IFRSs and accounting for intangible assets: the Telecom Italia case

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Abstract

Purpose – The purpose of this paper is to show whether and how International Financial Reporting Standards (IFRSs) are able to improve the quality of financial accounting information concerning intangible assets.

Design/methodology/approach – Being part of a wider project investigating the ability of IFRSs to improve accounting information concerning intangibles, this paper analyses the application of some IFRSs' key innovations to Telecom Italia. Considered innovations include two of the most relevant areas of change between Italian accounting principles to IFRSs, i.e. business combinations and accounting for intangible assets with indefinite useful life. Quality of accounting information is measured through four key parameters: correctness, transparency, prudence, and timeliness. Representation provided by Italian accounting principles and US GAAP of selected accounting events are compared in terms of the four key parameters, and differences in accounting information quality are systematically observed.

Findings – The findings in this paper show that the use of value-based measures in accounting actually leads to an improvement in the overall quality of information, by increasing correctness and transparency and leaving prudence and timeliness nearly unchanged. These early findings seem to support the conclusion that the path chosen by accounting evolution is correct, although some critical areas still exist.

Practical implications – The methodology proposed in this paper can represent a potential guideline for a wide range of researches concerning the quality of accounting information.

Originality/value – This paper provides three main contributions: a complete and structured critical review of literature on the evolution of accounting on intangible assets; an innovative framework to measure the quality of accounting information; a first in-depth analysis of the key changes in accounting for intangibles induced by IFRSs on the balance-sheets of Italian companies (through the case study).

Keywords Intangible assets, Fair value, Goodwill accounting, Financial reporting, Accounting standards, Italy

Paper type Research paper

Introduction

The main purpose of accounting is to provide a representation of the firm, which, although being conventional, reflects its actual structure at best, and particularly its value creation sources. Nevertheless, in the past three decades the nature of the most important sources of value changed considerably, moving first from production plants to distribution systems, and then to certain categories of intangible resources, such as technological competencies and customer relations. This change made traditional accounting techniques unable to pursue their goal, being mainly intended to represent

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companies whose key value sources were production plants and equipments. Consequently, an evolution process started in accounting science. Being part of a wider project aimed at understanding if and to what extent International Financial Reporting Standards (IFRSs) represent a step ahead in this process, this article analyses the potential impact if IFRSs on a specific case, Telecom Italia, which represent the most relevant case encountered so far by the authors. Such analysis is performed through a systematic comparison of Italian Generally Accepted Accounting Principles (GAAP) and US GAAP financial documents, exploiting the strong similarities existing between US GAAP and IFRSs concerning accounting for intangible assets.

The article is divided into two sections. The first section briefly illustrates the reasons why intangible assets became the most important category of strategic resources held by companies, and how this evolution made the change process in accounting science to begin. Subsequently, the current state of research on this topic is discussed, and the general method followed in our research project is illustrated. The second section, which is the core part of this article, focuses the chosen case study. It consists of a comparative study between the 2003 consolidated balance sheet of Telecom Italia Group, drawn up according to Italian GAAP, and the same report drafted according to US GAAP. Indeed, Telecom Italia is required to write its financial reports according to both accounting standards, being its shares listed both on the Milan Stock Exchange and the New York Stock Exchange, as well as on a few other European markets. The choice of 2003 was driven by the occurrence during that year of the merger between Olivetti and Telecom Italia. As a matter of fact, the method of accounting for M&A represents the most relevant area of innovation in the current release of IRFSs, and since US GAAP, as far as accounting for intangible assets is concerned, are really similar to IFRSs, an analysis of 2003 financial reports permits to understand what kind of improvements have been achieved, and in which areas further development is needed.

The evolution of accounting for intangible resources

It is well known that the ability of a firm to create economic value stems directly from its capability to generate profit above its cost of capital. This means that the firm's goal shall be earning profit superior to the market average, i.e. above its competitors. In order to reach this goal, the firm must get and maintain a position of competitive advantage. Consequently, the most important resources a firm must seek are those allowing it to obtain and keep a position of competitive advantage. According to the most recent research findings, these resources can be characterised through four properties (Dierickx and Cool, 1989, Peteraf, 1993):

(1) *Heterogeneity* across firms.
(2) *Ex-post limits to competition*, which permits to preserve heterogeneity over time.
(3) *Ex-ante limits to competition*, which allow the creation of added value.
(4) *Imperfect mobility*, which forces resources to remain inside the firm.

By observing which categories of resources have been showing such properties, it can be noticed that an evolution process of strategic resources towards immateriality has been taking place. As a matter of fact, these resources moved from production equipments to distribution systems, and finally to some particular categories of resources connected to technological know-how and to customer relationships: intangibles (see also Itami, 1987, and Barney, 1991).

Nevertheless, fairness and transparency of intangible resources are often poor on balance sheets. Reasons of this fact can be found in the rapidity showed by strategic resource evolution, as well as in the difficulties encountered by accounting in keeping up such pace (Watts, 2003). Indeed, enterprises show to be strategically interested in disclosing information about their value sources (Eustace, 2003). Consequently, it can be presumed that an evolution process of accounting is taking place as well, aimed at allowing a representation of strategic resources closer to reality. Such process can be describes as a virtuous circle, taking place through two main stages:

(1) The *regulators/lawmakers* seek for best practices in intangible resources evaluation systems as developed internally by companies, they examine their reliability and robustness by comparing them with accounting theory, with the final aim to develop new accounting standards (see for example Mouritsen, 2003).

(2) *Companies* assimilate these new systems as they became standards, and, by solving encountered implementation problems, they perfect them, giving origin to potential further innovations, and improving best practices.

Figure 1 provides a graphic representation of the evolution process of accounting.

Now, by analysing most recent developments in accounting rules, it can be stated that a similar process, from a regulation point of view, seems to have started. Such developments are represented in Europe by IFRSs, which became the official accounting principles for all EU-countries as of 1 January 2005. As a matter of fact,

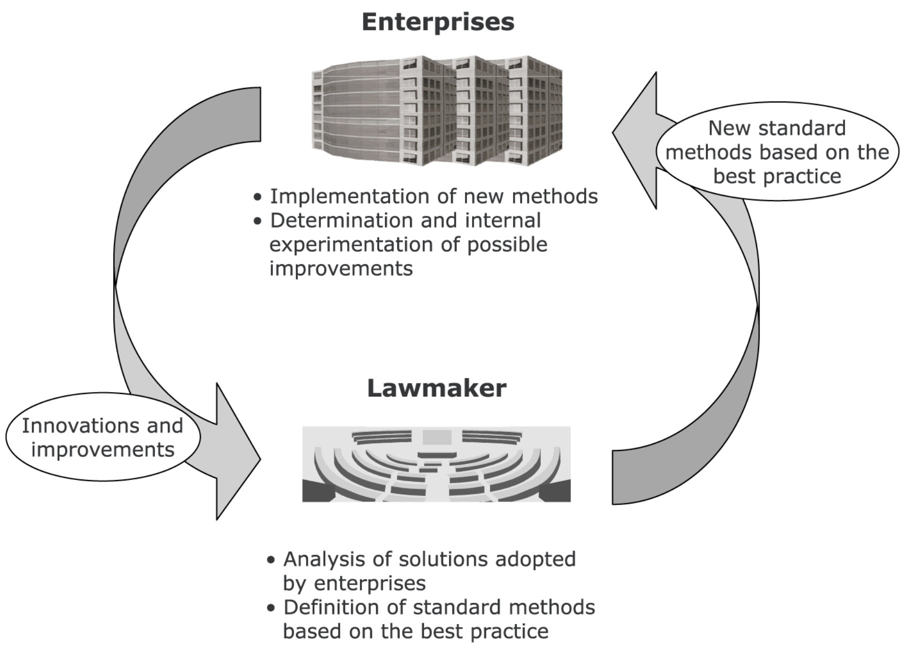

Figure 1.
The cyclic evolution process of accounting

IFRSs introduced two great innovations, the impact on intangibles of which looks highly relevant. These innovations are:

(1) The possibility to value selected strategic resources at fair value[1], thus taking into account their ability to create value. Presently, according to IFRSs the most relevant area of fair value application is the determination of values of assets acquired in business combinations; but its application to internally developed assets, although at the moment subject to severe restrictions, must not be ignored (Langendijk *et al.*, 2003, Guatri and Bini, 2003b, 2005);

(2) The regulation of impairment test, i.e. the procedure aimed at identifying eventual impairment losses of an asset's value. Such a regulation permits the utilise of the test itself as a value control system, together or even as a substitute of amortisation, thus eliminating the concept of useful life and introducing the intangible asset with indefinite life (Harper, 2001; Guatri and Bini, 2003a).

However, a simple analysis of accounting principles cannot prove IFRSs' ability to improve the quality of accounting information. Such a result, indeed, can only be demonstrated by observing their practical application. Nevertheless, as a consequence of the lack of a real survey[2], no empirical analysis or similar study specifically concerning the effectiveness of IFRSs on accounting information quality is currently available in literature. Contrariwise, a small literature is available concerning the impact on financial information of some innovations recently included into the USA accounting principles, the US GAAP[3], which are really similar to those introduced in Europe by IFRSs and preceded them by four years (Guatri and Bini, 2003c). Bens and Heltzer (2004) and Chen *et al.* (2004) showed that the overall impact of such innovations on financial information on intangibles has been positive.

Therefore, the empirical analysis performed in our project is aimed at understanding the impact of IFRSs on the quality of accounting information concerning intangibles, or, in other words, at quantifying the described change process of accounting.

First of all, four parameters have been determined to measure the quality of accounting information, thus its variations:

(1) The *fairness*, intended as the closeness to reality of:
    - the description of the structure of value sources, that is, their nature; and
    - the ability of creation of economic benefits of such sources, that is, their value.

(2) The *transparency*, defined as the level of depth of information disclosed concerning:
    - the structure of value sources; and
    - the processes involved in determining their value.

(3) The *prudence*, intended as the utilisation, throughout the evaluation processes, of reliable input data, and consequently, the adoption of evaluation methods requiring sufficiently reliable data.

(4) The *timeliness*, defined as the ability to release information before its obsolescence, that is, on time to be useful for balance sheets users in order to take decisions.

These parameters, according to the two most important accounting standards, i.e. US GAAP and IFRSs, represent a complete set of performance indicators of accounting information quality. Therefore, values assumed by such parameters represent an informative trade-off, which describes the quality degree of accounting information.

Afterwards, the analysis of several relevant cases started, being the goal of each case study the identification of variations in these four parameters between the old (e.g. Italian GAAP) and the new accounting practices (e.g. IFRSs). The case discussed in this paper represent the most relevant one encountered so far.

The case study: Telecom Italia Group

Since significant examples of IFRSs implementation are still to come, case studies included in our project include companies reporting in accordance with US GAAP. As a matter of fact, this choice allows exploitation of the broad convergence between IFRSs and US GAAP regulation concerning accounting for intangibles, with specific reference to:

- Acquired specific intangible assets (Financial Accounting Standard (FAS) 141 – Business Combinations, IFRS 3 – Business Combinations, and IAS 38 – Intangible Assets).
- Impairment of goodwill and intangibles with indefinite useful life (FAS 142 – Goodwill and Other Intangible Assets, and IAS 36 – Impairment of Assets).

Nevertheless, in order to correctly understand the evolution connected with IFRSs, it is necessary to have at the same time financial reports from the same companies available in accordance with "old" continental accounting standards. As a matter of fact, this would make a comparative analysis to be possible.

These considerations, together with the significance of the specific case study, were taken into account while choosing which of the several cases so far analysed throughout the research project would have been the topic of this paper. Finally, the selection fell on Telecom Italia[4]. Telecom Italia is an important Italian group, holding the national leadership in telecommunication services, and operating in the media industry as well. Through its mobile communications subsidiary, TIM, the group is a leading operator in several European and South American countries. Key financial figures about the group are reported in Table I[5].

Telecom Italia has a consolidated presence on the New York Stock Exchange, where its shares have been listed since 1997. Thus, Telecom Italia has been issuing financial reports according to both Italian GAAP and US GAAP for the last eight years. The period chosen for performing this analysis is the year ending December 31, 2003. On that year, Telecom Italia was involved in a relevant M&A operation, the merger with the former holding Olivetti. Such a merger made the company to apply the 2001 issued US regulation on acquired intangibles, which is really similar to the IFRSs one and, as previously mentioned, represents the most important innovation concerning accounting for intangibles included in the new standards.

The case study is divided into three sections. The first section deals with the Olivetti-Telecom Italia merger. The structure of the operation and the accounting methods employed are illustrated in detail, with particular attention to differences between Italian GAAP and US GAAP accounting, as well as on divergences between US GAAP and IFRSs. The second section illustrates goodwill accounting policies and

Table I. Key 2003 figures of Telecom Italia group

Key income statement figures	
Revenues	30,850
EBITDA	14,280
EBIT	6,789
Net income	2,428
Key balance sheet figures	
Total assets	81,683
Net invested capital	55,430
Equity	21,177
Net debts	34,253
Investments undertaken during 2003	
Industrial investments	4,894
Financial investments	1,464
Goodwill	5,096
Key ratios and other facts	
ROE (%)	11.47
ROI (%)	12.25
People employed	95,804
Total return to shareholders (TRS) of the holding company shares (2003) (%)	8.17

Note: EUR million except percentages and people employed

impairment tests conducted by the company prior to December 31, 2003, which are the only other events of relevance in order to understand the final differences between Italian GAAP and US GAAP 2003 balance sheets. Finally, the third section presents a comparative analysis between the 2003 balance sheet drawn up according to Italian GAAP and the same report prepared according to US GAAP. Once again, divergences between US GAAP and IFRSs will be stressed and discussed.

The merger

On July 2003, Telecom Italia S.p.A., head of the group bearing the same name, and Olivetti, the former holding, decided to merge. The operation was given a form of an incorporation of Telecom Italia into Olivetti, which later would have changed its name into Telecom Italia[6]; prior to the merger both Olivetti and Telecom Italia were listed on equity markets. The main reason driving the decision to merge was the intention to bring the most profitable units of the group, that is, the wireline communications service of Telecom Italia and the mobile communications service of TIM, closer to the owner companies, Pirelli and Benetton. This operation is of particular interest for this paper's purpose for two main reasons:

(1) It is one of the first and so far most relevant M&A operations performed by a continental European company to be accounted for under FAS 141.

(2) Prior to the merger, Olivetti, which is the taking-over company, was a pure finance holding company, or, in other words, an empty box. As a matter of fact, at the end of 2002 approximately 96 percent of its asset value consisted of its shareholding in Telecom Italia. Consequently, the surviving company resulted to be really similar to the incorporated one, Telecom Italia. This means that

almost all the assets of the surviving company are acquired assets, and thus accounted for under FAS 141.

Prior to the merger, the structure of Telecom Italia group and its controlling companies was shaped as shown in Figure 2[7].

The merger of Telecom Italia into Olivetti took place through two subsequent steps.

(1) Olivetti gave the chance to both Olivetti and Telecom Italia minority shareholders who disagree with the merger to redeem their shares. For this purpose, the taking-over company allocated 9 euro billion, to be employed as follows:

- Olivetti minority shareholders not agreeing with the merger could exercise their right of recourse, which was due because of the change in the company's by-laws[8].
- Since Olivetti owned more than 50 percent plus one of Telecom Italia common stock, Telecom Italia minority shareholders would have to accept any decision of the parent company. However, to avoid conflicts among shareholders, Olivetti decided to launch a take-over bid on Telecom Italia floating shares, both ordinary and savings. The limit of subscriptions would have been the number of shares necessary to cover the allocated 9 billion reduced by the amount paid to Olivetti shareholder exercising their right of recourse.

The number of Olivetti shareholders who decided to exercise their right of recourse was really small. The total amount the company paid them was 10.9 euro million, corresponding to 0.12 percent of the total share capital. Contrariwise, the bid had a far greater success. Olivetti retired Telecom Italia shares from the market for 5.27 euro billion, corresponding to a 10.32 percent interest.

(2) Once the subscription period for the bid was terminated, Olivetti proceeded to the actual merger. The company determined an exchange rate of seven Olivetti

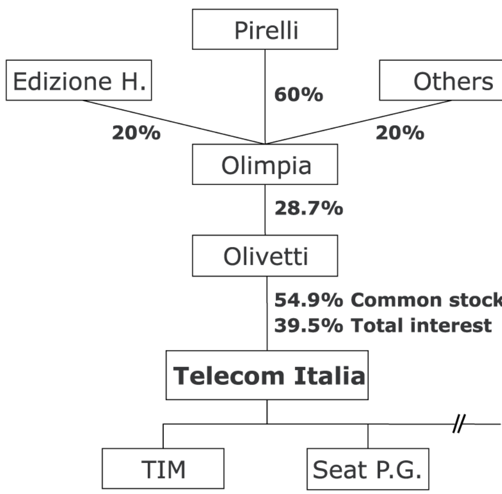

Figure 2.
Structure of Telecom Italia group and of its controlling chain prior to the merger

shares per one Telecom Italia share, regardless ordinary or savings. Subsequently, instead of the usual trade swap, Olivetti performed the merger through the redistribution method: it retired all shares both of Telecom Italia and Olivetti, annulled them, and redistributed new shares, issued by the surviving company, on the basis of the exchange rate.

Figure 3 shows Telecom Italia group structure and controlling chain after the merger[9].

According to the Italian GAAP, the two steps of the incorporation process were accounted for separately.

(1) The first step, the take-over bid, was considered as an acquisition of a further share in the capital of an already consolidated company. This event is regarded by the Italian GAAP as completely independent from the subsequent merger. The price paid, reduced by the book value of the share of Telecom Italia's equity purchased, is entirely allocated to goodwill, as shown in Table II. No process of recognition of acquired specific intangible assets is performed.

The amount of goodwill so determined is amortised in a 20-year period.

(2) The second step, the actual merger, was accounted for in accordance with Italian GAAP through the pooling of interests. According to this method, all assets and liabilities of Olivetti and Telecom Italia flowed together into a single balance sheet, without changing their carrying values. Consequently, the balance sheet of the resulting entity is almost identical to the consolidated

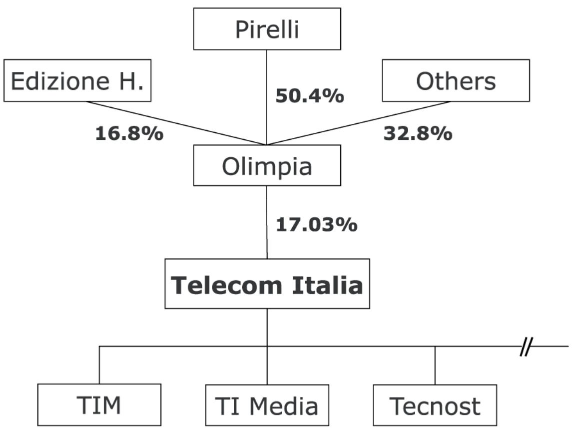

Figure 3. Structure of Telecom Italia group and of its controlling chain after the merger

	EUR million
Purchase price	5,274
Share of equity acquired	(723)
Excess prior to allocation	4,551
Allocated excess	–
Goodwill	4,551

Table II. Take-over bid price allocation under Italian GAAP balance sheet of the acquired company prior to the merger, i.e. after the first step. The only relevant differences are:

- A 10.9 euro million reduction of the share capital, in consequence of the exercise of the right of recourse; and
- A shift of 3,424 euro billion from minority interests to stockholders' equity falling within the group competence.

It is relevant to notice that all the effects of the merger on the balance sheet regard the equity side. This means that the disclosure about the merger concerns only the ownership of the rights on the acquired company's rents, while the sources of such rents are completely ignored.

The accounting treatment for this operation under the US GAAP, as well as under IFRSs, follows a radically different approach. There are two main points of divergence:

(1) The take-over bid and the incorporation are considered together as a single event.

(2) The operation is considered as an acquisition, and thus accounted for under the purchase method.

It looks remarkable how these two facts put in evidence the general principle of supremacy of substance over form, giving a quite good example of it. First, it definitely seems correct to consider the two steps together, since they are not independent at all, but they represent two stages of a single process. In other words, Olivetti would have never launched the bid without the intention to merge with Telecom Italia; thus, in substance, the bid is integral part of the merger. Second, the adoption of the purchase method of accounting permits to put in evidence the actual price paid by Olivetti to perform the operation, which, according to Italian GAAP, remains hidden.

Consistently with FAS 141, Olivetti was identified as the acquirer, since it obtained the control of the other entity involved in the business combination. Consequently, the operation is regarded as an acquisition of Telecom Italia by Olivetti, through the purchase of a 60.5 percent interest. The total purchase price was calculated taking into account the whole amount paid to former shareholders of the acquiree, regardless the form of payment. Thus, it equals the sum of the price paid for the bid and the fair market value of Olivetti shares exchanged[10]. As Table III shows, the total purchase price, reduced by the amount of equity acquired through the whole operation, makes the excess on purchase price that has to be allocated to acquired intangible assets and, by way of residual, to goodwill[11].

By analysing the acquired entity and its subsidiaries, Olivetti identified some intangible resources that were not accounted for in Telecom Italia balance sheet, but, as

Table III. Determination of purchase price under US GAAP (and IFRSs)

	EUR million
Cash payment for the bid	5,274
Fair market value of Olivetti shares exchanged	17,981
Total purchase price	23,255
Share of equity acquired	(2,665)
Excess prior to allocation	20,950

they respected separability or contractual-legal criterion, they could be considered specific intangible assets. These assets were divided between assets with definite useful life and indefinite useful life, and their fair values were estimated through financial methods based on the market value or on future income forecasts. Results of this evaluation process are shown in Table IV, providing details of the employed methods.

Decisions concerning the choice of evaluation methods were mainly driven by best practices in previous FAS 141 applications across the USA. The premium-price-based method employed for the brands consists of an innovative brand evaluation model based exclusively on accounting data, developed in Japan. The income-based valuation, which has been used for several assets, consists in the calculation of net present value through asset-related income forecasts, discounted by an interest rate, which takes into account both cost of capital and asset specific risk. Previous adoption experience was also the main basis for dividing assets between indefinite and finite useful life. For the latter, estimates of useful life were primarily driven by analysis of historical data, such as average customer or dealer churn rate, respectively for customer lists and distribution network. Thanks to the highly effective information system Telecom Italia has been endowed with since 2001, information for performing profit forecasts and premium price estimates resulted to be highly reliable and largely available[12].

Subsequent to their evaluation at fair value, identified intangible assets were added to the balance sheet. This stage of the accounting process is slightly different between US GAAP and IFRSs, basically due to the chance given by IFRSs and presently denied by US GAAP to account for intangible assets utilising the revaluation model. Nevertheless, with reference to such a case like the one considered, that is, the acquisition of minority interests, IFRSs still do not provide a specific treatment. At the moment, a few possible interpretations have been proposed, but both the management and the auditors of the company do not agree on which one is the best one, and further clearing up is expected by the International Accounting Standard Board (IASB). Considering this fact, in order to work out a comparison between US GAAP and IFRSs

	Fair value (EUR million)	Valuation method	Useful life (years)
Wireline unit (Telecom Italia)			
Customer list	10,597	Income-based	28.4
Brands (Telecom Italia, Alice and Aladino)	1,709	Premium-priced	Indefinite
Wireless unit (Telecom Italia Mobile)			
Customer list	10,099	Income-based	11.6
Brand (TIM)	1,326	Premium-priced	Indefinite
Distribution network	753	Recreation cost	9.1
GSM license	2,657	Income-based	Indefinite
Internet services unit (Telecom Italia Media)			
Customer list	32	Income-based	6.8
Portal Vigilio	91	Recreation cost	Indefinite
Contract with PG NET	77	Income-based	Indefinite
Contract with Google	12	Income-based	3.5

Table IV. Acquiree's identified intangible assets treatment, the authors chose to adopt the most prudent solution in IFRSs application. Accordingly, being stated that both with US GAAP and IFRSs each acquired asset is thought to be divided into two parts, i.e. the acquired part and the already owned part.

(1) Under US GAAP, the first part, which Olivetti actually paid for, shall be written at fair value, while the latter one has to be accounted for regardless the acquisition, that is, at its previous carrying value less amortisation or impairment losses if the asset was entered in the balance sheet, or simply ignored if the asset had not been recognised.

(2) Under IFRSs, both parts can be written at fair value, but while the first part is regarded as a first time written asset, the latter one is considered a revaluated asset. Thus it can be accounted for at fair value, but only if the asset had been previously recognised. If this is the case, a corresponding revaluation surplus has to be included in the equity. *Vice versa*, if the asset had not been formerly recognised this second part has to be ignored, similarly to US GAAP.

Therefore, the value of identified intangible assets actually included in New Telecom Italia 2003 US GAAP balance sheet was calculated proportionally to the acquired share of each asset. Table V shows such values, together with the results of a hypothetical treatment according to IFRSs, performed by the authors with the help of New Telecom Italia's management[13].

It can be noticed that in this particular case, the only assets changing their value between US GAAP and IFRSs are the two brands. As a matter of fact, these were the only assets among those identified in Telecom Italia that had been included, at cost, in Olivetti consolidated balance sheet in 1999, when Olivetti purchased its first stake in Telecom Italia. Due to Telecom Italia's information system, which in 1999 was far less performing than in 2003, no other intangible asset could be recognised.

Once the accounting procedure for identified intangibles had been performed, the allocation of purchase-price could be concluded, by determining the value of goodwill, as illustrated in Table VI.

According to FAS 142, as well as to IAS 36, the so determined amount of goodwill has not to be amortised, but yearly tested for impairment.

Although a systematic analysis of divergences between IFRSs and Italian GAAP reporting will be performed at the end of this case study, the main features of the change can already be pointed out by comparing Table II with Tables III, IV and V taken together, representing the first one Italian GAAP disclosure concerning the merger, the latter three US GAAP disclosure. As a matter of fact, US GAAP and IFRSs resemble actually able to provide higher level of correctness and transparency.

- The utilisation of purchase method for the whole operation makes its description far closer to reality, thus more correct; and
- The identification process of acquired intangibles assets allows a deeper level of representation of the structure of assets involved, thus making it more transparent.

Furthermore, it appears unfair to point out that US GAAP representation brings a risk of poor prudence. Indeed, the presence of Excess Prior to Allocation as a maximum limit for the overall value of acquired intangibles represents a guarantee, being it the result of a negotiation process.

Table V. Acquired assets values to be included in the balance sheet

	Fair value (EUR million)	Acquired share (%)	Asset value according to US GAAP (EUR million)	Asset value according to IFRSs (EUR million)
Wireline unit (Telecom Italia)				
Customer list	10,597	60	6,409	6,409
Brands (Telecom Italia, Alice and Aladino)	1,709	60.5	1,034	1,709
Wireless unit (TIM, 55.43 percent owned by TI)				
Customer list	10,099	33.5	3,385	3,385
Brand (TIM)	1,326	33.5	444	1,326
Distribution network	753	33.5	252	252
GSM license	2,657	33.5	891	891
IS unit (TI Media, 61.48 percent owned by TI)				
Customer list	32	37.2	12	12
Portal Virgilio[a]	91	15.0	14	14
Contract with PG NET[a]	77	15.0	12	12
Contract with Google[a]	12	15.0	2	2
Total value of intangible assets	27,353		12,455	14,012

Note: [a] Belonging to Matrix, 40.30 percent controlled by TI Media

Accounting for goodwill

Besides the merger into Olivetti, there is another important point of divergence between Italian GAAP and US GAAP accounting that is relevant to explain differences between Telecom Italia 2003 Italian GAAP and US GAAP balance sheets. This point consists of the treatment of goodwill. As a matter of fact, Italian GAAP, following the traditional continental European practice, requires goodwill to be amortised over a period that must not exceed, and generally equals, 20 years[14]. Upon the other hand US GAAP, since the issue of FAS 142 in 2001, demand goodwill not to be amortised but to be tested for impairment at least yearly, basing the test on group's reporting units[15].

Telecom Italia adopted FAS 142 as of January 1, 2002, and since that date it ceased to amortise goodwill. Subsequently, the company performed four impairment tests.

(1) The first test was held on June 2002. It actually was given the form of a transition test, aimed at checking the effectiveness of the reporting units identified for goodwill allocation and impairment testing purposes. Telecom Italia identified several reporting units, which could be grouped as follows:

- *Wireline* reporting units, including the holding company, and all subsidiaries operating in the wireline communications industry in Europe and in South America;
- *Wireless* reporting units, comprising the mobile operator TIM and all subsidiaries operating in the mobile communications industry in Europe and in South America;
- Internet and media, including:

  Units dealing with broadcasting and related services;

  Directories, Directory assistance and *Business Information* units, carrying on activities related telephone directory drawing up and publishing;

  Information Technology market unit, related to the activity of internet service provider;

  Buffetti, a retail franchise chain selling business periodicals and office supplies[16].

  The company allocated its goodwill to these units, following a proportional criterion on the basis of each reporting unit fair value. Evaluation of reporting units was performed through the discounted cash flow method, and no impairment was determined at this stage.

Table VI.
Purchase price allocation according to US GAAP

	EUR million
Total purchase price	23,255
Share of equity acquired	(2,665)
Excess prior to allocation	20,590
Fair value of acquired intangibles	(12,455)
Taxes	4,391
Goodwill	12,526

(2) The second test took place on December 31, 2002, being the first annual impairment test. Of most importance was the presence of a clear signal of probable impairment of goodwill allocated to the internet and media reporting units. As a matter of fact, during the second half of 2002, Telecom Italia initiated to consider the possibility to sell certain units of Seat, the group subsidiary whose activities revolved around telephone directories publishing. A similar fact is explicitly mentioned in FAS 142 as a "circumstance that more likely than not reduces the fair value of a reporting unit below its carrying amount" (FAS 142, 28). Instead of pure discounted cash flow value estimates, all reporting units included into the internet and media segment were valued through a combination of market multiples, calculated on the basis of similar recent transactions, and discounted cash flow. Such an approach was judged to be more appropriate considering the hypothesis to sell part of the units being valued. Results of the evaluations pointed out that the fair value of Directories, Directory Assistance and Business Information units was below its carrying amount. Thus, potential impairment existed. Telecom Italia proceeded with the second step of the test for this unit, by calculating the implied value of goodwill[17]. Fair values of all assets held by the reporting unit, regardless they had been previously recognised or not, were calculated through market multiples methods, and implied goodwill determined as the difference between the reporting unit fair value and the sum of fair values of its assets. By finally comparing implied goodwill with its carrying amount, Telecom Italia determined an impairment loss of 3,352 euro million.

If the described impairment test had been performed according to IFRSs, results would have been slightly different. As a matter of fact, the testing procedure included into IAS 36 consist of the first step only. Consequently, once stated that the fair value of Directories, Directory Assistance and Business Information unit was below its carrying amount, no second step would have been necessary and the impairment loss would have been equal to the difference between carrying value and fair value of the concerned units. Such a loss would probably have been slightly higher, although not enough to alter the substance of the balance sheet.

Fair values of other reporting units of the group were calculated utilising the discounted cash flow method, since there was no intention to dispose of any part of them. No further impairment loss was determined.

In July 2003, the company noticed that certain signals of impairment were present into two reporting units, Entel Chile and Buffetti. Both of them had been involved in some restructuring operations, which had been accounted for under the purchase method, and both units' fair value resulted to be below the respective carrying value. Being the fair value determined for business combination purpose, the value calculated for goodwill already corresponded to implied goodwill. Consequently, Telecom Italia recorded a goodwill impairment loss for both units, which amounted to 264 euro million for Entel Chile and 395 euro million for Buffetti.

(3) On December 31, 2003, Telecom Italia performed its second annual impairment test. All reporting units were valued through the discounted cash flow method. No impairment loss was recorded.

Even though the amount of impairment loss recorded was less relevant than those observed in other cases[18], the second and the third tests described seem to show that the new accounting method, through non-amortisation and impairment test, provides an evaluation of goodwill superior in correctness and prudence, although more variable. As a matter of fact, goodwill appears to be able to adapt its value to the actual profit generation capability of the reporting units which it has been allocated to. Such a conclusion is consistent with findings of Jennings *et al.* (2001), who showed that quality of information included into goodwill increases if goodwill is not amortised, but rather periodically tested for impairment.

balance sheets comparative analysis: US GAAP vs. Italian GAAP

As a result of the differences in accounting practices between US GAAP and Italian GAAP, respective Telecom Italia[19] 2003 consolidated balance sheets differ considerably. Tables VII and VIII show a comparison of these two financial statements, putting into evidence value discrepancies. Most of them indeed are due to the accounting facts described in the first two sections: the merger and the impairment test of goodwill.

By taking the first glance, it can be noticed that the most relevant discrepancies between the two balance sheets regard values of intangible assets and stockholders' equity. It can be stated indeed that these two items constitute the only highly relevant discrepancies, being respectively 82 and 69 percent of the total absolute difference

Table VII. Asset side of 2003 Telecom Italia consolidated balance sheet: Italian GAAP vs US GAAP

Assets (EUR million	Italian GAAP	US GAAP	Discrepancy
Current assets	22,498	21,342	− 1,156
Fixed assets, net	18,324	21,593	3,269
Intangible assets			
Goodwill	27,145	37,837	*10,692*
Other intangible assets, net	6,708	20,642	*13,934*
Total intangible assets, net	33,853	58,479	*24,626*
Other assets	5,826	6,679	853
Total assets	80,501	108,093	27,592

Note: Key areas of discrepancy are shown in italics

Table VIII. Liabilities and stockholder's equity side of 2003 Telecom Italia consolidated balance sheet: Italian GAAP versus US GAAP

Liabilities and shockholder's equity (EUR million)	Italian GAAP	US GAAP	Discrepancy
Liabilities			
Current liabilities	23,373	23,196	− 177
Long-term debt	30,852	32,586	1,734
Reserves and other liabilities	5,687	12,164	6,477
Total liabilities	59,912	67,946	8,034
Stockholder's equity	16,092	35,067	*18,975*
Minority interests	4,497	5,080	583
Total liabilities and stockholder's equity	80,501	108,093	27,592

Note: Key area of discrepancy is shown in italics between Italian GAAP and US GAAP as for assets and liabilities and stockholders' equity.

By analysing closely such discrepancies, it can observed that the higher value of intangible assets is basically due to recognition and fair value accounting of the assets acquired in the merger between Olivetti and Old Telecom Italia, discussed in the first section of this case study. As a matter of fact, the utilisation of purchase method and fair value in accounting for the merger resulted into an extra disclosure of intangible assets for 12.5 out of 13.9 euro billion of discrepancy on intangible assets. This means that 89.4 percent of such a discrepancy is due to the merger. Similarly, the higher amount of goodwill written, stems from the employment of purchase method in accounting for business combinations, and primarily, for the merger, although non-amortisation and impairment losses, played their roles. The merger made indeed goodwill to increase of 12.5 euro billion. These, reduced by impairment losses occurred in 2002 and 2003, which have not been accounted for in Italian GAAP balance sheet, explain the 10.7 euro billion difference. Finally, the different procedures in accounting for the merger also represent the main reason for stockholders' equity increase: as Table IX shows, although few other smaller transactions played their role, most of the origin of the almost 19 euro billion of discrepancy in equity is due to fair value accounting of newly issued shares, which have been distributed to Telecom Italia shareholders after the merger.

In order to understanding at best the substantial significance of discrepancies in these three items from the accounting evolution point of view, two relevant considerations shall be made, summing up the key findings on this case study[20].

(1) The concentration of discrepancies between the two balance sheets on intangible assets and on stockholders' equity is highly consistent with the accounting evolution process proposed in the first section. As a matter of fact, considering that the leading goal of the process is a better description of the actual firm value, it can be stated that:

- The asset side has the main purpose to provide information concerning the nature of firm's cash sources and their potential value. As previously stated, intangible asset represent one of the most important category of these sources. This is particularly true in telecommunications industry, where, being understood the relevance of physical networks, customer relationships and licenses are vital assets. As a consequence, the inability of historical cost to provide *correct* information about the actual value of this asset represented the most important problem to be solved by the new accounting

	EUR million
Purchase method of accounting for the merger	20,627
Purchase method of accounting for other transactions	4,006
Reversal of goodwill amortisation	364
Other variations	(572)
Tax effect on discrepancy items	(5,450)
Total stockholder's equity discrepancy	18,975

Table IX. Reasons for discrepancy in stockholders' equity practice. Thus, an impact on intangible assets value was strongly expected, and it looks consistent with the evolution process described.

- The liabilities and stockholders' equity side, upon the other hand, is aimed at reporting for values of all financial claims held mainly by shareholders and debtholders on cash flows the firm generates by mean of its assets. By utilising historical cost accounting, however, only the liability section gets closer to its goal. Contrariwise, the book value of equity most of time turns out to be far different from its real value, a reliable estimate of which is provided by market capitalisation. Consequently, the shift to fair value accounting was supposed to have a relevant impact on equity value.

(2) Observed discrepancies confirm impressions pointed out throughout the analysis of the business combination and the impairment tests, making the representation more correct and transparent. Increase in the two mentioned parameters can be noticed with reference to two facts:

- With reference to the asset side, the relevant discrepancy in the company's overall value indicates a superior correctness of US GAAP representation. As a matter of fact, such discrepancy is mainly due to the utilisation of purchase method while accounting for the business combination, and thus taking into account the whole acquired company. Furthermore, the overall value of the company's activities is made far more transparent thanks to the recognition of all identifiable assets inside goodwill. As a matter of fact, a little part of the overall amount of asset acquired in the business combination can be explained by the net book value of such assets. Most of it is indeed constituted by previously unidentified, besides often intangible, sources of value available to the acquiree. Now, accounting for these sources as recommended by either US GAAP or IFRSs means:

  Identifying their nature whenever possible;

  Estimating their fair value;

  Including each one of them separately into the balance sheet; and

  Providing in the notes detailed information about their nature, their useful life, and the valuation process.

Such a disclosure, as opposed to having all the acquired but unrecognised sources of value mixed up into a single goodwill item, allows any balance sheet user with purpose to invest in the firm to far better understand its capability to generate cash flows (see Table X). These considerations become clearer by comparing figures reported in

Table X.
Comparison between purchase accounting according to Italian GAAP and US GAAP

Intangible assets	Italian GAAP (purchase method)	US GAAP
Goodwill	51,467[a]	37,837
Other intangible assets, net	6,708[a]	20,642
Total intangible assets, net	58,175[a]	58,479

Note: [a] Author's estimate

Table XI[21]. The right column shows Telecom Italia 2003 intangible assets as reported in US GAAP balance sheet (see Table VII). The left column shows how the same balance sheet would be if the Olivetti-Old Telecom Italia merger and few other transactions would have been still accounted for under purchase method, but according to Italian GAAP, that is, without recognising identifiable intangible assets and separating them from goodwill.

It looks remarkable that a similar amount of goodwill would not only give poor information on the nature of value sources, but would also make the potential investor to doubt about the reliability of the measure. This, in other words, means that there would be serious uncertainty concerning the actual capacity of the company to generate cash flows consistently with such an asset value, and not only on the origin of such cash flows. Thus, transparency is of fundamental importance to communicate correctness to balance sheet users.

The superior correctness of US GAAP representation is strongly supported by the fact that the book value of equity calculated according to US GAAP, which would change very slightly by moving to IFRSs, is really close to the company market capitalisation, with a divergence of less that 3 percent, or a M/BV of equity ratio of 0.97. These figures, for a healthy telecommunication services provider, are simply amazing, and they get even more impressive if compared with Italian GAAP performance.

Considering the fact that Telecom Italia definitely is not a company undervalued by the market, a similar result shall be regarded as an important goal achieved by accounting. Such a result leads to two relevant conclusions. First, it strongly confirms the higher quality of information disclosed by accounting for M&A operation under purchase method, as opposed to pooling of interests. In the second place, it gives credibility to evaluation metrics and models employed by US GAAP and IFRSs accounting, not only for the equity itself but also for assets, particularly intangibles. As a matter of fact, being equity a measure of potential value for shareholders, if accounting is able to reliably measure this value, it is likely capable to determine what creates it, and how.

Conclusions

The aim of this paper was to analyse the potential impact if IFRSs on a the Telecom Italia case, taking into account some relevant events occurred in 2003 as well as the overall financial documentation related to the same year. Such analysis was performed through a systematic comparison of Italian GAAP and US GAAP financial documents, and exploiting the strong similarities existing between US GAAP and IFRSs concerning accounting for intangible assets. The comparison was made in terms of the quality of accounting information, measured through four parameters: correctness, transparency, prudence, and timeliness.

Table XI. Discrepancy between book value and market value of equity

	Value (EUR million)	Discrepancy from market capitalisation (%)
Market capitalisation	34,128	–
Italian GAAP book value of equity	16,092	− 112.08
US GAAP book value of equity	35,067	2.68

Table XII.

	Fair value (EUR million)	Interest of Telecom Italia S.p.A. (%)	Share of Telecom Italia S.p.A. acquired by Olivetti (%)	Share of the asset acquired by Olivetti (%)	Fair value of the acquired share, recognised by US GAAP (EUR million)
Wireline unit (Telecom Italia)					
Customer list	10,597	10.00	60.50	60.50	6,409
Brands (Telecom Italia, Alice and Aladino)	1,709	100.00	60.50	60.50	1,034
Wireless unit (TIM, 55.43 percent owned by TI)					
Customer list	10,099	55.43	60.50	33.54	3,385
Brand (TIM)	1,326	55.43	60.50	33.54	444
Distribution network	753	55.43	60.50	33.54	252
GSM license	2,657	55.43	60.50	33.54	891
IS unit (TI Media, 61.48 percent owned by TI)					
Customer list	32	61.48	60.50	37.20	12
Portal Vigilio[a]	91	24.78	60.50	14.99	14
Contract with PG NET[a]	77	60.50	14.99	12	
Contract with Google[a]	12	24.78	60.50	14.99	2

Note: [a] Belonging to Matrix, 40.30 percent controlled by TI Media

Table XIII.

	Fair value (EUR million)	Carrying value of the already owned share prior to the merger (EUR million)	Revaluation of the already owned share according to IFRSs (EUR million)	Asset value according to IFRSs (EUR million)
Wireline unit (Telecom Italia)				
Customer list	6,409	–	–	6,409
Brands (Telecom Italia, Alice and Aladino)	1,034	65[b]	610[b]	1,709[b]
Wireless unit (TIM, 55.43 percent owned by TI)				
Customer list	3,385	–	–	3,385
Brand (TIM)	444	119[b]	763[b]	1,326[b]
Distribution network	252	–	–	252
GSM license	891	–	–	891
IS unit (TI Media, 61.48 percent owned by TI)				
Customer list	12	–	–	12
Portal Virgilio[a]	14	–	–	14
Contract with PG NET[a]	12	–	–	12
Contract with Google[a]	2	–	–	2

Notes: [a] Belonging to Matrix, 40.30 percent controlled by TI Media; [b] author's estimate

Analysis conducted throughout the paper evidences that:

- Accounting representation according to US GAAP are superior in correctness and transparency; and
- No relevant change can be observed with reference to prudence and timeliness.

Such evidences represent an increase in the trade-off among the four parameters, and thus a superior quality of accounting information. Mentioned similarities between IFRSs and US GAAP concerning accounting for intangibles allow to extend such result to IFRSs themselves.

Tables XII and XIII show detailed calculation of carrying values of identified intangibles assets acquired by Olivetti through the merger, respectively according to US GAAP and to IFRSs.

Notes

1. The fair value of an asset is defined as the amount for which that asset could be exchanged between knowledgeable, willing parties in an arm's length transaction. Its determination is normally achieved through calculation of market value or value in use.
2. At present, application survey of IFRS consist mainly of simulation internally performed by companies, which are generally confidential.
3. Generally Accepted Accounting Principles.
4. The other three companies included in the research project are AOL Time Warner, Peoplesoft and an Italian software house, which asked not to be mentioned.
5. All data contained in this are according Italian GAAP.
6. From now, in this section, we will refer to the incorporated company as Telecom Italia, and to the surviving company after the change of name as New Telecom Italia.
7. Edizione is the finance holding company for Benetton group.
8. There was a big debate concerning whether the right of recourse had to be granted or not. As a matter of fact, Olivetti's by-law were going to change, since the company was moving from a finance holding which could keep interests in telecommunication companies to a company directly operating in telecommunication services. Nevertheless, by looking at the substance, there was no relevant change, since prior to the merger more than 95 percent of Olivetti's consolidated revenues was stemming from Telecom Italia group. In any case, to make the whole operation as much market friendly as possible, the right was granted.
9. Tecnost is a new company, constituted right after the merger and containing what remained of Olivetti's operations; Telecom Italia Media represents the result of a restructuring process of Seat Pagine Gialle, which will be briefly discussed later.
10. US GAAP treat the incorporation process as a share swap, which in substance was, although it was given the form of a redistribution.
11. The value of Olivetti shares exchanged includes 54 euro million of New Telecom Italia employees' stock options exchanged for Old Telecom Italia employees' stock options.
12. The reliability of acquired intangibles value estimates performed by Telecom Italia was confirmed with an explicit mention by the SEC.
13. Calculation of assets value according to IFRSs are partially based on authors' estimates, which stem from Telecom Italia and Olivetti balance sheets. For further details, including calculation of Revaluation Surplus, see Tables XII and XIII.

14. It has to be stated that most of continental Europe national GAAP are required to perform an impairment test if there are signals of decrease in goodwill value; nevertheless, there is neither a minimum time between one test and the following, nor a standard test procedure.
15. The same solution has been adopted by IFRSs, with the March 2004 review of IAS 38 – Intangible Assets. The only difference consists of the substitution of reporting units with cash generating units.
16. Buffetti is not anymore part of Telecom Italia Group.
17. The Implied Value of goodwill is the value that goodwill would assume if the respective reporting unit were acquired, and the acquisition accounted for under the purchase method.
18. See, for instance, AOL Time Warner 2002 consolidated balance sheet, Note to Financial Statement, 2.
19. In this section, we will refer to the surviving company after the merger as Telecom Italia, while the company incorporated into Olivetti will be referred to as Old Telecom Italia.
20. Such considerations are driven both by the authors' considerations and opinions of a pool of experts, belonging to the three different worlds involved in the change, that is, enterprises, financial investors, and lawmakers. Among these experts, who represent both the European and the North American areas, the authors are proud to include the Chief Financial Officer of Telecom Italia, Dr Enrico Parazzini, the former ten years member of the IASB Dr Ambrogio Picolli, and Professor Mauro Bini, probably the IFRSs most expert person in Italy, who was directly involved in Telecom Italia's intangible assets evaluation within the scope of accounting for the merger.
21. All values are as of December 31, 2003.

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