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The impact of the gains and losses recognised direclty in equity on the company profitability.

An empirical evidence from European Stock Exchanges.

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Abstract

The paper presents the results of an analysis of the impact of the gains and losses recognised directly in equity on the company profitability measured by the Return on Equity ratio.
IFRSs define the total comprehensive income that represents a fundamental concept in financial reporting. Furthermore, there is a great debate on the definition and relevance of the comprehensive income.
By means of an empirical analysis of the consolidated financial statements of the groups listed on the UK, French, German, Spanish and Italian Stock Exchanges and belongings to the main indexes, this research aims at verifying the impact of the "dirty surplus" on the evaluation of the profitability of a company measured by the return on equity ratio.
This paper shows that gains and losses have an important influence on the net income and have a highly variable weight in function of the nationality of the groups analysed and the different years. Consequently the ROE has considerable increases and decreases over the years.
Thus, under an investor point of view is profoundly different to evaluate the profitability of a company by the net income or by the total comprehensive income.
This research contributes to defining the relevance of the comprehensive income, which is a fundamental definition in accounting and extremely present after the revision of the IAS 1 by the IASB.

Keywords*: gains and losses recognised directly in equity, return on equity, comprehensive income, IFRS, profitability ratios.*

1 - Introduction

Since 1 January 2005 European listed companies have been required to prepare their consolidated financial statement in accordance with IAS/IFRS: "*pressures to integrate capital markets in*

Europe have prompted the European Commission to introduce uniform financial reporting standards for listed EU companies" (Van Hulle, 2003).

For the investors, the introduction of IAS/IFRS represents therefore an opportunity for the evaluation of investment choices on a global scale and no longer on a local one.

The application of IAS/IFRS involves the use of fair value and so, leads to a measurement of the net income and the correlated equity that present a greater volatility than in the past, in particular in the Continental Europe Accounting Group.

The tools used to assess the financial condition and performance of the company are financial ratios, or indexes, which relate two pieces of financial data by dividing one quantity by the other (Van Horn, Wachowicz, 2001).

Making reference to the consolidated financial statements in compliance with IAS/IFRS of the listed groups in the five major European Stock Exchanges (London, Paris, Frankfurt, Madrid and Milan) in 2004, 2005 and 2006 it is now possible to verify "on the field" whether the application of IAS/IFRS has significantly changed the quantities to be considered in the financial analysis which are also used by the investors.

This paper focuses in particular on the Return on Equity, which is able to express, in brief, the global profitability of the company. This ratio is used by the investor to evaluate the performance in relation to the resources provided by the shareholders'(Ferrero, Dezzani, 1979).

IAS 1 requires, in addition to the net income, to show the other comprehensive income that comprises items of income and expense that are not recognised in profit or loss as required or permitted by other IFRSs. These gains and losses recognised directly in equity represent the "dirty" surplus and the sum of the net income and this "dirty" surplus represents the total comprehensive income.

There has been a large debate on the usefulness of the comprehensive income (see Thinggaard at al., 2006). In fact, in response to the exposure draft of proposed amendments to IAS 1 Presentation of Financial Statements published by the IASB in March 2006, the authors note that "*besides the lack of a common conceptual basis for the items included in other recognised income and expense some of these items are mandatory whereas others are consequences of measurement options, which adds to the lack of a theory standards*".

Moreover, the paper above mentioned underlines that the surveyed research is often carried out in countries with differing standards and reporting environments and cover different time periods.

Thus, the paper aims at verifying, by means of the empirical analysis of the groups listed on the UK, French, German, Spanish and Italian Stock Exchanges belonging to the main indexes (FTSE100, CAC40, DAX30, IBEX35, S&PMIB40), the impact of the gains and losses recognised directly in equity on the return on equity ratio.

The consolidated financial statement of groups listed on the German, French, Italian and

Spanish Stock Exchanges which have been selected for this paper are generally categorized as belonging to the Continental Europe accounting group and are the opposite of the Anglo-Saxon approach to accounting in the UK[1].

The remainder of this paper is organized as follows. Sections 2 describes the background and justification for this paper and the research questions generated. The data and methods employed in this research are set out in Section 3 and the results are presented in Section 4. The paper concludes with a discussion of the findings and some indication of future development.

2 – Background and research questions

Return on Equity (ROE) measures "*net income relative to the amount invested by stockholders in a company, including retained earnings. Investors and financial analysts use return on equity to compare the performances of companies, either to compare one company with another or to compare a company's performance in one period with its performance in another period* (Van Horn, Wachowicz, 2001)".

Return on Equity (ROE) is determined by the ratio between the net income of the income statement of a financial year and the correlated average equity of the financial year.

Thus, the ratio is the following:

$$(F1)\ ROE = \frac{Net\ Income}{Average\ Equity}$$

The ROE analysis is often carried out also to monitor the different ways of making investment decisions for the firms' shareholders.

It was possible to execute this comparative analysis, without International accounting standards, by using the financial statement of those firms operating solely in countries whose quantities could be considered homogeneous.

The introduction of IAS/IFRS enables a comparison on an international scale of the shareholders' different choices of investment, with a convergence of the accounting principle of each country of the European Union to a unique set of standards (Reg. 1606/2002).

However, as well as the geographical dimension, it is important to investigate how meaningful the ROE is in the light of the changes that the quantities undergo, which determines the ROE itself.

[1] See the following papers/books for the differences in accounting in the UK, Germany, France, Italy, Spain: Delvaille, Pascale, Ebbers, G. and Saccon, C. (2005) International Financial Reporting Convergence: Evidence from Three Continental European Countries, *Accounting in Europe*, Vol. 2, N.1 [137 – 164] for the differences in the accounting policies of France, Germany and Italy. See also Campra M. (1998), *Il bilancio – Francia, Germania, Regno Unito, Spagna e Italia*, Giuffrè Editore, Milano, Nobes C. and Parker R. (2000), *Comparative International Accounting*, Prentice Hall, Englewood Cliffs, NJ.

In fact, the determination of the income and equity with the introduction of IAS/IFRS is profoundly different compared to the past with particular reference to the companies belonging to the Continental Europe Accounting Model.

In particular, the IAS/IFRS financial statement model is based primarily on the use, even though it is not exclusive (Cairns, 2006), of the fair value, that is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction (IAS 39, par. 11). The best evidence of fair value is quoted prices in an active market. If the market for a financial instrument is not active, an entity establishes fair value by using a valuation technique (IAS 39, par. 48 A).

Consequently the use of fair value on the financial statement links the income and the equity to the fair value/market value assets and liabilities oscillations, and so the use of fair value is expected to make earnings more volatile (Jackowitz et al., 2006).

Therefore, the income and the equity could be subject to a greater volatility compared to the past, in that the determination of the above mentioned quantities was solely influenced by the income that was effectively realized.

Furthermore, the recognition of gains and losses of fair value in financial statement is not univocal.

In fact, the International Accounting Standards foresee the recognition of gains and losses in fair value:

- in some cases, in the income statement (eg: financial instruments held for trading and investment property);
- in other cases, recognition takes place directly in equity in a specific reserve (eg.: financial assets available for sale, increase/decrease in fair value of derivative use in cash flow hedge relationship);
- in yet other cases the increases are recognised in equity and the decreases are recognised in the income statement (eg.: property, plant and equipment and intangible assets).

According to International Accounting Standards the financial statement model also foresees the recognition directly in equity of the other gains and losses, such as:

- the effect of the changes in accounting policies;
- gains and losses arising from translating the financial statements of a foreign operation.

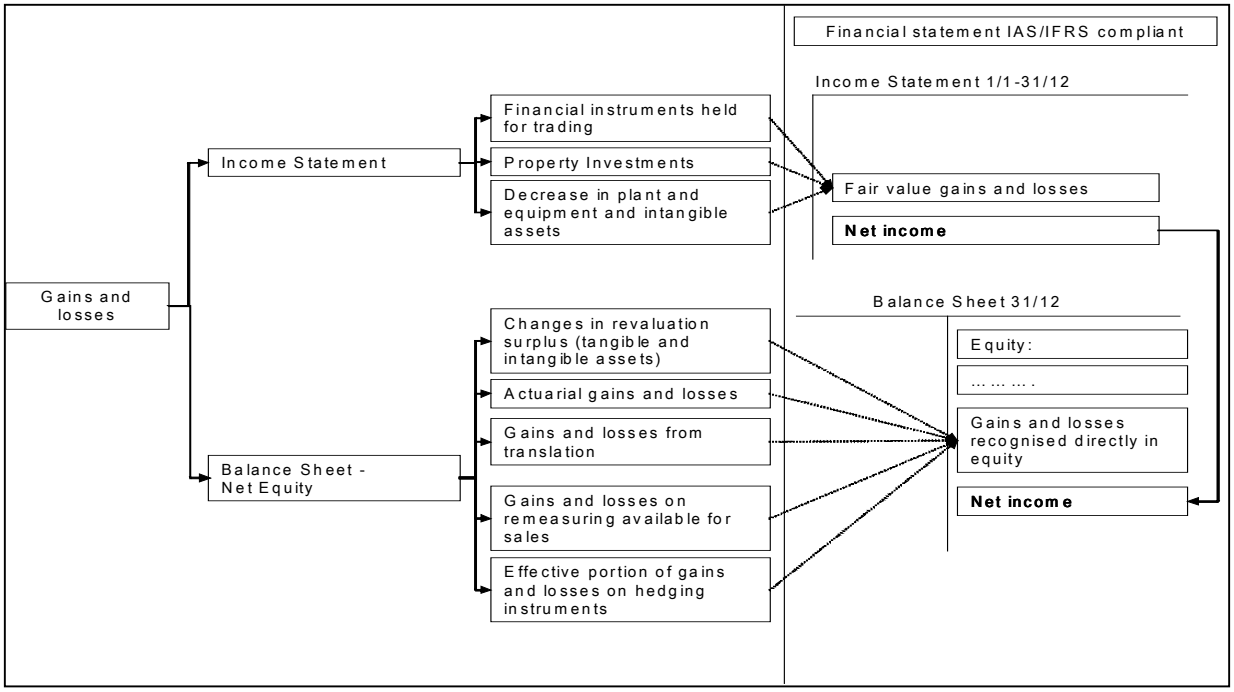
This affirmation is supported by the fact that the IAS 1 (revised in September 2007 and will be applied from 1st January 2009, with earlier application permitted) identifies the following components of "other comprehensive income" that are not recognised in profit or loss:

- changes in revaluation surplus (IAS 16 and IAS 38);
- actuarial gains and losses on defined benefit plans recognised in accordance with paragraph 93.a of IAS 19;

- gains and losses arising from translating the financial statements of a foreign operation (IAS 21);
- gains and losses on re-measuring available-for-sales financial assets (IAS 39);
- the effective portion of gains and losses on hedging instruments in a cash flow hedge (IAS 39)[2].

Table 1 provides a summary of the above.

Table 1 – Gains and losses



The first research question is to evaluate the total amount of the gains and losses directly recognised in equity and its composition in order to understand if the amount of the gains and losses is relevant in the sample examined (Q1).

Thus, it is possible to state that:

- only a part of the gains and losses of fair value are recognised in the income statement and therefore have an impact on the profit of the year;
- on the other hand, some gains and losses of fair value are recognised directly in equity.

The above can be summarised in the following way (highlighting the fair value gains and losses)[3]:

[2] The effect of the changes in accounting policies (IAS 8) is not considered in other comprehensive income because it is a non-owner changes in equity.

[3] See also Lionzo A. (2005), *Il sistema dei valori di bilancio della prospettiva dei principi contabili internazionali*, Franco Angeli, Milano.

Net Income = (Income – Expenses) + gains and losses of fair value recognised in the Income Statement
and
Equity at 31/12= Equity at 1/1 + gains and losses directly recognised in Equity + Net Income*

* Without considering the owners' transactions

It ensues that the total result of the firms' activity is partly subdivided into the:

- income statement (expressed by the net income).
- equity (gains and losses recognised directly in equity).

Therefore, the effective company result is not only represented by the profit of the year but must be integrated with the gains and losses directly recognised in equity.

So, the purpose of this paper is to prove that the transition to the International Accounting Standards and in particular the gains and losses recognised in equity influences the significance of the ROE, since the effect of the dirty surplus.

Consequently, the ROE should be thus determined:

(F2) $$ROEp = \frac{Total\ Comprehensive\ Income}{Equity\ Average}$$

The second and final research question is to analyse the differences between the return on equity calculated with the net income and the total comprehensive income in the defined sample (Q2).

3 – Data and methods

The examined sample is made up of the groups listed on the European Union Stock Exchanges and which belong to the main indexes of the five most important European Stock Markets (UK, Germany, France, Spain and Italy).

The examined sample is thus composed of the listed groups on the Stock Exchanges of the most important indexes of the main European Market (FTSE100, CAC40, DAX30, IBEX35, S&PMIB40), which had to apply the IAS/IFRS starting from 1st January 2005.

Consequently the consolidated financial statements refer to the three-year period 2004-2006.

The investigation was based on the consolidated financial statements of the entities belonging to the above mentioned indexes. In particular, the data of consolidated financial statements regarding 2004, 2005 and 2006 were analysed.

The year 2004 is obtained as comparative information of the Financial Statement referred to the year 2005.

Consequently, the sample of the analysed groups is in Table 2 (a list of the consolidated fi-

nancial statements of the analysed listed groups is provided in appendix A and the listed groups excluded from the analysis due to a lack of suitable data are provided in appendix B).

Table 2 - Sample

INDEXES*	**NUMBER OF GROUPS IN THE INDEX**	**YEARS**						**TOTAL NUMBER OF FINANCIAL STATEMENT ANALYSED**
		2004		**2005**		**2006**		
FTSE 100	100	97	97%	97	97%	89	89%	**283**
CAC40	40	38	95%	39	98%	39	98%	**116**
DAX30	30	23	77%	24	80%	23	77%	**70**
IBEX35	35	34	97%	35	100%	35	100%	**104**
S&P MIB40	40	32	80%	39	98%	39	98%	**110**
Total	**245**	**224**	**92%**	**234**	**95%**	**225**	**91%**	**683**

** The composition of the index refers to 30/09/2007*

As can be seen in table 2 the total examined sample is composed of 683 consolidated financial statements of the groups listed on the stock Exchange of London, Frankfurt, Paris, Madrid and Milan.

The analysed groups of the FTSE 100 decrease in 2007 due to the lack of financial statements of the companies with the end of the financial year after 30/04/2007.

The following quantities were then measured for each group belonging to the different indexes of the sample:

1. net income and equity;
2. the changes shown by IAS 1 revised – September 2007:
   a. changes in revaluation surplus (IAS 16 Property, Plants and Equipment and IAS 38 Intangible Assets);
   b. actuarial gains and losses on defined benefit plans recognised in accordance with paragraph 93 a of IAS 19;
   c. gains and losses arising from translating the financial statements of a foreign operation (IAS 21);
   d. gains and losses on re-measuring available-for-sales financial assets (IAS 39);
   e. the effective portion of gains and losses on hedging instruments in a cash flow hedge (IAS 39);
3. total amount of the gains and losses of the previous point, net of related tax effects;
4. the measurement of the total comprehensive income (net income + total amount of gains and losses from the previous point 3);

5. ROE calculated with net income and ROEp calculated with the total comprehensive income.

Due to the huge number and the variety in the source, data were "hand collected" from the group financial statements and transferred to a spreadsheet as the basis for further analysis.

The net income and equity were taken from the Balance sheet and Income Statement and the changes in gains and losses recognised directly in equity were collected from the consolidated statement of changes in equity or from the consolidated statement of recognised income and expenses.

The companies listed on the stock exchange in Paris, Madrid, Frankfurt and Milan draw up the consolidated financial statement in Euros whereas most of the companies listed on the London stock exchange used pounds, but some reported in US dollars or Euros (see the list in the appendix A).

Where the analysis required a common currency, data was converted to the foreign exchange rate at the balance sheet closing date.

Most of the group financial statements are closed at 31/12 of the year, whereas in the London Stock Exchange there are different reporting dates e.g. 31/01, 30/04, etc.

Where companies have undergone a business combination process the financial statement of the purchasing company was considered (in compliance with IFRS3).

4 - Results

The results are presented in accordance with the research questions that were posed.

4.1 - *The total amount of the gains and losses recognised directly in equity and its composition*

The first analysis is primarily a verification of how many cases have a sum of the gains and losses directly recognised in equity equal to zero, as shown by table 3.

Table 3 – Number of cases with total sum of gains and losses equal to zero

	2004			2005			2006		
	Number of groups	**%**	**Total Sample**	**Number of Groups**	**%**	**Total sample**	**Number of Groups**	**%**	**Total sample**
FTSE100	3	3.09%	97	1	1.03%	97	1	1.12%	89
CAC40	3	7.89%	38	0	0.00%	39	1	2.56%	39
DAX30	0	0.00%	23	0	0.00%	24	0	0.00%	23
IBEX35	2	5.88%	34	2	5.71%	35	2	5.71%	35
S&PMIB40	8	25.00%	32	2	5.13%	39	1	2.56%	39
	16	7.14%	224	5	2.13%	234	5	2.22%	225

As can be seen, table 3 shows that there are extremely few cases where the total amount of the gains and losses directly recognised in equity is equal to zero. The sole exception is the Italian index, in that there are eight firms that have no variation recognised directly in equity for the year 2004, due to the application of IAS 32 and 39 on 1 January 2005 and have no other variation (actuarial gains, translation of foreign operations, etc.)

Moreover, the higher number of gains and losses equal to zero were found in 2004, whereas there were only 5 cases in 2005 and 2006.

This analysis shows that in the three year period only in 26 cases, that is to say 3.80% of the total sample examined the sum of gains and losses in equity is equal to zero, and makes it possible to proceed with more in-depth analyses.

The second analysis is the verification of the total sum of the variations in the gains and losses that are directly recognised in equity, chiefly in order to understand the amount and the trends over the years.

Thus, table 4 below shows the total sum of the set of the changes of fair value emerging from the sample examined.

Table 4 – Total amount of the gains and losses recognised directly in equity

€ thousands	**2004**	**2005**	**2006**
FTSE100	7.157.638	-7.292.252	14.458.011
CAC40	-6.301.409	25.107.069	-11.454.935
DAX30	48.994	9.162.800	-2.089.700
IBEX35	47.072	9.748.365	-2.233.066
S&PMIB40	-558.815	7.959.822	-810.945

An analysis of table 4 shows that the maximum values were registered in 2004 by the groups listed on the FTSE100 index (7 billion Euro), in 2005 by groups listed on the CAC40 index (25 billion Euro) and in 2006 once more by groups listed on the FTSE100 index (14 billion Euro).

It is interesting to notice how in 2005 and 2006 the total sum of the gains and losses of the groups listed on the FTSE100 went against the trend compared to the gains and losses registered by the groups listed on the CAC40, DAX30, IBEX35 and S&PMIB40 indexes. In fact, the total amount of the gains and losses recognised directly in equity of the latter indexes in 2005 are positive, whereas the FTSE is negative; instead, in 2006 the total amount of the gains and losses recognised in equity registered by the groups listed on the FTSE100 index is positive, whereas the value of the groups listed on the continental indexes is negative.

Despite the lower number of groups listed on the CAC40 index, in 2005 it was characterized by the highest sum of the gains and losses recognised in equity in the three years analysed.

In order to gain a better understanding of the dynamics of the gains and losses recognised directly in equity see figure 1.

Figure 1 – Trend of the total amount of gains and losses in equity (Thousands Euro)

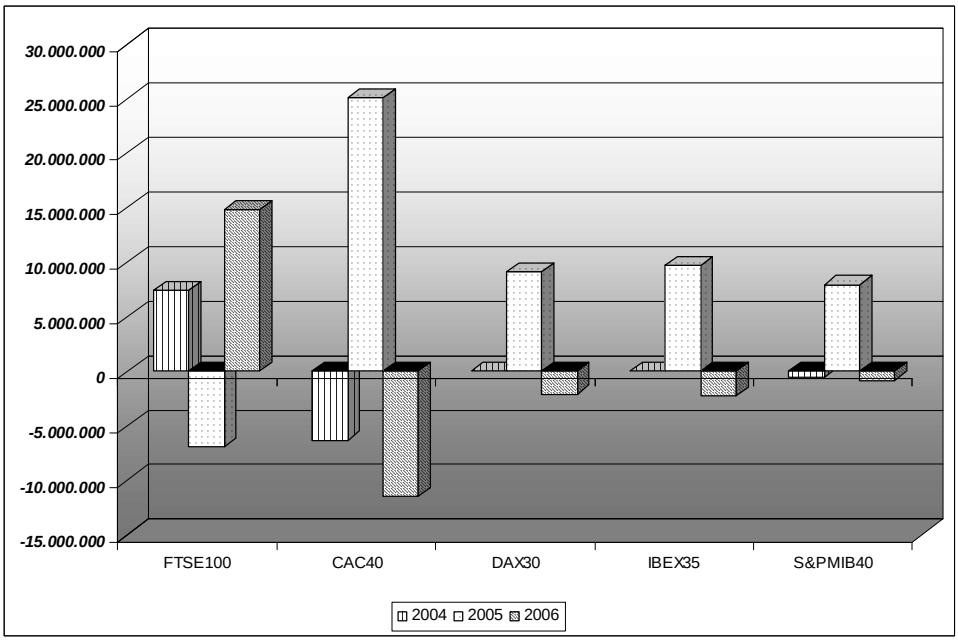


Figure 1 highlights how in 2004 the total sum of the gains and losses recognised directly in equity is less significant when compared with the other years analysed.

In particular, the total value of the groups of the DAX30, IBEX35 and S&PMIB40 indexes was not significant when compared with the other years that have been analysed. This is due to the fact that the groups were obliged to apply IAS 32 and IAS 39 from 1 January 2005, as well as the insignificant weight of the other gains and losses in equity.

There was a considerable increase in 2005 in all the markets analysed, and the peak is represented by the groups listed on the CAC40 index. In such an index, the peak is due to the significant increase in the gains deriving from the gains and losses which arise from translating the financial statements of a foreign operation.

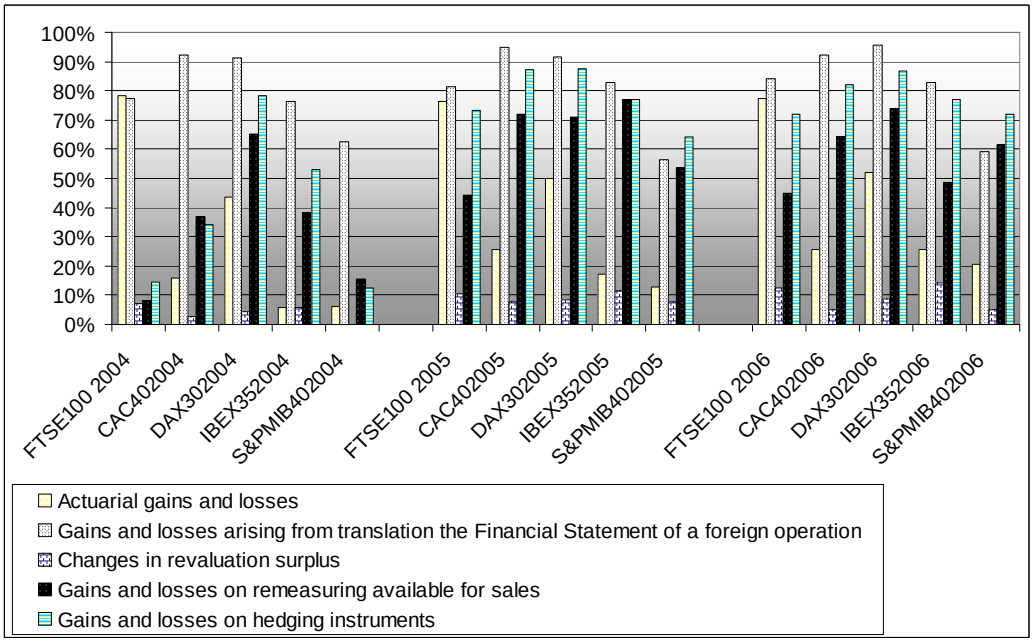
On the other hand, in 2006 there was a change in the trend in all the groups belonging to the different markets. In fact, the groups listed on the British index were once more positive, whereas all the indexes in Europe (CAC40, DAX30, IBEX35, S&PMIB40) registered a negative trend, with values that were more significant compared to those registered in 2004.

After having identified the total sum of the positive and negative components directly recognised in equity, Figure 2 shows, as a percentage, the number of cases where the gains and losses in equity have been found.

It emerges that the most common gains and losses in all the groups analysed in the three years are those deriving from translating the financial statements of a foreign operation, followed by the effective portion of gains and losses on hedging instruments in a cash flow hedge and

gains and losses on re-measuring available for sales financial assets.

Figure 2 – Frequency of different types of changes in equity



The gains and losses linked to the actuarial gains and losses are also present in large quantities in the consolidated financial statements of the analysed listed groups, whereas the least common are the changes in revaluation surplus.

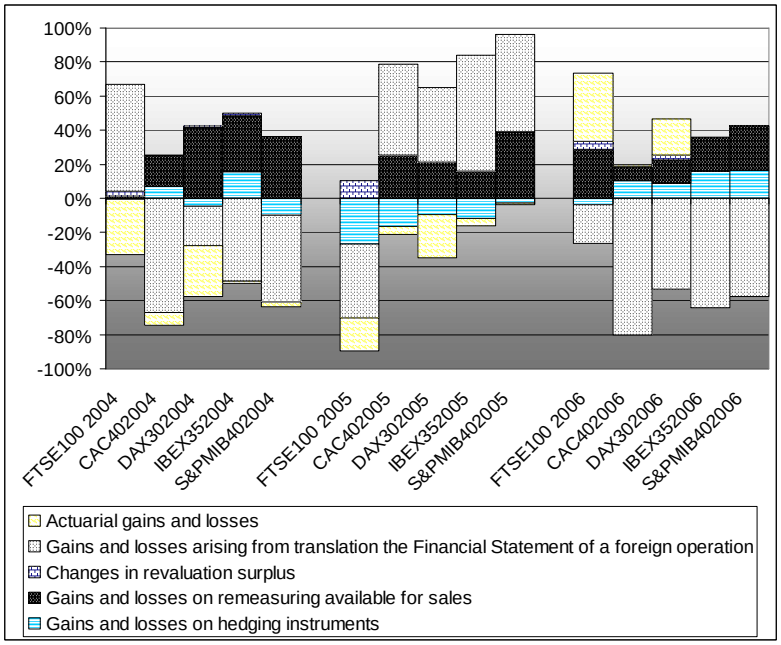
After having examined the frequency of the gains and losses found, a verification is made to see which of these gains and losses has the greatest impact on the total amount of the gains and losses components recognised directly in equity (Figure 3).

An analysis of figure 3 clearly shows how the gains and losses arising from translating the financial statement of a foreign operation are without doubt for all the analysed groups listed in their respective indexes and in the three-year period the value with the greatest influence on the total amount of the gains and losses recognised directly in equity.

It should be highlighted that the losses arising from translating the financial statement of a foreign operation of the groups listed on the "Continental" Stock Exchanges had a similar trend: in fact, the trend was negative in 2004 for the CAC40, DAX30, IBEX35 and SPMIB40 indexes. Only the London market had a positive trend in 2004.

On the other hand, the situation was reversed in 2005: the groups listed on the London index had a negative influence deriving from the gains and losses arising from translating the financial statement of a foreign operation, whereas continental Europe had a positive one for these quantities. In 2006, this difference was negative for all the groups listed on all the indexes analysed.

Figure 3 – Percentage of the gains and losses in equity on the total sum of changes in equity.



Moreover, significant variations were linked to the fair value assessment of the financial instruments with particular reference to the available for sales, which, over the three-year period and in the groups listed on the different indexes, always had a positive effect on the total value of the gains and losses recognised directly in equity.

Instead the cash flow hedge variations fluctuated during the analysed three-year period. Finally, it is important to see how the actuarial gains and losses on defined plans recognised in accordance with IAS 19 were significant over the three-year period only for the London and German markets.

The figure also confirms what has already been analysed in the group financial statements regarding the non application of the fair value as an allowed accounting policy for Property, Plant, Equipment and Intangible Assets[4]. In fact, the changes in revaluation surplus only have a significant value in the United Kingdom, whereas it is practically non-existent in the listed groups in the other countries that have been analysed.

4.2 - *The impact on the return on equity ratio*

The final analysis consists of evaluating the impact of the gains and losses directly recognised in equity on the return on equity ratio.

This analysis makes it possible to verify how the ROE calculated only with net income is different from the ROEp calculated with the total comprehensive income.

In particular, the following are used:

ROE = Net income/Average Equity
ROEp= Total comprehensive income/Average Equity

Table 5 shows ROE and ROEp mean and median for the examined three-year period.

Table 5 – Mean and Median of ROE and ROEp

		2004			***2005***			***2006***		
		ROE	*ROEp*	*Var. %*	*ROE*	*ROEp*	*Var. %*	*ROE*	*ROEp*	*Var. %*
CAC40	Mean	16.23%	14.80%	*-8.84%*	18.26%	22.19%	*21.55%*	17.20%	15.57%	*-9.50%*
	Median	15.84%	14.91%		16.28%	23.48%		15.57%	14.67%	
DAX30	Mean	14.22%	14.21%	*-0.08%*	15.95%	18.23%	*14.29%*	16.89%	14.66%	*-13.18%*
	Median	12.16%	10.84%		14.39%	17.60%		16.31%	16.10%	
FTSE100	Mean	18.10%	18.00%	*-0.54%*	19.36%	19.27%	*-0.48%*	22.22%	22.05%	*-0.75%*
	Median	17.26%	16.24%		19.28%	19.07%		19.67%	21.22%	
IBEX 35	Mean	18.80%	19.13%	*1.77%*	19.01%	22.45%	*18.10%*	22.20%	20.98%	*-5.49%*
	Median	17.90%	17.38%		17.34%	19.68%		20.18%	19.64%	
SPMIB40	Mean	13.39%	12.84%	*-4.13%*	15.82%	18.89%	*19.38%*	14.59%	14.00%	*-4.10%*
	Median	15.65%	14.06%		16.37%	20.37%		15.78%	15.95%	

In 2004, the average ROEp, considering the total comprehensive income, had a negative variation in the groups listed on the examined indexes with the sole exception of the IBEX35 index which, instead, showed an improvement in the global profitability of 1.77%. To sum up, in 2004 the difference was very low, also due to the scarce influence of the gains and losses directly recognised in equity in the same year.

On the other hand, in 2005 it can be seen how the difference between the ROE and the ROEp (calculated with the comprehensive income) was decidedly higher and more significant.

In fact, the "continental" indexes have variations that are between the 14.29% of the DAX30 and the 21.55% of the CAC40. In these cases, the total comprehensive income is greater than the profit of the financial year and consequently the global profitability calculated with the comprehensive income shows a higher return for the shareholders. This point is consistent with the analysis of the previous point, which highlighted the strong impact of the gains and losses in equity on the profit of the period.

Finally, in 2006 the differences were negative in all the markets; i.e. the global profitability

[4] See Busso D. and Devalle A., The application of the fair value measurement: the cases of the CAC40, DAX30, IBEX35 and S&PMIB40 indexes, paper presented at the "*Annual International Conference on Accounting and Busi-*

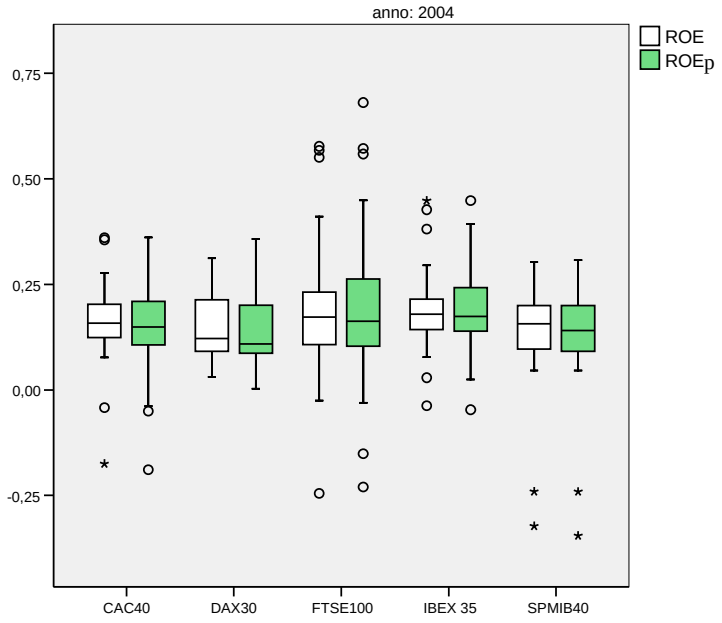
measured by the ROEp is lower than the value obtained with the traditional ROE.

This variation is considerable in some markets such as the DAX30 index, whereas it is between -4.10% and -13.18% for the other continental markets.

It should be noticed how the FTSE100 index, in keeping with what has emerged from the previous points, had a variation in the average values that was always over -1%.

Figure 4 shows the distribution of the ROE and the ROEp in 2004 for the groups listed on the different stock exchange indexes analysed (Figure 4).

Figure 4 – Box plots of ROE and ROEp (2004)



2004 highlights a worsening in global profitability of the firm if the ROE calculated with the total comprehensive income is considered.

In fact, the median even moves towards the lower end in the FTSE100 index, where the impact of the gains and losses recognised directly in equity on the profit was positive.

Moreover, the ROE, apart from the DAX30 index, reportss values that are distributed equally; whereas the ROEp shows an increasingly greater dispersion for the values exceeding the median.

It should also be emphasized that within the context of the FTSE 100, IBEX35 and CAC40 indexes there are some listed groups reporting a difference in values between +75% and – 20%.

Anyway the difference of the medians is, extremely limited, in keeping with what has emerged from the previous analysis. Figure 5 shows the variations in 2005.

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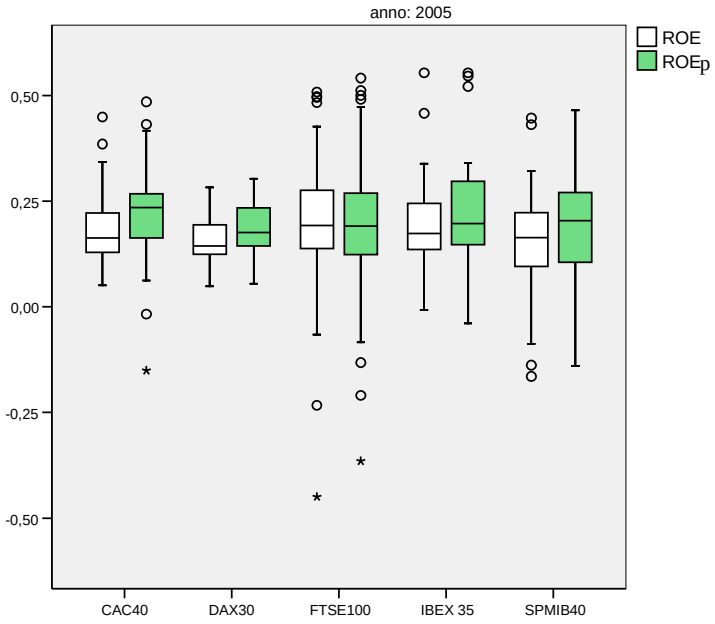
ness 2008" held in Shanghai, June 6-8th.

Figure 5 – Box plots of ROE and ROEp (2005)



In 2005 it can be seen how the distance between the ROE and ROEp medians was higher.

The CAC40 index median went from the 16.28% of the traditional ROE to the 23.48% of the ROEp. Besides, in this index it is significant how 50% of the sample was distributed less uniformly below the median, whereas the distribution over the median was highly concentrated. On the other hand, the DAX30 sees the median going from 14.39% to 17.60%, confirming a significant difference between the traditional ROE and the ROEp.

The SP&MIB40 index sees an increase of 4 percentage points between the median of the ROE and the ROEp. Instead the IBEX35 index has a median that goes from 17.34 to 19.68% with a positive difference.

Therefore the CAC40 index has a greater variation followed by the SPMIB40, the DAX30 and finally the IBEX35 indexes. Only the FTSE 100 index is almost unchanged, consistent with the previous analyses made.

Moreover, the distribution tends to be less uniform as the greater size of the box of the ROEp shows compared with the box of the traditional ROE.

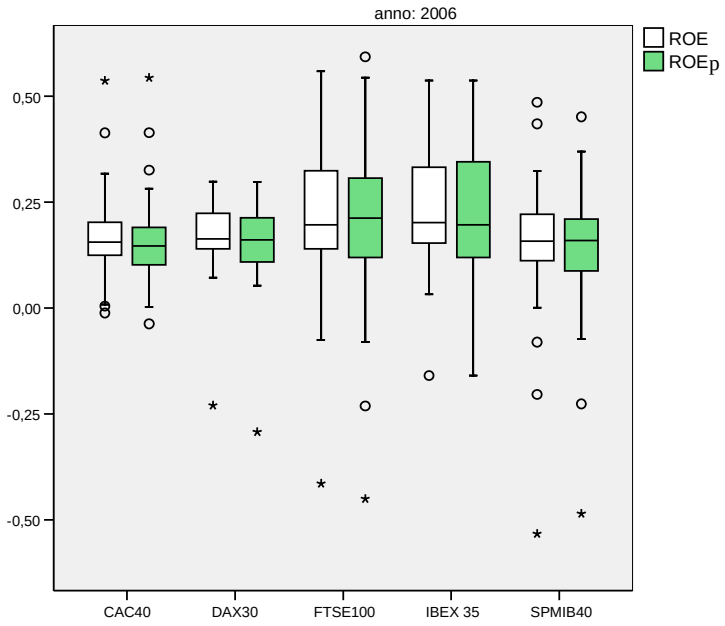
This means that the impact of the gains and losses recognised directly in equity brings about greater variations for each individual firm compared to the calculation of the traditional ROE.

Thus the investors, considering the traditional ROE of each firm, could have indications of global profitability that are inconsistent with the effective total company performance represented by the total comprehensive income.

As Figure 6 shows, in 2006 the ROEp values settled once more with the median values that

were decidedly different compared with the previous financial year, even if they were slightly lower in all the years.

Figure 6 – Box plot of ROE and ROEp (2006)



In particular, the CAC40, DAX30 and IBEX35 indexes had an extremely low decrease in the median, whereas only the FTSE100 and the SPMIB40 indexes had a growth in the median value. The latter two indicators went against the trend compared to the average values, which instead decreased (even if the difference between the two values is contained within 1%).

It is important to see how the analysis of the ROEp determines a significant increase in the variability of the data. This observation is consistent with the analysis of the histograms that was made previously, where it emerged that in 2006, there is the tendency towards a decrease in the dispersion of values of the sum of the variations recognised directly in equity.

A fact which is common to all the years examined is the distribution of the ROEp, which is less uniform. Hence the importance of monitoring the total comprehensive income of each company and not only the net income.

5 - Conclusion

This paper analyses the gains and losses recognised directly in equity and the impact they have on the global profitability of the company.

The empirical evidence has shown how such gains and losses have an important influence on the result of the year and have a highly variable weight according to the nationality of the con-

solidated financial statement analysed and the specific year.

Consequently the ROE, and thus the total profitability, has considerable increases and decreases over the years, depending on whether the calculation is made with the total comprehensive income or only with the financial year net income; precisely because of the impact of the gains and losses recognised directly in equity on the profit of the year.

Furthermore, it must be considered that the ROEp of each group of the indexes analysed shows a highly variable behavior depending on the company considered.

The investor has, therefore, a different understanding of the overall trend of the company by means of the monitoring of the performance represented by the comprehensive income and the calculation of the ROEp.

Three years are certainly not enough to be able to express a definitive opinion on the choice between the "traditional" ROE and the ROEp, but the evidence is clear: the gains and losses recognised directly in equity make the net income itself more variable, consequently the impact on the ROE is significant and shows that comprehensive income must be monitored.

In fact, the comprehensive income may increase or decrease depending on the impact of such gains and losses on the net equity.

On the basis of the results of this paper it will therefore be possible to carry out further studies on the value relevance of comprehensive income.

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APPENDIX A –List of the consolidated financial statements of the analysed listed groups

LISTED GROUPS ANALYSED	INDEX	CURRENCY	NOTES
ANCELOR MITTAL	CAC 40	EURO	Merger with Ancelor in 2006; Financial statement US GAAP compliant
ACCOR	CAC40	EURO	
AIR FRANCE-KLM	CAC40	EURO	
AIR LIQUIDE	CAC40	EURO	
ALCATEL	CAC40	EURO	
ALSTOM	CAC40	EURO	
AXA	CAC40	EURO	
BNP	CAC40	EURO	
BOUYGES	CAC40	EURO	
CAPGEMINI	CAC40	EURO	
CARREFOUR	CAC40	EURO	
CREDIT AGRICOLE	CAC40	EURO	
DANONE	CAC40	EURO	
DEXIA	CAC40	EURO	
EADS	CAC40	EURO	
EDF	CAC40	EURO	
ESSILOR	CAC40	EURO	
FRANCE TELECOM	CAC40	EURO	
GAZ	CAC40	EURO	
LAFARGE	CAC40	EURO	
LAGARDERE	CAC40	EURO	
L'OREAL	CAC40	EURO	
LVMH	CAC40	EURO	
MICHELIN	CAC40	EURO	
PERNOD	CAC40	EURO	
PINAULT	CAC40	EURO	
PSA PEUGEOT	CAC40	EURO	
RENAULT	CAC40	EURO	
SAINT GOBAIN	CAC40	EURO	
SANOFI-AVENTIS	CAC40	EURO	
SCHNEIDER	CAC40	EURO	
SOCIETE GENERALE	CAC40	EURO	
SUEZ	CAC40	EURO	
TOTAL	CAC40	EURO	
UNIBAIL-RODAMCO	CAC40	EURO	
VALLOUREC	CAC40	EURO	
VEOLIA	CAC40	EURO	
VINCI	CAC40	EURO	
VIVENDI	CAC40	EURO	
ADIDAS GROUP	DAX30	EURO	
ALLIANZ	DAX30	EURO	
BASF	DAX30	EURO	

BAYER	DAX30	EURO	
BMW	DAX30	EURO	
COMMERZBANK	DAX30	EURO	
CONTINENTAL	DAX30	EURO	
DEUTCHE BORSE	DAX30	EURO	
DEUTCHE POST	DAX30	EURO	
DEUTCHE TELEKOM	DAX30	EURO	
HENKEL	DAX30	EURO	
HYPO	DAX30	EURO	
LINDE	DAX30	EURO	
LUFTHANSA	DAX30	EURO	
MAN AG	DAX30	EURO	
MERCK	DAX30	EURO	
METRO	DAX30	EURO	
MUNICH RE	DAX30	EURO	
POSTBANK	DAX30	EURO	
RWE GROUP	DAX30	EURO	
SIEMENS	DAX30	EURO	Financial statement 2005 US GAAP compliant; year 2005 IAS/IFRS compliant in2006 Financial state-ment
THYESSEN KRUPP	DAX30	EURO	Only years 2004, 2005. Year End at 30/06
TUI	DAX30	EURO	
VOLKSWAGEN	DAX30	EURO	
3I GROUP PLC	FTSE100	POUND	
ABF	FTSE100	POUND	No 2006, Year End at 30/09
ALLIANZ LEICESTER	FTSE100	POUND	
ANGLO AMERICAN PLC	FTSE100	DOLLARS	
ANTOFAGASTA	FTSE100	DOLLARS	
ASTRAZENECA	FTSE100	DOLLARS	
AVIVA PLC	FTSE100	POUND	
BAE SYSTEMS	FTSE100	POUND	
BARCLAYS	FTSE100	POUND	
BARRAT DEVELOPMENTS	FTSE100	POUND	
BG GROUP	FTSE100	POUND	
BHPBILLITON	FTSE100	DOLLARS	
BP	FTSE100	DOLLARS	
BRITISH AIRWAYS	FTSE100	POUND	
BRITISH AMERICAN TABACCO	FTSE100	POUND	
BRITISH ENERGY	FTSE100	POUND	
BRITISH LAND COMPANY	FTSE100	POUND	
BT GROUP	FTSE100	POUND	
CABITA GROUP	FTSE100	POUND	
CABLE AND WIRELESS	FTSE100	POUND	
CADBURY SCHWEPPES	FTSE100	POUND	
CARNIVAL	FTSE100	DOLLARS	No 2006, Year End at 30/09
CARPHONE WAREHOUSE	FTSE100	POUND	
CENTRICA PLC	FTSE100	POUND	

COMPASS GROUP	FTSE100	POUND	No 2006, Year End at 30/09
DAILY MAIL	FTSE100	POUND	
DIAGEO	FTSE100	POUND	
DSG	FTSE100	POUND	
ENTERPRISE INNS	FTSE100	POUND	No 2006, Year End at 30/09
FRIEND PROVIDENT	FTSE100	POUND	
GSK	FTSE100	POUND	
HAMMERSON	FTSE100	POUND	
HBOS	FTSE100	POUND	
HSBC	FTSE100	DOLLARS	
ICAP	FTSE100	POUND	
ICI	FTSE100	POUND	
IHG	FTSE100	POUND	
IMPERIAL TOBACCO	FTSE100	POUND	
INTERNATIONAL POWER	FTSE100	POUND	
INVESCO	FTSE100	DOLLARS	
ITV	FTSE100	POUND	
JOHNSON MATTHEY	FTSE100	POUND	
KAZAKHMYS PLC	FTSE100	DOLLARS	
KINGFISHER PLC	FTSE100	POUND	
LAND SECURITIES	FTSE100	POUND	
LEGALAND GROUP	FTSE100	POUND	
LIBERTY INTERNATIONAL	FTSE100	POUND	
LLOYDS	FTSE100	POUND	
LONMIN	FTSE100	DOLLARS	No 2006, Year End at 30/09
MAN GROUP PLC	FTSE100	DOLLARS	
MARKS AND SPENCER	FTSE100	POUND	
MITCHELLS & BUTLERS	FTSE100	POUND	No 2006, Year End at 30/09
MORRISON ANNUAL REPORT	FTSE100	POUND	
NATIONAL GRID	FTSE100	POUND	
NEXT	FTSE100	POUND	
NORTHER ROCK	FTSE100	POUND	
OLD MUTUAL	FTSE100	POUND	
PEARSON GOVERNANCE	FTSE100	POUND	
PERSIMMON	FTSE100	POUND	
PRUDENTIAL PLC	FTSE100	POUND	
PUNCH TAVERNS	FTSE100	POUND	No 2006, Year End at 31/08
RBS GROUP	FTSE100	POUND	
RECKITT BENCKISER	FTSE100	POUND	
REED ELSEVIER	FTSE100	EURO	
RENTOKIL	FTSE100	POUND	
RESOLUTION	FTSE100	POUND	
REUTERS	FTSE100	POUND	
REXAM	FTSE100	POUND	
RIO TINTO	FTSE100	DOLLARS	
ROLLS-ROYCE	FTSE100	POUND	

ROYAL AND SUN ALLIANCE	FTSE100	POUND	
ROYAL DUTCH SHELL	FTSE100	DOLLARS	
SAB MILLER	FTSE100	DOLLARS	
SAGE	FTSE100	POUND	No 2006, Year End at 30/09
SAINSBURY	FTSE100	POUND	
SCHRODERS	FTSE100	POUND	
SCOTTISH & NEWCASTE PLC	FTSE100	POUND	
SCOTTISH AND S. ENERGY	FTSE100	POUND	
SEVERN TRENT	FTSE100	POUND	
SHIRE PLC	FTSE100	DOLLARS	
SKY	FTSE100	POUND	
SMITH&NEPHEW	FTSE100	DOLLARS	
SMITHS GROUP PLC	FTSE100	POUND	
STANDARD CHARTERED	FTSE100	DOLLARS	
TATE & LYLE	FTSE100	POUND	
TAYLOR WOODROW IN TAY-LOR WINPEY	FTSE100	POUND	
TESCO	FTSE100	POUND	
TULLOW OIL PLC	FTSE100	POUND	
UNILEVER	FTSE100	EURO	
UNITED UTILITIES	FTSE100	POUND	
VEDANTA	FTSE100	DOLLARS	
VODAFONE	FTSE100	POUND	
WHITBREAD	FTSE100	POUND	
WOLSELEY PLC	FTSE100	POUND	
WPP	FTSE100	POUND	
XSTRATA	FTSE100	DOLLARS	
YELL GROUP	FTSE100	POUND	
ABERTIS	IBEX 35	EURO	
ACCIONA	IBEX 35	EURO	
ACERINOX	IBEX 35	EURO	
ACS	IBEX 35	EURO	
AGUAS BARCELONA	IBEX 35	EURO	
ALTADIS	IBEX 35	EURO	
ANTENA 3	IBEX 35	EURO	
BA POPULAR	IBEX 35	EURO	
BA SABADELL	IBEX 35	EURO	
BAKINTER	IBEX 35	EURO	
BANESTO	IBEX 35	EURO	
BBVA	IBEX 35	EURO	
BME	IBEX 35	EURO	Financial statement 2005 US GAAP compliant; year 2005 IAS/IFRS compliant in 2006 Financial state-ment
CINTRA	IBEX 35	EURO	
ENAGAS	IBEX 35	EURO	
ENDESA	IBEX 35	EURO	
FCC	IBEX 35	EURO	

FERROVIAL	IBEX 35	EURO	
GAMESA	IBEX 35	EURO	
GAS	IBEX 35	EURO	
IBERDROLA	IBEX 35	EURO	
IBERIA	IBEX 35	EURO	
INDITEX	IBEX 35	EURO	
INDRA	IBEX 35	EURO	
INMOBILIARIA	IBEX 35	EURO	
MAPFRE	IBEX 35	EURO	
NH HOTELES	IBEX 35	EURO	
RED ELECTRICA	IBEX 35	EURO	
REPSOL	IBEX 35	EURO	
SACYR	IBEX 35	EURO	
SANTANDER (BSCH)	IBEX 35	EURO	
SOGECABLE	IBEX 35	EURO	
TELECINCO	IBEX 35	EURO	
TELEFONICA	IBEX 35	EURO	
UNION FENOSA	IBEX 35	EURO	
AEM SPA	SPMIB40	EURO	
ALITALIA	SPMIB40	EURO	
ALLEANZA ASSICURAZIONI	SPMIB40	EURO	
ASSICURAZIONI GENERALI SPA	SPMIB40	EURO	
ATLANTIA EX AUTOSTRADE SPA	SPMIB40	EURO	
AUTOGRILL SPA	SPMIB40	EURO	
BANCA INTESA-SANPAOLO SPA	SPMIB40	EURO	
BANCA MONTE DEI PASCHI DI SIENA SPA	SPMIB40	EURO	No 2004, lack of data
BANCA POPOLARE DI MILANO SCRL	SPMIB40	EURO	
BANCO POPOLARE (merger be-tween BANCA DI VERONA E NOVARA E BPI)	SPMIB40	EURO	No 2004, lack of data
BULGARI SPA	SPMIB40	EURO	
BUZZI UNICEM	SPMIB40	EURO	
ENEL SPA	SPMIB40	EURO	
ENI SPA	SPMIB40	EURO	
FASTWEB	SPMIB40	EURO	No 2004, lack of data
FIAT SPA	SPMIB40	EURO	
FINMECCANICA SPA	SPMIB40	EURO	
FONDIARIA SAI	SPMIB40	EURO	
GRUPPO EDITORIALE L'E-SPRESSO SPA	SPMIB40	EURO	
IMPREGILO	SPMIB40	EURO	
ITALCEMENTI SPA	SPMIB40	EURO	

LOTTOMATICA SPA	SPMIB40	EURO	No 2004, lack of data
LUXOTTICA SPA	SPMIB40	EURO	
MEDIASET SPA	SPMIB40	EURO	
MEDIOBANCA SPA	SPMIB40	EURO	No 2004, lack of data
MEDIOLANUM SPA	SPMIB40	EURO	
MONDADORI (ARNOLDO) EDITORE SPA	SPMIB40	EURO	
PARMALAT SPA	SPMIB40	EURO	No listed in 2005, due to the financial scandal
PIRELLI & C. SPA	SPMIB40	EURO	
PRISMIAN	SPMIB40	EURO	
SAIPEM SPA	SPMIB40	EURO	
SEAT PAGINE GIALLE SPA	SPMIB40	EURO	
SNAM RETE GAS	SPMIB40	EURO	
TELECOM ITALIA SPA	SPMIB40	EURO	
TENARIS	SPMIB40	DOLLARS	
TERNA SPA	SPMIB40	EURO	
UBI BANCA EX BANCHE POPOLARI UNITE SCRL	SPMIB40	EURO	No 2004, lack of data
UNICREDIT ITALIANO SPA	SPMIB40	EURO	
UNIPOL - ORDINARY SHARES	SPMIB40	EURO	

APPENDIX B - LISTED GROUPS EXCLUDED FROM THE ANALYSIS

LISTED GROUPS EXCLUDED FORM THE STUDY	INDEX	YEARS	NOTES
MITTAL STEEL (MERGED IN ANCELOR MITTAL)	CAC40	2004	Financial statement US GAAP compliant
STMICROELECTRONICS	CAC40 and SPMIB40	2004,2005,2006	Financial statement US GAAP compliant
DAIMLER CHRISLER	DAX30	2004,2005,2006	Financial statement US GAAP compliant
DEUTCHE BANKE	DAX30	2004,2005,2006	Financial statement US GAAP compliant
E.ON	DAX30	2004,2005,2006	Financial statement US GAAP compliant
FRESENIUS	DAX30	2004,2005,2006	Financial statement US GAAP compliant
INFIENON	DAX30	2004,2005,2006	Financial statement US GAAP compliant
SAP	DAX30	2004,2005,2006	Financial statement US GAAP compliant
SIEMENS	DAX30	2004	Financial statement 2005 US GAAP compliant; year 2005 IAS/IFRS compliant in 2006 Financial statement
EXPERIAN	FTSE100	2004,2005,2006	Demerged in October 2006 from GUS
HOME RETAIL GROUP	FTSE100	2004,2005,2006	Demerged in October 2006 from GUS
STANDARD LIFE	FTSE100	2004,2005,2006	Lack of suitable data due to its activity