

**Quality of non-compliance explanations related to
corporate governance codes**

Compliance with Corporate Governance Codes: differences between
the Netherlands and Germany

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Abstract

This research takes a closer look at compliance to corporate governance codes in the Netherlands and in Germany. Compliance is measured by the number of deviations from the corporate governance code, and also by how well these deviations are explained. This research finds that explanations are not of the level that the corporate governance code demands. With respect to the number of deviations, this research finds that shareholders seem to care more for comply-or-perform than for comply-or-explain. Furthermore, it is found that the presence of more women on the supervisory board plays a significant role in increasing compliance, whereas bigger supervisory boards are found to decrease a firm's compliance. A striking finding is that the executive board seems to play no role in determining compliance. Many differences between the Netherlands and Germany can be explained by making a distinction between the market-based funding in the Netherlands, and the bank-based funding in Germany, which has far reaching consequences for the corporate governance and its functioning in the two different countries. Lastly, it is found that the German corporate governance code is less efficient, because it is oriented towards market-oriented governance mechanisms, which only play a minor role in Germany.

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1. Introduction

The financial crisis and several accounting scandals have demonstrated that corporate governance mechanisms are not effective enough in ensuring accounting quality. One of these corporate governance mechanisms that is an important tool in increasing accounting quality are corporate governance codes, which describe what is considered to be best-practice. To allow for flexibility, and to avoid subjugating very diverse firms to the same set of rules, firms are allowed to deviate from the practices that are described in the corporate governance code. However, when a firm decides to deviate from the corporate governance code, it is mandatory for the firm to provide an explanation as to why the alternative practice is deemed more appropriate than the one described in the code, a principle that is referred to as the comply-or-explain principle. Corporate governance codes and non-compliance explanations are a fairly new area of research, and as a consequence, a lot still remains unclear. What other literature mainly researches are the factors that (1) cause non-compliance, and that (2) influence the quality of non-compliance explanations, which is measured in terms of informativeness. To take a new angle on this area of research, this paper examines the differences between the Netherlands and Germany, which, to the best of my knowledge, has not been done before. The aim of this paper is to discover whether these two countries show different outcomes in non-compliance, and the subsequent explanations of deviations. Therefore, the research question that this paper aims to answer is: “What are the differences in the degree of non-compliance, and the quality of non-compliance explanations, related to corporate governance codes between the Netherlands and Germany, and which factors are responsible for producing these differences?”

1.1. Practical relevance

This research could prove itself to yield important insights for various different groups. First, the insights could be important to regulators and standard-setters, as it opens up the debate about compliance, and whether (more) regulation is needed when it comes to firms that have to explain why they do not comply to corporate governance codes. Previous research (Hooghiemstra, 2012; Hooghiemstra & Van Ees, 2011) indicates that firms do not provide explanations of a sufficiently high level, i.e. firms do not present firm-specific reasons as to why another practice is preferred over the one that is described in the corporate governance code. Second, this research makes shareholders aware of the fact that not every non-compliance

explanation that a firm gives in its financial report, has to be accepted without further thought; not all deviations from the corporate governance code are always motivated well enough, even though the comply-or-explain principle requires specific explanations for each deviation. Moreover, this research could make shareholders aware of the fact that there is indeed a difference between the amount of information that firms provide in their financial reports, and the level of information that should be provided.

1.2. Scientific relevance and contribution

The area of non-compliance explanations related to corporate governance codes is a fairly unresearched area (Hooghiemstra, 2012). This paper adds to the knowledge of which factors play a role in the compliance decision, and also in the way that they influence the degree of informativeness of explanations in the non-comply case. Furthermore, an even smaller number of studies actually compared compliance across different countries. To the best of my knowledge, there is currently no study that analyzes differences between the Netherlands and Germany, but there have been studies that analyzed for example Central and Eastern European countries (Berglöf & Pajuste, 2005). When it comes to comparing Northern/Western-European countries the study by Akkermans et al. (2007) is one of the first studies to compare the United Kingdom and Germany. Comparing the Netherlands and Germany has the advantage of decreasing any cultural or regulatory differences further, as the Netherlands and Germany can be said to be quite similar (CPB, 1997).

1.3. Structure

The remainder of this paper is structured as follows. The second chapter focuses on existing literature. It is scrutinized how corporate governance codes emerged in the Netherlands and Germany, as well as in general. Further, the comply-or-explain principle is explained, and also what factors have already been identified as having an influence on the level of informativeness of non-compliance explanations. At the end of this chapter, hypotheses are formulated. The third chapter describes the research design, and the sample, and the variables are operationalized in this chapter. The fourth chapter describes the results of this research. In the fifth chapter, these results are discussed, and compared to previous research. Furthermore, the results are explained using previous research. Finally, in chapter six, conclusions are made, the limitations of this research are discussed, and directions for further research are indicated.

2. Literature Review

This chapter analyzes the current state of the literature. First, the Netherlands and Germany are compared to each other, in terms of their law systems, the developments of their corporate governance codes, and their corporate governance devices. Then, literature about the comply-or-explain principle is analyzed, and a brief history of this principle is provided. Then, it is analyzed what factors have been identified as having an influence on the compliance decision, and on the informativeness of non-compliance explanations. At the end of this chapter, hypotheses are formulated.

2.1. The Netherlands versus Germany

From the Dutch point of view, Germany often takes on the role of peer group (CPB, 1997). Many factors, such as GDP per capita, are roughly of the same level (World Bank, n.d.), making it fairly easy to compare both countries to each other, which is, as a result, done many times in literature. This section analyzes the law traditions of both countries, since these have important consequences for shareholder protection, and ownership structure in a country.

A similarity between the Netherlands and Germany is that they are both classified as countries with a civil law system (Francis, Khurana, & Pereira, 2003). There are two broad systems of law that a country can be classified under; the common law system, and the civil law system. In a common law system, rules are said to be uncodified, which means that not every situation is described by comprehensive legislation; legislative decisions are rather based on so-called precedent: decisions that were made in similar situations (University of California at Berkeley, n.d.). On the other hand, civil law systems have detailed, comprehensive and continuously updated legal codes. Here, the rules are codified, and there is no room for interpretation or precedent; facts are what matters (University of California at Berkeley, n.d.). Furthermore, a distinction is made between three different systems of civil law: German civil law (Germany), French civil law (the Netherlands), and Scandinavian civil law (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997, 2000). The differences between these systems are marginal, with literature mainly focusing on differences in emergence of these systems; it is said that the French system played a role in the emergence of the German civil law tradition (Tetley, 1999). The main difference between French and German civil law is that the German “terminology is more academic and technical and its rules more precise than those of the French Code” (Tetley, 1999, p. 688).

For this research, the most important characteristic of a civil law system is that shareholder protection is generally low (Baums & Scott, 2005; Demirgüç-Kunt & Maksimovic, 2002). The importance of (legal) shareholder protection is that it “affects the ease with which the manager, possibly in collusion with the large shareholders, can divert corporate resources (Burkart & Panunzi, 2006, p. 2). Common law systems tend to have the highest shareholder protection, French civil law systems tend to have the lowest shareholder protection, and German and Scandinavian civil law systems fall in between these two extremes (La Porta et al., 1997, 2000). The level of shareholder protection has consequences for shareholder structure in a country; when shareholder protection is low, shareholdings tend to be concentrated, i.e. shareholders hold a large amount of shares of a company, with the purpose of protecting themselves against expropriation by other shareholders (Goergen & Renneboog, 2003). The presence of large shareholders could form dangers for smaller shareholders, for example the fact that “large share- or stakeholders and managers may collude to keep minority shareholders at bay” (Hellwig, as cited in Lehmann & Weigand, 2000), or because large shareholders have the ability to steer the company in a direction that is favored by him or her, but which might not be in the company’s best interests (Burkart & Panunzi, 2006).

2.2. Corporate governance in the Netherlands and Germany; the development of codes

In both the Netherlands and Germany, high levels of conformity to the corporate governance codes are reported, and an increasing trend of compliance is observed, and this trend is expected to continue in the future (Akkermans et al., 2007; Arcot & Bruno, 2006; Lopez Iturriaga, 2009; Werder, Talaulicar & Kolat, 2005). Moreover, both codes value flexibility, and hence, both the Dutch and German codes maintain the comply-or-explain principle. However, despite the Netherlands and Germany being next to each other geographically, the emergence and development of a corporate governance code in each country was a different process. In the Netherlands, the development of a corporate governance code started with the Peters Committee (named after its chairman) in 1997 (Akkermans et al., 2007). Several recommendations for firms were made, which would increase “the effectiveness of management, supervision and accountability to investors in Dutch corporations” (De Jong, DeJong, Mertens, & Wasley, 2005, p. 3) However, it turned out that the responsibility that came with the code’s self-regulating character was too much to handle for Dutch companies: compliance seemed to be rather formal than anything else (Akkermans et al., 2007; De Jong et al., 2005; De Jong & Roosenboom, 2002), allegedly because “the Peters report contained no

legislation threats and the Minister of Finance made no public statements regarding non-compliance with reporting requirement or the recommendations” (De Jong et al., 2005, p. 3). In 2003, the Peters committee was replaced by the Tabaksblat Committee, after it became clear that the Peters Committee was not effective enough at establishing rules for good corporate governance; firms did not restructure themselves to adhere to the corporate governance code (De Jong, DeJong, Mertens, & Wasley, 2005). The code that was established by the Tabaksblat Committee, the Code Tabaksblat, discusses 21 principles which are considered to be “best-practice” in each of the following areas: (1) compliance with and enforcement of the code, (2) the management board, (3) the supervisory board, (4) provision of information to and logistics of the general meeting of shareholders, and (5) financial reporting (Corporate Governance Committee, 2003). Instead of relying on self-regulation, it was now obligatory for companies to adhere to the corporate governance code, and report on it using the comply-or-explain principle (Akkermans et al., 2009).

Germany was relatively late with developing a corporate governance code, because German companies were largely reliant on retained earnings and loans, instead of shares as a source of funding (Cromme, 2005). In its report in 2001, the Baums commission recommended that a corporate governance code be developed, so as to “promote the necessary corporate governance reform” (Baums, as cited in Rott, 2009, p. 188). Regulation was very much oriented towards creditors: “[t]he effect was reinforced by a stock corporation law strongly oriented towards the protection of creditors, while stockholders were rather neglected as providers of capital.” (Cromme, 2005, p. 362). In the 1990s, corporate funding went to the background, as privatization made banks and governments withdraw from corporate funding. Germany was not a very attractive country for foreign investors, due to the underdeveloped (but not absent) corporate governance rules. In time, this led to an increased attention on developing corporate governance rules, with the objective of making Germany more attractive for foreign investors. Nevertheless, Germany is still considered to be a bank-based economy nowadays (Demirgüç-Kunt & Maksimovic, 2002). In 1996, a law referred to as KonTraG was introduced, which was centered around control and transparency in business, which covered corporate governance items such as risk management and increasing the supervisory board’s rights (Cromme, 2005). This is said to be the first time in Germany that corporate governance was included in legislation (Cromme, 2005). However, it would not be until 2002 that the German corporate governance code was developed (Rott, 2009). Central to the German corporate governance code (to this day) is that it has to “boost confidence in the management of German companies” (Cromme,

2005, p. 364). The key principles of the German Code are centered around: (1) shareholders and the general meeting, (2) Cooperation between management board and supervisory board, (3) management board, (4) supervisory board, (5) transparency, and (6) reporting and audit of the annual financial statements (Government Commission German Corporate Governance Code, 2002).

2.3. Corporate governance devices; the market, or the bank?

A big difference between the Netherlands and Germany is that both countries rely on different sources of funding, which implies that both countries deal with different governance devices. The Netherlands is said to be a market-based economy, whereas Germany is said to be a bank-based economy (Demirgüç-Kunt & Maksimovic, 2002). This distinction between bank or market is made based upon where the most corporate control comes from. In the Netherlands, the market mostly exerts corporate control, whereas in Germany, banks and/or institutional shareholders exert the most corporate control. A similar distinction that is also made, is that between the competitive, and the cooperative model, where Germany is seen as the cooperative type, and the Netherlands as a mix between the two. In the market-based economy (or competitive type), potential conflicts are resolved through external control, such as takeover threats, the market for managers, legal rules, and competition for financial resources between different companies (CPB, 1997; Rott, 2009). On the other hand, the bank-based economy (or cooperative type) has banks as the main source of finance. Here, internal control mechanisms, such as shareholder monitoring, and the board of directors, are important tools, and the focus is on long-term relationships (CPB, 1997; Holmström & Tirole, as cited in Rott, 2009). However, when it comes to long-term growth rates, it is not found that any of the two systems is able to outperform the other (Levine, 2002).

2.4. The comply-or-explain principle

In 1992, the Cadbury Commission in the United Kingdom was the first to come up with the comply-or-explain principle. Flexibility is the key word of this principle: the primary objective is to avoid subjugating firms that are very diverse in nature to the same set of rules (Keay, 2014; MacNeil & Li, 2006; Seidl, Sanderson, & Roberts, 2013). In practice, the comply-or-explain principle allows companies to choose other practices when the company feels that they are a better fit to its personal circumstances. Thus, the firm is free to choose the governance structure that best pursues its objectives, and maintains and guarantees market transparency (Cuomo,

Mallin, & Zattoni, 2015). Consequently, a broader definition of good governance is adopted from the viewpoint of the comply-or-explain principle; complying with corporate governance codes is not the only sign of good corporate governance. The flexibility that companies have in making their own compliance decision implies that companies which decided to use other practices than the ones described in the code, and which offer valid reasons for this deviation cannot be “classified as badly governed because it [the firm] has weighed the pros and cons of specific corporate governance structures” (Arcot & Bruno, 2009, p. 3).

The comply-or-explain principle is oriented towards shareholders as well: “[t]he objective of the comply or explain approach is to allow investors to make an informed assessment of whether non-compliance is justified in the particular circumstances.” (MacNeil & Li, 2006, pp. 488–489). Corporate governance codes are a form of soft law, which implies that they are “formally nonbinding and voluntary in nature, issued by multi-actor committees, flexible in their application, built on the market mechanism for evaluation of deviations and evolutionary in nature” (Haxhi & Aguilera, 2014, p. 2). Due to the soft law nature of the comply-or-explain principle, and the fact that there is no regulation on the explanations, any information that is offered in non-compliance explanations can be seen as voluntarily disclosed information. The reason that firms would want to engage in voluntary disclosures in the first place – which is represented in this paper’s context as offering a higher level of informativeness of non-compliance explanations – is that voluntary disclosures lower a firm’s cost of capital, as information asymmetries between the firm and its shareholders are decreased (Leuz & Verrecchia, 2000).

However, the comply-or-explain principle encounters some challenges as well. First of all, due to the self-regulating character of corporate governance codes (Arcot & Bruno, 2009; MacNeil & Li, 2006), and the fact that corporate governance codes are soft law, compliance and non-compliance explanations and decisions are only judged by the shareholders, who either accept or reject deviations from the code. It is the company’s task to judge whether they (1) in fact comply to, or deviate from the code, and (2) if the degree of informativeness of their non-compliance explanations is of a specific enough level. The result is a grey area, where companies might either comply just to “get it over with”, provide empty explanations (non-compliance explanations which have no informative content), or might simply think that it follows the code, when in fact it does not. All of these cases, whether occurring on purpose or by mistake, are found by previous research to occur in practice. For instance, it is said that “[a] company which believes that it complies with the code, but in reality does not, will not provide

a non-compliance statement and therefore the market will not be called on to exercise judgment in relation to that issue, at least not immediately.”(MacNeil & Li, 2006, p. 488). In an ideal setting, however, shareholders who read the financial reports with a critical attitude will always discover non-compliance in the end, so misjudgments will always be discovered. However, this in itself is not a call for (more) regulation, since more regulation does not necessarily increase the value of all the firms (Arcot & Bruno, 2009).

Other cases of non-compliance are more worrying: the cases of complying-to-prevent-damage, or simply complying to get it over with. In a perfect world, shareholders critically read the financial reports, and punish the company in the form of selling their shares when it makes mistakes, or when it provides empty non-compliance explanations. However, in the real world, previous research finds that more and more firms comply with the code (Lopez Iturriaga, 2009), but also that non-compliance explanations are standard, and hence, uninformative (Akkermans et al., 2009; Arcot & Bruno, 2006). Allegedly, this “highlights a common conformity with the letter but not the spirit of the Code” (Arcot & Bruno, 2006, p. 1). As firms will try their best to avoid the possible penalties by the market as much as possible, firms are more inclined to comply than to deviate (Krenn, 2014; MacNeil & Li, 2006), so that they do not have to worry about whether non-compliance is explained according to the shareholder’s demands. Furthermore, other research (Aguilera, Cuervo-Cazurra, & Kim, 2011; Keay, 2014) indicates that shareholders might be less concerned with the informativeness of non-compliance explanations when the firm performs well enough, i.e. when the investor obtains the return on his investments that the investor desires, a situation that is referred to as comply-or-explain.

To conclude, the comply-or-explain principle allows for a great deal of flexibility. However, the self-regulatory nature of corporate governance codes has the disadvantage of providing firms with too much freedom, which manifests itself through either misjudgments, empty explanations, or complying-to-prevent-damage.

2.5. The compliance decision

Many forces play a role in deciding on whether firms will comply to the corporate governance codes, or whether they will deviate from it. One of the forces that comes forward in other papers, is the role of the capital market. Non-compliance will either be penalized by the shareholders through lower share prices, or non-compliance will be accepted when the deviation is deemed to be justified (Anand, 2005; Easterbrook & Fischel, 1996). Other factors such as firm size, ownership concentration, and the extent to which firms’ directors are embedded in the business

network have been subjected to research, and their role has also been confirmed in the compliance decision (Hooghiemstra & Van Ees, 2011). Arcot & Bruno (2009) find that companies with a dominant shareholder, and with growth opportunities have more incentives to deviate from the codes, which accordingly “is consistent with a one-size-does-not-fit-all approach to corporate governance, and with different monitoring needs of companies (p. 30). What comes forward in (Anand, 2005) is that choosing between compliance or non-compliance is mainly a trade-off: “firms may choose to absorb the costs of their non-compliance rather than comply with the law” (p. 17). Yet in some other cases, compliance is simply not possible, or compliance is inefficient (Seidl et al., 2013).

2.6. The case of non-compliance

Should a firm choose to deviate from the code, it is mandatory that explanations be added in the financial report. However, not every non-compliance explanation that is offered is of a sufficiently high level that explains the deviation properly. Many papers make a distinction between different levels of informativeness of non-compliance explanations, which reflect the quality of non-compliance explanations (Arcot & Bruno, 2006, 2009; Hooghiemstra, 2012; Seidl et al., 2013). In the end, all these papers conclude that non-compliance explanations are not of a sufficiently high level. Solutions remain to be found to increase the quality of non-compliance explanations, since it turns out that shareholders are either not powerful or interested enough to enforce a higher quality of non-compliance explanations themselves (Anand, 2005; Andres & Theissen, 2008; Arcot, Bruno, & Faure-Grimaud, 2010).

2.7. Formulation of hypotheses

As stated earlier, non-compliance explanations can be treated as a form of voluntary disclosure, because corporate governance codes are a form of soft law, implying that they are “formally nonbinding and voluntary in nature, issued by multi-actor committees, flexible in their application, built on the market mechanism for evaluation of deviations, and evolutionary in nature” (Haxhi & Aguilera, 2014, p. 2). Arguing from agency theory, managers would want to disclose information voluntarily, so as to convince the company’s shareholders that they are acting in a way that is the most beneficial for the company, and thus, that they are acting in the shareholders’ best interests. (Hooghiemstra, 2012; Leuz & Verrecchia, 2000; Watson, Shrivess, & Marston, 2002). Two things can happen with non-compliance explanations: (1) the firm will try to offer the best (i.e. most informative) explanations it can, or (2) the firm will offer an

uninformative, and maybe even standard statement of why it does not comply to the code. Agency theory would predict the first scenario to be the most likely, but it depends on the firm, and its individual characteristics which scenario will prevail. Since evidence is generally in favor of the second case (Arcot & Bruno, 2006, 2009; Hooghiemstra, 2012), it seems to be the most likely that also in the Netherlands and Germany, most of the found explanations will not be of the highest possible level when it comes to the amount and specificity of the disclosed information. In the following sections, it is assumed that a lower quality of non-compliance explanations can be set equal to a higher amount of deviations from a corporate governance code, because research finds that these two variables generally move together (Arcot & Bruno, 2009; Hooghiemstra, 2012).

2.7.1. Firm performance

Previous research (Arcot & Bruno, 2006; Keay, 2014; MacNeil & Li, 2006) indicates that there is a strong, negative association between firm performance and the informativeness of non-compliance statements. It is pointed out that shareholders might be less concerned with everyday business practices when firms show strong performance (Keay, 2014). Thus, it may be said that investors are more concerned for comply-or-perform instead of comply-or-explain. Arcot & Bruno (2009) find that a positive relationship between performance and corporate governance only holds for firms which have the highest levels of corporate governance standards or disclosure. The other way around, deviating from corporate governance codes while not presenting sufficiently informative non-compliance explanations might be associated with lower firm performance. The most important lesson that can be taken from Arcot & Bruno (2009) is that corporate governance codes and the comply-or-explain principle work with a broader definition of “good” corporate governance: “deviating from corporate governance standards is not necessarily a sign of bad governance if it is not related to self-maximizing purposes but to the company's unique characteristics” (non-technical summary, para. 8). However, there is also evidence that argues in the other direction, i.e. that better performing firms are willing to disclose more information (Berglöf & Pajuste, 2005). Thus, literature does not offer a general consensus of whether a negative or positive relationship between firm performance and informativeness exists (Bhagat & Bolton, 2008; Brown & Caylor, 2004). As a result, the following hypotheses are formulated:

H1: The quality of non-compliance explanations and firm performance are associated.

H2: The number of reported deviations and firm performance are associated.

2.7.2. Ownership concentration

Another variable that is often found to be associated with the quality of non-compliance explanations is ownership concentration. A dominant shareholder (also referred to as blockholder) is said to be present when more than five percent of the shares of a company are in the hands of a shareholder. However, in this research, ten percent is taken as the threshold, since this is also reflected in the German corporate governance code, which states that ten percent is the level for the firm or shareholder to disclose major shareholdings in their financial reports (Government Commission German Corporate Governance Code, 2002). The presence of large shareholders is generally perceived as a negative aspect, since “the presence of large block holders will ... undermine ... corporate governance mechanisms” (Berglöf & Pajuste, 2005, p. 182). For example, the presence of a dominant shareholder can reduce effective governance by the market; “large shareholders [which are] closely associated with the management may refrain from attempts to dismiss underperforming managers if such an intervention puts their own reputation at risk” (Mayer, as cited in Lehmann & Weigand, 2000, p. 494). When a dominant shareholder is present, it is found not only that the company is less likely to comply with a corporate governance code, meaning that the firm reports more deviations, but also that the firm is more likely to offer only low quality non-compliance explanations (Arcot & Bruno, 2009; Hooghiemstra, 2012). The explanation for this is that the dominant shareholder has the power to exert control over the organization, whereas small shareholders do not have this power. This would also imply that the dominant shareholder is better able to monitor the managers (Shleifer & Vishny, 1997), or to control the managers, thereby influencing the strategy of the firm in some desired direction (Lehmann & Weigand, 2000). Furthermore, the dominant shareholder is said to have the power to gain information – including private information – via channels other than the financial report, and to use this information to make gains (Dyck & Zingales, 2004). For these reasons, the following hypotheses are formulated:

H3: The quality of non-compliance explanations and the concentration of ownership are negatively associated.

H4: The number of reported deviations and the concentration of ownership are positively associated.

2.7.3. Board characteristics

When it comes to analyzing the executive and supervisory boards of a company, many variables can be designated as having an influence on the quality of non-compliance explanations. This paper takes gender diversity, and the size of the executive and supervisory boards as the most important characteristics. Nowadays, increasing gender diversity is seen as a goal in many companies and governments, to which the Dutch and German corporate governance codes are no exception. The presence of women on a board is said to have positive effects in many different situations, for example on monitoring and oversight (Ittonen, Miettinen, & Vähämaa, 2010; Stewart & Munro, 2007; Thiruvadi & Huang, 2011). The rationale behind aiming to have more women on the board than currently often the case is that gender diversity would ensure the presence of many different views, because men and women think and behave in different ways (Kimura, 1992; McGlone, 1980). For example, Thiruvadi and Huang (2011) argue that “women are more risk averse, cautious and ethical than men”. Furthermore, Barua, Davidson, Rama, and Thiruvadi (2010) state that “women are more likely to be in compliance with rules and regulations” (p. 26). As a result, it is expected that gender diversity will increase compliance with the code, and also that it increases the quality of non-compliance explanations. Thus, the fourth and fifth hypotheses are as follows:

H5: The quality of non-compliance explanations and the degree of gender diversity in the boards are positively related.

H6: The number of reported deviations and the degree of gender diversity in the boards are negatively related.

When it comes to the size of the board, a negative relationship is often found with the informativeness of non-compliance explanations (Core, Holthausen, & Larcker, 1999; Yermack, 1996). For example, a negative relationship is found between board size and firm value (Mak & Kusnadi, 2005). The general thought is that when boards consist of more than seven or eight members, the effectiveness of the board goes down, inter alia because the CEO is better able to influence the board (Jensen, 1993). Thus, the seventh and eighth hypotheses are formulated as follows:

H7: The quality of non-compliance explanations and the size of the boards are negatively related.

H8: The number of reported deviations and the size of the boards are positively related.

2.7.4. Leverage

Previous research shows that evidence on the relationship between leverage and voluntary disclosures is mixed. On the one hand, Hossain, Perera, & Rahman (1995) find a positive relationship between leverage and voluntary disclosures, and argue that debtholders require more information from the managers and shareholders about the business. On the other hand, both Hooghiemstra (2012) and Eng and Mak (2003) find a negative relationship between debt and the quantity of information disclosed. Two different scenarios can play out, and it depends on the situation which one prevails: (1) the negative association could come from debtholders protecting themselves through debt covenants rather than relying on voluntarily disclosed information (Eng & Mak, 2003), or (2) the positive association occurs because firms signal their good corporate governance through voluntarily disclosed information, in order to attract better credit ratings (Bauwhede & Willekens, 2008). As a result, the following two hypotheses with respect to leverage are as follows:

H9: The quality of non-compliance explanations and the amount of debt of a firm are associated.

H10: The number of reported deviations and the amount of debt of a firm are associated.

3. Methodology

This chapter focuses on the methodology and methods that are used in this research. First, the characteristics of the sample are discussed. Next, the relevant variables are operationalized, and control variables are identified. Lastly, the regression equation for this research is constructed.

3.1. Sample

The first criterion is that the company be active on the stock market, respectively on the Amsterdam Exchange Index (AEX) for the Netherlands, and on the Deutscher Aktienindex (DAX) for Germany. In this way, only the largest stock companies are analyzed. Second, following prior research (Hooghiemstra, 2012), financial companies are excluded from the analysis, because these are subjected to other rules. For the same reason, insurance companies are also excluded from the analysis, since differences in regulation may exist. Lastly, the time period over which data is collected runs from 2012 up until 2014. Multiple years are included in the sample to avoid creating a bias in which firm behavior in a certain year is drastically different from other years. Here, it is also critical for the firm to be active on the relevant stock

market in all of the years of the time frame, otherwise exclusion of the firm follows. For an overview of the companies that are included in the sample, look at table 1 of the appendix. Following all these criteria, 117 observations remain, which consists of 48 observations for Dutch firms, and 69 observations for German firms.

3.2. Dependent variable

Following Hooghiemstra (2012) and Bruno and Arcot (2009), the quality of non-compliance explanations will be measured by calculating a weighted average, which is referred to as the ISCORE. After collecting the financial statements for the sample, manual content analysis is used in order to be able to categorize the explanations according to the following categorization by Hooghiemstra (2012):

- 1) No explanation, whereby the alternative practice is merely described.
- 2) Generic explanation, which describe in a general way why the alternative practice is a better fit than the one prescribed in the code.
- 3) Firm-specific explanations, which describe in a way specific to the company why the alternative practice is a better fir than the one prescribed in the code.

Furthermore, deviations which are explained as not being applicable for a company are excluded from the analysis, with purpose of avoiding the creation of a bias. This categorization is chosen because it uses clear, and obviously different categories. Other papers, such as Seidl et al. (2013) make a distinction between three categories, but these categories are further distinguished in subcategories, which can lead to a tangle of different, confusing, or even seemingly overlapping, categories.

Content analysis is the appropriate way to prepare the financial statements for further statistical analysis, because it is a good way to analyze textual data, which is rich in substance, and strongly context-specific (Previts, Bricker, Robinson, & Young, 1994). After categorizing the explanations to the different categories, each category receives a number of points for the further calculation of the ISCORE. Because the category “no explanation” has no real informational value, this category receives the lowest number of points, namely one point. The reason that one point is assigned, is that these explanations might still have some informational value to readers, which is why the category should be kept in the regression equation. The category “generic explanations” receives two points, because it includes explanations with a higher informational value than the “no explanation” category, but which are not as informative

as the category of “firm-specific explanations”. Lastly, whereas in Hooghiemstra (2012) this last category receives four points, in this paper the firm-specific explanations will receive three points. This is because there seems to be no reason for assigning four points to the last category, and also because this way there is a linear line in the points. Hence, the calculation of the ISCORE in this paper is as follows:

$$\text{ISCORE} = \frac{1 \cdot \text{no explanation} + 2 \cdot \text{generic explanation} + 3 \cdot \text{firm-specific explanation}}{\text{total number of explanations}}$$

The measurement of the number of deviations is more straightforward: it is a simple addition of the number of deviations that a firm reported. Deviations that are reported because they are not applicable for the company are excluded.

3.3. Independent variables

Table 2 in the appendix describes all of the variables which are analyzed in this research. Data about the size of the company, leverage, and the return on equity is obtained from the Thomson One Database and the Orbis Database. Data about ownership concentration is obtained from the register of the Autoriteit Financiële Markten (Authority Financial Markets) for the Dutch firms, and from the Bundesanstalt für Finanzdienstleistungsaufsicht (Federal Financial Supervisory Authority) for the German firms. Further information, about inter alia the board characteristics come from the respective company’s websites, and from their financial statements.

3.4. Control variables

One of the control variables in this paper is firm size. It has been established in many other studies (Berglöf & Pajuste, 2005; Eng & Mak, 2003; Hossain et al., 1995; Watson et al., 2002) that the size of a company has a significant, positive effect on compliance to the corporate governance code. The reason for this is that larger firms are said to experience bigger agency problems (Dey, 2008). As a result, shareholders demand the firm to disclose information of a higher quality of, because information asymmetries are greater (Deumes & Knechel, 2008).

The second control variable is industry. It is said that within industries, peer pressures can come about, which force companies to either comply more, or offer a higher quality of non-compliance explanations (Anand, 2005). In many different studies, it comes forward that industry causes differences in compliance, and in informativeness of non-compliance

explanations (Arcot & Bruno, 2006; Bauwhede & Willekens, 2008; Hooghiemstra, 2012). The firms are classified by industry on the basis of five industry categorization, which uses Standard Industrial Classification Codes (from now on referred to as SIC-codes) developed by Fama and French, which makes a distinction between the following industries: consumer, manufacturing, hi-tech, health care, and other industries (DeHaan, n.d.).

The last control variable is that of year effects. To avoid including years in which firms behaved differently from other years, a dummy variable is included for each year.

3.5. Regression equation

An Ordinary Least Squares analysis is conducted, whereby the following regression equation is used:

$$\text{ISCORE}_x = \beta_0 + \beta_1 \text{ROE} + \beta_2 \text{OWN} + \beta_3 \text{EDIV} + \beta_4 \text{EBOARD} + \beta_5 \text{SDIV} + \beta_6 \text{SBOARD} \\ + \beta_7 \text{DEBT} + \beta_8 \text{FIRM} + \beta_9 \text{Industry} + \beta_{10} \text{Year} + \varepsilon_x$$

where β resembles the independent variables as described in chapter two, and as operationalized in chapter three. ε resembles the error term. The variables OWN, Industry, and Year are dummy variables. The regression equation is the same for the number of reported deviations.

4. Results

This chapter discusses the results that were found in this research. First, the sample is discussed using descriptive statics, and the sample is analyzed for the presence of multicollinearity. Afterwards, each individual model is compared to the hypotheses that were formulated at the end of chapter two.

4.1. Descriptive statics and multicollinearity

Panel A of table 3 in the appendix shows the descriptive statics for the sample. Panel A shows the mean, the minimum and maximum value, and the standard deviation for each variable, based on the entire sample. Panel B, C, and D break the sample down by year, by industry, and by country.

In Panel A, it can be observed that the mean value of deviations is quite low, with not even three deviations per firm on average. The ISCORE has a mean of only 2.49, which implies that the average quality of non-compliance disclosures is certainly not as high as the corporate

governance codes would require. The Return on Equity (ROE) that is found in the companies has a mean value of 0.130 (13 percent). However, this variable is quite diverse, with a minimum of -0.277 and a maximum of 0.487. Ownership concentration shows that the presence of a shareholder who holds more than ten percent of shares is quite frequent with a mean of 0.59, which indicates that in 59 percent of the observations, a major shareholder was present. Gender diversity in both the executive and supervisory boards is quite low; 10 percent, and 18.5 percent respectively. Size of the executive and supervisory boards is diverse as well, ranging from 2 to 14 for executive boards, and ranging from 0 to 22 for supervisory boards. A size of 0 members in the supervisory board indicates that the firm has a one-tiered board structure.

In Panel B of table 3 it can be observed that all the values for the variables are quite stable over the years. Therefore, it can be expected that it is not the case that firms' behavior was very different in any of the years which are included in this sample. The only two variables which increased over time are gender diversity, in both the supervisory and executive board, and the variable firm size. Neither one of these increases comes as a surprise, considering an increased emphasis on, and a general increasing of female presence in boards, as well as inflation, and economic performance to explain an increase in firm size.

In Panel C, the sample is broken down by industry, using the five-industry distinction of Fama and French (DeHaan, n.d.), which is based on a company's SIC code. As can be expected, the industry of a company has an influence on all of the variables. Most importantly, as can be observed in the table, the number of reported deviations and the quality of non-compliance explanations have quite different values. The different outcomes per industry correspond to what was found in the literature: industry has the ability to cause differences in corporate governance compliance.

Lastly, Panel D displays the data split up by country. Two differences come forward in this panel. First of all, the number of deviations is more than double in the Netherlands than in Germany. In itself, this is not a sign that corporate governance is worse in the Netherlands. As pointed out in chapter two, corporate governance takes a broader view on good governance than just compliance. The second difference is that German companies have larger supervisory boards: twenty members on a supervisory board in Germany is not a rare case.

Before the regression is conducted, it is investigated whether multicollinearity is present, by using a correlation matrix. The correlation matrix can be found in table 4 in the appendix. The rules of thumb which are used to interpret the correlation matrix are noted under table 4.

Overall, it can be concluded that most variables display little to no correlation, or only a low correlation. However, to be extra careful that there are no problems with multicollinearity, a Variance Inflation Factor (VIF) test is conducted after each regression.

4.2. Hypotheses testing

4.2.1. Number of deviations reported, general model

In this regression, the number of deviations a firm reported is regressed with each of the independent variables. The dummy variables for industry and year effects are excluded, since they were insignificant. Because this is the general model, all 117 observations are included. There are no missing values in this model. The output of this regression can be found in table 5 in the appendix, in panel (1.1). The F-statistic has a value of 8.01, and is significant at the one percent level, which means that this model can, in a statistically significant way, predict the number of deviations a firm reported. With an R-squared of 37.25 percent, it can be concluded that this model explains a big proportion of the variance, and thus, it can be concluded that this model is a proper fit. The next step in the analysis is to compare this model with the hypotheses that were specified at the end of the second chapter.

To recall, the second hypothesis states that the number of deviations and firm performance (ROE) are associated. According to the regression equation, this relationship is positive, and it is significant at the ten percent level. This positive relationship between firm performance and the quality corresponds to the results of (Berglöf & Pajuste, 2005). Thus, there is enough evidence to reject the null hypothesis that there is no relationship between firm performance and the number of deviations reported by a firm.

The next hypothesis is that the concentration of ownership has a positive relationship with the number of reported deviations, because the presence of dominating shareholders would hinder a proper functioning of corporate governance mechanisms (Arcot & Bruno, 2009; Berglöf & Pajuste, 2005; Hooghiemstra, 2012). Because the relationship is significant at the five percent level, there is enough evidence to reject the null hypothesis that these two variables are not related. The relationship has the direction that was hypothesized, so it can be concluded that the presence of shareholders hinders corporate governance mechanisms.

Because women and men behave differently, and also have a different view on ethics (Ittonen et al., 2010; Kimura, 1992; McGlone, 1980), the hypothesis is that gender diversity has a negative association with the number of reported deviations. For the executive board, a positive

yet insignificant relationship is found. For the supervisory board, a negative relationship is found, which is significant at the one percent level. As a result, the null hypothesis that predicts no relationship between these two variables cannot be rejected for the executive board, but there is enough evidence to reject the null hypothesis for the supervisory board.

The size of the executive and supervisory boards is the other variable which deals with board characteristics. It is hypothesized that the relationship between board size and the number of reported deviations is positive, because bigger boards are said to be less effective (Jensen, 1993). Based on the output, the relationship between executive board size and the number of reported deviations is slightly positive, but also insignificant. Consequently, the null hypothesis that there is no relationship between these two variables cannot be rejected. For the supervisory board, the relationship is negative and significant at the one percent level. Here, there is enough evidence to reject the null hypothesis.

In previous research, there is no consensus on whether leverage has a positive or negative relationship with the number of reported deviations. The positive relationship is said to be caused by firms disclosing more information to obtain better credit ratings (Bauwhede & Willekens, 2008), and the negative relationship would come from debtholders protecting themselves through debt covenants, rather than relying on voluntarily disclosed information (Eng & Mak, 2003). The current analysis shows that there is a negative relationship between the two variables. However, the relationship is insignificant, which means that it is not possible to reject the null hypothesis that debt and the number of reported deviations are not related.

Next, the general model is also tested for the presence of multicollinearity and heteroscedasticity. The output of these two tests can be found in table 5 as well, in the rows labeled “Max VIF” (multicollinearity), and “Breusch-Pagan test” (heteroscedasticity). First, it turns out that multicollinearity is not present, because none of the variables have a VIF value that is higher than ten. A Breusch-Pagan test, or Cook-Weisberg test, shows that heteroskedasticity is present. The null hypothesis of this test is that there is a constant variance of the error term, and the alternative hypothesis is that this is not the case. Because the outcome of the Breusch-Pagan test is significant at the one percent level, there is enough evidence to assume that there is some heteroskedasticity present in this regression. As a result, the regression is subjected to two different robustness tests, which alter the underlying assumptions of the model. The R-squared and the coefficients do not change in both these tests, because the tests relax some of the underlying assumptions, which leave the coefficients unchanged.

The first robustness test that is conducted assumes robust standard errors. The outcomes of this test can be found in panel (1.2) of table 5. Firm performance continues to have a positive relationship to the number of deviations reported, which is significant at the ten percent level. With respect to ownership concentration, there is still a positive, significant relationship to the number of deviations reported. The relationship between gender diversity on the executive board still has an insignificant relationship. However, on the supervisory board, gender diversity has a strong negative relationship to the number of deviations reported, which is still significant at the 1 percent significance level. The size of the executive board is remains insignificant, while the size of the supervisory board is weakly negative, but significant at the one percent level. Lastly, debt appears to have a negative, yet insignificant, relationship to the number of deviations reported.

The cluster test relaxes the assumption that standard errors are uncorrelated. Here, the standard errors might be correlated within the countries, which is why the regression is corrected for the presence of two separate clusters. In the cluster test, none of the relationships come out as significant, which leads to the conclusion that a correction for clusters is not appropriate for this research.

4.2.2. Differences between the Netherlands and Germany

This regression analyzes whether there are significant differences in the regression models for the Netherlands and Germany. Dummy variables are created as follows: a dummy for country equals zero for the Netherlands, and one for Germany. This country dummy variable is then multiplied by the respective independent variable. As a result, the Netherlands is the holdout group, because all the observations from Dutch firms received a zero, meaning that they are thereby included in the model as a constant. Consequently, any deviations from the constant come from German observations. The outcome for this regression can be found in table 6, panel (2.1). Dummies for year and industry are not included, because these were found to be insignificant. Moreover, the independent dummy variable that describes the size of the supervisory board is excluded, because it suffered from multicollinearity. The R-squared of this model is 0.245, and the F-value of 5.06 is significant at the one percent level. Thus, it can be concluded that this model is a good fit, and that it is able to predict the number of deviations reported in a statistically significant way.

As can be observed in the table, there are a number of insignificant variables, which implies that the respective variable is not significantly different in these two countries, in the number

of deviations that are reported by a firm. The ownership dummy is positive and significant at the five percent level, which means that ownership concentration causes significantly more deviations in Germany than in the Netherlands. The same goes for the dummy of gender diversity in the executive board; being significant at the ten percent level, gender diversity on the executive board causes significantly more deviations in Germany than in the Netherlands. Gender diversity on the supervisory board, and leverage both show a negative relationship, which is significant at the five and one percent level respectively, i.e. both variables significantly decrease the number of deviations reported by a firm in Germany.

As stated earlier, the dummy variable for the size of the supervisory board is excluded because of multicollinearity. After this, the maximum VIF-value that is encountered is 8.96, which is lower than the threshold of ten, so multicollinearity is eliminated by excluding the variable for the size of the supervisory board. However, there are some heteroskedasticity problems, according to the Breusch-Pagan test. Consequently, the two robustness tests – robust standard errors, and a cluster test – are conducted to see the influence of the present heteroskedasticity. As can be observed in panel (2), the robust standard errors, and panel (3), the cluster test, the significance of the variables does not change. It can thus be concluded that this model still holds when relaxing some of the underlying variables.

4.2.3. Number of deviations reported, Dutch model

This model includes the 48 observations for the Netherlands. Dummies that control for year effects are excluded, because none came out as significant in the initial model. The dummies for industries are included, because some of them were significant. There are no missing values in this model. The output of this regression can be found in table 5, panel (1.4). The F-statistic has a value of 4.60, and is significant at the one percent level, which means that this model can, in a statistically significant way, predict the number of deviations a firm reported. With an R-squared of 61.2 percent, it can be concluded that this model explains a large proportion of the variance, and thus that this model is a proper fit. In the following paragraph, the outcomes for the hypotheses are evaluated.

The first hypothesis states that there is an association between the number of deviations reported and firm performance. The relationship that is discovered is positive, as it was in the other models. However, this relationship is not significant, so no remarks can be made with respect to the null hypothesis. Next, ownership concentration has a positive relationship with the number of deviations that is reported by a firm. This relationship is significant at the ten percent

level, which means that there is enough evidence to reject the null hypothesis that there is no association between these two variables. Gender diversity on the executive board shows a negative relationship, but it is insignificant. Gender diversity on the supervisory board also shows that there is a negative relationship, that is significant at the five percent level. Thus, there is enough evidence to reject the null hypothesis that there is no association between supervisory board gender diversity and the number of reported deviations, but this does not go for gender diversity on the executive board. The size of the executive board has a positive relationship with the number of reported deviations, which is significant at the one percent level. This is enough evidence to reject the null hypothesis that there is no relationship between the two variables. For supervisory board size, there is no significant relationship, so here, the null hypothesis cannot be rejected. Lastly, debt has a positive relationship that is significant at the ten percent level, so there is enough evidence to reject the null hypothesis.

Furthermore, this model was subjected to a Breusch-Pagan test and a VIF test, to see if there is heteroskedasticity or multicollinearity in the model. Since no VIF value was higher than ten, it can be concluded that there is no problem with multicollinearity. The Breusch-Pagan test has a value of 1.91, but since it is not significant, there are no problems with heteroskedasticity. As a result, no further tests or treatments are necessary for this model.

4.2.4. Number of deviations reported, German model

This model includes the 69 observations for Germany. Dummies that control for year effects are excluded, because none came out as significant in the initial model. The dummies that control for industries are included, because some of them were significant. There are no missing values in this model. The output of this regression can be found in table 5, panel (1.5). The F-statistic has a value of 8.37, and is significant at the one percent level, which means that this model can, in a statistically significant way, predict the number of deviations a firm reported. With an R-squared of 64.2 percent, it can be concluded that this model is able to explain a large proportion of the variance, and thus that this model is a proper fit. The following paragraph deals with the outcomes with respect to the hypotheses.

Firm performance, as proxied by the return on equity, is hypothesized as being associated to the number of deviations. Here, the relationship is found to be positive, but because it is insignificant, the null hypothesis that firm performance and the number of reported deviations are not associated cannot be rejected. In this model, ownership concentration displays a positive relationship, which is significant at the one percent level. As a result, the evidence found in this

model is enough to reject the null hypothesis that these two variables are not associated. Gender diversity on both the executive board and the supervisory board display relationships that are significant at the one percent level. However, gender diversity on the executive board shows a positive relationship, whereas on the supervisory board, a negative relationship is found. The size of the executive board is insignificant, whereas the size of the supervisory board is negative, and significant at the one percent level. Debt shows a negative relationship to the number of deviations reported, and is also significant at the one percent level.

Again, the model is subjected to tests for multicollinearity and heteroskedasticity. As was already found in the Dutch model, neither one of these potential problems is present here, so no further tests are necessary.

4.2.5. The ISCORE in the general model

The result for the regression of the general model can be found in table 7, panel (3.1). In this regression, all observations are included, i.e. no distinction is made between country, year, industry, etc. Moreover, the control variables for industry are included in this regression. Using dummy variables to control for year effects is not done here, because none of the year variables came out as significant. Overall, the general model has an R-squared of 19.85 percent. Overall, this implies that the general model shows a quite good fit to the total sample. Overall, it can be concluded that the general model holds some explanatory power, but the variables are better at predicting the number of deviations reported, instead of the ISCORE.

To recall, it is hypothesized that the quality of non-compliance explanations and firm performance are associated. However, the relationship is found to be insignificant, so there is not enough evidence to reject the null hypothesis that firm performance is not associated with the quality of non-compliance explanations. The next hypothesis states that there is a negative relationship between ownership concentration and the quality of non-compliance explanations. However, this model shows a negative relationship, that is found to be insignificant. Thus, the null hypothesis is maintained. Gender diversity was hypothesized as having a positive relationship to the quality of non-compliance explanations. in the executive and supervisory boards. For both boards, there is a positive relationship found, but neither one is significant. As a result, the null hypothesis that there is no association between these variables cannot be rejected. The size of a board is expected to have a negative relationship with informativeness. For the executive board, a very weak negative relationship is found, which is significant at the ten percent level. Here, it can be concluded that there is indeed a negative relationship between

the size of the executive board, and the quality of non-compliance explanations. A positive relationship is found between the size of the supervisory board and quality of non-compliance explanations. However, since this relationship is not significant, the null hypothesis remains maintained for the size of the supervisory board. Lastly, literature was inconclusive about the relationship between a firm's level of leverage and the quality of non-compliance explanations, which is why the alternative hypothesis assumes any relationship between the two variables. Here, a strong negative relationship is found, but it is not significant. Therefore, it is not possible to reject the null hypothesis that there is no correlation between the two variables.

To be sure that any multicollinearity that might be present will not cause problems in further analysis, a VIF test is run, of which the output can be found in table 7. Since none of the values for VIF are bigger than ten, it is possible to conclude that multicollinearity does not form a problem. However, there are problems with heteroskedasticity; the Breusch-Pagan test is significant at one percent, with a value of 14.55. As a result, this model is also subjected to the robustness test and the cluster test. Because in the first model there is only one significant variable (EBOARD), the results from the two robustness tests do not change a lot in the significance. The size of the executive board (EBOARD) remains significant at the ten percent level in the robustness test, but becomes insignificant in the cluster test. However, gender diversity in the supervisory board comes out at significant at the five percent level in the cluster test.

4.2.6. Differences between the Netherlands and Germany

This model uses the same dummy variables as were used in section 4.2.2. This time, the ISCORE is the dependent variable. All 117 observations are included, whereby the Netherlands is again the holdout group, and German observations are represented in the variables. With an R-squared of 14.3 percent, this model explains merely a small amount of the variance that is encountered in the sample. The F-value is 2.61, and is significant at the five percent level, so it can be concluded that this model is able to predict the ISCORE in a significant way.

As can be observed in table 8, panel (4.1), there are only a few variables that come out as significant: ownership concentration and gender diversity on the supervisory board are significant at the ten percent level, and gender diversity on the executive board is significant at the five percent level. The ownership concentration and gender diversity on the executive board both have a significantly more negative relationship with the ISCORE in the German model

than in the Netherlands, whereas gender diversity on the supervisory board is significantly more positively related to the ISCORE in Germany.

Due to multicollinearity problems, the variable reflecting the size of the supervisory board is not included in this regression. Afterwards, there are no more multicollinearity problems, because the maximum value of the VIF is 8.96. Heteroskedasticity was present, according to the significant outcome of the Breusch-Pagan test. Consequently, the robustness test and the cluster test are applied to this model to see how it holds with relaxed underlying circumstances. As can be seen in panel (4.2), the robustness test, and panel (4.3), the cluster test, the results hold the same in these changed circumstances, so it can be concluded that the results are robust, despite the presence of heteroskedasticity.

4.2.7. The ISCORE in the Dutch model

The Dutch model includes all the observations for the Dutch companies. In total, 48 observations are included in the analysis. In this regression, the dummy variables for industry and year effect are not included. The output of this regression can be found in table 9, in panel (5.1). With an R-squared of 35.08 percent, it can be concluded that this model is quite adequate in analyzing the relationship between all the specified variables and the quality of non-compliance explanations. The F-value of 2.05 is significant at the five percent level, so this model is able to predict the quality in a statistically significant way.

With respect to the first hypothesis, that firm performance and the quality of non-compliance explanations are associated, it is found in the Dutch model that there is a positive relationship between the two. With a significance of slightly under 15 percent, it is concluded that the relationship is insignificant, but that it does provide indicative evidence of a positive relationship between firm performance and the quality of non-compliance explanations. Ownership concentration again displays a negative relationship, but one that is not significant. With a significance level of 70 percent, the hypothesis that concentration of ownership and the quality of non-compliance explanations are negatively associated, the hypothesis cannot be confirmed for the Dutch model. Gender diversity in the executive board displays a positive relationship with the quality of non-compliance explanations. Since this relationship is significant at the 10 percent level, the null hypothesis that gender diversity and the quality of non-compliance explanations are not associated can be rejected for the Dutch model. However, gender diversity on the supervisory board displays a negative relationship, which is also insignificant. Here, the null hypothesis remains maintained. The size of the executive board

displays a negative relationship, while the size of the supervisory board displays a positive relationship. Both variables are not significant, but, being under the 15 percent significance, it can be said that these variables provide indicative evidence that: (1) there is a negative relationship between the executive board and the quality of non-compliance explanations, and (2) there is a positive relationship between the supervisory board and the quality of non-compliance explanations. Lastly, debt shows a negative relationship with the ISCORE. This variable is significant at the ten percent significant level, which leads to the conclusion that the null hypothesis – which assumes no correlation between these two – can be rejected.

The next step is to analyze this model for the presence of multicollinearity and heteroskedasticity. With a maximum VIF value of 2.20, it can be concluded that multicollinearity is not a problem in this model. However, the Breusch-Pagan test has a value of 12.45, which is significant at the one percent level, which means that heteroskedasticity is present. Here, the only robustness test that is applied is that of the robust standard errors, because there are no subsets which are needed in the cluster test. The outcome of the robustness test can be found in table 9, panel (5.2). As can be seen, the robustness test increases the significance of all the variables, which makes that the model holds even better with the relaxed underlying circumstances.

4.2.8. The ISCORE in the German model

The last model that is analyzed is the German model, which includes 69 observations. Dummy variables for industry and year effects are not included, because these variables were not significant, and because it enhances comparability to the Dutch model that was discussed in the previous section. The output can be found in table 9 in the appendix, in panel (5.3). The R-squared of the German model is slightly higher than that of the Dutch model: 32.3 percent against 27.8 percent. The F-value is higher, and also more significant: the value of 3.58 is significant at the one percent level, against a value of 1.87 which is significant at the ten percent. It can be concluded that this model is a good fit due to its high R-squared, and also that is able to predict the quality of non-compliance explanations in a statistically significant way. The next section deals with the hypotheses that were formed in chapter 2.

Firm performance shows a rather strong positive relationship with the ISCORE. However, since it turns out that the variable is not significant, the null hypothesis that predicts no association between the two variables cannot be rejected. Next, the concentration of ownership shows a rather strong negative relationship, which is significant at the 10 percent level. As a result, this

is enough evidence to reject the null hypothesis that ownership concentration and the quality of non-compliance statements are not related. Gender diversity on the executive board is not significant, while the outcome for the supervisory board is a positive relationship that is significant at the five percent level. The size of the executive board is positive and insignificant, so here, the null hypothesis that there is no association between these two variables cannot be rejected. However, for the size of the supervisory board, a negative relationship that is significant at the one percent level is found. Here, there is enough evidence to reject the null hypothesis. Lastly, debt shows to have a positive relationship that is not significant, so the null hypothesis cannot be rejected, based on this model.

Furthermore, the German model is subjected to tests for multicollinearity and heteroskedasticity. Just as for the Dutch model, the maximum VIF value is 2.20, so it can be concluded that multicollinearity is not a problem. Heteroskedasticity is, because the outcome of the Breusch-Pagan test is significant at the one percent level. As can be seen in panel (5.4) of table 9, the results of the original model hold in the model with the robust standard errors.

4.2.9. The control variables

Being significant in most of the regressions, firm size appears to be an important control variable in this context. Most of the times, the relationship between firm size and the number of deviations reported, or the quality of non-compliance explanations, is positive, which was indicated by previous literature (Berglöf & Pajuste, 2005; Eng & Mak, 2003; Hossain et al., 1995; Watson et al., 2002). However, industry and year effects seem to be not important to include as control variables. Year effects were not significant in any model, so in no model, the dummies for year effects were included. According to the descriptive statistics, breaking down the sample by industry showed that there were differences between industries. However, the industry dummies were only included in the Dutch and German model for the number of reported deviations (table 5, panel (1.4) and (1.5)). Even in these models, the industry dummies appeared to have only a limited effect; for the Netherlands, only the dummy for manufacturing was significant. For Germany, the manufacturing, health care, and other industry categories were significant, which led to the inclusion of the industry dummies for both models, to enhance the comparability between the Dutch and German model.

5. Discussion

This chapter discusses the outcomes of the regressions that were conducted in the previous chapter. First, it is observed whether the hypotheses with respect to the number of deviations were correct, i.e. whether they provided enough evidence to reject the null hypothesis. Then, the hypotheses with respect to the quality of non-compliance explanations are analyzed. Furthermore, it is also analyzed whether certain relationships that were discovered in the previous chapter can be explained by the literature that was discussed in the literature review.

The general expectation that was pointed out in section 2.7 is that firms are expected to only offer explanations that possess the minimal amount of explanatory value, since previous research shows that this is often the case (Arcot & Bruno, 2006, 2009; Hooghiemstra, 2012). As can be observed in the descriptive statics of the sample (table 3), the mean value of the ISCORE is 2.489. Thus, it can be concluded that it appears that firms overall report quite a high quality of non-compliance explanations. However, the explanations are not as firm-specific as would be expected by the comply-or-explain principle.

5.1. The number of reported deviations

The first hypothesis with respect to the number of deviations is that they are associated with firm performance. The general regression (model 1.1) shows that this relationship is significant at the ten percent level, and the test with the robust standard errors (model 1.2) shows the same result. However, the cluster test, and the country-specific regression (model 1.3, 1.4, and 1.5) do not come up with significant relationships. According to previous research, the association would be positive due to the fact that shareholders are more concerned with comply-or-perform, instead of comply-or-explain (Arcot & Bruno, 2006; Keay, 2014; MacNeil & Li, 2006). This research thus corresponds to previous research, and it appears that, here too, a situation of comply-or-perform presents itself. Furthermore, with a coefficient of 3.36, it can be concluded that this relationship is strong, making it an important variable in explaining the number of reported deviations.

Second, it is hypothesized that there is a positive relationship between ownership concentration and the number of reported deviations, based on the premise that “the presence of large blockholders will ... undermine ... corporate governance mechanisms” (Berglöf & Pajuste, 2005, p. 182). As discussed earlier, because of the civil law systems in both the Netherlands and Germany, shareholder protection is weak, and the concentration of ownership will be high,

because shareholders want to protect themselves against expropriation risks (Goergen & Renneboog, 2003; La Porta et al., 1997, 2000). The results of this research correspond to the literature; a positive association is found for the general regression, the robustness test, and for the country-specific models. In fact, the French civil law system (to which the Netherlands belongs) is said to be the weakest in terms of shareholder protection, which leads to the Netherlands having a higher ownership concentration than in Germany. Moreover, the results of this research show an even stronger relationship between the number of deviations reported and ownership concentration for the Netherlands. Thus, it is not only established that the French civil law leads to a higher ownership concentration, but also that this higher ownership concentration is in fact responsible for more deviations than the German civil law system. However, the effect is quite small; 0.88. Thus, it means that this variable does not have strong effect on the number of reported deviations, but at the same time it is important to not overlook its effect.

Next, gender diversity is expected to have a negative relationship with the number of reported deviations, based on the fact that women are said to be more ethical. For gender diversity on the executive board, the only relationship that comes out as significant is the positive relationship found in the German model. For gender diversity on the supervisory board, negative, significant relationships are indeed found in all models in table 5, except for model 1.3 (the cluster test). Thus, it can be concluded that gender diversity on the executive board is not connected to the number of deviations reported, while higher gender diversity on the supervisory board decreases the number of reported deviations. With a coefficient of -6.79, it has to be concluded that this variable has a big influence on the number of reported deviations.

The size of the supervisory and executive boards is the other board characteristic that is included in this research. It is hypothesized that there is positive relationship between board size and the number of deviations reported, because larger boards would be less effective (Jensen, 1993). The size of the executive board seems to be unconnected to the number of deviations; only for the Dutch model (1.4) is the relationship significant. In the Netherlands, the average executive board consists of six or seven persons. Because the relationship is positive, it can be concluded that increasing the size of the board would decrease the effectiveness of the executive board. The size of the supervisory board shows that there is a negative, significant relationships in the general models (1.1 and 1.2). On average, the supervisory board consists of eleven or twelve members. Thus, an increase in the supervisory board would mean that the supervisory board could be increased in order to increase compliance, but at the same time, the effects will only

be small, because the coefficient is -0.13. On the other hand, the positive relationship that is found in the German model (1.5) indicates that increasing the size of the supervisory board in Germany will increase the number of deviations, i.e. increasing the supervisory board will only make the board less effective. Here too, the coefficient is small, which means that a change in board size will not lead to big changes in the number of deviations reported.

Lastly, it is hypothesized that there is an association between the amount of leverage and the number of deviations. Just as in the literature, this research finds mixed evidence. In the general model, there was no significant relationship found. However, the Dutch model (1.4) shows that there is a positive relationship between the number of deviations and a firm's level of debt. The explanation for this that, apparently, Dutch firms overall choose to signal good corporate governance, with the purpose of attracting better credit ratings (Bauwhede & Willekens, 2008). On the other hand, the German model (1.5) shows a negative relationship between the two variables, which can be explained by debtholders protecting themselves through debt covenants (Eng & Mak, 2003), and the fact that Germany is a bank-based economy, in which the bank functions as a governance device, and also monitors the firm closely simultaneously (Demirgüç-Kunt & Maksimovic, 2002).

5.2. The informativeness of non-compliance explanations

Whereas in the previous section a lot could be explained by the independent variables, it appears that these variables are not as suitable when it comes to explaining the quality of non-compliance explanations. The general models (3.1, 3.2, and 3.3) show that the size of the executive board is significant at the ten percent level (in model 3.1, and 3.2), and that gender diversity on the supervisory board is significant in the cluster test model (3.3). The negative relationship that is discovered between the executive board and the informativeness indicates that increasing the size of the boards will make them less effective (Jensen, 1993), which is interpreted here as the fact that the firm will offer non-compliance explanations of a lower level. Because gender diversity on the supervisory board is positively and significantly related to informativeness in model 3.3, it can be concluded that it appears that the presence of women (at least in the supervisory board) has the ability to increase the informativeness of non-compliance explanations. The motivation for this is that previous research generally finds that the presence of women has many positive effects (Ittonen et al., 2010; Stewart & Munro, 2007; Thiruvadi & Huang, 2011). When comparing the Dutch and German models (5.1 until 5.4), it appears that these models move in opposite directions from each other; a positive relationship

in the one model, is negative in the other. Hence, not many conclusions can be drawn from comparing these models. As will be discussed in the next section, models 4.1, 4.2, and 4.3 show that the differences between the Dutch and German models are hardly significant.

5.3. Differences between the Netherlands and Germany

5.3.1. Differences in the number of deviations

With respect to the number of deviations a firm reported, it is found that ownership concentration causes significantly more deviations in Germany than in the Netherlands. However, this goes against the scenarios which are drawn out in the sections of the civil law system (section 2.1.2), or in the section about the governance devices (section 2.4). Theory would predict that the lower ownership concentration in Germany gives way to better functioning governance mechanisms, because these mechanisms are less undermined by the presence of dominant shareholders. The explanation that this does not occur is that the German corporate governance code is made up by different provisions that are a better fit to a market-based economy (Rott, 2009), with provisions that are more oriented towards the capital market, and thus towards external control mechanisms, such as the market for control, the market for managers, and legal rules (Holmström & Tirole, as cited in Rott, 2009). Because Germany is a bank-based economy, the main control mechanisms are internal, such as the board for directors, incentive compensation, and debt covenants (Holmström & Tirole, as cited in Rott, 2009). As a result, there is conflict between focus on the external control mechanisms in the Code, and the actual internal control mechanisms that are active in bank-based Germany, which compromises the efficiency of the German corporate governance code (Rott, 2009).

More research is needed when it comes to explaining the significant differences between the Netherlands and Germany with respect to gender diversity on the executive and supervisory board. In general, it should be the case that the presence of more women on a board would decrease the number of deviations in both countries by as much. Here, several scenarios might be the case, such as that there is some “optimal proportion” of women in the board, or that the presence of women only adds value up until a certain level of corporate governance in a firm. The negative relationship that is found with respect to debt can be explained by the fact that Germany is a bank-based economy, whereby the bank takes on a large monitoring function, as opposed to the market-based economy, whereby this monitoring function is less present.

5.3.2. Differences in the informativeness of non-compliance explanations

When it comes to differences in the models that explain the quality of non-compliance explanations (tables 7, 8, and 9), it is found that there is again a significant difference between ownership concentration in both countries, which is this time negative, and also that the coefficients for gender diversity on both boards are different between the Netherlands and Germany. In theory, the lower ownership concentration in Germany would ensure a more efficient working of the corporate governance mechanisms, i.e. a higher informativeness of non-compliance explanations, compared to the Netherlands. As a result, the negative coefficient cannot be explained by these theories, since it indicates that the opposite seems to be the case. More research is needed to find out where this negative coefficient comes from.

A possible explanation for the positive coefficient of gender diversity is that gender diversity on the supervisory board in Germany is of a higher level than in the Netherlands. Because women are said to be more ethical than men (Thiruvadi & Huang, 2011), it could be stated that the supervisory board in Germany maintains higher ethical values and therefore, that a higher informativeness is found in Germany than in the Netherlands. Using this same logic – gender diversity on the executive board is higher in the Netherlands than in Germany – the negative coefficient that comes out would be explained by less gender diversity in Germany than in the Netherlands on the executive board.

6. Conclusion

To recall, the comply-or-explain principle that is included in the corporate governance codes of both the Netherlands and Germany has the purpose to increase flexibility, by avoiding that many different firms are subjugated to the same set of inflexible rules. However, previous research finds that firms do not appear to deal with these rules the way they should; the level of informativeness is lower than what the corporate governance code prescribed (Arcot & Bruno, 2006; Hooghiemstra, 2012; Keay, 2014).

The aim of this research is to gain a deeper understanding about which variables are involved in determining how many deviations firms report, and also how much information is offered by non-compliance explanations. Furthermore, this research also aims to find out whether there are differences between the Netherlands and Germany in this context. Even though the countries are highly comparable, differences might come from the fact that these countries have slightly different civil law systems, and also from the fact that the Netherlands is a market-

based economy, while Germany is a bank-based economy. To gain more knowledge about this topic, this research analyzes companies from the AEX and the DAX over a period of three years, in order to discover how the number of reported deviations, and the informativeness of non-compliance explanations come about.

With respect to the number of deviations that are reported by a firm, this research finds that shareholders seem to care more for comply-or-perform rather than comply-or-explain, since better performing firms report more deviations, and a lower quality of non-compliance explanations. Furthermore, it appears to be the case that the presence of dominant shareholders plays a hindering role on the proper functioning of governance mechanisms. When it comes to gender diversity on the supervisory board, the percentage of women on a supervisory board has a positive effect on the functioning of corporate governance mechanisms. Further, it is confirmed that bigger supervisory boards are less effective when it comes to monitoring, and enforcing, the working of corporate governance mechanisms. A striking finding is that the executive board (in terms of both gender diversity and size), and a firm's amount of debt appear to be unconnected to the number of reported deviations. For the models that are concerned with explaining the informativeness of non-compliance explanations, it has to be concluded that more research is needed into which company characteristics are important variables. The results appear to explain only a small part of the variance in this sample, and the direction of the variables seems to be the opposite of what is found in previous research. Just as with the models explaining the number of deviations, it can be concluded that the presence of women on the supervisory board has positive effects on the quality of non-compliance explanations, whereas increasing the size of the executive board will have negative effects.

When it comes to explaining differences between Germany and the Netherlands, the biggest differences appear to be caused by the fact that the Netherlands is a market-based economy, while Germany is bank-based, which has far reaching consequences on how ownership concentration and governance mechanisms develop within a country. The fact that in both countries the corporate governance codes are more market-oriented, and thus centered around external control mechanisms, is responsible for decreasing the effectiveness of the German corporate governance code, because Germany as a bank-based economy relies more on internal control mechanisms. Thus, an important policy recommendation that can be made on the basis of this research is that the Regierungskommission Deutscher Corporate Governance Kodex, in charge of developing/updating the German corporate governance code, should revise the

corporate governance code, so that it is more centered around the bank-based governance mechanisms which are important in Germany.

6.1. Limitations

This research is subjected to several limitations. First of all, the findings are based on a sample of firms that are active on the AEX and the DAX. Therefore, it might be that the findings do not hold for smaller companies. Furthermore, the sample is quite small, which also has its effects on the generalizability of this research's findings. When it comes to the methodology, content analysis is used. Content analysis presents itself to be a good tool to aid in the quantification of textual data, but there is always an error margin to keep in mind. Lastly, this research assumes that the relationships between the variables are linear. Because there is not a rich body of previous research, it might be that the relationship is either non-linear, or that the variables might be reflected better by using logarithms, or other transformations.

6.2. Directions for further research

As stated earlier, this research is one of the firsts to look into what influences compliance to corporate governance codes. As a result, many different directions for further research can be thought of. First and foremost, more research should be conducted on what variables are important when it comes to shaping the quality of non-compliance explanations. Second, research could focus itself more on the way the regressions are shaped; whether the relationships are in fact linear, and whether the way that the variables are operationalized and proxied, is actually the most optimal way. Last, more research should be conducted on how to explain differences across countries, as it turns out that the theories which are used in this research, are not able to explain all the found differences between the Netherlands and Germany.

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8. Appendix

Table 1: An overview of the companies included in the sample

AEX	Industry (SIC-Code)	DAX	Industry (SIC-Code)
ASML Holding NV	Hi-tech	Adidas AG	Manufacturing
Aalberts Industries NV	Manufacturing	BASF SE	Manufacturing
Akzo Nobel NV	Health Care	Bayer AG	Health Care
Gemalto NV	Hi-tech	Beiersdorf AG	Manufacturing
Heineken NV	Consumer	BMW AG	Consumer
Koninklijke Ahold NV	Consumer	Continental AG	Manufacturing
Koninklijke Boskalis Westminster NVShs	Other	Daimler AG	Consumer
Koninklijke DSM NV	Manufacturing	Deutsche Post AG	Other
Koninklijke KPN NV	Hi-tech	Deutsche Telekom AG	Hi-tech
Koninklijke Vopak NV	Other	Deutsche Lufthansa AG	Other
Reed Elsevier NV	Consumer	E.ON SE	Manufacturing
Randstad Holding NV	Other	Fresenius SE & Co. KGaA (St.)	Health Care
Philips Electronics NV	Consumer	Fresenius Medical Care AG & CO KGaA	Health Care
TNT Express NV	Other	HeidelbergCement AG	Manufacturing
Unilever NV	Consumer	Henkel KGaA Vz.	Manufacturing
Wolters Kluwer NV	Consumer	Infineon Technologies AG	Hi-tech
		K+S AG	Other
		Linde AG	Manufacturing
		Merck KGaA	Health Care
		RWE AG St.	Manufacturing
		SAP SE	Hi-tech
		Siemens AG	Manufacturing
		Volkswagen AG Vz.	Consumer

Table 2: Description of the variables

Variable	Proxy	Measurement
<i>Dependent variable</i>		
DEV	Number of reported deviations from the Code	Number of reported deviations from the Code.
ISCORE	Informativeness of non-compliance explanations.	Weighted average score of explanations for non-compliance.
<i>Independent variables</i>		
<i>Explanatory variables</i>		
ROE	Return on equity	The level of return on equity that is relevant for the shareholders.
OWN	Ownership Concentration	Dummy variable indicating that a shareholder holds more than 10% of outstanding shares: 1 means yes, 0 means no major shareholder present.
DIV	Gender diversity on board	Percentage of women on the board (at year's end).
BOARD	Size of board	Number of board members.
DEBT	Leverage	Total debt as a percentage of total assets.
<i>Control variables</i>		
FIRM	Size of firm	Total assets at the end of the fiscal year.
Industry dummies	Industry of firm	Dummy variable with the following categories: consumer, manufacturing, hi-tech, health care, and other industries.
Year dummies	Year effects	Dummy variable with the following categories: 2012, 2013, and 2014.

Table 3: Descriptive statics

<i>Panel A: total sample</i>					
<i>Dependent variable</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>St. Dev</i>	
Number of reported deviations (DEVS)	2.650	0	11	2.698	
Quality non-compliance explanations (ISCORE)	2.489	1	3	0.673	
<i>Independent variables</i>					
Return on equity (ROE)	0.130	-0.277	0.487	0.119	
Ownership Concentration (OWN)	0.590	0	1	0.494	
Gender diversity on executive board (EDIV)	0.100	0	0.5	0.146	
Size of executive board (EBOARD)	6.564	2	14	2.640	
Gender diversity on supervisory board (SDIV)	0.185	0	0.563	0.132	
Size of supervisory board (SBOARD)	11.590	0	22	6.145	
Leverage (DEBT)	0.598	0.236	0.935	0.144	
<i>Panel B: data split up by year</i>					
<i>Dependent variable</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>		
DEV	2.667 (2.832)	2.718 (2.743)	2.564 (2.583)		
ISCORE	2.494 (0.693)	2.553 (0.584)	2.422 (0.742)		
<i>Independent variables</i>					
Return on equity	0.129 (0.128)	0.135 (0.123)	0.127 (0.109)		
Ownership Concentration	0.560 (0.498)	0.590 (0.498)	0.560 (0.498)		
Gender diversity on executive board	0.0843 (0.101)	0.087 (0.129)	0.106 (0.130)		
Size of executive board	6.590 (2.692)	6.538 (2.644)	6.564 (2.654)		
Gender diversity on supervisory board	0.166 (0.119)	0.183 (0.137)	0.205 (0.140)		
Size of supervisory board	11.538 (6.039)	11.641 (6.226)	11.560 (6.328)		
Leverage	0.609 (0.146)	0.583 (0.145)	0.601 (0.143)		
<i>Panel C: data split up by industry</i>					
<i>Dependent variable</i>	<i>Consumer</i>	<i>Manufact.</i>	<i>Hi-tech</i>	<i>Health</i>	<i>Other</i>
DEV	4.037 (3.557)	1.722 (2.468)	2.111 (1.937)	3.133 (2.416)	2.571 (1.805)

ISCORE	2.528 (0.628)	2.748 (0.424)	2.463 (0.818)	2.242 (0.745)	2.197 (0.763)
<i>Independent variables</i>					
Return on equity	0.220 (0.480)	0.112 (0.099)	0.090 (0.126)	0.095 (0.104)	0.105 (0.089)
Ownership	0.593 (0.500)	0.500 (0.507)	0.611 (0.502)	0.600 (0.507)	0.714 (0.463)
Concentration					
Gender diversity on executive board	0.179 (0.148)	0.053 (0.074)	0.095 (0.118)	0.029 (0.060)	0.091 (0.123)
Size of executive board	8.704 (3.160)	5.917 (1.746)	6.556 (2.995)	6.867 (1.125)	4.714 (1.736)
Gender diversity on supervisory board	0.171 (0.109)	0.218 (0.142)	0.207 (0.108)	0.133 (0.128)	0.165 (0.154)
Size of supervisory board	10.22z2 (7.767)	13.278 (4.926)	10.722 (6.720)	11.333 (3.697)	11.381 (6.461)
Leverage	0.692 (0.075)	0.580 (0.125)	0.504 (0.218)	0.592 (0.086)	0.592 (0.138)

Panel D: data split up by country

<i>Dependent variable</i>	<i>Netherlands</i>	<i>Germany</i>
DEV	3.771 (3.224)	1.870 (1.932)
ISCORE	2.261 (0.721)	2.648 (0.591)
<i>Independent variables</i>		
Return on equity	0.138 (0.153)	0.125 (0.089)
Ownership	0.625 (0.489)	0.565 (0.499)
Concentration		
Gender diversity on executive board	0.121 (0.145)	0.073 (0.096)
Size of executive board	6.396 (3.660)	6.681 (1.613)
Gender diversity on supervisory board	0.174 (0.147)	0.192 (0.121)
Size of supervisory board	5.771 (3.130)	15.638 (4.137)
Leverage	0.580 (0.153)	0.610 (0.137)

Descriptive statics of the sample, which includes 117 observations. Panel A describes the total sample. Panel B, C, and D describe the sample broken down per year, industry, and country. For panel B, C, and D, the first number depicts the mean value, and the number between parentheses depicts the standard deviation.

Table 4: Correlation matrix

	DEV	ISCORE	ROE	OWN	EDIV	EBOARD	SDIV	SBOARD	DEBT
DEV	1.000								
ISCORE	-0.368	1.000							
ROE	0.348	0.040	1.000						
OWN	0.143	-0.113	-0.014	1.000					
EDIV	0.122	-0.077	0.222	-0.059	1.000				
EBOARD	0.260	-0.058	0.355	-0.066	0.235	1.000			
SDIV	-0.447	0.131	-0.275	0.021	0.169	-0.193	1.000		
SBOARD	-0.367	0.153	-0.151	-0.005	-0.056	0.012	0.324	1.000	
DEBT	-0.022	-0.051	0.059	-0.007	0.209	0.110	-0.077	0.311	1.000

Correlation matrix for all the dependent and independent variables, excluding the control variables. The rules of thumb are the following:

- 0.90 to 1.00 (-0.90 to -1.00): Very high positive (negative) correlation
- 0.70 to 0.90 (-0.70 to -0.90): High positive (negative) correlation
- 0.50 to 0.70 (-0.50 to -0.70): Moderate positive (negative) correlation
- 0.30 to 0.50 (-0.30 to -0.50): Low positive (negative) correlation
- 0.00 to 0.30 (0.00 to -0.30): Little if any correlation

Table 5: Multivariate regression results for the number of deviations

	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)
ROE	3.537*	3.537*	3.537	0.336	1.266
	(1.943)	(1.804)	(0.663)	(3.403)	(2.084)
OWN	0.881**	0.881**	0.881	2.249*	0.917***
	(0.418)	(0.425)	(0.618)	(1.237)	(0.333)
EDIV	2.598	2.598	2.598	-6.274	3.766***
	(1.621)	(2.271)	(4.518)	(4.277)	(1.344)
EBOARD	0.082	0.082	0.082	0.609***	-0.147
	(0.092)	(0.133)	(0.085)	(0.212)	(0.126)
SDIV	-6.794***	-6.794***	-6.794	-8.404**	-6.074***
	(1.849)	(1.842)	(1.424)	(4.059)	(1.722)
SBOARD	-0.129***	-0.129***	-0.129	-0.104	0.234***
	(0.044)	(0.037)	(0.043)	(0.230)	(0.060)
DEBT	1.500	1.500	1.500	7.393**	-12.294***
	(1.723)	(1.629)	(4.272)	(3.582)	(1.990)
Intercept	4.189***	4.189***	4.189	-1.843	5.828***
	(1.284)	(1.702)	(0.828)	(3.862)	(1.423)
R-squared	0.373	0.373	0.373	0.612	0.642
F value	8.01***	-	-	4.60***	8.37***
Max VIF	1.85	1.85	1.85	6.87	6.87
Breusch- Pagan test (Cook- Weisberg)	7.71***	-	-	1.91	1.91

The dependent variable in these regressions is the number of deviations. Model (1.1) shows the general model. Model (1.2) shows the outcome of the regression with robust standard errors. Model (1.3) shows the outcome of the regression with the cluster test. Model (1.4) shows the outcome for the Dutch model, which includes the 48 observations for Dutch firms. In this model, the dummy variables for industry are included. Model (1.5) shows the outcome for the German model, which includes the 69 observations for German firms. In this model, the dummy variables for industry are included.

In models 1.2, 1.3, and 1.4, all 117 observations are included. None of the models include the dummies for year effects, since these turned out to be insignificant. The numbers in parentheses show the standard errors for each of the coefficients.

****, **, * means that the coefficient is statistically significant at the 1, 5, and 10 % level respectively.*

Table 6: Multivariate regression results for the number of deviations with country dummies

	(2.1)	(2.2)	(2.3)
ROEDUMMY	3.118 (3.637)	3.118 (1.977)	3.118 (0.059)
OWNDUMMY	1.355** (0.588)	1.355** (0.359)	1.355** (0.006)
EDIVDUMMY	4.378* (2.243)	4.378* (1.574)	4.378* (0.029)
EBOARDDDUMMY	0.035 (0.191)	0.035 (0.103)	0.035 (0.004)
SDIVDUMMY	-5.415** (2.535)	-5.415** (1.504)	-5.415** (0.082)
SBOARDDDUMMY	EXCLUDED	EXCLUDED	EXCLUDED
DEBTDUMMY	-5.464*** (1.910)	-5.464*** (1.023)	-5.464*** (0.065)
Intercept	3.656*** (0.344)	3.656*** (0.458)	3.656*** (0.114)
R-squared	0.245	0.245	0.245
F value	5.06***	-	-
Max VIF	8.96	-	-
Breusch-Pagan test (Cook-Weisberg)	21.77***	-	-

The dependent variable in these regressions is the number of deviations, which is regressed with the interaction dummy variables for each of the independent variables. The hold-out group is the Netherlands, with its 48 observations. Model (2.1) shows the general model. Model (2.2) shows the outcome of the regression with robust standard errors. Model (2.3) shows the outcome of the regression with the cluster test.

In these models, all 117 observations are included. None of the models include the dummies for year effects or industries, since these turned out to be insignificant. The numbers in parentheses show the standard errors for each of the coefficients. The dummy variable for the size of the supervisory board is excluded due to multicollinearity.

****, **, * means that the coefficient is statistically significant at the 1, 5, and 10 % level respectively.*

Table 7: Multivariate regression results for the ISCORE

	(3.1)	(3.2)	(3.3)
ROE	0.623 (0.606)	0.623 (0.669)	0.623 (0.500)
OWN	-0.132 (0.122)	-0.132 (0.117)	-0.132 (0.218)
EDIV	-0.019 (0.477)	-0.019 (0.590)	-0.019 (0.503)
EBOARD	-0.049* (0.028)	-0.049* (0.028)	-0.049 (0.014)
SDIV	0.271 (0.567)	0.271 (0.554)	0.271** (0.006)
SBOARD	0.002 (0.014)	0.002 (0.014)	0.002 (0.029)
DEBT	-0.854 (0.533)	-0.854 (0.683)	-0.854 (0.925)
Intercept	2.847*** (0.405)	2.847*** (0.476)	2.847* (0.194)
R-squared	0.192	0.192	0.192
F value	2.05**	-	-
Max VIF	3.41	-	-
Breusch- Pagan test (Cook- Weisberg)	14.55***	-	-

The dependent variable in these regressions is the informativeness of non-compliance explanations. Model (3.1) shows the general model. Model (3.2) shows the outcome of the regression with robust standard errors. Model (3.3) shows the outcome of the regression with the cluster test.

In these models, all 117 observations are included. None of the models include the dummies for year effects or industries, since these turned out to be insignificant. The numbers in parentheses show the standard errors for each of the coefficients.

****, **, * means that the coefficient is statistically significant at the 1, 5, and 10 % level respectively.*

Table 8: Multivariate regression results for the ISCORE with country dummies

	(4.1)	(4.2)	(4.3)
ROEDUMMY	-0.758 (0.966)	-0.758 (0.860)	-0.758 (0.008)
OWNDUMMY	-0.268* (0.156)	-0.268* (0.121)	-0.268* (0.001)
EDIVDUMMY	-1.201** (0.596)	-1.201** (0.309)	-1.201** (0.017)
EBOARDDDUMMY	0.056 (0.051)	0.056 (0.042)	0.056 (0.002)
SDIVDUMMY	1.244* (0.673)	1.244* (0.485)	1.244* (0.024)
SBOARDDDUMMY	EXCLUDED	EXCLUDED	EXCLUDED
DEBTDUMMY	0.044 (0.507)	0.044 (0.440)	0.044 (0.041)
Intercept	2.267*** (0.091)	2.267*** (0.104)	2.267*** (0.043)
R-squared	0.143	0.143	0.143
F value	2.61**	-	-
Max VIF	8.96	-	-
Breusch-Pagan test (Cook-Weisberg)	5.19**	-	-

The dependent variable in these regressions is the informativeness of non-compliance explanations. Model (4.1) shows the general model. Model (4.2) shows the outcome of the regression with robust standard errors. Model (4.3) shows the outcome of the regression with the cluster test.

In these models, all 117 observations are included. None of the models include the dummies for year effects or industries, since these turned out to be insignificant. The numbers in parentheses show the standard errors for each of the coefficients. The dummy variable for the size of the supervisory board is excluded due to multicollinearity.

****, **, * means that the coefficient is statistically significant at the 1, 5, and 10 % level respectively.*

Table 9: Multivariate regression results for the ISCORE, separated for Dutch and German observations

	(5.1)	(5.2)	(5.3)	(5.4)
ROE	1.667* (0.848)	1.667** (0.636)	-0.516 (0.792)	-0.516 (0.874)
OWN	-0.131 (0.223)	-0.131 (0.222)	-0.287** (0.127)	-0.287** (0.120)
EDIV	1.939* (0.985)	1.939** (0.890)	-0.651 (0.520)	-0.651 (0.581)
EBOARD	-0.136** (0.055)	-0.136*** (0.037)	0.030 (0.049)	0.030 (0.043)
SDIV	-0.500 (1.143)	-0.500 (1.140)	1.542** (0.646)	1.542*** (0.521)
SBOARD	0.078 (0.056)	0.078 (0.058)	-0.076*** (0.021)	-0.076*** (0.016)
DEBT	-2.610** (0.977)	-2.610*** (0.830)	0.239 (0.682)	0.239 (0.770)
Intercept	3.410*** (0.717)	3.410*** (0.566)	3.281*** (0.477)	3.281*** (0.545)
R-squared	0.278	0.278	0.323	0.323
F value	1.87*	-	3.58***	-
Max VIF	2.20	-	2.20	-
Breusch-Pagan test (Cook-Weisberg)	12.45***	-	12.45***	-

The dependent variable in these regressions is the informativeness of non-compliance explanations. Model (5.1) shows the outcome for Dutch model. Model (5.2) shows the outcome for the Dutch model with robust standard errors. Model (5.3) shows the outcome for the German Model. (5.4) shows the outcome for the German model with robust standard errors.

Models 5.1, and 5.2 include the 48 observations for the Dutch firms. Models 5.3 and 5.4 include the 69 observations for the German firms. None of the models include the dummies for year effects or industries, since these turned out to be insignificant. The numbers in parentheses show the standard errors for each of the coefficients.

****, **, * means that the coefficient is statistically significant at the 1, 5, and 10 % level respectively.*