



Building a corporate governance index (JCGI) for an emerging market: case of Jordan

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Abstract

A comprehensive corporate governance index (JCGI, 0–100) is constructed to measure the quality of corporate governance practices of the universe of publicly traded Jordanian firms during 2018–2019. We survey all firms' corporate governance practices and manually collect governance data for listed corporations in Amman Stock Exchange to construct the first JCGI, which comprises five sub-indices and 60 elements. The results show that Jordanian companies did not progress in the corporate governance reform during the study period. The overall JCGI mean value is 67.80%. Sub-index results show that governance is weakest in both board procedure and disclosure, with a mean value of 57.36% and 52.43%, respectively. The board procedure subindex shows that most listed firms practice poor governance. Within the board structure sub-index, only 18% of the study sample has the policy to specify the board's professional qualifications and training requirements. Results of shareholders' rights show a rigid and nontransparent environment in the enterprises' control structure.

Keywords Corporate governance determinants · Corporate governance index · Corporate governance model · Governance elements

JEL Classification G30 · G39 · G19

Introduction

"Corporate governance, a term that scarcely existed before the 1990s, is now universally invoked wherever business and finance are discussed" (Keasey et al. 2005). Corporate governance has become a global phenomenon. The financial scandals and crises that have hit most countries pave the road for ongoing corporate governance interest. Governments worldwide are continuously developing corporate governance codes and guidelines or refurbishing those in existence (Mallin 2006).

The main sources of corporate governance legislation in Jordan are the Companies Law, the Securities Law, the Banking Law, and several Instructions and Regulations

issued by the Jordanian Securities Commission and the Central Bank of Jordan.

The banking sector in Jordan is heavily regulated. Much attention by regulators and market commissioners was directed to this sector, for example, the "Bank Directors Handbook of Corporate Governance" issued in 2004, the "Corporate Governance Code for Banks in Jordan," issued in 2007, and the "Corporate Governance Instructions for Banks" issued in 2014 (Cigna and Sigheartau 2016).

Jordan authorities have developed additional national corporate governance codes for listed companies; the Corporate Governance Code for Shareholding Companies listed on the ASE, issued in 2008. According to this law, companies must comply with its articles based on "comply or explain" principles or on a compulsory basis according to the law's requirements (See, Cigna and Sigheartau 2016 and OECD Investment Policy Reviews: Jordan 2013).

Jordan lacks an index for corporate governance that can reflect the degree of governance applied inside listed companies and give vital information to stakeholders. Overall corporate governance of companies in Jordan is lost information. No comprehensive measure exists to evaluate the

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degree of corporate governance used by policymakers, ASE, SDC, CBJ, and other participants in the capital market. JCGI is the first comprehensive corporate governance construction exercise conducted in Jordan. JCGI will judge how corporate governance reforms are working (Sarkar et al. 2012). It will help investors (local and foreign) evaluate the risk associated with deviating from proper corporate governance practices and determine their investment decisions. JCGI can rank companies in Jordan according to the degree of adopting best governance practices. Finally, the JCGI can be used for research purposes and international ratings and rating agencies.

For these reasons, we build the first JCGI for 191 listed firms in the corporate sector for the years 2018 and 2019 using four crucial corporate governance mechanisms: board structure, board procedure, disclosure, ownership structure, and minority shareholder rights. We also build the Corporate Governance Index by Sector (JCGIS) and corporate governance sector by company. The elements of each sub-index reflect Jordan-specific norms and institutions.

The remainder of this paper is organized as follows. Section "Literature review" summarizes the relevant literature review; section "Methodology and data" describes data and methodology. Section "Results" discusses the empirical results, and section "Conclusions and policy implications" has conclusions and policy implications.

Literature review

The literature on the importance and effect of corporate governance is vast, but literature on constructing a comprehensive Corporate Governance Index is limited. The work of Ararat et al. (2016) and Black et al. (2019), Black et al. (2012), Balasubramanian et al. (2011), Cheung et al. (2010), Cheung et al. (2007), Beiner et al. (2006), Black et al., 2006, Bebchuk et al., 2005, and Gompers et al., 2003, is some of the main works in this area.

Black et al. (2019) find that well-constructed, country-specific "corporate governance indices" can predict higher firm values in emerging markets. Black et al. investigate four major emerging markets (Brazil, India, Korea, and Turkey) and build an overall country-specific governance index. The overall index includes five subindices: disclosure, board structure, ownership structure, shareholder rights, board procedure, and control of related party transactions. The main findings are: (i) disclosure (especially financial disclosure) predicts higher market value across all selected countries, (ii) board structure (principally board independence) has a positive coefficient in all selected countries and only significant in two countries, (iii) ownership structure, shareholder rights, board procedure and control of related party transactions indices do not predict firm value.

Ararat et al. (2016) study the Effect of Corporate Governance on Firm Value and Profitability in Turkey from 2006 to 2012, relying on hand-collected data covering the vast majority of listed firms. They build a Turkey Corporate Governance Index (TCGI), composed of five sub-indices for board structure, board procedure, disclosure, ownership, and shareholder rights. Ararat et al. main findings are that TCGI predicts higher market value (with firm fixed effects) and higher firm-level profitability with firm random effects. The disclosure sub-index is the principal sub-index that predicts higher market value and profitability and drives the Index results.

Sarkar et al. (2012) construct a corporate governance index for the largest 500 listed firms in the Indian corporate sector from 2003 to 2008. They use the information on four crucial corporate governance mechanisms: the board of directors, ownership structure, audit committee, and the external auditor. They document an increasing trend in the governance index of Indian companies. They further examine the relationship between the Corporate Governance Index and companies' market performance and find a strong relationship between the two with companies with stronger corporate governance structures earning up normal returns.

Balasubramanian et al. (2011) provide a detailed "case study" of firm-level governance practices in India, based on an extensive survey in 2006 of 506 Indian public companies' firms. They build a broad overall Indian Corporate Governance Index (ICGI) and find a positive association between ICGI and firm market value with a stronger association between ICGI and smaller firms. They also investigate particular aspects of governance, such as board structure, in predicting firms' market values. They identify 49 firm attributes that are often believed to correspond to "good" governance; each element is coded "1" if a firm has the attribute; "0" otherwise. They group these elements into five main indices of Board Structure, Disclosure, Related Party Transactions, Shareholder Rights, Board Procedure. They find that most firms meet the board independence rules under Indian law and that Indian companies are more likely to comply with audit committee requirements. Related party transactions are common, but approval requirements for them are often weak. Only about two-thirds of companies disclose annual reports on their websites. Executive compensation is modest by US standards, but CEOs face only a small risk of dismissal. Only about 75% of firms allow voting by mail, even though this has been legally required since 1956. Government enforcement actions against firms are almost non-existent. They find a positive and statistically significant association between ICGI and firm market value in India. The association is more significant for more profitable firms and firms with higher growth opportunities. A sub-index for shareholder rights is individually significant, but subindices



for board structure, disclosure, board procedure, and related party transactions are not significant.

Cheung et al. (2010) construct a corporate governance index (CGI) to evaluate the Fortune 100 largest Chinese listed companies' corporate governance practice progress during 2004–2006. They construct the CGI Based on the Revised OECD's Principles of Corporate Governance (Gompers et al. 2003) and develop a corporate governance index consisting of 86 questions classified into five OECD corporate governance principles: rights of shareholders; equitable treatment of shareholders; the role of stakeholders; disclosure and transparency; and board responsibilities. Cheung et al. found that Chinese companies have been making progress in corporate governance reform. They also find a positive relationship between market valuation, as measured by Tobin's Q and market-to-book ratio (M/B), and overall corporate governance practices, as measured by the CGI.

Chen et al. (2007) test the relationship between ownership/leadership structures and stock returns for firms listed in Taiwan. They built a Governance Index based on four different aspects of the company's governance structure: CEO duality, the size of the board of directors, managements' holdings, and block shareholders' holding. They consider this index as a proxy measure of the effectiveness of the corporate governance mechanism in Taiwan. Chen et al. (2007) find a strong relationship between the governance index and stock performance.

Durnev and Kim (2005) have found out that firms with growth opportunities that are expected to be financed externally, usually practice a higher-quality form of governance, and this practice could possibly affect the company's market value positively.

Love and Klapper (2003) have studied and analyzed corporate governance (CG) rankings across 14 emerging markets by constructing a corporate governance index that included 6 main categories (Discipline, Transparency, Independence, Accountability, Responsibility, and Fairness), and they have found that the positive corporate governance is significantly correlated with a better operating performance and market valuation mainly in countries with weak legal environments.

Cheung et al. (2007) examine the relationship between corporate governance and firm value using one-year data of major listed companies in the Hong Kong Stock Exchange. They construct a corporate governance index (CGI) for Hong Kong listed companies to capture good corporate governance practices and the variation in these practices' quality. One of their major findings is that a company's market valuation is positively related to the overall CGI score and a composite measure of a firm's corporate governance practices.

Black et al. (2006) build Korean corporate governance index based on a spring.

2001 hand-collected data survey of some corporate governance practices by the Korea Stock Exchange (KSE). Black et al. classify corporate governance element five sub-indices: Shareholder Rights (5 elements); Board Structure (4 elements on board structure and composition); Board Procedure (26 elements); Disclosure (3 elements); and Ownership Parity sub-index. They conclude that an overall corporate governance index is an important and likely causal factor in explaining Korean public companies' market value.

Bebchuk et al. (2005) investigate the relative importance of the 24 provisions followed by the Investor Responsibility Research Center (IRRC) and included in the Gompers et al. (2003) governance index. They put forward an entrenchment index based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments. They construct the entrenchment index "E index," based on six provisions. Each company in the IRRC database is given a score, from zero to six, based on the number of these provisions the company has in the given year or month. They find that increases in the index level are monotonically associated with economically significant reductions in firm valuation, as measured by Tobin's Q, as well as large negative abnormal returns during the 1990–2003 period.

Gompers et al. (2003) construct a "Governance Index" or ("G") using specific corporate-governance provisions of all firms in Corporate Takeover Defenses of 24 governance rules to proxy for the level of shareholder rights at about 1500 large firms during the period from 1990 to 1998. In building the G-index, they add one point for every provision that restricts shareholder rights for every firm. Thus, the Governance Index ("G") is just the sum of one point for the existence (or absence) of each provision. Gompers et al. construct subindices for each of the five categories: Delay, Protection, Voting, Other, and State. However, this G-index does not accurately reflect the relative impacts of different provisions. They find that firms with stronger shareholder rights have higher firm value, higher profits, higher sales growth, lower capital expenditures, and fewer corporate acquisitions.

Methodology and data

JCGI is composed of five sub-indices, which in turn include 60 elements. Elements suggested by previous literature and fit the Jordanian environment are considered as potential indicators of good governance practices by corporations in Jordan. Most variables are coded as "1" if a firm has the attribute and "0" otherwise.

We construct a JCGI for 191 listed firms in the corporate sector for 2018 and 2019 using information related to



four important corporate governance mechanisms, namely, Board Structure, Board Procedure, Disclosure, Ownership Structure, and Minority Shareholder Rights. Then different elements inside each sub-index are determined. The elements of each sub-index reflect Jordan-specific norms and institutions.

JCGI covers all publicly traded Jordanian firms. JCGI is comprised of five equally weighted sub-indices; (1) Board Structure, (2) Board Procedure, (3) Disclosure, (4) Ownership Structure, and (5) Minority Shareholder Rights. Inside each sub-index, elements are given equal weights based on the different elements inside these sub-indices. Table 1 describes the sub-indices and attributes in each sub-index.

Methodology of index construction

We construct the Jordan Corporate Governance Index (JCGI) in two steps. In the first step, we construct a sub-index for each of the four corporate governance components selected, namely, (1) Board Structure, (2) Board Procedure, (3) Disclosure, (4) Ownership Structure, and (5) Minority Shareholder Rights. We specify the number of governance requirements according to best practices and the governance guidelines applied in Jordan and existing literature. In each sub-index, we assign equal weight to each element based on each CG component's total number of elements.

In the second step, we average the four sub-indices values to arrive at the overall Corporate Governance Index (CGI). The total JCGI score is an average of the sub-index scores.

Then we repeat this process to construct a CG index by sectors, the Banking sector, the Services sector, the Industrial sector, and the Insurance sector, to stand on the possible differences in CG practices between them. Further, we construct CGI by a company for the 191 listed ones. In constructing the JCGI, we used internationally accepted benchmark (OECD's Principles of Corporate Governance, OECD, 2004, G20/OECD's Principles of Corporate Governance 2015) and followed the Ararat et al. (2016) method and related specifications.

Data sources

We manually collect governance data on corporate governance practices for all companies listed on the Amman Stock Exchange (ASE) in 2018 and 2019.

Information about corporate governance dimensions of Board Structure, Board Procedure, Disclosure, Ownership Structure, and Minority Shareholder Rights is collected manually from the company's annual reports, corporate governance compliance reports, and charters, and the Securities Depository Center (SDC), and the Amman Stock Exchange (ASE).

Results

Jordan corporate governance index for all listed companies

Results of the JCGI are reported in Table 2. Table 2 presents the Corporate Governance Index along with its components for the years 2018–2019. The corporate governance index's mean value is 67.80%, nearly two-thirds of its maximum value.

Sub-index results ranked in descending order (Table 3) show that governance is weakest in both board procedures and disclosures with a mean value of 57.36% and 52.43%, respectively. Governance in Ownership structure is the highest, with a mean value of about 82.29 of the 100-maximum value. Shareholder rights and board structures are 75.67% and 71.26% approximately, accounting for more than two-thirds of the sub-indexes maximum value.

When going down into detailed sub-index results, interesting results emerge; the board procedure sub-index shows that most listed firms practice poor governance. About 69% of listed firms have no code of ethics or conduct, 61% do not implement the board performance measurement process, and 63% do not adopt and implement a firm risk management plan. The story is even worse in the disclosure sub-index; results show that all listed companies in Jordan disclose no remuneration policy. Ten percent and fewer listed companies disclose their quarterly financial statements, corporate governance compliance reports, code of conduct of ethics, and association articles. Out of the 191 companies, only 21% disclose corporate governance charter, and 18% disclose internal audit/control information. Within the board structure sub-index, only 18% of the study sample has the policy to specify the board's professional qualifications and training requirements. Results of shareholders' rights show a rigid and non-transparent environment in the enterprises' control structure. A structure does not change based on the shareholders' needs.

Jordan corporate governance index for listed companies by sector (JCGIS)

The mean value of JCGIS is reported in Tables 4, 5, 6, 7, and 8 for the Banking, Insurance, Service, and Industry sectors, respectively. Results show that the Banking sector possesses the highest JCGIS (87.64), followed by the Insurance Sector (72.07), Service Sector (65.34), and Industry Sector (65.22).

Sub-index results summary in Table 8 shows that governance is weakest in both board procedures in the Service



Table 1 JCGI Sub-indices and elements

Code	Elements of governance
<i>Board structure</i>	
Bs1	The firm has at least one independent director
Bs2	The firm has more than one independent director
Bs3	The audit committee has a non-executive or independent chair
Bs4	The audit committee has an independent member
Bs5	CEO (if onboard) and chairman are different people
Bs6	CEO (general manager) on the board
Bs7	Is the (general manager) an outsider
Bs8	A corporate governance committee exists
Bs9	The board consists of not less than three and not more than 13 members
Bs10	There is a policy to specify the professional qualifications & training requirements for the board
<i>Board procedures</i>	
Bp1	The firm has a code of ethics or conduct
Bp2	Corporate governance policy or board charter governs the board process
Bp3	The firm discloses the membership of the audit committee
Bp4	The firm discloses the audit committee charter
Bp5	The firm has an internal audit function
Bq6	The board implemented a performance measurement process to assess executive management performance
Bq7	The board has a nominations & compensation committee chaired by an independent director (or non-executive director)
Bq8	Board has implemented a mechanism to receive shareholder complaints and suggestions
Bq9	The board adopted and implemented a firm risk management plan
<i>Disclosures</i>	
Dis1	The firm puts annual financial statements on the firm's website
Dis2	The firm puts quarterly financial statements on the firm's website
Dis3	The firm discloses material events on the firm website
Dis4	The firm puts an annual report on the firm's website
Dis5	The firm puts CG compliance reports separately on the firm's website
Dis6	The firm puts an annual schedule of corporate events on the firm's website
Dis7	Firm articles of association available on the firm website
Dis8	The firm includes shareholding voting information on the firm's website
Dis 9	The firm prepares English language financial statements
Dis10	The firm discloses the list of insiders
Dis11	The firm discloses shareholdings of individual directors
Dis12	CG charter or guidelines disclosed
Dis13	Code of conduct or ethics is disclosed
Dis14	Information on the last AGM disclosed
Dis15	Board member's current roles are disclosed
Dis16	Board member's background (education, employment, history) is disclosed
Dis17	Board members date of joining the board disclosed
Dis18	The background of senior managers is disclosed
Dis19	Information on internal audit/control is disclosed
Dis20	The number of meetings/years is disclosed
Dis 21	Board resolutions are disclosed
Dis22	The executive director's remuneration policy is disclosed
<i>Ownership structure</i>	
Own1	Control structures that are not proportional to share ownership are disclosed
Own2	There are noulitimate controlling shareholders
Own3	The firm has no class of shares with multiple voting rights
Own4	The firm has an outside block holder with more than 5% of shares
Own5	The firm has managerial equity ownership



Table 1 (continued)

Code	Elements of governance
Own6	Institutional and foreign shareholding exists
<i>Shareholder rights</i>	
Sr 1	All shareholders have access to their ownership records and documents maintained by the company
Sr 2	Shareholders have access to the general assembly meeting minutes
Sr 3	Shareholders have the right to file lawsuits (or any alternative means of dispute settlements) against the board, board member(s), and general manager if they feel the company is at risk because of their actions
Sr 4	Major shareholders who hold 10% or more can request extraordinary general assembly meetings
Sr 5	Existing shareholders have a priority to subscribe to any new share issuance
Sr 6	Shareholders receive dividends within forty-five days from the date taken by GA to distribute them
Sr 7	Shareholders participate in and are informed on basic decisions
Sr 8	Shareholders can participate effectively and vote in the GSM
Sr 9	The enterprise's control structure is transparent and is allowed to change based on the shareholders' needs
Sr 10	Shareholders within the same class are treated equally
Sr 11	The firm has an insider trading policy
Sr 12	The firm does not have any loans to the director or has a policy limiting these loans
Sr 13	The firm has an investor relations officer/ department

and Industry sector (52.2 and 51.33, respectively) and for disclosures in Insurance, Service, and Industry sectors (56.23, 48.86, and 49.5, respectively). Governance in shareholder rights is the highest for the Banking sector with a mean value of 76.92 and weakest for the Insurance sector with a value of 72.92. Governance in shareholder rights is also strong for Service and Industry sectors (75.85 to 76.08, respectively). Ownership structure accounts for more than two-thirds of the maximum value of 100 of the sub-indices. Overall results show that governance is weakest in board procedures and disclosures.

Conclusions and policy implications

We survey all listed firms' corporate governance practices over 2018–2019 on the Amman Stock Exchange (ASE) and construct the first Jordan Corporate Governance Index (JCGI). JCGI comprises five sub-indices for board structure, board procedure, disclosure, ownership, and shareholder rights, including 60 elements. We manually collect

governance data on corporate governance practices for all companies listed in 2018 and 2019. The corporate governance index's mean value is 67.80%, nearly two-thirds of its maximum value.

Overall results show that governance is weakest in board procedures and disclosures elements, with a mean value of 57.36% and 52.43%, respectively. Governance in Ownership structure is the highest, with a mean value of about 82.29 of the 100-maximum value. Shareholder rights and board structures are 75.67% and 71.26% approximately. Results of JCGI by sector (JCGIS) show a similar ranking.

The development of JCGI can be used by policymakers, ASE, SDC, CBJ, and other participants in the capital market. JCGI will judge how corporate governance reforms are working and how Investors (local and foreign) can evaluate the risk associated with deviating from proper CG practices and can determine their investment decisions. JCGI can rank companies in Jordan according to the degree of adopting best governance practices. Finally, the JCGI can be used for research purposes and international ratings and rating agencies.



Table 2 Construction of JCGI, 2018–2019

Codes	Elements of governance	No.	Mean (%)
<i>Board structure</i>			
Bs1	The firm has at least one independent director	170	89
Bs2	The firm has more than one independent director	158	83
Bs3	The audit committee has a non-executive or independent chair	152	80
Bs4	The audit committee has an independent member	153	80
Bs5	CEO (if onboard) and chairman are different people	174	91
Bs6	CEO (general manager) on the board	110	58
Bs7	Is the (general manager) an outsider	44	23
Bs8	A corporate governance committee exists	176	92
Bs9	The board consists of not less than three and not more than 13 members	190	99
Bs10	There is a policy to specify the professional qualifications & training requirements for the board	34	18
Board structure sub-index		71.26	
<i>Board procedures</i>			
Bp1	The firm has a code of ethics or conduct	60	31
Bp2	Corporate governance policy or board charter governs the board process	153	80
Bp3	The firm discloses the membership of the audit committee	181	95
Bp4	The firm discloses the audit committee charter	33	17
Bp5	The firm has an internal audit function	129	68
Bq6	The board implemented a performance measurement process to assess executive management performance	74	39
Bq7	The board has a nominations & compensation committee chaired by an independent director (or non-executive director)	128	67
Bq8	Board has implemented a mechanism to receive shareholder complaints and suggestions	157	82
Bq9	The board adopted and implemented a firm risk management plan	71	37
Board procedures sub-index		57.36	
<i>Disclosures</i>			
Dis1	The firm puts annual financial statements on the firm website	50	26
Dis2	The firm puts quarterly financial statements on the firm's website	14	7
Dis3	The firm discloses material events on the firm website	59	31
Dis4	The firm puts an annual report on the firm's website	61	32
Dis5	The firm puts CG compliance reports separately on the firm's website	19	10
Dis6	The firm puts an annual schedule of corporate events on the firm's website	57	30
Dis7	The firm articles of association available on the firm website	5	3
Dis8	The firm includes shareholding voting information on the firm's website	40	21
Dis 9	The firm prepares English language financial statements	185	97
Dis10	The firm discloses the list of insiders	191	100
Dis11	The firm discloses shareholdings of individual directors	190	99
Dis12	CG charter or guidelines is disclosed	41	21
Dis13	Code of conduct or ethics code disclosed	8	4
Dis14	Information on the last AGM disclosed	191	100
Dis15	Board member's current roles are disclosed	182	95
Dis16	Board members background (education, employment, history) is disclosed	189	99
Dis17	Board members date of joining the board disclosed	133	70
Dis18	The background of senior managers is disclosed	181	95
Dis219	Information on internal audit/control is disclosed	35	18
Dis20	The number of meetings/years is disclosed	181	95
Dis 21	Board resolutions are disclosed	191	100
Dis22	The executive director's remuneration policy is disclosed	0	0
Disclosures sub-index		52.43	
<i>Ownership structure</i>			
Own1	Control structures that are not proportional to share ownership are disclosed	191	100



Table 2 (continued)

Codes	Elements of governance	No.	Mean (%)
Own2	There are no ultimate controlling shareholders	140	73
Own3	The firm has no class of shares with multiple voting rights	191	100
Own4	The firm has an outside block holder with more than 5% of shares	128	67
Own5	The firm has managerial equity ownership	117	61
Own6	Institutional and foreign shareholding exists	176	92
	Ownership structure sub-index		82.29
<i>Shareholder rights</i>			
Sr 1	All shareholders have access to their ownership records and documents maintained by the company	191	100
Sr 2	Shareholders have access to the general assembly meeting minutes	191	100
Sr 3	Shareholders have the right to file lawsuits (or any alternative means of dispute settlements) against the board, board member(s), and general manager if they feel the company is at risk because of their actions	191	100
Sr 4	Major shareholders who hold 10% or more can request extraordinary general assembly meetings	54	28
Sr 5	Existing shareholders have a priority to subscribe to any new share issuance	61	32
Sr 6	Shareholders receive dividends within forty-five days from the date taken by GA to distribute them	79	41
Sr 7	Shareholders participate in and are informed on basic decisions	190	99
Sr 8	Shareholders can participate effectively and vote in the gsm	191	100
Sr 9	The enterprise's control structure is transparent and is allowed to change based on the shareholders' needs	0	0
Sr 10	Shareholders within the same class are treated equally	191	100
Sr 11	The firm has an insider trading policy	191	100
Sr 12	The firm does not have any loans to a director or has a policy limiting these loans	158	83
Sr 13	The firm has an investor relations officer/ department	191	100
	Shareholder rights sub-index		75.67
JCGI	Jordan overall corporate governance		67.80

This table shows the governance elements used to construct the Jordan Corporate Governance Index (JCGI), the number of firm-year observations, and each element's mean. Data are hand-collected from firm-level corporate governance compliance reports, articles of association, companies' websites, annual reports, ASE, and SDC. Maximum mean values are 100

Table 3 JCGI and Sub-indices rankings. Maximum mean values are 100

Elements of governance	Mean
Ownership Structure Sub-index	82.29
Shareholding Rights Sub-index	75.67
Board Structure Sub-index	71.26
Board Procedures Sub-index	57.36
Disclosures Sub-index	52.43
JCGI	67.80



Table 4 Construction of JCGIS for the Banking Sector, 2018–2019

Codes	Elements of Governance	No.	Mean (%)
<i>Board structure</i>			
Bs1	The firm has at least one independent director	15	100
Bs2	The firm has more than one independent director	15	100
Bs3	The audit committee has a non-executive or independent chair	15	100
Bs4	The audit committee has an independent member	15	100
Bs5	CEO (if onboard) and chairman are different people	15	100
Bs6	CEO (general manager) on the board	15	100
Bs7	Is the (general manager) an outsider?	4	27
Bs8	A corporate governance committee exists	15	100
Bs9	The board consists of not less than three and not more than 13 members	15	100
Bs10	There is a policy to specify the professional qualifications & training requirements for the board	15	100
Board structure sub-index			92.70
<i>Board procedures</i>			
Bp1	The firm has a code of ethics or conduct	15	100
Bp2	Corporate governance policy or board charter governs the board process	15	100
Bp3	The firm discloses the membership of the audit committee	15	100
Bp4	The firm discloses the audit committee charter	15	100
Bp5	The firm has an internal audit function	15	100
Bq6	The board implemented a performance measurement process to assess executive management performance	15	100
Bq7	The board has a nominations & compensation committee chaired by an independent director (or non-executive director)	15	100
Bq8	Board has implemented a mechanism to receive shareholder complaints and suggestions	15	100
Bq9	The board adopted and implemented a firm risk management plan	15	100
Board procedures sub-index			100
<i>Disclosures</i>			
Dis1	The firm puts annual financial statements on the firm's website	15	100
Dis2	The firm puts quarterly financial statements on the firm's website	2	13
Dis3	The firm discloses material events on the firm website	13	87
Dis4	The firm puts an annual report on the firm's website	15	100
Dis5	The firm puts CG compliance reports separately on the firm's website	15	100
Dis6	The firm puts an annual schedule of corporate events on the firm's website	14	93
Dis7	Firm articles of association available on the firm website	3	20
Dis8	The firm includes shareholding voting information on the firm's website	15	100
Dis 9	The firm prepares English language financial statements	14	93
Dis10	The firm discloses the list of insiders	15	100
Dis11	The firm discloses shareholdings of individual directors	15	100
Dis12	CG charter or guidelines disclosed	15	100
Dis13	Code of conduct or ethics code disclosed	5	33
Dis14	Information on the last AGM disclosed	15	100
Dis15	Board member's current roles are disclosed	15	100
Dis16	Board member's background (education, employment, history) is disclosed	15	100
Dis17	Board member's date of joining the board disclosed	14	93
Dis18	The background of senior managers is disclosed	15	100
Dis219	Information on internal audit/control is disclosed	15	100
Dis20	Number of meetings/years is disclosed	14	93
Dis 21	Board resolutions are disclosed	15	100
Dis22	The executive director's remuneration policy is disclosed	0	0
Disclosures sub-index			82.95
<i>Ownership structure</i>			
Own1	Control structures that are not proportional to share ownership are disclosed	15	100



Table 4 (continued)

Codes	Elements of Governance	No.	Mean (%)
Own2	There are no ultimate controlling shareholders	13	87
Own3	The firm has no class of shares with multiple voting rights	15	100
Own4	The firm has an outside block holder with more than 5% of shares	7	47
Own5	The firm has managerial equity ownership	12	80
Own6	Institutional and foreign shareholding exists	15	100
	Ownership structure sub-index		85.67
	<i>Shareholder rights</i>		
Sr 1	All shareholders have access to their ownership records and documents maintained by the company	15	100
Sr 2	Shareholders have access to the general assembly meeting minutes	15	100
Sr 3	Shareholders have the right to file lawsuits (or any alternative means of dispute settlements) against the board, board member(s), and general manager if they feel the company is at risk because of their actions	15	100
Sr 4	Major shareholders who hold 10% or more can request extraordinary general assembly meetings	10	67
Sr 5	Existing shareholders have a priority to subscribe to any new share issuance	6	40
Sr 6	Shareholders receive dividends within forty-five days from the date taken by GA to distribute them	14	93
Sr 7	Shareholders participate in and are informed on basic decisions	15	100
Sr 8	Shareholders can participate effectively and vote in the GSM	15	100
Sr 9	The enterprise's control structure is transparent and is allowed to change based on the shareholders' needs	0	0
Sr 10	Shareholders within the same class are treated equally	15	100
Sr 11	The firm has an insider trading policy	15	100
Sr 12	The firm does not have any loans to a director or has a policy limiting these loans	0	0
Sr 13	The firm has an investor relations officer/ department	15	100
	Shareholder rights sub-index		76.92
JCGI	Jordan overall corporate governance for banking sector		87.64

This table shows the governance elements used to construct the Jordan Corporate Governance Index by sector (JCGIS), the number of firm-year observations, and each element's mean. Data are hand-collected from firm-level corporate governance compliance reports, articles of association, companies' websites, annual reports, ASE, and SDC. Maximum mean values are 100



Table 5 Construction of JCGIS for the Insurance Sector, 2018–2019

Codes	Elements of governance	No.	Mean (%)
<i>Board structure</i>			
Bs1	The firm has at least one independent director	20	95
Bs2	The firm has more than one independent director	20	95
Bs3	The audit committee has a non-executive or independent chair	20	95
Bs4	The audit committee has an independent member	19	90
Bs5	CEO (if onboard) and chairman are different people	21	100
Bs6	CEO (general manager) on the board	13	62
Bs7	Is the (general manager) an outsider?	2	10
Bs8	A corporate governance committee exists	20	95
Bs9	The board consists of not less than three and not more than 13 members	21	100
Bs10	There is a policy to specify the professional qualifications & training requirements for the board	5	24
Board structure sub-index			76.6
<i>Board procedures</i>			
Bp1	The firm has a code of ethics or conduct	16	76
Bp2	Corporate governance policy or board charter governs the board process	20	95
Bp3	The firm discloses the membership of the audit committee	21	100
Bp4	The firm discloses the audit committee charter	4	19
Bp5	The firm has an internal audit function	20	95
Bq6	The board implemented a performance measurement process to assess executive management performance	6	29
Bq7	The board has a nominations & compensation committee chaired by an independent director (or non-executive director)	16	76
Bq8	Board has implemented a mechanism to receive shareholder complaints and suggestions	11	52
Bq9	The board adopted and implemented a firm risk management plan	13	62
Board procedures sub-index			67.11
<i>Disclosures</i>			
Dis1	The firm puts annual financial statements on the firm's website	8	38
Dis2	The firm puts quarterly financial statements on the firm's website	1	5
Dis3	The firm discloses material events on the firm website	7	33
Dis4	The firm puts annual reports on the firm's website	13	62
Dis5	The firm puts CG compliance reports separately on the firm's website	0	0
Dis6	The firm puts an annual schedule of corporate events on the firm's website	11	52
Dis7	Firm articles of association available on the firm website	0	0
Dis8	The firm includes shareholding voting information on the firm's website	5	24
Dis9	The firm prepares English language financial statements	21	100
Dis10	The firm discloses the list of insiders	21	100
Dis11	The firm discloses shareholdings of individual directors	21	100
Dis12	CG charter or guidelines disclosed	3	14
Dis13	Code of conduct or ethics code disclosed	0	0
Dis14	Information on the last AGM disclosed	21	100
Dis15	Board member's current roles are disclosed	21	100
Dis16	Board member's background (education, employment, history) is disclosed	21	100
Dis17	Board member's date of joining the board disclosed	11	52
Dis18	The background of senior managers is disclosed	21	100
Dis219	Information on internal audit/control is disclosed	13	62
Dis20	The number of meetings/years is disclosed	20	95
Dis21	Board resolutions are disclosed	21	100
Dis22	The executive director's remuneration policy is disclosed	0	0
Disclosures sub-index			56.23
<i>Ownership structure</i>			
Own1	Control structures that are not proportional to share ownership are disclosed	21	100



Table 5 (continued)

Codes	Elements of governance	No.	Mean (%)
Own2	There are no ultimate controlling shareholders	18	86
Own3	The firm has no class of shares with multiple voting rights	21	100
Own4	The firm has an outside block holder with more than 5% of shares	14	67
Own5	The firm has managerial equity ownership	16	76
Own6	Institutional and foreign shareholding exists	20	95
	Ownership structure sub-index		87.33
	<i>Shareholder rights</i>		
Sr 1	All shareholders have access to their ownership records and documents maintained by the company	21	100
Sr 2	Shareholders have access to the general assembly meeting minutes	21	100
Sr 3	Shareholders have the right to file lawsuits (or any alternative means of dispute settlements) against the board, board member(s), and general manager if they feel the company is at risk because of their actions	21	100
Sr 4	Major shareholders who hold 10% or more can request extraordinary general assembly meetings	3	14
Sr 5	Existing shareholders have a priority to subscribe to any new share issuance	4	19
Sr 6	Shareholders receive dividends within forty-five days from the date taken by GA to distribute them	6	29
Sr 7	Shareholders participate in and are informed on basic decisions	21	100
Sr 8	Shareholders can participate effectively and vote in the GSM	21	100
Sr 9	The enterprise's control structure is transparent and is allowed to change based on the shareholders' needs	0	0
Sr 10	Shareholders within the same class are treated equally	21	100
Sr 11	The firm has an insider trading policy	21	100
Sr 12	The firm does not have any loans to a director or has a policy limiting these loans	18	86
Sr 13	The firm has an investor relations officer/ department	21	100
	Shareholder rights sub-index		72.92
JCGI	Jordan overall corporate governance for the insurance sector		72.07

This table shows the governance elements used to construct the Jordan Corporate Governance Index by sector (JCGIS), the number of firm-year observations, and each element's mean. Data are hand-collected from firm-level corporate governance compliance reports, articles of association, companies' websites, annual reports, ASE, and SDC. Maximum mean values are 100



Table 6 Construction of JCGIS for the Service Sector, 2018–2019

Codes	Elements of governance	No	Mean (%)
<i>Board structure</i>			
Bs1	The firm has at least one independent director	91	84
Bs2	The firm has more than one independent director	82	76
Bs3	The audit committee has a non-executive or independent chair	79	73
Bs4	The audit committee has an independent member	83	77
Bs5	CEO (if onboard) and chairman are different people	94	87
Bs6	CEO (general manager) on the board	62	57
Bs7	Is the (general manager) an outsider?	35	32
Bs8	A corporate governance committee exists	96	89
Bs9	The board consists of not less than three and not more than 13 members	107	99
Bs10	There is a policy to specify the professional qualifications & training requirements for the board	12	11
Board structure sub-index		68.5	
<i>Board procedures</i>			
Bp1	The firm has a code of ethics or conduct	24	22
Bp2	Corporate governance policy or board charter governs the board process	85	79
Bp3	The firm discloses the membership of the audit committee	99	92
Bp4	The firm discloses the audit committee charter	11	10
Bp5	The firm has an internal audit function	57	53
Bq6	The board implemented a performance measurement process to assess executive management performance	36	33
Bq7	The board has a nominations & compensation committee chaired by an independent director (or non-executive director)	68	63
Bq8	Board has implemented a mechanism to receive shareholder complaints and suggestions	94	87
Bq9	The board adopted and implemented a firm risk management plan	33	31
Board procedures sub-index		52.22	
<i>Disclosures</i>			
Dis1	The firm puts annual financial statements on the firm's website	18	17
Dis2	The firm puts quarterly financial statements on the firm's website	9	8
Dis3	Firm discloses material events on firm website	27	25
Dis4	The firm puts annual reports on the firm's website	19	18
Dis5	The firm puts CG compliance reports separately on the firm's website	3	3
Dis6	The firm puts an annual schedule of corporate events on the firm's website	20	19
Dis7	Firm articles of association available on the firm website	1	1
Dis8	The firm includes shareholding voting information on the firm's website	14	13
Dis9	The firm prepares English language financial statements	104	96
Dis10	The firm discloses the list of insiders	108	100
Dis11	The firm discloses shareholdings of individual directors	108	100
Dis12	CG charter or guidelines disclosed	19	18
Dis13	Code of conduct or ethics code disclosed	2	2
Dis14	Information on the last AGM disclosed	108	100
Dis15	Board member's current roles are disclosed	100	93
Dis16	Board member's background (education, employment, history) is disclosed	106	98
Dis17	Board member's date of joining the board disclosed	77	71
Dis18	The background of senior managers is disclosed	100	93
Dis219	Information on internal audit/control is disclosed	6	6
Dis20	The number of meetings/years is disclosed	101	94
Dis21	Board resolutions are disclosed	108	100
Dis22	The executive director's remuneration policy is disclosed	0	0
Disclosures sub-index		48.86	
<i>Ownership structure</i>			
Own1	Control structures that are not proportional to share ownership are disclosed	108	100



Table 6 (continued)

Codes	Elements of governance	No	Mean (%)
Own2	There are no ultimate controlling shareholders	76	70
Own3	The firm has no class of shares with multiple voting rights	108	100
Own4	The firm has an outside block holder with more than 5% of shares	76	70
Own5	The firm has managerial equity ownership	61	56
Own6	Institutional and foreign shareholding exists	98	91
	Ownership structure sub-index		81.17
	<i>Shareholder rights</i>		
Sr 1	All shareholders have access to their ownership records and documents maintained by the company	108	100
Sr 2	Shareholders have access to the general assembly meeting minutes	108	100
Sr 3	Shareholders have the right to file lawsuits (or any alternative means of dispute settlements) against the board, board member(s), and general manager if they feel the company is at risk because of their actions	108	100
Sr 4	Major shareholders who hold 10% or more can request extraordinary general assembly meetings	32	30
Sr 5	Existing shareholders have a priority to subscribe to any new share issuance	35	32
Sr 6	Shareholders receive dividends within forty-five days from the date taken by GA to distribute them	36	33
Sr 7	Shareholders participate in and are informed on basic decisions	108	100
Sr 8	Shareholders can participate effectively and vote in the GSM	108	100
Sr 9	The enterprise's control structure is transparent and is allowed to change based on the shareholders' needs	0	0
Sr 10	Shareholders within the same class are treated equally	108	100
Sr 11	The firm has an insider trading policy	108	100
Sr 12	The firm does not have any loans to the director or has a policy limiting these loans	98	91
Sr 13	The firm has an investor relations officer/ department	108	100
	Shareholder Rights Sub-index		75.85
JCGI	Jordan overall corporate governance for the services sector		65.34

This table shows the governance elements used to construct the Jordan Corporate Governance Index by sector (JCGIS), the number of firm-year observations, and each element's mean. Data are hand-collected from firm-level corporate governance compliance reports, articles of association, companies' websites, annual reports, ASE, and SDC. Maximum mean values are 100



Table 7 Construction of JCGIS for the Industry Sector, 2018–2019

Codes	Elements of governance	No.	Mean (%)
<i>Board structure</i>			
Bs1	The firm has at least one independent director	44	94
Bs2	The firm has more than one independent director	41	87
Bs3	The audit committee has a non-executive or independent chair	38	81
Bs4	The audit committee has an independent member	36	77
Bs5	CEO (if onboard) and chairman are different people	44	94
Bs6	CEO (general manager) on the board	20	43
Bs7	Is the (general manager) an outsider	3	6
Bs8	A corporate governance committee exists	45	96
Bs9	The board consists of not less than three and not more than 13 members	47	100
Bs10	There is a policy to specify the professional qualifications & training requirements for the board	2	4
Board structure sub-index			68.2
<i>Board procedures</i>			
Bp1	The firm has a code of ethics or conduct	5	11
Bp2	Corporate governance policy or board charter governs the board process	33	70
Bp3	The firm discloses the membership of the audit committee	46	98
Bp4	The firm discloses the audit committee charter	3	6
Bp5	The firm has an internal audit function	37	79
Bq6	The board implemented a performance measurement process to assess executive management performance	17	36
Bq7	The board has a nominations & compensation committee chaired by an independent director (or non-executive director)	29	62
Bq8	Board has implemented a mechanism to receive shareholder complaints and suggestions	37	79
Bq9	The board adopted and implemented a firm risk management plan	10	21
Board procedures sub-index			51.33
<i>Disclosures</i>			
Dis1	The firm puts annual financial statements on the firm's website	9	19
Dis2	The firm puts quarterly financial statements on the firm's website	2	4
Dis3	The firm discloses material events on the firm website	12	26
Dis4	The firm puts an annual report on the firm's website	14	30
Dis5	The firm puts CG compliance reports separately on the firm's website	1	2
Dis6	The firm puts an annual schedule of corporate events on the firm's website	12	26
Dis7	Firm articles of association available on the firm website	1	2
Dis8	The firm includes shareholding voting information on the firm's website	6	13
Dis9	The firm prepares English language financial statements	46	98
Dis10	The firm discloses the list of insiders	47	100
Dis11	The firm discloses shareholdings of individual directors	46	98
Dis12	CG charter or guidelines disclosed	4	9
Dis13	Code of conduct or ethics code disclosed	1	2
Dis14	Information on the last AGM disclosed	47	100
Dis15	Board member's current roles are disclosed	46	98
Dis16	Board member's background (education, employment, history) is disclosed	47	100
Dis17	Board member's date of joining the board disclosed	31	66
Dis18	The background of senior managers is disclosed	45	96
Dis219	Information on internal audit/control is disclosed	1	2
Dis20	The number of meetings/years is disclosed	46	98
Dis21	Board resolutions are disclosed	47	100
Dis22	The executive director's remuneration policy is disclosed	0	0
Disclosures sub-index			49.50
<i>Ownership structure</i>			
Own1	Control structures that are not proportional to share ownership are disclosed	47	100



Table 7 (continued)

Codes	Elements of governance	No.	Mean (%)
Own2	There are no ultimate controlling shareholders	33	70
Own3	The firm has no class of shares with multiple voting rights	47	100
Own4	The firm has an outside block holder with more than 5% of shares	31	66
Own5	The firm has managerial equity ownership	28	60
Own6	Institutional and foreign shareholding exists	43	91
Ownership structure sub-index			81.17
<i>Shareholder rights</i>			
Sr 1	All shareholders have access to their ownership records and documents maintained by the company	47	100
Sr 2	Shareholders have access to the general assembly meeting minutes	47	100
Sr 3	Shareholders have the right to file lawsuits (or any alternative means of dispute settlements) against the board, board member(s), and general manager if they feel the company is at risk because of their actions	47	100
Sr 4	Major shareholders who hold 10% or more can request extraordinary general assembly meetings	9	19
Sr 5	Existing shareholders have a priority to subscribe to any new share issuance	16	34
Sr 6	Shareholders receive dividends within forty-five days from the date taken by GA to distribute them	23	49
Sr 7	Shareholders participate in and are informed on basic decisions	46	98
Sr 8	Shareholders can participate effectively and vote in the GSM	47	100
Sr 9	The enterprise's control structure is transparent and is allowed to change based on the shareholders' needs	0	0
Sr 10	Shareholders within the same class are treated equally	47	100
Sr 11	The firm has an insider trading policy	47	100
Sr 12	The firm does not have any loans to a director or has a policy limiting these loans	42	89
Sr 13	The firm has an investor relations officer/ department	47	100
Shareholder rights sub-index			76.08
JCGI	Jordan overall corporate governance for the industry sector		65.22

This table shows the governance elements used to construct the Jordan Corporate Governance Index by sector (JCGIS), the number of firm-year observations, and each element's mean. Data are hand-collected from firm-level corporate governance compliance reports, articles of association, companies' websites, annual reports, ASE, and SDC. Maximum mean values are 100

Table 8 Summary results by sub-index by sector

Sub-index	Banking	Insurance	Service	Industry
Board Structure Sub-index	92.7	76.60	68.50	68.20
Board Procedures Sub-index	100	67.11	52.22	51.33
Disclosures Sub-index	82.95	56.23	48.86	49.50
Ownership Structure Sub-index	85.67	87.33	81.17	81.17
Shareholder Rights Sub-index	76.92	72.92	75.85	76.08
Jordan Overall Corporate Governance by sector	87.64	72.07	65.34	65.22

Declarations

Conflict of interest The authors have no conflicts of interest to declare. All authors have seen and agree with the contents of the manuscript, and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication.

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