



Universitat Autònoma de Barcelona

# Documents de treball

**A METHODOLOGY TO MEASURE SHARE-  
HOLDER VALUE ORIENTATION AND SHARE-  
HOLDER VALUE CREATION AIMED AT PRO-  
VIDING A RESEARCH BASIS TO INVESTIGATE  
THE LINK BETWEEN BOTH MAGNITUDES**

**Stephan Hecking**

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Departament d'economia de l'empresa



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# **A methodology to measure shareholder value orientation and shareholder value creation aimed at providing a research basis to investigate the link between both magnitudes**

**Stephan Hecking \***

## **Abstract:**

Does shareholder value orientation lead to shareholder value creation? This article proposes methods to quantify both, shareholder value orientation and shareholder value creation. Through the application of these models it is possible to quantify both dimensions and examine statistically in how far shareholder value orientation explains shareholder value creation. The scoring model developed in this paper allows quantifying the orientation of managers towards the objective to maximize wealth of shareholders. The method evaluates information that comes from the companies and scores the value orientation in a scale from 0 to 10 points. Analytically the variable value orientation is operationalized expressing it as the general attitude of managers toward the objective of value creation, investment policy and behavior, flexibility and further eight value drivers. The value creation model works with market data such as stock prices and dividend payments. Both methods were applied to a sample of 38 blue chip companies: 32 firms belonged to the share index IBEX 35 on July 1<sup>st</sup>, 1999, one company represents the “new economy” listed in the Spanish New Market as per July 1<sup>st</sup>, 2001, and 5 European multinational groups formed part of the EuroStoxx 50 index also on July 1<sup>st</sup>, 2001. The research period comprised the financial years 1998, 1999, and 2000. A regression analysis showed that between 15.9% and 23.4% of shareholder value creation can be explained by shareholder value orientation.

JEL classification: G31, G32, G34

Key words: shareholder value orientation, shareholder value creation, evaluation methodology, shareholder value variables

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## **1. INTRODUCTION**

Shareholder value creation was the slogan of most blue chip companies during the last boom at stock exchanges. Executives competed for being the champion in value creation for shareholders. But do managers really influence the creation of value or is it just the general market movement that brings stock prices up and down? To answer this question a methodology is needed to measure the value orientation of companies and another methodology is needed to measure the creation of value. Then, quantified values of value orientation and value creation of a statistically significant set of companies can be taken to determine, for example by means of a regression analysis, to which extent shareholder value orientation explains shareholder value creation.

Chapter 2 proposes a method to quantify the value orientation of companies. The method bases directly on information that comes from companies (annual reports, returned questionnaires concerning the topic in question). Financial literature provides a lot of models to measure the creation of shareholder value. None of these methods, however, is appropriate for the final purpose to examine the relation between shareholder value orientation and creation. So, chapter 3 designs a suitable model to measure the creation of value. Final chapter 4 reports briefly some results of the application of both methods on 38 major Spanish and European companies and gives an indication in how far shareholder value orientation influences shareholder value creation.

## **2. ORIENTATION TOWARDS SHAREHOLDER VALUE**

This chapter develops a model to measure the orientation of shareholder value. The measurement method follows some fundamental ideas of the Rating Scale Analysis – Rasch Measurement, proposed by Benjamin D. Wright and Geofferey N. Masters (1982), professors of the University of Chicago, who make use of the measurement philosophy of G. Rasch (1977). Wright and Masters established rules “to measure the attitudes of school children toward science” and applied their method to “measure the attitudes of seventy-five school children” (Wright, Masters 1982: 11). They go back to the principles of attitude measurement of Thurstone (1928) who already “recognized the importance of being able to express attitude measurement on a scale with a ‘defensible unit of measurement’, and hoped that ‘equal appearing intervals’ would provide a rational unit for his scales”. (Wright, Masters 1982: 13; Thurstone 1928: 542)

Concretely, the measurement of the orientation (applied attitude) towards the creation of shareholder value proceeded as follows:

The annual reports of 45 major Spanish and European blue chip companies<sup>1</sup> were analyzed in order to find out those variables that have presumably the greatest impact on the creation of shareholder value. It came out that

- general attitude towards the creation of shareholder value,
- investments,
- managerial and organizational flexibility,
- human resources,
- dividends,
- growth,
- corporate control,
- liquidity of shares and bonds,
- risk management,
- cost management, and
- competitive advantages

are not only outstanding value drivers from the companies' point of view but are also considered crucial for value creation in economic literature.

Then, the annual reports of those companies (financial years 1998, 1999, and 2000) were taken again<sup>2</sup> to obtain *typical* or *representative statements* that reflect all nuances of the companies' value orientation regarding the eleven shareholder value variables from "no value orientation" or "value destruction" to "best practice of value creation".

Statements are quotations of company presidents, CEOs, board and management committee members, or other persons who express a relevant opinion, or text fragments in the framework of the management report. The financial statements (legal part of the annual report) are taken into consideration only exceptionally if a statement is important for the evaluation of the company and could have

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<sup>1</sup> The companies belonging to the Spanish stock exchange index IBEX 35 on July 1<sup>st</sup>, 1999, five companies of the Spanish New Market and another five companies from the EuroStoxx 50 (July 1<sup>st</sup>, 2001, respectively) were selected.

<sup>2</sup> Also a questionnaire was sent to the selected companies to complete information.

been located also in the management report. Statements reflect companies' opinions, behaviors, strategies and policies. Only those statements of natural persons who express an explicitly personal opinion are cited with quotation marks. Frequently presidents and CEOs summarize in their letters to shareholders facts that are also stated or could have been stated elsewhere in the management report. In those cases the president or CEO is not cited with his or her name.

The statements were scored according to the level of cohesion to the state of the art of economic theories. The following subchapters describe first the general framework for the evaluation and then details the valuation rules for each shareholder value variable.

## 2.1. GENERAL VALUATION FRAMEWORK

Most statements are rather qualitative than quantitative. Therefore it is necessary to define *valuation criteria* (example: "minimum required return on investment is recognized by the company as a condition for a shareholder value creating investment", this recognition is scored with 6 points) and *benchmark statements* (corresponding example: "we invest only if we expect to obtain an adequate return on investment with an acceptable risk profile") for all shareholder value variables that represent valuations between 0 points (no shareholder value orientation) and 10 points (best practices) being scored with 5 points a statement that stands for a correct basic understanding and application of the variable. Due to the huge amount of different statements found in the annual reports it is impossible to reflect all nuances in the valuation criteria and benchmark statements. So, attitudes, strategies, and policies as stated in annual reports are scored according to their proximity to those valuation criteria and benchmark statements. The following table gives a general orientation for the variable-specific scoring criteria.

<u>Score</u>	<u>General orientation for required quality of understanding and application</u>
0	- completely wrong understanding and / or application that possibly destroys shareholder value  - no statement in case of an obligatory variable
1	wrong or very unsatisfying understanding / application but less serious consequences on shareholder value than those statements scored with 0 points
2	neutral information (explicit or implicit) that the variable is applied or at least known as such



3	high probability that the variable is not applied in a value destroying manner
4	importance of the variable is recognized
5	right basic understanding and application
6	probably shareholder value increasing application, also in the sense that the company is on the right way (processes installed), but too weak, little, implicit, vague information, lack of more detailed explication
7	conscious application to the explicit end to create shareholder value
8	conscious application in a way that lets assume that shareholder value will be created
9	shareholder value will surely be created, qualitative or quantitatively improved information in comparison to statements scored 8 points
10	best practice, optimal understanding and application of the variable

**Table 1: General valuation scheme for understanding and application**

If there are various statements concerning one variable (for example, one statement in each year of the research period 1998 to 2000), then the most favorable one will be taken. Is there a clear positive tendency in the sense that a company improves constantly in its efforts to create shareholder value, one additional point will be assigned. In case of a clear negative tendency (that means, that efforts, attitudes, strategies and policies in 2000 were worse than in 1999 and those of 1999 were worse than in 1998), then 5 points will be subtracted because it is very probable that managers destroy shareholder value. If statements are contradictory, one, two or three points will be subtracted pending on how serious those contradictions are. *Additional detail information* (e.g. the right application of a special human resources measure) earns 1 additional point with a maximum of 3 points per variable. Sometimes a statement has the typical characteristics of additional information but reflects also the general understanding the firm has concerning the variable. If there are no other statements of comparable quality available, which define the understanding and application of the variable, the statement is taken for this purpose and earns a point for additional information only if it could be divided in two statements stating the understanding and application on one side and offering useful additional information on the other side.

Some variables are obligatory in the sense that statements are indispensably required at least once in one of the annual reports of the research period. For instance, *risk management* is essential for value creation in each and every company. Consequently, if a company omits to explain to shareholders its risk management, it must be assumed that the management does not give risk management the priority necessary to maximize shareholder value. The shareholder value orientation of the company concerning this variable is scored with – 1 point. On the other hand, there are also variables which can be crucial for the creation of wealth for shareholders, such as *mergers and alliances*, but a company that does not play in this field not necessarily fails to create value. Consequently, missing statements do not lead to a negative valuation in those cases.

In order to calculate correctly the score of each company the sum of points of individual variables will finally be divided by the number of relevant variables. For example, a company may have obtained a valuation according to the following table:

<u>Variable</u>	<u>Score</u>
General attitude	6
Investments	4
Flexibility	2
Human resources	9
Dividends	n/a
Growth	3
Corporate control	5
Liquidity of shares	-1
Risk management	6
Cost management	4
Competitive advantages	7

**Table 2: Example of valuation of shareholder value orientation**

In this example, the company did not refer to the variables *Dividends* (not obligatory) and *Liquidity of shares* (obligatory). It obtained a total of 45 points which are divided by 10 (all variables but *Dividends*) leading to a total valuation of 4.5 points.

The questionnaire gives Chief Executive Officers the chance (without the corresponding risk, except for the case of contradictory statements) to enhance the company's score performance. Questions are based on the findings of the theoretical chapter 2 of this thesis and answers can close the gap let by annual reports.

The following table summarizes the scoring rules.

<u>Concept</u>	<u>Scoring scheme</u>
understanding and application of the shareholder value variable	0 to 10 points
correct basic understanding and application	5 points
no statement regarding an obligatory variable	– 1 point
clearly positive <u>t</u> endency in the 3 year research period (strictly monotonically increasing sequence of scores)	+ 1 point
clearly negative <u>t</u> endency in the 3 year research period (strictly monotonically decreasing sequence of scores)	– 5 points
contradictory statements	– 1 to – 3 points depending on the seriousness
clarifying or amplifying <i>additional</i> information	+ 1 point per statement, maximal + 3 points per variable

**Table 3: Summary scheme for the valuation of shareholder value orientation**

## 2.2. VALUATION RULES FOR EACH SHAREHOLDER VALUE VARIABLE

This subchapter specifies for each variable whether it is obligatory or not, specifies the valuation criterions, and cites benchmark statements and additional information. It must be stressed that valuation criterions are not exclusive definitions for their scores and all benchmark statements are just examples that give an orientation for the scoring. To cover all possible statements in the following valuation schemes would have meant to cite most of the statements that are subject to the scoring in the following subchapter. Statements are mostly taken from the annual reports. As statements are to a large extent of qualitative nature, valuation

may seem to be somewhat arbitrary in some cases. However, in tendency valuations should be coherent and logical since they orient to the general valuation scheme of understanding and application presented above.

### 2.2.1. General attitude towards the creation of shareholder value

Shareholder value variable *general attitude* is an obligatory variable. It should be stated in each annual report. The right understanding of managers concerning their own role and that of shareholders is a necessary (but not sufficient) condition that firms are indeed able to create shareholder value.

The following table offers valuation criteria for each score scale from 0 to 10 points and quotes one or more statements that stand for the respective valuation.

score	valuation criteria
	quotes as examples
0	- no statement
	- (one) main objective(s) that is not shareholder value creation and does not point to the intention of shareholder value creation
1	- our main objective is to serve the communities where we are present
	- recognize shareholders as important, but wrong understanding of the role of shareholders
2	- we hope to continue counting on the support of our shareholders
	- creation of shareholder value is not an explicit objective, but there is a positive probability that managers may do things right
3	- obviously, as a business, one of the company's main objectives is to generate profit from its operations, but the company also aspires to benefit the community we serve through its activities
	- recognition of shareholders as important and probably the right understanding of managers concerning their own role
4	- we serve our shareholders which belong to our important stakeholders
	- creation of shareholder value as an objective
5	- shareholder value creation is one of the company's objectives
	- recognition that it is not sufficient to generate just profit although a more exact definition would be better
6	- we strive to assure permanent return on investment
	- the company aims to secure an adequate level of profit for shareholders
7	- the company has proven to be a creator of shareholder value
	- creation of shareholder value is implicitly the foremost objective
8	- the company increases shareholder value every year
	- our priority objective is to assure that the companies in which we have holdings obtain maximum returns
9	- right explication of what is creation of shareholder value
	- economic objective, which consists in obtaining a level of profitability higher than the cost of capital invested
10	- shareholder value creation as the main objective
	- main objective is sustained creation of long term shareholder value

9	- explanation how the main objective, creation of shareholder value, can be reached
	- the main objective of the society, namely, the creation of value for shareholders is enhanced by the following measures: ...
10	- creation of highest possible value for shareholders, includes implicitly that the creation of shareholder value is hence the foremost objective of the firm
	- the objective of the company is to maximize shareholder value

**Table 4: Valuation scheme *General attitude towards the creation of shareholder value***

Companies undertake many measures to satisfy shareholders' necessities. Here are some typical additional information statements of the companies:

- company's transparency policy focuses especially on providing full information to shareholders
- toll-free shareholder hotline
- information campaigns, road shows, pro-active communication to shareholders and analysts
- web site for shareholders
- discounts for shareholders on the products of the company
- the company obtained a prize for "best shareholder attention"
- explanation how shareholder value is created

### 2.2.2. *Investments*

Shareholder value *variable investments* is obligatory at least in the three year horizon of this research and for the sample companies.

score	valuation criteria
	quotes as examples
0	- no statement
	- wrong basic understanding
1	- the <i>long-term</i> investment portfolio includes treasury bonds
	- right application of the variable is casual
2	- we invested huge amounts in order to improve the infrastructure of the community where we are located
	- investments recognized as important management tool, it keeps unclear if the variable is correctly applied
3	- heavy investments were undertaken
	- probably right understanding that could be better defined
4	- we invested in projects at prices that we consider attractive
	- management has defined requirements without communicating them to shareholders by means of the annual report
5	- the investment met the requirements we set
	- hint on requirements for investments that could be specified further
6	- our selection criterion is low maturity periods of investment projects
	- minimum required return on investment recognized
7	- obtain an adequate return on investment with an acceptable risk profile
	- application of the variable as instrument to create shareholder value

	- the adequate selection of investments will allow the profits and shareholders' value to increase significantly
8	- right application of the variable and related to the creation of shareholder value - creation of value by obtaining a profitability higher than the costs of capital invested
9	- right application of the variable and a reasonable approach to optimize return on investment - obtaining a level of profitability higher than the cost of capital invested and the sector average
10	- the company strives for the optimal utilization of financial resources - obtaining maximum return on our resources and optimum remuneration for our shareholders

**Table 5: Valuation scheme *Investments***

Additional information:

- the investments strengthen / consolidate market position to the end ...
- investments enable(d) cost reductions
- we invested in line with the strategic approach, in our traditional sectors
- if an opportunity exists, we will examine our investment opportunities
- buyback of own shares (categorized as investment by the firm)
- divestments with significant capital gains, or because not yet core business, or because expected future (risk-adjusted) ROI not sufficient
- department or special group company that evaluates investment projects and controls them (separate authority)
- explication why the high return on investment is expected
- explication of the instruments applied to control the investment (e.g. EVA)
- quantitative specification of the objective of investment
- quantitative success of past investments
- improving investment projects in course (to obtain a higher cash flow)
- realize economies of scale through investments
- explained replacement investments
- continuous control and assessment of investment projects

### **2.2.3. Managerial and organizational flexibility**

Flexibility is necessary to maximize shareholder value and companies should be aware of it. Therefore it is an obligatory variable.

Score	valuation criteria
	quotes as examples
0	- annual reports do not mention flexibility or (real) options at all
1	- implicit recognition of flexibility as an advantage, but re-active instead of pro-active attitude - the company evidenced its ability to benefit from the process of liberalization in the sector
2	- approximation to flexibility (e.g. "motion")

	- the company is building its future on the basis of a consolidated project, constantly in motion
3	- explicit recognition of the value of flexibility, less important example - the rating gives us the flexibility for obtaining the necessary resources for financing our expansion
4	- the company recognizes the advantages of flexibility - the flexibility that facilitates the new process allows to adjust the production in each moment avoiding to increase involuntarily stocks - the financial structure will allow us to pursue future business opportunities as they arise
5	- right basic understanding and pro-active attitude - the company strengthened its capacity for innovation and adaptation to the needs of an ever more global environment
6	- recognition of the real value of flexibility - our main competitive advantage is our flexibility
7	- conscious utilization of real options - flexibility as deliberate objective, not just <i>one</i> result of some measures - this project involves the option to include a further eleven concessions - with the objective to create a flexible organization, the bank has adopted a style of direction that allows to respond with agility - in order to adapt to the demands of new markets and products the Infrastructure Concessions Division was created
8	- utilization of various real options - the firm's success story has been built over the years through innovation, versatility, an ability to anticipate, adapt and change
9	- options are brought into a context of flexibility - we are in no way restricted in our capacity to pursue other sensible options; we will be able to react quickly to changes in the marketplace
10	- optimal application, best practice - we take into account the value of real options when evaluating an investment project

**Table 6: Valuation scheme *Managerial and organizational flexibility***

Additional information:

- the situation in Argentina causes us to study the matter in depth and reconsider the future of this investment
- authorize the Board of Directors to increase the share capital in the amount and subject to the maximum time limits ...
- we will diversify into other business areas if favorable business opportunities arise
- implementation of major modifications to enhance the plant's operational flexibility
- negotiation of flexible clauses in the supply contracts
- training must be individual and flexible, adapted to the needs of each post
- effort will be made regarding the new information technologies in order to reinforce and increment our business opportunities
- due to the substantial changes in the circumstances the firm considered it convenient to request these collaboration agreements be terminated

- we purchased 3% of the company and we have a purchase option for another 3%
- new work timetables have been agreed upon with more flexible working days
- the company is keeping itself alert for the purpose of being in the right place in the markets to take full advantage of new business opportunities
- after the decision to abandon the merger project our shares have reacted positively
- an example of the group's flexibility is its high level of subcontracting
- in order to maintain our leadership we have to assimilate changes
- we approved the segregation of the logistics and distribution businesses, full autonomous businesses will be more flexible
- we rationalized our organization for greater flexibility and efficiency

#### 2.2.4. Human resources

Two dimensions characterize shareholder value variable *human resources*: the optimization of management through a system of remuneration that – in the best case – assures maximum creation of shareholder value when managers maximize their own utility, and the return on investment in all the people that make up a company through a lot of different human resources measures. In order to consider both dimensions and weigh this shareholder value variable as strong as the other variables, companies can obtain a maximum of up to 5 points for each of the dimensions concerning the right understanding and application. The following table begins with dimension *management remuneration system*.

score	valuation criteria
	quotes as examples
0	-totally wrong or probably value destroying formulas or benchmarks to determine managers' variable remuneration component, managers will probably be directed the wrong way
	- no system of variable remuneration
0.5	- the Board of Directors' remuneration is calculated as a maximum of 0.25% of annual turnover
	- wrong understanding but less destructive than systems scored with zero points
1	- the group conceded a number of gratis shares to employees in function of their duration of contract and their remuneration
	- not specified system of stock options that are initially in the money, positive and negative aspects
1.5	- the company granted stock options to executive directors
	- unspecified system of cash payments
2	- all managers and sales employees receive bonus payments in form of cash within 3 months after year end closing, sometimes as well quarterly or monthly
	- the importance of variable remuneration is recognized
2.5	- we assign an increasingly important role to variable remuneration
	- recognition of variable remuneration as an instrument to create shareholder value, right basic understanding, but lack of information concerning application



	- the stock option plan is a highly valuable instrument for fostering stronger commitment by company executives to the creation of shareholder value
3	- the firm disposes of clearly defined targets to create shareholder value through a system of variable remuneration - right tendency in the development of a policy of shareholder value creation by means of variable remuneration - the remuneration policy will be more closely linked to value creation targets
3.5	- conscious application to the explicit end to create shareholder value - put into practice a company stock based incentive plan for the management team, in order to involve managers more directly in the value creating process
4	- variable remuneration policy assures that managers will be compensated only if they created value for shareholders - options were sold to executives at 5% of the share price which was € 25.00 at year end and the exercise price is € 28.50 per share
4.5	- policy of variable remuneration assures long-term creation of shareholder value - the management receives stock appreciation rights that are only translated into additional remuneration when two conditions are met after a two-year waiting period: our share prices outperform the DJ Euro Stoxx and rise more than 20%
5	- application of a consistent valuation tool for variable remuneration - the amount allocated to each management member depends first and foremost on his or her contribution of the improvement made in EVA

**Table 7: Valuation scheme *Human resources: management remuneration systems***

Valuable additional information with respect to the variable remuneration of managers was only found concerning a quantification of incentives:

- general share option plan for a maximum of 4,293,170 shares, at a share price to beneficiaries of 5.32 euros per share, which may be exercised at different maturities from June 1, 2000 to December 31, 2003

The valuation scheme for the dimension of other HR measures also permits to earn up to 5 points.

score	valuation criteria
	quotes as examples
0	- HR measures are not mentioned at all
0.5	
1	- the company takes HR measures, but it keeps unclear if they can be translated into creation of value finally, neutral information - a total of 100 courses were run with 80% of personnel being involved
1.5	- probably, measures will have a positive effect but lack of information - we continued our policy of training the employees in new technology
2	- the utility of HR measures is mentioned but not quantified - the ongoing training, one of the distinctive features of our company from the out-set
2.5	- right basic understanding and use of HR measures

	- we made a big effort to improve qualification of the staff in the framework of our global strategy - a new unit specially dedicated to the management of people's security
3	- the firm's disposes of a sophisticated system of HR measures - the integrated system of HR management permits to know the personnel, evaluate possibilities of development, determine the area of its professional career and its necessity of training and measures of professional behavior - our HR plan pretends to promote initiatives and staff's professional careers, by means of rotation, training, teamwork, ...
3.5	- HR policy recognized as an instrument to generate value - investment in human resources is that which produces the best returns - the bank's extraordinary human capital is the first key to value
4	- efficient use of human resources to create value - human resources policy focused on continuing all processes that contribute to increase the contribution of the staff to improve the group's results
4.5	- efficient use of human resources within the strategic framework of the company - we implemented a strategic HR plan in which all phases of personnel policy ... from an integrated business model aimed at adding value to the company
5	- optimum understanding and application of the variable - we measure permanently the success of our HR management, which contributed 9.7% to the total value creation

**Table 8: Valuation scheme *Human resources: other HR measures***

Additional information use to refer to the general human resources policy:

- [list of various HR measures (with explanation) and their respective objectives]
- [the company dedicates a very exhaustive chapter (20 pages) to the topic HR management]
- the edge over other companies that offer the same services comes from its human resources
- we adapted the headcount to these new requirements in order to reduce costs
- we also completed our Safety Management Process by conducting an Occupational Risk Prevention Audit
- building of links with educational centers as a pool of future professionals
- a seminar was given on creating value for shareholders in order for the management team to become even more closely identified with these policies
- we ran a "Survey of Personnel Satisfaction" ... results will help to determine new focuses on managing our personnel
- our workforce has always been a key factor in efficiency and generation of value
- with a view to sharing the Company strategy with all our employees, the target-linked remuneration system was applied to the entire workforce
- ongoing analysis and revision of the salary policy, to adapt it to the current context of the market
- we have demonstrated that we can attract and retain highly qualified professionals

- personnel fluctuation was considerably less than in other companies of the sector
- an independent study was carried out in 2000 to measure employee satisfaction, in consequence a plan was designed to increase satisfaction, the result was a significant reduction of absenteeism as well as staff turnover
- the results of the early retirement plans lay both in annual savings and the dynamization of the Bank's human capital
- we invested heavily in our human resources, with special attention to promoting teamwork
- 1998 saw a strong reinforcement of our policy towards internal promotion
- the company's HR team has worked to make sure that right people were doing the right job at the right time throughout the group
- in order to identify the people best qualified to act as leaders and to help set future trends, an in-depth staff evaluation program was carried out
- create a culture where everybody would have greater sense of belonging to the company, regardless of the employee's place of work
- making each of our employees a manager in his or her post
- a new organizational matrix model has been established that allows managerial procedure to be optimized and more effective
- a great effort was made to strengthen initiatives aimed at increasing employee loyalty
- development of preventive medicine as an essential means of improving employees' health and avoiding illness
- as a consequence of our career plan system we are able to fill the majority of vacancies and new posts internally
- last year we hired 10,000 new employees, fresh ideas and inspiration inject new energy into the company
- we need to provide an environment in which our employees can be creative and turn their ideas into collective actions

### 2.2.5. *Dividend payments and dividend policy*

*Dividends* is not an obligatory variable. However, dividend policy can be used to create shareholder value. As the following table shows, many different statements evidence the importance of the variable for managers.

score	valuation criteria
	quotes as examples
0	[- no information about dividend policy, the company foregoes the chance to use a value creating instrument (no penalizing effect)] - wrong understanding of the value creation effect of dividend payments

	<ul style="list-style-type: none"> <li>- shareholders will participate in the good results obtained in the financial year through a dividend of 85 pesetas</li> <li>- the dividend yield for the year was 4%, this makes the company one of the most attractive stocks listed on the Spanish stock market</li> <li>- the company, as part of its policy of creating value for shareholders, has carried on increasing its dividend</li> </ul>
1	<ul style="list-style-type: none"> <li>- neutral statement that does not prove a wrong application at least but lacks information about dividend policy, therefore wrong understanding of the variable</li> <li>- the company distributed a dividend of € 0.39 per share</li> </ul>
2	<ul style="list-style-type: none"> <li>- unexplained information about the tendency of dividend payments, hint to the existence of a dividend policy</li> <li>- the company distributed a dividend of € 0.39 per share, € 0.05 more than the previous year</li> </ul>
3	<ul style="list-style-type: none"> <li>- recognition that the dividend is a part of the calculation of shareholders' return on investment</li> <li>- against the 18.31% drop of the Ibex35 in the last quarter of 2000, the price of our share fell by only 11.25%; the high dividend yield by the shareholders of our company, who received 44 pesetas gross per share on 15 December 2000, should also be taken into consideration</li> </ul>
4	<ul style="list-style-type: none"> <li>- unexplained dividend payment practices that serve shareholders, saving them taxes, the variable is recognized as an instrument</li> <li>- we consider that mixed remuneration system (dividends and the return of contributions to share capital) is the most efficient way to compensate shareholders</li> </ul>
5	<ul style="list-style-type: none"> <li>- deliberate information policy: link between the present result and dividend payments</li> <li>- the company pursues a dividend policy</li> <li>- right basic understanding and application</li> <li>- thanks to these results, the proposed dividend for the year totals 20,000 million pesetas, 5% more than the previous year</li> <li>- of special note is the adaptation of allocation to voluntary reserves, thus providing for a stable distribution policy</li> </ul>
6	<ul style="list-style-type: none"> <li>- application of a dividend policy that may create value for shareholders but lack of explaining information</li> <li>- the company states what is the sense of its dividend policy, although probably not optimal in the sense of shareholder value creation</li> <li>- to further stimulate growth and expansion, our shareholders renounced dividends</li> <li>- our intention is that the dividend reflects the development of the group's earnings per share</li> </ul>
7	<ul style="list-style-type: none"> <li>- a favorable measure of dividend policy combined with a good explication</li> <li>- we propose a dividend of Ptas 115, Ptas 30 more than last year; this substantial dividend is in line with the outstanding results of the year and therefore an extraordinary dividend; Ptas 30 will be paid as Premium Refund</li> </ul>
8	<ul style="list-style-type: none"> <li>- active dividend-similar measures that create shareholder value and inform the market (dividend policy)</li> <li>- measures accompanied by the explanation that and how the company aims to create shareholder value</li> <li>- as the stock was trading at an appreciable discount to its liquidity value, we have continued buying back our shares to the benefit of our shareholders</li> <li>- the bank continues to pay back part of the nominal since this form of retribution is favorable for the shareholders from a tax point of view</li> </ul>
9	
10	<ul style="list-style-type: none"> <li>- clearly stated dividend policy (as such) and quantified measures</li> <li>- an example of the confidence in the company's future prospects is the decision to acquire up to 5% of the share capital as treasury stock</li> </ul>

**Table 9: Valuation scheme *Dividend payments and dividend policy***

Additional information

- in the year 1999 as there were doubts on tax treatment, the decision was rather preferred to pay an Interim Dividend on the year 1999 for the same amount
- at the end of 1999, 27.05% of the Bank's shareholders participated in the Dividend Reinvestment Plan
- at the same time we plan to continue paying dividends, so ensuring that our growth policies do not mean shareholders are obliged to sell their shares to obtain liquidity

## 2.2.6. Growth

Growth is not a necessary condition for companies to create shareholder value and therefore not an obligatory variable. On the contrary, a wrong understanding and application of the variable easily destroys wealth of the company's owners. A "strategic or permanent link between performance and growth" is a minimum requisite for an acceptable basic understanding scored with 5 points.

score	valuation criteria
	quotes as examples
0	- meaningless statement of growth, hence completely wrong understanding of the variable - growth that makes clear that it was not obtained in order to create shareholder value
	- the growth of our company this year has dovetailed neatly with that of the Spanish economy - our expansion plays an important role in helping to promote the commercial development of the areas of influence where we locate, by modernizing the retail distribution network and stabilizing prices
1	- unexplained growth that may favor or harm shareholders (too expensive growth)
	- the company boosted its market share from 30.6% to 33% despite the entry of a new operator
2	- the company recognizes at least <i>ex post</i> that its growth policy did not reduce profits, probably neutral impact on shareholder value
	- the company's profitability has not been affected by the company's growth
3	- the company takes probably right measures, but lack of information
	- the company is open to new business opportunities in expanding areas with considerable growth potential

4	- simple and not further explained and detailed relation between growth and profit - importance of the variable is recognized
	- the firm has once more proven the capacity to growth and generation of clear profits
5	- right basic understanding and application
	- expansion that we have based on three fundamentals: a successful policy of company acquisitions, an appropriate management for each of the businesses that we develop and a strategic vision for identifying business opportunities
6	- strategic or permanent link between performance and growth
	- the group is implementing its growth strategy without reducing its profitability and in accordance with strict financial criteria
7	- link between growth and shareholder value
	- increasing our shareholders' value by growing in the most profitable areas
8	- growth strategy that very probably generates shareholder value
	- the bank doubles virtually every 4 years its size, growing faster than its competitors, without significant new employments or opening additional branches
9	- clear shareholder value increasing benefits from growth
	- we're concerned with attaining a size that makes sense in commercial terms: cost benefits and a high level of competitiveness
10	- optimal understanding and application of the variable
	- our high market share growth combined with returns on investment that exceed capital costs prove our successful policy of value creation

**Table 10: Valuation scheme *Growth***

Additional information:

- developing Group activities that show higher growth potential through ...
- a detailed analysis of the growth shows that 4% of this increase is attributable to a higher tonnage of sales to third parties, 3% to an improved product mix and 11% to the increase of sales prices
- during 1998, the Group proceeded to the development and launching of the remote commerce business thus being able to face the big growth expectations of this activity for the year 2000
- the growth prospects for the infrastructure division are excellent since the plan for Spain to attain real convergence with Europe implies Ptas. 19 trillion in investments in infrastructure between 2000 and 2008, paid for by government funds, European structural funds and private initiative
- the bank's strong financial position lets it invest in novel, new technology-intensive projects that guarantee the bank's sustainable growth in the long term
- during the coming years, we will continue to increase the number of new customers at a rate of 700,000 per year, half of these in Spain and the other half in Latin America
- the firm maintained its strategy aimed at making its distribution operations a growth driver

### 2.2.7. Corporate control: mergers and alliances

Although most of the researched companies were implicated in mergers and acquisitions during the period 1998 to 2000 and without doubt all these companies could profit from some sort of alliance, *corporate control* is not an obligatory variable. Little evidence was found in this research that mergers and alliances destroyed value. This explains the lack of examples with very low scores (only one statement was found in all analyzed annual reports that got a score of 1 point).

score	valuation criterions
	quotes as examples
0	- value destroying application
1	- wrong focus, value destruction can not be excluded - strategic alliances are better than an acquisition of a merger when they lead to market leadership without losing identity
2	- the merger may or may not create shareholder value, lack of information - the agreement is aimed at creating a new company destined to be the world leader in its industry
3	- the company intends to benefit shareholders among others - I would like to stress the willingness to serve customers and consumers, who jointly with the shareholders, will benefit from this merger
4	- economically "successful" merger without quantification of the success - recognition of the "economic" importance of the variable - the merger was a complete success as the economic results confirm
5	- not quantified benefits from the merger, but right basic understanding - the merger of our subsidiary company Euro with Saba during the year has generated operating synergies
6	- right understanding of the sense of a merger that aims to increase shareholder value - joining together the best of both banks is going to significantly surpass the mere sum of both
7	- link of a merger to the corporate strategy, more than just realization of synergies - the success of the merger was mainly the result of the group's strategic result
8	- clear benefits from an alliance - various shareholder value increasing benefits from a merger - the frequent exchange of information and numerous benchmarks and workshops with Arbed contributed to improve logistics - the commercialization of insurances will be possible through the commercial network of the bank's subsidiaries in Argentina - the merger permitted the bank to optimize its distribution capacity, unify and strengthen the various businesses, simplify the group's management and efficiently reassign resources - the key objectives of the merger were to boost profitability on the back of cost reductions, economies of scale and optimized management
9	- a well managed merger proven by a listing of various success factors concerning implementation and post merger integration - due to its speed, magnificent execution and absence of conflicts, the integration can be rated model
10	- a merger that proved to create significant shareholder value - absolute priority for shareholders interests - successful defense strategy, argued from the standpoint of shareholders



	<ul style="list-style-type: none"> <li>- financial markets welcomed the announcement of the merger, the share price rose by 40% during the first month after the announcement</li> <li>- since the first offer to acquire our company was launched we sought to avoid defensive positions that might impair the interests of our shareholders</li> <li>- the Board of Directors did not reject the offer, but actively sought to obtain the best outcome for our shareholders</li> <li>- the agreement will allow the maximization of the value of both companies with respect to their shareholders</li> <li>- the Royal Decree altered the conditions of the merger in a significant manner so that we renounced the merger in order to not harm shareholders</li> <li>- the Board of Directors reacted to the offer to the effect the price being offered was insufficient, the counter bid was of 2.75 euros per share higher</li> </ul>
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**Table 11: Valuation scheme *Corporate control: mergers and alliances***

Additional information:

- analysts and the financial community in general gained a very positive impression of the process due to its transparency and the objectives and, above all, due to the results which we obtained
- our group continued to cooperate with the various Autonomous Communities in the development of infrastructure for transport and distribution in their respective territories
- in Spain, Research and Technology Development activities are based on collaborating with different organizations such as ...
- as a strategic response to the changes and challenges facing the Spanish construction sector we entered in an alliance with ...
- major synergies by enhancing operations and bringing together the experiences of the two organizations
- significant cost savings due to the merger
- and launched novel formulas for selling our products through El Corte Inglés department store chain
- thanks to the alliance we made a successful bid for the privatization of Central American power company EEGSA
- we created a network of more than 1,400 first-class restaurants in Spain with the objective to increase the sales for our products
- taking advantage of tax synergies through the acquisition of ...
- the planned merger synergies of x euros were exceeded
- we are constantly screening the market for good opportunities to in-license, acquire of partner products

### **2.2.8. *Liquidity of shares***

The liquidity of their companies' shares should be an outstanding topic for the top managers of the researched firms since all of them are listed in one or more stock exchanges and have a potential to increase shareholder value by taking the right measures to increase share liquidity. Hence the variable is obligatory.



score	valuation criteria
	quotes as examples
0	- no information about share liquidity
1	- minimum information about listing, no measures to increase liquidity via additional listings - our company is listed on the Madrid stock exchange
2	- neutral basic information - the volume of the shares traded totaled 500 million €
3	- neutral standard information - the volume of the shares traded totaled 500 million €, representing 70% of the share capital, an increase of 15% over the previous year
4	- information about in the past taken measures to improve liquidity of shares, so that it can be assumed that the importance of the variable is recognized - the shares are listed on the Madrid, New York (ADRs), Frankfurt, and Paris, trade volume ...
5	- positive attitude towards the liquidity of shares - right basic understanding - our trading volume evolved favorably - our share was included in the IBEX 35 index as recognition of its high trade volume and liquidity - the liquidity of the share is demonstrated by the high trading volume
6	- the firm takes measures to increase the share's liquidity - we agreed with our partner to reduce our mutual holdings in order to increase the free float - the Annual General Shareholders Meeting approved the splitting of the share in order to increase liquidity - the aim of the use of ADRs is to increase the share's liquidity
7	- recognized benefits from a high liquidity - the increased liquidity permitted the share to be a highly demanded stock for individual and institutional investors
8	- liquidity increasing measures and hint to shareholder value - the Board, keen to strengthen the value of the shares, give them greater liquidity and enable small investors to acquire them by splitting the stock in a relation 1:3
9	- permanent efforts to increase liquidity - in 1997 the split was three new shares for one old share, in 1998 it was two new shares for one old one, and this year it was again a 1:2 split; the measures served to increase our share's liquidity
10	- optimal understanding and application - we renounced to increase the liquidity of our stock since costs would have been exceeded benefits

**Table 12: Valuation scheme *Liquidity of shares***

Additional information:

- considerable liquidity of our stock, 100% of which is free float
- the share price fell due to the stock having been dropped from the IBEX 35 index
- customized promissory note program

### 2.2.9. Risk management

Risk management is fundamental for the creation of shareholder value and should be a permanent topic on the agenda of the board of management. Also every annual report of each company should exhaustively inform about risks and risk management. Therefore, *risk management* is an obligatory shareholder value variable.

score	valuation criterions
	quotes as examples
0	- no information
1	- diversification without an explication that shareholders cannot diversify themselves (reasons) is probably not the adequate policy to create shareholder value and may destroy value if diversification does not fit with the company's strategy - high degree of diversification gives great stability to Group's Statement of Income
2	- higher probability that diversification makes sense - the new company acquires own establishments, profitable and modern, diversifying tipographically and geographically its offer in order to reduce risk and increase profitability in the framework of a worldwide touristic market constantly in movement
3	- sensibility for one special type of risk - labor risk prevention is fundamental
4	- qualitative or quantitative measure of one special type of risk - accident frequency and seriousness indexes are much lower than those of our competitors / than last year
5	- general awareness of risk as a success influencing variable - we are keeping a strict risk policy - we control our risks
6	- the company disposes of a sophisticated risk <i>control</i> - we implemented a risk controlling from the minimum level of aggregation
7	- recognition of the importance of risk <i>management</i> - the core factor in the banking business is efficient risk management
8	- the company disposes of a well implemented risk management and considers risk management as a permanent task - risk management has an adequate organizational status - identification of the company's main risks and implementing and monitoring of appropriate internal control and reporting systems - all risks are duly identified, measured and assessed - the bank seeks always to revise and improve processes of prevention and control
9	- recognition of the importance that risk management has on the value of a firm and value creating application - all investment decisions are based on the concept of risk-adjusted return
10	- risk management is considered cornerstone to increase shareholder value and well implemented (optimal understanding and application of the variable) - we recognize that our risk management is of utmost importance for our performance, therefore all investment decisions are based on the concept of risk-adjusted return and permanently controlled

Table 13: Valuation scheme *Risk management*

Additional information:

- no product or consumer market represents more than 20% of sales to third parties
- joint venture: redistribution of all risks and at the same time the global business vision keeps maintained
- we ensured our stake in Airtel via an agreement with Vodafone
- we have a very low index of non-performing loans
- coal supply-contracts were signed with producers on the five continents
- interest rate hedges
- Y2K risks are fully under control
- prices and delivery terms are agreed in advance
- we introduced terms of variable renting conditions in the contracts of rented hotels

### 2.2.10. Cost management

A sophisticated and well implemented cost management is one of the cornerstones to realize the objective to create and maximize shareholder value. In order to earn 5 points corresponding to the right basic understanding of this obligatory variable, cost management must be recognized as a permanent task and not just a temporal necessity to meet some objectives.

score	valuation criteria
	quotes as examples
0	- no information
1	- information that does not show adequate management efforts to control costs - operating expenses make up 61% of the total, increasing by 9.3% due to the special emphasis on improving services to our clients
2	- re-active attitude, cost controlling is not seen as permanent task but as temporarily necessary - the improvement of profit is only possible through expense savings policies
3	- weak explanation of increasing costs - the bank is now a technology-based enterprise and our focus on multiple integrated distribution channels has enabled us to attain and hold a leadership position in information systems, investing and innovating at a pace far superior to the industry average; for this reason, the 7.3% growth in the Group's operating expenses in 1999 is positive
4	- importance of the variable is recognized - with regard to income, sales were enhanced, whilst as regards expenses, personnel, operating and financial costs were significantly reduced
5	- right basic understanding of the variable, but cost management could be further explained and success in cost cuttings could be quantified - strict cost control - elimination of "non quality" costs - best services at the lowest cost possible
6	- the company formulates an objective of its cost management - cost management leads to business success

	- maintaining operating margins by an exhaustive control over costs that will allow us to consolidate as one of the most profitable construction companies - we aim to explore cost synergies which will increase our competitiveness - ongoing cost cutting efforts were largely responsible for our good performance in 1998
7	- cost management has strategic value or a defined high priority - the company disposes of a defined cost controlling system - we have a strategic action plan that comprises a number of measures to reduce costs ... [list of various cost cutting measures] - cost control was one of the group's priorities during the reported financial year - we have formal mechanisms for monitoring and controlling operating costs
8	- cost controlling as an important variable and in the context of other variables aiming at the creation of value - this plan is oriented to create value, and therefore is not only considered to cut costs but also to improve the results
9	- the company disposes of a sophisticated cost controlling and managing system - activity based costing is being studied in order to put in place an end-to-end cost control throughout the entire supply chain
10	- the company pursues a holistic view which considers cost controlling as an integral part of a value creation management - management by processes and ongoing improvement have long been key operational levers for improving the company's costs and adding value to all its businesses

**Table 14: Valuation scheme *Cost management***

Additional information:

- use of economies of scale dilute structure costs
- permanent cost reductions
- we benchmark our cost behavior with other companies of the sector
- processes were reengineered in order to save costs
- thanks to TQM we obtained significant cost savings
- management of globalized purchasing logistics
- the group has centralized the purchase of fish and seafood for all its hotels in Madrid realizing an 8% cost reduction
- the focus on new media such as Internets, Intranets and Extranets reduces our costs
- cost optimizations systems such as Shared Services Centers will be further developed

### **2.2.11. *Competitive advantages***

For the different nature of shareholder value variable *competitive advantages* a different valuation scheme applies. To take full competitive advantages a company needs a basis consisting in distinctive capabilities applied in a relevant market, dominance over the competition or a strong market position. Also the good strategies contribute to the success.

All statements comparable to the following examples (benchmark statements) earn one point.

### 3. Base of competitive advantages

#### 3.1. distinctive capabilities applied in a relevant market

##### 3.1.1. architecture

- through its alliance with the international ARBED group, our company participates in one of the top steel groups in Europe and the world, a situation which brings considerable competitive advantages

##### 3.1.2. innovation

- the innovation capacity of our society is a decisive factor to achieve excellence in a performance frame every day more competitive
- the group participated in seminars, courses and congresses in order to turn the innovation made in the construction market into competitive advantages

##### 3.1.3. reputation

- the group consolidated its leading position as a reference company for any type of infrastructure and service

##### 3.1.4. choice of the market, products

- the year was characterized by an agreement in our position in the industrial solid waste market and the technical inspection of vehicles

##### 3.1.5. choice of the market, geography

- the bank aims to strengthen its competitive position in the Latin America region

#### 3.2. dominance

- we were able to maintain a 94.7% market share of total traffic, despite operating in a liberalized environment

#### 3.3. market position

- in order to maximize the company's position in the sector, 6,500 million pesetas have been invested this last year

### 4. Strategies

#### 4.1. generic strategies

#### 4.1.1. cost leadership

- the result confirmed our company as one of the most profitable companies of the sector

#### 4.1.2. differentiation

- the growing popularity of our loyalty-building program, Club PuntoAhorro, is conferring a clear competitive and differential edge

#### 4.1.3. focus

- the strategic vision is to become the first and best Spanish group in infrastructure and services

#### 4.2. specific strategies

##### 4.2.1. overwhelming size

- our group strengthened its indisputable leadership by increasing its market share from 59.8% to 62.1%

##### 4.2.2. preferred access to resources

- we use a cutting edge technology available only to us and two other companies in the world

##### 4.2.3. preferred access to customers

- the strong international presence through 35 branches in more than 20 countries has given this area an important competitive edge for being able to provide its customers with an integral service and this has become an indispensable element for the development of its business

##### 4.2.4. politics that limit competitors

- our main competitors have intended to follow our lead. This is why we will improve and redouble our efforts in these projects, increasing our competitive advantage.

### 3. CREATION OF SHAREHOLDER VALUE

The present chapter develops a fitting method to calculate correctly the creation of shareholder value so that the results can be used to determine whether or not exists a relation between shareholder value orientation and shareholder value creation.

Creation of shareholder value has to do with return (increased share prices and / or dividends and other payouts to shareholders) on the long run and should therefore be the basis for an analytical tool that measures the creation of shareholder value during several years. Assuming that an efficient market reflects all available information in the share price at every moment, it is logical to link *relative* share prices of a period to the performance of the same period.

Those are the conditions and requisites of the valuation model:

- The performance period has to be identical with the analysis period of shareholder value orientation, for example, comprise financial years 1998 – 2000<sup>3</sup>. This period is long enough to identify the creation of value – if not in absolute terms, then at least relative to other companies.
- To compare only the quotation of the starting point, the last price quoted in 1997, to the last quotation of the financial year 2000, recorded on December, 29, could be somewhat disturbing since, for instance, there may be one event at the end of 2001 that is under or overestimated by investors at the moment of the last quotation of 2001. By taking into account the last quotations of the 12 quarters following the starting date the results of value creation efforts become more smoothed.

The calculation of shareholder value creation starts with the last price listed at the stock exchange previous to the research period that comprises the financial years 1998, 1999 and 2000. That is the price of the last deal quoted in 1997.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Performance date or event date	Event	Relation (1:x)	Amount	Share value	Number of normalized shares	Adjusted value	Adjusted percentage
31.12.1997				1,000.00	1.000000		100.00%
31.03.1998				1,100.00	1.000000		110.00%

<sup>3</sup> It is assumed that the research period for the determination of value orientation is the three-year horizon 1998 – 2000 just to have an example.

**Table 15: Calculation scheme I shareholder value**

This share value, column (5), corresponds *per definitionem* to 1.000000 share (6) and represents 100.00% of the basis value (starting point), (8). The transformation of the share value into a percentage reference ensures that value evolutions of the shares of all companies of the sample set will be comparable. The percentage consideration allows also abstracting from currencies. Then, in the next step, the last quotations of the quarters of the financial years 1998, 1999 and 2000 are taken as the basis to calculate the creation of shareholder value. If, for example the share price goes up from ESP 1,000.00 on December 31, 1997 to ESP 1,100.00 on March 31, 1998, the adjusted percentage (fixed at 100.00% on December 31, 1997) will be 110.00% on March 31, 1998 (8).

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Performance date or event date	Event	Relation (1:x)	Amount	Share value	Number of normalized shares	Adjusted value	Adjusted percentage
31.12.1997				1,000.00	1.000000	1,000.00	100.00%
15.01.1998	Dividend		200.00	800.00	1.250000	1,000.00	100.00%

**Table 16: Calculation scheme II shareholder value**

Some events (specified in column (2)) alter the value of a share. If, for instance, a company pays dividends to its shareholders, the share price has to be corrected by the full amount of the dividend. Technically, the problem is solved in this valuation model by “normalizing” the share quantity (6). The model eliminates the dividend payment adjusting the share value (7) that is the basis to compute the “adjusted percentage” (8) as the reference to determine the creation of shareholder value.

An example: the share value before dividend payment be ESP 1,000.00<sup>4</sup> (5, previous line). Then the company pays a dividend (2) at the date stated in column (1) of ESP 200.00 (4). Hence the new theoretical share value is ESP 800.00 (5). The model normalizes the number of shares from 1.000000 (6, assumption of this example that no other relevant event took place between December 31, 1997 and event date January 15, 1998) to 1.250000 (6) and multiplies this new factor with the theoretical share price after dividend payment (5) taking the last recorded quotation (i.e., that of the end of the previous quarter), resulting in this case an ad

<sup>4</sup> Although shares priced in ESP are full pesetas amounts this model considers two sub-unit digits in order to maintain the format for EUR prices (European stock exchanges switched from local currencies to EUR on January 1, 1999) and coincide with the format of shares priced, for instance, in DEM, FIM or FRF.



justed value (7) of ESP 800.00  $\cdot$  1.250000 = ESP 1,000.00, and consequently the same adjusted percentage (8) as before dividend payment (assumption of reinvestment).

Other possible events (2) altering the number of normalized shares (6) are

- paybacks of the share's face or nominal value,
- paybacks of additional paid-in capital (voluntary reserves),
- and, as a special form of dividend payment, in some cases, an attendance compensation for shareholders who participate in the General Shareholders' Meeting.

Stocks splits are normally already considered in the share values (5) if the model works with historical data provided for example by Bolsa de Madrid (Madrid Stock Exchange).

Once computed the adjusted percentages (8) for all 12 quarters of the research period following the starting point December 31, 1997, those percentages are summed up and divided by 12 resulting a shareholder value creation measure without unit specification. "The mean (...), or arithmetic average, is by far the most commonly used measure of central tendency. It reports the average score of a distribution, and its calculation is straightforward ... Since the computation of a mean requires the mathematical procedures of addition and division, its is fully justified only when working with interval-ratio data." (Healey 2002: 71, 72) The condition is given in the present case so that the mean can be considered the correct statistical magnitude for the purpose in question.

Although a value of 1.00 (example) can be interpreted in the sense that the company's share price did not move on average and the company did actually destroy shareholder value, the purpose is not to measure the isolate performance of the companies but to measure its performance in relation to the other companies. This benchmark serves later in a further research step to relate the real creation of shareholder value to the quantified orientation of the company towards shareholders interests and determine whether the latter tends to lead to the creation of shareholder value or not.

#### **4. APPLICATION OF THE VALUATION METHODS**

This chapter summarizes briefly the result of an empirical research that applied the presented valuation methods and gives an indication to which extent shareholder value orientation influences shareholder value creation. The following

table shows the value orientation and creation of the 38 companies that were examined. The research period comprised the financial years 1998, 1999, and 2000. As data sources served annual reports of the companies, returned questionnaires that gave firms the chance to provide further information, and market data to

Company		Orientation		Creation
Code	Name	Total score with questionnaire	Total score without questionnaire	Value creation
ACE	Autopistas, Concesionaria Española, S.A.	4.32	4.32	0.98
ACS	ACS, Actividades de Construcción y Servicios, S.A.	6.09	6.09	1.28
ACR	Aceralia Corporación Siderúrgica, S.A.	7.14	6.41	1.04
ACX	Acerinox, S.A.	3.85	3.85	1.11
AGS	Agbar, Sociedad General de Aguas de Barcelona, S.A.	5.91	4.82	1.28
ALB	Corporación Financiera Alba, S.A.	5.09	5.09	1.57
ANA	Acciona, S.A.	6.64	6.64	1.80
AUM	AUREA Concesiones de Infraestructura, S.A.C.E.	5.45	5.45	1.20
BBV	Banco Bilbao Vizcaya Argentaria, S.A.	9.32	8.18	1.50
BKT	Bankinter, S.A.	7.35	7.35	1.61
CAN	Hidroeléctrica del Cantábrico, S.A.	6.86	6.86	1.32
CTG	Gas Natural SDG, S.A.	6.59	6.59	1.45
DRC	Grupo Dragados, S.A.	6.45	6.45	1.53
ELE	Endesa, S.A.	7.86	7.86	1.34
FCC	Fomento de Construcciones y Contratas, S.A.	4.64	4.64	1.38
IBE	Iberdrola, S.A.	7.32	7.32	1.25
MAP	Corporación Mapfre, Compañía Internacional de Reaseguros, S.A.	5.95	4.27	0.88
NHH	NH Hoteles, S.A.	6.55	6.55	2.40
POP	Banco Popular Español, S.A.	6.75	6.75	1.13
PRY	Centros Comerciales Carrefour, S.A.	4.59	4.59	1.28
PUL	Ebro Puleva, S.A.	2.00	2.00	0.91
REP	Repsol YPF, S.A.	7.14	7.14	1.47
SCH	Banco Santander Central Hispano, S.A.	9.73	8.86	1.42
SOL	Sol Meliá, S.A.	5.41	5.41	0.98
TAB	Altadis, S.A.	6.82	6.82	1.24
TEF	Telefónica, S.A.	8.09	8.09	2.03
TPZ	Tele Pizza, S.A.	7.00	7.00	1.68
UNF	Unión Eléctrica Fenosa, S.A.	8.05	7.27	1.89
URA	Uralita, S.A.	6.27	6.27	0.87
VAL	Vallehermoso, S.A.	7.59	6.64	1.00
VIS	Viscofan, Industria Navarra de Envolturas Celulósicas, S.A.	3.80	3.80	0.97
AMP	Amper, S.A.	5.73	5.73	0.72
ZEL	Zeltia, S.A.	5.00	5.00	17.77
ANZ	Allianz AG	9.18	7.55	1.37
AVT	Aventis S.A.	7.14	7.14	1.44
DAN	Groupe Danone	7.95	7.95	1.66
DCX	DaimlerChrysler AG	8.73	7.86	1.13
NOK	Nokia Corp.	6.73	6.73	7.19

measure companies' value creation performance.

**Table 17: Empirical results: value orientation and value creation**

The table shows that the ratio for value creation lies between 0.72 (Amper) and 2.40 (NH Hoteles) for all companies but two outliers: Zeltia reached a score of 17.77 and Nokia was rated 7.19. In both cases, not the orientation towards the creation of shareholder value reflected in the eleven variables presented above but very optimistic expectations concerning the future success of the companies' products led to a phenomenal value creation, respectively.

The explanation power of the independent variable shareholder value orientation concerning the dependent variable shareholder value creation was then measured by means of two regression analyses, one taking into account information of questionnaires and the other based on annual reports only. Due to model assumptions the determination coefficient is higher when additional information is not included (chance without risk). If the reality is supposed to be within the range of  $R^2$  for all companies but outliers whereby questionnaire information is included and the  $R^2$  of the same reduced set of the remaining 36 companies without additional information, then between 15.9% and 23.4% of shareholder value creation is due to shareholder value orientation. Hence, the conclusion is that shareholder value orientation pays and that companies which pursue the objective of value creation through a right understanding and application of the main value drivers have good chances to outperform other companies less shareholder value oriented.

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