RAE eletrônica

FINANCIAL REPORTING ON THE INTERNET - THE PORTUGUESE CASE

Por:
Lúcia Lima Rodrigues
Carlos Menezes

RAE-eletrônica, v. 2, n. 2, jul-dez/2003.

http://www.rae.com.br/eletronica/index.cfm?FuseAction=Artigo&ID=1391&Secao=FINANÇAS&Volume=2&Numero=2&Ano=2003

RAE-eletrônica
ISSN 1676-5648

FUNDAÇÃO GETULIO VARGAS
Escola de Administração de Empresas de São Paulo

FINANCIAL REPORTING ON THE INTERNET - THE PORTUGUESE CASE

Lúcia Lima Rodrigues
Professora Associada na Universidade do Minho Créditos/Titulação
E-mail: lrodrigues@eeg.uminho.pt
Interesses de Pesquisa: Relato Financeiro, Contabilidade Internacional, História da Contabilidade

Carlos Menezes
Assistente estagiário na Universidade do Minho
E-mail: menezes@eeg.uminho.pt
Endereço: Universidade do Minho, Escola de Economia e Gestão, Gualtar, 4709 Braga Codex, PT
Interesses de Pesquisa: Relato Financeiro, Novas Tecnologias Aplicadas à Contabilidade

RESUMO

Devido aos desenvolvimentos recentes nas tecnologias de informação, as empresas portuguesas estão a usar a Internet para divulgar informação financeira. Depois de apresentarmos as vantagens e desvantagens deste tipo de relato financeiro e de fazermos a revisão da literatura, os Web site*s* das empresas portuguesas cotadas foram examinados no período Março 2000 a Fevereiro de 2001, com vista a determinar que empresas apresentam informação financeira e se a informação fornecida é resumida, idêntica à versão em papel do "Relatório e Contas" ou mais detalhada. Adicionalmente, realizaram-se testes econométricos com o objectivo de tentarmos saber se a dimensão da empresa, o sector e o facto da empresa estar cotada em mercados de capitais internacionais, afecta a extensão da informação financeira divulgada na Internet. Concluímos que as empresas portuguesas cotadas estão a enfrentar de um forma positiva esta nova forma de relato financeiro e, tal como acontece noutros países, há uma correlação positiva entre a dimensão da empresa e a existência de Web site e a extensão de informação financeira divulgada.

ABSTRACT

Due to recent developments in information technologies, Portuguese companies are using the Internet to disclose accounting information through their Web sites. After presenting the advantages and eventual risks of this form of financial reporting and literature review, the Web sites of Portuguese listed companies were examined throughout March 2000 to February 2001, to determine which companies present financial information and whether the information provided is summarised, identical to the paper version of the annual report or is more detailed. In addition, we tested if there is significant difference between company size, industry type, overseas listings and the extent of financial disclosure on the Internet. We concluded Portuguese companies are starting to face positively this new way of financial reporting. Concerning the hypotheses tests performed we noticed that, likewise to what is happening in other countries, there is a positive correlation between company size and the existence of Web site and company size and financial information disclosed.

PALAVRAS-CHAVE

Relato Financeiro, Internet, Vantagens/riscos; Empresas Portuguesas Cotadas; Estudos de correlações.

KEY-WORDS

Financial Reporting; Internet; Advantages/Risks; Portuguese Companies Listed; Hypotheses tests.

INTRODUCTION

The growth of the Internet and particularly the *Web* has been fast and sustained. This growth is perhaps the most visible example of today's tendency to globalisation and has caused changes in the way financial information flows from companies to investors and creditors. The development of this new form of financial reporting presents accounting and its practitioners with new challenges and opportunities.

In an attempt to debate this new reality, on November 15th 1999 *The International Accounting Standards Board* (IASB) published a document entitled "Study of Business Reporting on the Internet" as a first step towards a project of standardisation in this matter. This study shows the alterations that occurred in financial reporting and explains how these alterations are affecting the disclosure of accounting and business information.

In that same sense, the *Financial Accounting Standards Board* (FASB) has also published, on 31st January 2000, the report "Electronic Distribution of Business Reporting Information", the first of a wider range study in the "Business Reporting Research Project". This first report aims to describe the current state of financial information reporting on the Internet in the United States of America and to identify the most usual practices.

Concern about this new form of financial reporting is present also among the academics and some empirical studies are already being carried out in several different countries. Given the tendency for globalisation, it is important to see how Portugal is facing this new way of financial reporting and what are the reasons that lead Portuguese companies to disclose financial information on the Internet, in order to understand if cultural characteristics of a country are important in this kind of phenomenon. So, to present the Portuguese case is the contribution of this paper. To our knowledge it is the first paper to address such a task.

Therefore, after a brief approach to the advantages and risks of voluntary disclosure of financial information on the Internet, we will approach the existing literature on this matter and we will present some empirical results observed in other countries. The next section will be dedicated to presenting empirical evidence for the Portuguese case. Our empirical study describes, the type of information disclosed on *Web sites* by the companies listed on the Lisbon and Porto Stock Exchange between March 2000 and February 2001. In doing so, it considers three independent variables that are probably associated with different levels of information disclosure: company size; industry sector and listing in foreign exchange markets.

THE ADVANTAGES AND EVENTUAL RISKS OF VOLUNTARY FINANCIAL INFORMATION DISCLOSURE ON THE INTERNET

Several studies try to explain what leads companies to voluntarily disclose financial information. A great incentive is the need to increase capital at the lowest possible cost. Voluntary information disclosure increases transparency and reduces information asymmetry between company management and investors. It also allows the company to attract new shareholders, which leads to an increase in demand for the company's stock and improves liquidity.

When considering the financial information disclosure on the Internet we may add that, according to Signalling Theory, a company voluntarily places its information on the Internet in order to "send a

sign" to the marketplace, saying it is a modern company and keeps up with the latest technological developments.

This new form of financial reporting undoubtedly brings some advantages, but also some concerns and risks, which we will now point out.

The Democratisation of Business Reporting: Information at Low Costs

According to FASB (2000: vii), more than anything else, the Internet has been used as a means to expand the amount of information available to non-specialist investors, allowing information to be carried to them at low or no cost at all. In fact, any investor with a computer and a modem may obtain information that, until then, was only accessible to a small group of people. The costs of printing and distributing information are no longer a barrier preventing the spreading of the information. It's also much cheaper to modify the information to fit all kinds of users.

Timely Information

One of the advantages of the Internet as a means of access to information is the timely and frequent character of that information. It is thought that this ability to provide timely and relevant information will eventually bring more efficiency to the financial markets. It is also believed that Internet will lead the annual and biannual cycles of financial reporting to real time reporting. Yet, at this moment, the information obtained through the Internet still comes no faster than other, since it is still the same kind of information. For this advantage to become a reality some practical and legal problems must be solved, such as the integration of current information and previously presented information without exposing the company to significant costs or legal problems. On the other hand, we cannot forget that, the timelier the information, the more potential there is to decrease the reliability of that information.

Thorough Information

The information provided over the Internet is also expected to be more thorough and complete than the Report and Accounts on paper, given the possibilities of the Internet in terms of the spreading of information. However, we conclude that, at the moment, the contents of the financial information are very variable, with companies that see in the Internet a possibility to improve and expand their financial information and others that supply a very limited amount of information. The way that information is presented is also very variable, which makes comparison a difficult task.

The Potential Risks

Despite all the advantages the Internet brings to the users of the information, there is a risk of loss of reliability. Hence, even though the Portuguese Securities Market Commission (CMVM - Comissão do Mercado de Valores Mobiliários) has a positive attitude towards using Internet as a way to market assets and disclose financial information, it has recently produced a set of recommendations aiming to protect investors. We point out some recommendations relative to the financial information that are revealing of the concerns of CMVM:

"1.1.

- The information provided over the Internet must be complete, true, recent, clear, objective and legal;

- The entities that disclose information through the Internet are responsible for its content;

[...]

2. The CMVM determines, as to the content of the information disclosed over the Internet, that:

- the moment when the information was last updated must be indicated on the homepage;
- when it is external to the site in question, the source must be identified;
- the fact that the information refers to a full document, an extract or a summary must be mentioned;
- when the information is destined to residents in Portugal, it must be in the Portuguese language, unless the CMVM agrees to another language;

[...]

5.2. About financial information:

- mentioning clearly whether the information has been approved or not;
- identifying the Report and Accounts (namely the date of reference and the simple or consolidated nature of the accounts), accompanying them with the legal accounts certification and, in such cases, an External Audit Report." (CMVM, 2000)

Apart from this kind of Stock Exchange regulation, the companies using the *Web* to, their business report are operating without national or international accounting orientations. Recognising the need to supply immediate accounting guidelines, the IASB (1999) considers the possibility of developing a "Code of Conduct" for the report on the Internet, of which we point out the following guidelines:

- if, for any reason, the online documents do not provide complete information regarding the original format, that fact must be indicated; it must also be indicated if there is additional information or not to the original format; in case there is additional information, it must be indicated whether it has been audited or not; if the financial statements are elaborated according to the Generally Accepted Accounting Principles of the country, of IASC or of any other country, such fact must be mentioned; in case the demonstrations are constructed according to several PCGA, the relevant differences must be explained;
- Information that is not prepared using the national and international standards (forecasts, qualitative information, management reports, etc.) must be disclosed separately, in a way not to induce the idea that it is consistent with the standards.

FINANCIAL REPORT ON THE INTERNET: PREVIOUS EMPIRICAL STUDIES

Both the FASB and the IASB documents above mentioned are concerned with listing the companies that are already doing electronic financial reporting (chapters 3 and 4, respectively).

Since, in general, the studies are performed at each country's level, the IASB has decided to analyse the extent and characteristics of electronic financial reporting in several countries. In order to do that it has performed an inquiry to the largest listed companies in 22 countries. The sample was composed of the 30 largest companies in the Dow Jones Global[1] index of the 22 countries, summing to 660 companies. The selection of the countries was made so as to obtain a good geographic balancing and a group of advanced and developed capital markets. For consistency, the IASB has only analysed the annual accounts. As a result, it was concluded that 86% of the sample had a *Web site*, varying from 100% in Germany, Canada, Sweden and the United States to 53% in Chile. From the 62% (410) of companies that supply financial information in some way, 80% (327) use, in any way, HTML, with 57% (234) disclosing important elements of their financial statements on the *Web* and in HTML (a more advanced and flexible format than the "electronic paper" - Adobe Acrobat).

The IASB has also noted that the disclosure of the financial statements in HTML was very changeable: while some companies only supplied the main financial statements (Balance Sheet, Income Statement and, some times, Cash Flow Statement), others supplied the complete financial statements, including the Notes of Accounts and Audit Report.

Many *Web sites* provide the possibility to download financial statements, with a considerable variation between countries, with emphasis to the Canadian companies (27 out of 28) and Norwegian (20 out of 21), which allow downloading in most cases.

The FASB project "Electronic Distribution of Business Reporting Information" limits the investigation to companies in the United States. From the results of this investigation we point out the following:

- out of 100 companies, 99 had *Web sites*;
- of those 99, 93 included some form of relationship with the investors and financial information on their *Web* pages;
- the attributes related to those pages varied significantly, with companies presenting highly detailed information and others only summarised information; in terms of financial statements, 74% included the complete versions (equal to the paper versions), but only 63% presented the notes to the financial statements;

When comparing these two works to previous investigations we must conclude that there is a growing trend to an increase in the number of companies with a *Web site* and to an inclusion of more and more financial information (Table 1).

[1] For information on the national indexes see http://www.dowjones.com/

Table 1: Studies about Financial Reporting on Internet

Studies	Sample	Conclusions
Louwers, Pasemark and Typpo (1996)	Fortune 150 companies in the Unites States	65% had a Web site and 23% presented some form of information related to their annual accounts.
Petravick and Gillett (1996)	Fortune 150 companies of the United States	69% had a Web site, 54% included some form of financial information and 31% presented their annual accounts
Gray and Debreceny (1997)	Fortune 500 companies of the United States	98% had a Web site and 36% distributed their annual reports
Lymer (1997)	50 largest companies listed in the United Kingdom Stock Exchange	92% have a Web site and 32% included the annual accounts
Lymer and Tallberg (1997)	72 companies in the stock market in Finland	90% had web sites, with only 11% of them including financial information related to their annual accounts
Flynn and Gowthorpe (1997)	Fortune 100 international companies	89% of them had a Web site and 71% included annual financial information
Sánchez Barrios (1999)	Spanish IBEX companies	63% of the companies had a Web site, 20% with their annual accounts
Deller, Stubenrath and Weber (1998)	The 100 largest German companies	76% had Web sites, 36% of them including their annual accounts
Gowthorpe and Amat (1999)	The 379 companies listed by the Madrid Stock Exchange	Only 19% of them had Web sites, of which only 5% included some form of financial information
Molero, Prado and Sevillano (1999)	The companies listed by the Madrid Stock Exchange	45% of the them had Web sites and, of these, 56% included some form of financial information
Craven and Marston (1999)	The largest 200 companies listed by capitalization in the Financial Times	74% had Web sites and 33% included their annual accounts;
Hedlin (1999)	The 60 companies listed in the Stockholm Stock Exchange	98% of them had a Web site and 83% disclosed their annual accounts;
Pirchegger and Wagenhofer (1999)	32 companies listed in the Vienna Stock Exchange	88% of them had a Web site, 84% of them disclosed their annual accounts
Hassan, Jaffar; Johl (2000)	247 out of 705 companies listed by the Kuala Lumpur Stock Exchange	Only 36% of them had a Web site, 46% of them included some form of financial information.
Fisher, Laswad and Oyelere (2000)	220 companies listed by the New Zealand Stock Exchange	56% of them had a Web site, 73% of them had financial information.

Based on these studies that analysed the different practices of financial information disclosing on the Internet, we can conclude that, in most countries, the great majority of the companies have *Web sites*, which are true financial information warehouses, even though its quantity and quality may change from country to country.

Other studies have been developed with the purpose of determining the reasons that lead companies to disclose financial information on their *Web sites*, as that developed by Flynn and Gowthorpe (1997) who cncluded that the financial reporting practices on the Internet vary according to the cultural and economic aspects in which the companies are based. Other studies are presented in a systematic way in Table 2.

Table 2: Studies about reasons that lead companies to disclose financial information

Studies	Sample	Hypotheses	Conclusions
Marston and Leow (1998)	FTSE – 100 companies in the United Kingdom	H_1: the influence of company size in the extent of the information disclosed; H_2: the influence of the industry sector in the extent of the financial information.	There was a strong positive correlation; however, as for the second hypothesis, such a correlation was only observed when the companies were classified according to the detail of the information disclosed.
Craven and Marston (1999)	The 200 biggest companies of Financial Times (22/01/98)	H_1: the influence of company size in the extent of the information disclosed; H_2: the influence of the industry sector in the extent of the financial information.	There was a strong positive correlation; such correlation was not found in relation to the industry sector.
Pirchegger and Wagenhofer (1999)	31 companies listed by the Austrian Stock Exchange and 30 DAX Germany companies	H_1: the influence of company size in the extent of the information disclosed; H_2: the influence of the stock free-float.	There was a strong correlation between the increase in the web sites quality and the company size; this correlation could also be observed with the stock free-float.
Hassan, Jaffar and Johl (1999)	247 companies from the 705 companies listed by the *Kuala Lampur Stock Exchange*	H_1: the influence of company size in the extent of the information disclosed; H_2: the influence of profitability in the extent of the information disclosed	There was a strong correlation between the extent of the information disclosed and the two variables tested.
Marston and Warney Wu (2000)	The 100 biggest Japanese companies	H_1: the influence of company size in the extent of the information disclosed; H_2: the influence of industry sector extent of the information disclosed	There was a positive correlation between the extent of the information disclosed and the two variables tested
Jorge and Inchausti (2001)	144 listed by Madrid Stock Exchange	H_1: the influence of company size in the extent of the information disclosed; H_2: the influence overseas listed companies and extent of the information disclosed	There was a positive correlation between the extent of the information disclosed and the two variables tested

ELECTRONIC FINANCIAL REPORTING IN PORTUGAL

The Sample

According to works performed in other countries, we have selected as a sample for our study the group of companies in the Continuous Market and the Second Market in the Lisbon and Porto Stock Exchange (Bolsa de Valores de Lisboa e Porto - BVLP). One other reason we can provide for our choice is related to the fact that these companies, according to Marston and Leow (1998), tend to be considered large companies. As such, and in comparison to small companies, they are more likely to disclose financial information on the Internet.

As we had done in the March 2000 study, we have taken from the BVLP *Web site*, on February 24th 2001 the group of companies to analyse. We verified that, in the analysed period, there was a reduction in the number of listed companies (see Table 3).

Table 3: Companies listed in the Continuous and Second Markets on BVLP on February 2001 and March 2000

	Feb/2001 #	Mar/2000 #	Feb/2001 %	Mar/2000 %
Continuous Market	64	70	86.49	85,37
Second Market	10	12	13.51	14,63
Total	74	82	100.00	100.00

Through keywords (companies' names) we have tried to find the *Web sites*, using the search engines: *Sapo*, *Cusco* and *Altavista*. For those companies whose *Web sites* were not found, phone contacts were attempted on February the 26th. Concerning data collection, it was processed between February 24th and 26th.

In total, as can be inferred from the analysis of Table 4, on February 2001 we have identified 58 *Web sites* (78%), 54 of the companies in the Continuous Market and 4 from the Second Market. Even though there was a decrease in the number of companies listed in the BVLP in the period we have analysed, the number of companies with *Web sites* has increased.

Table 4: Companies in the Continuous and Second Markets on BVLP with and without Web sites on February 2001 and March 2000

	Continuous Market				Second Market			
	#		%		#		%	
	Feb/2001	Mar/2000	Feb/2001	Mar/2000	Feb/2001	Mar/2000	Feb/2001	Mar/2000
Companies with *Web site*	54	46	84.38	65.71	4	4	40.00	33.33
Companies without *Web site*	10	24	15.62	34.29	6	8	60.00	66.67
Total	64	70	100.00	100.00	10	12	100.00	100.00

Descriptive Analysis

We will now point out some of the results obtained in our research. Of the 58 companies with *Web sites* in February 2001, only 39 (67%) supply financial information (against 34 companies in March 2000). Table 5 shows the companies listed in the Continuous Market and Second Market of BVLP with financial information on their *Web site* divided by activity sector in the two moments of our study. We point out, in this matter, the importance, on February 2001, of the "Other Activities and Services Provided to Companies" sector, in contrast to what had been verified in March 2000, when there was a major importance from the sector of financial intermediation.

Table 5: Companies in the Continuous and Second Markets on BVLP with Financial Information in their Web Site in Different Activity Sectors on February 2001 and March 2000

ACTIVITY SECTOR	CAE	Continuous Market		Second Market		Totals			
		#		#		#		%	
		Feb/2001	Mar/2000	Feb/2001	Mar/2000	Feb/2001	Mar/2000	Feb/2001	Mar/2000
Food and beverage industry	15	1	1	0	0	1	1	2.56	2.86
Paper pulp, paper and cardboard industry	21	2	2	0	0	2	2	5.13	5.71
Chemical products industry	24	3	2	0	0	3	2	7.69	5.71
Non metallic minerals industry	26	2	2	0	0	2	2	5.13	5.71
Automobiles and tow trucks	34	1	1	0	0	1	1	2.56	2.86
Other transport materials	35	1	0	0	0	1	0	2.56	0.00
Production and distribution of electricity, gas and steam	40	1	1	0	0	1	1	2.56	2.86
Building construction	45	1	1	0	0	1	1	2.56	2.86
Postal services and telecommunications	64	2	2	0	0	2	2	5.13	5.71
Financial services	65	8	11	1	1	9	12	23.08	34.29
Insurance and mutual funds	66	0	2	0	0	0	2	0.00	5.71
Information technologies and related	72	1	1	0	0	1	1	2.56	2.86
Other activities and services provided to companies	74	15	8	0	0	15	8	38.46	22.86
Total		38	34	1	1	39	35	100.00	100.00

Regarding the kind of information included in the *Web sites*, we have divided our analysis into Report and Accounts, Summarised Financial Information, Chairman's Statement, Main Events and Management Report. The results are displayed in the following Table:

Table 6: Type of Financial Information in the Web sites

Activity Sector	CAE	Report and Accounts		Total	Summary of Financial Information		Total	Chairman's Statement		Total	Main Events		Total	Management Report		Total
		Yes	No		Yes	No		Yes	No		Yes	No		Yes	No	
Food and beverage industry	15	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (1)	1 (0)	1 (1)
Paper pulp, paper and cardboard industry	21	2 (2)	0 (0)	2 (2)	1 (1)	1 (1)	2 (2)	2 (2)	0 (0)	2 (2)	1 (1)	1 (1)	2 (2)	1 (1)	1 (1)	2 (2)
Chemical products industry	24	1 (0)	2 (2)	3 (2)	3 (2)	0 (0)	3 (2)	2 (0)	1 (2)	3 (2)	1 (0)	2 (2)	3 (2)	1 (0)	2 (2)	3 (2)
Non metallic minerals industry	26	1 (0)	1 (2)	2 (2)	2 (2)	0 (0)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	1 (0)	1 (2)	2 (2)
Automobiles and tow trucks	34	0 (0)	1 (1)	1 (1)	1 (1)	0 (0)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)
Other transport materials	35	0 (0)	1 (0)	1 (0)	1 (0)	0 (0)	1 (0)	0 (0)	1 (0)	1 (0)	1 (0)	0 (0)	1 (0)	0 (0)	1 (0)	1 (0)
Production and distribution of electricity, gas and steam	40	1 (0)	0 (1)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	0 (0)	1 (1)	1 (1)	1 (0)	0 (1)	1 (1)
Building construction	45	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)
Postal services and telecommunications	64	2 (2)	0 (0)	2 (2)	1 (1)	1 (1)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)
Financial services	65	4 (5)	4 (7)	8 (12)	7 (10)	1 (2)	8 (12)	2 (3)	6 (9)	8 (12)	7 (5)	1 (7)	8 (12)	4 (4)	4 (8)	8 (12)
Insurance and mutual funds	66	0 (0)	0 (2)	0 (2)	0 (2)	0 (0)	0 (2)	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)
Information technologies and related	72	1 (0)	0 (1)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (1)	1 (2)	0 (0)	1 (1)	1 (1)	1 (0)	0 (1)	1 (1)
Other activities and services provided to companies	74	8 (2)	7 (6)	15 (8)	8 (7)	7 (1)	15 (8)	6 (0)	9 (7)	15 (7)	7 (2)	8 (6)	15 (8)	11 (2)	4 (6)	15 (8)
Total		21 (13)	17 (22)	38 (35)	27 (30)	11 (5)	38 (35)	17 (10)	21 (25)	38 (35)	20 (11)	18 (24)	38 (35)	23 (11)	15 (24)	38 (35)

( ) Information regarding results obtained in March 2000.

As can be seen in Table 6, there has been a significant increase in the number of companies (from 13 to 21) that present the Report and Accounts, the Message from the President to Shareholders (from 10 to 17), the main events (from 11 to 20) and the Management Report (from 11 to 23).

Regarding the elements of the financial statements, and just as had happened in the IASB study, the Balance Sheet and Income Statement are the most presented, which is not unexpected, given the role these two statements play in understanding the true and fair view of the company's financial and economic situation. It must also be noted that, unlike what is seen in the IASB study, there are a small percentage of companies that present the Cash Flow Statement. Note that, relatively to the first study, there is a greater concern from the companies to disclose their financial statements (see Table 7):

Table 7: Financial Statements (February 2001 and March 2000)

Activity Sector	CAE	Balance Sheet		Total	Income Statement		Total	Income Statement by Cost Area		Total	Cash Flow Statement		Total	Notes to the Accounts		Total
		Yes	No		Yes	No		Yes	No		Yes	No		Yes	No	
Food and beverage industry	15	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)
Paper pulp, paper and cardboard industry	21	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)
Chemical products industry	24	2 (0)	1 (2)	3 (2)	2 (0)	1 (2)	3 (2)	1 (0)	2 (2)	3 (2)	1 (0)	2 (2)	3 (2)	1 (0)	2 (2)	3 (2)
Non metallic minerals industry	26	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	1 (0)	1 (2)	2 (2)
Automobiles and tow trucks	34	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)
Production of other transportation material	35	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)
Production and distribution of electricity, gas and steam	40	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	1 (0)	0 (1)	1 (1)
Building construction	45	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)
Postal services and telecommunications	64	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (1)	0 (1)	2 (2)
Financial services	65	7 (8)	1 (4)	8 (12)	7 (8)	1 (4)	8 (12)	0 (0)	8 (12)	8 (12)	4 (5)	4 (7)	8 (12)	4 (5)	4 (7)	8 (12)
Insurance and mutual funds	66	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)
Information technologies and related	72	1 (0)	0 (1)	1 (1)	1 (0)	0 (1)	1 (1)	0 (0)	1 (1)	1 (1)	1 (0)	0 (1)	1 (1)	1 (1)	0 (1)	1 (2)
Other activities and services provided to companies	74	12 (4)	3 (4)	15 (8)	12 (4)	3 (4)	15 (8)	0 (0)	15 (8)	15 (8)	3 (1)	12 (7)	15 (8)	9 (0)	6 (7)	15 (7)
Total		30 (21)	8 (14)	38 (35)	30 (21)	8 (14)	38 (35)	4 (4)	34 (31)	38 (35)	13 (9)	25 (26)	38 (35)	20 (10)	18 (25)	38 (35)

( ) Information regarding results obtained in March 2000.

- The Balance Sheet and Income Statement are presented by 30 companies (21 in March 2000);
- The Notes to Financial Statements are presented by 20 companies (only 10 in March 2000);
- The Cash Flow Statement is presented only in 13 companies (9 in March 2000).

In Table 8 it is possible to verify, on the one hand, the small number of companies that present the Legal Certification of Accounts and, on the other hand, the importance of the Statutory Auditor's Report since, of all the elements, it is that which is made available by a larger number of companies, namely in the sectors of financial intermediation and services:

Table 8: Account Certification Elements

Activity Sector	CAE	Statutory Auditors Report		Total	External Auditors Report		Total	Report and Opinion of Statutory Audit Board		Total
		Yes	No		Yes	No		Yes	No	
Food and beverage industry	15	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)	0 (1)	1 (0)	1 (1)
Paper pulp, paper and cardboard industry	21	1 (1)	1 (1)	2 (2)	1 (1)	1 (1)	2 (2)	0 (0)	2 (2)	2 (2)
Chemical products industry	24	1 (0)	2 (2)	3 (2)	1 (0)	2 (2)	3 (2)	1 (0)	2 (2)	3 (2)
Non metallic minerals industry	26	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	2 (2)
Automobiles and tow trucks	34	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)
Production of other transportation material	35	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)
Production and distribution of electricity, gas and steam	40	1 (0)	0 (1)	1 (1)	1 (0)	0 (1)	1 (1)	1 (0)	0 (1)	1 (1)
Building construction	45	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)	1 (1)	0 (0)	1 (1)
Postal services and telecommunications	64	2 (2)	0 (0)	2 (2)	2 (2)	0 (0)	2 (2)	1 (1)	1 (1)	2 (2)
Financial services	65	4 (6)	4 (6)	8 (12)	3 (5)	5 (7)	8 (12)	4 (4)	4 (8)	8 (12)
Insurance and mutual funds	66	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)	0 (0)	0 (2)	0 (2)
Information technologies and related	72	1 (0)	0 (1)	1 (1)	1 (0)	0 (1)	1 (1)	1 (0)	0 (1)	1 (1)
Other activities and services provided to companies	74	8 (1)	7 (7)	15 (8)	5 (1)	10 (7)	15 (8)	7 (1)	8 (7)	15 (8)
Total		19 (12)	19 (23)	38 (35)	15 (11)	23 (24)	38 (35)	16 (8)	22 (27)	38 (35)

( ) Information regarding results obtained in March 2000.

In an attempt to understand the degree of globalisation of the financial information provided by the Portuguese companies, we have also studied languages in which the *Web sites* with financial information are presented. In Table 9, it is possible to observe that, unlike what happened in the study performed in March 2000 when 51.43% of the financial information was presented in Portuguese and English, only 47.37% of the financial information is presented in Portuguese and English and we can verify a significant tendency to the presentation of information in Portuguese.

Table 9: Languages of the Web sites/Web sites with financial information and Financial Statements

	Web Sites	%		Web Sites with Financial Information	%		Financial Statements	%	
		Feb. 2001	Mar. 2000		Feb. 2001	Mar. 2000		Feb. 2001	Mar 2000
Portuguese	31 (23)	53,45	46,00	18 (15)	47,37	42,86	17 (15)	44,74	42,86
English	1 (2)	1,72	4,00	1 (0)	2,63	0,00	1 (0)	2,63	0,00
Portuguese/English	22 (23)	37,93	46,00	16 (18)	42,11	51,43	18 (19)	47,37	54,29
Portuguese/English/Spanish	2 (0)	3,45	0.00	2 (0)	5,26	0,00	1 (0)	2,63	0,00
Portuguese/English/French/Spanish	2 (2)	3,45	4,00	1 (2)	2,63	5,71	1 (1)	2,63	2,86
Total	58 (50)	100,00	100,00	38 (35)	100,00	100,00	38 (35)	100,00	100,00

( ) Information regarding results obtained in March 2000.

Hypotheses

Besides the description of the kind of information available on the *Web sites*, we have tried, after an analysis of empirical studies performed in other countries, to test the relationship between the company size and the extent of the financial information disclosed on the Internet. Thus, we assessed the following hypotheses:

$H0_1$ – There is no significant difference between company size and the extent of financial disclosure on the Internet.

H_1 – There is significant difference between company size and the extent of financial disclosure on the Internet.

According to Foster (1986, p. 44) company size is considered the most significant variable when it is intended to analyse differences between companies in what concerns its financial information disclosure politics. Apart from that, agency theory suggests that the bigger the company is the bigger agency costs are (Jensen and Meckling: 1976). This way, it seems logical that regarding voluntary disclosure interests, the bigger companies have other incentives than the smaller ones.

In order to determine a company size, like Marston and Leow (1998), we selected four variables, namely, turnover, number of employees, total assets and company market value.

To assess turnover, we have used data from the individual accounts for economic year of 1999 and 2000 that, in the case of companies corresponds to selling total and service rendering; for the Financial Institutions corresponds to the banking product, and for insurance companies corresponds to the premiums. Data concerning total assets and number of workers were obtained from companies' individual accounts, for 1999 and 2000. Finally, the market value was reached having as reference point the last quotation of companies stocks in 1999 and 2000.

H02 – There is no significant difference between industry type and the extent of financial disclosure on the Internet;

H2 - There is significant difference between industry type and the extent of financial disclosure on the Internet.

In Verrechia's (1983) opinion, political costs and those cost consequences of competition disadvantages vary according to industry type. Consequently, the fact that a company is more or less connected to sectors with considerable investments in research or connected to high technologies may influence voluntary information disclosure.

This hypothesis relies on work performed by Lymer (1997) and Wildstrom (1997), who verified a relationship between information disclosure on the Internet and activity sector.

$H0_3$ – There is no significant difference between financial disclosure of overseas listed companies and the companies listed in the Portuguese market;

H_3 – There are differences between financial disclosure of overseas listed companies and the companies listed in the Portuguese market;

For Meek and Gray (1989), overseas listed companies face additional pressure from the international capital markets and disclose more information.

Results
Hypothesis Test and Correlation Coefficient

In order to verify the linear relation between company size variables we proceed to determination of correlation coefficients.

Table 10 – Correlation between different size variables

	Turnover		Number of Employees		Total Assets	
	2001	**2000**	**2001**	**2000**	**2001**	**2000**
Number of Employees	0.382	0.426				
Total Assets	0.301	0.569	0.707	0.302		
Market Value	0.598	0.823	0.570	0.513	0.613	0.565

From Table 10 it is possible to ascertain that the results are in conformity with the studies performed by Marston and Leow (1998) and Craven and Marston (1999), since the turnover and market value are strongly correlated (0,823), for de year 2000, while the variables number of employees and total assets are less related with just 0.302. However, for 2001, number of employees and total assets are variables more closely related (0.707) while turnover and total assets are the less related (0.301).

Since our sample is of small dimension, we decided to use the non-parametric method *Kruskal-Wallis* to test if there are significant differences between the medium values of the several size variables concerning the amount of financial information disclosure through companies *Web sites*, having determined 5% as significance level.

Table 11 – Testing company size against existence or not of Web sites

	Turnover		Total Assets		Number of Employees		Market Value	
	2001	**2000**	**2001**	**2000**	**2001**	**2000**	**2001**	**2000**
Kruskall- Wallis	4.990	10.630	5.577	11.320	0.082	5.002	9.645	4.318
Degrees of Freedom	1	1	1	1	1	1	1	1
Levels of Significance	0.025	0.001	0.018	0.001	0.943	0.067	0.003	0.098

Table 11 shows, for a significance level of 5% turnover and total assets variables are correlating in a positive way with the existence or non-existence of *Web site* (rejecting $H0_1$). Additionally, we have noticed the opposite for the remaining variables. Concerning year 2001, the null hypothesis is rejected except for the variable number of employees.

Table 12 – Testing company size against the existence or not of financial information on the Web sites

	Turnover		Total Assets		Number of Employees		Market Value	
	2001	2000	2001	2000	2001	2000	2001	2000
Kruskall- Wallis	1.02	4.28	3.92	8.54	1.21	4.89	6.43	8.42
Degrees of Freedom	1	1	1	1	1	1	1	1
Levels of Significance	0.312	0.038	0.048	0.003	0.270	0.027	0.011	0.004

Table 12 tests, for the year 2000 and 2001, the size variables relating to the existence or not of financial information on the companies *Web sites*. For year 2000, and similarly to the previous case, also in this case the null hypothesis is rejected. However, regarding 2001, this is not verified for turnover and number of employees variables.

Relating size variables with detailed or summarised financial information, Table 13 shows that for year 2000 we accept the null hypothesis.

Table 13 – Testing company size against degree of financial information disclosure on websites with Financial Information

	Turnover		Total Assets		Number of Employees		Market Value	
	2001	2000	2001	2000	2001	2000	2001	2000
Kruskall- Wallis	0.54	2.25	5.73	0.51	1.43	2.79	7.72	2.25
Degrees of Freedom	1	1	1	1	1	1	1	1
Levels of Significance	0.460	0.133	0.017	0.473	0.231	0.094	0.005	0.133

In what concerns year 2001 the null hypothesis is rejected only for Total assets and Market Value variables. This means, the higher the market value and total assets the higher is the propensity for disclosure detail financial information.

Comparing the results with those achieved by Marston and Leow (1998) we have observed that we have reached a much higher significance degree in all the tests performed. These results are approaching very much to those achieved by Craven and Marston (1999).

In order to determine if there are significant differences between industry type and the existence of *Web site*, financial information and extension of financial information variables, we perform the chi-square test (χ^2).

Contrarily to what was done for the *Web sites* content analysis and, similarly to Holm (2000), we decided to aggregate the different companies by the following three activities: production, financial, trade and servicing.

This way, we defined as null hypothesis the absence of difference in financial information disclosure in the Internet per activity.

Table 14 – Testing existence of Web site, financial information disclosures on Web sites and extension of that information by type of activity

	Web site		Financial Information		Extension of Financial Information	
	2001	**2000**	**2001**	**2000**	**2001**	**2000**
Chi-Square (χ^2)	7.33	11.33	0.28	4.51	1.55	1.29
Degrees of Freedom	4	6	2	3	2	3
Levels of Significance	0.119	0.079	0.868	0.211	0.461	0.730

As Marston and Leow (1998) and Craven and Marston (1999), and from the Table 14 analysis, we conclude that there are no relevant differences in the financial information degree per activity sector, with exceptions of variable *Web site* where it was accepted that there are significant difference in the *Web sites* found per activity (using a significance level of 10%). However, this result is not observed in the year 2001.

Finally, in order to verify id there are significant differences between financial disclosure of overseas listed companies and the companies listed in the Portuguese stock market, once again we performed the chi-square test (χ^2) for both years. However, we have decided to exclude to present hereby the results achieved, since the assumptions of the chi-square test (χ^2) were violated.

In order to validate the results achieved previously regarding the influence of the company size and to enhance our study with a deeper approach, we have decided to perform a multivariate analysis (MANOVA). This way, we intent to settle on which company size variables, in each situation, carry out a fundamental role in our study. It is important to point out that due to the data resulting from the previous study we choose not to make any more tests for the activity sector and for companies listed in foreign stock markets. Finally, it is important to mention that all the different dimension variables were given a logarithm.

Firstly, we verify the fulfilment of MANOVA assumptions, to confirm the independence of the observations, the random sampling, and multivariate normality as well as the homogeneity of covariance matrices. The results were the following:

Table 15 – Contribution of all variables for the existence or not of Web site

	Wilks'Lambda	
	2001	**2000**
Value	0,84	0,79
Levels of Significance	0,031	**0,004**

From the analysis of table 15 it is possible to conclude that the discriminate power of the variables is much bigger in 2000 than in 2001, given that the degree of significance of the *Wilks'Lambda* is closer to 0. Nevertheless, and since both are inferior to 5%, we can state such contribution, rejecting thus the null hypothesis, i.e., that there is a significant difference between company dimension and the existence of *Web site*.

Trying to analyse the contribution of each one of the dimension variables, we have performed the *Tests of Between Subjects Effects*.

Table 16 – Contribution of each variable to the existence or not of Web site

	Turnover		**Total Assets**		**Number of Employees**		**Market Value**	
	2001	**2000**	**2001**	**2000**	**2001**	**2000**	**2001**	**2000**
Partial Eta Squared	0,013	0,106	0,061	0,175	0,002	0,038	0,145	0,092
Degrees of Freedom	1	1	1	1	1	1	1	1
Levels of Significance	0,362	**0,005**	0,045	**0,000**	0,709	0,100	**0,002**	0,009

Table 16 shows that for year 2000, the major contributions are made by total assets, turnover and market value variables, although such contribution is reduced since *Partial Eta Squared* is considerable low. For year 2001, "turnover" and "number of employees" variables are not significant.

Finally, it is possible verify from the mean analysis of year 2000 (table 17), that the size variables, turnover and total assets and number of employees present the higher values, while for year 2001, the variable number of employees is replaced by the market valuevariable.

Table 17 – Comparison of groups

				95% Confidence Interval			
	Website	**Mean**		**Lower Bound**		**Upper Bound**	
		2001	**2000**	**2001**	**2000**	**2001**	**2000**
Turnover	No	14,33	21,97	11,93	21,16	16,73	22,78
	Yes	15,57	23,40	14,32	22,83	16,82	23,97
Total Assets	No	16,66	23,59	15,49	22,80	17,84	24,38
	Yes	18,02	25,46	17,41	24,90	18,63	26,01
Number of Employees	No	5,26	23,00	4,01	22,13	6,52	23,87
	Yes	5,00	24,42	4,35	23,81	5,65	25,04
Market Value	No	15,56	5,34	14,41	4,46	16,71	6,22
	Yes	17,69	6,24	17,09	5,61	18,28	6,86

After, we have performed the same test in order to verify if the previously indicated variables

influence in the disclosure of financial information on the *Web sites*. So, after verified the MANOVA assumptions, the test *Wilks'Lambda* was performed, and it was concluded the non-existence of any difference between companies with financial information and companies without financial information on the *Web sites*, so the null hypothesis is not rejected.

Table 18 – Contribution of each variable to the existence or not of financial information on the Web sites

	Wilks'Lambda	
	2001	**2000**
Value	0,852	0,851
Levels of Significance	0,104	0,130

Under these circumstances, and since the remaining tests present the same direction, we cannot say that there is a relationship between size and the availability of financial information.

Verifying once more MANOVA assumptions, we have analysed the relationship between company size and the type (detailed or summarized) of information available through *Web sites*.

Table 19 – Contribution of all variables to the extension of financial information on Websites with financial information

	Wilks'Lambda	
	2001	**2000**
Value	0,707	0,851
Levels of Significance	**0,019**	0,130

Although regarding year 2000 the degree of significance of *Wilks'Lambda* says that there is no difference between company size and the type of financial information disclosure, for the year 2001, the hypothesis null is rejected because the degree of significance is reaching 0.

Using Tests of Between Subjects Effects we aim to know the contribution of each of the dimension variables. The results achieved were as follow:

Table 20 - Contribution of each variable to the extension of financial information on Websites with financial information

	Turnover		Total assets		Number of Employees		Market Value	
	2001	2000	2001	2000	2001	2000	2001	2000
Partial Eta Squared	0,000	0,082	0,126	0,141	0,045	0,078	0,220	0,106
Degrees of Freedom	1	1	1	1	1	1	1	1
Levels of Significance	0,904	0,049	0,029	0,009	0,201	0,054	0,003	0,024

In 2001, and accordingly to the results obtained in the test *Wilks' Lambda*, it is possible to infer that total assets and the market value are the more contribution variables for the information disclosure on the *Web sites*, although such contribution is also reduced due to the low value of *Partial Eta Squared*.

CONCLUSIONS

The "Web" can be very soon the main way to report financial information. Apparently we are changing from the financial reporting almost exclusively in paper another way almost exclusively electronic. In fact, more and more companies place financial information on the Internet.

In Portugal, we concluded that companies are starting to face positively this new way of financial reporting. As we saw through the analysis of period from March 2000 to February 2001, each time more companies have "Websites" and the amount of account information available is growing at a good rhythm. Nevertheless, financial reporting is still behind the desirable, as financial information presented on Web sites does not even corresponds, in the great majority, to information available in the traditional format.

In a similar way to other countries, there is a positive correlation between company size and the existence of Web site and the company size and the financial information disclosed. Concerning the hypotheses test performed, we notice that in a similar way to other countries, there is a positive correlation between company size and the existence of Web sites. In relation to the effect of each one of the variables, we can conclude that, although each contribution is reduced, total assets and turnover are, for 2000 year, the most important variables for the decision to have or not Web sites. For 2001 only total assets and market value variables were noted, however the contributions are very low.

About the influence of company size on financial information disclosed we can state that although the results from *Kruskall- Wallis* test allow us to reject null hypothesis, with multivariate analysis we cannot support that conclusion, so we cannot conclude that there is a significant difference between company size and financial information.

Concerning the analysis about the relationship between company size and the extension of financial information disclosed we only could reject null hypothesis for 2001 year where total assets and market value are the variables that more contributes for the information disclosure, although such contributions are also reduced.

Due to limitations ensuing from the reduced number of companies listed and the small number of companies listed in overseas markets, it was not possible to prove the fact that a company listed

internationally influences positively the disclosure of Financial Information on the Internet.

Artigo recebido em 25.03.2002. Aprovado em 30.05.2003

References

COMISSÃO DE MERCADOS DE VALORES MOBILIÁRIOS, "*Entendimento e Recomendações da CMVM Sobre a Utilização da Internet*". Available at htpp:// www.cmvm.pt/legislacao_Publicacoes/recomendacoes_internet.htm1, 2000.

CRAVEN, B. M. and Marston, C. L. (1999). "Financial reporting on the Internet by leading UK companies". *European Accounting Review.* Vol. 8 (2): 321-333.

DELLER, D.; Stubenrath, M. and Weber, C. (1999). "*Investor Relations and the Internet: Background, Potential Application and the Evidence from USA, UK and Germany*". Paper presented at the 21st Annual Congress of the European Accounting Association. Antwerp. Belgium.

FINANCIAL ACCOUNTING STANDARDS BOARD, "*Electronic Distribution of Business Reporting Information*", Business Reporting Research Project, http://www.fasb.org/, 31 de Janeiro de 2000.

FISHER, R.; Laswad, F. and Oyelere, P. (2000). "Financial Reporting on the Internet". *Chartered Accountants Journal*. April: 68-72.

FLYNN, G. and Gowthorpe, C. (1997). "*Volunteering financial data on the World Wide Web. A study financial reporting from a Stakeholder Perspective*". Paper presented at the First Financial Reporting and Business Communication Conference. Cardiff. UK.

FOSTER, George. (1986). *Financial Statements Analysis*. Englewood Cliffs, N. J.: Prentice Hall.

GOWTHORPE, C. And Amat, O. (1999). "External Reporting of Accounting and Financial Information via the Internet in Spain". *European Accounting Review*. Vol. 8 (2).

GRAY, G. and Debreceny, R. S. (1997). "*Corporate Reporting on the Internet: Opportunities and Challenges*". Paper presented at the 17th Asian-Pacific Conference on International Accounting Issues. Bangkok.

HASSAN, S.; Jaffar, N. and Johl, S. (1999). "*Financial Reporting on the Internet by Malaysian Companies: Perceptions and Practices*". Paper presented at the 3rd Annual Financial Reporting and Business Communication Conference. Cardiff. UK.

HEDLIN, P. (1999). "The Internet as a Vehicle for Investor Information; the Swedish Case". *European Accounting Review*. Vol. 8 (2): 373-381.

HOLM, C. (20009. "*Financial reporting on the Internet – An Examination Across Industries and Company Size*". Paper presented at 23rd annual Congress of the European Accounting Association. Munich. Germany.

INTERNATIONAL ACCOUNTING STANDARDS COMMITTEE (1999). "*Study of Business Reporting on the Internet*." http://www.iasc.org.uk/news/cen8_076.htm.

JENSEN, M. and Meckling, W. H. (1976). "Theory of the firm: Managerial behaviour, agency costs and ownership structure." *Journal of Financial Economics*. October: 305-360.

LOUWERS, T. J.; Pasewark, W. R. ; Typpo, E. W. (1996). "The Internet: Changing the Way Corporations Tell Their Story". *CPA Journal*. Vol. 66 (11): 24 – 28.

LYMER, A. and Tallberg, A. (1997). "*Corporate Reporting and the Internet – A Survey and Commentary on the Use of the WWW in Corporate Reporting in the UK and Finland"*. Paper presented at 20th Annual Conference of The European Accounting Association. Graz. Austria.

LYMER, A. (1997). "*The Use of the Internet in Company Reporting: A Survey and Commentary on the Use of the WWW in Corporate Reporting in the UK*". British Accounting Association Annual Conference, Birmingham, UK.

MARSTON, C. and Leow, C. Y. (1998). "*Financial reporting on the Internet by leading UK companies*". Paper presented at 21st Annual Congress of The European Accounting Association". Antwerp. Belgium.

MEEK, Gary and Gray, Sidney J. (1989). "Globalization of stock markets and foreign listing requirements. Voluntary disclosures by continental European Companies listed on the London Stock Exchange". *Journal of International Business Studies*. Vol. 20 (2): 315–338.

MOLERO LOPEZ, J. J.; Prado Martín, A.; Sevillano Martin, F. J. (1999). "*The Presentation of Financial Statements through the Internet: Analysis of the Most Significant Companies in Spain*". Paper presented at the 22nd Annual Congress of The European Accounting Association. Bordeaux. France.

MOLERO, Prado e Sevillano (1999). "*The Presentation of Financial Statements through the Internet: Analysis of the Most Significant Companies in Spain*". Paper presented at the 22nd Annual Congress of European Accounting Association. Bordeaux. France.

PETRAVICK, S. and Gillett, J. (1996)."Financial Reporting on the World Wide Web". *Management Accounting (*USA), 78 (5): 26-29.

PIRCHEGGER, B.; Schader, H. and Wagenhofer, A. (1999). "Financial Information on the Internet. A survey of the Homepages of Austrian Companies". *European Accounting Review*. Vol. 8 (2): 383-395.

SÁNCHEZ BARRIOS, M. (1999). "*La memoria como cuenta anual. Un estudio empírico*". Tesis Doctoral, director: Bonsón Ponte, E. Capítulo 4: La memoria en el ciberespacio, Universidad de Sevilla.

VERRECCHIA, R. (1983). "Discretionary disclosure". *Journal of Accounting and Economics.* December: 179-194.