Dividend payout decisions under uncertainty: the ownership influence in the early days of the COVID-19 pandemic in Finland

Andreas Lindén and Othmar M. Lehner
Hanken School of Economics, Helsinki, Finland
Heimo Losbichler
Department of Controlling, Accounting and Finance, University of Applied Sciences Upper Austria, Steyr, Austria, and
Minna Martikainen
University of Vaasa, Vaasa, Finland

Received 7 October 2021
Revised 30 January 2022
2 June 2022
Accepted 13 June 2022

Abstract

Purpose – This paper examines whether ownership type has a moderating influence on dividend payouts during the COVID-19 pandemic crisis with respect to changes in profits. Future uncertainties because of the pandemic will result in a perceived need for liquidity within the company, but retaining cash may be risky for shareholders who could look for less risky alternatives. The dividend payout strategy is thus even more closely related to the overall type concentration and strategy of the owners during the crisis.

Design/methodology/approach – The effects are explored and tested on early data from 2019 to 2020 of Finnish companies using ANCOVA while controlling for profitability and sector variables.

Findings – A significant effect on dividend payout during the COVID crisis was found when the companies are dominantly held by individual owners validating early suggestions on such an influence. Therefore, this study contributes further to the academic debates on the influence of ownership concentration in times of crises. This study lists certain sectors which experience diminished profits during such a crisis which pinpoints sector separation in future discussions.

Research limitations/implications – This study explores early data from a specific context in the Nordic countries. However, it does so out of purpose as explained in the paper.

Practical implications – Ownership type and concentration matters when it comes to dividend payout decisions under uncertainty with regard to changes in profit. Investors need to accept these behavioural insights into their decisions.

Originality/value – This study examines the signalling effect of dividends by analysing how actual or anticipated change in profitability due to a crisis is reflected by owners and leads to dividend payout decisions under uncertainty.

Keywords Dividend payouts, COVID-19, Ownership concentration, Agency theory

Paper type Research paper

Introduction

The relation between ownership structure and dividend policy has been the subject of research in many studies over recent decades (Rozeff, 1982; Cronqvist and Nilsson, 2003; Duqi *et al.*, 2020). Dividend payout decisions provide particularly relevant insights into companies

Journal of Applied Accounting Research
Vol. 24 No. 2, 2023
pp. 299-317
Emerald Publishing Limited
0967-5426
DOI 10.1108/JAAR-10-2021-0274

by displaying the strategic employment of capital (Agarwal *et al.*, 2015; Ackert *et al.*, 2018). Payout decisions boil down to the opportunity expectations and preferences of managers and owners (with their own principal-agent related problems), as well as to how the decision will be perceived by other stakeholders (Below and Johnson, 1996; Golden and Kohlbeck, 2017). According to Fuller and Goldstein (2011) and Payne (2011), the revealing role of dividend decisions is further emphasised in declining markets, which allow to draw conclusions on reserves, future expectations, but also on the quality of corporate governance (Attig *et al.*, 2016; Mehdi *et al.*, 2017). In an uncertainty environment, dividend payout decisions are even more interesting, because without known risk distributions providing guidance, the potential of loss-taking for the company and the commitment of the owners to it become the dominant factors in these decisions (Hauser, 2013; Welker *et al.*, 2017), besides an increasing stakeholder pressure on certain industries.

The financial effects of pandemics are a relatively rare subject in economic studies due to the broader contextual uncertainty in these scenarios, which may halt economic growth as investors become cautious, causing companies to lose revenue and forcing them to adapt to a new working environment (Bell and Lewis, 2005).

In the first stages of such a pandemic, companies need to decide what to do with profits that were generated before the global outbreak. Should profits be distributed to show stability, or should they be retained to ensure liquidity? For shareholders it will be a difficult decision, as uncertainty levels will not allow for stable risk models and thus retaining or taking out profits may well come down to personal preferences and motivations. The type of ownership may thus play an important role regarding the emotional connection of the shareholders to the company.

Taking on a micro-organisational, governance-based perspective, this paper will examine whether dividends deviated from established patterns shortly after the first period of the COVID-19 pandemic in the spring of 2020, when lockdowns and restrictions on social interactions were implemented. In this first period, uncertainty (e.g. on potential governmental subsidies, the duration of the pandemic or on overall economic impacts) was the highest (Rikhardsson *et al.*, 2021). In search for the missing link in the literature of how ownership type and dividend decisions go together (Forst *et al.*, 2016; Sikka and Stittle, 2019), our research question is thus: *Does ownership type concentration matter when it comes to decision-making on dividend payouts during the early stages of a crisis characterised by an uncertain environment*?

This study analysis how the actual or anticipated change in profitability is reflected in dividend payout decisions. Managers consider dividend payouts to provide information about the company's financial state. The aim is therefore to maintain stable dividends, which signal their perceived positive outlook of the company to the shareholders (Baker and Powell, 2000). Nevertheless, the signalling effect of dividends or company profitability is debated as research has shown managers to be reluctant to decrease dividends when encountering liquidity issues unless it is anticipated. The negative effect of reducing dividend payouts is dampened if the market is experiencing a downturn or if the dividend reduction is apparent across the industry (Jensen *et al.*, 2010; Balachandran *et al.*, 2011). Studying the change in dividend and its connection to change in profitability during the start of a pandemic furthermore provides additional evidence of the signalling power of dividends as well as the initial economic effects caused by a widespread virus outbreak.

The financial data indicates that measurements such as revenue and income fluctuate between periods to a greater extent than indicators such as return on assets and equity.

As to the obvious limitations of this paper in terms of sample and sampling time, we would like to point out our thinking behind this early publication based on the first spring of the crisis within the narrow scope of Finland as context. There are three reasons for this, and they are based on the level of uncertainty and the homogeneity of exogenous factors.

First, in the first spring of the COVID-19 crisis, companies did not know how long and how deep the impact of the crisis would be and thus the uncertainty environment peaked. As there were no lessons already learned at this time (e.g. concerning government subsidiaries etc.), the dividend payout decision making of the owners might therefore be largely based on the characteristics of these owners in terms of their willingness to retain dividends in the larger interest of the company as well as on their relative decision-making power.

Second, because of the novelty of our findings, we wanted to publish these very early results based on a preliminary sample already and ask the scholarly community now to pick up, clarify, and deepen the variability, given the availability of much more data in the years to follow albeit with much less contextual uncertainty.

Third, Finland provides an excellent context for this endeavour due to its stable, well developed capital market embedded in a very equal, highly compliant, welfare society (Kangas and Saloniemi, 2013). The homogenous environment in terms of regulations and governmental inference and fundamental absence of confounding effects (e.g. based on corruption, non-compliance or desperation based on poverty) allows us to focus on the main effects by controlling for only few confounding variables.

Therefore, the results of this study are early and contextually limited, but our aim is to highlight the evidence of the effects of the pandemic as a highly uncertain environment on dividend payout decisions and whether ownership plays a role in this. The ownership structure is divided depending on their predominant type into groups consisting of individuals/insiders, institutions, and corporations. The sample also contains companies with state and bank owners but the amount of these is very limited.

In the next sections the underlying theory is explored followed by the methodology and an overview of the data.

Research background

As outlined in the introduction this study focuses on why dividend payouts should be studied while cross examining their role during a crisis, characterised by uncertainty, with a particular focus on the effect of ownership structure as influential governance factor on dividend pay outs.

Dividends as an informational tool

Perfect market conditions are non-existent due to information asymmetry between owners and managers and the bounded rationality of individuals (Stigler, 1957). The imperfect and changing market conditions result in additional expenses for retrieving information which enables opportunistic behaviour by the contractual parties regardless of them being managers, owners or suppliers (Williamson, 2007). The stakeholders can mitigate opportunistic management overspending through a commitment to the distribution of retained earnings as it limits available cash and liquidity (Baker and Powell, 2000). One of the most common ways of distributing earnings is through dividends, which are usually paid out period wise, annually, or more frequently, and should reflect the financial state of the company to decrease uncertainty and increase legitimacy of decision making in the company. Consequentially, this creates an issue due to managers neglecting profitable investment opportunities in favour of maintaining dividends, which is counterproductive towards the owners' goal long-term value creation (Balachandran *et al.*, 2011).

The rational investor increases the value of their investment by comparing the risks and benefits of different opportunities' potential outcomes, but their judgement becomes clouded due to their personal feelings and emotions (Forgas, 1995). For instance, when the investor is in a positive mood the likelihood for efficiency and optimistic judgement is increased as well as the

likelihood of making errors (Loewenstein *et al.*, 2001). In addition to this, company management might be incentivised to alter accounting policies to report more appealing figures to hide uncertain future cashflows (Smith *et al.*, 2001). Furthermore, world altering issues such as pandemics and climate change create high levels of uncertainty which forces both investors to estimate scenarios regarding the future state of the world and the specific investment opportunities in each scenario (Hallegatte *et al.*, 2012). The complexity of this requires managers to create legitimacy in their decision making in order to mitigate the perceived uncertainty. Nordic based companies have been shown to achieve this by implementing accounting figures in the strategic decision-making process (Nielsen *et al.*, 2015).

The legitimacy of decisions such as dividend payouts made by shareholders and suggested by management is perceived differently depending on the company's operational economic environment, which consists of functional, political, and social norms (Baum and Oliver, 1991). The companies' functional norms vary depending on size, partnerships, employees, managers, and owners, while the political and social norms include regulation as well as public awareness and opinion (Dacin *et al.*, 2002). Norms often change over time and adjusting to these is complicated by the managers' different priorities and approaches in problem-solving which is in turn affected by national culture, economic development, investor protection, taxation, and market size. These variations determine whether managers lean more towards individualistic success through ambition and capabilities or preservation of the group by respecting traditions and securing the future (Shao *et al.*, 2010).

The perceived legitimacy of companies' actions is also dependent on how well their reported earnings reflect daily operations and anticipated future. Tong and Miao (2011) highlighted the signalling effect of dividend payouts as they found dividend-paying compared to non-paying companies to have higher earnings quality. Despite this, dividend-paying companies have also been found to be more incentivised to smooth earnings upwards or downwards in relation to the previous year to maintain established dividend patterns, possibly due to pressure from outside stakeholders (Liu and Espahbodi, 2014). By voluntarily disclosing financial information companies can increase the legitimacy of their financial decisions such as diverting from dividend patterns. This so-called social contract provides external stakeholders with further insight into the company, mitigating information asymmetries (Zaini *et al.*, 2018).

Dividend signalling value during a crisis

The importance of companies' signalling through actions increases when managers include the interests of all stakeholders in decision making since not all of the stakeholders are profit seeking and instead prefer sustainability and transparency (Wicks and Freeman, 1998). The importance of inserting such components grew after the financial crisis of 2008–09 due to the consequences of shareholder-oriented decision making, as these owners failed to see that the growth was mainly financed through debt which made companies dependent on credit markets (Tse, 2011). Lacking oversight led to managerial opportunistic behaviour through earnings management which caused financial distress (Ghazali *et al.*, 2015).

The probability of a dividend payout decreased significantly during this time period, regardless of the economic impact the crisis had on the individual companies. The cut in pay out was not due to lower profitability but instead the desire to increase the cash ratio in order to tackle (potential) future liquidity risks and opportunities caused by the crisis (Hauser, 2013). This further creates a demand for additional information from companies to ensure shareholder value maximisation by explaining the larger cash reserves in the financial reporting.

Corporate governance through owners

To affirm the implementation of environmental and social targets requires monitoring of the company by the owners. Concentrated ownership increases the influence of the owners and

lowers their monitoring costs, which in turn increases the company's market-to-book value (Shleifer and Vishny, 1997; Thomsen and Pedersen, 2000). Company value increases with monitoring as it sets expectations on companies' financial reporting quality and earnings forecasts (Liu, 2014). However, the positive value effect is reversed when ownership concentration reaches a certain threshold as the controlling owner gains enough influence to extract benefits through means which do not benefit minority owners (Ting *et al.*, 2017).

The positive effects of concentrated ownership such as responsiveness of returns on company earnings have been shown to extend with improved corporate governance (Donnelly and Lynch, 2002). One of the most common return on earnings, the company's dividend policy also depends on the type of controlling owners in the company as they possess different priorities (Thanatawee, 2013). Companies with large private ownership have been shown to have higher dividend payout ratios than those with large institutional ownership, as the latter group is more often an intermediary and passive (Islam and Adnan, 2019).

In a study conducted by Maury and Pajuste (2002), which included 133 listed companies on the Helsinki Stock Exchange in 1999, evidence was found suggesting that the identity of the controlling owner of Finnish companies had a visible effect on the dividend policy. By measuring the degree of control held by the three largest shareholders the authors found a negative relation between concentration and dividend payouts. The study further identified a significant impact of a company's second largest owner when owning more than 20% of the voting rights. These companies saw a decrease in dividend payments which suggests possible collusion between the two largest block holders. The authors emphasise the risk of collusion between the two largest owners when their combined stakes can attain majority control. The controlling owner's identity connected to the highest dividend payout ratio was individuals, and this positive correlation was further enhanced if the owner was outside of the organisation.

The significance of the dominant owner type has also been highlighted in other smaller economies, such as Malaysia, where the relation between managers and largest owners affected the degree of voluntary information disclosure. The study assumed sufficient control over a company to be reached when the owner group's holdings exceed 20% of voting rights, which is in line with the assumption made by Maury and Pajuste (2002). Comparing family-controlled businesses with those controlled by widely dispersed shareholders, these authors implied a negative effect on voluntary disclosures in family controller companies, in line with the entrenchment theory (Zaini *et al.*, 2018).

Financial institutions, both domestic and foreign, own a significant portion of the Finnish stock market. With bank regulation in the early 1990s their stake in Finnish companies steadily declined. This vacuum was partly filled by the financial institutions but due to the small size of the Finnish stock market these investors moved mostly towards foreign markets when new capital became available, while retaining their stake in Finland (Jakobsson and Korkeamäki, 2014).

Based on 464 responses from CEOs and CFOs the majority of Nordic non-financial listed companies do not have a specific debt-to-equity ratio nor do they allow it to be fully flexible. With that being said, dividend payouts and defined dividend policies were more often identified in companies which had a constrained debt-to-equity ratio (Brunzell *et al.*, 2014).

In the Nordic countries the most important determinants for maintaining a dividend policy are the current capital structure, stability and future earnings, sustainable change in earnings, long-term payout policies, and the target capital structure. Studies also suggest that concentrated ownership and large long-term private or industrial ownership affects managerial decisions when it comes to dividend policy (Brunzell *et al.*, 2015).

The studies above highlight the importance of dividend patterns and available funds. Most studies include a long timeframe where macroeconomic variables such as inflation and

GDP play a more significant role than they do over a shorter period. Most studies are also conducted before the financial crisis of 2008, after which companies increased their liquidity in order to avoid problems due to extensive debt financing (Hauser, 2013). The final effects of COVID-19 on the financial year of 2020 are still uncertain for most companies. A potential indication of how companies perceive the effects of COVID-19 is whether companies deviate from established dividend patterns, which, according to previous studies, is a decision not taken lightly. The severity of COVID-19 is visible through the retaining of rather than distribution of profits from Fiscal Year (FY) 2019 due to the fear of future losses due during FY 2020. However, it is possible that companies choose to stick with established dividend patterns due to the lack of evidence of severe, long lasting, negative macro-economic effects from pandemics, with economists' expectations ranging from V-shape, U-shape to L-shape recoveries, all with distinctive demands on liquidity.

As the ownership structure and concentration has been shown, according to the previous literature, to influence dividend decisions taken in companies, the next step is to identify if the companies' ownership structure affects the degree of which H_1 is true. This study will focus on individual/insider ownership and consider an above 20% stake in a company to be dominant (related to the notion of a "significant influence" as can be derived for example from IFRS/IAS 28). This degree of ownership can be further explored depending on whether it is held by a group or a single individual. When considering these possibilities this study's hypothesis can be formulated as:

H_1. Dominant individual/insider ownership has an influence on change in dividend payouts in Finnish listed companies during the early stages of the COVID-19 pandemic when controlling for changes in profit.

Research design

This study approaches this hypothesis by using quarterly quantitative data from Capital IQ. The data is derived from the Finnish stock market and spans from the first quarter of 2017 to the second quarter of 2020, which provides financial figures prior to and during the COVID-19 pandemic, indicating whether a company deviates from an established dividend pattern. The exclusion of the third and fourth quarter should not have a major effect on the findings of the study since prior theory suggests companies stick with established dividend patterns, which is paid regularly at a specific point in time during the year (Liu and Espahbodi, 2014).

The Finnish stock market is utilised in this study for two reasons. First, it is a small but internationally highly integrated capital market, a fact which should increase both the visibility and influence of particular exogenous shocks (such as the pandemic), and second, the overall environment is largely homogenous and shows limited potentially confounding factors such as corruption or non-compliance.

The ownership structure of the listed Finnish companies is explored based on whether dominant individual/insider ownership exists and if this is held by a single person. Dominant ownership is assumed to exist when the owners might influence dividend payout decisions, which have been connected to holdings exceeding 20% in Finnish listed companies (Maury and Pajuste, 2002, see also IFRS/IAS 28).

The change in dividends is computed based on the difference in dividend paid per share in 2020 and the three-year average prior to 2020, which provides an indication of the company's stable dividends before crisis.

This study mainly uses five different measurements for company profitability: total revenue, operating income, gross profit, net income, and ROA. These variables cover dividend determinants highlighted in prior literature such as volatility of earnings and free cash flows (Rozeff, 1982; Pandey, 2001; Hellström and Inagambaev, 2012). The change in profitability is instead measured based on the change between 2020 and 2019 as these variables tend to

fluctuate to a greater degree than dividends per share. This computation should also highlight the full extent of potential drops in earnings that Finnish listed companies experienced during the first half of 2020.

All computations are performed in IBM SPSS v.26. This approach is similar to previous literature concerning variables which affect dividend payouts (Enow and Isaacs, 2018). This study uses Pearson's correlation to test the degree of collinearity between change in dividend and change in profitability with two-tailed significance. A correlation matrix provides an understanding of how dependent the change in dividends is on a change in profitability. Based on previous literature this study assumes a positive relation between change in dividend and current earnings (Baker *et al.*, 2001; Hellström and Inagambaev, 2012). Correlation analysis also highlights multicollinearity between the different profitability measurements (Abor and Bokpin, 2010).

T-tests are performed to measure the differences in means for change in dividend based on ownership, the primary sector and primary stock market of companies in the sample. Previous studies have used *t*-tests to examine if the average dividend payout differs vastly from neutral 0, depending on dividend determinants and context and whether this difference is significant (Baker and Powell, 2000; Kapoor *et al.*, 2010). If ownership effects are lacking, the *t*-test can also display potential dividend decreases in certain sectors (as provided by Capital IQ) during the spring of 2020 regardless of ownership structure.

T-tests are similar to ANCOVA analysis, with the main difference being that the latter enables comparisons between more than two groups and the inclusion of controls. Following this, if a separate continuous variable is to be included then an ANCOVA analysis is preferable (Swanson and Holton, 2005). ANCOVA analysis is flexible as it fits well with data containing quantitative covariates and has potential to also be applied in more experimental studies, though disproportionate group sizes might decrease the validity of findings (Keselman *et al.*, 1998). One of the main arguments for using ANCOVA analysis in this study is the possibility to take background factors into account through controlling for another variable known as covariates (Xia and Liitiäinen, 2014). To estimate the effect of the covariate on the dependent variable their interaction is measured in the ANCOVA analysis which provides its partial eta squared (η^2). Partial η^2 is widely considered as the measure of effect size (Richardson, 2011).

Data and sample

The quality of the collected data is examined through four assumptions concerning linear regressions. The first assumption is linearity and requires a linear relationship between the dependent and independent variable, which is possible to confirm through trustworthy previous literature or statistical charts such as scatterplots. The second assumption is homoscedasticity, which is most likely if values are recorded randomly and evenly around the *x*-axis. Deviation causes a certain degree of heteroskedasticity which is insignificant when limited but can cause serious misinterpretation of the results if it reaches high levels. Independence is the third assumption, which highlights the reliability of the variables. The regression becomes more complex for each independent variable added to the analysis and therefore causes questionable results. The last assumption to be met is normality, meaning that all variables are normally distributed. Visual presentation through data plots is one of the easiest ways to identify normal distribution and enable the removal of outliers (Osborne and Waters, 2002).

The obtained sample from Capital IQ consists of quarterly data from 152 companies listed on OMX Helsinki in 2017–2020. The ownership data consists of companies owned by individuals/insiders, institutions, corporations, banks, and/or the state. Figure 1 displays which ownership types held a dominant stake in Finnish listed companies in 2019 (just before

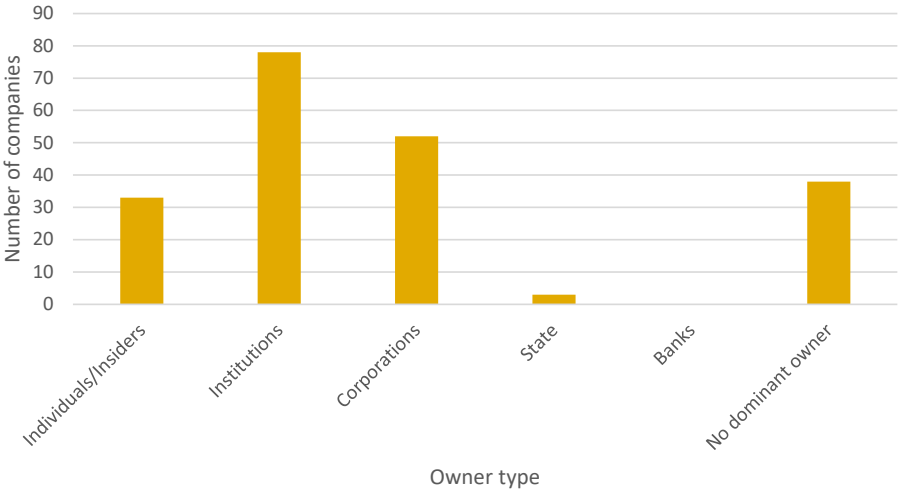

Figure 1.
Number of Finnish companies with 20% and above owner concentration in 2019

the crisis). As a 20% stake and above is considered to be dominant one company can have more than one dominant owner type (derived from IFRS/IAS 28).

According to Figure 1 the 2019 ownership data from includes 33 companies where individual/insider ownership exceeds 20% (Forst *et al.*, 2016). In 11 cases this level of ownership is held by a one single person (individual). Information regarding ownership structure is missing in 9 companies. Table 1 shows the average drop in dividend paid per share across companies depending on the individual ownership concentration (IOC). The ownership concentration is categorised depending on whether individuals or company insiders, meaning an individual with inside knowledge of the company, as a group own more than 20% of the company or whether a single individual surpasses that threshold.

The results from Table 1 are only indicative as the sample sizes vary between the three groups and the number of companies with owner concentration above 20% is relatively small. Nevertheless, these indicative results show a greater decrease in dividend from companies with dominant individual/insider ownership. This drop in dividend payout is even more drastic in cases where a single person holds above 20% of the company.

To further examine the sample the companies are organised based on their primary sector of operations provided by the Capital IQ database. Capital IQ also provides a subcategory of primary industry but dividing the companies based on this would result in such small sample sizes that any comparability between them would be lost. Companies within in these sectors face challenges concerning profitability on a regular basis as management is often expected to maintain profits while cutting costs and improving quality (Adler *et al.*, 2000), while also implementing measures for social and environmental impacts (Cuganesan *et al.*, 2010). Therefore, a comparison between the sectors based on change in profitability as related to the

Table 1.
Change in dividend depending on individual ownership concentration

Ownership structure	Q1 change in dividend	Q2 change in dividend
IOC <20%	−0.0023	−0.0090
IOC >20%	−0.0045	−0.0159
Single individual/company insider holds >20%	−0.0742	−0.0563

previous year can only provide a preliminary understanding of financial development during the first half 2020 among Finnish listed companies. Figure 2 shows the average change in turnover during Q1 and Q2 in 2020. Similar to previous comparisons, the results are only indicative due to the small sample sizes.

Figure 2 highlights how almost all sectors experienced diminished revenues in Q2 compared to Q1 of 2020. To complement the sector overview the ownership structure in each sector is also examined. Varying dividend policies are often apparent in different sectors depending on regulations and the actions of competitors (Baker *et al.*, 2001). Therefore, different owner types tend to seek out sectors and companies with policies matching their preferences, and according to the clientele effect theory, aim to further influence these policies (Allen *et al.*, 2000). Figure 3 shows the average stake held by individuals/insiders, institutions, and corporations in Finnish listed companies in 2019.

Table 2 shows the mean change in variables used in the study. Change in dividend payout (CID) is measured based on dividends paid in 2020 compared to the previous 3-year average. Change in profitability is measured as the change in total revenue (CTR), operating income (COI), gross profit (CGP), net income (CNI) and return on assets (CROA) for each quarter compared to the previous year. The figures showcase the development of the Finnish market by computing the change in all listed companies as well as the change in only the dividend-paying companies. Panel A displays the quarterly change in dividends and highlights the payout decrease during the first half of 2020. Contradicting this, according to panel B the Finnish companies' earnings increased during this period.

Findings

To examine the relation between dividend change in 2020 in comparison to the change in profitability, the first step in the analysis is to identify whether the variables are correlated. This shows the initial results of how dependent changes in dividends were on profit fluctuation in the spring of 2020 and the degree of multicollinearity between the profitability measurements.

Tables 3 and 4 shows that change in dividend and change in profitability is significantly correlated during the first half of 2020. The highest correlation is recorded between change in

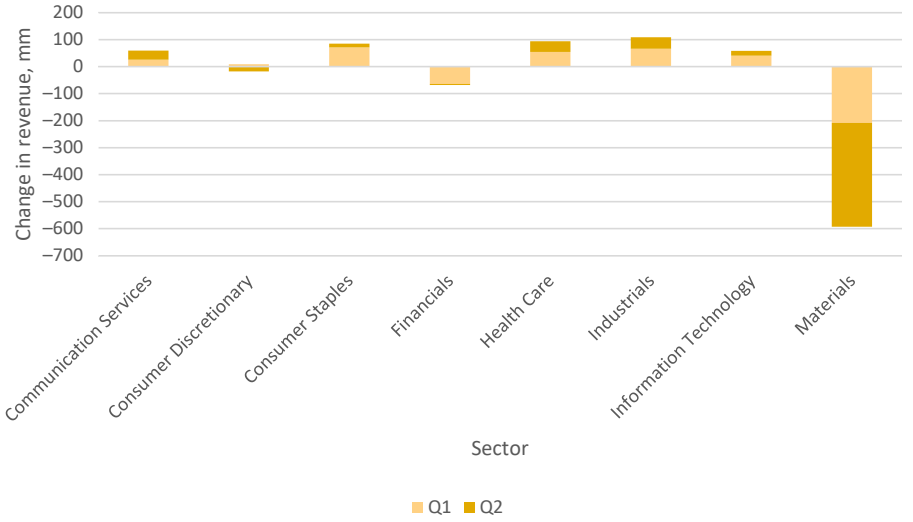

Figure 2.
Sector profitability based on change in total revenue 2020

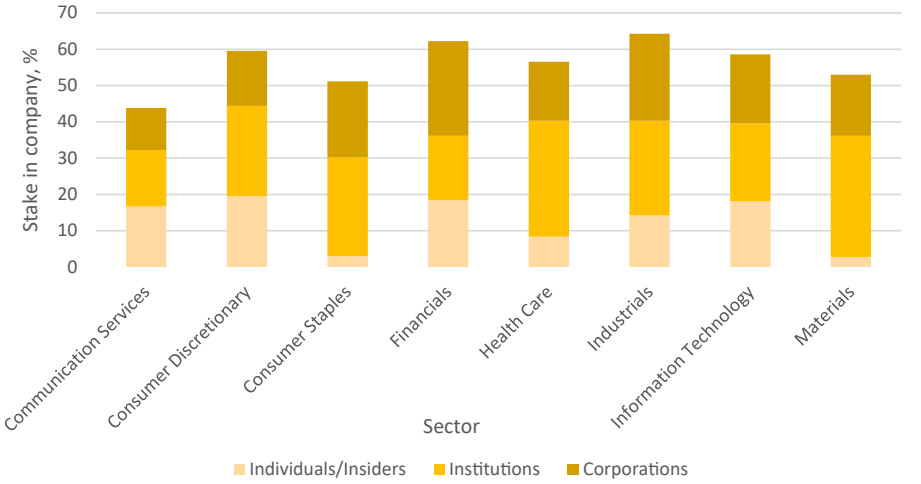

Figure 3.
Ownership structure distribution in different sectors

Panel A: Change in dividend paid per share

	All companies		Dividend paying companies	
Variables	Mean	Standard deviation	Mean	Standard deviation
Q1 CDP	−0.0019	0.1798	−0.0073	0.2013
Q2 CDP	−0.0095	0.1911	−0.0172	0.2142

Panel B: Change in profitability

	All companies		Dividend paying companies	
Variables	Mean	Standard deviation	Mean	Standard deviation
Q1 CTR	20.8126	199.2479	26.9382	226.1019
Q1 COI	1.7370	119.4256	2.3931	136.0186
Q1 CGP	14.6729	130.8534	18.9079	148.6737
Q1 CNI	13.2166	198.1768	17.7871	225.6237
Q1 CROA	−0.4526	4.0882	−0.6552	3.6460
Q2 CTR	84.4339	1189.2887	110.1784	1354.2808
Q2 COI	−0.8529	90.7558	−1.0955	103.2797
Q2 CGP	21.6263	265.1402	28.0635	301.7377
Q2 CNI	22.5134	250.7518	29.3727	285.4047
Q2 CROA	−0.2527	4.2177	−0.2861	3.0363

Table 2.
Descriptive statistics

Q1	DVP	CTR	CGP	COI	CNI	CROA
CDP	1					
CTR	0.384**	1				
CGP	0.374**	0.617**	1			
COI	0.391**	0.606**	0.813**	1		
CNI	0.269**	0.381**	0.562**	0.773**	1	
CROA	0.047	0.079	0.149	0.165	0.95	1

Note(s): **. Correlation is significant at the 0.01 level (2-tailed)

Table 3.
Q1 correlation matrix

dividend and change in operating income in the first quarter (0.391) as well as in the second quarter (0.367).

Both Tables 3 and 4 display how highly correlated the profitability measurements are with each other which provides an indication for how interchangeable the variables are in the study's linearity and ANCOVA analyses.

Scatterplot analysis identifies the highest linearity in Q1 to be between change in dividend and change in profitability based on the variable: change in operating income ($R^2 = 0.153$). Similar levels of linearity are recorded in Q2 ($R^2 = 0.135$). This suggests that the generated cashflows from business operations during the first half of 2020 could have affected the decisions surrounding dividend payouts more than typical key figures and measurements for profitability.

The independent *t*-test is used to study whether the mean for dividends is significantly different depending on whether the company individuals or insiders are dominant owners. The *t*-test results show that there is not a significant difference in the change in dividend payouts when individuals/insiders own more than 20% of the company. Table 5 shows that the difference in dividend decrease for companies in Q1 with above 20% individual/insider ownership (Mean = −0.002, SD = 0.142) and lower individual/insider ownership (Mean = −0.003, SD = 0.216) is minimal. According to Table 5 the dividend differences are less than 1 cent per share in both quarters.

To test for the relation between dividend change and change in profitability an ANCOVA analysis is performed (see more details in the Tables A1-A4). With ANCOVA the change in dividend payouts based on dominant owner type can be controlled depending on the profitability of the company. The tables in the main text are summarised to highlight the results for the interaction between change in dividend and owner type dummy with a profitability covariate.

The ANCOVA analysis is used as it takes one or several covariates into account. This study examines the relation between change in dividend payouts in 2020 and a potential dominant owner type while assuming that profitability also influences the dividend difference. The dependent variable is the difference between the change in dividends for each

Q2	CDP	CTR	CGP	COI	CNI	CROA
CDP	1					
CTR	0.044	1				
CGP	0.231**	0.885**	1			
COI	0.367**	0.128	0.410**	1		
CNI	0.296**	0.251**	0.358**	0.651**	1	
CROA	0.61	0.000	0.066	0.210*	0.131	1

Note(s):**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)

Table 4.
Q2 correlation matrix

Group statistics	>20%	*N*	Mean	Std. Deviation	Std. Error mean
Q1 CDP	0	78	−0.003	0.216	0.024
	1	24	−0.002	0.142	0.029
Q2 CDP	0	78	−0.011	0.219	0.025
	1	24	−0.016	0.198	0.040

Table 5.
T-test for dominant individual ownership

of the first quarters in 2020 and the average change in dividends 2017–2019 for the respective period. The fixed factor in the analysis is the dummy variable dominant individual/insider ownership which is 1 when holdings exceed 20% of the company and otherwise 0. The profitability covariate used is change in operating income (COI) between 2020 and 2019 as this variable had the highest correlation with change in dividends compared to CTR, CGP, CNI and CROA. Operating income was also listed as a main variable for profitability in the study conducted by Smith *et al.* (2001) concerning accounting policy decisions during economic recess. The analysis uses the so-called type III sum-of-squares calculation which makes the order of specification unimportant as the sum of squares is not sequential (Korstanje, 2019).

Table 6 shows in Q1 a significant interaction ($f(2) = 9.105$, $p < 0.000$) between the ownership dummy and profitability covariate operating income with relatively high explanatory effect (partial $\eta^2 = 15.5\%$). The covariates change in total revenue and in gross profit provide as significant explanatory effects (partial $\eta^2 = 15.2\%$ (14.1%)). Change in net income while not being as significant ($p = 0.014$) provides a lower explanatory effect (partial $\eta^2 = 8.3\%$) than the other covariates in the first quarter of 2020.

Table 7 shows that the covariate is also significant ($p < 0.001$) with a similar explanatory effect (partial $\eta^2 = 13.8\%$) in Q2. The significancy and explanatory effect of change in total revenue remains on a corresponding level in Q2 as well. Meanwhile, the significancy of change in gross profit decreases ($p = 0.022$) and its explanatory effect (partial $\eta^2 = 7.4\%$) drops below change in net income (partial $\eta^2 = 9.5\%$).

The ANCOVA analysis of the owner type individual/insider provides several significant relationships between change in dividend and change in profitability in both the first and second quarter. The sample is split up in a 3:1 ratio of companies with and without dominant ownership. The covariates' change in total revenue and in operating income provide a relatively high and consistent explanatory effect, while a lower and more fluctuating explanatory effect and degree of significancy is observed for change in gross profit and in net income. Meanwhile, change in return on assets failed to provide any significant effects on change in dividend payouts.

Table 6.
Q1 ANCOVA analysis of individual ownership

Source	Type III sum of squares	df	Mean square	F	Sig	Partial η^2
Corrected Model	0.632[a]	2	0.316	9.105	0.000	0.155
Intercept	0.001	1	0.001	0.027	0.870	0.000
IOC*COI	0.632	2	0.316	9.105	0.000	0.155
Error	3.436	99	0.035			
Total	4.068	102				

Note(s): Dependent Variable: Q1 Change in dividend 2020-Average 2017–19
a. $R^2 = 0.155$ (Adjusted $R^2 = 0.138$)

Table 7.
Q2 ANCOVA analysis of individual ownership

Source	Type III sum of squares	df	Mean square	F	Sig	Partial η^2
Corrected Model	0.635[a]	2	0.317	7.926	0.001	0.138
Intercept	0.013	1	0.013	0.335	0.564	0.003
IOC*COI	0.635	2	0.317	7.926	0.001	0.138
Error	3.965	99	0.040			
Total	4.614	102				

Note(s): Dependent Variable: Q2 Change in dividend 2020-Average 2017–19
a. $R^2 = 0.138$ (Adjusted $R^2 = 0.121$)

The highest partial η^2 is observed in the interaction between company dummy variable IOC and covariate COI which is significant both in the first and second quarter ($p \leq 0.001$). Based on the outcome of the ANCOVA analysis, a potential model could estimate the change in future dividend if the operating income is known with a 13–15% certainty, in line with the recorded explanatory effect of the analysis.

Returning to H_1, which stated that individual/insider ownership influenced dividend payout deviation during the first half of 2020, the hypothesis cannot be rejected as this study found a significant effect on dividend payout decrease if the companies were dominantly held by individual/insider owners. Prior theory from Finland and in other smaller economies also suggest the existence of such a relationship which was now demonstrated (Maury and Pajuste, 2002; Thanatawee, 2013; Islam and Adnan, 2019).

The overall research question asked for the potential impact of ownership concentration on dividends during a crisis. This study found that such impact can be implied based on preliminary data. Based on this the following theoretical implications should be discussed.

The descriptive data of change in dividends suggests a decrease in payouts compared to the previous three year average. A larger decrease in profitability is visible in Q2 compared to Q1 based on its average fluctuation. This could be connected to the classification of COVID-19 as a pandemic towards the end of Q1 on the 11th of March (World Health Organization, 2020) and thus higher uncertainty levels.

To identify whether the change in dividend payments is dependent on the change in companies' profitability measurements, the correlation between these variables is computed for each quarter. The initial analysis of Q1 identifies highly significant correlations between the change in dividend payouts and change in profitability. The respective relationships in Q2 are also significant except for change in total revenue. The lower levels of revenue generation during Q2 would indicate that the dividend decisions no longer reflect the current state of the companies depending on the sector. Decreases in total revenue are identified in the materials, financial and consumer discretionary sector, while the others experienced small increases.

The initial overview based on the profits and the dividend descriptive data could suggest that dividends during the period deviated from the previous average while profitability remained stable or saw decreases similar to the previous year.

The correlations and *t*-tests provide vital information on the quality of the data used in the ANCOVA analysis. The ANCOVA analysis of the companies with dominant individual ownership suggests that change in profitability, such as operating income, has a significant effect on change in dividends during the first half of 2020. Based on this analysis and the tests above, ownership type does matter in this case where dividend payout decisions are made, and other factors were controlled for.

Conclusion

It is of course still too early in 2021 to identify all the substantial effects of the COVID-19 pandemic as countries experienced several waves of cases and the perception of the virus varies with pandemic fatigue. Therefore, these findings can only provide a preliminary indication of the severity of the economic impact caused by COVID-19. This study recognises the need for sector separation as companies within them face different challenges regarding implementation of new standards and systems while maintaining human resources (Adler *et al.*, 2000; Cuganesan *et al.*, 2010). Additionally, sector separation is beneficial in order to create a more extensive understanding of the ownership structure effects; according to Bell and Lewis (2005), different industry sectors are impacted to different degrees during a pandemic. Be that as it may, a further separation of the small number of listed Finnish companies with dominant individual/insider ownership would not provide any significant

result. Based on the previous theory (Allen *et al.*, 2000; Baker *et al.*, 2001) as well as the different ownership structures and profitability during 2020, similar effects of dominant individual/insider ownership are possible; therefore, future research into this topic is needed.

Studying the relation between change in dividends and profitability creates a comprehension of how decision-makers perceived the coronavirus during the first half of 2020 as they decided on the allocation of profits from the previous year, which were unlikely to have been affected by the pandemic. In this high level of uncertainty, and almost no guidance, these decisions may provide an understanding of the decision-makers' anticipation for the future and commitment to the company. On a more theoretical level, our findings suggest the necessity to include further perspectives from behavioural finance to provide an explanation of the phenomenon at hand. Loewenstein *et al.* (2001), for example, highlight how a positive mood leads to more optimistic judgement and therefore negativity could have the opposite effect. Negativity and anxiousness, which can reportedly be caused by fear of the unknown and uncertain (potentially escalated by disproportionate media coverage (Xie *et al.*, 2011)) versus persistence and belief in your company (and Finnish *sisu*), may be at play here.

References

Abor, J. and Bokpin, G.A. (2010), "Investment opportunities, corporate finance, and dividend payout policy", *Studies in Economics and Finance*, Vol. 27 No. 3, pp. 180-194.

Ackert, L.F., Church, B.K. and Zhang, P. (2018), "Informed traders' performance and the information environment: evidence from experimental asset markets", *Accounting, Organizations and Society*, Vol. 70, pp. 1-15.

Adler, R., Everett, A.M. and Waldron, M. (2000), "Advanced management accounting techniques in manufacturing: utilization, benefits, and barriers to implementation", *Accounting Forum*, Vol. 24 No. 2, pp. 131-150.

Agarwal, V., Taffler, R.J., Bellotti, X. and Nash, E.A. (2015), "Investor relations, information asymmetry and market value", *Accounting and Business Research*, Vol. 46 No. 1, pp. 31-50.

Allen, F., Bernardo, A.E. and Welch, I. (2000), "A theory of dividends based on tax clienteles", *The Journal of Finance*, Vol. 55 No. 6, pp. 2499-2536.

Attig, N., Boubakri, N., El Ghoul, S. and Guedhami, O. (2016), "The global financial crisis, family control, and dividend policy", *Financial Management*, Vol. 45 No. 2, pp. 291-313.

Baker, H.K. and Powell, G.E. (2000), "Determinants of corporate dividend policy: a survey of NYSE firms", *Financial Practice and Education*, Vol. 10, pp. 29-40.

Baker, H.K., Veit, E.T. and Powell, G.E. (2001), "Factors influencing dividend policy decisions of Nasdaq firms", *Financial Review*, Vol. 36 No. 3, pp. 19-38.

Balachandran, B., Juthani, V., Mahamuni, M. and Vidanapathirana, B. (2011), "Price reaction, final dividend reductions and signaling: UK evidence", *IUP Journal of Applied Finance*, Vol. 17 No. 4, pp. 26-37.

Baum, J.A. and Oliver, C. (1991), "Institutional linkages and organizational mortality", *Administrative Science Quarterly*, Vol. 36, pp. 187-218.

Bell, C. and Lewis, M. (2005), "Economic implications of epidemics old and new", Online repository working paper, 997387, available at SSRN: papers.ssrn.com.

Below, S.D. and Johnson, K.H. (1996), "An analysis of shareholder reaction to dividend announcements in bull and bear markets", *Journal of Financial and Strategic Decisions*, Vol. 9 No. 3, pp. 15-26.

Brunzell, T., Liljeblom, E., Löflund, A. and Vaihekoski, M. (2014), "Dividend policy in Nordic listed firms", *Global Finance Journal*, Vol. 25 No. 2, pp. 124-135.

Brunzell, T., Liljeblom, E., Löflund, A. and Vaihekoski, M. (2015), "Capital structure policy decisions in Nordic listed firms", *Nordic Journal of Business*, Vol. 64 No. 1, pp. 4-20.

Cronqvist, H. and Nilsson, M. (2003), "Agency costs of controlling minority shareholders", *Journal of Financial and Quantitative Analysis*, Vol. 38 No. 4, pp. 695-719.

Cuganesan, S., Guthrie, J. and Ward, L. (2010), "Examining CSR disclosure strategies within the Australian food and beverage industry", *Accounting Forum*, Vol. 34 Nos 3-4, pp. 169-183.

Dacin, M., Goodstein, J. and Scott, W. (2002), "Institutional theory and institutional change: introduction to the special research forum", *Academy of Management Journal*, Vol. 45 No. 1, pp. 45-56.

Donnelly, R. and Lynch, C. (2002), "The ownership structure of UK firms and the informativeness of accounting earnings", *Accounting and Business Research*, Vol. 32 No. 4, pp. 245-257.

Duqi, A., Jaafar, A. and Warsame, M.H. (2020), "Payout policy and ownership structure: the case of Islamic and conventional banks", *The British Accounting Review*, Vol. 52 No. 1, 100826.

Enow, S.T. and Isaacs, E.B.H. (2018), "Factors that determine dividend payout. Evidence from the financial service sector in South Africa", *Journal of Finance and Bank Management*, Vol. 1 No. 1, pp. 48-53.

Forgas, J.P. (1995), "Mood and judgment: the affect infusion model (AIM)", *Psychological Bulletin*, Vol. 117 No. 1, p. 39.

Forst, A., Hettler, B. and Barniv, R.R. (2016), "Insider ownership and financial analysts' information environment: evidence from dual-class firms", *Journal of Accounting, Auditing and Finance*, Vol. 34 No. 1, pp. 30-53.

Fuller, K.P. and Goldstein, M.A. (2011), "Do dividends matter more in declining markets?", *Journal of Corporate Finance*, Vol. 17 No. 3, pp. 457-473.

Ghazali, A.W., Shafie, N.A. and Sanusi, Z.M. (2015), "Earnings management: an analysis of opportunistic behaviour, monitoring mechanism and financial distress", *Procedia Economics and Finance*, Vol. 28, pp. 190-201.

Golden, J. and Kohlbeck, M. (2017), "The unintended effects of financial accounting standard 123R on stock repurchase and dividend activity", *Journal of Accounting, Auditing and Finance*, Vol. 34 No. 3, pp. 411-433.

Hallegatte, S., Shah, A., Brown, C., Lempert, R. and Gill, S. (2012), "Investment decision making under deep uncertainty-application to climate change", World Bank Policy Research Working Paper, p. 6193.

Hauser, R. (2013), "Did dividend policy change during the financial crisis?", *Managerial Finance*, Vol. 39 No. 6, pp. 584-606.

Hellström, G. and Inagambaev, G. (2012), "Determinants of dividend payout ratios: a study of Swedish large and medium caps (dissertation)", available at: http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-56954.

Islam, M.S. and Adnan, A. (2019), "Dividend practices in listed companies: study on the manufacturing sector of Bangladesh", *Management of Organizations: Systematic Research*, Vol. 81 No. 1, pp. 1-19.

Jakobsson, U. and Korkeamäki, T. (2014), "Ownership and governance of large Finnish firms", *Prime Minister's Office Reports*, Vol. 6, pp. 1-45.

Jensen, G.R., Lundstrum, L.L. and Miller, R.E. (2010), "What do dividend reductions signal?", *Journal of Corporate Finance*, Vol. 16 No. 5, pp. 736-747.

Kangas, O. and Saloniemi, A. (2013), *Historical Making, Present and Future Challenges for the Nordic Welfare State Model in Finland*, FAFO Foundation, Oslo, ISBN 978-82-324-0045-4, p. 80.

Kapoor, S., Mishra, A. and Anil, K. (2010), "Dividend policy determinants of Indian services sector: a factorial analysis", *Paradigm*, Vol. 14 No. 1, pp. 24-41.

Keselman, H.J., Huberty, C.J., Lix, L.M., Olejnik, S., Cribbie, R.A., Donahue, B., Kowalchuk, R.K., Lowman, L.L., Petoskey, M.D., Keselman, J.C. and Levin, J.R. (1998), "Statistical practices of

educational researchers: an analysis of their ANOVA, MANOVA, and ANCOVA analyses", *Review of Educational Research*, Vol. 68 No. 3, pp. 350-386.

Korstanje, J. (2019), "ANOVA's three types of estimating sums of squares: don't make the wrong choice!", Towards data science, available at: https://towardsdatascience.com/anovas-three-types-of-estimating-sums-of-squares-don-t-make-the-wrong-choice-91107c77a27a (accessed 29 November 2019).

Liu, A.Z. (2014), "Can external monitoring affect corporate financial reporting and disclosure? Evidence from earnings and expectations management", *Accounting Horizons*, Vol. 28 No. 3, pp. 529-559.

Liu, N. and Espahbodi, R. (2014), "Does dividend policy drive earnings smoothing?", *Accounting Horizons*, Vol. 28 No. 3, pp. 501-528.

Loewenstein, G.F., Weber, E.U., Hsee, C.K. and Welch, N. (2001), "Risk as feelings", *Psychological Bulletin*, Vol. 127 No. 2, p. 267.

Maury, C.B. and Pajuste, A. (2002), "Controlling shareholders, agency problems, and dividend policy in Finland", *LTA*, Vol. 1 No. 2, pp. 15-45.

Mehdi, M., Sahut, J.M. and Teulon, F. (2017), "Do corporate governance and ownership structure impact dividend policy in emerging market during financial crisis?", *Journal of Applied Accounting Research*, Vol. 18 No. 3, pp. 274-297.

Nielsen, L.B., Mitchell, F. and Nørreklit, H. (2015), "Management accounting and decision making: two case studies of outsourcing", *Accounting Forum*, Vol. 39 No. 1, pp. 64-82.

Osborne, J.W. and Waters, E. (2002), "Four assumptions of multiple regression that researchers should always test", *Practical Assessment, Research, and Evaluation*, Vol. 8 No. 1, pp. 2-5.

Pandey, I.M. (2001), "Corporate dividend policy and behaviour: the Malaysian experience", SSRN online repository, 299912, available at: papers.ssrn.com.

Payne, B.C. (2011), "On the financial characteristics of firms that initiated new dividends during a period of economic recession and financial market turmoil", *Journal of Economics and Finance*, Vol. 35 No. 2, pp. 149-163.

Richardson, J.T. (2011), "Eta squared and partial eta squared as measures of effect size in educational research", *Educational Research Review*, Vol. 6 No. 2, pp. 135-147.

Rikhardsson, P., Rohde, C., Christensen, L. and Batt, C.E. (2021), "Management controls and crisis: evidence from the banking sector", *Accounting, Auditing and Accountability Journal*, Vol. 34 No. 4, pp. 757-785.

Rozeff, M.S. (1982), "Growth, beta and agency costs as determinants of dividend payout ratios", *Journal of Financial Research*, Vol. 5 No. 3, pp. 249-259.

Shao, L., Kwok, C.C. and Guedhami, O. (2010), "National culture and dividend policy", *Journal of International Business Studies*, Vol. 41 No. 8, pp. 1391-1414.

Shleifer, A. and Vishny, R.W. (1997), "A survey of corporate governance", *The Journal of Finance*, Vol. 52 No. 2, pp. 737-783.

Sikka, P. and Stittle, J. (2019), "Debunking the myth of shareholder ownership of companies: some implications for corporate governance and financial reporting", *Critical Perspectives on Accounting*, Vol. 63, 101992.

Smith, M., Kestel, J.A. and Robinson, P. (2001), "Economic recession, corporate distress and income increasing accounting policy choice", *Accounting Forum*, Vol. 25 No. 4, pp. 334-352.

Stigler, G.J. (1957), "Perfect competition, historically contemplated", *Journal of Political Economy*, Vol. 65 No. 1, pp. 1-17.

Swanson, R.A. and Holton, E.F. (2005), *Research in Organizations: Foundations and Methods in Inquiry*, Berrett-Koehler Publishers, Oakland, CA.

Thanatawee, Y. (2013), "Ownership structure and dividend policy: evidence from Thailand", *International Journal of Economics and Finance*, Vol. 5 No. 1, pp. 121-132.

Thomsen, S. and Pedersen, T. (2000), "Ownership structure and economic performance in the largest European companies", *Strategic Management Journal*, Vol. 21 No. 6, pp. 689-705.

Ting, I.W.K., Kweh, Q.L. and Somosundaram, K. (2017), "Ownership concentration, dividend payout and firm performance: the case of Malaysia", *Malaysian Journal of Economic Studies*, Vol. 54 No. 2, pp. 269-280.

Tong, Y.H. and Miao, B. (2011), "Are dividends associated with the quality of earnings?", *Accounting Horizons*, Vol. 25 No. 1, pp. 183-205.

Tse, T. (2011), "Shareholder and stakeholder theory: after the financial crisis", *Qualitative Research in Financial Markets*, Vol. 1 No. 3, pp. 51-63.

Welker, M., Ye, K. and Zhang, N. (2017), "(Un)intended consequences of a mandatory dividend payout regulation for earnings management: evidence from a natural experiment", *Journal of Accounting, Auditing and Finance*, Vol. 32 No. 4, pp. 501-535.

Wicks, A.C. and Freeman, R.E. (1998), "Organization studies and the new pragmatism: positivism, anti-positivism, and the search for ethics", *Organization Science*, Vol. 9 No. 2, pp. 123-140.

Williamson, O.E. (2007), "The economic institutions of capitalism. Firms, markets, relational contracting", in *Das Summa Summarum des Management*, Gabler, pp. 61-75.

World Health Organization (2020), "Archived: WHO Timeline - COVID-19", available at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline (accessed 09 September 2021).

Xia, B.S. and Liitiäinen, E. (2014), "Economics of education and work life demand in terms of earnings and skills", *Citizenship, Social and Economics Education*, Vol. 13 No. 1, pp. 67-77.

Xie, X.F., Stone, E., Zheng, R. and Zhang, R.G. (2011), "The Typhoon Eye Effect: determinants of distress during the SARS epidemic", *Journal of Risk Research*, Vol. 14 No. 9, pp. 1091-1107.

Zaini, S.M., Sharma, U., Samkin, G. and Davey, H. (2018), "Impact of ownership structure on the level of voluntary disclosure: a study of listed family-controlled companies in Malaysia", *Accounting Forum*, Vol. 44 No. 1, pp. 1-34.

Further reading

Burkart, M., Gromb, D. and Panunzi, F. (1997), "Large shareholders, monitoring, and the value of the firm", *The Quarterly Journal of Economics*, Vol. 112 No. 3, pp. 693-728.

Du Rietz, S. (2018), "Information vs knowledge: corporate accountability in environmental, social, and governance issues", *Accounting, Auditing and Accountability Journal*, Vol. 31 No. 2, pp. 586-607.

Fama, E.F. and Jensen, M.C. (1983), "Agency problems and residual claims", *The Journal of Law and Economics*, Vol. 26 No. 2, pp. 327-349.

How, S.M., Lee, C.G. and Brown, D.M. (2019), "Shareholdertheory versus stakeholdertheory in explaining financial soundness", *International Advances in Economic Research*, Vol. 25 No. 1, pp. 133-135.

Linter, J. (1956), "Distribution of incomes of corporations among dividends retained earnings and taxes", *The American Economic Review*, Vol. 46 No. 2, pp. 97-113.

Smith, D.D. and Pennathur, A.K. (2017), "Signaling versus free cash flow theory: what does earnings management reveal about dividend initiation?", *Journal of Accounting, Auditing and Finance*, Vol. 34 No. 2, pp. 284-308.

Weitzner, D. and Deutsch, Y. (2019), "Why the time has come to retire instrumental stakeholder theory", *Academy of Management Review*, Vol. 44 No. 3, pp. 694-698.

Appendix
ANCOVA model analyses

Table A1.
Q1 dominant institutional ownership ANCOVA analysis

Source	Type III sum of squares	df	Mean square	F	Sig	Partial eta squared
Corrected model	0.652[a]	2	0.326	12.070	0.000	0.154
Intercept	0.001	1	0.001	0.039	0.844	0.000
Onehot_Inst_2019 * Q1_Diff_OI2019	0.652	2	0.326	12.070	0.000	0.154
Error	3.590	133	0.027			
Total	4.242	136				
Corrected total	4.242	135				

Note(s): a. $R^2 = 0.154$ (Adjusted $R^2 = 0.141$)
Dependent variable: Q1_Div_diff_20-Avg17_19

Table A2.
Q2 dominant institutional ownership ANCOVA analysis

Source	Type III sum of squares	df	Mean square	F	Sig	Partial eta squared
Corrected model	0.612[a]	2	0.306	9,548	0.000	0.126
Intercept	0.010	1	0.010	0.323	0.571	0.002
Onehot_Inst_2019 * Q2_Diff_OI2019	0.612	2	0.306	9,548	0.000	0.126
Error	4.232	132	0.032			
Total	4.857	135				
Corrected total	4,844	134				

Note(s): a. $R^2 = 0.126$ (Adjusted $R^2 = 0.113$)
Dependent Variable: Q2_Div_diff_20-Avg17_19

Table A3.
Q1 dominant corporate ownership ANCOVA analysis

Source	Type III sum of squares	df	Mean square	F	Sig	Partial eta squared
Corrected model	0.590[a]	2	0.295	10.504	0.000	0.153
Intercept	0.003	1	0.003	0.114	0.736	0.001
Onehot_Corp_2019 * Q1_Diff_OI2019	0.590	2	0.295	10.504	0.000	0.153
Error	3.259	116	0.028			
Total	3.851	119				
Corrected total	3.850	118				

Note(s): a. $R^2 = 0.153$ (Adjusted $R^2 = 0.139$)
Dependent variable: Q1_Div_diff_20-Avg17_19

Table A4.
Q2 dominant corporate ownership ANCOVA analysis

Source	Type III sum of squares	df	Mean square	F	Sig	Partial eta squared
Corrected model	0.579[a]	2	0.290	8.685	0.000	0.130
Intercept	0.043	1	0.043	1.297	0.257	0.011
Onehot_Corp_2019 * Q2_Diff_OI2019	0.579	2	0.290	8.685	0.000	0.130
Error	3.868	116	0.033			
Total	4.479	119				
Corrected total	4.447	118				

Note(s): a. R^2 red = 0.130 (Adjusted R^2 = 0.115)
Dependent variable: Q2_Div_diff_20-Avg17_19

Corresponding author
Othmar M. Lehner can be contacted at: othmar.lehner@hanken.fi