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The determinants of the quality of accounting information disclosed by French listed companies.

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ABSTRACT

The aim of this paper is to relate the quality of disclosure in the annual reports of French listed companies to possible determinants representing agency theory. The choice of France is based on the fact that until now only transnational studies have investigated the overall extent of French corporate annual reports disclosure (Barrett, 1977), (Williams, 1992), while research on determinants of the extent of disclosure by British, Swedish, Japanese, Swiss or Spanish have already been conducted. The sample includes 100 industrial and commercial companies whose corporate reporting have been studied from 1991 to 1995. The quality of disclosure is measured by an index based on the expectations and opinions of French financial analysts concerning the information disclosed today. Independent variables are measures of ownership diffusion, use of external financing, domestic share listing, multiple share listing and profitability. These independent variables have been selected in order to investigate the real influence nowadays of French major accounting practice characteristics: weak influence of financial markets on disclosure, strong secrecy traditions and strong influence of information disclosure requirements. Relations are assessed using univariate analyses and multiple regressions. Only domestic and multiple listing status play a significant role in the disclosure quality over the 1991-1995 period. As disclosure requirements justify this influence, it suggests that compliance with those requirements is considered to be enough to solve agency problems. Ownership diffusion has no influence on disclosure quality and leverage has a significant influence only in 1995. Nevertheless, since 1993, as the influence of these variables is getting stronger, it indicates a trend toward a better transparency in French companies' reporting practices. Profitability has no influence on disclosure quality. So our results provide new insight into French reporting practices and suggest topics for additional research.

1 Introduction

This paper reports the empirical findings of a doctoral research directed to the investigation of factors that explain the level of disclosure quality by French firms. Disclosure refers to the entire content of a corporate annual report: financial and non financial information, management's analyses and other information.

The importance to advance our understanding of disclosure practices by companies is pointed by the institutional part that plays the information disclosed by a company. It helps regulating the relations that exist between a firm and its environment. Accounting information is used to construct an interface between the organisation and its environment who seek to pursue an interest in it (Crozier & Friedberg, 1977), (Hopwood, 1983). Visibility of the organisation depends on accounting information quality. But this visibility also depends on the company's negotiation margins and its economic and social objectives. Thus, disclosure quality is determined by an internal expert judgement (Choi & Mueller, 1992) according to the pressure of the company's environment.

According to works by Lev (1992) about a company's disclosure strategy or by Gibbins, Richardson & Waterhouse (1992) about a company's information disclosure management, disclosure quality is a response to environment incentives. These incentives come from shareholders, investors, creditors, government, environmental pressure groups, unions, media, accounting profession and regulation bodies, competitors. Financial markets, industry, economic environment, some of the firm's characteristics (size, performances, assets in place, internationalisation) and the firm's strategies (issuing new capital, restructuration) can strengthen those incentives. But these incentives influence on corporate disclosure is conditioned by the personal characteristics of individuals in charge with information disclosure, by the company's information disclosure strategy and by the organisation and means of the accounting subunit.

Among these factors, three are considered to be important to explain corporate reporting quality in France: the financial market influence, accounting regulation characteristics and secrecy traditions.

French financial market requirements are lower than American or British financial market requirements because of the traditional nature of financiers (banks) (Nobes, 1988). Consequently, French financial market authorities had little influence on disclosure and their requirements are lower than American or British financial market requirements (Saudagaran & Biddle, 1995).

French accounting practice is legally regulated and macro-uniform (Doupnick & Salter, 1992; Nobes, 1992; Colasse & Standish, 1997) which impose compliance with disclosure obligations. But according to Dye (1985), mandatory information reduce information voluntarily disclosed: a company restrict disclosure to information required by law in order to keep private others informations. Barrett (1977) provided empirical evidence of the influence of mandatory information (through the Plan Comptable Général) over French firms' disclosure practices.

Major French accounting values are uniformity and conservatism associated with a low transparency and a weak professionalism (Gray, 1988). These values can be explained by

two cultural values: individualism and strong uncertainty avoidance. Consequently, compliance with rules is privileged and companies share information about business only with those closely involved with its management and financing.

Because of these three characteristics, the quality of French corporate reporting is lower than Anglo-Saxon corporate reporting quality. Transnational researches always provided evidence of this inferiority. For example, Barrett (1977) results showed the low disclosure level of French companies compared with American or British companies because of the influence of the Plan Comptable Général.

In 1991, Zhou (1997), using the index developed by Barrett (1977), concluded that also the information disclosure level increased since the seventies in comparison with Barrett's results, the information level disclosed by French firms was still very low. In a second study, Zhou (1997) developed an index to compare French and British firms' disclosure levels. She studies the 1991 annual reports of 44 French listed companies. Her results still provided evidence of the low French firms' disclosure levels compared with British firms.

The purpose of our research has been to investigate the real influence of the three major characteristics of French accounting practice (financial market weak influence, secrecy tradition and legal regulation), relating disclosure quality to several company's attributes over the 1991-1995 period. The independent variables selected are:

- Domestic or multiple listing status to investigate quotation market requirements incentives. This variable take into account the influence of information disclosure requirements;
- Profitability to investigate capital costs incentives versus proprietary costs constraints. This variable helps to deepen the influence of financial markets versus secrecy traditions over corporate reporting;
- Ownership diffusion and use of external financing to investigate incidences of secrecy traditions.

Corporate reporting quality, the dependent variable, is measured using an index methodology. The index used is based on a scoring sheet (a list of items and a scoring scheme) to capture levels of disclosure quality.

The remainder of the paper is organised as follows. In the first section the hypotheses and the explanatory variables of our research are discussed. In order to study and measure French firms' disclosure quality, during the five years under study (1991-1995), an index has been constructed. This and the sample of companies that has been analysed are described in the second section. This is followed, in the third section, by a description of the statistical analyses, results and limitation. Finally, the conclusions of that study and the additional research avenues suggested are presented.

2 The impact of firm-specific characteristics on disclosure quality.

Company's characteristics selected to explain the quality of the information disclosed by a company are measures of ownership diffusion, use of external financing,

domestic and foreign share listing and profitability. Agency theory provides the theoretical framework of the discussion. Most of the hypotheses on these determinants have been formulated and tested by previous studies, so we also review prior evidence.

2.1 Ownership structure.

The separation of ownership and control generates agency costs resulting from conflicting interests between managers and stockholders (Jensen & Meckling, 1976). Nevertheless, this separation is unavoidable since, in complex organisations, specific information valuable for decisions is diffused among many agents throughout the organisation. Control of the agency problem is then achieved by separating decision control and decision management, but opportunistic behaviours may be incurred when the firm is not controlled by large shareholders (Fama & Jensen, 1983). According to the agency theory (Leftwich *et al.*, 1981) or transaction costs theory (Ray & Gupta, 1988), annual reports is a main source of information for shareholders who cannot incur large expenditures in order to ascertain managers opportunistic behaviours. Managers of firms whose ownership is diffuse have thus an incentive to increase disclosure quality in order to help shareholders in monitoring their behaviour. A stronger ownership diffusion should weaken secrecy traditions.

H1: disclosure quality is positively related to the firm ownership diffusion.

Previous results on ownership diffusion influence on disclosure are mixed. Zhou (1997) found no significant relation in France as did Raffournier (1995) in Switzerland or McKinnon and Dalimunthe (1993) in Australia. Nevertheless, Malone *et al.* (1993) or Hossain *et al.* (1994) found a positive relation.

In order to investigate the influence of large ownership diffusion on secrecy traditions, we used as a proxy the percentage of shares not held by known shareholders.

2.2 Use of external financing.

Disclosure quality can also contribute to solve monitoring problems between creditors and shareholders and managers. Leverage may help reducing agency costs in relationship between owners and managers, since it engage manager to maximise the firm's value and even to transfer wealth from creditors to shareholders (Kelly, 1983). Thus, an increase in disclosure quality should be used to give more confidence to creditors and reduce debt agency cost. The number of French companies annual reports registered as Document de Référence show that external disclosure is an important mean to attract creditors.

H2: disclosure quality is positively related to the firm leverage.

Nevertheless, as far as owners' and managers' interests meet, Schipper (1981) think that there is no reason to increase disclosure quality. Others arguments are used to contradict

this positive relation between external financing and disclosure quality:

- banks are one of external financing sources and can get information directly from managers. So they less rely on external disclosure. In the French context, this argument matches secrecy traditions;
- the selection of external financing sources closely depends on the competitive environment of the company. If potential proprietary costs are too high, a company will choose banks in order to avoid external diffusion (Healy & Palepu, 1993; Gibbins, Richardson & Waterhouse, 1992);
- creditors can monitor managers' opportunistic behaviours thanks to debt contracts. So managers have incentives to act in accordance with creditors' expectations and disclosure quality becomes a minor way to monitor managers (Schipper, 1981).

Consequently, empirical results are conflicting. For example, Chow & Wong-Boren (1987), Hossain & Adams (1995), Raffournier (1995), Inchausti (1997), Zhou (1997) found a negative relation.

To assess the real influence of the use of external financing and so the influence of secrecy traditions on disclosure quality, we used two proxies:

- financial debt-on-total-assets ratio,
- financial debt-on-shareholders' equity ratio.

2.3 Domestic listing status.

Companies whose shares are listed on a stock exchange are likely to offer a higher disclosure quality than non-listed firms for three reasons:

listed firms have to comply with minimum disclosure requirements of market regulation authorities (Schipper, 1981);

financial analysts' incentives and press coverage make listed firms increase disclosure quality to give more confidence to investors (Firth, 1979);

information disclosure helps reducing agency problems increased by quotation (Cooke, 1989).

Compliance with disclosure requirements of the domestic stock exchange commission is the more important aspect of listing in our research. This allows us to investigate the real influence of disclosure requirements on French accounting practice. As my sample includes only listed firms, I concentrated on the others requirements listed firms must comply with in order to register their annual reports as "document de référence". These requirements include specific voluntary information disclosure and presentation norms.

H3: disclosure quality is positively related to the firm domestic listing status.

Previous studies usually found mixed results about domestic stock listing on disclosure quality. Buzby (1975) or Malone *et al.* (1993) found a negative relation, but they used a sample of companies listed on the second market to proxy non-listed firms, which may induce a bias according to Cooke (1989).

2.4 Multiple listing status.

Companies whose shares are listed on the domestic market with at least one foreign quotation have to comply with domestic and foreign market requirements (Cooke, 1989), with international disclosure practices and international investors needs (Meek & Saudagaran, 1990). Furthermore, agency costs vary with multiple listing status. These three reasons should lead a multiple listed company to increase its disclosure quality and reduce its secrecy traditions because foreign listing may help a company attract attention and favour its economic implantation (Saudagaran, 1988).

H4: disclosure quality is positively related to the firm foreign listing status.

All previous studies have found a positive relationship between multiple listing and disclosure (Hossain *et al.*, 1994; Hossain & Adams, 1995; Cooke, 1989; Meek *et al.*, 1995; Inchausti, 1997; Zhou, 1997).

We used a dummy variable to investigate the influence of multiple share listing: either the company is multiple listed, or the company is only domestic listed.

2.5 Profitability.

Influence of profitability on disclosure quality is ambiguous in the theoretical literature. Potential proprietary costs linked with high profitability information account for a decrease in disclosure quality whereas capital cost have the opposite effect. A firm will be interested in disclosing good news to the market in order to avoid the underevaluation of their shares and reduce capital costs (Trueman, 1986), (Verrechia, 1990).

On the one hand, financial market incentives (through capital cost) will induce a company to increase its disclosure quality in order to attract and give confidence to investors. On the other hand, secrecy traditions will limit this influence. Nevertheless we expect that listed companies should be more interested in reducing capital costs.

H5: disclosure quality is positively related to the firm performances

A review of prior results show that there is little evidence of such a positive relation. Wallace *et al.* (1994), Inchausti (1997) or Zhou (1997) found no relation. Nevertheless, Raffournier (1995) and Patton & Zelenka (1997) confirmed this positive relation.

The proxy we used is the operating margin to sales ratio.

3 Measuring disclosure quality.

In order to assess the extent to which disclosure quality is determined by ownership diffusion, the use of external financing, the listing status or the profitability, we must first quantify disclosure quality of a sample of French companies. In order to measure corporate reporting disclosure during the five years under study, an index has been constructed. The

index methodology has been developed by Cerf in the early sixties. An index is composed of a list of items and a scoring scheme.

3.1 *Sample.*

The analysis covers the annual reports of 100 French listed firms over a five years long period (1991-1995). The 100 firms included in my sample are not the top 100 listed companies, whose reporting practices are studied in thorough annual surveys. My choice was to include large companies (to neutralise size effect) but also to take into account every kind of reporting practice.

A ranking of listed companies, apart from financial and insurance firms, was established for the year 1994, based on their sales. Starting with the first one, each company was asked to send their consolidated annual reports for the accounting periods 1991, 1992, 1993, 1994, until the sample of 100 firms was get. In June 1996, the sample firms were asked to send their 1995 annual reports. Appendix 2 contains the list of the companies included in the sample.

So firms included belong to the top 200 listed companies (for the year 1994). This sample characteristic provides an opportunity to compare the actual corporate disclosure levels with top 100 listed companies reporting practices. The mean sales for the sample of companies was approximately 19 000 millions of French francs, with a range from 200 000 millions of French francs to 500 millions of French francs.

3.2 *The disclosure index.*

A major task of this research was the construction of an index to capture levels of disclosure quality. The index methodology has been developed by Cerf in the early sixties. An index is based on a scoring sheet: a list of items and a scoring scheme. Two kinds of index can be constructed. One kind is based on an extensive list of items in order to cover all types of information users of corporate reports may need. Zhou (1997) developed such a list of items because she tried to compare French and British corporate reporting. An other kind of list is directed at a specific corporate information user group and includes only information helping this user group to make decisions.

3.2.1 Items included in the scoring scheme.

The aim of the scoring sheet is to evaluate disclosure quality, which means first to define this concept of disclosure quality. Previous studies usually use various constructs to represent disclosure quality: adequacy (Buzby, 1975), informativeness (Wallace, 1988), comprehensiveness (Wallace et al., 1994) or timeliness for examples.

In an Anglo-Saxon context, conceptual frameworks define these various qualitative characteristics. But French normalisation, does not really provide any qualitative characteristics of accounting information, neither accounting information objectives nor any user group primacy (Colasse, 1991). Accounting information has a broader scope than just helping financial decisions. It must also help social regulation. Thus, qualitative characteristics in a French context should address the judgement of the information providers.

The three constructs used to represent disclosure quality are:

Relevance (valeur). In a communication process, the provider of information must not forget the needs of the user;

Reliability (sincérité). In a communication process, the reality presented must not be biased by the provider's judgement or by means used;

Intelligibility (intelligibilité). In a communication process, the user must be able to understand information provided.

Whichever user group is privileged, these constructs can be used to represent disclosure quality. But to conduct an empirical investigation, a user group able to specify its own needs and understanding of disclosure quality must be selected. Thus I concentrated on financial decisions makers.

The research is not limited to the financial statements only but rather to the entire content of the annual report. The selection of items to translate the three constructs representing disclosure quality is based on:

a survey of previous similar studies (Singhvi & Desai, 1971), (Benjamin & Stanga, 1977), (Firth, 1978), (Chow & Wong-Boren, 1987), (Cooke, 1989), (Gray, Roberts & Gordon, 1991) for examples,

on works by American and British Institute of Chartered Accountants on corporate reports content,

on interviews with French financial analysts. These interviews help specify, from a user point of view, characteristics and items of information improving or reducing disclosure quality.

The number of items finally selected total 55. This list, if directed at a specific user group, is not constrained by the compulsory or voluntary nature of the items. Unlike previous lists, a negative way of formulating is used for some items, firstly to translate financial analysts' expectations, secondly because absence or presence of items cannot be neutral upon disclosure quality. Items are distributed as follows:

Number of items		Number of items	
Financial information	17	Reliability	13
Accounting methods	10	Relevance	36
Segmental information	6	Intelligibility	6
Information on strategy and projections	4		55
Economic information	18		
	55		

3.2.2 Scoring the disclosure quality items.

In order to score the disclosure quality items, it is supposed that disclosure quality represented by constructs can be measured along a continuum ranging from poor to excellent. There are two main approaches to developing a scoring scheme to capture levels of disclosure quality. One approach is to use a dichotomous procedure in which an item scores one if it is disclosed and zero if it is not disclosed (Cooke, 1989), (Raffournier, 1995), (Inchausti, 1997), (Zhou, 1997). The alternative approach is used when the list of items is directed at a specific user group. This approach is to assign weights to each item in order to reflect their relative importance to the user group. Each item disclosed is weighted by its mean importance rating or zero otherwise (Buzby, 1975), (Firth, 1979). In either approach the total disclosure score for a company is additive.

The scoring scheme captures the importance a sample of financial analysts place in each of the 55 items. A questionnaire asked them to evaluate each item on a scale of -3 to 3 reflecting how it affects disclosure quality. This rating scale matches the negative form of some items and allows respondents to give their own opinion on each item. A total of 85 completed responses were received yielding a 15 percent response rate.

The possibility of there being a significant level of non-response bias to the questionnaire was tested using an approach suggested by Oppenheim (1966) and previously used in similar survey. This test uses late respondents as surrogate for non-respondents and compares the means of their responses to the individual questionnaire items with the means of the responses of the early respondents. These two means were compared for significant difference using a t test. There was a significant difference between the two means for only two items. These results indicated the lack of significant non-response bias and thus it was felt that the results of the questionnaire survey could be generalised to the population of French financial analysts. Furthermore, skewness and kurtosis statistics provided evidence of a consensus among respondents' rating for 36 items.

Major expectations of French financial analysts concern company's prospects and future strategy, stated quantitative goals and results forecasts, methods used to establish consolidated accounts, explanations and quantitative valuation of changes in these methods, segmental and financial information (investments, future changes in shareholders' equity, financial debts, operating expenses detail, self-financing margin, cash-flow statement), information about research and development, competition, business successes or failures. They do reject cherry picking among domestic or international accounting rules. Items about information presentation seem to be less interesting for financial analysts, maybe because they are professional users of corporate information.

The weighting of the individual item are then calculated taking the arithmetic mean of the responses received to each item from the questionnaire. Appendix 1 contains the disclosure index constructed.

3.2.3 Computing the disclosure quality scores.

The disclosure score was computed first, by scoring each item according to a dichotomous procedure. This dichotomous procedure allows, according to Barrett (1977), more flexibility in interpretation and makes it possible to determine if firms disclose relatively important items (according to a user's perception) more frequently. Then scores of each item are weighted by the item rating. The disclosure quality score for a company is the sum of all the 55 items weighted scores.

In a dichotomous procedure, rules for scoring each item have to be established. Following Buzby (1975), items fell into different groups:

Items self-contained. These items represent single pieces of information which either are or are not present in the annual report;

Items that could be disclosed under varying degrees of specificity. Scoring means rewarding the depth of information provided;

Items which could be expressed in terms of subelements of information. Development of the relevant subelements is based on a review of pertinent literature or annual report content.

For those two last groups, the scoring depends on subelements validated. Although the scoring system used for those groups partially relies on my own judgement, clear rules for each item were established before examining the annual reports in order to reduce subjectivity.

The total disclosure score DS_j for a company is thus:

$$DS_j =$$

We also computed an unweighted disclosure score for each company and for each year under survey in order to compensate two potential bias of the weighted scores which are:

first the index ratings are obtained through a survey with no real economic consequences to the respondents (Chow and Wong-Boren, 1987, p. 536). Financial analysts do not have to pay for the information,

second, respondents to our survey agreed that although they award a high score to an item this does not mean that the item is expected. The less information the financial analyst gets, the more interesting and valuable is the analysis.

3.2.4 The disclosure quality index.

Once all the items have been scored, an index is created to measure the relative level of disclosure quality by a company. The use of an index is important to avoid confusion between the absence of a particular item and its nondisclosure as in a case of items non-relevant to a specific firm (Moore & Buzby, 1972). Furthermore, the use of an index helps to take into account the disclosure of an item that should not be validated according to financial analysts.

The index is a ratio of the actual score awarded to a company to the maximum score, which that company is expected to earn. This maximum score does not take into account the negative items and items not relevant to the company. The maximum disclosure score MDS_j for a company is thus:

$$MDS_j =$$

We computed for each company and each year under survey both weighted disclosure quality index scores and unweighted disclosure quality index scores. Appendix 2 contains disclosure indexes awarded to the sample firms. Appendix 3 contains each item mean disclosure.

4 Results.

Both univariate and multivariate analyses were conducted to test the influence of the explanatory variables on weighted and unweighted disclosures indexes. These two analyses were conducted in order to evaluate the influence of a particular user group perception on statistical results. Chow & Wong-Boren (1987) previously did this and found that using weighted index scores had no influence on the analysis.

As a matter of facts both statistical analyses provided almost identical results. Thus only the results based on weighted index scores will be reported there. We only noticed that for multiple regressions, the R^2 computed were stronger using unweighted index scores.

With exception of the quotation status, all variables are continuous. Consequently, I used t test to test H3 and H4, and linear regressions for all others hypothesis. The multivariate analysis consists in multiple linear regressions. The regression equation used is as follows:

$$Y_{i,t} = \alpha_0 + \alpha_1 X1_{i,t} + \alpha_2 X2_{i,t} + \alpha_3 D1_{i,t} + \alpha_4 D2_{i,t} + \alpha_5 X3_{i,t} + u_{i,t}$$

Where Y = disclosure quality index,
 α = constants or parameters,
 u = the stochastic disturbance term,
 X1 = Ownership diffusion,
 X2 = Leverage (financial debt-on-total-assets ratio or financial debt-on-shareholders' equity ratio)
 X3 = Profitability,
 D1 = Listed on the Paris Stock Exchange,
 D2 = Multiple listed,
 D1 - D2 = dummy variables; X1-X3 = continuous variables.

Parametric statistical tests are justified because measures of firms' characteristics and indexes are independent variables, but also because indexes are considered to achieve the level of measurement of an interval scale.

Table 1: Descriptive statistics.

	1991	1992	1993	1994	1995
Ownership Diffusion					
mean	0.421	0.432	0.446	0.463	0.453
std. dev.	0.219	0.221	0.227	0.240	0.241
Financial debt-on-					

shareholders' equity ratio	1.023	1.055	0.885	0.963	0.685
mean	1.528	1.568	0.881	2.474	0.786
std. dev.					
Financial debt-on-total-assets ratio	0.256	0.258	0.245	0.230	0.217
mean	0.134	0.141	0.145	0.168	0.134
std. dev.					
Operating margin to sales ratio	0.062	0.058	0.051	0.063	0.077
mean	0.052	0.049	0.051	0.048	0.178
std. dev.					

4.1 Univariate analysis.

Tables 2 and 3 report the results of univariate analysis. Predicted signs are not always validated. Quotation status hypotheses are statistically validated over the period. Ownership diffusion hypothesis is statistically validated from 1993 to 1995. Leverage hypothesis is statically validated in 1995 using the financial debt-on-total-assets ratio and rejected in 1991 and 1992 if the financial debt-on-shareholders' equity ratio is used. On the contrary, it appears that profitability has no influence on disclosure quality.

Table 1: Results of variance analyses.

	Annual reports non registered as document de référence	Annual reports registered as document de référence				Firms listed solely on the French Stock Exchange	Multiple listed firms					
	number	mean index	number	mean index	t prob.			number	mean index	number	mean index	t prob.
1991	98	0.411	2	0.588	0.000		1991	90	0.372	10	0.501	0.0002
1992	97	0.415	3	0.526	0.058		1992	89	0.411	11	0.484	0.0002
1993	95	0.423	5	0.532	0.027		1993	87	0.423	13	0.499	0.0008
1994	91	0.431	9	0.533	0.000		1994	87	0.430	13	0.506	0.0011
1995	85	0.444	15	0.519	0.001		1995	87	0.444	13	0.536	0.0001

t probability gives the probability of the null hypothesis "there is non difference between the disclosure quality indexes of both groups"

Table 2: Results of univariate regressions.

	Mean	Standard deviation	Regression coeff.	t-value	t probability	R ²
Ownership diffusion						
1991	0.421	0.219	0.047	1.2154	0.1136	1.48%
1992	0.432	0.221	0.051	1.3827	0.0849	1.91%
1993	0.446	0.227	0.062	1.8116	0.0366	3.24%
1994	0.463	0.240	0.064	1.9254	0.0285	3.65%
1995	0.453	0.241	0.086	2.6090	0.0053	6.49%
financial debt-on-total-assets ratio						
1991	0.256	0.134	-0.034	-0.5345	0.2970	0.029%
1992	0.258	0.141	-0.034	-0.5745	0.2835	0.034%

1993	0.245	0.145	0.041	0.7492	0.2277	0.057%
1994	0.230	0.168	0.031	0.6362	0.2630	0.041%
1995	0.217	0.134	0.087	1.4398	0.0765	0.207%
financial debt-on-shareholders' equity ratio						
1991	1.023	1.528	-0.008	-1.508	0.067	2.268%
1992	1.055	1.568	-0.008	-1.544	0.063	2.375%
1993	0.885	0.881	0.006	0.623	0.267	0.390%
1994	0.963	2.474	0.002	0.490	0.313	0.245%
1995	0.685	0.786	0.000	0.012	0.495	0.000%
operating margin to sales ratio						
1991	0.062	0.052	0.201	1.2282	0.1111	0.152%
1992	0.058	0.049	0.058	0.3413	0.3667	0.012%
1993	0.051	0.051	0.012	0.0770	0.4638	0.001%
1994	0.063	0.048	0.144	0.8612	0.1955	0.075%
1995	0.077	0.178	-0.008	-0.1775	0.4297	0.003%

Correlation coefficients confirm the results of linear regressions. Table 3 indicates a low correlation between the dependent variable and the independent variables and a change in the sign of the relation between leverage and disclosure quality index score in 1993.

As Financial debt-on-shareholders' equity ratio and Financial debt-on-total-assets ratio are strongly correlated, our multiple regressions have been computed using either one ratio or the other.

Table 3: Correlation matrix

1991					
Index	1.000				
Ownership diffusion	0.122	1.000			
Debt/assets	-0.054	-0.057	1.000		
Debt/shareholders' equity	-0.151	-0.152	0.567	1.000	
Profitability	0.123	0.132	-0.019	-0.353	1.000
	Index	Diffusion	Debt/assets	Debt/equity	Profitability
1992					
Index	1.000				
Ownership diffusion	0.138	1.000			
Debt/assets	-0.058	-0.070	1.000		
Debt/shareholders' equity	-0.154	-0.182	0.561	1.000	
Profitability	0.035	0.116	-0.176	-0.271	1.000
	Index	Diffusion	Debt/assets	Debt/equity	Profitability
1993					
Index	1.000				
Ownership diffusion	0.180	1.000			
Debt/assets	0.076	-0.104	1.000		
Debt/shareholders' equity	0.063	-0.139	0.764	1.000	
Profitability	0.008	0.139	-0.032	-0.283	1.000
	Index	Diffusion	Debt/assets	Debt/equity	Profitability
1994					
Index	1.000				
Ownership diffusion	0.191	1.000			
Debt/assets	0.064	-0.121	1.000		
Debt/shareholders' equity	0.049	-0.173	0.356	1.000	

Profitability	0.087	0.081	-0.142	-0.186	1.000
	Index	Diffusion	Debt/assets	Debt/equity	Profitability
1995					
Index	1.000				
Ownership diffusion	0.255	1.000			
Debt/assets	0.144	-0.098	1.000		
Debt/shareholders' equity	0.001	0.058	0.518	1.000	
Profitability	0.144	0.074	-0.122	-0.085	1.000
	Index	Diffusion	Debt/assets	Debt/equity	Profitability

4.2 *Multivariate analysis.*

Only domestic and multiple listing status (H3 and H4) are statistically validated over the 1991-1995 period. External financing hypothesis (H2) is validated in 1995 (using financial debt to total assets ratio) and can be rejected in 1991 and 1992 (using financial debt to shareholders' equity ratio). Ownership diffusion hypothesis (H1) can not be validated but a positive sign is found over the period. Profitability hypothesis (H5) is not validated and the expected sign is not always confirmed.

Table 4: Results of 1991 multiple regressions.

	Diffusion	Debt/asset	Domestic list	Multiple	Profitability	Constant
coefficient	-0.018	-0.026	0.146	0.085	0.084	0.412
t-value	-0.454	-0.446	2.522	2.929	0.531	16.387
t prob.	0.325	0.328	0.007	0.016	0.2928	0.000
R ²	18.47%					
F-value	4.146	F prob.	0.002			

	Diffusion	Debt/equity	Domestic list	Multiple	Profitability	Constant
coefficient	-0.025	-0.008	0.147	0.081	-0.002	0.422
t-value	-0.633	-1.479	2.585	3.083	-0.014	19.072
t prob.	0.262	0.071	0.006	0.001	0.495	0.000
R ²	19.77%					
F-value	4.632	F prob.	0.001			

Table 5: Results of 1992 multiple regressions.

	Diffusion	Debt/asset	Domestic list	Multiple	Profitability	Constant
coefficient	0.080	-0.034	0.069	0.063	-0.046	0.418
t-value	0.206	-0.588	1.391	2.166	-0.270	16.157
t prob.	0.419	0.279	0.084	0.016	0.394	0.000
R ²	10.82%					
F-value	2.283	p. c. F	0.053			

	Diffusion	Debt/equity	Domestic list	Multiple	Profitability	Constant
coefficient	0.001	-0.008	0.068	0.065	-0.113	0.424
t-value	0.020	-1.540	1.401	2.274	-0.648	19.238
t prob.	0.492	0.063	0.082	0.012	0.259	0.000
R ²	12.70%					
F-value	2.736	F prob.	0.024			

Table 6: Results of 1993 multiple regressions.

	Diffusion	Debt/asset	Domestic list	Multiple	Profitability	Constant
coefficient	0.012	0.056	0.077	0.058	-0.039	0.404
t-value	0.331	1.066	2.085	2.229	-0.259	17.050
t prob.	0.371	0.145	0.019	0.014	0.398	0.000
R ²	15.59%					
F-value	3.474	F prob.	0.006			

	Diffusion	Debt/equity	Domestic list	Multiple	Profitability	Constant
coefficient	0.013	0.009	0.073	0.059	-0.028	0.409
t-value	0.375	0.987	1.999	2.302	-0.182	18.913
t prob.	0.354	0.163	0.024	0.012	0.428	0.000
R ²	15.45%					
F-value	3.436	F prob.	0.007			

Table 7: Results of 1994 multiple regressions.

	Diffusion	Debt/asset	Domestic list	Multiple	Profitability	Constant
coefficient	0.016	0.046	0.080	0.041	0.120	0.402
t-value	0.460	1.017	2.800	1.532	0.754	17.128
t prob.	0.323	0.156	0.03	0.064	0.226	0.000
R ²	18.08%					
F-value	4.151	F prob.	0.002			

	Diffusion	Debt/equity	Domestic list	Multiple	Profitability	Constant
coefficient	0.018	0.003	0.080	0.041	0.126	0.409
t-value	0.500	0.952	2.799	1.520	0.787	19.850
t prob.	0.309	0.172	0.003	0.066	0.217	0.000
R ²	17.97%					
F-value	4.120	F prob.	0.002			

Table 8: Results of 1995 multiple regressions.

	Diffusion	Debt/asset	Domestic list	Multiple	Profitability	Constant
coefficient	0.031	0.101	0.049	0.066	-0.001	0.404
t-value	0.874	1.809	2.195	2.602	-0.021	18.880
t prob.	0.192	0.037	0.015	0.005	0.492	0.000
R ²	22.13%					
F	5.346	p. c. F	0.000			

	Diffusion	Debt/equity	Domestic list	Multiple	Profitability	Constant
coefficient	0.025	0.000	0.049	0.067	-0.010	0.429
t-value	0.707	0.013	2.132	2.591	-0.227	24.345
t prob.	0.241	0.495	0.018	0.006	0.410	0.000
R ²	19.42%					
F-value	4.534	F prob.	0.001			

The results, for the year 1991, are consistent with Zhou's results: multiple listing status explains disclosure index, whereas ownership diffusion or profitability has no influence and leverage has a negative influence (using financial debt to shareholders' equity

ratio). Nevertheless, these determinants do not explain an important part of disclosure quality variances. R^2 varies from 19.77 % in 1991 to 22.13 % in 1995.

Quotation market requirements account for listing status influence and it seems that the hypothesis of compliance with stock exchange commission requirements is confirmed for two reasons:

- to be registered as Document de Référence, companies must comply with specific requirements,
- multiple listed companies of our sample are almost exclusively listed on financial markets (United States, Great Britain) whose disclosure requirements are considered to be higher than French ones (Saudagaran & Biddle, 1995).

Taken as a whole, these findings suggest that compliance with those requirements is considered to be enough to solve agency problems. They do not validate the hypothesis that disclosure is used to solve monitoring problems between managers, shareholders and creditors. This can be explained by the strength of the cultural value of secrecy: information is only shared with people implicated in the firm (Gray, 1988). The French traditional nature of corporate owners (banks and families), financiers (banks) and regulation are the origins of such a tradition.

Nevertheless, since 1993, a change can be noticed. Leverage and ownership diffusion influence is getting stronger which indicates a trend toward a better transparency in French firm reporting practices. This trend is consistent with Nobes's assumption that France has moved consistently towards the family "code-based international influences" inside the macro-uniform class (Nobes, 1992). International reporting practices patterns spread, French Securities and Exchange Commission attempts to make Paris Stock Exchange attractive (Standish, 1991) and changes in financiers are three possible ways to explain firms attempts to meet shareholders and creditors needs.

Internationalisation of business, ownership, external financing and the adoption of international reporting rules weaken domestic cultural and accounting values (Saudagaran & Meek, 1997). These values only concern small and medium companies. This evolution in accounting values is necessary to the efficiency and attractiveness of the French financial market (Macharzina, 1988; Salter & Niswander, 1995).

5 Concluding remarks

The aim of this paper was to look for possible determinants of disclosure quality of French listed companies by relating the content of their annual reports to several of their characteristics. This study is different from a prior similar study (Zhou, 1997) in two ways. Firstly, the analysis extends to 100 French listed firms over a five years long period (1991-1995). Secondly, the analysis yields additional insights into factors behind disclosure quality choices in France. So it enhances the understanding of disclosure practices and changes in these practices.

In order to investigate the influence of a few company's specific characteristics on

disclosure, a measure of disclosure quality has been established. This measure is an index (a list of items and a scoring scheme) based on the expectations of a specific user group, the French financial analysts. The independent variables investigated are ownership diffusion, leverage, domestic and foreign share listing, profitability. These variables and relations expected with disclosure quality have been assessed using univariate and multivariate analyses. Only domestic and multiple listing status are statistically validated over the 1991-1995 period. External financing hypothesis is validated in 1995 (using debt-to-total assets ratio) and can be rejected in 1991 and 1992 (using debt-to-shareholders'equity ratio). Ownership diffusion can not be validated but a positive sign is found over the period. Profitability hypothesis is not validated and the expected sign is not always confirmed.

Nevertheless, limitations of this research are numerous. The scoring sheet creates limitations that have been previously criticised by Dhaliwal (1981). First, the scoring sheet is constructed on the assumption that financial analysts possess a high degree of insight concerning their own usage of information. Second that the relative importance of a disclosure item does not change over time. These two critics are very relevant in my own case. The second critic needs not to be forgotten as I am using over a five years period the same scoring sheet without taking into account any change in financial analysts' expectations. Furthermore, my scoring sheet does not take into account information cost, direct costs (data collection, processing, production and auditing) and indirect costs (danger of providing information damaging for the firm), although financial analysts do not have to pay for disclosure.

The computing of the disclosure quality scores and indexes create another kind of limitation. Previous similar studies usually control for subjectivity in interpreting the annual reports by using independent raters to confirm disclosure scores and indexes. This control has not been done in my research. This lack of control creates a gap between a scoring sheet based on professional expectations and a non-professional reading of the annual reports of which I am aware. Furthermore, indexes may also be criticised because the maximum disclosure score is not uniform for every company and from one year to another, which reduces its ability to compare disclosure quality among companies. As indexes are not really proved to be interval scale measures, the parametric statistical tests used may also be criticised (Marston & Shrives, 1991). Nevertheless, statistical investigations did not provide enough evidence to reject the validity of using parametric tests.

Another limitation concerns the ability to generalise the results of the study. Although my sample includes 100 firms over five years, which enhances my understanding of disclosure practices and changes in these practices, we cannot generalise the results to the entire population of French listed firms. My sample is not representative of the entire population of French listed firms.

With regard to future research, several independent variables would enhance my conclusions and my understanding of disclosure practices. To assess the change in external financing sources and its potential influence on disclosure quality, independent variables have to consider bank versus market external financing. Ownership structure should be considered through the number of shares held by international investors. Such a variable could bring interesting results on the influence of international reporting practices patterns

and on ownership structures strategies by French firms. If firms begin to take into account investors' information needs, a reason may be the search for a new shareholder mix. Nevertheless, qualitative research offers more opportunities to enhance the understanding of reporting practices in the future than quantitative research.

6 References

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Appendix 1: The scoring sheet.

N°	Item	Financial analysts' weight
1	Exposé des métier(s), marchés, produits ou services offerts et principaux sites d'exploitation du groupe. <i>Descriptions of business, markets, major products and major plants location.</i>	2.098
2	Principaux actionnaires de l'entreprise (pourcentage du capital et droit de vote détenu).	2.459

	<i>Indication of major stockholders.</i>	
3	Présentation des performances boursières (évolution du cours de l'action (moyennes, cours extrêmes) et capitalisation boursière). <i>Information on share listing.</i>	0.950
4	Position compétitive du groupe sur ses marchés (parts de marché, taux de croissance, atouts quantitatifs et qualitatifs par rapport à la concurrence). <i>Information on the company's competitive position.</i>	2.450
5	Présentation des principaux concurrents (rentabilité, parts de marché, croissance). <i>Information on the company's competitors.</i>	1.921
6	Succès et échecs commerciaux du groupe (contrats, carnet de commandes, produits nouveaux). <i>Information on business successes or failures.</i>	2.138
7	Présentation des actions d'amélioration des produits au niveau de la sécurité, des risques de pollution. <i>Information on products security and reducing products pollution risks programmes</i>	0.459
8	Frais de recherche et développement engagés (globaux, segmentés, partie autofinancée). <i>Expenditures in Research and Development.</i>	1.838
9	Description des axes de recherche et développement. <i>Information on Research and Development programmes.</i>	1.763
10	Résultats obtenus (succès ou échecs) sur les projets de R&D mis en œuvre. <i>Results of Research and Development projects.</i>	1.635
11	Informations sur des facteurs économiques, sociaux ou politiques ayant influencé les performances. <i>Discussion of major economic, social or political factors which influenced current results.</i>	1.350
12	Politique financière du groupe au cours des derniers exercices. <i>Company's financial policy until now.</i>	1.702
13	Voies de financement de l'activité privilégiées dans le futur. <i>Company's financing funds used in the future.</i>	1.706
14	Informations sur les effectifs et leur évolution. <i>Employees - number, breakdown.</i>	1.905

15	Informations sur les relations sociales (procédures collectives, conflits sociaux, relations avec les instances représentatives). <i>Information on relation with employees, unions, work councils.</i>	0.388
16	Présentation des actions menées pour l'insertion et l'emploi des minorités, des jeunes des femmes et des handicapés sur le territoire national et à l'étranger. <i>Information on community involvement.</i>	-0.659
17	Présentation des actions pour la protection de l'environnement, maîtrise de l'énergie et de leurs impacts. <i>Information on corporate environmental responsibility.</i>	0.235
18	Présentation purement qualitative et descriptive des divers éléments permettant d'apprécier la continuité temporelle du groupe (absence d'évaluation économique et financière). <i>Qualitative and descriptive information only for items 4 to 17.</i>	-0.646
19	Perspectives du groupe et orientations stratégiques (produits, marchés, choix de développement). <i>Company's prospects and future strategy.</i>	2.400
20	Objectifs chiffrés fixés (rentabilité, croissance du CA, parts de marché, ...). <i>Stated quantitative goals (sales increase, market shares).</i>	2.224
21	Prévisions du chiffre d'affaires et du résultat d'exploitation futurs. <i>Forecast of next year's sales and operating income.</i>	1.953
22	Explications des variations entre prévisions précédentes et réalisations. <i>Discussion of the gaps between previous forecasts and current results.</i>	2.024
23	Informations segmentées par activités (CA, résultat d'exploitation, éléments d'actifs, effectifs, investissements). <i>Breakdown of sales, operating income, assets, employees, investments by lines of business.</i>	2.795
24	Informations segmentées par zones géographiques (CA, résultat d'exploitation, éléments d'actifs, investissements, effectifs). <i>Breakdown of sales, operating income, assets, employees, investments by geographic areas.</i>	2.600

25	Historique de l'information segmentée sur trois exercices au moins. <i>Three years comparative segment reporting.</i>	1.987
26	Modification des méthodes de segmentation d'un exercice à l'autre (définition des métiers et/ou des zones géographiques) accompagnée de disparition d'information. <i>Change in segment reporting methods with an increase of details.</i>	-1.435
27	Modification des méthodes de segmentation d'un exercice à l'autre (définition des métiers et/ou des zones géographiques) accompagnée d'une augmentation d'information. <i>Change in segment reporting methods with a decrease of details.</i>	0.651
28	Absence d'information segmentée par secteurs d'activité et secteurs géographiques. <i>Lack of segment reporting either by lines of business or by geographic areas.</i>	-2.241
29	Indication du référentiel national (Plan Comptable Général ou professionnel, loi du 3/01/1985 sur les comptes consolidés) ou international (IASB, FASB, ASB) utilisé. <i>Mention of the accounting reference framework used (PCG, IASB, FASB, ASB).</i>	1.753
30	Utilisation d'un référentiel comptable combiné (référentiel international et national) sans préciser les principes et méthodes retenues considérées comme conformes à ces deux référentiels. <i>Use of a mixed accounting reference framework.</i>	-1.518
31	Rappel des principes et méthodes comptables utilisés. <i>Statement of accounting principles and methods used in the preparation of the accounts.</i>	1.847
32	Détail des entrées et des sorties du périmètre de consolidation. <i>List of subsidiaries consolidated for the first time or no longer consolidated.</i>	2.470
33	Exposé des méthodes de consolidation retenues ou des changements de méthode de consolidation opérés pour chaque entreprise consolidée. <i>Statement of consolidation methods or change in consolidation methods for each subsidiaries.</i>	1.964
34	Valorisation, en terme de situation	

	nette, CA et résultats, des conséquences des modifications du périmètre de consolidation et des changements de méthode de consolidation éventuels (par entreprise). <i>Quantitative consequences of change in consolidation methods (on sales, results and shareholders' equity).</i>	2.532
35	Explications et valorisations des conséquences des changements de méthode éventuels. <i>Explanation and quantitative consequences of change in accounting methods.</i>	2.471
36	Chiffres pro-forma sur trois exercices lors de changements de méthodes comptables. <i>Three-year comparative pro-forma information at least when change in accounting methods.</i>	2.470
37	Absence de documents pro-forma sur deux exercices au moins lors de changements de méthodes <i>Lack of two-year comparative pro-forma information at least when change in accounting methods.</i>	-2.224
38	Synthèse des différences entre règles et méthodes comptables françaises et règles et méthodes du référentiel international choisi. <i>Synthesis of differences between French accounting methods and foreign accounting methods used.</i>	1.699
39	Détails de la composition et des mouvements des actifs immobilisés. Breakdown of fixed assets and changes in fixed assets.	1.625
40	Informations relatives aux investissements corporels et incorporels réalisés au cours de l'exercice. <i>Information about expenses into tangible assets and intangibles.</i>	2.325
41	Informations relatives aux investissements financiers (en titres de participation, joint-venture) réalisés au cours de l'exercice. <i>Information about expenses into joint venture, new subsidiaries, unconsolidated subsidiaries.</i>	2.459
42	Informations relatives aux variations des capitaux propres. <i>Information about changes in shareholders' equity.</i>	1.650
43	Informations sur les actions futures à créer par droits de souscription ou conversion d'obligations, par modification du nombre d'actions (division, attribution d'actions)	2.294

	gratuites). <i>Information about stocks to be issued.</i>	
44	Informations relatives aux dettes financières (catégories d'emprunts, échéancier, taux d'intérêt, garanties). <i>Information about financial liabilities.</i>	2.238
45	Informations relatives au compte Créances Clients (échéancier, montant des eene). <i>Information about accounts receivable.</i>	1.329
46	Informations relatives aux engagements financiers et des instruments financiers. <i>Information about off-balance sheet financing and financial instrument.</i>	1.911
47	Tableau de financement de l'exercice. <i>Statement of sources and application of funds.</i>	2.788
48	Tableau des flux de trésorerie. <i>Statement of cash flows.</i>	2.525
49	Présentation de l'EBE, de la VA et du résultat d'exploitation. <i>EBE, Value Added and Operating Result.</i>	2.118
50	Absence de détail des charges d'exploitation. <i>Lack of details in operating expenses.</i>	-2.217
51	Capacité d'autofinancement ou marge brute d'autofinancement dégagée au cours de l'exercice. <i>Self-financing margin.</i>	2.565
52	Biais dans l'échelle et les chiffres choisis pour les graphiques. <i>Bias in scale and figures used for graphics.</i>	-1.037
53	Non-homogénéité entre certains chiffres (chiffres clefs des tableaux récapitulatifs, informations segmentées) et les chiffres des documents financiers (bilan et compte de résultats). <i>Differences between figures in summary statements and segment reporting and balance sheet and income statement figures.</i>	-1.988
54	Absence d'indication sur les méthodes de calcul des données d'appréciation (dividende et résultat par action, taux de rendement des actions, ratios financiers, agrégats nets). <i>Lack of information about calculation methods of earning per share, financial ratios.</i>	-0.888
55	Commentaires stéréotypés d'un	-1.000

	exercice à l'autre. <i>Stereotyped comments from one year to the next.</i>	
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Appendix 2: Companies covered by the survey and disclosure quality indexes.

	WEIG HTED INDEX ES	UNWE IGHTE D INDEX ES								
	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
Air Liquide	0,391	0,413	0,413	0,424	0,403	0,338	0,391	0,363	0,374	0,358
Alcatel-Alsthom	0,510	0,523	0,410	0,471	0,534	0,467	0,514	0,365	0,436	0,470
André	0,413	0,439	0,435	0,467	0,493	0,335	0,366	0,354	0,389	0,433
Application des gaz	0,336	0,355	0,353	0,381	0,339	0,287	0,316	0,324	0,329	0,303
Arbel	0,389	0,464	0,456	0,442	0,504	0,324	0,399	0,387	0,375	0,435
Bertrand Faure	0,442	0,490	0,510	0,507	0,502	0,378	0,425	0,454	0,427	0,426
Bic	0,328	0,300	0,300	0,373	0,407	0,290	0,264	0,264	0,346	0,372
Bis	0,272	0,287	0,273	0,234	0,293	0,231	0,243	0,256	0,200	0,254
Boiron	0,414	0,411	0,407	0,424	0,524	0,360	0,355	0,340	0,356	0,445
Bolloré	0,389	0,452	0,606	0,599	0,650	0,343	0,383	0,531	0,521	0,564
Bongrain	0,346	0,346	0,359	0,353	0,347	0,276	0,276	0,290	0,287	0,278
Bouygues	0,584	0,568	0,585	0,551	0,536	0,534	0,509	0,523	0,485	0,465
BP France	0,416	0,451	0,486	0,404	0,452	0,365	0,417	0,450	0,373	0,417
Cap Gemini Sogeti	0,382	0,420	0,413	0,418	0,428	0,325	0,354	0,340	0,353	0,372
Carrefour	0,340	0,350	0,354	0,380	0,356	0,290	0,300	0,303	0,326	0,306
Cascades	0,384	0,394	0,334	0,418	0,312	0,345	0,351	0,302	0,369	0,280
Casino	0,334	0,369	0,402	0,415	0,473	0,274	0,302	0,373	0,377	0,433
CFPI	0,530	0,452	0,470	0,541	0,574	0,476	0,411	0,442	0,513	0,547
Cgea	0,464	0,510	0,520	0,510	0,500	0,416	0,480	0,468	0,493	0,490
Chargeurs	0,355	0,370	0,331	0,333	0,335	0,286	0,297	0,266	0,285	0,271
Christoffe	0,361	0,353	0,354	0,394	0,497	0,322	0,334	0,326	0,350	0,426
Cnim	0,327	0,324	0,402	0,422	0,466	0,284	0,283	0,350	0,377	0,424
Cofigeo	0,404	0,459	0,450	0,419	0,334	0,355	0,402	0,395	0,367	0,296
Cogifer	0,442	0,489	0,424	0,433	0,499	0,405	0,423	0,353	0,371	0,440
Colas	0,504	0,517	0,523	0,556	0,552	0,464	0,474	0,492	0,516	0,517
Crometal	0,270	0,350	0,359	0,375	0,440	0,235	0,294	0,308	0,317	0,388
Damart	0,441	0,484	0,428	0,520	0,531	0,375	0,413	0,359	0,454	0,461

Danone	0,433	0,437	0,459	0,448	0,479	0.412	0.406	0.453	0.384	0.421
Dassault Electronique	0,421	0,416	0,428	0,406	0,473	0.400	0.392	0.397	0.373	0.432
Dauphin	0,490	0,465	0,516	0,478	0,505	0.423	0.395	0.452	0.410	0.429
De Dietrich	0,420	0,418	0,423	0,463	0,422	0.353	0.370	0.352	0.401	0.392
Degremont	0,348	0,453	0,498	0,530	0,522	0.319	0.445	0.512	0.493	0.517
Devanlay	0,400	0,411	0,369	0,430	0,418	0.337	0.341	0.305	0.366	0.348
Deveaux	0,313	0,341	0,352	0,336	0,357	0.264	0.268	0.311	0.288	0.321
Docks de France	0,418	0,369	0,386	0,403	0,448	0.357	0.309	0.322	0.346	0.412
Dolisos	0,460	0,450	0,418	0,542	0,488	0.409	0.402	0.372	0.471	0.429
Ducros Services Rapides	0,490	0,476	0,481	0,482	0,517	0.415	0.413	0.417	0.415	0.458
Dynactio n	0,310	0,305	0,347	0,340	0,403	0.281	0.278	0.326	0.306	0.353
Ecia	0,352	0,359	0,339	0,390	0,427	0.285	0.317	0.280	0.339	0.380
Elf	0,445	0,441	0,449	0,414	0,529	0.405	0.419	0.413	0.381	0.481
Emin	0,316	0,290	0,465	0,495	0,549	0.286	0.255	0.415	0.440	0.492
Eridania	0,498	0,442	0,496	0,530	0,548	0.417	0.383	0.444	0.508	0.530
Essilor	0,413	0,513	0,522	0,575	0,572	0.370	0.460	0.462	0.511	0.505
Esso	0,404	0,411	0,438	0,460	0,448	0.359	0.363	0.376	0.404	0.398
Europe 1	0,247	0,234	0,246	0,309	0,274	0.219	0.209	0.218	0.276	0.240
Financière de l'Atlantique	0,395	0,410	0,416	0,432	0,441	0.329	0.341	0.353	0.365	0.376
Fives lille	0,396	0,375	0,445	0,531	0,526	0.347	0.345	0.408	0.499	0.475
Galleries Lafayette	0,363	0,356	0,336	0,348	0,366	0.305	0.305	0.283	0.292	0.317
Gevelot	0,438	0,471	0,496	0,460	0,475	0.373	0.406	0.428	0.396	0.408
Gfi	0,520	0,516	0,515	0,512	0,513	0.440	0.444	0.429	0.428	0.431
Go Sport	0,378	0,359	0,421	0,439	0,420	0.316	0.300	0.360	0.379	0.354
Guyenne	0,364	0,377	0,377	0,359	0,388	0.302	0.324	0.324	0.300	0.335
Hotels & Casinos Deauville	0,455	0,457	0,485	0,448	0,419	0.375	0.395	0.413	0.382	0.355
Imetal	0,461	0,461	0,444	0,489	0,496	0.403	0.408	0.392	0.429	0.429
Ims	0,355	0,306	0,320	0,320	0,322	0.287	0.254	0.270	0.263	0.250
Jean Lefebvre	0,400	0,434	0,464	0,481	0,459	0.357	0.397	0.441	0.494	0.464
La Rochette	0,486	0,432	0,480	0,457	0,502	0.410	0.364	0.442	0.418	0.463
Labinal	0,540	0,543	0,548	0,559	0,566	0.483	0.488	0.505	0.513	0.510
LBD	0,278	0,268	0,438	0,421	0,494	0.227	0.216	0.363	0.358	0.430
Legrand	0,217	0,189	0,255	0,327	0,352	0.164	0.130	0.249	0.319	0.301
LVMH	0,520	0,454	0,468	0,482	0,519	0.465	0.395	0.408	0.418	0.464
Lyonnais	0,484	0,538	0,591	0,577	0,657	0.434	0.513	0.572	0.563	0.633

e des eaux										
Manitou	0,347	0,373	0,413	0,369	0,437	0.302	0.332	0.366	0.318	0.384
Manouki an	0,176	0,244	0,406	0,401	0,433	0.148	0.204	0.328	0.329	0.364
Marie Brizard	0,356	0,441	0,455	0,455	0,455	0.317	0.393	0.397	0.397	0.397
Metrolog ie	0,459	0,507	0,420	0,258	0,303	0.407	0.437	0.371	0.213	0.263
Mouline x	0,434	0,373	0,428	0,383	0,442	0.388	0.322	0.375	0.336	0.393
Nissan France	0,496	0,408	0,489	0,498	0,472	0.405	0.328	0.417	0.404	0.385
Nord-Est	0,488	0,448	0,523	0,480	0,503	0.429	0.393	0.446	0.399	0.427
NSC	0,390	0,422	0,403	0,451	0,434	0.360	0.371	0.351	0.396	0.383
Onet	0,328	0,303	0,353	0,359	0,375	0.288	0.266	0.304	0.316	0.328
Pasquier	0,269	0,226	0,254	0,236	0,277	0.220	0.184	0.209	0.196	0.237
Pernod Ricard	0,484	0,434	0,393	0,437	0,497	0.416	0.385	0.346	0.403	0.450
Peugeot	0,579	0,558	0,569	0,628	0,614	0.547	0.522	0.505	0.559	0.571
Pochet	0,501	0,488	0,433	0,464	0,450	0.439	0.426	0.379	0.422	0.394
Primaga z	0,494	0,499	0,511	0,491	0,534	0.429	0.439	0.475	0.427	0.467
Rexel	0,422	0,430	0,399	0,407	0,418	0.386	0.371	0.347	0.349	0.353
Rhone Poulenc	0,429	0,536	0,532	0,553	0,543	0.412	0.500	0.509	0.517	0.508
Roquefo rt	0,308	0,336	0,332	0,303	0,259	0.269	0.289	0.298	0.265	0.217
Rougier	0,434	0,415	0,429	0,478	0,502	0.380	0.355	0.365	0.416	0.438
Roussel Uclaf	0,631	0,574	0,555	0,554	0,579	0.588	0.554	0.533	0.524	0.543
Sagem	0,514	0,499	0,497	0,489	0,481	0.461	0.437	0.435	0.422	0.415
Saint Gobain	0,592	0,568	0,607	0,587	0,576	0.534	0.498	0.540	0.550	0.549
Saint Louis	0,448	0,475	0,489	0,515	0,518	0.391	0.440	0.441	0.461	0.451
Salomon	0,454	0,431	0,381	0,394	0,491	0.399	0.368	0.322	0.350	0.455
Saupique t	0,460	0,464	0,472	0,477	0,426	0.403	0.419	0.413	0.413	0.362
Schaeffe r	0,370	0,277	0,262	0,256	0,301	0.313	0.246	0.235	0.220	0.267
Schneide r	0,534	0,516	0,478	0,435	0,412	0.475	0.490	0.449	0.394	0.401
SEP	0,348	0,430	0,452	0,376	0,375	0.319	0.409	0.424	0.352	0.340
Sidergie	0,397	0,401	0,421	0,407	0,416	0.338	0.352	0.360	0.354	0.362
Sligos	0,422	0,462	0,436	0,487	0,410	0.347	0.393	0.375	0.437	0.338
Sodexho	0,419	0,429	0,381	0,436	0,394	0.379	0.377	0.336	0.382	0.335
Sommer	0,515	0,534	0,564	0,535	0,520	0.451	0.472	0.502	0.463	0.456
Taittinge r	0,399	0,379	0,404	0,403	0,441	0.338	0.316	0.343	0.342	0.373
Tfl	0,417	0,439	0,426	0,466	0,442	0.369	0.403	0.357	0.409	0.375
Valeo	0,488	0,419	0,484	0,458	0,485	0.425	0.361	0.413	0.409	0.463
Valloure c	0,537	0,464	0,465	0,451	0,461	0.490	0.436	0.466	0.418	0.430
Vev	0,287	0,288	0,324	0,345	0,381	0.252	0.234	0.273	0.290	0.334

Virbac	0,372	0,379	0,520	0,387	0,430	0.326	0.326	0.467	0.339	0.376
Zodiac	0,482	0,487	0,453	0,476	0,502	0.454	0.430	0.394	0.436	0.475