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Does Corporate Governance Compliance Increase Company Value? Evidence from the Best Practice of the Board

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Abstract: Drawing upon agency theory, we address the limitations of best practice code in the context of emerging governance, emphasizing the role of concentrated ownership. While the code provisions were formulated in developed countries, the transfer of one-size-fits-all guidelines may not address the characteristics and challenges of emerging and post-transition economies. Specifically, we emphasize that provisions of corporate governance codes are aimed at solving the principal–agent conflict between shareholders and managers. These guidelines may remain limited in addressing principal–principal conflicts between majority and minority shareholders and have either a lesser effect on valuation or none at all. Using a unique sample of 155 companies listed on the Warsaw Stock Exchange during the period 2006–2015, with hand-collected data from declarations of conformity, we tested the hypotheses on the link between corporate governance compliance (with board) practice and company value. The period of 2006–2015 was chosen deliberately, due to the relative stability of corporate governance code recommendations over this time. The results of our panel model reveal a negative and statistically significant relation between corporate governance compliance and company value. We contribute to the existing literature providing new evidence on compliance practice in the context of concentrated ownership, and the limited effect of code provisions in addressing structural challenges of corporate governance in emerging post-transition economies and hierarchy-based control systems.

Keywords: corporate governance best practice; corporate governance compliance; company value; Warsaw Stock Exchange

1. Introduction

The adoption of best practice codes has been one of the most influential trends in corporate governance in the last 20 years (Aguilera and Cuervo-Cazura 2004; Zattoni and Cuomo 2008; Cuomo et al. 2016), being noted in both developed and emerging economies. Conceptually, codes of best practice offer self-regulation for companies (Hooghiemstra and van Ees 2011) and aim to resolve the inherent principal–agent conflict, strengthen monitoring tools over management and limit the power of corporate officials (Pritchett 1983). As a result, corporate governance guidelines reduce information asymmetry, empower shareholders, and lower agency costs (Chang 2018). Despite institutional differences across corporate governance regimes, the code provisions remain similar (Cicon et al. 2012; OECD 2015). In practice, the set of recommendations on board work, and the structure of executive remuneration and standards of transparency have been viewed as a systemic response to corporate governance inefficiencies identified during disruptive corporate scandals (Aguilera et al. 2009; Krenn 2015).

Prior studies identify the value added by the adoption of best practice. The positive effects for those companies complying with corporate governance principles relate to increased investor trust and lower risk (Durnev and Kim 2005). With greater transparency, investors are more interested in allocating their funds in company stocks. Compliance also leads to enhanced company reputation, lower cost of capital, better performance, higher return on investment, and higher market valuation (Mazotta and Veltri 2014; Kaspereit et al. 2017). Nevertheless, despite the belief in the positive effect of higher compliance, scholars have addressed limitations in the transfer of Anglo-Saxon corporate governance guidelines to countries having different institutional environments and company characteristics (Chen et al. 2011). The criticism of the one-size fits-all approach indicates the structural differences in ownership structure, cultural norms, and socializing patterns, which may result in problems of code implementation, such as an instrumental approach to adoption (Fotaki et al. 2019), manipulation (Okhmatovskiy and David 2012), and decoupling (Martin 2010; Sobhan 2016). These issues may reduce compliance benefits and limit the effect of higher valuations.

In countries characterized by concentrated ownership and wedge between control and cash-flow rights, the conflicts between majority and minority shareholders become the prime concern of corporate governance (La Porta et al. 1999; Bennedsen and Nielsen 2010; Hamadi and Heinen 2015; Huu Nguyen et al. 2020). While the flexibility of the codes and the universalism of best practice enable the adoption of code guidelines for a concentrated ownership environment, in compliance terms, it remains the decision of powerful blockholders as to whether they constrain themselves in exerting their power over the company and their willingness to share "control of control" (Perezts and Picard 2015). The gap between "formal adoption of structures and their actual daily use" (Perezts and Picard 2015, p. 833) or the lack of congruence between enacted values and espoused values (Fotaki et al. 2019) are more likely to occur in countries with insufficient investor protection, inadequate transparency standards, and weak institutions. These conditions, accompanied with ownership concentration, happen to materialize in developing countries, as well as emerging and post-transition economies (Huu Nguyen et al. 2020). Implementing codes of best practice in the context of what is termed "emerging governance" reveals a different logic, since "arrangements adapt and evolve over time", as a result of "the co-habitation of different institutional, regal and ownership tradition and assumptions from more established governance models" (Mahadeo and Soobaroyen 2016, pp. 739–40).

In this paper, we aim to add to the existing literature on corporate governance compliance in developing and emerging markets (Outa and Waweru 2016; Sarhan and Ntim 2018), in addition to smaller economies (Chang 2018), and to deliver insights on the implementation of best practice codes in a post-transition and post-communist economy (Okhmatovskiy and David 2012; Albu and Girbina 2015). In this light, we pose a question concerning the market valuation effect for the implementation of best practice codes. Drawing upon agency theory, we address the limitations of best practice codes in an emerging governance context, emphasizing the role of concentrated ownership. While the existing literature emphasizes that the prime objective of best practice implementation lies in creating conditions to attract investors to invest funds (Chang 2018), the reality of operating in the context of concentrated ownership may offer different incentives for blockholders (Chen et al. 2011). Compliance per se may be seen in terms of a cost, a loss of power, or a threat from the exposure of internal structure to the scrutiny of the general public. We study the link between compliance practice and company value in relation to ownership concentration and ownership by distinct shareholder types, including financial, individual, industry, CEO, and state.

The contribution of the paper is twofold. Firstly, we provide much-needed evidence on longitudinal compliance practice in an unfavorable environment of insufficient investor protection, concentrated ownership, and a hierarchy-based corporate governance system under a post-communist legacy. We study the scope and dynamics of compliance with best practice in the context of reemerging trust and civic society, yet where institutions and the legal system are still insufficiently effective. Secondly, developing further the approach proposed by Chen et al. (2011) on the limitations of best

practice adoption in emerging markets, we analyze the relations between compliance practices and company value.

The remainder of this paper is organized as follows. First, we outline the concept of corporate governance best practice by recourse to agency theory, which explains the motivation for compliance. We explain practices by listed companies in the context of emerging governance, concentrated ownership, and a hierarchy-based control system. Then, we present prior studies on the relations between corporate governance compliance and company value and performance. This is followed by a presentation of our research design, presenting our study sample, data collection, descriptive statistics, and econometric models. Our analysis is based on a sample of 155 companies listed on the Warsaw Stock Exchange in the years 2006–2015. The period of 2006–2015 was chosen deliberately, due to the relative stability of corporate governance code recommendations. Our findings suggest that implementing new corporate governance practice is an incremental process. Descriptive statistics are consistent with prior studies on emerging and post-transition countries and demonstrate a slow but steady increase in the number of complying companies, though still lagging behind well-established economies (Albu and Girbina 2015; Chang 2018). The results of the constructed models reveal a statistically significant and negative relationship between all three constructed measures of compliance and firm value as measured by Tobin's Q. We discuss implications for theory and practice and formulate suggestions for further research in the final sections.

2. Corporate Governance Best Practice

2.1. Corporate Governance Code in the View of Theory

The existing literature analyzes corporate governance from the perspective of inherent conflicts which exist in the organization context and are explained by agency theory (Fama and Jensen 1983; Shleifer and Vishny 1997). According to agency theory, the conflict between shareholders and managers arises from the separation of ownership and control (Jensen and Meckling 1976), observed predominantly in the context of dispersed ownership structure. The principal–agent conflict, known as the agency conflict of type I, refers to information asymmetry and differences in time horizon and risk diversification opportunities, which characterize the relation between shareholders and managers (Jensen and Meckling 1976). The theory explains that managers may have the tendency of maximizing their own wealth, acting at the cost of shareholders (Fama and Jensen 1983; Shleifer and Vishny 1997).

Given that dispersed ownership, which offers an ideal environment for the emergence of principal–agent conflict, remains in a global context more the exception than the rule (La Porta et al. 1999) more interest in corporate governance studies has been devoted to concentrated ownership (Su et al. 2008; Loyola and Portila 2019). While concentrated ownership provides a natural mechanism for mitigating principal–agent conflict (Coffee 1999; Berglöf and Claessens 2006), it leads to the emergence of the agency conflict type II, which refers to the relations between majority and minority shareholders (Wang and Shailer 2015; Edmans 2014; Khan et al. 2020). Principal–principal conflicts materialize in the majority shareholders' actions related to investment and dividend policy, in order to enjoy private benefits (Gilson and Schwartz 2013) and to extract value from the company at the expense of minority investors (Krivogorsky and Burton 2012; Wang and Shailer 2015). In addition, majority investors tend to appoint their own representatives to the board to limit the access to information and decision-making for minority investors (Shleifer and Vishny 1997).

Agency conflicts are inherent in organizations and remain naturally linked to more complex ownership structures characterized by the presence of shareholders who differ in terms of their type (industry, family, and financial), as well as the size and the time horizon of their investment (Hamadi and Heinen 2015). In reaction to these conflicts, corporate governance offers a set of mechanisms and institutions for reducing potential problems by aligning the interests of managers with the interests of shareholders and by aligning interests of majority and minority shareholders. This alignment can be exerted with monitoring and incentive schemes. Monitoring exercised by internal forces, such as ownership, board

composition, and structure, and by external mechanisms, including markets for corporate control, competitive labor markets, shareholder activism, rating agencies, and media (Aguilera et al. 2015; Elgharbawy and Abdel-Kader 2016) is expected to reduce agency conflicts. Despite ongoing efforts to formulate and enforce principles, "effective corporate governance still remains a puzzle for practice and research" (Fotaki et al. 2019, p. 1).

Best practice codes offer corporate governance principles on oversight and control over the firm (Cuervo 2002; Aguilera and Cuervo-Cazura 2004; Chizema 2008; Tricker 2012). The best practice concept assumes voluntary adoption according to the comply or explain rule, providing flexibility in terms of scope and pace for implementing code recommendations (Tan 2018). It is viewed an example of self-regulation of listed companies (Hooghiemstra and van Ees 2011). The codes address selected dimensions of corporate governance, such as functioning of the board, shareholder rights, transparency, auditing, and remuneration (OECD 2015), and they are designed to provide principles and norms for creating shareholder value (Mallin 2004). The codes offer widely recognized and accepted guidelines for addressing governance inefficiencies (Lipman 2007; Arcot et al. 2010; Tricker 2012) and are often inspired by international organizations, such as the OECD, or regulatory and supervision authorities, such as the European Commission (e.g., the European Commission Communication 284 to the European Council and the European Parliament) or the US Securities and Exchange Commission.

In the conceptual framework of agency theory, the adoption of code provisions is expected to mitigate information asymmetry and reduce conflicts between shareholders and managers. Increasing disclosure and addressing the problems of hidden action, hidden information, and hidden intention compliance lower investment risk and enhance investor trust (Durnev and Kim 2005; (Mazotta and Veltri 2014; Kaspereit et al. 2017). In the context of ownership concentration, majority shareholders may be motivated for compliance by the assumption that their interests are "interchangeably merged with the interests of the corporate entity and whatever is good for the society must be good for the corporation in the long run" (Pritchett 1983, p. 997). This resonates in the commitment to adopt the rules of fairness, an ethical stance which is in the best interests of the company. Blockholders may decide to voluntarily constrain themselves in exerting their power over the company and by their willingness to share "control of control" (Perezts and Picard 2015), driven by the notion that "corporate actions are related to long run corporate benefit and there is no taint of self-dealing or conflict of interests" (Pritchett 1983, p. 997).

Implementing the code is driven by numerous reasons. Firstly, the idea of self-regulation and "soft law" provided by the code assumes that the market monitors compliance. This means that investors express their acceptance of conformity with the code via increasing their holdings of a company's shares, leading to an increase of company value (Gompers et al. 2003; Black et al. 2006; Goncharov et al. 2006; Renders et al. 2010). Consequently, investors penalize non-complying companies through selling their shares (Easterbrook and Fischel 1996).

Secondly, the code principles are formulated according to the needs and interests of institutional investors, for whom high conformity translates into high trust towards the company management (Arcot et al. 2010). Compliance with internationally recognized and easily comparable standards increases transparency and lowers the risk associated with firm operation (Bistrowa and Lace 2012). In a sense, greater compliance is understood as higher protection of shareholder interest.

Thirdly, corporate governance conformity not only aims to develop efficient monitoring and oversight to protect shareholder value, but also aims to legitimize the presence of the firm on the stock market. Competition between companies to attract investors and raise funds for growth generates coercive or normative imitation (Guler et al. 2002). According to the legitimization perspective, companies implement new practices in order to enjoy the benefits of meeting social expectations. "If practices become institutionalized, their adoption brings legitimization to the adopting organization or social system" (Aguilera and Cuervo-Cazura 2004, p. 422). Firms are differently motivated to comply with best practice, and such conformity does not necessarily result in greater efficiency or effectiveness. The declaration of conformity issued by listed companies may either fail to lead to better performance or

higher firm value, or else it may not necessarily be motivated by the strategy of increasing shareholder value. Instead, compliance may be a product of the endogenously determined structure of internal firm governance or result from isomorphic dynamics driven by the firm's legitimization policy (Hermalin and Weisbach 2003).

In sum, according to agency theory, firms operate in an economically rational way and search for practices and organizational solutions that improve performance with respect to resources utilized and effectiveness (Williamson 1981). Thus, the decisions on corporate governance compliance and the implementation of best practice are undertaken for the purpose of obtaining efficiency gains (Aguilera and Cuervo-Cazura 2004). The process of innovation diffusion introduces new solutions, improves company performance, and is driven by technical and rational needs (Zattoni and Cuomo 2008). It is motivated by rational arguments and is expected to improve company efficiency. Thus, well-performing companies which previously met shareholder expectations with respect to financial results, share price, and company value are more responsive to formal requirements and shareholder expectations with respect to the board's functioning, structure, and composition, as well as transparency standards and remuneration policy. Compliance with the code recommendations constitutes a signal for investors that the firm, its executives, and board directors aim at protecting shareholder interests and endeavor to enhance shareholder value (Hermes et al. 2007).

2.2. Corporate Governance Code and Company Value

Studies on corporate governance compliance offer a wide range of qualitative and quantitative analyses revealing the degree, scope, and dynamics of compliance (Seidl et al. 2013; Shrives and Brennan 2015; Okhmatovskiy 2017), in addition to its relation to company performance and value (Stiglbauer and Velte 2014; Rose 2016; Roy and Pay 2017). Conceptually, studies are based on the assumption that companies with poor corporate governance should have lower valuations in comparison to companies with effective corporate governance, since investors do not tolerate higher risk of expropriation without receiving a premium for such investments (Gompers et al. 2003; Goncharov et al. 2006). A positive link between the quality of governance and performance is observed in studies on European (Drobetz et al. 2003; Gompers et al. 2003; Bauer et al. 2004; Goncharov et al. 2006; Renders et al. 2010; Bistrowa and Lace 2012), Japanese (Aman and Nguyen 2007), and American (Bhagat and Bolton 2008) companies.

Specifically, a series of studies analyze the dynamics of compliance with corporate governance codes and the link between the compliance and firm performance. Goncharov et al. (2006) examine the declared degree of compliance for a sample of German DAX30 and MDAX listed firms and find that "the compliance with the Code is value-relevant after controlling for endogeneity bias" (Goncharov et al. 2006, p. 432). Research on a sample of 140 German companies reveals that companies with a higher value of Tobin's Q are more likely to comply with the recommendation on disclosing the remuneration schemes of individual directors (Andres and Theissen 2008). A study on a large sample of 1199 observations on FTSE companies and 33,667 observations of Worldscope firms (Renders et al. 2010) shows that—when controlling for endogeneity by introducing instrumental variables and eliminating the sample selection bias—there is a positive link between the quality of corporate governance (measured by the rating variable) and company performance. The strength of this relationship depends on the quality of the institutional environment, while "improvements in corporate governance ratings over time result in decreasing marginal benefits in terms of performance" (Renders et al. 2010, p. 87). A positive link between company performance measured by return of equity (ROE) and return on assets (ROA) indicators and total corporate governance comply or explain disclosure scores is noted in a sample of Danish firms (Rose 2016). This study indicates a positive effect for two categories: board composition and remuneration policy, while no impact on performance is reported for increasing compliance with the recommendations on risk management and internal controls.

Similar results are shown in a study on the impact of corporate governance quality on stock performance in a sample of 116 firms from 10 Central and Eastern European countries for the period of 2008–2010 (Bistrowa and Lace 2012). Based on the model rating, the firms characterized by the highest

corporate governance quality (top 25%) outperformed companies with the worst corporate governance quality (bottom 25%) by 0.98% on a monthly basis.

Although studies document a positive association between corporate governance compliance and firm value and performance (Goncharov et al. 2006; Renders et al. 2010; Rose 2016), the opposite may also be true (Bhagat and Black 2002). The assumed effect referring to higher company valuation, increased legitimization towards constituencies, and positive ethical spillovers may be constrained by a number of reasons. Firstly, the pricing effect takes place when investors believe in the reliability of information provided by firms to the market. This may not necessarily be the case, as the declaration of conformity is neither verified nor audited. Moreover, companies may choose to comply with provisions which are either relatively easy to follow or which appear useless from an investor standpoint (Goncharov et al. 2006; Sobhan 2016).

Secondly, the voluntary approach to compliance and the absence of enforcement mechanisms may lower the credibility of the conformity statement and may weaken the positive economic consequences (Healy and Palepu 2001; Goncharov et al. 2006). With the given institutional and ownership characteristics in emerging and post-transition economies, codes of best practice aim to resolve the inherent principal–principal conflict and add to the protection of minority investors (Mahadeo and Soobaroyen 2016). In spite of this, "publicly mandated commitment to corporate governance, business ethics and legal compliance" (Adelstein and Clegg 2016) is significantly constrained. Insufficient enforcement mechanisms, combined with institutional skepticism, increases "the declarative and instrumental use of corporate governance structures and their actual daily use" (Perezts and Picard 2015, p. 833). This can lead, as shown in a study on Hungary, to a "disjuncture between formal commitment to code adoption and its effective implementation" (Martin 2010, p. 145). Therefore, the effective implementation of codes of best practice depends on the perceived benefits and costs by majority shareholders.

Thirdly, compliance with the code guidelines may be viewed as explicit information on the corporate governance structure and standards for board functioning and investor protection. The declaration of conformity issued by listed companies may either not lead to better performance or higher firm value or not necessarily be motivated by a strategy of increasing shareholder value. Instead, compliance may be a product of the endogenously determined structure of internal firm governance or result from the isomorphic dynamics driven by company legitimization policy. Research reveals the impact of endogeneity in the process of board formation and monitoring (Hermalin and Weisbach 2003). The legitimacy driven effect should be particularly strong for poorly performing companies, which, by publishing a declaration of corporate governance conformity, intend to compensate shareholders reacting to unsatisfying financial results.

Fourthly, while we acknowledge the contribution of agency theory, we also consider the limitations of the rationale approach to corporate governance compliance. Since legitimacy is crucial for organization survival, as it provides access to resources from the environment (Deephouse 1996; Mizruchi and Fein 1999), companies may be "prone to construct stories about their actions that correspond to socially prescribed dictates about what organization should do" (Mizruchi and Fein 1999, p. 656). In addition, companies may tend to declare adherence with corporate governance principles without any substantive compliance.

Fifthly, legitimacy motivation is observed in many companies, regardless of the country of origin or operation. However, in the context of weaker institutions and insufficient investor protection, this declarative character (Okhmatovskiy 2017), overstatement (Sobhan 2016) or instrumental approach (Fotaki et al. 2019) to compliance may result in no effect on market valuation (Gherghina 2015).

We follow the approach proposed by Chen et al. (2011), who argue that the provisions of corporate governance codes are designed around companies in developed economies. They suggest that best practice "cannot mitigate the negative effect of controlling-shareholder expropriation on corporate performance" (Chen et al. 2011, p. 115). This is caused by two main limitations. Firstly, code provisions are designed to solve type I principal–agent problems between shareholders and managers, while they

do not address conflicts between majority and minority shareholders. Secondly, the core of best practice code lies in the guidelines on board structure and operation, which structurally will not be implemented in a concentrated ownership context since majority shareholders appoint their own representatives to the board (Shleifer and Vishny 1997; Ferrarini and Filippelli 2013; Gaur et al. 2015). Put differently, not only are the code provisions not substantively implemented by boards, but they also fail to respond to the structural problems and challenges of corporate governance in emerging economies. Investors do not observe positive effects with regard to lower asymmetry, lower risk, or more efficient oversight; thus, there is no resulting higher valuation. In sum, recognizing the limitations of corporate governance codes in the context of concentrated ownership, we formulate the following hypotheses:

Hypothesis 1a (H1a). *Formal compliance with board best practice is negatively associated with firm value.*

Hypothesis 1b (H1b). *Minimum compliance with board best practice is negatively associated with firm value.*

Hypothesis 1c (H1c). *Substantive compliance with board best practice is negatively associated with firm value.*

3. Research Design

3.1. Sample and Data Collection

We intended to test the hypothesis regarding the link between compliance with best practice and company value on a unique sample of companies listed on the Warsaw Stock Exchange over a long period, during which corporate governance conformity evolves and gradually becomes institutionalized. We purposefully choose sample companies listed over a 10-year period (2006–2015) that are characterized by their relative stability of corporate governance code recommendations. We constructed a balanced panel to investigate companies which were listed over the whole period of our analysis and reveal similar attributes with regard to corporate governance practice. Over the analyzed period, the numbers of companies listed on the Warsaw Stock Exchange varied due to initial public offerings (POs) and delisting, as reported in Table 1.

Table 1. Number of companies listed on the Warsaw Stock Exchange.

Years	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Listed companies	284	351	374	379	400	426	438	450	471	487
Initial public offerings (IPOs)	38	81	33	13	34	38	19	23	28	30
Delisted firms	9	14	10	8	13	12	7	11	8	13

Source: GPW, www.gpw.pl/statystyki.

We start with 284 firms quoted on the Warsaw Stock Exchange in 2006. We eliminate companies operating in the insurance sector, real estate firms, companies with missing observations and those delisted over the analyzed period. Our final sample consists of a balanced panel with 155 companies and 1550 observations. We collect data on company financial characteristics and performance, company value, and ownership structure from the IQ Capital data base. Prior research emphasizes the essential role of the board for mitigating agency costs, for attaining sufficient quality in corporate governance (Khan et al. 2020). Data on compliance include the conformity—or the lack thereof—of a given company with best practice on the following: the presence of two independent directors, information concerning the identification of independent board members, the presence of an independent board chairman, and the formation of an audit committee and remuneration committee on the supervisory board. Due to the absence of such data in any available database, all information on compliance is collected by hand directly from annual reports of the companies in the sample. The analyses were performed, using STATA16 software.

3.2. Variables

We operationalize our variables, following the research procedures adopted in prior studies. We employ Tobin's Q, defined as market value to book value, as our explained variable (Kim et al. 2015). Compliance with board best practice is our explanatory variable. Due to the essential role of corporate governance, we focus on compliance with recommendation on the supervisory board (Seidl et al. 2013; Huu Nguyen et al. 2020). Specifically, we include information on the presence of independent directors on the board, chairman status, the formation of an audit committee and other committees within the supervisory board, and publication of the compliance statement included in the annual report and its size (length). In order to test for the relationship between conformity to best practices and company value, we introduce three compliance variables: formal compliance (FORMALCOMPL), minimum compliance (MINCOMPL), and substantive compliance (SUBSTCOMPL). FORMALCOMPL is constructed as an arithmetic sum of compliance with the best practice on the presence of two independent directors and the formation of an audit committee and remuneration committee on the supervisory board. MINCOMPL is defined as the minimum level of compliance and is the arithmetic sum of compliance with the best practice on the presence of two independent directors and the formation of audit committee on the supervisory board. SUBSTCOMPL refers to substantive, pragmatic compliance and is the arithmetic sum of compliance with the best practice on the presence of two independent directors with the information of board directors who are independent, the presence of an independent board chairman, and the formation of a separate audit committee and remuneration committee on the supervisory board. SUBSTCOMPL is a measure which depicts compliance in substance, rather than its declarative character. Formally, the amendments of the Accounting Act imposed the obligation to form an audit committee within the supervisory board. According to the act, in the case of supervisory board with the minimum legal size of 5 directors, the whole board can function as the committee. We include additional variables which depict (1) whether a company reports the existence of an audit committee within the board, (2) whether the whole board performs the function of the audit committee, and (3) whether a separate committee within the board is formed.

Finally, we use control variables on ownership structure, company size, and financial performance. We operationalize the variables on ownership structure, following prior studies (Thomsen and Pedersen 2000; Krivogorsky and Burton 2012). Specifically, we use ownership variables on concentration (the largest shareholder), in addition to the shareholders' stakes by selected types (financial, foreign, CEO, and government), to control for the impact of ownership on firm value. In both cases, we measure the potential effect of ownership concentration and shareholder identity, using the variable of the size of the stake owned (Krivogorsky and Burton 2012; Florackis et al. 2015). Finally, we use standard control variables covering the company size (assets and debt) and performance (ROA). The list of variables used in the analysis is provided in Table 2.

Table 2. Summary of variables.

Variable	Description	Type
	Regressand	
ln_Q	Natural logarithm of value of Tobin's Q (market value/book value)	Quantitative, real
	Regressors	
FORMALCOMPL	Formal compliance with best practice on the presence of two independent directors, and the formation of an audit committee and remuneration committee on the supervisory board	Quantitative, real
MINCOMPL	Minimal compliance with best practice on the presence of two independent directors, and the formation of an audit committee on the supervisory board	Quantitative, real

Table 2. *Cont.*

Variable	Description	Type
SUBSTCOMPL	Substantive compliance with best practice on the presence of two independent directors with the information who of board directors are independent the presence of an independent board chairman, and the formation of a separate audit committee and remuneration committee on the supervisory board	Quantitative, real
FILASHA_sq	Square root of percentage of company's shares held by the largest shareholder	Quantitative, real
INSTINV_sq	Square root of percentage of company's shares held by financial investors	Quantitative, real
INDUSTINV_sq	Square root of percentage of company's shares held by industry investors	Quantitative, real
CEOSHA	Percentage of company's shares held by the CEO	Quantitative, real
GOVSHA	Percentage of company's shares held by the government	Quantitative, real
ln_ASSETS	Natural logarithm of the value of assets (current prices, million PLN)	Quantitative, real
ADJ_ROA	Sector-adjusted and time-adjusted return of assets ratio (see note below)	Quantitative, real
DEBT	Debt (current prices, million PLN)	Quantitative, real
DEBT_ON_ASSETS	Debt versus assets	Quantitative, real

Note: The value of return of assets (ROA) variable is the value of the return of assets measure of a company, adjusted by the year of observation and the sector it operates in (Vintila et al. 2014). This measure is calculated with the use of the median value of ROA for each sector and year, as follows: $ADJ\ ROA_{it} = sign(ROA_{it} - median\ ROA_{SE,t}) \cdot \sqrt{|ROA_{it} - median\ ROA_{SE,t}|}$, $i = 1, \ldots, 155$; $t = 2006, \ldots, 2015$, where i—number of the company, $SE \in$ {Industry, Services, Construction, Financial}.

3.3. Descriptive Statistics

We transform some variables (as shown in Table 2) into square root or natural logarithm measures for the purpose of constructing econometric models which allow for economic interpretation. Below we report the process of variables transformation, presenting natural values of our variables (Tables 3–8). Table 3 reveals the distribution of our explained variable, Tobin's Q.

Table 3. Distribution of Tobin's Q—number of companies and untransformed variables.

Value	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
(0;1)	13	24	106	57	49	103	96	75	83	83
(1;2)	48	50	29	67	73	42	47	56	46	37
(2;3)	35	29	11	21	25	6	5	14	17	15
(3;4)	24	24	6	5	3	3	2	4	5	9
>4	35	28	3	5	5	1	5	6	4	11

As reported in Table 3, the distributions of Q are one-modal, yet since 2008, they reveal strong positive asymmetry, which means that, over the analyzed period, there are more years characterized with a low value of Q than a high one. A more balanced distribution of Q is revealed in the first year of the analyzed period, while since 2008, we depict the effects of the financial crisis peaking in 2011. Due to the asymmetric distribution, we analyze the median value of Q, as shown in Table 4.

Table 4. Mean value of Tobin's Q by sector and year, and untransformed variables.

Sector	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Median for industrial companies	2.1	2.0	0.7	1.1	1.4	0.7	0.8	1.2	0.9	0.85
Median for services companies	2.35	1.8	0.8	1.1	1.15	0.75	0.7	0.9	0.9	1.00
Median for construction companies	3.05	2.9	1.45	1.65	1.65	0.7	0.8	0.95	0.9	0.8
Median for financial companies	3.8	4.0	1.3	1.65	1.85	1.35	1.45	1.8	1.7	1.25
Median for all companies	2.5	2.0	0.7	1.2	1.4	0.7	0.8	1.0	0.9	0.9
Arithmetic mean for all companies	3.005	2.597	1.048	1.423	1.546	0.974	1.107	1.369	1.228	1.467

Table 4 reveals variations of Q in the specified sectors of operation. The maximum values of Q were noted in the initial years of the analyzed period, with a strong drop in 2008 and some recovery in 2010–2011, followed by a subsequent decline. The recovery of the median Q value in 2013 is mostly evident for industrial companies. Stagnation is observed for service and construction sectors until the end of the analyzed period. A similar trend is noted for companies operating in the financial sector, yet the values of Tobin's Q remain at the higher level. The differences between the median and arithmetic mean confirm the expectation of the positive asymmetry of Q.

Next, we investigate the variability of Tobin's Q over the analyzed period and across the years under consideration, using the standard deviation and average mean, as presented in Table 5.

Table 5. Variability of Tobin's Q, and untransformed variables.

Standard Deviation	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Overall					1.450					
Between	1.976	1.776	0.913	0.916	1.019	0.803	1.063	1.232	1.167	1.597
Between variation coefficient	0.658	0.684	0.871	0.644	0.659	0.824	0.960	0.900	0.950	1.089
Within					1.131					
Within variation coefficient	0.376	0.436	1.079	0.795	0.732	1.161	1.022	0.826	0.921	0.771

The between variation coefficient, which measures the variability of Tobin's Q, has risen since 2009, suggesting the variability of adaptability and capability to survive amongst listed companies. The within variation coefficient is calculated as the quotient within standard deviation, which remains stable across time, and the arithmetic mean of Tobin's Q for the given years (Table 4).

We test the variables used in the econometric analysis, employing the Shapiro–Wilk normality test (null hypothesis assumes normal distribution of variable) and the Harris–Tzavalis stationarity test for a balanced panel (null hypothesis assumes the variable has unit root). Tests are run for the untransformed variables. The results are given in Table 6.

Table 6. Shapiro–Wilk normality test and Harris–Tzavalis stationarity test for variables, and untransformed variables.

Variable	Shapiro–Wilk Test		Harris–Tzavalis Test	
	Critical Value	Prob > z	Critical Value	*p*-Value
Q	13.584	0	−17.101	0
FORMALCOMPL	8.449	0	−7.050	0
MINCOMPL	6.352	0	−6.482	0
SUBSTCOMPL	9.784	0	−7.448	0
FILASHA	9.294	0	−13.845	0
INSTINV	9.907	0	−8.602	0
INDUSTINV	9.685	0	−14.422	0
CEOSHA	14.573	0	−8.548	0
GOVSHA	13.670	0	−8.515	0
ASSETS	16.367	0	−9.385	0
ADJ_ROA	7.998	0	−21.974	0
DEBT_ON_ASSETS	12.692	0	−14.598	0

None of variables have normal distribution and reveal a stationary distribution over the analyzed period at every level of significance. While the absence of a normal distribution of variables may constitute challenges for econometric modeling, the stationary distribution does not hinder further analysis. Thus, using the logarithm or square root of selected variables before employing them as regressand or regressors means recognizing the non-linearity in the analyzed link between Tobin's

Q and selected company attributes. It does not serve as a solution to eliminating non-stationarity of variables. Table 7 presents descriptive statistics of variables used in econometric modeling.

Table 7. Descriptive statistics of variables, and untransformed variables.

Variable	Mean	Median	SD	Min	Max	Skewness	Kurtosis
Q	1.576	1.1	1.449	0	9.5	2.294	9.333
FORMALCOMPL	1.526	1.0	1.348	0	8	0.896	4.280
MINCOMPL	1.154	1.0	0.889	0	3	−0.052	1.730
SUBSTCOMPL	1.449	1.0	1.572	0	9	1.302	4.678
FILASHA	35.706	31.570	21.938	0	99.0	0.413	2.211
INSTINV	26.803	22.760	22.019	0	98.870	0.808	3.089
INDUSTINV	22.984	0	28.894	0	99.8	0.778	2.111
CEOSHA	4.426	0	11.213	0	77.500	3.303	14.826
GOVSHA	2.841	0	11.899	0	84.750	4.740	25.902
ASSETS	1997.9	138.4	7148.6	1.51	70,198.9	5.561	38.663
ADJ_ROA	−0.010	0	0.245	−1.220	0.890	−0.519	4.222
DEBT_ON_ASSETS	0.208	0.177	0.190	0	1.999	2.420	15.894

As shown in Table 7, variables are characterized by asymmetry and kurtosis. Only the distributions of MINCOMPL, FILASHA, INDUSTINV, and ADJ_ROA remain moderately asymmetric, while distributions of other variables are strongly asymmetric (FORMALCOMPL, SUBSTCOMPL, and INSTINV) or extremely asymmetric (Q, CEOSHA, GOVSHA, ASSETS, and DEBT_ON_ASSETS). The strong asymmetry present in the majority of variables may lead to lesser explanatory power of the estimated econometric models and may limit the ability to interpret kurtosis. In addition, the minimal value of Tobin's Q is zero, which was not transformed into a logarithm. However, a value of zero is present in only eight cases from 1550 observations, making it an acceptable number.

We analyze the distribution of compliance variables, specifically formal compliance, minimum compliance, and substantive compliance, as shown in Table 8.

Table 8. Distribution of compliance variables (formal, minimum, and substantive).

Year	FORMALCOMPL			MINCOMPL				SUBSTCOMPL		
	0	1–3	4–8	0	1	2	3	0	1–3	4–8
2006	134	21	0	134	14	6	1	133	18	4
2007	101	54	0	102	34	18	1	101	46	8
2008	63	90	2	64	51	37	3	71	70	14
2009	35	114	6	36	54	61	4	47	89	19
2010	25	122	8	27	51	72	5	36	100	19
2011	19	129	7	21	49	79	6	35	101	19
2012	18	130	7	21	46	82	6	32	103	20
2013	18	134	3	21	39	88	7	32	102	21
2014	17	131	7	20	45	84	6	32	103	30
2015	16	132	7	19	44	85	7	27	107	21

The data presented in Table 8 are indicative of a constant improvement in compliance by the sample companies in all the measured categories over the analyzed period. For each identified variable, the number of companies which do not comply with any code provisions drops significantly—from 133 or 134 firms in 2006 to 16–27 firms in 2015. Interestingly, the highest improvement is noted for the medium value of compliance—formal compliance between 1 and 3 increases from 21 companies in 2006 to 132 companies in 2015. The growth for the high value of compliance end is marginal—formal compliance between 4 and 8 is noted in 0 companies in 2006 and increases to 7 companies in 2015.

Using a Pearson linear correlation coefficient, we report the correlation coefficients of regressand and regressors in Table 9.

Table 9. Correlation coefficients of variables, regressand and regressors.

Variables	ln_Q	(1)	(2))	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Q (1)		1.00											
FORMALCOMPL (2)	−0.11	−0.13	1.00										
MINCOMPL (3)	−0.09	−0.10	0.71	1.00									
SUBSTCOMPL (4)	−0.06	−0.08	0.87	0.50	1.00								
FILASHA (5)		−0.09	0.13	0.19	0.16	1.00							
FILASHA_sq	−0.11	−0.12	0.16	0.21	0.18								
INSTINV (6)		0.02	0.03	0.10	0.03	−0.12	1.00						
INSTINV_sq	0.10	0.04	0.04	0.10	0.03	−0.12							
INDUSTINV (7)		−0.04	0.12	0.09	0.16	0.54	−0.16	1.00					
INDUSTINV_sq	−0.04	−0.06	0.12	0.09	0.16	0.46	−0.10						
CEOSHA (8)	−0.17	−0.09	0.11	0.05	0.07	0.04	−0.02	−0.21	1.00				
GOVSHA (9)	−0.04	−0.07	−0.01	0.01	0.03	0.19	−0.05	−0.04	−0.09	1.00			
ASSETS (10)		0.04	0.18	0.19	0.26	0.24	0.24	0.17	−0.09	0.26	1.00		
ln_ASSETS	−0.13	0.03	0.17	0.26	0.26	0.40	0.27	0.18	−0.13	0.37			
ADJ_ROA (11)	0.35	0.28	0.04	0.05	0.01	0.03	0.17	0.03	−0.03	0.03	0.13	1.00	
DEBT_ON_ASSETS (12)	−0.06	−0.05	0.06	0.01	0.05	0.08	−0.01	0.03	0.08	−0.05	0.04	−0.24	1.00

Table 9 presents the correlation matrix for both untransformed and transformed variables (with the use of logarithm and square root measures). In rows with two lines, the upper line represents the value of the untransformed variable, while the bottom line shows the value of transformed variables. The column "ln_Q" presents the coefficient of linear correlation between regressand and regressors. The correlation matrix illustrates the strength and directions of the analyzed relations between variables, similar to linear correlation. It shows the relations in which the value of a given variable increases or decreases by a stable unit in line with the value change of another variable within a given time (year).

With the non-linear relations, the Pearson linear correlation coefficient may incorrectly suggest a magnitude which may be stronger than initially anticipated. The statistical test indicates that all correlation coefficients higher than 0.04 may be viewed as statistically different from zero. As reported in Table 8, changes in ln_Q are correlated with ROA, assets, CEO ownership and ownership concentration. A weaker link is noted for compliance measures. With low correlation coefficients, we do not identify the multicollinearity problem.

3.4. Econometric Modeling

We test our hypotheses on the links between firm value and compliance with board best practice, with the use of the following econometric model:

$$Q = f\left(Compliance,\ FILASHA_{SQ},\ INSTIN_{SQ},\ INDUSTIN_{SQ},\ CEOSHA,\ GOVSHA,\ \ln_ASSETS,\ ADJ_ROA,\ DEBT_ON_ASSETS\right)$$

where *Compliance* is FORMALCOMPL, MINCOMPL, and SUBSTCOMPL.

We test the formulated hypotheses with the use of panel analysis (Cameron and Trivedi 2005, 2010). Constructing the econometric models, we address three main issues. Firstly, we consider the problem of heteroskedasticity with the parallel variability of random variables between units and time period, which requires the adoption of a method for estimating parameters robust enough for standard estimates errors. We acknowledge heteroskedasticity and calculate the values of robust errors with the use of a Wald test in all models. Secondly, we run a Hausman test to determine the type of the model to be constructed. For each model, the significance level equals zero, indicating a rejection of the null hypothesis and acceptance of the alternative hypothesis to choose the fixed effects model. Thus, we decide to run fixed effects for all A–C models, meaning that the individual effects which differentiate the reactions of the companies under analysis are represented by an intercept, which remains stable over time.

Considering the heteroskedasticity of the random variable we use a dedicated version of the Hausman test (rhausman test). Next, for A–C models, we employ an F-test to determine the statistical significance of the entire set of regressors. In each of the models, we reject the null hypothesis, suggesting that there is no variable that impacts the changes in the value of the regressand in the models. We also run the Shapiro–Wilk test, which assumes a normal distribution of the random variable. This hypothesis is rejected. Finally, to test for multicollinearity of regressors, we determine the variance inflation factor (VIF) for each regressor in a given model. A VIF below 2, as is revealed in the A–C models, eliminates multicollinearity. The VIF coefficients, overall and between, are close to zero, signifying that the A–C models only explain the time changes of Tobin's Q value. These tests support the supposition that the changes of each explanatory variable have a statistically significant impact on the value of explained variable.

The results of the tests and models under discussion are reported in Table 10.

Table 10. Estimation results for dependent ln_Q.

Regressors	Model A	Model AS (Std.)	Model B	Model BS (Std.)	Model BC	Model C	Model CS (Std.)
FORMALCOMPL [L1]	−0.089 (0.025) ***	−0.147 [1.349]					
SUBSTCOMPL [L1]			−0.082 (0.025) ***	−0.159 [1.572]			
dec_SUBSTCOMPL [L1]					−0.035 (0.026)		
MINCOMPL [L1]						−0.157 (0.033) ***	−0.171 [0.889]
INDNED [L1]					−0.129 (0.025) ***		
FILASHA_sq	−0.061 (0.024) **	−0.149 [1.980]	−0.063 (0.024) **	−0.153 [1.980]	−0.060 (0.025) **	−0.060 (0.024) **	−0.146 [1.980]
INSTINV_sq	−0.031 (0.017) *	−0.091 [2.467]	−0.031 (0.016) *	−0.096 [2.467]	−0.031 (0.020)	−0.028 (0.014) *	−0.087 [2.467]
INDUSTINV_sq	−0.035 (0.012) ***	−0.156 [3.614]	−0.037 (0.012) ***	−0.163 [3.614]	−0.036 (0.011) ***	−0.036 (0.011) ***	−0.161 [3.614]
CEOSHA	−0.014 (0.004) ***	−0.189 [11.213]	−0.014 (0.004) ***	−0.197 [11.213]	−0.014 (0.004) ***	0.013 (0.004) ***	−0.183 [11.213]
GOVSHA	−0.007 (0.003) **	−0.101 [11.899]	−0.007 (0.003) **	−0.100 [11.899]	−0.007 (0.003) **	−0.008 (0.003) **	−0.112 [11.899]
ln_ASSETS	−0.210 (0.096) **	−0.514 [1.991]	−0.209 (0.097) **	−0.512 [1.991]	−0.203 (0.098) **	−0.207 (0.096) **	−0.506 [1.991]
ADJ_ROA	0.759 (0.105) ***	0.229 [0.245]	0.751 (0.104) ***	0.226 [0.245]	0.742 (0.104) ***	0.759 (0.105) ***	0.228 [0.245]
DEBT_ON_ASSETS	0.350 (0.205) *	0.082 [0.190]	0.332 (0.204) *	0.077 [0.190]	0.341 (0.203) *	0.335 (0.202) *	0.083 [0.190]
INTERCEPT	1.898 (0.567) ***		1.908 (0.574) ***		1.908 (0.583) ***	1.916 (0.563) ***	
N (observations)	1387		1387		1387	1387	

Table 10. *Cont.*

Regressors	Model A	Model AS (Std.)	Model B	Model BS (Std.)	Model BC	Model C	Model CS (Std.)
n (companies)	155		155		155	155	
Max VIF	1.61		1.67		1.95	1.65	
R_sq within	0.172		0.170		0.181	0.183	
R_sq between	0.003		0.003		0.007	0.005	
R_sq overall	0.006		0.005		0.004	0.003	
F test	13.19		13.08		15.68	16.37	
Prob > F	0		0		0	0	
Shapiro–Wilk test z	11.81		11.84		5.16	11.80	
Prob > z	0		0		0	0	
Hausman chi^2 test	78.26		62.17		116.35	67.04	
Prob > chi^2	0		0		0	0	

Notes: The symbol of L1 by the regressor name indicates the variable value lagged by 1 year. The robust standard error for each coefficient in models A, B, and C is reported in parentheses; *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$, where the p-value is called the observed level of significance. The significance test for the coefficients is the t-statistics test. Models AS, BS, and CS are models estimated for standardized variables, with standard deviations for values of non-standardized variables presented in parentheses.

As shown in Table 10, for each A–C model, a given set of regressors differs only by one variable on compliance. We use a compliance variable lagged by 1 period (year) to examine the effect on the company market valuation after the publication of the conformity declaration and the information on compliance practice. The results indicate a negative correlation between compliance with board best practice and Tobin's Q. The negative association is noted for all three measures of compliance, i.e., formal compliance (FORMALCOMPL), minimum compliance (MINCOMPL), and substantive compliance (SUBSTCOMPL). This means that from the perspective of our hypotheses we find support for H1, which assumes a negative association between compliance with best practice code and firm value. We also find support for H2, as we observe a negative and statistically significant relation between the minimum level of compliance with code provisions and Q. Finally, for H3, our results reveal a negative relation between company value and SUBSTCOMPL, which measures the most substantive scope of compliance. Hence, we find support for H3, as well.

In addition, we tested A–C models for endogeneity. Based on prior studies, we identify ln_ASSETS as the potential endogeneity driver and we proceed as follows. We estimate fixed-effect models with the same set of regressors, using two approaches: the least-squares method (LS) and instrumental variables method (IV). In the latter model, we use the lagged value of ln_ASSETS as the instrument. We estimate both models for 2007–2015, in order to ensure full comparability. We use a Hausman test, comparing LS model (null hypothesis) with the IV model. The rejection of the null hypothesis would suggest selection of the IV model and would indicate that the ln_ASSETS variable may cause endogeneity problems. We find no reason to reject the null hypothesis, which implies that we should choose the LS model and that we do not note endogeneity issues. For models A–C, we do not reject the null hypothesis, so fixed effect models estimated with the use of the least squared method offer the most appropriate approach. Thus, there is no need to adopt instrumental variables, and the variable of ln_ASSETS does not cause an endogeneity problem. As a consequence, it follows that the use of other estimation methods is not appropriate.

We address the question concerning the changes in the values of regressors that have the strongest impact on changes in the regressand. For this purpose, we estimate the equivalents for the A–C models with standardized variables. The coefficients in models with standardized variables show how the regressand changes within its own standard deviation if the regressor values change by one standard deviation. Table 10 shows the values of standardized coefficients and values of standard deviation of regressors for models AS, BS, and CS in dedicated columns. Models estimated with standardized variables reveal that the signs of the regression parameters and the values of t-statistics of regression parameters do not change, so the statistical significance of the relations does not change

either. Other values of the statistical verification for our models remain stable, as well. The value of ln_Q ranges between −2.303 and 2.251, with the standard deviation equal to 0.815. It shows that ln_ASSETS and ADJ_ROAs have the strongest impact on a change in the regressand value, followed by CEOSHA, FILASHA, and compliance. DEBT_ON_ASSETS reveals the lowest impact on the change of ln_Q.

Finally, we run an additional BC model with the measure of decomposed substantive compliance (dec_SUBSTCOMPL). We observe that, in the A–C models, the variable for independent directors is the main explanatory component, since WSE-listed companies do not report numerous aspects included in the substantive compliance measure (e.g., independent chair, the identification of independent directors, and the formation of a separate audit committee). Thus, in the BC model for decomposed substantive compliance (dec_SUBSTCOMPL) we exclude the variable of INDNED from compliance. As presented in Table 10, for the BC model, the decomposed substantive compliance (dec_SUBSTCOMPL) remains statistically insignificant, while INDNED is statistically significant. While this approach offers a deeper insight into compliance practice, it has two limitations: Firstly, dec_UBSTCOMPL and INDNED are strongly correlated; secondly, neither are more strongly correlated with the variable ln_Q than SUBSTCOMPL. This means that introducing two variables instead of one measure, being the sum of the two variables, may increase parameter estimation error and consequently render the regressors statistically insignificant. Importantly, the decomposition of SUBSTCOMPL into INDNED and dec_UBSTCOMPL changed neither the signs of the estimated parameters of other regressors nor the statistical characteristics of the estimated models reported with the F test, Shapiro–Wilk test, and Hausman test.

3.5. Robustness Tests

We run robustness tests to check the stability of our models. For this purpose, we construct models with an additional control variable—board size (BOARDSIZE)—which represents the number of non-executive directors on the supervisory board. The results for the three models, AR, BR, and CR, are presented in Table 11.

Table 11. Estimation results of robustness tests.

Regressors	Model AR	Model BR	Model CR
FORMALCOMPL [L1]	−0.089 (0.025) ***		
SUBSTCOMPL [L1]		−0.083 (0.025) ***	
MINCOMPL [L1]			−0.157 (0.033) ***
FILASHA_sq	−0.060 (0.024) **	−0.062 (0.024) **	−0.060 (0.024) **
INSTINV_sq	−0.031 (0.020)	−0.032 (0.020) *	−0.029 (0.020) *
INDUSTINV_sq	−0.036 (0.012) ***	−0.037 (0.012) ***	−0.036 (0.011) ***
CEOSHA	−0.013 (0.003) ***	−0.014 (0.003) ***	0.013 (0.004) ***

Table 11. *Cont.*

Regressors	Model AR	Model BR	Model CR
GOVSHA	−0.007 (0.003) **	−0.007 (0.003) **	−0.008 (0.003) **
ln_ASSETS	−0.211 (0.096) **	−0.210 (0.097) **	−0.208 (0.096) **
DEBT_ON_ASSETS	0.350 (0.205) *	0.333 (0.206) **	0.3569 (0.202) **
ADJ_ROA	0.761 (0.106) ***	0.753 (0.104) *	0.761 (0.104) *
BOARDSIZE	0.015 (0.025)	0.014 (0.025)	0.017 (0.025)
INTERCEPT	1.808 (0.554) ***	1.821 (0.562) ***	1.815 (0.552) ***
N (observations)	1387	1387	1387
n (companies)	155	155	155
Max VIF	2.49	2.51	2.53
R_sq within R_sq between R_sq overall	0.172 0.002 0.007	0.171 0.003 0.006	0.183 0.005 0.006
F test Prob > F	11.96 0	11.85 0	14.76 0
Shapiro–Wilk test z Prob > z	5.120 0	5.060 0	5.220 0
Hausman chi2 test Prob > chi2	106.390 0	97.790 0	79.090 0

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

As shown in Table 11, the variable of board size does not change the stability of our models. All parameter signs and statistical significances remain stable.

4. Discussion

The objective of this article was to provide an empirical verification of the relationship between corporate governance compliance and company value. With the application of the framework offered by agency theory (Jensen and Meckling 1976; Fama and Jensen 1983), the study tests the main assumption that greater compliance has a positive effect on the market valuation of complying companies. Codes of corporate governance best practice are based on fundamental principles of justice, fairness, and equality (Zattoni and Cuomo 2008) and recommend conformity with a set of provisions of board work, practices of executive compensation, policies of risk management, and standards of transparency (Aguilera et al. 2015). Along with the criticism of a one-size-fits-all approach with national adjustments, codes of best practice reveal conditions in which participants of a community reach a mutual understanding. The concept of flexibility and a voluntary approach to codes of best practice provide space for a dialog to reach consent, in which certain norms and behavior are seen as right or wrong. According to the comply-or-explain rule (Tan 2018), companies are obliged to report

their scope of conformity, which facilitates understanding of both the determinants and performance effects of compliance.

Prior studies indicate the positive effect of compliance related to enhanced investor trust, lower capital cost, and reduced information asymmetry, and they reveal a positive relation between corporate governance conformity and company performance and value (Mazotta and Veltri 2014; Rose 2016; Kaspereit et al. 2017). However, some researchers argue that the impact of corporate governance codes and compliance may be limited in different institutional settings, in particular in the context of concentrated ownership, insufficient investor protection, and emerging governance (Sobhan 2016; Okhmatovskiy 2017). The main focus of corporate governance codes is devoted to solving principal–agent conflicts between shareholders and managers, rather than giving sufficient attention to principal–principal conflicts between majority and minority shareholders (Chen et al. 2011). Thus, in countries of concentrated ownership and emerging governance, the code provisions and compliance with best practice may not result in a higher performance effect (Gherghina 2015) or may even be detrimental to company value (when regarded merely as an extra cost) or fail to elicit investor trust.

We tested the hypotheses of the relationship between compliance and company value compliance, using a unique sample of conformity with board best practice by 155 companies listed on the Warsaw Stock Exchange over a 10-year period. Specifically, we assume that formal compliance with board best practice is negatively associated with firm value (H1) and a that minimum compliance with board best practice is negatively associated with firm value (H2). We hypothesize that investors do not appreciate substantive compliance either and that conformity with board best practice is negatively associated with firm value (H3).

The results of the panel analysis provide support for hypotheses H1 and H2, showing a negative association between formal compliance and firm value and minimum compliance and firm value. In line with our assumption in H3, we obtain partial support for the negative association between substantive compliance and Q. The negative correlation between company value and compliance remains statistically significant for the general measure of substantive compliance (SUBSTCOMPL) and statistically insignificant for decomposed substantive compliance (dec_SUBSTCOMPL), for which we exclude the variable on independent directors (INDNED). We interpret these findings as evidence for a mismatch between code provisions and corporate governance challenges, relating to concentrated ownership and principal–principal conflicts (Chen et al. 2011). Consistent with findings by Bhagat and Black (2002), we do not observe a positive market valuation effect for complying companies. Investors appear not to find compliance with board best practice a convincing solution to possible tensions between majority and minority shareholders (Healy and Palepu 2001; Goncharov et al. 2006), questioning the efficient implementation of board guidelines (Martin 2010).

5. Conclusions

The goal of this study was to test for the link between compliance and company value in a specific context of concentrated ownership and post-transition corporate governance. The results show a negative correlation between compliance with the code provisions on board practice and company value, as measured by Tobin's Q, suggesting that investors do not find the adoption of board practice a plausible solution for the principal–principal conflict in an environment of concentrated ownership.

The study adds to the debate on corporate governance compliance, in general, and its effects on market valuation in emerging and post-transition countries, in particular. For practitioners and policymakers, the results of our analysis deliver important insights into the limitations of code provisions, which are transmitted across countries with differing institutional environments and ownership structures, and results in different agency problems.

We acknowledge the limitations of our research—we focused on board best practice and in one country. Further research should address a wide scope of code provisions and cover a larger sample of companies from different economies. Adding variables to cover the institutional environment, such as

measures of investor protection or rule of law, would aid in understanding the effect of the regulatory context on the efficiency of corporate governance provisions.

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References

Adelstein, Jennifer, and Steward Clegg. 2016. Code of ethics: A stratified vehicle for compliance. *Journal of Business Ethics* 138: 53–66. [CrossRef]

Aguilera, Ruth, and Alvaro Cuervo-Cazura. 2004. Codes of good governance worldwide: What is the trigger? *Organization Studies* 25: 415–43. [CrossRef]

Aguilera, Ruth, Alvaro Cuervo-Cazura, and Soyoung Kim. 2009. Taking stock of research on codes of good governance. In *Codes of Good Governance Worldwide*. Edited by Felix J. Lopez Iturriaga. New York: Nova Science Publishers Inc., pp. 3–32.

Aguilera, Ruth, Kurt Desender, Michael Bednar, and Jun Ho Lee. 2015. Connecting the dots—Bringing external corporate governance into the corporate governance puzzle. *The Academy of Management Annals* 9: 483–573. [CrossRef]

Albu, Cătălin, and Maria Girbina. 2015. Compliance with corporate governance codes in emerging economies. How do Romanian listed companies "comply-or-explain". *Corporate Governance* 15: 85–107. [CrossRef]

Aman, Hiroyuki, and Pascal Nguyen. 2007. Do stock prices reflect the corporate governance quality of Japanese firms? *Journal of the Japanese and International Economies* 22: 647–62. [CrossRef]

Andres, Christian, and Erik Theissen. 2008. Setting a Fox to keep the geese—Does the comply-or-explain principle work? *Journal of Corporate Finance* 14: 289–301. [CrossRef]

Arcot, Sridhar, Valentina Bruno, and Antoine Faure-Grimaud. 2010. Corporate governance in the UK: Is the comply or explain approach working. *International Review of Law and Economics* 30: 193–201. [CrossRef]

Bauer, Rob, Nadja Gunster, and Rogér Otten. 2004. Empirical evidence on corporate governance in Europe: The effect on stock returns, firm value and performance. *Journal of Asset Management* 5: 91–104. [CrossRef]

Bennedsen, Morten, and Kasper Nielsen. 2010. Incentive and entrenchment effects in European ownership. *Journal of Banking and Finance* 34: 2212–29. [CrossRef]

Berglöf, Erik, and Stijn Claessens. 2006. Enforcement and good corporate governance in developing countries and transition economies. *World Bank Research Observer* 21: 123–50. [CrossRef]

Bhagat, Sanjai, and Bernard Black. 2002. The non-correlation between board independence and long term firm performance. *Journal of Corporation Law* 27: 231–74. [CrossRef]

Bhagat, Sanjai, and Brian Bolton. 2008. Corporate governance and firm performance. *Journal of Corporate Finance* 14: 257–73. [CrossRef]

Bistrowa, Julia, and Natalja Lace. 2012. Corporate governance best practice and stock performance: Case of CEE Companies. *Systemics, Cybernetics and Informatics* 10: 63–69.

Black, Bernard, Hasung Jang, and Woochan Kim. 2006. Does corporate governance predict firms' market value. Evidence from Korea. *Journal of Law, Economics and Organization* 22: 366–413. [CrossRef]

Cameron, A. Collin, and Pravin Trivedi. 2005. *Microeconometrics. Methods and Applications*. Cambridge: Cambridge University Press.

Cameron, A. Collin, and Pravin Trivedi. 2010. *Microeconometrics Using STATA*. Revised Edition. College Station: Stata Press.

Chang, Allan. 2018. Analysis on corporate governance compliance standards in New Zealand—A qualitative study on disclosures using content analysis and interviews. *Journal of Financial Regulation and Compliance* 26: 505–25. [CrossRef]

Chen, Victor Zitian, Jing Li, and Daniel Shapiro. 2011. Are OECD-prescribed "good corporate governance practices" really good in an emerging economy? *Asia Pacific Journal of Management* 28: 115–38. [CrossRef]

Chizema, Amon. 2008. Institutions and voluntary compliance: The disclosure of individual executive pay in Germany. *Corporate Governance* 16: 359–74. [CrossRef]

Cicon, James, Stephen Ferris, Armin Kammel, and Gregory Noronha. 2012. European corporate governance: A thematic analysis of national codes of governance. *European Financial Management* 18: 620–48. [CrossRef]
Coffee, John. 1999. Privatization and corporate governance: The lessons from securities market failure. *Journal of Corporation Law* 25: 1–39. [CrossRef]
Cuervo, Alvaro. 2002. Corporate governance mechanisms: A plea for less code of good governance and more market control. *Corporate Governance* 10: 84–93. [CrossRef]
Cuomo, Francesca, Christine Mallin, and Alessandro Zattoni. 2016. Corporate governance codes: A review and research agenda. *Corporate Governance: An International Review* 24: 222–41. [CrossRef]
Deephouse, David. 1996. Does isomorphism legitimate? *Academy of Management Journal* 39: 1024–39. [CrossRef]
Drobetz, Wolfgand, Andreas Shillhofer, and Heinz Zimmermann. 2003. Corporate governance and expected stock returns: Evidence from Germany. *European Financial Management* 10: 267–93. [CrossRef]
Durnev, Artyom, and E. Han Kim. 2005. To steal or not to steal: Firm attributes, legal environment and valuation. *Journal of Finance* 60: 1461–93. [CrossRef]
Easterbrook, Frank, and Daniel Fischel. 1996. *The Economic Structure of Corporate Law*. Cambridge: Harvard University Press.
Edmans, Alex. 2014. Blockholders and corporate governance. *Annual Review of Financial Economics* 6: 23–50. [CrossRef]
Elgharbawy, Adel, and Magdy Abdel-Kader. 2016. Does compliance with corporate governance hinder corporate entrepreneurship? *Corporate Governance* 16: 765–84. [CrossRef]
Fama, Eugene, and Michael Jensen. 1983. Separation of ownership and control. *Journal of Law and Economics* 26: 301–25. [CrossRef]
Ferrarini, Guido, and Marilena Filippelli. 2013. Independent directors and controlling shareholders around the world. Orizzonti del Diritto Commerciale. *Rivista Telematica*, 1–31. Available online: http://orizzontideldirittocommerciale.it/media/24835/ferrarini_-_filippelli_independent_directors.pdf (accessed on 13 October 2020).
Florackis, Chris, Angelos Kanas, and Alexandros Kostakis. 2015. Dividend policy, managerial ownership and debt financing: A non-parametric perspective. *European Journal of Operational Research* 214: 783–95. [CrossRef]
Fotaki, Maria, Spyros Lioukas, and Irini Voudouris. 2019. Ethics is destiny: Organizational values and compliance in corporate governance. *Journal of Business Ethics*. [CrossRef]
Gaur, Sanjaya, Hanoku Bathula, and Deeksha Singh. 2015. Ownership concentration, board characteristics and firm performance: A contingency framework. *Management Decision* 53: 911–31. [CrossRef]
Gherghina, Ştefan. 2015. Corporate Governance Ratings and Firm Value: Empirical Evidence from the Bucharest Stock Exchange. *International Journal of Economics and Financial Issues* 5: 97–110.
Gilson, Ronald J., and Alan Schwartz. 2013. Contracting about Private Benefits of Control. Columbia Law and Economics Research Paper No. 436. Available online: https://law.stanford.edu/wp-content/uploads/sites/default/files/publication/359494/doc/slspublic/ssrn-id2182781.pdf (accessed on 13 October 2020).
Gompers, Paul, Ishii Joy, and Andrew Metrick. 2003. Corporate governance and equity prices. *Quarterly Journal of Financial Economics* 118: 107–55.
Goncharov, Igor, Joerg Werner, and Jochen Zimmermann. 2006. Does compliance with the German corporate governance code have an impact on stock valuation? An empirical analysis. *Corporate Governance* 14: 432–45. [CrossRef]
Guler, Isin, Mark Guillén, and John MacPherson. 2002. Global competition, institutions and the diffusion of organizational practices: The international spread of ISO quality certificates. *Administrative Science Quarterly* 47: 207–32. [CrossRef]
Hamadi, Malika, and Andréas Heinen. 2015. Firm performance when ownership is very concentrated: Evidence from a semiparametric panel. *Journal of Empirical Finance* 34: 172–94. [CrossRef]
Healy, Paul, and Krishna Palepu. 2001. Information asymmetry, corporate disclosure and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31: 405–40. [CrossRef]
Hermalin, Benjamin, and Michael Weisbach. 2003. Boards of directors as an endogenously determined institutions: A Survey of economic literature. *Economic Policy Review* 9: 7–26.
Hermes, Niels, Theo Postma, and Orestis Zivkov. 2007. Corporate governance codes and their contents: An analysis of Eastern European codes. *Journal for East European Management Studies* 12: 53–74. [CrossRef]

Hooghiemstra, Reggy, and Hans van Ees. 2011. Uniformity as response to soft law: Evidenced from compliance and non-compliance with the Dutch corporate governance code. *Regulation and Governance* 5: 480–98. [CrossRef]

Huu Nguyen, Anh, Duong Thuy Doan, and Linh Ha Nguyen. 2020. Corporate governance and agency cost: Empirical evidence from Vietnam. *Journal of Risk and Financial Management* 13: 103. [CrossRef]

Jensen, Michael, and William Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3: 305–60. [CrossRef]

Kaspereit, Thomas, Kerstin Lopatta, and Dennis Onnen. 2017. Shareholder value implications of compliance with the German corporate governance code. *Managerial and Decision Economics* 38: 166–77. [CrossRef]

Khan, Haroon ur Rashid, Waqas Bin Khidmat, Osama Al Hares, Naeem Muhammad, and Kashif Saleem. 2020. Corporate governance quality, ownership structure, agency costs and firm performance. Evidence from an emerging economy. *Journal of Risk and Financial Management* 13: 154. [CrossRef]

Kim, Ji Youn, Jooyoung Kwak, and Keun Lee. 2015. Estimating Tobin's Q for listed firms in Korea (1980–2005): Comparing alternative approaches and an experiment with investment functions. *Seoul Journal of Economics* 28: 1–30.

Krenn, Mario. 2015. Understanding decoupling in response to corporate governance reform pressures. The case of codes of good governance. *Journal of Financial Regulation* 23: 369–82. [CrossRef]

Krivogorsky, Victoria, and Greg Burton. 2012. Dominant owners and performance of continental European firms. *Journal of International Accounting Research* 11: 191–221. [CrossRef]

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 1999. Corporate ownership around the world. *Journal of Finance* 54: 471–517. [CrossRef]

Lipman, Frederick. 2007. Summary of major corporate governance principles and best practices. *International Journal of Disclosure and Governance* 4: 309–19. [CrossRef]

Loyola, Gino, and Yolanda Portila. 2019. Optimal ownership structure and monitoring in entrepreneurial firms. *Finance Research Letters*. [CrossRef]

Mahadeo, Jyoti Devi, and Teerooven Soobaroyen. 2016. A longitudinal study of the implementation of the corporate governance code in a developing country: The case of Mauritius. *Business and Society* 55: 738–77. [CrossRef]

Mallin, Christine. 2004. *Corporate Governance*. Oxford: Oxford University Press.

Martin, Roderick. 2010. Transferring corporate governance: Form or substance? Corporate governance in Hungary. *Europe-Asia Studies* 62: 145–71. [CrossRef]

Mazotta, Romilda, and Stefania Veltri. 2014. The relationship between corporate governance and the cost of equity capital. Evidence from the Italian stock exchange. *Journal of Management and Governance* 18: 418–48. [CrossRef]

Mizruchi, Mark, and Lisa Fein. 1999. The Social construct of organizational knowledge: A study of the uses of coercive, mimetic and normative isomorphism. *Administrative Science Quarterly* 44: 653–83. [CrossRef]

OECD. 2015. G20/OECD Principles of Corporate Governance. Available online: http://www.oecd.org/daf/ca/Corporate-Governance-Principles-ENG.pdf (accessed on 9 January 2019).

Okhmatovskiy, Ilya, and Robert David. 2012. Setting your own standards: Internal corporate governance codes as a response to institutional pressure. *Organization Science* 23: 155–76. [CrossRef]

Okhmatovskiy, Ilya. 2017. Self-regulation of corporate governance in Russian firms: Translating the national standard into internal policies. *Journal of Management and Governance* 21: 499–532. [CrossRef]

Outa, Erik, and Nelson Waweru. 2016. Corporate governance guidelines compliance and firm financial performance. Kenya listed companies. *Managerial Auditing Journal* 31: 891–914. [CrossRef]

Perezts, Mar, and Sébastien Picard. 2015. Compliance or comfort zone? The work of embedded ethics in performing regulation. *Journal of Business Ethics* 131: 833–52. [CrossRef]

Pritchett, Marshal. 1983. Corporate ethics and corporate governance: A critique of the ALI Statement on corporate governance section 2.01(b). *California Law Review* 71: 994–1011. [CrossRef]

Renders, Annelies, Ann Gaeremynck, and Piet Sercu. 2010. Corporate-governance ratings and company performance: A cross-European study. *Corporate Governance: An International Review* 18: 87–106. [CrossRef]

Rose, Casper. 2016. Firm performance and comply or explain disclosure in corporate governance. *European Management Journal* 34: 202–22. [CrossRef]

Roy, Amitava, and Ananda M. Pay. 2017. Corporate governance compliance, governance structures and firm performance. *Indian Accounting Review* 21: 31–50. [CrossRef]

Sarhan, Ahmed, and Collins Ntim. 2018. Firm- and country-level antecedents of corporate governance compliance and disclosure in MENA countries. *Managerial Auditing Journal* 33: 558–85. [CrossRef]

Seidl, David, Paul Sanderson, and John Roberts. 2013. Applying the 'comply-or-explain' principle: Discursive legitimacy tactics with regards to codes of governance. *Journal of Management and Governance* 17: 791–826. [CrossRef]

Shleifer, Andrei, and Robert Vishny. 1997. A survey of corporate governance. *Journal of Finance* 52: 737–83. [CrossRef]

Shrives, Philip J., and Niamh M. Brennan. 2015. A typology for exploring the quality of explanations for non-compliance with UK corporate governance regulations. *The British Accounting Review* 47: 85–99. [CrossRef]

Sobhan, Abdus. 2016. Where institutional logics of corporate governance collide: Overstatement of compliance in a developing country, Bangladesh. *Corporate Governance: An International Review* 24: 599–618. [CrossRef]

Stiglbauer, Markus, and Patrick Velte. 2014. Impact of soft law regulation by corporate governance code on firm valuation: The case of Germany. *Corporate Governance* 14: 395–406. [CrossRef]

Su, Yiyi, Dean Xu, and Phillip Phan. 2008. Principal-principal conflict in the governance of the Chinese public corporation. *Management and Organization Review* 4: 17–38. [CrossRef]

Tan, Zhiyuan. 2018. Textual construction of comparative space: How analyst corporate governance reports redefine and create "best practice". *Accounting, Auditing & Accountability Journal* 31: 1794–827.

Thomsen, Steen, and Torben Pedersen. 2000. Ownership structure and economic performance in the largest European companies. *Strategic Management Journal* 21: 689–705. [CrossRef]

Tricker, Bob. 2012. *Corporate Governance. Principles, Policies and Practices*. Oxford: Oxford University Press.

Vintila, Goergeta, Ştefan Gherghina, and Mihai Nedelescu. 2014. The effects of ownership concentration and origin on listed firms' value. Empirical evidence from Romania. *Romanian Journal of Economic Forecasting* 17: 51–71.

Wang, Kun, and Greg Shailer. 2015. Ownership concentration and firm performance in emerging markets: A meta-analysis. *Journal of Economic Surveys* 29: 199–229. [CrossRef]

Williamson, Oliver. 1981. The economics of organization: The transaction cost approach. *American Journal of Sociology* 87: 548–77. [CrossRef]

Zattoni, Alessandro, and Francesca Cuomo. 2008. Why adopt codes of good governance? A comparison of institutional and efficiency perspective. *Corporate Governance* 16: 1–15. [CrossRef]

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