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**Impact of Investor Meetings/Presentations on Share Prices, Insider Trading and Securities Regulation**

**af**

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# Impact of Investor Meetings/Presentations on Share Prices, Insider Trading and Securities Regulation

*by Caspar Rose\**

*February 2001*

**Abstract:** *The purpose of this article is to investigate whether the securities regulation put forward by the EU contributes to an efficient stock market. An event study of investor meetings/presentations held by listed Danish firms is conducted. The article finds significantly positive abnormal returns a few days around investor meetings. Share turnover reaches maximum one day after investor meetings. The variances of the abnormal returns increase substantially the closer we get to the holding of an investor meeting, indicating the presence of possible insider trading. The relevant securities regulation based on EU directives is critically discussed and thus compared with US regulation.*

**Keywords:** *Insider trading, investor meetings, securities regulation, corporate governance*

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## 1. Introduction

Investor meetings or presentations held by European listed firms have increased in popularity recent years. This is also the case in Denmark, where several firms have put down specific bodies to handle investor relations activities, which include arrangement of various investor meetings/presentations. One of the reasons for holding these meetings for actual and potential investors, is that they enable market participants to obtain more information about the activities and strategies of listed firms in order to make more accurate earnings forecasts. However, this development also raises some important legal aspects concerning both listed firms' disclosure obligations and securities regulation in general.

This article analyzes whether the EU securities regulation of insider trading and the general duty of listed companies to disclose price relevant information is sufficient regarding the arrangement of investor meetings/presentations. The question therefore relates to whether the regulation enhances the efficiency of the stock markets in EU member states. Thus, the article makes a contribution to the debate over the legal protection of investors which is a major issue in the debate of corporate governance. The article conducts an event study using both parametric/nonparametric to measure the impact on share prices of investor meetings. The article also makes use of a test for homogeneity of variances, in order to measure the extent of insider trading. The sample consists of 120 investor meetings of Danish companies held within the last five years

An incentive for management to arrange investor meetings is that management may regard the company's shares as "undervalued" and therefore seeks to "speak the price up". This can be accomplished by providing information about changes in the company's future business strategy or inform more or less specifically about projects that market participants have not yet been informed about. For instance, at the investor presentation held by Tele Danmark on September 8 2000, Henning Dyremose CEO argued that the motivation for holding the investor meeting was that the management in Tele Danmark regarded the share price as "highly undervalued". Other firms report that they frequently arrange investor

meetings in order to enhance the liquidity of the company's shares. The article tests the following hypotheses:

***1<sup>st</sup> Hypothesis:*** *During an investor meeting management provides inside information which enables investors to earn an abnormal return*

***2<sup>nd</sup> Hypothesis:*** *There is trading based on insider information even prior to the investor meeting enabling some investors to earn abnormal returns.*

During an investor meeting, management could easily violate the obligations codified in the securities regulation. The relevant securities legislation concerns the prohibition against insider trading and the general duty to disclose. If management informs participants of a meeting about certain conditions that may influence share prices and does not simultaneously inform the stock market, management contravenes the prohibition against insider trading. This is also the case for investors who trade on the basis of such inside information. In addition, management would in this situation violate the general duty to disclose relevant information. This is because management has an obligation to inform the stock market immediately, if it possesses information that could influence the share prices. It is not enough just to inform the participants at the meeting or wait to inform investors about relevant information when the investor meeting is actually taking place. In this light the Copenhagen Stock Exchange just recently made an announcement where it recommended that firms should pay more attention to their disclosure obligations when arranging such investor meetings.

The Danish securities regulation is based on EU-directives which have been incorporated into Danish law. Even though EU prohibits insider trading and has codified a general doctrine for management to disclose relevant information, there are no specific rules governing listed firms' arrangement of investor meetings. Instead it is up to EU member states to formulate their own rules concerning investor meetings, but no EU state has yet adopted rules that deals solely with investor meetings.

Generally, the financial literature concerning insider trading seems to regard insider trading as non-desirable. Proponents of insider trading argue that insider trading fosters efficient capital markets by improving the accuracy of stock prices. Insider trading promotes quick price discovery which mitigates the incentive for many individuals to collect the same information (see Manne (1966), and Carlton and Fichel (1983), and Leland (1992)). On the other hand opponents argue that insider trading inevitably implies that there is a loser for each winner, since informed traders' abnormal returns reduce the opposing traders' realized returns. Secondly, insider trading increases the bid-ask spread by the market maker, created by an adverse selection mechanism. If the market-maker is unable to distinguish between types of traders, then he would be forced to charge all traders for the expected value of their possible non-public information (see e.g. Seyhun 1985). This increases the bid-ask spread which therefore reduces the efficiency of the stock market.

Narayanan (2000) formulates a model of the voluntary disclosure of information by firms. He shows that the likelihood and amount of voluntary disclosure increases with manager's pay sensitivity, firm quality, and the number of insiders privy to the information and decreases with market liquidity. Furthermore he shows that stringent enforcement of insider trading regulations induces more disclosure by firms whereas the short sales prohibition on insiders induce less disclosure.

According to Fama's (1970) classical definition of the Efficient Markets Hypothesis, a market in which prices always "fully reflect" available information is called efficient. Weak form of efficiency means that the information set includes only the history of prices (or returns) whereas semistrong-form of efficiency in addition requires that the information set includes all publicly available information. When all information is known to each market participant, including private/inside information, the market is said to be efficient in the strong form. If insiders are not able to earn abnormal returns, this would indicate that markets are strong form efficient. If there are no abnormal returns associated with investor meetings, this would indicate that prices already reflect all information disclosed at the meeting.

We can not reject the 1<sup>st</sup> hypothesis, since there is a short-term effect four days after an investor meeting, although there is no significant effect in the long run. The results show that there are significantly positive abnormal returns around investor meetings. The variances of the abnormal returns are much higher the closer we get to the investor meetings, suggesting that we can not reject the 2<sup>nd</sup> hypothesis. Share price turnover reaches maximum the day after the holding of investor meetings. This feature therefore supports the other findings. The results indicate that the current EU-regulation does not contribute enough to achieving an efficient and well functioning stock market.

The article is organized as follows. Literature is presented in section 2. Section 3 gives a brief description of the relevant legislation in the United States, EU and Denmark. Data is described in section 4 and the methodology is outlined in section 5. The results are presented in section 6 followed by a robustness test in section 7. The results are discussed in section 8 and the article concludes in section 9.

## **2. Literature**

There seems to be no event studies in the financial literature concerning the impact of investor meetings/presentations on share prices. However, several studies investigate whether corporate insiders are able to earn abnormal returns due to their private information. Yermack (1997) finds in a sample of 620 stock options-awards coincides with movements in firms stock prices. Patterns that of companies' quarterly earnings announcements are consistent with an interpretation that CEOs receive stock option awards shortly before favorable corporate news. Ferreira (1995) shows that corporate insiders earn abnormal returns by adjusting their own firms' stock trading to future market movements. Meulbroek (1992) conducts an empirical analysis of illegal insider trading focusing on how informed trading affects stock prices. She finds that insider trading is associated with immediate price movements. The cumulative abnormal return on inside trading days is half as large as the price reaction to the public revelation of the information on which the insider trades.

According to Meulbroek this ratio suggests that the stock market detects informed trading and impounds a large proportion of the information into the stock price before it becomes public. Syed et al. examines if trading on stocks based on the inside information about the “Heard on the Street” column of the Wall Street Journal generates abnormal returns. The authors finds significant abnormal returns on days  $t=-1$  and  $t=0$  (publications date) for the stocks related to insider trading. For a comparable control group of non-insider-traded abnormal returns were not significant on day  $t=-1$ . The results indicate that the inside information was the cause for the differences.

### **3. Securities Regulation and Investor Meetings**

The purpose of holding investor meetings is to increase market participants' interest in the company's shares by providing information that in some way or another will influence the valuation of a company's shares. In this situation management is inevitable caught in a dilemma since it has to act in the best interests of the existing shareholders (i.e. maximizing the net present value of the existing shares) but on the other hand, if management did not provide any relevant information, no one would ever show up to an investor meeting. Thus, when holding investor meetings, management has to be aware of the provisions codified in the securities regulation, since information provided by management could easily constitute a violation of the prohibitions against insider trading and the general duty to disclose.

#### **3.1 EU Securities regulation and investor meetings**

The insider Directive 89/592/EEC was finally adopted on 13 November 1989. It requires implementation by 1 June 1992 and is now passed by all member states in EU (see Edwards 1999 p. 308). The history of the Directive goes back to 1966 with the publication of a report entitled *The Development of a European Capital Market*. The Committee of experts recommended rules “to prevent those who virtue of their office in a company, have access to information which might influence the market from using their knowledge to secure a personal advantage denied to other investors” (quoted by Edwards 1999 p.309).



The Insider Directive was formulated as a minimum Directive in order to promote an internal market for goods and services. The aim of the Directive is stated in the preamble which states that the purpose is to ensure confidence for an effective and functioning capital market by treating all investors equally. As opposed to the US securities regulation, “inside information” is defined. In Art 1(1) inside information is as;

*Information which has not been made public of a precise nature relation to one or several issuers of transferable securities or to one or several transferable securities, which, if it were made public, would be likely to have a significant effect on the price of the transferable security or securities in question...*

The Directive does not directly deal with the situation of investor meetings but distinguishes between different types of insiders. Primary insiders are defined in Art 2(1) as persons who have direct access to inside information as employees, consultants or shareholders. Secondary insiders in Art 4 are persons who receive inside information from one of the persons mentioned above and it is sufficient to violate the prohibition that the information stems from a primary insider. Since the Directive is a minimum Directive, member states may adopt more stringent provisions c.f. art. 6. Articles 8-10 deal with the enforcement and art. 13 prescribes that member states shall determine penalties. The EU-Directive was a major innovation for all EU member states, except for the United Kingdom, which already had a detailed law on insider dealing. The British legislation is based on the view that the motivation for the prohibition of insider trading is the misuse of information obtained when the insider is in a position of trust above all in relation to the company in question, i.e. use of information is a breach of fiduciary duties by a “connected” person (see Elland and Bently (1991)). Thus, no European Stock exchange/authority has issued specific rules dealing solely with investor meetings/presentations.

EU has initiated several Directives concerning firms’ obligations to disclose various kind of information that influences the valuation of firms, e.g. the development of common accounting standards in the fourth Directive and seventh Directive.

The first EU-Directive of securities regulation 79/279/EEC formulates some minimum requirements a firm has to oblige when listed at a stock exchange, c.f. section A-D. The Directive states that listed firms are obliged to publish new information, as soon as possible, that substantially could influence the valuation of share prices. The purpose is to enhance the efficiency of the European stock exchanges and give investors equal treatment. The general duty to disclose relevant information to all market participants is inspired of the equal opportunity doctrine in Common Law. Furthermore, it reduces the period of time when there is a risk that investors trade on inside information.

### **3.2 Danish securities regulation and investor meetings**

The provisions of the EU-Directive have been incorporated into Danish law. The Danish Securities Act (section 34 and 35) contains prohibitions against trading on inside information and delivering inside information. The Danish regulation is similar to the Insider Directive except that the Danish Securities Act does not distinguish between primary and secondary insiders. The general duty to disclose relevant information is codified in the Danish Securities Act section 27. See Krüger Andersen and Clausen (2000) for a detailed description of the Danish Securities regulation.

In addition, Copenhagen Stock Exchange is authorized to issue supplementary rules. It requires that information provided by management e.g. in connection with investor meetings must only take place if the information simultaneously is made public for all market participants. This follows from Section 8(2) in the rules issued by Copenhagen Stock Exchange, although there does not exist any incident where management has been sanctioned due to a violation of the above rule (section 8(2)). Copenhagen Stock Exchange has in some circumstances taken a more pragmatic view and recognized that persons involved with a firm's financial restructuring may get inside information. This is only permitted if the persons involved do not violate their professional duty of confidentiality, refrain from trading the firm's shares within the period of time and provided that the information afterwards is made public.

Danish law only requires that firms must have internal rules concerning management's and employee's handling of inside information. But the law does not prescribe the content of those rules, it is solely up to the individual firm to specify the content.

### **3.3 US Securities regulation and investor meetings**

Even though the draft of the EU insider-Directive goes back several years, the United States passed two federal securities laws just after the great depression in 1929, c.f. Securities Act of 1933 and Securities Exchange Act of 1934. The aim was to protect shareholders through a doctrine of equal treatment of investors. This implies that all shareholders must have simultaneous access to relevant information regarding share prices. At the same time the Securities and Exchange Commission (SEC) was established with the authorization to issue binding federal rules. The prohibition of insider trading in the US is now governed by a detailed legislation although the term insider trading has not been defined by the SEC. The US legislation of insider trading is based on a detailed collection of provisions as well as a substantial amount of case law, which for example has contributed to clarify the so-called misappropriation theory. The misappropriation theory (see e.g. *Dirks v. SEC*) states that in the judgement of whether a certain trade violates the insider trading prohibition codified in Rule 10b-5, emphasis should be placed on whether there has been an unlawful appropriation of internal information or whether the culprit has obtained an enrichment due to the use of inside information.

Just recently SEC has adopted new rules that address the selective disclosure of nonpublic information by issuer in Rule 100 of Regulation FD c.f. SEC's final rule: "Selective Disclosure and Insider Trading" (August 15 2000. Effective date: 23 October File No.S7-31-99). The regulation requires that when an issuer, or person acting on its behalf, discloses nonpublic information to certain enumerated persons (in general, securities market professionals and holders of the issuers securities who may as well trade on the basis of the information), it must make public disclosure of that information.

Concerning the timing of the disclosure, it depends on whether the selective disclosure was intentional or non-intentional: In the first case an issuer must make public disclosure simultaneously and in the latter case the issuer must make public disclosure promptly e.g. by filing a Form 8-k. SEC argues that the motivation for the rules is that “many issuers are disclosing important nonpublic information, such as advance warnings of earnings results to securities analysts or selected institutional investors, before making full disclosure of the same information to the general public. Where this has happened, those who were privy to the information beforehand were able to make a profit or avoid a loss at the expense of those kept in the dark” (c.f. page 2). SEC also proposes alternative ways for public disclosures, including Internet webcasting, by telephonic means or by announcing the conference content just before an investor meeting.

In summary, we can say that the US regulation on this vital area is considerably more detailed and elaborated compared to the EU. But probably most important of all, US regulators are much more aware of the problems associated with investor meetings/presentations and firms disclosure obligations in general than their European counterparts.

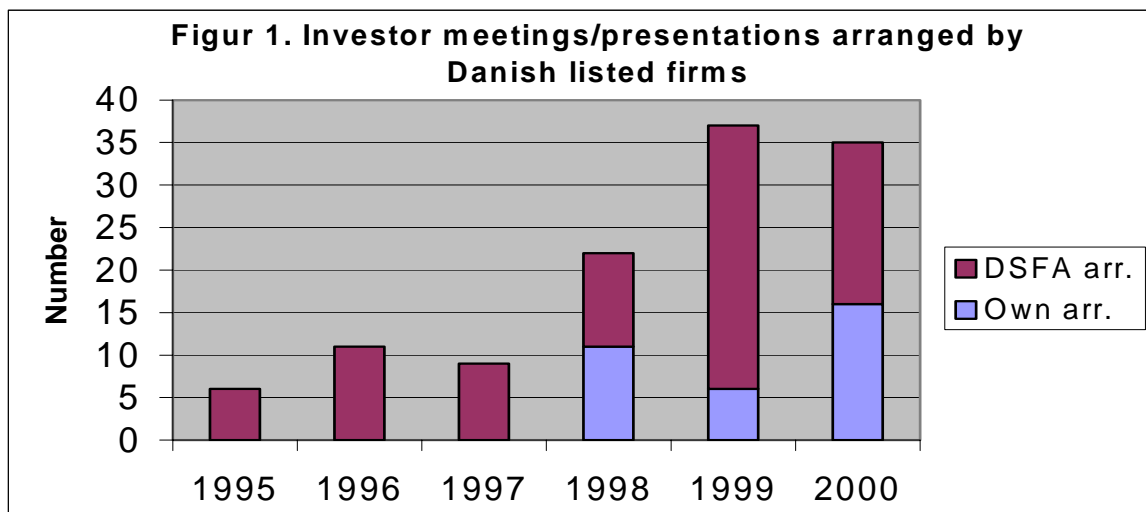
#### **4. Data**

This article defines an investor meeting as a publicly announced arrangement held by a firm in which some analysts and professional investors are invited. At the meeting, senior company officers give information about the firm that is regarded relevant for outsiders' valuation of the company's shares. Sometimes large firms hold so-called closed investor meetings where only a few large investors or analysts who specialize in this particular branch are invited. However, information about the frequency and the extent of these closed investor meetings is extremely difficult to obtain for an outsider. It is therefore also almost impossible to conduct a valid empirical investigation of the phenomenon.

Data consists of an unique sample of Danish listed companies' arrangements of investor meetings/presentations over the last 5 years. Information about the investor meetings is obtained both from the companies own homepages on the

internet, as well as annual reports from the Danish Society of Financial Analysts (Den Danske Finansanalytikerforening) in which information about investor meetings initiated by this body is available. Large companies normally arrange investor meetings by themselves, whereas medium size companies very often hold investor meetings through the Danish Society of Financial Analysts.

Companies occasionally invite investors a few days after the annual accounts are made public, in order to elaborate the annual accounts and answer questions posed by investors. Those meetings are excluded from the sample since the information content of them may be biased. None of the investor meetings in the sample concerns a situation where a firm is in a situation of financial distress or is being restructured. This leaves a sample consisting of 120 events or investor meetings. In no cases management informed Copenhagen Stock Exchange about the information content of the investor meetings.



*DSFA: Danish Society of Financial Analysts, \*Only up to the last quarter of 2000.*

Figure 1 shows the frequency of investor meetings during the period. The number of investor meetings has increased within the last years as well as the fraction of companies which arrange investor meetings by themselves. DSFA stands for the Danish Society of Financial Analysts. Share prices of daily data are obtained from the database BORSDATA located at the Aarhus School of Business.

## 5. Methodology

To measure the effect of an economic event on the value of a firm economists have frequently used event-study analysis which is especially suited for examining the information content of disclosures. Event study analysis has also been employed frequently in various investigations of insider trading (see e.g. Jaffe (1974) for an early use of event study analysis concerning insider trading).

### 5.1 Parametric tests

If investor meetings convey relevant information to investors one should expect to see that the actual return deviates from the predicted return, where the predicted return represents the return that would be expected if no event took place (see Campbell, Lo and MacKinlay for a detailed description of event-study analysis). The article calculates the predicted return using the market model in the form

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \quad (1)$$

where  $R_{i,t}$  is the daily return on the stock of firm  $i$  on day  $t$  and  $R_{m,t}$  is the return on day  $t$  for the total market index on Copenhagen Stock Exchange. The parameters  $\alpha_i$  and  $\beta_i$  for firm  $i$  in the market model are estimated by OLS using daily data from the estimation period running from -260 to -13 days prior to the event day. The error term  $\varepsilon_{i,t}$  is expected to satisfy the standard assumptions except that the model has been transformed to the generalized difference equation if the Durbin-Watson  $d$ - statistic showed first order serial-correlation where the coefficient of serial-correlation was estimated from the OLS residuals.

Abnormal returns are calculated for each firm and for each day in the event period running from -12 to +12 days after an investor meeting has been held. Abnormal returns for firm  $i$  on day  $t$  are obtained as:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t}) \quad (2)$$

In order to draw overall inferences about investor meetings, the abnormal return observations must be aggregated. The cumulative abnormal return  $CAR_i(\tau_1, \tau_2)$  for stock  $i$  from time  $\tau_1$  to  $\tau_2$  is now given as followed:

$$CAR_i(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} AR_{it} \quad (3)$$

The cumulative average abnormal return  $CAAR_i(\tau_1, \tau_2)$  for stock  $i$  over the time period  $\tau_1$  to  $\tau_2$  is now given as follows:

$$CAAR_i(\tau_1, \tau_2) = \frac{1}{N} \sum_{t=\tau_1}^{\tau_2} AR_{it} \quad (4)$$

Inference and tests for significance of the abnormal returns over the period  $\tau_1$  to  $\tau_2$  are based on the following asymptotic normally distributed test statistic (see also Brown and Warner 1980)

$$Z = \frac{1}{N} \sum_{i=1}^N \left( \frac{CAR_i(\tau_1, \tau_2)}{\sqrt{Var(CAR_i(\tau_1, \tau_2))}} \right) \quad (5)$$

where

$$Var(CAR_i(\tau_1, \tau_2)) = \hat{\sigma}_i^2 \left( L_i + \frac{L_i^2}{T_2 - T_1 + 1} + \frac{L_i^2 (E(R_{m,L_i}) - E(R_m))^2}{\sum_{t=T_1}^{T_2} (R_{m,t} - E(R_m))^2} \right) \quad (6)$$

$T_1$  equals the first day in the estimation period,  $T_2$  respectively the last day.  $L_i$  denotes the length of the event period i.e.  $L_i = \tau_2 + \tau_1 + 1$ .  $E(R_m)$  denotes the average market return in the estimation period where as  $E(R_{m,L_i})$  denotes the average market return in the event period.  $\hat{\sigma}_i^2$  is equal to the squared residuals in the estimation period for firm  $i$ .

## 5.2 Nonparametric tests

Contrary to parametric tests which rest on the assumption that abnormal returns are normally distributed, nonparametric tests are free of specific assumptions concerning the distribution of returns. Nonparametric tests (e.g. the sign test) are often used to check the robustness of the results obtained from parametric tests. However, Campbell and Wasley (1993) find that Corrado's (1989) rank test performs better when using daily return observations. The test formulated by Corrado is also less affected by an event-date excess-returns variance increase compared to parametric tests (see also Subramaniam (199)). The test statistic for the null hypothesis of no abnormal return on a certain event day is:

$$Z = \frac{1}{N} \sum_{i=1}^N \left( K_{i\tau} - \frac{L_i + 1}{2} \right) / s(L_i) \quad (7)$$

Let  $K_{i\tau}$  be the rank of the abnormal return for security  $i$  for event time period  $\tau$  where we use that the expected rank under the null hypothesis equals  $(L_i + 1/2)$  and the denominator equals:

$$s(L_i) = \sqrt{\left[ \frac{1}{L_i} \sum_{\tau=T_1+1}^{T_2} \left( \frac{1}{N} \sum_{i=1}^N \left( K_{i\tau} - \frac{L_i + 1}{2} \right) \right)^2 \right]} \quad (8)$$



### 5.3 Variance tests

Besides just looking at the abnormal returns around investor meetings, this article also conducts a simple variance test based on Bartlett's test for homogeneity of variance. The idea is that if management does not reveal any information before or at an investor meeting, the cross-sectional variances of the daily abnormal returns should not change significantly i.e. cross-sectional variances of abnormal return should be constant over time.

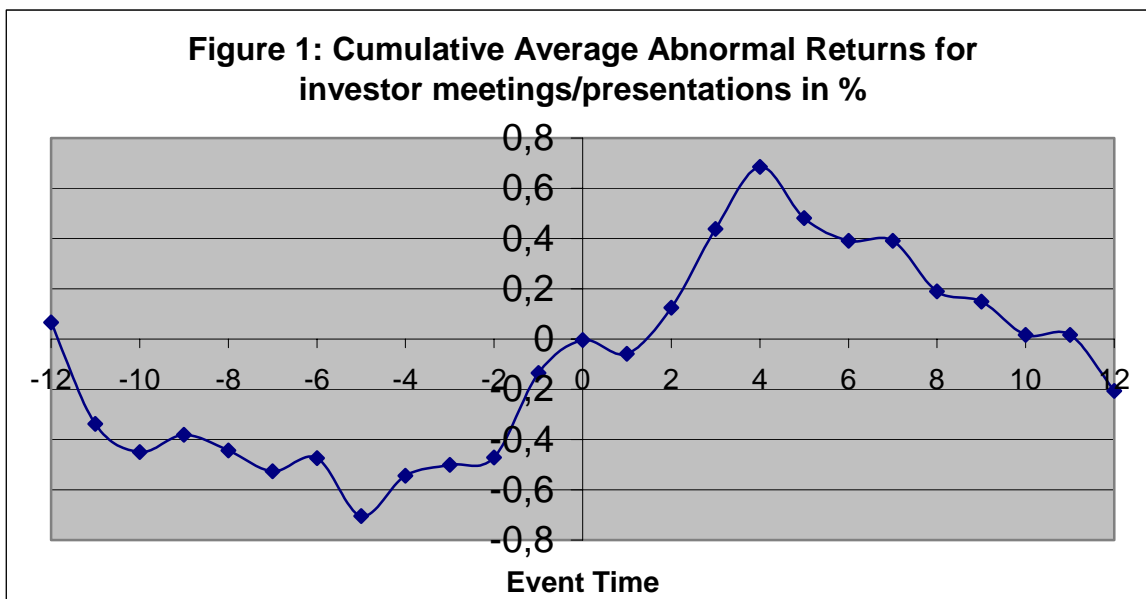
If all the variances over the entire event period are not significantly different then this is a strong indication that information relevant to share prices has not been revealed. However, if the variances of the abnormal returns are significantly different from each other in an interval around the investor meeting, but are not significantly different in the interval consisting of the complementary interval, this indicates that relevant information is revealed by management. The complementary interval is the set consisting of;  $\{-12, \lambda\} \cup \{\lambda, +12\}$ , where  $\lambda$  is some constant  $\in \{-12, 12\}$ . By varying  $\lambda$  we may find at what time management could have revealed relevant information. The test is based on the following expression:

$$b = \frac{k \log(\bar{\sigma}_f^2) f - f \sum_i \log(\sigma_i^2)}{1 + \left( \frac{k}{f} - \frac{1}{fk} \right) / (3(k-1))} \approx \chi^2 (f = k - 1) \quad (9)$$

where  $\bar{\sigma}_f^2$  is the average variance over the considered period of time.  $f$  is the number of degrees of freedom which equals 119 and  $k$  is the number of observed variances in the considered period (max 25). I do not attempt to construct any model for the variance in the event period or calculate an expression for "abnormal" variance. This is due to the uncertainty about what the true model is, i.e. the functional form of the variance (see e.g. Bentzen and Sellin (1999)).

## 6. Results

Figure 1 shows the cumulative average abnormal returns for investor meetings/presentations. It is interesting to notice that management is unable to “speak up the price” since the cumulative average abnormal returns over the entire event period is close to zero. This suggests that it is generally not possible for investors to earn abnormal returns just by buying 12 days prior to investor meetings and holding the shares 12 days afterwards. However, this does not necessarily imply that professional investors and analysts should refrain from going to investor meetings, only that it is impossible to earn abnormal returns in the long run. Professional analysts may get relevant information through investor meetings just by observing the behavior of management and by inferring, not only what management actually says, but also from what it does not say.



From the perspective of the individual analysts, it may be vital that she gets first hand information, instead of solely relying on second hand information sources. The cumulative average abnormal returns prior to investor meetings are all negative (except for day -12), but figure 2 shows that they start to increase five days prior to an investor meeting and continue to last to four days after an investor meeting, and afterwards they slowly decline.

This indicates that the relevant information is revealed around investor meetings, although in order to formulate more accurate statements, it is necessary to divide the entire event period into sub-periods.

**Table 1. Null Hypothesis of CAAR**

Interval	CAAR	Z-test
-12 ; +12	-0,207	-0,177
-12 ; -6	-0,448	-0,612
-5 ; -1	0,839	1,076
-2 ; +2	0,625	1,567
0 ; +4	0,814	2,077
+5 ; +12	-0,892	-1,243

Table 1 reports the results of the null hypothesis of CAAR in different sub-periods. CAAR is positive around investor meetings and significantly different from zero in the interval from day zero to day +4, which suggest that relevant information is revealed by management at investor meetings. Even though CAAR is less than one percent, investors can earn an abnormal return using a simple trading strategy, where they buy shares at the day investor meetings take place and sell the same shares four days later.

Table 2 shows the results of Corrado's (1989) rank test which more robustly enables us to evaluate the significance of a particular day's abnormal return in the event period. In addition, table 2 reports each day's rank deviation from the expected rank. The only day that abnormal returns are significantly in the event period, is one day prior to an investor meeting (t-value of 2.114). The deviation from the expected rank is 1.45, meaning that the average rank is positive and exceeds the expected rank on that day. The deviation from the expected rank (the mean) is also positive and relatively large at day zero, although it is not significantly different from zero (t-value of 1.811).

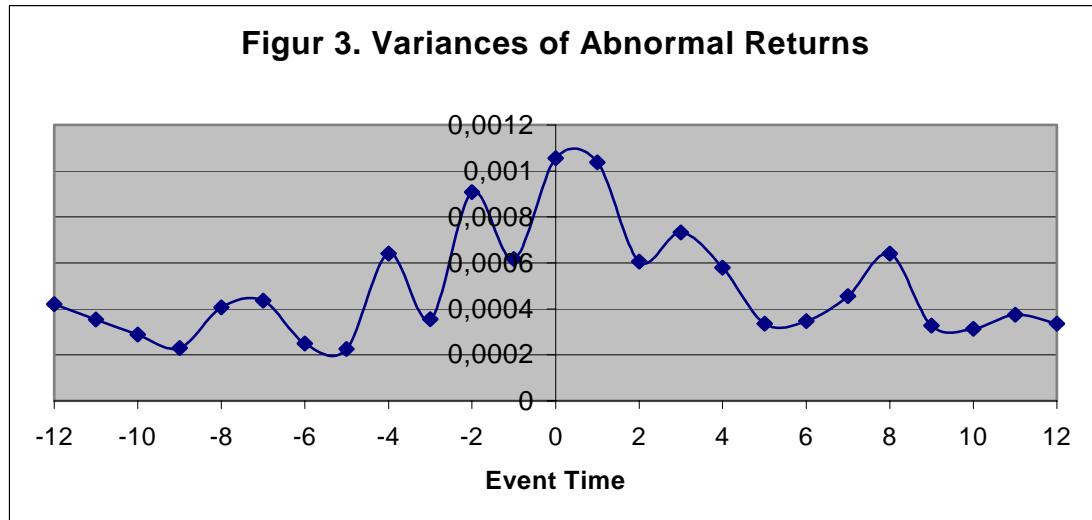
Table 2 further shows that the rank values' deviation from the mean is positive just around investor meetings, where as they become negative, when moving away from day zero. It therefore indicates that management reveals relevant information around investor meetings, enabling investors to earn abnormal returns.

**Table 2. Results of Nonparametric Tests**

Day	Z-statistic	Average rank deviation <sup>a</sup>	Day	Z-statistic	Average rank deviation <sup>a</sup>
-12	0,522	0,358	1	1,203	0,825
-11	-0,789	-0,542	2	0,036	0,025
-10	-0,959	-0,658	3	0,923	0,633
-9	0,036	0,025	4	0,182	0,125
-8	-0,122	-0,083	5	-1,458	-1,000
-7	-0,583	-0,400	6	-0,388	-0,267
-6	-1,491	-0,708	7	-0,352	-0,242
-5	0,777	0,533	8	-0,400	-0,275
-4	0,048	0,033	9	-1,385	-0,950
-3	-0,121	-0,083	10	-0,462	-0,312
-2	0,826	0,566	11	-0,572	-0,392
-1	2,114*	1,450	12	-0,462	-0,312
0	1,811	1,242			

+The expected deviation from the mean rank i.e.  $\frac{1}{N} \sum_{i=1}^N (K_{it} - 13)$

Turning to the analysis of variances, figure 2 displays the variances of the abnormal returns over the entire event period, showing a clear pattern. Changes in variances tend to increase the closer we get to investor meetings, indicating that relevant information is revealed by management around investor meetings. The highest variance is reached the day investor meetings take place, whereas the longer we get from day zero, the more stable are the variances. The variances just around day zero are almost five times larger compared to the “normal” variances in the two “tails”.



This also indicates that information is revealed just a few days around investor meetings, thereby supporting the findings of the previous tests. Table 2 shows the results of the variances tests.

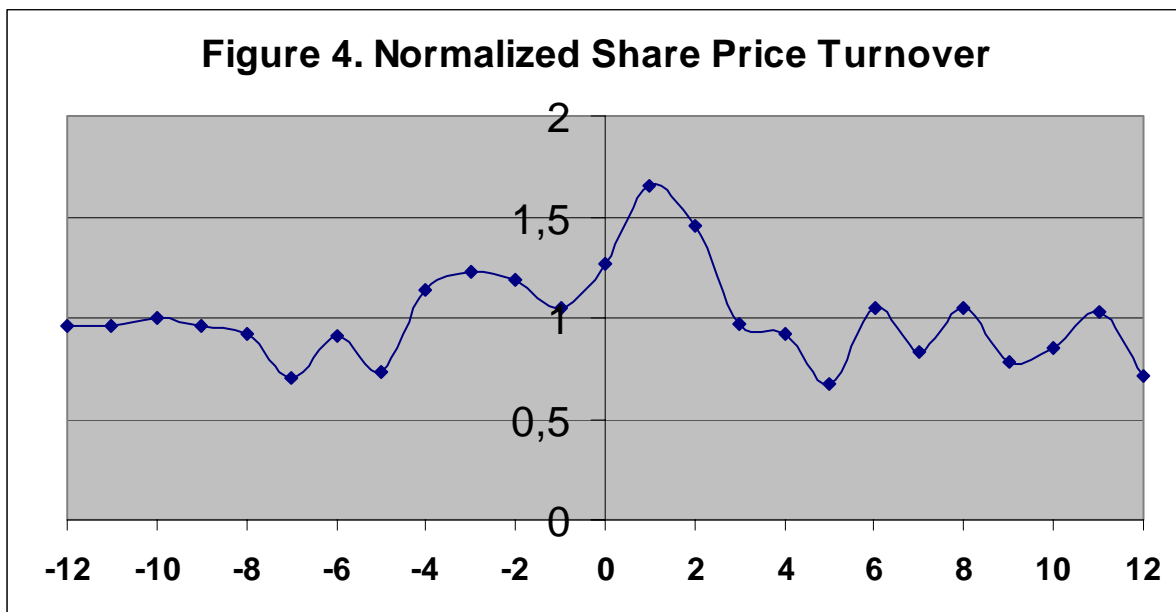
**Table 3. Bartlett's test for homogeneity of variance**

Interval	Average Variance	Test statistic	$\chi^2$ (95% fractile)
$[-12,-9] \cup [+9,+12]$	0,00033	5,74	14,06
$[-12,-5] \cup [+5,+12]$	0,00036	28,74	24,99
$[-12,+12]$	0,00049	128,19	36,41

Bartlett' test for homogeneity of variance shows that the only interval wherein the variances are not significantly different consists of the interval  $[-12,-9] \cup [+9,+12]$ . This enhances the statement above in which information is revealed just a few days around investor meetings. Table 2 also shows that the average variance differs considerably in the three intervals. It gives an indication that relevant information has been revealed just a few days around an investor meeting. The correlation matrix of abnormal returns (not reported in the article) does not show a high correlation among the abnormal returns over the period.

The results depicted in table 2 must be seen in connection with the analysis of abnormal returns, where the analysis of variance supports the previous findings concerning abnormal returns. Thus, since none of the firms in the sample have informed Copenhagen Stock Exchange about any information that could influence share prices around investor meetings, this may provide some kind of evidence that inside information has been revealed.

This impression is strengthened when we look at how investor meetings affect share price turnover. Figure 4 shows the normalized turnover in the event period. Maximum turnover is reached the day after investor meetings take place, followed by day two with the second highest turnover. None of the other days in the event period seem to exhibit any extraordinary turnover, suggesting that investor meetings boost turnover and enhance liquidity.



*The normalization is obtained by first dividing each firms daily share price turnover in the event period with the firms average share price turnover over the entire event period. Thereafter is the cross-sectional average turnover calculated for each day in the event period.*

One explanation for the increased share price turnover immediately after investor meetings could be that management provides participants at the meeting with relevant new information. This new information creates incentives for participants to trade the firms shares, trading that otherwise would not had occurred.

## 7. Robustness

A full assessment of the potential causes for share price reactions requires that the analysis controls for firm-specific characteristics. Table 4 displays the results from a cross-sectional regression model with the cumulative average abnormal return as the dependent variable. The explanatory variables are factors that may influence firm performance such as; volatility, leverage, book/market, size (see Fama and French (1992), and Dimson and Marsh (1985) regarding the size effect), and finally ownership by large shareholders (see e.g. Shleifer and Vishny (1986)). None of the explanatory variables have a significant influence on the vector of abnormal returns, suggesting that the abnormal returns are independent of these firm specific characteristics. This is also the case if the dependent variable, defined as the average abnormal return on day  $t=-1$  is regressed against the above explanatory variables (although the results are not displayed in the article).

Danish firms normally announce that management intends to arrange an investor meeting several weeks before the investor meeting takes place. It is natural to ask whether such an announcement could contain a relevant signal thereby changing the expectations of the market participants. For example, it could be the case that a firm only holds an investor meeting when it has good news. However, a separate event study, in which the event is defined as the announcement of a forthcoming investor meeting, does not show any significant impact on share prices.

A possible explanation is that investor meetings are conducted on a regular basis which usually is the case when investor meetings are carried out through the Danish Society of Financial Analysts. Investor meetings may also differ in nature and subject, making the signal of such an announcement less powerful.

**Table 4. Cross-sectional Regression on Firms' Characteristics**

OLS regressions estimates with  $CAAR(0:4)$  as the dependent variable with heteroscedasticity-consistent standard errors (see White (1980)). The numbers in the parentheses are t-statistics.

Explanatory variables:

*Volatility:* The volatility of stock return in estimation period.

*Size:* The natural log of market value measured as average outstanding shares times market price.

*Book/Market:* The natural log of book equity minus natural log of market equity.

*Owner:* Cumulative ownership of blockholders holding more than 5 percent.

*Leverage:* Book value of debt divided by book value of equity.

Independent variables:	1.	2.	3.	4.	5.
<i>Constant</i>	-0,026 (-0,690)	-0,035 (-1,086)	-0,021 (-1,754)	-0,011 (-1,091)	-0,007 (-0,735)
<i>Volatility</i>	0,247 (1,679)	0,245 (1,690)	0,239 (1,639)	0,246 (1,708)	0,275 (1,865)
<i>Book/market</i>	-0,005 (-0,595)	-0,005 (-0,658)	-0,007 (-1,028)	-0,007 (-0,970)	
<i>Leverage</i>	0,007 (1,009)	0,007 (1,011)	0,067 (0,954)		
<i>Size</i>	0,002 (0,422)	0,002 (0,482)			
<i>Owner</i>	-0,002 (-0,573)				
Adj. R <sup>2</sup>	0,077	0,075	0,074	0,068	0,062



## **8. Discussion of results**

The results, in particular of the analysis of variances, suggest that management reveals information to some market participants, enabling them to earn abnormal returns. Management thereby violates its fiduciary duty as well as the regulation codified in the Danish securities legislation. The crucial question is whether the obtained results are due to the inefficiency of the Danish Stock Exchange, or can be generalized to other EU countries. Recent empirical studies shows that the Copenhagen Stock Exchange is quite efficient since share prices react rapidly to earnings announcements (see Thinggaard et al (1999)).

It seems that there may be a need for a more detailed and specific regulation concerning management's holdings of investor meetings/presentations. This has also just recently been recognized by the SEC which has implemented a much richer and elaborated legislation dealing with management's communication with investors. The equal treatment of shareholders with respect to information supplied by listed firms plays a crucial role in the legal protection of investors. This aspect is also very important in corporate governance, since a higher degree of investor protection reduces agency costs due to the inherent asymmetries in information between shareholders and management.

Capital markets cannot be viewed independently of legal rules, sine they to a very large extent determine the efficiency of capital markets. The relationship between legislation and the supply of external finance play a key role since countries with poor investment protection also have less developed capital markets (see La Porta, Lopez-De-Silances and Schleifer (1997)). The legal protection of shareholders is not only limited to securities regulation, but also to other areas of business law, especially company law, which to some degree supplement securities regulation. In particular, this is the case for duty of loyalty that loosely said implies that managers have a duty to act in shareholders' interests.

There is no doubt that investor meetings are valuable and increases managements credibility. This is also documented by an interview survey covering major public companies in the US (see Baretta (1990)).

IR professionals believe that “the credibility factor is key to reducing investor perception of risk in the company as an investment, gaining investor confidence and maintaining a stock price that reflects the company’s past performance and future potential” (c.f. page 28). Arranging investor meetings is an important part of a listed company’s corporate communication strategy. At the same time it contributes to enhancing the efficiency of stock markets, provided that management treats all investors equally. However, the question is whether the present EU-based securities regulation is adequate or instead needs to be supplemented by specific guidelines regarding listed firms’ arrangements of investor meetings. The EU-commission could for example formulate rules that require the use of simultaneous video presentations available on the internet or which prohibit that journalists are excluded from any investor meeting. However, it is important that the provisions of sanctions in such rules are formulated much more in accordance with the US-regulation. Since if this is not the case, the rules may only stand as an empty threat, because the punishment for violating the rules cannot be compared to the financial gain obtained by violating these rules.

## **9. Conclusion**

Investor meetings play a vital role in management’s communications with actual and potential shareholders. However, management has to be aware of the provisions set fourth in the securities regulation, concerning the general duty to disclose relevant information and the prohibition against insider trading. Based on a sample of 120 investor meetings/presentations held by Danish listed firms, the article demonstrates that the current securities regulation initialed by the EU, is insufficient in securing efficient stock markets. Using both traditional event study analysis as well as an analysis of variances, I show that investor meetings convey relevant information and enable investors to earn abnormal return around investor meetings. Compared to European insider trading regulation, US regulation deals more directly with the problems of insider trading and the duty to disclose relevant information to all investors simultaneously.

## Appendix:

### Appendix A: Correlation Matrix

	<i>CAAR (0,4)</i>	<i>Volatility</i>	<i>Size</i>	<i>Book/Market</i>	<i>Owner</i>	<i>Debt/equity</i>
CAAR (0,4)	1,00					
Volatility	0,23	1,00				
Size	0,07	0,06	1,00			
Book/Market	-0,14	-0,30	-0,51	1,00		
Owner	-0,06	-0,01	-0,21	0,22	1,00	
Debt/equity	0,09	0,06	-0,16	0,02	0,02	1,00

### Appendix B: Average Abnormal Returns

Event Time	Average Abnormal Returns
-12	0,066
-11	-0,403
-10	-0,112
-9	0,069
-8	-0,062
-7	-0,083
-6	-0,448
-5	0,269
-4	0,160
-3	0,043
-2	0,029
-1	0,337
0	0,130
1	-0,055
2	0,183
3	0,314
4	0,247
5	-0,203
6	-0,091
7	0,000
8	-0,202
9	-0,041
10	-0,133
11	0,001
12	-0,224

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