Abdullahi Hassan YUSUF

THE EFFECTS OF COVID-19 ON THE BUSINESS PERFORMANCE M.Sc. THESIS

OF BUSINESS SECTORS OF TURKEY

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APPROVAL

We certify that we have read the thesis submitted by **Abdullahi Hassan YUSUF**titled "**The Effects of Covid-19 on the Business Performance of Business Sectors of Turkey**" and that in our combined opinion it is fully adequate, in scope and in quality, in scope and in quality, as a thesis for the degree of Master of Business Administration

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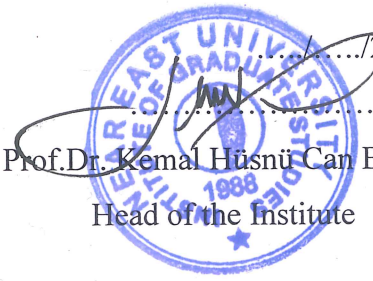

DECLARATION

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Abdullahi Hassan YUSUF

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ABSTRACT

The effects of Covid-19 on the business performance of business sectors of Turkey

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The outbreak of the Covid-19 pandemic towards the end of 2019 and in the early months of 2020 in other world countries has caused many devastating effects on the performance of organisations. The current research Thesis is aimed at examining the effect of the Covid-19 crisis among the 17 business sectors of Turkey. The current research also employs the PMG-ARDL technique which gives strong and robust results, hence the current findings are reliable for making policies. The study period ranges from 2009 to 2020 and is quarterly data. The major findings of the research show that, among the 17 business sectors of Turkey, the Covid-19 pandemic provides for a significant long-run positive effect on the ROE and an insignificant effect ROA. Equity to assets ratio, equity to debt ratio and leverage ratio are observed to positively impact ROA, while long-term debt to total debt negatively impacts ROA. Long-term debt to total debt, equity to debt ratio and leverage ratio are observed to positively impact ROA, while Equity to assets ratio negatively impacts ROE. The current research recommends measures to be put to reduce the severity of Covid-19 effects on the performance of businesses as well as the use of using mixed financing in business finance that is both equity and debt.

***Keywords*:** Covid-19; Business Performance; Capital Structure; Turkey.

Özet

Covid-19'un Türkiye'dekiişsektörlerininişperformansınaetkileri

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2019'un sonlarına doğru ve 2020'Nin ilk aylarında diğer dünya ülkelerinde patlak veren Covid-19 pandemisi, kuruluşların performansı üzerinde birçok yıkıcı etkiye neden oldu. Mevcut araştırma Tezi, Covid-19 krizinin Türkiye'nin 17 iş sektörü üzerindeki etkisini incelemeyi amaçlamaktadır. Mevcut araştırma, güçlü ve sağlam sonuçlar veren PMG-ARDL tekniğini de kullanmaktadır, bu nedenle mevcut bulgular politika oluşturmak için güvenilirdir. Çalışma dönemi 2009 ile 2020 arasında değişmektedir ve üç aylık verilerdir. Araştırmanın önemli bulguları, Türkiye'nin 17 iş sektörü arasında, Covid-19 salgınının ROE üzerinde uzun vadeli önemli bir pozitif etki ve ROA üzerinde önemsiz bir etki sağladığını göstermektedir. Özkaynak/varlık oranı, özkaynak/borç oranı ve kaldıraç oranının ROA'yı olumlu etkilediği, uzun vadeli borcun toplam borcun ROA'yı olumsuz etkilediği görülmektedir. Uzun vadeli borcun toplam borca, öz sermayenin borca oranı ve kaldıraç oranının ROA'yı olumlu etkilediği, özkaynakların aktiflere oranının ise ROE'yi olumsuz etkilediği görülmektedir. Mevcut araştırma, Covid-19'un işletmelerin performansı üzerindeki etkilerinin şiddetini azaltmak için alınacak önlemlerin yanı sıra işletme finansmanında hem özkaynak hem de borç olan karma finansmanın kullanılmasını önermektedir.

***AnahtarKelimeler*:** Covid-19; İşperformansı; Sermayeyapısı; Türkiye

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey Fuller
CS	Capital Structure
DPD	Dynamic Panel Data
EA	Equity to Assets
ED	Equity to Debt
FE	Fixed Effects
FP	Firm Performance
GARCH	Generalized Autoregressive Conditional Heteroskedasticity
G-20	Group of Twenty, an intergovernmental forum comprising 19 countries and the European Union (EU).
IFRS	International Financial Reporting Standards
LTD.TD	Long-term debt to total debt
MM	Modigliani-Miller
OLS	Ordinary Least Squares
PP	Philips Peron
RE	Random Effects
ROA	Return on Assets
ROE	Return on Equity
SME's	Small and Medium-sized Enterprises
STD.TD	Short-term debt to total debt
U.S.	United States
W.H. O	World Health Organization
PMG-ARDL	The panel Pooled Mean Group – Autoregressive Distributed Lag
ECT	Error Correction Term

CHAPTER I
INTRODUCTION

The starting point on the study of the performance of firms is the capital structure theories. The study by Shahar, Shahar et al. (2015); provides that the theories of capital structure are many and they range from the pecking order, the trade-off, market timing, the agency cost, the signalling and the free cash flow theories(Adomako and Danso 2014). The pecking order theory and the trade-off theory are regarded as the traditional capital structure theories. According to the study of (Shahar, Shahar et al. 2015); the trade-off theory by (Modigliani and Miller 1963)is the earliest and most recognized theory of capital structure, while the pecking order theory is gaining ground and hence rising to become one of the most popular theories.

According to the studies of (Mostafa and Boregowda 2014); (Abdullah and Tursoy 2021) the first capital structure theory is the Modigliani-Miller proposition. It assumes for the existence of capital structure in a world that is perfect, in such a way that the decisions of financing have no effect on company value. (Shahar, Shahar et al. 2015, Abdullah and Tursoy 2021). Under this proposition the conditions of the capital market are considered perfect, meaning that taxes, transaction costs and asymmetric of information does not exists (Modigliani and Miller 1958). The trade-off theory according to (Modigliani and Miller 1963)analyses capital structure under the conditions of presence of interest on debt and taxes (Shahar, Shahar et al. 2015); Bandana, 2012). Under the trade-off theory, debt funds are utilized as tax saving benefits; however, this comes along with bankruptcy costs as well as agent costs. Under the trade-off theory alludes that, businesses are financed via equity or debt finance, (Butt, Khan et al. 2013).

The pecking order theory has got its basis anchored on the information asymmetry between investors and managers and was introduced through the work of (Myers 1984); as well as (Myers and Majluf 1984). Under the pecking order theory, the first source of finance is the internal sources, which are first used before resorting to other sources of finance. After the internal sources of finance has been exhausted, then debt finance is used and lastly equity (Bundala 2012); (Cotei and Farhat 2009).

The retained earnings of a company are referred to as the internal sources of finance. While debt finance is sourced from investors who are outside of the business. Debt or thus are not owners of the business. The major reason behind the preference of debt finance over equity is the tax advantage of debt finance. The pecking order theory gives that manager hold more information than the shareholders of a business, hence the existence of asymmetric information. Therefore, ways on how to mitigate the existence of asymmetric information by giving incentives to managers so that they act for the good of the shareholders needs to be put in place.

The agency cost theory, according to (Jansen and Meckling 1976) shoes the existence of a relationship among one or more parties, the principal(s) who hires another part, agent, to undertake various activities on the principal's behalf. The principal need to put measures to control the agent to act in the best interest of the principal. However, it is difficult to fully monitor the actions of agents, (Jansen and Meckling 1976). The agency cost in a firm arises due to the conflict of interest that exists between the agent and the principal, (Abdullah and Tursoy 2021). The two major categories in which agency costs are divided are the agency cost of equity and the debt agency costs, (Abdullah and Tursoy 2021). The study by (Baker and Wurgler 2002)introduced another type of capital structure theory which is known as market timing. The market timing theory entails that when the value of the market of companies' equity is high, then companies tend to issue equity and tend to buy equity when market value of equity has fallen below its book value. Market timing in the buying and selling of equity is meant to benefit from the short-term fluctuations in the prices and it is crucial for the financial policy of the firm.

At this juncture, we have seen the basic theories of capital structure in inducing business performance. Recent studies have also observed that apart from capital structure, other factors such as IFRS adoption have great impact on the performance of Businesses (Abdullah and Tursoy 2021); (Karğın 2013); (Agyei-Boapeah, Machokoto et al. 2020); (Uyar and Güngörmüş 2013); among many). These studies shows that the adoption of IFRS has led to high performances among business, even though some other studies present opposing results. Other studies have also observed that crises are a major factor that affects the performance of Businesses around the world. For example, the 2008 global financial crisis was observed to cause major negative effects

on firm performance (Zhang and Sogn-Grundvåg 2022). Great importance on the effect of the performance firms is the recent Covid-19 pandemic which has caused a lot of harm to the activities of Businesses. To this day quite a good number of researches have been employed to analyze the effect of the COVID-19 effects on business performance (see, (Cheng and Kao 2022); (Chen, Demir et al. 2020); (Nový and Nováková 2022); (Ben-Ahmed, Ayadi et al. 2022); (Zhang and Sogn-Grundvåg 2022); (Zhang and Zheng 2022)among others). These studies show that the outbreak of the COVID-19 pandemic has negatively affected firm performance in various ways. Production of goods and services has been observed to fall during periods of the pandemic in comparison to be periods before the pandemic.

Other indicators of firm performance such as profitability, sales and stock returns have also been observed during the period of years pandemic. Not only did business performance affected, rather many other business areas have been affected, for example the existence of market volatility and contagion in the period of COVID-19 pandemic (see, (Piñeiro-Chousa, López-Cabarcos et al. 2022)foreign ownership among companies is observed to slow down (Zhang and Sogn-Grundvåg 2022), the construction sector declined (Nový and Nováková 2022), while it is observed that the online food delivery business boomed with some little challenges on the customers perceptions. Labour force also slowed down due to health issues. Therefore, it is clear the COVID-19 pandemic caused some devastating effects on business performance and hence studies should be done to ascertain its impact. This will go a long way in coming up with policies to mitigate these effects.

The current dissertation is aimed at assessing the effect of the pandemic of Covid-19 on company performance of various Turkish firms of Turkey. This research is different from other researches that were done by previous researchers in that it makes use 17 sectors of Turkey for the period that ranges from 2009 to 2020. This research uses quarterly data of these 17 sectors. Unlike past researches that used the number of deaths or cases of Covid-19, this research uses binary data to indicate periods where there was no pandemic outbreak as 0 and periods of the pandemic as 1.

The panel Pooled Mean Group – Autoregressive Distributed Lag (PMG-ARDL) analysis is used for data analysis. The major findings of the research show that, among the 17 business sectors of Turkey, the Covid-19 pandemic provides for a significant long-run positive effect on the ROE and an insignificant effect ROA. Equity to assets ratio, equity to debt ratio and leverage ratio are observed to positively impact ROA, while long-term debt to total debt negatively impacts ROA. Long-term debt to total debt, equity to debt ratio and leverage ratio are observed to positively impact ROA, while Equity to assets ratio negatively impacts ROE.

Study Aim

To understand the effects of the Covid-19 pandemic on business performance in the 17 sectors of Turkey.

Research Questions

1. What is the effects of Covid-19 pandemic have on firm performance?
2. Do capital structure offers a significant positive effect of firm performance?
3. Is the business performance high before the pandemic and low during the pandemic?

Goals

1. To understand the effects of Covid-19 pandemic on business Performance.
2. To examine the role of capital structure of firm performance
3. To compare the performance of Businesses prior and during and after The pandemic.

Study strength

The strength of the current research is as follows: (1) it uses ROA and ROE, the major profitability ratios of a firm to measure firm performance. Profit maximization is by far the major motive of company owners to start up a business, hence a company that produces high profit is considered to be performing well, while companies with a long history of losses are considered to be poorly performance and heading towards bankruptcy. (2) The current research takes into consideration the major theories of capital structure which gives the importance of debt and equity in a business, hence including these factors in the model. (3) The current research also employs the PMG-ARDL technique which gives strong and robust results; hence the current findings are reliable for making policies.

Study Limitations

The current study is limited in that, it only employs ROA and ROE to proxy firm performance. The other firm performance proxies such as stock price, Tobin Q, market to book ratio and stock returns have not been included due to unavailability in the data streams.

CHAPTER II
LITERATURE REVIEW

Theoretical review

The capital structure theories have been long considered as consisting of the pecking order theory, trade-off theory, agency cost theory, the free cash flow theory, the signalling theory, and the market timing theory(Shahar, Shahar et al. 2015); (Adomako and Danso 2014). According to (Shahar, Shahar et al. 2015); the pecking order as well as the trade-off theories are considered as the traditional capital structure theories, while the signalling, market timing, free cash flow, and the agency cost theories are the contemporary ones (Adomako and Danso 2014). According to (Shahar, Shahar et al. 2015), the trade-off theory of capital structure is more recognised than other capital structure theories. However, pecking order theory seems to be growing and becoming more popular in comparison to other capital structure theories.

The first theory of capital structure whose practicality is subject to question is the Modigliani-Miller (MM) proposition(Shahar, Shahar et al. 2015); Mostafa &Boregowda, 2014; (Abdullah and Tursoy 2021). (Shahar, Shahar et al. 2015); (Abdullah and Tursoy 2021) alludes that this proposition is of the assumption of the existence of capital structure in a perfect world in such a way that the company's value will not be affected by the financing decisions. It is however the company's size that is responsible for influencing the value of the firm (Abdullah and Tursoy 2021). The Modigliani-Miller proposition, assumes perfect conditions of capital market, that is, no asymmetry of information, no taxes and costs of transactions(Modigliani and Miller 1958),. In real life the existence of these assumptions is questionable; hence its applicability to real life is limited. The MM proposition also sets quite a good number of assumptions, that is, firms have no risks classes that are different, non-existence of perpetual flow of cash and growth factor of cash flow, in ideal capital markets there is no transaction costs and bankruptcy, same firm risk classes, equity with risk and debt without risk to be the only claims issued by companies, and the existence of no moral hazard from managers since they solely work to maximize shareholder's profit.

(Modigliani and Miller 1963)is the father of the trade-off theory and unlike the MM proposition, the trade-off theory includes taxes and interest in the model,(Bundala 2012, Shahar, Shahar et al. 2015). The trade-off theory gives the benefit of using debt finance as that of tax saving, not forgetting that debt finance brings in the problem of bankruptcy costs, as well as agency costs, (Myers 1984)According to the postulations of (Butt, Khan et al. 2013), companies can either finance their activities by debt or equity finance. Tax benefit remains the major benefit of debt finance, (Butt, Khan et al. 2013). The study by (Butt, Khan et al. 2013)gives that mixed financing remains the best approach on business financing since this will allow for striking a balance between the disadvantages and advantages of debt finance and equity finance. The approach of using more and more of debt finance than equity is not viable in reducing the capital cost of a company, (Butt, Khan et al. 2013). When the level of leverage rises this may causethe creditors risk to rise thus also raising the creditors' required return rate. According to the postulations of (Bundala 2012) and (Myers 1984), if the market price of equity is undervalued, then managers will tend to issue it, debt according to (Bradley, Jarrell et al. 1984)is raised up until its marginal unit's satisfaction equals the debt costs, plus financial distress' high-cost probability.

The Pecking order theory was introduced through the work of (Myers 1984); (Myers and Majluf 1984). The capital structure theory of pecking order has its basis on the idea of information asymmetry that exists between investors on one hand and managers on the other. According to (Bundala 2012); Cote and Ferhat (2009) organisations have a tendency of starting to finance their activities through the use of external sources of finance, such as retained profits. Once the retained profits have been exhausted or have been observed not to be sufficient, debt finance becomes the second option and lastly equity finance. The preference of debt finance over equity is because it has the tax advantage. Interest on debt is not taxes by the government, hence debt finance is preferred.

According to (Cotei and Farhat 2009), the capital structure theory of Pecking order is based more on the issue of asymmetry information, where managers are considered to be the ones that are in possession of more and valuable information than the investors who happens to be the shareholders of the company. Managers are the ones that are responsible for the company's day to day running operations and they are informed on the riskiness of various business activities, the opportunities, business adventures and all the conditions related to the company. Managers fullycontrol thebusiness and are responsible forrunning it. Unlike, shareholders and investors who simply invest their money in a business enterprise and leave it in the hands of Managers. According to the pecking order theory alludes that the leverage of company is driven by the need to reduce asymmetric information rather than by trade-off and this explains why finance sources that are internal, are first preferred, while debtfinance is the next option in line and equity is the last option, (Cotei and Farhat 2009)

The capital structure theory of agency cost was pioneered through the work of (Jansen and Meckling 1976), which poses for the existence of an association between two or more persons, in which the first person(s) is the principal who engages the other person(s) known as the agent to undertake some specified tasks and responsibilities on behalf of the principal. This implied that, authority is delegated by the principal to the agent (Jansen and Meckling 1976). In the event that both parties in this association seeks to maximize utility, then the agent may not be in a position to be able to perform his duties in the principal's best interest. If the principal wishes the agent to perform in their best interest, then they need to come up with control measured for the agent. This will go a long way in stopping the agent from diverting to the interests of the principal (Jansen and Meckling 1976). According to (Jansen and Meckling 1976), there are generally two ways by which the principal may control agents, that is, by incurring some extra costs of monitoring and by giving agents some incentives. The studies by (Eisenhardt 1989); Jansen (1986); (Berger and Di Patti 2006); (Jerzemowska 2006); (Margaritis and Psillaki 2010) also gave a great insight on the idea behind the agency cost theory and how the issue of agency costs arises.

Market timing theory is one of the most crucial theories of capital structure which was pioneered by(Baker and Wurgler 2002). This theory diverts from the idea of the trade-off theory and pecking order theory on the preferences between issuing equity or debt financeby alluding that, in the event that the equity's market value is high compared to its book value then equity may be issued (Baker and Wurgler 2002). It also follows that when equity's market value drops, then firms will tend to repurchase it. Thus, the market timing technique is employed to take advantage of fluctuations in the prices, which allows firms to earn profit after various repeated actions of buying and selling of equity. The market timing theory is still new in the field, hence not much work has been done to ascertain its practicality (Adomako and Danso 2014).

Empirical studies review

To begin with, the study by (Bai and Ho 2022) that was done in the 31 selected countries during the period 2002 to 2020, by employing the Fixed Effects and the Pooled OLS models observed that corporate social performance provides for a positive significant effect of the debt levels of company in a period that is before the Covid 19 pandemic. The study also provides the postulations that corporate social performance reduces stakeholder engagement constraints during the period before the Covid 19 pandemic. It is observed that corporate social performance during the pandemic period costs more, (Bai and Ho 2022). Corporate social performance during the Covid 19 pandemic causes more problems of managerial agency for the organizations. Moreover, it is observed that the relationship between the level of company debt and corporate social performance is not much pronounced in the nations that have institutional surroundings that are better, (Bai and Ho 2022).

Furthermore, the study by (Chen, Demir et al. 2020) in Taiwan in the year 2021, which utilized an online survey of 681 participants, and used the process of MACROfor data analysis purposes, observed the mediating effect of job stress activation on the job satisfaction of employees as well as the performance of hotels. A moderating effect of firm resilience on the stress of job is also observed. The findings also show that the mental health of people as caused by the pandemic are traumatic events' effects whose factors needs to be better understood in a society. The consequences of the pandemic that affect the psychology negatively needs to be minimized by applying some robust interventions.

(Brzeszczyński, Gajdka et al. 2022) in a study of the East Asia economies from 2016 to 2021 through the use of the beta coefficient observed that during the covid-19 period, companies' socially responsible investment risk sharply increased in a systematic manner. The risk patterns observed on various other markets is observed to be stable and remarkably resilient. The findings also give contradicting results in the case of East Asia as a comparison with the rest of the region. The findings in the East Asia shows that systematic risk of socially responsible investment organizations in the East Asian markets, during the period of the pandemic fell and this is in direct contradiction with socially responsible investment of organizations' systematic risk

that are in the socially responsible investment indices in the world region, (Brzeszczyński, Gajdka et al. 2022).

(Ecer and Pamucar 2021) in a study of Turkey also used the MARCOS technique on 10 insurance companies, evaluated by 10 experts, by making use of 7 criteria. The findings from ten insurance firms were retrieved and was ranked according to their service of health care during the time of the Covid 19. It is observed that, the most crucial factors that were determined amongst insurance companies examined during this period is the network, premium price as well as the payback period, (Ecer and Pamucar 2021). The methodology's effectiveness and stability that is proposed in the study is verified by applying a comprehensive analysis of sensitivity. The assessment problem of insurance is met appropriately by this approach, during the time of the pandemic and the outcomes of the sensitivity analysis are observed to be very satisfactory. The sector of insurance should rely mostly on the three factors, that is, premium price, payback period and network in obtaining the insurance company that is most acceptable, (Ecer and Pamucar 2021). (García-Pérez-de-Lema, Madrid-Guijarro et al. 2022) in a different study in Spain, during the period that ranges from 11 May to 04 June 2020, which constituted of a field work of 612 SME's which applied the panel OLS method alludes that the activities of finance and investment of SME's has been negatively affected by its operating activities that has been negatively affected by the crisis of Covid-19.

The findings also shows that the policies that are aimed at enhancing the firms' competitiveness of SME's demands is greatly exacerbated by the rise in the negative effects of financing and investment. In the services and construction companies the covid-19 negative operating effects is greatly intensified by the negative effects from the financial activities more than that of manufacturing firms, (García-Pérez-de-Lema, Madrid-Guijarro et al. 2022). It is also observed that the covid-19 operating effects differently affects the level of investment effect and is observed to be highly crucial in the manufacturing in comparison to the service firms. The public measures employed to lessen the effects of Covid-19 exerted on SME's firms in the world over are observed to be labour policies, social policies, fiscal policies, monetary policies among many others. For the purpose of protecting SME's from being bankrupt, great support needs to be given from the government.

The SME's plays a vital role in sustaining the Gross Domestic Product and employment among world economies, (García-Pérez-de-Lema, Madrid-Guijarro et al. 2022).

(Chen, Demir et al. 2020) in a study of the U.S. from January 2 to April 30 2020, which employed the Fixed Effects and Random effects models observed that, after having controlled for the effects of the pandemic, it is observed that returns on stock are negatively affected by government restrictions' stringency. The study examines the effects that is generated by Covid-19 on the Leisure firms and U.S. stock returns. Leisure and travel companies' stock prices with cash reserves that are high, whose tangibility is less and whose size is small have been found to be more resilient to the government's restrictions of Covid-19. The restrictions are observed to be low on gambling, casinos, tourism and travel sectors in that order, while the airlines sectors are highly impacted by the restrictions. The stock returns of the leisure and travel sectors is observed to fall due to an increase of additional restrictions by the government. Accordingly, when government restrictions are eased, this will have the tendency of raising the stock returns on the leisure and travel sector companies. Stock prices resilience on restrictions is observed among companies that have high reserves in cash, have less tangibility and are small in size.

(Erasmus, Tutjavi et al. 2022)in a research survey of 45 fisheries done in the Namibia observed that the riskiest places were observed to be the mess rooms, and on-board vessels of fishing where the likelihood of contracting Covid-19 was high. The respondents at sea alluded that the pandemic of Covid-19 has greatly and in a negative way affected the observation since the fisheries observers seemed to be averse to the risk. The findings show 50% of the participants to have purported negative effects of biological data collection.

(Jin, Zhang et al. 2022) in research done in China during the period 2020 January – October, which employed the Fixed Effects model observed that, company innovation in China is inhibited by Covid-19 at national level. Regions in China has been observed not exhibit any significant differences on the impacts of Covid-19. For example, the province of Hubei is observed to exhibit similar effects to those of other regions. State owned companies have been observed to be negatively impacted by Covid-19 at a higher rate in comparison to private owned companies.

Innovations of medium and small sized companies are less likely to be affected by Covid-19 impacts, while that of large companies are found to be greatly affected.

Moreover, (Nový and Nováková 2022)in the Czech Republic in a 5 months survey that used interviews and qualitative data analysis, observed that during the first quarter of 2021 as well as in the year 2022, it is observed that the construction industry greatly decreased. The decline in the production of the construction industry is also forecasted to continue declining. Health problems which have been exacerbated by the Covid-19 are the major reasons behind a decline in the production of the construction industry together with sharp decline on the employees from abroad due to travel restrictions. Towards the end of the second quarter of year 2021, the construction industry begins to boom as the effect of the pandemic starts to slow down and the value sharply increases as compared to the previous year. The findings also show that inasmuch as the pandemic has been observed to negatively affect the construction industry to a greater extend, however some positive impacts are also observed.

(Ben-Ahmed, Ayadi et al. 2022) in a study undertaken in the 24 countries of the world during the period January to July 2020 on the 90 top digital companies which utilized the Dynamic Panel Data analysis method found out that, returns on the stock of digital companies significantly affected positively by the growth in the Covid-19 infected people and the death cases. The economic sectors of the nations are also observed to be slowed down by the crisis. The ratio of market to book and the returns on stockof companies are observed to have a positive interaction with Covid-19 pandemic. The total number of Covid-19 confirmed cases and the confirmed monthly cases of Covid-19 are positively related to stock returns positively, (Ben-Ahmed, Ayadi et al. 2022).

(Meena and Kumar 2022) in a study of India and U.S. from 2020, 01 February to 2021, 30 November employed the OLS model. The research findings show that during the period of the Covid-19, the business of food delivery greatly improved. During the pandemic period customers in the U.S. are found to have great concern on the finance, while those of India are observed to have concern over social responsibility. Customers in the U.S. are not satisfied by the companies of food delivery, while those of India shows signs of great satisfaction.

The sentiments of customers are also found to be moderated significantly by factors like; covid-19 waves, market size and country, as well as the brand of online food delivery firms.

Moreover, (Reis, dos Santos Moreira-Silva et al. 2022) in a survey study of Brazil on the 320 multinational firms which employed the Structural Equation Modelling alluded that the World Health Organization have provided recommendations that are meant to mitigate Covid-19's negative impacts on multinational companies' marketing, logistic and operational activities as well as the health and safety of the workers. The safety performance, health, markets, logistics and operations of companies are observed to have been severely impacted by the crisis. The pandemic effects on the performance of firms' marketing, logistics and operations are have observed to be mitigated by the WHO practices by 50%. The workers' absenteeism is observed to increase due to the increased rates of mental and physical problems as caused by the Covid-19, while only 1.8% of the negative impacts of the safety and health problems have been successfully mitigated by the WHO practices. The rate at which the WHO practices have mitigated the health and safety problems of the Covid-19 may be improved by maintaining the social distance rule in public transports as well as improving awareness on the side of employees to remain safe from contamination of the Covid-19 during the time of the social activities.

(Zhang and Sogn-Grundvåg 2022) in a survey study provides that financial revenue is found to be reduced by the effects of Covid-19, while liquidity demand is raised which end up causing firms financial stress all over the world. In a bid to mitigate the impacts of the pandemic by the government, quite a good number of credit programs were organized which were meant to give firms credit hence ease their financial stress. The relief programs that were introduced to ease the impact of Covid-19 have been found to be very low. It has been observed that identification of the most vulnerable companies has been difficult, hence making it difficult for the relief funds to reach those companies that are in need. It is also observed that the characteristics of firms the conditions of credit constraints have an impact on the severity of Covid-19 effect on the performance of the company. The crisis is also observed to severely affect small companies and those companies with limited finance access. Foreign owned companies and companies whose business operations are done in small cities have less risk.

The findings shows that credit constraints companies and foreign owned ones, in comparison to the global financial crisis of 2008 is less impacted by the Covid-19 crisis, while small to medium sized companies are observed to have been severely impacted.

(Lee and Cho 2022)also undertook another survey study that constituted of 188 participants which used a 7-point Likert scale. The study seeks to understand on how behavioural responses and public attitudinal are affected by corporate social responsibility fit. The findings shows that high level of public serving motive is generated by low/high corporate social responsibility fit as compared to that generated by high/low fit of corporate social responsibility. It is also observed that the Covid-19 valence's effect on the performance of companies has been changed by the impact of corporate social responsibility fit on the motives of public serving. Behavioural and attitudinal intentions are affected by the fit as moderated and mediated by Covid-19 valence and motives of public servings respectively. For the purposes of protecting against unexpected crisis such as the pandemic proper implications on the corporate social responsibility of stigmatized industry.

Furthermore, (Zhang and Zheng 2022)in a study done in China during the period 2019Q1 to 2021Q2 by using the RESSET, Fixed Effects models and dynamic difference-in-difference model, observed that sale related profitability of companies decrease due to Covid-19. The effects of the pandemic on companies are that it reduces the company's potential cash flow, increases the cost and enlongen the operation. The adverse shocks are significantly weakened by environmental tax. The study recommends the government to use the tax on the environment effectively and that economic recovery can be achieved through boosting of sales as well as stimulating consumers.

(Piñeiro-Chousa, López-Cabarcos et al. 2022)in a study of the U.S. during the period 2019, January 3 to 2021, February 12, that used the GARCH model postulates that, the study put into consideration the investors' sentiments, market volatility and technological market index's influence. Sentiments of market sentiment volatility on companies returns are observed to exhibit for unequal impact in both companies and different behaviours of volatilities. During the period of Covid, a contagion effect is found in the technological markets and in both companies.

(Chen, Su et al. 2022) in another research of the U.S. during the period 2019, January 1 to 2022, September 31 which employed the Autoregressive jump intensive trend, provides that in the event that the company has a high environmental-social-governance the short run volatility of stock returns is found to converge to the equilibrium at a faster rate. The study considers the ratings of the environmental-social-governance and Covid-19 effects of the airline industry stock performance of the U.S. The autoregressive jump intensive trend is observed to be the best methodology to use since it captures long and short-run impacts of environmental-social-governance and covid-19 on the dynamics of the stock returns. The findings also shows that environmental-social-governance offers to the airline industry a defence mechanism and that its performance is worthy integrating into the operational goals of a company.

(Yin, Bi et al. 2022)in survey research of 396 valid samples that were received, that was done in China from May 1 to May 31 2022, observed that turnover intention is affected significantly by the strength of the Covid-19 event via the operating expenses perceived, thereby impacting the perception of job security. The findings also shows that middle and small sized hotels reduce the impact of job insecurity somewhat on the intention of turnover and this this is observed to differ from the researcher's expectations. It has been also observed that employees and entrepreneurs of most hotels comes from the same city, hence a close friendship among them is observed, which enables them not to increase problems of job insecurity as well as the intention of turnover.

(Fernández-González, Pérez-Pérez et al. 2022) in a survey of 246 fishing companies in Spain observed a generalized negative trend to be shared among different fishing zones. The results of the study also show problems of heterogeneity. The public study perceptions, target species caught and the predominant fleet extract are the major determinants. Moreover, (El Khoury, Nasrallah et al. 2022) in the G-20 in the year 2020 employed the OLS and quartiles model and found out that the environmental-social-governance during the Covid-19 crisis time is beneficial. The benefit seems to be linked to specific aspects of firm-specific indicators, the level of income and environmental-specific-governance.

(Takyi and Bentum-Ennin 2021) in the study of 13 African countries from2019 October 1 to 2020 June 30, which employed the Bayesian structural model postulates that during and after the Covid-19 outbreak, it is observed that the performance of stock returns significantly fell among African countries. The stock market of 10 countries have been observed to be negatively affected by the pandemic in a significant way, whereas, the remaining three countries exhibits for no significant effect of the pandemic on its returns of stock. The study concludes that, overall, the pandemic adversely impacted the stock returns of African countries.

On the relationship that exists between the proxies of firm performance with the proxies of capital structure and other control variables various studies have been employed and empirical findings have been ascertained. The major proxies of capital structure have been given as equity and debt, hence various studies have used the ratios of financial position and the leverage ratios to proxy capital structure. On the other hand, the profitability ratios, such as the ROE, ROA, Tobin Q and the stock prices and returns have been used to proxy firm performance in various researches(Karadeniz, Kandir et al. 2009); (Abdullah and Tursoy 2021); (Tifow and Sayilir 2015); (Twairesh 2014); (Sathyamoorthi, Pritika et al. 2019); (Nassar 2016); (Ayuba, Bambale et al. 2019), among many others).

The study by (Abdullah and Tursoy 2021) which was aimed at understanding the association that exists between the performance Germany companies with respect to that capital structure and the International Financial Regulation and Standards (IFRS). (Abdullah and Tursoy 2021) provides that indeed the performance of Germany companies and their capital structure exhibits for a significant association that is positive. The findings of this research shows that indeed capital structure helps to improve the performance of organizations. Other studies however, such as the one that was undertaken by (Awunyo-Vitor and Badu 2012)contradicted with the postulations of (Abdullah and Tursoy 2021), by alluding that the performance of Ghanaian banks is negatively impacted by the leverage ratio. (Awunyo-Vitor and Badu 2012). Also postulated that the banks in Ghana are highly geared, they rely more on the short-term debt because of the fairly high bank rate of the debt. The findings of (Awunyo-Vitor and Badu 2012). on the existence of a negative link between the performance of firms and the structure of firm capital is supported by the postulations of (Sathyamoorthi, Pritika et al. 2019).

The research of (Sathyamoorthi, Pritika et al. 2019) gives that, ROE, ROA and Tobin Q which happen to be the proxies of the performance of organizations are negatively linked to total debt to total assets ratio (proxy of capital structure). In the Botswana's consumer service sector, (Sathyamoorthi, Pritika et al. 2019), is of the postulations that high financial debt has a tendency of reducing financial companies' performance on Botswana's consumer service.

In addition to the postulations of (Awunyo-Vitor and Badu 2012). and that of (Sathyamoorthi, Pritika et al. 2019), (Tifow and Sayilir 2015)is of the postulations the short-term debt to total debt ratio exhibits for a significant negative link with ROA and Tobin Q. These postulations shows that indeed the structure of capital and the performance of companies exhibit for a negative association, such that a rise in the capital structure of a business will tend to reduce its performance. These findings shows that excess use of debt finance is not health for an organisation and that it's use should be minimised. Rather companies need to balance equity finance and debt finance in order to meet in between the merits and demerits of both sources of finance. Moreover, ROE and Tobin's Q are also found be linked through a negative significant link with the long-term debt to total debt assets(Mazucheli, Alves et al. 2022).

Among the organisations that are listed in the BorsaIstanbul,(Nassar 2016)is of the postulation that the structure of capital exhibits for a negative association with the organizational performance. These postulations are also supported by the postulations given in the study of (KALASH 2019)who gives that indeed the profitability of firms and their leverage exhibit for a significant negative link. (KALASH 2019) further gives that that this negative impact is observed to be more acute among organisations than have high agency costs, while it is low among organisations with free flow of cash. Furthermore, the research undertaken by (Twairesh 2014) provides that the performance of firms is significantly affected by its size. This study shows that apart from capital structure being the major driver of firm performance, there are many other factors that plays a role in impacting the performance of companies.

Various other researches also undertook various researches to observe the link between leverage ratio and other indicators such as firm size, tangibility, profitability and the intensity of the capital. According to the postulations of (Latridis and Zaghmour 2013)alludes that the leverage of a company and its size are significantly linked.

These postulations are in line with what I'd postulated in the research of (Butt, Khan et al. 2013) whose postulations is that the company size ad proxied by the total company assets are negatively linked with leverage. (Latridis and Zaghmour 2013) further gives that the growth of the companies in Turkey is positively linked with their growth. On the association of ROA, assets tangibility taxrates and debt ratio, a negative association that is significant is found. (Karadeniz, Kandir et al. 2009)further gives that firm size, growth opportunities creditposition free cash flow, and tax shield are not in any way significantly related.

On association that exists between the adoption of IFRS and the performance of firms, various studies have been done, see (Karğın 2013); (Abdullah and Tursoy 2021); (Agyei-Boapeah, Machokoto et al. 2020); (Uyar and Güngörmüş 2013); (Abad, Cutillas-Gomariz et al. 2018); Pascale (2015); (Ibiamke and Ateboh-Briggs 2014); (Amrutha, Selvam et al. 2019). The study by (Karğın 2013)in a study of Turkey is of the postulations that accounting information greatly improved due to the IFRS adoption. These findings are supported by the postulations of (Agyei-Boapeah, Machokoto et al. 2020)who alludes that in Africa, the adoption of IFRS affects the value of companies in a positive way. As a result (Agyei-Boapeah, Machokoto et al. 2020), supports the full implementation of the IFRS for the purpose of taking advantage of high benefits that comes along with it, than to adopt partially. (Uyar and Güngörmüş 2013) also supports the above postulations by pointing out that in Turkey the adoption of IFRS brought some huge advancement on the quality of the accounting system, thereby further enhancing the market's activeness. The postulations of (Uyar and Güngörmüş 2013) is directly aligned to the postulations of (Karğın 2013) who gives that the accounting value of the post-IFRS was greatly enhanced putting into consideration the book value, whereas the earnings results showed otherwise.

Furthermore, in the study that was undertaken in Spain by (Abad, Cutillas-Gomariz et al. 2018), during the post-IFRS period, the information asymmetry was greatly reduced. (Abad, Cutillas-Gomariz et al. 2018)alludes that market benefits have been observed by the exodus from the local and traditional standards to IFRS adoption. The quality of financial reporting has also been observed to be improved. Nonetheless, amongst the Nigerian companies IFRS adoption has been observed to exhibit for a significant negative impact on the financial ratios, see (Ibiamke and Ateboh-Briggs 2014).

Table 1.A brief summary of empirical findings

Author	Region	Period	Methodology	Findings
(Bai and Ho 2022)	31 selected countries	2002 – 2020	Fixed Effects Pooled OLS	Corporate social performance is observed to provide for a positive significant effect of the debt levels of company in a period that is before th e Covid 19 pandemic Corporate social performance is also observed to reduce stakeholder engagement constraints during the period before the Covid 19 pandemic It is observed that corporate social performance during the pandemic period costs more Corporate social performance during the Covid 19 pandemic causes more problems of managerial agency for the organizations.

				The relationship between the level of company debt and corporate social performance is not much pronounced in the nations that have institutional surroundings that are better
(Cheng and Kao 2022)	Taiwan	2021	Online survey N=681 The process of MACRO	The mediating effect of job stress activation on the job satisfaction of employees as well as the performance of hotels is observed A moderating effect of firm resilience on the stress of job is also observed The mental health of people as caused by the pandemic are traumatic events' effects whose factors needs to be better understood in a society

				The consequences of the pandemic that affect the psychology negatively needs to be minimized by applying some robust interventions
(Brzeszczyński, Gajdka et al. 2022)	East Asia	2016 – 2021	Beta Coefficient	During the period of the covid-19 pandemic, it is observed that companies socially responsible investment risk sharply increased in a systematic manner The risk patterns observed in various other markets is observed to be stable and remarkably resilient The findings also give contradicting results in the case of East Asia as a comparison with the rest of the region

		The findings in the East Asia shows that systematic risk of socially responsible investment organizations in the East Asian markets, during the period of the pandemic fell and this is in direct contradiction with socially responsible investment of organizations' systematic risk that are in the socially responsible investment indices in the world region.
(Ecer and Turkey Pamucar 2021)	MARCOS technique 10 insurance companies, evaluated by 10 experts, used 7 criteria	The findings from ten insurance firms were retrieved and was ranked according to their service of health care during Covid 19 crisis The most crucial factors that were determined amongst insurance companies examined during this

	period is the network, premium price as well as the payback period
	The methodology's effectiveness and stability that is proposed in the study is verified by applying a comprehensive analysis of sensitivity
	The assessment problem of insurance is met appropriately by this approach, during the time of the pandemic and the outcomes of the sensitivity analysis are observed to be very satisfactory
	The sector of insurance should rely mostly on the three factors, that is, premium price, payback period and network in obtaining the insurance company that is most acceptable

(García-Pérez-de-Lema, Madrid-Guijarro et al. 2022)	Spain	11 May – 04 June 2020	Field work of 612 SME's of Spain Panel OLS	The activities of finance and investment of SME's has been negatively affected by its operating activities that has been negatively affected by the crisis of Covid-19 The findings also shows that the policies that are aimed at enhancing the firms' competitiveness of SME's demands is greatly exacerbated by the rise in the negative effects of financing and investment In the services and construction companies the covid-19 negative operating effects is greatly intensified by the negative effects from the financial activities

more than that of manufacturing firms

It is also observed that the covid-19 operating effects differently affects the level of investment effect and is observed to be highly crucial in the manufacturing in comparison to the service firms

The public measures employed to lesson the effects of Covid-19 exerted on SME's firms in the world over are observed to be labor policies, social policies, fiscal policies, monetary policies among many others

For the purpose of protecting SME's from being bankrupt, great support needs to be given from the government

			The SME's plays a vital role in sustaining the Gross Domestic Product and employment among world economies
(Chen, Demir et al. 2020)	U.S.	January 2 – April 30 2020	Fixed Effects Random effects	The study examines the effects that is generated by Covid-19 on the Leisure firms and U.S. stock returns After having controlled for the effects bof the pandemic, it is observed that stock returns is negatively impacted by government restrictions' stringency Leisure and travel companies' stock prices with cash reserves that are high, whose tangibility is less and whose size is small have been found to be more resilient to

the government's restrictions of Covid-19

The restrictions are observed to be low on gambling, casinos, tourism and travel sectors in that order, while the airlines sectors is highly impacted by the restrictions

The stock returns of the leisure and travel sectors is observed to fall due to an increase of additional restrictions by the government

Accordingly, when government restrictions are eased, this will have the tendency of raising the stock returns on the leisure and travel sector companies

Stock prices resilience on

			restrictions is observed among companies that have high reserves in cash, have less tangibility and are small in size
(Erasmus, Tutjavi et al. 2022)	Namibia	Survey of 45 fisheries	The riskiest places were observed to be the messrooms, and onboard vessels of fishing where the likelihood of contracting Covid-19 was high The respondents at sea alluded that the pandemic of Covid-19 has greatly and in a negative way affected the observation since the fisheries observers seemed to be averse to the risk. The findings show 50% of the participants to have purported negative effects of biological data collection

(Jin, Zhang et al. 2022)	China	2020 January – October	Fixed Effects	Company innovation in China is inhibited by Covid-19 at national level Regions in China has been observed not exhibit any significant differences on the impacts of Covid-19. Fore example the province of Hubei is observed to exhibit similar effects to those of other regions State owned companies have been observed to be negatively impacted by Covid-19 at a higher rate in comparison to private owned companies Innovation of medium and small sized companies are less likely to be affected by Covid-19 impacts, while that of large companies are found to be greatly affected

(Nový and Nováková 2022)	Czech Republic	5 months	Interviews Qualitative data analysis	During the first quarter of 2021 as well as in the year 20220, it is observed that the construction industry greatly decreased The decline in the production of the construction industry is also forecasted to continue declining Health problems as has been exacerbated by the Covid-19 are the major reasons behind a decline in the production of the construction industry together with sharp decline on the employees from abroad due to travel restrictions Towards the end of the second quarter of year 2021, the construction industry begins to boom as the

				effect of the pandemic starts to slow down and the value sharply increases as compared to the previous year The findings also show that in as much as the pandemic has been observed to negatively affect the construction industry to a greater extend, however some positive impacts are also observed
(Ben-Ahmed, Ayadi et al. 2022)	24 countries of the world	January to July 2020	90 top digital companies DPD	The stock returns of digital companies have been observed to be significantly affected positively by the total number growthof Covid-19 infected people and the death cases The economic sectors of the nations are also

				observed to be slowed down by the crisis The ratio of market to book and the returns onstock of companies are observed to have a positive interaction with Covid-19 crisis The total number of Covid-19 confirmed cases and the confirmed monthly cases of Covid-19 are positively related to stock returns positively
(Meena and Kumar 2022)	India and U.S.	2020, 01 Feb – 2021, 30 November	OLS	During the period of the Covid-19, it has been found that the business of food delivery greatly improved During the pandemic period customers in the U.S. are found to have great concern on the finance, while those of India are observed to have

			concern over social responsibility Customers in the U.S. are not satisfied by the companies of food delivery, while those of India shows signs of great satisfaction The sentiments of customers are also found to be moderated significantly by factors like; covid-19 waves, market size and country, as well as the brand of online food delivery firms
(Reis, dos Santos Moreira-Silva et al. 2022)	Brazil	Survey 320 multinational firms Structural Equation Modelling	The World Health Organization is observed to have provided recommendations that are meant to mitigate Covid-19's negative impacts on multinational companies' marketing, logistic and operational activities as well as

	the health and safety of the workers
	The safety performance, health, markets, logistics and operations of companies are observed to have been severely affected by the pandemic
	The impacts of the crisis on the performance of firms' marketing, logistics and operations are have observed to be mitigated by the WHO practices by 50%
	The workers' absenteeism is observed to increase due to the increased rates of mental and physical problems as caused by the Covid-19, while only 1.8% of the negative impacts of the safety and health problems

		have been successfully mitigated by the WHO practices The rate cat which the WHO practices have mitigated the health and safety problems of the Covid-19 may be improved by maintaining the social distance rule in public transports as well as improving an awareness on the side of employees to remain safe from contamination of the Covid-19 during the time of the social activities
(Zhang and Sogn-Grundvåg 2022)	Surveys	Financial revenue is found to be reduced by the effects of Covid-19, while liquidity demand is raised which end up causing firms financial stress all over the world

In a bid to mitigate the impacts of the pandemic by the government, quite a good number of credit programs were organized which were meant to give firms credit hence ease their financial stress

The relief programs that were introduced to ease the impact of Covid-19 have been found to be very low

It has been observed that identification of the most vulnerable companies has been difficult, hence making it difficult to for the relief funds to reach those companies that are in need

It is also observed that the characteristics of firms the conditions of credit constraints have an impact on the

	severity of Covid-19 effect on company performance
	The crisis is also observed to severely affect small companies and those companies with limited finance access
	Foreign owned companies and companies whose business operations are done in small cities have less risk
	The findings shows that credit constraints companies and foreign owned ones, in comparison to the global financial crisis of 2008 is less impacted by the Covid-19 crisis, while small to medium sized companies are observed to have been severely impacted.

(Lee and Cho 2022)	188 participants Survey 7-point Likert scale	The study seeks to understand on how behavioral responses and public attitudinal are affected by corporate social responsibility fit The findings shows that high level of public serving motive is generated by low/high corporate social responsibility fit as compared to that generated by high/low fit of corporate social responsibility It is also observed that the Covid-19 valence's effect on the performance of companies has been changed by the effect of corporate social responsibility fit on the motives of public serving Behavioral and attitudinal intentions are affected by the fit

			as moderated and mediated by Covid-19 valence and motives of public servings respectively For the purposes of protecting against unexpected crisis such as the pandemic proper implications on the corporate social responsibility of stigmatized industry
(Zhang and Zheng 2022)	China	2019Q1 – 2021Q2	RESSET FE Dynamic difference-in-difference model	Sale related profitability of companies is found to decrease due to Covid-19 The effects of the pandemic on companies are that it reduces the company's potential cash flow, increases the cost and enlongen the operation The adverse shocks are significantly

			weakened by environmental tax The study recommends the government to use the tax on the environment effectively and that economic recovery can be achieved through boosting of sales as well as stimulating consumers
(Piñeiro-Chousa, López-Cabarcos et al. 2022)	U.S.	2019, January 3 – 2021, February 12	GARCH	The study put into consideration the investors' sentiments, market volatility and technological market index's influence Market sentiment and market volatility on companies returns are observed to exhibit for unequal impact in both companies and different behaviors of volatilities

			During the period of Covid, a contagion effect is found in the technological markets and in both companies
(Chen, Su et al. U.S. 2022)	2019, January 1 – 2022, September 31	Autoregressive jump intensive trend	The study considers the ratings of the environmental-social-governance and Covid-19 effects of the airline industry stock performance of the U.S. Autoregressive jump intensive trend is observed to be the best methodology to use since it captures long and short-run effects of environmental-social-governance and covid-19 on the dynamics of the stock returns In the event that the company as a high environmental-social-governance the short run volatility of stock

				returns is found to converge to the equilibrium at a faster rate The findings also shows that environmental-social-governance offers to the airline industry a defense mechanism and that its performance is worthy integrating into the operational goals of a company
(Yin, Bi et al. 2022)	China	May 1 – May 31 2022	Survey of 396 valid samples that were received	Turnover intention is affected significantly by the strength of the Covid-19 event via the operating expenses perceived, thereby impacting the perception of job security The findings also shows that middle and small sized hotels reduces the impact of job insecurity somewhat on the intention of turnover

			and this this is observed to differ from the researcher's expectations It has been also observed that employees and entrepreneurs of most hotels comes from the same city, hence a close friendship among them is observed, which enables them not to increase problems of job insecurity as well as the intention of turnover\
(Fernández-González, Pérez-Pérez et al. 2022)	Spain	Survey of 246 fishing companies	A generalized negative trend is observed to be shared among different fishing zones The results of the study also show problems of heterogeneity The public study perceptions, target

				species caught and the predominant fleet extract are the major determinants
(El Khoury, Nasrallah et al. 2022)	G-20	Year 2020	OLS Quartiles	The findings shows that the environmental-social-governance during the Covid-19 crisis is beneficial The benefit seems to be linked to specific aspects of firm-specific indicators, the level of income and environmental-specific-governance
(Takyi and Bentum-Ennin 2021)	13 African countries	2019 October 1 – 2020 June 30	Bayesian structural	During and after the Covid-19 outbreak, it is observed that the performance of stock returns significantly fell among African countries The stock market of 10 countries have been observed to be negatively affected by

	the pandemic in a significant way Whereas, the remaining three countries exhibits for no significant effect of the pandemic on its returns of stock The study concludes that, overally the pandemic adversely impacted the stock returns of African countries

The literature review provided above gives mixed results on the effect of Covid-19 crisis on firm performance and other various activities. Great importance is the wide range of empirical evidence that has clearly provided that the pandemic of Covid-19 had negative effects of the firm activities due to various health related issues caused by the crisis as well as the large number of deaths observed in this period together with some travel restrictions which badly affected companies under the tourism industries. These findings are crucial in helping businesses and managers to come up with policies that may be utilized towards mitigating the negative effects of future crises on companies. The other findings provide that different sizes of firms and firms in different sectors have had different effects from the pandemic. For example, whilst most of the companies have been observed to deteriorate, companies in the food delivery industry had been observed to boom. Therefore, more research is required especially in a region such as Turkey, where no studies on this topic has been done. Thus, the current research seeks to cover this gap by employing a new study in Turkey to understand how companies in various sectors were affected by the pandemic.

CHAPTER III
METHODOLOGY

Study Model

The association between the performance of firms with capital structure of a company has been widely studied in the past researches, (Twairesh 2014); (Sathyamoorthi, Pritika et al. 2019); (Abdullah and Tursoy 2021);(Awunyo-Vitor and Badu 2012).The studies by (Twairesh 2014); (Sathyamoorthi, Pritika et al. 2019); (Abdullah and Tursoy 2021);(Awunyo-Vitor and Badu 2012) gives return on assets (ROA), stock price,return on equity (ROE), and Tobin Q as the major proxies of firm performance in any business enterprise and hence are the dependent variables. In addition to that, the studies by (Twairesh 2014); (Awunyo-Vitor and Badu 2012); (Abdullah and Tursoy 2021);(Sathyamoorthi, Pritika et al. 2019)also gives the total debt to total assets ratio, leverage ratio and firm size as the major proxies of capital structure of a company and hence the independent variables of the model. These studies also included IFRS adoption as the target variable of the models since these studies were aimed at understanding the impact of IFRS adoption on the performance of companies.

(Twairesh 2014); (Sathyamoorthi, Pritika et al. 2019); (Abdullah and Tursoy 2021);(Awunyo-Vitor and Badu 2012)modelled firm performance as a function of capital structure, while various other control variables were employed to avoid the omission of some crucial variables in a model which will end up resulting in biased results. In addition to the postulations of (Twairesh 2014); (Sathyamoorthi, Pritika et al. 2019, Abdullah and Tursoy 2021);(Awunyo-Vitor and Badu 2012)) in modelling firm performance other recent studies (Khoury, et al., 2022; (Chen, Su et al. 2022); (Zhang and Zheng 2022); (Ben-Ahmed, Ayadi et al. 2022)included Covid-19 pandemic variable as a dummy variable and/or target variable to understand its impact on company performance. The study by (El Khoury, Nasrallah et al. 2022) supports past studies of (Twairesh 2014); (Sathyamoorthi, Pritika et al. 2019); (Abdullah and Tursoy 2021);(Awunyo-Vitor and Badu 2012), that return on assets, stock return, ROE and price to book ratio are the major proxies of firm performance. (El Khoury, Nasrallah et al. 2022)argues that all these ratios are referred to as the accounting and

market-based measures, thus firm performance is best represented by these accounting and market-based measures. Therefore, (El Khoury, Nasrallah et al. 2022) provides firm performance as a function of Covid-19 pandemic and Environment, Social and Governance. This is supported by the study of (Chen, Su et al. 2022) who gives stock price as a function of Environment, social and governance and Covid-19 pandemic. (Zhang and Zheng 2022) went on to provide firm performance as a function of Covid-19 pandemic, firm age, size, equity, leverage, Tobin Q, state control status of a firm and share concentration.

In line with past studies, in this research we model firm performance as a function of capital structure Covid-19 pandemic. This is given in the expression shown in the Equation 1.

$$FP = f(CS, COVID) \qquad (1)$$

In the Equation 1, FP stands for firm performance and in this study, we choose two major market-based and market-based measures to proxy performance of firms, that is, return on assets (ROA) and return on equity (ROE). CS in Equation 1 represents capital structure and the variables equity to assets (EA) ratio, equity to debt (ED) ratio, leverage ratio and long-term debt to total debt (LTD.TD) ratio are used to proxy capital structure in this study. The variable Covid is the Covid-19 pandemic indicator in this study is a dummy variable in binary form, where the period 2020 quarter 1 to 2020 quarter 4 are the periods of Covid-19 which are represented with 1, while the period from 2009 quarter 1 to 2019 quarter 4 are periods of no pandemic and are represented with 0. Since two dependent variables are employed in this Thesis,

Therefore two models are specified as shown in Equation 2 and Equation 3. The first model specifies ROA as the dependent variable while the second model specifies ROE as dependent variable.

$$ROA_t = c_0 + c_1ED_t + c_2EA_t + c_3LEV_t + c_4LTD.TD_t + c_5COVID_t + e_t \quad (2)$$

$$ROE_t = c_0 + c_1ED_t + c_2EA_t + c_3LEV_t + c_4LTD.TD_t + c_5COVID_t + e_t \quad (3)$$

Where ***ROE*** stands for return on equity; ***ROA***stands for return on assets; ***EA***represents equity to assets ratio; ***ED***stands for equity to debt ratio; ***LEV*** is the leverage ratio; ***LTD.TD*** is long-term debt to total debt ratio; ***COVID*** is the Covid-19 pandemic indicator; $e_t$is the error term and $t$is the time variant for the time series variable.

Data and sample size

The data utilized in this research is the panel data of Turkey's 17 business sectors (Agriculture; Manufacturing; Mining and quarrying; Electricity, gas, steam and air-conditioning supply; Construction; Water supply, sewerage, waste management and remediation activities; Trade; Accommodation and food service activities; Transportation and storage; Information and Communication; Professional scientific and technical activities; Real estate activities; Administrative and support service activities; Human health and social work activities; Education; Arts, entertainment and recreation; and Other services). It is quarterly data for the period that ranges from 2009 quarter 1 to 2020 quarter 4 making a total of 48 observations per each variable of each and every sector. The data in this research is obtained from the data streams which happens to be the official page of the Central Bank of the Republic of Turkey(https://www.tcmb.gov.tr)

The variables included in this research Thesis are return on assets, equity to assets ratio, short-term debt to total debt ratio, equity to debt ratio, return on equity, long-term debt to total debt ratio, leverage ratio and Covid-19 pandemic variable.

The ROE and ROA variables are the explained indicators that represents firm performance whilst, Covid-19 is the dummy variable in the model and the rest of indicators are the control variables is a profitability ratio that is obtained by dividing Net profit with total assets. It indicates the amount of profit that has been generated from the assets employed in a company. Return on equity is also a profitability ratio which is obtained by dividing Net profit with the total equity value. It measures how much profit is obtained from the total shareholders' equity employed in a business enterprise. Equity to debt ratio is found by dividing total equity value with the value of total debt. Equity to assets ratio is found by dividing total equity value with total assets.

The leverage value in this research is the division of total debt total assets. It is sometimes referred to as the debt ratio. The leverage ratio helps firms to understand on how much of the debt finance has been used to acquire the company's assets. Inasmuch as debt is hailed up for its tax advantage, too much of it strangles supply chain of a business as well as the access to equipment and materials.

The long-term debt to total debt ratio is found by dividing long-term debt with total debt while the short-term debt to total debt ratio is found by dividing short-term debt with total debt.

The equity to assets ratio, equity to debt ratio leverage, long-term debt to total debt ratio and short-term to total debt ratio are the ratios of financial position. The **Table 2**of this research gives a summary of all the indicators used in this study.

Table 2.Variables summary

Variable	***Abbreviation***	***Measurement***	***Source***
Return on Assets	ROA	A fraction of net profit and total assets as a percentantage	https://www.tcmb.gov.tr
Return on Equity	ROE	A fraction of net profit divided and total equity as a percentage	https://www.tcmb.gov.tr
Equity to Assets	EA	A fraction of total equity and total assets as a percentage	https://www.tcmb.gov.tr
Equity to Debt	ED	A fraction of total equity and total debt as a percentage	https://www.tcmb.gov.tr
Leverage	LEV	A fraction of total debt with total assets as a percentage	https://www.tcmb.gov.tr
Long-term debt to total debt	LTD.TD	A fraction of long term debt with total debt as a percentage	https://www.tcmb.gov.tr
Covid-19	Covid	Dummy variable with 1 representing periods of Covid-19 pandemic and 0 otherwise	https://www.tcmb.gov.tr

Research Method

The current research Thesis follows four major steps in trying to come up with robust results and these steps are descriptive statistics analysis, unit root test, cointegration test, PMG-ARDL analysis. The descriptive statistic helps understand the nature and characteristics of the indicators of the model. Descriptive statistics helps gives the mean, standard deviation, sum, maximum, median and minimum values among many others, of the study variables. Therefore, this research Thesis begins by providing the descriptive statistics values of the research indicators to understand the behaviour of the variables.

The next stage in analysing data of this Thesis is to run the unit root test. This Thesis employs the Philips Peron (PP) as well as Augmented Dickey Fuller (ADF) techniques of unit root. The ADF test is the first and traditional model of unit root that was introduced by the work of (Dickey and Fuller 1979) while the PP test was introduced through the work of(Phillips and Perron 1988). The unit root test is crucial in any econometric data analysis because it tests if the indicators are stationary or not. Non-stationary variables have the problem of causing spurious regressions to occur in a regression analysis. Therefore, it is required that all variables be stationary to avoid spurious regressions.

The third stage in the data analysis of this research is to run the test of cointegration. The test of cointegration is necessary in a research study to examine the existence of a long-run association among the study indicators. According to (Granger 1986); (Engle and Granger 1987) variables that are cointegrated can be specified in a long-run model to ascertain the existence of a long-run association among them. Cointegrated variables are said to have a long-run association and tends to move in the same way in the long-run and will tend to converge towards a long-run equilibrium.

The fourth stage is to run the major model of the study, that is, the panelPooled Mean Group-Autoregressive Distributive Lag (PMG-ARDL) analysis. The panel PMG-ARDL techniques provides both the long-run and short-run estimations of the model. The long-run estimations are the ones that are useful for policy implications. It works with variables that have either 1 order of integration, 2 order of integration or both. It also requires variables to be cointegrated so as to run the Error Correction Mechanism and long-run form. Therefore, it is crucial to examine the unit root test analysis to examine the order of integration of the variables. The pioneers of the ARDL technique are Pesaran, Shin and Smith (1999; 1997; 2001).

The Equation 4 and of this Thesis are the PMG-ARDL techniques for the 2 models of this research, that is, Equation 4 employs ROA as the dependent indicator, while Equation 5 employs ROE as the dependent indicator. In the Equations 4 and 5, β_0 is the model's constant, Δ represents the first-difference operator, β_1 to β_6 are the short-run coefficient parameters, β_7 to β_{12} are the long-run coefficient parameters, β_{13} is the coefficient parameter of the Error Correction Term (ECT) and ***et*** is the error term.

$$\Delta ROA_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta ROA_{t-i} + \sum_{i=1}^{q} \beta_{2i} \Delta EA_{t-i} + \sum_{i=1}^{q} \beta_{3i} \Delta ED_{t-i} + \sum_{i=1}^{q} \beta_{4i} \Delta LEV_{t-i} + \sum_{i=1}^{q} \beta_{5i} \Delta LTDTD_{t-i} + \sum_{i=1}^{q} \beta_{6i} \Delta COVID_{t-i} + \beta_{7i} ROA_{t-1} + \beta_{8i} EA_{t-1} + \beta_{9i} ED_{t-1} + \beta_{10i} LEV_{t-1} + \beta_{11i} LTDTD_{t-1} + \beta_{12i} COVID_{t-1} + \beta_{13i} ECT_{t-1} + et \quad (\mathbf{4})$$

$$\Delta ROE_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta ROE_{t-i} + \sum_{i=1}^{q} \beta_{2i} \Delta EA_{t-i} + \sum_{i=1}^{q} \beta_{3i} \Delta ED_{t-i} + \sum_{i=1}^{q} \beta_{4i} \Delta LEV_{t-i} + \sum_{i=1}^{q} \beta_{5i} \Delta LTDTD_{t-i} + \sum_{i=1}^{q} \beta_{6i} \Delta COVID_{t-i} + \beta_{7i} ROE_{t-1} + \beta_{8i} EA_{t-1} + \beta_{9i} ED_{t-1} + \beta_{10i} LEV_{t-1} + \beta_{11i} LTDTD_{t-1} + \beta_{12i} COVID_{t-1} + \beta_{13i} ECT_{t-1} + et \quad (\mathbf{5})$$

CHAPTER IV
FINDINGS

Results of the descriptive statistics

In this Chapter of the findings of this dissertation, we begin by providing the findings of the descriptive statistics of all the variables that are employed in this research. It is observed from the findings provided in Table 3 that the total observations of all the variables employed in this research study is 816. This shows that considering the panel data of 17 sectors of Turkey during the period 2009 to 2020 after having utilized quarterly data of all the variables, the total number of observations for each and every observation is 816. This shows that the number of observations employed in this research is large enough to produce robust and unbiased results.

To begin with, return on assets is observed to have a mean value of 14.42% while its median value is found to be 0.752. These findings show that return on assets of all the 17 sectors of Turkey considered in this research, has an average value of 14.42%. Thus, on average all 17 sectors of Turkey realized an average of 14.42% profits from the total assets employed, during this period. The median value in as much as it may be used to understand the average value of a series in statistics it is however observed not to provide robust value since it is based on arranging the values of a series in ascending or descending order and then pick the value that falls at the middle. In this case of return on assets the value that falls at the middle after arranging all values in ascending or descending order is 0.75%. We also observe that the minimum value is -48. The standard deviation of return on assets is also 419.2 which is high showing that the variable has been fluctuating very much within the given period of time.

The descriptive statistic results of the variable return on equity are also provided in Table 3 in this research. The findings provided for in Table 3 shows that the mean value of the return on equity amongst all the sectors of Turkey considered in this research study during the period of the study is 26.88% whilst the median value is 9.04%.

These findings show that on average the return on equity of all the 17 sectors of Turkey during the period that stretches from 2009 to 2020 is 26.88%.This value shows that on average during this periodthe profit from the equity employed in these sectors is around 26.8%. Table 3 also provide that the minimum value of ROE is -42.6 9% whilstthe standard deviation of return on equity is 429.25%.

Furthermore, we also provide the descriptive statistics of the COVID-19 indicator in Table 3 as follows: the mean value of the Covid-19 indicator is given as 0.08%, while the median value is given is 0. This shows that the probability of a pandemic occurring during the period under study is 0.08%. This is so because from the sample size used in this research study only a single year 2020 is considered as the period of the pandemic. The maximum value of the Covid-19 indicator is 1 while the minimum value is 0 and its standard deviation is 0.276%. The results provided for in Table 3 also gives the equity to assets ratio outcomes that its mean value is 40.84%, whilst its median value is that 35.17%. These findings show that on average during the study period, for the equity assets ratio amongst the 17 sectors of Turkey, was observed to be 40.84%. The minimum value of the equity to assets ratio is also observed to be - 53.74%, whilst its standard division is 84.54%. We also give the findings of the equity to debt ratio results of the descriptive statistics in Table 3. The outcomes shows that the mean value of the equity to debt ratio is 70.41% whilst its median value is 45.73%. This shows that on average the equity to debt ratio value for the 17 sectors of Turkey is 70.41%. The minimum value is also -59.4% whilst the standard division is 117.5%.

Table 3.Findings of the descriptive statistics

	ROA	ROE	COVID	EA	ED	LEV	LTD.TD
Mean	14.41675	26.88633	0.083333	40.84054	70.40989	65.68791	28.67927
Median	0.752513	9.036000	0.000000	35.16726	45.72500	65.35960	25.25582
Maximum	11973.00	12267.00	1.000000	2317.000	2127.000	2263.000	895.0000
Minimum	-48.01671	-42.69276	0.000000	-53.73666	-59.40008	-5.136280	0.038546
Std. Dev.	419.2077	429.2506	0.276555	84.53904	117.5068	81.84151	35.68667
Obs.	816	816	816	816	816	816	816

The descriptive statistic results of the leverage ratio of the 17 sectors of Turkey as provided for in Table 3 shows that its mean value is 65.68%, whilst its median value is 65.36%. This shows that on average the leverage ratio of all the 17 sectors of Turkey during the period considered in this research study is around 65%. The minimum value of the leverage ratio variable is also considered and observed to be – 5.13%, whereas its standard division is 81.84%.

The descriptive statistic results of the long-term debt to total debt ratio is also given in Table 3. The median value of the long-term debt to total debt ratio is 28.67%,whereas its median value is observed to be 25.25%. This shows that on average the long-term debt to total debt ratio of all the 17 sectors of Turkey considered in this research study during the period under consideration is 28.67%. The minimum value of the long-termdebt to total debt ratio is also observed to be 0.048% whilst its standard division is 35.68%. The descriptive statistics results also show that the mean value of the short-term debt to total debt ratio is 52.5%, whilst its median value is 48.59%. This shows that on average amongst the 17 sectors of Turkey during the period under consideration the average value of the short-term debt to total debt ratio was 52.5%. The minimum value of the short-term debt to total debt ratio is also observed to be 2.63% whilst in standard division is 83.19%.

Test of unit root

The outcomes of the test of unit root of this research study are also given in the Table 4 of this study. The ADF test and the Phillips Peron tests of unit root are utilized in this dissertation to observe if the variables are stationary in their level form or non-stationary. The findings provided for in the Table 4 shows that the variable, return on assets according to the ADF test and the PP test result is stationary at its level form. This shows that return on assets variable is integrated of order 0. Moreover, the findings also shows that return on equity according to the findings of the Philips Peron and the Augmented Dickey-Fuller test in Table 4 is also stationary at level indicating that it is integrated of order 0. However, the outcomes of the variable COVID-19 pandemic indicator are observed according to the Philips Peron and the Augmented Dickey Fuller test results that it is not stationary at level but rather it is stationary at first difference.

These findings show that the COVID-19 pandemic indicator is integrated of order one. The variable equity to assets ratio as per the Philips Peron and the Augmented Dickey-Fuller test results is also observed to be stationary at level showing that it is integrated of order 0. Equity to debt ratio according to the findings provided for in Table 4 of the Phillips Peron and the ADF test shows that this variable is also stationary at level, thus it is integrated of order 0. Moreover, the variable leverage ratio according to the Philips Peron and the ADF test of unit root is also observed to be stationary at level, hence this shows that this variable is integrated of order 0. In addition to that, we also observed that the variable long-term debt to total debt ratio is stationary at level according to the Phillips Peron and the ADF tests of unit root indicating that the variable is integrated of order 0. The findings provided in Table 4 also shows that the indicator short term debt to total debt ratio according to the Philips Peron and the ADF test of unit root is stationary at level, indicating that this variable is integrated of order 0. Therefore, in this research study all the indicators employed are integrated of 0order except for COVID-19 indicator which is observed to be integrated of order one. These findings shows that these variables can be employed in any regression analysis since they are stationary and no spurious regressions will occur.

Table 4. Results of Unit root test

	ADF	**PP**
ROA	3042.67***	1428.50***
ROE	3604.59***	1094.93***
COVID	13.2375	13.2320
EA	4214.25***	1010.98***
ED	3603.48***	827.238***
LEV	3743.91***	1000.51***
LTD.TD	4214.27***	981.566***
∆***COVID***	244.225***	469.414***

Note: * stands for 10% level of significant; ** stands for 5% level of significant; *** stands for 1% level of significant. ∆ Is the first difference operator for variables that are not stationary at level.

Test of cointegration

This section of the research gives the cointegration test outcomes. This study employs the panel cointegration tests of JohansenFisher, Pedroni residual and the Kaoresidual test, for both models where ROE and ROE are the explained variables. The findings provided for in Table 5 of the Johansen Fisher, Pedroni residual and the Kao residual tests ofcointegration,are the cointegration outcomes when the return on assets is the dependent variable, whereas the outcomes provided for in Table 6 are the outcomes of the Johansen Fisher, Pedroni residual and the Kao residual tests of cointegration, when the return on equity variable is the dependant variable.

The results provided for in Table 5 according to the Johansen Fisher panel cointegration test shows that in a model where return on assets is the dependant variable all the variables are cointegrated. The Trace test and Max-Eigen test of the Johnson Fisher panel cointegration tests shows that the indicators in a model where return on assets is dependant variable have at most 4cointegration equations. Moreover, the outcomes provided for by the Pedroni residual cointegration tests in a model where return on assets is the dependant variable shows that according to the panel Rho statistic, panel ADF statistic, PanelPP statistic,groupRho-statistic, group ADF statistics and groupPP statistic, all the variables expressed in the model are cointegrated. Also, the outcomes of the Kao residual test when the return on assets variable is dependant variable shows that the variables expressed in this model are cointegrated. Therefore, we conclude that the variables in question exhibit for a significant long run association, they tend to move together towards a long run equilibrium and hence they can be specified in cointegration equations to observe the long run association amongst these variables.

Table 5.Cointegration test results (ROA is dependent variable)

Johansen Fisher Test		
Number of CE(s)	***Trace test***	***Max-Eigen test***
None	363.7***	1111.***
At most 1	750.9***	468.1***
At most 2	245.5***	177.3***
At most 3	104.3***	75.56***
At most 4	50.71**	52.62**
At most 5	21.65	17.23
At most 6	42.63	42.63

Pedroni Residual Test		
	Statistic	***Weighted Statistic***
Panel v-Statistic	-3.112300	-1.735768
Panel rho-Statistic	-8.519171***	-9.265733***
Panel PP-Statistic	-16.39368***	-21.17133***
Panel ADF-Statistic	-7.195757***	-7.925312***
Group rho-Statistic	-8.495968***	
Group PP-Statistic	-22.49751***	
Group ADF-Statistic	-7.802949***	

Kao Test	
	t-Statistic
ADF	3.756194***

Note: * stands for 10% level of significant; ** stands for 5% level of significant; *** stands for 1% level of significant.

The results provided for in Table 6 according to the Johansen Fisher panel cointegration test shows that in a model where return on equity is the dependant variable all the variables are cointegrated.

The Trace test and Max-Eigen test of the Johnson Fisher panel cointegration tests shows that the indicators in a model where return on equity is dependant variable have at most 4 cointegration equations. Moreover, the outcomes provided for by the Pedroni residual cointegration tests in a model where return on assets is the dependant variable shows that according to the panel Rho statistic,panel ADF statistic, Panel PP statistic, group Rho statistic, group ADF statistics and group PP statistic, all the variables expressed in the model are cointegrated. Also, the outcomes of the Kao residual test when the return on equity variable is dependant variable shows that the variables expressed in this model are cointegrated. Therefore,we provide that the variables in question exhibit for a long run significant association, they tend to move together towards a long run equilibrium and hence they can be specified in cointegration equations to learn the long run association amongst these variables.

Table 6.Cointegration test results (ROE is dependent variable)

Johansen Fisher PanelTest		
Number of CE(s)	***Trace test***	***Max-Eigen test***
None	388.1***	1309. ***
At most 1	790.7***	471.9***
At most 2	297.4***	210.9***
At most 3	126.7***	82.68***
At most 4	68.64***	59.63***
At most 5	34.95	29.42
At most 6	46.22*	46.22*
Pedroni Residual Test		
	Statistic	***Weighted Statistic***
Panel v-Statistic	-3.113476	-2.712349
Panel rho-Statistic	-8.542776***	-8.054069***
Panel PP-Statistic	-16.44080***	-17.97650***
Panel ADF-Statistic	-7.217073***	-8.660322***
Group rho-Statistic	-7.379550***	
Group PP-Statistic	-20.21138***	
Group ADF-Statistic	-8.548174***	
Kao Residual Test		
	t-Statistic	
ADF	3.733644	

Note: * stands for 10% level of significant; ** stands for 5% level of significant; *** stands for 1% level of significant.

Findings of the PMG-ARDL analysis

The Table 7 of this research study gives the outcomes of the PMG-ARDL analysis, when return on assets variable is the dependant variable. The long-run estimation findings if the PMG-ARDL technique given in Table 7 shows that equity to debt ratio, equity to assets ratio, and leverage ratio exhibit for a significant positive effect on ROA. The long-run findings shows that a rise in equity to debt ratio, equity to assets ratio and leverage ratio by 1 unit, results in an increase in ROA by 0.0115, 0.0254 and 0.0297 units respectively. These long-run outcomes are significant at 5% level, providing for a strong association between these variables and the dependent variable, ROA. Therefore, it is observed that among the sectors of Turkey, equity to assets, equity to debt and leverage ratios, which are the proxies of capital structure, remains the major drivers of firm performance. Moreover, the long-run estimations of the PMG-ARDL technique in Table 7 gives that, long-term debt to total debt ratio gives a strong negative impact on ROA. Arise on long-term debt to total debt ratio, on the long-run, by 1 unit causes ROA to decrease by 0.1249 units. The findings are significant at 1% level, showing a strong association to exist among these indicators. This indicates that debt discourages firm performance and should be kept at minimum levels. The findings of Table 7 also provide that, COVID-19 pandemic indicator does not have any significant impact on the firm performance of companies in Turkey. The coefficient of Covid-19 indicator is positive, implying a positive association to exist, but this association is not significant.

Table 7.PMG-ARDL outcomes (ROA is dependent variable)

	Coefficient	t-Statistic	P-value
	Long-run estimations		
EA	0.0254	2.0687**	0.0390
ED	0.0115	2.8179***	0.0050
LEV	0.0297	5.1005***	0.0000
LTDTD	-0.1249	-11.756***	0.0000
COVID	0.1542	0.4924	0.6226
	Short-run estimations		
ECT(-1)	-0.4289	-4.4117***	0.0000
Δ(ROA(-1))	-0.4355	-6.3695***	0.0000
Δ(EA)	-4.9923	-0.9704	0.3322
Δ(EA(-1))	-4.5224	-0.9731	0.3309
Δ(ED)	0.0596	1.1503	0.2505
Δ(ED(-1))	-0.2211	-0.9731	0.3309
Δ(LEV)	5.1764	0.9970	0.3192
Δ(LEV(-1))	-2.3813	-1.0096	0.3131
Δ(LTDTD)	2.9358	1.0033	0.3161
Δ(LTDTD(-1))	9.0752	1.0039	0.3158
Δ(COVID)	44.2882	1.0062	0.3147
Δ(COVID(-1))	46.7090	0.9595	0.3377

Note: * stands for 10% level of significant; ** stands for 5% level of significant; *** stands for 1% level of significant.

The ECT of the PMG-ARDL technique results given in Table 7 is negative and significant at 1% level, showing the existence of a long-run association among the indicators specified in the model. Therefore, the study indicators having a tendency of moving together in the long-term and tends to converge. These findings support the outcomes of the cointegration test which gives the presence of significant cointegration among the variables.

The short-run outcomes of the PMG-ARDL analysis in Table 7shows that, it is only the first lag of ROA that has a significant negative impact on ROA. The rest of the variables, equity to assets ratio, equity to debt ratio, leverage ratio, long-term debt to total debt ratio and Covid-19 pandemic indicator, do not have any significant impact on ROA in the short-run.

Table 8. PMG-ARDL outcomes (ROE is dependent variable)

	Coefficient	t-Statistic	P-value
	Long-run estimations		
EA	-0.3025	-5.6590***	0.0000
ED	0.0818	4.2459***	0.0000
LEV	0.2125	12.113***	0.0000
LTDTD	0.1250	3.8049***	0.0002
COVID	5.0166	5.3677***	0.0000
	Short-run estimations		
ECT(-1)	-0.3441	-4.4031***	0.0000
Δ(ROE(-1))	-0.3807	-4.8046***	0.0000
Δ(EA)	-4.9235	-0.9404	0.3474
Δ(EA(-1))	-4.6307	-0.9761	0.3294
Δ(ED)	-0.0109	-0.1946	0.8457
Δ(ED(-1))	-0.2385	-1.0238	0.3063
Δ(LEV)	5.3329	1.0103	0.3128
Δ(LEV(-1))	-2.3089	-0.9474	0.3438
Δ(LTDTD)	3.1639	1.0521	0.2932
Δ(LTDTD(-1))	9.4480	1.0178	0.3092
Δ(COVID)	43.729	0.9693	0.3328
Δ(COVID(-1))	48.539	0.9649	0.3350

Note: * stands for 10% level of significant; ** stands for 5% level of significant; *** stands for 1% level of significant.

Table 8 of this study gives the findings of the model where ROE is expressed as the dependent variable. Here, we try to investigate the association between ROA as the proxy of firm performance and the proxies of capital structure as well as the Covid-19 pandemic indicator, as target variable. The findings of the PMG-ARDL analysis in Table 8 gives that, equity to assets ratio has a significant negative effect on return on equity. This outcome provides that a high level of equity in relation to the company's assets has a tendency of reducing the return on shareholder's equity. The outcome shows that a rise in equity to assets ratio by 1 unit causes ROE to decrease by 0.3 units. This shows that, the equity size should be moderated in relation to the total company assets, since a high level of equity which does not match the company assets tends to reduce ROE.

Moreover, the long-run study findings in Table 8 shows that, equity to debt ratio, leverage ratio, long-term debt to total debt ratio and Covid-19 pandemic indicator provides for a significant positive effect on ROE. A rise in equity to debt ratio leverage ratio, long-term debt to total debt ratio and Covid-19 pandemic indicator by 1 unit causes ROE to rise as well, by 0.08, 0.21, 0.12 and 5.02 units respectively. Therefore, these findings show that equity to debt, leverage and long-term debt to total debt ratio significantly improves the return on equity. Thus, in order to enhance firm performance, factors that enhance these indicators should be encouraged.

This study shows a positive significant association between Covid-19 pandemic indicator and ROE. However, generally speaking, it should not be so. The Covid-19 pandemic has caused more harm companies, which saw them shutting down for a while and losing out business due to the lockdowns that were put in place to mitigate the effects of the pandemic. The existence of a positive association between ROE and Covid-19 pandemic indicator, in this research, can only be explained by the coping mechanisms that were adopted by companies during this period. Some companies resorted to online business, which enabled them not to shutdown during the period of the pandemic, hence continued to earn positive profits. For example, Universities resorted to online teaching during the time of the pandemic, thus they continue to make positive profits and were not severely affected by the pandemic. Food companies, such as restaurants also resorted to food package deliveries which saw them enjoying positive profits during the time of the pandemic. Many other offices work was done at home on the computers, hence the reason behind this positive link between Covid-19 pandemic indicator and ROE among the 17 sectors of Turkey. Moreover, different

sectors were affected differently, while some suffered from the pandemic, for example the tourism and construction industry, other industries were not severely affected and others enjoyed positive profits. This research is a panel of the 17 sectors of Turkey, hence provides a generalization on the findings of all companies in Turkey. However, a study that examines each and every sector separately might help show the sectors that were severely affected by the pandemic and those sectors that survived. In addition to that, different countries were affected differently by the pandemic, hence different results are observed among world nations.

The ECT term in Table 8 is positive and significant, showing the existence of a significant long-run association among the study indicators. These results support the cointegration findings above. The short-run outcome in Table 8 shows that, it is only the first lag of ROE that has a significant negative effect on ROE in the short-run. We observe in Table 8 that, equity to assets ratio, equity to debt ratio, leverage ratio, long-term debt to total debt ratio and Covid-19 pandemic indicator do not significantly affect ROE in the short-run. There is no significant connection among these indicators in the short-run.

CHAPTER V
DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Discussion

The current research Thesis observes that, there is no significant association between firm performance and Covid-19 variable among the 17 sectors in Turkey. To be specific, among the 17 sectors of Turkey, Covid-19 pandemic indicators do not significantly affect ROA, a proxy of firm performance in this research, whereas ROE is observed to be positively impacted in a significant way. These findings which shows that, firm performance is positively impacted by the pandemic supports the outcomes of past researches, such as (Meena and Kumar 2022) who alludes that during the pandemic the performance of the food delivery companies improved greatly; (Nový and Nováková 2022)who postulates that the construction industry partly improved during the period of the pandemic; (Ben-Ahmed, Ayadi et al. 2022) who alludes that a positive interaction between market to book ratio and returns on stock with the Covid-19 pandemic is observed. Therefore, as much as the pandemic brought about some negative impacts to firms, some sectors managed to come up with some coping mechanisms which promoted their survival. Moreover, different companies in different countries were impacted differently, depending on the severity of the pandemic in those nations.

These findings are in contrary with the findings of past studies, such as (Takyi and Bentum-Ennin 2021); (Yin, Bi et al. 2022); (Zhang and Zheng 2022); (Meena and Kumar 2022); (Zhang and Sogn-Grundvåg 2022); (Nový and Nováková 2022); (Ben-Ahmed, Ayadi et al. 2022); (García-Pérez-de-Lema, Madrid-Guijarro et al. 2022)among many others. This study shows a positive significant association between Covid-19 pandemic indicator and ROE and an insignificant relationship with ROA. However, generally speaking, this should not be so. The Covid-19 pandemic has caused more harm on companies, which saw them shutting down for a while and losing out business due to the lockdowns that was put in place to mitigate the effects of the pandemic. The existence of a positive association between ROE and Covid-19 pandemic indicator, in this research, can only be explained by the coping mechanisms that were adopted by companies during this period. Some companies resorted to online

business, which enabled them not to shutdown during the period of the pandemic, hence continued to earn positive profits. For example, Universities resorted to online teaching during the time of the pandemic, thus they continue to make positive profits and were not severely affected by the pandemic. Food companies, such as restaurants also resorted to food package deliveries which saw them enjoying positive profits during the time of the pandemic. Office-work was done at home on the computers, hence the reason behind this positive link between Covid-19 pandemic indicator and ROE among the 17 sectors of Turkey.

Moreover, different sectors were affected differently, while some suffered from the pandemic, for example, the tourism and construction industry, other industries were not severely affected and others enjoyed positive profits. This notion is supported by the postulations of (García-Pérez-de-Lema, Madrid-Guijarro et al. 2022), who alludes that operating activities of SMEs has been negatively affected by Covid-19; (Nový and Nováková 2022) who alludes that production in the construction industries declined due to the pandemic; (Zhang and Zheng 2022)who provides that the revenue of firms was greatly reduced by the pandemic; (Zhang and Zheng 2022) who provides that profitability was greatly reduced by the pandemic among firms; and the study of (Takyi and Bentum-Ennin 2021) who gives that in Africa, the performance of stock market was reduced by the pandemic. This research is a panel of the 17 sectors of Turkey, hence provides a generalization on the findings of all companies in Turkey. However, a study that examines each and every sector separately might help show the sectors that were severely affected by the pandemic and those sectors that survived. In addition to that, different countries were affected differently by the pandemic, hence different results are observed among world nations.

In addition to that, the study findings give a significant result which shows that, capital structure exhibits for a significant positive effect on the performance of a firm, in the long-run. These findings are in support of past studies, such as (Abdullah and Tursoy 2021); and (Tifow and Sayilir 2015)which gives that capital structure and ROA are positively related. The study findings show that equity to assets ratio has a significant positive impact on ROA, in the long-run, amongst the 17 sectors of Turkey that are considered in this research study. However, equity to assets ratio is observed to have a significant negative effect on ROE in the long-run. Equity to debt ratio

provides a significant positive impact on ROA and it also has a significant positive effect on ROE in the long-run. This shows that equity to debt ratio has a significant positive effect on ROA and ROE among the sectors of Turkey. Leverage provides for a significant positive impact on ROAand ROE amongst the 17 sectors of Turkey in the long-run. Long-term debt to total debt ratio has a significant positive effect on ROEand a significant negative effect on ROA, high levels of long-term debt in relation to the total debt of a company tends to reduce the return on assets. These findings do not support the postulations of (Abdullah and Tursoy 2021); and (Tifow and Sayilir 2015) which gives that, long-term debt to total debt and ROA are positively related.Therefore, in this study we conclude that amongst the 17 sectors of Turkey, capital structure positively impacts ROA and ROE. Thus, in order for companies in Turkey to increase their profitability through increasing ROA and ROE, then they need to increase or raise the capital structure.

The findings of the current research which shows the existence of a positive association between capital structure and firm performance, except for the negative association observed between long-term debt to total debt and ROA, and the negative association of equity to assets and ROE, do not support findings of past researches, such as (Awunyo-Vitor and Badu 2012) who gives that leverage negatively affect the performance of firms; (Sathyamoorthi, Pritika et al. 2019)who observed the existence of a negative association between firm performance and total debt to total assets ratio, that is, the association between ROA and leverage; (Tifow and Sayilir 2015) who gives a negative association among long-term debt to total debt ratio and ROE and between short-term debt to total assets ratio and ROA; as well as in the findings of (Nassar 2016).

Conclusion

The current research is concluded by providing that, in the 17 sectors of Turkey, during the period 2009 to 2020, Covid-19 pandemic is observed to provide for a significant positive impact on ROE and an insignificant effect on ROA of firms. The insignificant impact of Covid-19 pandemic on ROA and significant positive effect on ROE can be explained by the different coping mechanisms, such as resorting to online business during the time of the pandemic, Moreover, different sectors were affected differently with some having enjoying positive profits. These findings support the postulations of (Meena and Kumar 2022) who alludes that during the pandemic, the performance of the food delivery companies improved greatly; (Nový and Nováková 2022) who postulates that the construction industry partly improved during the period of the pandemic; (Ben-Ahmed, Ayadi et al. 2022) who alludes that a positive interaction between market to book ratio and returns on stock with the Covid-19 pandemic is observed. However, this is contrary with the postulations of (García-Pérez-de-Lema, Madrid-Guijarro et al. 2022); (Nový and Nováková 2022); (Zhang and Sogn-Grundvåg 2022); (Zhang and Zheng 2022); (Takyi and Bentum-Ennin 2021), who observed negative effects of the pandemic of firm performance. On the association of the structure of capital in a company and the performance of firm, mixed outcomes are obtained. Capital structure in observed to positively affect ROA and ROE, while long-term debt to total debt and ROA, equity to assets and ROE are observed to have a negative association.

Policy recommendations

The current research recommends firms to develop some coping mechanisms during periods of pandemics to enhance the performance of their companies. Moreover, the government need to provide support to small and medium companies from the negative impacts of the Covid-19. Also, we recommend for a mixed approach on the financing of a company. Both debt and equity finance should be used and a balance between the two should be promoted. This will help to ensure that a balance between the demerits and merits of using debt finance with the demerits and merits of using equity finance.

Recommendations on future studies

We encourage future studies to use the data of Turkish firms since this study uses the data of business sectors in Turkey.

REFERENCES

Abad, D., et al. (2018). "Does IFRS mandatory adoption affect information asymmetry in the stock market?" Australian Accounting Review**28**(1): 61-78.

Abdullah, H. and T. Tursoy (2021). "Capital structure and firm performance: evidence of Germany under IFRS adoption." Review of Managerial Science**15**(2): 379-398.

Adomako, S. and A. Danso (2014). "Financial Literacy and Firm performance The moderating role of financial capital availability and resource flexibility."

Agyei-Boapeah, H., et al. (2020). IFRS adoption and firm value: African evidence. Accounting Forum, Taylor & Francis.

Amrutha, P., et al. (2019). "Impact of converging to IFRS on key financial ratios with reference to BSE listed firms." International Journal of Psychosocial Rehabilitation**23**(01).

Awunyo-Vitor, D. and J. Badu (2012). "Capital structure and performance of listed banks in Ghana." Global Journal of Human Social Science**12**(5): 57-62.

Ayuba, H., et al. (2019). "Effects of Financial Performance, Capital Structure and Firm Size on Firms' Value of Insurance Companies in Nigeria." Journal of Finance, Accounting & Management**10**(1).

Bai, M. and L. Ho (2022). "Corporate social performance and firm debt levels: Impacts of the covid-19 pandemic and institutional environments." Finance Research Letters: 102968.

Baker, M. and J. Wurgler (2002). "Market timing and capital structure." The journal of finance**57**(1): 1-32.

Ben-Ahmed, K., et al. (2022). "COVID-19 impact on digital companies' stock return: A dynamic data analysis." Finance Research Letters**46**: 102340.

Berger, A. N. and E. B. Di Patti (2006). "Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry." Journal of Banking & Finance**30**(4): 1065-1102.

Bossman, A., et al. (2022). "Modelling the asymmetric effect of COVID-19 on REIT returns: A quantile-on-quantile regression analysis." The Journal of Economic Asymmetries**26**: e00257.

Bradley, M., et al. (1984). "On the existence of an optimal capital structure: Theory and evidence." The journal of finance**39**(3): 857-878.

Brzeszczyński, J., et al. (2022). "Has the Risk of Socially Responsible Investments (SRI) Companies Stocks Changed in the COVID-19 Period? International Evidence." Finance Research Letters: 102986.

Bundala, N. N. h. (2012). "Do Tanzanian companies practice pecking order theory, agency cost theory or trade-off theory? An empirical study in Tanzanian listed companies." International Journal of Economics and Financial Issues**2**(4): 401-422.

Butt, S., et al. (2013). "Static Trade-off theory or Pecking order theory which one suits best to the financial sector. Evidence from Pakistan." European Journal of Business and Management**5**(23): 131-140.

Chen, C.-D., et al. (2022). "Understanding how ESG-focused airlines reduce the impact of the COVID-19 pandemic on stock returns." Journal of Air Transport Management: 102229.

Chen, M.-H., et al. (2020). "The impact of policy responses to COVID-19 on US travel and leisure companies." Annals of Tourism Research Empirical Insights**1**(1): 100003.

Cheng, S.-C. and Y.-H. Kao (2022). "The impact of the COVID-19 pandemic on job satisfaction: A mediated moderation model using job stress and organizational resilience in the hotel industry of Taiwan." Heliyon**8**(3): e09134.

Cotei, C. and J. B. Farhat (2009). "The trade-off theory and the pecking order theory: are they mutually exclusive?" Available at SSRN 1404576.

D'Urso, P., et al. (2022). "A D-vine copula-based quantile regression model with spatial dependence for COVID-19 infection rate in Italy." Spatial statistics**47**: 100586.

Dickey, D. A. and W. A. Fuller (1979). "Distribution of the estimators for autoregressive time series with a unit root." Journal of the American statistical association**74**(366a): 427-431.

Ecer, F. and D. Pamucar (2021). "MARCOS technique under intuitionistic fuzzy environment for determining the COVID-19 pandemic performance of insurance companies in terms of healthcare services." Applied Soft Computing**104**: 107199.

Eisenhardt, K. M. (1989). "Making fast strategic decisions in high-velocity environments." Academy of Management journal**32**(3): 543-576.

El Khoury, R., et al. (2022). "Exploring the performance of responsible companies in G20 during the COVID-19 outbreak." Journal of Cleaner Production**354**: 131693.

Engle, R. F. and C. W. Granger (1987). "Co-integration and error correction: representation, estimation, and testing." Econometrica: journal of the Econometric Society: 251-276.

Erasmus, V. N., et al. (2022). "Impacts of COVID-19 on at-sea data collection and regulatory activities and fisheries catches off Namibia." Regional Studies in Marine Science**55**: 102519.

Fernández-González, R., et al. (2022). "Socio-economic impact of Covid-19 on the fishing sector: A case study of a region highly dependent on fishing in Spain." Ocean & Coastal Management**221**: 106131.

García-Pérez-de-Lema, D., et al. (2022). "Operating, financial and investment impacts of Covid-19 in SMEs: Public policy demands to sustainable recovery considering the economic sector moderating effect." International Journal of Disaster Risk Reduction**75**: 102951.

Granger, C. W. J. (1986). Developments in the study of cointegrated economic variables. Oxford Bulletin of economics and statistics, Citeseer.

Ibiamke, N. A. and P. B. Ateboh-Briggs (2014). "Financial ratios effect of international financial reporting standards (IFRS) adoption in Nigeria." Journal of Business and Management Invention**3**(3): 50-59.

Jansen, M. C. and W. H. Meckling (1976). "Theory of the Firm: Managerial." Agency Costs and Ownership Structure.

Jerzemowska, M. (2006). "The main agency problems and their consequences." Acta Oeconomica Pragensia**14**(3): 9-17.

Jin, X., et al. (2022). "The impact of COVID-19 on firm innovation: Evidence from Chinese listed companies." Finance Research Letters**45**: 102133.

KALASH, İ. (2019). "Firm leverage, agency costs and firm performance: An empirical research on service firms in Turkey." İnsan ve Toplum Bilimleri Araştırmaları Dergisi**8**(1): 624-636.

Karadeniz, E., et al. (2009). "Determinants of capital structure: evidence from Turkish lodging companies." International Journal of Contemporary Hospitality Management.

Karğın, S. (2013). "The impact of IFRS on the value relevance of accounting information: Evidence from Turkish firms." International Journal of Economics and Finance**5**(4): 71-80.

Latridis, G. and S. Zaghmour (2013). "Capital structure in the MENA region: empirical evidence from Morocco and Turkey." Investment management and financial innovations**10**(1): 68-77.

Lee, Y.-J. and M. Cho (2022). "Socially stigmatized company's CSR efforts during the COVID-19 pandemic: The effects of CSR fit and perceived motives." Public relations review**48**(2): 102180.

Margaritis, D. and M. Psillaki (2010). "Capital structure, equity ownership and firm performance." Journal of Banking & Finance**34**(3): 621-632.

Mazucheli, J., et al. (2022). "An overview on parametric quantile regression models and their computational implementation with applications to biomedical problems including COVID-19 data." Computer Methods and Programs in Biomedicine: 106816.

Meena, P. and G. Kumar (2022). "Online food delivery companies' performance and consumers expectations during Covid-19: An investigation using machine learning approach." Journal of Retailing and Consumer Services**68**: 103052.

Modigliani, F. and M. H. Miller (1958). "The cost of capital, corporation finance and the theory of investment." The American economic review**48**(3): 261-297.

Modigliani, F. and M. H. Miller (1963). "Corporate income taxes and the cost of capital: a correction." The American economic review**53**(3): 433-443.

Mostafa, H. T. and S. Boregowda (2014). "A brief review of capital structure theories." Research Journal of Recent Sciences

ISSN**2277**: 2502.

Myers, S. (1984). Capital structure puzzle (No. w1393), National Bureau of economic research.

Myers, S. C. and N. S. Majluf (1984). "Corporate financing and investment decisions when firms have information that investors do not have." Journal of financial economics**13**(2): 187-221.

Nassar, S. (2016). "The impact of capital structure on Financial Performance of the firms: Evidence from Borsa Istanbul." Journal of Business & Financial Affairs**5**(2).

Nový, M. and J. Nováková (2022). "Impact of the COVID-19 Pandemic on Construction Companies in the Czech Republic." Procedia computer science**196**: 717-723.

Pfarrhofer, M. (2022). "Modeling tail risks of inflation using unobserved component quantile regressions." Journal of Economic Dynamics and Control**143**: 104493.

Phillips, P. C. and P. Perron (1988). "Testing for a unit root in time series regression." Biometrika**75**(2): 335-346.

Piñeiro-Chousa, J., et al. (2022). "US biopharmaceutical companies' stock market reaction to the COVID-19 pandemic. Understanding the concept of the 'paradoxical spiral'from a sustainability perspective." Technological Forecasting and Social Change**175**: 121365.

Reis, G., et al. (2022). "Effect of early treatment with fluvoxamine on risk of emergency care and hospitalisation among patients with COVID-19: the TOGETHER randomised, platform clinical trial." The Lancet Global Health**10**(1): e42-e51.

Sathyamoorthi, C. R., et al. (2019). "Capital structure and its effect on firm performance: an empirical study on the listed consumer services sector organizations in Botswana." European Journal of Economic and Financial Research.

Shahar, W. S. S., et al. (2015). A review of capital structure theories: Trade-off theory, pecking order theory, and market timing theory. Proceeding of the 2nd International Conference on Management and Muamalah.

Takyi, P. O. and I. Bentum-Ennin (2021). "The impact of COVID-19 on stock market performance in Africa: A Bayesian structural time series approach." Journal of Economics and Business**115**: 105968.

Talukder, A., et al. (2021). "Factors associated with age of mother at first birth in Albania: application of quantile regression model." Heliyon**7**(3): e06547.

Tifow, A. A. and O. Sayilir (2015). "Capital structure and firm performance: An analysis of manufacturing firms in Turkey." Eurasian Journal of Business and Management**3**(4): 13-22.

Twairesh, A. E. M. (2014). "The impact of capital structure on firm's performance evidence from Saudi Arabia." Journal of Applied Finance and Banking**4**(2): 183.

Uyar, A. and A. H. Güngörmüş (2013). "Perceptions and knowledge of accounting professionals on IFRS for SMEs: Evidence from Turkey." Research in Accounting Regulation**25**(1): 77-87.

Yin, J., et al. (2022). "The impact of COVID-19 on turnover intention among hotel employees: A moderated mediation model." Journal of Hospitality and Tourism Management.

Zhang, D. and G. Sogn-Grundvåg (2022). "Credit constraints and the severity of COVID-19 impact: Empirical evidence from enterprise surveys." Economic Analysis and Policy**74**: 337-349.

Zhang, D. and W. Zheng (2022). "Does COVID-19 make the firms' performance worse? Evidence from the Chinese listed companies." Economic Analysis and Policy**74**: 560-570.

ETHICS COMMITTEE APPROVAL

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SCIENTIFIC RESEARCH ETHICS COMMITTEE

12.12.2022

Dear Abdullahı Hassan Yusuf

Your project **"The Effects of Covid-19 on the Business Performance of Business Sectors of Turkey"** has been evaluated. Since only secondary data will be used the project does not need to go through the ethics committee. You can start your research on the condition that you will use only secondary data.

Prof. Dr. Aşkın KİRAZ

The Coordinator of the Scientific Research Ethics Committee

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