# COVID-19 DISCLOSURES IN ANNUAL REPORTS

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**ABSTRACT**

The devastating effects of COVID-19 that led to continued uncertainty for businesses escalate the importance of crisis-related vis-à-vis pandemic-related disclosure studies. This study aims to understand the types of COVID-19 related disclosures made by New Zealand listed companies, why the companies disclosed such information, and determine whether those disclosures reflect through their performances. The findings of this study have given rise to numerous pathways for future studies. Moreover, the researcher has examined whether COVID-19 has influenced the level of disclosures and earnings management. This study has based agency, stakeholder, political, and prospects theories for the development of hypotheses. The findings reveal that companies disclosed more about uncertainty, effects on performance, liquidity management, substantial impairments of assets, extended customer support, ceased dividend payments, and most importantly, health and safety of the employees and customers. The results suggested that the overall level of disclosures has increased in the year 2020 irrespective of essential or non-essential services. Following the previous literature, the results indicated that firm size and the number of board meetings are significantly associated with the change in disclosures. Moreover, the results revealed positive signs of earnings management. According to the regression results, COVID-19 has influenced the companies to have more discretionary accruals. However, the results revealed that board members with accounting expertise reduce discretionary accruals. Pandemic-related disclosure studies will be necessary for the regulators and accounting policymakers to understand the corporate disclosure culture and behavior in times of pandemics and other crises. It will also help managers understand what disclosures are relevant for better transparency of their firms in a crisis setting.

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**LIST OF ABBREVIATIONS**

NZ: New Zealand

NZX: New Zealand's Exchange

MJM: Modified Jones Model

QCA: Quantitative content analysis

BNPL: Buy-now-pay-later

ROA : Return on Assets

**ATTESTATION OF AUTHORSHIP**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly define in the acknowledgments), nor material of which a substantial extent has been submitted for the award of any other degree or diploma of a university or other institute of higher learning.

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# CHAPTER 1: INTRODUCTION

## 1.1 Introduction

COVID-19 has forged unforeseeable uncertainty and unique challenges for business operations worldwide, making financial reporting disclosures extremely critical, which is important for the investors and stakeholders to make timely decisions. The uncertainty has amplified the financial reporting disclosures like never before. It has highlighted the significant persisting impact of a major economic shock on the financial reporting items recognized, measured, and reported in annual reports (Austin, 2020; International Organization of Securities Commissions, 2020; Tokar & Kumar, 2020; Tysiac, 2020). A feature of the COVID-19 pandemic is that none of the countries was "immune" to its acute economic shock (Mohaddes, 2020). Nathan and Kelkar (2020) have divided economic shocks into "endogenous and exogenous" shocks. Endogenous shocks flourish within the economic system itself, and exogenous shocks arise totally outside the economic system. The previous crises originated from the "Great Depression" to the "Global economic recession," which were endogenous shocks and were controlled by adjusting fiscal and financial policies (Reserve Bank of Australia, 2021). However, the COVID-19 pandemic, an exogenous shock and is still sprouting uncertainty worldwide, has unprecedented innate impacts among different industries.

Over and above, the economic stability, government leadership style, and the strength of the healthcare system have determined the severity of COVID-19 experienced by each country (Aspachs & Ruiz, 2020; Bremmer, 2021). Responsively, New Zealand (NZ) battled to prevent the spreading of COVID-19, well above the rest of the world, by immediate lockdown restrictions in the view of prioritizing general public health (BBC, 2020; Gulley, 2020). Moreover, the NZ government introduced a system to classify businesses as essential and non-essential services according to the importance of the businesses' existence, that provide necessities of everyone's life (Businessnz, 2020). Consequently, most benefitted was essential services as opposed to non-

essential services. Further, the NZ government spent nearly $182 billion as COVID support (Controller and Auditor General, 2020).

Subsequently, NZ companies were able to apply for wage subsidies supposing to retain employees. Moreover, companies received benefits such as reduced tax burdens and other means such as payment deferrals, and waiving penalties (Deloitte, 2020a; Inland Revenue, 2021). Notably, Hanna and Skandier (2020); O'Donnell (2020) have stated that the government support extended to the corporate sector by using public money should not be wasted. As the purpose of government support is to contribute towards the re-shaping of the economy, but not situations like "profits are commercialized, and risks are socialized."

## 1.2 Research Objective

The main objective of this study is to identify the types of disclosures made regarding COVID-19 by New Zealand-listed companies, why some companies are resorting to such disclosures more than others and determine whether the COVID-19 related disclosures reflect through company performances. During this crisis, the level of information disclosed by companies is essential for the investors and the annual reports' users while not encountering competitive disadvantages in the marketplace(CA ANZ et al., 2020). In addition, the continuous uncertainty that arises due to COVID-19 has emerged optimistic to negative consequences for different sectors of the economy. Despite the economic implications, managers need to identify the impact of COVID-19 and report according to the level of significance. Pandemic-related disclosure studies are comparatively new are in Accounting research. Hence, the present study contributes to the literature by focusing on voluntary financial reporting disclosures under pandemics and crisis settings. Its consequences will support policymakers to encourage the preparers of the annual reports to adjust future reporting policies relating to major shocks such as a pandemic.

### 1.3 Research questions

Following the above research objectives, the researcher intends to answer the below research questions.

1. What do the companies disclose in their annual reports during a pandemic?
2. Why do the companies disclose such information during a pandemic?
3. Are these disclosures related to the financial performance indicators of the companies?

### 1.4 Research Methodology

This study has employed a quantitative method to accomplish the above-outlined objectives and to answer the research questions. A wide range of scholarly articles has adopted a quantitative approach, especially on disclosure studies. It supports measuring the variables to predict intended outcomes (Debreceny & Rahman, 2005; Hossain et al., 1995b; Patten, 2015). Devi (2009) has suggested content analysis for data analysis. However, content analysis was placed at the center of a controversy to identify as quantitative or qualitative. Accordingly, Morgan (1993) has recommended that the researchers should exercise judgment to fulfill their requirements.

It is essential to measure the differences of disclosures from pre-COVID year to COVID-19 year to identify the surged impact. Following the previous disclosure studies and considering the focus of the study, the researcher has identified the independent (IV) and dependent (DV) variables. Once the variables are specified, correlation is a helpful technique to identify the association between variables. Correlation measures the linear relationship among two or more variables, determining the relationship's strength and tendency (Fernando & Walters, 2021). However, correlation does not assume the degree of influence in a relationship but only assumes a linear relationship between variables. A positive correlation explains that when one variable increases, another variable also increases, and a negative correlation means that when one variable increases, the other variable decreases (Bahna, 2009). Regression analysis illustrates the pre hypothesized relationship between DV and one or more IV (Bahna, 2009). Moreover, multiple linear regression

"is a statistical technique that uses several explanatory variables to predict the outcome of a response variable" (Hayes & Estevez, 2021). Accordingly, this study has incorporated quantitative content analysis (QCA) to observe the correlations and multiple linear regression to interpret the results.

### 1.5 Research structure

The structure of this paper includes eight Chapters. Following Chapter 1 with the introduction, research objectives, research questions and methodology, Chapter 2 provides an overview of disclosure studies in NZ. Chapter 3 includes the literature review, followed by Chapter 4 with development of hypotheses. Chapter 5 outlines the research design, sample selection and variable measures and Chapter 6 will follow with the findings under disclosure types that includes financial-related, employee-related, customer-related and governance-related disclosures. Chapter 7 reports the results, followed by Chapter 8 with conclusions, limitations, and suggestions for future research.

## CHAPTER 2: OVERVIEW OF NEW ZEALAND DISCLOSURE STUDIES

There have been different studies on voluntary disclosures in NZ companies. One of the early studies carried out by McNally et al. (1982) has investigated whether "corporate characteristics" have influenced voluntary disclosures in NZ. Their study has identified NZ as a country with a booming economy with a 3 million population. According to the earliest data available on NZX, during 1986, there have been 396 securities trading. Still, surprisingly, at the time of writing this report, there were only 186 securities trading on the NZX, even though the population increased by nearly 2 million (NZX, 2021). According to Gaynor (2017), the "cost of raising capital" is overly expensive in NZ. Furthermore, the New Zealand Exchange (NZX) does not represent the broader economy very well.

Bradbury (1992) has examined the relationship between disclosures of segment data and five firm-specific characteristics: size, leverage, the asset in place, earnings volatility, and sources of finance. In addition, Hossain et al. (1995b) have also studied the relationship between NZ companies' voluntary disclosure and five firm-specific characteristics. However, it differs from previous studies, and it has used two different firm characteristics, such as type of auditor and foreign listing status. Furthermore, Hackston and Milne (1996) have examined the determinants of environmental and social disclosures of companies in NZ. Their study has revealed that NZ companies make relatively low disclosures on ecological and social matters than UK and USA companies.

However, NZ companies are relatively small in capitalization. In addition, this study has examined the relationship between disclosure and some firm-specific characteristics such as profitability, size, industry, number of board members, number of board meetings, essential services, and industries. In contrast with previous NZ studies, the present study will be different as it examines the COVID-19 pandemic-related disclosures. Moreover, the researcher has reviewed whether the above-mentioned firm-specific characteristics have influenced the change in disclosures.

## CHAPTER 3: LITERATURE REVIEW

Given the continued uncertainty surrounding the preparation of financial statements, incomplete information that has a potential distortion after releasing the reports to the public could put the preparers of the financial statement in a terrible dilemma. The preparers of the financial reports need to be more considerate about professional skepticism and substantial judgments than ever before (Levy, 2020). The accounting profession is gearing up by continuously highlighting the importance and the responsibility of the preparers of the financial reports on the current uncertainty disclosures (BDO, 2020; CA ANZ et al., 2020; Deloitte, 2020b; EY, 2020; International Organization of Securities Commissions, 2020; Mossadams, 2020). However, it has been criticized in the past literature remarking the existence of the professional bodies and the same services offered at previous financial crises (Arnold, 2009). The question that arises is, what would companies making COVID-19 related disclosures report, why would they disclose such information, and whether the disclosures reflect on their performances?

According to Healy and Palepu (2001), the need for financial reporting disclosures emanates from agency issues and information asymmetry between managers and investors. Adhikari and Tondkar (1992); Rahman et al. (2002) & Debreceny et al. (2002) have argued that firm characteristics influence the level of disclosures. However, empirical evidence has suggested that the investors' conflict of interest behind the disclosures fluctuates with the company characteristics (Chow & Wong-Boren, 1987; Craswell & Taylor, 1992a). In addition, financial leverage could also impact the level of disclosures (Ball, 1995; Bradbury, 1992). Economic liberalization added up with modern finance theory, have enlightened the policymakers and regulators to consider the financial markets as a cluster of rational investors who are eager to maximize their wealth, therefore, to provide safeguard by mandating the disclosure requirements (Avgouleas, 2009; Merino & Neimark, 1982). At the same time, Crotty (2009) has argued that radical deregulation of the financial process and brisk innovation have accelerated economic growth and eventually resulted in crises. Financial reporting regulators, standard setters, professional bodies emphasize the importance and responsibility of the preparers of the financial

reports on uncertainty disclosures (International Organization of Securities Commissions, 2020), (CA ANZ et al., 2020). However, literature on voluntary disclosure has criticized the management intention was to deliberately inflate the investors' expectations of increasing share price (Einhorn, 2007). It may be the reason for the 2020s overvalued stocks in the US Stock market (Patton, 2020).

Accounting literature has criticized the lack of transparency and accountability in financial reporting disclosure during the economic crisis (Barth & Landsman, 2010; Ghazali & Weetman, 2006; Probohudono et al., 2013; Rahman, 1998). However, some researchers have argued that investors possessed adequate information on the financial risk towards subprime mortgage catastrophe (Kolb, 2010). Loughran and McDonald (2020) have argued that the potential risk of a health crisis did not mention most of the sample company's 2018 annual reports in the US. However, the world has experienced H1N1, SARS, Ebola before the COVID-19 pandemic but did not have devastating results as much as COVID-19.

The concept of risk in the modern era is growing continuously (Power, 2004). The integral paradigm of accounting has moved to accommodate the responsibility towards the stakeholders (Mirfazli, 2008). Risk disclosures play a vital role in reporting to the stakeholders. According to the Financial Committee of the Institute of Chartered Accountants in England and Wales (2002), there are two types of risks; "downside" and "volatility". The downside risk is explaining where something could go wrong, and the volatility risk is where risk involving uncertainty, where the outcome could be a gain or loss. COVID-19 related risk is all about uncertainties.

UK Government has implemented operating and financial review (OFR) with the anticipation of improving the non-financial forward-looking reporting quality on annual reports. It has included mandatory relevant risk information, although there could be conflicts with the management's interest to disclose such forward-looking information, because auditors may not verify it, and such information can result in potential takeover situations (Linsley & Shrives, 2005). However, UK Government has withdrawn the OFR legislation soon after (November 2005) they

implemented in March 2005 due to political intervention (Rowbottom & Schroeder, 2014). Furthermore, Accounting Standards Board (ASB) have issued a reporting statement after the deregulation of OFR, explaining the best practices in reporting forward-looking risk information, which was supposed to be mandatory (Accounting Standards Board, 2006). The American Institute of Certified Public Accountants (AICPA) has also raised its concerns and has suggested a comprehensive model that illustrates the importance of including forward-looking information such as opportunities and future trends. In addition, they have indicated that a comparison of previously disclosed opportunities and threats with current opportunities and threats would be ideal for the stakeholders to assess their decisions (American Institue of Certified Public Accountants, 1994). However, Beretta and Bozzolan (2008) have analyzed the role played by forward-looking financial reporting disclosures. Their findings have explained that there is no relationship between the quality of the forward-looking reporting and the reduction in analysts' earnings forecast dispersion. As the world economy is disturbed by COVID-19 uncertainty, incorporating forward-looking risk information is extremely important for decision-making stakeholders. However, the nature of the virus itself made it difficult to measure the foreword-looking economic uncertainties. Baker et al. (2020) have suggested three indicators to measure economic uncertainty: market volatility, newspaper-based economic uncertainty, and subjective uncertainty in business expectation surveys.

Another possibility with the COVID-19 pandemic is the potential earnings management by opportunist management. Scholars have introduced earnings management as purposeful alteration of reported earnings at the discretion of management (Beneish, 2001; Healy & Wahlen, 1999). Chi and Gupta (2009); Dechow and Schrand (2004); Smith et al. (2001) have mentioned that managers are motivated to use income-increasing policies to impress shareholders. Managers prepare the forecasts using accounting estimates and judgments; however, they struggle to perform as expected when a recession hits. Financial crises or natural disasters could allow managers to write off previous higher earnings by "taking a bath" (Cheng et al., 2019),(Habib et al., 2012). COVID-19 pandemic also could be an ideal opportunity for the companies to apply the "big bath" theory, as investors expect poor performances during a crisis, and managers could

dump all the pre-existing terrible news to the crisis period possible (Hope & Wang, 2018). In addition, Fiechter and Meyer (2010) have confirmed in their study that during the 2008 global financial crisis, some financial institutions that reported extensive losses in 2008 have reported positive earnings soon after the worldwide recovery. It could have been that those institutions overstated their losses.

Furthermore, Jordan and Clark (2015); Riyadi et al. (2018); Yoshihiro and Tomoaki (2011) have discussed that management changes can lead to earnings management. Irregular or 'hostile' changes in directors can enforce big bath during the first year. Regardless of the reported losses, the outcome will not compromise the new management's reputation. In addition, Jordan and Clark (2015) have explained that "big bath" could occur via writing off the intangible assets.

Previous studies have explained that managers are likely to use "accruals" and "cash flows" for earnings management. As cash flow manipulation is simply noticeable and costly, researchers have presumed that managers use accruals over cash flows (Mendesa et al., 2012; Peasnell et al., 2000). A wide range of scholars has used different models to predict earnings management. Jones (1991) has proposed the "Jones Model" to detect earnings management by dividing total accruals into discretionary (abnormal) and non-discretionary (normal) to identify the discretionary accruals for a given period. In addition, the "Jones Model" assumes that the manipulation is not applied over revenue but on accruals (Algharaballi & Albuloushi, 2008). However, Dechow et al. (1995) have proposed the "Modified Jones Model" (MJM) that picks up the effect of revenue-based manipulation (Algharaballi & Albuloushi, 2008). Although the present study's primary focus is not to detect earnings management, the researcher has adopted MJM to examine whether opportunist management has practiced earnings management because of the COVID-19 pandemic.

Considering the existing challenging environment and living nearly one and half years with the COVID-19 pandemic, this paper addresses the factors influencing NZ companies to disclose the 'known' pandemic situation in the unknown forward-looking financial reports. This study will

help understand the pandemic-related disclosures and the reasons behind such disclosures, which could act as a means of evaluating future market needs for disclosures relating to unforeseen shocks.

## CHAPTER 4: DEVELOPMENT OF HYPOTHESES

Past studies have considered different types of size variables such as total assets, market value, and the number of shareholders as determinants of discretionary disclosures (Chow & Wong-Boren, 1987; Cooke, 1989; Hossain et al., 1995a; Leftwich et al., 1981). However, in his study Cooke (1989), has incorporated three size variables; total assets, market value, and the number of shareholders, and has reported a positive association between the level of disclosures and all three variables. Moreover, agency theory was applied to explain the choice of size variable as in market value and the number of shareholders, suggesting that an increased number of shareholders could potentially reduce the cost of capital and increase the share price (Cooke, 1989; Hossain et al., 1995a). This study has considered market value as the size variable. Furthermore, Lang and Lundholm (1993) have argued that larger firms have a higher demand for information from analysts, therefore, tend to disclose more information. Thus, it is hypothesised that

***H1: There is a positive association between firm size and change in disclosure***

Previous studies have suggested that board size may positively associate with the level of disclosures. According to Chen and Jaggi (2000), the total number of independent non-executive directors has positively influenced the breadth of financial disclosures. In addition, their findings have implied that an increased number of board members could enhance the company's compliance with better disclosures and transparency. However, the present study has not considered the number of non-executive independent directors but only the total number of directors. According to the NZX listing rules, the board should comprise a minimum of 2 independent directors (NZSA, 2014). Therefore, this study assumes that most directors are non-executive independent directors. In addition, according to Roe, 1991(as cited by (Chen & Jaggi, 2000), political theory suggests that due to fragmentation of capital, the power of shareholders will transfer to the managers. In addition, Akhtaruddin et al. (2009) have suggested that an increased number of directors could improve the shared experiences and expertise and simultaneously improve the quality and the level of disclosures. Therefore, it is hypothesised that,

***H2: There is a positive association between board size and change in disclosures.***

Alexandrina (2013); Khaireddine et al. (2020) have argued that "frequency of board meetings" can influence the level of disclosures. The argument emanates from stakeholder theory. According to Freeman et al. (2010), the "stakeholder theory" explains that the board is accountable for protecting the shareholder and stakeholder interests. During a crisis like COVID-19, the board's involvement, guidance, and leadership were essential to oversight the operations. Therefore, presumably, the frequency of board meetings will increase during the pandemic. Hence it is hypothesized that

***H3: There is a positive association between number of board meetings and change in disclosures.***

Bradbury (1992); Hossain et al. (1995a) have established a significant correlation between a company's leverage and the level of disclosures. Present study findings have revealed that most of the companies' level of borrowings has increased during the year 2020. When borrowings increase, the lenders will demand more information to understand the performance of the company. Based on the agency theory, managers attempt to disclose more details when the level of borrowings has increased, and it could potentially reduce the agency cost. However, Craswell and Taylor (1992b) have reported a negative relationship between leverage and level of disclosures in an industry-specific study. Therefore, to identify whether the increased borrowings during COVID-19 have influenced the level of disclosures, it is hypothesised that,

***H4: There is a positive association between leverage and the change in disclosures***

Scholars have argued for both positive and negative relationships between a company's profitability and the level of disclosures in past literature. Chen et al. (2002); Skinner (1994), have argued that companies disclose more information when they are making losses. In addition, based on agency theory, managers intend to avoid "reputational costs" by informing poor performances promptly. On the other hand, Debreceny and Rahman (2005); Miller (2001) findings have suggested that the level of disclosures increases when earnings are growing. However, considering the COVID situation where revolving uncertainty, it is hypothesised that,

***H5: There is a positive association between profitability and change in disclosures***

The researcher has noticed that the COVID-19 impact on companies depended on the services they provided to the economy. Disruptions on non-essential services were higher than essential services. Based on agency theory, higher disruptions will result in more disclosures to reduce agency costs. Although there were no previous studies to justify the argument, it is hypothesised that,

***H6: There is a negative association between essential services and the change in disclosures.***

As discussed above, earnings management or "big bath" could be another subsequent outcome of the pandemic. Although COVID has laid exogenous shock, opportunist management may take advantage of the situation for discretionary accruals. Fiechter and Meyer (2010) have highlighted signs of discretionary accruals during the 2008 global financial crisis. According to Kahneman and Tversky (1979), "prospect theory" suggests that individuals tend to select risky choices based on the individual "reference point." "Reference point can be defined as " an idea, fact, or an event that you already know, which helps you understand or make a judgment about another situation" (Longman, 2021). During a crisis like COVID-19, the investors will indisputably expect the companies to perform less. Some opportunist managers may take advantage of the situation and use accounting techniques like "big bath," "income smoothing," etic depending on their level of reference point. When the management makes risky choices like abnormal accruals, they may reduce the level of disclosures. Therefore, it is hypothesized that

***H7: There is a negative association between discretionary accruals and the total level of disclosures***

# CHAPTER 5: DESIGN

## 5.1 Research Design

Methodologically, the researcher has undertaken QCA by using NZ listed companies published annual reports for 2019 and 2020, which included pre-COVID-19 and COVID-19 disclosures. A two-year comparison will support identifying the changes in disclosures. QCA has been defined by Berelson, 1952, as cited by (Rourke & Anderson, 2004) as "a research technique for the systematic, objective, and quantitative description of the manifest content of the communication." The researcher identified the link between firm characteristics and the difference of COVID-19 disclosures through a review of the empirical studies to develop hypotheses. This study has excluded the mandatory disclosures. However, to examine whether the change in disclosures reflects the actual performances, financial performance measures such as profitability, leverage, and return on assets (ROA) were used to bring more meaningful insight.

Moreover, to detect whether management has applied earnings management, operating profit before tax, cash flows from operations, total accruals, total assets, total receivables, total revenue, and property plant and equipment (PPE) has been considered. Furthermore, to extract financial figures, Refinitive Eikon financial analysis software was used. In addition, a disclosure checklist and a scoring system have been constructed by following previous literature (Chow & Wong-Boren, 1987; Ghazali & Weetman, 2006; Hossain et al., 1995b). The change in disclosures was considered as the dependent variable (DV). Following the literature, the researcher has examined whether macro-level factors, which are firm-specific characteristics, have influenced the COVID-19 related disclosures. Then those factors: size, the size of the board, leverage, profitability, essential services, and industry are considered independent variables (Chow & Wong-Boren, 1987; Craswell & Taylor, 1992a; Debreceny et al., 2002). As data can have high variations, scholars have suggested log transformation to reduce the skewness or variations to increase interpretability (Feng et al., 2014). Then correlation and regression analysis have been carried out to address the developed hypotheses by using SPSS software.

## 5.2 Sample selection

This study has used a simple random sampling method to select the sample. The simple random sampling method is an approach used to extract a relatively smaller sample from a large population to "generalize" the results (Depersio, 2021). The selection includes 90 listed companies on the NZX main board (NZX, 2020). Botosan (1997); Debreceny and Rahman (2005); Nagara et al. (2003), have argued that the level of disclosures may vary among different industries. Followingly, the industry report list published by the IBIS World website IBISWorld (2021) is noted. However, as mentioned earlier, NZX does not represent the broader economy and all industries. Therefore, the researcher had categorized the companies into industries considering the below factors

- COVID-19 impact
- The list of industries
- The type of industries listed in NZX.

Appendix 1 includes a list of companies and industries. Furthermore, 13 companies had different reported currencies such as AUD, GPB, and USD. The researcher has converted them to NZD, considering the calendar year-end date rate. Appendix 2 includes the exchange rates used in this research.

## 5.3 Variable measurement related to COVID disclosures

### *5.3.1 Dependent variable*

According to Cooke and Wallace, as cited in Hossain et al. (1995b), "financial disclosure is an abstract concept that cannot be measured directly." According to Healy and Palepu (2001), researchers use different "proxies" to measure disclosures such as "management forecasts, AIMR scores (Association for Investment Management and Research) and self-developed measures.

Botosan (1997); Miller (2001) have used a self-constructed disclosure index to compute the disclosure score.

According to Li (2010), accounting disclosure studies have used both manual and computer-based content analysis techniques. The manual content analysis technique is advantageous as the researcher can customise for the best use. As the focus of this study is COVID-19 related disclosures, the researcher has customized the technique and initially taken a sample of 20 companies to look for the word "COVID" and have extracted the paragraphs that included the keyword. After studying the sections, common types of disclosures have been identified and generalized for the rest of the sample. Then the disclosure index has been finalized, including 33 voluntary discretionary disclosure items. A discretionary disclosure item list is provided in Appendix 3. Following previous studies, e.g., (Hossain et al., 1995b) the researcher has developed a scoring system, and each disclosure item is scored as "1" if disclosed and a score of "0" if not declared. Then the types of discourses have been further categorized into financial, employee, customer, and governance-related disclosure. Then under each category, the scores have been averaged and computed to arrive at the total disclosure score.

*5.3.2 Independent Variables*

Independent variables are listed below.

- Company size

  It is measured using the log of market value.
- Size of Board
- Log of leverage

  The researcher measured leverage using the log of asset over equity.
- Profitability

  The researcher used the log of net income as profitability.
- Essential Services

As per the NZ government classifications, the researcher has categorized the companies as essential and non-essential services. Non-essential services are more disrupted compared with essential services.

- Industry

  As explained under the hypothesis, different industries may influence the level of disclosures.

*5.3.3 Model*

As per the above explanation, the researcher has used a simple linear regression model to compute whether the IV listed above has influenced the DV, in this case, change in disclosures.

$$\Delta \text{ Disclosures} = \beta_0 + \beta_1 \text{ Size} + \beta_2 \text{ Size of Board} + \beta_3 \text{ Number of meetings} + \beta_4 \text{ Leverage} + \beta_5 \text{ Profitability} + \beta_6 \text{ Essential Services} + \beta_7 \text{ Industry} + \varepsilon$$

In order to measure whether performance-related indicators are consistent with the disclosures, the researcher has used the following model, which considers the change in disclosures as IV, where the difference in ROA is DV. Return on Assets (ROA) measures the profit generate through company assets.

$$\Delta \text{ ROA} = \Delta \text{ Disclosures}$$

**5.4 Variables related to Earnings Management**

The findings of this study signaled that there could be potential earnings management. Apart from different methods used in past studies to measure earnings management, MJM is one of the more straightforward methods used in Algharaballi and Albuloushi (2008) and Dechow et al. (1995). Therefore, the present study has considered MJM. This model measures whether discretionary accruals applied over revenue to overly reduce the net income. According to the MJM,

precomputed residual of discretionary accruals is being considered as IV. The residual is considered as "the difference between an observed value of response variable and the value of response variable predicted from the regression line" (Ministry of Education, 2021). Therefore, discretionary accrual is considered as the difference between the regression line and the discretionary accrual. When the difference is higher, the more the company has applied discretionary accruals. The method of calculation is explained below under the model.

*5.4.1 Modified Jones Model*

$$TA_{i,t} / A_{i,t-1} = \beta i\,(1/A_{i,t-1}) + \beta_{1i}[(\Delta REV_{it} - \Delta REC_{it}) / A_{i,t-1}] + \beta_{2i}(PPE_{it} / A_{i,t-1}) + e_{i,t}$$

| | |
|---|---|
| TA | = Operating profit before tax – Cashflow from operations |
| $TA_{i,t} / A_{i,t-1}$ | = Discretionary Accruals |
| $A_{i,t-1}$ | = Total Assets of year t-1 |
| $\Delta REV_{it}$ | = Total Revenue of year t less total Revenue of year t-1 |
| $\Delta REC_{it}$ | = Total receivables of year t less total receivables of year t-1 |
| $PPE_{it}$ | = Total Property Plant and Equipment of year t less total Property Plant and Equipment of year t-1 |

The researcher has extracted the model from the below online document.

http://www.studyland.nl/materials/Pdf/EN%20Formulas%20Modified%20Jones%20Model.pdf

## CHAPTER 6: FINDINGS

As mentioned in the introduction, the NZ government introduced a system according to the services provided and classified as essential and non-essential services. Table 1 explains the industry classification by government classification.

Table 1: Industry classification by essential and non-essential services.

**Industry classification by essential and non-essential services**

| Industry | | Essential | Non_Essential |
|---|---|---|---|
| | CPRE | 0 | 10 |
| | FIN | 4 | 9 |
| | HR | 7 | 0 |
| | MI | 10 | 5 |
| | RAFS | 9 | 6 |
| | TL | 8 | 2 |
| | UT | 16 | 4 |
| | Total | 54 | 36 |

CPRE: Commercial property and real-estate, FIN: Financial, HR: Healthcare and retirement, MI: Manufacturing and industrial, RAFS: Retail, accommodation and food services, TL: Transport and logistics, UT: Utilities

According to Table 1, all the corporate property and real estate (CPRE) companies come under non-essential services. Under the Financial (FIN) sector, only the banks and NZX are essential services, and the rest of the financial institutions are non-essential services. All the Healthcare and Retirement (HR) sector companies are essential services. The manufacturing and Industrial (MI) sector that produces essential products are classified as essential, and the rest as non-essential. The retail Accommodation and Food Services (RAFS), which provide essential items, have been classified as essential and the rest as non-essential. Under Transport and Logistics (TL) sector, both Air New Zealand and Auckland International Airport are listed as non-essential services and the rest under essential services. Lastly, under the Utilities (UT) sector, the Information Technology (IT) related companies were classified as non-essential, and the rest of the companies under essential services. Overall, most of the sample companies are listed as essential services. The types of COVID disclosures further have been categorized into four

sections. The discussion will follow based on financial-related, employee-related, customer-related, and governance-related disclosures.

### 6.1. Financial-related disclosures

#### *6.1.1 Income Statement and Balance Sheet related disclosures*

Table 2 explains the changes in financial disclosures. It is presented at the beginning for easy referencing for the reader. For clear understanding, the researcher has excluded the "No" score so that the reader could identify how disclosures have increased in all the industries.

Table 2: Financial related disclosures by year

**Changes in financial related disclosures**

| Type of Disclosure | | Year 2019 | Year 2020 |
|---|---|---|---|
| Increased_provisions | Yes | 27 | 59 |
| Higher_impairment | Yes | 22 | 50 |
| Goodwill_impairment | Yes | 15 | 25 |
| Reduction_in_tax_expense | Yes | 41 | 55 |
| Increased_borrowings | Yes | 40 | 60 |
| Reduce_or_No_Dividend | Yes | 29 | 49 |
| COVID_related_donation | Yes | 0 | 27 |
| Uncertainty_in_valuation | Yes | 51 | 71 |
| Forward_looking_statements | Yes | 48 | 58 |
| Increase_in_Expected_credit_loss | Yes | 21 | 43 |
| Significant_impact_on_accounting_estimates | Yes | 60 | 76 |
| Risk_of_inadequate_capital_levels | Yes | 0 | 5 |
| Market_volatility | Yes | 16 | 52 |

Table 3 explains the percentage change in total disclosures between industries. Financial and utility industry total disclosures have increased by 81% and 101%, respectively.

Table 3: Percentage change in financial disclosures as per industry

| Industry | % Change in financial disclosures |
|---|---|
| Commercial Property and real estate | 40.9 |
| Financial | 81.6 |
| Health care and retirement | 22.9 |
| Manufacturing and Industrial | 68.2 |
| Retail accommodation and food services | 48.5 |
| Transport and logistics | 53.0 |
| Utilities | 101.3 |

Although many companies, in general, have disclosed about poor performance in the year 2020, blaming for the COVID-19 pandemic, according to the information provided in Table 4, average revenue has not drastically decreased. However, some cases have increased, comparing with the average net income (profit) decrease.

Table 4: Comparison of revenue, net income, and operating expenditure by year

**Comparision of Revenue, Net Income and Operating Expenditure**

| | Year | | | | | |
|---|---|---|---|---|---|---|
| | 2019 | | | 2020 | | |
| Industry | Revenue_NZD_Millions Mean | Net_Income_NZD_Millions Mean | Operating_Expenditure Mean | Revenue_NZD_Millions Mean | Net_Income_NZD_Millions Mean | Operating_Expenditure Mean |
| Commercial_property_Real_Estate | 110.11 | 120.36 | 6.43 | 113.69 | 46.54 | 15.77 |
| Financial | 3015.05 | 999.73 | 2133.21 | 2873.18 | 540.88 | 2470.99 |
| Healthcare_and_Retirement | 207.35 | 86.47 | 163.48 | 218.82 | 74.31 | 173.61 |
| Manufacturing_and_industrial | 1023.55 | 75.74 | 916.12 | 1003.04 | 36.52 | 933.80 |
| Retail_Accomodation_and_Food_Services | 987.70 | 39.94 | 925.50 | 1111.59 | 42.71 | 1046.39 |
| Transport_and_logistic | 1098.49 | 113.33 | 964.86 | 998.72 | 7.77 | 993.71 |
| Utilities | 2604.96 | 179.05 | 2398.54 | 2481.99 | 179.10 | 2275.40 |

Table 5: Changes and percentage changes in revenue, net income, and operating expenditure

**Changes and % Changes in Revenue, Net Income and Operating Expenditure**

| Industry | Change_in_Revenue Mean | Percentage_Change_in_Revenue Mean | Change_in_Net_Income Mean | Percentage_Change_in_Net_Income Mean | Change_in_Operating_Exp Mean | Percentage_Change_in_OpeExp Mean |
|---|---|---|---|---|---|---|
| Commercial_property_Real_Estate | 3.59 | 2.99 | -73.82 | -101.26 | 9.33 | -4.82 |
| Financial | -141.86 | -98.09 | -458.85 | -186.40 | 337.78 | -1.61 |
| Healthcare_and_Retirement | 11.47 | 8.20 | -12.16 | -25.28 | 10.14 | 22.70 |
| Manufacturing_&_industrial | -20.51 | .69 | -39.22 | -229.46 | 17.68 | 5.56 |
| Retail, _Accomodation_&_Food_Services | 123.90 | 3.77 | 2.78 | -226.84 | 120.89 | 5.63 |
| Transport_and_logistic | -99.77 | -3.28 | -105.57 | -24.92 | 28.86 | 5.88 |
| Utilities | -122.97 | 6.90 | .05 | 54.05 | -123.14 | -10.66 |

There could be several reasons for the decrease in profits, such as increased operating expenditure, increased taxes, borrowing costs, one-time costs, decreased revenue (Exceptional Services, 2019) or the management applying earnings management. When comparing the percentage change in revenue, net income, and operating expenditure, the net income has decreased at an intense rate except for the utility industry. The average percentage decrease was reported only in the financial and utility industries. Furthermore, the rest of the industries have reported an average percentage increase in revenues. Average operating expenditures have decreased only in the utility industry. However, the average percentage of operating expenditure has decreased in real estate, financial, and utility industries. According to Table 5, the health care and retirement industry had the highest percentage increase of operating expenditure. It could be because retirement villages had older adults who are most vulnerable for COVID-19, and they had to incur additional expenditure on looking after them. When looking at the percentage change in operating expenditure, and percentage change in net income, there must be other reasons for the poor operating performance.

According to Table 5, the change in operating expenditure justifies the increased disclosures described in the financial statements, such as provisions, impairments, and goodwill impairment. Almost all the industries have increased their level of disclosures that connect with their operating expenditure. The disclosures regarding provisions included disclosures on depreciation, regulatory provisions, provisions related to loans provided, obsolete inventories, allowance for

doubtful debts. Moreover, the higher impairment reported as employment benefits, credit impairment, investments loss on hold for sales.

Another reason for the decrease in overall profitability could be higher taxes and increased borrowings. The NZ Government re-introduced a tax depreciation scheme as a business support package during March 2020 that reduced most companies' tax expenditure (Deloitte, 2020a; Inland Revenue, 2021). As explained in Table 2, most companies have increased the level of borrowings to maintain the cash flow level. Therefore, those companies would have experienced higher interest expenses, resulting in a decrease in profitability. A total of 55 companies have disclosed that they have benefitted from a reduction in tax expenditures. Most of the companies have disclosed the re-introduction of the NZ Government's tax depreciation scheme.

Furthermore, nearly half of the sample companies disclosed that they would not pay or reduce the dividends for the year 2020 to strengthen the cashflows. Changes to dividend policy are consistent with the previous literature as the lenders would prefer lower distribution of earnings to protect liquidity. (Bhat & Pandey, 1994; Healy & Palepu, 1990; John & Kalay, 1982; Myers, 1977). Moreover, Hauser (2013) has argued that companies' dividend policies have changed during the 2008 financial crisis to support liquidity. In addition, reported changes in dividend policies can Signal the investors about the future uncertainties of the COVID-19. Empirical literature also has suggested that the dividend policy could be helpful for the investors to alarm about future performance (Bhattacharya, 1979; Brook et al., 1998). Further, when checked the ownership concentrate of those 12 companies, most of them had no significant shareholders. The top shareholders had no more than 10%, and only one company had nearly 30% of the ownership to one of the directors. Other companies had government institutions as top shareholders. It may be that although there was increased net income, the companies had decided not to pay or reduce dividends as both shareholders have not much power to demand or the shareholders are government institutions.

In addition, Botosan and Plumlee (2002) have examined the relationship between the cost of equity capital and the level of disclosures in annual reports by using 3,618 companies and have reported that the cost of equity capital has reduced the level of disclosures. However, it has increased the timely disclosure level, such as half-year reporting or quarterly reporting. The cost of equity capital is the yield a company pays back to its investors (Kenton, 2021). If the investors are getting higher returns than dividends or other benefits, they would not worry about the disclosures. However, on the other hand, the lenders will require more information if the borrowings have increased. Furthermore, if the companies attract competitive borrowing rates, they will have to provide more information as the lenders are concerned about their security (Sengupta, 1998).

Unfortunately, not many of the companies have proved that they have contributed to social responsibility. According to Table 2, only 27 companies have made COVID-related donations. Fioretti et al. (2021), have argued that companies with higher individual shareholder concentrate are more concerned about their image. Although this study has not considered the shareholder concentration, only 8 out of 23 profit generated companies have made COVID donations.

Table 6 explains the movements of the total financial disclosure scores and the performance ratios. The financial disclosure score has increased for all the industries from pre-COVID year to COVID year, and net profit margin has decreased for all the industries except the financial sector. The return on equity measures the profitability compared to shareholders equity, which has decreased for all industries except for the financial and healthcare sectors. The debt-to-equity ratio explains the proportion of a company's debt over shareholder equity. A higher ratio explains increased borrowings, and a lower ratio explains higher equity than borrowings. The total average debt to equity ratio has increased for all industries except for the financial sector.

Table 6: Movement of financial disclosure score vs. movement of performance ratios by industry

| Industry | Financial related disclosure score vs performance ratios | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2019 | | | | 2020 | | | |
| | Financial_related_disclosure_score Mean | Net_Profit_Margin Mean | Return_on_Equity Mean | Debt_to_Equity_Ratio Mean | Financial_related_disclosure_score Mean | Net_Profit_Margin Mean | Return_on_Equity Mean | Debt_to_Equity_Ratio Mean |
| Commercial_property_Real_Estate | .34 | 101.04 | .11 | .48 | .48 | 37.72 | .03 | .56 |
| Financial | .22 | 49.54 | .03 | 5.12 | .41 | 53.30 | .04 | 3.44 |
| Healthcare_and_Retirement | .38 | -25.24 | -6.38 | -9.33 | .47 | -27.83 | .05 | 1.66 |
| Manufacturing_and_industrial | .34 | 5.11 | .10 | .76 | .57 | -1.41 | -.07 | 1.04 |
| Retail_Accomodation_and_Food_Services | .35 | -2.40 | .20 | .83 | .52 | -3.17 | .10 | 1.65 |
| Transport_and_logistic | .30 | 22.12 | .13 | 1.10 | .64 | 15.70 | .05 | 1.98 |
| Utilities | .31 | -22.08 | .31 | .65 | .62 | 5.48 | -.03 | 1.73 |

### *6.1.2 Risk related disclosures*

The researchers have identified five areas of increased financial risk disclosures in the annual reports. They are the valuation uncertainties, including forward-looking information, increased expected credit losses, significant impact on accounting estimates, and risk of inadequate capital level. According to French and Gabrielli (2004); Mallinson and French (2000), any valuation will always have a certain level of uncertainty under normal conditions. The expected outcome of a valuation report can be helpful to communicate the probable variables such as recent market price, geographical location, environmental conditions from a potential purchaser's view. However, the client would expect to have accurate valuation as much as possible, without any uncertainties. Disclosure of the valuer's uncertainties is always necessary for the report users to obtain sound decisions. However, according to Mallinson and French (2000) , uncertainty could be categorized under normal and abnormal circumstances. Abnormal circumstances will also arise due to a reason. The valuer needs to be aware of the abnormal situation and explain the reasons in the report to consider the decision-making.

Companies may struggle to make judgments around valuations and estimates during a pandemic. Although previous studies have argued that risk information disclosed has not increased during

the 2007 – 2009 financial crisis (Probohudono et al. (2013)). Now we have passed over a decade after the financial crisis. According to Table 2, risk-related disclosures have increased during the COVID-19 year. COVID-19 has affected all aspects of life. According to Sawalqa (2020), Jordanian companies' risk disclosures have increased during COVID-19 and have identified five risk categories: operational, financial, investor relation, strategic, and market-related risks. However, only five companies have disclosed the risk of inadequate capital levels, and they are Westpac, Sky Television, Pacific Edge, Sky city Entertainment, and Precinct Property.

### *6.1.3 Market Behavior*

Irrespective of the COVID-19 pandemic, NZ's share market has performed well on average. According to Table 7, market capitalization and share price have increased in more than half of the sample companies. However, according to Carroll (2020), many consumer brands are not trading on NZX. It could be that share prices are overvalued, like in the United States (Patton, 2020).

Table 7: Movement in market value and share price by industry

| | | 2020 | | | |
|---|---|---|---|---|---|
| | | Increase_in_Market_Cap | | Increase_in_Share_Price | |
| | | No Count | Yes Count | No Count | Yes Count |
| Industry | Commercial_property_Real_Estate | 2 | 8 | 4 | 6 |
| | Financial | 5 | 8 | 5 | 8 |
| | Healthcare_and_Retirement | 4 | 3 | 4 | 3 |
| | Manufacturing_&_industrial | 5 | 10 | 5 | 10 |
| | Retail, _Accomodation_&_Food_Services | 9 | 6 | 10 | 5 |
| | Transport_and_logistic | 6 | 4 | 7 | 3 |
| | Utilities | 6 | 14 | 7 | 13 |
| | Total | 37 | 53 | 42 | 48 |

According to Domm (2020), the number of new investors during the year 2020 has increased, possibly due to the stock market's "forward-looking mechanism." According to NZ Herald (2020), during COVID-19, there was a record-breaking increase in investors from "90,000 - 190,000". In addition, most of the investors are new entrants to the share market. It would have been an outcome of more working from home flexibility and exploring the opportunities. Further, low deposit rates at NZ's banks may have contributed to the increase in investors at the share

market. However, the broader impact that immerged because of COVID-19 is immeasurable. As mentioned above, NZX does not represent a broader economy. Small business contributes to the GDP by nearly 28%. And in New Zealand, 97% of the businesses are small businesses (Ministry of Business, 2018)

According to Table 8, average share prices have increased for all industries except for the financial sector. The average net income has decreased for all industries except the utility industry. In addition, EPS has decreased for all industries except for the retail sector.

Table 8: Movement in average net income, earnings per share, and share price by industry

| | | Year | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2019 | | | 2020 | | |
| | | Net_Income_NZD_Millions Mean | Basic_EPS_including_extraordinary_items Mean | Share_price Mean | Net_Income_NZD_Millions Mean | Basic_EPS_including_extraordinary_items Mean | Share_price Mean |
| Industry | Commercial_property_Real_Estate | 120.36 | .17 | 1.80 | 46.54 | .08 | 1.91 |
| | Financial | 999.73 | .45 | 10.51 | 540.88 | .15 | 10.37 |
| | Healthcare_and_Retirement | 86.47 | .27 | 4.57 | 74.31 | .26 | 5.07 |
| | Manufacturing_and_industrial | 75.74 | .30 | 5.99 | 36.52 | .13 | 6.55 |
| | Retail_Accomodation_and_Food_Services | 39.94 | .17 | 4.67 | 42.71 | .18 | 4.73 |
| | Transport_and_logistic | 113.33 | 4.57 | 9.06 | 7.77 | 1.74 | 11.50 |
| | Utilities | 179.05 | .07 | 3.89 | 179.10 | .06 | 4.24 |

*6.1.4 Earnings management*

NZ Government introduced a wage subsidy scheme to support employers in retaining staff if otherwise would have had to lay off due to COVID-19 lockdowns (Employment New Zealand, 2021). Devastatingly, companies still have made redundancies even though they applied for wage subsidies. Table 9 explains a comparison of redundancies and wage subsidies. A total of 10 companies have clearly explained that they have made COVID-related redundancies. A total of 22 companies made redundancies that were not specified as COVID-related redundancies and used different terms. However, from the total of 32 companies that have applied for wage subsidies, only four companies have returned it to the government. It would be interesting to

determine whether those companies that applied the wage subsidy used the money for the purpose or different agendas.

Table 9: Comparison of redundancies and wage subsidies by industry

**Redundancies Vs Wage Subsidies**

| | | Year 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | COVID_Redundency | | Non_Covid_redundency | | Wage_subsidi | | Wage_subsidi_return | |
| | | 0 | 1 | 0 | 1 | No | Yes | No | Yes |
| | | Count | Count | Count | Count | Count | Count | Count | Count |
| Industry | Commercial_property_Real_Estate | 10 | 0 | 8 | 2 | 10 | 0 | 10 | 0 |
| | Financial | 13 | 0 | 10 | 3 | 13 | 0 | 13 | 0 |
| | Healthcare_and_Retirement | 7 | 0 | 5 | 2 | 5 | 2 | 6 | 1 |
| | Manufacturing_and_industrial | 13 | 2 | 13 | 2 | 7 | 8 | 15 | 0 |
| | Retail_Accomodation_and_Food_Services | 11 | 4 | 13 | 2 | 3 | 12 | 14 | 1 |
| | Transport_and_logistic | 8 | 2 | 9 | 1 | 4 | 6 | 8 | 2 |
| | Utilities | 18 | 2 | 10 | 10 | 16 | 4 | 20 | 0 |
| | Total | 80 | 10 | 68 | 22 | 58 | 32 | 86 | 4 |

As discussed in section 2, COVID-19 uncertainty and the global pandemic situation could be an opportunity for the management to "take a bath" and tidy up their financial position and to get rid of unprofitable cash-generating units, writing off overvalued goodwill, undertaking long-awaited employee restructuring. According to the data, a total of 13 companies have applied for wage subsidies yet made employee redundancies.

In addition, AbuGhazaleh et al. (2011); Jordan and Clark (2015); Lapointe-Antunes et al. (2008) have mentioned that during the early period of adopting the accounting standard related to goodwill, CEO changes and goodwill impairments were 'significantly associate.'. In this study, during the COVID affected year, there has been a total of 5 companies where both CEO changes and goodwill impairment has taken place. It may indicate signs of earnings management the companies have used providing excuses as COVID-19 pandemic.

Furthermore, according to Table 10, Chief Executive Officers (CEO) of 14 companies have resigned during the year 2020. According to Riyadi et al. (2018); Yoshihiro and Tomoaki (2011), there is a possibility of 'big baths' when there is a change in management. It is essential to mention that the NZ Government has initially spent $12.1 billion as a COVID support package and

gradually has increased with time (New Zealand Government, 2020). According to The Treasury (2020), the NZ government has supported companies by canceling the interest charges on late tax payments and re-introducing tax depreciation schemes. According to Noy (2020), many countries have lost the money which the governments have provided as support packages during the 2008 financial crisis by providing support to the corrupted corporates. Therefore, it is essential that NZ companies consider the government support wisely and use it for the purpose as their signs of behavior imply corrupted practice with more wage subsidies and higher redundancies.

Table 10: CEO resignations, goodwill impairment, and total redundancies by the industry for the year 2020

| | | Year 2020 | | | | | |
|---|---|---|---|---|---|---|---|
| | | CEO_resinged | | Goodwill_impairment | | Total_Redundancies | |
| | | No Count | Yes Count | No Count | Yes Count | No Count | Yes Count |
| Industry | Commercial_property_Real_Estate | 10 | 0 | 10 | 0 | 8 | 2 |
| | Financial | 13 | 0 | 9 | 4 | 10 | 3 |
| | Healthcare_and_Retirement | 5 | 2 | 4 | 3 | 5 | 2 |
| | Manufacturing_and_industrial | 13 | 2 | 10 | 5 | 11 | 4 |
| | Retail_Accomodation_and_Food_Services | 12 | 3 | 11 | 4 | 9 | 6 |
| | Transport_and_logistic | 9 | 1 | 8 | 2 | 7 | 3 |
| | Utilities | 14 | 6 | 13 | 7 | 8 | 12 |
| | Total | 76 | 14 | 65 | 25 | 58 | 32 |

*6.1.5 Financial related disclosure score*

Considering all the above discussed financial-related disclosures, the researcher has computed an average disclosure score using variables related to financial disclosures.

Table 11: Movement in average financial disclosure score

**Financial Disclosure Score 2019 vs 2020**

| Type | Mean |
|---|---|
| Financial_Disclosures_2019 | .32 |
| Financial_Disclosures_2020 | .53 |

**6.2 Employee-related disclosures.**

Table 12 presents the overall changes in employee-related disclosure by year.

Table 12: Movement in employee-related disclosures by year

**Changes in employee related disclosures**

| Type of Disclosure | | Year 2019 | Year 2020 |
|---|---|---|---|
| Total Redundancies | Yes | 23 | 32 |
| Work from home support | Yes | 3 | 61 |
| Employee mental wellbeing | Yes | 42 | 58 |
| New employees | Yes | 37 | 35 |
| Remuneration reduction executive and higher | Yes | 0 | 27 |
| CEO resinged | Yes | 12 | 14 |

As the COVID-related uncertainty emerges, as explained above, the researcher has noticed an increased number of redundancies irrespective of the wage subsidies applied by the companies. Furthermore, many companies have allowed employees to work from home, and as a result, some companies have raised concerns about privacy policies and cybersecurity threats. In addition, most companies were compelled to improve their technologies to support the staff to work from home and provide better services. The researcher has noticed additional payments for the staff during the lockdown period mainly for the essential services employees.

Furthermore, an increased number of companies have addressed the mental well-being of the employees and their families. Okuyan and Bege (2021) have mentioned that a study undertaken during the pandemic has explained how individuals experience difficulties like anxiety, depression symptoms, perceived stress, sleep disorders. In addition, they have explained the benefits of work from home as flexibility of work hours and the challenges as work-life balance and caregiving responsibilities, and the mental-wellbeing.

Table 13 explains the employee redundancies as per the company categorization based on essential services and non-essential services. According to Table 13, overall redundancies were high in the year 2020. Perhaps companies that planned employee restructuring during the year 2019 received an opportunity to carry out further redundancies. Furthermore, as per Table 13, redundancies were high on non-essential services, possibly due to higher disruptions.

Table 13: Total disclosed redundancies by essential and non-essential services.

| Redundancies as per Essential and Non Essential Services | | Year 2019 Count | Year 2020 Count |
|---|---|---|---|
| Essential_and_Redundancies | No | 72 | 70 |
| | Yes | 18 | 20 |
| Non_essential_and_Redundancies | No | 85 | 78 |
| | Yes | 5 | 12 |

Despite having redundancies, some companies had to recruit more staff to cope up with the pandemic. According to Table 12, a total of 35 companies have recruited new employees. As per information disclosed in the annual reports, information and technology-related occupations had more demand in the job market. Detail analysis revealed that the utility industry made relatively more recruitments. However, it was clear that the total number of companies who made recruitments decreased during the pandemic. Coy (2021), commented that many employees recruited during the pandemic are likely to resign soon due to poor interactions between colleagues and management.

According to Table 14, a total of 61 companies has allowed their employees to work from home. As a result, companies' technology must be improved and perhaps need to provide more technological devices for their employees. As a result, more companies have disclosed their technology improvements. In addition, when working from home increases, more companies have invested in their employee's mental well-being during COVID-19. While working from home increases, many companies have raised concerns about cybersecurity threats.

Table 14: Movement of disclosures on new technology, cybersecurity, work-from-home, and employee mental wellbeing.

| | Year | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | | | | | | | | 2020 | | | | | | | |
| | Introducing_new_technology | | Cyber_security_threat | | work_from_home_support | | Employee_Mental_wellbeing | | Introducing_new_technology | | Cyber_security_threat | | work_from_home_support | | Employee_Mental_wellbeing | |
| | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count | Count |
| Commercial_property_Real_Estate | 5 | 5 | 10 | 0 | 10 | 0 | 7 | 3 | 5 | 5 | 9 | 1 | 2 | 8 | 4 | 6 |
| Financial | 10 | 3 | 8 | 5 | 13 | 0 | 8 | 5 | 6 | 7 | 7 | 6 | 4 | 9 | 8 | 5 |
| Healthcare_and_Retirement | 2 | 5 | 7 | 0 | 7 | 0 | 4 | 3 | 2 | 5 | 7 | 0 | 5 | 2 | 3 | 4 |
| Manufacturing_and_industrial | 6 | 9 | 14 | 1 | 15 | 0 | 7 | 8 | 3 | 12 | 14 | 1 | 4 | 11 | 4 | 11 |
| Retail_Accomodation_and_Food_Services | 5 | 10 | 14 | 1 | 15 | 0 | 8 | 7 | 6 | 9 | 13 | 2 | 9 | 6 | 5 | 10 |
| Transport_and_logistic | 2 | 8 | 10 | 0 | 10 | 0 | 4 | 6 | 2 | 8 | 9 | 1 | 3 | 7 | 3 | 7 |
| Utilities | 2 | 18 | 19 | 1 | 17 | 3 | 10 | 10 | 0 | 20 | 14 | 6 | 2 | 18 | 5 | 15 |
| Total | 32 | 58 | 82 | 8 | 87 | 3 | 48 | 42 | 24 | 66 | 73 | 17 | 29 | 61 | 32 | 58 |

When examined whether there is a correlation between work from home and employee mental well-being, change in technology, and cybersecurity threat, there was a significant correlation between work from home and all other variables. According to Table 15, there was a significant positive correlation between change in work from home and changes in increased cybersecurity threat (r=.25, p<.05)

Table 15: Correlation between changes in employee mental wellbeing, technology, cybersecurity, and work-from-home.

| Variables | M | SD | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| Change in employee mental wellbeing | 0.2 | 0.4 | -- | | | |
| Change in technology | 0.1 | 0.4 | -0.03 | -- | | |
| Change in cybersecurity threat | 0.1 | 0.3 | 0.04 | 0.19 | -- | |
| Change in work from home | 0.6 | 0.5 | 0.16 | 0.10 | 0.25* | -- |

N=90, *p<.05, **p<.01

Furthermore, according to Williams (2020) report, the COVID-19 pandemic has forced New Zealanders to do more online activities. As per Venture Insights, a company that provides independent research and consulting services, broadband usage and demand for faster services

was rocket high. In addition, a total of 27 company executives and directors have been taking a voluntary remuneration reduction. Logically thinking, it is a signal of poor financial performance discussed above. Therefore, the managers and the directors were more thoughtful and decided to reduce their remuneration to support its cash flow. However, there has not been a significant correlation between the remuneration reduction and leverage or the net income decrease.

According to Table 12, there has been a significant number of CEO resignations. There were 12 CEO resignations on the verge of COVID-19. Moreover, during the COVID year, there have been 14 CEO resignations. According to Katagata (2017), a study conducted in Japan has revealed that CEO announces resignations when the company is in a crisis, whether or not the CEO is accountable, to convey an apology. However, CEO resignations during the year 2019 have been highlighted around the world too. According to Fitzgerald (2020), 2019 has had the highest CEO departures since the 2008 financial crisis. It could be that the CEOs knew the poor performance and were worried to acknowledge due to reputational issues.

### *6.2.1 Employee disclosure score*

Considering overall employee-related disclosures, the researcher has computed the overall disclosure score by considering an average of all the variables. Table 16 describes the average employee-related disclosure scores for both years 2019 and 2020.

Table 16: Movement in average employee-related disclosure score

**Employee related disclosure score**

| | Mean |
|---|---|
| Employee_related_disclosures_2019 | .22 |
| Employee_related_disclosures_2020 | .42 |

### 6.3 Customer Related Disclosures

Table, 17 displays the overall movement of customer-related disclosures scores from the year 2019 to the year 2020.

Table 17: Movement in customer-related disclosures

**Changes in customer related disclosures**

| Types of Disclosures | | Year 2019 | Year 2020 |
|---|---|---|---|
| Increased_customer_enquiries | Yes | 3 | 25 |
| Delay_in_responding | Yes | 1 | 6 |
| Customer_Covid_Support | Yes | 0 | 45 |
| Repayment_deferrals | Yes | 0 | 26 |
| Customer_bankcruptcy_risk | Yes | 0 | 8 |
| Health_and_safety_of_customers | Yes | 18 | 42 |

As the reporting of non-financial information continues to increase with more disclosures on environmental, social, and governance (ESG) issues to the interested stakeholders Dumay et al. (2015), the researcher has identified that certain reported disclosures increased during the COVID-19 period. Previous studies have suggested that ESG related disclosures have contributed to the inception of environmental prestige (Toms, 2002). As COVID-19 has impacted all aspects of life, companies have demonstrated their concerns about their customers' advancement as a way of uplifting their reputation.

According to Table 17, there is a considerable increase in customer inquiries during the COVID-19 year. Banks have reported mortgage repayment-related inquiries as a result of lockdowns and loss of jobs. Health care and technology-related manufacturing companies and telecommunication companies also showed increased customer inquiries. The retail industry reported more customer inquiries regarding online sales platforms. However, six companies have reported delays in responding to their customers due to a high-level high volume of telephone calls.

According to (Wynn, 2021), feedback from NZ's largest retail customers has revealed that by early 2021, customers were not considerate about COVID-19 any longer. In addition, according to the information provided by a software company, " Customer Radar," one year passing COVID-19, customers are laying more pressure on NZ companies to improve customer satisfaction (Wynn, 2021). Furthermore, as reported in Forbes magazine, customer expectations, inquiries, and support have increased during COVID-19 (Ranjan, 2021).

As per Table 17, half of the sample companies have disclosed that they have provided additional customer support during 2020. The additional support included amending contractual obligations, increased the staff for customer support, providing free public Wi-Fi, extended credit facilities., A total of 26 companies have provided repayment deferrals for their customers. The commercial property and real estate industry have supported their tenants with rent abatements, and the financial sector has provided mortgage repayment deferrals. Retail and food services have provided repayment deferrals to their commercial customers. Additionally, under the transport industry, Auckland international airport has provided rent abatements for their tenants. Lastly, almost all telecommunication and energy companies have supported customers, such as repayment plans and waiving off late payment fees under the utility industry.

Furthermore, a total of 8 companies have disclosed the customer bankruptcy risk. Two banks and many utility providers have mentioned this matter. However, logically, when the companies provide extended credit facilities to their customers, the risk of recovering also increases.

According to Nadkarni (2020), the "Buy-now-pay-later" (BNPL) service use among the young generation in NZ has increased during the March 2020 lockdowns and again during the Christmas season. Further, the "Laybuy" Managing Director has commented that most of the young generation have mentioned that they would not spend more than NZ$ 600 for Christmas 2020 as many of them had fewer opportunities to find work due to the pandemic as online shopping increased. The increase in BNPL services also implies that many companies have also allowed the customers to use this new trending service.

As the COVID-19 pandemic is all about health and safety, nearly half of the sample companies have mentioned their increased concerns about customer health and safety. Most companies have mentioned that they have implemented increased hygienic products such as hand sanitizers to use and mark social distancing levels. Finally, irrespective of essential or non-essential services, nearly half of the sample companies have increased disclosures on customer health and safety.

### *6.3.1 Customer related disclosure score*

Table 18 indicates the average customer-related disclosure score for the pre-COVID year and COVID-19 year. Furthermore, it clearly explains that most companies have increased levels of disclosures regarding their customer relations.

Table 18: Movement in average customer-related disclosure score

**Customer related disclosure score**

| | Mean |
|---|---|
| Customer_related_disclosure_score_2019 | .04 |
| Customer_related_disclosure_score_2020 | .28 |

### 6.4 Governance-related disclosures

Corporate governance is the structure of "rules, practices, and processes" that support a company to be guided and controlled (Chen & James, 2021). Moreover, it further associates with harmonizing the interests of its stakeholders (Chen, 2021). COVID-19 pandemic has forced some companies to adopt corporate and structural changes (OECD, 2021). According to Zattoni and Pugliese (2021), the previous financial crisis resulted from the company's misbehaviors and loopholes in the control systems, where the COVID-19 crisis resulted from health-related matters. It could be that some companies make advantages from the COVID-19 pandemic. However, the level and quality of disclosures made regarding corporate governance can support the stakeholders to make sound decisions during the pandemic. Table 19 shows the movement in governance-related disclosure.

Table 19: Movement in governance-related disclosures

**Changes in governance related disclosures**

| | | Year | |
|---|---|---|---|
| | | 2019 | 2020 |
| Type of Disclosure | | | |
| Operational_changes | Yes | 12 | 69 |
| Strategic_chanes | Yes | 21 | 42 |
| Internal_Audit | Yes | 44 | 44 |
| Audit_commitees | Yes | 88 | 88 |
| New_health_and_safety_policies | Yes | 0 | 68 |
| Introducing_new_technology | Yes | 58 | 66 |
| Special_covid_disclosure_section | Yes | 0 | 72 |
| Non_COVID_challenges | Yes | 14 | 20 |

According to Wilson and Eilertsen (2010), findings suggested that the companies that carried out strategic planning and changes seek more growth potentials during a crisis. Deverell and Olsson (2010) findings have suggested that fully resilient management has adopted strategic and operational modifications to cope with the crises, where semi-resilient management has only adopted strategic level modifications. As per Table 19, the researcher has noticed that there was an increase in both operational and strategic changes. It may explain the management involvement

and fully resilient governance culture during a pandemic. Common operational changes included work from home, improved services for customers and employees. Common strategic changes included introducing more online selling platforms, closing poor-performing segments to strengthen the cashflows, employee restructuring to reduce cost, introducing new health and safety policies. The researcher has further examined whether there have been changes in the internal control systems, such as the internal audit function and the Audit committees in the pre-COVID year and the COVID-19 year. As shown in the Table 19, there have been no changes in the internal audit function or the audit committees.

In addition, many companies have updated or introduced new health and safety policies during the year 2020 with the pandemic. According to the government requirements, every workplace and public transport service must display QR codes. Furthermore, if the employees are not well, they are encouraged to stay at home (Worksafe, 2021). According to Table 19, a total of 68 companies has updated or introduced new health and safety policies. From that 68 companies, 66 companies had reported currency either AUD or NZD. Only two companies who had reported currency, either GPB or USD, had disclosed the health and safety policies. Overall, New Zealand-based companies' annual reports reflected the NZ government's strict regulations.

Table 19 further explains how the management has responded to using new technology. During the COVID-19 period, there was significant demand for new technological products and services, to work from home, and to improve the quality and flexibility of products and services. A total of 66 companies have disclosed about using new technologies. Furthermore, a total of 72 companies has included a special COVID-19 disclosure section on their annual reports. Other companies in the sample have mentioned generally under different sections. The special COVID-19 disclosure section is vital for the users of the annual reports to identify the COVID-19 impacts on companies quickly and how the companies are addressing the issues.

The researcher has examined whether the changes to the number of board members from the pre-COVID to COVID-19 period. According to Table 20, there have been board resignations in 19

companies and additions in 28 companies. Nearly half of the companies had no change in the size of the board. Although there has been a tremendous amount of information for the board of directors to prepare for the COVID-19 hurdle, such as working towards resilience, resolve, reform, Table 20 indicates the distressing behavior among board members (Hirt et al., 2020; Institute of Directors, 2020). In addition, the researcher has noticed that almost the same individuals are rotating among the companies' directorships.

Table 20: Total movement of board members during 2019 and 2020 by industry

| | | Change_in_size_of_Board | | |
|---|---|---|---|---|
| | | Decreased Count | Increased Count | Stable Count |
| Industry | Commercial_property_Real_Estate | 2 | 3 | 5 |
| | Financial | 2 | 4 | 7 |
| | Healthcare_and_Retirement | 2 | 3 | 2 |
| | Manufacturing_&_industrial | 3 | 2 | 10 |
| | Retail, _Accomodation_&_Food_Services | 3 | 4 | 8 |
| | Transport_and_logistic | 1 | 3 | 6 |
| | Utilities | 6 | 9 | 5 |
| | Total | 19 | 28 | 43 |

According to Table 21, the frequency of board meetings conducted has increased during the year 2020. That implies that the board members have worked hard and held additional discussions towards managing the company during the crisis. In addition, it could be that the board members were actively involved in decision-making during the COVID-19 year. However, the average accounting expertise of the board members has not changed significantly.

Table 21: Movement in the frequency of board meetings and accounting expertise of board members by industry

| | | Year | | | |
|---|---|---|---|---|---|
| | | 2019 | | 2020 | |
| | | Number_of_meetings Mean | Accounting_experties_of_Board_members Mean | Number_of_meetings Mean | Accounting_experties_of_Board_members Mean |
| Industry | Commercial_property_Real_Estate | 7 | 1 | 8 | 1 |
| | Financial | 8 | 2 | 11 | 2 |
| | Healthcare_and_Retirement | 8 | 2 | 7 | 2 |
| | Manufacturing_and_industrial | 10 | 1 | 11 | 1 |
| | Retail_Accomodation_and_Food_Services | 9 | 1 | 12 | 1 |
| | Transport_and_logistic | 10 | 1 | 13 | 2 |
| | Utilities | 10 | 1 | 12 | 1 |

In addition, there was an increase in non-covid challenges such as floods, bushfires, fires during the year 2020. Reporting all the challenges is essential, and it provides more validity for the stakeholders. A bank reported a litigation challenge due to employees' misbehaviors. Power generating companies also had an industry-specific challenge due to the announcement of Tiwai Point's Aluminium smelter closure by Mid 2021. However, in early 2021, the closure was extended to 2024 (Harding, 2021). This Aluminium Smelter is significantly crucial for the power companies as it consumes nearly 13% of the total countries electricity (Huffadine, 2020).

According to Beekes et al. (2014), better-governed companies are more likely to provide more quality disclosures concerning good or bad news, and it further improves transparency. Respectively, the governance policies could potentially influence the overall transparency and disclosures. In addition, higher disclosures could conceivably reduce the company's cost of equity capital (Botosan, 1997).

*6.4.1 Governance-related disclosure score*

Considering the types of disclosures regarding corporate governance, Table 22 presents the governance-related disclosure score.

Table 22: Movement in average governance-related disclosure score

**Governance related disclosure score**

| | Mean |
|---|---|
| Governance_related_disclosure_score_2019 | .33 |
| Governance_related_disclosure_score_2020 | .65 |

**6.5 Total disclosure score**

Lastly, Table 23 presents the movement in total disclosure score by essential services. The total disclosure score includes all financial, employee, customer, and governance-related disclosure scores.

Table 23: Movement in total disclosure score by essential services

| | Essential | | | Non-Essential | | |
|---|---|---|---|---|---|---|
| Item | 2019 Average | 2020 Average | % change | 2019 Average | 2020 Average | % change |
| Total disclosure score | 0.24 | 0.51 | 112.5 | 0.2 | 0.42 | 110 |

## CHAPTER 7: DESCRIPTIVE STATISTICS AND REGRESSION RESULTS

Table 24 shows the descriptive statistics for the log of leverage, size of the board, number of meetings, log of net income, log of market value, and change in total disclosure score. Overall, the change in total disclosure level varied from -2% to 200%. The overall average change in total disclosure score was 100% which means the disclosures increased by 100%. The researcher has attached detail descriptive for Table 24, under Appendix 4

Table 24: Descriptive statistics for change in total disclosures and other independent variables (leverage, size of board, number of meetings, log of net income, size)

| Variables | M | SD | N | Minimum | Maximum |
|---|---|---|---|---|---|
| Log of leverage | 0.32 | 0.26 | 176 | 0.00 | 1.48 |
| Size of Board | 6.45 | 1.632 | 180 | 3 | 13.0 |
| Number of meetings | 9.81 | 4.596 | 177 | 0 | 27.0 |
| Log of Net income | 1.70 | 0.829 | 145 | -0.72 | 3.9 |
| Log of Market Value (size) | 2.9 | 0.824 | 180 | 0.66 | 5.0 |
| Change in total disclosure score | 1.03 | 0.66 | 85 | -0.02 | 2.90 |

The researcher examined the correlation between the change in total disclosure score and the IVs by associating past literature (Hossain et al., 1995b). As presented in Table 25, change in total disclosure score has a significant positive relationship between all the independent variables in this scenario, with log of leverage ($r=.52$, $p<0.01$), size of the board ($r=.38$, $p<0.01$), number of meetings ($r=.68$, $p<0.01$), log of net income ($r=.40$, $p<0.01$) and log of market value (firm size) ($r=.36$, $p<001$). In addition, log of market value (firm size) also significantly correlates with log of leverage ($r=.19$, $p<0.05$), size of board ($r=.57$, $p<0.01$) net income ($r= .90$, $p<0.01$). In addition, these results are consistent with the agency theory; to reduce the burden of agency cost, the managers disclose more information for the investors. Moreover, when firm size increases, companies have more access to loans, attract board members with increased expertise, frequent

board involvement, and the potential to make more profits. The correlation results extracted from SPSS is attached under Appendix 5.

Table 25: Correlation between variables (leverage, size of board, number of meetings, log of net income, size)

| Variables | N | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 1. Log of Leverage | 176 | -- | | | | | |
| 2. Size of Board | 180 | .291** | -- | | | | |
| 3. Number of meetings | 177 | .417** | .231** | -- | | | |
| 4. Log of Net Income | 145 | .173* | .544** | .127 | -- | | |
| 5. Log of Market Value (Size) | 180 | .192* | .575** | .120 | .902** | -- | |
| 6. Change in total disclosure score | 85 | .517** | .376** | .679** | .407** | .336** | -- |

**p<0.01, *p<0.05

In addition, as presented in Table 26, the researcher has examined whether there is a significant correlation between change in total disclosure score and the industry dummy variables and essential services.

Table 26: Correlation between change in total disclosure score, essential services, and industry dummies

| | Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Financial Industry | -- | | | | | | | |
| 2 | Utility, Transport & Logistic | -.29** | -- | | | | | | |
| 3 | Manufacturing and industrial industry | -.18* | -.32** | -- | | | | | |
| 4 | Health care and retirement | -.12 | -.21* | -.13 | -- | | | | |
| 5 | Retail and accommodation | -.18* | -.32** | -.20** | -.13 | -- | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Commercial property and real estate | -.14 | -.25* | -.15* | -.10 | -.16* | -- | | |
| 7 | Essential services | -.23** | .30** | .07 | -.16* | .01 | -.42** | -- | |
| 8 | Change in total disclosure score | -.12 | .31** | -.16 | -.15 | .07 | -.09 | .12 | -- |

**p<0.01, *p<0.05

According to Table 26, only the utility industry showed a significant increase in disclosures (r=.31, p<0.01). As findings revealed that both essential and non-essential services had increased their disclosures simultaneously, the results were consistent with the findings that the disclosures made by essential services have no statistical significance between change in total disclosures. The correlation results are attached with Appendix 6

According to Table 27, regression results indicate the collective regression model is highly significant, p<0.001. In addition, 61% of the overall independent variables account for the total change of disclosures. However, the results were not consistent with Hypothesis 2, 4 and 5, and with previous studies which posited that the change in total disclosure score has a positive association with size of board, leverage, and profitability respectively. However, the coefficient results for firm size were consistent with the previous studies' results and Hypothesis 1, that firm size is marginally significant (p<0.1) and there is a positive association between change in disclosures. Furthermore, coefficient results for number of meetings were highly significant (p<0.001) that is consistent with Hypothesis 3 and with previous studies. In addition, this model has used industry dummy variables. The coefficient for the utility and transport industry is highly significant (p<0.001) and financial industry was marginally significant (p<0.1) with the change of disclosures that are also consistent with the correlation explanation. Moreover, Hypothesis 6 is consistent with correlation, and regression results those essential services has a negative association between change in total disclosures, although the coefficient results did not have significant predictive power. The regression results extracted from SPSS is attached with Appendix 7.

Table 27: Regression results for change in total disclosure score and independent variables (size, size of board, leverage, log of net income, essential services, and industries)

| | Variables in the model | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intercept | Size | Size of Board | No of meetings | Leverage | Net income | Essential | FIN | UT | MI | HR | CPRE |
| Unstandardized Coefficient | -0.95 | 0.37 | -0.02 | 0.07 | 0.33 | 0.01 | .24 | -.34 | .000 | -.36 | -.05 | .06 |
| t statistics | -2.145 | 2.002 | -0.447 | 4.405 | 1.19 | 0.055 | 1.482 | -1.719 | -2.078 | -0.199 | 1.028 | 0.335 |
| p-value | 0.037 | 0.051 | 0.657 | 0 | 0.239 | 0.957 | 0.145 | 0.092 | 0.043 | 0.843 | 0.309 | 0.739 |

Ad R2 = 61%, F = 9.72, P<0.001

DV: Change in total disclosures

FIN: Financial industry, UT &TL: Utilities industry, Transport and logistics industry, MI: Manufacturing and industrial industry, HR: Healthcare and retirement industry, CPRE: Commercial property and retail industry.

Table 28: Correlation between variables (change in disclosure score, total disclosure score, essential services, size, log of ROA, log of leverage, change in revenue, absolute residual, accounting expertise of board)

| | Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Change in disclosure score | -- | | | | | | | | |
| 2 | Total disclosure score | .850** | -- | | | | | | | |
| 3 | Essential services | 0.122 | .231** | -- | | | | | | |
| 4 | Size | .336** | .317** | 0.054 | -- | | | | | |
| 5 | Log of ROA | -.285* | -.336** | 0.102 | -0.152 | -- | | | | |
| 6 | Log of leverage | .517** | .536** | .225** | .192* | -.524** | -- | | | |
| 7 | Chg in Rev - Chg in Rec by At_1 | -0.062 | 0.057 | 0.089 | .253** | -.212* | .345** | -- | | |
| 8 | Absolute residual | 0.009 | -0.084 | 0.144 | -.242** | .270** | -0.051 | -0.009 | -- | |
| 9 | Accounting expertise of board | .222* | .295** | 0.094 | .296** | -.303** | .272** | .237** | -0.144 | -- |

**p<0.01, *p<0.05

According to Table 28 correlations, there is a significant positive correlation between essential services and total disclosure score. It indicates that if there was no COVID-19 impact, the essential services category generally discloses more information than non-essential services. Furthermore, consistent with Table 26 correlations, there was a significant positive correlation between total disclosure score and firm size and leverage. In addition, there was a significant negative correlation between absolute residual or the degree of discretionary accruals and the firm size. It indicates that when the firm size increases, the degree of discretionary accruals decreases. The correlation results extracted from SPSS is attached with Appendix 8

Moreover, there was a negative correlation between discretionary accruals and the total disclosures. It indicates that when the degree of discretionary accruals increases, total disclosures decrease. In addition, there was a negative correlation between change in disclosures, total disclosures, and log of ROA. It indicates that when profitability increases through assets, the level of disclosures reduces. In addition, the accounting expertise of the board members has a significant positive correlation between change in disclosures, total disclosures, firm size, and leverage. It presumes, when boards attract more members with accounting expertise, the level of disclosures improves. Moreover, large firms have more higher board members with accounting expertise, and when the borrowings increase, the board influences more disclosures.

Table 28: Regression results for discretionary accruals, essential services, accounting expertise of board, and in total disclosure score

| | Variables in the model | | | |
|---|---|---|---|---|
| | Intercept | Essential Services | Total Disclosure Score | Accounting expertise of Board |
| Unstandardized Coefficient | 0.132 | 0.054 | -0.013 | -0.023 |
| t statistics | 2.731 | 1.981 | -0.791 | -1.679 |
| p-value | 0.007 | 0.049 | 0.43 | 0.095 |

Ad R2 = 2%, F= 2.41, p<0.1

DV: Discretionary accruals

According to Table 28, consistent with the correlation, and Hypothesis 7, total disclosure has a negative association with discretionary accruals, indicating that when the degree of discretionary accruals increases, the total level of disclosures decreases. Furthermore, the results revealed that essential services have made more discretionary accruals, and the results are marginally significant, p<0.10. In addition, there is a negative association and marginal significance p<0.10 between the accounting expertise of the board and discretionary accruals. It indicates that professional accountants disapprove the discretionary accruals. The results extracted from SPSS relevant to Table 28 is attached under Appendix 9.

Table 29: Regression results for essential services, accounting expertise, change in disclosures, and discretionary accruals.

| | Variables in the model | | | |
|---|---|---|---|---|
| | Intercept | Essential Services | Accounting expertise of Board | Change in disclosures |
| Unstandardized Coefficient | 0.082 | 0.053 | -0.015 | 0.007 |
| t statistics | 2.225 | 1.799 | -0.997 | 0.306 |
| p-value | 0.029 | 0.076 | 0.322 | 0.76 |

Ad R2 = 1%, F= 1.3, P<.30,

DV: Discretionary accruals

According to Table 29, there is a significant positive association between change in disclosures and the discretionary accruals p<0.01. The results suggest that the COVID-19 has influenced the companies to make more discretionary accruals to avoid losses. However, the overall model did not have significant predicting power as p<.30. The detail regression results with relates to Table 29, is attached under Appendix 10.

# CHAPTER 8

## 8.1 Conclusion

This study is an exploratory study conducted on COVID-19 related disclosures in New Zealand. The findings reveal that companies had increased their overall disclosures, including financial, employee, customer, and governance-related information. In addition, when examining the level of disclosures by essential services, both the essential and non-essential services disclosures have increased simultaneously with only a 2% difference between the two. It was not consistent with Hypothesis 6 which posited that there is a negative relationship between **change** in total disclosures and essential services. However, there was a positive correlation between **total** disclosures and essential services

Furthermore, this study has investigated the association between firm, precise characteristics, and the change in total disclosures. The firm's specific features were the size, size of the board, number of meetings, leverage, profitability, essential services, and industry. The selection of independent variables, i.e., size, leverage, profitability, essential services, were based on agency theory. In addition, the researcher has based political theory in using the size of the board variable and stakeholder theory in using the frequency of board meetings. The results were consistent with Hypotheses 1, and 3 that firm size and number of board meetings are influential for change in disclosures. Although there was a significant correlation between the change in total disclosures and the independent variables, the regression results have marginal influences from individual independent variables, other than for firm size and the number of board meetings. As mentioned earlier, correlation measures only linear relationships among variables and it does not assume the degree of influence in a relationship. However, the collective model explained a highly significant influence from firm-specific characteristics to changes in COVID-19 disclosures.

The coefficient for the number of board meetings was highly influential as per Hypothesis 3 and the firm size was marginally significant align with Hypothesis 1, and consistent with previous

literature, (Alexandrina, 2013; Hossain et al., 1995b). Persistent with stakeholder theory, increased board meetings highlighted the increased participation of the board members and their accountability and responsibility for the investors. The increased frequency of the board meetings along with an increased level of disclosures further reflected the effort taken by the accounting profession and their continuous advice, recommendations to address the importance of financial disclosures, during this pandemic.

According to the findings, the overall leverage (debt-to-equity ratio) of companies has increased significantly except for the financial sector. However, when the number of board meetings was removed from the regression, the leverage indicated a significant influence on the change in disclosures. It outlined the uplifted financial burden of the companies and signaled the potential upcoming recession in New Zealand. Furthermore, the increased leverage of companies is also consistent with the changes in disclosures regarding dividend policies as a result of COVID-19. More than half of the sample companies have disclosed reduce or no dividend during the year 2020. Past literature also revealed that dividend policies have changed during the 2008 financial crisis to maintain liquidity (Hauser, 2013). The findings revealed that the share prices have increased during the COVID-19 period. Furthermore, there was a substantial increase in the number of new investors in the market. When the demand for shares increases, share prices eventually increase for the simple theory of demand and supply. However, it could mislead the new investors that the companies are performing well. Hence this study is informative for the investors, that it is important to monitor the performance and the debt structure of the companies, before making any investment decisions, as the higher debt over equity can potentially reduce the dividends and even can signal that the liquidity crisis of the company

In addition, this study brings into view the corporate culture of NZ companies. Findings revealed that most of the company's management style is fully resilient that they have adopted both operational and strategic changes. According to the previous literature, companies could initiate more growth potentials by being resilient (Wilson & Eilertsen, 2010).

In addition, this study has investigated earnings management as a subsequent outcome of COVID-19. In addition, the results suggested that COVID-19 has influenced companies to have more discretionary accruals. However, when there was more accounting expertise on board members, the discretionary accruals were lower. Furthermore, the correlation results suggested that large the firm size, could lower the discretionary accruals.

The findings regarding employment redundancies highlighted the employment crisis and the opportunist corporate culture in New Zealand. The impact of COVID-19 has created a demand for technology. It was consistent with the findings, that increased demand for technology related occupations. This study is informative for the government bodies to administer the potential employment crisis to new directions by providing awareness on new technology. It also informs managers about the impact of corporate disclosures in acutely uncertain settings.

**8.2 Limitations**

This study has different constraints. Due to the limited time frame, the researcher has reduced the sample size to 90 companies. The results would have been more promising with a larger sample size. In addition, NZX does not represent a broader economy and industries. COVID-19 have hugely impacted small business which represents 28% of the country's GDP. As a result, this study does not cover the small companies that had devastating outcomes of the pandemic. Furthermore, the actual signs of employment crisis were not reflected through this study due to sample containing large companies by market capitalization. As mentioned above small businesses represent the larger economy, it is vital to include smaller businesses for the pandemic disclosure studies.

This study has used a manual content analysis technique, and the method itself has limitations. It could reduce the capacity of empirical testing. When collecting specific categories disclosures, different companies have defined specific terms differently. For example, some companies

reported redundancies as restructuring, post-employee benefits, employee schemes. Collecting such information has been extremely challenging and may have untracked information.

### 8.3 Suggestions for future studies

The limitation of this study suggests that the future studies be undertaken regarding pandemic-related disclosures. New Zealand was outstanding at preventing COVID-19 spread. However, many countries suffered by not taking immediate response for controlling COVID-19. Therefore, the researcher suggests the future scholars undertake a multi-country analysis on pandemic-related disclosures to examine how the COVID-19 related disclosures have changed between countries as per the level of impact of COVID-19. In addition, COVID-19 influenced earnings management studies with an increased time frame by using multiple models to obtain satisfactory results. Moreover, market behavior and corporate governance culture will also be an exciting pathway for future studies during a pandemic. Furthermore, it is important that future studies include small businesses to reflect the actual economic effect of COVID-19 pandemic.

## REFERENCE


AbuGhazaleh, N., Al-Hares, O., & Roberts, C. (2011). Accounting Discretion in Goodwill Impairments: UK Evidence. *Journal of International Financial Management & Accounting, 22*(3), 165-204. https://doi.org/10.1111/j.1467-646X.2011.01049.x

Accounting Standards Board. (2006). *Reporting Statement: Operating and Financial Review*. ASB. https://www.frc.org.uk/getattachment/4aeb44dd-0c04-479d-9592-d1a503834216/Reporting-Statement-The-Operating-and-Financial-Review-January-2006.pdf

Adhikari, A., & Tondkar, R. (1992). Environmental Factors Influencing Accounting Disclosure Requirements of Global Stock Exchanges. *Journal of International Financial Management & Accounting, 4*(2), 75-105. https://doi.org/10.1111/j.1467-646X.1992.tb00024.x

Akhtaruddin, M., Hossain, M., Hossain, M., & Yao, L. (2009). Corporate governance and voluntary disclosure in corporate Annual reports of Malaysian listed firms *Jamar, 7*(1), 1-20. http://mahossain.com/wp-content/uploads/2020/09/Akhter_JAMAR_v7.1_Corp_gov_-Malaysia-1-2.pdf

Alexandrina, Ş. (2013). How do board of directors affect corporate governance disclosure? – the case of banking system. *The Romanian Economic Journal 47*, 127-146. http://www.rejournal.eu/sites/rejournal.versatech.ro/files/articole/2013-03-01/1937/stefanescu.pdf

Algharaballi, E., & Albuloushi, S. (2008). Evaluating the specification and power of discretionary accruals models in Kuwait. *Journal of Derivatives & Hedge Funds,, 14*(3-4), 251-264. https://doi.org/10.1057/jdhf.2008.23

American Institue of Certified Public Accountants. (1994). *Meeting the Information Needs of Investors and Creditors*. http://3197d6d14b5f19f2f440-5e13d29c4c016cf96cbbfd197c579b45.r81.cf1.rackcdn.com/collection/papers/1990/1994_0101_ReportingJenkins.pdf

Arnold, P. (2009). Global financial crisis: The challenge to accounting research. *Accounting, Organizations and Society, 34*, 803-809. https://doi.org/10.1016/j.aos.2009.04.004

Aspachs, O., & Ruiz, A. (2020). *The COVID-19 Crisis: an unprecedented shock*. CaixaBank Research. https://www.caixabankresearch.com/en/economics-markets/monetary-policy/covid-19-crisis-unprecedented-shock

Austin, M. (2020). *Illustrative Public Company Disclosures (consequences of COVID-19)*. AICPA. https://future.aicpa.org/professional-insights/article/illustrative-public-company-disclosures-consequnces-of-covid-19

Avgouleas, E. (2009). The Global Financial Crisis and the Disclosure Paradigm in European Financial Regulation: The Case for Reform. *European Company and Financial Law Review, 6*(4), 440-475. https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/ecomflr6&id=466&men_tab=srchresults#

Bahna, S. (Ed.). (2009). *Annals of Allergy, Asthma and Immunology* (Vol. 103). American College of Allergy, Asthma & Immunology. American College of Allergy, Asthma & Immunology.

Baker, S., Bloom, N., Davis, S., & Terry, S. (2020). *COVID-Induced Economic Uncertainty* [NBER Working Paper No. 26983].

Ball, R. (1995). Making Accounting More International: Why, How, and How Far Will It Go? . *Journal of Applied Corporate Finance Fall*, 19-29. https://doi.org/10.1111/j.1745-6622.1995.tb00633.x

Barth, M., & Landsman, W. (2010). How did Financial Reporting Contribute to the Financial Crisis? *European Accounting Review, 19*(3), 399-423. https://doi.org/10.1080/09638180.2010.498619

BBC. (2020). *Coronavirus: How New Zealand relied on science and empathy*. BBC. https://www.bbc.com/news/world-asia-52344299

BDO. (2020). *Accounting Alert August 2020*. https://www.bdo.nz/en-nz/accounting-alert-august-2020/covid-19-may-result-in-extra-financial-statement-disclosures

Beekes, W., Brown, P., & Zhang, Q. (2014). Corporate governance and the informativeness of disclosures in Australia: a re-examination. *Accounting & Finance, 55*(4), 931-963. https://doi.org/10.1111/acfi.12088

Beneish, M. (2001). Earnings management: a perspective. *Managerial Finance , 27*(12), 3-17. https://doi.org/10.1108/03074350110767411

Beretta, S., & Bozzolan, S. (2008). Quality versus Quantity: The Case of Forward-Looking Disclosure. *Journal of Accounting, Auditing & Finance, 23*(3), 333-376. https://doi.org/10.1177/0148558X0802300304

Bhat , R., & Pandey, I. (1994). Dividend Decision : A Study of Managers' Perceptions. *Decision, 21*(1&2), 67-86. http://vslir.iima.ac.in:8080/jspui/bitstream/11718/9308/2/Div_managers_perceptions.pdf

Bhattacharya, S. (1979). Imperfect Information, Dividend Policy, and "The Bird in the Hand" Fallacy. *The Bell Journal of Economics, 10*(1), 259-270. https://www.jstor.org/stable/3003330

Botosan, C. (1997). Disclosure Level and the Cost of Equity Capital. *The Accounting Review, 72*(3), 323-349. https://www.jstor.org/stable/248475

Botosan, C., & Plumlee, M. (2002). A Re-Examination of Disclosure Level and the Expected Cost of Equity Capital. *Journal of Accounting Research, 40*(1), 21-40. https://www.jstor.org/stable/3542428

Bradbury, M. (1992). Voluntary disclosue of financial segment data : New Zealand evidence *Accounting & Finance, 32*(1), 15-26. https://doi.org/10.1111/j.1467-629X.1992.tb00174.x

Bremmer, I. (2021). The Best Global Responses to the COVID-19 Pandemic, 1 Year Later. *Time*. https://time.com/5851633/best-global-responses-covid-19/

Brook, Y., Charlton, W., Hendershott, R., & Jr. (1998). Do Firms Use Dividends to Signal Large Future Cash Flow Increases? *Financial Management, 27*(3), 46-57. https://www.jstor.org/stable/3666274

Businessnz. (2020). *Essential Businesses*. https://www.businessnz.org.nz/__data/assets/pdf_file/0006/189429/Updated-Essential-services-.pdf

CA ANZ, CPA Australia, & Australian Institute of Company Directors. (2020). *Impacts of COVID-19 on annual report disclosures* https://www.cpaaustralia.com.au/-/media/corporate/allfiles/document/covid-19/business-advice/impacts-of-covid-19-on-annual-report-disclosures-guide.pdf?la=en&rev=a24d1efcf0c5475e861183830c62f4a2

Carroll, M. (2020). Covid-19: Which stocks are the coronavirus winners and losers on the NZX? *Stuff*. https://www.stuff.co.nz/business/industries/122873077/covid19-which-stocks-are-the-coronavirus-winners-and-losers-on-the-nzx

Chen, C., & Jaggi, B. (2000). Association between independent nonexecutive directors, family control and
fnancial disclosures in Hong Kong. *Journal of Accounting and Public Policy, 19*(4-5), 285-310. https://doi.org/10.1016/S0278-4254(00)00015-6

Chen, J. (2021). *Corporate Governance*. Investopedia. https://www.investopedia.com/terms/c/corporategovernance.asp

Chen, J., & James, M. (2021). *Corporate Governance*. Investopedia. https://www.investopedia.com/terms/c/corporategovernance.asp

Chen, S., DeFond, M., & Park, C. (2002). Voluntary disclosure of balance sheet information in quarterly earnings announcements. *Journal of Accounting and Economics, 33*(2), 229-251. https://doi.org/10.1016/S0165-4101(02)00043-5

Cheng, Y., Park, J., Pierce, S., & Zhang, T. (2019). Big Bath Accounting following Natural Disasters. *SSRN*. https://doi.org/10.2139/ssrn.3305478

Chi, J., & Gupta, M. (2009). Overvaluation and earnings management. *Journal of Banking and Finance, 33*, 1652-1663. https://doi.org/10.1016/j.jbankfin.2009.03.014

Chow, C., & Wong-Boren, A. (1987). Voluntary Financial Disclosure by Mexican Corporations. *The Accounting Review, 62*(3), 533-541. https://www.jstor.org/stable/247575

Controller and Auditor General. (2020). *Controller update on Government spending on Covid-19*. Controler and Auditor-General. https://oag.parliament.nz/media/2020/controller-september

Cooke, T. (1989). Voluntary Corporate Disclosure by Swedish Companies *Journal of International Financial Management and Accounting, 1*(2), 171-195. https://doi.org/10.1111/j.1467-646X.1989.tb00009.x

Coy, P. (2021). People Hired in the Pandemic Are More Likely to Quit Their Jobs. *Bloomberg Businessweek*. https://www.bloomberg.com/news/articles/2021-05-26/people-hired-in-the-pandemic-are-more-likely-to-quit-their-jobs

Craswell, A., & Taylor, S. (1992a). Discretionary Disclosure of Reserve by Oil and Gas Companies: An Economic Analysis. *Journal of Business Finance and Accounting, 19*(2), 295-308. https://doi.org/10.1111/j.1468-5957.1992.tb00626.x

Craswell, A., & Taylor, S. (1992b). Discretionary discloure of reserves by Oil and Gas Companies : an economic anaysis. *Journal of Business Finance & Accounting, 19*(2), 295-308. https://doi.org/10.1111/j.1468-5957.1992.tb00626.x

Crotty, J. (2009). Structural causes of the global financial crisis: a critical assessment of the 'new financial architecture'. *Cambridge Journal of Economics, 33*, 563-580. https://doi.org/10.1093/cje/bep023

Debreceny, R., Gray, G., & Rahman, A. (2002). The determinants of Internet financial reporting. *Journal of Accounting and Public Policy, 21*, 371-394. https://doi.org/10.1016/S0278-4254(02)00067-4

Debreceny, R., & Rahman, A. (2005). Firm-specific determinants of continuous corporate disclosures. *The International Journal of Accounting, 40*, 249-278. https://doi.org/10.1016/j.intacc.2005.06.002

Dechow, P., & Schrand, C. (2004). *Earnings Quality*. The Research Foundation of CFA Institute. http://csinvesting.org/wp-content/uploads/2015/04/Defining-Earnings-Quality-CFA-Publication.pdf

Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review, 70*(2), 193-225. http://www.jstor.org/stable/248303

Deloitte. (2020a). *COVID-19: Reintroduction of tax depreciation on certain buildings*. https://www2.deloitte.com/content/dam/Deloitte/nz/Documents/tax/nz-en-covid-19-reintroduction-of-tax-depreciation-on-buildings.pdf

Deloitte. (2020b). *Financial Reporting Considerations Related to COVID-19 and an Economic Downturn*. https://www.iasplus.com/en/publications/us/financial-reporting-alerts/2020/20-2

Depersio, G. (2021). *Using Simple Random Sample to Study Larger Populations*. Investopedia. https://www.investopedia.com/ask/answers/042915/what-are-advantages-using-simple-random-sample-study-larger-population.asp

Deverell, E., & Olsson, E. (2010). Organizational culture effects on strategy and adaptability in crisis management. *Risk Management, 12*, 116-134. https://doi.org/10.1057/rm.2009.18

Devi, N. (2009). *Understanding the qualitative and quantitative methods in the context of content analysis* Qualitative and Quantitative Methods in Libraries, International Conference, Chania Crete Greece. http://www.isast.org/proceedingsQQML2009/PAPERS_PDF/Devi-Understanding_the_Qualitative_and_Quantatitive_Methods_PAPER-QQML2009.pdf

Domm, P. (2020). *How the pandemic drove massive stock market gains, and what happens next*. CNBC. https://www.cnbc.com/2020/12/30/how-the-pandemic-drove-massive-stock-market-gains-and-what-happens-next.html

Dumay, J., Frost, G., & Beck, C. (2015). Material legitimacy. *Journal of Accounting & Organizational Change, 11*(1), 2-23. https://doi.org/10.1108/JAOC-06-2013-0057

Einhorn, E. (2007). Voluntary disclosure under uncertainty about the reporting objective. *Journal of Accounting and Economics 43*, 245-274. https://doi.org/10.1016/j.jacceco.2007.03.001

Employment New Zealand. (2021). *Previous financial support schemes*. https://www.employment.govt.nz/leave-and-holidays/other-types-of-leave/coronavirus-workplace/previous-financial-support-schemes/

Exceptional Services. (2019). *Sales Are Up, Profits Are Down — What's the Fix?* https://www.exceptionalservicesagency.com/post/sales-are-up-profits-are-down-what-s-the-fix

EY. (2020). *Accounting considerations of the coronavirus pandemic (Updated November 2020)*. https://www.ey.com/en_gl/ifrs-technical-resources/accounting-considerations-of-the-coronavirus-pandemic-updated-november-2020

Feng, C., Wang, H., Lu, N., Chen, T., He, H., Lu, Y., & Tu, X. (2014). Log-transformation and its implications for data analysis. *Shanghai Archives of Psychiatry , 26*(2), 105-109. https://doi.org/1002-0829.2014.02.009

Fernando, J., & Walters, T. (2021). *Correlation Coefficient*. Investopedia. https://www.investopedia.com/terms/c/correlationcoefficient.asp

Fiechter, P., & Meyer, C. (2010). *Big bath accounting using fair value measurement discretion during the financial crisis* University of Zurich]. https://pdfs.semanticscholar.org/cd31/cff4c56290c66aa0215547a3262cf3065132.pdf

Financial Committee of the Institute of Chartered Accountants in England and Wales. (2002). No surprises: the case for better risk reporting. *Balance Sheet, 10*(4), 18-21. https://doi.org/10.1108/09657960210450745

Fioretti, M., Saint-Jean, V., & Smith, S. (2021). *Selfish Shareholders: Corporate Donations During COVID-19**. https://spire.sciencespo.fr/hdl:/2441/3t26b67lmf8nnqo12dbjl5bqom/resources/2021-fioretti-saint-jean-and-smith-selfish-shareholders-corporate-donations-during-covid-19.pdf

Fitzgerald, M. (2020). 2019 had the most CEO departures on record with more than 1,600. *CNBC*. https://www.cnbc.com/2020/01/07/2019-had-the-most-ceo-departures-on-record-with-more-than-1600.html

Freeman, R., Harrison, J., Wicks, A., Parmar, B., & Colle, S. (2010). *Stakeholder Theory : The State of the Art*. Cambridge University Press. https://ebookcentral.proquest.com/lib/aut/detail.action?docID=501247.

French, N., & Gabrielli, L. (2004). The uncertainty of valuation. *Journal of Property Investment & Finance, 22*(6), 484-500. https://doi.org/10.1108/14635780410569470

Gaynor, B. (2017). *Why does the NZX have so few IPOs and what does this mean for investors and the economy?* Milford. https://milfordasset.com/insights/brian-gaynor-nzx-ipos-mean-investors-economy

Ghazali, N., & Weetman, P. (2006). Perpetuating traditional influences: Voluntary disclosure in Malaysia following the economic crisis. *Journal of International Accounting, Auditing and Taxation, 15*, 226-248. https://doi.org/10.1016/j.intaccaudtax.2006.08.001

Gulley, A. (2020). *New Zealand has 'effectively eliminated' coronavirus. Here's what they did right.* National Geographic. https://www.nationalgeographic.com/travel/article/what-new-zealand-did-right-in-battling-coronavirus

Habib, A., Bhuiyan, B., & Islam, A. (2012). Financial distress, earnings management and market pricing of accruals during the global financial crisis. *Managerial Finance, 39*(2), 155-180. https://doi.org/10.1108/03074351311294007

Hackston, D., & Milne, M. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal, 9*(1), 77-108. https://doi.org/10.1108/09513579610109987

Hanna, T., & Skandier, C. (2020). *We can't let this economic crisis go to waste*. openDemocracy. https://www.opendemocracy.net/en/oureconomy/we-cant-let-economic-crisis-go-waste/

Harding, E. (2021). Tiwai aluminium smelter to stay open until end of 2024. *Stuff*. https://www.stuff.co.nz/business/123944399/tiwai-aluminium-smelter-to-stay-open-until-end-of-2024

Hauser, R. (2013). Did dividend policy change during the financial crisis? *Managerial Finance, 39*(6), 584-606. https://doi.org/10.1108/03074351311322861

Hayes, A., & Estevez, E. (2021). *Multiple Linear Regression (MLR)*. Investopedia. https://www.investopedia.com/terms/m/mlr.asp

Healy, P., & Palepu, K. (1990). Effectiveness of accounting-based dividend covenants. *Journal of Accounting and Economics, 12*(1-3), 97-123. https://doi.org/10.1016/0165-4101(90)90043-4

Healy, P., & Palepu, K. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature$. *Journal of Accounting and Economics, 31*, 405-440. https://doi.org/10.1016/S0165-4101(01)00018-0

Healy, P., & Wahlen, J. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons, 13*(4), 365-383. https://doi.org/10.2308/acch.1999.13.4.365

Hirt, M., Huber, C., Lund, F., & Spielmann, N. (2020). *Boards need to step up their game and guide their organizations toward the next normal.* McKinsey & Company. https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/boards-in-the-time-of-coronavirus

Hope, O., & Wang, J. (2018). Management deception, big-bath accounting, and information asymmetry: Evidence from linguistic analysis. *Accounting, Organizations and Society, 70*, 33-51. https://doi.org/10.1016/j.aos.2018.02.004

Hossain, M., Perera, M., & Rahman, A. (1995a). Voluntary Disclosure in the Annual Reports of New Zealand Companies *Journal of lnlemalional Financial Management and Accouniing, 6*(1), 69-87. https://doi.org/10.1111/j.1467-646X.1995.tb00050.x

Hossain, M., Perera, M., & Rahman, A. (1995b). Voluntary disclosure in the annual reports of New Zealand companies. *Journal of International Financial Management and Accounting 6*(1), 69-87. https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1467-646X.1995.tb00050.x?casa_token=PaxAhyCnVk8AAAAA:bB4Nh209aIDIZxfhMkeRaYgqCU4VFuL1H52wqwqH71yPRHFKn0sQz8ugOnhhJXQ3yihiB7BLuFS7y_PK

Huffadine, L. (2020). *Tiwai Point smelter closure: What happens to the electricity sector*. RNZ. https://www.rnz.co.nz/news/business/420885/tiwai-point-smelter-closure-what-happens-to-the-electricity-sector

IBISWorld. (2021). *List of Industries*. IBISWorld,. https://www.ibisworld.com/nz/list-of-industries/

Inland Revenue. (2021). *COVID-19 Depreciation and low-value assets*. https://www.ird.govt.nz/covid-19/business-and-organisations/specific-income-tax-issues/depreciation-and-low-value-assets

Institute of Directors. (2020). *Board practices : Guidance for boards and directors on governing in extraordinary times.* Institute of Directors New Zealand. https://www.iod.org.nz/covid-19/board-practices/#

International Organization of Securities Commissions. (2020). *IOSCO Statement on Importance of Disclosure about COVID-19*. https://www.iosco.org/library/pubdocs/pdf/IOSCOPD655.pdf

John, K., & Kalay, A. (1982). Costly Contracting and Optimal Payout Constraints. *The Journal of Finance, 37*(2), 457-470. https://www.jstor.org/stable/2327348

Jones, J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research, 29*(2), 193-228. https://doi.org/10.2307/2491047

Jordan, C., & Clark, S. (2015). Do New CEOs Practice Big Bath Earnings Management Via Goodwill Impairments? . *Journal of Accounting and Finance, 15*(7), 11-21. http://digitalcommons.www.na-businesspress.com/JAF/JordanCE_Web15_7_.pdf

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica, 47*(2), 263-292. https://doi.org/10.2307/1914185

Katagata, K. (2017). Factors impacting of CEO resignation in times of corporate crisis in Japan. *Transactions of the Academic Association for Organizational Science, 6*(2), 20-25. https://doi.org/10.11207/taaos.6.2_20

Kenton, W. (2021). *Cost of Equity*. Investopedia. https://www.investopedia.com/terms/c/costofequity.asp

Khaireddine, H., Salhi, B., Aljabr, J., & Jarboui, A. (2020). Impact of board characteristics on governance, environmental and ethical disclosure. *Society and Business Review, 15*(3), 273-295. https://doi.org/10.1108/SBR-05-2019-0067

Kolb, R. (Ed.). (2010). *Lessons from the Financial Crisis : Causes, Consequences, and Our Economic Future* (1 ed., Vol. 12). John Wiley & Sons, Incorporated.

Lang, M., & Lundholm, R. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research, 31*(2), 246-271. https://doi.org/10.2307/2491273

Lapointe-Antunes, P., Cormier, D., & Magnan, M. (2008). Equity recognition of mandatory accounting changes: the case of transitional goodwill impairment losses. *Canadian Journal of Administrative Sciences, 25*(1), 37-54. https://doi.org/10.1002/cjas.41

Leftwich, R., Watts, R., & Zimmerman, J. (1981). Voluntary Corporate Disclosure: The Case of Interim Reporting. *Journal of Accounting Research, 19*, 50-77. https://www.jstor.org/stable/2490984

Levy, H. (2020). Financial Reporting and Auditing Implications of the COVID-19 Pandemic. *The CPA Journal, 90*(5), 26-33. https://search.proquest.com/docview/2420173071?fromopenview=true&pq-origsite=gscholar

Li, F. (2010). Textual analysis of corporate disclosures: A survey of the literature. *Journal of Accounting Literature, 29*, 143-165. https://webuser.bus.umich.edu/feng/LI%20JAL%202011%20(Textual%20Analysis%20of%20Corp%20Disclosures).pdf

Linsley, P., & Shrives, P. (2005). Transparency and the disclosure of risk information in the banking sector. *Journal of Financial Regulation and Compliance, 13*(3), 205-214. https://doi.org/10.1108/13581980510622063

Longman. (2021). reference point. In https://www.ldoceonline.com/dictionary/reference-point

Loughran, T., & McDonald, B. (2020). *Management Disclosure of Risk Factors and COVID-19*.

Mallinson, M., & French, N. (2000). Uncertainty in property valuation – The nature and relevance of uncertainty and how it might be measured and reported. *Journal of Property Investment & Finance, 18*(1), 13-32. https://doi.org/10.1108/14635780010316636

McNally, G., Eng, L., & Hasseldine, R. (1982). Corporate Financial Reporting in New Zealand: An Analysis of User Preferences, Corporate Characteristics and Disclosure Practices for Discretionary Information. *Accounting and Business Research, 13*(49), 11-20. https://doi.org/10.1080/00014788.1982.9729725

Mendesa, C., Rodriguesb, L., & Estebanc, P. (2012). Evidence of earnings management using accruals as a measure of accounting discretion. *Review of Applied Management Studies 10*, 3-14. https://www.elsevier.es/en-revista-tekhne-review-applied-management-350-articulo-evidence-earnings-management-using-accruals-X1645991112599721

Merino, B., & Neimark, M. (1982). Disclosure Regulation and Public Policy: A Sociohistorical Reappraisal *Journal of Accounting and Public Policy, 1*(1), 33-57. https://doi.org/10.1016/0278-4254(82)90005-9

Miller, G. (2001). Earnings performance and discretionary disclosure. *Journal of Accounting Research, 40*(1), 173-204. https://doi.org/10.1111/1475-679X.00043

Ministry of Business, I. E. (2018). *New Zealand's Support for Small Business*. https://www.business.govt.nz/assets/Uploads/Documents/Small-business-booklet.pdf

Ministry of Education. (2021). *Residual (in linear regression)*. Ministry of Education. https://nzmaths.co.nz/category/glossary/residual-linear-regression

Mirfazli, E. (2008). Evaluate corporate social responsibility disclosure at Annual Report Companies in multifarious group of industry members of Jakarta Stock Exchange (JSX), Indonesia. *Social Responsibility Journal, 4*(3), 388-406. https://doi.org/10.1108/17471110810892884

Mohaddes, K. (2020). *No country 'immune' to COVID-19 economic shock, but Asian nations will bounce back faster*. University of Cambridge.

Morgan, D. (1993). Qualitative content analysis: a guide to paths not taken. *Qualitative health research, 3*(1), 112-121. https://journals.sagepub.com/doi/pdf/10.1177/104973239300300107?casa_token=h2SuCbJAfDAAAAAA:Q8j-aviB2TzsAEkchCFsKEcKQnKq9jWCjJyNxdO2cBbwSQVOmfmf7fcP3vovxBBAkIk0Kf77VNEB

Mossadams. (2020). *COVID-19 Disrupts Financial Reporting*. https://mossadams.com/articles/2020/03/covid-19-disrupts-financial-reporting

Myers, S. (1977). Determinants of corporate borrowing. *Journal of Financial Economics, 5*(2), 147-175. https://doi.org/10.1016/0304-405X(77)90015-0

Nadkarni, A. (2020). Buy-now-pay-later demand booms as more Christmas presents bought online. *Stuffs*. https://www.stuff.co.nz/business/123699212/buynowpaylater-demand-booms-as-more-christmas-presents-bought-online

Nagara, V., Nandab, D., & Wysockic, P. (2003). Discretionary disclosure and stock-based incentives. *Journal of Accounting and Economics, 34*(1-3), 283-309. https://doi.org/10.1016/S0165-4101(02)00075-7

Nathan, D., & Kelkar, G. (2020). *Is COVID-19 really an exogenous shock?* United Nations University. https://www.wider.unu.edu/publication/covid-19-really-exogenous-shock

New Zealand Government. (2020). *COVID-19: Economic Response Package*. Beehive. https://www.beehive.govt.nz/feature/covid-19-economic-response-package

Noy, I. (2020). COVID-19 Financial package a golden opportunity for long-term change. *Newsroom*. https://www.newsroom.co.nz/2020/03/25/1099682/ilan-noy-on-financial-package

NZ Herald. (2020). Capital Markets report: Pandemic boosts interest in online investment platform Sharesies. *NZ Herald*. https://www.nzherald.co.nz/business/capital-markets-report-pandemic-boosts-interest-in-online-investment-platform-sharesies/7KPHXVUN4DLKZ4SOYJ2ENATRHU/

NZSA. (2014). *NZSA Policy Statements: Independent Directors*. New Zealand Shareholder's Association. https://www.nzshareholders.co.nz/shareholders-best-practiceDetail.cfm?bestpracticeid=31

NZX. (2020). *NZX Main Board (NZSX)*. https://www.nzx.com/markets/NZSX

NZX. (2021). *Market Activity*
. NZX company research. https://companyresearch-nzx-com.ezproxy.aut.ac.nz/deep_ar/index.php?pageid=live_market

O'Donnell, M. (2020). *Never let a good crisis go to waste*. Stuff. https://www.stuff.co.nz/business/better-business/120434015/never-let-a-good-crisis-go-to-waste

OECD. (2021). *The Future of Corporate Governance in Capital Markets Following the COVID-19 Crisis, Corporate Governance*. OECD Publishing. https://www-oecd-ilibrary-org.ezproxy.aut.ac.nz/docserver/efb2013c-en.pdf?expires=1625986069&id=id&accname=ocid41012844&checksum=CF0354F730AF28A96B3612D353876BA8

Okuyan, C., & Bege, M. (2021). Working from home during the COVID-19 pandemic, its effects on health, and recommendations: The pandemic and beyond. *Perspect Psychiatr Care*, 1-7. https://doi.org/10.1111/ppc.12847

Patten, D. (2015). An insider's reflection on quantitative research in the socialand environmental disclosure domain. *Critical Perspectives on Accounting*

, *32*, 45-50. https://doi.org/10.1016/j.cpa.2015.04.006

Patton, M. (2020). The Impact Of Covid-19 On U.S. Economy And Financial Markets. *Forbes*. https://www.forbes.com/sites/mikepatton/2020/10/12/the-impact-of-covid-19-on-us-economy-and-financial-markets/?sh=ddd5db42d206

Peasnell, K., Pope, P., & Young, S. (2000). Detecting earnings management using crosssectional abnormal accruals models. *Accounting and Business Research, 30*(4), 313-326. https://doi.org/10.1080/00014788.2000.9728949

Power, M. (2004). The risk management of everything. *Journal of Risk Finance, 5*(3), 58-65. https://doi.org/10.1108/eb023001

Probohudono, A., Tower, G., & Rusmin, R. (2013). Risk disclosure during the global financial crisis. *Social Responsibility Journal, 9*(1), 124-136. https://doi.org/10.1108/17471111311307859

Rahman, A., Perera, H., & Ganesh, S. (2002). Accounting Practice Harmony, Accounting Regulation and Firm Characteristics. *Abucus, 38*(1), 46-77. https://doi.org/10.1111/1467-6281.00097

Rahman, M. (1998). The role of accounting in the East Asian financial crisis: lessons learned? *Transnational Corporations, 7*(3), 1-52. https://unctad.org/system/files/official-document/iteiit9v7n3_en.pdf#page=7

Ranjan, M. (2021). How The Pandemic Has Impacted Customer Expectations. *Forbes*. https://www.forbes.com/sites/forbesbusinesscouncil/2021/02/04/how-the-pandemic-has-impacted-customer-expectations/?sh=118b320a3185

Reserve Bank of Australia. (2021). *The Global Financial Crisis*. Reserve Bank of Australia,. https://www.rba.gov.au/education/resources/explainers/the-global-financial-crisis.html

Riyadi, A., Utami, W., & Nugroho, L. (2018). Potential Big Bath Accounting Practice in CEO Changes (Study on Manufacturing Companies Listed in Indonesia Stock Exchange) *International Journal of Accounting and Finance Studies, 1*(2), 202-215. https://doi.org/10.22158/ijafs.v1n2p202

Rourke, L., & Anderson, T. (2004). Validity in quantitative content analysis. *Educational technology research and Development, 52*(1), 5-18. https://link.springer.com/content/pdf/10.1007/BF02504769.pdf

Rowbottom, N., & Schroeder, M. (2014). The rise and fall of the UK operating and financial review. *Accounting Auditing & Accountability Journal 27*(4), 655-685. https://doi.org/10.1108/AAAJ-09-2012-1107

Sawalqa, F. (2020). Risk Disclosure Patterns among Jordanian Companies: An Exploratory Study during the COVID-19 Pandemic. *Accounting and Finance Research, 9*(3), 69-84. https://doi.org/10.5430/afr.v9n3p69

Sengupta, P. (1998). Corporate Disclosure Quality and the Cost of Debt. *The Accounting Review, 73*(4), 459-474. https://www.jstor.org/stable/248186

Skinner, D. (1994). Why Firms Voluntarily Disclose Bad News. *Journal of Accounting Research, 32*(1), 38-60. https://doi.org/10.2307/2491386

Smith, M., Kestel, J., & Robinson, P. (2001). Economic Recession, Corporate Distress and Income Increasing Accounting Policy Choice. *Accounting Forum, 25*(4), 334-352. https://doi.org/10.1111/1467-6303.00070sd

The Treasury. (2020). *COVID-19 Economic Package at a Glance: He Waka Eke Noa: We Are All Working Together - April 2020*. https://www.treasury.govt.nz/publications/glance/covid-19-economic-package-glance-he-waka-eke-noa-we-are-all-working-together-april-2020

Tokar, M., & Kumar, S. (2020). *Applying IFRS Standards in 2020— impact of covid-19*. IFRS. https://cdn.ifrs.org/-/media/feature/news/2020/inbrief-covid19-oct2020.pdf?la=en

Toms, J. (2002). Firm resources, quality signals and the determinants of corporate envirionmental reputation : Some UK evidence *The British Accounting Review, 34*(3), 257-282. https://doi.org/10.1006/bare.2002.0211

Tysiac, K. (2020). *SEC staff guidance addresses pandemic-related disclosures*. Journal of Accountancy. https://www.journalofaccountancy.com/news/2020/jun/sec-guidance-coronavirus-pandemic-related-disclosures.html

Williams, S. (2020). *NZ's shift to online during COVID here to stay - report*. IT Brief New Zealand. https://itbrief.co.nz/story/nz-s-shift-to-online-during-covid-here-to-stay-report

Wilson, J., & Eilertsen, S. (2010). How did strategic planning help during the economic crisis? *Strategy & Leadership, 38*(2), 5-14. https://doi.org/10.1108/10878571011029000

Worksafe. (2021). *Managing health and safety: Novel coronavirus (COVID-19)*. Worksafe. https://www.worksafe.govt.nz/managing-health-and-safety/novel-coronavirus-covid/

Wynn, K. (2021). Pandemic fatigue: Customer Radar data reveals consumers want good service without Covid excuse. *NZ Herald*. https://www.nzherald.co.nz/business/pandemic-fatigue-customer-radar-data-reveals-consumers-want-good-service-without-covid-excuse/VXE4S37BKBGCDWCGGGNH7BXS74/

Yoshihiro, T., & Tomoaki, Y. (2011). *Big Bath and Management Change* https://repository.kulib.kyoto-u.ac.jp/dspace/bitstream/2433/145954/1/123.pdf

Zattoni, A., & Pugliese, A. (2021). Corporate Governance Research in the Wake of a Systemic Crisis: Lessons and Opportunities from the COVID-19 Pandemic. *Journal of Management Studies, 58*(5), 1405-1410. https://doi.org/10.1111/joms.12693

Appendix 1

List of Companies

| Item | Name | Industry |
|---|---|---|
| 1 | Westpac Banking Corporation | Financial |
| 2 | Australia and New Zealand Banking Group Limited | Financial |
| 3 | F & C Investment Trust Plc | Financial |
| 4 | AMP Limited | Financial |
| 5 | Australian Foundation Investment Company Limited | Financial |
| 6 | Templeton Emerging Markets Plc | Financial |
| 7 | City of London Investment Trust Plc | Financial |
| 8 | The banker's investment trust plc | Financial |
| 9 | JP Morgan Global Growth and Income Plc | Financial |
| 10 | Heartland Group Holdings Limited | Financial |
| 11 | Kingfish Limited | Financial |
| 12 | NZX Limited | Financial |
| 13 | Fonterra Shareholders Fund | Financial |
| 14 | Telstra Corporation Limited | Utilities |
| 15 | Spark New Zealand Limited | Utilities |
| 16 | Chorus Limited | Utilities |
| 17 | Serko Limited | Utilities |
| 18 | Vista Group International Limited | Utilities |
| 19 | Pushpay Holdings Limited | Utilities |
| 20 | Gentrack Group Ltd | Utilities |
| 21 | Plexure Group | Utilities |
| 22 | Sky Network Television Limited | Utilities |
| 23 | Paysource Limited | Utilities |
| 24 | Enprise Group Limited | Utilities |
| 25 | Meridian Energy Limited | Utilities |
| 26 | Mercury NZ Limited | Utilities |
| 27 | Contact Energy Limited | Utilities |
| 28 | Infratil Limited | Utilities |
| 29 | Vector Limited | Utilities |
| 30 | Genesis Energy | Utilities |
| 31 | Tilt Renewables Limited | Utilities |
| 32 | Trustpower Limited | Utilities |
| 33 | Z Energy Limited | Utilities |
| 34 | Auckland International Airport Limited | Transport and logistic |
| 35 | Mainfreight Limited | Transport and logistic |
| 36 | Port of Tauranga Ltd | Transport and logistic |
| 37 | Freightways Limited | Transport and logistic |
| 38 | Napier Port Holdings Limited | Transport and logistic |
| 39 | Air New Zealand | Transport and logistic |
| 40 | Marsden Maritime Holdings Ltd | Transport and logistic |

| | | |
|---|---|---|
| 41 | South Port New Zealand Ltd | Transport and logistic |
| 42 | Til Logistic Group Limited | Transport and logistic |
| 43 | QEX Logistics | Transport and logistic |
| 44 | Fisher & Paykel Healthcare Corporation Limited | Manufacturing & industrial |
| 45 | The a2 Milk Company Limited | Manufacturing & industrial |
| 46 | Delegat Group Limited | Manufacturing & industrial |
| 47 | Skellerup Holdings Limited | Manufacturing & industrial |
| 48 | Synlait Milk Limited | Manufacturing & industrial |
| 49 | Scales Corporation Limited | Manufacturing & industrial |
| 50 | Sanford Limited | Manufacturing & industrial |
| 51 | PGG Wrightson Ltd | Manufacturing & industrial |
| 52 | Seeka Limited | Manufacturing & industrial |
| 53 | Scott Technology Ltd | Manufacturing & industrial |
| 54 | Fletcher Building Limited | Manufacturing & industrial |
| 55 | Steel and Tube Holdings Ltd | Manufacturing & industrial |
| 56 | Ikegps Group Ltd | Manufacturing & industrial |
| 57 | Metro Performance Glass | Manufacturing & industrial |
| 58 | Wellington Drive Technologies Ltd | Manufacturing & industrial |
| 59 | Ryman Healthcare Limited | Healthcare and Retirement |
| 60 | Summerset Group Holdings Limited | Healthcare and Retirement |
| 61 | Arvida Group Limited | Healthcare and Retirement |
| 62 | Oceania Healthcare Group | Healthcare and Retirement |
| 63 | Pacific Edge Limited | Healthcare and Retirement |
| 64 | Green Cross Health | Healthcare and Retirement |
| 65 | Third Age Health Services Limited | Healthcare and Retirement |
| 66 | Ebos Group Limited | Retail, Accommodation & Food Services |
| 67 | Briscoe Group limited | Retail, Accommodation & Food Services |
| 68 | The Warehouse Group Limited | Retail, Accommodation & Food Services |
| 69 | Kathmandu Holdings Ltd | Retail, Accommodation & Food Services |
| 70 | Hallenstein Glasson Holdings Ltd | Retail, Accommodation & Food Services |
| 71 | Skycity Entertainment Group Limited | Retail, Accommodation & Food Services |
| 72 | Michael Hill International Limited | Retail, Accommodation & Food Services |
| 73 | Turners Automotive Group Limited | Retail, Accommodation & Food Services |
| 74 | Restaurant Brands New Zealand Limited | Retail, Accommodation & Food Services |
| 75 | My food bag | Retail, Accommodation & Food Services |
| 76 | Millennium & Copthorne Hotels New Zealand Ltd | Retail, Accommodation & Food Services |
| 77 | Comvita Ltd | Retail, Accommodation & Food Services |

| | | |
|---|---|---|
| 78 | Cooks Global Foods Limited | Retail, Accommodation & Food Services |
| 79 | Burger Fuel Group Limited | Retail, Accommodation & Food Services |
| 80 | Good Spirits hospitality | Retail, Accommodation & Food Services |
| 81 | Goodman Property Trust | Commercial property Real Estate |
| 82 | Precinct Properties New Zealand limited | Commercial property Real Estate |
| 83 | Kiwi Property Group Limited | Commercial property Real Estate |
| 84 | Vital Healthcare Property Trust | Commercial property Real Estate |
| 85 | Property for Industry Limited | Commercial property Real Estate |
| 86 | Argosy Property Limited | Commercial property Real Estate |
| 87 | Stride Property Limited | Commercial property Real Estate |
| 88 | Investore Property Limited | Commercial property Real Estate |
| 89 | CDL Investment New Zealand Limited | Commercial property Real Estate |
| 90 | Asset Plus Limited | Commercial property Real Estate |

Appendix 2

Exchange rate conversions

| Date | NZD | AUD | GBP | USD |
|---|---|---|---|---|
| 31 Dec 2018 | 1 | 1.04878 | 1.88933 | 1.48881 |
| 31 Dec 2019 | 1 | 1.04048 | 1.95104 | 1.48752 |
| 31 Dec 2020 | 1 | 1.06547 | 1.88787 | 1.39046 |

Source: https://www1.oanda.com/currency/converter/

Appendix 3

| No | **Discretionary Disclosure item** |
|---|---|
| | *Financial related* |
| 1 | Increased provisions |
| 2 | Higher impairment |
| 3 | Goodwill impairment |
| 4 | Reduction in tax expense |
| 5 | Increased borrowings |
| 6 | Reduce or no dividend |
| 7 | COVID related donations |
| 8 | Uncertainty in valuation |
| 9 | Forward-looking statements |
| 10 | Increase in expected credit loss |
| 11 | Significant impact on accounting estimates |
| 12 | Risk of inadequate capital levels |
| 13 | Market volatility |
| | *Employee related* |
| 14 | Total redundancies |
| 15 | Work from home |
| 16 | Employee mental wellbeing |
| 17 | New employees |
| 18 | Remuneration reduction of executives and higher |
| 19 | CEO resigned |
| | *Customer-related* |
| 20 | Increase in customer inquiries |
| 21 | Delay in responding to customers |
| 22 | Customer COVID support |
| 23 | Repayment deferrals |
| 24 | Customer bankruptcy risk |
| | *Governance related* |
| 25 | Health and safety of customers |
| 26 | Operational changes |
| 27 | Strategic changes |
| 28 | Internal Audit |
| 29 | Audit committees |
| 30 | New health and safety policies |
| 31 | New technology |
| 32 | Special COVID disclosure section |
| 33 | Non-COVID challenges |

Appendix 4

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Skewness | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Leaverage_lg | 176 | .00 | 1.48 | .3206 | .26059 | 1.619 | .183 | 3.456 | .364 |
| Size_of_Board | 180 | 3 | 13 | 6.45 | 1.632 | .597 | .181 | 1.390 | .360 |
| Number_of_meetings | 177 | 0 | 27 | 9.81 | 4.457 | .735 | .183 | 1.596 | .363 |
| Net_Income_lg | 145 | -.72 | 3.85 | 1.7005 | .82906 | -.286 | .201 | .490 | .400 |
| Market_Share_lg | 180 | .66 | 4.96 | 2.9572 | .82370 | -.227 | .181 | .089 | .360 |
| Change_in_Disclosure_Score | 85 | -.02 | 2.90 | 1.0332 | .66075 | .496 | .261 | -.301 | .517 |
| Valid N (listwise) | 63 | | | | | | | | |

Appendix 5

**Correlations**

| | | Leaverage_lg | Size_of_Board | Number_of_meetings | Net_Income_lg | Market_Share_lg | Change_in_Disclosure_Score |
|---|---|---|---|---|---|---|---|
| Leaverage_lg | Pearson Correlation | 1 | .291** | .417** | .173* | .192* | .517** |
| | Sig. (2-tailed) | | <.001 | <.001 | .039 | .011 | <.001 |
| | N | 176 | 176 | 173 | 144 | 176 | 84 |
| Size_of_Board | Pearson Correlation | .291** | 1 | .231** | .544** | .575** | .376** |
| | Sig. (2-tailed) | <.001 | | .002 | <.001 | <.001 | <.001 |
| | N | 176 | 180 | 177 | 145 | 180 | 85 |
| Number_of_meetings | Pearson Correlation | .417** | .231** | 1 | .127 | .120 | .679** |
| | Sig. (2-tailed) | <.001 | .002 | | .131 | .113 | <.001 |
| | N | 173 | 177 | 177 | 143 | 177 | 85 |
| Net_Income_lg | Pearson Correlation | .173* | .544** | .127 | 1 | .902** | .407** |
| | Sig. (2-tailed) | .039 | <.001 | .131 | | <.001 | <.001 |
| | N | 144 | 145 | 143 | 145 | 145 | 63 |
| Market_Share_lg | Pearson Correlation | .192* | .575** | .120 | .902** | 1 | .336** |
| | Sig. (2-tailed) | .011 | <.001 | .113 | <.001 | | .002 |
| | N | 176 | 180 | 177 | 145 | 180 | 85 |
| Change_in_Disclosure_Score | Pearson Correlation | .517** | .376** | .679** | .407** | .336** | 1 |
| | Sig. (2-tailed) | <.001 | <.001 | <.001 | <.001 | .002 | |
| | N | 84 | 85 | 85 | 63 | 85 | 85 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 6

**Correlations**

| | | FIN | UTandTL | MI | HR | RAFS | CPRE | Essential | Change_in_Disclosure_Score |
|---|---|---|---|---|---|---|---|---|---|
| FIN | Pearson Correlation | 1 | -.291** | -.184* | -.119 | -.184* | -.145 | -.235** | -.122 |
| | Sig. (2-tailed) | | <.001 | .014 | .111 | .014 | .052 | .002 | .266 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| UTandTL | Pearson Correlation | -.291** | 1 | -.316** | -.205** | -.316** | -.250** | .303** | .312** |
| | Sig. (2-tailed) | <.001 | | <.001 | .006 | <.001 | <.001 | <.001 | .004 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| MI | Pearson Correlation | -.184* | -.316** | 1 | -.130 | -.200** | -.158* | .071 | -.166 |
| | Sig. (2-tailed) | .014 | <.001 | | .082 | .007 | .034 | .346 | .128 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| HR | Pearson Correlation | -.119 | -.205** | -.130 | 1 | -.130 | -.103 | .158* | -.153 |
| | Sig. (2-tailed) | .111 | .006 | .082 | | .082 | .170 | .034 | .161 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| RAFS | Pearson Correlation | -.184* | -.316** | -.200** | -.130 | 1 | -.158* | .010 | .074 |
| | Sig. (2-tailed) | .014 | <.001 | .007 | .082 | | .034 | .893 | .500 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| CPRE | Pearson Correlation | -.145 | -.250** | -.158* | -.103 | -.158* | 1 | -.423** | -.099 |
| | Sig. (2-tailed) | .052 | <.001 | .034 | .170 | .034 | | <.001 | .369 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| Essential | Pearson Correlation | -.235** | .303** | .071 | .158* | .010 | -.423** | 1 | .122 |
| | Sig. (2-tailed) | .002 | <.001 | .346 | .034 | .893 | <.001 | | .266 |
| | N | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 85 |
| Change_in_Disclosure_Score | Pearson Correlation | -.122 | .312** | -.166 | -.153 | .074 | -.099 | .122 | 1 |
| | Sig. (2-tailed) | .266 | .004 | .128 | .161 | .500 | .369 | .266 | |
| | N | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 7

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .823[a] | .677 | .608 | .41654 | .677 | 9.728 | 11 | 51 | <.001 |

a. Predictors: (Constant), CPRE, Net_Income_lg, HR, MI, Leaverage_lg, FIN, RAFS, Number_of_meetings, Size_of_Board, Essential, Market_Share_lg

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 18.567 | 11 | 1.688 | 9.728 | <.001[b] |
| | Residual | 8.849 | 51 | .174 | | |
| | Total | 27.416 | 62 | | | |

a. Dependent Variable: Change_in_Disclosure_Score

b. Predictors: (Constant), CPRE, Net_Income_lg, HR, MI, Leaverage_lg, FIN, RAFS, Number_of_meetings, Size_of_Board, Essential, Market_Share_lg

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.952 | .444 | | -2.145 | .037 |
| | Market_Share_lg | .369 | .185 | .412 | 2.002 | .051 |
| | Size_of_Board | -.020 | .045 | -.051 | -.447 | .657 |
| | Number_of_meetings | .067 | .015 | .487 | 4.405 | <.001 |
| | Leaverage_lg | .334 | .281 | .131 | 1.190 | .239 |
| | Net_Income_lg | .009 | .172 | .011 | .055 | .957 |
| | Essential | .243 | .164 | .177 | 1.482 | .145 |
| | FIN | -.340 | .198 | -.180 | -1.719 | .092 |
| | MI | -.359 | .173 | -.191 | -2.078 | .043 |
| | HR | -.051 | .256 | -.019 | -.199 | .843 |
| | RAFS | .186 | .181 | .107 | 1.028 | .309 |
| | CPRE | .079 | .236 | .040 | .335 | .739 |

a. Dependent Variable: Change_in_Disclosure_Score

Appendix 8

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .220[a] | .048 | .028 | .15678 | .048 | 2.413 | 3 | 143 | .069 |

a. Predictors: (Constant), Accounting_experties_of_Board_members, Essential, Total_Disclosure_Score

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .178 | 3 | .059 | 2.413 | .069[b] |
| | Residual | 3.515 | 143 | .025 | | |
| | Total | 3.693 | 146 | | | |

a. Dependent Variable: AbsRES_1

b. Predictors: (Constant), Accounting_experties_of_Board_members, Essential, Total_Disclosure_Score

**Correlations**

| | | Change_in_Disclosure_Score | Total_Disclosure_Score | Essential | Market_Share_lg | ROA_log | Leaverage_lg | ChgRev_ChgRecbyAt_1 | AbsRES_1 | Accounting_experties_of_Board_members |
|---|---|---|---|---|---|---|---|---|---|---|
| Change_in_Disclosure_Score | Pearson Correlation | 1 | .850** | .122 | .336** | -.285* | .517** | -.062 | .009 | .222* |
| | Sig. (2-tailed) | | <.001 | .266 | .002 | .024 | <.001 | .571 | .941 | .041 |
| | N | 85 | 85 | 85 | 85 | 63 | 84 | 85 | 73 | 85 |
| Total_Disclosure_Score | Pearson Correlation | .850** | 1 | .231** | .317** | -.336** | .536** | .057 | -.084 | .295** |
| | Sig. (2-tailed) | <.001 | | .002 | <.001 | <.001 | <.001 | .455 | .310 | <.001 |
| | N | 85 | 172 | 172 | 172 | 138 | 169 | 172 | 147 | 172 |
| Essential | Pearson Correlation | .122 | .231** | 1 | .054 | .102 | .225** | .089 | .144 | .094 |
| | Sig. (2-tailed) | .266 | .002 | | .469 | .222 | .003 | .235 | .074 | .211 |
| | N | 85 | 172 | 180 | 180 | 145 | 176 | 180 | 154 | 180 |
| Market_Share_lg | Pearson Correlation | .336** | .317** | .054 | 1 | -.152 | .192* | .253** | -.242** | .296** |
| | Sig. (2-tailed) | .002 | <.001 | .469 | | .069 | .011 | <.001 | .002 | <.001 |
| | N | 85 | 172 | 180 | 180 | 145 | 176 | 180 | 154 | 180 |
| ROA_log | Pearson Correlation | -.285* | -.336** | .102 | -.152 | 1 | -.524** | -.212* | .270** | -.303** |
| | Sig. (2-tailed) | .024 | <.001 | .222 | .069 | | <.001 | .011 | .002 | <.001 |
| | N | 63 | 138 | 145 | 145 | 145 | 144 | 145 | 124 | 145 |
| Leaverage_lg | Pearson Correlation | .517** | .536** | .225** | .192* | -.524** | 1 | .345** | -.051 | .272** |
| | Sig. (2-tailed) | <.001 | <.001 | .003 | .011 | <.001 | | <.001 | .538 | <.001 |
| | N | 84 | 169 | 176 | 176 | 144 | 176 | 176 | 150 | 176 |
| ChgRev_ChgRecbyAt_1 | Pearson Correlation | -.062 | .057 | .089 | .253** | -.212* | .345** | 1 | -.009 | .237** |
| | Sig. (2-tailed) | .571 | .455 | .235 | <.001 | .011 | <.001 | | .914 | .001 |
| | N | 85 | 172 | 180 | 180 | 145 | 176 | 180 | 154 | 180 |
| AbsRES_1 | Pearson Correlation | .009 | -.084 | .144 | -.242** | .270** | -.051 | -.009 | 1 | -.144 |
| | Sig. (2-tailed) | .941 | .310 | .074 | .002 | .002 | .538 | .914 | | .075 |
| | N | 73 | 147 | 154 | 154 | 124 | 150 | 154 | 154 | 154 |
| Accounting_experties_of_Board_members | Pearson Correlation | .222* | .295** | .094 | .296** | -.303** | .272** | .237** | -.144 | 1 |
| | Sig. (2-tailed) | .041 | <.001 | .211 | <.001 | <.001 | <.001 | .001 | .075 | |
| | N | 85 | 172 | 180 | 180 | 145 | 176 | 180 | 154 | 180 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 9

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .220[a] | .048 | .028 | .15678 | .048 | 2.413 | 3 | 143 | .069 |

a. Predictors: (Constant), Accounting_experties_of_Board_members, Essential, Total_Disclosure_Score

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .178 | 3 | .059 | 2.413 | .069[b] |
| | Residual | 3.515 | 143 | .025 | | |
| | Total | 3.693 | 146 | | | |

a. Dependent Variable: AbsRES_1

b. Predictors: (Constant), Accounting_experties_of_Board_members, Essential, Total_Disclosure_Score

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .132 | .048 | | 2.731 | .007 |
| | Essential | .054 | .027 | .163 | 1.981 | .049 |
| | Total_Disclosure_Score | -.013 | .016 | -.067 | -.791 | .430 |
| | Accounting_experties_of_Board_members | -.023 | .014 | -.142 | -1.679 | .095 |

a. Dependent Variable: AbsRES_1

Appendix 10.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .231[a] | .053 | .012 | .12010 | .053 | 1.297 | 3 | 69 | .283 |

a. Predictors: (Constant), Accounting_experties_of_Board_members, Essential, Change_in_Disclosure_Score

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .056 | 3 | .019 | 1.297 | .283[b] |
| | Residual | .995 | 69 | .014 | | |
| | Total | 1.051 | 72 | | | |

a. Dependent Variable: AbsRES_1

b. Predictors: (Constant), Accounting_experties_of_Board_members, Essential, Change_in_Disclosure_Score

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .082 | .037 | | 2.225 | .029 |
| | Essential | .053 | .029 | .212 | 1.799 | .076 |
| | Change_in_Disclosure_Score | .007 | .023 | .036 | .306 | .760 |
| | Accounting_experties_of_Board_members | -.015 | .015 | -.119 | -.997 | .322 |

a. Dependent Variable: AbsRES_1