

COST STRUCTURE COMPLEXITY AND STOCK PRICES VOLATILITY: AN ANALYSIS OF POSSIBLE RELATIONSHIP AMONG ITALIAN LISTED COMPANIES IN THE PERIOD OF CRISIS

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A*bstract: This paper analyzes the relationship between complexity in cost structure (Jennings et al., 2013) and stock price volatility concerning Italian Listed Companies to determine over “the period of crisis” whether firm complexity is associated with risk.*

Using data collected for 153 available Italian listed companies from AIDA database, I found that there was no relationship between stock market volatility and cost structure complexity among Italian Listed Companies. I also found that cost service was the most relevant element within 40 complex Italian listed companies and suggested an integrating analysis with further measures of complexity approaches.

Keywords: *Organizational Complexity, Measures of Complexity, Cost Structure, Volatility, Stock Return*

JEL Classification: *G01; M40; M41; C1; C2*

1. Introduction

Organizational Complexity is one of the most debated topics in accounting literature. As documented by many scholars, the number of papers focused on

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organizational complexity have extensively grown over the last decades. In the face of increasing market uncertainty and internal and external complexity, there have been major efforts geared towards reducing and optimizing operational costs in order to keep earnings stable, at least. When crisis arises, organizations can be faced with an overwhelming need for radical change, and accounting practices which focus on Cost Structure. In light of the contributions made by previous researchers, this study aims to determine whether there is a correlation between organizational complexity and stock price volatility on all the Italian Listed companies for the period 2009-2012. I quantified the organizational complexity by taking into account Cost Structure Complexity measure from Jennings *et al.* (2013) based upon correlation between Sales revenues and income before extraordinary items, that is, Earnings Before Interest and Taxes (EBIT).

This paper aims to understand whether cost structure complexity is associated with stock price volatility among Italian listed companies, and what category of cost is the most relevant among most complex companies. I think it is useful to underline that this study exclusively focuses on Cost Complexity resulting in Jennings approach (2013). This means that further approaches of Cost Complexity computation can be considered. However, I preferred to emphasize the Jennings contribution (2013) by measuring organizational complexity throughout cost structure.

In order to achieving the research objectives the following hypotheses (H₁, H₂) are postulated in current study:

H₁ → I expect that Cost structure complexity is associated with stock prices volatility among Italian Listed Companies. The most complex listed companies would be the most risky.

Furthermore, I will also split operational costs into relevant cost categories in order to evaluate the incidence related to the total operational Costs.

H₂ → Relative to the most cost structure complex listed companies, I expect a relevant incidence of Service Cost.

What emerges from data analysis is that any correlation between Cost Structure and Stock Price Volatility doesn't exist and, therefore, the level of significance is not sufficient to make an interpretation, since the sample of Italian Listed Companies is inevitably small. My suggestions for future contribution is to adopt further measures of complexity (i.e. business complexity or geographic concentration measures) and relate them to stock market volatility in order to find a possible relationship.

In addition, I also suggest introducing cross-country companies in order to increase the number of sample companies and to make a comparison between listed companies from different countries.

Finally, since the period considered is related to “the crisis period” (2009-2012), this could abnormally affect the cost structure of companies and, thus, alter the data. For this reason, it would be interesting to increase the time period by considering also the pre-crisis period (before 2009).

2. Literature Review

2.1. Organizations and Organizational Complexity

Over the past 60 years, academics world-wide have been debating the relevance, nature and roles of organizational complexity within different contexts. By starting from the social processes studies within organization, Simon (1957) found that human cognitive limits are a basic hindrance to determine organization structures (modern contingency theory). The contribution of March and

Simon with “Organizations” (1958) *viewed the employee as an instrument and physiological automation, proceeding through theories that were centrally concerned with the motivational and affective aspects of human behavior and concluding with theories that placed particular emphasis on cognitive processes.* They emphasized the underlying concepts of organization equilibrium assuming that an organization is a system of interrelated social behaviors of number of participants, *each individual and group receives inducements from the organization for their contribution, the individual continues to participate so long as the inducements he or she receives are greater than his or her contributions. The contributions are sources from which the organization creates inducements to pay the others and, finally, equilibrium occurs when the organization creates inducements in members to obtain their contributions. They finally underlined the importance of innovation in the structure of an organization.* Cyert and March (1963) pointed out that organizations are a sort of coalition of individuals whose goals may be in contrast and create conflict. How this conflict is resolved is determined by the firm’s bargaining process. Galbraith (1974) proposed an innovative organization design considering the degree of uncertainty as the primary attribute. His contribution based on the need to provide a basis for integrating organizational interventions (information system and group problem solving). *As the amount of uncertainty increases and information processing increases, the organization must adopt an integrating mechanism which increases its information*

processing capabilities in the form of three factors: defining Rules and Programs in order to better coordinate behavior between interdependent tasks, building a solid hierarchy to tackle situations in which individuals have no rules and, finally, setting goals to be achieved. Further studies of Galbraith (1984) provided the following: *The ability of an organization to coordinate interdependent tasks depends on its ability to compute meaningful subgoals to guide subunit action. When uncertainty increases because of the introduction of new products, entering new markets, or employing new technologies, these subgoals are incorrect. The result is more exceptions, more information processing, and an overloaded hierarchy. The greater the task uncertainty, the greater the amount of information that must be processed among decision-makers during task execution in order to achieve a given level of performance.*

By providing more details on the concept of organization complexity, many scholars have provided important contribution. Many contributions emphasized the importance of complexity as a critical factor in organizational analyses. According to several studies (Caplow, 1957; Grusky, 1961), the size of an organization “makes a difference” meaning that large organization are, by definition, more complex and formalized than small ones. In contrast with these assumptions, other researchers (Zelditch and Hopkins 1961; Blau and Scott 1962) pointed out that dimension may not be a critical factor. Zelditch and Hopkins (1961) posited that a large size is not a critical factor of organizations. Complexity appears to be important and it is often measured by size. Pugh, Hickson *et al.* (1963) showed that every organization has an authority, the configuration of the organizational structural may be compared in different organizations. They also suggested that *structural complexity depends on vertical and lateral spans of control, criteria for the market segmentation and the number of positions in segments*. Similar to Pugh, Hickson *et al.* (1963), Kahn, Wolfe, *et al.* (1964) stated that the greater increase of size, the more the organizational structure becomes complex. The complexity depends on the differentiation and specialization of labor; it also depends on *levels of supervision in order to maintain coordination and control, and the amount of people involved in organizational planning*. Perrow (1967) argued that the complexity of organizational structure increases with the degree of ambiguity and difficulty in understanding and analyzing the activity of an organization. An important contribution was provided by Hall *et al.* (1967). They investigated the relationship between organizational size and measures of complexity and formalization. According to Hall *et al.* (1967), the definition of complexity may be synthesized as follows: “the degree of internal segmentation – the number of separate “parts” of the organization as reflected by measures quantified by the

division of labor-general (in terms of distinct organizational goals), the division of labor-specific (in terms of the number of major divisions or specialized departments), the number of hierarchical levels (numbers of levels in the deepest single division) and the spatial dispersion of the organization (degree of personnel and physical facility are spatially dispersed). Airoldi, Brunetti and Coda (2005) re-proposed the concept of complexity by providing a broad definition: "Complexity is defined as the volume of information to be collected and processed, the volume of information for making decisions during an activity course".

In the last two decades, the organizational complexity has been extensively elaborated in international literature (Damanpour 1996, Anderson 1999, Moldoveanu and Bauer, 2004, Campbell *et al.*, 2009; Robson *et al.* 2008). Many academic researchers argued that complexity is a structural variable representing the operations that occur and the flow of information that follows, within an organization. The greater the complexity, the greater the number of different simultaneous events that an organization must deal with on a daily basis (Scott 1992), as well as the number of activities and sub-systems that articulate the organization (Daft 1992). Damanpour (1996) studied two critical indicators of organizational complexity – structural complexity and organizational size by identifying several contingency factors: environmental uncertainty, organizational size, industrial sectors, types of innovation, and stages of innovation adoption. The investigation showed a strong correlation between structural complexity and innovation, as well as between organizational size and innovation. Further insights have documented over the recent years a significant correlation between complexity and reduced transparency of information, defined as the clarity of the information disclosed to outside investors. Denis *et al.* (2002) introduced the global and industrial diversification and they found that *a global diversified organization is more complex than a purely domestic firm*. This complexity can lead to high costs of coordinating corporate policies. This diversification may produce benefits for managers including much greater power and prestige (Stulz 1990). Duru and Reeb (2002) have shown that due to the complexity of international diversification it is more difficult to accurately forecast earnings and, thus, leads to a decrease in the accuracy of forecasts of budgetary data. Bushman *et al.* (2004) analyzed how to vary the organizational complexity based on concentration of ownership, incentives and the structure of the board. They found that managers' incentives and ownership concentration increased with the firm complexity.

2.2. Measuring Organizational Complexity

Hage (1965) provided a measure of complexity in terms of “number of occupational specialties included and the length of training required by each”. The greater the number of occupations and the longer the period of training required, the more complex the organization. During the beginning of the years 2000s, a huge number of scholars described the organizational complexity by seeking to provide some measures in order to quantify the complexity. Dolde and Mishra (2007) developed measures for firm complexity by computing two indexes of complexity. Firstly, they scaled Research & Development expenditures by sales (RDSALES) and, next, they computed the BVMV (Book Value to Market Value). According to Dolde and Mishra (2007), a higher ratio of BV to MV suggest a less complex firm with fewer unexplored growth opportunities. Similarly higher Research & Development (R&D) expenditures indicate higher growth opportunities, future investment potential, and greater technological change for the firm, which results in greater firm complexity. Recent studies have found that a more diversified firm composed of business units in several industries requires managers to obtain, consolidate, and process information from each of the firm’s segments and make decisions accordingly. *“Geographic dispersion leads to a greater complexity, resulting in greater difficulty in managing employees”* (Adler, 1983). Mittal *et al.* (2004) argued that *“when the customers of firms are located in geographically dispersed areas, it can be difficult and complex to manage service quality because its relative importance is likely to vary spatially”*. Hanlon, Krishnan and Mills (2009) quantified several measures of complexity related to the number of business segments as a proxy for the complexity of the firm. Markarian and Parbonetti (2007) split firm complexity into two types, internal and external. Internal Complexity relates to the sophistication of internal work processes (proxied by R&D expenditures, and the amount of invested capital), while external complexity refers to the external competitive structure (proxied by the number of business segments and industrial leadership). According to Jennings, Stoumbos and Tanlu (2013), organizational complexity embraces three aspects – business complexity, geographical complexity and cost structure complexity. The “Business Complexity” based on the concept that a multi-business requires managers to obtain, consolidate, and process information from each of the firm’s segments and make decisions accordingly. Similarly, “Geographical Complexity” refers to different geographical markets: a multinational firm deals with information aggregation issues due to geographic dispersion of operations, different legal systems and multiple currencies (Denis *et al.*, 2002, Duru and Reeb 2002). In doing so, they argued that different markets involve different cultures and languages, meaning a greater complexity. Similar to Bushman *et al.*, (2004), they capture organizational complexity by using segment revenue information to

compute Hirfindahl-Hirschman indices measuring within firm industry and geographic concentration. Measures can have a range between 0 and 1. Higher values of both indices bring more industry and geographic concentration, and thus less complexity.

2.3. Returns and Volatility

The distribution of stock returns play an important role in the theory and application of financial economics (Gettinby *et al.*, 2004).

“Returns are the relative change in the price of a financial asset over a given time interval, often expressed as a percentage” (Danielsson 2011). In line with this understandable definition, the statistical technique put forward two methods to identify and evaluate stock returns. By ignoring dividend component for simplicity, the first method is the *simple or arithmetic returns* (R_t) (computed as a percentage of change in prices) as follows:

$$\text{Simple } R_t = (P_t - P_{t-1})/P_{t-1} \quad (1)$$

where: R_t is the return over the period at time t , P_t is the stock price at time t and P_{t-1} is the stock price at time $t-1$.

The second method is the continuously compounded returns (Compounded R_t) (computed as the natural logarithm of gross return) as follows:

$$\text{Compounded } R_t = \ln(P_t/P_{t-1}) \quad (2)$$

Simple returns need to be used in some situations, such as accounting research, but continuously compounded returns are preferable. According to Gettinby *et al.* (2004), the reason for using changes in the natural logarithmic price rather than simple price changes is first provided by Fama (1965), a contribution which claimed that the change in logarithmic price is the yield, with continuous compounding, from holding the share for that period. There have been empirical evidences why logarithmic returns are preferable to simple because of their tractability when linking together sub-periods returns (Strong, 1992) as well as they are more likely to be normally distributed and, consequently, satisfy assumptions of standard statistical techniques more fully (Gettinby *et al.*, 2004).

Once defining financial returns, I introduce the most used measure of risk, volatility. According to Danielsson (2011), volatility is the main measure of risk

in most financial analysis when financial market returns are normally distributed. Although several other risk measures have been analyzed such as Value-at-Risk (VaR) and Expected Shortfall (ES), the majority of accounting studies have used Volatility. Many scholars investigated the the role of volatility in forecasting (Minton *et al.*, 2002). Lipe (1990) found that stock returns during a certain period is a function of the time-series persistence of the earnings series. Dichev and Tang (2009) provided survey evidence which indicates that earnings volatility is negatively related to earnings and, furthermore, that earnings volatility brings improvements in the prediction of short- and long- term earnings. Minton *et al.* (2002) proposed a link between cash flow volatility and investment levels. After estimating a variety of models from daily and monthly portfolio data, Baillie and De Gennaro (1990) examined the relationship between mean returns and conditional standard deviation. Li *et al.* (2005) proposed a study that examines the relationship between expected stock returns and volatility in the 12 largest international stock markets during January 1980 to December 2001. They found evidence of significance negative relationship between expected returns and volatility in 6 out of the 12 markets. However, no work has examined the relationship between the cost structure complexity and the stock price volatility among Italian listed companies. For this reason , I intend to examine whether the cost structure of each listed company in the “Borsa Italiana” is positively or negatively related to risk, proxied by standard deviation of Stock Price Returns (Volatility).

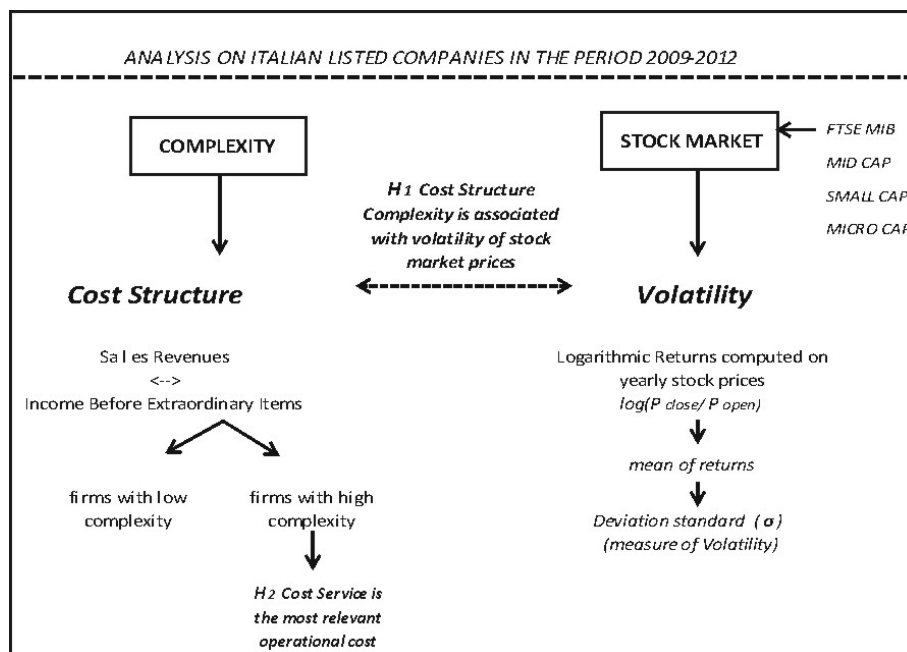
3. Methodology, Data Collection and Sample

The Cost structure indicates the expenses that a firm must consider which include transaction costs, sunk costs, marginal costs and fixed costs. Usually, the cost structure of the firm is the ratio of fixed costs to variable costs but many scholars have simplified this definition. Jennings *et al.* (2009) defined Cost structure complexity as the extent to which expenses covary with revenues. According to Klassen and Flores (2001), sales forecasts are used by management for resource allocation, capital budgeting and production planning. Operational Costs move proportionately with revenues in organizations with less complex cost structures. If they don't, the effect would be the opposite. Similar to Jennings *et al.* (2013), I measure cost structure complexity by correlating sales revenues and earnings before interest and taxes, defined as Income Before Extraordinary Items (EBIT or IBEX) over the last four years. Lower correlation between Sales and EBIT suggest that operational costs are difficult to predict. After finding all the correlations, I multiply these values by

-1 so that *Complex_Cost* variable can have values between -1 and 1. Higher values indicate higher cost structure complexity, resulting in less predictable sales revenues (Jennings *et al.*).

I investigate whether cost structure complexity is associated with stock price volatility among Italian listed companies, and therefore what category of cost is the most relevant among the most complex companies.

Table 1 – Research Design



The data of my empirical study consists of Italian Listed Companies stock prices during the crisis period from 1stJan 2009 to 31stDec 2012, which constitutes a total of N=4 trading years. Since I assume that stock returns are normally distributed, I compute historical volatility prices for each Italian Listed Company considering the yearly return R_N as the $\ln(P_t/P_{t-1})$, where P_{close1} is the 4.00 pm closing prices in the last trading day of the year 1 and P_{open1} is the 9.00 am opening prices in the first trading day of the year 1.

I take a time series returns $R_{t,k} = R_{\text{time}, \text{firm}}$ each at the same interval of time apart and I assume $t = 1, \dots, 4$ year and k refers to listed companies. The time series of prices generates the time series of natural logarithmic returns

$$R_{t,k} = \ln(P_{\text{close } t,k} / P_{\text{open } t,k}) \quad (3)$$

From which it is possible to compute the sample average and the sample standard deviation as a measure of volatility:

$$R_{\text{mean}} = \sum (R_{t,k}) / t \quad (4) \quad \text{Volatility} = R_{\text{standard deviation}} = \sigma \quad (5)$$

Similar to Liberatore and Mazzi (2010), I define σ as the historical volatility on annual basis estimated on a stock price time series.

I examine all the Italian Listed Companies belonging to FTSE MIB, MID CAP, SMALL CAP and MICRO CAP. I use AIDA data source for collecting Sales, Operational Costs and Income before extraordinary items (EBIT) data over the period 2009-2012. The analysis covered the "Italian crisis period" which embraces the annual years from 2009 and 2012, last annual year with available data. Italian Listed Companies have been taken from www.borsaitaliana.it dated 05.02.2014. From this list all the companies that do not cover the four years crisis period, have been excluded, so they are out of the sample. During the analysis, AIDA provided data relatively to 71% (153 companies out of 215) of Italian Listed Companies, which is considered significant. The remaining companies are also out of the sample because of no data available on AIDA. Most of these companies operate in Banking and in Insurance Services which don't generate any Sales Revenues and, consequently, Income before extraordinary items (also known as EBIT).

4. Findings

The empirical analysis, carried out using a sample of 153 Italian Listed Companies over a four-year period, demonstrated that there is no such thing as no relationship between the two considered variables (*Volatility* and *Cost_Complex*).

Table 2 – Findings on SPSS

		Correlation	
		VAR00003	VAR00004
VAR00003	Pearson Correlation	1	,005
	Sig. (2-code)		,953
	N	154	121
VAR00004	Pearson Correlation	,005	1
	Sig. (2-code)	,953	
	N	121	121

By using SPSS, the Pearson Correlation shows a 0.005 correlation that is approximately null. This means there is no relationship between Volatility and Complexity in Cost Structure (see Appendix A and B).

In addition, results show that service cost is the most relevant item within the most complex firms, as indicates Appendix C.

According to the findings of this study, I can conclude that there is no relationship between stock market volatility and Cost structure complexity (computed on Jennings *et al.* contribution, 2013) for Italian Listed Companies. However, statistical significance, that is equal to 0.953, is not sufficient to make considerations throughout this research.

5. Conclusion and Research's Suggestion

When crisis takes place, organizations can be faced with market uncertainty and internal and external complexity; indeed, there has been a lot of efforts put into focusing on cost structure. If Sales Revenues and EBIT move synchronously, then the complexity will increase. If they don't move synchronously, the opposite effect applies. In light of the contributions made by previous researchers, this study aims to determine whether there is a correlation between cost structure complexity and stock prices volatility concerning all the Italian Listed companies for the "crisis volatility). Further, within the most complex firms, the service cost is the most relevant item (average of 32% among the companies included in the sample).

My Advice for future contributions is as follows: one should expand the measures of complexity (i.e. firm industry and geographic concentration could be measured by Hirfindahl-Hirschman indices (Bushman *et al.*, 2004)) and relate them to stock market volatility in order to find a possible relationship between them. It would be beneficial to consider banks and insurance companies by using *ad hoc* measures of

complexity, which do not refer to Sales Revenues, because they don't generate Sales.

I also advise expanding the sample size by including cross-country companies in order to compare data of different countries. Expanding the study would not only increase the measures that quantify organizational complexity but would also increase the number of cross-country companies.

Finally, the period considered (2009-2012) could alter the data because it refers to a crisis period. For this reason, it would be interesting to expand the time period by considering also the pre-crisis period (before 2009) and seeking to provide further insights for correlation between complexity in cost structure and stock market volatility.

A. The Stock Market Volatility Computation

VOLATILITA'						
SOCIETA'	Rlog 2009	Rlog 2010	Rlog 2011	Rlog 2012	Media Rlog 2009-2012	DevStandard Rlog 2009-2012
A2A S.P.A.	9,06%	-35,60%	-32,27%	-55,86%	-28,67%	0,27
ANSALDO STS S.P.A.	29,40%	-3,56%	-22,16%	7,63%	2,83%	0,22
AUTOGRILL S.P.A.	47,04%	17,31%	-34,53%	12,04%	10,46%	0,34
BUZZI UNICEM SPA	-2,80%	-29,76%	-25,06%	41,07%	-4,14%	0,32
CAMPARI S.P.A.	41,23%	28,63%	5,39%	9,02%	21,07%	0,17
ENEL SPA	-1,26%	-8,64%	-18,29%	-2,77%	-7,74%	0,08
ENI S.P.A.	1,99%	-10,23%	-2,53%	12,41%	0,41%	0,09
FIAT S.P.A.	74,42%	38,59%	-68,25%	2,13%	11,72%	0,61
FINMECCANICA SOCIETA PER AZIONI	2,17%	-27,62%	-110,28%	38,61%	-24,28%	0,63
GTECH S.P.A.	-22,61%	-42,31%	21,01%	37,60%	-1,58%	0,37
MEDIASET S.P.A.	34,82%	-24,85%	-75,42%	-36,52%	-25,49%	0,46
PIRELLI & C. S.P.A.	45,86%	28,75%	5,86%	25,83%	26,57%	0,16
PRYSMIAN S.P.A.	13,60%	0,71%	-29,60%	41,11%	6,46%	0,29
SAIPEM S.P.A.	68,16%	40,59%	-13,72%	-13,52%	20,38%	0,41
SNAM S.P.A.	5,36%	7,46%	-8,75%	0,92%	1,25%	0,07
TELECOM ITALIA SPA	-8,12%	-11,61%	-16,59%	-21,76%	-14,52%	0,06
TERNA	23,57%	5,95%	-20,30%	9,06%	4,57%	0,18
TOD'S S.P.A.	50,19%	36,57%	-15,84%	41,12%	28,01%	0,30
ACEA S.P.A.	-25,73%	13,69%	-56,15%	-8,74%	-19,23%	0,29
AMPLIFON S.P.A.	126,10%	21,00%	-14,43%	13,80%	36,62%	0,62
ASCOPIAVE S.P.A.	2,42%	3,88%	-15,72%	-7,26%	-4,17%	0,09
ASTALDI S.P.A.	41,74%	-22,18%	-0,10%	0,10%	4,89%	0,27
ASTM S.P.A.	63,50%	-5,33%	-31,05%	0,84%	6,99%	0,40
BREMBO SPA	26,62%	39,01%	-16,98%	35,57%	21,05%	0,26

VOLATILITA'						
SOCIETA'	Rlog 2009	Rlog 2010	Rlog 2011	Rlog 2012	Media Rlog 2009-2012	DevStandard Rlog 2009-2012
CAIRO COMMUNICATION S.P.A.	45,61%	-10,79%	3,39%	-12,33%	6,47%	0,27
CEMENTIR HOLDING SPA	29,16%	-45,39%	-28,41%	3,92%	-10,18%	0,33
CIR S.P.A.	89,18%	-30,77%	-10,51%	-48,24%	-0,08%	0,61
COFIDE - GRUPPO DE BENEDETTI S.P.A.	51,59%	-1,28%	-18,99%	-41,22%	-2,48%	0,40
DANIELI & C. S.P.A.	73,36%	26,31%	-39,46%	24,99%	21,30%	0,46
DATALOGIC S.P.A.	-20,48%	39,36%	-5,33%	12,65%	6,55%	0,26
DIASORIN SPA	53,30%	24,94%	-48,17%	44,31%	18,60%	0,46
EI TOWERS S.P.A.	26,62%	-7,59%	20,08%	9,80%	12,23%	0,15
ENGINEERING S.P.A.	60,98%	-27,13%	3,12%	11,59%	12,14%	0,37
FALCK RENEWABLES S.P.A.	16,25%	-52,54%	-67,89%	11,64%	-23,13%	0,43
GEOX SPA	5,82%	-34,60%	-46,24%	-5,55%	-20,14%	0,24
GRUPPO EDITORIALE L'ESPRESSO S.P.A.	65,77%	-31,65%	-45,18%	-23,22%	-8,57%	0,50
HERA S.P.A.	0,31%	-4,48%	-34,02%	6,85%	-7,84%	0,18
IMA S.P.A.	-3,81%	12,73%	-12,43%	8,70%	1,30%	0,12
INDESIT COMPANY S.P.A.	58,34%	0,31%	-79,14%	36,91%	4,11%	0,60
IREN S.P.A.	36,63%	-7,68%	-54,61%	-51,06%	-19,18%	0,43
ITALCEMENTI S.P.A.	4,10%	-43,43%	-37,02%	-10,72%	-21,77%	0,22
ITALMOBILIARE SPA	1,10%	-23,38%	-56,98%	-14,92%	-23,54%	0,24
MAIRE TECNIMONT S.P.A.	49,88%	28,04%	-122,27%	-91,31%	-33,92%	0,86
MARR S.P.A.	7,86%	37,62%	-29,84%	20,11%	8,94%	0,29
MONDADORI EDITORE SPA	-16,41%	-19,48%	-68,91%	-21,63%	-31,61%	0,25
PARMALAT S.P.A.	51,29%	2,97%	-44,24%	29,06%	9,77%	0,41
PIAGGIO & C SPA	43,85%	15,73%	-28,71%	8,21%	9,77%	0,30
POLTRONA FRAU S.P.A.	9,15%	13,41%	-9,98%	9,85%	5,61%	0,11
RCS MEDIAGROUP SPA	28,66%	-21,85%	-43,85%	59,82%	5,70%	0,47
RECORDATI S.P.A.	29,41%	28,98%	-23,68%	19,78%	13,62%	0,25
SAFILO GROUP SPA	-6,75%	50,95%	-103,29%	27,16%	-7,98%	0,68
SARAS	-14,35%	-35,22%	-50,41%	-0,85%	-25,21%	0,22
SAVE S.P.A.	39,72%	26,11%	-18,76%	24,00%	17,77%	0,25
SOGEFI SPA	44,88%	14,34%	-25,15%	-3,50%	7,64%	0,30
SOL SPA	35,40%	20,84%	-18,84%	-0,50%	9,23%	0,24
SORIN SPA	103,02%	27,23%	-36,97%	30,23%	30,88%	0,57
TAMBURI INVESTMENT PARTNERS SPA	-11,21%	14,49%	6,95%	0,93%	2,79%	0,11
TREVI - FINANZIARIA INDUSTRIALE S.P.A.	38,31%	-6,99%	-79,26%	-26,86%	-18,70%	0,49
UNIPOL GRUPPO FINANZIARIO SPA	-13,76%	-61,95%	-63,01%	-121,91%	-65,16%	0,44
ZIGNAGO S.P.A.	11,75%	19,07%	-7,05%	9,53%	8,33%	0,11
ACOTEL GROUP SPA	49,98%	-47,81%	-81,35%	17,46%	-15,43%	0,60

VOLATILITA'						
SOCIETA'	Rlog 2009	Rlog 2010	Rlog 2011	Rlog 2012	Media Rlog 2009-2012	DevStandard Rlog 2009-2012
<i>SIGLABILE ACQUE POTABILI S.P.A.</i>	51,12%	-31,04%	-69,66%	6,10%	-10,87%	0,52
<i>ACSMAGAM SPA</i>	11,64%	2,02%	-50,97%	-4,38%	-10,42%	0,28
<i>AEDES SPA</i>	33,56%	-16,41%	-114,86%	-8,19%	-26,48%	0,63
<i>AEFFE S.P.A.</i>	-26,98%	-4,19%	14,54%	-5,86%	-5,62%	0,17
<i>AMBIENTHESIS S.P.A.</i>	-20,16%	-31,49%	-5,44%	-23,52%	-20,15%	0,11
<i>AUTOSTRADE MERIDIONALI SPA</i>	64,06%	36,72%	-32,16%	1,74%	17,59%	0,42
<i>B. & C. SPEAKERS SPA</i>	3,65%	41,34%	-25,76%	4,77%	6,00%	0,27
<i>BASIC NET S.P.A.</i>	51,94%	34,08%	-27,63%	-45,29%	3,27%	0,47
<i>BASTOGI S.P.A.</i>	10,77%	-31,81%	-46,99%	-13,83%	-20,46%	0,25
<i>BE SPA</i>	-12,74%	-20,73%	-29,15%	-59,28%	-30,48%	0,20
<i>BEGHELLI S.P.A.</i>	27,78%	-4,14%	-42,53%	-29,76%	-12,16%	0,31
<i>BIALETTI INDUSTRIE S.P.A.</i>	40,45%	-29,78%	-32,80%	-34,06%	-14,05%	0,36
<i>BIANCAMANO S.P.A.</i>	-18,68%	-10,69%	1,88%	-68,94%	-24,11%	0,31
<i>BIESSE S.P.A.</i>	28,99%	-1,37%	-63,33%	-17,46%	-13,29%	0,39
<i>BOLZONI S.P.A.</i>	-30,19%	40,89%	-11,02%	9,05%	2,18%	0,30
<i>BONIFICA DEI TERRENI FERRARESI</i>	19,39%	-16,94%	-40,65%	61,12%	5,73%	0,44
<i>BRIOSCHI SVILUPPO IMMOBILIARE S.P.A.</i>	7,62%	-43,70%	-51,78%	-1,75%	-22,40%	0,30
<i>CAD IT S.P.A.</i>	11,23%	-29,97%	-24,04%	22,10%	-5,17%	0,26
<i>CALEFFI SPA</i>	-10,40%	5,51%	31,03%	-9,24%	4,22%	0,19
<i>CARRARO SPA</i>	-11,12%	52,68%	-96,71%	33,77%	-5,35%	0,67
<i>CEMBRE SPA</i>	33,01%	27,57%	-13,05%	15,60%	15,78%	0,21
<i>CENTRALE DEL LATTE DI TORINO & C. - S.P.A.</i>	10,90%	-0,62%	-34,51%	-19,31%	-10,89%	0,20
<i>CHL S.P.A.</i>	-192,35%	-33,57%	-52,04%	-23,73%	-75,42%	0,79
<i>CLASS EDITORI S.P.A.</i>	-2,13%	-42,07%	-57,02%	-17,48%	-29,67%	0,25
<i>COBRA AUTOMOTIVE TECHNOLOGIES S.P.A.</i>	-17,58%	-40,18%	-109,46%	5,18%	-40,51%	0,50
<i>COMPAGNIA IMMOBILIARE AZIONARIA SPA</i>	44,72%	-3,22%	-14,32%	-5,62%	5,39%	0,27
<i>CSP INTERNATIONAL FASHION GROUP S.P.A.</i>	-10,60%	33,04%	-37,50%	25,92%	2,71%	0,33
<i>DADA SPA</i>	-15,57%	-18,52%	-83,20%	31,26%	-21,51%	0,47
<i>DAMIANI S.P.A.</i>	19,08%	-25,42%	9,04%	-1,88%	0,21%	0,19
<i>DIGITAL BROS S.P.A.</i>	-19,75%	-42,51%	-18,94%	-3,07%	-21,07%	0,16
<i>DMAIL GROUP S.P.A.</i>	36,68%	-58,00%	-79,22%	-116,36%	-54,22%	0,65
<i>EEMS ITALIA SPA</i>	7,00%	7,05%	-74,77%	-52,92%	-28,41%	0,42
<i>EL.EN. - S.P.A.</i>	-16,54%	5,43%	-23,59%	37,53%	0,71%	0,27
<i>ELICA - S.P.A.</i>	80,42%	-30,15%	-61,76%	24,02%	3,13%	0,63
<i>EMAK S.P.A.</i>	-12,52%	22,65%	-107,16%	6,89%	-22,54%	0,58

VOLATILITA'						
SOCIETA'	Rlog 2009	Rlog 2010	Rlog 2011	Rlog 2012	Media Rlog 2009-2012	DevStandard Rlog 2009-2012
ERGYCAPITAL S.P.A.	23,26%	-0,43%	-58,47%	-73,26%	-27,22%	0,46
ESPRINET S.P.A.	95,39%	-53,16%	-77,10%	20,70%	-3,54%	0,78
EUROTECH S.P.A.	10,06%	-42,82%	-35,59%	-20,95%	-22,32%	0,23
EXPRIVIA S.P.A.	33,36%	-25,62%	-36,64%	-10,38%	-9,82%	0,31
FIDIA - S.P.A.	46,68%	-21,40%	-27,89%	-18,02%	-5,16%	0,35
FIERA MILANO S.P.A.	6,13%	-3,54%	-19,82%	9,58%	-1,91%	0,13
FNM S.P.A.	16,94%	-14,83%	-55,49%	16,53%	-9,21%	0,34
FULLSIX SPA	-42,66%	-11,22%	69,68%	-14,36%	0,36%	0,48
GABETTI PROPERTY SOLUTIONS S.P.A.	-8,05%	-65,20%	-147,70%	13,17%	-51,94%	0,72
GEFRAN S.P.A.	-32,24%	65,52%	-46,08%	-9,88%	-5,67%	0,50
GRUPPO CERAMICHE RICCHETTI S.P.A.	-78,03%	-59,44%	-41,34%	6,15%	-43,16%	0,36
I GRANDI VIAGGI S.P.A.	21,67%	-18,96%	-17,93%	-52,49%	-16,93%	0,30
IGD SIHQ SPA	32,18%	-8,99%	-68,70%	11,28%	-8,56%	0,43
IL SOLE 24 ORE S.P.A.	-17,24%	-32,86%	-68,39%	-32,13%	-37,65%	0,22
INTEK GROUP SPA	0,13%	6,04%	-8,56%	2,84%	0,11%	0,06
IRCE S.P.A.	-0,71%	-0,06%	15,21%	-32,71%	-4,57%	0,20
ISAGRO S.P.A.	24,92%	-2,47%	-33,16%	-17,21%	-6,98%	0,25
ITWAY S.P.A.	-32,50%	-24,42%	-78,00%	0,58%	-33,59%	0,33
JUVENTUS FOOTBALL CLUB SPA	13,07%	5,70%	-28,25%	-37,12%	-11,65%	0,25
K.R.ENERGY S.P.A.	-54,60%	-77,02%	-117,15%	-90,18%	-84,74%	0,26
KINEXIA SPA	11,61%	-5,01%	-73,37%	-4,37%	-17,79%	0,38
LA DORIA - S.P.A.	71,45%	-13,17%	-12,62%	0,83%	11,62%	0,40
LANDI RENZO S.P.A.	1,25%	-15,70%	-89,31%	15,70%	-22,02%	0,47
SS LAZIO SPA	0,15%	75,81%	-49,04%	-2,12%	6,20%	0,52
MEDIACONTECH S.P.A.	47,02%	-33,42%	-48,35%	-8,27%	-10,76%	0,42
MOLMED S.P.A.	48,23%	-110,69%	15,16%	-14,86%	-15,54%	0,68
MONDO TV S.P.A.	79,07%	-44,50%	-54,95%	-36,42%	-14,20%	0,63
MOVIMAX MEDIA GROUP S.P.A.	-70,41%	2,58%	112,39%	-114,18%	-17,40%	0,99
OLIDATA S.P.A.	40,60%	18,43%	-73,88%	-10,77%	-6,40%	0,50
PANARIAGROUP INDUSTRIE CERAMICHE S.P.A.	-19,14%	-19,71%	-45,28%	10,86%	-18,32%	0,23
PININFARINA S.P.A.	-30,66%	17,49%	-18,49%	-10,48%	-10,53%	0,20
PIQUADRO S.P.A.	38,84%	49,48%	-22,44%	0,51%	16,60%	0,33
POLIGRAFICA SFAUSTINO SPA	23,09%	-23,55%	-82,18%	-3,82%	-21,61%	0,45
PRELIOS S.P.A.	-33,16%	-19,03%	-170,98%	-8,14%	-57,83%	0,76
PREMUDA - SOCIETA' PER AZIONI	-5,64%	-31,19%	-29,46%	-86,92%	-38,30%	0,34
PRIMA INDUSTRIE - S.P.A.	-7,01%	-8,66%	-8,64%	29,53%	1,31%	0,19
RATTI SPA	30,65%	-46,79%	-12,24%	16,71%	-2,92%	0,34
RENO DE MEDICI SPA	49,40%	-2,03%	-51,93%	5,46%	0,23%	0,42

VOLATILITA'						
SOCIETA'	Rlog 2009	Rlog 2010	Rlog 2011	Rlog 2012	Media Rlog 2009-2012	DevStandard Rlog 2009-2012
RETELIT SPA	23,31%	-21,32%	-1,56%	33,91%	8,58%	0,25
A.S. ROMA SPA	29,30%	20,38%	-68,09%	-7,03%	-6,36%	0,44
ROSSS -S.P.A.	89,41%	11,83%	-56,90%	16,99%	15,33%	0,60
SABAF S.P.A.	-0,73%	43,25%	-81,54%	-24,83%	-15,96%	0,52
SAES GETTERS S.P.A.	-1,06%	12,90%	-2,16%	2,49%	3,04%	0,07
SEAT PAGINE GIALLE S.P.A.	-106,80%	-68,16%	-118,70%	-173,20%	-116,71%	0,43
SERVIZI ITALIA S.P.A.	26,87%	12,75%	-48,59%	-17,11%	-6,52%	0,34
SINTESI S.P.A.	-139,54%	-120,81%	-165,69%	6,29%	-104,94%	0,76
SNAI S.P.A.	37,20%	-9,77%	-28,96%	-129,84%	-32,84%	0,70
STEFANEL - S.P.A.	-11,79%	-139,60%	-48,17%	27,93%	-42,91%	0,72
TELECOM ITALIA MEDIA SPA	11,84%	-79,04%	-39,26%	-6,82%	-28,32%	0,40
TERNI ENERGIA SPA	5,18%	60,62%	-40,27%	-15,05%	2,62%	0,43
TXT E-SOLUTIONS S.P.A.	12,05%	-21,56%	78,73%	38,43%	26,91%	0,42
ENERVIT SPA	-5,22%	-14,63%	42,35%	5,13%	6,91%	0,25
GRUPPO MUTUO ONLINE SPA	72,00%	-14,97%	-36,93%	-5,24%	3,72%	0,47
NICE S.P.A.	52,20%	1,32%	-24,14%	7,90%	9,32%	0,32
SAT SPA	21,10%	-3,37%	-9,19%	-7,91%	0,16%	0,14
VIANINI INDUSTRIA SPA	-9,60%	-8,88%	-4,20%	-23,11%	-11,45%	0,08
VIANINI LAVORI SPA	16,32%	-17,42%	-19,30%	-8,35%	-7,19%	0,16

B. The Cost Structure Complexity over the past four annual-years

SOCIETA'	EBIT				SALES REVENUES				Correlation	Cost_complex
	2012	2011	2010	2009	2012	2011	2010	2009		
AZA S.P.A.	-35.984	-1.608	36.695	149.253	431.506	475.456	610.543	645.492	0,89	-0,89
ANSALDO STS S.P.A.	77.388	87.908	116.460	82.745	589.075	328.867	905.285	716.817	0,61	-0,61
AUTOGRILL S.P.A.	-11.781	33.790	57.239	75.729	1.167.189	1.307.200	1.352.687	1.324.149	0,91	-0,91
BUZZI UNICEM SPA	-18.121	-17.612	-9.033	41.713	315.899	351.426	367.732	433.388	0,94	-0,94
CAMPARI S.P.A.	152.021	143.233	97.965	28.094	542.070	545.499	493.439	308.985	0,97	-0,97
ENEL SPA	-94.947	-44.390	-79.685	-35.964	327.538	731.997	669.463	692.998	0,79	-0,79
ENI S.P.A.	-917.511	-428.367	435.625	1.250.097	51.197.813	45.502.612	35.256.291	32.535.516	-0,97	0,97
FIAT S.P.A.	-34.940	-70.314	-83.214	-42.062	70.529	37.917	45.137	182.049	0,61	-0,61
FINMECCANICA SOCIETA PER AZIONI	-111.195	-134.430	-90.977	-86.278	74.016	73.826	72.370	65.666	-0,70	0,70

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost_ com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
<i>GTECH S.P.A.</i>	184.070	157.395	118.895	133.405	515.917	424.614	337.082	362.383	0,99	-0,99
<i>MEDIASET S.P.A.</i>	-37.130	-51.933	-59.871	-57.129	4.252	5.647	5.207	4.915	-0,69	0,69
<i>PIRELLI & C. S.P.A.</i>	14.871	-30.421	-39.623	-39.558	12.614	9.251	9.897	17.460	-0,04	0,04
<i>PRYSMIAN S.P.A.</i>	-24.457	-27.876	-21.559	-13.601	55.730	41.451	37.020	37.695	-0,44	0,44
<i>SAIPEM S.P.A.</i>	258.800	450.553	230.497	335.705	5.737.622	5.252.932	4.717.907	4.113.761	0,00	0,00
<i>SNAM S.P.A.</i>	5.656	1.162.134	1.194.475	991.537	184.134	1.945.411	1.929.436	1.865.561	0,99	-0,99
<i>TELECOM ITALIA SPA</i>	814.342	-311.480	4.972.848	5.204.888	16.940.020	18.044.995	18.985.351	20.473.745	0,82	-0,82
<i>TERNA</i>	854.139	799.894	750.519	654.367	1.571.588	1.515.964	1.459.127	1.253.209	0,98	-0,98
<i>TOD'S S.P.A.</i>	144.789	144.148	124.154	106.519	674.315	665.181	577.031	526.491	0,99	-0,99
<i>ACEA S.P.A.</i>	-58.376	-110.669	-51.106	-97.575	167.903	163.764	140.545	135.138	-0,04	0,04
<i>AMPLIFON S.P.A.</i>	37.099	33.902	23.978	27.034	224.681	221.515	210.725	194.299	0,75	-0,75
<i>ASCOPIAVE S.P.A.</i>	11.616	17.982	16.325	25.764	78.406	75.035	71.638	67.883	-0,90	0,90
<i>ASTALDI S.P.A.</i>	157.332	178.958	152.843	104.290	756.163	1.948.735	1.551.075	353.746	0,84	-0,84
<i>ASTM S.P.A.</i>	-2.009	-831	-471	-8	5.045	4.897	4.868	4.811	-1,00	1,00
<i>BREMBO SPA</i>	11.103	11.020	8.116	-2.698	640.455	637.716	554.073	459.731	0,96	-0,96
<i>CAIRO COMMUNICATI ON S.P.A.</i>	8.901	10.753	5.311	5.121	137.099	140.487	137.472	131.584	0,76	-0,76
<i>CEMENTIR HOLDING SPA</i>	-2.395	-2.082	-1.001	1.383	11.948	12.181	11.494	11.099	-0,93	0,93
<i>CIR S.P.A.</i>	-28.261	-27.718	-20.499	-19.913	6.149	6.087	7.116	6.703	0,91	-0,91
<i>COFIDE - GRUPPO DE BENEDETTI S.P.A.</i>	-3.027	-3.139	-2.617	-2.746	1.074	1.111	1.264	1.552	0,67	-0,67
<i>DANIELI & C. S.P.A.</i>	60.764	84.030	60.724	3.345	649.663	1.417.201	1.019.388	749.721	0,64	-0,64
<i>DATALOGIC S.P.A.</i>	-1.940	-129	1.922	2.803	16.300	15.262	14.276	11.693	-0,92	0,92
<i>DIASORIN SPA</i>	35.636	28.849	17.578	22.641	218.512	197.576	174.840	143.756	0,78	-0,78
<i>EI TOWERS S.P.A.</i>	27.843	-20.982	-1.814	-947	177.179	1.324	8.069	10.556	0,91	-0,91
<i>ENGINEERING S.P.A.</i>	35.663	21.748	35.501	33.831	480.620	468.225	448.886	417.583	-0,24	0,24
<i>FALCK RENEWABLES S.P.A.</i>	-19.205	-17.868	-9.358	-6.841	55	140	364	189	0,71	-0,71

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost- com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
<i>GEOX SPA</i>	17.405	45.181	73.421	120.779	602.813	702.387	701.599	735.344	0,86	-0,86
<i>GRUPPO EDITORIALE L'ESPRESSO S.P.A.</i>	13.706	64.085	48.447	20.431	403.917	459.629	462.711	494.151	0,28	-0,28
<i>HERA S.P.A.</i>	169.425	153.498	147.205	175.778	1.366.506	1.335.484	1.285.752	1.313.802	0,47	-0,47
<i>IMA S.P.A.</i>	25.296	20.403	8.571	12.635	340.514	221.988	127.390	111.146	0,94	-0,94
<i>INDESIT COMPANY S.P.A.</i>	-31.200	-3.500	-35.200	5.300	1.017.500	1.108.100	1.238.000	1.352.600	0,47	-0,47
<i>IREN S.P.A.</i>	-14.013	-23.513	-17.730	-15.713	13.320	13.250	10.359	4.760	-0,34	0,34
<i>ITALCEMENTI S.P.A.</i>	-89.870	-66.509	-124.507	-70.929	554.710	613.792	614.086	769.343	0,38	-0,38
<i>ITALMOBILIARE SPA</i>	-15.359	-16.903	-16.429	-16.474	6.414	6.219	6.496	5.536	0,31	-0,31
<i>MAIRE TECNIMONT S.P.A.</i>	-3.248	-14.177	19.561	30.603	16.325	14.574	37.069	52.889	0,97	-0,97
<i>MARR S.P.A.</i>	70.664	71.510	64.661	57.334	1.131.515	1.123.426	1.078.097	1.033.207	0,99	-0,99
<i>MONDADORI EDITORE SPA</i>	-10.772	35.217	61.973	35.668	626.221	720.912	751.420	776.254	0,87	-0,87
<i>PARMALAT S.P.A.</i>	-84.698	16.126	95.897	386.687	778.839	820.717	820.548	819.978	0,61	-0,61
<i>PIAGGIO & C SPA</i>	-6.603	-11.769	-3.725	38.774	841.756	947.261	976.819	1.125.773	0,86	-0,86
<i>POLTRONA FRAU S.P.A.</i>	5.812	7.162	4.677	5.887	106.202	111.901	104.124	102.003	0,75	-0,75
<i>RCS MEDIA GROUP SPA</i>	-53.616	-18.802	-15.916	-20.492	743.172	5.072	6.304	7.875	-0,99	0,99
<i>RECORDATI S.P.A.</i>	39.050	40.158	33.350	47.898	273.150	267.458	240.898	255.323	0,31	-0,31
<i>SAFILO GROUP SPA</i>	-5.712	-5.281	-4.009	-518	980	980	1.030	1.030	0,79	-0,79
<i>SARAS</i>	-199.040	2.130	-147.696	-18.102	10.679.997	9.932.619	7.394.327	4.478.195	-0,40	0,40
<i>SAVE S.P.A.</i>	32.110	32.485	26.757	27.815	99.728	100.629	85.662	84.375	0,98	-0,98
<i>SOGEFI SPA</i>	-4.211	-3.896	-4.964	-3.866	14.045	12.767	11.448	9.653	-0,05	0,05
<i>SOL SPA</i>	15.935	15.214	19.456	16.792	226.522	226.899	225.120	207.366	-0,06	0,06
<i>SORIN SPA</i>	-14.204	-14.024	-11.147	-10.628	14.331	12.872	13.926	12.623	-0,33	0,33
<i>TAMBURI INVESTMENT PARTNERS SPA</i>	-1.013	616	1.064	-747	4.712	5.469	6.637	3.225	0,84	-0,84

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
TREVI - FINANZIARIA INDUSTRIALE S.P.A.	- 1.173	- 1.480	- 178	395	10.942	11.186	12.604	13.457	0,97	-0,97
UNIPOL GRUPPO FINANZIARIO SPA	-110.117	-126.070	- 47.470	- 56.858	10.175	12.554	17.466	48.274	0,61	-0,61
ZIGNAGO S.P.A.	27.703	32.304	29.464	26.744	169.923	170.674	166.565	151.460	0,66	-0,66
ACOTEL GROUP SPA	- 540	- 986	- 1.160	- 647	3.152	2.537	2.660	2.613	0,64	-0,64
SIGLABILE ACQUE POTABILI S.P.A.	- 1.536	- 2.216	494	400	59.126	58.595	58.476	47.352	-0,56	0,56
ACSMAGAM SPA	- 7.536	- 8.779	- 3.042	760	34.781	29.578	47.037	55.385	1,00	-1,00
AEDES SPA	-82.134	- 5.860	- 11.688	- 53.284	12.019	12.788	12.025	1.728	0,31	-0,31
AEFFE S.P.A.	7.391	6.575	71	- 3.793	125.186	125.239	115.918	116.452	0,94	-0,94
AMBIENTHESIS S.P.A.	- 1.302	1.237	5.596	3.380	45.501	45.693	51.363	52.386	0,85	-0,85
AUTOSTRADE MERIDIONALI SPA	- 1.934	9.964	24.278	23.919	119.436	128.615	157.715	78.795	-0,04	0,04
B. & C. SPEAKERS SPA	6.066	5.355	3.991	2.573	29.611	26.915	22.693	16.646	1,00	-1,00
BASIC NET S.P.A.	10.601	8.162	4.738	4.849	1.669	3.022	3.522	3.788	-0,96	0,96
BASTOGI S.P.A.	- 2.152	- 2.093	- 2.389	- 2.579	704	729	615	987	-0,61	0,61
BE SPA	- 2.468	- 461	- 1.975	- 2.614	33	348	420	7.286	-0,47	0,47
BEGHELLI S.P.A.	- 27.752	- 1.921	32.507	4.298	92.498	98.271	123.322	100.964	0,94	-0,94
BIALETTI INDUSTRIE S.P.A.	3.808	2.959	- 9.128	- 1.616	128.173	143.475	153.651	127.423	-0,65	0,65
BIANCAMANO S.P.A.	- 1.134	- 891	- 728	- 1.362	6.004	5.686	5.520	3.105	0,70	-0,70
BIESSE S.P.A.	- 6.989	377	- 6.934	- 27.237	267.807	287.464	251.515	187.105	0,99	-0,99
BOLZONI S.P.A.	2.222	2.249	1.383	- 568	62.326	61.357	50.170	37.633	0,98	-0,98
BONIFICA DEI TERRENI FERRARESI	284	3.258	1.366	- 49	8.101	8.437	7.905	6.318	0,69	-0,69

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
<i>BRIOSCHI SVILUPPO IMMOBILIARE S.P.A.</i>	- 2.479	- 2.793	- 3.296	- 3.124	4.816	2.704	1.978	1.745	0,92	-0,92
<i>CADIT S.P.A.</i>	4.027	4.006	330	2.972	50.037	49.639	44.987	45.146	0,80	-0,80
<i>CALEFFI SPA</i>	- 904	741	25	1.933	38.465	40.628	44.026	45.281	0,80	-0,80
<i>CARRARO SPA</i>	- 6.359	- 4.195	- 8.978	- 12.191	102.112	98.461	64.926	64.759	0,87	-0,87
<i>CEMBRE SPA</i>	10.812	12.800	13.162	6.791	79.368	80.562	72.751	56.334	0,84	-0,84
<i>CENTRALE DEL LATTE DI TORINO & C. - S.P.A.</i>	2.318	2.349	3.833	4.439	57.407	59.378	59.380	57.461	-0,14	0,14
<i>CHL S.P.A.</i>	- 2.281	- 1.810	- 1.576	- 1.437	4.023	8.482	8.839	9.040	0,95	-0,95
<i>CLASS EDITORI S.P.A.</i>	- 18.564	- 12.820	- 7.245	- 961	29.105	28.270	28.272	28.675	-0,40	0,40
<i>COBRA AUTOMOTIVE TECNOLOGIE S.S.P.A.</i>	- 4.657	- 10.804	- 7.845	- 14.215	64.279	78.228	72.280	52.733	0,36	-0,36
<i>COMPAGNIA IMMOBILIARE AZIONARIA SPA</i>	2.614	362	1.187	1.069	3.102	3.055	2.784	2.836	0,33	-0,33
<i>CSP INTERNATIONA L FASHION GROUP S.P.A.</i>	2.181	- 287	2.745	2.426	69.285	77.054	80.113	82.605	0,14	-0,14
<i>DADA SPA</i>	- 2.676	- 5.436	- 8.062	- 4.505	5.200	7.049	8.905	11.273	-0,41	0,41
<i>DAMIANI S.P.A.</i>	- 2.541	- 5.617	- 3.363	- 13.267	78.500	64.793	60.825	56.738	0,69	-0,69
<i>DIGITAL BROS S.P.A.</i>	4.577	- 971	5.286	6.404	72.955	70.655	88.402	97.661	0,77	-0,77
<i>DMAIL GROUP S.P.A.</i>	- 2.773	- 5.485	1.451	- 5.940	614	451	635	470	0,89	-0,89
<i>EEMS ITALIA SPA</i>	- 279	431	153	- 2.141	5.002	5.027	9.702	8.752	-0,40	0,40
<i>EL.EN. - S.P.A.</i>	2.674	3.155	3.879	1.659	42.169	44.772	45.546	36.091	0,96	-0,96
<i>ELICA - S.P.A.</i>	1.595	3.638	- 139	- 3.378	287.489	295.394	255.189	203.193	0,98	-0,98
<i>EMAK S.P.A.</i>	1.019	6.456	11.056	7.643	142.230	155.794	158.951	145.709	0,78	-0,78
<i>ERGYCAPITAL S.P.A.</i>	- 2.436	- 2.912	- 27.247	- 6.550	441	327	423	1.600	0,15	-0,15
<i>ESPRINET S.P.A.</i>	30.033	36.064	44.789	51.496	1.467.034	1.580.742	1.655.253	1.609.758	0,80	-0,80

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
EUROTECH S.P.A.	- 4.408	- 5.503	- 4.222	- 6.577	13.300	13.359	11.186	9.128	0,58	-0,58
EXPRIVIA S.P.A.	- 761	701	3.400	2.672	75.098	52.677	46.533	41.343	-0,90	0,90
FIDIA - S.P.A.	- 1.653	- 805	141	- 1.604	31.778	26.233	24.481	24.688	-0,55	0,55
FIERA MILANO S.P.A.	- 2.617	5.656	- 13.086	6.124	198.100	212.205	155.659	180.750	0,74	-0,74
FNM S.P.A.	13.414	7.533	7.911	5.816	46.051	42.129	43.650	40.677	0,95	-0,95
FULLSIX SPA	- 888	- 1.291	- 420	- 1.368	8.490	8.692	9.186	11.005	-0,41	0,41
GABETTI PROPERTY SOLUTIONS S.P.A.	- 10.680	- 6.145	- 5.416	- 8.137	2.839	2.961	2.458	5.395	-0,22	0,22
GEFRAN S.P.A.	- 5.950	3.938	10.779	- 11.657	84.232	91.851	88.600	56.137	0,80	-0,80
GRUPPO CERAMICHE RICCHETTI S.P.A.	- 9.499	- 9.520	- 11.514	- 6.888	71.865	66.194	71.376	71.128	0,01	-0,01
I GRANDI VIAGGI S.P.A.	- 5.821	- 963	- 336	845	61.462	65.392	76.600	77.421	0,85	-0,85
IGD SIQ SPA	66.733	68.452	59.189	51.136	89.371	88.845	75.882	66.527	0,99	-0,99
IL SOLE 24 ORE S.P.A.	- 59.583	- 16.558	- 37.502	- 33.068	363.085	399.273	316.643	308.195	0,25	-0,25
INTEK GROUP SPA	- 3.484	- 4.211	- 3.896	- 4.964	- 3.866	14.045	12.767	11.448	-0,63	0,63
IRCE S.P.A.	7.009	19.082	19.683	3.434	264.076	322.597	291.766	160.639	0,87	-0,87
ISAGRO S.P.A.	765	- 1.604	2.002	- 7.310	106.317	109.135	98.895	101.618	0,01	-0,01
ITWAY S.P.A.	527	31	486	1.156	48.606	50.469	58.107	51.875	0,07	-0,07
JUVENTUS FOOTBALL CLUB SPA	- 58.521	- 92.155	2.086	14.041	31.824	161.773	215.586	232.191	0,62	-0,62
K.R.ENERGY S.P.A.	- 5.123	- 5.619	- 42.065	- 5.258	220	346	874	537	-0,89	0,89
KINEXIA SPA	- 2.030	- 1.184	- 1.353	- 1.752	570	1.521	1.166	739	0,98	-0,98
LA DORIA - S.P.A.	12.055	- 2.102	16.065	28.324	297.182	260.174	259.192	259.811	-0,09	0,09
LANDI RENZO S.P.A.	- 654	- 14.190	14.393	16.563	136.703	112.592	197.498	203.097	0,98	-0,98
SS LAZIO SPA	- 10.456	2.453	- 878	12.134	9.949	8.517	76.694	76.868	0,59	-0,59
MEDIACONTEC H S.P.A.	- 11.155	- 1.419	- 2.719	- 2.541	4.527	3.854	3.691	3.748	-0,95	0,95
MOLMED S.P.A.	- 22.382	- 22.680	- 17.748	- 17.807	4.593	2.767	2.081	2.413	-0,71	0,71
MONDO TV S.P.A.	556	- 613	401	842	8.408	7.625	9.332	8.350	0,58	-0,58

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost- com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
<i>MOVIEMAX MEDIA GROUP S.P.A.</i>	- 1.063	257	2.382	- 1.004	15.121	21.148	24.812	19.298	0,90	-0,90
<i>OLIDATA S.P.A.</i>	1.633	- 3.910	- 77	- 7.825	49.840	35.010	19.969	68.627	-0,58	0,58
<i>PANARIAGROU P INDUSTRIE CERAMICHE S.P.A.</i>	- 4.536	1.725	3.036	4.422	165.182	185.465	176.152	185.559	0,86	-0,86
<i>PININFARINA S.P.A.</i>	- 13.047	- 20.981	- 24.706	- 39.314	34.557	27.073	184.032	170.663	-0,74	0,74
<i>PIQUADRO S.P.A.</i>	6.160	10.929	15.569	12.783	53.188	60.847	59.120	50.681	0,32	-0,32
<i>POLIGRAFICA SFAUSTINO SPA</i>	- 1.862	- 765	- 128	- 1.104	29.164	28.990	29.394	27.346	0,20	-0,20
<i>PRELIOS S.P.A.</i>	- 31.690	- 22.951	- 18.320	- 60.090	10.721	16.977	19.401	30.939	-0,73	0,73
<i>PREMUDA - SOCIETA' PER AZIONI</i>	- 19.271	- 11.501	1.263	- 26.416	45.302	42.377	49.673	54.308	-0,28	0,28
<i>PRIMA INDUSTRIE - S.P.A.</i>	4.420	- 649	2.337	- 122	100.662	90.394	75.454	63.243	0,53	-0,53
<i>RATTI SPA</i>	6.930	5.971	- 23	- 2.509	90.079	78.568	58.061	54.447	0,97	-0,97
<i>RENO DE MEDICI SPA</i>	- 435	3.514	5.543	3.275	230.774	284.150	294.724	240.496	0,83	-0,83
<i>RETELIT SPA</i>	- 4.471	- 2.209	- 1.972	- 2.289	1.245	1.356	118	1.128	-0,43	0,43
<i>A.S. ROMA SPA</i>	- 60.609	- 31.135	- 49.616	- 8.740	14.802	115.059	23.821	48.302	0,48	-0,48
<i>ROSSS -S.P.A.</i>	294	- 695	- 773	- 1.724	21.130	20.447	15.776	14.917	0,82	-0,82
<i>SABAF S.P.A.</i>	4.988	12.603	20.026	10.842	116.202	132.514	132.176	112.699	0,72	-0,72
<i>SAES GETTERS S.P.A.</i>	- 18.405	- 17.634	- 17.641	- 28.502	4.685	3.852	8.133	16.394	-0,94	0,94
<i>SEAT PAGINE GIALLE S.P.A.</i>	136.808	- 365.365	- 250.943	318.418	449.668	748.515	875.543	952.225	-0,03	0,03
<i>SERVIZI ITALIA S.P.A.</i>	14.942	9.718	16.312	13.964	192.006	167.614	167.980	159.109	0,24	-0,24
<i>SINTESI S.P.A.</i>	389	- 2.780	- 5.679	- 3.853	393	32	149	117	0,70	-0,70
<i>SNAI S.P.A.</i>	- 11.061	- 9.053	- 1.705	22.278	493.492	527.708	528.770	518.222	0,23	-0,23
<i>STEFANEL - S.P.A.</i>	- 14.261	- 24.715	- 20.132	- 22.955	120.402	120.924	112.587	122.011	-0,15	0,15
<i>TELECOM ITALIA MEDIA SPA</i>	- 116.449	- 70.457	- 159.160	- 65.445	80.214	139.867	115.616	113.667	0,37	-0,37

SOCIETA'	EBIT				SALES REVENUES				Corre- lation	Cost com- plex
	2012	2011	2010	2009	2012	2011	2010	2009		
TERNIENERGIA SPA	367	15.395	20.400	9.807	32.240	192.001	124.181	55.288	0,75	-0,75
TXT E- SOLUTIONS S.P.A.	1.008	- 2.299	- 1.192	- 6.364	31.246	33.010	41.033	24.002	0,62	-0,62
ENERVIT SPA	1.558	2.642	2.317	1.979	45.539	44.030	40.657	35.750	-0,05	0,05
GRUPPO MUTUIONLINE SPA	- 2.295	- 2.887	13.096	12.422	298	320	15.811	15.072	1,00	-1,00
NICE S.P.A.	26.135	32.173	38.204	36.519	119.507	129.335	127.335	114.065	0,09	-0,09
SAT SPA	9.133	8.422	6.816	5.341	68.525	73.517	69.869	54.800	0,79	-0,79
VIANINI/ INDUSTRIA SPA	- 3.578	- 565	139	1.451	12.218	10.379	9.399	17.860	0,39	-0,39
VIANINI LAVORI SPA	- 494	- 3.270	31.178	18.813	190.909	264.758	237.704	213.101	-0,01	0,01

C. The Incidence of each operational costs

	Raw materials	Service cost	Costs for lease of third- party assets	Labor cost	Depreciation/ amortization	Provisions	Other mana- gement expenses
ASTM S.P.A.	0,0%	21,79%	6,05%	41,71%	3,38%	0,00%	27,03%
RCS MEDIAGROUP SPA	14,32%	37,56%	7,84%	28,87%	7,04%	1,17%	3,20%
ENI	51,26%	18,16%	1,07%	2,66%	2,70%	0,80%	23,34%
BASIC NET S.P.A.	7,31%	31,46%	12,42%	31,08%	7,97%	0,00%	9,76%
MEDIACONTECH S.P.A.	1,03%	16,68%	3,64%	40,26%	20,84%	16,49%	1,05%
SAES GETTERS S.P.A.	12,24%	30,69%	0,00%	41,41%	9,93%	0,00%	5,73%
CEMENTIR HOLDING SPA	0,00%	19,77%	2,89%	51,65%	2,61%	0,00%	23,08%
DATALOGIC S.P.A.	0,00%	42,72%	0,00%	30,97%	9,23%	0,00%	17,07%
ASCOPIAVE S.P.A.	4,33%	18,75%	13,71%	24,70%	23,51%	0,00%	14,99%
EXPRIVIA S.P.A.	8,52%	28,66%	2,78%	54,51%	3,90%	0,65%	0,98%
K.R.ENERGY S.P.A.	0,00%	12,64%	2,19%	8,20%	68,23%	1,34%	7,41%
PININFARINA S.P.A.	44,97%	10,38%	0,67%	24,43%	9,81%	3,93%	5,80%
PRELIOS S.P.A.	0,12%	44,05%	10,66%	25,31%	6,36%	3,61%	9,88%
MOLMED S.P.A.	9,23%	46,98%	4,54%	33,05%	4,93%	0,00%	1,28%
FINMECCANICA SOCIETA PER AZIONI	0,17%	47,13%	2,35%	29,57%	4,94%	3,63%	12,22%

	Raw materials	Service cost	Costs for lease of third-party assets	Labor cost	Depreciation/amortization	Provisions	Other management expenses
<i>MEDIASET S.P.A.</i>	0,19%	11,39%	2,05%	20,31%	0,07%	62,23%	3,77%
<i>BIALETTI INDUSTRIE S.P.A.</i>	46,02%	32,48%	2,55%	12,29%	4,97%	0,25%	1,44%
<i>BASTOGI S.P.A.</i>	0,00%	25,46%	17,41%	36,05%	4,97%	0,00%	16,12%
<i>OLIDATA S.P.A.</i>	77,25%	11,55%	0,46%	5,56%	3,11%	0,32%	1,76%
<i>SIGLABILE ACQUE POTABILI S.P.A.</i>	24,67%	31,17%	4,79%	18,02%	16,51%	0,00%	4,85%
<i>FIDIA - S.P.A.</i>	35,82%	28,31%	2,54%	31,09%	1,33%	0,41%	0,50%
<i>ADF SPA</i>	5,90%	43,85%	1,59%	34,02%	8,20%	3,50%	2,95%
<i>BE SPA</i>	5,42%	35,68%	2,25%	27,11%	4,44%	7,19%	17,90%
<i>PRYSMIAN S.P.A.</i>	0,99%	46,55%	4,81%	35,49%	5,82%	0,03%	6,30%
<i>RETELIT S PA</i>	0,27%	24,34%	7,82%	48,76%	1,21%	7,12%	10,50%
<i>DADA SPA</i>	0,28%	48,24%	0,00%	28,84%	18,38%	1,75%	2,50%
<i>FULLSIX SPA</i>	0,00%	37,29%	7,08%	48,22%	3,80%	1,82%	1,80%
<i>SARAS</i>	92,21%	4,53%	0,09%	1,23%	1,24%	0,41%	0,29%
<i>CLASS EDITORI S.P.A.</i>	4,10%	74,92%	6,50%	4,79%	2,66%	0,08%	6,94%
<i>EEMS ITALIA SPA</i>	0,36%	42,87%	0,00%	40,86%	5,09%	0,00%	10,81%
<i>IREN S.P.A.</i>	0,04%	43,99%	0,83%	40,77%	1,16%	1,80%	11,41%
<i>SORIN SPA</i>	0,40%	50,16%	6,12%	32,30%	5,34%	0,00%	5,69%
<i>PREMUDA - SOCIETA' PER AZIONI</i>	8,81%	33,37%	10,13%	7,47%	36,79%	0,00%	3,43%
<i>ENGINEERING S.P.A.</i>	1,76%	47,67%	0,80%	45,65%	2,92%	0,42%	0,79%
<i>GABETTI PROPERTY SOLUTIONS S.P.A.</i>	0,00%	28,29%	4,86%	34,82%	4,19%	15,58%	12,26%
<i>INTEK GROUP SPA</i>	0,00%	35,91%	5,65%	10,63%	0,24%	1,33%	46,24%
<i>STEFANEL - S.P.A.</i>	31,44%	40,81%	5,46%	12,28%	6,94%	1,84%	1,22%
<i>CENTRALE DEL LATTE DI TORINO & C. - S.P.A.</i>	56,03%	24,63%	0,57%	14,08%	3,68%	0,15%	0,86%
<i>LA DORIA - S.P.A.</i>	68,22%	14,48%	0,56%	10,21%	3,68%	0,56%	2,30%
<i>SOL SPA</i>	34,03%	34,51%	1,81%	17,41%	10,84%	0,49%	0,92%
	16,19%	32,00%	4,19%	27,17%	8,57%	3,47%	8,41%

*The percentage in the table has been computed as follows: for example, the computation of raw material cost of ASTM S.p.A. is obtained as the average amount of Raw Materials over the period 2009-2012 scaled by Total Average Operational Costs of ASTM S.p.A.

**The final incidence of operational costs (in the last data line) is obtained by computing the average incidence of cost category (i.e. Raw Material Costs) among all the most complex firms.

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