TRENDS OF VOLUNTARY INTERNET REPORTING IN CROATIA: ANALYSIS FOR THE PERIOD 2005-2007

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Abstract

During the last decade a large number of scientific papers analyzed Internet reporting of listed companies, but research is still very limited in the emerging markets like Croatia. Therefore, this paper is aimed to analyze voluntary Internet reporting of Croatian listed companies in the period 2005-2007. The research shows that Croatian companies on average are not very transparent as measured by IFR Score. Although capital market in Croatia has been growing very strongly for the last few years there has been only limited improvement in voluntary Internet reporting. The average IFR Score measured on the sample of 55 companies has slightly risen during the period of analysis.

JEL classification: M21, M41

Key words: voluntary reporting, Internet, Croatia

1. Development of capital markets in Croatia

In the 21st century the Internet represents a very useful tool for investors' relations and disclosure of financial and non-financial information to investors. Contemporary research in developed European countries and US reveals that this model of reporting is adopted by majority of listed companies. But still there is very limited research on the issue of voluntary reporting in the emerging markets of Eastern Europe, especially in Croatia. Most of Eastern European countries (including Croatia) were socialist planned economies without capital markets and issues of information asymmetry and disclosure. By the beginning of the 90-ies in the 20th century Croatia started to implement the model of free market economy, privatizing state owned companies and building institutions. The process of transition in Croatia was pretty slow because of the war (1991-1995) and the postwar reconstruction. The chosen model of privatization was pretty unsuccessful, and many companies went into bankruptcy. Majority of stocks in many joint stock companies were acquired by individuals (those with political background or company managers) or their companies, while such transactions were usually intransparent and executed outside of the bourse. As a consequence, today in Croatia the majority of joint stock companies have a rather concentrated ownership.

In such business environment the capital market was stagnating, there were no IPOs and the issue of financial reporting and disclosure was marginal. But after the enactment of the amended Securities Act in 2002 about 200 joint stock companies (with share capital over 30 mil. kunas and more than 100 shareholders) were forced to list on the bourse quotation of "public joint stock companies". In the same year the reform of pension system in Croatia was started and mandatory and voluntary pension funds were established. During the last few years financial industry in Croatia has been growing very strongly and many open-end investment funds were established. Positive effects of development of fund industry, inflow of foreign investment funds (mainly from Scandinavian countries), strong growth of domestic GDP all together triggered strong growth of the capital market in Croatia. Since capital markets in Croatia are growing very strongly and five IPOs were realized during the 2006 and 2007 it is very interesting to analyze the issue of financial reporting. Especially, it is interesting to analyze the level and trends of voluntary Internet disclosure in the business environment of an emerging market like Croatia.

2. Previous research on voluntary Internet reporting

During the last decade many papers were analyzing the issue of Internet reporting. Early research for Irish companies was conducted by Brennan and Hourigan (1998, 18-21). Research has revealed that 37% of sampled companies had a web site and 23% of them presented balance sheet and P&L statement on the Internet. Cash flow statement was discovered in 14% of sampled companies. Hurtt et. al. (2001, 67-75) analyzed US Fortune 100 Internet reporting practice and discovered that 93 companies had Web sites. Research has revealed that 74% of companies with a Web site publish the balance sheet, while 70% of companies publish the P&L statement and the cash flow statement on the Internet. Furthermore, sampled companies relatively frequently publish the auditor report (65%), notes (63%) and managerial discussion and analysis (61%).
Allam and Lymer (2001, 1-41) conducted research at the end of 2001 and in early 2002 on the sample of 50 largest companies from 5 countries (USA, Canada, UK, Australia and Hong Kong). Researches revealed that majority (96-100 %) of companies publish basic financial statements like: balance sheet, P&L statement and cash flow statement. The PDF format is most used in presentation of financial statements in all the five countries. Usage of spreadsheet formats (XLS & Lotus 123) is still limited since this kind of format was found in 12% of companies only in USA and UK. Usage of Internet for investor's relations in the Euronext stock exchange zone on the sample of 50

largest companies from France, the Netherlands and Belgium was analyzed in 2001 by Geerings et. al. (2003, 567-579). The research revealed that French and Dutch companies use the Internet more intensively for investor relations than Belgian companies. Some basic financial statements are published very frequently in all the three countries, but some Internet advantages (processable format, multimedia, mailing lists, etc) are used less frequently by Belgian companies. After controlling for size the differences between French and Belgian companies are significantly lower. On the other hand differences continue to exist for comparison of equal size Belgian and Dutch companies.
Research in the international setting covering 22 countries (660 companies) was done by Debreceny et al. (2002, 371-394). The authors adopted FASB-s framework and structured Internet reporting into two dimensions: Internet reporting content and Internet reporting presentation. Ordered probit regression resulted with conclusion that size, foreign listing, US listing, technological knowledge and disclosure environment were significant for IFR-Presentation. For variable IFR-Content the significant variables were the following: size, US listing, ratio market/book value and disclosure environment. Bonson and Escobar (2002, 27-51) analyzed voluntary disclosure on the Internet on the sample of 300 companies from EU. The sample was formed of the 20 largest companies by market capitalization from each EU country. The authors used a list of 23 items and formed a transparency index (TI). The research revealed that the TI was statistically related with country of origin, since companies from the North and Central Europe have higher TI in comparison with companies from the South Europe. The industry sector was related with TI and the size since larger companies provide more information on the Internet.
The Internet reporting practice of the 100 largest Japanese listed companies was analyzed by Marston (2003, 23-34). Using the Kruskal-Wallis test it was concluded that size was significantly related with the Japanese Web site status, while this relation was less clear for the level of disclosure. The usage of chi-square test revealed that service companies were less likely to have an English version of the Web site, while manufacturing industries were more likely to have an English version of the Web site. The level of disclosure was not significantly related with industry membership. Finally, foreign listing status (UK or US) was not significant for the Web page status or disclosure level. Research for listed German companies (DAX 100) was done by Marston & Polei (2004, 281-368). The authors developed a very comprehensive list of criteria for the Internet page evaluation, classified into two main sectors: content and presentation. In 2003 all sampled companies had a Web site and 89% presented the full annual report. The most used format was PDF (2000-88%, 2003-98% of companies, while processable format is relatively infrequent (2000-10%, 2003-14%). The total score was significantly related with foreign listing status in 2000 and 2003. The free float variable was significant only in

2000. After transforming scores the size variable became significant in both years.
Bonson & Escobar (2006, 299-318) analyzed the distance between the information provided on the Internet by companies from 13 Eastern European countries and the current requirements according to the EU initiative to increase transparency. The authors developed a list of 44 elements which formed the Distance Index (DI). The research total involved 1,543 companies of which only 805 had a web site, while the research sample was limited to 266 companies. The average value of DI was rather low - 8.66 suggesting that there the transparency of analyzed companies was low in comparison with the EU initiatives. The DI was positively correlated with the Big Four Auditor, financial sector and company size. Pervan (2006, 1-27) analyzed voluntary reporting on the Internet in Croatia and Slovenia on the 2005 data. The research sample included 55 listed companies from Croatia and 30 companies from Slovenia. The author developed a list of 30 elements which resulted with an IFR Score. The average value of the IFR Score for the Croatian sample was only 6.85, while in the Slovenian sample it was 17.63, indicating that Slovenian companies are more transparent in comparison with Croatian companies.

3. Hypothesis and research

3.1. Hypothesis

As mentioned above the main aim of this research is to analyze the cross time change of voluntary Internet reporting of listed companies in Croatia. Having in mind that the data indicate a strong growth of the capital market (Zagreb Stock Exchange) in terms of market turnover and capitalization we could assume that voluntary disclosure of listed companies should also be increased. Increased trade on capital markets and growth of number of investors should result with increased demand for relevant financial and nonfinancial information. However, the behavior of companies as providers of information is not so simple. Previous research indicates that on average Croatian companies are not very transparent in terms of voluntary disclosure. Field research and discussion with managers reveal that financial reporting is still perceived as an obligation rather than and an asset. Croatian managers are used to hide the real financial results primarily for income tax evasion. At the present time many of managers are also large stockholders in their companies and reduced voluntary disclosure might provide them strategic advantage over other participants on capital markets. In order to reveal the change of voluntary Internet reporting practice for listed companies we are testing the following hypothesis:

H: There is an increase in the voluntary Internet reporting of listed Croatian companies in the period from 2005 to 2007.

3.1. Research sample

The research sample is based on the population of joint stock companies listed on the capital market (Zagreb Stock Exchange). But since many of the approximately 300 listed Croatian companies are not actively traded at the market the research sample was limited only to the companies whose share were actively traded in 2005. If a company is not actively traded on the market there is no demand for its information and there is no incentive for voluntary reporting. Therefore, it would be useful to limit the sample only to the companies which are actively traded and for which investors consequently seek information. The criterion for inclusion of company in the initial sample was stock turnover of more than 300,000 € in the first quarter of 2005. On the basis of such criterion only 55 companies entered the sample.
Measurement of level of Internet disclosure in the previous literature is often based on some kind of scoring variable. These variables include a certain number of financial and nonfinacial information, which is evaluated with 1 if satisfied and with 0 if not. Thus for example, Bonson & Escobar (2002) use transparency index consisting of 23 elements, Patel *et. al*. (2002) use Standard & Poors T&D score with 98 elements, Marston & Polei (2004) use disclosure variable with 71 elements, Bonson & Escobar (2006) measure disclosure index with 44 elements, etc. Since this study is aimed to analyze the trend of voluntary Internet reporting in the period 2005-2007, measurement of disclosure variable is based on the same Internet disclosure variable used in the initial research by Pervan (2006). The mentioned research used the Internet Financial Reporting Score (IFR Score), which includes 30 elements. The detailed structure of the IFR Score is given in the Table 2.

3.3. Cross time analysis of IFR Score

In order to conduct the cross time analysis the 55 companies (with the highest market turnover) from the initial research in 2005 were again analyzed in 2006 and 2007. The Web sites of companies were searched by global search engines (Google, Yahoo, etc), using the company name and prefix hr and com. The research revealed that 51 companies (92.7%) had a web site, while 4 companies did not have it. On the basis of analyzing the web sites of the sampled companies the following changes of the average IFR Score was found in the period 2005-2007:

Table 1: Trends of IFR Score in period 2005-2007

	2005	2006	2007
IFR Score Average	6.85	7.31	9.44
IFR Score$_t$- IFR Score$_{t-1}$	N.A.	+0.45	+2.59
IFR Score Maximum	29	29	29
IFR Score Minimum	0	0	0
IFR Score Standard Deviation	8.01	8.36	9.6

Source: Author's calculation

The data on the IFR Score indicate that the average value of the IFR Score slightly rose during the period of analysis. Namely, in 2005 the average was 6.85, in 2006 7.31, while in 2007 the average value of the IFR Score was 9.44. Since the research was done on the same sample of 55 companies (related samples) and the IFR Score is the scoring variable measured on scale the Friedman test was used for formal testing of the IFR Score change.

Application of the Friedman test resulted in the Chi-Square of 46,953 and significance less than 1%. On the basis of such finding here we can accept the hypothesis that voluntary Internet reporting in Croatia was improved in the period 2005-2007. However, although the increase of the IFR Score in 2007 by 2.59 points represents the relative change of 37.8% in comparison with 2005, the average value of IFR Score is still very low. Having in mind the maximum score of 30, the average value of IFR Score of 9.44 indicates that the sampled Croatian companies in 2007 were rather intransparent in comparison with contemporary research from the developed EU countries. More details on the change of IFR Score is given in the Table 2.

Table 2: Changes in the elements of IFR Score in period 2005-2007

	2005	2006	2007	Change 06-05	Change 07-06	Change 07-05
A) Financial statements information						
1. Balance sheet	18	17	18	-1	1	0
2. Income statement	18	17	18	-1	1	0
3. Cash flow statement	17	16	18	-1	2	1
4. Changes of owners equity statement	16	16	18	0	2	2
5. Auditor report	15	14	15	-1	1	0
6. Notes	13	12	15	-1	3	2
7. Accounting policies	13	12	15	-1	3	2
8. Segment information	7	8	7	1	-1	0
9. Quarterly statements	3	3	7	0	4	4
10. Half-annual statements	4	3	7	-1	4	3
11. Past year statements	15	15	16	0	1	1
B) Other useful information						
12. Latest stock price	11	8	9	-3	1	-2
13. Press releases	17	18	20	1	2	3
14. Managerial discussion and analysis	11	13	14	2	1	3
15. Business risks analysis	7	12	12	5	0	5
16. Supervisory board report	7	9	6	2	-3	-1
C) Governance transparency						
17. Managerial board information	12	19	23	7	4	11
18. Managerial board compensation	3	3	11	0	8	8
19. Supervisory board information	10	17	19	7	2	9
20. Supervisory board compensation	2	2	1	0	-1	-1
21. Managerial responsibility for financial statements	6	8	11	2	3	5
22. Governance code	3	3	3	0	0	0
D) User support						
23. Investors page	7	7	6	0	-1	-1
24. Internal search engine	10	16	13	6	-3	3
25. E-mail	52	52	51	0	-1	-1
26. Mailing lists	3	5	3	2	-2	0
27. Statements download	15	15	17	0	2	2
28. Processable format of statements	2	2	2	0	0	0
29. English language page	39	41	45	2	4	6
30. English version of financial statements	21	19	15	-2	-4	-6
Average IFR Score	6,85	7,31	9,44	0,5	2,1	2,6

Source: Pervan, 2006, p. 20 & Author's calculation for 2006 & 2007

In the financial statements section of the IFR Score in 2007 still only 18 companies (32.7%) publish balance sheet and P&L statement. A Slight improvement in 2007 in comparison with 2005 can be found in publishing of the cash flow statement (+1) and changes of owners equity (+2). The auditor report is still published on the Internet by only 15 companies (27.3%). Two more companies in 2007 published notes and accounting policies, while the segment information is published by only 7 companies. Some improvement in

comparison to 2005 can be seen in publishing of quarterly (+4) and half annual statements (+3), while the past year statements can be found in 16 cases. In the segment of "Other useful information" only 9 companies in 2007 present the latest stock price, which represents the decrease of 2 in comparison with 2005. In 2007 we can see improvement of press releases and managerial discussion and analysis of operations and results. The analysis of business risk has become more often since 5 more companies publish that information. Supervisory board reports are still quite rare and only 6 companies publish such information.
The governance transparency sector of the IFR Score reveals good improvement in comparison with 2005 since 11 more companies present data on managerial board, while 8 more companies provide aggregate data on managerial compensation. Supervisory board information is presented by additional 9 companies in comparison with 2005, while information on their compensation is published by only 1 company. The number of companies publishing responsibility for financial statement rose from 6 in 2005 to 11 in 2007. Navigation on the corporate web sites is still demanding since only 6 companies (10.9%) have investors page and internal search engine can be found in 13 corporations (23.6%). E-mail address is available in 51 corporations, while mailing lists are still quite a rare service used only by 3 corporations. Financial statements download is possible in 17 corporations, while processable format of financial statements is still pretty rare and provided by 2 corporations. English version of web sites usage increased from 39 corporations in 2005 to 45 corporations in 2007. Surprisingly, the number of companies publishing financial statements in English decreased from 21 to 15.

4. Conclusions

The conducted research for the sampled largest Croatian companies indicates that the level of voluntary Internet reporting slightly increased during the period 2005-2007. Measured by the IFR Score the level of Internet disclosure in 2005 was 6.85, in 2006 7.31 and in 2007 9.44. The increase of the IFR Score by 2.59 points is tested by Friedman test and the established hypothesis on the increase of Internet reporting can be accepted. Although the IFR Score has increased by 37.8% in the three year period, the average value of IFR Score is still rather low in comparison with the practice of companies from US or developed EU countries. The findings are similar to other research for listed companies from Eastern Europe and here we can conclude that there is a large area for improvement of Internet reporting practices in order to reduce information asymmetry and improve functioning of capital markets in Croatia.

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