

Firer, C.; Meth, G.

**Article**

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# Voluntary information disclosure in company annual reports

C. Firer and G. Meth

Graduate School of Business Administration, University of the Witwatersrand, Braamfontein

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The objective of this study was to measure the level of voluntary disclosure of information by listed South African manufacturing companies. A disclosure index designed to measure such disclosure was constructed. In general a fairly low level of disclosure of non-statutory items was observed in the companies studied. Disclosure tended to improve slightly during the five years 1979–1983. Limited correlation was found between the level of disclosure and firm size.

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Die doel van hierdie studie was om die vlak van vrywillige openbaarmaking van inligting deur Suid-Afrikaanse vervaardigingsmaatskappye wat op die effektebeurs verskyn, te meet. 'n Indeks om mate van vrywillige openbaarmaking in maatskappyjaarsverslae te meet is saamgestel. Oor die algemeen is 'n taamlike lae vlak van openbaarmaking van nie-wetlike items waargeneem in die maatskappye wat bestudeer is. Openbaarmaking het gedurende die vyf jaar 1979–1983 effens verbeter. Beperkte korrelasie is tussen die vlak van openbaarmaking en maatskappygrootte waargeneem.

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## Introduction

In recent years there has been increasing interest in the area of corporate financial reporting in South Africa. The local press regularly carries articles in which the quality of information in recently published annual reports is commented upon. Two awards are presented annually for the 'best' annual report, one award being sponsored by the Institute of Chartered Accountants in conjunction with the Business Times and the other by the Financial Mail in conjunction with the Bureau for Financial Analysis of the University of Pretoria.

This interest is understandable because the quality of corporate disclosure can, in no small measure, influence the investment decisions taken by investors (Singhvi & Desai, 1971). Although investors have diverse information sources which may include annual reports, press coverage, stockbrokers, advisory services and friends, studies undertaken to rank the various information sources (Chang, Most & Brain, 1983 and Porcano, 1981) show that the annual report is both an important primary as well as secondary source of information (Hines, 1982). It follows that the extent to which investor-related information items are disclosed in annual reports is of particular importance to the investor user group.

Minimum levels of disclosure in annual reports are governed by statute and other regulations. However, the actual level of disclosure of information (which normally exceeds the minimum requirements) varies between firms. Research has previously been undertaken in Canada (Amernic & Maiocco, 1981), New Zealand (McNally, Eng & Hasseldine, 1982), the United Kingdom (Firth, 1978, 1979a) and the United States (Buzby, 1974 and Singhvi & Desai, 1971) to examine the information requirements of investors and the extent to which these requirements were being met by the annual report. In addition, studies have been reported which associate a variety of firm characteristics with the level of disclosure (Buzby, 1975; Choi, 1973; Firth, 1979b, 1980, 1984; McNally, *et al.*, 1982; Singhvi & Desai, 1971).

This study was aimed at complementing these previous studies by examining the level of voluntary disclosure by South African firms in their annual reports, by measuring the changes in this disclosure over the period 1979–1983, and by investigating the relationship between the level of disclosure and firm size.

## Research design

The first step in the research design was to develop a disclosure index by compiling a list of voluntary information items which appeared or could appear in corporate annual reports. The items were then weighted according to their perceived

C. Firer\* and G. Meth  
Graduate School of Business Administration,  
University of the Witwatersrand, P.O. Box 31170,  
Braamfontein, 2017 Republic of South Africa

\*To whom correspondence should be addressed

importance by a sample of investment analysts. The list of weighted information items thus comprises the index, which can then be used to measure the level of voluntary disclosure of relevant investor information in company annual reports.

A sample of firms whose annual reports were to be tested was chosen and the disclosure index applied to the annual reports of the firms over a five-year period. The extent of voluntary disclosure and the change in disclosure levels over time was analysed. Finally, the degree of correlation between the level of disclosure and firm size was explored.

### Development of the disclosure index

In order to gauge the overall extent of a firm's voluntary disclosure of relevant investor information in its annual report, a tool known as a disclosure index may be used. The index is, in the context of this study, a weighted list of voluntary information items which reflect the importance, perceived by investors, of the disclosure of such information items in a firm's annual report. It can also be used to measure the overall disclosure levels of each voluntary information item in a sample of firms' annual reports.

The items making up the index should of necessity have applicability to the particular firm being measured. Items, the disclosure of which is required by law or regulation, should not be included, and the items which are included should have relevance to the investment decision.

In order to identify suitable items for inclusion in the disclosure index, a sample of award-winning South African company reports was examined. In addition the relevant literature (e.g. Amernic & Maiocco, 1981; Barret, 1976; Buzby, 1974, 1975; Chandra, 1975; Choi, 1973; Firth, 1978, 1979a; McNally, *et al.*, 1982; Singhvi & Desai, 1971) was reviewed. From these sources a list was constructed of investor-related information items which companies could voluntarily include in their annual reports.

The list was reduced to 49 items by:

- (a) Deleting those items, the disclosure of which is required in terms of the Companies Act, Statements of Generally Accepted Accounting Practice or the Johannesburg Stock Exchange rules, applicable during the period 1979–1983, because the index was to be composed of voluntary information items only. An information item covering depreciation was included in the list as Statement AC 106 (Depreciation Accounting) issued under the authority of the Accounting Practices Board only became effective on 1 January 1983.
- (b) Excluding those items common to less than three of the ten indices examined. This was done because there appeared to be limited consensus amongst researchers as to the relative importance of these items. This step enabled the number of information items to be reduced to a more manageable number.
- (c) Eliminating those items which were considered inapplicable to companies whose activities included a significant proportion of manufacturing. Prior research in this field had concentrated on manufacturing companies (e.g. Buzby, 1974; Firth, 1979a; McNally, *et al.*, 1982), and so it was decided to do likewise to facilitate a comparison of results.
- (d) Including all the information items that comprised the Firth index. As a significant proportion of the published work in this field has been done by Firth (1978, 1979a, 1979b, 1980, 1984), all the non-statutory items in his index were included in the list of items. Also, the wording used by Firth for the common information items was mostly

adhered to. This assisted in making the results of the two studies comparable.

Some information items are more relevant than others in making an investment decision. In order to reflect this, a numerical weighting is attached to each item, reflecting its relative importance. The technique used to establish the weights was as follows: A questionnaire consisting of the 49 information items was drawn up and was sent under a covering letter to all 395 members of the Investment Analysts Society of Southern Africa resident in South Africa. A total of 137 usable replies were received which represented a response rate of 35%.

The analysts were requested to weight each of the items appearing in the questionnaire on a five-point scale. The aim of the scale was to establish how important they thought it was that the information items should appear in company annual reports. A response of 1 meant that the information item was relatively unimportant while 5 meant that the item's inclusion in the annual report was very important. This method of scoring the information items for their importance was similar to the methods used by Buzby (1974), Firth (1979a), and McNally, *et al.* (1982) who received similar response rates of 26%, 38% and 44% respectively.

The possibility exists that a bias can be introduced into the results because respondents may give a profile of answers different to that which would have been given by non-respondents. This bias would prevent the results from being generalized across all investment analysts.

Such bias was tested using an approach suggested by Oppenheim (1966) and used previously in similar surveys (Buzby, 1974; Firth, 1979a; McNally, *et al.*, 1982). In this test late respondents to the questionnaire are used as surrogates for non-respondents and their responses to the individual questionnaire items are compared with the responses of the early respondents.

Two test means were calculated for the responses to each information item, one using the 12 earliest replies and the second using the 12 latest. The two means for each item were tested for significant differences (at the 0,05 level) using a *t* test.

Only one information item showed a significant difference between the test means. An analysis of the *t* statistic signs revealed 23 positive, 22 negative and four zero *t* statistics. These results indicated that the non-response bias was probably not significant and thus it was felt that the results of the questionnaire survey could be generalized.

### Selection of firms

This study evaluated annual reports issued during the five-year period 1979–1983. The firms selected for the study were required to meet the following criteria:

- The firm should be listed on the Johannesburg Stock Exchange (JSE) throughout the five-year period. This would eliminate any possible bias arising from changes in disclosure practices due to changes in listing status.
- The volume of shares traded of the selected firms in each of the years 1979–1983 should exceed 250 000. Volume efficiency was necessary to perform any future market-risk related tests on the data (Strebel, 1977).
- One of the main activities of the firm should be manufacturing. Mining, finance, retail, insurance and property firms were excluded.
- Finally, because it was proposed to extend the study to include an investigation of the degree of correlation between the level of disclosure and the total and systematic risks

of the companies, only those with betas published by a well-known portfolio risk management service were included. These criteria were met by 36 firms, which were all selected for study.

### Data analysis

The weightings of the individual information items of the disclosure index were calculated by taking the arithmetic mean of the responses received to each item from the questionnaires sent to the investment analysts. This approach was similar to the methods used in previous studies.

The annual report of each firm was evaluated using a mark sheet drawn up from the questionnaire sent to the investment analysts. The information items were divided into three categories in a manner similar to that used by Buzby (1974).

- Category 1 consisted of those self-contained items whose presence or absence in the annual report could be readily ascertained, such as the market value of inventory.
- Category 2 consisted of those items where different degrees of disclosure were possible and the researcher's judgement was necessary to evaluate the level of disclosure. For example, a specific forecast of the following year's profit or EPS would receive a full credit. However, a general indication of the direction of the following year's profit or EPS would receive only a partial credit.
- Category 3 comprised those items that could be analysed into sub-elements of information. The firms received full credit where all the sub-elements of an information item were disclosed. However, a proportional credit was allocated for less than full disclosure of all sub-elements.

Not all the information items were necessarily applicable to all firms. For example, details of mergers and acquisitions would not be applicable where no such event had occurred during the particular financial year examined. To cater for such situations two scores were calculated, the first measuring the maximum level of disclosure which could be made and the second measuring the actual disclosure.

The extent to which each information item was disclosed in the annual reports was measured by the percentage of the actual to the maximum potential score for firms disclosing the particular item. A score of 100 would mean that all firms fully disclosed the item whereas as 0 would mean total non-disclosure.

The changes in the levels of disclosure in the annual reports of the firms tested during the period 1979–1983 were measured by reviewing the extent to which changes in the disclosure of each individual item had occurred, by reviewing the overall disclosure index scores for each firm annually, and by computing on an annual basis the arithmetic mean of the overall disclosure index scores for all the firms evaluated.

The relationship between the level of disclosure of relevant investor information in annual reports and the specific firm characteristic (size) was calculated by ranking the firms with respect to both level of disclosure and firm characteristic and then calculating the Spearman and Kendall rank correlation coefficients for each pair of rankings.

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### Disclosure of information items

In the appendix details are given of the level of disclosure of each information item for each of the five years from 1979 to 1983 in the order of disclosure for 1983. A score of 100% would indicate full disclosure of the item by all firms in the survey whereas 0% would indicate complete non-disclosure.

The level of disclosure of the items ranged from 0% to 89,6%. Of the 49 information items, 11 had a score of more

than 50% and 28 items had a score of less than 25%. A 0% score was recorded for seven items. The average disclosure level for all items and therefore for all firms was 29,7%.

Historical data and descriptive material such as description of major products/services; functional responsibility of senior management; group structure; major industry trends; and information on mergers and acquisitions tended to dominate the items of high disclosure whilst predictive data received a lower ranking. Inflation-adjusted accounts as supplementary statements received a 22,2% disclosure level whereas other inflation-related items received minimal scores.

It should be pointed out that the item 'Names and Salaries of Senior Management' which was ranked as the 12th most disclosed item, achieved its rank by virtue of the fact that almost all companies disclosed the names of senior management (as distinct from directors) whereas none gave any salary indications. It was necessary to give equal weight to each 'part' of the item, hence arriving at a score of close to 50% disclosure.

The highly disclosed items 'Descriptions of Major Products/Services' and 'Functional Responsibilities of Senior Management' both had to be assessed rather subjectively. It is possible that the standards of evaluation were set too low, resulting in the high scores achieved.

Completely absent were any indications of costs of goods sold, the ratio between fixed and variable expenses, market value of inventory, details of expenses, or future cash flow projections.

In order to adequately define the required return on an equity investment in a firm, and hence the price to be paid for its shares, an assessment must be made of both the financial and business risk of the firm (Brigham, 1985: 514). Most of the information needed to assess financial risk falls into the category of mandatory disclosure, and it is therefore interesting to note the almost complete absence of disclosure in the areas relating to business risk.

The general conclusion, in common with the studies of Firth (1979a) and McNally, *et al.* (1982), is that the overall level of disclosure of relevant investor information was low.

Firth (1979a) suggested that two major reasons for the low disclosure levels were possibly that the preparers of annual reports were not aware of the importance of information items to investors and that the disclosure of certain items may reveal important information to competitors. Interestingly, although the investment analysts surveyed in this report were not asked to comment on the questionnaire items, a number indicated that the full disclosure of items would reveal confidential information to competitors.

A third reason could be that the preparers of annual reports may believe that the cost of providing the additional information outweighs the possible benefits.

Nevertheless, the fact that certain information items have a high level of disclosure whereas others are not disclosed at all suggests that there are a number of areas where companies can improve the quality of their corporate reporting. Not all of these involve 'sensitive' information, yet, are regarded as highly desirable by users of the information. Such items would include:

- cash projections,
- statement of transactions in foreign currency, and
- rate of return required by the firm on its projects.

### Changes in disclosure levels

A review of the appendix indicates that there has been an overall improvement in the level of disclosure of the individual

items. This is borne out by the improvement in the average disclosure levels from 24,4% in 1979 to 29,7% in 1983. However, most of this improvement occurred in the 1980 and 1981 annual reports. Also, the most significant improvements appear to have taken place in items which were already relatively extensively disclosed.

Individual items which showed marked improvement were the historical summary of the share price range (improved from 30,6% to 72,2%), the number and type of ordinary shareholders (improved from 33,2% to 66,7%), and the statement of value added/wealth created (improved from 22,2% to 55,6%). As regards their investor-perceived importance relative to the 49 items in the survey, these items ranked 48, 40 and 33 respectively. It follows that the significant disclosure improvements have taken place in relatively unimportant information items.

The possible reasons for these changes could be that the necessary data for these items are readily available to firms, that the costs associated with their accumulation are minor, and that the information is believed to be of limited value to competitors.

The majority (30) of firms improved their level of voluntary disclosure over the period, compared to the six showing less overall voluntary disclosure as measured by the index. However, annual changes were not consistent. Individual firms showed both positive and negative changes in disclosure in different years, although, their overall level generally improved between 1979 and 1983.

#### Disclosure and firm characteristics

Previous researchers (Buzby, 1975; Choi, 1973; Firth, 1979b, 1980, 1984; McNally, *et al.*, 1982; Singhvi & Desai, 1971) have examined the relationship between the level of disclosure and firm characteristics such as: firm size, listing status, audit firm, rate of return, earnings margin, number of stockholders, stock market risk, and growth.

Although not all characteristics have shown a positive relationship to the level of disclosure, firm size has been positively related to disclosure level in a number of different countries. In the present study the relationship between firm size and the level of voluntary disclosure was investigated.

Intuitively one might expect a positive relationship between firm size and disclosure. Possible reasons for such a relationship were put forward by Buzby (1975) and Singhvi & Desai (1971) and were summarized by Firth (1979b) as follows:

- The cost of collecting and disseminating information is more easily borne by the larger firms which are also more likely to collect such information for internal management purposes.
- Larger firms tend to be listed and may raise finance from the stock market more often than smaller firms. Their greater reliance on the market for finance may influence them to disclose more information in their annual reports.
- Small firms may believe that additional disclosure may put them at a competitive disadvantage with respect to larger firms in their field.
- Larger firms tend to be more in the public eye and to be more closely watched by the various government bodies. They may believe that improved reporting will reduce pressure from these parties.

Various measures could be used to rank firms in terms of size. McNally, *et al.* (1982) used total assets, net income and 'shareholders' funds. In this article total assets, the market capitalization of the ordinary shares at the balance sheet dates,

**Table 1** Disclosure and firm characteristics

	Total assets	Market capitalization	Net income	Sales
Spearman $\rho$	0,35	0,44	0,34	0,21
Kendall $\tau$	0,25	0,32	0,25	0,15

net income, and sales are used as surrogates for firm size. The correlations obtained between the level of individual firm disclosure and the four size surrogates are shown in Table 1.

Although a positive relationship existed between the level of voluntary disclosure and firm size as measured by the above surrogates, the correlation was weak. This was especially so in the case of sales, whereas the strongest correlation was recorded with the market capitalization of ordinary shares.

Although total assets, net income and sales were used as surrogates to rank the firms in terms of size, each of these measures are believed to contain some factors which may bias the results.

The problem associated with total assets is the value attached to such assets, especially fixed assets and inventories. For example, two firms identical in all respects would be ranked differently if the one firm included fixed assets in its annual report on a historical cost basis while the other firm included the items at valuation. Similarly, inventories could be costed using a number of different formulae including LIFO and FIFO. The particular formula used could affect the firm's ranking when based on total asset value.

The formula used to value inventory also impacts on net income. The use of LIFO during periods when the cost of a firm's products is rising generally means that the value of inventory is less and the net income is lower than if the FIFO formula was used.

Similarly, firms could have different accounting policies to determine their levels of sales. As such, their relative rankings in terms of sales could be affected.

On the other hand, for well-traded shares, the market capitalization of ordinary shares does not appear to suffer from such potential errors. Here the value of the firm to ordinary shareholders is used as a surrogate to measure firm size. It is believed that the significant advantage is that the size of the firm (i.e. its value) is determined by outsiders who are able to make use of all available information, including that of differing accounting policies, to arrive at their estimate of a fair share price.

Significantly, while the rank correlation coefficients measured were generally low, that relating to market capitalization was the highest.

#### Comparison with similar surveys

In a US study, Buzby (1975) used asset size as a surrogate for firm size when measuring the degree of association with disclosure level and obtained tau values of 0,52 and 0,37 respectively for his sample of listed and unlisted firms. The corresponding tau of 0,25 for the listed firms in this survey is considerably less than that of Buzby's.

Firth (1979b) used sales and capital employed when measuring the impact of size on disclosure index scores in the UK. Using sales, the tau for his sample of 100 listed firms was 0,70 which is considerably larger than the corresponding tau of 0,16 of this survey.

McNally, *et al.* (1982), studying New Zealand firms, used total assets as a surrogate for firm size and measured the

relationship using Spearman's rho. He found a significant relationship between firm size as measured and both the number of items disclosed and the average score for each firm. However, he does not indicate the actual correlation found. The rho of 0,35 in this survey indicates a limited level of correlation.

The correlation between size and the level of voluntary disclosure was therefore considerably less in this survey than in similar studies undertaken overseas. A possible reason for this could be that in South Africa the ultimate control of a relatively large proportion of listed firms is believed to be vested in a small number of holding companies and institutions. Those organizations which are believed to have ultimate control may exert influence on the reporting practices of the controlled firms in which case it is believed that there would be a limited correlation between firm size and the level of voluntary disclosure.

### Conclusions

The objective of this study was to measure the level of disclosure of voluntary information by listed South African manufacturing companies.

The replies to questionnaires sent to investment analysts were used to construct a disclosure index for voluntary information items which could appear in firm annual reports. A notable feature of the index was the emphasis placed on predictive information by local analysts.

Certain voluntary information items were widely disclosed. However, the overall level of disclosure of the items was low, indicating considerable areas for improvement.

The sample-wide level of voluntary disclosure improved marginally from 24,4% to 29,7% over the five-year period 1979–1983. The items showing most improvement tended to be those already relatively extensively disclosed. Of the firms, 30 showed improvement while six had an overall lower level of disclosure.

Limited positive correlation was found between the level of disclosure by firms and their relative size. The highest level of correlation was measured when using market capitalization as a surrogate for firm size. This finding was in contrast to similar studies undertaken in New Zealand, the United Kingdom and the United States where a significant positive correlation had been found to exist.

The results of this survey cannot be statistically applied either to all the industrial firms listed on the JSE or even to that subset of firms of which shares are efficiently traded. This is because the firms included in the survey were not randomly selected. Rather, all firms satisfying the selection criteria were included in the survey.

Nevertheless, it is believed that the conclusions reached regarding the disclosure of voluntary information are probably applicable to the industrial sector of the JSE as a whole.

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### Appendix 1 Disclosure of individual information items

Index items	1979 %	1980 %	1981 %	1982 %	1983 %
Description of major products/services	88,3	91,0	91,7	90,3	89,6
Discussion of the firm's results for the past year with reasons for changes	82,6	84,7	86,1	85,4	88,2
Functional responsibilities of senior management	66,7	83,3	83,3	83,3	86,1
Group structure	63,9	66,7	69,4	72,2	75,0
Discussion of the major factors which will influence next year's results	68,1	72,2	74,3	74,3	75,0
Historical summary of price range of ordinary shares	30,6	55,6	69,4	75,0	72,2
Information on major industry trends	62,5	66,0	70,1	72,2	72,2
Historical summary of important operating and financial data	58,1	64,9	70,0	72,5	72,1
Number and type of ordinary shareholders	33,2	44,4	52,8	63,9	66,7
Information on mergers and acquisitions	59,0	60,2	78,1	70,7	66,4
Statement of value added/wealth created	22,2	33,3	50,0	52,8	55,6

## Appendix 1 (Continued)

Index items	1979 %	1980 %	1981 %	1982 %	1983 %
Names and salaries of senior management	36,1	43,1	43,1	43,1	44,4
Statement of objectives	30,6	41,0	50,0	50,0	43,8
Capital expenditure — narrative/quantitative/past/planned	39,6	44,4	43,6	44,4	43,1
Current resale value/valuation/insurance value of fixed assets	22,2	25,0	33,3	36,1	41,7
Depreciation method used and rates or useful lives of assets	43,1	43,1	41,7	41,7	41,7
Information on corporate social responsibility	28,5	41,0	47,2	43,8	41,0
Statement of future dividends/dividend policy	26,4	23,6	42,4	36,1	36,8
Directors' functional responsibilities and major outside affiliations	16,7	22,2	29,2	33,3	36,1
Breakdown of earnings by major product lines, customer classes and geographic locations	31,5	33,3	31,5	30,6	29,6
Forecast of next year's profits or EPS	31,3	30,6	32,6	29,2	26,4
Inflation-adjusted accounts as supplementary statement	11,1	13,9	16,7	19,4	22,2
Breakdown of sales revenue by major product lines, customer classes and geographic locations	18,5	22,2	23,2	23,2	21,3
Indication of employee morale	2,8	3,5	13,2	11,8	16,7
Brief narrative history of the firm	21,5	25,7	20,1	16,7	15,3
Discussion of the impact of inflation on the financial results	16,0	18,8	16,0	15,3	14,6
Expenditure on human resources	2,8	5,6	6,9	12,5	12,5
Description of major plants /warehouses/properties	18,8	18,8	13,9	13,9	11,8
Measure of physical level of					

## Appendix 1 (Continued)

Index items	1979 %	1980 %	1981 %	1982 %	1983 %
output and capacity utilization	12,5	11,1	13,9	11,1	9,7
Money value of firm's order backlog	8,6	8,6	8,3	8,3	8,3
Allowance for doubtful debts	5,6	5,6	5,6	5,6	8,3
Number and type of employees	0,0	0,0	0,0	8,3	8,3
Research and development	9,7	6,9	9,0	8,3	8,3
Description of marketing network for finished goods	10,6	8,8	10,6	9,9	8,3
Extent of dependence on major customers	13,2	9,0	6,3	4,2	6,9
Share of market in major product/service areas	13,9	16,7	11,1	5,6	5,6
Index of quantity of sales	8,6	11,4	8,6	8,3	5,6
Advertising and publicity	0,7	1,4	2,1	3,5	3,5
Index of sales prices	2,8	5,6	5,6	0,0	2,8
Index of raw material prices	2,9	5,4	5,7	0,0	2,8
Statement of rate of return required by the firm on its projects	5,6	0,0	0,0	0,0	2,8
Statement of money exchanges with the government	0,0	0,0	0,0	0,0	2,8
Cost of goods sold	0,0	0,0	0,0	0,0	0,0
Breakdown of expenses into fixed and variable components	0,0	0,0	0,0	0,0	0,0
Market value of inventory	2,8	2,8	0,0	0,0	0,0
Statement of transactions in foreign currency	0,0	0,0	0,0	0,0	0,0
Summary of the age of debtors at the balance sheet date	0,0	0,0	0,0	0,0	0,0
Amount and detailed breakdown of expenses	0,0	0,0	0,0	0,0	0,0
Cash projections one to five years	0,0	0,0	0,0	0,0	0,0
Average disclosure level	24,4	27,1	29,5	29,3	29,7