*Università degli Studi
di Brescia*

*Dipartimento di
Economia Aziendale*

Claudio TEODORI - Monica VENEZIANI

INTANGIBLE ASSETS IN ANNUAL REPORTS: A DISCLOSURE INDEX

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by

Claudio TEODORI
Full Professor of Accounting

Monica VENEZIANI
Ph.D., Assistant Professor

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Abstract

Introduction of the IAS/IFRS entails important changes for Italian companies, characterised by civil law accounting culture, including assessment and accounting of intangible assets which is one of the most fundamental issues. Our attention focuses on companies listed in the main Italian Stock Exchange Indexes (S&P/Mib, Star and TechStar) in which the intangible assets are some of the most critical elements of company management. After a brief comparison between IAS 38 and Italian law, the aim of this paper is to study the effects of IAS 38 application on financial disclosure via an empirical analysis. The level of disclosure in compliance with IAS 38 is summarised via the construction of a "disclosure index" and is studied in greater depth by identification of the possible influencing factors. In the paper the focus is on disclosure since, as the scholars also agree, financial communication does not represent a neutral process but affects the behaviour of the recipients, and consequently that of the preparers. The 2005 and 2006 annual consolidated financial report have been analysed. The next step of the research will be the analysis of the 2007 and 2008 annual consolidated financial statements considering the All Stars Index, instead of Star and Tech Star, in the light of the changes that have occurred in Borsa Italia since June 2007.

Keywords: compliance with IAS/IFRS, intangible assets, disclosure.

1. Introduction: the Italian background

Transition to International GAAP represents a complex process for Italian companies. The move to the new regime is having a considerable impact on both accounting traditions and organisational procedures (such as personnel training) and operations (including new assessment procedures) involving amendments to both the administrative structure and the information systems within the organisation (Veneziani, 2004). The reason for this profound cultural change, which affects the accounting system first and foremost, is connected with the environmental factors (legal system, tax system, accounting theory, company type, role of the financial market) typical of the national economic backgrounds: there is a considerable difference in these factors between Italy and the Anglo-Saxon countries, the originators of the IAS/IFRS (Nobes and Parker, 2002; Choi and Meek, 2005).

For instance, in Italy Roman law prevails, characterised by the importance of written codified law, as opposed to custom and usage, with which the community must comply. Written law takes precedence over practical concrete aspects and governs individual cases. This system is also characterised by the existence of a rigid hierarchical order as regards the sources of law: analogy is permitted only in cases not explicitly provided for by the legal system. Therefore, Italian companies have always applied legal regulations which, substantially, have not changed greatly over time and are of a general and abstract nature; national accounting standards have always played a secondary role in drawing up of the financial statement (the primary role is played by the law), a situation which has been identified and highlighted by empirical studies and research (Marchi, 2000). Following the process of international accounting harmonisation, the Italian listed companies have had to adapt to a completely new accounting regulation. Since 2005 they have had to apply international accounting standards which, due to their very different characteristics from those of the law, are constantly evolving and are very detailed.

Furthermore, the most important differences between the IAS/IFRS and the Italian accounting rules derive from the different public addressed; the basic rationale of the financial statement revolves around its information needs and justifies certain choices in terms of assessment criteria and principles for drawing up the financial report (Veneziani, 2005). The IASB gives priority to investors as the main user of the financial statement, who are primarily interested in assessment of the company performances with orientation also towards the future (Quagli, 2004; Cattaneo, 2004). As the IAS/IFRS are of Anglo-Saxon origin, they are affected by the environmental factors characteristic of these countries: the presence of public companies

and, above all, well-developed stock exchange markets in which the investor plays a very important role. In this case, accounting practice will tend towards a greater diffusion and completeness of the accounting information. In particular, for the numerous minority shareholders, the financial statement is one of the main sources of information on the performance of the company.

Italian accounting practice, on the other hand, while providing for financial statements characterised by understandability and neutrality, tends to give priority to one particular class of stakeholder, the creditors. This focus justifies the emphasis on the principle of prudence (Lacchini and Trequattrini, 2002) and more generally on a more conservative assessment rationale (Sterling, 1967) with the aim of safeguarding the integrity of the equity to avoid inadequate representations due to overestimation of the assets. This characteristic, which represents the ratio of the Italian legislator, derives mainly from the fact that the banks have always been the main financers of companies, the companies are mainly SMEs with family shareholding and the financial market is consequently relatively underdeveloped. In this situation, the main stakeholders (family shareholders and banks) are less interested in an informative financial statement since they have direct access to detailed information concerning the performance of the company.

In this context, Italy has a limited (but growing) stock exchange market characterised by many companies with family shareholding. More in detail, at the end of 2006 there were 263 companies listed on the main equities market divided as follows (264 in 2005) [1]:

– 84 companies (89 in 2005) in the Blue Chip segment, dedicated to companies with a capitalisation of over 1 billion euro (capitalisation on average 8,899 million euro in 2006 and 7,450 million euro in 2005);
– 76 companies (71 in 2005) in the Star segment, for companies with a capitalisation between 1 billion and 40 million euro which voluntarily comply with the high requirements regarding liquidity, transparency and corporate governance as these requirements enhance the company's visibility and image on the market (capitalisation on average 321 million euro in 2006 and 264 million euro in 2005);
– 103 companies (104 in 2005) in the Standard segment, for the other companies with a capitalisation between 1 billion and 40 million euro

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[1] The foreign companies (6 in 2006 and 7 in 2005) and the companies temporarily suspended from the quotation (3 in 2006 and 6 in 2005) are not considered for calculation of the mean capitalisation because the information is not available.

(capitalisation on average 320 million euro in 2006 and 257 million euro in 2005).

Introduction of the international accounting standards, strongly oriented towards the financial markets, undoubtedly represents a profound change for Italian companies, a break with the past, and it is important to understand the scope of this change. For historical-cultural and economic reasons, the IAS/IFRS reflect a very different conceptual model from the one existing in Italy.

For this reason we believe it is useful to study the propensity towards disclosure, much broader in the IAS/IFRS than in the Italian Gaap, with reference to the IAS 38 (*Intangible assets*), one of the most innovative standards both in theory and in terms of impact on performance.

This is therefore the background to the study, which we believe it is useful to illustrate, albeit briefly, for a better understanding of the aims of the research and the results obtained and presented below.

This paper proceeds as follows. Research questions are discussed in section two. Section three outlines the literature review. The main differences on intangible assets between IAS/IFRS and Italian rules are presented in section four. Section five contains the methodology applied. Section six presents the research sample and documents analysed. Section seven contains the empirical results and discussions. The final section summarises and concludes.

2. The aim and the research questions

The aim of the paper is to define the reference framework for the problems deriving from systematic introduction of the new process connected with accounting and assessment of intangible assets in the drawing up of corporate financial statements (Andrei, 2006; Carini, Teodori and Veneziani, 2006). In particular, taking into consideration a specific standard, the IAS 38 (*Intangible assets*), which entails important changes in Italy in terms of assessment and accounting of intangible assets, the following research questions will be addressed:

RQ1: what is the level of disclosure in compliance with IAS 38, i.e. what choice do companies have in terms of financial communication, in the IAS/IFRS-compliant annual financial statements? What are the main issues?
RQ2: do differences exist between companies belonging to different Stock Exchange indexes? What are the possible determining factors?

The theme of disclosure, the main subject of the paper, allows us to identify, considering the information available vis-à-vis the 2005 and 2006 IAS/IFRS-compliant annual documents, the policies adopted by the companies as regards communication, above all in terms of transparency and completeness. Disclosure is studied in particular, since, according to a widely-held opinion, financial communication does not represent a neutral process but affects the behaviour of the recipients and consequently that of the preparers. The level of disclosure on the intangible assets in compliance with IAS 38 will be summarised via the construction of a disclosure index.

The IAS 38 has been chosen for various reasons: the first is the growing importance and criticality of intangible assets in recent years in scientific literature, in the economic world and in companies (Barth, 1998; Andriessen and Tiessen, 2000; Low and Cohen Kalafut, 2002; Daum, 2003; Lev, 2003; Young, 2007; Zambon, 2007); the second relates to the important differences existing between national and international standards, hence we have chosen to focus on Italian companies as the subject of our study[2]; the third concerns the expectation of a significant level of communication transparency, in the light of the connotations of these assets.

As regards the companies, we chose those belonging to different Stock Exchange indexes since, as described below (par. 6), they are characterised by significant differences in terms of capitalisation, business, and information requirements to be met and they are therefore representative of the different realities that exist in the Italian economic context and, more generally, in any national context.

In relation to the documentation analysed, the 2005 and 2006 annual consolidated financial statements were chosen. The reason for the choice of the annual financial statement instead of the interim reports is because the first is the most complete accounting document.

3. Literature review

The process of accounting harmonisation, which is the context considered in this paper, has been a topic of study for years at both international and national level. The discussion has been based on: (i) environmental factors characterising the socio-economic fabric of the various countries (Alexander and Nobes, 1994; Onesti, 1995; Zambon, 1996; Rusconi, 1999; Poselli, 2000; Di Pietra, 2002; Nobes and Parker,

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[2] See par. 4.

2002; Zambon, 2002; Choi and Meek, 2005); (ii) comparison of national accounting systems (Mezzabotta, 1995; Provasoli and Vigano, 1995; Di Pietra and Riccaboni, 2003); (iii) comparison between accounting principles and the IAS/IFRS (Maglio, 1998; Quagli, 1999; Rossi, 2003; Pizzo, 2000; Pizzo, 2004; Hague, 2004; Walton, 2004; Lionzo, 2005; Wüstermann and Kierzek, 2005; Tokar, 2005); (vi) the first applications of the IAS/IFRS in the European countries (Delvaille, Ebbers and Saccon, 2005; Colwyn and Luther, 2005; Hong, 2005; Andrei, 2006; Teodori, 2006).

A number of theories have been put forward to describe why companies disclose information. Companies that have high levels of disclosure often have a lower cost of capital, a higher share value and a higher market-to-book ratio because they are seen to be less risky than their non-disclosing counterparts by investors; thus, it may be in companies' interest to disclose information (Verrecchia 1999; Aggarwal & Simkins 2004). This argument is consistent with both agency theory and a decision-usefulness approach where managers and owners have to weigh up the relative costs and benefits of increased disclosure. The costs of disclosure relate to the expense of collating, interpreting and disclosing information. Such information is value-reducing for informed traders as they already have the information that is not known to the markets generally. They may be able to trade on this information and exploit their advantage. Further, insiders have an incentive not to disclose if they think that they will be providing strategic information to competitors (Marshall & Weetman 2002). However, one benefit from reporting such information is that it will reduce any information asymmetry among shareholders and improve the liquidity in the market for that company's shares, lowering bid-ask spreads and increasing the volume of transactions that take place (Cornell & Sirri 1992).

Several studies have addressed the impact of corporate characteristics on the level of disclosure (Belkaoui and Kahl, 1978; McNally et al., 1982; Cooke 1991, 1992; Wallace and Naser, 1995; Dumontier and Raffournier, 1998). These characteristics include size, listing status, leverage, profitability, industry, type of auditor, dispersion of stock ownership, and country of origin. Overall, these studies indicate that size and listing status are significantly associated with the level of disclosure.

Street and Bryant (2000) studied factors associated with the overall level of disclosure and the level of IAS compliance using the Cooke's methodology (1991, 1992). The authors found a significant extent of non compliance with IAS disclosure requirements. Street and Gray (2001) applied the methodology of Street and Bryant in order to analyse the compliance with IAS disclosure requirements for a larger sample of

companies. However, both studies (2000 and 2001) report a significant positive association between the level of compliance with IAS and companies listed on the USA; the second study also reports a positive association with companies audited by a Big 5+2. Furthermore, both studies found that several factors associated with the overall level of disclosure are also associated with the level of IAS compliance (i.e. listing status, type of auditor). More recently, Street and Glaum (2003) examined the level of compliance with IAS and US GAAP as regard German firms listed in the New Market. They provide evidence that the most important degree of compliance is related to the quality and the rigor of the audit, in particular the best results in terms of the level of compliance were performed by companies audited by the Big 5.

The level of disclosure and the degree of compliance with accounting GAAP can be analysed using different techniques. In this study we refer in particular: (i) to content analysis (Holsti, 1969; Kassarjian, 1977; Andren, 1981; Weber, 1985; McTavish and Pirro, 1990; Krippendorff, 2004) which is widely used in literature (Gray, Kouhy, and Lavers, 1995 a) and b); Beretta and Bozzolan, 2004; Dunne *et. all*, 2004) and (ii) to the construction of the disclosure index (Marston and Shrives, 1991; Cooke and Camfferman, 2002).

To sum up, the paper concerns the accounting harmonisation process in Italy in the initial application phase of the IAS/IFRS and focuses in particular on analysis of the level of disclosure relative to the intangible assets (Liberatore, 1996; Aboody and Lev, 2000; Bergamini and Zambon, 2002; Gelb, 2002; Mancini, Quagli and Marchi, 2003; Cordazzo, 2004) in compliance with the IAS 38 (Teodori and Veneziani, 2005) and the possible influencing factors, via the use of content analysis and the construction of a disclosure index.

4. The main differences between IAS 38 and Italian rules

First of all we focus attention on the main differences (Table 1) between IAS 38 and Italian rules (Veneziani, 2006).

In terms of definition it appears immediately clear that in Italy the class of intangible assets is narrowed (Fellegara, 1995; De Cicco, 1996; Guatri, 1997; Superti Furga, 1997; Pozza, 1999; Fontana, 2001; Mancini, Quagli, Marchi, 2003) by introduction of the IAS 38: this is due to the non-possibility of capitalising the long-term costs (start-up costs, research, and advertising costs) since, although they are costs that could indirectly

contribute to the production of future economic benefits, they do not actually generate an asset.

A particular interpretation of accrual basis appears to emerge from the international accounting standards due to a vision based more on the concept of assets/liabilities. In other words, it would seem that the IAS 38, rather than a "correlation between costs and revenue" looks for a "correlation between cost and generation of an asset".

TABLE 1 – *Some of the main differences between IAS 38 and Italian rules*

Themes	IAS 38	Italian rules
Definition	More restrictive definition, only the intangible assets in the strict sense are considered.	Wider definition, long-term costs are also considered in accordance with certain conditions.
Recognition in financial statement	After the first entry it is possible to apply two models: cost model or revaluation model.	The cost model is always used.
Useful life	Distinction between assets with a finite useful life subject to amortisation and assets with an indefinite useful life subject to impairment test at least once a year.	Only intangible assets with a finite useful life subject to amortisation are considered.
Impairment loss	For assets with indefinite useful life the impairment test must be performed at least once a year.	Correctness of the value of the asset is verified when an impairment loss is assumed. The method used to determine impairment losses in the IAS/IFRS is much more wide-ranging and complex.

The different approach justifies on the one hand the possibility of capitalising some costs within certain limits (Italy) and, on the other, the prohibition on recognising a cost as an asset if the link between the cost and its ability, even indirect, to produce future economic benefits is too "far" and if the other two conditions characterising an asset (identifiability and control - IAS 38) are missing. Probably between the two positions there is also a different concept of "indirect ability" to generate future economic benefits, certainly understood in a narrower sense for the Board and in a wider sense for the Italian legislator: applied research costs are a clear example of this.

From a theoretical point of view, the choice of the Italian legislator would appear to be more correct as it respects to a greater extent the principle of the accrual basis (Devecchi, 1979; Nova, 1997; Palma, 2003) and at the same time, with the legal limits imposed for the capitalisation of long-term costs (art. 2426 Civil Code), it is in line with the principle of prudence (Lacchini and Trequattrini, 2002).

From the point of view of prevalence of substance over form (Maglio, 1998; ASB – FRS 5), the choice of the Board would appear to be more appropriate also because (as also admitted by Italian legal theory) it is not easy to establish the contribution of certain costs to the generation of income, especially to what extent they contribute to the production of income via the revenue they help to produce: in this sense the link between sustaining of the cost and production of income therefore becomes difficult to quantify in a reliable way.

Another important difference emerges concerning recognition of the intangible asset after the first entry in the financial statement: this is due to the assessment at *fair value* (Pizzo, 2000) introduced by the IAS/IFRS for certain assets and not provided for by Italian law based on the *historical cost* (Ijiri, 1970). In this case the problems linked to the assessment criteria come into play. In our opinion, one of the main changes that the Italian firms subject to the international accounting harmonisation (Viganò 1997; Parker, 2001; Campedelli, 2003) are dealing with consist in application of the logic of assessment and accounting linked to the fair value, abandoning, for some classes of value, the basic criterion of cost. It is fundamental to take account of the fact that assessment according to fair value produces effects on the methods of income determination (Edwards and Bell, 1965; Sterling, 1979; Lee, 1985; Parker *et. all*, 1986; Pizzo, 2005) and, therefore, on financial communication (Coda, 1991; Salvioni, 2002; Corvi, 2000; Quagli and Teodori, 2005). In particular, introduction of the IAS/IFRS modifies the main user of the financial statement (from the creditors to the investors) and, consequently, the cognitive aim: the primary purpose of assessment at fair value is, in fact, to provide information on company performances, on capital structure and on financial position, with greater attention to the present and with orientation to the future at each accounting period (Lionzo, 2005). At theoretical level the argument could be studied in greater depth but in the case of assessment of the intangible assets, assessment at fair value should not produce any substantial effects: the Board considers, rightly in our opinion, occurrence of the conditions necessary for use of the revaluation model to be rare.

With reference to the useful life of the intangible assets, the aspect which is most certainly innovative with respect to Italian legislation, is represented by the category of intangible assets with indefinite life, including goodwill

(Bianchi Martini, 1996), no longer subject to amortisation but to impairment test at least once a year (Guatri and Bini, 2003; Fazzini, 2004). In particular, the Board agrees that if a rigorous and operational impairment test could be devised, more useful information would be provided to users of financial statements under an approach in which goodwill is not amortised, but instead tested for impairment. This approach links up with the provision of the IAS 38 (par. 93) in which the Board affirms that prudence cannot in any case lead to unrealistic definition of excessively short useful asset life. Here again the importance assumed, in the logic of the IAS/IFRS financial statement, by the economic substance of events emerges, while the principle of prudence does not appear to be emphasised (Rossi, 2003).

While agreeing with the decision of the Board not to amortise goodwill since in practice it is very difficult to establish the duration of its useful life, this solution may involve a problem of assessment due to the possible influence of the goodwill generated internally on the value of the goodwill acquired externally: only adequate disclosure by firms can demonstrate the correctness of the assessment process. Furthermore, replacement of amortisation, usually straight-line, with the impairment test will tend to make the financial performances of the Italian firms more volatile: hence company disclosure becomes even more fundamental in the relationship with the investors (Teodori, 2006).

With regard to the impairment losses, on the other hand, what differentiates the two positions compared is not so much the theoretical concept of impairment losses as the method used to determine them, which in the IAS/IFRS appears much more wide-ranging and complex than the provisions of the Italian legislator.

Given these differences which reflect in practice on the determination of company performances, it is interesting to study if and how the companies communicate this important change to stakeholders.

5. The methodology applied

For analysis of the disclosure we used a disclosure-scoring system (Robb, Single and Zarzeski, 2001; Vanstraelen, Zarzeski and Robb, 2003), i.e. an analysis technique that provides for classification of the information in pre-selected categories and subsequent measurement of the related disclosure level. This technique is considered a partial form (Beattie, McInnes and Fearnley, 2004) of content analysis (Kassarjian, 1977; Krippendorff, 2004).

More specifically, the research method consisted of the following phases:

– analysis of the IAS 38 and specific requirements in terms of disclosure;
– identification, by the research group, of the categories and individual variables contained in them, in the light of the findings of the international accounting standard study phase;
– construction of the disclosure-scoring sheet and definition of the rules for identification of the individual variables;
– application of the investigation technique by two researchers on the same sample of financial statements, highlighting any differences in the findings. In this pre-analysis phase, in order to make the behaviour of the researchers as uniform as possible, some modifications had to be made to the basic scheme, and only after achieving 90% identity between the results did we begin analysis of the documents pertaining to the study[3];
– analysis of the documents and application of the detailed rules defined in the pre-analysis phase to the parts of the financial statement significant for the research (in particular the explanatory notes and statements) attributing the score 0/1 to each variable, considering all equally important in terms of disclosure;
– identification of the data and subsequent processing of the results.

The variables used for analysis of the documentation amount to a total of 62, grouped into three categories (Appendix – Panel 1):

a) *recognition and derecognition*, with specific reference to the various possibilities provided for by the Board;
b) *accounting model and measurement after recognition*, taking account of the peculiarities relative to the different accounting treatment permitted by the standard in question;
c) *useful life*, with particular attention to the distinction between intangible assets with finite useful life and indefinite useful life.

The studies on the disclosure indexes are based on the general principles of content analysis. With regard to these indexes, the main problem is to assess the relationship between quantity and quality of the disclosure. In this regard, Botosan affirms that *"although important, assessment of the quality of the information is very difficult"* (Botosan, 1997). It should be pointed out that in this study we shall not be investigating the quality of the disclosure (Diamond and Verrecchia, 1991; Hopkins, 1996) and the indicators that can be constructed with regard to the quality of the

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[3] Kassarjian (1977) affirms that if the analysis is performed by several researchers, to ensure the reliability of the information, the level of homogeneity of the results must not be below 80%.

information (Beattie, McInnes and Fearnley, 2004) but the level of disclosure, via the construction of an index score (Marston and Shrives, 1991), taking account of the information complexity of the company. In other words, we shall not simply be assessing the presence/absence (0/1) of a variable but its actual availability vis-à-vis the existence of a specific information requirement (Cooke and Camfferman, 2002). By way of example, it is not significant to use in the calculation the variables connected with development costs if the company does not carry out research. This approach permits the avoidance of unjustified over/under-estimations.

For this purpose, all the variables used in the research have been divided into three types:

a) *the introductory or context variables*, to which no score is attributed, because although useful for defining the environment in which the disclosure of a company develops, they cannot be directly connected with it. For example, what is important is not the mere presence of intangible assets with indefinite useful life (introductory variable) but the level of disclosure associated with them (subordinate variable, see point b) below). The introductory variables are necessary to point out the level of potential disclosure: if a company has not internally generated intangible assets, all the connected subordinate variables are not considered because the information is not important for this topic;

b) *the subordinate variables*, which are taken into account only when the communication need is present within the company. For example, the topic of frequency of revaluation (subordinate variable) is examined in detail only if revaluation model as accounting model is used by the firm (introductory variable);

c) *the autonomous variables*, which do not depend on other variables and for this reason must always be disclosed in the financial statement. For example, given the presence of intangible assets, companies must always indicate the accounting model chosen.

It should be pointed out that the difference between autonomous and subordinate variables refers not so much to the importance as the connection with/dependence on the introductory or context variables. In other words an autonomous variable does not depend on others while a subordinate variable is considered for calculation of the disclosure index only upon the occurrence of an event; when the event takes place, the disclosure becomes significant. In the Appendix, the category of each variable is indicated beside it.

In the study, there are 3 autonomous variables, 41 potential subordinate variables and 18 introductory variables. The last kind of variable is not directly used for developing disclosure index.

The procedure described above gives us, for each company, a disclosure indicator that could be defined relative, between 0 and 1 (better between 0% and 100%), obtained by the ratio between the score achieved by the company and the actual situations in which the information has to be communicated. The latter is obtained from the sum of the autonomous variables – always considered – and the subordinate variables, only when the information need recurs in the company. In short, the value of the numerator represents what the company has actually communicated; that of the denominator what it should have communicated in the light of the existing "information complexity": for this reason also the denominator can vary from company to company.

The disclosure index (Teodori, 2006) commented on below[4] is the overall or summary mean, which can be constructed at several levels: for single company, for entire population or for each stock exchange index. In both cases the disclosure index corresponds to the mean calculated considering the disclosure indexes of the individual companies.

$$(DI) = \sum_{i=1}^{n} \frac{(x_i + y_i)}{(X + Y_i)} \Big/ n$$

where:

x_i = effective autonomous variable X = number of autonomous variables n = number of companies

y_i = effective subordinate variable Y_i = number of potential subordinate variables

Lastly, to understand the factors affecting the level of disclosure on the intangible assets, the following hypotheses has been formulated:

H1: there is a positive relationship between level of disclosure and incidence of the intangible assets on the total assets; incidence of the intangible assets on the equity; level of capitalisation (a variable that discriminates inclusion of the individual company in a specific Stock Exchange indexes); number of transactions performed (both in terms of annual total and daily mean); volatility on an annual basis; turnover ratio on

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[4] See par. 7.

an annual basis. There is a negative relation between level of disclosure and performance on an annual basis.

H2: the best results in terms of level of dislcosure are performer by compagnie audited by the Big 4.

The analysis took as its reference three different Stock Exchanges indexes also in an attempt to understand the existence of links between communication choices – measured summarily by the disclosure index – and some variables expressing on the one hand the importance of the intangible assets and, on the other, the characteristics of the individual Stock Exchange indexes.

The variables belonging to the first group are connected with the quantitative importance of the intangible assets: incidence on the total assets and incidence on the equity. With the increase in the quantitative importance of the intangible assets in the economy of the company, the level of disclosure towards the outside should increase, thus offering a better understanding of its strategic role.

The second group comprises the variables relative to the stock exchange market: capitalisation, number of transactions, volatility on an annual basis, turnover ratio on an annual basis, performance on an annual basis. For the first four, a positive relationship exists, as they identify situations in which there is greater attention to and demand for information on the part of the investors. More specifically, as the capitalisation increases, the number of stakeholders increases; as the number of transactions increases, the greater the number of subjects involved in the market; with increase in volatility, an indicator that measures the uncertainty or variability of the return of a financial asset and therefore its level of risk, the greater the demand for information; higher turnover levels (indicator of liquidity) indicate widespread interest in the company. As regards performance on an annual basis, reduction should involve a greater information flow towards the outside.

With reference to the second hypothesis, the companies audited by the Big 4 produce an high level of information because the Big 4 have a reputation, very qualify employees and a more neutral relationship with the company audited.

Having specified the starting hypothesis, we wish to ascertain the existence of a linear relation between the level of disclosure and the explanatory variables, via calculation of the linear correlation index (Pearson) highlighting the R^2 (Draper, 1966).

6. The research sample

In the context of the companies quoted on the Milan Stock Exchange, those with shares traded on the Mercato Telematico Azionario (Telematic Share Market)[5] were selected, on the basis of the market index criterion[6]. The following three were selected in particular:

– The S&P/Mib, the main index for the Blue Chip segment, totalling 40 companies (both 2005 and 2006). We selected it due to its high level of capitalisation (over 1 billion euro), which should presuppose, given the number of national and international stakeholders, a high quali-quantitative level of disclosure. The S&P/Mib index was set up in conjunction with Standard & Poor's to provide a broad accurate representation of the Italian share market. The components of the basket are chosen not only with reference to the capitalisation but also on the basis of a sectorial classification.
– The Star, the main index of the Star segment, consists of 54 companies in 2006 (50 companies in 2005), and is dedicated to companies with capitalisation below one billion euro but above 40 million, which respond to specific requirements in terms of liquidity, transparency and corporate governance, characteristics that make it an interesting subject for study as we would expect advanced communication processes. The companies in the Star index are traditional businesses.
– The TechStar, also an index of the Star segment, consisting of 22 companies in 2006 (21 companies in 2005) operating in the technological field.

The choice of the three indexes is due to their importance on the stock exchange market, the significant differences in terms of capitalisation and business and, therefore, their representativity in the Italian economic context.

The importance of intangible assets in Italian companies has already emerged in previous studies, connected with analysis of the transition to the IAS/IFRS (Teodori, 2006). With reference to all the companies belonging to the three indexes examined, the mean incidence on total investments is around 14%. In these studies it emerged that, considering the business carried out by the companies, the greatest investments in intangible assets are made by non-finance companies. More specifically, in these companies

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[5] The reference dates are 31st December 2005 and 31st December 2006.
[6] Because of the criterion is the market index, the number of companies may change every year.

the mean incidence is 16%, as against 1% in the finance companies: this difference, again on the basis of a previous study (Teodori, 2006), affects the level of disclosure, with lower index values.

When we change the reference term (from the capital invested to the equity), the differences do not change: at overall level the incidence is on average 50%, with values of 53% for the non-finance companies and 12.5% for the finance companies.

On the basis of these considerations, we decided to exclude the finance companies from the analysis, reducing the overall number from the 116 companies in 2006 (111 companies in 2005) initially selected to 95 (87 in 2005); a further 6 in 2006 (5 in 2005) were excluded for the following reasons: absence of obligation to draw up the consolidated financial statement, use of accounting standards (US Gaap) not coherent with the aim of the research, foreign head office. The final sample therefore consisted of 89 companies (82 companies in 2005). The complete list of the companies included in the sample is given in the Appendix – Panel 2.

To conclude, we highlight some elements differentiating the three Stock Exchange indexes (Table 2).

TABLE 2 – *Some differences between indexes*

	Number of companies		Capitalisation on average (ml euro)		Trading (daily average)		Trading (total number)	
	2005	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**
S&P/Mib	21	22	12,792	13,299	2,878	3,277	731,056	832,349
Star	41	46	266	310	194	339	47,964	46,978
TechStar	20	21	182	240	438	313	42.510	75,054
Total	**82**	**89**	**3,453**	**3,504**	**941**	**1,059**	**224.572**	**247,739**

As regards the quantitative importance of the intangible assets, in 2006 the mean incidence on the total assets drops from 25% in the S&P/Mib to 13% in the Star (19% for the TechStar), while the incidence on the equity varies from 90% in the S&P/Mib to 38% in the Star (41% in the TechStar)[7]: a fairly clear picture therefore emerges, in which the intangible assets are more important in companies with greater capitalisation. The quantitative importance of the intangible assets concerns mainly goodwill, brands and patents.

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[7] In 2006 the mean incidence on the total assets drops from 23% in the S&P/Mib to 15% in the Star (16% for the TechStar), while the incidence on the equity varies from 85% in the S&P/Mib to 39% in the TechStar (41% in the Star).

7. Empirical evidence and discussion

7.1 The main results on the level of disclosure in compliance with IAS 38

a) Recognition and derecognition

All the companies declare that the first entry of an intangible asset is performed at cost, as provided for by the IAS 38. In particular (Table 3), the following are the most common modes of acquisition of an intangible asset in 2005 and 2006: separate acquisition, business combination, and internal generation. Recourse to government grants emerged in particular for the TechStar companies in 2005: the majority of these, do not mention the accounting criterion.

TABLE 3 – *Recognition*

Variables	Total		S&P/Mib		Star		TechStar	
	2005	2006	2005	2006	2005	2006	2005	2006
Business combination	93%	97%	95%	100%	93%	96%	90%	95%
- definition of the fair value	3%	14%	5%	32%	3%	9%	0%	5%
- methods of determination of fair value	100%	100%	100%	100%	100%	100%	100%	100%
Separate acquisition	100%	100%	100%	100%	100%	100%	100%	100%
- information on acquisition costs	6%	10%	14%	18%	5%	11%	0%	0%
Internal generation	71%	71%	67%	73%	66%	67%	85%	76%
- evidence of the development phase	93%	95%	93%	94%	93%	94%	94%	100%
- kind of development activity	95%	78%	93%	75%	82%	81%	100%	75%
- composition of the development costs	31%	14%	14%	0%	37%	26%	35%	6%
Government grant	13%	3%	5%	5%	7%	4%	35%	0%
Exchange of assets	0%	0%	0%	0%	0%	0%	0%	0%

More specifically, with reference to the business combinations, in the grille of analysis the emphasis was placed on the concept and modes of determination of fair value: regrettably, however, only few companies provide a definition of it (together with the methods of determining the value), even if the situation is improved particularly in the S&P/Mib in the last year. Since fair value is one of the most important new features

introduced by the IAS/IFRS in Italy, the situation that emerged in terms of information is considered to be inadequate.

In relation to separate acquisition, the most important element is represented by the recognition of costs in the carrying amount of an intangible asset: with respect to Italian law, there are some differences, for example the prohibition to capitalise, in accordance with the IAS/IFRS, costs for the introduction of a new product or service. In 2006 in 90% of cases (94% in 2005), unfortunately, the problem is not tackled while in 10% (6% in 2005) the information appears to be fairly general; the S&P/Mib provides the best results although inadequate.

As regards the internally generated intangible assets, the companies affected by the problem place the emphasis on the development phase. In particular, in the two years considered, the most frequent information provided by the companies (without important differences between the three indexes) refers to how the intangible assets will generate probable future economic benefits (73% on average) and to the ability to reliably measure the expenditure attributable to the intangible asset during the development phase (72% on average)[8]. With reference to the types of development activity, the information tends to be less frequent in 2006. More in detail, in 2005 the activity consists of other projects not classifiable into the situations provided for by the IAS 38 (83% on average): i.e. development costs sustained for the direct production of software, services for portals, specific technological components without recourse to previous models or prototype. In 2006, companies refer mainly to two examples expressed by the IAS 38: design, construction and verification of prototypes or models prior to their production and use (43% on average) and design, construction and testing of a chosen alternative for new or improved materials, products, processes, systems or services (41% on average). Both in 2005 and 2006 there are not significant differences between the three indexes.

However, in relation to these two aspects (evidence on the development phase and kind of development phase), a common attitude emerged on the part of the companies, which confine themselves to referring to the conditions expressed by the IAS 38, often in the notes on the assessment criteria, without going into detail.

Finally, as regards the composition of the cost relating to the internal production of intangibles, the situation that emerged in terms of information

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[8] Multiple replies were permitted in relation to these variables. Companies tend to give less information on the technical feasibility of completing the intangible assets; the intention to complete the intangible assets; the ability to use or sell the intangible assets; the availability of adequate technical and financial resources to complete the development phase.

is considered to be inadequate particularly in 2006: in this case the Star provides the best results.

The IAS 38 requires an intangible asset to be eliminated from the financial statement only at the time of retirement or when no economic benefit is expected for its utilisation or retirement.

In relation to this particular theme, we searched for specific information on the different modes of derecognising an intangible asset (sale, stipulation of a financial leasing contract, donation, other methods) but no significant data emerged from the analysis.

b) Measurement after recognition

Application of the revaluation model in the assessment of intangible assets, although possible, is considered an unlikely situation also by the IAS 38 due to the difficulties connected with the presence of an active market. Assessment at cost is also the easiest choice for Italian companies who in this way do not have to modify the criteria applied in the past; the entire assessment and accounting process is also greatly simplified. From the analysis it was found that 100% of the companies apply always the cost model in concrete terms. In our opinion the method adopted by the companies examined is understandable since, given the characteristics of the intangible assets, it is very difficult to obtain objective elements for application of the fair value.

c) Useful life

One of the main new features introduced by the IAS 38 is the distinction between intangible assets with finite useful life and indefinite useful life. For this reason we expected the companies to dedicate particular attention to communicating and justifying this classification within the intangible assets.

From the analysis (Table 4) it emerged that this distinction is always clearly indicated, although, regrettably, more specific information on the criteria adopted to classify intangible assets as having an indefinite or definite useful life is generally lacking. In other words the companies (without significant differences between the indexes) tend to referring to the general conditions expressed by the IAS 38, thus the information found in the financial statements is quite similar despite the different sectors of activity in which the firms carry out their business.

TABLE 4 – *Useful life*

Variables	Total		S&P/Mib		Star		TechStar	
	2005	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**
Intangible assets with indefinite useful life	96%	98%	100%	96%	93%	98%	100%	100%
- impairment test	98%	98%	100%	96%	95%	94%	100%	100%
Intangible assets with finite useful life	100%	100%	100%	100%	100%	100%	100%	100%
- amortisation method	63%	64%	52%	64%	63%	63%	75%	67%
- amortisation rate	76%	74%	86%	68%	71%	74%	75%	81%
- residual value	0%	5%	0%	5%	0%	2%	0%	0%

With particular reference to the intangibles with indefinite useful life, in 98% of the cases it is affirmed that they undergo impairment test, on an annual basis (96% in 2006 and 98% in 2005) and/or when symptoms of depreciation occur (45% in 2006 and 72% in 2005). In this case the TechStar provides the best results, however the general situation can be considered fairly adequate.

As regards the type of intangible asset with indefinite useful life, in all cases the goodwill is included in this category, and also the brands in some cases. In this regard it should be pointed out that some companies grouped the brands into the two classes permitted by the IAS 38 but without providing adequate information to justify this different treatment.

The two different classifications obviously have a different impact on the financial statement results: in the case of brands classified as having an indefinite useful life, the EBIT and the net income, conditions being equal, are certainly better with respect to the situation in which these assets are amortised. In general terms it should be underlined that, due to the effects of non-amortisation of the intangible assets with indefinite useful life on financial performances and for the purpose of greater transparency, a higher level of information is necessary clearly justifying the classifications adopted by the companies, especially when, in addition to the goodwill, other types of intangible assets with indefinite useful life are also taken into consideration. Other kinds of intangible assets with indefinite useful life found in the study are: key money, masthead, library, radio-frequency. Also in these cases the information to justify the useful life is very synthetic or null.

In relation to the intangible assets with finite useful life, in 64% of the cases in 2006 (63% in 2005) the amortisation method is indicated: in

particular, in almost all it is the straight-line method. Furthermore, in 74% in 2006 (76% in 2005) the amortisation rate or duration of the useful life is indicated. As regards the differences between the indexes, only the Star companies have a constant behaviour. However, considering that these two simple kinds of information on amortisation are compulsory according to the IAS 38 (par. 118), the general situation is not satisfactory.

With reference to the accounting representation of the amortisation in the income statement table, from the analysis it emerged that in 9% of cases in 2006 (13% in 2005) amortisation of the intangible assets figures as an independent class (with the prevalence of the Star and TechStar companies).

Lastly as regards the residual value, no significant information emerged.

7.2 The disclosure index

The disclosure index represents a summary indicator of the completeness of the external communication, applied to intangible assets. The results obtained can be examined on two levels: in overall terms (89 companies in 2006; 82 companies in 2005) and in relation to the Stock Exchange index they belong to (Table 5).

In the analysis phase, we will start from the overall results and then identify and comment on the main elements of differentiation at analytical level.

The disclosure index reaches a mean value that is not particularly high (63%), only sufficient in overall terms: the minimum value does not exceed 50%, a figure that is certainly negative and common to 10 companies (7 in 2005); in 7 cases (5 in 2005), however, results superior to 75% are obtained, a value very near to the maximum (85% in 2006; 81% in 2005).

TABLE 5 – *Summary results of the analysis*

	Total		S&P/Mib		Star		TechStar	
	2005	2006	2005	2006	2005	2006	2005	2006
Disclosure Index	63%	63%	63%	63%	64%	62%	64%	64%
SD	8%	9%	8%	12%	9%	10%	8%	6%
Median	64%	63%	62%	61%	64%	62%	64%	67%
MAX	81%	85%	79%	84%	81%	85%	76%	72%
MIN	42%	39%	46%	44%	42%	39%	46%	46%

The index highlights that on average only 63% of the information required by the IAS 38, and for which the pre-conditions for communication exist, is actually present: it should be noted that it is not 63% of the

disclosure required overall by the standard but 63% of the disclosure connected with the specific individual situations.

Given the importance of the annual report in terms of information, more satisfactory results were expected: after the broad disclosure relative to the transition (Teodori, 2006)[9], there is a return to the condition that could be described as "ordinariness", in which the situation undergoes a significant change, almost as if after application of the IFRS 1, the "novelty" phase introduced by the international accounting standards is considered to be over: in 48% of the companies the indicator of disclosure, with respect to the 2005, deteriorates.

Alongside the value of the index, the variability between the companies must be considered, which is relatively limited, indicating a substantially uniform behaviour; furthermore, the median has values very near the mean, indicating an analogous distribution of the companies above and below the mean.

With reference to the Stock Exchange indexes, on the other hand, the most communicative one is the TechStar (64%), followed by S&P/Mib and Star but the differences are very limited.

These results must be read according to the characteristics of the companies in each Stock Exchange index: the companies in the TechStar, on average smaller companies many of them with modest short-term performances, require more detailed communication processes above all vis-à-vis the classes of assets that are critical for the overall performances, such as the intangible assets studied here.

There is a convergence between S&P/Mib and Star, in terms of both mean and variability. This is a very interesting finding as there is substantial uniformity of disclosure, which did not emerge in previous research on financial communication in Italy. In fact, it is widely known that companies with greater capitalisation communicate quali-quantitatively to a greater extent: the similarity recorded here depends on both the specific item observed (intangible assets – IAS 38), certainly more important – in terms of innovativeness – for those with lower capitalisation[10] and even more the high level of information which the companies in the Star index are required to provide, even if this is the only market index in which the disclosure index worsened.

It is therefore worth pointing out that the results obtained depend on the partial nature of the analysis: observing only one type of asset and the

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[9] The disclosure index was 79%, with minimum value 46% and maximum 100%.
[10] See par. 7.3 for more specific results on capitalisation.

disclosure associated with it does not allow us to formulate considerations on the overall communication policy of the companies; however, it is certainly interesting to see whether, vis-à-vis the importance of a phenomenon, the companies coherently adapt their policies concerning disclosure of information to the outside.

Examining the analytical results relative to application of the content analysis, according to a more qualitative approach (Veneziani, 2006), the first general observation to be made is that there is a certain superficiality as regards information, which becomes incompleteness as can be seen, for example, in definition of the purchase cost, introduction of the term fair value without further specifications (concerning acquisition via business combination) and the reference to parts of the IAS 38 practically as is, without going into any particular detail. The similarity of information is striking, analogous in all the types of companies, whereas in the case of development costs, we would expect some differentiation, also at definitional level.

The second general observation concerns the distinction between assets with a finite and indefinite useful life: on this crucial aspect, a certain gap emerges between information expectations and actual behaviour of the companies. In fact, not all of them deal with the question in accounting documents and when they do, they concentrate more on the types of assets than on the elements used to support identification of the economic duration. Goodwill is established as having an indefinite useful life by the IAS/IFRS and therefore all companies quote it as an example but none of the other assets are examined in detail, contrary to what is required by the standards. From the empirical analysis it emerges that the most widespread type of asset with indefinite useful life is represented by the goodwill, although there are also other assets, for example brands.

In this regard, there is widespread approval in the financial community of the decision of the Board not to amortise the intangible assets with indefinite useful life but to subject them to annual impairment test, since in this way the asset will have a value that is more realistic and representative of the expected economic potential.

Without going into the subject of impairment, this observation is important in terms of communication as it identifies one of the classes of assets where disclosure must be greater than in the past, not only because it is required by the new standards but also as a result of the changes affecting the international economic context. This is necessary to allow the market to appropriately assess both the greater profitability – due to lack of amortisation – and the correlated policies adopted concerning self-financing and distribution of the dividends. The greater disclosure will also allow for

improved assessment of the depreciation, in order to understand the strategic impact connected with it.

For these reasons we believe there is plenty of scope for improvement in this area, in order to make the IAS/IFRS financial statement useful for all external users, first and foremost the investors.

7.3 The factors affecting the level of disclosure in compliance with IAS 38

After illustrating and commenting on the disclosure index, the next step is to verify the existence of specific factors that affect its value. For this purpose, as illustrated in the paragraph dedicated to methodology, some variables have been identified that can be classified into two groups: the first expressing the quantitative importance of the intangible assets and the second the characteristics of the individual Stock Exchange indexes.

Here again, the results obtained (Tables 6 – 7) can be examined both at overall level and with reference to the individual Stock Exchange indexes.

In general terms, very weak linear relations appear between the disclosure index and the individual explanatory variables, with a prevalence of those belonging to the first group, but with low and therefore non-significant values. The signs of the correlations are substantially as expected, even though some differences are found in the variables connected with the Stock Exchange, in particular as regards the Star index and the turnover and volatility in 2006. From 2005 to 2006 the relation between disclosure index and quantitative importance of intangible assets increases for the lower capitalized market indexes.

In the context of the individual Stock Exchange indexes the situations are different, indicating the different characteristics and importance of the individual variables even though, here again, the values are of limited significance.

TABLE 6 – *The results of the analysis: the variables connected with the quantitative importance*

		IA/Total Assets		IA/E [11]	
		2005	**2006**	**2005**	**2006**
Total		0.13	0.23	0.06	0.17
	R^2	0.02	0.05	0.00	0.03
S&P/Mib		0.21	−0.05	0.04	−0.02
	R^2	0.04	0.00	0.00	0.00
Star		0.11	0.46	0.13	0.48
	R^2	0.01	0.21	0.02	0.23
TechStar		0.11	0.40	0.10	0.16
	R^2	0.01	0.16	0.01	0.03

TABLE 7 – *The results of the analysis: the variables connected with the stock exchange market*

		Capitalisation		Transactions (daily mean)		Transactions (total number)		Volatility		Turnover		Performance	
		2005	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**	**2005**	**2006**
Total		0.12	0.21	0.11	0.07	0.04	0.12	0.10	−0.24	0.17	−0.12	−0.18	−0.21
	R^2	0.02	0.05	0.01	0.00	0.00	0.01	0.01	0.06	0.03	0.02	0.03	0.04
S&P/Mib		0.32	0.40	0.26	0.31	0.23	0.31	−0.09	−0.27	0.18	−0.01	−0.12	−0.14
	R^2	0.10	0.16	0.07	0.09	0.05	0.09	0.01	0.07	0.03	0.00	0.01	0.02
Star		−0.41	−0.17	−0.21	−0.27	−0.18	0.07	−0.08	−0.30	0.12	−0.16	−0.12	−0.24
	R^2	0.17	0.03	0.05	0.07	0.03	0.00	0.01	0.09	0.01	0.03	0.01	0.06
TechStar		0.00	−0.20	0.32	−0.33	−0.05	−0.30	0.26	−0.16	0.33	−0.17	−0.42	−0.27
	R^2	0.00	0.04	0.11	0.11	0.00	0.09	0.07	0.02	0.11	0.03	0.18	0.07

In the S&P/Mib, the highest values are connected with the market variables in particular as regards the transactions – a signal that as trading increases, the information on the topic investigated improves – and capitalisation. The variables on the incidence of the intangible assets are not important: this result means that the communication policy does not depend on the quantitative incidence of the individual classes of assets.

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[11] IA = intangibile assets; E = equity.

At the other end of the scale are the TechStar companies, the communication policies of which appear to be coherent with the connotations highlighted previously (importance of the intangible assets and criticality of the level of performance): in this index there are many companies with short-term economic performances that are not fully satisfactory and this justifies the greater correlation with the performance variable, of almost nil importance in the other cases. Capitalisation also appears to be non-significant, characterised by null or negative sign and modest variability within the segment. Modest company size (in relative terms) is an important factor in explaining why the specific variables on the intangible assets take on greater importance with respect to the S&P/Mib, because as size decreases, companies tend to focus their attention more on the strictly accounting aspect of treatment of the intangible assets, since it represents an important novelty for them. As it is a new problem, they are inclined to provide more information for the stakeholders.

The Star companies occupy a substantially intermediate position, although the greatest similarities are with the TechStar, also due to the similar dimension: this is the Stock Exchange index where the lowest values were generally obtained and where it is not easy to identify a unifying element between the companies other than the high communication requirements which, in terms of intangible assets, are considered sufficient. The Star has a disclosure index analogous to the S&P/Mib while recording a much lower incidence of the assets. Lastly, the fact that the values identified in the Star index are generally less significant has partly to do with the high level of information which the companies in this index are required to provide a part from specific situations.

With reference to the relation between disclosure index and audit companies, a similarity in the results exists. In other words, the hypothesis that the best results in terms of level of disclosure are performed by companies audited by Big Four is not verified. The average disclosure index of the companies audited by Big Four is the same of the other companies (in 2005 slightly lower).

8. Conclusions, limitations and future research

In the concluding remarks we wish to reiterate that the problem of financial communication is of fundamental importance in general but in Italy in particular because, taking the companies as a whole, financial communication has always been subject to legal obligations, with little attention paid to the national accounting standards and to the financial market. The international accounting standards, based on a conceptual

model very different from the one existing in Italy, are strongly oriented towards the markets and towards the future, identifying the investors as the reference subjects: the difference of approach and the considerable importance of the change are therefore obvious.

The first two annual IAS/IFRS-compliant documents are a fundamental step towards full assimilation of the new standards, but so far the results have not been particularly satisfactory. The theme of intangible assets – and therefore also disclosure – certainly features elements representing significant change with respect to the past: on the one hand, therefore, a greater drive towards innovation was expected but on the other, the high level of innovation involved, which requires lengthy assimilation times, may have had a negative effect. In fact, in the initial phase, the need for adaptation prevails over that of developing a new communication approach. In the future companies would certainly be required to provide greater information than at present, significantly increasing voluntary disclosure, a process which so far has only been partially implemented: the information needs to be more detailed, focusing attention on the most important themes according to the new accounting standards.

It becomes important to see the process of adoption of the international standards in the correct light. It should not be considered by companies simply as an accounting change: they must go beyond this, in order to fully appreciate the effects and potential opportunities of this cultural change which, whether judged positively or negatively, represents, at least for Italian companies, the most important break with the past that has occurred over the last decades.

To conclude, some of the points that have emerged during the analysis are underlined below. In particular, shifting attention to the analysis of the disclosure in compliance with the IAS 38, the following summary considerations can be formulated.

- ✓ Despite introduction of the fair value, a very innovative aspect in accounting tradition based on historical cost, there is no specific information on it; it is almost as if the terms have simply been substituted (from cost to fair value) when required by the international accounting standards.
- ✓ At the level of recognition of the intangible asset, the most recurrent information refers to the development costs, the capitalisation conditions of which are those already established by the Italian accounting standards, while very general expressions are used with reference to capitalisation of the directly attributable costs.
- ✓ There is also little information in relation to the distinction between

intangible asset with finite useful life and indefinite useful life. In our opinion this is a negative situation, for two reasons in particular: on the one hand the IAS 38 requires indication of the rate and method of amortisation of the intangible assets with finite life (information not always present) and, an even more important aspect, the reasons for classifying the asset as having an indefinite useful life, with description of the factors that have determined this choice; on the other, the distinction between intangible asset with finite and indefinite life has important effects on the financial performances of the companies. In order to obtain a clear representation of the intangible assets and the financial performances, therefore, a more open attitude and greater communication transparency on the part of the firms is desirable, to safeguard the stakeholder from possible "incomes policies".

✓ There are not many significant differences among the three Stock Market indexes in terms of disclosure. The disclosure index and its variability are similar: only Star index reduced the value from 2005 to 2006. In broad terms in the two-years period, in 48% of the companies disclosure index deteriorated while in 52% of the companies improved or remained equal.

✓ In more general terms, our judgement on the level of disclosure emerging from the analysis performed is not positive. Given the scope of the changes introduced by the IAS/IFRS and the importance of intangible assets for the companies considered, we expected more information, also of the voluntary type, to communicate to the outside the particular characteristics of the new accounting standards, whereas the attitude that emerged on the part of the companies investigated is conservative, as if the IAS/IFRS had always been applied or as if they were of little importance. Furthermore, not only is there little voluntary information but at times there is also little mandatory information concerning the most delicate aspects introduced by the IAS 38.

The study contains an initial investigation of the factors explaining the level of disclosure concerning the intangible assets but very weak linear relations appear between the disclosure index and the explanatory variables. Differences are observed between the individual indexes: in the S&P/Mib the biggest link is with the market variables while the variables connected with the incidence of the intangible assets are less important as the communication policy does not depend on the quantitative incidence of the individual asset classes; in the TechStar, on the other hand, although the major correlation is with the performance variable, the specific variables concerning the intangible assets are also important, since the strictly

accounting dimension becomes increasingly significant as the dimension is reduced; the Star companies occupy a substantially intermediate position, with greater similarities with the TechStar, although the significance of the results is inferior and the unifying element identified in the specific information requirements becomes more important.

Finally, disclosure index is not influenced by the audit companies (Big Four or others).

We believe that the analysis and methodology proposed should be considered a first attempt to verify the level of disclosure and its determinants with reference to a very important asset category which, since 2005, has been characterised by a new accounting treatment owing to the application of the IAS/IFRS in Italy. We think possible to apply this methodology to another type of asset or to a wider research about the disclosure in compliance with international financial reporting standards.

We note here two limitations of the research. First, it may be necessary to consider almost three/four years, to verify the evolution of the results and the changes in the culture approach to financial statements by Italian companies. A second limitation is that all the variables used for the disclosure index are equally counted: the quality of communication depends on quantity.

To refine the proposed results, future research should address a few critical issues. First, the variables related to impairment should be considered in the disclosure model, to evaluate the communication level facing the assessment of loss on intangible assets. Second, further analysis should be conducted by questionnaires to be submitted to worst and best companies to know the reasons for their choices. Third, other statistical models will be used to verify other types of relations between level of disclosure and explanatory variables.

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APPENDIX

Panel 1 – Disclosure variables about IAS 38

a)	**Recognition and derecognition**		
1	Initial recognition (way of acquisition)	A	
	Separate acquisition		
2	Evidence of the separate acquisition	I	
3	Composition of the acquisition cost	S	2
	Business combination		
4	Evidence of the acquisition as part of business combination	I	
5	Existence of definition of the fair value	S	4
6	Criteria for defining fair value	S	4
7	IA not recognised in the balance sheet of the seller	I	
8	Evidence of the reasons	S	7
	Government grant		
9	Evidence of the acquisition by way of government grant	I	
10	Evidence of the initial recognition	S	9
11	Evidence of the accounting criteria	S	9
	Exchange of assets		
12	Evidence of the acquisition by way of the exchange	I	
13	Commercial substance of an exchange transaction	S	12
14	Evidence of the initial recognition	S	12
	Internally generated IA		
15	Evidence of the internally generated IA	I	
16	Development phase	S	15
17	Elements used to assert development phase	S	15
18	Evidence of development activities	S	15
19	Research and development expenditures recognised as costs (not IA)	S	15
20	Components of the development costs	S	15
	Contractual commitments		
21	Contractual commitments for the acquisition of IA	I	
22	Value of the contractual commitments	S	21
	Retirement		
23	IA retired or disposed	I	
24	Evidence of the retirement and disposal way	S	23
b)	**Accounting model: measurement after recognition**		
25	Accounting model chosen	A	
	Revaluation model		
26	Revaluation model as accounting model	I	
27	Frequency of the revaluation	S	26
28	Difference in IA between revaluation and historical cost models	S	26
29	Date of the last revaluation	S	26
30	Evidence that revaluation model is applied at the whole of the classes	S	26
31	Accounting method for any accumulated amortisation	S	26
32	Increase of IA's carrying amount	I	
33	Accounting treatment for the increase in the carrying amount	S	32
34	Value of the increase	S	32
35	Specific information about the increase	S	32
36	Decrease of IA's carrying amount	I	
37	Accounting treatment for the decrease in the carrying amount	S	36
	Deprecation		

38	Value of the deprecation	S	36
39	Specific information about the deprecation	S	36
40	Review in the measurement criteria	I	
41	Evidence of the reasons	S	40
c)	**Useful life**		
42	Factors used to estimate useful life	A	
43	Evidence of IA with finite useful life	I	
44	Evidence of IA with indefinite useful life	I	
	Amortisation		
45	Amortisation method	S	43
46	Evidence of the amortisation period	S	43
47	Line item in the income statement for the amortisation charge	S	43
48	Gross carrying amount, accumulated amortisation, reconciliation of carrying amount (begin/end of the period)	S	43
49	Evidence of the residual value	S	43
50	Residual value assumed different from zero	I	
51	Factors used to assume residual value different from zero	S	50
52	Review in the amortisation method and period	I	
53	Value of the review	S	52
54	Factors used to review amortisation period and method	S	52
	IA and contractual and legal rights		
55	Evidence of contractual and legal rights related to IA	I	
56	Evidence of the contractual and legal right period	S	55
	Impairment test		
57	Impairment test for the indefinite useful life IA	S	44
58	Frequency of the impairment test	S	44
	Others specific situations		
59	Others specific situations	I	
60	IA not yet amortised	S	59
61	IA fully amortised	S	59
62	IA controlled but not recognised	S	59

Panel 2 – Companies

STAR INDEX	2005	2006
Actelios	X	X
Amga	X	
Ansaldo		X
Ascopiave		X
Astaldi	X	X
Biesse	X	X
Bolzoni		X
Brembo	X	X
Buongiorno Vitaminic	X	
Cairo Communication	X	X
Cdb Web Tech	X	X
Cembre	X	X
Cementir	X	X
Centrale Latte Torino	X	X
Cobra		X
Cremonini	X	X
Dmail Group	X	X
Ducati	X	X
Elica		X
Emak	X	X
Fidia	X	X
Fiera Milano	X	X
Graniti Fiandre	X	X
Guala Closures	X	X
Ima	X	X
Interpump Group	X	X
Irce	X	X
Isagro	X	X
Jolly Hotel	X	X
La Doria	X	X
Mariella Burani	X	X
Marr	X	X
Mirato	X	X
Mondo Tv	X	X
Negri Bossi	X	X
Nice		X
Panaria	X	X
Poligrafica San Faustino	X	X
Poltrona Frau		X
Polynt		X
Prima Industrie	X	X
Recordati	X	
Reno De Medici	X	X
Sabaf	X	X
Socotherm	X	X
Sogefi	X	X
Stefanel	X	X
Targetti	X	X
Trevisan	X	X

S&P/MIB INDEX	2005	2006
Aem	X	X
Alitalia		X
Autogrill	X	X
Autostrade	X	X
Bulgari	X	X
Enel	X	X
Eni	X	X
Fastweb	X	X
Fiat	X	X
Finmeccanica	X	X
Gruppo L'espresso	X	X
Italcementi	X	X
Lottomatica	X	X
Mediaset	X	X
Mondadori	X	X
Parmalat		X
Pirelli	X	X
Rcs Mediagroup	X	
Saipem	X	X
Seat Pagine Gialle	X	X
Snam Rete Gas	X	X
Telecom Italia Spa	X	X
Terna	X	X

TECHSTAR INDEX	2005	2006
Acotel	X	X
Buongiorno Vitaminic		X
Cad It	X	X
Cdc	X	X
Dada	X	X
Datalogic	X	X
Datamat	X	
Digital Bros	X	X
Dmt	X	X
Eems		X
El.En	X	X
Engineering	X	X
Esprinet	X	X
Eurotech	X	X
Fullsix	X	X
Gefran	X	X
I.Net	X	X
It Way	X	X
Reply	X	X
Saes Getters	X	X
Tas	X	X
Txt	X	X

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