

THE EFFECTS OF CORPORATE GOVERNANCE PRACTICES ON FIRM-LEVEL FINANCIAL PERFORMANCE: EVIDENCE FROM BORSA ISTANBUL XKURY COMPANIES

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Abstract. Corporate governance (CG) is a fundamental criteria for enhancing investors' and stakeholders' trust, relatively recently recognized in emerging markets. This study investigates the effects of CG practices on the firm-level financial performance of Borsa Istanbul XKURY-indexed companies during 2007–2019. Four specific aspects of CG are analysed: shareholders' rights, public disclosure and transparency, stakeholders' rights, and board of directors functioning, as defined by the Turkish Code of Corporate Governance, in line with international principles of CG issued by OECD. Alternative estimations of panel regression analysis indicate a positive association between stakeholder-oriented governance practices and firm-level financial performance expressed by accounting measures for both financial and non-financial companies. Shareholder protection policies have a negative influence on accounting-based performance, especially for non-financial industries, whereas the corporate practices related to board of directors and public disclosure vary between financial and non-financial entities. These findings contribute to international research on CG implications for emerging markets, providing evidence about the importance of stakeholders' protection and the distinctive effects of CG dimensions for corporate financial performance.

Keywords: corporate governance, transparency and disclosure, shareholders, stakeholders, board of directors, financial performance, emerging markets.

JEL Classification: G32, G34, M10, L25.

Introduction

Qualified CG practices require companies to allocate additional financial, human and time resources to assure adequate stakeholder and shareholder protection. Although these practices aim to improve the business environment, and investors' confidence, there is no clear evidence about the CG influence on firm-level activity and financial performance in emerging markets (Black et al., 2018; Mishra & Mohanty, 2018; Shahwan, 2015; Wahyudin &

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Solikhah, 2017). Worldwide business activities are shaped by country-specific institutional, social, cultural, legal, environmental and financial characteristics (Black et al., 2014; Doidge et al., 2007; Haxhi & Aguilera, 2017; Klapper & Love, 2004). The country-specific aspects influence corporate approach to CG (Doidge et al., 2007). This study investigates the effects of increased quality governance practices on the firm-level financial performance of Borsa Istanbul XKURY-indexed companies, considering each of the four pillars of CG defined by international regulators (OECD) and adopted by the Capital Markets Board of Turkey (CMB) since 2003: shareholder protection, public disclosure and transparency, stakeholder rights, and board of directors (BoD).

Turkey has a strategic geographical and economical position between Europe and the Middle East. Its business environment is characterized by family-owned companies, foreign investment (Ararat et al., 2017), a bank-oriented financial system, and a relative reticence of local investors towards equity investment (Turkish Capital Markets Association, 2018). Therefore, companies expect to improve their access to financial resources provided by capital markets by implementing better CG practices. The Turkish CG system has a hybrid nature influenced by laws and regulations following the Anglo-American model, and a concentrated ownership structure similar to the continental-European model (Saygili et al., 2020).

The prior research focused on the overall effect of CG practices. The purpose of this study is to analyse the distinctive effect of each of the four CG dimensions (shareholders protection, public disclosure and transparency, stakeholders' rights, and BoD) on accounting and market-based financial performance of Turkish companies listed on the CG dedicated index of Borsa Istanbul (XKURY index).

Alternative estimations of panel regression analysis for XKURY companies during 2007–2019 highlight the beneficial influence of stakeholder-oriented governance practices on corporate profitability for both financial and non-financial entities. Additionally, enhanced shareholder protection is negatively associated with accounting-based financial performance, especially for non-financial companies. This suggests that a change in shareholders' rights and ownership-related policies may alter corporate performance. The evidence about the functioning of board of directors and corporate disclosure varies in time and between financial and non-financial entities.

These findings may guide corporate policies for shareholders and stakeholders protection, disclosure, and functioning of BoD, both in Turkey and internationally. The study makes several significant contributions to the CG literature as follows: it describes and analyses the four CG dimensions in Turkey; it studies the CG scoring system used on Borsa Istanbul; it investigates the effect of CG practices of both financial and non-financial entities on accounting and market performance, being one of the few studies comparing CG implications for financial and non-financial sectors; it provides a long-run and up-to-date empirical study for the XKURY index; it launches avenues for improvement of CG practices in emerging markets.

The paper is structured as follows. Section 1 presents the literature insights and hypotheses development. Section 2 explains the research methodology. Section 3 covers the empirical study and discussion of the results. The paper ends with concluding remarks.

1. Literature review and hypotheses development

1.1. Literature insights

CG represents the monitoring and controlling mechanisms of the companies to ensure a return to their suppliers of finance (Shleifer & Vishny, 1997). The CG literature draws on agency, signalling and stakeholders' theories to explain the governance-performance relationship. Agency problems stem from the conflicts of interests between managers and outside shareholders. As CG practices improve, both agency risk and the likelihood of minority shareholders' expropriation diminish, potentially leading to higher dividends, and increasing investment from minority shareholders (Claessens & Yurtoglu, 2012). According to signalling theory, companies may use corporate reports and announcements, including firm performance and governance indicators, to signal to investors about corporate reputation (Musteen et al., 2010; Sun et al., 2010). Stakeholders' theory addresses the active role of shareholders and stakeholders in corporate decisions, indicating that a good CG framework may maximize corporate contributions to national and international economy for the benefit of all stakeholder groups (Claessens & Yurtoglu, 2012).

A broad stream of literature investigated the CG-performance relationship both in developed (Akbar et al., 2016; Alimov, 2018; Ammann et al., 2011; Bauer et al., 2004; Bhagat & Bolton, 2008; Kyere & Ausloos, 2020; Malik & Makhdoom, 2016) and emerging markets (Black et al., 2014; Claessens & Yurtoglu, 2013; Da Silva & Leal, 2005; Klapper & Love, 2004; Shahwan, 2015; Wahyudin & Solikhah, 2017) providing contradictory results. Apart from contextual and methodological aspects, the mixed findings may be explained by the variations in governance practices and their various measures (Agrawal & Knoeber, 1996; Al-ahdal et al., 2020; Black et al., 2018; Da Silva & Leal, 2005; Iqbal et al., 2019; Klapper & Love, 2004; OECD, 2004; Shahwan, 2015).

Some studies found that board members who themselves hold shares in the company demand strict monitoring and an effective involvement in corporate decisions (Agrawal & Knoeber, 1996; Bhagat & Black, 1999; Bhagat & Bolton, 2019). Malik and Makhdoom (2016) indicate a positive correlation between the percentage of external directors and financial performance. Recent evidence reveals the negative impact of the number of board meetings (López -Quesada et al., 2018; Malik & Makhdoom, 2016; Rodriguez-Fernandez et al., 2014) and the number of board members (Malik & Makhdoom, 2016) on corporate performance. Other studies focused on the beneficial role of stakeholders and corporate social responsibility (CSR) (Barnett & Salomon, 2012; Berman et al., 1999; Berrone et al., 2007; Choi & Wang, 2009; Harrison & Wicks, 2013; Pekovic & Vogt, 2020).

The previous research on Turkey provides mixed evidence about the CG-firm performance relationship. Sengur (2011) compared the financial performance of companies before and after being listed in XKURY index and found no significant change in their financial results during the first year of the index membership. Kara et al. (2015) found a positive relationship between the overall CG score reported by XKURY companies and Tobin's Q, with no significant evidence for accounting-based performance. Ararat et al. (2017) developed a customized CG index for Turkish listed companies and suggest that CG practices, and especially corporate disclosure, increase firms' profitability and their market value.

1.2. Hypotheses development

Equal treatment of shareholders, and protection of voting, dividend and access to information rights are fundamental to the shareholder-investee company relationship (Mallin & Melis, 2012). Financial markets react negatively when large shareholders reduce minority shareholders' dividends (Gugler & Yurtoglu, 2003), and unsatisfied shareholders sell their shares causing market value deterioration (Gillan & Starks, 2007). Gompers et al. (2003) reported that firms with stronger shareholder rights had higher firm value, higher profits, higher sales growth, lower capital expenditures, and made fewer corporate acquisitions. However, good CG practices and shareholders protection are not a guarantee of increased profitability or market value (Akbar et al., 2016). Effective monitoring and shareholders involvement may prevent management from earnings overestimation, leading to an eventual negative effect on firm-level financial performance (Bauer et al., 2004). As long as shareholders-related practices make a change in corporate actions, it is expected they influence firm-level performance as following:

H1: *Corporate governance practices protecting **shareholders'** rights have a significant influence on financial performance of participating firms.*

Corporate disclosure facilitates shareholders' and stakeholders' decisions. Black et al. (2018) found that disclosure, especially financial disclosure, predicts higher market value for companies from developing countries, whereas Ararat et al. (2017) found that corporate disclosure policies enhance profitability. Timely, sufficient, and comprehensible information seem to diminish conflicts of interest and information asymmetries, leading to transparent operations and fair valuation of the firms, especially after IFRS adoption (Aksu & Espahbodi, 2016). Corporate disclosure satisfies users' legitimate need of information, but it simultaneously bears significant efforts, and financial and proprietary costs (Richardson, 2001), with implications for corporate financial results as hypothesized below:

H2: *Corporate governance practices ensuring **transparency and public disclosure** have a significant influence on the financial performance of participating companies.*

Stakeholder-oriented governance practices refer to protection of employees' rights, good relations with customers and suppliers, ethical behaviour, and CSR. A lack of balance concerning the diverse categories of stakeholders may negatively affect corporate profitability (Agrawal & Knoeber, 1996; Barnett & Salomon, 2012). Ntim and Soobaroyen (2013) reported that the combination of CSR and CG practices strengthens corporate performance. Barnett and Salomon (2012) indicated that the relation between corporate stakeholder orientation and firm-level performance is U-shaped. These arguments lead to the following research hypothesis:

H3: *Corporate governance practices protecting **stakeholders'** rights have a significant influence on the financial performance of participating companies.*

Separation of CEO and chairperson roles, and BoD gender diversity positively impact firm-level performance (Assenga et al., 2018; Lückerath-Rovers, 2013; Vo & Phan, 2013). The influence of independent directors on financial results was found both positive (López-Quezada et al., 2018) and negative in prior studies (Bhagat & Bolton, 2008). Dilution of power, board size, and degree of involvement of board members also affect corporate results and

investors' reactions (Gill & Obradovich, 2012; López-Quesada et al., 2018; Malik & Makhdoom, 2016; Rodriguez-Fernandez et al., 2014; Saidat et al., 2019). Because board decisions dictate corporate business strategy and actions, the quality of board composition is expected to influence business performance, as follows:

H4: *Corporate governance practices that address the functioning of board of directors have a significant influence on the financial performance of participating companies.*

2. Methodology

2.1. Variables

2.1.1. Dependent variables

Prior research exploring the relationship between CG and financial performance used accounting-based measures, such as return on assets (ROA) and return on equity (ROE) (Assenga et al., 2018; Mishra & Mohanty, 2018; Wahyudin & Solikhah, 2017), stock market valuation reflected by Tobin's Q (Gugler & Yurtoglu, 2003; Shahwan, 2015), or both accounting and stock market-related indicators (Bhagat & Bolton, 2008; Black et al., 2018; Fernández-Temprano & Tejerina-Gaite, 2020; Klapper & Love, 2004; Malik & Makhdoom, 2016). Consequently, this study uses ROA, ROE, Tobin's Q and alternatively price-to-book market ratio as dependent variables to reflect the firm-level profitability and financial market valuation.

2.1.2. Independent variables

Grounded on the core principles of equality, transparency, accountability, and responsibility, the CG practices of XKURY companies are yearly evaluated by official rating agencies, and their scores are publicly announced. The current study considers these official scores to express shareholder-related practices (SH), corporate disclosure and transparency (PD), stakeholders' rights (SK) and board of directors functioning (BD), in order to overcome the validity limitation of a self-constructed index (Black et al., 2014). A summary of the CG principles related to each of the four CG dimensions is reported in Appendix.

As corporate financial results are influenced by numerous factors other than CG, the study includes a set of control variables common in CG literature: firm size, age, and indebtedness. Large and experienced firms have better growth opportunities and market reputation, which enhance CG quality (Klapper & Love, 2004). Additionally, debt financing may stimulate profitability through stricter monitoring by creditors (Agrawal & Knoeber, 1996) despite financing costs that affect firm-level financial performance (Gill & Obradovich, 2012).

Detailed definitions of the selected variables and data sources are presented in Table 1.

Table 1. Selected variables

| Variables | Definitions | Data sources |
|---|--|--------------------------|
| <i>Dependent variables (alternative variables for firm-level financial performance)</i> | | |
| ROA | Return on assets defined as income after taxes divided by the average total assets for the fiscal year | Refinitiv Eikon database |

End of Table 1

| Variables | Definitions | Data sources |
|--|---|---|
| <i>ROE</i> | Return on equity defined as income available to common equity excluding extraordinary items divided by the average common equity for the fiscal year | |
| <i>TobQ</i> | Sum of the book value of debt, preferred stock, and market value of common outstanding shares at the end of the reporting period, divided by book value of total assets | Authors' calculation Refinitiv Eikon database |
| <i>PBR</i> | Price to book ratio determined as share close price at the end of the fiscal year divided by the book value of equity per share | |
| <i>Independent variables (corporate governance sub-scores)</i> | | |
| <i>SH</i> | Shareholders score | Hand-collected from Turkish Corporate Governance Association website (2020) |
| <i>PD</i> | Public disclosure and transparency score | |
| <i>SK</i> | Stakeholders score | |
| <i>BD</i> | Board of directors score | |
| <i>Control variables (firm-level)</i> | | |
| <i>LnTA</i> | Natural logarithm of total assets at the end of the fiscal year (which measures firm size) | Refinitiv Eikon database |
| <i>Debt</i> | Debt ratio defined as total debt to total equity at the end of the fiscal year | |
| <i>Age</i> | Age of the company defined as fiscal year minus year of incorporation | |

2.2. Sample

Borsa Istanbul XKURY index includes companies that voluntarily apply for this CG-related index and score over 70 out of 100 on the yearly CG ratings. These companies represent a model of best practices and accountability for the Turkish financial market. At the date of data collection, XKURY index consists of 51 companies (17 financial and 34 non-financial entities) out of 399 companies listed on Borsa Istanbul. The analysed period 2007–2019 covers the spread of CG principles among the Turkish listed companies, starting from the creation of XKURY index (in 2007), until the most recent available data for this research. The sample structure per years is presented in Table 2.

Although the Turkish and international CG principles apply to all listed companies, multiple operating, financial, and organizational aspects differentiate financial from non-financial entities (De Haan & Vlahu, 2016; Mehran et al., 2011). Therefore, the sample was divided into financial and non-financial firms. CG scores calculation and their interpretations are the same for both groups of companies, but financial sector is additionally restricted and supervised by national and international authorities due to its excessive risk-taking activity (De Haan & Vlahu, 2016). Financial entities have more frequent audit committee meetings and conduct stricter internal audit (Beasley et al., 2000), lack in transparency (Mehran & Mollineaux, 2012), and tend to report less sustainability information (Gallo & Christensen, 2011). In contrast, companies from other sectors, for example manufacturing and automotive, have

more detailed codes of ethics (Saygili et al., 2019), codes of conducts towards stakeholders (Saygili & Ozturkoglu, 2017), and comprehensible sustainability and environmental disclosure (Gallo & Christensen, 2011; Halme & Huse, 1997).

Table 2. Sample structure

| Year | Number of XKURY companies with historical data available for CG component scores | |
|--------|--|-------------------------|
| | Financial companies | Non-financial companies |
| 2007 | – | 5 |
| 2008 | 2 | 7 |
| 2009 | 4 | 14 |
| 2010 | 5 | 20 |
| 2011* | 6 | 12 |
| 2012 | 8 | 25 |
| 2013 | 11 | 28 |
| 2014 | 11 | 30 |
| 2015 | 15 | 33 |
| 2016 | 16 | 33 |
| 2017** | 17 | 34 |
| 2018 | 15 | 33 |
| 2019 | 15 | 32 |

Notes: *The index includes 30 companies in 2011, but the CG scores were missing.

**Reference year for the list of XKURY companies included in the sample.

2.3. Panel regression model

The influence of the CG dimensions on firm-level financial performance is empirically analysed through a panel least-squares regression model with control variables. This method is selected according to the dataset characteristics and the research purpose. The inclusion of the control variables limits the omitted variable and endogeneity bias (Black et al., 2014). The model equation is:

$$FinPerform_{i,t} = \beta_0 + \beta_1 SH_{i,t} + \beta_2 PD_{i,t} + \beta_3 SK_{i,t} + \beta_4 BD_{i,t} + \sum \beta_j Controls_{j,i,t} + \varepsilon_{it} \quad (1)$$

where: *FinPerform* represents the alternative measures of financial performance (*ROA*, *ROE*, *TobQ*, and *PBR*); *SH*, *PD*, *SK*, and *BD* are the specific CG scores; *Controls_j* refers to the firm-level control variables *LnTA*, *Debt*, and *Age*; *i* stands for firm *i* and *t* for period *t*; ε_{it} is the error term.

The panel regression with random effects is recommended for almost constant or limited range independent factors (Wooldridge, 2012) such as CG scores (Kieschnick & Shi, 2020),

and for between-firms analysis. This study analyses companies from the same index and financial market, with slight yearly variations in individual CG scores, and thus prefers the model with random effects (which is also supported by Hausman test as further reported in the results section).

3. Results and discussion

3.1. Descriptive statistics

The main descriptive statistics for the selected variables are presented in Table 3.

Table 3. Descriptive statistics

| Variables | Mean | Std. Dev. | Minimum | Maximum | Skewness | Kurtosis | Jarque-Bera statistic |
|--------------------------------|--------|-----------|---------|---------|----------|----------|-----------------------|
| <i>Financial companies</i> | | | | | | | |
| ROA | 0.042 | 0.065 | -0.024 | 0.350 | 3.241 | 14.032 | 866.344*** |
| ROE | 0.144 | 0.097 | -0.353 | 0.513 | -0.835 | 10.531 | 314.847*** |
| TobQ | 0.766 | 0.729 | 0.127 | 3.847 | 2.587 | 10.274 | 434.872*** |
| PBR | 1.371 | 2.623 | 0.181 | 17.401 | 4.747 | 25.782 | 3324.999*** |
| SH | 89.771 | 5.382 | 74.580 | 97.790 | -0.876 | 3.034 | 16.264*** |
| PD | 92.356 | 5.400 | 64.830 | 99.000 | -1.845 | 8.381 | 225.300*** |
| SK | 91.747 | 6.270 | 72.400 | 100.000 | -0.871 | 3.098 | 16.103*** |
| BD | 87.190 | 7.902 | 59.980 | 97.600 | -1.530 | 5.127 | 73.494*** |
| LnTA | 22.510 | 2.387 | 17.359 | 26.713 | -0.100 | 2.460 | 1.809 |
| Debt | 3.490 | 3.820 | 0.008 | 17.498 | 1.459 | 4.814 | 64.437*** |
| Age | 40.695 | 25.385 | 6.000 | 93.000 | 0.398 | 1.594 | 14.259*** |
| <i>Non-financial companies</i> | | | | | | | |
| ROA | 0.056 | 0.074 | -0.170 | 0.353 | 0.396 | 4.762 | 49.898*** |
| ROE | 0.120 | 0.194 | -0.902 | 0.770 | -0.913 | 7.101 | 269.554*** |
| TobQ | 0.970 | 0.711 | 0.164 | 5.800 | 3.141 | 16.774 | 3065.348*** |
| PBR | 1.881 | 2.229 | 0.203 | 19.609 | 3.792 | 23.210 | 6232.321*** |
| SH | 88.430 | 6.341 | 57.700 | 97.520 | -0.875 | 4.107 | 54.815*** |
| PD | 92.709 | 4.710 | 75.000 | 99.470 | -0.980 | 3.675 | 54.979*** |
| SK | 92.892 | 6.714 | 66.300 | 99.510 | -1.748 | 6.236 | 290.279*** |
| BD | 85.915 | 9.385 | 60.860 | 97.820 | -1.324 | 3.519 | 93.127*** |
| LnTA | 21.732 | 1.532 | 17.434 | 24.583 | -0.318 | 2.481 | 9.014* |
| Debt | 0.985 | 1.269 | 0.000 | 15.452 | 5.574 | 56.439 | 39 857.850*** |
| Age | 38.520 | 14.397 | 11.000 | 83.000 | 0.315 | 2.830 | 5.696 |

Note: ***p < 0.001; **p < 0.01; *p < 0.05.

Accounting-based financial performance varies from negative to positive results, with higher variation and higher mean values for ROE than ROA. Tobin's Q and PBR have a large range of values suggesting the volatility of stock market valuation for both financial and non-financial entities. Among the CG scores (for which higher values represent better compliance with CG principles), public disclosure and stakeholders-related scores have the highest mean values, whereas shareholder protection and BoD scores range from moderate to high values. These figures indicate that XKURY listed companies recognize the beneficial role of disclosure and cooperation with stakeholders. Lower average scores for shareholders and BoD may be explained by the family business model dominant in Turkey, which implies a strong family representation on the BoD (Ciftci et al., 2019). The scores vary between financial and non-financial entities, but their average values are almost similar. The selected companies are comparable in size and age, and financial entities have on average a significantly higher degree of indebtedness specific to their activities.

3.2. Correlation analysis

Spearman correlation coefficients (recommended for non-parametric distributions) are reported in Table 4. For financial companies, shareholders' governance score is negatively correlated with ROE and Tobin's Q, indicating that high and equitable shareholders protection conflicts equity yield. Stakeholders-related practices are positively correlated with ROE and price to book ratio. Control factors of corporate size, indebtedness and age are significantly correlated with ROA, Tobin's Q ratio, and partially with the price to book ratio, shareholders and stakeholders CG scores.

For non-financial companies, public disclosure and BoD practices are positively correlated with financial indicators of market performance. Stakeholders score is positively related with all four alternative measures of financial performance. Corporate indebtedness is correlated with ROA, Tobin's Q and price to book ratio showing that firm performance depends on its financing resources. Debt ratio is also correlated with CG scores (except BD), and firm size is correlated with all CG factors, whereas firm age is significantly correlated only with shareholders and stakeholders indicators.

As CG practices are interrelated and occur simultaneously, CG scores are moderately (less than 0.7) and positively correlated with each other. Their variation inflation factor (VIF) test indicates values of less than 2.5 and no multicollinearity threat.

Table 4. Spearman correlation coefficients

| | ROA | ROE | TobQ | PBR | SH | PD | SK | BD | LnTA | Debt |
|----------------------------|-----------|---------|-----------|--------|----------|----------|----------|-------|------|------|
| <i>Financial companies</i> | | | | | | | | | | |
| SH | -0.128 | -0.204* | -0.212* | -0.056 | | | | | | |
| PD | 0.140 | 0.146 | 0.050 | 0.028 | 0.586*** | | | | | |
| SK | 0.060 | 0.293** | -0.116 | 0.187* | 0.492*** | 0.591*** | | | | |
| BD | 0.089 | 0.044 | -0.038 | -0.146 | 0.657*** | 0.616*** | 0.532*** | | | |
| LnTA | -0.491*** | 0.094 | -0.487*** | 0.132 | 0.267** | 0.036 | 0.347*** | 0.056 | | |

End of Table 4

| | | | | | | | | | | |
|--------------------------------|-----------|----------|-----------|----------|----------|----------|----------|--------|----------|--------|
| | ROA | ROE | TobQ | PBR | SH | PD | SK | BD | LnTA | Debt |
| Debt | -0.530*** | 0.165 | 0.377*** | 0.165 | -0.164 | -0.059 | -0.086 | -0.153 | 0.270** | |
| Age | -0.449*** | 0.130 | -0.347*** | 0.403*** | 0.279* | 0.022 | 0.375*** | 0.082 | 0.754*** | 0.183* |
| <i>Non-financial companies</i> | | | | | | | | | | |
| SH | -0.085 | -0.078 | 0.054 | 0.072 | | | | | | |
| PD | 0.079 | 0.082 | 0.168** | 0.186** | 0.517*** | | | | | |
| SK | 0.199*** | 0.229*** | 0.239*** | 0.303*** | 0.464*** | 0.539*** | | | | |
| BD | 0.040 | 0.054 | 0.119* | 0.138* | 0.596*** | 0.614*** | 0.609*** | | | |
| LnTA | 0.017 | 0.107 | -0.026 | 0.125* | 0.178** | 0.424*** | 0.263*** | 0.120* | | |
| Debt | -0.337*** | -0.018 | 0.188*** | 0.255*** | 0.170** | 0.123* | 0.175** | 0.106 | 0.362*** | |
| Age | 0.099 | 0.067 | -0.002 | 0.013 | 0.196*** | 0.032 | 0.301*** | 0.032 | 0.083 | -0.041 |

Note: ***p < 0.001; **p < 0.01; *p < 0.05.

3.3. Regression analysis

The panel regression estimations show that the effects of CG practices on firm-level financial performance partially vary between financial and non-financial entities as reported in Table 5.

Table 5. Panel least-squares regression results with random effects

| Variables | Financial companies | | | | Non-financial companies | | | |
|-----------|---------------------|-----------|----------|----------|-------------------------|------------|----------|----------|
| | ROA | ROE | TobQ | PBR | ROA | ROE | TobQ | PBR |
| SH | -0.0013 | -0.0067** | 0.0126 | 0.1500 | -0.0027** | -0.0070** | 0.0001 | -0.0163 |
| | (0.0011) | (0.0022) | (0.0178) | (0.1140) | (0.0009) | (0.0025) | (0.0162) | (0.0392) |
| PD | -0.0006 | -0.0042 | -0.0289* | 0.0195 | 0.0009 | 0.0007 | -0.0051 | 0.0123 |
| | (0.0010) | (0.0039) | (0.0118) | (0.0678) | (0.0019) | (0.0043) | (0.0237) | (0.0506) |
| SK | 0.0015** | 0.0083*** | 0.0363* | 0.0646 | 0.0029** | 0.0071* | 0.0161 | 0.0550 |
| | (0.0005) | (0.0021) | (0.0175) | (0.0459) | (0.0010) | (0.0028) | (0.0129) | (0.0332) |
| BD | 0.0003 | 0.0017 | -0.0282 | -0.2591 | 0.0005 | 0.0026* | 0.0102 | 0.0282 |
| | (0.0005) | (0.0018) | (0.0202) | (0.1717) | (0.0006) | (0.0012) | (0.0065) | (0.0165) |
| LnTA | 0.0034 | -0.0014 | -0.2140* | -0.2314 | -0.0010 | 0.0190 | -0.0369 | -0.1320 |
| | (0.0105) | (0.0100) | (0.0887) | (0.1626) | (0.0059) | (0.0142) | (0.0689) | (0.1521) |
| Debt | -0.0013 | 0.0031 | 0.0145 | 0.0094 | -0.0181** | -0.0724*** | -0.0189 | 0.5640* |
| | (0.0008) | (0.0025) | (0.0453) | (0.0565) | (0.0057) | (0.0150) | (0.0278) | (0.2384) |
| Age | -0.0013 | -0.0007 | 0.0004 | -0.0006 | 0.0004 | -0.0001 | -0.0063 | -0.0088 |
| | (0.0007) | (0.0008) | (0.0048) | (0.0097) | (0.0004) | (0.0015) | (0.0059) | (0.0180) |
| Constant | 0.0394 | 0.2829 | 6.1477** | 7.9258* | -0.0716 | -0.5542 | 0.1381 | -2.7201 |
| | (0.2305) | (0.2616) | (2.0257) | (3.5260) | (0.1210) | (0.3200) | (1.3554) | (3.3897) |

End of Table 5

| Variables | Financial companies | | | | Non-financial companies | | | |
|----------------------------|---------------------|-----------|-------|-------|-------------------------|--------|--------|-------|
| | ROA | ROE | TobQ | PBR | ROA | ROE | TobQ | PBR |
| Number of observations | 123 | 123 | 127 | 127 | 307 | 307 | 307 | 307 |
| R-Squared | 0.081 | 0.131 | 0.401 | 0.366 | 0.131 | 0.229 | 0.044 | 0.138 |
| Hausman test (Chi-Squared) | 26.249*** | 30.716*** | 4.661 | 2.592 | 4.459 | 10.385 | 11.522 | 7.205 |

Note: ***p < 0.001; **p < 0.01; *p < 0.05. White Period standard errors are reported in parenthesis.

Shareholders-related practices have a negative influence on both ROA and ROE for non-financial entities, and only on ROE for financial companies. This result is in line with Ararat et al. (2017) and Bauer et al. (2004). A possible explanation is the conflict of interests between family and minority ownership (Aksu & Espahbodi, 2016). Ownership data for XKURY companies, compiled by the authors from the Public Disclosure Platform (2020) for Turkish capital markets shows that 50% of the non-financial firms are directly or indirectly family-owned. Moreover, the ownership of these companies is highly concentrated (the largest shareholder of 44% of the entities holds more than 50% of shares, whereas the total shares owned by shareholders with less than 5% capital is higher than 50% of shares only for 15% of the companies). For most of the non-financial companies the shares have equal voting rights (97% of entities) and are registered for being fully traded without any privileges (53% of entities). In an environment dominated by family businesses, shareholders are expected to be involved in corporate operations and management. On the one hand, shareholders' strict monitoring may prevent earnings management due to executives' self-interest (Bauer et al., 2004). On the other hand, shareholders' timely access to information and the creation of an active investor relations department to equitable serve external investors involve additional costs, which lead to decreased profitability. Dividend distribution may also have a negative influence on future performance, limiting corporate reinvestment.

41% of XKURY financial companies have their largest shareholder owning more than 50% of their shares. XKURY financial entities include real estate investment trusts, banks, insurance, leasing, factoring, brokerage, and holding companies, and 18% of them are family-owned. The obtained results indicate that shareholders-related scores for financial companies have a significant negative influence on ROE. As financial sector is highly regulated and volatile, shareholders' involvement in corporate actions may be limited by regulatory provisions (De Haan & Vlahu, 2016) with consequences on firm-level financial results.

The findings simultaneously show no significant evidence related to shareholders governance practices and market-based performance expressed by Tobin's Q and price to book ratio.

The public disclosure and transparency score measures the ability of companies to communicate timely and comprehensible information through their website and annual reports, both in native and foreign languages that would satisfy users' interests. CG principles impose

some key information to be disclosed such as corporate ownership structure, BoD structure and its committees, top executives, financial information and audit report, corporate strategy and key organizational changes, sustainability actions, related party transactions, human resources policies, dividend policies, etc. The empirical analysis shows that the quality and amount of corporate disclosure have a weak negative effect on Tobin's Q for financial entities. It may be assumed that higher transparency raises the awareness of proprietary costs and higher investment risk in financial institutions, leading investors to more prudential actions (De Haan & Vlahu, 2016; Richardson, 2001). Further research is needed to confirm the consistency of this result.

Governance practices regarding stakeholders have a significant positive influence on ROA and ROE for both financial and non-financial entities. The sound treatment of stakeholders enhances business operations and financial performance, as previously reported by Choi and Wang (2009), Harrison and Wicks (2013), Ntim and Soobaroyen (2013). Turkish hospitality and culture of generosity seem to be an efficient strategy to retain customers and maintain good relationships with employees, suppliers and other business partners, which may contribute to sales growth and increased corporate performance. For financial entities, ensuring both depositors and debtholders' trust and providing a secure reputation are essential for business performance (Mehran et al., 2011). As shown by Tobin's Q model estimations, investors of financial institutions appreciate strong stakeholders' protection.

Board of directors functioning has a positive effect on ROE, suggesting that corporate monitoring and decisions under the supervision of BoD increase profitability and equity efficiency for non-financial companies. This finding may be explained by a mix of measures such as the ability of BoD to organize strict internal and external audits, a proper balance between their involvement and interest in corporate activities (Malik & Makhdoom, 2016), efficient distribution of their duties in line with corporate needs and other actions that support strategies of the firms and shareholders' interests. No evidence was found for BoD functioning and financial performance measured by ROA, market ratios, nor for financial companies. A possible explanation for financial entities may be their stricter activity norms that keep BoD functioning stable and under direct supervision (Anginer et al., 2018; Mehran et al., 2011).

3.4. Robustness checks

In order to limit omitted variables bias and to check the consistency of the results, the model was alternatively estimated with fixed effects, as illustrated in Table 6. These findings complement the analysis with random effects and show the implications of CG practices within the firms, illustrating how the change in CG scores influences firms' performance over time (Ararat et al., 2017; Kieschnick & Shi, 2020).

Fixed effects analysis shows that the main results of the study are robust to alternative estimations and valid both between and within the firms. Thus, shareholders-related CG practices have a negative effect on the accounting-based performance of non-financial companies, public disclosure of financial entities has a negative effect on Tobin's Q, and stakeholders' protection leads to increased profitability for financial entities. Moreover, BoD functioning has a positive effect on ROE and Tobin's Q for non-financial companies. The fact that shareholders score for financial entities and stakeholders score for non-financial entities lost their

significance on fixed effects estimations indicates that they have a visible impact between entities rather than within the firms.

Table 6. Panel least-squares regression results with fixed effects

| Variables | Financial companies | | | | Non-financial companies | | | |
|------------------------|---------------------|----------|----------|----------|-------------------------|------------|----------|-----------|
| | ROA | ROE | TobQ | PBR | ROA | ROE | TobQ | PBR |
| SH | -0.0010 | -0.0044 | 0.0176 | 0.1701 | -0.0023* | -0.0062* | 0.0053 | -0.0031 |
| | (0.0011) | (0.0033) | (0.0195) | (0.1289) | (0.0009) | (0.0027) | (0.0204) | (0.0503) |
| PD | -0.0005 | -0.0053 | -0.0276* | 0.0335 | 0.0005 | 0.0012 | -0.0114 | 0.0020 |
| | (0.0012) | (0.0041) | (0.0133) | (0.0783) | (0.0022) | (0.0046) | (0.0228) | (0.0518) |
| SK | 0.0012** | 0.0072** | 0.0319 | 0.0570 | 0.0021 | 0.0045 | 0.0157 | 0.0581 |
| | (0.0004) | (0.0022) | (0.0163) | (0.0483) | (0.0015) | (0.0037) | (0.0185) | (0.0576) |
| BD | 0.0001 | 0.0034 | -0.0261 | -0.2690 | 0.0009 | 0.0030* | 0.0121* | 0.0358 |
| | (0.0004) | (0.0029) | (0.0175) | (0.1937) | (0.0005) | (0.0013) | (0.0057) | (0.0193) |
| LnTA | 0.0314 | 0.1279 | -0.3196* | -0.5397 | -0.0011 | 0.0163 | 0.2422 | 0.4133 |
| | (0.0190) | (0.0647) | (0.1592) | (0.3474) | (0.0244) | (0.0431) | (0.2643) | (0.6929) |
| Debt | -0.0001 | 0.0030 | 0.0057 | -0.0299 | -0.0177* | -0.0806*** | -0.0363 | 0.4689 |
| | (0.0009) | (0.0028) | (0.0576) | (0.0916) | (0.0081) | (0.0170) | (0.0469) | (0.3351) |
| Age | -0.0053* | -0.0326* | -0.0030 | 0.0393 | -0.0011 | 0.0015 | -0.0515 | -0.1191 |
| | (0.0023) | (0.0150) | (0.0406) | (0.0798) | (0.0030) | (0.0057) | (0.0425) | (0.1575) |
| Constant | -0.4264 | -1.4879 | 8.3797** | 11.8888* | 0.0249 | -0.4535 | -4.1795 | -11.3446 |
| | (0.3519) | (0.9223) | (3.0719) | (5.6566) | (0.4370) | (0.8262) | (5.1079) | (13.4410) |
| Number of observations | 123 | 123 | 127 | 127 | 307 | 307 | 307 | 307 |
| R-Squared | 0.908 | 0.557 | 0.805 | 0.640 | 0.457 | 0.544 | 0.471 | 0.470 |

Note: ***p < 0.001; **p < 0.01; *p < 0.05. White Period standard errors are reported in parenthesis.

Since data for some companies was available for a limited number of years, an additional reduced sample analysis was conducted to limit eventual bias of unbalanced datasets. The reduced sample was randomly determined (Sayari & Simga-Mugan, 2017) and consists of 80% of the financial and non-financial XKURY companies included in the main analysis (thus 13 financial and 27 non-financial entities). The estimations were conducted for the period 2010–2019 after the international financial crisis from 2008–2009, and the consolidation of XKURY index. The obtained results are reported in Table 7.

The reduced sample analysis shows that the main results of the research, regarding the between effect of shareholder and stakeholder governance practices remain robust over time. Shareholders' protection has a significant negative effect and stakeholders-oriented activities have a positive effect on ROA and ROE for non-financial entities, and only on ROE for financial firms. Additionally, public disclosure of financial entities is negatively related to ROA. No

significant evidence was found regarding BoD practices, suggesting that their impact varies in time and was stronger at the beginning of the analysed period (2007–2009).

Table 7. Panel least-squares regression results with random effects for reduced samples

| Variables | Financial companies | | | | Non-financial companies | | | |
|----------------------------|---------------------|-----------|----------|----------|-------------------------|------------|----------|----------|
| | ROA | ROE | TobQ | PBR | ROA | ROE | TobQ | PBR |
| SH | -0.0016 | -0.0065* | 0.0110 | 0.1358 | -0.0038** | -0.0096* | 0.0001 | -0.0366 |
| | (0.0015) | (0.0030) | (0.0180) | (0.0988) | (0.0014) | (0.0037) | (0.0148) | (0.0326) |
| PD | -0.0016* | -0.0089 | -0.0044 | -0.0012 | 0.0020 | 0.0039 | -0.0359 | -0.0391 |
| | (0.0008) | (0.0050) | (0.0113) | (0.0629) | (0.0027) | (0.0056) | (0.0294) | (0.0668) |
| SK | 0.0008 | 0.0111** | 0.0194 | 0.0792 | 0.0030* | 0.0099** | 0.0078 | 0.0181 |
| | (0.0009) | (0.0041) | (0.0190) | (0.0982) | (0.0011) | (0.0030) | (0.0093) | (0.0217) |
| BD | 0.0007 | 0.0025 | -0.0355 | -0.2766 | 0.0007 | 0.0030 | 0.0080 | 0.0157 |
| | (0.0005) | (0.0022) | (0.0253) | (0.1581) | (0.0010) | (0.0019) | (0.0082) | (0.0178) |
| LnTA | 0.0071 | 0.0085 | -0.1961* | -0.1972 | -0.0076 | -0.0031 | -0.0228 | -0.1986 |
| | (0.0183) | (0.0136) | (0.0714) | (0.1957) | (0.0063) | (0.0145) | (0.0923) | (0.2063) |
| Debt | -0.0015 | 0.0062 | 0.0463 | -0.0598 | -0.0162** | -0.0785*** | 0.0073 | 0.6445** |
| | (0.0013) | (0.0032) | (0.0247) | (0.0900) | (0.0051) | (0.0127) | (0.0206) | (0.2292) |
| Age | -0.0019 | -0.0022 | 0.0083 | 0.0001 | 0.0008 | 0.0005 | 0.0049 | 0.0247 |
| | (0.0014) | (0.0016) | (0.0060) | (0.0206) | (0.0006) | (0.0018) | (0.0088) | (0.0172) |
| Constant | 0.1388 | 0.1820 | 5.4562* | 10.8288 | 0.0142 | -0.4795 | 3.1204 | 8.1367 |
| | (0.3040) | (0.3924) | (1.9847) | (6.3524) | (0.1872) | (0.4283) | (1.9066) | (4.4839) |
| Number of observations | 90 | 90 | 91 | 91 | 203 | 203 | 203 | 203 |
| R-Squared | 0.106 | 0.160 | 0.448 | 0.441 | 0.134 | 0.301 | 0.042 | 0.305 |
| Hausman test (Chi-Squared) | 17.519* | 26.892*** | 2.915 | 2.708 | 2.065 | 4.599 | 10.913 | 4.754 |

Note: ***p < 0.001; **p < 0.01; *p < 0.05. White Period standard errors are reported in parenthesis.

3.5. Discussion

A summary illustration of the overall results is presented in Table 8. The financial performance of financial entities is mainly influenced by public disclosure and stakeholders-related governance practices, whereas the profitability of non-financial firms is influenced by shareholders' and stakeholders' protection, and partially by CG activities related to board of directors.

The negative effect of shareholders-related practices and the weak evidence about the positive influence of board of directors on the financial performance of non-financial firms are consistent with existing literature (Ararat et al., 2017; Coskun & Sayilir, 2012), and mainly explained by concentrated ownership particularities of XKURY companies. Minority share-

Table 8. Summary results

| CG Pillar | Effect | Sample | Financial Performance |
|--------------------------------|------------------------|------------------|--|
| <i>Financial companies</i> | | | |
| <i>SH</i> | (-) Between | Full and reduced | ROE |
| <i>PD</i> | (-) Between and Within | Full and reduced | Tobin's Q (full sample), ROA (reduced sample) |
| <i>SK</i> | (+) Between and Within | Full and reduced | ROE, ROA (full sample), Tobin's Q (full sample between estimation) |
| <i>BD</i> | No significant effect | - | - |
| <i>Non-financial companies</i> | | | |
| <i>SH</i> | (-) Between and Within | Full and reduced | ROA, ROE |
| <i>PD</i> | No significant effect | - | - |
| <i>SK</i> | (+) Between | Full and reduced | ROA, ROE |
| <i>BD</i> | (+) Between and Within | Full | ROE, Tobin's Q (within estimation) |

holder rights and board independence are interconnected with founding family influence (Felicio & Galindo Villardon, 2015; Yurtoglu, 2003). Pyramids and dual-class shares are traditional tools used by families to distinguish their dividend rights from voting rights (Claessens & Yurtoglu, 2012; Yurtoglu, 2003) and have a negative impact on corporate financial performance (Yurtoglu, 2000). Despite the concerns about potential linkages between controlling shareholders and independent directors (Ararat et al., 2010), the current study found that BoD functioning according to CG principles contributes, at least in some periods, to financial performance of non-financial entities.

Stakeholders score has a positive effect on firm performance for both financial and non-financial companies, complementing prior studies which indicate a positive relation between CSR and corporate performance (Akben-Selçuk, 2019; Arsoy et al., 2012). Economic, social and environmental sustainability practices, customer relations management, supply chain management, human resources policies, codes of ethics, and other stakeholders-related practices promoted among XKURY companies (Cetinkaya et al., 2015) result in favourable financial results for the firms, and a relatively stable CG score of stakeholders' protection over time.

In contradiction to Ararat et al. (2017), the current analysis found no significant evidence about the effect of disclosure practices on financial performance of non-financial companies. Even though the public disclosure scores are high for XKURY entities, the communicated information is mainly financial (Aksu & Espahbodi, 2016; Ararat & Balic, 2008), and sometimes lacks in voluntary, BoD and management related aspects (Aksu & Köseadağ, 2006; Ararat & Balic, 2008) expected by financial markets.

Conclusions

This study investigated CG practices in Turkey as an emerging economy dominated by family-owned entities. The results indicate that each CG pillar has a partial influence on ac-

counting or market-based performance of financial or non-financial companies. These findings may contribute to standard-setters, companies, investors, and researchers, encouraging entities to protect shareholders' and stakeholders' rights.

Although the inference of results is limited due to restricted availability of officially evaluated CG data for Turkish companies, this study highlights the multiple dimensions of CG with contributions on corporate activity and firm-level performance. Future studies may address the questions raised by the current analysis and extend the research to a multi-country setting using the Turkish CG rating methodology as a benchmark for measuring CG practices in other emerging markets.

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ATS, ES and AT conceived the study and were responsible for the development of the data analysis and writing the article. AT was responsible for data collection and analysis.

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APPENDIX

Corporate Governance principles of Capital Markets Board of Turkey (sources: Capital Markets Board of Turkey (2005, 2014) and Public Disclosure Platform (2020))

Section 1: Shareholders

1. Facilitating the exercise of shareholders' rights.
2. The right to obtain and examine corporate information.
3. The right to participate in the general assembly meetings.
4. Voting rights.
5. Minority rights.
6. Dividend rights.
7. Transfer of shares.
8. Equal treatment of shareholders.

Section 2: Public Disclosure and Transparency

1. Principles for public disclosure and corporate website information.
2. Transparency about the relations between the company and its shareholders, board of directors, and executives.
3. Public disclosure of periodical financial statements and annual reports.
4. External audit.
5. Trade secret concept and insider trading.

Section 3: Stakeholders

1. Corporate policy on stakeholders.
2. Participation of stakeholders in corporate management.
3. Human resources policy.
4. Relations with customers and suppliers.
5. Ethical rules and social responsibility.

Section 4: Board of Directors

1. Functions of the board of directors.
2. Principles of activity for the board members.
3. The board of directors structure.
4. Procedures for the board meetings.
5. Board committees.
6. Financial rights provided for the board members and executives.