

An estimate of the land incidence on a property value: how the instrumental tangible assets can be estimated in the Italian context according to the International Accounting

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## **An Estimate of the Land Incidence on a Property Value**

*How the instrumental tangible assets can be estimated in the Italian context according to the International Accounting Standard n. 16*



*The Italian "BolognaFiere" Expo District panorama*

### **Introduction**

The total value of a property as a whole, is generally regarded as the sum of its complementary values: the land and the building. However, the land share is not always given by the standing alone value of the area: merely it's somehow also supported by the supplementary value that the building, depending on its features, is able to furnish during its existence.

Due to the close complementary existing between the parts of a property the Italian appraisal tradition considers in fact a property as a whole<sup>1</sup> and such approach is ordinarily adopted in accounting valuations too. Despite appearance, in the accounting issue, immovable values are a source of income, obtained by means of accounting standards not always aligned to the estimative ones.

In fact, while in the context of property valuation the key value is generally described by the most probable market price, accounting is more interested in representing entities by their "value in use", because of their instrumental contribution to the income statement.

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<sup>1</sup> N. Famularo, *La stima dei fabbricati*, Edizioni Agricole, Bologna, 1947

In particular the bookkeeping discipline explicit opportune evaluation criteria, today ruled in any European National context, depending on three main aims:

- 1) to furnish indications on the property values evolution to the inside managerial goals in order to plan short, middle or long - term strategies.
- 2) to determine the single assets and the company value in its complex, as truthful and correct as possible, in order to acquaint stakeholders, shareholders, banks, etc...;
- 3) to monitor the fiscal income on which the public body determines its collecting.

The generally accepted practice of recording in the balance sheet each immovable entity through a single total value, the so-called "historical cost", run in fact against the recent accounting revision inaugurated by the so-called "ammonisation process."

This phenomenon, in action in the European Community since 2001, foresees the introduction of new frames named "International Accounting Standards" (IAS). This implicate in fact, among the most evident changes on immovable's, the component approach on the total value, in order to divide the land value from the building one, and the introduction of the fair value in place of the "historical cost."

Therefore this study intends to show the matters which have risen by the demand of dividing the land value from the instrumental building as requested by the International IAS 16 "Property, Plant and Equipment", in comparison with the solutions worked out by recent Italian and International Valuation Standards.

On the operational point of view the study key goal resides therefore in the individualization of the land value incidence percentage on the entity in its complex, as a useful strategy in the National context, in order to divide the total value in its two main components: the land and the building.

Finally by way of an example is shown the IAS valuation on *BolognaFiere S.p.a* Expo District: in this case- study the land incidence percentage share on the expo pavilions value has been tested.

### **IAS / IFRS normative application in Italy**

In Italy the International Accounting Standards have been enforced through the formal adoption of specific regulations<sup>2</sup> that have allowed the gradual IAS homologation in order to make them compatible to the Italian normative in force.

IAS or, after 2001, IFRS (International Financial Reporting Standards), designate the whole International Accounting Standards issued by the IASB, International Accounting Standards Board. This organism has now replaced the institutional functions previously developed by the IASC, International Accounting Standard Committee, constituted in 1973 in London.

Following, we propose the key points concerning the normative in progress for IAS /IFRS application in Italy (1<sup>st</sup> outline).

The first European provision was concretized by **UE Directive n. 65/2001<sup>3</sup>** (partially acknowledged in Italy by the **Legislative Decree n. 394/2003<sup>4</sup>**) which introduced the *fair value* criteria in the financial reports.

Nevertheless, the first normative provision imposing the IAS/IFRS to all the quoted companies was the **UE Act n. 1606/2002<sup>5</sup>**. Then, the following **UE Directive n. 51/2003<sup>6</sup>** allowed the IAS/IFRS financial frames faculty for not quoted companies too.

Anyway it's only with the **UE Act n.1725/2003<sup>7</sup>** that IAS become to be legally regulated. This document published in enclosure the full IAS/IFRS list emanated by September 14 th 2002 together with their relative interpretations, the SIC (Standing Interpretation Committee). Since then

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<sup>2</sup> These documents have been issued according to the provisions of law expressed in the "Amsterdam Treaty".

<sup>3</sup> EC Directive n. 65/2001 of 09/27/01, published in the OJEU on 10/27/01

<sup>4</sup> Legislative Decree n. 394 of 12/30/2003, "2001/65/EC Directive Implementation", published in the OJEU n. 44 02/23/04.

<sup>5</sup> Published on the OJEU n. 243 of 09/11/02 end become effective on 09/14/02.

<sup>6</sup> Published on the OJEU n. 178 of 07/17/03.

<sup>7</sup> Published on the OJEU n. 261 of 10/13/03.

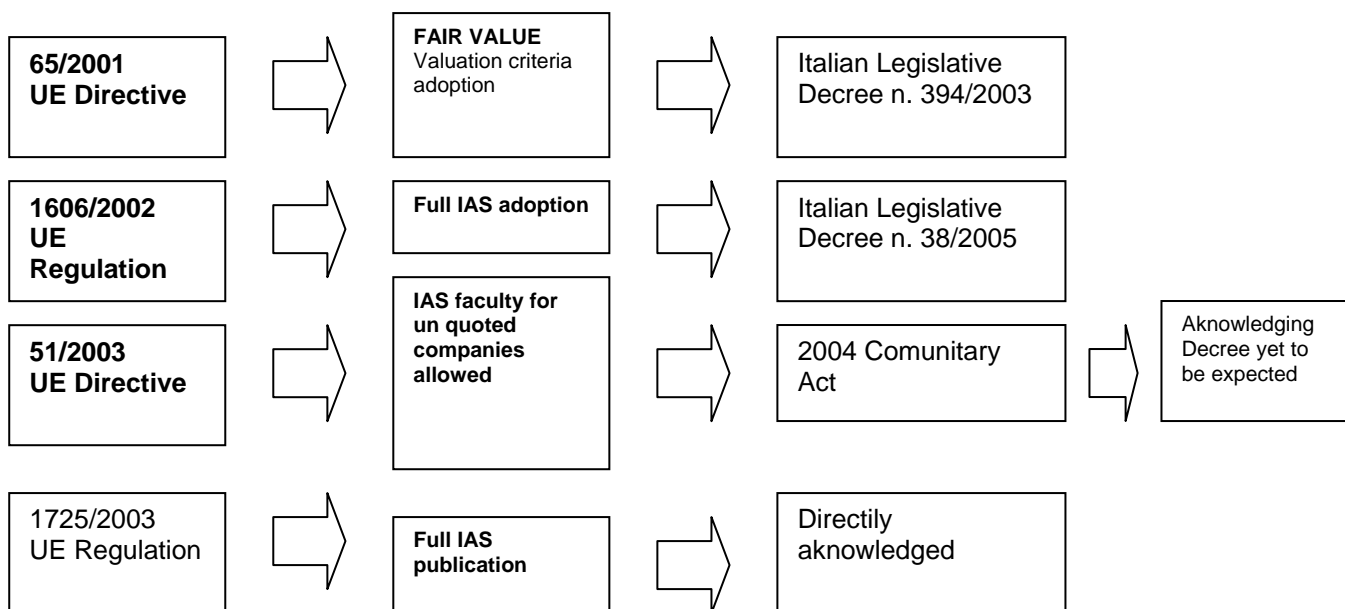
any following document has only provided to gradually confirm the International Standard into the Italian framework.

The IAS harmonization has finally been introduced in Italy through the "**Community Act 2003, n. 306/2003**<sup>8</sup>, " involving the following subjects:

- quoted companies
- issuing financial tools companies
- banks: quoted or not
- insurance companies: quoted or not
- financial corporate bodies operating in the vigilance sector

The Italian legislator began contextually to foresee the IAS faculty either for the subsidiaries societies or the parent one, not yet quoted, but involved by the single or consolidated financial statement, in order to guarantee and to offer diffused comparability among the different frames of the financial information.

The IAS application has then been conducted according to various acts during 2005 and 2006. Furthermore it is remarkable to stress the importance assumed by the Accounting Italian Organism (OIC) in leading companies into IAS application, suggesting changes to the legislative either civil or fiscal<sup>9</sup> dispositions.



*1st outline: IAS / IFRS normative application in Italy*

### The Real Estate properties in the Balance Sheet

Any accounting model generally furnishes information through an encoded language, with the purpose of writing the three main "financial reports"<sup>10</sup>, known as:

- Asset and liability statement
- Income Statement
- Additional note

<sup>8</sup> Published in the Italian Official Journal (GU) n. 266 on 11/15/03.

<sup>9</sup> OIC, *Guida operativa per la transazione ai principi contabili internazionali (IAS/IFRS)*, October 2005.

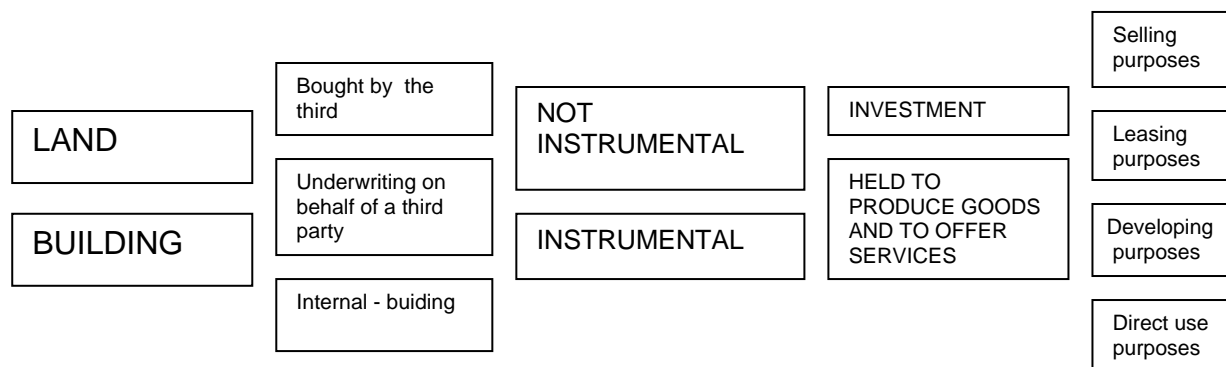
<sup>10</sup> Robert N. Anthony, Lesile K. Breitner, *Core Concepts for accounting*, Pearson Education, New Jersey, 2003

<sup>11</sup> EC IV Directive n.78/660 of 07/25/78 and EC VII Directive n. 83/349 of 06/13/83.

Both acknowledged in Italy by the Legislative Decree n. 127 of 1991

The Italian accounting rules, according to the changes made by the IV and VII Community Directives<sup>11</sup>, have been so far contained in the Civil Code (artt. 2423, etc.).

Immovable tangible entities appear in the Balance Sheet among those assets of long service life. To be more precise they represent factors furnishing their utility to the company for more than one year. As it was specified in the 1998 edition of IAS 16 "Property, Plant and Equipment" they often constitute the most remarkable part on the total asset value balance<sup>12</sup>, becoming, consequently, the main share in order to represent the financial situation. To decide if a cost represents an asset or an expenditure can in fact produce an outstanding effect on the management results.



2nd outline:

*Non Current Tangibile Assets in the Balance Sheet by nature and use.*

However the representation of a property value isn't confined into the alone standing account of "asset": it is obvious, in fact, that by a double-entry system representation, to every value in "debit" it will correspond one in "credit." Besides, either the land or building need constant maintenance. This fact produces costs of exercise to be ascribed in Income Statemet as "expenditures" with a depreciation value.

At the same time the depreciation, by which any entity is effected during its service life, needs to be noticed in a proper account called "accumulated depreciation". This one accrues year by year in consequence of the yearly "depreciation expense".

Now, adding to these "inside transactions" the "external " one (i.e. financial tools by banks, leasing operations, investments etc..) we can easily comprehend how many tangible asset "traces" can be developed by any company property. (3<sup>rd</sup> outline).

### **The IAS Anglo - saxon based model in comparison with the Continental one**

To understand the changes introduced in Europe by the International Accounting process is important moreover to remember that the Italian accounting standards and concepts has been based so far on a "continental" model, that is quite different from the "anglo – saxon" one, the model on which IASB criteria are based.

The continental model relates, among the main differences according to the *Cost Concept*, to the "historical cost":

- the form prevalence, accordingly to the *Materiality Concept*,
- the allocation of long term running expenses, according to the *Matching Concept*
- a creditors guardianship optic, based on the *Conservatorism Concept*.

<sup>12</sup>See: 1998 IAS 16 Edition, paragraph 8.

## IAS 16 “Property, Plant and Equipment”: the accounting treatment of the tangible instrumental not current assets in the International Framework

The instrumental tangible assets can be divided into two main clusters: the instrumental ones (to develop every production activity) and the investment ones (held to serve a speculative purpose).

The vastness of accounting matters concerning tangible non current assets is contemplated in 3 of the 41 International Accounting Standards. They are:

- IAS 16: Property, plants and equipment;
- IAS 17: Leasing;
- IAS 40: Investment property;

Anyway the present study examines the IAS 16, concerning the accounting treatment of “instrumental assets” only, because of its prevalence on the other two standards about changes on the land and building accountancy.

Tangible assets	
DEBIT	CREDIT
<b>ASSET &amp; LIABILITY STATEMENT</b> Edited by means of financial criteria (Divided into Assets and Liabilities + Equity accounts)	<b>VENTURE CAPITAL</b> , including: <ul style="list-style-type: none"> <li>• Valuation Reserve</li> <li>• Other funds</li> </ul> <b>REAL LOAN CAPITAL</b> , including: <ul style="list-style-type: none"> <li>• Debts and Loans</li> <li>• Accrued liabilities</li> </ul>
<b>INCOME STATEMENT</b> (Divided in Costs and Revenues accounts )	<ul style="list-style-type: none"> <li>• Alienations and Ex change Revenues</li> <li>• Leasing and Rental Earnings</li> <li>• Ordinary Appreciations</li> </ul>
<b>ADDITIONAL NOTE</b>	<b>According to the Italian Civil Code and with reference to IV and VII UE Directives</b> <ul style="list-style-type: none"> <li>• It defines the valuation criteria by means of which account values have been estimated.</li> <li>• It defines the single entity value amount, by parting investment assets from the instrumental ones.</li> </ul>

3rd outline: Tangible non current assets traces in Real Properties accounting reports

Two crucial Italian accounting concepts and two main changes carried out by the IAS 16.

Among the National Standards on instrumental properties, completely revolutioned by IAS 16, we have to stress two inner crucial points that, in Italy, are going to be revised:

- *The Historical Cost Concept*
- *The Total Value Depreciation*

In Italy assets entities, according to the Cost Concept, appears in the financial statements as an "artificial" value, since it is historical and not current, as a result of a complex evaluation criteria in which the estate market conditions are obviously undertaken.

As a result the first problematic crucial point is now introduced. Italian companies, in fact, generally register their assets at the "historical purchasing cost." Therefore, among the total assets not all accounts represent monetary entities. Property, plants and equipment, are, in fact "not monetary" assets. By registering only the first ones (i.e. stocks) through an adjourned and real value, the company is expressed only in part by a market oriented value. This fact decrees a difference in treatment that doesn't make the assets evaluation criteria "homogeneous" in the same balance sheet.

The greatest revolution inherent IAS 16 resides in the fair value concept<sup>13</sup>. Trying to attribute a current value, and not a historical one, to non current tangible entities is in fact a real novelty. Expressing the operating results by means of fair value induces to expose the assets and liabilities statement to a completely current value. As a consequence the IAS balance becomes of great interest for investors<sup>14</sup>.

The power of such novelty is in producing a turnover of other continental accounting concept and criteria: the substance prevalence and a balance sheet recognition based on the "potential income" rather than on the "produced" one.

This is the explanation for which the watershed produced by the "accounting harmonization process" has also motivated companies not yet quoted, but operating in markets in which quoted competitors just act. By way of evidence the unquoted companies need to conform their own accounting evaluation criteria in order to become aligned in the free market, by planning their short, middle term<sup>15</sup>. Therefore it is interesting to remember as the IAS faculty has been defined by the Italian Government with great foresight.

The second crucial point deals with the Italian Depreciation criteria. The depreciation is the accounting procedure through which the functional and technical obsolescence process involves the non current tangible assets (production factors). These entities, generally represented by land, buildings, plants and equipment loose their utility in a gradual way, participating in the business activity for more than a few years.

Their acquisition cost, usually significant, represents an outflow to register year after year, becoming accrued liabilities until the company considers their utility expired.

In other words, while their financial demonstration places during the monetary exit, the relative "accrual" reverts on the different administrative years in which they are used. The multi annual share imputed into every annual report is known as "depreciation expense".

As a consequence the above said annual "depreciation expense" is an income in every financial statement result.

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<sup>13</sup> On the subject remember that the USGAAP – United States Generally Accepted Accounting Principles – the unique world - wide IAS option, refer accounting values of "historic costs" conventions.

<sup>14</sup> *Le nuove sfide della valutazione: partecipazioni, intangibili e crescita esterna alla prova IAS*, Conference Acts, Milano, Bocconi University, 12/03/04. The Conference title can be translated in "The New Valuation Challenges: Joint –ventures, intangibles assets and external growth by means of IAS".

<sup>15</sup> *Il processo di riqualificazione dei quartieri fieristici italiani*. Giugno 2005. Study realised by *Prometeia* association (Bologna) together with CFI Committee – Comitato Fiere Industria. The title can be translated in "The Requalification Process of the Italian Expo Districts".

The Italian Civil Code foresees that every asset depreciation "must systematically be divided during its life". By way of general practice the Italian accounting model doesn't recognise that the land and the building have different service "lives". As a consequence the Italian depreciation model manages land and building with an undiversified treatment that indiscriminately subdues the total value of the sources. The obvious and illogic effect is that the land value is registered by accrual accounting together with the building share.

Unless in particular cases, for example caves, or other assets subdued to depletion, the land isn't in fact generally involved in depreciation processes or any other physical obsolescence.

Furthermore the Italian normative indicates that "it is necessary to depreciate the land" only "if the land purchase is an additional value once built on (...), if the building dilapidates, the land assistant value will do so as well".<sup>16</sup>

IAS 16 created order to the international depreciation procedure. In fact it imposed a new treatment to complex properties having different service "life" components. The component approach's aim is over and above accountable to the single components value "by their remarkable cost in comparison with the total one, in order to impute a correct expenditure amount by depreciation"<sup>17</sup>.

Therefore, simplifying IASB definitions, a complex as a whole has conventionally been considered by surveyors as the value resulting from the sum of its main complementary values: the land and the building.

### **The land complementary value incidence in the National and International valuation assessments**

The "complementary value" concept is not a novelty in the Italian valuation assessment. In fact surveyors traditionally correlate it to the "transformation value", involving the land income in development and valorisation project. The "complementary value" inner logic is in fact ordinarily employed in the investment analysis to estimate the complementary value of the land, as a fixed transformation input<sup>18</sup>. In this context it can be useful to produce a synthetic verification of the economic feasibility of the investment, calculating the incidence of the area cost on the immovable property value (building and land developed) on which the developer intends to build as residual border of expense to be compared with the future expected revenues and with the operational costs<sup>19</sup>.

Additionally in Italy the land incidence percentage calculation is an operation that has scarce scientific value. Such conclusion can be drawn by the reading of the IPVS Italian Property Valuation Standards or the "Evaluation Real Estate Code", translated in English in 2006 by Tecnoborsa<sup>20</sup>. This Valuation Code represents the Italian acknowledgement of IVS, International Valuation Standard, elaborated by the International Valuation Standard Committee<sup>21</sup>.

The IVS text, in fact, analyses accounting in the IVA - International Valuation Standards for Accounting – but confines the complementary value concept to the general treatment thereof only. In this context the "complementary value" is in fact defined as a simple "combination of two market values: one of the complex and one of the residual part". Included in the IVS "Italian Valuation Standards" the "complementary ratio" concept is introduced. It is considered as a complementary

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<sup>16</sup> Consiglio nazionale dell'ordine dei dottori commercialisti (Charter Accountant National Council), *National Accounting Standard n. 16, Document n. 4*, 1974 recently updated by the 2005 edition, Chapter "DII" – paragraph n. 7, "Cespiti da ammortizzare" (Depreciable Properties). Published in the Chartered Accountant National Council website: [www.cndc.it](http://www.cndc.it).

<sup>17</sup> IAS 16, paragraph n.43.

<sup>18</sup> Marco Simonotti, *La logica estimativa del valore di trasformazione*, in *Aestimum*, n. 33, 1995.

<sup>19</sup> Franco Prizzon, *Gli investimenti immobiliari*, Celid, Torino, 1995.

<sup>20</sup> Tecnoborsa it's an Italian Consortium founded in 1997. In 1999 it has established a technical - scientific committee to develop the Italian valuation discipline. During last years Tecnoborsa has been published the *Italian Property Valuation Standards* also known as *The Real Estate Code*.

<sup>21</sup> The IVSC has been founded in London in 1981. The first IVS version was published in 2003.

index, with reference to the construction sector, expressing the relationship between the value of the valorised land and the Real Property in its complex<sup>22</sup>.

The problem emerges in the necessity of dividing the total value in its main complementary parts in order to express separate accounting values. To introduce the IAS logic by means of a component approach, would mean to diminish the relative historical values to correct the cumulative depreciation related to the land.

This operation obviously creates notable difficulties that connects the accounting discipline to estimative and fiscal one. Besides the direct (comparisons to the market) and indirect (for capitalization, transformation, substitution and complementarity) procedures IVS introduce a further method that make use of the complementary value<sup>23</sup>.

Professor Marco Simonotti, who has collaborated with *Tecnoborsa* to the IPVS layout has been studying the applicability of these further approaches in the Italian Real Estate market and with direct reference to the IAS. He has taken into consideration some mixed methods referring to the Cost Approach known as: Residual techniques and Band of Investment.

The first technique develops the complementary concept between a complex entity and its heterogeneous parts. However its application is confined, as suggested in GN1 - IVS 5.25.3, to the recent buildings evaluation, in order to avoid adding together current and dated values.

The second develops the complementary concept inside a total capitalization essay that can be divided between the sum of the single components (land and building). Capitalization can then be used for measuring the land incidence value in a real market sector.

As Professor Marco Simonotti observed, their application is possible only in countries in which better conditions of transparency of the Real Estate market and an integration with the financial market exist. On the contrary, if their application can be done, it will be possible to develop a market observation by an analogy with other investments<sup>24</sup>.

Seeing the incapacity of these further tools to suite the Italian context, if the sources don't have standard characteristics or don't service a large market, a solution must be found, as IAS themselves suggest. Developing a fundamental appraisal and discounting the company cash flows.

Therefore the Discounted Cash Flow analysis (DCF), known in Italy as Analysis of Costs and Revenues, has at the moment become the privileged approach. Useful to carry out the land incidence percentage. In these terms it is evident how the accounting evaluation by a "component approach" demands, in our country, a brief a procedural contribution. Every appraisal is in fact function of a purpose and individualizes the key value through the use of a specific method.

The interest of the IAS companies involved lies in attributing the largest value to the most depreciable component. In this way companies can impute to Income Statement multi annual costs through the well known depreciation procedure.

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<sup>22</sup> IPVS, Chapter 5, Paragraph 2.21, English Edition , 2006.

<sup>23</sup> University Professor Marco Simonotti has been dealing with this approach pertaining the Italian Real Estate market with direct reference to IAS. He has also collaborated with *Tecnoborsa* in the Italian Property Valuation Standards writing.

<sup>23</sup> The *Residual Techniques* and the *Band of Investment* are contemplated in IPVS , Chapter 3, paragraph 8. Furthermore they have been presented and discussed in:

- M. Simonotti, *Metodi di stima immobiliare*, Dario Flaccovio Editore, Palermo 2006;
- M. Simonotti, A. Benvenuti, *Il valore di un immobile tra fabbricato e terreno*, in *Estimo e Territorio*, n. 11 2005
- M. Simonotti, *Incidenza dell'area in un segmento del mercato immobiliare*, in *Estimo e territorio*, n. 12, 2005

<sup>24</sup> Ibidem

## Difficulties inherent in the land incidence percentage in the Italian context

### ▪ *Subdivision in instrumental and non instrumental Real Estate assets*

A first significant operation responsible by the surveyors lies in the collecting and verifying of all the data testing the real properties consistence and qualification. This stage is essential to distinguish which entities will follow the above mentioned "component approach" treatment, as shown in the IAS 16 "Property, Plant and Equipment" and which, as well as the IAS 40 "Investment Property".

In fact, while the instrumental properties "possessed and used by the company for production or sale of goods and services or for administrative purposes"<sup>25</sup> can be registered in the balance sheet as operating costs, the investment ones, producing rents or cash flows, generally independent from the company core business, can no longer be depreciated.

### ▪ *Data reliability*

One of the principal appraisal difficulties in calculating the land incidence percentage, resides in the nature of "historical cost". Unless such costs are "amply recent", it is very probable that during the years have suffered some alteration due to inflation or changes in the town-planning status.

The IAS 16 foresees the "Cost Option" as the possibility to choose whether to list the tangible activities to the cost or to the fair value. In practice such theoretical flexibility runs against the difficulty of furnishing a moot set of incidence percentages useful to effect the component approach having the total historical cost available only.

To individualize a complementary value share, both by synthetic or analytical method, we have to operate summoning actual values of one of the two components. To complete algebraic sum operations among historical values not lined up would in fact produce a significant error, which, at most, could bring to sustain that the incidence value of one of the two parts would be over the 100% of the total historical cost.

A possible solution, contemplated at least in the IVS - IVA 1 and IAS / IFRS, concerns the use, just for accounting, of the DRP (Depreciated Replacement Cost method) This method in fact implicates the subdivision, through an analytical cost representation, of the intrinsic property components, enabling the explication of the components share.

However the solution implicates a revaluation of the property in its complexity today. Submitting the adjourned value to an opportune depreciation ratio able to simulate any technical or functional obsolescence effect. As a result, the so estimated substitution cost would be a current value, expressing, in the end, the nearest actual fair value

### ▪ *Current available values in respect of a fair valuation*

While the largest part of commodities are exchanged on competitive and ordinary markets with high frequency, company properties, due to their intrinsic characteristics, are rarely purchased, and, if a market transaction exists, it reveals as self – explanatory.

As a result the business properties market is nearly opaque and doesn't allow to formulate direct forecasts on values or their shadows: the prices. Moreover, in Italy the availability of Real Estate data is notoriously critical in the ordinary sectors, due to unelastic offers and a non transparent market.

To produce evaluations at a fair value by means of a Market Comparison Approach (privileged reference in the IAS / IFRS and in the IVS GN 1 5.25) is therefore quite impossible in Italy.

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<sup>25</sup> The IAS 16 instrumental property definition.

### The preset fiscal incidences: an operational contribution?

As above mentioned the fiscal monitoring constitutes, in the companies point of view, one of the fundamental management points. Reducing an operative cost quota, the accounting component approach implies an important fall out on the budgets, as it:

- Increases the profits
- Implies a heavier fiscal claim.

The 2007 recent financial law has in fact lined up the fiscal value to the IAS criteria, foreseeing an instrumental tangible asset depreciation approach, founded on preset incidence percentages, to perform on the total value, in order to part the land share. So, the difficulty in collecting data on built areas has been, in the fiscal context, overcome through the imposition of default ratios. In particular the established land value ratios specifies a 20% share, in the case of common properties (as shops, deposits, stores, offices, etc..) and a 30% incidence for the industrial ones (as shed and warehouse). The use of these preset percentages in the accounting reports, even if it has been granted by law, doesn't represent a concrete answer.

As tested in the case –study shown ahead, despite companies generally consider arduous devolving a proper valuation by external surveyors, an analytical approach in fact seems to be preferable.

Especially during this delicate IAS transaction, the computation of the single complementary values is an operation to be conducted by an analytical approach. Therefore the preset fiscal limits can represent a maximum incidence threshold only.

### The Case - study<sup>26</sup>: *BolognaFiere S.p.a Expo District*



The aim of the research is to show the land complementary incidence value amount calculated by testing the IAS approach to the instrumental properties owned by the joint - stock company *BolognaFiere S.p.a.*

Bologna Expo District, is a major expo pole with a Head Office and many other service units. The complex has been developed since 1965 and cover more than 180.000 mq on area of nearly 350.000 mq.<sup>27</sup>



2<sup>nd</sup> and 3<sup>rd</sup> Images: some *BolognaFiere* external and internal views and the actual plan

<sup>26</sup> Note that this is a research draft. The study is still in progress and the final result is only a first output. As a consequence the values ascribed are not definitive.

<sup>27</sup> Note that 180.000 mq and 350.000 corresponds to around 940.000 Sq Ft and 4.000.000 Sq Ft.

Referring to the up – to – date disciplinary actions on financial reports and to the land incidence value on the complex properties, registered in the 2006 balance sheet, this study pertains to the following operative steps:

1. Calculation of the expo district single properties *fair value* (land and pavilions as a whole) according to a macroeconomic reasoning and by means of a synthetic - comparative approach;
2. Calculation of the rough area average parametric *fair value* by means of a Discounted Cash Flow Analysis (DCF);
3. Attribution of a specific value to the land, weighing the average value by the uses of the single buildings;
4. Calculation of the single land incidence value on each pavilion as punctual ratio resulting by comparing the single land values (as estimated in the 3rd step) with the total amount (as estimated in the 1st step).

#### 1. Calculation of the Expo District single properties fair value (land and pavilions as a whole)

As above said the IAS, individualize in the *fair value*, the main point to determine the properties components value. Accordingly, such value has been searched by means of a direct market comparison approach.

Therefore the used method requires an acquired value range inside which we determine the appraised one. Therefore, average values, obtained from the principal national statistic sources available, have been collected. They refer to 2006 data and concern offices, industrial sheds and local commercial sites in Bologna.

In this study the synthetic comparative approach developed depends on some default questions. On one hand it is to underline that there isn't a full parallelism among the available statistic sources typologies and the expo districts actual ones (as i.e. expo pavilions, stores, pedestrian flying passages, etc...). On the other hand it has been necessary to correct the statistic value resulting by the sources with reference to the actual maintenance condition and the plants equipment of the expo district.

In brief, the average values used are quoted. They have been gained by weighing the obtained statistic source price on each functional use)<sup>28</sup>:

- *Headoffice and Service Center building: € 2.637/mq*  
An average weight value between *offices* (€ 2.665/mq) and *business premises* (€ 2.388/mq).
- *Concrete pavilions: € 2.378 /mq*  
A average weight among *offices* average value (€ 2.665/mq), *business premises* (€ 2.388/mq), and *sheds* (€ 903/mq).
- *Steel structure pavilions: € 2.021 /mq*  
The average concrete pavilions value, decreased by 15% considering maintenance needs (i.e. painting).
- *Stores: € 1.003/mq*  
Shed's maximum values average as reported in all statistic sources.

<sup>28</sup> Note that unit prices are expressed in €/mq

- *Other Services Units and Electrical Closets: € 1.003/mq*  
The average sheds value, decreased by 35% considering their function.
- *Pedestrian fly –over passages, underground bathrooms: € 1.665/mq*  
The average expo pavilion value, decreased by 30% considering their function.

Since the collected and calculated values refer to new or newly restructured buildings, an age, maintenance and quality ratio (3<sup>th</sup> table), to correct the parametric average value, has been used. (Source: *Il Consulente Immobiliare*, a financial review edited by "Il Sole 24 Ore").

Age, Quality, Maintenance Buildings Ratios (Source: *Il Consulente Immobiliare*, 2006)

Age	Excellent status	Good status	Mediocre status	Bad status
new	1,00	-	-	-
Very recent	0,85	0,80	0,75	-
10-20 years -old	0,80	0,75	0,70	-
21-40 Years - old	0,75	0,70	0,65	0,55
41-60 Years - old	0,70	0,65	0,60	0,50
More than 60 years - old	0,65	0,60	0,55	0,45

3rd table

Depending on the effective single - building realisation a medium or high quality and constant maintenance have been detected.

Therefore, the entities (lands and buildings) values worth of € 414.257.281 in total:

DESCRIPTION	Developed areas (mq)	YEAR BUILT OR IN USE	Adjusting RATIO	€/MQ VALUE, carried out by sources and ratios (land + building)	Property Values at 2006
HEADOFFICE	1.456	1991	0,80	2.109,44	3.071.345
PAVILION N.36	14.658	1991	0,80	1.902,43	27.885.762
STORE "EX SIAS" (area 43)	4.331	1980	0,75	752,50	3.259.078
STORE "VIA MASERATI N. 20 a-b (ex Agrati)"	1.512	1969	1,00	1.003,33	1.517.040
STORE/OFFICES "VIA MASERATI 18 (ex Giorgini) 90%" centro serv 10% mag	1.210	1970	1,00	2.473,45	2.992.879
STORE "VIA MASERATI 20 c-d (ex Selene-Galbani) "	1.248	1969	1,00	-	1.619.000
PAVILION N.35	9.796	1985	0,75	1.783,52	17.471.406
THIRD ACCESS (Michelino)	3.718	1993	0,80	1.902,43	7.073.220
PAVILION N.19-20	30.017	1998	0,85	2.021,33	60.674.194
BATHROOMS AND BAR (BETWEEN PAVILIONS N.29/30)	423	2001	0,85	1.828,10	773.617
UNDERGROUND BATHROOMS "AREA 49"	993	2002	0,85	-	3.396.000
PEDESTRIAN FLY-OVER PASSAGES	450	2002	0,85	1.414,93	636.718
SERVICES CENTER	8.207	2003	0,85	2.241,28	18.394.185
PAVILION N. 21/22/23/24	13.406	1965	0,70	1.414,93	18.968.544
PASSAGES N. 6 (21-22-23-24) + BATHROOMS 64 MQ SU + PASSAGE N. 1 (19-20/21-22)	2.866	2004	1,00	1.664,62	4.770.809
SERVICES E ELECTRICAL CLOSET-PAV. 21/22/23/24	189	2004	1,00	652,17	123.260
					<b>23.862.612</b>

DESCRIPTION	Developed areas (mq)	YEAR BUILT OR IN USE	Adjusting RATIO	€/MQ VALUE, carried out by sources and ratios (land + building)	Property Values at 2006
PAVILION N. 25/26/27/28	19.414	1965	0,70	1.414,93	27.469.440
PASSAGE N. 7 (25-26-27-28)	2.636	2006	1,00	1.664,62	4.387.946
SERVICES E ELECTRICAL CLOSET- PAV. 25/26/27/28	189	2006	1,00	652,17	123.260
					<b>31.980.645</b>
PAVILION N. 31/32	6.108	1965	0,70	1.414,93	8.642.389
SERVICES E ELECTRICAL CLOSET-PAV. 31/32	193	1965	0,70	456,52	88.108
					<b>8.730.497</b>
PAVILION N. 33/34	25.488	1983	0,75	1.783,52	45.458.472
PAVILION N. 29	8.174	1970	0,75	1.516,00	12.391.750
SERVICE UNIT PAV. 29	3.580	1975	0,75	1.977,60	7.079.808
					<b>19.471.558</b>
PAVILION N. 30	8.169	1970	0,75	1.516,00	12.384.170
STORES "CONSTRUCTA"	5.104	1970	0,75	-	6.000.000
CLOSET "ENEL"	263	2006	1,00	-	1.500.000
PEDESTRIAN FLY-OVER PASSAGES - PAV. N. 19-20 16-18 21-22	380	2005	1,00	-	9.980.000
PEDESTRIAN PASSAGES ALONG PAV.19-20	1.049	2000	0,85	-	2.968.000
PAVILION N. 16/18 (leasing per cui solo fabbricato)	38.765	2004	1,00	2.378,03	92.184.434
RESTAURANT 16/18	1.284	2005	1,00	2.636,80	3.385.651
PARKING 16/18	10.116	2005	1,00	750,00	7.587.000
RESIDUE USABLE LAND	12.928		-	-	-
<b>TOTAL</b>	<b>244.588</b>				<b>414.257.481</b>

2nd table

2. *Calculation of the rough area average parametric fair value by means of a Discounted Cash Flow Analysis (DCF)*

Such method, generally pursued in order to carry out transformation value allows, at the same time, to set the parametric built or residential zoning value engendered by the lot itself. This one is expressed through a ratio, a percentage share, resulting from the transformation costs on the operation total value. The DCF case – study progress has carried out a rough area average parametric value of € 312,45 /mq. This result, as IAS just suggest, can be considered suitable as a correct *fair value* representation.

3. *Attribution of a specific value to the land, weighing the average value by the use of the single buildings;*

The specific parametric land value has been achieved by weighing the average value. This one has in fact been adjusted regarding to the single gaps inferred by each single building use value.

<b>Building parametric value (land + building)</b>	<b>Parametric value by sources</b>	<b>Gap</b>	<b>rough average parametric value of the covered land (€/mq)</b>
Concrete pavilions	2.378	1,09	341,83
Iron structure pavilions	2.021	0,93	290,56
Headoffice and Service Center	2.637	1,21	379,03
Storse	1.003	0,46	144,23
Other services and electric closet	652	0,30	93,75
Pedestrian passages, fly-over passages, underground bathrooms	1.665	0,77	239,28
<b>Average value weighed on the gross surface area</b>	<b>2.174</b>		

3rd table

#### 4. Calculation of the single land incidence value on each pavilion

The land incidence on each immovable has been calculated as a ratio expressing the land value (as estimated in the 3<sup>rd</sup> step) on the respective property total value (as estimated in the 1<sup>st</sup> step)

As a consequence it is then possible to carry out the complementary value of the building.

<b>DESCRIPTION</b>	<b>Property Values at 2006</b>	<b>Developed area (mq)</b>	<b>Adjusting RATIO</b>	<b>Developed area parametric value (€/mq)</b>	<b>Land value</b>	<b>% land incidence</b>	<b>Building value</b>
HEADOFFICE	3.071.345	1.342	1,21	379,03	508.661	16,56%	2.562.684
PAVILION N.36	27.885.762	12.342	1,09	341,83	4.218.925	15,13%	23.666.836
STORE "EX SIAS" (area 43)	3.259.078	4.331	0,46	144,23	624.643	19,17%	2.634.434
STORE "VIA MASERATI N. 20 a-b (ex Agrati)"	1.517.040	1.512	0,46	144,23	218.070	14,37%	1.298.970
STORE/OFFICES "VIA MASERATI 18 (ex Giorgini) 90%" centro serv 10% mag	2.992.879	1.210	1,14	355,55	430.217	14,37%	2.562.662
STORE "VIA MASERATI 20 c-d (ex Selene-Galbani) "	1.619.000	1.248	0,46	144,23	179.994	11,12%	1.439.006
PAVILION N.35	17.471.406	9.508	1,09	341,83	3.250.165	18,60%	14.221.240
THIRD ACCESS (Michelino)	7.073.220	1.662	1,09	341,83	568.129	8,03%	6.505.091
PAVILION N.19-20	60.674.194	23.585	1,09	341,83	8.062.174	13,29%	52.612.020
BATHROOMS AND BAR (BETWEEN PAVILIONS N.29/30)	773.617	407	0,99	309,16	125.932	16,28%	647.685
UNDERGROUND BATHROOMS "AREA 49"	3.396.000	552	0,77	239,28	132.085	3,89%	3.263.915
PEDESTRIAN FLY-OVER PASSAGES	636.718	450	0,77	239,28	107.678	16,91%	529.040
SERVICES CENTER	18.394.185	3.672	1,21	379,03	1.391.805	7,57%	17.002.380
PAVILION N. 21/22/23/24	18.968.544	13.406	0,93	290,56	3.895.242	20,54%	15.073.302
PASSAGES N. 6 (21-22-23-24) + BATHROOMS 64 MQ SU + PASSAGE N. 1 (19-20/21-22)	4.770.809	2.710	0,77	239,28	648.461	13,59%	4.122.348
SERVICES E ELECTRICAL CLOSET-PAV. 21/22/23/24	123.260	94	0,30	93,75	8.812	7,15%	114.447
	23.862.612				4.552.515	19,08%	19.310.098
PAVILION N. 25/26/27/28	27.469.440	19.414	0,93	290,56	5.640.924	20,54%	21.828.516
PASSAGE N. 7 (25-26-27-28)	4.387.946	2.636	0,77	239,28	630.754	14,37%	3.757.192
SERVICES E ELECTRICAL CLOSET- PAV. 25/26/27/28	123.260	94	0,30	93,75	8.812	7,15%	114.447

DESCRIPTION	Property Values at 2006	Developed area (mq)	Adjusting RATIO	Developed area parametric value (€/mq)	Land value	land %	Building value
	31.980.645				6.280.490	19,64%	25.700.155
PAVILION N. 31/32	8.642.389	6.108	0,93	290,56	1.774.738	20,54%	6.867.651
SERVICES E ELECTRICAL CLOSET-PAV. 31/32	88.108	96	0,30	93,75	9.000	10,21%	79.108
<b>DESCRIPTION</b>	<b>8.730.497</b>				<b>1.783.738</b>	<b>20,43%</b>	<b>6.946.759</b>
HEADOFFICE	45.458.472	20.510	1,09	341,83	7.011.032	15,42%	38.447.440
PAVILION N.36	12.391.750	8.174	0,93	290,56	2.375.034	19,17%	10.016.716
STORE "EX SIAS" (area 43)	7.079.808	3.450	1,21	379,03	1.307.660	18,47%	5.772.148
	<b>19.471.558</b>				<b>3.682.694</b>	<b>18,91%</b>	<b>15.788.864</b>
PAVILION N. 33/34	12.384.170	8.169	0,93	290,56	2.373.581	19,17%	10.010.588
PAVILION N. 29	6.000.000	5.104	0,46	144,23	736.065	12,27%	5.263.935
SERVICE UNIT PAV. 29	1.500.000	136	0,30	93,75	12.750	0,85%	1.487.250
	9.980.000	0	0,00	0,00	0	0,00%	9.980.000
PAVILION N. 30	2.968.000	0	0,00	0,00	0	0,00%	2.968.000
STORES "CONSTRUCTA"	92.184.434	27.598	1,09	341,83	9.433.957	10,23%	82.750.477
CLOSET "ENEL"	3.385.651	1.284	1,21	379,03	486.677	14,37%	2.898.974
PEDESTRIAN FLY-OVER PASSAGES - PAV. N. 19-20 16-18 21-22	7.587.000	0	0,00	0,00	0	0,00%	7.587.000
PEDESTRIAN PASSAGES ALONG PAV.19-20	-	12.928	1,00	312,46	4.039.412	-	
<b>TOTAL</b>	<b>414.257.481</b>	<b>200.000</b>			<b>60.211.388</b>	<b>14,53%</b>	<b>354.046.093</b>

4th table

Additionally, to the accounting aim, we have assigned to *BolognaFiere* Real Estate assets an average incidence land value. According to the values range, included between a minimum of 0,85%, and a maximum of 20,43%, we have imputed an average land incidence percentage of 14,5%.

## Conclusions

The final outcome resulting by testing the IAS 16 component approach on *BolognaFiere* Expo District allows us to develop some final conclusions.

First of all it's important to notice that the rough land average incidence value of 14,53% is lower than the preset forfeit percentages imposed by the Italian fiscal claim. Especially in this application, using a default of 20% percentage would cause a 5,5% increase in the non depreciable expenses accounts as well as a distorted financial structure observation. Nowadays IAS involved companies need therefore to develop an integrated Real Estate company management system in order to have a direct control over their accounting on fixed assets.

In this way it will be possible not only to monitor their multi annual expenses but also to quickly estimate, on a case by case basis, the proper accounting *fair value* to register in the balance sheet according to the year by year IAS revaluation approach.

A final consideration concerns the important work that IAS request to impose on the valuation discipline, especially in Italy, where the information systems and the Real Estate data collecting system, at present, are rather weak and incomplete.

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