal of Accounting Research*, 111-128.

Healy, P. M., and Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1), 405-440.

Herrmann, D., and Thomas, W. B. (2000). An analysis of segment disclosures under SFAS No. 131 and SFAS No. 14. *Accounting Horizons*, 14(3), 287-302.

Hisiao, C. (2003). *Analysis of panel data*. Cambridge, University Press.

Hope, O. K., Kang, T., Thomas, W. B., and Vasvar, F. (2009). The effects of SFAS 131geographic segment disclosures by US multinational companies on the valuation of foreign earnings. *Journal of International Business Studies*, 40, 421-443.

IASB (2012). *Post-Implementation Review of IFRS 8, Operating Segment*. Staff Memorandum. http//www.iasb.org/ (accessed 14 February).

Jensen, M. C., and Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360.

Leuz, C. (1999). Proprietary versus non-proprietary disclosures: voluntary cash flow statements and business segment reports in Germany. *Department of Business and Economics Johann Wolfgang Goethe-Universität Frankfurt*.

Leuz, C., and Verrecchia, R. E. (2004). Firms' capital allocation choices, information quality and the cost of capital. *Rodney L. White Center for Financial Research.*

Joos, P., and Lang, M. (1994). The effects of accounting diversity: Evidence from the European Union. *Journal of Accounting Research*, 141-168.

Kang, H., and Gray, S. J. (2013). Segment Reporting Practices in Australia: Has IFRS 8 Made a Difference? *Australian Accounting Review*, 23(3), 232-243.

Katselas, D., Birt, J., and Kang, X. H. (2011). International firm lobbying and ED 8 operating segments. *Australian Accounting Review*, 21(2), 154-166.

Kelly, G. J. (1994). Unregulated segment reporting: Australian evidence. *The British Accounting Review*, 26(3), 217-234.

Kim, O., and Verrecchia, R. E. (1994). Market liquidity and volume around earnings

announcements. *Journal of Accounting and Economics*, 17(1), 41-67.

Kinney, W. R. (1971). Predicting earnings: entity versus subentity data. *Journal of Accounting Research*, 127-136.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. W. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, 55(1), 1-33.

Macchioni, R. (2007). Riflessioni su alcune proposte di modifica delle norme sul bilancio d'esercizio. *Rivista Italiana di Ragioneria e di Economia Aziendale*, (1), 34-47.

Mardini, G. H., Crawford, L., and Power, D. M. (2012). The impact of IFRS 8 on disclosure practices of Jordanian listed companies. *Journal of Accounting in Emerging Economies*, 2(1), 67-90.

Mautz, R. K. (1968). *Financial reporting by diversified companies*. New York: Financial Executives Research Foundation.

McKinnon, J. L., and Dalimunthe, L. (1993). Voluntary disclosure of segment information by Australian diversified companies. *Accounting and Finance*, 33(1), 33-50.

Milgrom, P. R. (1981). Good news and bad news: Representation theorems and applications. *The Bell Journal of Economics*, 12(2), 380-391.

Mitchell, J. D., Chia, C. W., and Loh, A. S. (1995). Voluntary disclosure of segment information: Further Australian evidence. *Accounting and Finance*, 35(2), 1-16.

Morris, R. D. (1987). Signalling, agency theory and accounting policy choice. *Accounting and Business Research*, 18(69), 47-56.

Naser, K. (1998). Comprehensiveness of disclosure of non-financial companies: Listed on the Amman financial market. *International Journal of Commerce and Management*, 8(1), 88119.

Newman, P., and Sansing, R. (1993). Disclosure policies with multiple users. *Journal of Accounting Research*, Spring, 92-112.

Nichols, N. B., and Street, D. L. (2007). The relationship between competition and business segment reporting decisions under the management approach of IAS 14 Revised. *Journal of international accounting, auditing and taxation*, 16(1), 51-68.

Nichols, N. B., Street, D. L., and Cereola, S. J. (2012). An analysis of the impact of adopting IFRS 8 on the segment disclosures of European blue chip companies. *Journal of International Accounting, Auditing and Taxation*, 21(2), 79-105.

Nichols, N. B., Street, D. L., and Tarca, A. (2013). The impact of segment reporting under the IFRS 8 and SFAS 131 management approach: a research review. *Journal of International Financial Management and Accounting*, 24(3), 261-312.

Nobes, C. (1998). Towards a general model of the reasons for international differences in financial reporting. *Abacus*, 34(2), 162-187.

Nobes, C. (2003). On the myth of "Anglo-Saxon" financial accounting: a comment. *The International Journal of Accounting*, 38(1), 95-104.

Nobes, C. (2004). On accounting classification and the international harmonisation debate. *Accounting, Organizations and Society*, 29(2), 189-200.

Nobes, C. (2006). The survival of international differences under IFRS: towards a research agenda. *Accounting and Business Research*, 36(3), 233-245.

Pisano, S., and Landriani, L. (2012). The determinants of segment disclosure: an empirical analysis on Italian listed companies. *Financial Reporting*, 1, 113-132.

Piotroski, J. D. (2003). Discussion of the impact of SFAS No. 131 on information and monitoring. *Journal of Accounting Research*, 41, 225-234.

Prather-Kinsey, J., and Meek, G. K. (2004). The effect of revised IAS 14 on segment reporting by IAS companies. *European Accounting Review*, 13(2), 213-234.

Prencipe, A. (2004). Proprietary costs and determinants of voluntary segment disclosure: evidence from Italian listed companies. *European Accounting Review*, 13(2), 319-340.

Raffournier, B. (1995). The determinants of voluntary financial disclosure by Swiss listed companies. *European Accounting Review*, 4(2), 261-280

Salamon, G. L., and Dhaliwal, D. S. (1980). Company size and financial disclosure requirements with evidence from the segmental reporting issue. *Journal of Business Financeand Accounting*, 7(4), 555-568.

Sanders, J., Alexander, S., and Clark, S. (1999). Features-New Segment Reporting: Is It Working?-Competitors, suppliers, and buyers may be benefiting more than the actual companies complying with the FASB rule to disclose more segment information. *Strategic Finance-Montvale*, 81(6), 35-38.

Singhvi, S. S., and Desai, H. B. (1971). An empirical analysis of the quality of corporate financial disclosure. *Accounting Review*, 129-138.

Spence, M. (1973). Job market signaling. *The quarterly journal of Economics*, 355-374.

Street, D. L., Nichols, N. B., and Gray, S. J. (2000). Segment disclosures under SFAS No. 131 has business segment reporting improved? *Accounting Horizons*, 14(3), 259-285.

Street, D. L., and Gray, S. J. (2002). Factors influencing the extent of corporate compliance with International Accounting Standards: summary of a research monograph. *Journal of International Accounting, Auditing and Taxation*, 11(1), 51-76.

Street, D. L., and Nichols, N. B. (2002). LOB and geographic segment disclosures: an analysis of the impact of IAS 14 revised. *Journal of International Accounting, Auditing and Taxation*, 11(2), 91-113.

Thomas, W. B. (2000). The Value-relevance of Geographic Segment Earnings Disclosures Under SFAS 14. *Journal of International Financial Management and Accounting*, 11(3),

133-155.

Trombetta, M., Wagenhofer, A., and Wysocki, P. (2012). The usefulness of academic research in understanding the effects of accounting standards. *Accounting in Europe*, 9(2), 127-146.

Tsakumis, G. T., Doupnik, T. S., and Seese, L. P. (2006). Competitive harm and geographic area disclosure under SFAS 131. *Journal of International Accounting, Auditing and Taxation*, 15(1), 32-47.

Veron, N. (2007). *EU adoption of the IFRS 8 standard on operating segments*. Note for the ECON Committee of the European Parliament.

Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, 5, 179-194.

Verrecchia, R. E. (1990). Information quality and discretionary disclosure. *Journal of Accounting and Economics*, 12(4), 365-380.

Verrecchia, R. E. (2001). Essays on disclosure. *Journal of Accounting and Economics*, 32(1), 97-180.

Wallace, R. S., and Naser, K. (1996). Firm-specific determinants of the comprehensiveness of mandatory disclosure in the corporate annual reports of firms listed on the stock exchange of Hong Kong. *Journal of Accounting and Public policy*, 14(4), 311-368.

Wagenhofer, A. (1990). Voluntary disclosure with a strategic opponent. *Journal of Accounting and Economics*, 12(4), 341-363.

Wallace, R. O., Naser, K., and Mora, A. (1994). The relationship between the comprehensiveness of corporate annual reports and firm characteristics in Spain. *Accountingand Business Research*, 25(97), 41-53.

Zambon, S. (1996). *Profili di ragioneria internazionale e comparata: un approccio per aree tematiche*. Milano, CEDAM.

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