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ORIGINAL

Effects of corporate governance at information asymmetry on the presence of covid 19 pandemic

Efectos del gobierno corporativo en la asimetría de la información ante la pandemia del covid 19

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ABSTRACT

This research was conducted in the presence of the COVID-19 epidemic, and its goal was to examine the effect of certain corporate governance mechanisms on information asymmetry. Company governance mechanisms include board size, board independence, block holders, family ownership, government ownership, and managerial ownership. The study spans the monthly interval from March of 2020 to December of 2021. Companies listed on the Amman Stock Exchange were randomly sampled using a statistically valid and reliable process of elimination. In total, 48 company-years were used to compile this sample. This study's experimental nature, its foundation in the financial statements of actual businesses, and its practical end-use all place it firmly within the realm of accounting solid evidence research. We examined the connection between corporate governance mechanisms and information asymmetry using a System GMM dynamic panel technique. The study discovered that information asymmetry is significantly associated with corporate governance mechanisms. Furthermore, the significance level at 1 % of the lagged factors of information asymmetry indicates that the asymmetry persists over time. Lastly, the corporate governance mechanisms in our study are based on a wide range of aspects of corporate governance and point companies and their shareholders toward governance practices that reduce information asymmetry in firms.

Keywords: Information Asymmetry; Corporate Governance; Covid 19 Pandemic; System GMM.

RESUMEN

Esta investigación se llevó a cabo en presencia de la epidemia COVID-19, y su objetivo era examinar el efecto de determinados mecanismos de gobernanza empresarial sobre la asimetría de la información. Los mecanismos de gobernanza empresarial incluyen el tamaño del consejo, la independencia del consejo, los accionistas en bloque, la propiedad familiar, la propiedad gubernamental y la propiedad gerencial. El estudio abarca el intervalo mensual de marzo de 2020 a diciembre de 2021. Las empresas que cotizan en la Bolsa de Ammán fueron seleccionadas aleatoriamente mediante un proceso de eliminación estadísticamente válido y fiable. En total, se utilizaron 48 años-empresa para compilar esta muestra. La naturaleza experimental de este estudio, su fundamento en los estados financieros de empresas reales y su uso final práctico lo sitúan firmemente en el ámbito de la investigación de pruebas sólidas de contabilidad. Examinamos la conexión entre los mecanismos de gobierno corporativo y la asimetría de la información utilizando una técnica de panel dinámico System GMM. El estudio descubrió que la asimetría de la información está significativamente asociada a los mecanismos de gobierno corporativo. Además, el nivel de significación al 1 % de los factores

retardados de la asimetría de la información indica que la asimetría persiste en el tiempo. Por último, los mecanismos de gobierno corporativo de nuestro estudio se basan en una amplia gama de aspectos del gobierno corporativo y orientan a las empresas y sus accionistas hacia prácticas de gobierno que reducen la asimetría de información en las empresas.

Palabras clave: Asimetría de Información; Gobierno Corporativo; Pandemia Covid 19; Sistema GMM.

INTRODUCTION

Despite the fact that boards of directors are tasked with reining in chief executive officers (CEOs) who fail to maximize shareholder value, they may not be set up to do so effectively Shi, et al.[52], Annathurai,[11] ,Lee, et al.[38]. The market for corporate control (takeovers) may, instead, create impetus for reform (Khurana et al.[33] Boone et al.[19], Guthrie et al.[25].To further align CEO incentives with those of shareholders, a third option is CEO compensation. The findings of studies in this field suggested that increased adoption of these governance measures could improve information asymmetry for shareholders. One counterargument is that managers have a greater understanding of their companies than anyone from the outside. If the CEO has access to confidential information regarding the company's investment potential, the CEO may be better positioned to make decisions that maximize shareholder value Gupta, et al., [24]. Because of this discrepancy, it appears that boards of directors may not need to keep close tabs on CEOs who have more asymmetric information. A powerful equity incentive may be the best way to bring the CEO's interests in line with those of the shareholders in this scenario. However, management as a party with more control over information than investors or creditors (Zimon, et al.[60] creates a condition known as information asymmetry. The term "information asymmetry" describes a scenario in which one party (in this case, management) has more access to information than another (the principal or parties outside the organization) does about the company and its future prospects. There is solid reason to expect that agents will not always perform best for principal activities, as pointed out by Kristjánsson[35]. Both the agents and the principals, they argue, are persons attempting to maximize their utility. Principals can control this by enforcing appropriate incentives for agents and keeping an eye on their actions to rein in those who stray. When the principal is not keeping an eye on what the agent is doing, there is more room for disagreement over remuneration and benefits. When there is a discrepancy in the amount of information held by the principle and the agent, there is an opportunity for conflict as one party attempts to use the other to further their own ends.

According to Kilincarslan[34] when a corporation has minimal asymmetric information, the cost of board monitoring is cheap, suggesting that the board will exert substantial control because the benefit is large. However, the "monitoring cost theory" suggests that enterprises with a lot of asymmetric information will likely rely more on external supervision and incentive compensation than on extensive monitoring by the board because the former may not be worth the expenses. In a nutshell, the comparative pressure of the three approaches is based on their costs, benefits, and how they are affected by the company's information environment. There are different ideas in the existing research about how asymmetrical information affects CEO pay plans and protections against being taken over. According to Pho[46], companies shouldn't use as much board monitoring and incentive alignment if there are mixed indications about the CEO's impact on firm value. However, Agha, and Hossain, [4] proposed that board monitoring and CEO incentive alignment offer alternate governance systems that can be just as effective. If this is the true, the monitoring cost hypothesis predicts that boards will monitor executives less closely and CEOs will be paid more sensitively to their performance. Board monitoring and the market for corporate control, according to Couzoff, et al.[20] and Zhu et al.[61] are equivalent alternatives to one another in terms of corporate governance. When used together with the monitoring cost hypothesis, this theory argues that companies with higher levels of asymmetric information will use less stringent board monitoring and instead rely more heavily on the takeover market to discipline their managers. Since its outbreak in early 2020, the unique corona virus (COVID-19) pandemic has had a devastating impact on the world economy and stock markets, as revealed by empirical research. Reports indicate that the pandemic and its aftermath will have a negative impact on labor availability, production, and service delivery. Beginning on the 17th of March 2020, only necessary services were permitted to function within Jordan, and even then, they were only allowed to do so during specific times and with a bare minimum of staff. Government officials also urged citizens to withdraw from one another, banned all overseas travel, and passed the Defence Law, which gave the Minister of Defense broad ability to make decisions and issue directives in response to the crisis. There are just 10 key services listed: provision of food, water, electricity, communication, defense, public cleaning management and sewerage, healthcare and medical, including nutritional supplements, banking, finance, e-commerce, and logistics. The government and all non-essential enterprises were put on temporary lockdown. Because of this, a nationwide curfew was implemented to ensure complete isolation. Its administrative governorates were also

cut off from each other, and the borders were closed to anyone entering from epidemic countries before March 17. The lockdown threatens industries like travel and transportation while others, like healthcare, thrive during the pandemic. The effects of market power and information asymmetry on shareholder returns, as well as the opportunities and threats presented to various industries by the epidemic, remain unclear. No conclusion can be drawn about whether or not a company's prior financial health would mitigate the impact of market and industry pressures on shareholder returns.

This research seeks to answer the issues of whether the corporate governance and information asymmetry encountered during the crisis and give empirical evidence for possible investment opportunities in Jordan, one of the emerging markets hit worst by the pandemic. In this paper, we develop a composite index to measure asymmetric information based on a number of previously studies measures, including firm size, and Tobin's Q. We take into account three mechanisms of corporate governance: board size, board independence, block holders, family ownership, government ownership, and managerial ownership. In light of these gaps, we used a panel dataset consisting of a sizable sample of non-financial enterprises traded on the Amman Stock Exchange (ASE) between 2020 M03 and 2021 M12 to analyze how corporate governance affects information asymmetry in Jordanian companies. Our research contributes to the literature by utilizing data from non-financial sectors and by focusing on a comprehensive corporate governance mechanism that includes elements such as board structure, ownership, director participation and busyness, the external control market, and product market competition. Furthermore, we are aware that the panel regression results will be method dependent due to the endogenous nature of the link between corporate governance and firm information asymmetry. We employ the generalized method of moments (GMM) based estimators for dynamic panel estimations in addition to static fixed effects models to address these endogeneity issues. The remaining parts of this paper are structured as follows: In this section, we discuss the theoretical and empirical studies that have attempted to investigate the connection between corporate governance and information asymmetry. In the section describes the data used by our study along with the methodology and model specification. The empirical findings, including descriptive statistics, correlation analyses, and regression analyses, are presented and discussed in the "Empirical results and discussion" section. Important implications from our study are discussed in the final part, under "Conclusion and implications," along with potential avenues for future investigation.

Literature Review

Theoretical Foundations

Information asymmetry theory, developed by Spence et al. (1970), is generally considered to be the first theory of its kind in the field of information economics. The economic theory of "economic system based on incomplete knowledge" was founded on this idea. The economic system formally acknowledges that some persons have an informational advantage over others based on partial information. Two common manifestations of asymmetric information are adverse selection and moral hazard. A case of asymmetric information is "adverse selection," which arises when one or more parties to a contract or proposed transaction have more information than the other parties have. When one or more parties to a contract or transaction can see their desires being fulfilled in a trade, but the other party is unable to watch the event, a situation known as "moral hazard" arises Loannidou, et al.[27] Akerlof is credited for introducing the concept of information asymmetry (1970). According to his theory, one side contains more information than the other. According to Wang, et al. [58], the term "information asymmetry" refers to the belief that those within an organization, such as executives, have access to more accurate data regarding asset valuations and investment prospects than those operating in the market. According to agency theory, problems with agents develop whenever the objectives of agents and their employers are at odds with one another. In summary, the asymmetric information can be formed by a conflict of interest between diverse organizations Ahmed, et al.[5]. Because many employers cannot completely measure and oversee the behavior of the agents (managers), agency costs are incurred. According to Miloud.[43] good corporate governance is linked to strategies that ensure investors receive a fair return on their capital. According to Rezaee et al.[48] "corporate governance is the process of monitoring and controlling to assure the performance of company director with the benefits of shareholder," which is consistent with agency theory. Another definition centers on allocating the value created by the firm to the many parties with which it interacts Sachs et al.[50]. Alfordy et al.[6] defined corporate governance as "laws, rules, structures, procedures, cultures, and systems that contribute to fulfilling the goals of accountability, transparency, fairness, and the rights of stakeholders." This description is congruent with the stakeholder's theory.

Previous Studies

The goal of corporate governance systems is to lower the cost of agency for stakeholders (employers) by influencing the actions of directors, who stand in for shareholders Ananzeh, et al.[9] Ananzeh[10] Behbahaninia[17] Lepore, et al.[40] Lien[41] Information asymmetry can be minimized in two ways: directly through incentives and indirectly through monitoring, both of which have the effect of lowering managers' actions. Incentives in the

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form of awards for managers encourage them to be transparent about the extent to which they are exerting effort, hence reducing the negative effects of information asymmetry on their activities. Information asymmetry can also be mitigated through legislative mechanisms like splitting the responsibilities of the chairman and CEO or increasing the number of independent directors on the board. Shareholders can see how their management acts through the regulatory procedures that are in place. There has not been a lot of investigation into how corporate governance styles and levels of information asymmetry are linked. This is because the majority of the evidence obtained in this area is itself inconsistent. Several authors, including (Joudi, et al.[30] Sugiyanto et al.[54] Tessema[55] Abu et al.[3] Effendi[22] Sabatini, et al.[49] Wang, et al.[58] found that major shareholders could mitigate information asymmetry and boost long-term performance. On the other hand, more institutional ownership was linked to higher levels of information asymmetry. While many scholars have explored the connection between corporate governance and information asymmetry, they have typically focused on narrow aspects or isolated systems of corporate governance. Independent boards have been shown to lessen information inequality in studies by Abu et al.[3], Effendi[22]. According to Lepore, et al.[40] a board's impartiality helps ensure reliable financial reporting. Lien[41] and Sabatini et al.[49] looked at how compensation for executives could help solve agency conflicts and extent the playing specialty when there is a lack of information.

As stated by Sprenger et al.[53] and Kasbar et al.[32] high levels of free cash flow and external financing are dependent on lowering information asymmetry between enterprises and improving the impact of corporate governance procedures on the value of the organization. Institutional shareholders and information asymmetry were the focus of a study by VO.[57] They found that stock prices in companies with high institutional ownership included more information about future profitability than those with low institutional ownership. In this research, the model of Venkatesh and Chiang (1986) was utilized to determine information asymmetry based on the domain of the recommended price for buying and selling stocks. Weird market conditions in supply and demand are to blame for the wide gap between the asking price and the accepted price. Due to the existence of secret information, supply and demand are disrupted in unexpected ways. The projected selling price drops and the supply of stock rises when damaging confidential news is released. When positive secret information is revealed, however, demand rises and so do the prices at which they are offered for sale. If there is no confidential information, the stock price will reflect the effects of general information released by market-makers, meaning that the market-makers will steer the price to a reasonable level. Hong et al.[26] proposed that traders and speculators could benefit from market inefficiency during a pandemic outbreak. The stock market's recent volatility and the increased emphasis on finding ways to turn a profit are both results of the stimulus packages' injection of cash into the economy. During times of market volatility and general uncertainty, the bid-ask spread may widen significantly.

In addition, the bid-ask spread is frequently employed as a surrogate for measuring information asymmetry. If a security is new or relatively small in size and hence has less analyst attention, the bid-ask spread may be greater than usual. Furthermore, organizations that have a small number of owners tend to have greater information asymmetry. This is due to the information asymmetry advantages held by controlling shareholders, who are able to reap the disproportionate benefits of a wider bid-ask spread in excess of the intrinsic worth of the shares before the market reflects this reality. When compared to other proxies like the percent Effective Spread, percent Price Impact, percent Realised Spread, and percent Quoted Spread, the bid and ask prices of the closing percent quoted spread perform better, as discovered by Będowska-Sójka et al.[16]. They also discovered that the size of a company has no bearing on the type of dependence between a benchmark and a proxy, despite the fact that spreads are larger for small stocks compared to big ones. However, Saleemi[51] have noted a correlation between the percentages of bid-ask spreads and the returns on securities. They determined that an increase in the spread yielded a higher rate of gross return. Le et al.[37] had already shown that treasuries with a greater bid-ask spread, which makes them more susceptible to liquidity shocks, had higher dividends. Their results imply that the liquidity cost should be factored into return calculations to account for the risk of a pandemic. However, Leirvik et al.[39] showed, however, that market liquidity and liquidity costs do not account for stock market performance. Saleemi[51] backs this up by finding a negative but negligible relationship between liquidity costs and yields on the DJI index if the timeframe is analyzed during the pandemic-related limitations. From what has been said above, it's clear that there is no consensus on how to define the connection between the corporate governance on information asymmetry. Therefore, the purpose of this research is to examine and verify the hypothesis that the effect of corporate governance on information asymmetry during the uncertainty caused by a pandemic in an emerging economy.

METHOD

This study is an associative quantitative analysis of the impact of corporate governance mechanisms on information asymmetry in Jordan during the COVID-19 outbreak. Our research data comes from the Thomson One Data Stream database. The database was made available to the researcher so that he or she could compile the desired financial data from Jordan Stock Exchange-listed companies. The database was mined for

information on the selected organizations, including financial data from the income statement, cash flow, and balance sheet. Secondary data sources offer a wealth of information useful for research and problem-solving, and their use reduces the time and money spent on data collection. To do this, we use a dataset consisting of non-financial companies trading on the Amman Stock Exchange (ASE) in the following sectors: manufacturing, mining, energy, services (non-financial), and construction/real estate. 94 companies make up the original panel data set from 2020M03 through 2021M12. But after removing the businesses with the most missing values we are left with a final sample of 48 companies.

Variables and empirical hypothesis

The Corporate Governance Variables

Board Size (BZ)

The board size in this study refers to the number of directors on the board, as shown in the Auditing financial statement. Measuring the Board Size in the present study followed the previous studies (Abdul Gafoor et al.[2] Al-Haddad et al.[7].

Board Independence (BIND)

The percentage of independent non-executive directors on the board is all that the Board Independence metric shows. According to the Jordanian corporate governance Code (2009), a company's independent director must not only be separate from the company's executive director and any employees of the senior executive management, but also from the company's major shareholders, its auditor, and any companies with which the listed corporation is affiliated. In order to gauge board independence, previous empirical research have stressed the crucial role that these subsets of members have in monitoring earnings management and boosting performance Al-haddad et al.[7] and Rajeevan et al.[47].

CEO's Duality (CED)

When the functions of both the chief executive officer and the chairperson are combined, we speak of a "dual CEO." That's the case when one and the same person holds the positions of chairman and chief executive officer. The position of chairman of the board of directors cannot be held simultaneously with any other executive position in the firm, according to the Jordanian corporate governance Code (2009). In contrast, previous research has shown that the CEO's dualism is crucial to the performance and earnings management of the organization (Abdul Gafoor et al.[2], Al-haddad et al.[7] and Rajeevan et al.[47].

Block Holders (BH)

Since one of the main benefits of block holders is the creation of an ownership structure in which the shareholders are large enough to control the firm and extract their private profits, this type of ownership is widely regarded as the most crucial aspect of any given ownership structure Abdi et al [1] Because of the enormous number of shares, they possess in a firm, block holders sometimes have significant sway over its management. In this analysis, we defined block holders as those investors who own five percent or more (5 % or more) of the total shares of the company Maswadeh[42] Kao et al.[31].

Family Ownership (FO)

One important component of Jordan's ownership structure is reflected in this study through the perspective of family ownership. According to a proposition, the multitude of shares possessed by families is divided by the overall multitude of shares in a company (Lassoued et al.[36] and Musallam et al.[44].

Government Ownership (GO)

Because government officials are not actual owners and do not have personal cash flow rights, government ownership is used in the current study. This should make state officials more open to requiring thorough Audits designed to safeguard corporate assets. In this scenario, the portion of government ownership is found by considering the multitude of shares the government owns to the overall multitude of shares in the company (Jarbou et al.[29] and Lassoued et al.[36]. Several government entities can represent the government.

Managerial Ownership (MO)

Managerial ownership refers to the amount of stock held by the board of directors. "Managerial ownership" is calculated by segregating the multitude of shares possessed by the company's directors by the overall multitude of shares Alqatamin.[5] Becht et al.[14] found that when a company's executive and non-executive directors work together to establish the ownership of the directors, the company's difficulties and challenges are mitigated and its information asymmetry is enhanced.

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The Construction of Information Asymmetric Index (IAI)

Several indicators of information asymmetry have been proposed in the literature. There is a connection between these metrics, but they also individually tell a different perspective. However, most empirical articles only use one or two factors to assess information asymmetry. In this study, we employed a holistic evaluation by developing an index of asymmetric information that takes into account its many characteristics. In this paper, we combine the principal component analysis (PCA) of firm size with Tobin's Q to create an asymmetric information index (IAI). Principal Component Analysis (PCA) techniques are widely used and recognized in modern data analysis, and are being put to use in a wide variety of fields (Islam, et al.[28] and Ouyang et al.[45]. The PCA is a multivariate and non-parametric method that can find important details in a large data set where the assertions are frequently described by a number of numeric explanatory elements that are directly linked Abdi et al.[1]. Yasin, et al.[60] upheld that despite the prevalence of several indicators of Asymmetric Information in literature, no accurate and specific proxy would encapsulate the asymmetric information. Usually, Firm Size, and Tobin's Q, etc. are merged to apprehend the asymmetric information, henceforth, because using one and leaving the other proxies would lead to a loss of important information Tyavambiza et al.[56].

Firm size

Since the market and regulators pay greater attention to larger companies, they may have less information asymmetry since they are more mature and have more tried-and-true disclosure rules and processes in place Zuhroh[63]. To account for inflation, we adjust both the firm's assets and market value of its shares to 2020 dollars.

Tobin's Q

Earlier research has suggested that companies with promising expansion prospects are particularly vulnerable to the pitfalls of an information asymmetry Dos Santos et al.[21]. In order to quantify this information gap, proxies for enterprises' investment potential have been employed. Tobin's Q is a popular proxy. Tobin's Q equals the book value of assets minus the book value of equity plus the market value of equity divided by the book value of assets.

Empirical model estimation

Our dataset is panel-based, encompassing both cross-sectional and time-series information, so our econometric analysis makes use of both static and dynamic forms of panel data regression. We employed the fixed effects (FE) model proposed by Gujarati[23] and Wooldridge[59] to estimate static panel data. As it makes an effort to account for the unobserved heterogeneity present amongst distinct entities, this model outperforms the pooled OLS approach (companies). This is reflected by a distinctive differential intercept term for every business. Within-transformation, widely used for FE model estimation, controls for time-dependent and explanatory variables while removing fixed effects (unobserved heterogeneity).

$$Z_{i,j} - \widehat{Z}_{\iota} = \varphi\left(Q_{i,j} - \widehat{Q}_{\iota}\right) + \left(w_{i,j} - \widehat{w_{\iota}}\right) \qquad (1)$$

When the dependent variables are anticipated to show a high level of persistence, dynamic panel data regression estimation is employed. Based on our evaluation of the relevant literature, the lagged information asymmetry term captures the pervasiveness seen in measures of information asymmetry. Due to its ability to account for persistent effects, dynamic panel estimation outperforms its static counterpart in terms of robustness and insight. Specifically, we employ Difference GMM and System GMM, two well-known dynamic panel estimate methods (Blundell & Bond 1998).

$$Z_{i,j} = \omega + \varphi Z_{i,j} + \varphi Q_{i,j} + w_{i,j} \qquad (2)$$

$Z_{i,j}$ is the dependent variable representing information asymmetry measures in Equation (1) and (2), whereas $Q_{i,j}$ represents the collection of independent explanatory factors including both the corporate governance processes variables. Time-delayed information asymmetry is represented by the $Z_{i,j}$ term, where $Q_{i,j}$ and $w_{i,j}$ are the time-defined values of $Q_{i,j}$ and $w_{i,j}$, respectively. Explanatory factors in our case are often assumed to suffer from endogeneity, as indicated by Arora et al.[13]. This is because the firm's information asymmetry has an effect on the seven methods, we employed to evaluate corporate governance. Furthermore, the fixed effects estimator produces skewed and inconsistent regression coefficient estimates when a lagged dependent variable is used as a regressor. Generalized method of moments (GMM) estimators are often used to estimate dynamic panels because they avoid Nickel bias Beck et al.[15] To avoid endogeneity and simultaneity bias, GMM estimators

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are superior to fixed effects estimators Arora et al.[13] When estimating the model as a set of equations, one for each time period, the Difference GMM estimator (also known as the Arellano and Bond Estimator) makes use of the lagged levels of the dependent variables as instruments for the first differenced lags of the dependent variable Arellano et al.[12] The lagged values of the dependent variables, however, are often poor instruments for the first differenced variables, as argued by Blundell et al.[18]. Since the System GMM estimator employs lagged differences of $Z_{i,j}$ as instruments for the equation in levels in addition to lagged levels of $Z_{i,j}$ as instruments for the equation in first differences, it was recommended that this method be used. Therefore, the System GMM estimator outperforms the Difference GMM estimator in terms of stability. Furthermore, robust standard errors for FE estimation and Windmeijer-corrected standard errors for GMM estimations have been described to address heteroskedasticity and autocorrelation issues, respectively. Using the Sys-GMM approach, we develop the following model to assess the impact of a company's corporate governance on information asymmetry within the company.

$$IAI_{i,j} = \omega_0 + \omega_1 IAI_{i,j-1} + \omega_1 IAI_{i,j-1} + \omega_2 BZ_{i,j} + \omega_3 BIND_{i,j} + \omega_4 CED_{i,j} + \omega_5 BH_{i,j} + \omega_6 FO_{i,j} + \omega_7 GO_{i,j} + \omega_8 MO_{i,j} + w_{i,j} \quad (3)$$

In equation (3), $IAI_{i,j}$ signified the information asymmetry index. Also, we have the corporate governance mechanisms for firm measured using the seven mechanisms described previously.

RESULTS AND DISCUSSION

Table 1. Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
IAI	1,52E-08	0,142835	1,668934	-7,61444	1,133238	-2,72135	14,90011
BZ	7,744792	7	15,43634	0,028935	2,44532	0,785132	3,406022
BIND	0,211269	0,127259	1,1	-0,65249	0,26261	0,584812	2,718417
BH	0,616323	0,631964	1,074846	0,17475	0,176357	-0,15573	2,667286
CEOD	0,165702	0	1,751157	-1,04398	0,388684	1,701159	4,724299
FO	0,022217	0,002343	0,486822	-0,0457	0,047827	3,969895	26,31694
GO	0,01391	0	0,519388	0	0,073746	5,778232	36,38071
MO	0,154734	0,107156	0,546517	-0,33027	0,147909	0,642303	2,457117

Table 2. Correlation Matrix

Variables	IAI	BZ	BIND	BH	CEOD	FO	GO	MO
IAI	**1**							
BZ	-0,225*	**1**						
BIND	0,072**	-0,107*	**1**					
BH	-0,215*	0,305*	0,032	**1**				
CEOD	0,018	0,108*	0,026	0,209*	**1**			
FO	0,123*	-0,039	0,067**	-0,060	0,074**	**1**		
GO	0,126*	0,034	0,140*	0,046	-0,080*	-0,087**	**1**	
MO	0,243*	-0,062**	-0,218*	-0,135*	0,214*	0,211*	-0,197*	**1**

Table 3. Regression Results

Variables	FE	Diff-GMM	Sys-GMM
Lagged IAI	-	0,056*	0,348*
BZ	0,074*	0,061*	0,085*
BIND	0,392*	-0,395*	0,303*
CEOD	-0,600*	-0,787*	-1,212*
BH	1,762*	0,844*	-0,328*
FO	0,586*	1,194**	3,651*
GO	-3,233*	-1,169**	1,991*
MO	0,612*	-0,912*	2,628*
R-square	0,364	-	-
Number of observations	-	960	1008
Number of companies	-	48	48

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Examining descriptive statistics of the relevant variables is recommended prior to analyzing the estimation. This summary of the model's series' attributes is crucial; hence a detailed description is provided below. Descriptive statistics for the studied variables are presented in table 1. The mean can be used to summarize the data in a sample with a single number. The mean is frequently used as a proxy for the midpoint of a data set in statistical tests. The averages of the independent variables in table 1 are rather close together. As a result, the data variables are spread out uniformly across the whole set. As a result, based on the mean, there is no significant difference between any of the factors. Furthermore, the maximum number of dummy variables is 1, and the minimum number is 0, indicating that the data was examined successfully. Inferring from table 2's correlation matrix, we find no evidence of multicollinearity among the independent (explanatory) variables. As Sugiyanto al.[54] suggested multicollinearity is thought to be a problem if the connection among any two predictors is greater than 0,80. As a result, we can conclude that our dataset is free of multicollinearity. Table 3 displayed the outcomes of the regression study conducted with both static (FE) and dynamic (GMM) panel regression models. The FE model's standard errors were reported to be robust, while the dynamic panel models' (Difference GMM and System GMM) were claimed to be Windmeijer-corrected. As stated by Blundell et al.[18].

Information asymmetry is still there, as shown by the fact that the lagging terms of information asymmetry are significant (at the 1 % level). These results contradict the work of Arora et al.[13] who find CG to be irrelevant in explaining information asymmetry, albeit only somewhat. Perhaps this is due to the fact that the method we use to measure CG deviates significantly from the one they used in their study. Based on these results, we can conclude that CG plays a crucial role in shaping information asymmetry. One more noteworthy conclusion concerning the nature of the connection between CG and information asymmetry is implied by the results of Sys-GMM. Good corporate governance standards assist in reducing information asymmetry because they lead to more efficient operations and wiser decision-making. This is because the board can keep an eye on management's actions and choices if good corporate governance procedures are in place. In addition to reducing information asymmetry and generating positive financial outcomes, the board is able to exert sufficient pressure on operational management to improve its performance. However, establishing robust internal controls and corporate governance systems can be expensive for businesses. Time spent by managers preparing for and attending board meetings, directors' sitting fees, travel expenditures, etc., all add up to these costs. If shareholders think these costs are too high, investor confidence may drop, which would make information asymmetry less of a problem for the company. Investors may also feel that the board meetings themselves don't provide enough time for the directors to achieve any significant gains that would be crucial in changing the firm's information asymmetry. The negative correlation between some forms of CG (government ownership and CEO duality) and information asymmetry may be explained by the above factors.

CONCLUSIONS

In the presence of COVID 19, we investigate the effects of seven major systems of corporate governance on information asymmetry in Jordan. We find that firms encountering stronger asymmetric information tend to use less intensive board supervision, have more exposure to market discipline, and have higher CEO pay. The findings are in line with the notion of monitoring cost. In other words, because of the high expenses associated with direct board oversight, businesses are forced to rely more on indirect governance measures like CEO incentive alignment and market discipline. Endogeneity among governance methods and between governance and asymmetric information has little effect on our findings. The conclusions indicating governance depends on asymmetric information provide additional evidence that firms endogenously and optimally choose governance. The study's shirkers are the types of managers who would rather not take on executive responsibilities, and it is assumed that they are not beholden to the company's interests, even though this may not be the case. Therefore, it may be impossible to evaluate potential benefit contradictions between managers without responsibility and the company on whose board they participate based on the customary disparities in defining executive managers with and without responsibility.

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