


CORPORATE GOVERNANCE AND CAPITAL STRUCTURE: EVIDENCE FROM EUROPE

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 14 April 2023</p> <p>Accepted 13 July 2023</p>	<p>Purpose: The objective of this paper is to investigate the association between corporate governance and capital structure.</p>
<p>Keywords:</p> <p>Corporate Governance; Capital Structure; Non-financial Firms.</p>	<p>Theoretical framework: Since 1970, when the concept of corporate governance is introduced, the debate on whether it might affect capital structure have been ongoing. It is largely believed that in the real world, when effective cooperate governance adopted, strong capital structure can be achieved. Nonetheless, the experimental evidence reveals a variety of findings on such association.</p>
	<p>Design/Methodology/Approach: Panel data was collected form annual reports of 42 non-financial listed firms on Frankfort and Oslo stock exchange over the period 2017-2021. Ordinary Least Square (OLS) regression model is utilized to estimate the connection between dependent and independent variables.</p>
	<p>Findings: The finding shows that BS and AUCS are positively related with the capital structure and the result is significant. With respect to corporate governance, BM and BR with DTA have a negative and significant relationship. CEOC has positive but insignificant connection with DTA. Similarly, insignificant relationship between CEOC and DTA was observed. FS as a control variable has positive association with DTA, whereas the CR related DTA inversely. Despite the fact that, European firms mainly followed with a good corporate governance style if compared with developing countries, the results are still recommended further improvement for the firms in both countries in order to improve the financial position</p> <p>Research, practical & social implications: Future studies should focus on other corporate governance indicators that might affect capital structure significantly. It is also recommended for them to focus on financial firms and make a comparison between financial and non-financial firms.</p> <p>Originality/Value: By providing significant data for the impact of corporate governance on capital structure, this research contributes with existing literature on governance mechanism and management of capital structure. The findings will guide policymakers in various countries in determining the effectiveness of availability corporate governance reforms to enhance the structure of capital.</p>
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GOVERNO DAS SOCIEDADES E ESTRUTURA DE CAPITAL: PROVAS DA EUROPA

RESUMO

Objetivo: O objetivo deste documento é investigar a associação entre o controle corporativo e a estrutura de capital.

Quadro teórico: Desde 1970, quando o conceito de governo das sociedades foi introduzido, o debate sobre se poderia afetar a estrutura de capital tem estado em curso. Acredita-se amplamente que no mundo real, quando se adota uma governação cooperativa eficaz, se pode alcançar uma estrutura de capital forte. No entanto, as evidências experimentais revelam uma variedade de descobertas sobre tal associação.

Concepção/Metodologia/Abordagem: Os dados do painel foram recolhidos a partir de relatórios anuais de 42 empresas cotadas em bolsa não financeiras na Bolsa de Frankfurt e Oslo durante o período de 2017-2021. O modelo de regressão Least Square (OLS) comum é utilizado para estimar a conexão entre variáveis dependentes e independentes.

Constatações: A constatação mostra que a BS e a AUCS estão relacionadas positivamente com a estrutura de capital e o resultado é significativo. No que diz respeito à governança corporativa, a BM e a BR com a DTA têm uma relação negativa e significativa. O CEOC tem uma conexão positiva, mas insignificante, com a DTA. Da mesma forma, foi observada uma relação insignificante entre CEOT e DTA. FS como uma variável de controle tem associação positiva com DTA, enquanto o CR relacionado DTA inversamente. Apesar de as empresas europeias seguirem principalmente um bom estilo de governação das sociedades, se comparadas com os países em desenvolvimento, os resultados são ainda recomendados para novas melhorias das empresas em ambos os países, a fim de melhorar a situação financeira

Investigação, implicações práticas e sociais: Os estudos futuros devem centrar-se noutros indicadores de governo das sociedades que possam afetar significativamente a estrutura de capital. Recomenda-se igualmente que se concentrem nas empresas financeiras e procedam a uma comparação entre as empresas financeiras e não financeiras.

Originalidade/Valor: Ao fornecer dados significativos para o impacto do governo corporativo na estrutura de capital, esta pesquisa contribui com a literatura existente sobre o mecanismo de governança e gestão da estrutura de capital. As conclusões guiarão os decisores políticos em vários países na determinação da eficácia da disponibilidade de reformas de governação empresarial para melhorar a estrutura de capital.

Palavras-chave: Controle Corporativo, Estrutura de Capital, Empresas não Financeiras.

GOBIERNO CORPORATIVO Y ESTRUCTURA DE CAPITAL: EVIDENCIA DE EUROPA

RESUMEN

Objetivo: El objetivo de este trabajo es investigar la asociación entre el gobierno corporativo y la estructura de capital.

Marco teórico: Desde 1970, cuando se introdujo el concepto de gobierno corporativo, el debate sobre si podría afectar la estructura de capital ha estado en curso. Se cree en gran medida que en el mundo real, cuando se adopta una gobernanza cooperativa eficaz, se puede lograr una estructura de capital sólida. Sin embargo, la evidencia experimental revela una variedad de hallazgos sobre dicha asociación.

Diseño/Metodología/Enfoque: Los datos del panel se recopilaban a partir de los informes anuales de 42 empresas no financieras que cotizaban en la bolsa de valores de Frankfurt y Oslo durante el período 2017-2021. Se utiliza el modelo de regresión de mínimos cuadrados ordinarios (MCO) para estimar la conexión entre variables dependientes e independientes.

Hallazgos: El hallazgo muestra que el BS y el AUCS están positivamente relacionados con la estructura de capital y el resultado es significativo. Con respecto al gobierno corporativo, BM y BR con DTA tienen una relación negativa y significativa. CEOC tiene una conexión positiva pero insignificante con DTA. Asimismo, se observó una relación insignificante entre el CEOT y el DTA. FS como variable control tiene asociación positiva con DTA, mientras que el DTA relacionado con RC lo tiene en forma inversa. A pesar de que las empresas europeas siguieron un estilo de buena gobernanza empresarial en comparación con los países en desarrollo, se recomienda que los resultados sigan mejorando para las empresas de ambos países a fin de mejorar la situación financiera.

Investigación, implicaciones prácticas y sociales: Los estudios futuros deberían centrarse en otros indicadores de gobernanza corporativa que podrían afectar significativamente a la estructura de capital. También se recomienda que se centren en las empresas financieras y que hagan una comparación entre las empresas financieras y las no financieras.

Originalidad/Valor: Al proporcionar datos significativos sobre el impacto de la gobernanza empresarial en la estructura de capital, esta investigación contribuye con la literatura existente sobre mecanismos de gobernanza y gestión de la estructura de capital. Los resultados servirán de orientación a los encargados de formular políticas de

diversos países para determinar la eficacia de las reformas de la gobernanza empresarial disponibles a fin de mejorar la estructura del capital.

Palabras clave: Gobierno Corporativo, Estructura de Capital, Empresas no Financieras.

INTRODUCTION

Due to possible conflicts of interest across the participants of capital structure, the sound of corporate governance is becoming significant. Corporate governance is a method for boosting shareholder wealth through organizational structure, that has traditionally been associated with agency issues (Ahmed et al., 2019; Gerged and Agwili, 2020; Ullah et al., 2019). It appears to have an impact on capital structure (CS) and is also crucial when deciding how to finance companies (Haque et al., 2011). Through a good practice of corporate governance, firms can be controlled and managed in effective way (Cadbury, 1992) and can also meet regulatory requirements, safeguard shareholders' interests, and reach their corporate goals and sustain economic development (Elamer et al., 2020; Granado-Peiró & López-Gracia, 2017; Sheikh; Wang, 2012).

The interaction between stakeholders, supervisory board, and executive management in deciding a firm's performance is consistent with the line of strong corporate governance (Jensen, 1993). Therefore, factors related to firm governance, such as, the size of board, board structure, board remuneration and CEO duality and tenure may directly affect choices regarding to capital structure (Bajagai et al., 2019). Additionally, since such choices are reached at the management level, effective corporate governance have a direct impact on organizational decisions including external funds. This can improve company's performance by decreasing the cost of capital as well as creating and sustaining an organizational culture which encourages management to adopt decisions to increase shareholder value (Tien, 2023; Sheikh & Wang, 2012).

Capital structure, on the other hand, is another significant aspect that affects the entire operational level of corporations and has drawn attention in the fields of accounting and corporate finance (Neves et al., 2020). A great incentive of managing capital structure is to minimize cost of capital and increase the interest of shareholders (Huong, 2023; Uwuigbe, 2014). Variables related to governance and institutional ownership have an impact on capital decision. The capital structure topic that was launched by (Modigliani & Miller, 1958) who claimed that a company's valuation and future growth were unaffected by capital management.

However, it is crucial because it affects the capacity to satisfy the demands of all of participants (Bajagai et al., 2019).

Therefore, the general purpose of this study is to investigate the impact of corporate governance on capital structure in non-financial listed firms in the context of developed economies, such as, German and Norway, and mainly it aims to:

1. Investigate how the capital structure is affected by board size, board meetings and board remuneration in non-financial firms in Europe?
2. Investigate the impact of CEO compensation, CEO tenure on capital structure in non-financial firms in Europe?
3. Investigate the impact of audit committee size on capital structure in non-financial firms in Europe?

Scientifically, a significant amount of empirical study has been conducted to examine how corporate governance affects capital structure in both emerging and emerged countries and they are offering some supportive data, such as (Bashir & Asad, 2018; Berger et al., 1997; Bokpin & Arko, 2009; Brick et al., 2006; Crespí-Cladera & Gispert, 2003; Detthamrong et al., 2017; Feng et al., 2020; Friend and Hasbrouck, 1988; Friend & Lang, 1988; Li et al., 2012; Jensen and Meckling, 1976; Sheikh & Wang, 2012; Uwuigbe, 2014; Wen et al., 2002). Their findings provided that the relationship between corporate governance and capital structure is positive and suggesting that adopting strong corporate governance mechanism will reduce the cost of capital and enhance firm performance as well. However, none of them tasted the above association in Europe and particularly in selecting industrial sector. Therefore, this paper will fill this gap by investigating the impact of corporate governance on capital structure in non-financial listed firms in the context of developed economies, such as, German and Norway. These two countries are considered as they are financially competitive countries in Europe (Schwab and Sala-i-Martin, 2016).

LITERATURE REVIEW

Theoretical Review

Agency theory

Theoretically capital structure depended on agency theory (Mehran, 1992). Agency theory is regarded as one of principles that is most important in determining the relationship between the shareholders (principals) and managers (agents) of the firm (Ali & Ahmed, 2021; Alam & Chouaibi, 2022). It can also applied to illustrate the association between governance

and capital structure (Jensen and Meckling, 1976). According to agency theory, conflict of interests brings an agency costs, which have an influence on capital structure decision (Agyei & Owusu, 2014; Harris & Raviv, 1991).

The typical agency conflict arises when managers and board of directors (agents) and owners (principals) all have competing to their interests (Alfaraih et al., 2012). When the decision making process will start, the managers need to consider the interests of the shareholders as well (Feng et al., 2020). However, agents may neglect the interests of principals and as a result, owners suffer an issue that commonly known as an agency cost (Jensen and Meckling, 1976; Sheikh & Wang, 2012). Firm debt strategy is frequently viewed as a crucial corporate governance tool for reducing agency problem between agents and principals (Gyimah et al., 2021). Debt financing can help to solve agency conflict by decreasing free cash flow (Jensen, 1986) but raise the risks of bankruptcy (Haque et al., 2011). Hence, larger stockholders also have opportunity to gather data and maintain a close eye on monitoring the management (Jensen and Meckling, 1976).

Pecking order theory

Pecking order theory was developed by (Myers & Majluf, 1984) claimed that business organizations will originally depended on internal funds, such as non-distributed income. In the absence of asymmetric information and if additional capital is required, they will next switch to borrowing debt (Agyei & Owusu, 2014; Sewpersadh, 2019). Ultimately, they will release stocks to satisfy any additional capital that needed (Abdullah & Tursoy, 2021). Nevertheless, if internal finance (free cash flow) is selected as the preferred source of increasing capital, the pecking order theory disregards the agency issues that observed (Sewpersadh, 2019). As a result, the theory of free cash flow that developed by Jensen (1986) solves the agency issues of executive boards, which allure to invest more from the company's internal funding through poor net present value ventures.

Moreover, the pecking order hypotheses claims that companies will prefer retained income than external funding as source of financing (Jiraporn et al., 2012). This is supported by a proof that an adverse relationship between leverage ratio and profitability (Haque et al., 2011). The favorable impact of the size of firm on debt ratio is accepted by conceptual expectation. This means that big companies have benefits than small firms in terms of gaining short and long term bank borrowings because they have a different economic environment, like

capacity of releasing information and possibility for growth and expansion (Fama & Jensen, 1983).

Empirical Literature

Board size

The size of firms supervisory board have been a key factor in prior research on governance, and it has an influence on the firm's capital structure as well (Dimitropoulos, 2014). This is because the firms main decision making authority is supervisory board and they have responsibility to give strategic direction to assure the firms development and increase investment return (Sheikh & Wang, 2012). Additionally, executive managements are under the controlling and monitoring of the supervisory board. This may be due to the fact that when the boards are large, managers can be monitored well and accessed to extensive scale of assets (Reddy et al., 2010).

Previous study provides a different finding between the board size and capital structure. A study conducted by Feng et al. (2020) focused on the relationship between corporate governance and capital structure by collecting data from 119 Chinese real estate listed companies and 595 firm observation as a panel data. They found a positive association between large board and debit ratio as a measurement of capital structure. Similarly, (Agyei & Owusu, 2014; Bokpin & Arko, 2009; Sheikh & Wang, 2012) have also found a positive and significant relationship between the above relationship. Resource dependence theory also suggested that companies who have a large supervisory board, are able to increase funds easily from outside sources, which can improve firms performance (Abebe Zelalem et al., 2022). On the other hand, a research by Sewpersadh (2019) examined 130 JSE listed firms for the six year period and found a negative and significant link between board size and leverage ratio. The study concluded that firms with large board size have a low leverage ratio. By following the suggestion of resource dependence theory, the first research hypothesis is developed as follow:

H1. Large board size is positively related with capital structure.

Board meeting

It is considered that, eight supervisory board meetings is economically significant per year (Doan & Nguyen, 2018). According to the data that collected in this study, the average board meeting for German and Norway for non-financial firms was below seven times per year. Regular board meetings could be a sign that the board is actively monitored the firms as whole

(Conger et. al., 1998). When meetings are held more frequently, executive management is more closely supervised. Thus, agency costs can be reduced and consequently firms' performance can get an improvement. Very few studies tasted the above relationship.

This may be because the topic is more complicated that it can be seen. Vafeas (1999) found an adverse connection between the number of board meetings and firm performance. However, by moderating impact of firms leverage (Bashir & Asad, 2018) found a positive and significant association between board meetings and firm performance. Similarly, Grove et al. (2011) and Bansal et al. (2023) found that the above relationship is favorable and significant.

Corporate governance can be seen stronger, when the supervisory board meets frequently, which has a direct impact on the firms overall. Thus, the second hypothesis in this study can be developed as follow:

H2. Number of board meetings annually is positively related with capital structure.

Board remuneration

financial experts and scholars have raised their concern about board compensation, specifically, since it is considered to be a barrier to the economic collapse that have shaken corporations in the last three decades. According to agency theory, the factors of board remuneration are varied and they are depending on how much control that shareholders have over the board and executive management.

Prior investigations give a different result about the impacts of board compensation. Barontini & Bozzi (2011) explored the association between board remuneration, ownership structure and corporate performance of listed firms on Milan stock exchange for the period 1995-2002. The study found that board remuneration is inversely related to the corporate performance. Bryan et al. (2000) have also found a negative connection between board remuneration and firms leverage. On the other hand, Doucouliagos & Haman (2007) examined the connection between directors' compensation and corporate performance. The findings illustrated that there is no significant association between board compensation and performance. However, by applying a two years data they found a positive relationship between the board remuneration and return on equity and earning per share. Similarly, a positive association between board remuneration and firm performance has also found by (Brick et al., 2006; Crespí-Cladera & Gispert, 2003; Main et al., 1996). It is argued that a large supervisory board may be greater to handle the firms demand and to expand the business network in order

to improve the firm's performance, which could affect on board remuneration to be increased. Therefore, the third research hypothesis is developed as follow:

H3. Board remuneration is positively related with capital structure.

CEO compensation

Chief Executive Officer (CEO) compensation is commonly known a combination of financial and non-financial benefits that consists of fixed salary and short- and long-term incentives (Bezuidenhout, 2016). Number of studies have focused on the relationship between CEO compensation and capital structure; however, insufficient attention has been paid to those association with non-financial firms in the European economy. Positive connection between CEO remuneration and firm's financial leverage by (Berger Et Al., 1997; Mehran, 1992; Jensen and Meckling, 1976). However, Friend and Hasbrouck (1988); Friend & Lang (1988); Wen et al. (2002) declared a negative relationship between CEO compensation and corporate capital structure. This may be because managers who hold a larger share of the company may desire a higher level of debt to maintain the firm's control under their power. Thus, the fourth study hypothesis is enhanced as follow:

H4. CEO compensation is negatively related with capital structure.

CEO Tenure

According to researchers, tenure can be measured as the number of years that Chief Excusive Officer (CEO) has been employed in this position (Shah et al., 2009). "agency theory predicts that CEOs become increasingly entrenched as they gain experience in their positions" (Pascal Ndaki et al., 2018). Hence, this study expects adverse association between CEO Tenure and debt to assets ratio as a capital structure measurement. From the previous literature, a positive and significant association have found between the above relationship by (Pascal Ndaki et al., 2018). In contrast, Wen et al. (2002) found a negative correlation between CEO Tenure and capital structure. Berger et al. (1997) have also found a negative relationship between the above variables but statistically insignificant with leverage based on book value. Executive entrenchment has an impact on corporate leverage to be lower, particularly if the tenure of CEO is long. As a result, the fifth study hypothesis is supported as follow:

H5. CEO Tenure is negatively related with capital structure.

Audit committee size

It is commonly argued that one of the component of strong corporate governance is audit committee, especially in improving the efficiency of supervisory board to control executive management (Detthamrong et al., 2017). Li et al. (2012) argued that audit committee with a large number will provide better monitoring and supervision, which can help to identify and resolve possible issues in the firm's annual report. Supported by pecking order theory declared that companies with greater and higher audit committee have better free cash flows due to better monitoring and lower expenses associated with it (Benjamin & Karraheemi, 2013). This means that expanding the audit committee size will enhance trust. From the previous literature, Gerged & Agwili (2020); Li et al. (2012) observed a positive and significant relationship between the size of audit committee and firm performance and intellectual capital disclosure respectively. On the other hand, a negative and significant association have been explained between audit committee size and firms leverage and performance by (Ahmed et al., 2019; Detthamrong et al., 2017). Hence, the sixth hypothesis can be argued as follow:

H6. The size of audit committee is positively related with capital structure.

Control Variables

In addition to the above variables, the study model also contains two control variables for the firm characteristics that can predict to affect capital structure. Firm size can be defined as a natural logarithm of total assets and according to trade off theory, the correlation between firm size and debt ratio is positive (Feng et al., 2020). The second control variable is current ratio, which is measured as total current assets divided by total current liabilities. Detthamrong et al. (2017) have found a negative between current ratio as a control variable and firms leverage as an explanatory variable. However, trade off theory predict a positive association between liquidity and leverage (Neves et al., 2020).

METHODOLOGY

Research Variables

Following the direction of previous investigation (Sheikh & Wang, 2012) the dependent variable is capital structure, which is calculated by total dept to assets ratio (DTA). The explanatory variable is corporate governance and it is measured by board size (BS), board meetings (BM), board remuneration (BR), CEO compensation (CEOC), CEO tenure (CEOT) and audit committee size (AUCS) (Bashir & Asad, 2018; Berger et al., 1997; Crespí-Cladera

& Gispert, 2003; Feng et al., 2020; Li et al., 2012; Wen et al., 2002). Control variables in this study is estimated by firm size (FS) and liquidity ratio as current ratio (CR) (Detthamrong et al., 2017; Uwuigbe, 2014).

Table 1: Variable Description and Measurement

Variables	Abbreviation	Measurements	Source
Dependent variables: Total Debt to Assets Ratio	DTA	Total liabilities divided by total assets	(Sheikh & Wang, 2012)
Independent variables: Board Size	BS	Natural logarithm of number of supervisory board	(Feng et al., 2020)
Board Meetings	BM	Number of meetings that held by board of directors annually	(Bashir & Asad, 2018)
Board Remuneration	BR	Natural logarithm of board remuneration	(Crespí-Cladera & Gispert, 2003)
CEO Compensation	CEOC	Natural logarithm of CEO compensation	(Wen et al., 2002)
CEO Tenure	CEOT	Number of years that CEO employed in this position	(Berger et al., 1997)
Audit Committee Size	AUCS	Number of audit committee members	(Li et al., 2012)
Control variables: Firm Size	FS	Natural logarithm of total assets	(Uwuigbe, 2014)
Current Ratio	CR	Ratio of total current assets divided by total current liabilities	(Detthamrong et al., 2017)

Source: Prepared by the authors (2023)

Based on the above summary in table 1, the study model is:

$$DTA_{it} = a_0 + \beta_1 BS_{it} + \beta_2 BM_{it} + \beta_3 BR_{it} + \beta_4 CEOC_{it} + \beta_5 CEOT_{it} + \beta_6 AUCS_{it} + \beta_7 FS_{it} + \beta_8 CR_{it} + e_{it}$$

Where,

TDA_{it} is total debt to assets ratio from i at t time, BS_{it} is board size from i at t time, BM_{it} is board meetings from i at t time, BR_{it} is supervisory board remuneration from i at t time, $CEOC_{it}$ is CEO compensation from i at t time, $CEOT_{it}$ is number of years that CEO employed to this position from i at t time, $AUCS_{it}$ is the size of audit committee from i at t time, FS_{it} is a firm size from i at t time, CR_{it} is a current ratio from i at t time, a_0 is considered to be a constant, $\beta_1 - \beta_5$ is coefficients for corresponding the explained variables and e_{it} is error term from i at t time.

Data Collection

This paper examined the relationship between corporate governance and capital structure of non-financial listed firms on Frankfurt and Oslo stock exchange during 2017-2021. A panel data is obtained from the official annual report of 42 selected non-financial firms that contained both financial and non-financial information, such as statement of financial position, comprehensive income statement, statement of cash flow, statement of changes in shareholders'

equity, independent auditors and corporate governance report. Initially, they were 50 firms but 8 of them were removed due to missing information and having low economic scale. Finally, the data for 42 firms was collected from the WSJ Market partially and the rest downloaded from the annual report of the firms that are publicly shared. Two European countries (German and Norway) was selected in this study as they are economically competitive.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2: Summary statistics

Variables	DTA	BS	BM	BR	CEOC	CEOT	AUCS	FS	CR
Mean	0.538538	3.738095	6.785714	13.48062	0.310476	14.34009	6.861905	21.41155	2.657095
Std. Dev.	0.185459	1.421966	4.027036	0.980439	0.104738	0.892333	6.637574	2.100731	4.071996
Minimum	0.089711	2.000	1.000	11.3022	0.04	11.80506	0.500	16.80361	0.25
Maximum	0.956989	8.000	21.000	16.03806	0.49	16.7893	33.000	25.73555	54.93
Observations	210	210	210	210	210	210	210	210	210

Source: Prepared by the authors (2023)

Table 2 presents the descriptive results of dependent (capital structure) and independent (corporate governance). The mean value of total debt to assets ratio is 0.538 with standard deviation of 0.158. The total debt to assets ratio has a minimum and highest value of 0.089 and 0.956 respectively. Board size has mean and standard deviation value of 3.738 and 1.421 respectively, with minimum and maximum value of 2.000 and 8.000 respectively. Board meetings and board remuneration have a mean value of 6.785 and 13.4480 with standard deviation of 4.027 and 0.980 respectively. The lowest and highest value of board meetings is 1.000 and 21.000 and board remuneration is 11.302 and 16.038 respectively. The standard deviation of CEO compensation and tenure of CEO are 0.104 and 0.892, with mean value of 0.104 and 0.892 respectively. CEO compensation has a minimum and maximum value of 0.04 and 0.49, while the CEO tenure has a minimum and highest of 11.805 and 16.789. Audit committee size has mean value of 6.861 and standard deviation of 6.637 with minimum and maximum value of 0.500 and 33.000. Firm size and current ratio have standard deviation value of 2.100 and 4.071 with mean value of 21.411 and 2.657 respectively. The minimum and maximum value of firm size are 16.803 and 25.735 and the lowest and highest value of current ratio are 0.25 and 54.93.

Correlation Analysis

Table 3: Correlation matrix between dependent and independent variables

	<i>DTA</i>	<i>BS</i>	<i>BM</i>	<i>BR</i>	<i>COEC</i>	<i>CEOT</i>	<i>AUCS</i>	<i>FS</i>	<i>CR</i>
<i>DTA</i>	1								
<i>BS</i>	0.469**	1							
<i>BM</i>	-0.140*	0.101	1						
<i>BR</i>	0.139*	0.5963*	0.197**	1					
<i>COEC</i>	0.044	0.3341*	0.210**	0.274**	1				
<i>CEOT</i>	-0.070	-0.201**	-0.042*	-0.219**	-0.137*	1			
<i>AUCS</i>	0.482**	0.593**	-0.241**	0.319**	0.062	0.018	1		
<i>FS</i>	0.372**	0.582**	0.210**	0.694*	0.538**	-0.105	0.376**	1	
<i>CR</i>	-0.362**	-0.232**	0.025	-0.098	-0.040	0.039	-0.214**	-0.182*	1

Notes: ** Significant at 5% level; * Significant at 10% level.

Source: Prepared by the authors (2023)

Table 4 Multicollinearity test

Variables	Tolerance Value	VIF Value
BS	0.362	2.760
BM	0.805	1.242
BR	0.290	3.449
CEOC	0.431	2.320
CEOT	0.910	1.099
AUCS	0.447	2.239

Mean = 2.184

Source: Prepared by the authors (2023)

Before explaining the Pearson correlation between variables, the data were examined for multicollinearity. According to Abebe Zelalem et al. (2022) if the value of tolerance is above 0.1 and variance inflation factor (VIF) is lower than 10, the issue of multicollinearity cannot be considered. As indicated in table 4, this study is free from this problem. Additionally, according to Gujarati and Porter (2009) multicollinearity is an issue in the data set when a correlation between variables is greater than 0.8. Thus, table 4 clarified that Multicollinearity is not likely to be an issue in this paper.

Considering table 3, again for correlation matrix between all of the variables. At 1 percent significance level, the size of supervisory board, audit committee size and firm size have a positive association with capital structure measurement with value of 0.4690, 0.4822 and 0.3724 respectively at 10% percent significancy. Board remuneration has also a positive and significant connection with debt ratio with a value of 0.1390 at 5 percent level. With value of - 0.1408 board meeting has a negative and significant correlation with total debt to assets ratio at 5 percent. Similarly, current ratio has negative connection with capital structure indicator at 1 percent with value of -0.3625. Further, CEO compensation has favorable but insignificant relationship with debt to assets ratio with value of 0.0444. Finally, the link between

CEO tenure and an indicator of capital structure is negative and nonsignificant with value of -0.0706.

Regression Results and Estimation

Table 5: Ordinary Least Squares regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BS	0.556869	0.148143	3.758985	0.0002***
BM	-0.005519	0.002755	-2.003502	0.0465**
BR	-0.072458	0.018959	-3.821836	0.0002***
CEOC	0.006375	0.016954	0.376047	0.7073
CEOT	-0.001458	0.001573	-0.926911	0.3551
AUCS	0.028000	0.009832	2.847858	0.0049***
FS	0.029893	0.007118	4.199670	0.0000***
CR	-0.009708	0.002536	-3.827947	0.0002***
C	0.579530	0.177307	3.268516	0.0013***
R-squared	0.693084			
Adjusted R-squared	0.670123			
S.E. of regression	0.143641			
F-statistic	18.42556			
Prob(F-statistic)	0.003770			

Notes: *** Significant at 1% level; ** Significant at 5% level.
Source: Prepared by the authors (2023)

DISCUSSION

Table 5 shows panel regression results for the above estimation. The F-statistics demonstrates that the model has acceptable rate for the explanatory factors and the adjusted R², which evaluates the proportion of the impact of the explanatory variables on the variance of debt to assets ratio has a value of 0.670. This indicates that the indicators of corporate governance and control variables are properly described by 67% of debt to assets in the German and Norway manufacturing companies.

The finding also shows that the association between the size of supervisory board and capital structure is positive and statistically significant with a coefficient of 0.556 that is measured by total debt to assets ratio. This finding is similar with the suggestion of both agency theory and resource dependence theory that claimed if the boards are large in size, they are more able to connect with outside environment. In case of the non-financial firms in Germany and Norway, it is recommended for them when they want to rise their capital by debt financing, it is better to increase the board size as an option. During the data analysis in this study, it is also observed that, firms with larger board had more ability to rise their capital through external loans. From the prior investigations, this finding is disagreed with the examination of (Sewpersadh, 2019). However, it is consentience with the arguments of (Agyei & Owusu,

2014; Bokpin & Arko, 2009; Feng et al., 2020; Sheikh & Wang, 2012) who declared that firms can get more debt financing when the supervisory board are large in size. Supporting this, the first hypothesis that large board size is positively related with capital structure in Europe is accepted.

The result with a coefficient of -0.0055 illustrates a negative and significant association between annual number of meetings by board and capital structure. Assuming a constant value for other potential determinants, a 1% raise in the supervisory board meetings brings about a decrease of 0.5% in total debt to assets ratio. More clearly, an increase in annually board meetings resulted in a decline of debt financing that used to increase capital in European non-financial listed firms, particularly in German and Norway. According to organizational theory, decision-making in group requires long time (Vafeas, 1999). Hence, meetings that held by supervisory board “are reactive, rather than proactive” (Jensen, 1993). This result is consistent with pecking order theory suggesting that firms prefer internal fund first to increase their capital rather than external source. This finding in this context is similar with (Vafeas, 1999) who demonstrated an inverse and significant association between board meetings and firm performance. On the other hand, it is opposite with the studies of (Bashir & Asad, 2018; Grove et al., 2011). As a result, the second hypothesis that number of board meetings annually is positively related with capital structure in Europe is rejected. Doan & Nguyen (2018) also claimed that eight supervisory board meetings per year have significant financial impact. If it is larger than eight, it may be considered to increase costs for board meetings, such as, travel expenses, meeting fees and administrative time.

Moreover, the finding also shows a negative and significant association between board remuneration and capital structure with coefficient of -0.0724. Supposing that, other alternative predictors have a constant value, a 1% increase in the board remuneration brings a decline in total debt ratio by 7.2%. Debtors should expect higher business risk, if remuneration plan goes with the interests of executives and board of directors. To support this, agency theory claimed conflict of interest and increasing agency cost due to ownership separation from control (Panda & Leepsa, 2017), which have a significant impact on the decision of capital structure. The finding is consistent with the argument of (Barontini & Bozzi, 2011; Bryan et al., 2000) and opposite with the study of (Brick et al., 2006; Crespí-Cladera & Gispert, 2003). Therefore, the hypothesis that suggested board remuneration is positively related with capital structure in Europe is rejected. The result recommended that directors may follow lower debt ratio in order

to prevent the additional risk and stress that connected with using excessive leverage and also to maintain their positions for attractive salaries and incentives.

CEO compensation is statistically insignificant and positively linked to debt to assets ratio. This suggests that it is not important whether the CEO remuneration is high or low, the leverage ratio remains unchanged. Thus, the fourth hypothesis that CEO remuneration is negatively related with capital structure in Europe is rejected. This result is similar with a study of (Wen et al., 2002) who found an insignificant association between CEO compensation and debt to assets ratio. The possible reason for having positive correlation in this study may be because when CEOs own a large percentage of the company's stock, they will have stronger incentives to make decisions about maximizing capital structure. In other words, CEOs may prefer more debt when they have power and significant number of shares. The positive result is similar with the studies of (Berger et al., 1997; Mehran, 1992 and Jensen and Meckling, 1976).

In case of the tenure of CEO, the finding shows a negative and insignificant relationship with the total debt ratio. This clearly recommends that entrenched CEOs do not have any influence on the capital structure decision. Therefore, the fifth hypothesis that CEO Tenure is negatively related with capital structure in Europe is rejected. The negative association that observed in this study may be because when the leverage is low, the CEOs tenure is long. Thus, they become more entrenched due to having higher salaries and good incentives. The negative finding is consistent with the argument of (Berger et al., 1997) who found a negative correlation between the tenure of CEO and total debt ratio,

Audit committee size is statistically significant and positively associated to the total debt to assets ratio with coefficient of 0.0280. Assuming that, other predictors remain constant, a 1% rise in the size of audit committee leads to an increase in leverage by 2.8%. The finding suggests that when the size of audit committee is large, directors and managers can be controlled and supervised in effective way that have a direct impact on the firms leverage to be higher. In addition, sufficient and effective audit committee can reduce the level of fraud, conflict of interest, agency cost and improve the firm's performance as well. This finding is similar with line of agency theory, which claimed that conflict of interest can be reduced by having an appropriate level of controlling and supervising. It is also consistent with pecking order theory, suggesting that firms with strong and higher audit committee have more ability to use free cash flows as they have sufficient monitoring and lower costs as well. Based on the previous literature, Gerged & Agwili (2020); Li et al. (2012) found a positive and significant

connection between audit committee size and company's performance and intellectual capital disclosure. However, a negative and significant link observed by both (Ahmed et al., 2019; Detthamrong et al., 2017). As a result, the sixth hypothesis that the size of audit committee is positively related with capital structure in Europe is accepted.

Moreover, two control variables have tested for estimating the study model and they are widely recognized for capital structure. Firm size is related to the capital structure positively and this finding is similar with trade off theory recommending that firm size and total debt ratio should be positive. Similar result has also found by (Feng et al., 2020) suggested that larger companies can borrow more money because they are more diversified and have steady income sources. As a result, they suffer fewer bankruptcy expenses. Current ratio as a second control variable has a negative and significant effect on the debt to assets ratio. Similar association is clarified by (Neves et al., 2020) who claimed that firms with sufficient liquidity ratio can produce significant cash flows, which can be useful to cover short-term obligations.

CONCLUSION AND RECOMMENDATION

This study aimed to investigate the impact of corporate governance on capital structure in Europe. To obtain the study objectives, an econometric model was developed to assess the relationship between dependent and independent variables. A panel data was obtained and collected from annual financial reports of 42 non-financial firms that listed on Frankfurt and Oslo stock exchange over the period 2017-2021. Descriptive statistics, correlation matrix, variance inflation factor (VIF) and ordinary least square (OLS) regression model is utilized to measure the above relationship. The dependent variable is capital structure and measured by total debt to assets ratio (DTA). corporate governance on the other hand, is considered to be independent variable and indicated by six proxies; board size (BS), board meetings (BM), board remuneration (BR), CEO compensation (CEOC), CEO tenure (CEOT) and audit committee size (AUCS).

The finding illustrated that board size is statistically significant and positively related to the capital structure and it is similar with the suggestion of agency theory and resource dependence theory claiming that firms with a large supervisory board have more opportunity to increase their capital through external fund, such as borrowing. In case of board meeting, the finding illustrates a negative and significant link with an indicator of capital structure and it is in the line of organizational theory suggesting that group meeting like "supervisory board" can

make decision but it takes a long time. As a result, most of the meetings may not be proactive (Jensen, 1993).

The association between board remuneration and capital structure is negative and significant and it is consistent with the agency theory recommending that agency issues can be observed due to ownership separation from control which affect capital structure significantly. Thus, firms must predict risks, when the compensation plan works with the interest of directors and managers.

Moreover, CEO compensation has a positive relationship with capital structure but statistically insignificant. If CEO compensation is high or low, does not have any impact on capital structure decision. Similarly, the CEO tenure does not have any influence on debt to assets ratio because the finding is statistically insignificant, which means if the tenure of CEO is long or short, capital structure remains unchanged.

The association between audit committee size and capital structure is positive and statistically related to the capital structure. This shows that large audit committee means better controlling, which leads to reduce agency problems. The result is consistent with the agency theory suggesting that by having a proper set of monitoring, conflict of interest can be decreased.

Based on the above, it is clear that corporate governance is mainly strong in European countries, specifically in Germany and Norway and they cannot compare with the developing countries that performed weak governance system. However, Corporate governance in both European countries still needs some consideration and improvement with the aim of expanding greater macro-objectives in order to sustain the economic growth.

Finally, this study is not free from limitations and first, this study is depended on the secondary data only, primary data however, can be also used to understand and obtain more information by combining both survey and reported data to improve the findings of the future study. Secondly, this study is based on non-financial firms that listed on Frankfurt and Oslo stock exchange. Thus, the direction for future study is to promote their results by applying data from other industries and other European countries as well. Lastly, this paper is based on some indicators of corporate governance, however, other proxies, such as board composition, proportion of outside directors, ownership concentration and CEO duality are important and might affect capital structure significantly. Hence, it is recommended for the future study to focus on other corporate governance measurement.

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