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Bridging the gap between disclosure and use of intellectual capital information

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Abstract

Purpose – The objective of this paper is to examine the information regarding intellectual capital disclosed to financial analysts and to study if this data is finally considered in their decision-making process.

Design/methodology/approach – The database consists of 257 reports of presentations held by Spanish companies and 217 analyst reports issued during 2000 and 2001. The paper shows that information related to intellectual capital is widely reported to financial analysts and that they use it in their decision making process.

Findings – The findings show that some of the items most frequently disclosed in the meetings and considered in valuation tasks are related to coherence and credibility of strategy, alliances, or leadership. Nevertheless, the comparison shows that the disclosure on intangibles is higher than the level of this information included in the analyst reports. This paper contributes to three streams of literature. The first is the literature on intangible assets, to which we contribute by providing evidence of its disclosure through direct contacts. The second is the literature on analyst valuation, to which we contribute by increasing understanding of the role of intellectual capital in the decision-making process of financial analysts. Finally, by comparing the results, we test the differences in the focus on intangibles between the main parties involved in the information flow: the discloser and the user of the information.

Originality/value – The analysis of non-financial information currently reported in private channels and used by financial analysis may be of interest to policymakers or regulators in the setting of mandatory disclosure requirements regarding intangibles

Keywords Financial analysis, Disclosure, Intangible assets, Intellectual capital

Paper type Research paper

Introduction

Increasing competition, new business sectors and technological developments have led to the decreasing relevance of financial statements and the increasing relevance of narrative reporting (Lev and Zarowin, 1999; Breton and Taffler, 2001). The capital market is requesting more reliable information regarding knowledge resources in a company, such as risk factors, strategic direction, managerial qualities, innovatory skills, experience, and integrity. These variables are the key drivers of value creation

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and most of them are usually considered intangibles or intellectual capital of the firm[1].

Despite the growing importance of intellectual capital, users of financial statements have an incomplete picture of them due to identification, recognition and measurement problems. As a consequence, an increasing number of companies are reporting their intellectual capital indicators to the investor community through direct contacts. The perceived limitations of public channels, the nature of the information, and corporate preferences for private disclosure play a fundamental role in this decision (Holland, 1997, 2001).

Direct contacts, which include on-site visits, management presentations, conference calls or phone calls, give financial analysts the opportunity to obtain timely and relevant information about qualitative factors such as quality of management or strategic credibility. Academic studies show that analysts obtain a large proportion of information through these sources (Lee and Tweedie, 1981; Chang and Most, 1985; Arnold *et al.*, 1984; Olbert, 1992; Pike *et al.*, 1993; Breton and Taffler, 1995)[2]. These studies reveal that the information related to intellectual capital is recognized by financial analysts as leading indicator of future performance, as it is used to provide earning forecasts and to justify recommendations to investors.

In order to explore such questions further, the objective of this paper is to analyse if the information regarding intellectual capital disclosed in private contacts is relevant for financial analysts when they take their investment decisions. In summary, the paper will be concerned with the Spanish firms' disclosure practices on intangibles by distinguishing between two dimensions of the information system: the discloser and the user of the information. This study expands a previous one (García Meca *et al.*, 2004) where the authors analyse the explanatory factors of intellectual capital information reported in presentations to analysts. Figure 1 shows the graphical description of the study with the dashed line representing the path of information examined.

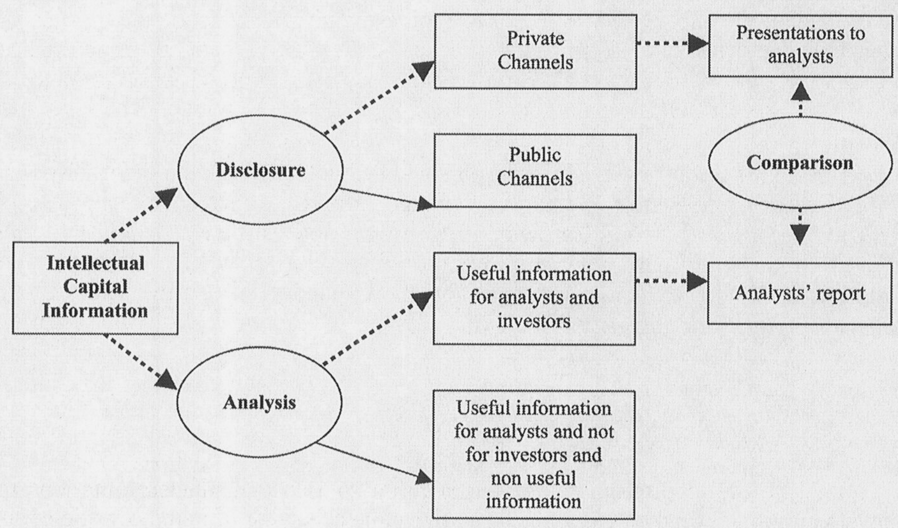

Figure 1.
Study description

Briefly, the study evidences that firms use their meetings with analysts as a source of voluntarily disclosing data on intangibles, and that financial analysts use it to provide recommendations. The empirical results indicate that in the meetings firms usually reveal information about their strategy, customers, and processes, which also appear to be relevant when financial analysts consider information regarding intangibles in their valuation reports.

This paper contributes to three streams of literature. The first is the literature on intangible assets, to which we contribute by providing evidence of its disclosure by managers. The second is the literature on analyst valuation, to which we contribute by increasing understanding of the role of intellectual capital in the decision-making process of financial analysts. Finally, by comparing the results we can test the differences in the focus between the main parties involved in the information flow with respect to intellectual capital information, and examine which items disclosed by firms are not usually put forward as important by analysts to justify their investment decisions.

Empirical study

The main research question posed in this essay is to examine the information related to intellectual capital reported to analysts, comparing if this data is finally considered by financial analysts in their decision-making process. The focus is both on the extent of overall disclosure/use and on the disclosure/use of each category of intangibles.

Presentations to analyst and financial analyst reports are the two sources selected to examine the relevance of intangibles. The reason to focus on presentations to analysts was due to findings that both investors and financial analysts regard private channels to be the most important source to obtain non-financial data. Presentations to analysts provide a clear vision of the key parts of complex published documents, involve a less formal atmosphere and much deeper analysis than public channels (Marston, 1996; Holland, 1997). As a result, they are a means of providing data on areas such as human capital, innovation, or customers (Tasker, 1998). On the other hand, the choice to examine analyst reports was due to the limited empirical evidence on the use of intellectual capital information in valuation tasks. Analyst reports are structured to include basic information about a company and the evaluation of that information, and contain both recommendations and supporting arguments. As a result, these reports reflect the essential information that analysts consider most relevant to investors' recommendations and also reflect their beliefs about the intrinsic values of stocks.

The database consists of 257 reports of presentations held by Spanish companies listed in the Madrid Stock Exchange, during two time periods: 2000 and 2001. We obtained the data from the web page of the Spanish National Commission of the Stock Exchange (see García Meca *et al.*, 2004). On the other hand, we also use 217 analyst reports from companies listed in the Spanish Capital Market during 2000 and 2001. The sample was obtained with the help of the Spanish Institute of Financial Analysts, which facilitated contacts with the top-ranked brokerage houses in Spain. The houses were Morgan Stanley, ABN AMRO, Ahorro Corporación, JP Morgan, Merrill Lynch, Urquijo Bolsa and Banesto Bolsa. The information of the sample by business sectors is shown in Table I.

To analyse the intellectual capital information contained in the presentations to analysts and in the analyst reports we use the same check-list of items considered as

Table I.
Sample by business sectors

Industry	Presentations	Analyst reports
Financial services	48	34
Utilities	33	38
Food	20	8
Construction	15	34
Communication	16	11
Petroleoum/chemistry	17	11
Metallurgy	11	15
Technology	32	36
Others	65	30
Total	257	217

communicable by the firm and relevant to value it. The choice of items has partly been made on the basis of literature about disclosure (Cooke, 1989), literature about intellectual capital (Sveiby, 1997; Bukh *et al.*, 2001), value relevance studies (Ernst & Young, 2000), and disclosures recommended by the Financial Accounting Standard Board (FASB, 2001). In our study, 69 items have been considered, and according to Bukh *et al.* (2001) the items have been divided into six different categories or groups:

(1) human capital (HC);

(2) customers (CUS);

(3) processes (PRO);

(4) technology (TEC);

(5) innovation, research and development (IRD); and

(6) strategy (ST).

In the present study we use a disclosure index (DI) which reports on the percentage of intellectual capital items disclosed in the presentations to financial analysts. Likely, a general or non-specific index called analyst index (AI) is used to measure the extent of intellectual capital items included in the analyst reports. In order to further study the differences in the disclosure and use of the information, we also calculate the score over each category as a whole. Thus, we obtained what we called sub-indexes, which are ratios of actual scores awarded to the maximum score in the group considered. Consequently, we study sub-indexes of disclosure (DI) and analyst use (AI) regarding human capital, customers, processes, technology, innovation, research and development, and strategy. Figure 2 shows the different indexes used to measure the disclosure and use of intellectual capital information.

Empirical results

If we analyse the extent of intellectual capital information revealed in analyst meetings (DI), we find that firms disclosed, on average, 24.51 per cent of the total disclosure items (see Table II). Our results likewise demonstrate that the extent to which information about intangibles is finally considered to provide earnings forecasts and buy/hold/sell recommendations to investors is not overwhelming; the average value of the index (AI) per report is 13.8 per cent of the total items, quite lower than the information reported in the meetings.

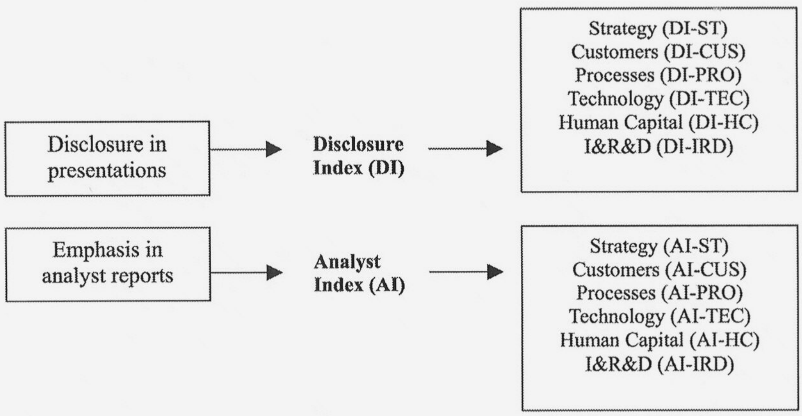

Figure 2.
Measuring disclosure and analyst use of intangibles

Table II.
Descriptive statistics of disclosure index and analyst index

Indexes	Mean	SD	Kurtosis	Skewness	Min	Max	N
DI	24.515	10.1875	−0.0648	0.276	2.845	52.615	257
AI	13.867	7.768	3.083	1.477	2.817	49.275	217

This considerable difference between the extent and use of intangibles is mainly due to the different objectives of both sources. Presentations to analysts allow firms to explain what has happened, clarify the events that are reflected in the financial statements and discuss in what direction the company wants to go in the future. These information sources also play an important role in improving the company's image and reputation. Moreover, managers are likely to increase the levels of voluntary disclosure due to the reduction of the cost of capital (Botosan, 1997; Leuz and Verrecchia, 2000) and information asymmetry (Lev, 1992). The higher levels of disclosure also reduce transaction costs for investors, the uncertainty regarding the distribution of results, increases the share performance (Healey *et al.*, 1999) and produces a higher stock price correlation with future earnings (Gelb and Zarowin, 2000). These incentives do not affect the level of information contained in analyst reports, which only include basic information about a company. Since analyst reports only reflect the information that analysts consider most relevant to investors' recommendations, we do not know what information analysts used but did not report. Neither do we know what information was unavailable that might have been useful to analysts. Moreover, in the limited space of their reports, financial analysts only include the information they regard as relevant to support the investment recommendations they supply the investor with (Arvidsson, 2003).

Although the level of information related to intangibles is different between presentations and analyst reports, the focus of both sources is on the same categories. Almost the 100 per cent of the presentations analysed include items regarding strategy (98.84 per cent of the meetings include some item from this group), processes (92.61 per cent) and customers (91.83 per cent) (see Figure 3). In a similar way, analyst reports usually relied on data about strategy (100 per cent of analyst reports), customers (65.9

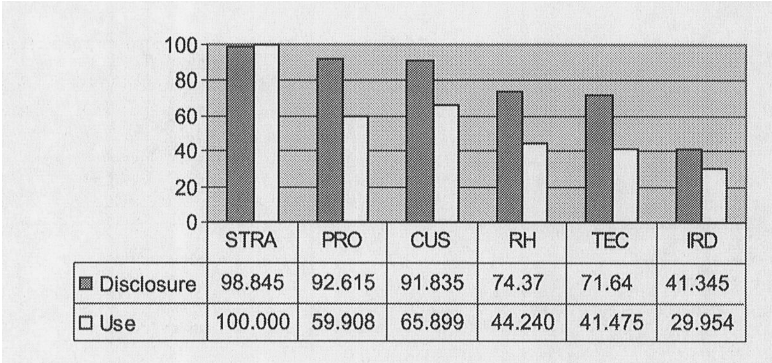

Figure 3. Frequency of disclosure and use by groups

per cent of reports) and processes (59.9 per cent of reports). The items related to innovation, research and development are the least disclosed by firms and also the slightest considered by financial analysts in their investment decisions. The above results are logical given that when a company discloses much information regarding specific categories of intangibles the availability of that information is higher for financial analysts.

In order to study the different groups of information, we use sub-indexes of intellectual capital according to the categories of items included in both disclosure indexes (DI and AI). These sub-indexes are ratios of actual scores awarded to the maximum score in the group considered. Consistent with Meek *et al.* (1995), Ferguson *et al.* (2002), Bukh *et al.* (2001) and Arvidsson (2003), we obtain that disclosure by intellectual capital groups varies considerably (see Table III). In presentations, firms revealed, on average, 43.8 per cent of strategy items (DI-ST), 9.43 per cent of human capital items (DI-HC) and 8.975 per cent of innovation, research and development items (DI-IRD). According to previous literature (Marston, 1996; Larrán Jorge, 2001), items about innovation, research and development are the least reported by firms. The low ranking of human capital indicators is also shown in the studies of Mavrinac and Siesfeld (1997) and Eccles and Mavrinac (1995).

Table III. Sub-indexes of disclosure and use of intellectual capital

	Mean	Median	St. D.
Disclosure			
DI-ST	43.805	42.61	17.015
DI-TEC	35.845	25	29.515
DI-PRO	27.05	27.775	15.685
DI-CUS	22.085	19.225	15.35
DI-HC	9.43	10.52	8.35
DI-IRD	8.975	7.14	14.86
Analyst use			
AI-ST	30.376	27.778	14.926
AI-TEC	15.323	0	22.145
AI-PRO	12.505	11.111	13.272
AI-CUS	9.465	7.692	10.101
AI-HC	4.05	0	6.04
AI-IRD	5.135	0	9.22

On the other hand, analysts' reports contain, on average, 30.37 per cent of strategy items (AI-ST) but only 4.05 per cent of human capital items (AI-HC) and 5.13 per cent of innovation, research and development items (AI-IRD). The risk of releasing information which could be beneficial to competitors would explain the paucity of disclosure from the innovation category and, consequently, its lack of usage by financial analysts. Although research and development is of obvious relevance for future cash generation, according to Barker (1999), the predicted payoffs are so unreliable that they are one of the least useful information sources for financial analysts. The low usage of human capital items is in accordance with surveys (Eccles and Mavrinac, 1995; Dempsey *et al.*, 1999) where employee measures were, on average, ranked as being "of little use" by financial analysts.

Analysing the information content in each category, Tables IV–IX show the items most frequently disclosed in the presentations to analysts (DI) and those usually included in the analyst reports (AI).

Items	DI	AI
New products and technology	90.72	64.055
Investment in new business	84.495	74.194
Business vision; objectives and consistency of strategy	89.495	70.507
Leadership and brands	73.975	52.995
Acquisitions	64.665	59.908
Strategic alliances, agreements	63.45	49.77
Network of suppliers and distributors	49.91	20.737
Quality of products	48.665	18.433
Information about marketing	46.33	25.806
Price policy	42.86	40.092
Organisational structure	41.655	14.286
Market share by segment/product	43.9625	40.092
Shareholders structure	22.635	23.041
Relative market share to competitors	19.92	7.373
Best practise	9.355	1.382
Corporative culture	8.585	1.382
Market share	8.57	0.922
Environmental investments	7.02	3.922
Social responsibility	5.08	0

Table IV. Disclosure and use of strategy

Items	DI	AI
Efficiency	65.795	33.641
Installed capacity	62.655	34.101
Business model	38.655	14.747
Utilisation of energy and other input goods	30.015	20.765
Information and communication within the company	19.105	4.147
Efforts related to the working environment	7.405	0.922
External and internal failures	3.125	0
Environmental policies	1.97	1.307
Litigations	2.705	2.765

Table V. Disclosure and use of processes

Table VI. Disclosure and use of customers

Items	DI	AI
Sales breakdown by product or business	63.91	23.963
Customers breakdown by product or business	45.615	35.945
New customers	39.325	23.041
Customer relationships	30.425	15.207
Customers engagement	25.715	4.147
Sales breakdown by customers	24.5125	2.765
Web customers	19.475	6.912
Value added by customer or business	12.065	2.765
Dependence on key customers	11.27	4.608
Education/training of customers	3.545	0.922
Production by customer	6.205	0.922
Customers by employee	3.12	0.922
Repurchase	1.945	0.922

Table VII. Disclosure and use of technology

Items	DI	AI
IT systems	54.93	25.806
Web transactions	42.125	10.599
Investment in technology	28.475	17.972
Number of seen web pages, visits to the web	17.86	6.912

Table VIII. Disclosure and use of human capital

Items	DI	AI
Management experience	32.745	14.747
Change in number of employees	32.29	16.59
Breakdown of employees by age, experience or department	28.445	4.608
Management quality	19.475	22.581
Incentive systems	14.845	0.922
Education and training policy	12.095	0.461
Experience of employees	10.545	2.304
Production by employee	10.12	0.922
Shares owned by employees or managers	4.3	2.765
Remuneration systems	1.575	0
Recruitment policy	34.875	3.687
Job rotation opportunities	0.785	0.461
Dependence on key employees	0.785	0
Agreements with employees	2.717	2.765
Pensions	0.395	2.304
Career opportunities	0.793	0
Income by employee	3.855	1.382
Value added per employee	0	0.461
Insurance policies	0	0

Strategy

The information about firms' products (90.72 per cent), coherence and credibility of strategy (89.49 per cent), new investments (84.49 per cent), leadership and brands (73.97 per cent) are the items most reported to financial analysts in the meetings held by the firms (DI). On the other hand, corporate culture, environmental investments, and social responsibility are the least disclosed items when a company discloses information to analysts (see Table IV).

The findings are in accordance with previous literature. Holland's (2001) study, based on case interviews with 40 large UK fund managers from 1997 to 2000, showed that much of the private meeting agenda between companies and foundation managers, focused on information concerning quality of management, coherence and credibility of strategy and the structure of the board. Moreover, Marston (1996) and Larrán Jorge (2001) analyse companies' perceptions of the relative importance of disclosure of different types of information at meetings with analysts. In both studies, the most important items on future prospects were: a company's long-term and short-term strategy, and the company's strategy regarding particular segments of the business. From the point of view of financial analysts (AI), information about new investments (74.19 per cent), coherence and credibility of strategy (70.50 per cent), firms' products (64.05 per cent), and leadership (52.95 per cent) are the items most used in their reports. Corporate culture, environmental investments, and social responsibility are the least valued items by these intermediaries.

Processes

In Table V we can see that firm capacity and efficiency are the most reported items in the meetings held by firms and in the reports of financial analysts. Litigations and environmental politics are hardly revealed in any of these sources.

Customers

More than 25 per cent of information revealed in presentations to analysts concerns the breakdown of annual sales by product or segment, order book, new customers, and information about relations with customers. The results are similar to Tasker's (1998) findings, which showed that many questions asked on high-tech conference calls included aspects related to revenue breakdown by products, order backlogs or number of new customers. Guthrie and Petty (2000) also found that Australian firms usually disclose information regarding customer items.

If the relevance of customer information in the decision-making process is analysed, the findings show that more than 35 per cent of reports concern the breakdown of customers by product or segment. Order book, new customers, and information about relations with customers are also usually employed by financial intermediaries.

Items	DI	AI
Strategy, objects of I&R&D	17.96	6.912
Future projects regarding I&R&D	3.895	0
I&R&D in basic research	3.893	1.382
I&R&D in product design/development	3.508	1.382
Patents pending	0.384	0

Table IX. Disclosure and use of innovation, research and development

Financial analysts do not seem to value items regarding education of customers, customers by employee, production by customers or repurchase when they issue recommendations about companies.

Technology

With regard to the technology category, the firms usually report data about technological systems and web transactions, which are also the most emphasized items in analysts reports. Traffic web information is seldom considered by firms (17.86 per cent) or analysts (6.91 per cent).

Human capital

Table VIII shows that, in both years, the experience of managers is the most reported item in the category of human resources. The latter is consistent with previous literature (Mavrinac and Siesfeld, 1997; Holland and Doran, 1998) which suggests that top management quality is an important issue for the investor community. However, insurance politics, or value added per employee items are scarcely reported. Cumby and Conrod (2001) (biotechnology industry) or Arvidsson (2003) (pharmaceutical, biotechnology, health care equipment industry) also found that employee human capital is often ignored in the disclosure strategy of the firm.

In analyst reports, the quality of managers is also the most mentioned item (22.58 per cent). This is consistent with previous literature (Mavrinac and Siesfeld, 1997; Holland and Doran, 1998; Barker, 1999) which suggests that top-level management quality is an important issue for the investor community. According to Weetman and Beattie (1999, p. 36), integrity, reliability, ability to explain and performance in response to questions are aspects of this issue. On the other hand, insurance politics or value added per employee items are not commented on in the analyst reports of the study.

Innovation, research and development

There is empirical evidence supporting the fact that this kind of information is strongly demanded by financial analysts (Eccles and Kahn, 1998). However, companies must balance the profit of disclosing this information with the costs of competitive disadvantages. In our sample, these items are rarely reported by the firms (see Table IX). In a similar way, FASB's examination of voluntary disclosures showed that disclosures about research and development activities and product development were generally sparse (FASB, 2001). This evidence is not consistent with previous studies (Bukh *et al.*, 2001; Arvidsson, 2003) which found that innovation was the category with highest disclosure scores; however, it must be taken into consideration that their samples were restricted to knowledge-intensive companies. Thus, financial analysts do not seem to justify their investment decision with this kind of intellectual capital information either.

Concluding remarks

The objective of this paper is to analyse the information concerning intellectual capital disclosed in presentations to analysts held by Spanish firms, and to examine if it is relevant for financial analysts when they take their investment decisions.

The present study evidences that firms use their meetings with analysts as a source of voluntarily disclosing data on intangibles, and that financial analysts value it to provide earnings forecasts and buy/hold/sell recommendations. Nevertheless, the comparison shows that the disclosure on intangibles is higher than the level of this information communicated in the analyst reports. Some possible explanations can justify this result. Managers are prone to disclose higher levels of information in order to reduce the cost of capital and the information asymmetry, as well as to increase the share performance and improve the image and reputation of the firm. The limited space of an analyst report and the unreliability to predict payoffs by using intellectual capital information can also explain these results.

The focus of companies and financial analysts are on the same categories of intellectual capital. The empirical results indicate that in the meetings firms usually reveal information about their strategy, customers, and processes, which also appear to be deemed highly relevant when financial analysts use information related to intangibles in their valuation reports. The findings show that some of the items most frequently disclosed in the meetings and considered in valuation tasks are related to coherence and credibility of strategy, new investments, firms' products, alliances, or leadership.

On the other hand, the companies disclose the least information on items concerning innovation, research, and development. Although this category contains key information to explain competitive advantages and financial returns, the risk of releasing information which could be of benefit to competitors can highly influence the company reluctance to report it. These items are not frequent in analyst reports either; maybe because of the problems of obtaining data and the risk of future litigation for companies due to released information which could be of beneficial to competitors. In addition, with the exception of the quality and experience of managers, human resources category does not appear to be prioritised in the disclosure strategy and valuation of Spanish firms. The low relevance of information concerning human capital observed in the results could be due to a lack of perception by firms and financial analysts that employees may be relevant as value drivers. In accordance with Johanson (2003), this also can also due to the risk of loosing the human capital and the reliability and validity of the information.

After conducting the present study, some suggestions concerning the design of future studies have arisen. In this sense, it would be interesting to analyse the value relevance of intellectual capital information for market valuation and to examine whether stock market valuations are influenced by the intellectual capital information contained in the reports of financial analysts.

Notes

1. We will use intangibles and intellectual capital in the same way.
2. According to Arnold and Moizer (1984), the actual influence of discussions may be higher than reported because respondents might have understated their importance for fear of suspicions about "inside information".

References

Arnold, J. and Moizer, P. (1984), "A survey of the methods used by UK investments analysts to appraise comparative study of US and UK practices", *Accounting and Business Research.*, summer, pp. 195-207.

Arnold, J., Moizer, P. and Noreen, E. (1984), "Investments appraisal methods of financial analysts: a comparative study of US and UK practices", *International Journal of Accounting*, Vol. 19 No. 2, pp. 1-18.

Arvidsson, S. (2003), "Demand and supply of information on intangibles – the case of knowledge-intensive companies", PhD dissertation, The Institute of Economic Research, University of Lund, Lund.

Barker, R. (1999), "The role of dividends in valuation models used by analysts and fund managers", *European Accounting Review*, Vol. 8 No. 2, pp. 195-218.

Botosan, C.A. (1997), "Disclosure level and the cost of equity capital", *The Accounting Review*, Vol. 72 No. 3, pp. 323-49.

Breton, G. and Taffler, R.J. (1995), "Creative accounting and investment analyst response", *Accounting and Business Research*, Vol. 25 No. 98, pp. 81-92.

Breton, G. and Taffler, R.J. (2001), "Accounting information and analysts stock recommendation decisions: a content analysis approach", *Accounting and Business Research*, Vol. 31 No. 2, pp. 91-101.

Bukh, P.N., Gormses, P. and Mouritsen, J. (2001), "Disclosure of intellectual capital indicators in Danish IPO Prospectuses", working paper, Aarhus School of Business, Aarhus.

Chang, L. and Most, K. (1985), *The Perceived Usefulness of Financial Statements*, International University Press, Florida, CA.

Cooke, T.E. (1989), "Disclosure in the corporate annual reports of Swedish companies", *Accounting and Business Research*, Vol. 19 No. 74, pp. 113-24.

Cumby, J. and Conrod, J. (2001), "Non-financial performance measures in the Canadian biotechnology industry", *Journal of Intellectual Capital*, Vol. 2 No. 3, pp. 261-72.

Dempsey, S.J., Gatti, J.F., Grinell, D.J. and Cats-Baril, W.L. (1999), "The use of strategic performance variables as leading indicators in financial analysts' forecasts", working paper, University of Vermont, Burlington, VT.

Eccles, R.C. and Kahn, H. (1998), *Pursuing Value: the Information Reporting Gap in the US Capital Markets*, PriceWaterhouse and Coopers LLP.

Eccles, R.C. and Mavrinac, S.C. (1995), "Improving the corporate disclosure process", *Sloan Management Review*, summer, pp. 11-25.

Ernst & Young (2000), "Measuring the future, the value creation index", working paper, March.

Ferguson, M., Lam, K. and Lee, G. (2002), "Voluntary disclosure by state-owned enterprises listed on the stock exchange of Hong Kong", *Journal of International Financial Management and Accounting*, Vol. 13 No. 2, pp. 125-52.

Financial Accounting Standards Board (FASB) (2001), "Improving business reporting: insights into enhancing voluntary disclosures", Business Reporting Research Project, January.

García Meca, E., Parra Frutos, I., Martínez Conesa, I. and Larrán Jorge, M. (2004), "Intellectual capital disclosure to financial analysts. Explanatory factors", working paper, accepted for publishing in *European Accounting Review*.

Gelb, D. and Zarowin, P. (2000), "Corporate disclosure policy and the informativeness of stock prices", working paper, University of New York. available at: http://papers.ssrn.com. taf?abstract_id = 235009

Guthrie, J. and Petty, R. (2000), "Intellectual capital: Australian annual reporting practices", *Journal of Intellectual Capital*, Vol. 1 No. 3, pp. 241-51.

Healey, P., Palepu, K. and Hutton, A. (1999), "Stock performance and intermediation changes surrounding sustained increades in disclosure", *Contemporary Accounting Research*, Vol. 16, pp. 485-520.

Holland, J. (1997), *Corporate Communications with Institutional Shareholders*, Institute of Chartered Accountants of Scotland, Edinburgh.

Holland, J. (2001), "Financial institutions, intangibles and corporate governance", *Accounting, Auditing and Accountability Journal*, Vol. 14 No. 4, pp. 497-529.

Holland, J. and Doran, P. (1998), "Financial institutions, private acquisition of corporate information and fund management", *The European Journal of Finance*, No. 4, pp. 129-55.

Johanson, U. (2003), "Why are capital markets ambivalent to information about certain indicators on intangibles?", *Accounting, Auditing & Accountability Journal*, Vol. 16, pp. 31-38.

Larrán Jorge, M. (2001), *El mercado de Información Voluntaria en las Bolsas de Valores*, ICAC, Madrid.

Lee, T. and Tweedi, D. (1981), *The Institutional Investor and Financial Information*, The Institute of Chartered Accountants in England and Wales, London.

Leuz, C. and Verrecchia, R. (2000), "The economic consequences of increased disclosure", *Journal of Accounting Research*, Vol. 38 No. 3, pp. 91-124.

Lev, B. (1992), "Information disclosure strategy", *California Management Review*, Vol. 34 No. 4 pp. 9-32.

Lev, B. and Zarowin, P. (1999), "The boundaries of financial reporting and how to extend them", *Journal of Accounting Research*, Vol. 37 No. 3, pp. 353-86.

Marston, C.L. (1996), *Investor Relations: Meeting the Analysts*, The Institute of Chartered Accountants of Scotland, Edinburgh.

Mavrinac, S. and Siesfeld, T. (1997), "Measures that matter. An exploratory investigation of investors information needs and value priorities", working paper, The Ernst & Young Center for Business Innovation.

Meek, G.K., Roberts, C.B. and Gray, S.J. (1995), "Factors influencing voluntary annual reports disclosures by US and UK and continental European multinational corporations", *Journal of International Business Studies*, Vol. 26, pp. 555-72.

Olbert, L. (1992), "Stock valuation methods of financial analysts in thin stock market in Sweden, with comparisons to the UK and the United States", *The International Journal of Accounting*, Vol. 29, pp. 123-35.

Pike, R., Meerjanssen, J. and Chadwick, L. (1993), "The appraisal of ordinary shares investments analysts in the UK and Germany", *Accounting and Business Research*, Autumn, pp. 489-99.

Sveiby, K.E. (1997), *The New Organizational Wealth Managing and Measuring Knowledge-based Assets*, Berrett Koehler Publishers, San Francisco, CA.

Tasker, S. (1998), "Bridging the information gap: quarterly conference calls as a medium for voluntary disclosure", *Review of Accounting Studies*, Vol. 3, pp. 137-67.

Weetman, P. and Beattie, A. (1999), *Corporate Communications: Views of Institutional Investors and Lenders*, The Institute of Chartered Accountants of Scotland, Edinburgh.

Further reading

Cottle, S., Murray, R. and Block, F. (1989), *Graham and Dodd's Security Analysis*, 5th ed., McGraw-Hill, New York, NY.

Diamond, D.W. and Verrecchia, R.E. (1991), "Disclosure, liquidity and the cost of capital", *The Journal of Finance*, Vol. 41 No. 4, pp. 1325-59.

Francis, J., Hanna, J.D. and Philbrick, D.R. (1997), "Management communications with security analysts", *Journal of Accounting and Economics*, Vol. 24, No. 3, pp. 363-94.

Healey, P., Palepu, K. and Hutton, A. (1998), "Do firms benefit from voluntary disclosure?", Working Paper, Harvard Business School, Boston, MA.

Lev, B. (2000), *Intangibles, Management, Measurement and Reporting*, The Brooking Institution, Washington, DC.

Lev, B. and Zarowin, P. (1997), "Investment in R&D and the declining value-relevance of earnings", working paper, New York University, New York, NY.

Previs, G.J., Bricker, R.J., Robinson, T.R. and Young, S.J. (1994), "A content analysis of sell-side financial analysts company reports", *Accounting Horizons*, Vol. 8 No. 2, pp. 55-70.

Schipper, K. (1991), "Analysts' forecasts", *Accounting Horizons*, December, pp. 105-21.