The Impact of News Releases on Trade Durations in Stocks
-Empirical Evidence from Sweden

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Abstract

This paper studies the impact of news announcements on trade durations in stocks on the Stockholm Stock Exchange. The news are categorized into four groups and the impact on the time between transactions is studied. Times before, during and after the news release are considered. Econometrically, the impact is studied within an autoregressive conditional duration model using intradaily data for six stocks. The empirical results reveal that news reduces the duration lengths before, during and after news releases as expected by the theoretical litterature on durations and information flow.

Key Words: Finance, transaction data, intraday, market microstructure, ACD.

JEL Classification: C12, C32, C41, G14.

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1 Introduction

This paper examines empirically the short-run impact of public news announcements on trade durations in stocks traded on the Stockholm Stock Exchange in Sweden. The duration corresponds to the time between two consecutive transactions, and a transaction refers to a trade between a buyer and a seller of a volume of stocks at a given price. The news announcements are the news released from one of the leading news agencies in Sweden. The news announcements are categorized into four categories, Company/Sector news, EU macro, Swedish macro and US macro, and their impacts on durations are studied.

The idea to study the duration between transactions originates in the information based model of Glosten and Milgrom (1985). In this model traders are either informed or uninformed, with information varying with the value of the asset they trade. Uninformed traders mainly trade for liquidity reasons, while informed traders act on their superior information on the value of the asset. Easley and O'Hara (1992) extend this model by highlighting the importance of time to distinguish between informed and uninformed traders. They stress that new information, public or private, to market participants, leads to increased trade intensity, i.e. shorter durations between transactions. This corresponds to an increased number of informed agents trying to exploit their new information. The new public information may, e.g., be news announcements from news agencies or press releases. Indicators thought to carry information of revealed new information are, e.g., larger volumes than expected and higher price volatility. In this paper the public news announcement variables are quantified with data from a news agency that provides economic and financial information in Sweden.

Studies of news arrivals, or from a general point of view the impact of events, may be assigned to the literature of event studies, e.g., Campbell et al. (1997). Previous studies have used various proxies for news announcement. Berry and Howe (1994) use the number of daily newspaper headlines and earning announcements. Ederington and Lee (1993) study macroeconomic news and Mitchell and Mulherin (1994) examine stock market announcements. More recent studies are Bollerslev et al. (2000)

with macroeconomic news, Bauwens et al. (2005) who use headlines released on the Reuters news alert screen and Kalev et al. (2004) who employ firm specific announcements. These previous studies have mainly focused on news announcements impact on returns and volatility in securities, rather than on durations. However, there is a link between trade durations and price formation. For example, Grammig and Wellner (2002), Dufour and Engle (2000) and Engle (2000) study the interdependence between intradaily prices, price volatility and trade durations. Dufour and Engle (2000) find that as the time between transactions become shorter the speed of price adjustment increases. This suggests that an active market with short durations demonstrates presence of informed traders. Consequently, publicly released news announcements that contains price driving information may not only reduce duration lengths but may also affect prices. In this paper we concentrate on trade durations to detect the presence of informed traders after news releases. As far as we are aware this is the first empirical study of the impact of news arrivals on durations.

News announcements are sometimes unanticipated, while in other instances both content and timing are expected. News announcements may therefore have an impact on durations both before and after the actual news are released. For the expected news announcement, e.g., scheduled announcements as annual reports and macro figures, an increased trade activity (shorter durations) before the news may be due to price speculations about the information in the announcement. Trade activity after news announcements may be present both for the expected and unanticipated news announcements. The increased trade activity may be due to, e.g., the incorporation of the new information into the price.

For practitioners it may be of interest to study duration dynamics in relation to unanticipated news releases. According to the definitions of the efficient market hypothesis a market is efficient if current and important information are freely available to all market participants. Hence, the use of nonpublicly released price driving information, or insider trading, is prohibited in most countries, e.g., in Sweden by the Market Abuse Penal Act.[1] A possibility for the authorities to monitor violations of the law may

[1] www.fi.se

be to study the duration dynamics. An increased trade intensity before unscheduled and unanticipated news announcements may be due to leaks of insider information. By analyzing durations before unscheduled and unanticipated news releases it may be possible for the authorities to look for leaks and abuse of insider information.

The study of the impact of news on durations econometrically is based on the autoregressive conditional duration model (ACD) of Engle and Russell (1998). The model is useful for irregularly spaced time series data and may also be used for testing hypotheses about sources of clustering of short durations (e.g., Bauwens and Giot, 2001; Engle and Russell, 1998). The categorized news are incorporated as dummy variables in the mean function of the ACD model. The dummy variables represent intervals of before, during and after the news announcements. Consequently the impact of news releases on durations before, during and after the news announcements can be studied.

The outline of the paper is the following. Section 2 presents the data. Section 3 presents the ACD model with details concerning estimation, followed by Section 4 where the empirical results are presented. The final section discusses and concludes.

2 Data

2.1 Stock transaction data

The transaction data were downloaded from Ecovision (www.ecovision.se), a provider of real time financial information from the Stockholm Stock Exchange, and later filtered by the author. The Stockholm Stock Exchange is an order driven market, i.e. no market maker is involved, traders enter sell or buy orders to the order book, visible to all market participants. The database covers June 7 to August 26, 2005, with opening hours 0930 to 1730. Seven days are missing due to technical problems during the summer holiday, from August 9 to August 18. The database contains every transaction with associated spread, price and traded volume, recorded on a second scale. The opening and closing procedure at the Stockholm Stock Exchange determines the opening and closing price for the day and is not regular trading. As we only consider regular trading the first and last 15 minutes of the trade day is deleted. Six stocks were simul-

taneously downloaded and recorded. The stocks are; Ericsson, Nordea, SCA, Skanska, TeliaSonera and Volvo. The stocks are active in different lines of business. Ericsson is a provider of telecommunication equipment, Nordea is a banking company, Volvo manufactures among other things trucks and buses, SCA produces paper and hygiene products, Skanska is a construction company, and TeliaSonera is a telecommunication company.

The six selected stocks are presented in Table 1 with associated descriptive statistics. All stocks are among the most traded stocks on the Stockholm Stock Exchange. Table 1 shows that Ericsson is the most traded among the selected stocks, followed by Volvo, TeliaSonera, Nordea, SCA and Skanska in that order.

One feature of transaction data is the diurnal pattern of duration lengths (e.g., Bauwens et al. 2002; Engle and Russell, 1998). Especially after the opening and prior to the closing of the market the trade intensity is high, i.e. shorter durations, and around the lunch-hour the trade intensity is lower, i.e. longer durations (Simonsen, 2005). Several suggestions of how to account for a potential diurnal pattern have been considered. Engle and Russell (1998) suggest the use of time adjusted durations $d_i = D_i/\phi_i$, where D_i is the duration from the data and ϕ_i is a cubic spline with nodes on each hour defined as the expected duration conditioned on the time of day. Obviously, any other flexible function may be used to capture the intraday seasonality in addition to the cubic spline function (e.g., Bauwens et al. 2002). The adjusted duration d_i is used for estimation. By using d_i, autocorrelations are reduced when compared to unadjusted durations, D_i. Still, auotocorrelations are high in the adjusted durations. The deseasonalizing procedure is also used for the explanatory variables used in the estimations.

2.2 News announcement data

The news announcement data consist of news messages released from the news agency Direkt (www.direkt.se). We only consider news announcement data that coincide with the stock transaction data, i.e. from June 7 to August 26, 2005, and opening hours 0945-1715.

Table 1: Summary statistics of the durations. The figures reported are measured in seconds.

	Mean	Std.	Min	Max	Nr obs
Ericsson	8.9	18.7	0	351	184292
Nordea	35.2	74.8	0	1415	40780
SCA	37.3	79.6	0	1491	38487
Skanska	45.0	91.1	0	1489	31941
TeliaSonera	26.0	59.7	0	1048	55209
Volvo	22.7	51.6	0	936	63581

The distributed news are related to Swedish financial markets and include stock specific news, national and international economic macro news, forecasts and expectations in the market. The first release after a news event is a short summary in a so-called flash. It consists of a few sentences and is supposed to be quick and to provide important information to investors. Only information concerning the most important news events is distributed through a flash. A news flash is followed, within a couple of minutes, by additional and more detailed information. The news flash releases are recorded on a minute scale. The news flash releases are rounded to the nearest integer minute, i.e. recorded seconds $s \in [0, 29]$ are assigned to the previous integer minute, and seconds $s \in [30, 59]$ are assigned to the following integer minute. The announcement with additional information is recorded on a second scale.

To capture the effect of different kinds of news, the news data from Direkt are categorized into four groups. Table 2 gives both the frequencies of the news flash and the following additional news releases in the different categories of news. The first group contains both company and sector specific news. The company news contain news directly concerning the company. The sector news are related to companies in the same sector or news related to the sector itself. The three following groups, US, European and Swedish macroeconomic news contain, e.g., employment reports, price indices, GDP reports and other important macro figures from the different regions. Other studies using categorized news announcement data are, e.g., Bauwens et al. (2005) and Bollerslev et al. (2000) with macro news announcement, and Kalev et al.

Table 2: Number of news announcements in the different news categories.

	Company/Sector news					
	Ericsson	Nordea	SCA	Skanska	TeliaSonera	Volvo
Company/sector flash	62	30	67	18	17	26
Company/sector, additional info	32	21	28	16	14	9
	Macro news					
US macro flash	127					
US macro, additional info	79					
Eu macro flash	143					
Eu macro, additional info	103					
Swe macro flash	148					
Swe macro, additional info	69					

(2004) who employ firm specific announcements.

3 Model and estimation

The impact of news announcements is studied within the autoregressive conditional duration model (ACD) of Engle and Russel (1998). For this purpose dummy variables of before, during and after a news announcement are created.

First, we start by presenting the ACD model and a functional form extension of Bauwens and Giot (2001). Let $d_i = t_i - t_{i-1}$ be the duration between transactions at times t_i and t_{i-1} and the conditional expected duration

$$\theta_i = \theta_i(d_{i-1}, ..., d_1; x) = E(d_i \,|d_{i-1}, ..., d_1; x)\,.$$

The conditional expected duration may be parameterized as suggested by Engle and Russell (1998) in a linear form

$$\theta_i = \omega + \sum_{j=1}^{p} \alpha_j d_{i-j} + \sum_{j=1}^{q} \beta_j \theta_{i-j} + \gamma' x_{i-1}$$

where θ_i is specified in such a way that $\epsilon_i = d_i/\theta_i$ is independent and identically distributed. This is called an ACD(p, q) with p duration lags and q lags in the expected

duration and x contains explanatory variables such as price and volume. A useful variant of the original ACD model is the log-ACD of Bauwens and Giot (2001). The extension ensures that expected durations remain positive:

$$\theta_i = \exp\left[\omega + \sum_{j=1}^{p} \alpha_j d_{i-j} + \sum_{j=1}^{q} \beta_j \ln \theta_{i-j} + \gamma' x_{i-1}\right].$$

Dummy variables for the news announcements are added as explanatory variables. The dummy variable for a news announcement flash is denoted $N^f_{i,\tau}$, where i indicates the news type and τ is used to indicate the interval before, during or after the news announcement (see Figure 1). The durations considered in the intervals are completed ones, i.e. the terminal point of the durations are in the observation window. $N^f_{i,0}$ is equal to 1 if a news flash is released during the interval and zero otherwise. $N^f_{i,-1}$ and $N^f_{i,1}$ are dummies for the intervals before and after a news flash announcement, respectively. Empirically, the dummies represent observation windows equal to five minutes before the announcement and ten minutes after the news announcement. Other lenghts of the observation windows were also considered, see next section. The observation window during which the news arrives, $N^f_{i,0}$, is equal to 1 minute. The total observation window during and around the news announcement is 16 minutes. To consider the impact of more than 1 news flash announcement of type i during the observation window the dummy $N^f_{i,f>1}$ is equal to 1 if the number of news flash announcements is larger than 1 and zero otherwise.

The impact of the news announcement with additional information, released after the news flash, is considered with a dummy variable (see Figure 1). The dummy $A_{i,1}$ for the additional information is equal to 1 if additional information is released of type i and zero otherwise. The lengths of the observed interval after the additional information, $A_{i,1}$, is equal to 5 minutes.

We may determine the percentage change in the conditional mean duration of a change in the discrete valued dummy variable $N^f_{i,\tau}$. Denote the expected mean duration

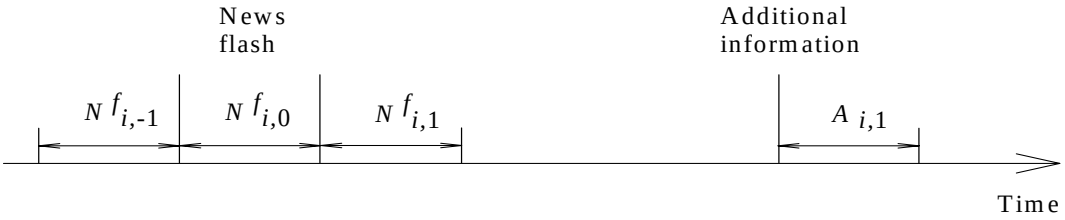

Figure 1: Illustration of the dummy variable structure during and around the news flash and additional news arrivals.

$E(d_i|N^f_{i,\tau}=0)$ as the base level and $E(d_i|N^f_{i,\tau}=1)$ as the mean duration when a news announcement is released during the interval τ. The percentage change, $P^f_{i,\tau}$, of a news flash is then

$$P^f_{i,\tau} = 100\frac{E(d_i|N^f_{i,\tau}=1) - E(d_i|N^f_{i,\tau}=0)}{E(d_i|N^f_{i,\tau}=0)}.$$

The x vector of explanatory variables also contain price, volume and spread.

4 Empirical results

The empirical results are reported for the log-ACD model with explanatory variables. To determine the lag structures we utilize the AIC criterion and for the estimation of parameters we apply the quasi maximum likelihood (QML) estimator based on the exponential distribution (e.g., Engle and Russell, 1998).

The results are presented in Tables 3-5. Table 3 reports the estimates of the dummy variables before, during and after the news flash and the dummy variable of the additional news announcement. Table 4 reports the impact of more than one news flash announcement and the effects of the explanatory variables traded volume, spread and changes in price.

Although not reported in Table 3 but part of the estimates, the parameters α, of lagged durations and β, of lagged expected durations are significant with a few exceptions. Exclusion of the insignificant parameters were also considered, though such a specification is not minimizing the AIC. The β estimates are significant and

throughout smaller than one.

Before discussing the individual parameter estimates reported in Table 3 of the news announcement variables of before, during and after the news announcement we may test if the news announcement dummy parameters are jointly significantly different from zero, i.e. if the news variables jointly add explanatory power to the model. A likelihood ratio test is applied for this purpose. It is found that the added news announcement dummies are jointly significantly different from zero for all results. The result holds both when including and excluding the explanatory variables volume, spread and changes in price.

Next, we consider the individual parameter estimates in Table 3. As Easley and O'Hara (1992) claim that new information increases the trade intensity, the expected impact of news before, during and after the release is a reduction of durations, i.e. higher trade intensity. Consequently the expected sign of the parameters of the news announcement dummies is negative. The impact before the news release may be caused by scheduled and anticipated news releases. We find significant results with the expected negative sign for, e.g., US macro news for Ericsson and SCA and Company/Sector news for Ericsson, TeliaSonera and Volvo. The parameter estimates imply that the expected durations lengths are shortened by 5.3 and 2.1 percent for TeliaSonera and Ericsson, respectively, prior to Company/Sector news. The rest of the significant and negative estimates all shorten the durations by less than 5 percent. We find significant and negative parameter estimates also for the 1 minute intervals where the news arrives of, e.g., EU macro news for Ericsson and Nordea and Company/Sector news for SCA, Skanska, Nordea and TeliaSonera. It seems that Company/Sector news reduces duration lenghts, e.g., for Skanska by 19 percent, Nordea by 42 percent and for TeliaSonera by 24 percent.

Table 3: Estimation results of before, during and after news flash and additional news releases for the different stocks (robust t statistics in parentheses).

	US Macro				EU Macro				SWE Macro				Company/Sector							
Model	$N^f_{i,-1}$	$N^f_{i,0}$	$N^f_{i,1}$	$A_{i,1}$	$N^f_{i,-1}$	$N^f_{i,0}$	$N^f_{i,1}$	$A_{i,1}$	$N^f_{i,-1}$	$N^f_{i,0}$	$N^f_{i,1}$	$A_{i,1}$	$N^f_{i,-1}$	$N^f_{i,0}$	$N^f_{i,1}$	$A_{i,1}$	LB_{40}	LB^2_{40}	$\ln L$
Ericsson																			
ACD(8,1)	-0.013	0.010	-0.006	-0.001	-0.003	-0.022	-0.012	0.020	0.002	0.020	-0.003	-0.007	-0.021	0.033	-0.002	-0.008	2631.3	0.6	-133034.4
	(-3.98)	(1.34)	(-2.02)	(-0.35)	(-1.16)	(-3.31)	(-4.98)	(4.85)	(0.28)	(1.10)	(-0.75)	(-1.18)	(-4.88)	(2.29)	(-0.47)	(-1.75)	2495.2	0.6	-133430.4
Nordea																			
ACD(4,1)	-0.025	0.357	0.015	0.008	-0.028	-0.194	0.035	0.055	0.125	0.619	-0.010	-0.071	0.027	-0.544	0.123	-0.150	234.9	128.9	-33286.9
	(-1.52)	(5.41)	(0.72)	(0.29)	(-0.93)	(-3.04)	(2.12)	(2.04)	(3.08)	(4.05)	(-0.26)	(-1.66)	(0.63)	(-9.35)	(3.47)	(-2.64)	237.9	139.6	-33570.4
SCA																			
ACD(7,1)	-0.012	-0.005	0.005	0.009	0.006	-0.009	0.001	0.005	0.0002	-0.024	0.004	0.0004	0.015	-0.045	0.0006	-0.009	269.9	30.0	-31111.9
	(-2.58)	(-0.34)	(1.32)	(1.62)	(1.75)	(-0.62)	(0.64)	(1.79)	(0.04)	(-2.53)	(0.97)	(0.09)	(4.73)	(-11.2)	(0.20)	(-4.06)	255.3	21.9	-31912.0
Skanska																			
ACD(4,1)	0.178	0.014	0.089	-0.144	-0.007	0.050	-0.069	0.152	0.322	0.154	0.149	-0.258	0.028	-0.216	-0.070	0.245	178.9	94.6	-29376.3
	(3.14)	(0.09)	(2.86)	(-3.76)	(-0.18)	(0.39)	(-2.34)	(3.20)	(4.76)	(0.78)	(3.81)	(-5.58)	(0.26)	(-0.69)	(-1.23)	(2.22)	190.8	84.5	-29486.3
TeliaSonera																			
ACD(3,1)	0.016	0.015	-0.042	0.011	-0.021	0.101	-0.062	0.030	0.078	-0.100	0.118	-0.108	-0.054	-0.272	-0.044	-0.090	236.4	284.5	-47742.7
	(1.02)	(0.27)	(-2.00)	(0.36)	(-1.21)	(2.19)	(-4.06)	(1.43)	(2.64)	(-1.59)	(5.53)	(-4.03)	(-3.60)	(-8.83)	(-2.83)	(-2.96)	236.1	254.9	-47922.4
Volvo																			
ACD(8,1)	0.004	0.002	-0.004	0.010	-0.004	0.007	0.0006	-0.002	-0.003	0.001	-0.003	0.006	-0.020	-0.004	0.005	0.004	102.1	11.6	-55843.8
	(1.72)	(0.34)	(-2.96)	(3.51)	(-1.30)	(0.82)	(0.27)	(-0.57)	(-0.82)	(0.09)	(-1.15)	(1.17)	(-2.84)	(-0.50)	(1.43)	(0.58)	263.0	46.4	-56167.6

Notes: Parameter estimates of durations and explanatory variables volume, spread and price changes are not reported in the table, although part of the estimations. Reported LB_{40} and LB^2_{40} are the Ljung box statistic of the residuals and the squared residuals. LB_{40}, LB^2_{40} and loglikelihood are reported both with, uppermost, and without, lower, the news announcement dummies for all stocks.

For the 10 minute observation window after the news announcement the findings are seven negative and significant estimates. These reflect US macro news for Ericsson, TeliaSonera and Volvo, EU macro news for Ericsson, Skanska and TeliaSonera, and Company/Sector news for TeliaSonera. In particular, the macro related news from US and EU seem to influence durations negatively. The relative reduction in durations is at most 10 percent for the negative and significant estimates of the observation window after the news announcement.

Considering the effect of additional information, i.e. the more detailed news release after the first short and rapid news flash, the plausible impact is a reduction of durations if the additional news release contains important information in additional to the news flash. The sign of the coefficients corresponding to $A_{i,1}$ in Table 3 is therefore expected to be negative. This is also found for, e.g., additional Company/Sector news for SCA, Nordea and TeliaSonera. Also, for SWE macro news negative and significant estimates are found for Skanska and TeliaSonera. Additional US macro news reduces durations for Skanska. These additional news shorten durations by 10 to 25 percent.

Reported in Table 4 is the effect of more than one news flash during the 16 minutes observation window. More than one news flash of the same type during the observation windows may originate from important and complex events. If more than one news flash indicates important news events we expect the impact of more than one news flash to additionally reduce durations. Consequently the expected sign is negative. Negative and significant results are found for, e.g., US macro and SWE Macro news for Skanska and Company/Sector news for and TeliaSonera. A majority of the estimated parameter signs of Company/Sector news are negative but insignificant while for the other news categories a large proportion is positive and significant.

The estimates for traded volume, spread and changes in price are also presented in Table 4 and show negative significant estimates of traded volume while significant positive ones for spread and changes in price. That is durations are reduced after large traded volumes and durations are shorter after negative changes in price. Due to numerical problems during estimation, price change is excluded in all estimates for SCA.

Table 4: The impact of more than one news flash announcement during the total length of the observation windows (5+1+10 minutes) for different news categories (columns 1-4). Estimation results of the explanatory variables (columns 5-7).

	US Macro	EU Macro	SWE Macro	Sector/ Company	Traded vol	Spread	Price change
Ericsson	-0.004	0.007***	0.001	-0.005	-0.001***	0.0003	0.048
Nordea	0.019	0.032	0.057*	-0.031	-0.0009***	0.258***	0.203***
SCA	0.0009	0.006**	-0.001	-0.004	-0.0003***	0.0002	-
Skanska	-0.112***	-0.072*	-0.192***	0.065	0.002	0.156***	0.181***
TeliaSonera	0.063***	0.058***	-0.017	-0.098***	-0.002***	0.163***	1.929***
Volvo	0.002*	0.002	0.004*	0.002	-0.0003**	0.004**	-0.002

Notes: The symbols ***,** and * indicate significance at 1%, 5% and 10% levels, respectively. Standard errors are the robust standard error.

Table 5 summarizes the estimation results for the different news categories, i.e., US macro, EU macro, Swedish macro and Company/sector news. The first and second column reports the impact of the news announcement before and after the announcement, respectively. The third column reports the difference between the parameters of before and after news releases. The total sum of the coefficients of the news windows before, during and after the news releases, totally 16 minutes, is reported in the fourth column.

The expected sign of the parameters reported in the first and second column is, as discussed above, negative. The difference between the parameters reported in column three assesses the relative effect between before and after news releases. A positive sign indicates that durations in the observation window before the news release is shorter relative to the durations in the observation window after the news release. The estimates of the difference between before and after the news are both negative and positive. However, for Company/Sector news a major part of the estimates are positive indicating longer durations after the news releases relative to the length of the durations before the announcement.

The total sum of the coefficients of the news windows before, during and after

the news releases is reported in the fourth column. We may test if the parameters in the fourth column is less than zero. Rejection implies that news announcement prolongs duration lengths. The results indicates that news have a negative impact on durations for the total observation lengths. Particularly Company/Sector news influence durations negatively. We find shorter durations of Company/Sector news for SCA, Nordea, TeliaSonera and Volvo. Also EU macro news for Nordea significantly reduces the durations.

Other lenghts of the observation windows than 5 minutes of before, 1 minute during and 10 minutes after news releases were utilized and evaluated. However, both shorter intervals, 30 seconds, 1 minute and 3 minutes and longer intervals, 10 and 20 minutes results in less number of significant parameters, although, both shorter and longer observation windows also results in significant parameter estimates.

Table 5: The impact of news before, after and the total effect of news announcements for the different stocks and news categories.

	$N^f_{i,-1}$	$N^f_{i,1}$	$N^f_{i,1}-N^f_{i,-1}$	$\sum_{\tau=-1}^{1} N^f_{i,\tau}$
		US Macro		
Ericsson	-0.013***	-0.006**	0.007*	-0.009
Nordea	-0.025	0.015	0.040	0.347***
SCA	-0.011***	0.005	0.017**	-0.011
Skanska	0.178***	0.089***	-0.089	0.281*
TeliaSonera	0.016	-0.042**	0.058**	-0.011
Volvo	0.004*	-0.004***	0.009	0.002
		EU Macro		
Ericsson	-0.003	-0.012***	-0.009***	0.037***
Nordea	-0.028	0.035***	0.063**	-0.186***
SCA	0.005*	0.001	0.005	-0.002
Skanska	-0.007	-0.069**	-0.062	-0.026
TeliaSonera	-0.021	-0.062***	0.042*	0.018
Volvo	-0.004	0.0005	0.004	0.004
		SWE Macro		
Ericsson	0.002	-0.003	-0.005	0.019
Nordea	0.125***	-0.010	-0.135***	0.733***
SCA	0.0002	0.004	0.003	-0.020**
Skanska	0.322***	0.149***	-0.173***	0.624***
TeliaSonera	0.078***	0.118***	0.040	0.096
Volvo	-0.003	-0.003	0.000	-0.006
		Company/Sector news		
Ericsson	-0.021***	-0.002	0.019***	0.011
Nordea	0.027	0.123***	0.097**	-0.395***
SCA	0.015***	0.0006	-0.015***	-0.029***
Skanska	0.029	-0.070	-0.099	-0.258
TeliaSonera	-0.054***	-0.043***	0.016	-0.369***
Volvo	-0.020***	0.005	0.025***	-0.020**

The symbols ***,** and * indicate significance at 1%, 5% and 10%, respectively. Standard errors in the first and second column are the robust standard errors. The standard errors reported in the third and fourth column are from the chi-squared distributed Wald statistics.

5 Discussion

This paper examines the impact of news on durations in stocks traded on the Stockholm Stock Exchange in Sweden. The news are categorized into four groups and added as explanatory variables to the autoregressive conditional duration model. The dummy variable structure captures the impact before, during and after the news.

The dummy variable structure of before, during and after the news announcement seem to capture news announcements impact on durations. We find increased trade activity before, during and after news releases. In the current sample the relative reduction in mean duration before the news announcement is less than 5 percent. The impact around the news release of for example Company/Sector related news shortens durations by 20 to 40 percent. After the news release mean durations are at most reduced by 10 percent. The results indicates that particularly during the news release the durations are reduced. After the news release the durations are shortened by at most twice as much as before the news release.

The cause of reduced durations before the actual news releases may originate from anticipated news releases, while the significant result of the impact during and after the news release may be due to both anticipated and unanticipated news events. The support is strong for Company/Sector related news, while weaker for macro related news, although, we find significant results also for macro news. The result supports the predictions of Easley and O'Hara (1992) of shorter durations in connection to news. Recent studies also find significant impacts of news announcements, e.g., Bollerslev et al. (2000) and Bauwens el al. (2005) for macro news, Kalev et al. (2004) for firm specific news. These studies are concentrated with the impact on price volatility.

The result indicates that detailed Company/Sector news and to some extent also macro news followed after a brief news flash reduces the durations. Accordingly, additional Company/Sector news contains important information to market traders. The results show weak support for Company/Sector news releases reducing the durations. Consequently, several news flash releases do not contain additional information reducing the expected durations.

Considering the link between durations and price volatility we may expect the news announcement to also affect volatility. To asses this feature we utilize a AR(1)-GARCH(1,1) model with one minute aggregated price data. The news announcement dummy variables are added as explanatory variables to the model. The findings are significant estimates of the news announcements. In the case of Ericsson, Nordea, SCA, Skanska, TeliaSonera the significant estimates are mainly of the interval after the news announcement. Consequently, it seems that volatility is affected mainly after the news announcement while the durations are affected also before and during the news announcement. This may be the result of uncertainty prior the news announcement that results in trading but not in price movements. After the release of news and possible price driving information durations as well as the market price may be affected, i.e., the volatility is increased. One suggestion for further analysis of the relation between news releases, durations and volatility may be to model the variables simultaneously.

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