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## Ownership Structure and Corporate Governance in the Case of Turkey

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### **Abstract:**

Turkey is one of the eight countries that currently have a corporate governance index for firms listed on its main stock exchange (Borsa Istanbul). As in the case of many emerging markets, the country's business landscape is characterized by family owned conglomerates some of which have recently become a favorite target for foreign direct and portfolio investment. By using corporate governance data on 22 publicly traded Turkish companies we estimate the determinants of corporate governance ratings for these companies with a focus on ownership structure. Our results show that family ownership has a negative impact on corporate governance ratings while foreign ownership has a weak but positive effect.

## 1. INTRODUCTION

Corporate governance has become as important a factor as financial performance in investment decisions recently. Recent financial scandals such as Enron and WorldCom illustrated how corporate governance can help avoid or minimize agency problems and the opportunistic behavior of managers. These scandals have served as justification for new legislation to regulate corporate governance practices such as the Sarbanes-Oxley Act, Organization for Economic Co-operation and Development (OECD) Corporate Governance Principles, UK Corporate Governance and Stewardship Codes, Dodd-Frank Wall Street Reform and Consumer Protection Act, and the Tabaksblat Code in the Netherlands . These types of regulations set new standards for corporate governance especially regarding selection and functions of board directors, senior executives in the case of the U.S. In emerging markets such regulations offer guidance on what rules may be adopted to satisfy the willingness of investors and potential investors.

In parallel with the current practices worldwide in corporate governance, the Capital Markets Board of Turkey (CMB) established the Corporate Governance Principles in 2005. In doing so, regulations of many countries were examined including the “OECD Corporate Governance Principles” of 1999. The particular conditions of Turkey have been taken into consideration during the preparation of these principles. In Turkey, after Capital Market Board’s communiqué on Corporate Governance Ratings, Istanbul Stock Exchange<sup>1</sup> published the rules of Corporate Governance Index -. The Principles consist of four main sections namely shareholders, disclosure and transparency, stakeholders and board of directors. (Corporate Governance

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<sup>1</sup> New name is Borsa Istanbul (BIST) since April, 2013.

Principles, CMB, 2003: 7)<sup>2</sup> Today, 46 Turkish companies are rated on their corporate governance practices. Corporate governance ranking is a new concept for Turkish firms. Although being listed in this index is optional, publicly-traded companies should be rated by agencies that hold a license issued by CMB and need to receive a rating of 7 or higher to be listed in the Corporate Governance index. In the first year following the implementation of the index in Turkey, there were only seven companies on Borsa Istanbul (BIST) that had corporate governance ratings (CGR); at the end of 2013 this number increased to 46 representing 11 % of all listed companies.

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<sup>2</sup> The principles mainly address publicly held joint stock companies. It is considered that other joint stock companies and institutions, active in private and public sector, may also implement these Principles. The implementation of the Principles is optional. However, the explanation concerning the implementation status of the Principles, if not detailed reasoning thereof, conflicts arising from inadequate implementation of these Principles, and explanation on whether there is a plan for change in the company's governance practices in the future should all be included in the annual report and disclosed to public. This part in annual reports are called as Corporate Governance Principles Compliance Report. Corporate Governance Principles that are adopted and not adopted by the company, reasons for not applying the principles and conflicts of interest resulting from not wholly adopting these principles are disclosed in this report.

## Box 1. Implementation of Corporate Governance Index in Turkey

### Implementation of CGI in Turkey

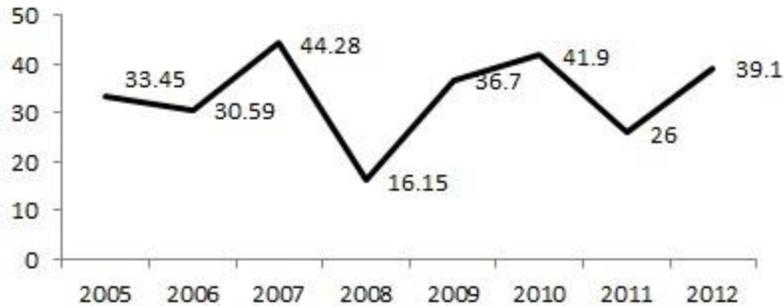
*In Turkey, after CMB's communiqué on Corporate Governance Rating, BIST published the rules of CGI in February 2005. In August 2007, BIST launched the CGI with 5 companies, an important step. As an incentive for companies to be listed on the index, the annual listing/registration fee is currently reduced by 50% for the first two years and by 25% for the following two years. Companies that remain on the index further than this period only pay 90% of the listing fee.*

*Companies traded on Borsa İstanbul (except for the companies on the Watchlist, the Turkish equivalent of Pinksheet Stocks in in the US and C List) are rated by the five rating agencies licensed by the CMB. Evaluated companies need a minimum corporate governance rating of 7 out of 10 as a whole and minimum of 6.5 for each evaluation category<sup>3</sup> to be able to be listed in Borsa İstanbul's CGI. If a company is rated by a rating agency more than once in a calendar year, the latest rating score is taken into consideration. In the case of cancellation of one rating agency's rating license by CMB, the rating evaluations and scores are cancelled as well. Companies should reevaluate their rating scores every year in order to continue to be listed in the Index.*

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<sup>3</sup> The main evaluation categories are shareholders, disclosure and transparency, stakeholders and board of directors. The weights are as follows: Shareholders 25%, Disclosure and Transparency 35%, Stakeholders 15%, Board of Directors 25%.

**Figure 1. Stock market Capitalization in Turkey as a percentage of GDP**



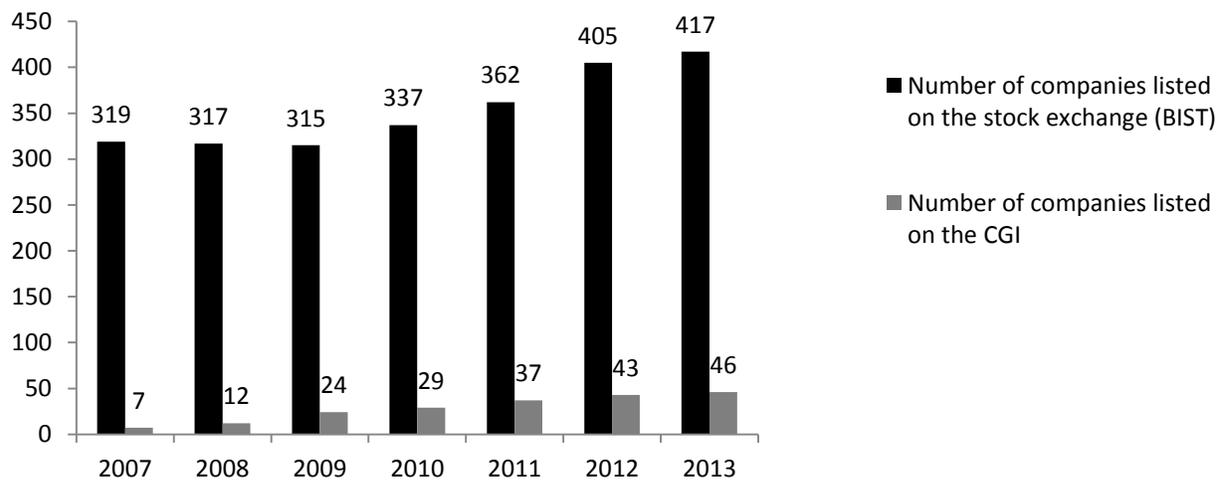
Source: Worldbank, World Development Indicators<sup>4</sup>

The implementation of a Corporate Governance Index holds a particular importance in the case of Turkey. As of 2012, the ratio of the market capitalization of stocks listed on Borsa Istanbul to the country's GDP is 39.12%. Although this figure is low compared to the European Union average of 42.85% and to the emerging markets average of 49.89%, the fact that it has grown from less than 20% in 2008 to the current level illustrates the significance. (See Figure 1).

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<sup>4</sup> Market capitalization is calculated as the share price times the number of shares outstanding. Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. Listed companies does not include investment companies, mutual funds, or other collective investment vehicles.

**Figure 2. Number of Firms in BIST and CGI**



Source: Worldbank and Borsa Istanbul <sup>5</sup>

When we compare Turkey's progress in implementing CGR measures in relation to other emerging markets, we observe that Turkey is one of the leaders. Since 2001 only seven other stock exchanges around the world have launched corporate governance indexes besides Turkey: Brazil, China, Italy, Mexico, Peru, South Africa, and South Korea.

<sup>5</sup> Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. Listed companies do not include investment companies, mutual funds, or other collective investment vehicles.

**Table 1. Number of Companies Listed In Corporate Governance Indices in the World**

<b>Country</b>	<b>Index Name</b>	<b>Launch Date</b>	<b>Original Constituents</b>	<b>February 2013</b>	<b>Increase since launch date</b>
	Special Corporate				
Brazil	Governance Stock Index	2001	12	174	162
China	Corporate Governance Index	2008	199	266	67
Italy	FTSE Italia STAR	2001	20	66	46
Mexico	Indice IPC Sustentable	2011	23	29	6
Peru	Good Corporate Governance Index	2008	9	9	0
South Africa	Socially Responsible Investment Index	2004	49	79	30
South Korea	Korean Corporate Governance Index	2003	50	50	0
Turkey	Corporate Governance Index	2007	7	46	39

Source: The Table is derived from *Grimminger and Benedetta (2013)* World Bank/IFC study: Raising the Bar on Corporate Governance – A Study of Eight Stock Exchanges Indices

In general, firms that receive corporate governance ratings get the opportunity to differentiate themselves in the marketplace especially in countries where corporate governance

practices are weak. Incentives for better corporate governance practices would also attract foreign capital. Developing countries like Turkey need foreign capital to cover current account deficits. One of the most important safeguards for the foreign investors is the sound corporate governance practices in line with international standards. Increasing foreign stake in local companies is usually encouraged by policy-makers due to the common notion that foreign ownership increases not only profitability but also accountability. The underlying assumption here is that foreign investors bring much-needed know-how and managerial skills to domestic companies and in return make them more efficient. Although the linkage has been studied in developed market economies, studies that focus on emerging market settings are rare. Research on the effect of foreign ownership on corporate governance rating improvement in Turkey is still new; this paper contributes to the existing literature by evaluating the impact of foreign ownership on corporate governance in the case of Turkey.

Another important contribution of this paper is to illustrate the impact of family ownership in corporate control in an emerging market setting like Turkey. Family-controlled groups of companies are a common characteristic of Turkish business scene. Existence of family control may not be a problem in countries with effective regulations and laws for protecting minority shareholders, but it may be a problem in developing countries. New generation of family-controlled companies in Turkey pay more attention to corporate governance to make sure their companies survive in such a competitive world. This new generation of family managers seems more aware of the importance of corporate governance practices. The four fundamental pillars of corporate governance (responsibility, accountability, fairness and transparency) inevitably gain more importance for the new generation family members compared to their predecessors. The prevalence of strong families with controlling corporate stakes is not unique to

Turkey. In many emerging market settings (i.e. Brazil, India) family owned conglomerates hold a significant share in the country's business landscape. By evaluating the impact of family control on corporate governance scores, we also seek to find out if family ownership leads to better or worse corporate governance outcomes.

The outline of this paper is as follows: In the following section some of the earlier literature on corporate governance and ownership structure is introduced; in section 3 we describe our data and lay out our methodology; Section 4 provides the results of our estimations and Section 5 concludes.

## **2. LITERATURE REVIEW**

Empirical studies that evaluate determinants of CGR usually include firm specific financial measures such as profitability and financial risk (i.e. Ananchotikul, 2009, Brown and Caylor 2009, Larcker et al. 2007, Abdullah and Page, 2009, Sami et. al, 2011).

Profitability is usually measured by evaluating return on assets (ROA), return on equity (ROE) and earnings per share (Brown and Caylor, 2009, Mashayekhi and Bazaz, 2008, Gompers et al. ,2003, Wu and Cui, 2002, Demsetz & Villalonga 2001, Gugler et al. 2004.) Gompers et al. (2003) show that better governed US firms have higher valuation but they find that performance indicator, ROE is an insignificant factor. Core et al (2005) argue that ROA is a better measure compared to ROE and find a significant relationship between corporate governance and this performance measure. Contrary to these results Brown and Caylor (2009) show that firms with relatively poor governance are relatively less profitable and pay out less cash to their shareholders.

Financial risk is usually measured by financial leverage but there is no consensus in the literature about the effect of this measure on corporate governance. According to agency cost view, Grossman and Hart (1982) argue that debt financing provides better incentives for managers to perform as they aim to avoid the personal costs of bankruptcy. Another view suggests “high-quality” borrowers have incentives to show their quality (Stiglitz and Weiss 1981). Such High – quality borrowers want to show their performance by applying good corporate governance or debt holders may want to see sound corporate governance practices to protect their loan and return on risky investment. On the other hand, Pushner (1995), Nickell et al. (1997), Arping and Sautner (2010) indicate a negative relationship between corporate governance and financial leverage.

Ownership structure play an important role in corporate governance mechanism, and it is often analyzed by focusing on ownership concentration and firm performance (Lerner, 1966, Short 1994, Holderness, 2003, Denis and Serrano 1996, Shleifer and Vishny, 1997) and ownership identity (Ananchotikul, 2008, Gürsoy and Aydoğan, 2002, Mehran, 1995, Huizinga and Denis, 2003, Hartzell and Starks, 2003). Firms operating in poor investor protection environments have more concentrated ownership structure La Porta et al, 1996, Shleifer and Vishny (1986),: When the regulatory quality provides enough legal rights to small investors, they can invest in small amounts but In weak regulatory environment, investors or shareholders want to keep their enough shares to protect their rights. Thus, ownership concentration may be seen as a substitute for legal protection. Besides acting as a substitute, another advantage of ownership concentration is the opportunity to shareholders for monitoring managers and this may reduce agency cost.

A positive effect of family ownership besides family members acting as managers is long-term orientation of the family owner. Family-owners acting as managers for a long time also tend to develop comparative advantage -through increasing capital and searching for new investment opportunities compared to other nonfamily managers aiming for short-term profits. Thus we can argue that long-term orientation of the family owner reduces agent cost (Hsu and Chen, 2009).

The private control benefit argument can be considered as a negative effect of family ownership structure. In the case of weak shareholder protection, family owners have more opportunities to gain private control by expropriating minority shareholders' benefits (Chen 2012, Villalonga and Amit, 2006). This may adversely affect firm's performance. In the case of Turkey, Gürsoy and Aydoğan (2002) find that family owned firms seem to have lower performance with lower risk while firms with foreign ownership display better performance. Pinto and Leal (2013) show that in another emerging market setting like Brazil, family controlled firms tend to pay more to their CEOs and board members when controlling shareholders or their relatives act as directors. Schiehl et al. (2011) assert that family controlled firms in Brazil tend not to voluntarily disclose their executive stock options plans.

One of the earlier papers regarding foreign ownership and corporate governance is by Shleifer and Vishny (1986) who show that foreign equity investment results in better monitoring of company directors and as a result benefits all shareholders. By exercising their voting rights foreign investors can force out existing management and put in place more efficient directors. The impact of foreign ownership on corporate governance might change as the size of the ownership stake changes. If foreign investors control a sizeable stake in the company, they might also act in their self-interest to exploit minority stakeholders. Known as the

entrenchment hypothesis, this view suggests that more equity ownership by the foreign industrial corporations which take part in active management of the company may worsen financial performance since the foreign stake-holder may not consider minority owners' interests. (Morck, Shleifer, and Vishny (1988)).

Another view, known as the theory of private benefits of control (Bebchuk, 1999) argues that the disincentive of foreign investors to improve corporate governance might be due to the fact that they receive potential private benefits with relative ease when corporate governance is weak.<sup>6</sup>

Testing whether either one of these theories hold in practice is an empirical project. Although there are studies that have looked at this relationship in developed market economies such as [Doidge et al, 2004, Aggerwal et al, 2009, Ammann et al., 2011], research on emerging market settings is limited<sup>7</sup>. Ananchotikul (2008) has investigated this linkage in the case of Thailand and finds that the impact of foreign ownership on corporate governance is somewhat linked to the form of foreign investment. In the case of Thailand, foreign industrial investors do not necessarily improve corporate governance while purchases of minority stakes by foreign institutional investors lead to improvements. This is an interesting finding and shows to prove that the story around foreign ownership and corporate governance is not a clear-cut issue. Ananchotikul also illustrates that the origin of foreign owner matters: there may be no improvements for firms who have a foreign owner that comes from a country with weak governance institutions.

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<sup>6</sup> For more discussion on the topic see Ananchotikul (2006).

<sup>7</sup> For Turkey, Gurbuz et al. (2010) show evidence that institutional investors improve financial performance of Turkish firms. Akman et al. (2011) find foreign ownership has a positive impact on firm performance consistent with Gürsoy and Aydoğan (2002). Xu and Wang (1997) and Claessens (1997) also find evidence suggesting lower accounting-based performance, and higher market performances are experienced while the concentration in ownership increases in the cases of China, Slovak and Czech Republics. On the contrary, Demsetz and Villalonga (2001) find no systematic relation between ownership structure and firm performance

Recently, there has been a proliferation of country-level evidence that the origin of legal rules and the quality of their enforcement in a country are good proxies for differences in investor protection which, in turn, affects the efficiency of its financial markets and its access to foreign capital (see for ex. La Porta et al., 1996, 1997, Schleifer and Wolfenzon, 2002, Gugler et al., 2004). Firm-level empirical evidence has corroborated these findings: firms with better corporate governance practices have been found to have lower cost of capital (Sengupta, 1998; Mazumdar et al., 2002; Ashbaugh et al., 2004), lower credit rate spreads (Yu, 2005); higher values, profitability, and lower risk (Gompers et al., 2003; Brown and Caylor, 2004 and 2005).

### **3. DATA AND METHODOLOGY**

#### **a. DATA**

Our data on corporate governance for Turkish companies comes from Borsa İstanbul bulletins, Finnet database and financial reports of firms announced on Public Disclosure Platform of Turkey. Although we started our calculation with 46 companies listed on Borsa İstanbul which currently have corporate governance ratings, we excluded firms operating in finance sector to prevent data distortion. Our main concern was distortion due to differences in firm operating characteristics. We also excluded some outlier observations.<sup>8</sup> At the end we reached 76 firm year observations with 22 firms covering a 6-year time span from 2008 to 2012.<sup>9</sup>

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<sup>8</sup> Observations that were more than 6 standard deviations away from category means are excluded. In total, 5 year-firm observations are dropped.

<sup>9</sup> Financial institutions including banks and participation banks, insurance companies, financial leasing and factoring companies, holding and investment companies, investment trusts, real estate investment trusts, venture capital investment trusts and brokerage houses are excluded.

In terms of ownership structure, Turkish corporations can be characterized as highly concentrated, family-owned firms attached to a group of companies generally owned by the same family or a group of families. The group usually includes a bank, which does not have significant equity ownership in member firms. Very large groups are well-diversified conglomerates sometimes with pyramidal structures. Others are usually vertically integrated companies in the same line of business. Although professional managers run these companies, family members are highly actively involved in strategic as well as daily decisions. (Gürsoy, Aydoğan, 2002)

**Table 2. Descriptive Statistics**

<b>Variable</b>	<b>Mean</b>	<b>Min.</b>	<b>Max.</b>	<b>Std. Dev.</b>	<b>No. Of Obs.</b>
<b>EPS</b>	0.952692	-0.42	<b>5.85</b>	1.271049	76
<b>CGR</b>	84.48808	71.2	<b>92.44</b>	4.144718	76
<b>ROE</b>	15.56423	-38.55	<b>52.16</b>	14.73067	76
<b>ROA</b>	6.956667	-14.49	<b>26.1</b>	7.080452	76
<b>FL</b>	51.59962	2.42	<b>84.99</b>	20.02921	76
<b>OPG</b>	27.17754	-116.66	<b>347.98</b>	83.41217	76
<b>FOREIGN</b>	14.4641	0	<b>83.75</b>	23.49773	76

The table shows descriptive statistics for our dataset. EPS stands for earnings per share in Turkish Liras, CGR stands for the corporate governance index score assigned by the rater; ROE is return on equity measured as percentage points, ROA is return on assets measured as percentage points; FL stands for financial leverage calculated as the ratio of liabilities to equity; OPG represents growth of Operating Profit in percentage points; FOREIGN is a percentage of foreign ownership and FAMILY represents the dummy variable that takes the value of 1 if the company is controlled by a family.

Table 2 provides summary statistics on our dataset employed in this paper.<sup>10</sup> We define foreign ownership if 0.5% or more equity is held by a foreign partner.<sup>11</sup> In our sample the average is 14.46%. . Maximum shares owned by family-owned companies are 77.5% with a mean of 47.92% shares. In the sample, government ownership exists for only 2 companies.<sup>12</sup>

## b. EMPIRICAL SPECIFICATION

We follow Ananchotikul (2008) in setting up our empirical estimation in evaluating the link between foreign ownership and corporate governance in the case of Turkey. Our empirical estimation takes the following form:

$$CGR_{i,t} = \beta_0 + \sum_{k=1}^k \gamma_k CONTROL_{i,t-1}^k + \beta_1 FITCH_{t-1} + \beta_2 FAMILY_{i,t-1} + \beta_3 FOREIGN_{i,t} + \varepsilon_{i,t} \quad (1)$$

where  $CGR_{i,t}$  represents the corporate governance rating for firm  $i$  at time  $t$ ;  $FITCH_t$  is a dummy variable that takes the value of 1 for periods after 2012 when Turkey received investment grade status by Fitch Ratings. We include this variable in our estimations since sovereign rating changes have an underlying effect on individual company ratings.  $FAMILY_{i,t-1}$  is a dummy variable that represents controlling stake in company  $i$  by a family at time  $t-1$ . As mentioned before Turkish companies can be characterized as highly concentrated, family owned firms attached to a group of companies generally owned by the same family or a group of families in the form of holding. If the family members have significant voting rights associated with their

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<sup>10</sup> Most of the Turkish firms have a complex network of ownership. i.e. Hurriyet operates in manufacturing of paper and paper products as well as in printing and publishing sector. Doğan Yayın Holding owns 66% of the company and Doğan Holding owns another 11% stake in the company. Doğan Yayın Holding is owned by Doğan Holding and Doğan Holding is owned by Doğan family. Keeping Doğan Holding and Hurriyet in the sample may cause duplication of data. So holdings in such situations are excluded.

<sup>11</sup> Foreign ownership can be as portfolio investment or direct investment. Joint venture is not common in Turkish Capital Market.

<sup>12</sup> Turkish State has shares in Turk Telekom, a telecommunications company and Aselsan, a defense contractor.

sizeable stake, the dummy takes the value of 1 and otherwise 0. This information is hand collected by analyzing board structures of companies and disclosure notes in financial reports. CGR reports usually include a section evaluating board of directors, but the classification of family management is determined by reading annual financial reports, disclosures and by collecting data about family members.  $FOREIGN_{i,t-1}$  represents foreign ownership in percentage for firm  $i$  at time  $t-1$ ;  $CONTROL_{i,t-1}^k$  is a matrix of control variables for firm  $i$  and includes the following:

- Firm's profitability measured by the following accounting and market-based ratios:
  - Earnings per share ( $EPS_{i,t-1}$ ) in Turkish liras calculated by dividing net income to the average number of outstanding shares in the previous reporting period;
  - Return on equity ( $ROE_{i,t-1}$ ) calculated as the ratio of previous fiscal year's net income to previous year's average total equity;
  - Return on assets ( $ROA_{i,t-1}$ ) calculated by dividing a company's annual earnings by its total assets, expressed as percentage points and reported by the firm in the previous reporting period;
  - Growth of company's operating profit (OPG) calculated as the change in operating profit divided into prior year's net operating profit.<sup>13</sup>
  
- Financial Risk measured by financial leverage ratio ( $FL_{i,t-1}$ ) calculated as the ratio of company's total debt to its equity in the previous year.

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<sup>13</sup> In year-end financial reports of companies in Turkey, other operating income and other operating expense are also taken into account in profit calculations. For an accurate calculation and to indicate performance only about a firm's operating area we excluded other operating income and expense in our calculations of this variable.

We take a one-period lag of all control variables in our specification since most CGR reporting companies rely on previous period's reports in calculating CGR. We expect a company's CGR reading to be influenced by its risk and profitability. The rationale is higher profits could be a sign of excessive risk taking which should lower a firm's CGR reading or vice versa. In the meantime, excessive risk can be identified by the firm's financial leverage ratio which can have an adverse effect on the company's CGR reading.

**Table 1. Estimation Variables and Expected Signs**

Variable	Abbreviation	Expected Sign of the Coefficient
<b>Macro Variables</b>		
Upgrade of Turkey's Credit Rating to Investment	FITCH	+
Grade Status		
<b>Profitability Measures</b>		
Earnings Per Share (in TL)	EPS	+
Return on Equity	ROE	+/-
Return on Assets	ROA	+/-
Growth of Operating Profit	OPG	+
<b>Risk Measures</b>		
Financial Leverage	FL	+/-
<b>Ownership Structure Variables</b>		
Foreign ownership	FOREIGN	?
Family Ownership	FAMILY	?

#### 4. ESTIMATION RESULTS

This section provides the results of our estimations for equation (1). We perform a two-level procedure in our analysis. First we run stepwise static OLS estimations. Before doing so, we perform Hausman Test to check for the validity of the fixed effects model. The  $X^2$  value with 21 degrees of freedom is 121.63 with a p value that is equal to 0. The p-value strongly rejects the null hypothesis that cross-section effects are redundant supporting the use of fixed effects model. In order to account for possible persistence in CGR readings, we slightly modify Eq. (1) and include a lag of our endogenous variable ( $CGR_{t-1}$ ). The reason we use a lag of our dependent variable on the right hand side is because CGR readings are usually influenced by the previous period's reading, a finding shown with a high correlation between the two variables.<sup>14</sup> Previous literature has shown that firm structure measures are highly endogenous to CGR estimations.<sup>15</sup> The solution to endogeneity works if we can find instrumental variables that are correlated with the endogenous regressor. When assuming the ownership structure to be endogenous Demsetz and Lehn (1985), Cho (1998), Hermalin and Weisbach (1989) use generalized method of moments with a panel of data to remove the simultaneous effect of performance on ownership structure and to increase the adequacy of the empirical test. Thus, for the modified versions of Eq. (1) we use the dynamic Generalized Method of Moments (GMM) following the strategy of Arellano and Bond (1991). We use all possible lags of our dependent variable plus lagged values of our ownership structure, FAMILY variable as instruments. By doing so we obtain parameter estimates that are consistent and efficient. We have 18 firms that we can use in our dynamic panel GMM model; this increases our confidence in the consistency and efficiency of our estimates.

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<sup>14</sup> The coefficient of correlation between  $CGR_t$  and  $CGR_{t-1}$  is 0.86.

<sup>15</sup> See Larcker, et al (2007), Black (2006) and Ananchotikul (2008).

**Table 3. Estimation Results**

Dependent Variable: CGR <sub>it</sub>	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)	(1.6)	(1.7)	(1.8)	(2)
Method Time Period	OLS 2008- 2012	OLS 2008- 2012	OLS 2008- 2012	OLS 2008- 2012	OLS 2008- 2012	OLS 2008- 2012	OLS 2008- 2012	OLS 2008- 2012	GMM 2010- 2013
C	84.61** * (0.57)	84.31** * (0.42)	84.84** * (0.48)	84.96** * (0.47)	80.12** * (2.46)	80.80** * (2.34)	82.25** * (2.34)	81.77** * (2.31)	
CGR (-1)									0.26* (0.14)
EPS (-1)	2.41*** (0.48)	1.47*** (0.38)	2.05*** (0.46)	2.18*** (0.45)	2.25*** (0.44)	2.49*** (0.43)	2.44*** (0.41)	2.53*** (0.41)	2.50** (1.08)
FITCH (-1)		4.19*** (0.62)	4.45*** (0.61)	4.40*** (0.60)	4.29*** (0.58)	4.51*** (0.56)	4.58*** (0.54)	4.46*** (0.53)	2.22** (0.84)
ROE (-1)			-0.07** (0.03)	-0.19** (0.07)	-0.20*** (0.07)	-0.25*** (0.07)	-0.24*** (0.07)	-0.28*** (0.07)	-0.37** (0.15)
ROA (-1)				0.24* (0.13)	0.25** (0.13)	0.25** (0.12)	0.23** (0.12)	0.28** (0.12)	0.62** (0.30)
FL (-1)					0.09* (0.45)	0.08* (0.43)	0.09** (0.04)	0.08** (0.04)	0.16** (0.07)
OPG (-1)						0.01** (0.003)	0.01*** (0.003)	0.01** (0.003)	0.004 (0.004)
FAMILY (-1)							-2.81** (1.26)	-2.94** (1.24)	-2.77*** (0.49)
FOREIGN (-1)								0.07* (0.04)	0.17 (0.14)
Adj. R <sup>2</sup>	0.51	0.73	0.75	0.76	0.77	0.80	0.81	0.82	
No. of firms	22	22	22	22	22	22	22	22	18
No. of observations	76	76	76	76	76	76	76	76	54
S.E. of Regression									2.41
AR (1)									z=-0.085 p=0.59
AR(2)									z=-0.109 p=0.68
Sargan Test p value									0.49
Instruments used									CGR, FAMIL Y

The table shows the results of stepwise estimations for equation (1) using OLS and GMM techniques. All OLS estimations include fixed effects that are not reported here. EPS stands for earnings per share in Turkish Liras, FITCH is a dummy variable that takes the value of 1 following the upgrade of Turkey's credit rating to investment-grade status in 2012; ROE is return on equity measured as percentage points, ROA is return on assets measured as percentage points; FL stands for financial leverage calculated as the ratio of liabilities to equity; OPG represents growth of Operating Profit in percentage points; FAMILY is a dummy variable that takes the value of 1 if the company is controlled by a family; FOREIGN is the percentage of foreign ownership \* represents significance at 10%, \*\* represents significance at 5% and \*\*\* represents significance at 1%. The null hypothesis for the Sargan Test is the instrumental variables are uncorrelated to some set of residuals. The null hypothesis for AR(k) test is there is no autocorrelation up to order k.

The results of our estimations are available in Table 3. We observe that the following regressors have a robust effect on CGR readings: earnings per share (EPS), Fitch rating upgrade (FITCH), return on equity and assets (ROE and ROA), financial leverage (FL) ratio and family control (FAMILY) dummy. Among our firm specific control variables, earnings per share (EPS) increases a firm's CGR reading as evidenced in both equations. This suggests that firms with higher earnings also receive higher corporate governance readings. We also observe that profitability is closely linked to CGR scores as illustrated by ROE and ROA coefficients. Both of these variables are highly significant in both OLS and GMM estimations yet with opposite signs. ROE enters our estimations with a negative sign suggesting that higher returns on equity yield lower CGR readings while for ROA we observe the opposite suggesting return on assets is a positive contributor to corporate governance. The reason why we might observe a negative sign for ROE while a positive sign for ROA could be because firms with low equity could be seen more risky by the rating companies and thus be assigned a lower CGR score. Financial leverage (FL) which is measured by the ratio of liabilities to equity takes a positive sign and is significant in our estimations. This suggests as firms' liabilities increase relative to their equity their corporate governance rating increases. We can explain this result as follows: faster growing firms need external capital to sustain growth, and therefore might choose better governance to attract investors. The positive and significant sign of FL in our models is an indicator that high-quality borrowers want to show their performance by applying good corporate governance practices. Additionally, we can argue that a contributing factor is the scrutiny the firm is subject to as its liability portfolio increases. A significant portion of liabilities for a firm is loans; higher loans bring along with more scrutiny towards a firm's finances and operations by the creditors. This may result in highly leveraged firms to behave more conservatively and compliant thus

receiving higher CGR scores. This finding is in line with previous research (Stiglitz and Weiss, 1981) which has demonstrated that debt holders may want to see sound corporate governance practices to secure their repayment.

The dummy variable “FITCH “which takes the value of 1 for 2012 and 0 for previous years enters our estimations positively suggesting that Turkey’s rating upgrade was an instrumental factor in CGR readings for Turkish firms.

As predicted by theory (Bebchuk 1999, La Porta et al. 1999 and 2000, Dyck and Zingales, 2004’ Villalonga and Amit, 2006), founders of firms or their families may need to retain control of the firm because the family's reputation is needed to raise external funds when the legal protection of outside investors is poor. In our study, however the sign and coefficient of the FAMILY variable is negative and does not change in both our OLS and GMM estimations. The interpretation is that rating companies may read controlling stakes by a family in a firm’s ownership structure as unfavorable conditions in corporate governance. In line with this result we also find that ROE has a negative effect on corporate governance. This finding is consistent with the private control benefit argument (Chen, 2012): the divergence of voting rights and cash flow rights allows the block holder to gain private benefit because it has high control power and low capital involvement.

Another important finding in our results is the effect of previous period’s CGR reading on the current period reading. The high significance of this variable in GMM estimations suggests that raters take into consideration previous period’s CGR levels in assigning new CGR scores to firms.

We find the foreign ownership variable (FOREIGN) takes on an expected sign and yet it is not highly-significant in our estimations. The positive sign of this variable suggests that foreign

ownership increases a firm's CGR scores while the insignificance of this variable in our GMM estimations suggests this is not a robust finding. The same can be said for the growth of operating profit (OPG) in our estimations. While significant in our OLS estimations and with a positive sign, this variable is insignificant in our GMM estimation. A positive sign indicates that growth in profits from company's core operations has a positive effect on its CGR score. This is a meaningful and expected result.

## 5. CONCLUSION

Ownership structure, as a mechanism in corporate governance has been believed to effect firm performance for many years. The relationship between ownership structure and corporate performance are assumed to exist, because ownership concentration and owner identity influence the incentives of each party within the firm, and thus influence the firm's ability to solve agency problems. The conflict of shareholders and management is expected to decrease with good corporate governance practices. Also it is becoming more common for investors to consider governance issues when making investment decisions. In response to this interest, several organizations now rate the corporate governance practices of public companies, either as a stand-alone offering or as part of a credit rating. In line with international practices, Turkey's CMB established the Corporate Governance Principles and since 2005 Borsa Istanbul has been listing a Corporate Governance Index for Turkish companies. This index was created to expand the breadth and significance of corporate governance applications and to promote the voluntary compliance. The index gives firms an opportunity to differentiate themselves by voluntary application after the assessment of corporate governance ratings. In this paper we evaluated the impact of ownership structure on Turkish firm's CGRs. In doing so we compiled data on 22 publicly traded Turkish companies and their ownership structures. Our estimations suggest that

family control has a significant and negative impact on Turkish firms CGR scores. This finding suggests controlling stakes by a family in a firm's ownership structure are considered as unfavorable conditions. This finding has important policy implications. Weakening of family control on Turkish corporations seems to be an important step in improving corporate governance in Turkey.

We also find that financial risk as measured by financial leverage (FL) has a positive impact on CGR scores. Faster growing firms with high debt seem to choose better governance to attract investors in the Turkish case or debt holders may want to see sound corporate governance practices to secure their repayment.

Foreign ownership seems to improve CGR scores for Turkish companies as shown in our research. The origin of foreign ownership in Turkey is mostly from developed countries such as the US, Netherlands, Switzerland, Italy and France. For the sample period studied, these countries have better corporate governance ranking than Turkey.<sup>16</sup> According to our results, the positive sign of this variable suggests that foreign ownership increases a firm's CGR and is in line with previous research that focused on foreign ownership in Turkish companies. Gürsoy and Aydoğan (2002) and Akman et al. (2011) find foreign ownership has a positive impact on market performance. On the other hand the insignificance of this variable in our GMM estimations suggests this is not a robust finding.

Our study has valuable contribution to literature on corporate governance in emerging market settings and is expected to be of interest to regulators, researchers, managers and market participants. As of 2014 only eight countries have corporate governance indices and only three are applying voluntary application. Further research may focus on cross-sectional analysis of

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<sup>16</sup> The World Bank Governance Index is available at <http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators>. Only Lebanon has ranked below Turkey.

ownership structure and especially on family control of corporate boards in other emerging market cases to see whether our results hold.

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