EXPLORING THE IMPACT CEO DUALITY, FIRM SIZE, AND BOARD SIZE ON CAPITAL STRUCTURE BASED ON THE KNOWLEDGE MANAGEMENT DURING THE COVID-19 PANDEMIC

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Abstract
In light of the COVID-19 epidemic, the aim of this study is to explore the influence of CEO duality, company size, and board size on capital structure with an emphasis on knowledge management. The study was done out in Bahrain over the period of a year with a cross-sectional design, concentrating on a sample of 12 companies listed in the industrial machinery industry. Data for the year 2022 was primarily derived from annual reports. The findings of the study reveal a significant and beneficial association between board size and financial leverage (LEV). It indicates that businesses with bigger boards typically display higher amounts of financial leverage. The existence of a broader board illustrates a variety of knowledge and expertise, which may enable better capital structure decision-making. The findings highlight how important it is to take board size into account while adopting a capital structure. The research also shows an effective and beneficial connection between CEO duality and financial leverage. This suggests that businesses with a CEO who doubles as the board chairman are likely to have greater amounts of financial leverage. Due to the potential concentration of decision-making power brought on by CEO duality, there may be a rise in taking chances and reliance on financing via debt. These results highlight how crucial CEO structure is in determining capital structure. The study also discovers a significant and advantageous relationship between firm size and financial leverage. Bigger businesses frequently use larger amounts of financial leverage, which may indicate that size affects capital structure decisions. The results suggest that larger companies may have more readily available financial resources, enabling them to take on greater quantities of debt to finance their activities and investments. The study's emphasis on Bahrain's industrial machinery market during the COVID-19 epidemic offers insightful information about the particular difficulties that businesses encountered in this situation. The study adds to the body of knowledge on business finance and knowledge management in times of crisis by investigating the effects of CEO duality, company size, and board size on capital structure. Overall, this study advances knowledge of the variables affecting capital structure choices in Bahrain's industrial sector. Based to these results, firm size, CEO duality, and board size have a big impact on how much capital a company can borrow. These findings underline the significance of taking these aspects into account when designing capital structure rules and the vital function that knowledge management plays in navigating complex and uncertain business contexts, like the COVID-19 pandemic. Our understanding of the interactions between corporate governance, company features, and capital structure decisions would be improved by additional study and analysis in this area.

Keywords: CEO duality, Firm size, Board Size, Capital Structure, Bahrain
1. Introduction

At the end of 2019, notably around December, the COVID-19 pandemic, also referred to as the Corona virus, spread over the entire world. As it swiftly spread from Wuhan, China, to nations all around the world, the World Health Organization (WHO) formally labeled it a global health catastrophe (Alabdullah et al., 2020). In both developing and affluent countries, this unusual pandemic led to medical shortages and a deterioration in the profitability of many enterprises. This global crisis' effects became clear, worsening the situation in many nations. Significant limitations on the availability of necessary raw materials and manufacturing assets to several countries were brought about by COVID-19. Theoretical work on capital structure was mostly undertaken through empirical investigations using the example of major businesses. A company's capital structure has a significant impact on both its financial status and market performance. It describes how a business uses a mix of debt and equity to fund its operations and investments. For businesses seeking to build an important presence in the financial market, which will produce good results and contribute to a nation's overall economic growth, achieving the ideal capital structure is essential. Companies may effectively manage their financial resources and take advantage of chances to maximize value for their shareholders when they have a well-planned and balanced structure for capital. Companies can attain an ideal degree of financial leverage that is in line with their growth goals and risk tolerance by carefully weighing the combination of debt and equity. They are able to get the required funds using this tactical strategy while keeping their financial situation stable. Businesses that have a strong capital structure typically have many benefits in the financial market. First off, they have access to a variety of funding options, such as loan instruments, equity issuance, or retained earnings. Due to their financial flexibility, they can support their operations, grow their company, and take advantage of new opportunities. Additionally, an ideal capital structure enables businesses to control expenses by balancing the benefits of debt (such as tax savings) with the possible risks linked to higher leverage. A solid capital structure also improves a company's performance as a whole. Companies can reduce their cost of capital, which has a direct impact on profitability and shareholder returns, by maintaining an optimum ratio of debt to equity (Almashhadani and Almashhadani, 2022; Alabdullah and Husein, 2023; Akabdullah et al., 2014; Ahmed et al., 2021).

A company's capacity to recruit investors, obtain attractive financing terms, and increase its creditworthiness are all benefits of having a well-structured capital foundation. This boosted investor confidence helps the business's standing and stock performance on the stock market. Beyond their collective performance, businesses with a strong financial structure produce good results. These businesses produce substantial economic advantages for the nation as they grow. Businesses with solid financial standings can promote long-term expansion, generate employment, and drive innovation within their particular industries. The ensuing economic growth draws in investments and fosters wealth, adding to the country's overall stability and development. The capital structure of a company is a key factor in determining its financial standing and market performance. Companies can efficiently manage their resources, obtain finance, and maximize profitability by achieving an ideal capital structure. Companies with strong capital structures not only have an advantage on the financial market, but they also help their nation's economy expand and flourish overall. As a result, organizations seeking to build a strong presence in the financial sector and progress the economy of their country must understand and implement effective capital structure plans (Alabdullah, 2019;
The current study's primary emphasis is on issues that, in terms of corporate governance indicators, are becoming more significant in Bahrain. As the Corona virus affected various sectors of the world's economies, including Bahrain, the current study examines the relationship between the capital structure and the corporate governance indicators (such as the board of directors, the size of the organization, and the CEO's influence). In a number of economic areas. Additionally, being aware of how the capital structure is impacted by the CEO's dual role, firm size, and the board size in order to determine whether there is a significant link between governmental policies and the performance of UAE companies and most economies around the world, this research conducts cross-regression analyses in the financial and non-financial sectors in Bahrain and most other economies. Every business must make decisions about its capital structure. Where there are numerous factors influencing the capital of manufacturing companies, research is being done to determine whether capital structure models drawn from Western settings offer convincing justifications for the choices made by companies regarding their capital structures. These theories of the capital structures include barter theory, scrolling order theory, agency theory, free cash flow theory, and there have been numerous developments for the theories of alternative capital structures over the years. Despite the capital structure's theoretical appeal, managers have not yet been able to use it to identify the ideal level of debt due to the lack of a precise approach in place. This might be because the relative emphasis of the various capital structure theories varies. For instance, inequalities in information are decorated by the headquarters arrangement theory, taxes are highlighted by the negotiating theory, and agency costs are highlighted by the free cash flow theory.

2. Theoretical Background

Previous studies in the literature review mentioned that the theories help in understanding how enterprises finance themselves and in identifying potential capital structure-influencing variables. Khanchel (2007) contends that the job duality limits board independence and lessens the likelihood that the board will be able to effectively and transparently carry out its governance responsibilities. According to Li et al. (2008), a board wherein the CEO has significant control is more likely to experience information asymmetries. Finkelstein and Hambrick (1996, p. 251) claim that the combination of the CEO and chairperson positions is "an Indicator of CEO power over a board." This demonstrates how job duality impairs a board's ability to intelligently and effectively oversee top management that maybe consequence in a decreased level of disclosure (less transparency). The separation of the two positions not only lessens the CEO's influence, but also improves the board's capacity to oversee firm management (Cerbioni and Parbonetti, 2007; Haat et al., 2008; Gul and Leung, 2004). In other meaning, the board's ability to monitor is improved by a separation of the chief executive officer and chair roles (Jensen, 1993). Previous research that looked at corporate governance and business performance focused on its significance and looked into a number of factors. For instance, Sheikh and Wang (2021), they focused on the factors influencing the capital structure of manufacturing enterprises in Pakistan as well as the link between capital structure decisions and the market value of the company on a wide scale. According to the study's findings, the debt ratio is favorably correlated with company size, whereas profitability and liquidity are adversely correlated with tangible profits (asset structure). According to Abobakr and Elgiziry (2016), despite the numerous theories, models, and studies that have attempted to clarify the occurrence of capital
structure, the issue has not yet been resolved. However, in light of recent advancements in behavioral finance, corporate governance, and agency theory, it is worthwhile to look at how the capital structure is affected by the outcomes of applying various corporate governance mechanisms to the features of the board of directors (BC) and the ownership structure (OC). In this study, 36 businesses from the Egyptian Stock Exchange were chosen as a research sample, and they were used to investigate this link. The arrangement of ownership and its effects on the capital structure of the business were found to play a significant role, according to the results. Therefore, while issuing property rights, firms must consider a variety of variables. The management of the company, investors, decision-makers, and other interested parties are likely to gain something from this study.

Alabdullah (2019), in his study on the size of a company's board of directors and the dual nature of corporate social responsibility in the nation of Asia. The results of this study, which was conducted included 91 public companies listed in Malaysia as the sample, demonstrated that the size of the board of directors plays a significant and advantageous role in the disclosure of corporate social responsibility. The CEO's hesitation in reporting corporate social responsibility, on the other hand, indicates a bad connection. Kokeyeva (2019) focused on the analysis of the key variables influencing the leadership of the capital structure in small and medium-sized enterprises in Kazakhstan during the years of 2015 and 2018. to research the factors that affect capital structure, such as size, growth, profitability, and tangible assets. The findings show that the variables influencing capital structure management The amount and profitability of tangible assets in medium-sized and small enterprises. In the United Arab Emirates, Bodan et al. (2017) provided a clear study on the effects of corporate governance with external audits on earning management. In 2017, the findings showed that the activities of the board of directors and the expansion of the CEO's role both had an impact on the management of earnings. Significantly, and secondly, the beneficial effects of ownership structure and board size on discretionary benefits (AD) in the financial industry in the Arab Emirates.

Based on the above illustration, we predict a set of hypotheses:
H1: CEO duality and financial leverage are positively correlated.
H2: The firm size is positively correlated with the financial leverage.
H3: The size of the board of directors and financial leverage are positively correlated.

3. Methods
Data Collection & Measurement
A certain selection of industrial machinery businesses listed in Bahrain was chosen as the sample for this study. In order to acquire the data, information from these companies' annual reports was carefully gathered for the year 2022. In order to accomplish the goals and objectives of the study, accounting and non-accounting data was collected from an overall of 12 industrial machinery businesses. Over the course of a year, a cross-sectional study was carried out to explore the research's goals and hypotheses. The analysis of relationships between numerous variables, including dependent and independent variables, was made possible by this method. Understanding the relationships and interactions between these factors in the wider context of the research was the main goal. A overview of the variable measurements is given below Table 1's detailed depiction of the ways the variables have been measured in this study.
Table 1 Variables and their Measurements

<table>
<thead>
<tr>
<th>Variables</th>
<th>Acr.</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Financial leverage</td>
<td>LEV</td>
<td>Leverage in the financial system is measured using the ratio of total.</td>
</tr>
<tr>
<td>2 Board size</td>
<td>BZ</td>
<td>The number of board members is determined by how many people are currently on the organization's board.</td>
</tr>
<tr>
<td>3 CEO duality</td>
<td>CEO</td>
<td>CEO duality is replaced by a binary variable that expresses whether the CEO also serves as the chairman of the board.</td>
</tr>
<tr>
<td>4 Firm Size</td>
<td>FZ</td>
<td>To calculate the firm's size, the natural logarithm of its total assets is used as a transformation.</td>
</tr>
</tbody>
</table>

4. Results and Discussion

Descriptive Analysis

A sample of 12 enterprises registered in Bahrain's industrial machinery industry served as the basis for the analysis of all study variables, both dependent and independent variables. Table 2 displays the distribution of these factors. To evaluate the normality of the data sample, the values of kurtosis (K) and skewness (S) are shown in Table 2. The observed values reflect a normal distribution because the skewness (S) and kurtosis (K) of the study's sample fall within acceptable limits. According to Alabdullah et al. (2014), data can be regarded as normal when the standards for kurtosis (K) and skewness (S) are 3.96 and 1.96, respectively.

Table 2. Descriptive Analysis

<table>
<thead>
<tr>
<th>All-variables</th>
<th>Mean</th>
<th>Std_Dev</th>
<th>Min</th>
<th>Max</th>
<th>Skewness (S)</th>
<th>Kurtosis (K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEV</td>
<td>0.384</td>
<td>1.301</td>
<td>0.101</td>
<td>4.401</td>
<td>1.567</td>
<td>1.620</td>
</tr>
<tr>
<td>BZ</td>
<td>1.2110</td>
<td>2.4100</td>
<td>0.0000</td>
<td>9.000</td>
<td>1.2210</td>
<td>3.9330</td>
</tr>
<tr>
<td>CEO</td>
<td>0.9430</td>
<td>0.9800</td>
<td>0.0000</td>
<td>1.000</td>
<td>-0.3300</td>
<td>-1.2200</td>
</tr>
<tr>
<td>FZ</td>
<td>5.4770</td>
<td>0.2130</td>
<td>4.3210</td>
<td>6.2900</td>
<td>0.1830</td>
<td>0.4650</td>
</tr>
</tbody>
</table>

Correlation Analysis

The findings of the correlation analysis performed among each of the dependent variables are shown in Table 3. The results show a positive association between the independent variable board size (BZ) and the value of (LEV 0.282). This implies that the independent variables are satisfactorily related to one another and that multicollinearity is not a problem.
Table 3. Correlation test

<table>
<thead>
<tr>
<th></th>
<th>LEV</th>
<th>BZ</th>
<th>CEO</th>
<th>FZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEV</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BZ</td>
<td>0.2820**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO</td>
<td>0.0180</td>
<td>0.1200*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>FZ</td>
<td>0.7700</td>
<td>0.0430</td>
<td>0.711**</td>
<td>1</td>
</tr>
</tbody>
</table>

Significant level is *p < 0.05, **p < 0.01

Statistical Regression Analysis

All of the predictions were supported by the testing findings, which are shown in Table 4 for your review. The results show a substantial and favorable connection (P 0.05, t=1.154) between board size (BZ) and financial leverage (LEV), indicating that board size significantly affects LEV. The findings also show a substantial positive relationship between the CEO and financial leverage (LEV) (P 0.05, t=1.332), highlighting the CEO's major influence on LEV. Additionally, the results show a strong positive association between firm size and financial leverage (LEV) (P 0.05, t=1.411), demonstrating that firm size also significantly affects LEV.

Table 4. Path Coefficients

<table>
<thead>
<tr>
<th>Variables</th>
<th>Path Coefficients</th>
<th>t-value</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>BZ -&gt; LEV</td>
<td>0.0200</td>
<td>1.1540*</td>
<td>YES</td>
</tr>
<tr>
<td>CEO -&gt; LEV</td>
<td>0.0220</td>
<td>1.3320*</td>
<td>YES</td>
</tr>
<tr>
<td>FZ -&gt; LEV</td>
<td>0.0170</td>
<td>1.4110*</td>
<td>YES</td>
</tr>
</tbody>
</table>

Significance levels: *** P < 0. 001 (t >3.33), **p < 0. 01 (t >2.33), *p < 0.05 (t >1.605)

Recommendation

Companies should evaluate and decide the ideal board size that balances competence, diversity, and efficient decision-making based on the study's conclusions. In order to prevent potential inefficiencies and conflicts, it is crucial to establish a balance even if larger boards may signal better financial leverage. Aim for a board size that optimizes the advantages of varied viewpoints and expertise while maintaining good governance. When it regards the size and makeup of their boards, businesses must have a culture of constant development. Companies can stay adaptable and flexible by periodically reviewing the board composition as the business environment changes and new issues arise. Companies can modify their board to maximize competency, diversity, and efficiency by soliciting suggestions from stakeholders, carrying out frequent reviews, and remaining up to date with industry best practices. Adopting this proactive stance will put the business in a position for long-term success and efficient governance in a dynamic environment.

5. Conclusion

This study focused on knowledge management in the context of the COVID-19 pandemic and examined the effects of CEO duality, firm size, and board size on capital structure. The cross-sectional research carried out over a year in Bahrain gave important insights into the variables influencing capital structure choices in the manufacturing equipment sector. Based on the study's results, a strong and favorable correlation exists between board size and financial leverage, indicating that bigger boards help to increase financial leverage. This emphasizes how crucial it is to take the size of the board into account when choosing a capital structure, as having a larger board can help with
decision-making in this area. The study also found a strong and favorable relationship between CEO duality and financial leverage. Financial leverage is more common in businesses where the CEO also serves as the board chairman. This highlights the impact of CEO construction on capital structure choices as well as the possible dangers of having highly concentrated decision-making authority. The study also discovered a strong and advantageous relationship between firm size and financial leverage. The tendency of larger companies to use a greater amount of financial leverage suggests that size influences capital structure decisions. Larger businesses are able to take on higher amounts of debt to fund their activities and make investments because they have access to more financial resources. The study offers useful insights into the issues encountered by businesses and the function of knowledge management in navigating unstable business settings by exploring these elements within the particular context of the manufacturing sector in Bahrain during the COVID-19 epidemic. These results deepen our understanding of the variables affecting capital structure choices and emphasize the significance of taking firm size, board size, and CEO duality into account when establishing capital structure rules. Our understanding of the intricate interactions between corporate governance, business characteristics, and capital structure decisions might be improved by more research in this area. Future research can build on this study's findings to offer more information about the ideal board size, CEO structure, and company size considerations in various industries and geographies, ultimately leading to better corporate finance decision-making.

References


