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Impairment of goodwill, IAS 36 and determinants of mandatory disclosure in Italian listed companies

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Disclosure allows investors to understand financial performance. The study provides findings on the level of compliance of mandatory disclosure concerning the impairment of goodwill under IFRS and its determinants. The examined sample is composed of 145 Italian listed entities. Size variables, performance variables and amortization of goodwill variables were tested in order to verify the determinant of the compliance with mandatory disclosure of the impairment of goodwill. We have run an ordinary least square (OLS) regression model: results show that the weight of goodwill, the way entities amortize goodwill and the size of the firm are positively associated with the mandatory disclosure requested by IAS 36. We have contributed to previous studies by providing findings on the role of mandatory disclosure, which is a fundamental characterization in accounting and extremely current after the publication of the Discussion Paper by the international accounting standards board (IASB). The contribution to current literature is to provide findings on the determinants of mandatory disclosure of goodwill in Italy.

Key words: Intangible assets, goodwill, impairment test, financial mandatory disclosure, annual report, compliance, dscore index, IAS 36.

INTRODUCTION

Disclosure of the annual report is an important topic for users of the annual report. Disclosure permits users to comprehend the application of the accounting standards used by entities in order to analyze significant data as stated by Healy and Palepu (2001) and Graham et al. (2005).

The international accounting standards (IAS) Framework states that users rely on information enclosed in the annual report to make decisions. A full and comprehensive disclosure produces economic advantages for entities, even if it requires investments in

information systems (Devalle and Rizzato, 2012).

Financial disclosure is made up of financial information (numerical or qualitative) on a mandatory or voluntary basis, via formal or informal channels (Gibbins et al., 1990). The main source of financial information is the annual report of an entity that includes a statement of comprehensive income, a statement of financial position, a statement of changes in equity, a statement of cash flows, the notes and other statements and explanatory material that are an integral part of the annual report (for example, the management report). Disclosure can be

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classified in different ways: mandatory or voluntary, financial or non-financial, and so forth (Devalle and Rizzato, 2013).

In this paper, we focus on the mandatory disclosure provided in the notes of public entities. Disclosure of the annual report is a topic fueled by International Financial Reporting Standards (IFRS) with the "disclosure Initiative," a portfolio of implementation and research projects aimed at improving the effectiveness of annual report disclosures.

In March 2017, the IASB published a discussion paper (DP) on disclosure initiative - principles of disclosure stating that "the main objective […] is to identify disclosure issues and to develop new, or clarify existing, principles of disclosure in IFRS to address those issues."

The principles proposed in the DP build on the existing requirements of IAS 1, and the concepts being developed in the conceptual framework project. The goal is to amend IAS 1, or to create a new disclosure standard that would incorporate and replace parts of IAS 1 (either outcome is referred to as the 'general disclosure standard' in the DP, and in the rest of this document)" (IFRS in Focus, 2017). IFRS in focus also stated, "in a nutshell, the disclosure problem is the perception that annual report do not provide enough relevant information, include too much irrelevant information, and communicate the information ineffectively".

The aim of this research is to assess the attitude of the Italian listed entities to disclose mandatory items with reference to IAS 36 concerning the impairment of goodwill, by means of an empirical research. Intangible assets (IA) are a relevant asset in many companies, and the financial crisis showed the necessity to write off the value of IA and in particular goodwill.

The information required by IAS 36 is very important for investors in order to evaluate the consistency of intangible assets. Thus, when intangible assets are relevant, disclosure is extremely important in evaluating the performance of the entity analyzed.

The study objective is to analyze the variables that impact on the compliance of mandatory disclosure of IAS 36 on the Italian securities market exchange. The study contributes to establishing the compliance of mandatory disclosure, which is a fundamental definition in accounting and extremely current after the publication of the DP by the IASB. The results of the study research can be extended to other stock markets, where the government evaluates the possibility of making mandatory IFRS for listed entities. In addition, the results of our research can be extended to other stock markets, where the government evaluates the possibility of making IFRS mandatory for listed entities.

LITERATURE REVIEW

The analysis of previous literature reviews showed that several research studies have been conducted on disclosure (both on mandatory and/or on voluntary disclosure). The study has focused its analysis on the papers published after the year 2000.

Abd-Elsalam and Weetman (2003) analyzed the annual reports of listed non-financial entities in Egypt when IFRS where first introduced. Glaum and Street (2003) conducted an empirical research study on the compliance with disclosure both under USGAAP and IFRS for entities listed on Germany's New Market.

Results show that the compliance with IAS and US GAAP disclosure is positively related to entities being audited by the Big 4 auditing entities. The analysis is based on an overall mandatory disclosure of IFRS. Result shows that there is a low level of compliance, depending on the type of auditing firm used.

Ali et al. (2004) examined the compliance with mandatory disclosure requirements by national accounting standards in South Asia. The paper is based on non-IFRS GAAP. Akhtaruddin (2005) analyzed the Bangladesh market under local GAAP. Al-Shammari et al. (2008) analyzed the compliance of mandatory disclosure under IFRS over a period of time (1996 to 2002).

The sample analyzed is based on entities listed on Bahrain, Oman, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates. Hodgon et al. (2008) focused on the linkage between the analysts' earnings forecast errors and firm compliance with the disclosure requirement of IFRS. The analysis on mandatory disclosure was also made in the Kuwait Market.

The results showed that there is a medium level of compliance (69%) and the company size influence significantly and positively IAS-required disclosure (Al Mutawaa and Hewaidy, 2010). Two research studies analyzed the Greek market. Galani et al. (2011) did a research into disclosure for the year 2009, before the introduction of IFRS in Europe.

Tsalavoutas (2011) analyzed 153 Greek entities that draw up the financial statements in compliance with IFRS. The sample examined refers to the year 2005. The contribution of the paper is based on the measurement of the level of compliance by providing two different disclosure index method.

Glaum and Street (2003) studied the compliance with IFRS 3 and IAS 36 across 17 European Countries. Italy is considered in the sample but only analyzing 33 entities. The results on the Italian market are not significant. Tsalavoutas et al. (2014) made a study of a worldwide application of the mandatory disclosure of IFRS 3, IAS 38 and IAS 36.

Also in this study, the Italian sample is based only on 20 companies. With reference to the Italian contest we found another paper (Prencipe, 2004), that refers to voluntary disclosure before the introduction of IFRS in Italy. Devalle et al. (2016) made an in-deph analysis of mandatory disclosure considering different variables and

different IFRS. This paper bridge the gap in the literature review by focusing only on mandatory disclosure of the annual report with reference to IAS 36 (Intangible Assets). Furthermore, the analysis is based on Italian listed entities belonging to the FTSE All-Share Index. The total number of entities analyzed was 218, and the main source of information was the consolidated annual report.

Development of hypotheses

In order to assess the determinants that influence the mandatory disclosure of IAS 36, the following hypothesis was tested.

H1: Disclosure of impairment is positively correlated with the size of goodwill

Many studies in the literature have shown a positive correlation between the size of the entity (measured alternatively as the total investment, market capitalization, total revenue, number of shareholders, etc.) and the quality of disclosure (Inchausti, 1997; Marston and Robson, 1997). If this concept is generally accepted, it can also be claimed that the dimension of a specific annual report item has an impact on the compliance of disclosure relative to the identification and assessment of that particular item. Therefore, this study examines the existence of a positive correlation between the size of the goodwill, measured as goodwill size, equity on goodwill and weight of goodwill. According to previous research, we expect a significant and positive correlation with the different configuration of the size of goodwill, and the compliance of mandatory disclosure with IAS 36.

H2: Disclosure of impairment test of goodwill is positively associated with the entity's performance

Return on equity and gearing: In literature, many studies show that entity profitability is positively correlated with the level of disclosure provided by entities in their annual reports (Singhvi and Desai, 1971; Singhvi, 1968; Wallace et al., 1994). Entities with high profitability are indeed more inclined to provide positive and comprehensive information to the market. On the other hand, some studies say the opposite is true, that is, there is no correlation between entity performance and the

quality of the disclosure of the annual report (McNally et al., 1982; Raffournier, 1995). There are different configurations of an entity's performance; this study used the return of equity (ROE) and the gearing (Wallace, 1987; Inchausti, 1997). A clear relationship is not too expected between performance ratio and the compliance of mandatory disclosure of goodwill with IAS 36.

H3: Disclosure of impairment test of goodwill is positively associated with the amortization of goodwill

Amortization of goodwill deriving from the negative consequence of the annual impairment test has a positive correlation with the compliance of the mandatory disclosure established by IAS 36. We expect that the entities that amortize goodwill are also the entities that show more compliance information about the variables used to do the impairment test of goodwill.

METHODOLOGY

The sample is made up of Italian listed entities (FTSE All-Share) that report the presence of goodwill in the annual report, as shown in Table 1. Consequently, the final sample of the analyzed entities is made up of 66% of the total sample.

We hand-collected the mandatory disclosure of IAS 36 (par. 126 to 135) from the notes of the consolidated annual report. We identified 48 main items of mandatory disclosure of IAS 36. We then hand-collected 6,960 items from the notes on the 145 entities analyzed and subsequently we identified a disclosure index in compliance with Cooke (1989).

We assigned one point if an item of mandatory disclosure of the impairment of goodwill (IAS 36) was present (dichotomous approach) (Devalle and Rizzato, 2013): each piece of information was weighted and the maximum total of points was 48. The formula of the Dscore Index is the following (Devalle et al., 2016):

$$\text{Dscore}_{unwe\,j} = \frac{\sum_{i=1}^{n} d_i}{\sum_{i=1}^{n} x_i}$$

where:

$\text{Dscore}_{unwe\,j}$	Index unweighted for the entity j
i	Item examined
x_i	1 if relevant; 0 if not relevant
d_i	1 if present; 0 if not present

The OLS regression model was used in this study, coherent with previous studies (Botosan, 1997):

$$Dscore\_IAS36_i = \alpha + \beta_1 GW_i + \beta_2 Imp\,GW_i + \beta_3 \frac{Equity}{GW}_i + \beta_4 \sqrt{\frac{GW}{Asset}_i} + \beta_5 Gearing_i + \beta_6 Roe_i + \beta_7 Sector_i + \beta_8 Audit_i + \varepsilon_i$$

RESULTS

The descriptive statistics of the variables are presented in

Table 2. In Table 2, we present the descriptive statistics concerning the independent variables used to verify the determinant of the compliance with the mandatory disclosure of the impairment test required by IAS 36.

Table 1. Presence of goodwill.

Answer	N	Percentage (%)
Yes	145	66.5
No	73	33.5
Tot.	218	100

Table 2. Descriptive statistics of independent variables.

Variable	GW $\dfrac{Equity}{GW}$	$\sqrt{\dfrac{GW}{Asset}}$	Gearing	ROE	IMPGW	Sector	Audit
	Goodwill	Equity/Goodwill	Weight of goodwill on investments	$\dfrac{Financial\ Debts}{Equity}$	$\dfrac{Net\ income}{Equity}$	Impairment of goodwill	Industrial/Non-industrial	Big 4/ Non- big 4 auditing firm
	Numerical. (/million euros)	Quantitative	Numerical	Numerical	Numerical	Dummy	Dummy control variable	Dummy control variable
N	145	145	145	145	145	-	-	-
Missing	0	0	0	0	0	-	-	-
Mean	331.1484	16.6669655	0.3129	26.7539	.0017666	-	-	-
Std. Deviation	782.73095	48.13633346	0.18768	280.64458	.35081348	-	-	-
Skewness	3.653	6.884	0.489	12.034	-3.472	-	-	-
Kurtosis	13.823	56.632	-0.700	144.881	26.035	-	-	-
Std. Error Kurtosis	0.400	0.400	0.400	0.400	0.400	-	-	-
Minimum	0.06	-0.22000	0.02	-24.07	-2.63054	0.00	0.00	0.00
Maximum	4,417.00	465.48000	0.78	3382.18	1.31490	1.00	1.00	1.00

The first group of independent variables used in the study model is the size of goodwill. As shown in Table 4, we used three different configurations: goodwill, the ratio between equity and goodwill, and the ratio between goodwill and total assets. The mean of goodwill in the sample analyzed is equal to 331.15 million Euros and the standard deviation is equal to 782.73 million Euros.

This means there is a strong dispersion of the value of goodwill from its normal distribution. The minimum value of goodwill in the sample analyzed is equal to 60,000 Euros and the maximum value is equal to 4.41 billion Euros. The ratio between equity and goodwill shows that, in mean, the equity is 16.67 times bigger than goodwill with a minimum value equal to -0.22 and a maximum value equal to 465.58 times. The negative value is influenced by the negative value of equity.

The results show that goodwill is an important item in the balance sheets of Italian listed entities and, for this reason, the information about the evaluation is very important for investors. We can make similar considerations about the ratio between goodwill and total assets. The second group of independent variables used in the study is the performance variables measured through ROE and gearing.

As shown in Table 4, the mean of ROE is equal to 0.17% with a maximum value equal to 131.40%, and a minimum value equal to -263.05%. Gearing is the ratio between the financial debt and equity. As shown in Table 4, the minimum value is equal to -24.07 and the maximum value is 3,382.18. Also in this case, the value of mean (26.75) and standard deviation (280.74) show that there is a strong dispersion of the value from its normal distribution.

The last independent variable used in the study is the attitude by the entities to amortize the

Table 3. Descriptive statistics of dependent variable.

Variable	GW	-
	Dscore IAS 36	-
Type of variable	Numerical	-
N	145	-
Missing	0	-
Mean	0.6759	-
Median	0.7500	-
Std. Deviation	0.14091	-
Skewness	-0.679	-
Kurtosis	-0.024	-
Min.	0.38	-
Max.	1	-

Disclosure compliance level		
Level	No	Percentage (%)
90 to 100%	1	0.69
80 to 89%	16	11.03
70 to 79%	65	44.83
60 to 69%	36	24.82
50 to 59%	13	8.97
Less than 50%	14	9.66
Total	145	100.00

goodwill. This is a dummy variable, and it assumes a value equal to 1 if the entity amortized the goodwill in the annual report and 0 if this is not the case.

In the study model we have considered two control variables: sector (financial and non-financial) and auditing firm (the big 4 and other). Finally, we can see that there are no missing values in the study sample, because we used a balanced sample. All the variables were observed for each entity. The descriptive statistics of the Dscore (dependent variable) are reported in Table 3.

Table 3 shows an interesting result: there is a low level of compliance with mandatory disclosure requested by IAS 36 concerning the impairment test of goodwill. This result is consistent with previous literature review (Al Mutawaa and Hewaidy, 2010; Galani et al., 2011; Devalle et al., 2016).

The minimum value of the Dscore is equal to 38%, and the maximum value is 100%. The mean of Dscore is 67.59% with a median value equal to 75%, and the standard deviation equal to 14.09. These values together with the value of skewness (-0.679) and kurtosis (-0.024) show that the distribution is skewed to the right. Thus, it is clear that even though the information about the items used by the entities for the impairment test of goodwill are mandatory, many do not disclose all the information.

For this reason, it is very important to verify which determinants significantly influence the compliance of Dscore requested by the IAS 36. We made the following

assumptions of the OLS model in order to explain the appropriate estimator of the regression coefficients β_i: the first one, which is implicit in the OLS model, is that there is a lack of multicollinearity. Table 4 shows that there are no significant correlations (Pearson correlation test – PC test) (Table 4).

Of all of them, the most important is the correlation between $\sqrt{\frac{GW}{Asset}}$ and $\frac{Equity}{GW}$ (-0.395) and Sector and $\sqrt{\frac{GW}{Asset}}$ (0.328). The second assumption we made is the lack of heteroscedasticity by means of the Withe test. We found heteroscedasticity in the model, and for this reason we used the robust standard error (Table 5).

Table 5 shows the regression parameters, the robust standard error and the VIF. The VIF prove the absence of multicollinearity between the independent variables. The R^2 is equal to 0.293: this value is an adequate considering the typology of this study. In fact, the most important studies on the subject refer to the quality of the disclosure of the annual report and not, instead, to the specific items on the annual report characterized by high levels of objectivity during both the identification and the assessment phase.

The results show that the ratio between equity and goodwill significantly influences (p-value < 0.01) and negatively ($\beta = -0.001$) affects the compliance of disclosure for IAS 36. This result is very interesting in that it highlights that the greater the capacity of the entity to

Table 4. Correlations.

Variable		GW	ImpGW	$\dfrac{Equity}{GW}$	$\sqrt{\dfrac{GW}{Asset}}$	Gearing	ROE	*Sector*	Audit
GW	PC	1	-	-	-	-	-	-	-
	Sig. (2-tailed)	-	-	-	-	-	-	-	-
	N	145	-	-	-	-	-	-	-
ImpGW	PC	0.263**	1	-	-	-	-	-	-
	Sig. (2-tailed)	0.001	-	-	-	-	-	-	-
	N	145	145	-	-	-	-	-	-
$\dfrac{Equity}{GW}$	PC	-0.121	0.124	1	-	-	-	-	-
	Sig. (2-tailed)	0.146	0.137	-	-	-	-	-	-
	N	145	145	145	-	-	-	-	-
$\sqrt{\dfrac{GW}{Asset}}$	PC	0.160	0.177*	-0.395**	1	-	-	-	-
	Sig. (2-tailed)	0.055	0.034	0.000	-	-	-	-	-
	N	145	145	145	145	-	-	-	-
Gearing	PC	-0.034	-0.043	-0.017	-0.051	1	-	-	-
	Sig. (2-tailed)	0.682	0.611	0.843	0.543	-	-	-	-
	N	145	145	145	145	145	-	-	-
ROE	PC	0.058	-0.030	-0.087	0.055	-0.020	1	-	-
	Sig. (2-tailed)	0.489	0.724	0.300	0.510	0.815	-	-	-
	N	145	145	145	145	145	145	-	-
Sector	PC	-0.292**	0.075	-0.065	0.328**	0.023	-0.059	1	-
	Sig. (2-tailed)	0.000	0.370	0.439	0.000	0.781	0.480	-	-
	N	145	145	145	145	145	145	145	
Audit	PC	0.147	-0.086	-0.152	0.069	-0.228**	0.102	-0.066	1
	Sig. (2-tailed)	0.077	0.305	0.069	0.412	0.006	0.222	0.429	-
	N	145	145	145	145	145	145	145	145

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

deal with goodwill, the lower the tendency of the entity to provide disclosure in the notes of the annual report regarding the impairment test of goodwill. This behavior is linked to the concept of significance and the importance of the information, which are key principles in order to apply the IFRS correctly.

In particular, the variation of a unit in the ratio between equity and goodwill reduced the compliance of the Dscore by 0.001 units. The impairment of goodwill has a significant (p-value < 0.01) and positive ($\beta = 0.100$) effect on the quality of the disclosure. In particular, an analysis of the regression parameter shows that when there is a depreciation of goodwill, the entities have a higher attitude to report items regarding the application of the impairment test to the notes to the annual report.

This tendency decreases when there are entities that have not carried out the depreciation of goodwill during 2013. Another independent variable that has a significant (p-value < 0.01) and positive ($\beta = 250$) effect on the Dscore of the IAS 36 is the square root of the ratio between goodwill and the total sum of the investments. This data is also interesting because, as the regression parameter is positive, it shows that as the weight of goodwill on the total sum of the investments increases, so too does the tendency of the entities to disclose information in the notes to the annual report.

The last variable that has a significant impact (p-value < 0.01) on the quality of the disclosure regarding the impairment test of goodwill is the gearing index, which is the relationship between the financial debts and equity.

Table 5. Regression result.

Independent variables		Coefficient	Collinearity statistics	
		β_i	Tolerance	VIF
α	(Constant)	0.592	-	-
β_1	GW	-0.056	0.758	1.318
β_2	ImpGW	0.100***	0.838	1.194
β_3	Equity/GW	-0.001***	0.780	1.282
β_4	$\sqrt{GW/Asset}$	250***	0.682	1.466
β_5	ROE_total	-0.041	0.978	1.022
β_6	Gearing	0.332***	0.939	1.065
β_7	Sector	-0.069	0.755	1.324
β_8	Audit	0.068	0.890	1.124
-	F	7.042***	-	-
-	R^2	0.293	-	-
-	N	155	-	-

The beta coefficient, equal to 0.332, shows that the greater the impact of the financial debt on the equity, the greater the tendency of the entities to provide information on the assessment of goodwill.

CONCLUSION

The results showed a low level of compliance with required disclosure defined by IAS 36 concerning the impairment test of goodwill in the Italian market, which is consistent with previous literature. This result is important also for the IASB and the project on disclosure: even if disclosure is required, many entities do not report data in the notes.

With reference to the determinants that influence the Dscore, the results also showed that the effects of the relationship between equity and goodwill are significant and negative (p < 0.01) and the impairment of goodwill has a significant and positive effect on the compliance with mandatory disclosure (p < 0.01). Furthermore, another independent variable that has a significant and positive effect on the IAS 36 Dscore is the square root of the ratio between goodwill and the total sum of the investments (p < 0.01).

The last variable that has an impact on the compliance of the disclosure regarding the goodwill write off is the gearing index, which is the relationship between liabilities and equity. The main limitation of this paper is the fact that the sample is based only on Italian entities. Future researches should improve the sample by making a cross-country analysis for different years.

The next step will be to make an analysis of mandatory disclosure of IAS 36 between different EU countries to verify if the market where the firm is listed also impacts the disclosure.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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