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Chasing dividends during the COVID-19 pandemic

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Abstract

This paper investigates the impact of the coronavirus disease 2019 pandemic on investors' trading behaviors around ex-dividend dates in Europe. The sudden decrease in the number of companies paying dividends reduced the opportunities to capture dividends. Thus, the firms that maintained dividend payments during the pandemic attracted more interest than before. This led to a doubling in the magnitude of stock return patterns usually observed around ex-dividend days. Our evidence indicates that dividend-seeking investors are likely to be the main driver of the price patterns observed around ex-dividend dates.

JEL: G12; G14; G35

Keywords: COVID-19; dividend capture; price pressure; ex-dividend date; event study

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This paper investigates the impact of the coronavirus disease 2019 pandemic on investors' trading behaviors around ex-dividend dates in Europe. The sudden decrease in the number of companies paying dividends reduced the opportunities to capture dividends. Thus, the firms that maintained dividend payments during the pandemic attracted more interest than before. This led to a doubling in the magnitude of stock return patterns usually observed around ex-dividend days. Our evidence indicates that dividend-seeking investors are likely to be the main driver of the price patterns observed around ex-dividend dates.

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1 Introduction

The coronavirus disease 2019 (COVID-19) pandemic deeply impacted businesses worldwide. Due to the large drop in consumption following widespread lockdowns, many companies saw their revenues and profits decline and their financial position deteriorate. To mitigate financial concerns or to ensure corporate survival, a number of firms further decided to forego dividend payments and keep the cash (Wigglesworth et al., 2020). This also had negative consequences on investors looking for dividend-paying stocks. Thus, in this paper, we examine how the pandemic affected stock price patterns of Western European companies surrounding the ex-dividend day, as COVID-19 (and the associated lockdowns) surprisingly hit this region just before the dividend distribution season.[1]

Studies on stock price behavior around ex-dividend days have a long-standing history (Campbell and Beranek, 1955). In perfect capital markets, the stock price drop should equal the amount of the dividend paid out on the ex-dividend day. Many studies over the past fifty years have shown that this is not the case. The ex-dividend day premium (the ratio of price decline to dividend) has been shown to be consistently below one, thus generating positive returns (e.g., Elton and Gruber, 1970 or Eades et al., 1994). Over time, several reasons have been offered to explain this phenomenon.[2]

Elton and Gruber (1970) propose a tax clientele effect. The stock price and ex-dividend day behavior will depend on the difference in taxation between capital gains and dividends. Later studies (e.g., Frank and Jagannathan, 1998) contradict this finding as the effect appears to remain in the absence of differential tax treatments. Kalay (1982) proposes that the insufficient price drop reflects the transaction costs of arbitrageurs trading such stock. These short-term

[1] This paper focuses on abnormal stock returns over a short window around the ex-dividend day. For analyses of stock returns behaviour over longer horizons during the COVID-19 pandemic, see for instance Ding et al. (2021).

[2] For a detailed overview, see Farre-Mensa et al. (2014).

traders will generate abnormal profit through dividend capturing. Michaely and Vila (1995), in a dynamic dividend clientele model, reconcile both explanations by examining all types of traders affecting the equilibrium price on the ex-dividend day. Finally, market microstructure may also explain the existence of this phenomenon. Bali and Hite (1998) and Frank and Jagannathan (1998) show that both price discreteness and a bid-ask bounce affect the ex-dividend price drop.

In this paper, we use the drop in dividends during the pandemic to investigate a new explanation based on behavioral aspects. It states that supply and demand are likely to shift a few days before the ex-dividend day as some investors buy the stock to capture the dividend. This will attract arbitrageurs who will profit from offsetting price movements due to this dividend-motivated trading. If a demand overhang exists and arbitrageurs cannot counterbalance it, stock prices should increase (Eades et al., 1985, Hartzmark and Solomon, 2013). If price pressure is responsible for positive abnormal returns before dividend payments, one ought to observe a decrease in prices after the ex-dividend day when investors sell their shares (Hartzmark and Solomon, 2013, Lakonishok and Vermaelen, 1986). However, as some investors keep the shares after the ex-date, this leads to positive abnormal returns on aggregate. This pattern in prices is termed the dividend month premium. Its existence has been corroborated internationally (Koo and Chae, 2020, Kreidl and Scholz, 2020, Ainsworth and Nicholson, 2014) and for several types of dividends (Bessembinder and Zhang, 2015, Berkman and Koch, 2017). Different explanations for the excess demand for dividends leading to positive price pressure before the ex-date have been proposed in the literature. They include catering theory (Baker and Wurgler, 2004), mutual funds' investments in dividend-paying stocks before the ex-dividend date to increase their dividend yield (Harris et al., 2015), or investors' lack of attention in the stock price reduction from the cum-dividend to ex-dividend dates (Hartzmark and Solomon, 2019).

In the context of the COVID-19 pandemic, we argue that the dividend month premium suggested by Hartzmark and Solomon (2013) should increase due to investors' exceptional situations. Assuming a constant demand for dividends, the price pressure on shares still paying dividends should grow given the decline in the number of dividend-paying companies during the pandemic. Therefore, we expect to observe generally stronger price patterns around ex-dividend dates. Hartzmark and Solomon (2013) and Berkman and Koch (2017) further show that investor demand is more substantial for companies paying larger dividends. Therefore, we expect large dividend payers to be particularly prone to price pressure during the COVID-19 pandemic.

Our empirical results tend to confirm our hypotheses and show that the price patterns observed around ex-dividend dates during the COVID-19 pandemic are amplified. Compared to previous years, we observe a doubling in the magnitude of stock return patterns around this date during the COVID period. This increase is even larger for high dividend payers. Therefore, our findings suggest that dividend-seeking investors are likely to be the main driver of the price changes around ex-days. Our paper contributes to the literature examining the stock price behavior around recurring corporate events by studying how an exogenous shock impacts investors' decision-making. More specifically, we confirm the price pressure explanation of Hartzmark and Solomon (2013) and highlight the important role of dividend-chasing investors in the predictable evolution of stock prices around ex-dividend dates. Further, we provide the first evidence on the impact of the COVID-19 pandemic on investors' response to corporate payout policies. Our paper is structured as follows. Section 2 presents the data and methodology, Section 3 empirical findings, while Section 4 concludes.

2 Data and methodology

2.1 Sample

The data set covers the universe of publicly-listed Western European companies. All data are downloaded for the period January 2018 to July 2020 from Refinitiv Datastream and converted into EUR for markets outside the Eurozone. To ensure that companies show a minimum standard, the sample is limited to companies traded in their own country (i.e., avoiding international cross-listings) and active in July 2020. Further, we restrict the sample to investable companies by implementing the following two restrictions: the stock price is above EUR 1.00, and the market capitalization higher than EUR 50 million. We then divide our sample into two groups: dividend payments occurring before (pre-COVID) and after (COVID) the pandemic started. We use the first day of lockdown in a Western European country, 24/02/2020, as a cut-off date. Thus, the COVID period encompasses the period from 24/02/2020 to 31/07/2020. The pre-COVID period is used as a control group covering the period from 01/01/2018 to 23/02/2020.

Table 1 provides evidence on the temporal evolution of dividend payouts for all companies (payers and non-payers) of the sample and an identical time period (24/02 to 31/07 of the respective year).

Table 1
Effect of COVID-19 on dividend payments

Year	Payers	Stop dividend	Reduction		Firms
			Total	>25%	
2018	66.69%	7.64%	7.45%	4.58%	2,750
2019	66.41%	6.16%	9.74%	5.49%	2,843
2020	35.76%	33.58%	10.60%	7.66%	2,886

This table reports, for the period 24/02 to 31/07 of each year, the fraction of dividend payers, companies stopping dividend payments, and firms reducing payments (overall or by more than 25%).

The fraction of payers in our sample dropped from 66.41% in 2019 to 35.76% in 2020. Moreover, we report that about one-third of companies stopped paying dividends during the COVID period, while these numbers were around 7% before. A marked increase also is present

in companies diminishing their dividend payments. Around 10.60% of companies reduced their payouts, and 7.66% cut it by more than 25%. Overall, these statistics confirm that opportunities to trade on ex-dividend dates strongly decreased with the pandemic's arrival.

For the rest of the study, we only use dividend-paying firms to reflect the investment universe of firms available to dividend-chasing investors. Table 2 exhibits the final sample composition by market. It includes 2,248 companies from 16 Western European markets and comprises 6,865 dividend distributions, of which 1,066 occurred during the COVID period. Our data set appears representative of the overall European environment with the United Kingdom, France, and Germany being the most represented markets in terms of companies and the number of dividend payouts. A higher payment-frequency in the United Kingdom (bi-annual and quarterly) explains its higher number of payouts.

Table 2
Sample composition of dividend-paying firms

Market	Benchmark index	Firms	Number of payments		
			Total	Pre-COVID	COVID
Austria	ATX	45	97	81	16
Belgium	BEL All share	76	209	164	45
Denmark	OMX Copenhagen	66	171	144	27
Finland	OMX Helsinki	93	273	206	67
France	CAC All-tradable	298	750	611	139
Germany	XETRA Prime All-share	270	637	506	131
Greece	Athex Composite	35	96	70	26
Ireland	ISEQ All-share	19	70	63	7
Italy	FTSE MIB	149	360	290	70
Netherlands	AEX	63	227	199	28
Norway	Oslo SE OBX	100	310	247	63
Portugal	PSI All-share	19	47	38	9
Spain	Madrid SE IGBM	99	317	268	49
Sweden	OMX Stockholm	223	606	521	85
Switzerland	Swiss Performance Index	192	496	361	135
United Kingdom	FTSE All-share	501	2,199	2,030	169
Total		2,248	6,865	5,799	1,066

This table reports the number of dividend-paying companies per market and the number of payments done in total, in the pre-COVID period (01/01/2018-23/02/2020), and after the COVID outbreak (24/02/2020-31/07/2020) in Europe.

2.2 Methodology

Our analysis is based on a standard event study methodology (Brown and Warner, 1985, Campbell et al., 1997). The daily stock returns are computed as

$$R_{i,t} = \frac{P_{i,t}+D_{i,t}-P_{i,t-1}}{P_{i,t-1}} \quad [1]$$

where $P_{i,t}$ is the closing price on day t for stock i (except for $t0$ where it is the opening price on the ex-date), and $D_{i,t}$ is the dividend per share which was paid out. Thus, $R_{i,0}$ corresponds to an overnight return of a stock going from cum to ex (after the stock exchange closes), while $R_{i,+1}$ is measured from the opening of the ex-date to the closing of the subsequent day.

Abnormal returns are calculated as

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad [2]$$

where daily market returns ($R_{m,t}$) are calculated for each of the corresponding 16 benchmark indices[3]. Then, we winsorize all $AR_{i,t}$ at the 0.1–99.9% level and calculate average abnormal returns (AAR_t) as

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{i,t} \quad [3]$$

with $AR_{i,t}$ for a given period (e.g., pre-COVID and COVID) and cumulated average abnormal returns for a given event window as

$$CAAR = \sum_{t=1}^{T} AAR_t \quad [4]$$

The first part of the analysis compares AAR and CAAR depending on the period and dividend payout level. We further split the sample into firms with high (yearly upper quartile dividend yield) versus low dividend yields (bottom three quartiles) to test if high dividend stocks show a stronger reaction and confirm the hypothesis that dividend-seeking investors have more demand for shares paying high dividends (Hartzmark and Solomon, 2013).

[3] The indices are listed in Table 2.

Finally, we supplement the AAR and CAAR analysis by examining the market reaction drivers in a panel regression analysis. The identification strategy is based on interactions between dividend level and period indicators as follows

$$y_{ijt} = \alpha_i + \delta_{1i} High\_preCOVID + \delta_{2i} High\_COVID + \delta_{3i} Low\_COVID$$

$$+\beta_i X_{jt} + \theta_i Industry + \omega_i Country + \varepsilon_{ijt} \quad [5]$$

where $y_{i,j,t}$ measures the CAR for different time windows i for company j in year t. $High\_preCOVID_t$ denotes the interaction between the high dividend indicator and the dividend payments indicator in the pre-COVID period. It gives the difference in CAR between high and low dividend firms during the pre-COVID period. $High\_COVID_t$ and Low_COVID_t are interaction terms between dividend-size indicators and the indicator for the COVID period. These variables differentiate the CAR between the pre-COVID and COVID period for low and high dividend-paying firms, respectively. $X_{j,t}$ is a vector of firm-level characteristics. Following Zhang et al. (2008) and Le et al. (2020), we include the relative risk (defined as the variance of a stock over its respective market variance over 40 days), beta (defined as the regression coefficient of a stock's returns on the returns of its respective market index over a 250-day window), and size (defined as the natural logarithm of a company's market capitalization). All three variables are calculated 21 days before the ex-dividend day. We also include country and industry dummies to account for possible differences along these dimensions. We cluster standard errors at the firm level.

3 Empirical results

Table 3 exhibits AAR over a [−5; +5] day window around the ex-dividend date for both the COVID and pre-COVID periods as well as CAAR for different windows before and after the ex-dividend date. In both cases, the returns are significantly positive until the ex-dividend date

and negative thereafter as investors build up price pressure to capture dividends followed by a reversal.

Table 3
AAR and CAAR around ex-dividend dates

Panel A: AAR	COVID (1)	Pre-COVID (2)	Difference (1)-(2)
-5	0.0025***	0.0007***	0.0018*
-4	0.0006	0.0006**	-0.0000
-3	0.0015*	0.0006**	0.0010
-2	0.0036***	0.0011***	0.0024***
-1	0.0046***	0.0010***	0.0036***
0	0.0087***	0.0069***	0.0018**
+1	-0.0058***	-0.0019***	-0.0038***
+2	-0.0032***	-0.0006***	-0.0026***
+3	-0.0026***	0.0004*	-0.0030***
+4	-0.0024***	-0.0000	-0.0024***
+5	-0.0009	0.0005**	-0.0014*
Observations	1,066	5,799	

Panel B: CAAR	COVID (1)	Pre-COVID (2)	Difference (1)-(2)
[-5; 0]	0.0214***	0.0109***	0.0105***
[-4; 0]	0.0189***	0.0102***	0.0087***
[-3; 0]	0.0184***	0.0096***	0.0087***
[-2; 0]	0.0168***	0.0091***	0.0078***
[-1; 0]	0.0133***	0.0079***	0.0053***
[+1; +2]	-0.0089***	-0.0025***	-0.0064***
[+1; +3]	-0.0115***	-0.0022***	-0.0094***
[+1; +4]	-0.0140***	-0.0022***	-0.0118***
[+1; +5]	-0.0149***	-0.0016***	-0.0132***
Observations	1,066	5,799	

This table reports AAR (Panel A) and CAAR (Panel B) for different time windows around ex-dividend dates for the COVID and pre-COVID period. ***, **, * denote significance at the 1%, 5% and 10%-level.

Column 3 reports the difference in abnormal returns between the two periods. As expected, we observe that the price reaction around dividend payments amplified during the COVID period. For example, an investor buying a stock five (one) days before the ex-dividend date and selling it at the ex-day opening would have earned an average abnormal return of 2.14% (1.33%) during the COVID period, while he would have obtained 1.09% (0.79%) previously.

This result suggests that investors traded up stocks paying dividends more intensely than in regular times to capture dividends where possible.[4]

Hartzmark and Solomon (2013) and Berkman and Koch (2017) document that stocks with higher dividends exhibit higher abnormal returns on the ex-day. As the pandemic triggered a drop in firms paying dividends, we argue that this effect was further exacerbated during this period. Consistent with our expectation, the results of Table 4 show stronger return patterns for high dividend stocks than for low dividend stocks in both the pre-COVID and COVID periods. This is especially evident when looking at the CAAR (Panel B). All the differences (columns 3 and 6) are positive and highly significant up to the ex-date, and then significantly negative. Buying a stock paying a large dividend five (one) days before the ex-date and selling it at the ex-day opening, would have provided an average abnormal return of 3.43% (2.09%) during the COVID period, while only 1.8% (1.34%) in regular times. Moreover, the last column indicates that during the COVID pandemic, high dividend stocks exhibited the largest abnormal returns (in absolute terms). Again, all the differences are highly significant in Panel B. This provides evidence that investors were especially seeking those stocks allowing them to capture the highest possible dividend.

These results are confirmed in Figure 1. It illustrates CAAR over a [−5; 5] day window for the baseline specification and the one splitting by dividend-payment intensity. In the three graphs, we can observe a clear amplification of the price patterns during the COVID period (solid line), when compared to the pre-COVID period (dashed line). Furthermore, the y-axis being the same across the graphs, we can also clearly see the higher peak for the high-dividend stocks.

[4] We run several robustness tests and find that (i) restricting the data set to companies with a minimum market capitalization of EUR 100 million, (ii) using a pre-COVID period over 2015–2019 or for 2019 only, or (iii) taking the closing price of the ex-dividend day t_0, all lead to qualitatively very similar results.

Table 4
AAR and CAAR around ex-dividend dates – high- versus low-dividends

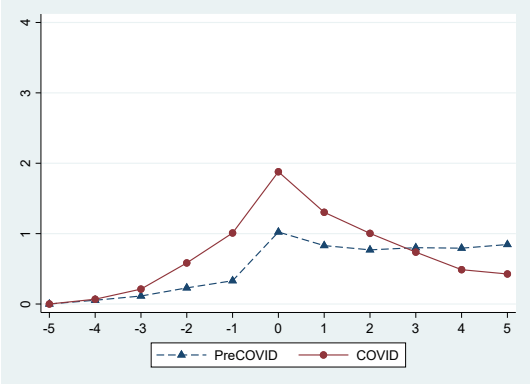
Panel A: AAR	COVID			Pre-COVID			COVID / Pre-COVID
	High-dividend	Low-dividend	Difference	High-dividend	Low-dividend	Difference	Difference
	(1)	(2)	(1)-(2)	(3)	(4)	(3)-(4)	(1)-(3)
-5	0.0050***	0.0015	0.0035*	0.0006	0.0007**	-0.0001	0.0044**
-4	-0.0001	0.0008	-0.0008	0.0010**	0.0005*	0.0006	-0.0011
-3	0.0034*	0.0009	0.0026	0.0013***	0.0003	0.0010*	0.0021
-2	0.0050***	0.0030***	0.0019	0.0016***	0.0010***	0.0006	0.0033*
-1	0.0055***	0.0042***	0.0013	0.0008*	0.0010***	-0.0002	0.0047***
0	0.0154***	0.0062***	0.0092***	0.0126***	0.0051***	0.0075***	0.0028**
+1	-0.0139***	-0.0027**	-0.0111***	-0.0053***	-0.0008**	-0.0045***	-0.0086***
+2	-0.0060***	-0.0021**	-0.0039**	-0.0014***	-0.0004	-0.0010*	-0.0046**
+3	-0.0034**	-0.0024**	-0.0010	-0.0006	0.0007***	-0.0013**	-0.0028*
+4	-0.0032**	-0.0022**	-0.0010	-0.0009**	0.0003	-0.0012**	-0.0022
+5	-0.0016	-0.0006	-0.0010	-0.0004	0.0009***	-0.0013**	-0.0011
Observations	288	778		1,429	4,370		

Panel B: CAAR	COVID			Pre-COVID			COVID / Pre-COVID
	High-dividend	Low-dividend	Difference	High-dividend	Low-dividend	Difference	Difference
	(1)	(2)	(1)-(2)	(3)	(4)	(3)-(4)	(1)-(3)
[-5; 0]	0.0343***	0.0166***	0.0177***	0.0180***	0.0086***	0.0094***	0.0163***
[-4; 0]	0.0292***	0.0151***	0.0141***	0.0173***	0.0079***	0.0095***	0.0119***
[-3; 0]	0.0293***	0.0143***	0.0150***	0.0163***	0.0074***	0.0089***	0.0130***
[-2; 0]	0.0259***	0.0135***	0.0124***	0.0150***	0.0071***	0.0079***	0.0108***
[-1; 0]	0.0209***	0.0104***	0.0105***	0.0134***	0.0061***	0.0073***	0.0075***
[+1; +2]	-0.0199***	-0.0049***	-0.0150***	-0.0067***	-0.0012***	-0.0055***	-0.0132***
[+1; +3]	-0.0232***	-0.0072***	-0.0160***	-0.0073***	-0.0005	-0.0068***	-0.0160***
[+1; +4]	-0.0264***	-0.0094***	-0.0170***	-0.0082***	-0.0002	-0.0080***	-0.0182***
[+1; +5]	-0.0280***	-0.0100***	-0.0180***	-0.0086***	0.0007	-0.0092***	-0.0194***
Observations	288	778		1,429	4,370		

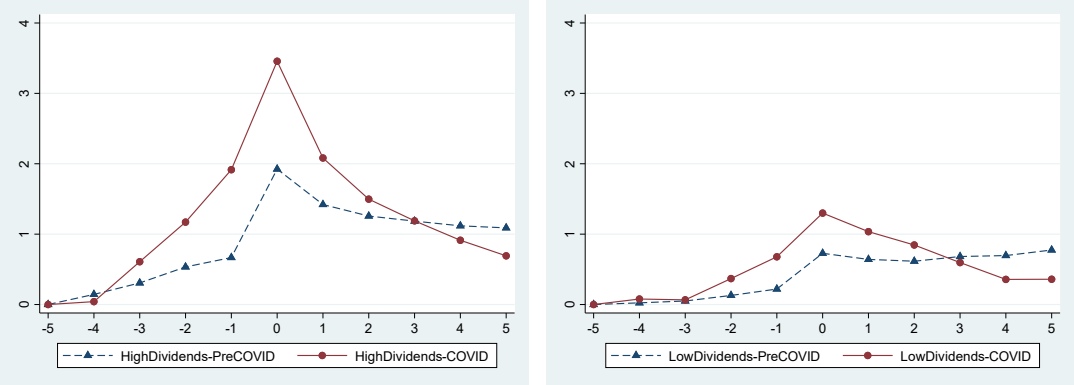
This table reports AAR (Panel A) and CAAR (Panel B) for different time windows around ex-dividend dates for the COVID and pre-COVID period. The sample is further split into *High-dividend* for companies in the yearly upper quartile of dividend yields and *Low-dividend* for other firms. ***, **, * denote significance at the 1%, 5%, and 10%-level.

Figure 1
Cumulative average abnormal returns (CAAR)

Panel A: All firms



Panel B: High-dividend (left) vs low-dividend (right) firms



Panel A illustrates CAAR, expressed in percent, over a [-5; +5] window around the ex-dividend day. The dashed line denotes the pre-COVID period and the solid line the COVID period. Panel B illustrates CAAR over a [-5; +5] window around the ex-dividend day. The left figure contrasts high-dividend stocks (yearly upper quartile dividend yield) and the right figure low-dividend stocks (yearly bottom three quartiles dividend yield) over the pre-COVID period (dashed line) and the COVID period (solid line).

Table 5 presents estimates for equation [5]. Consistent with our prediction, return patterns are more pronounced during the COVID period. Relative to the low dividend firms in the pre-COVID period, we observe that, in the COVID period, high (low) dividend firms exhibit 2.4% (0.8%) higher CAR over the five days before the ex-date. We further observe stronger negative CAR following ex-dividend days. Due to a shortage of dividends during the pandemic, this result supports the hypothesis of an increased price pressure. Also, the regression analyses confirm the stronger return patterns for firms paying high dividends during both pre-COVID and COVID periods. Additionally, we observe that this phenomenon is exacerbated during the COVID period.

The difference in abnormal returns between low and high dividend stocks on ex-dividend day is 0.6% in the pre-COVID period increasing to 0.8% during the COVID period. Similar patterns are observed for cumulated returns.[5]

Table 5
Regression analysis on AR and CAR

	(1) CAR(-5;0)	(2) CAR(-1;0)	(3) AR(0)	(4) AR(+1)	(5) CAR(+1;+5)
High_COVID	0.024***	0.013***	0.008***	-0.013***	-0.027***
	(0.004)	(0.002)	(0.001)	(0.002)	(0.004)
Low_COVID	0.008***	0.004***	0.001	-0.002	-0.011***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)
High_preCOVID	0.008***	0.006***	0.006***	-0.004***	-0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Relative risk	0.000	-0.000	0.000	-0.000	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Size	-0.002***	-0.002***	-0.001***	0.000*	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Beta	-0.005**	-0.002*	-0.001	0.000	-0.004**
	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)
Constant	0.030***	0.019***	0.013***	-0.002	-0.006
	(0.004)	(0.002)	(0.001)	(0.002)	(0.004)
Industry FE	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES
Observations	6,857	6,857	6,857	6,857	6,857
R-squared	0.048	0.068	0.109	0.021	0.041

This table reports regression results for CAR and AR for different time windows around ex-dividend dates for the COVID (01/01/2018-23/02/2020) and pre-COVID (24/02/2020-31/07/2020) period. *High_COVID* denotes yearly upper quartile dividend yield companies in the COVID period, *Low_COVID* yearly bottom three quartiles dividend yield companies in the COVID period, and *High_preCOVID* yearly upper quartile dividend yield companies in the pre-COVID period. The exact definition of control variables is provided in section 2.2. All regressions include country and industry dummies. Standard errors are clustered at the firm level. ***, **, * denote significance at the 1%, 5% and 10%-level.

Table 5 also points out some interesting results concerning control variables. We find significantly negative coefficients for firm size before the ex-date (columns 1 to 3), followed by positive ones (columns 4 and 5). Therefore, the return patterns are attenuated for large firms. This is consistent with the findings of Zhang et al. (2008) who argue that large-capitalization stocks have lower transaction costs, which reduces ex-dividend day excess returns. Furthermore,

[5] Splitting dividend-paying stocks at the yearly median instead of the top-quartile yields qualitatively similar results for Tables 4 and 5.

consistent with Michaely and Vila (1995), we find that beta is the main risk priced in the ex-day excess returns.

4 Conclusions

The COVID-19 pandemic induced a drop in dividend distributions in Europe, providing a unique setting to examine dividend-seeking investors' impact on stock prices around ex-dividend days. Indeed, those investors are likely to have focused their trades on firms maintaining dividend payments, increasing price pressure on these stocks. Consistent with our hypothesis, an investor buying a stock five days before the ex-dividend date and selling it at the ex-day opening would have earned an average abnormal return of 2.14% during the COVID period. This is close to double the average premium obtained on an equivalent trade in the pre-COVID period. The premium even triples for high dividend payers during the COVID period. This indicates that dividend capture plays an important role in price formation around the ex-date.

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