

# Earnings Announcement Timing in Selected Equity Markets

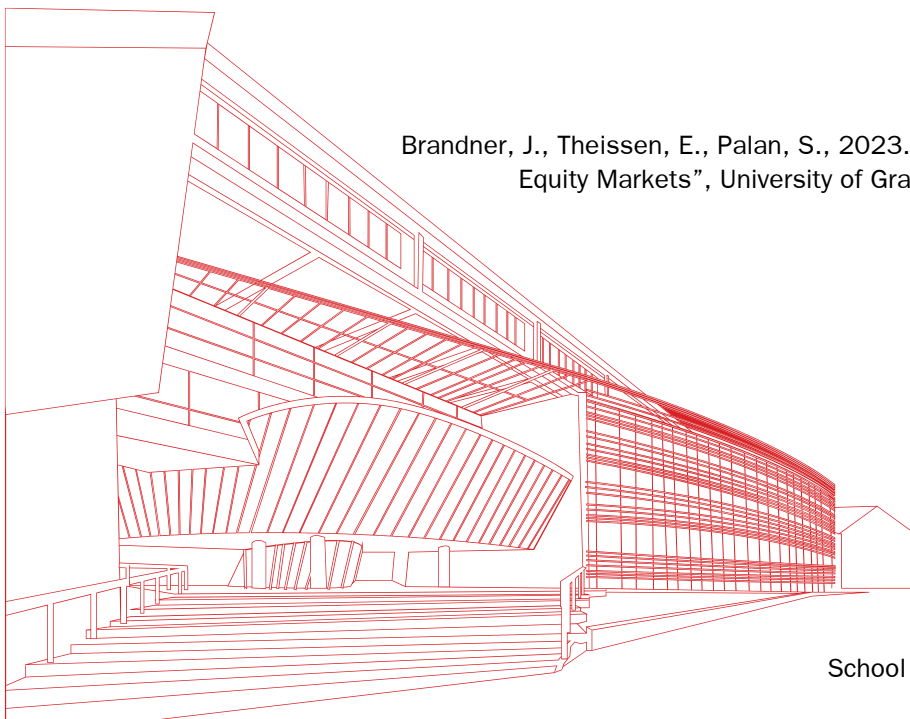
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Working Paper 2023-02

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We investigate earnings announcement timing in the equity markets of France, Germany, Japan, and the UK. We document important differences between the announcement timing in these countries and the U.S. After controlling for firm-specific characteristics we find no evidence that firms strategically release bad news on specific days of the week, or at specific times of the day.

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**JEL:** G12, G14, G40, M41

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# Earnings Announcement Timing in Selected Equity Markets

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## Abstract

We investigate earnings announcement timing in the equity markets of France, Germany, Japan, and the UK. We document important differences between the announcement timing in these countries and the U.S. After controlling for firm-specific characteristics we find no evidence that firms strategically release bad news on specific days of the week, or at specific times of the day.

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## 1. Introduction

Firms regularly publish earnings announcements, and the share price reacts to the information contained therein. In an informationally efficient market the share price should react instantaneously and fully to the announcement. Share prices have been known, however, to underreact to new information, for example because investors are distracted (see, e.g., Jiang et al., 2021). If the strength of the share price reaction to a given piece of information varies over time in predictable ways, managers may try to strategically time their earnings announcements. They may release positive announcements at times when they expect an immediate and strong price reaction, and release negative announcements at times when they expect a muted reaction.

A broad literature addresses the question of whether managers indeed time earnings announcements strategically. Penman (1987) and Damodaran (1989) were among the first to report that bad news are more likely to be announced on Fridays. This pattern, which is consistent with the belief that share prices react less strongly to new information on Fridays, is known as the ‘Friday Effect’ (e.g. Zolotoy, 2007). However, more recent empirical research suggests that no systematic Friday effect remains once firm characteristics are controlled for (e.g., Bagnoli et al., 2005; Doyle and Magilke, 2009; deHaan et al., 2015; Michaely et al., 2016). A second strand of the literature analyzes whether there are time-of-day effects in the release of earnings announcements. Patell and Wolfson (1982) report that negative earnings news tend to be announced outside of trading hours, a result that was confirmed in subsequent research (e.g., Damodaran, 1989; Jiang et al., 2012; deHaan et al., 2015). However, as in the case of day-of-the-week effects, more recent research suggests that the time-of-day effects disappear once firm characteristics are controlled for (e.g., Doyle and Magilke, 2009; Michaely et al., 2014).

Previous research into the timing of earnings announcements almost exclusively focuses

on the U.S. market.<sup>1</sup> In this paper we shed light on the timing of earnings announcements in four key non-U.S. equity markets: France, Germany, Japan, and the UK. For each of these markets we investigate the constituents of the major equity indices, namely the CAC 40, DAX 30, NIKKEI 225, and FTSE 100. Our methodology (explained in detail in Section 3) is inspired by Michaely et al. (2014, 2016).

We find that the distribution of announcements across days of the week is similar in France, Germany, and the UK. In these countries, firms most frequently release their earnings announcements on Thursdays and least frequently on Mondays, with Friday being the second-least popular announcement day. In contrast, Friday is the most popular earnings announcement day for NIKKEI 225 firms (27% of all announcements). This pattern in particular is very different from that in the U.S., where Friday is the *least* popular announcement day.

We further find that the intraday timing of earnings announcements differs substantially between the equity markets we investigate. The vast majority of firms release their earnings announcements before the market opens in France, Germany, and the UK (90% of CAC 40 announcements, 92% of DAX 30 announcements, and 88% of FTSE 100 announcements). Conversely, the majority of NIKKEI 225 firms release their earnings announcements after market close (65%), with the remainder (35%) releasing them during trading hours.

We do not find evidence of strategic announcement timing. Neither are negative announcements more likely to be made on Fridays, nor are negative news more likely to be announced outside of trading hours.<sup>2</sup> We further find no evidence that individual firms

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<sup>1</sup>The only exceptions we are aware of are Ghaemi et al. (2013) who analyze the Friday effect on the Tehran stock exchange and Abad et al. (2009) and Kwan et al. (2009) who analyze the intraday timing of earnings announcements in Spain and Korea, respectively.

<sup>2</sup>As will be discussed in more detail in Section 2, we analyze the intraday pattern of earnings announcements only for Japan because the number of announcements made during trading hours is too small for a

strategically switch the timing of their earnings announcements (e.g., by moving to a Friday announcement when the announcement contains bad news).

Our paper extends previous research on the timing of earnings announcements by focusing on four important non-U.S. equity markets. Our results show that the day-of-the-week and time-of-the-day patterns of earnings announcement releases in the four countries under investigation differ substantially from those in the U.S. However, our finding that there is no evidence of strategic timing of earnings announcements is in line with the recent U.S. evidence. These results imply that further regulation of the timing of earnings announcements is likely unnecessary.

## 2. Data and Descriptive Statistics

Our sample includes the constituent stocks of the major equity indices in France (CAC 40), Germany (DAX 30), Japan (NIKKEI 225), and the UK (FTSE 100).<sup>3</sup> The sample period ranges from January 2001 to May 2021.

We obtain stock and index return data from Refinitiv Eikon. Michaely et al. (2014) and Bradley et al. (2014) report that earnings announcement time stamps may be inaccurate. We therefore adopt a procedure proposed by deHaan et al. (2015) and collect earnings announcement data, including time stamps, from three sources: Refinitiv Eikon, Bloomberg, and I/B/E/S. We thus gather an initial sample of 25,602 earnings announcements. We account for the fact that data providers may report time stamps in local time or in a standard time format, and we take into account daylight savings time wherever relevant. We then classify each announcement as occurring before market open (midnight to exchange opening

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meaningful empirical analysis in France, Germany, and the UK.

<sup>3</sup>These countries were the four largest non-U.S. economies in terms of GDP at the start of our sample period according to World Bank data; see <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>, accessed 2023-05-17.

time), during trading hours, or after market close (exchange closing time to midnight). Our sample only retains announcements that are classified consistently by at least two of the three data providers. The final sample contains 12,842 announcements. We find that Bloomberg offers the most comprehensive coverage of time stamp data for our data set (time stamps available for 68% of our sample), followed by Refinitiv Eikon (56%) and I/B/E/S (36%).

Table 1 presents the distribution of earnings announcement timings across days of the week and times of the day for the CAC 40, DAX 30, NIKKEI 225, and FTSE 100 constituents. We find that the most popular announcement weekday for CAC 40, DAX 30, and FTSE 100 firms is Thursday, with approximately 40% of all earnings announcements released on this weekday. Monday is the least popular day (3% to 5%), followed by Friday (8% to 16%). Interestingly, the most popular announcement weekday for NIKKEI 225 firms is Friday (28%). This is in clear contrast to the U.S., where the share of Friday earnings announcements is much lower and has decreased from 18% in the 1970s to 6% in the early 2000s (e.g., Penman, 1987; DellaVigna and Pollet, 2009; Michaely et al., 2016).

Firms in France, Germany, and the UK release between 88% (UK) and 92% (Germany) of their earnings announcements before market open. In contrast, Japanese firms release their earnings announcements after market close (65%) or during trading hours (35%), but very rarely before market open (5 announcements out of a total of 7,187).<sup>4</sup> Thus, there are systematic differences between the three European markets and the Japanese market in the intraday timing of earnings announcements measured in local time.

One potential explanation for systematic differences in announcement times in our European sample countries on the one hand and in Japan on the other hand is that firms time their announcements relative to the opening times of the dominant U.S. markets. We

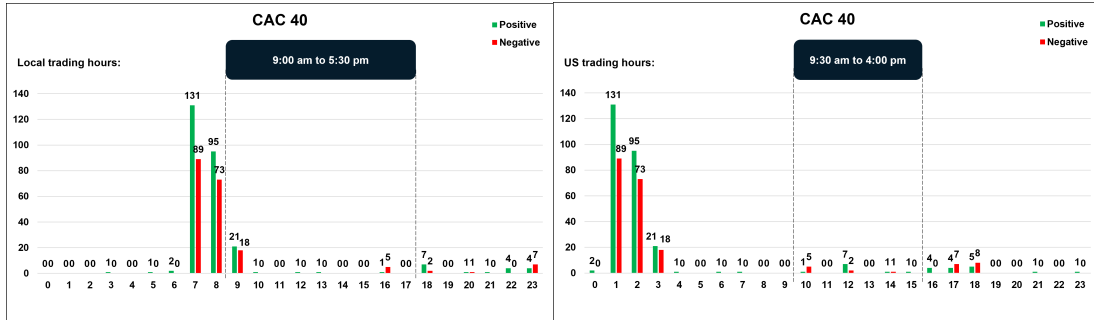
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<sup>4</sup>Interestingly, we find that 17% of the earnings announcements of Japanese firms in our data set are released Fridays outside of trading hours. The corresponding figure for the U.S. is only 1% (Michaely et al., 2016).

present the distribution of earnings announcement times for each country, both in local time and in Eastern Standard Time, in Figure 1. We find that firms in all four countries release earnings announcements in the very early morning hours of the Eastern U.S. There are very few announcements during U.S. trading hours. Whether firms indeed time their announcements to avoid U.S. market opening hours or whether the timing is determined by factors local to each country is an interesting question. However, variation across countries and time zones in our sample is too low to draw informed conclusions.

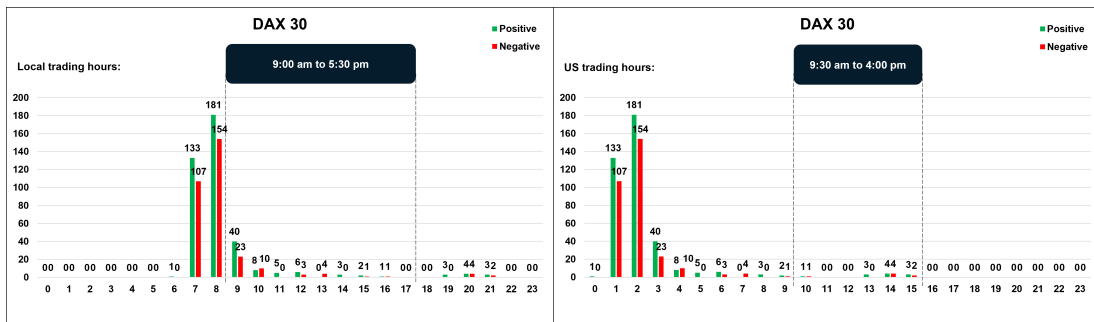
Because very few announcements are made in Japan after the market closes, or in the three European countries before the market opens, we pool announcements released before market open and after market close and thus only differentiate between announcements made outside of trading hours and those made during trading hours. Nevertheless, the number of announcements made during trading hours in France, Germany, and the UK is too low for a meaningful statistical analysis. We therefore confine our analysis of the intraday timing of earnings announcements to our Japanese sample.





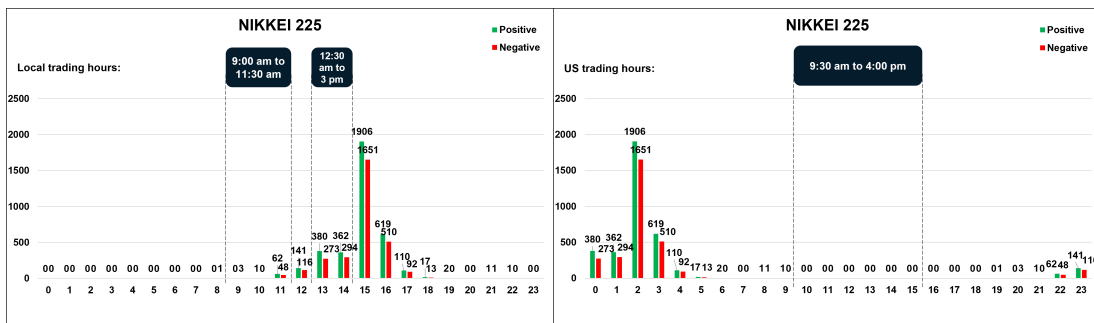
(a) CAC 40 – Local Time

(b) CAC 40 – U.S. ET



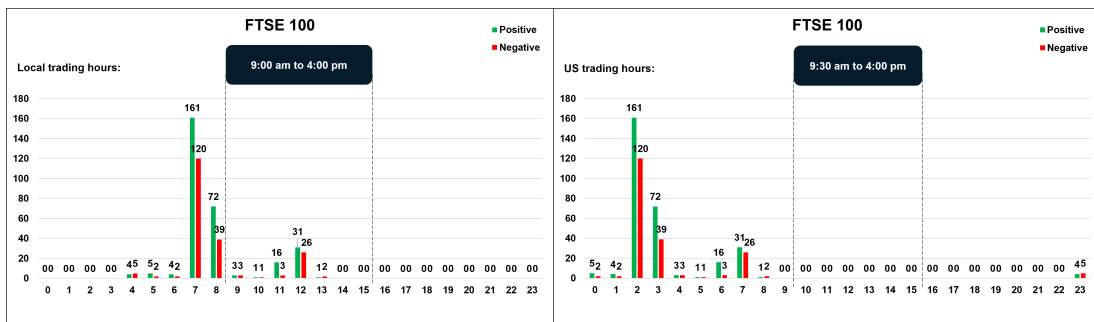
(c) DAX 30 – Local Time

(d) DAX 30 – U.S. ET



(e) NIKKEI 225 – Local Time

(f) NIKKEI 225 – U.S. ET



(g) FTSE 100 – Local Time

(h) FTSE 100 – U.S. ET

**Figure 1: Distribution of earnings announcements – Local time vs U.S. ET.** These charts show the distribution of earnings announcement timing of firms in the investigated indices in their respective local time compared to the announcement time translated to U.S. Eastern Time.

**Table 1: Overview of earnings announcement timing.** Earnings announcement timing of firms listed in the CAC 40, DAX 30, NIKKEI 225, and FTSE 100 after validating time stamps based on two matching announcement timing classifications (as described in Section 2).

Announcement timing	CAC 40	DAX 30	NIKKEI 225	FTSE 100
Monday	31 3%	24 3%	853 12%	59 5%
Tuesday	114 12%	142 20%	1,324 18%	293 24%
Wednesday	202 22%	177 25%	1,316 18%	289 23%
Thursday	428 47%	281 40%	1,752 24%	499 40%
Friday	144 16%	75 11%	1,942 27%	99 8%
Total	919	699	7,187	1,239
Chi-square test for uniform distribution	$\chi^2(4, N=919)=488.4$ $p=0.000$	$\chi^2(4, N=699)=278.5$ $p=0.000$	$\chi^2(4, N=7,187)=502.8$ $p=0.000$	$\chi^2(4, N=1,239)=502.9$ $p=0.000$
Before market open	820 90%	641 92%	5 0%	1,085 88%
During trading	19 2%	43 6%	2,521 35%	151 12%
After market close	80 8%	16 2%	4,661 65%	3 0%

### 3. Methodology and Results

We follow the approach of Michaely et al. (2016) to analyze whether there is a tendency for managers to release particularly good or bad information on specific days of the week. We run, separately for each day of the week, the following regression that relates the earnings surprise to the day on which the announcement is made.

$$SUE_{i,t} = \alpha_0 + \alpha_1 W_{i,t} + \sum_{i=1}^5 \alpha_{i+1} X_{i,t} + \epsilon_{i,t} \quad (1)$$

‘SUE’ (Standardized unexpected earnings) is the earnings surprise, defined as the actual EPS minus the analyst median EPS estimate one day prior to the announcement, divided by the stock price five days prior to the announcement. We also estimate the variable ‘Absolute SUE’, defined as the absolute value of the earnings surprise.  $W_{i,t}$  is a binary variable equaling one if the earnings announcement was released on the weekday under consideration and zero

otherwise.  $X_{i,t}$  is a vector of control variables. The control variables are defined as in Michaely et al. (2016). ‘Log Mkt. Cap.’ is the natural log of the firm’s market capitalization in the respective local currency on the earnings announcement day. ‘Number of analysts’ is the number of analysts covering the firm in a given year. ‘Debt-to-assets’ and ‘Price-to-book’ are the respective ratios on the earnings announcement day. Moreover, we use ‘Free float’, defined as the percentage of free floating shares on the earnings announcement day, as an additional control variable. Firm and year fixed effects are included in all regressions and standard errors are clustered at the firm level. Table 2 summarizes the variables used in the regressions.

**Table 2: Variable Overview.** Overview and description of variables used in regressions.

Variable	Description
SUE (Standardized unexpected earnings)	(Actual EPS – Analyst Median EPS 1 day prior to announcement) / Stock price 5 days prior to the announcement
Absolute SUE	Absolute value of ‘SUE’
Log Mkt. Cap	Natural log of the firm’s market capitalization on the announcement day
Number of analysts	Number of analysts covering the firm in a given year
Debt-to-assets	Total debt outstanding / Total assets reported on the announcement day
Price-to-book	Market capitalization / book value
Free float	Percentage of free floating shares on the announcement day

Table 3 shows, for each day of the week, the total number of announcements in the sample, the percentage of announcements that meet or beat the median analyst forecast (denoted MBE%), the average signed and absolute SUE, and the coefficient estimates for the day-of-the-week dummies of regression (1) as well as their  $t$ -statistics. The four panels of the Table show the results for France, Germany, Japan, and the UK, respectively.

We first note that the fraction of announced earnings that meet or beat the median analyst forecast is greater than 50% in almost all cases. The only exceptions are announcements in France and Germany made on Mondays (which, incidentally, are the two cases with the lowest numbers of observation in the entire sample). That managers tend to release earnings figures that meet or beat analyst expectations is well-established (see, e.g., Degeorge et al.,

1999).

Over our sample period, the average SUE are negative on all weekdays in Japan and predominantly positive in all other countries. The lowest SUE are observed on Wednesdays in France, on Mondays in Germany, on Tuesdays in Japan and on Fridays in the UK. The absolute SUE are largest on Mondays in France and Japan, on Thursdays in Germany and on Fridays in the UK. Larger absolute SUE imply greater information content of the announcement. While there are small differences in SUE and absolute SUE across the days of the week, these differences are not statistically significant. We only observe one statistically significant coefficients: absolute SUE are significantly larger (at the 10% level) for Friday announcements in the UK. Given that we run a total of 40 regressions (five days of the week, four countries, signed and absolute SUE), we attribute this single significant coefficient to chance.

The results so far thus do not support the hypothesis of strategic announcement timing. However, up to this point we did not differentiate between firms that make their announcements on the same day of the week as they did the previous announcement and firms that switch the day of the week on which they choose to announce. If managers want to “hide” bad news by announcing on Fridays, we would expect to see that (1) a larger percentage of Friday announcements is switched as compared to announcements made on the other days of the week, and that (2) announcements that are switched to a Friday have lower average SUE. To test these predictions, we compare the frequency of switched announcements across days of the week, and we compare the SUE for switched to that for non-switched announcements for each day of the week. We only consider cases in which no more than 120 (200) calendar days elapsed between the current announcement and the one preceding it for French, German, and Japanese firms (UK firms).<sup>5</sup>

Table 4 presents our results. The table shows the percentage of switched announce-

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<sup>5</sup>We follow Michaely et al. (2016) in assuming that announcements made more than 120 days (200 days

**Table 3: Strategic announcement timing – Day-of-the-week effects.** The table shows the average SUE, meet or beat percentages (MBE%), coefficients and  $t$ -statistics for Equation (1), as detailed in Section 3. All SUE and coefficients are multiplied by 100 for ease of exposition.

<b>CAC 40</b>						
Weekday	Observations	MBE%	SUE		Absolute SUE	
			Average SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
Monday	31	41%	0.293	0.972 (0.627)	1.359	0.614 (1.576)
Tuesday	114	61%	0.122	0.072 (0.227)	1.099	0.103 (1.563)
Wednesday	202	54%	0.031	-0.255 (-0.849)	0.985	-0.046 (-0.345)
Thursday	428	60%	0.303	-0.043 (-0.153)	1.126	0.033 (0.314)
Friday	144	61%	0.035	0.268 (1.758)	0.831	-0.137 (-0.578)
Full sample	919	58%	0.165		1.048	
<b>DAX 30</b>						
Weekday	Observations	MBE%	SUE		Absolute SUE	
			Average SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
Monday	24	43%	-0.437	-0.646 (-1.630)	0.934	0.154 (0.721)
Tuesday	142	57%	0.044	-0.058 (-0.335)	0.783	-0.009 (-0.066)
Wednesday	177	60%	0.313	0.112 (0.599)	0.889	-0.097 (-0.812)
Thursday	281	57%	0.309	-0.024 (-0.161)	1.014	0.112 (1.393)
Friday	75	54%	0.267	0.143 (0.737)	0.753	-0.125 (-0.991)
Full sample	699	57%	0.229		0.907	
<b>NIKKEI 225</b>						
Weekday	Observations	MBE%	SUE		Absolute SUE	
			Average SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
Monday	853	59%	-0.293	-0.109 (-0.168)	2.228	0.427 (0.912)
Tuesday	1,324	54%	-0.328	-0.181 (-1.044)	1.891	0.031 (0.179)
Wednesday	1,316	53%	-0.239	-0.008 (-0.004)	1.852	-0.034 (-0.211)
Thursday	1,752	51%	-0.293	0.104 (0.760)	1.831	-0.101 (-0.678)
Friday	1,942	55%	-0.155	0.101 (0.357)	2.225	-0.105 (-0.971)
Full sample	7,187	54%	-0.252		1.997	
<b>FTSE 100</b>						
Weekday	Observations	MBE%	SUE		Absolute SUE	
			Average SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
Monday	59	60%	-0.250	0.238 (1.241)	0.808	0.398 (0.974)
Tuesday	293	63%	0.429	-0.357 (-1.051)	1.143	-0.113 (-0.425)
Wednesday	289	56%	0.124	-0.161 (-0.412)	0.671	0.002 (0.009)
Thursday	499	63%	0.366	0.634 (1.278)	0.792	0.157 (1.155)
Friday	99	59%	-0.753	-0.691 (-0.788)	2.003	-0.300* (-2.536)
Full sample	1,239	61%	0.224		0.947	

*Note:*

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

ments for each day of the week (i.e., announcements preceded by an announcement on a different weekday), the mean SUE for switched and non-switched announcements, the difference between the means, and the  $t$ -statistic for a test of the difference against zero. Note that the number of observations is markedly lower in Table 4 than in Table 3 because an earnings announcement is only included in the analysis when we also observe the previous announcement.

The results indicate that switching between days of the week is very common in France, Germany, and Japan. In these countries, firms switch 59%, 61% and 72% of the announcements, respectively. These results differ somewhat from Michaely et al.'s (2016) for the U.S., where firms on average switch only 49% of the announcements. Considering the individual days of the week that firms switch their announcements to, we find that the fraction of switched announcements is highest for Monday (i.e., firms switch *to* Monday) announcements in France and Germany (77% and 93%, respectively) and for Monday and Wednesday announcements in Japan (both 77%). The difference in SUE between switched and non-switched announcements is not significant, with a single exception (switched Tuesday announcements in Japan have lower SUE than non-switched announcements). These findings do not lend support to the strategic announcement timing hypothesis.

Results for the UK are markedly different at first sight. The fraction of switched announcements is much lower, at 24% on average. Apparently, many firms who announce on Tuesdays, Wednesdays or Thursdays have previously also announced on the same weekday, as evidenced by a low switching frequency on these days of the week (19%, 34% and 16%, respectively). In contrast, Monday and Friday announcements are much more likely to have been preceded by announcements on different weekdays at the previous (typically

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for FTSE 100 firms) after the preceding announcement are either significantly delayed or indicate that there is an announcement in between that is missing in the data. We choose a higher cutoff value for UK firms because most firms in the UK announce semi-annually rather than quarterly.

semi-annual) announcement date (60% and 76%, respectively). We note, though, that these percentages are based on a low number of observations and are therefore not reliable. We further note that the difference in SUE between switched and non-switched announcements is always insignificant. We therefore conclude that there is no reliable evidence of strategic announcement timing in our UK sample, as was also the case for the French, German and Japanese samples.

As explained in Section 2 we analyze the intraday timing of earnings announcements only for our Japanese sample. To investigate how the earnings surprise relates to the intraday timing of the announcement we replace the weekday dummy  $W_{i,t}$  in equation (1) by the dummy variable  $T_{i,t}$ , which indicates whether an announcement was released during or outside of trading hours. We then estimate the following regression.<sup>6</sup>

$$SUE_{i,t} = \alpha_0 + \alpha_1 T_{i,t} + \sum_{i=1}^5 \alpha_{i+1} X_{i,t} + \epsilon_{i,t} \quad (2)$$

Panel A of Table 5 presents the regression results and descriptive statistics. The fraction of announcements that beat analyst expectations is 55% (53%) for announcements released during (outside of) trading hours. The average SUE and average absolute SUE for announcements released during and outside of trading hours are very similar and the coefficients of the respective dummy variables in regression (2) are not significant.

We also perform an analysis of switching behavior. We proceed exactly as documented above, except that we analyze switching between during-trading-hours and outside-of-trading-hours announcements rather than switching between days of the week. Panel B of Table 5 presents the results. Most firms either always announce during or always announce outside of

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<sup>6</sup>We also estimate an alternative specification where we consider the choice of the day and of the intraday timing (within or outside of trading hours) simultaneously. The results are fully consistent with those presented in the main text. We report them in Appendix A.

**Table 4: Strategic announcement timing – Switching behavior.** The table shows the percentage of switched announcements (i.e., announcements preceded by an announcement on a different weekday), the SUE change from the previous to the current earnings announcement for switched and non-switched announcements, and the difference between mean SUE for switched and non-switched announcements, with  $t$ -statistics in parentheses. All SUE are multiplied by 100 for ease of exposition.

<b>CAC 40</b>					
Weekday	% of switched announcements	SUE change if switched	SUE change if not switched	Mean difference ( $t$ -statistic)	Observations
Monday	77%	1.338	0.331	1.008 (0.466)	13
Tuesday	67%	-0.008	-0.364	0.355 (0.426)	57
Wednesday	67%	-0.126	-0.303	0.177 (0.479)	121
Thursday	49%	0.288	0.136	0.152 (0.430)	204
Friday	67%	-0.205	-0.423	0.217 (0.368)	63
Full sample	59%	0.074	-0.061	0.135 (0.606)	458
<b>DAX 30</b>					
Weekday	% of switched announcements	SUE change if switched	SUE change if not switched	Mean difference ( $t$ -statistic)	Observations
Monday	93%	-0.399	0.756	-1.156 (-)	15
Tuesday	71%	-0.296	0.987	-1.283* (-1.715)	98
Wednesday	65%	0.118	-0.162	0.281 (0.496)	121
Thursday	49%	0.086	-0.299	0.386 (1.429)	201
Friday	65%	-0.568	-0.093	-0.474 (-1.170)	48
Full sample	61%	-0.087	-0.061	-0.025 (-0.122)	484
<b>NIKKEI 225</b>					
Weekday	% of switched announcements	SUE change if switched	SUE change if not switched	Mean difference ( $t$ -statistic)	Observations
Monday	77%	0.713	0.529	0.183 (0.178)	734
Tuesday	76%	-0.994	-0.074	-0.919* (-1.951)	1,133
Wednesday	77%	-0.639	-0.029	-0.610 (-1.232)	1,130
Thursday	68%	0.026	-0.204	0.229 (0.546)	1,536
Friday	66%	-0.036	0.321	-0.357 (-0.554)	1,647
Full sample	72%	-0.237	0.068	-0.305 (-1.135)	6,180
DT	10%	0.663	-0.441	1.105 (1.016)	2,105
OT	5%	0.255	-0.081	0.336 (0.418)	4,075
Full sample	7%	0.448	-0.176	0.625 (0.950)	6,180
<b>FTSE 100</b>					
Weekday	% of switched announcements	SUE change if switched	SUE change if not switched	Mean difference ( $t$ -statistic)	Observations
Monday	60%	0.795	-0.389	1.184 (1.617)	10
Tuesday	19%	-0.121	0.092	-0.214 (-0.363)	89
Wednesday	34%	-0.388	0.189	-0.577 (-1.522)	76
Thursday	16%	1.100	0.101	0.998 (0.921)	193
Friday	76%	-0.902	-3.409	2.507 (0.608)	17
Full sample	24%	0.111	0.056	0.055 (0.137)	385
<i>Note:</i>				* $p < 0.1$ ; ** $p < 0.05$ ; *** $p < 0.01$	



**Table 5: Strategic announcement timing – Intraday timing – NIKKEI 225.** The table illustrates the average SUE, meet or beat percentages (MBE%), coefficient and  $t$ -statistic for Equation (2) as detailed in Section 3. All SUE and coefficients are multiplied by 100 for ease of exposition.

**Panel A: Intraday timing**

Overall						
Intraday timing	Observations	MBE%	SUE		Absolute SUE	
			Average SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
During trading	2,521	55%	-0.268	-0.393 (-0.935)	2.129	0.193 (0.489)
Outside trading	4,666	53%	-0.244	0.393 (0.935)	1.942	-0.193 (-0.489)

**Panel B: Switching behavior**

**NIKKEI 225**

Weekday	% of switched announcements	SUE change if switched	SUE change if not switched	Mean difference ( $t$ -statistic)	Observations
DT	10%	0.663	-0.441	1.105 (1.016)	2,105
OT	5%	0.255	-0.081	0.336 (0.418)	4,075
Full sample	7%	0.448	-0.176	0.625 (0.950)	6,180

*Note:*

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

trading hours. The fraction of switched announcements is low: 10% for announcements made during trading hours and 5% for announcements made outside of trading hours. The SUE for switched and non-switched announcements do not differ significantly from each other (and, in fact, the SUE are higher for the switched announcements). Again, these results do not support the hypothesis that firms strategically time their earnings announcements.

#### 4. Conclusion

Prior research on the timing of earnings announcements has almost exclusively focused on the U.S. equity market. While the earlier literature found evidence that managers strategically time the weekday and time of day of earnings announcements, more recent papers find no such evidence once firm characteristics are controlled for. Our study extends this line of research to international markets. We investigate the announcement timing decisions of firms in France, Germany, Japan, and the UK. While we do find differences in announcement behavior across countries, we do not find evidence of strategic timing of announcements. In

this respect our results are in line with the more recent literature on the U.S. market.

## Internet Appendix A Regression of SUE on days of the week and time of the day

To analyze the relation between the earnings surprise and the interaction between the day of the week and the time of the day, we estimate the specification

$$SUE_{i,t} = \alpha_0 + \alpha_1 W_{i,t} \times T_{i,t} + \alpha_2 W_{i,t} + \alpha_3 T_{i,t} + \sum_{i=1}^5 \alpha_{i+3} X_{i,t} + \epsilon_{i,t}. \quad (3)$$

The interaction term  $W_{i,t} \times T_{i,t}$  equals one if the earnings announcement was released on a specific day of the week *and* in a specific time slot, and equals zero otherwise. The coefficient  $\alpha_1$  measures the effect of a specific weekday/time-of-day combination after controlling for the ‘pure’ effects of the weekday ( $\alpha_2$ ) and the time of day ( $\alpha_3$ ). We estimate this regression separately for each combination of day of the week and time of the day and report the results in Table 6. The earnings surprises are largest for announcements made on Mondays during trading hours and lowest for announcements made on Tuesdays during trading hours.

**Table 6: Strategic announcement timing – Intraday timing – NIKKEI 225.** The table illustrates the average SUE, meet or beat percentages (MBE%), coefficient and  $t$ -statistic for Equation (2) as detailed in Section 3. All SUE and coefficients are multiplied by 100 for ease of exposition.

<b>During trading</b>						
Weekday	Observations	MBE%	SUE		Absolute SUE	
			Avg SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
Monday	322	57%	-0.138	0.383 (0.600)	2.455	0.103 (0.199)
Tuesday	472	59%	-0.040	0.722 (1.425)	1.947	-0.476 (-1.152)
Wednesday	407	54%	-0.075	0.426 (0.812)	1.957	-0.150 (-0.351)
Thursday	578	48%	-0.393	-0.343 (-0.747)	1.978	0.439 (1.172)
Friday	742	56%	-0.459	-0.706 (-1.616)	2.305	0.002 (0.007)
<b>Outside trading</b>						
Weekday	Observations	MBE%	SUE		Absolute SUE	
			Avg SUE	Coefficient ( $t$ -statistic)	Average Absolute SUE	Coefficient ( $t$ -statistic)
Monday	531	59%	-0.367	-0.383 (-0.600)	2.118	-0.103 (-0.199)
Tuesday	852	52%	-0.452	-0.721 (-1.425)	1.866	0.476 (1.152)
Wednesday	909	52%	-0.294	-0.426 (-0.812)	1.815	0.150 (0.351)
Thursday	1,174	52%	-0.258	0.343 (0.747)	1.779	-0.439 (-1.172)
Friday	1,200	54%	-0.001	0.706 (1.616)	2.184	-0.002 (-0.007)
<i>Note:</i>					*p<0.1; **p<0.05; ***p<0.01	

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