IS THERE A DARK SIDE OF DISCLOSURE? - A PANEL DATA NETWORK ANALYSIS OF GERMAN DIRECTOR COMPENSATION

Abstract:

Our research examines the influence of social comparison on the compensation received by directors of German Prime Standard companies during the period of 2002 to 2007. German directors are allowed to serve on multiple boards with comparable tasks and essentially set their compensation themselves, which makes them the ideal object to study social comparison on. We investigate the impact of the three pillars individual experience, peer compensation and market compensation and can show that the individual experience stemming from multiple board seats in different companies as well as a general market trend comparison impact the compensation level. On the other hand a peer group comparison shows no signs of significance in this context. This result implies that not the disclosure rules, that make comparison possible on the peer group level, drive the increase of director compensation but rather the directors' individual experience gained through multiple board seats bordered by the economic trend.

Keywords: Supervisory Board, Director Compensation, Social comparison, Two-tier System, Disclosure.

1. Introduction

Disclosure is a good thing; that is the opinion politicians and the media usually support when it comes to shareholders' rights and the issue of defending or extending them. The more they know about their investment (this leads ultimately to perfect information) the more efficient the market as a whole works. Transparency is seen as the key to facilitating well-informed decisions made by shareholders. Disclosure of director compensation in Germany is also regarded as a way, shareholders are able to control their directors for deserved pay. However there is also a "downside" that is discussed sometimes: Directors are expected to gain too much information on common compensation levels via the perfect transparency. Our research concentrates therefore on how directors use this transparency to their advantage in setting their compensation.

When explaining directors' or executives' compensation there is always the hope that every last cent can be explained with rational factors such as corporate size, firm performance, industry or human capital attributes (O'Reilley, Main, & Crytsal, 1988). But next to company, performance and board characteristics there are also social aspects driving the setting of a compensation level. Therefore social comparison might close the gap between real compensation and explainable compensation further. To compare themselves, directors need information on economically justifiable levels of compensation. One way gaining this information might be via the observation of a set of peer group directors. This kind of observation is generally possible in times of strict transparency on compensation (Bebchuck, & Fried, 2003). And indeed, researchers have observed management compensations increasing in the wake of more and more disclosure agreements put into place (e.g. Craighead, Magnan, & Thorne, 2004). Following this idea and seeing the observed "bidding-up" process critically, one can conclude that reducing the extent of disclosure or even abolishing it would decrease compensation levels again or at least stop them from increasing. The main research contribution of our study however is, that we can show that this bidding up process occurs anyways since directors base their social comparison mainly on individual experience and market trends and therefore do not even need any disclosure to increase their compensation via social comparison.

Our concept of social comparison bases on the idea that even without the knowledge gained through annual reports directors have enough information for social comparison simply from their individual experience stemming from multiple directorships. Each board of directors with at least one member with an additional mandate on another board has access to individual experience and we show an actual influence on the compensation. The board

member with the highest compensation pushes the focal board's compensation up because "equal pay for equal work" seems to be fair for him. In contrast the comparison with similar companies within the same stock index (as one example of a peer group) that represents information purely gained through disclosure does not influence compensation. Furthermore we show that the average compensation for directors in the entire German market plays a role in the process of setting compensation as well. In summary our research suggests that the market compensation sets guidelines and the directors use individual experience to determine the compensation within those. The information on peer compensation gained via transparency however cannot be identified as a significant driver of the compensation level.

Our research focuses on German Prime Standard boards of directors and their per capita compensation for the following reasons: In the German two-tier system the board of directors (also called supervisory board members) is separated from the board of managers and that includes that there is no influence of the latter on the compensation of the former. The supervisory board essentially sets its own pay by proposing a system to calculate the compensation to the general assembly of shareholders who then formally approve it. This is important as we can demonstrate that social comparison truly plays a role without any interdependencies or tactical behavior between the two boards. German supervisory board members' compensation does not contain any long-term incentives. If performance based compensation elements are included they are usually short term as well as cash and not stocks or stock options. That does not only make it easy to calculate but also compare the compensation for the directors as well as for us observing it. The tasks performed by the different boards are very similar across firms, industries and indices, which also makes the compensation comparable. Another prerequisite for our analysis is that our research objects have to be able to gain experience on different boards and that is allowed and common for directors in Germany. Moreover the German corporate governance system is well known for its dense network or supervisory board members – the so called Germany Inc. (e.g. Adams, 1999; Deeg, 2005; Goergen, Manjon & Renneboog, 2008) and therefore gives us the chance to consider many observations by investigating individual experience of directors in other supervisory boards. These unique characteristics make the German directors' compensation the topic of our research.

Our contribution to the existing literature is that we are able to measure the social comparison in an environment without any unwanted influences we cannot control for. With the German boards of directors we analyze a group of people who are able to set their own compensation (within limits) so the gained experience is immediately usable without adjustment to another

context and the impact of outside parties is limited to the general assembly who usually approve of the proposals made by the boards. We therefore extend to existing literature on director compensation by the dimension of social comparison.

In summary this is the first paper that analyzes the immediate impact of social comparison on compensation levels within a certain group. In the existing literature the impact of social comparison between a board of directors and the management has been identified (e.g. O'Reilley et al., 1988), also the objects people use for comparison (cp. Shah, 1998) but the approach we use is unique. We are able to show that social comparison plays a role when directors set their compensation. Though working on a German sample our results can also be transferred into different institutional settings – the German sample just facilitates the measurement and separation of the three effects of individual experience, peer comparison and market comparison without any biases.

The next parts of the paper are structured as follows: The second part gives an overview of the existing literature on aspects that explain the level of director compensation as well as the relationship between disclosure and management compensation. After that we explain the concept of social comparison and develop the hypotheses about the effect it has on director compensation. An overview of our sample introduces the data, variables and methods before we present the results. We conclude by discussing the results and giving suggestions for further research as well as implications of our findings for governments as well as companies.

2. Literature Review

2.1. Determinants of Director Compensation

The question about what influences director compensation has been asked numerous times in the existing literature and many different aspects have come into consideration. For an easier review we structure the determinants into the following categories: corporate characteristics, corporate performance and corporate governance (subdivided into ownership structure and board characteristics).

One corporate characteristic determining director compensation is firm size. Possible explanations for the impact are the skill set a director has to possess in a bigger company relative to a smaller one and the ability of a larger company to pay higher compensation for the relatively scarce qualifications (Boyd, 1996). Linn and Park (2005) show, that directors add larger total value to larger companies because these companies are more resource abundant. Arguing with marginal product theory they state that the directors of larger companies should get paid more in turn. A company's risk as well as its leverage affect

director compensation since they influence the intensity of the tasks the directors have to perform controlling the management board (cp. Adams, 2003; Bryan, Hwang, Klein, & Lilien, 2000).

The performance of the company also impacts the compensation of its directors. This can be represented by capital market or accounting based measures. The former (cp. Bryan et al., 2000) as well as the latter (cp. Brick, Palmon, & Wald, 2006) are reported in the existing literature to have positive impacts on the directors' compensation.

Ownership structure determines the compensation of directors as boards with higher percentages of directors owning equity in the company have a relatively lower compensation. Boyd (1996) explains this with agency theory: directors without ownership in the company might have different goals than their colleagues who own shares of the company. A higher compensation will get their goals aligned with the ones of the shareholders. Analyzing the influence of external block holders can make a similar argument: They have more power relative to shareholders with fewer shares of the company and therefore control the board of directors more strictly when it comes to setting their compensation. Additionally these blockholders depend less on the efficiency of the internal control committee and therefore do not need to set strong incentive via high compensation (cp. Cordeiro, Veliyath, & Erasmus, 2000; Andreas, Rapp, & Wolff, 2009).

Board characteristics also influence the compensation paid to a director: The number of board meetings for example has an impact because part of it is designed as an attendance fee, which means the more meetings held the higher the compensation is, attendance assumed (cp. Bryan et al., 2000; Brick et al., 2006). There are different implications in the literature about board size. Ryan et a. (1996) reports a significant negative impact of board size on directors' compensation while Hempel and Fay (1994) find a positive impact, not significant however.

2.2. Disclosure and Management Compensation

In economic theory perfect information is an aspired state, as it would facilitate well-informed decisions by all agents (cp. Fama, Fisher, Jensen, & Roll, 1969). This is one reason why legislators all over the world try to push for more and broader disclosure rules. The need for disclosure seems to be eminent because of the agency conflict. Shareholders as principal and management as agent have different goals so the principal has to link the agent's objectives to his ones. One way of accomplishing that is through performance-based pay for the agent. Good performance is the principal's goal and with reaching that goal, the agent gets paid more, which is his goal (cp. Elston, & Goldberg, 2003). In theory the disclosure of management compensation gives the shareholders a way to control the management. The

question remains however whether that is actually the case as some researchers have found out that there are unwanted side effects.

In their research on the impact mandated disclosure has on CEO compensation, Craighead et al. (2004) show that the cash compensation of CEOs increased with the advent of disclosure rules in a sample from Canada. Their research indicates the possibility of an improvement of executive accountability through mandated disclosure of compensation but further research is necessary to proof cost-effectiveness. The study implies that for CEO cash compensation a significant and general increase is observable after the disclosure rules were put into effect. "This suggests that by making CEO compensation public, mandated disclosure may have resulted in CEOs adopting performance-contingent compensation plans that were costly to shareholders" (Craighead et al., 2004: 391).

On a related note Hayes and Schaefer (2009) investigated an effect called Lake Wobegon Effect[1], which explains rising CEO compensation levels with the feeling of companies that their CEO has to receive an above average compensation since that strengthens the perception of the company. They argue that without disclosure there would be no need for that and therefore disclosure rules might be the reason for this effect.

This observed increase in compensation is not just an unwanted side effect; it is the opposite of what disclosure of CEO compensation was intended for. Originally designed to help shareholders control the compensation of their CEO and minimize agency conflicts, it appears to have the effect of CEOs earning more. With this background information it seems reasonable that some scientists do not approve of disclosure as the panacea for the agency conflict.

Also a subject worth noting in this discussion is the influence disclosure has on the affected managers. Autrey, Dikolli and Newman (2007) analyze the career concerns that managers might have because with disclosure rules in effect not only the shareholders but also the labor market can assess their ability especially when performance-based pay components are reported. Their research concludes that disclosure can be beneficial if a) the observed managers can influence the disclosed measures with more effort, and b) the measures depict the ability of the observed object to a certain accuracy. If these two characteristics fit together disclosure rules can be an additional incentive for the manager to perform well which in turn is beneficial for the shareholders.

[1] This effect is named after Lake Wobegon, Minnesota, a mythical town invented by Garrison Keillor (a public radio host). All children there are above average, which made "Lake Wobegon effect" a synonym for the "phenomenon" that every observation ranks above average. (cp. Hayes, & Schaefer, 2009).

3. Social comparison and director compensation

Based on general aspects on the theory of social comparison we derive hypotheses for the three dimensions individual experience, peer comparison and market comparison. Therefore it is important to clarify our understanding of social comparison and the constraints for the concept driven by our research setting. These general definitions represent the theoretical basis for the following hypotheses.

3.1. Social comparison

To understand the concept of social comparison and to make it applicable to the setting of compensation levels of supervisory board members on has to understand the *meaning* of social comparison, the *fundamentals* it bases on and the *way of affecting behavior*.

According to Suls, Martin and Wheeler (2002) the *meaning* of social comparison is defined as follows: "Social comparison consists of comparing oneself with others in order to evaluate (…) some aspect of the self" (2002: 159). This concept can be observed in various surroundings. Every time the assessment of the own position is only possible with reference points, social comparison takes place. Comparison of one's standing, ability or characteristic with someone else's, enables the comparer to judge how to perceive the own position and whether it is satisfactory or not. Festinger (1954) distinguishes between opinions and abilities, which both are evaluated using social comparison and together have an effect on the behavior. The difference between them as he analyzed is the fact that ability can be evaluated objectively while opinions cannot. For economical analyses such as ours opinions do not play a role as the general principal of "more is better" lay the basis for research in that field of science. Salancik and Pfeffer's (1978) argument that in a situation involving uncertainty social similarity plays a more important role than without, is also based in part on Festingers theory stating that social comparison is used by individuals when they lack an objective way to judge a situation.

The *fundamental* for social comparison is the way of obtaining information. In the literature two different ways of getting the information can be found: inquiry and monitoring (Ashford, & Cummings, 1983). Whereas inquiring implies active asking, monitoring does not require interaction. Within our research setting only monitoring is a common approach for gaining information, since either the directors know what they earn (i.e. individual experience) or the information is open to be monitored through publications (i.e. index compensation/market compensation). The advantage of this one-dimensional information path is that our research is not biased by the fact that only a part of the directors (the active ones) ask for information and

drive the results. The general disadvantage of information retrieval via inquiry on the other hand does not hold in our case: inquired information has to be interpreted and therefore leaves room for errors (cp. Shah, 1998). But information on compensation levels mainly consists of numbers and with numbers there is only marginal scope of interpretation.

Social comparison *affects a person's behavior* by providing goals. Managers set their aspiration levels via social comparison (cp. Greve, 2008, for the analyses of this aspiration effect of social comparison on managers deciding about company size). Suls et al. (2002) assess that once the result of a comparison is apparent there are positive and negative effects on behavior. Observing the own situation as being the better one a person realizes that a) one's position is better relative to the other one but also that b) it could worsen. Similar in the case of a relatively worse situation one can a) just realize it or b) see the chance of improvement. Applied on director compensation the board member either only realizes that his compensation is higher (lower) than the compensation another director receives or he can recognize the endangerment of a compensation decline (or the possibility of improvement). After all it is not important what the result is but how it is dealt with. The comparison can be seen as a simple gain of information on the own position relative to others or it can act as a stimulus toward taking action and improving that position. Concerning compensation one has to expect a person to take some action, when it can improve the own situation by increasing the amount of money and to silently observe if the danger of a decrease in compensation is given. The situation ends up in the bidding-up process defined by Ezzamel and Watson (1998). In salary-only models they found evidence for a bidding-up process "since the estimated coefficients (…) on the underpaid executive pay anomalies indicate a much greater sensitivity of subsequent cash pay changes than they did for the overpaid executives" (1998: 230).

3.2. Developing Hypotheses

When analyzing mechanisms how social comparison affects director compensation we expect to find three pillars that play a role: the *individual experience*, the *comparison with peer group compensation* and the *comparison with market compensation*. We thereby extend the multi-dimensional approach of O'Reilley et al. (1988) by a third pillar and refine and improve their first two pillars investigating an unbiased experience effect. In contrast to them we do not have to deal with biased behavior of a compensation committee that is deciding about somebody else's compensation, but can focus directly on the impact of an individual's cognition and reaction on the active comparison with its social environment.

When people compare themselves to others, they like to use someone similar to themselves simply because the information gained can be more easily interpreted (Suls et al, 2002). Taking this argument further, comparison with oneself (*individual comparison*) is even better because nobody is more similar. Gaining information on reasonable levels of compensation through experiencing it first-hand therefore is valuable because the director can put it into the context of other information and characteristics. A director who serves on more than one board of directors of different companies gains first-hand knowledge about the director compensation modalities in each of these companies. Provided that comparable work is performed in each of them, compensation differences lead him to try to increase the compensation of his lower paying directorship(s) towards the compensation level of his highest paying one. We assume that the other directors act rational and support their highest paid colleague in trying to push the compensation upward for the entire board because of the general economic principal that more is perceived as better. Given all these preconditions are fulfilled the compensation will go up. Through this mechanism the other directors benefit from their one colleague with the highest paid mandate. Applying the reasoning that Autrey et al. (2007) analyzed in regard to manager compensation it is also in the interest of directors to send a signal of their quality to the public. All directors of one company receive the same compensation but it is in the interest of them all that it is above average in order to demonstrate the quality of their work. The director with the highest compensation additionally can be perceived as the initiator of that raise, which is observable through the disclosure rules in the German Prime Standard. This can act as an additional motivation for him.

> *Hypothesis 1: The highest compensation within the board of directors has a positive impact on the compensation for the entire board in the following year.*

The *comparison with a peer group* should also yield satisfactory argumentation. McBride (2010) argues that when people make social comparison they compare themselves to the average of all others if this is the only information they have, but prefer to use a group of similar people to compare to if possible. Applied on director compensation a supervisory board member would tend to create some kind of peer group to set the own level of compensation into comparison. One possibility for such peer groups are stock indices. The Prime Standard (sample of this study) itself is divided into four indices: DAX, MDAX, SDAX, TecDAX and additionally there are some companies abiding by the rules set for Prime Standard companies. Comparison within an index makes sense as it happens between similar sized and publicly monitored companies. The argumentation behind the rationale of raising the compensation because the index is paying better on average seems plausible.

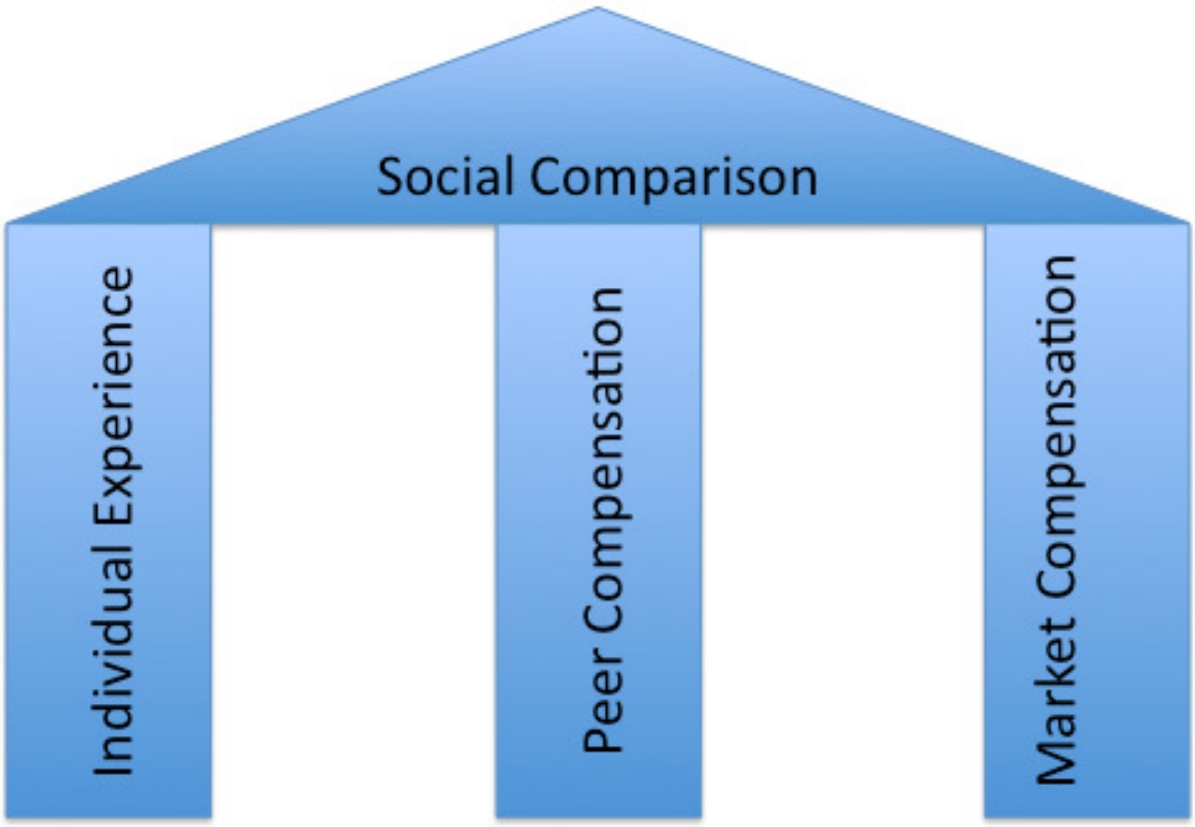
Making his case on the basis of a greater group in order to convince the general assembly gives the director credibility. The disclosure rules enable the directors as well as the general assembly to assess how the compensation modalities of their board of directors rank in comparison to other companies and hence to the average compensation within the index they currently belong to. This is also observable by the public in general which holds two more rationales why the comparison with the index average is an important factor: Arguing with the Lake Wobegon Effect explained earlier (cp. Hayes, & Schaefer, 2009) there is a further incentive for the shareholders to approve a higher compensation proposal by the directors as a below average compensation might act as bad publicity for the company. Furthermore an above average compensation as mentioned earlier entails a perceived above average work quality of the directors. Taking these two components into consideration an above average compensation is aspired by the shareholders as well as the directors.

> *Hypothesis 2: The compensation paid in the respective index the company belongs to has a positive impact on the compensation the directors on the board receive in the following year.*

Reasonable thinking however also leads to the conclusion that the comparison with the compensation average of the entire country should not be dismissed even if peer comparisons are possible through disclosure rules. From a psychological standpoint one might argue that this is the least favorite comparison object but from an economical it definitely has an impact. Compensation cannot be set without taking the economy of the country as a whole into consideration. Shareholders as well as the public and the media would not stand quiet if a small group tried to boost their compensation to unjust ranges while the rest of the country "suffered". Therefore the *comparison with market compensation* bases on the general trend in the market. It is expected that directors compare their compensation to the average of the entire economy. This comparison gives the directors a first guideline for their compensation and sets the borders within the directors optimize what they pay themselves.

> *Hypothesis 3: The overall average of director compensation in the entire market has a positive impact on the compensation for the entire board in the following year.*

Scheme 1 depicts our three hypotheses as components of social comparison, which we expect to have an impact on director compensation. In the following parts we show the empirical analysis of our hypotheses and its results.



This scheme shows the three pillars individual experience, peer compensation and market compensation as components of social comparison, which we hypothesize to have an impact on director compensation.

Picture 1: The three pillars of social comparison

4. Sample and Methods

4.1. Data and regional focus

The initial sample we use consists of all German companies whose shares were listed in the Prime Standard between 2002 and 2007. The Prime Standard is a market segment in Germany that dictates the highest reporting level as well as disclosure standards. Our sample is restricted to Prime Standard firms because our data has to satisfy high levels of quality in order to guarantee the correctness of conclusions we infer from them. On the basis of that sample we made the following adjustments: We ensure that each company only appears once per year in the sample by eliminating double listings. Excluding companies with a foreign ISIN ensures the same regulation and economic surroundings as well as similar corporate governance for all companies. For those reasons we do not consider financial companies in our sample as well, which are defined by a Standard Industry Classification code in the range of 6000 through 6799 (cp. Farrell, Friesen, & Hersch 2008). This leaves out real estate and insurance companies as well as banks. Additionally companies' observations are excluded for

a firm-year in which they became insolvent, merged with another company or were acquired. In any of these cases compensation data for the full year was not attainable. These adjustments leave us with 1773 firms through these years that meet the set criteria. For 33 of them sufficient data about the director compensation was not available so that our used sample consists of 1,740 firm-year observations. For these we accumulate and calculate data representing corporate characteristics, performance and corporate governance.

Further adjustment is necessary because not all firm-year observations are feasible for our research. We lag the variable representing social comparison by one year (which eliminates year 2002) and firms that only joined the Prime Standard within the last three years do not have certain data available (e.g. the 36 months – stock price volatility). This leaves us with 269 to 304 companies per year and overall 1317 firm-year-observations with usable data on director compensation.

Annual reports of the Prime Standard firms are our prime source for board and governance characteristics. Due to the lack of comprehensive sources for this type of data such as the Standard and Poor's ExecuComp or Compustat we rely on manually collected data accrued from the firms' annual reports as well as the Hoppenstedt Aktienführer, which is a guide to stocks listed in Germany. Datastream and Worldscope are our sources for financial data.

		Number of directors		Average number of directors		
Year	Number of firms	All directors	Shareholders representative	All directors	Shareholders representative	Average compensation of all directors
2002	308	2,286	1,580	7.42	5.13	22,442
2003	287	2,186	1,506	7.62	5.25	25,252
2004	269	2,060	1,400	7.66	5.20	29,408
2005	281	2,122	1,416	7.55	5.04	31,861
2006	291	2,209	1,472	7.59	5.06	35,431
2007	304	2251	1534	7.40	5.05	38,060
All	1,740	13,114	8,908	7.54	5.12	30,409

Table 1 shows the yearly development of firm-year observations. From our initial sample of all German Prime Standard companies between 2002 and 2007 we eliminated double listing, foreign as well as financial companies and also companies that went insolvent, merged or were acquired during theses years. The other columns show the developments of directorships as well as the breakdown of how many directors represent the shareholders and are therefore relevant for our research. The last column shows the average compensation the directors received.

Table 1: Overview directorships

The German two-tier system is ideal to analyze the effects that networks and social comparison have on compensation for five reasons: The strict *separation* of managers and supervisory board members, the *individual decision* of supervisory board members on their

compensation and the *comparability* of supervisory boards concerning theirs tasks, the uncomplex *structure of the compensation* of supervisory board members and the dense Germen supervisory board member *network*:

In the German two-tier system the board of directors is *separated* from the board of managers. The basic tasks for the board of directors are to appoint the executive management and set their contracts (cp. Boyd, 1994). Certain decisions can only be made with the supervisory board's approval (AktG[2] §111). A unique feature of the German separation of supervisory and management board is that the latter has no influence on the compensation of the former. German supervisory board members set their compensation on their own. Thereby the decision is not biased by any tactics that could be possible if a committee had to decide about the compensation of another individual. Several studies on management pay have shown that these tactical biases are not unusual (cp. Conyon, & Peck, 1998).

A supervisory board essentially sets its own pay *individually* by proposing the level and structure of their compensation to the general assembly of shareholders. The general assembly has to approve that proposal but usually that is only a matter of form and there are no further discussions about it. The influence the directors have on their own compensation is important for our research because this means that they have a chance to use the knowledge they gained from social comparison towards setting it. We are able to measure the influence and analyze how and to what extend it is used in setting compensations.

Additionally the German corporate governance system provides a high *comparability* of the boards concerning their tasks. As mentioned above the board of directors has to appoint the management board as well as supervise it. On top of that certain management decisions have to be approved by the directors. The similarity is an important fact when a director bases his demands on the logic of "equal pay for equal work".

The *compensation structure* of German directors is also favorable for our reasoning: There are no long-term incentives. More and more companies start to implement compensation models that include performance based compensation elements but they are usually short term as well as cash and not stocks or stock options (Andreas et al., 2009). This makes the total compensation easy to calculate as well as easy to compare it to others' compensation, which is crucial as without that fact there would be no possibility for social comparison.

[2] German Stock Corporation Act (Aktiengesetz – AktG).

When examining individual experience with common levels of compensation, the possibility to gain this experience must be given. In contrasts to executive managers for directors in Germany it is allowed and common to have seats on more than one board of directors. Analyzing German supervisory board members allows us to analyze the network they create by serving on several boards. Thereby we can investigate the board network's ability to serve as a channel of information (cp. Hillman, Cannella, & Paetzhold, 2000; Haynes, & Hillman, 2010) Germany is known for having a very interwoven network known as "Deutschland AG" (engl.: "Germany corporation"). This term refers to the fact that many directors serving on the boards of the big German companies also have seats on other big German companies, which facilitates the gaining of experience about compensation models and is a perfect object for us to study social comparison on (cp. Adams, 1999).

All facts considered these characteristics make boards of directors on the German two-tier system the perfect object to analyze the influence of social comparison on the directors' compensation.

4.2. Variables and Descriptive Statistics

4.2.1. Dependent variable

The purpose of this paper is to show if and how social comparison influences the compensation of supervisory board members. We measure the compensation on a per capita basis because each company's compensation system is set on an individual basis as well even though it is the same for all directors on that board. Through this the amounts are comparable between directors, which facilitates the social comparison and is therefore essential for our study. In the Prime Standard companies have to disclose the amount of money they pay their board of directors as a whole and also the names of directors. That made it easy for us to calculate the per capita compensation by dividing the total board compensation by the number of directors as well as analyze the network created with multiple board seats.

In our model we do not account for differences between board members. Some companies pay their chairman and his deputy more than the other members but the proportion is not the same across companies. Most companies also pay attendance fees or fees for participation on certain committees on top of the regular fixed compensation. Therefore we control for the number of meetings in our regressions.

Finally we use the natural logarithm of the compensation, as it is a standard procedure in the literature when regression models are used to explain compensation levels. This approach

diminishes the effect of heteroskedasticity (cp. Boyd, 1994; Belliveau, O'Reilley, & Wade, 1996): The logarithm is usually used with variables with an expected skewness because it smoothes outliers (cp. Fahlenbrach, 2009). That makes COMPENSATION as the logarithm of per capita compensation our dependent variable.

4.2.2. Independent variables

To control for various other influences on director compensation we consider *corporate characteristics* as well as *corporate performance* and *corporate governance* features as our control variables. All variables are also explained in the Appendix in Table A1.

The following variables represent *corporate characteristics*: To account for the size of the company we use LN TOTAL ASSETS, which is the natural logarithm of the company's total assets (cp. Daily, Johnson, Elstrand, &Dalton, 1998). We also include LEVERAGE (ratio of total debt to total capital) and FREE CASH FLOW, which represent the capital structure of the particular company in focus (cp. Andreas et al., 2009). We also account for risk ("RISK (VOLA3)") depicted by the 3-year volatility of the stock price (cp. Adams, 2003).

We take *corporate performance* into consideration by using DIVIDEND PAYOUT, the investment opportunities, measured by the company's MARKET TO BOOK VALUE (cp. Farrell et al., 2008) and RETURN ON ASSETS as control variables in our models. By using these three variables we cover not only the capital market measures but also the accounting-based ones.

Corporate governance characteristics are split into two basic directions: Our variables # MEETINGS PER YEAR, TENURE (which is the average tenure of the directors on the board representing the shareholders) and EX MANAGER (0, 1) are proxies for the characteristics of the specific board while OWNER CONTROLLED MANAGING BOARD (0, 1), EXTERNAL BLOCKHOLDER (0, 1) reflect the ownership structure. The variable EX MANAGER(0, 1) indicates whether one of the directors was working as a manager for the company before. The two ownership variables are dummy variables where OWNER CONTROLLED MANAGING BOARD (0, 1) measures whether the managing board is controlled by the/an owner, EXTERNAL BLOCKHOLDER (0, 1) measures whether an external shareholder holds more than 25% of the voting rights. We do not incorporate board size into our analysis because in Germany the board size is regulated by law. Its determinants are the company's equity and number of employees. Including board size as an additional control variable, multicollinearity would become a concern.

In the following part we explain the variables we created and calculated in order to measure social comparison on the boards.

For our first pillar, the "individual experience", we use the variable "MAXIMUM COMPENSATION OF DIRECTORS' NETWORK". It represents the highest per capita compensation any of the directors representing the shareholders gets paid in any of his directorships. In order to calculate this we use data of all directorships that the directors on a specific board hold and take the maximum per capita compensation. This approach is possible because the Prime Standard companies have to disclose the names of their directors and across all companies we are able to manually trace the networks created in each board by multiple directorships. Based on social comparison we expect the director with the highest compensation to want to get that high amount for every one of his directorships. In our case we have to keep in mind another important feature of German boards, which is the co-determination of shareholder- and worker-representatives. This law requires companies with certain sizes or in certain industries to have certain percentages of worker representatives on the board as directors.[3] This measure is only based on the shareholder representatives, because they do not keep their compensation for themselves. Usually they are members of worker unions and the money they earn on boards of directors they pass on to foundations associated with the unions they belong to. Their main concerns are the interest of workers and being employee of the company most of the time (no multiple directorships possible) they do not have the possibility to become a member of the supervisory board member network.

"INDEX COMPENSATION" represents the second pillar of social comparison. This is the average compensation of the index the focus company is part of during the respective year. If the company changes to another index that index's average is used during the next year. This approach allows us to accommodate for a company that changes the index and adapts the directors' compensation accordingly during one year of our study. In the existing literature regarding social comparison several authors write about the concept of geographical proximity (cp. Davis, & Greve, 1997; Stuart, & Yim, 2010). For the case of a small company such as Germany we believe however that the used peer group is rather dependent on characteristic than on the geographic proximity. We therefore measure the second pillar via index affiliation. Industry affiliation is used as a robustness test.

[3] These laws are called Drittbeleteiligungsgesetz (DrittelbG §1) and Mitbestimmungsgesetz (MitbestG §1).

MARKET COMPENSATION is our third pillar and it is the average directors' compensation over all companies. For each year there is only one average and that is supposed to indicate a general trend over the years not only about the development of directors' compensation but also about the development of the economy as a whole.

4.2.3. Descriptive statistics

The following table shows the descriptive statistics of the variables we use.

	Panel A: Mean and median					Panel B: VIF
	Mean	25%-Percentile	Median	75%-Percentile	Obs	max. VIF
LN PER CAPITA COMPENSATION	9.914	9.365	9.852	10.477	1,740	---
LN TOTAL ASSETS	5.488	3.881	4.980	6.814	1,736	4.74
LEVERAGE	0.329	0.052	0.252	0.478	1,703	1.06
FREE CASH FLOW	25.198	-5.100	1.503	14.611	1,707	1.08
RISK (VOLA3)	0.498	0.292	0.427	0.653	1,773	2.23
MARKET TO BOOK VALUE	2.064	0.992	1.610	2.590	1,666	1.13
DIVIDEND PAYOUT	16.089	0.000	0.000	29.134	1,572	1.52
RETURN ON ASSETS	0.277	-0.751	4.045	7.499	1,728	1.37
# MEETINGS PER YEAR	5.471	4.000	5.000	6.000	1,598	1.12
TENURE	3.308	1.723	3.000	4.762	1,751	1.33
EX MANAGER (0, 1)	0.246	0.000	0.000	0.000	1,751	1.11
OWNER CONTROLLED MANAGING BOARD (0, 1)	0.224	0.000	0.000	0.000	1,773	1.36
EXTERNAL BLOCKHOLDER (0, 1)	0.361	0.000	0.000	1.000	1,773	1.33
MAXIMUM COMPENSATION OF DIRECTORS' NETWORK*	5.369	1.367	2.567	6.514	1,750	2.27
INDEX COMPENSATION*	3.075	1.935	2.034	3.468	1,750	4.43
MARKET COMPENSATION*	3.056	2.527	2.956	3.587	1,750	2.26

*** in 10.000 Euros**

Table 2 shows the descriptive statistics of the variables used in our models. The overview that is given by the descriptive statistics table contains for each variable the mean as well as the 25%-, 50%- and 75%-percentile and the number of firm-year-observations we are able to use for that particular variable. The last column shows the maximum variance inflation factors for each variable, which can be interpreted as a measure for multi-collinearity. From the results we show this problem can be rejected.

Table 2: Descriptive Statistics of our variables.

The data indicates the following about the board of directors within our sample: They meet on average 5.4 times per year and the shareholders representing directors' tenure is 3.3 years on average. Table 2 also shows us that the companies have 7.54 directors on average and 5.12 of them represent the shareholders. Another interesting fact to note is that on almost one in four German boards of directors a former manager serves.

4.3. Econometric Model

The panel character of our sample allows us to use panel regression approaches. We use both an Ordinary Least Square as well as a Fixed Effects Model to show the robustness of our research. We account for year effects for both model types and industry effects for the OLS

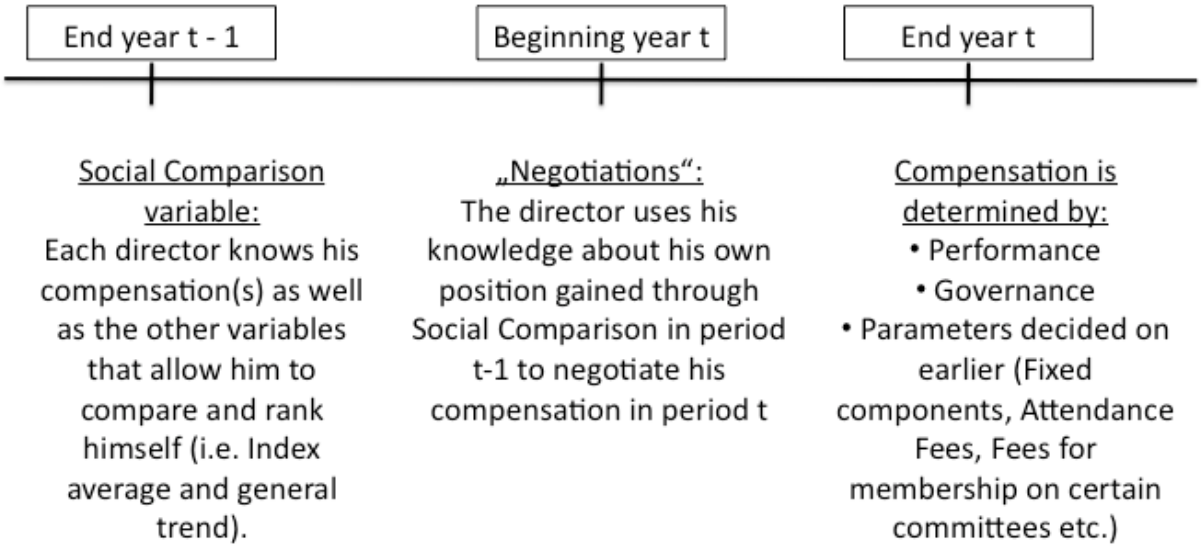
model as well as firm-fixed effects for the Fixed Effects Model. Firm-fixed effects consider internal firm characteristics when calculating the regression coefficient and are therefore able to incorporate unobserved factors for specific firms into the model. For the Ordinary Least Square model we use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity (White, 1980), which is a standard procedure in the literature concerning compensation levels (cp. Brick et al., 2006; Stuart, & Yim, 2010). The problem of multicollinearity was a concern but it is addressed in Table 2 where the variance inflation factors are tabulated and from the magnitudes we can reject that problem. The concern of endogeniety we counteract by using an adequate amount of control variables that have been identified in the literature as influence factors on director compensation. Concerns about causality can be excluded conceptually because of the time lag in the critical exogenous variables. Additionally we used two models as well as several other robustness checks (also see 5.2).

All models consist of the control variables (i.e. variables explaining corporate characteristics, performance and corporate governance) of the same year of the compensation that we want to explain. The variable representing the aspect of social comparison we lag one year because of the process of setting a compensation as depicted in Picture 2: At the end of year t-1 each director knows the compensation for each of his directorships and also the index compensation and the market compensation. This information determines the ranking of the focal compensation relative to the other data gained and hence the personal feeling of the director regarding whether the amount should be adjusted upward. At the beginning of year t the board of directors uses their combined knowledge to "negotiate" a new level of compensation. At the end of year t the compensation is paid after the final amount is determined by certain components that have to develop during the year (e.g. performance measures, number of meetings and work on committees that determine the respective fees if defined in the compensation system).

This leaves us with the following formula as a proxy for explaining the components of directors compensation for company i in year t:

$$LN(\text{Directors' per capita compensation}_{it}) = f(\text{Social comparison}_{t-1}, \text{Corporate Characteristics}_{it}, \text{Corporate Performance}_{it}, \text{Corporate Governance}_{it})$$

For both types of models at first we use the control variables with only one of our pillars: In models A1 and B1 we analyze the impact individual experience has on the level of compensation, then in models A2 and B2 only the index compensation's influence and then only the market compensation as a proxy for social comparison (Models A3 and B3). Finally in Models A4 and B4 all three variables together are supposed to simulate reality because in Germany with the disclosure rules in effect the directors have access to the information of all three pillars at the same time. This combined knowledge should then imply action by one or more directors if we are correct in assuming that social comparison has an impact on setting compensation.



This scheme illustrates the timely process of how and when our variables come into play when directors set their compensation. At the end of year t-1 they know what they earned for the past year as well as the index compensation and the market compensation. With this knowledge they negotiate the compensation terms for the next year with the influence of the knowledge from the year before. At the end of year t the directors receive their compensation. At that point in time not only the components agreed upon at the beginning of the year are known but also criteria such as company performance or number of meetings, which have an influence on the compensation.

Picture 2: Compensation Process.

5. Results

5.1. Empirical results

Tables 3a and 3b show the regression results for the Ordinary Least Square models and the Fixed Effects models respectively. The following part reports the results regarding our hypotheses and afterwards we give a brief overview of the control variables:

Hypothesis 1: The data gained from our models support Hypothesis 1. Models A1 and A4 (B1 and B4 respectively) show that MAXIMUM COMPENSATION OF DIRECTORS'

NETWORK(-1) has a strongly significant and positive impact on the director compensation. When regarded as only comparison object we obtain a t-statistic of 4.96 and together in a group with the two other pillars it is 4.49. These results support our argument that individual experience drives directors' compensation. It appears to be an important reference point they look to in order to assess their position and draw conclusion from it. As predicted the highest paid director drives the compensation to higher levels for the entire board of directors. The motivation to increase the compensation level is derived from two principals: "Equal pay for equal work" and "More is better". These two components together legitimate the claim for a higher compensation by the highest paid director. Furthermore the signal the compensation sends to outside observers about the work quality serves as extra incentive.

Hypothesis 2: Models A4 as well as B4 do not clearly support Hypothesis 2. Only using the variable INDEX COMPENSATION as proxy for social comparison (model A2/B2) to assess their position comparison with a peer group, there is a significant influence on the compensation levels with a t-statistic of 2.26. But using all information (also individual experience and market compensation) the significance disappears. These two superpose the Index compensation's influence and make it obsolete, which is shown by the t-statistic of 0.68. Instead of arguing with the compensation level directors in similar index earn in order to increase their own compensation directors rather support their claim with their own experience and the general market trend. Experiencing the work and the pay for it first hand, they are able to assess it fully and are therefore independent of disclosure rules. This enables the directors to compare not only pay but also workloads and hence arrive at an accurate assessment of deserved pay.

Hypothesis 3: Models A3 and A4 (B3 and B4) support Hypothesis 3. When using market compensation only as a single social comparison variable (t-statistic=5.52) as well as with the other two pillars together as observable in reality (3.78) it has a strongly significant impact as well as a positive coefficient. Market compensation is a vital reference point for directors when they use social comparison in order to assess their compensation. It serves as a guideline that can be used to assure the claims of higher compensation are at a justifiable level. After all the directors have to account for the general state of the economy for both publicity reasons as well as not to endanger the approval by the general assembly. In a phase when the economy is doing well, the directors should get paid better as well and vice versa.

	Model A.1 OLS		Model A.2 OLS		Model A.3 OLS		Model A.4 OLS	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	1.99E-01	(9.5956) ***	2.05E-01	(7.5573) ***	2.51E-01	(15.498) ***	1.79E-01	(6.5450) ***
LEVERAGE	8.29E-03	(2.0961) **	7.28E-03	(1.6809) *	6.97E-03	(1.4431)	8.06E-03	(2.0848) **
FREE CASH FLOW	-4.07E-06	(-0.2254)	1.28E-08	(0.0006)	4.62E-06	(0.2346)	-4.39E-06	(-0.2424)
MARKET TO BOOK VALUE	6.66E-03	(0.7575)	5.93E-03	(0.6755)	6.45E-03	(0.6745)	7.55E-03	(0.8676)
RISK (VOLA3)	5.28E-02	(0.4130)	3.40E-02	(0.2656)	5.39E-02	(0.4212)	6.46E-03	(0.0517)
DIVIDEND PAYOUT	6.39E-04	(0.4891)	1.06E-03	(0.7093)	8.86E-04	(0.5938)	8.11E-04	(0.5970)
RETURN ON ASSETS	-1.52E-04	(-0.1600)	-4.06E-04	(-0.4363)	-6.27E-04	(-0.6428)	-2.82E-04	(-0.3064)
# MEETINGS PER YEAR	5.44E-02	(4.3993) ***	5.99E-02	(4.9335) ***	5.92E-02	(4.9322) ***	5.64E-02	(4.5437) ***
TENURE	4.39E-02	(3.5825) ***	4.44E-02	(3.2672) ***	4.56E-02	(3.3813) ***	4.47E-02	(3.4047) ***
OWNER CONTROLLED MANAGING BOARD (0, 1)	-1.64E-01	(-2.2809) **	-1.74E-01	(-2.3367) **	-1.94E-01	(-2.6458) ***	-1.64E-01	(-2.2297) **
EXTERNAL BLOCKHOLDER (0, 1)	-1.42E-01	(-2.3192) **	-1.29E-01	(-2.0655) **	-1.61E-01	(-2.5571) **	-1.37E-01	(-2.2548) **
EX MANAGER (0, 1)	1.08E-01	(1.8109) *	1.25E-01	(2.0125) **	1.30E-01	(2.1032) **	1.04E-01	(1.7378) *
MAXIMUM COMPENSATION OF DIRECTORS' NETWORK (-1)	3.10E-06	(4.9653) ***					3.12E-06	(4.4921) ***
INDEX COMPENSATION (-1)			5.90E-06	(2.2661) **			1.91E-06	(0.6879)
MARKET COMPENSATION (-1)					3.06E-05	(5.5237) ***	2.32E-05	(3.7836) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes**		Yes**	
Industry effects	Yes*		Yes*		Yes*		Yes*	
Firm effects	No		No		No		No	
R^2-adjusted	0.537		0.522		0.517		0.541	
No. of observations	1317		1317		1317		1317	

*Table 3a shows the regression results for the Ordinary Least Squares models. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: In the first model the individual experience is the only variable representing the social comparison, in the second model it is peer group compensation and in the third it is market compensation. In the fourth model all three variables are plugged in together. We also use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level respectively.*

Table 3a: Ordinary Least Squares Models

Table 3b: ***Effects on the logarithm of per capita remuneration***

	Model B.1 FE		Model B.2 FE		Model B.3 FE		Model B.4 FE	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	1.75E-01	(4.5557) ***	1.85E-01	(4.6738) ***	1.96E-01	(4.9841) ***	1.73E-01	(4.4270) ***
LEVERAGE	1.53E-03	(0.2279)	1.86E-03	(0.2745)	1.80E-03	(0.2658)	1.68E-03	(0.2515)
FREE CASH FLOW	7.26E-06	(0.3279)	8.43E-06	(0.3777)	1.06E-05	(0.4745)	6.91E-06	(0.3131)
MARKET TO BOOK VALUE	3.29E-03	(0.7065)	3.05E-03	(0.6474)	2.58E-03	(0.5469)	3.07E-03	(0.6591)
RISK (VOLA3)	8.89E-02	(1.0018)	2.89E-02	(0.3104)	4.27E-02	(0.4595)	3.24E-03	(0.0352)
DIVIDEND PAYOUT	1.17E-05	(0.0144)	-2.90E-05	(-0.0347)	-8.30E-06	(-0.0099)	-1.24E-04	(-0.1498)
RETURN ON ASSETS	-1.07E-03	(-1.3274)	-1.02E-03	(-1.2601)	-1.05E-03	(-1.2883)	-1.04E-03	(-1.2907)
# MEETINGS PER YEAR	1.58E-02	(2.0083) **	1.82E-02	(2.2643) **	1.92E-02	(2.3828) **	1.31E-02	(1.6347)
TENURE	8.55E-03	(0.7586)	7.13E-03	(0.6256)	6.30E-03	(0.5519)	5.86E-03	(0.5206)
OWNER CONTROLLED MANAGING BOARD (0, 1)	-3.42E-02	(-0.4686)	-1.84E-02	(-0.2454)	-9.63E-03	(-0.1284)	-2.09E-02	(-0.2830)
EXTERNAL BLOCKHOLDER (0, 1)	-1.86E-01	(-3.3681) ***	-1.47E-01	(-2.5058) **	-1.51E-01	(-2.5636) **	-1.66E-01	(-2.8515) ***
EX MANAGER (0, 1)	-3.88E-02	(-0.8504)	-4.90E-02	(-1.0665)	-4.43E-02	(-0.9640)	-4.20E-02	(-0.9251)
MAXIMUM COMPENSATION OF DIRECTORS' NETWORK (-1)	2.23E-06	(5.5556) ***					2.12E-06	(5.0285) ***
INDEX COMPENSATION (-1)			4.31E-06	(2.2809) **			1.74E-06	(0.9027)
MARKET COMPENSATION (-1)					3.76E-05	(10.031) ***	3.06E-05	(7.0547) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes***		Yes***	
Industry effects	No		No		No		No	
Firm effects	Fixed		Fixed		Fixed		Fixed	
R^2-adjusted	0.835		0.834		0.833		0.838	
No. of observations	1317		1317		1317		1317	

Table 3b shows the regression results for the Fixed Effects models. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: Similar to the Ordinary Least Squares models in the first three columns the variables representing the social comparison are plugged

*in by themselves and all together in the fourth model. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level respectively.*

Table 3b: Fixed Effects Models

Furthermore for all four models we show that the company's size is important for the compensation received by their board of directors. The coefficient is positive which implies that the compensation is higher in bigger companies. This is consistent with the existing literature (to find in Boyd, 1996; Linn, & Park; 2005). Our results also show that the corporate performance does not have a significant impact on the dependent variable. Neither MTB and DIVIDEND PAYOUT (as proxy for capital market measures) nor RETURN ON ASSETS (accounting-based proxy) are significant in all models. As mentioned above in Germany performance based pay for directors was introduced only in recent years and it is not very common yet.

When assessing the ownership structure the results of our models seem to be intuitive as well: An external shareholder exercising voting rights excessive of 25% is a significant influence on LN PER CAPITA COMPENSATION but with a negative influence. This can be interpreted by assuming that more power is executed by a single shareholder with an amount of voting rights that big than by many individual ones and that it is not in the best interest of a shareholder to pay the directors a higher compensation. The more powerful the shareholders the lower the compensation levels will be.

Also # MEETINGS PER YEAR has a significantly positive influence. When part of the compensation stems from attendance fees, more meetings held mean higher attendance fees and hence higher total compensation. In the Ordinary Least Square models Tenure also has an impact. That can be described as more pay for more experience. In this instance experience stands for work related experience that helps solving tasks delegated to the directors.

5.2. Robustness tests

To ensure robustness of our results we also analyze other variables measuring individual experience as well as peer group compensation and market compensation. The tables for the robustness models with the Ordinary Least Squares approach can be seen in the appendix.[4]

To prove robustness for the individual experience we adjusted the MAXIMUM COMPENSATION OF DIRECTORS' NETWORK for the index it is in. We use two different

[4] The robustness tests for the Fixed Effects models contain qualitatively similar results and can be requested from the authors.

ways of adjustment: a) a relative difference by subtracting the index median from the per capita compensation and then dividing the result by the index median, and b) an absolute difference as Gompers, Ishii and Metrick (2003) did when they adjusted for industries, which is done by subtracting the index median from the per capita compensation. In both instances the results we get when plugging these variables into the models instead of MAXIMUM COMPENSATION OF DIRECTORS' NETWORK show robustness: Models A1 as well as A4 yield the same results regarding significance (Models A2, and A3 are left unchanged). The variables are very significant representing social comparison by themselves as well as together with the other variables.

Another variable we plug in for our first pillar in order to show the robustness of our model is the MAXIMUM AVERAGE COMPENSATION OF DIRECTORS' NETWORK. This variable represents the highest average compensation over all his mandates any director receives and it is calculated as follows: we take the average compensation each director receives over all their respective mandates and chose the highest one. The models A1 and A4 provide the same results with this variable as they do with our original one. It is a good indicator for the social comparison that can lead to action taken by one member of the board with the respective result. It implies a greater authority that one might have when demanding a raise of his compensation and also might be a greater motivation for the director in question. With just one highly compensated mandate he might not be very convincing as the general assembly could define this as an outlier. With an average compensation however that is higher than the focus compensation this view is not valid anymore and the need for action appears more eminent. The personal motivation is also greater because the number of other companies paying the “right” amount strengthens the feeling of not earning what is deserved. That will drive the director towards changing that. Therefore it is an important robustness check that provides our results with further credibility. O’Reilley et al. (1988) also showed in their study of the influence of social comparison on CEO compensation that both the highest salary earned by a member of the salary setting compensation committee is correlated positively with the CEO salary as well as their average salary.

To ensure robustness also for our second pillar we use a different peer group to substitute for the index: Instead of the average compensation of the index we use the average compensation of the industry the focus company is part of during the respective year. In order to group the firms into industries we use the Fama/French-classification that contains 17 industries. By

showing the same result for the industry as for the index we show robustness for our peer group hypothesis.

The variable MARKET COMPENSATION is the average compensation paid across the entire economy. Also for our third pillar we show robustness by plugging the market median compensation into our models A3 and A4, which return the same results. This as well shows that our analysis is robust to the choice of the measure for the third pillar and that this pillar has an important influence on the directors' compensation.

6. Conclusion

6.1. Discussion of results

We show that social comparison has a significant influence on director compensation. Directors look at their own individual experience as well as the market compensation when assessing the justness of their compensation. Essentially they are able to set their own compensation system so after knowing where they stand relative to these comparison dimensions they are able to adjust it. Information about the compensation within a peer group such as the index or industry average is not used when information in all three comparison dimensions is available for the director.

Directors use their individual experience gained through multiple board seats as well as the market compensation in order to assess the perceived fairness of their focal compensation. Two general principles lay the basis for the motivation to take action in case the focal compensation is not the highest one: "Equal pay for equal work" and "More is better". Furthermore directors are motivated to increase what they earn as it can be interpreted as indication for the quality of their work by outside observers. Our results show that the highest compensation within the directors' network is the one that is used when arguing about the compensation and presenting an example of higher compensation somewhere else. This behavior leads to a bidding-up process when in every boardroom the highest compensation of them all serves as a reference point for their new compensation. The directors are able to compare compensations of their different directorships and the highest paid director on the focal board drives the entire board's compensation upward. The knowledge of getting paid less for the same tasks is a motivational factor to change that.

The other significant influence on director compensation stems from the comparison to the market compensation as an indicator for how the economy as a whole is doing. We interpret this as a form of guideline the directors follow and do not stray away from too far. They do

not abstract away from circumstances affecting the entire economy as they are part of it. Also the judgment of the general assembly might play a role here as they usually accept the proposition regarding the system of compensation suggested by the directors, but they have the final say. It is not beneficial for the directors' public reputation if their proposal is not approved so they would prevent it if possible.

The behavior as a whole can be described as optimizing the own compensation within boundaries set by the economy because the market compensation as a proxy for the wellbeing of the entire German economy has a stronger influence than the individual experience the directors have. This paints the picture that the directors raise their own compensation with a sense of proportion.

We also show that the average compensation of a peer group (the index or industry the company currently belongs to) is not a significantly robust comparison object. The effects of the other two pillars overlay the effect the compensation of a peer group has on the focal compensation. This is the most obvious information only available because of disclosure rules. The bidding-up process some scientists attribute to disclosure has a different origin as we show here. O'Reilley et al. (1988) also analyzed that the individual experience is more important than industry (and additionally as we show index as well) surveys in the field of executive compensation setting within compensation committees: "While compensation consultants are often used to provide executive salary surveys for the industry, the most immediate comparison set available to the committee members is their own experience" (262).

When debating about disclosure and maybe reducing it, this means however that directors do not need the official statements about other boards' compensations from annual reports. The own as well as the experience of a colleague on the focal board is used and has a positive impact within boundaries set by the economy. This means that the bidding-up process happens with or without disclosure, but with it the shareholders are better informed and the economy works more efficiently as a whole.

6.2. Implications

With our research we explain a part of director compensation that has not been researched yet, but we also want to bring to a broader attention on how compensation is set. The objects we use to show that social comparison influences compensation are the directors of German companies because for them the phenomenon is rather easily observable: The *separation* between the managing board and the supervisory board prevents interdependencies between

them, the *individual decision* made by the directors about their own compensation makes the effect of social comparison immediately observable, the tasks carried out by directors do not differ greatly across boards and are therefore *comparable*, the *network* created by directors sitting on German supervisory boards is very dense as it is common for German directors to have multiple board seats and therefore have the opportunity to gain individual experience, and the *structure of the compensation* makes comparison simple as well because most of it is a fixed amount. This does not mean that this is the only group of people where this factor plays a role. Our results may be applied to different geographical settings as well, but due to the unique characteristics observable in the German two-tier-system only this environment makes biases in measuring the effects of social comparison almost non-existent.

An implication companies can gain from our research is that directors with at least one other board mandate are more expensive than others through the social comparison component we uncover, which causes the observed bidding-up process. That should not be the only criterion taken into consideration when choosing their directors however, as multiple board seats also result in expertise and experience about the tasks that have to be carried out. This aspect should not be neglected because it also helps the company to have a well experienced and networked director on their board (cp. Hillman, & Dalziel, 2003; Shropshire, 2010).

For governments our results implicate that in order to fight a bidding-up process within the economy it is not reasonable to abolish the disclosure agreements that were put into place because of increasing director compensation. We show that the information gained through disclosure is not the reason for the rise of compensation. Disclosure is an important factor for shareholders and overall to make the economy work more efficiently and should be kept in place. Disclosure could be a tool for shareholders to control how much the directors get paid. Disclosure rules enable shareholders to compare the compensation of "their" directors with the amount paid to other companies' directors and adjust it if necessary. And in the end, transparency is one of the main drivers for democracy and in order to avoid a destruction of a whole society, abolish transparency should not be the action chosen to avoid the bidding-up process in compensation (cp. Drori, Jang, & Meyer, 2006).

The legislator should however be concerned about the dense network of directors which seems to significantly influence the increase in compensation. There are two possibilities to regulate this network: a direct and an indirect one. Directly one could reduce the allowed number of additional directorships, a board member is allowed to hold. On the other hand the legislator could just dictate lower minimum sizes of supervisory boards.

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A Appendix

A.1 Used Variables

Table A1: *Definition of variables*

Variable	Description	Source
DIVIDEND PAYOUT	Common Dividends (Cash)/ (Net Income before Preferred Dividends - Preferred Dividend Requirement) * 100	Thomson Financial Worldscope und Datastream
EX MANAGER (0, 1)	Dummy Variable that is 1 if at least one member of the Board of Directors a former employee of the focal company (most of the time a manager on the managing board)	Hoppenstedt Aktienführer, Business Reports
EXTERNAL BLOCKHOLDER (0, 1)	Dummy Variable that is 1 if there is an external shareholder who owns 25% or more of the total amount of shares and is not a member of the management	Hoppenstedt Aktienführer, Business Reports
FREE CASH FLOW	Net-operating Cash Flow - Cash dividends - Capital Expenditures	Thomson Financial Worldscope und Datastream
INDEX COMPENSATION	Average per capita compensation over all companies in the same index as the foacl company for that particular year	Calculations on the basis of Hoppenstedt Aktienführer, Business Reports
LEVERAGE	Ratio of Total Debt to Total Capital	Thomson Financial Worldscope und Datastream
LN PER CAPITA COMPENSATION	Natural Logarithm of the per capita compensation of a director measured by dividing the compensatioan reported for the entire board of directors by the number of directors	Calculations on the basis of Hoppenstedt Aktienführer, Business Reports
LN TOTAL ASSETS	Natural Logarithm of Total Assets (TOTAL ASSETS represent the sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets.)	Thomson Financial Worldscope und Datastream
MARKET COMPENSATION	Average per capita compensation over all companies in the sample per year	Calculations on the basis of Hoppenstedt Aktienführer, Business Reports
MARKET TO BOOK VALUE	Market price compared to the price of the company on its books	Thomson Financial Worldscope und Datastream
MAXIMUM COMPENSATION OF DIRECTORS' NETWORK	Highest per capita compensation any of the directors on the focal board receives in any of his directorships.	Calculations on the basis of Hoppenstedt Aktienführer, Business Reports
OWNER CONTROLLED MANAGING BOARD (0, 1)	Dummy Variable that is 1 if the managing board is comtrolled by the owner	Hoppenstedt Aktienführer, Business Reports
# MEETINGS PER YEAR	Number of meeting a board of direstors holds during the course of one year	Hoppenstedt Aktienführer, Business Reports
RETURN ON ASSETS	(Net Income before Preferred Dividends + ((Interest Expense on Debt-Interest Capitalized) * (1-Tax Rate))) / Last Year's Total Assets * 100	Thomson Financial Worldscope und Datastream
RISK (VOLA3)	Company specific risk measured as volatility of the stock prices over a period of the last 3 years	Thomson Financial Worldscope und Datastream
TENURE	Average of the tenure on the board of the directors representing the shareholders	Hoppenstedt Aktienführer, Business Reports
INDUSTRY EFFECTS	17 Dummy variables that indicate the belonging to one of the 17 industries defined by Fama and French	Website by Kenneth French*
YEAR EFFECTS	Dummy variable indicating the observed year.	---

*http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Table A1 gives an overview over the used variables, what they stand for and their source.

Table A1: Definition of variables

A.2 Robustness

	Model A.1 OLS		Model A.2 OLS		Model A.3 OLS		Model A.4 OLS	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	2.30E-01	(14.044) ***	2.05E-01	(7.5573) ***	2.51E-01	(15.498) ***	1.97E-01	(7.5915) ***
LEVERAGE	8.70E-03	(2.1712) **	7.28E-03	(1.6809) *	6.97E-03	(1.4431)	8.50E-03	(2.1834) **
FREE CASH FLOW	-9.28E-06	(-0.5643)	1.28E-08	(0.0006)	4.62E-06	(0.2346)	-1.09E-05	(-0.6347)
MARKET TO BOOK VALUE	6.52E-03	(0.7120)	5.93E-03	(0.6755)	6.45E-03	(0.6745)	7.53E-03	(0.8468)
RISK (VOLA3)	8.46E-02	(0.6767)	3.40E-02	(0.2656)	5.39E-02	(0.4212)	1.17E-02	(0.0947)
DIVIDEND PAYOUT	5.72E-04	(0.4361)	1.06E-03	(0.7093)	8.86E-04	(0.5938)	7.26E-04	(0.5306)
RETURN ON ASSETS	-3.11E-04	(-0.3230)	-4.06E-04	(-0.4363)	-6.27E-04	(-0.6428)	-3.95E-04	(-0.4261)
# MEETINGS PER YEAR	4.93E-02	(4.1026) ***	5.99E-02	(4.9335) ***	5.92E-02	(4.9322) ***	5.15E-02	(4.2622) ***
TENURE	4.78E-02	(4.0367) ***	4.44E-02	(3.2672) ***	4.56E-02	(3.3813) ***	4.50E-02	(3.5046) ***
OWNER CONTROLLED MANAGING BOARD (0, 1)	-1.78E-01	(-2.5018) **	-1.74E-01	(-2.3367) **	-1.94E-01	(-2.6458) ***	-1.75E-01	(-2.3904) **
EXTERNAL BLOCKHOLDER (0, 1)	-1.46E-01	(-2.4501) **	-1.29E-01	(-2.0655) **	-1.61E-01	(-2.5571) **	-1.32E-01	(-2.2125) **
EX MANAGER (0, 1)	1.04E-01	(1.8095) *	1.25E-01	(2.0125) **	1.30E-01	(2.1032) **	9.72E-02	(1.6702) *
INDEXADJUSTED MAXIMUM COMPENSATION OF DIRECTORS' NETWORK (-1)	5.44E-02	(4.8900) ***					5.25E-02	(4.5400) ***
INDEX COMPENSATION (-1)			5.90E-06	(2.2661) **			3.73E-06	(1.4622)
MARKET COMPENSATION (-1)					3.06E-05	(5.5237) ***	2.50E-05	(4.1391) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes**		Yes**	
Industry effects	Yes**		Yes*		Yes*		Yes**	
Firm effects	No		No		No		No	
R^2-adjusted	0.542		0.522		0.517		0.546	
No. of observations	1317		1317		1317		1317	

*Table R1 shows the regression results of the Ordinary Least Square models with the variable INDEXADJUSTED MAXIMUM COMPENSATION OF DIRECTOR' NETWORK instead of MAXIMUM COMPENSATION OF DIRECTORS' NETWORK. We perform an adjustment for the index in R1 by using a relative difference: We subtract the index median from the per capita compensation and then divide the result by the index median. The rest of the model stays the same to ensure a high level of conformity with the original model in order to show the robustness of our results. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: In the first column the individual experience is the only variable representing the social comparison, in the second column it is peer group compensation and in the third it is market compensation. In the fourth column all three variables are plugged in together. We also use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level.*

Table R1: Robustness – Individual experience adjusted for Index

	Model A.1 OLS		Model A.2 OLS		Model A.3 OLS		Model A.4 OLS	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	2.11E-01	(11.834) ***	2.05E-01	(7.5573) ***	2.51E-01	(15.498) ***	1.84E-01	(6.9649) ***
LEVERAGE	8.28E-03	(2.0288) **	7.28E-03	(1.6809) *	6.97E-03	(1.4431)	8.03E-03	(2.0018) **
FREE CASH FLOW	-8.38E-06	(-0.5093)	1.28E-08	(0.0006)	4.62E-06	(0.2346)	-9.37E-06	(-0.5562)
MARKET TO BOOK VALUE	6.88E-03	(0.7729)	5.93E-03	(0.6755)	6.45E-03	(0.6745)	7.92E-03	(0.9070)
RISK (VOLA3)	6.17E-02	(0.4884)	3.40E-02	(0.2656)	5.39E-02	(0.4212)	-3.90E-03	(-0.0314)
DIVIDEND PAYOUT	4.99E-04	(0.3907)	1.06E-03	(0.7093)	8.86E-04	(0.5938)	6.53E-04	(0.4898)
RETURN ON ASSETS	-2.30E-04	(-0.2428)	-4.06E-04	(-0.4363)	-6.27E-04	(-0.6428)	-3.52E-04	(-0.3843)
# MEETINGS PER YEAR	5.07E-02	(4.1585) ***	5.99E-02	(4.9335) ***	5.92E-02	(4.9322) ***	5.29E-02	(4.3168) ***
TENURE	4.69E-02	(3.9276) ***	4.44E-02	(3.2672) ***	4.56E-02	(3.3813) ***	4.52E-02	(3.5015) ***
OWNER CONTROLLED MANAGING BOARD (0, 1)	-1.72E-01	(-2.4152) **	-1.74E-01	(-2.3367) **	-1.94E-01	(-2.6458) ***	-1.70E-01	(-2.3365) **
EXTERNAL BLOCKHOLDER (0, 1)	-1.47E-01	(-2.4822) **	-1.29E-01	(-2.0655) **	-1.61E-01	(-2.5571) **	-1.37E-01	(-2.3194) **
EX MANAGER (0, 1)	1.05E-01	(1.8246) *	1.25E-01	(2.0125) **	1.30E-01	(2.1032) **	9.85E-02	(1.7044) *
INDEXADJUSTED(2) MAXIMUM COMPENSATION OF DIRECTORS' NETWORK (-1)	3.80E-06	(5.6969) ***					3.72E-06	(5.3646) ***
INDEX COMPENSATION (-1)			5.90E-06	(2.2661) **			2.90E-06	(1.1167)
MARKET COMPENSATION (-1)					3.06E-05	(5.5237) ***	2.44E-05	(4.0602) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes**		Yes**	
Industry effects	Yes*		Yes*		Yes*		Yes*	
Firm effects	No		No		No		No	
R^2-adjusted	0.544		0.522		0.517		0.548	
No. of observations	1317		1317		1317		1317	

*Table R2 shows the regression results of the Ordinary Least Square models with the variable INDEXADJUSTED(2) MAXIMUM COMPENSATION OF DIRECTOR' NETWORK instead of MAXIMUM COMPENSATION OF DIRECTORS' NETWORK. For this adjustment we use an absolute difference: We subtract the index median from the per capita compensation. The rest of the model stays the same to ensure a high level of conformity with the original model in order to show the robustness of our results. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: In the first column the individual experience is the only variable representing the social comparison, in the second column it is peer group compensation and in the third it is market compensation. In the fourth column all three variables are plugged in together. We also use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level respectively.*

Table R2: Robustness – Individual experience adjusted for Index (2)

	Model A.1 OLS		Model A.2 OLS		Model A.3 OLS		Model A.4 OLS	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	1.42E-01	(7.4562) ***	2.05E-01	(7.5573) ***	2.51E-01	(15.498) ***	1.50E-01	(6.0766) ***
LEVERAGE	7.60E-03	(2.1763) **	7.28E-03	(1.6809) *	6.97E-03	(1.4431)	7.06E-03	(1.9844) **
FREE CASH FLOW	5.60E-06	(0.3519)	1.28E-08	(0.0006)	4.62E-06	(0.2346)	1.01E-05	(0.7208)
MARKET TO BOOK VALUE	5.79E-03	(0.8456)	5.93E-03	(0.6755)	6.45E-03	(0.6745)	6.52E-03	(0.9241)
RISK (VOLA3)	1.05E-02	(0.0882)	3.40E-02	(0.2656)	5.39E-02	(0.4212)	1.42E-02	(0.1259)
DIVIDEND PAYOUT	4.64E-04	(0.4170)	1.06E-03	(0.7093)	8.86E-04	(0.5938)	5.47E-04	(0.4906)
RETURN ON ASSETS	3.80E-05	(0.0454)	-4.06E-04	(-0.4363)	-6.27E-04	(-0.6428)	-1.82E-04	(-0.2235)
# MEETINGS PER YEAR	4.72E-02	(4.1504) ***	5.99E-02	(4.9335) ***	5.92E-02	(4.9322) ***	4.64E-02	(4.1365) ***
TENURE	3.03E-02	(2.6631) ***	4.44E-02	(3.2672) ***	4.56E-02	(3.3813) ***	3.65E-02	(3.1063) ***
OWNER CONTROLLED MANAGING BOARD (0, 1)	-1.28E-01	(-1.8809) *	-1.74E-01	(-2.3367) **	-1.94E-01	(-2.6458) ***	-1.34E-01	(-1.9557) *
EXTERNAL BLOCKHOLDER (0, 1)	-1.28E-01	(-2.3563) **	-1.29E-01	(-2.0655) **	-1.61E-01	(-2.5571) **	-1.47E-01	(-2.7696) ***
EX MANAGER (0, 1)	6.15E-02	(1.1499)	1.25E-01	(2.0125) **	1.30E-01	(2.1032) **	5.91E-02	(1.1275)
MAXIMUM AVERAGE COMPENSATION OF DIRECTORS' NETWORK (-1)	9.89E-06	(10.818) ***					1.11E-05	(11.527) ***
INDEX COMPENSATION (-1)			5.90E-06	(2.2661) **			-3.39E-06	(-1.4601)
MARKET COMPENSATION (-1)					3.06E-05	(5.5237) ***	2.19E-05	(3.9490) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes**		Yes**	
Industry effects	Yes*		Yes*		Yes*		Yes	
Firm effects	No		No		No		No	
R^2-adjusted	0.590		0.522		0.517		0.600	
No. of observations	1317		1317		1317		1317	

*Table R3 shows the regression results of the Ordinary Least Square models with the variable MAXIMUM AVERAGE COMPENSATION OF DIRECTOR' NETWORK instead of MAXIMUM COMPENSATION OF DIRECTORS' NETWORK. In this model the individual comparison is represented by an average giving it a broader foundation when arguing for a raise of the board's compensation. The rest of the model stays the same to ensure a high level of conformity with the original model in order to show the robustness of our results. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: In the first column the individual experience is the only variable representing the social comparison, in the second column it is peer group compensation and in the third it is market compensation. In the fourth column all three variables are plugged in together. We also use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level respectively.*

Table R3: Robustness – Individual experience measured with the maximum average compensation

	Model A.1 OLS		Model A.2 OLS		Model A.3 OLS		Model A.4 OLS	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	1.99E-01	(9.5956) ***	2.47E-01	(14.963) ***	2.51E-01	(15.498) ***	1.89E-01	(8.9453) ***
LEVERAGE	8.29E-03	(2.0961) **	6.98E-03	(1.4860)	6.97E-03	(1.4431)	8.00E-03	(2.0400) **
FREE CASH FLOW	-4.07E-06	(-0.2254)	3.86E-06	(0.2002)	4.62E-06	(0.2346)	-3.56E-06	(-0.2052)
MARKET TO BOOK VALUE	6.66E-03	(0.7575)	6.76E-03	(0.7038)	6.45E-03	(0.6745)	7.93E-03	(0.8848)
RISK (VOLA3)	5.28E-02	(0.4130)	4.01E-02	(0.3119)	5.39E-02	(0.4212)	3.96E-03	(0.0316)
DIVIDEND PAYOUT	6.39E-04	(0.4891)	8.93E-04	(0.5984)	8.86E-04	(0.5938)	7.53E-04	(0.5571)
RETURN ON ASSETS	-1.52E-04	(-0.1600)	-5.88E-04	(-0.6029)	-6.27E-04	(-0.6428)	-3.23E-04	(-0.3429)
# MEETINGS PER YEAR	5.44E-02	(4.3993) ***	5.93E-02	(4.9231) ***	5.92E-02	(4.9322) ***	5.62E-02	(4.5245) ***
TENURE	4.39E-02	(3.5825) ***	4.57E-02	(3.3966) ***	4.56E-02	(3.3813) ***	4.51E-02	(3.4566) ***
OWNER CONTROLLED MANAGING BOARD (0, 1)	-1.64E-01	(-2.2809) **	-1.90E-01	(-2.5959) ***	-1.94E-01	(-2.6458) ***	-1.67E-01	(-2.3122) **
EXTERNAL BLOCKHOLDER (0, 1)	-1.42E-01	(-2.3192) **	-1.52E-01	(-2.4199) **	-1.61E-01	(-2.5571) **	-1.42E-01	(-2.3011) **
EX MANAGER (0, 1)	1.08E-01	(1.8109) *	1.30E-01	(2.1013) **	1.30E-01	(2.1032) **	1.05E-01	(1.7551) *
MAXIMUM AVERAGE COMPENSATION OF DIRECTORS' NETWORK (-1)	3.10E-06	(4.9653) ***					3.23E-06	(4.9582) ***
INDUSTRY COMPENSATION (-1)			6.00E-06	(2.0319) **			3.29E-06	(1.0095)
MARKET COMPENSATION (-1)					3.06E-05	(5.5237) ***	2.11E-05	(3.5677) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes**		Yes**	
Industry effects	Yes*		Yes*		Yes*		Yes	
Firm effects	No		No		No		No	
R^2-adjusted	0.537		0.518		0.517		0.541	
No. of observations	1317		1317		1317		1317	

*Table R4 shows the regression results of the Ordinary Least Square models with the variable INDUSTRY COMPENSATION instead of INDEX COMPENSATION as representative of our second pillar. The variable describes the average compensation in the industry the focal company is in as defined by the Fame/French-logic containing 17 Industries[5]. The rest of the model stays the same to ensure a high level of conformity with the original model in order to show the robustness of our results. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: In the first column the individual experience is the only variable representing the social comparison, in the second column it is peer group compensation and in the third it is market compensation. In the fourth column all three variables are plugged in together. We also use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level respectively.*

Table R4: Robustness - Index compensation substituted by Industry Compensation

[5] The classification logic into 17 industries as well as into a different number of industries can be obtained at: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

	Model A.1 OLS		Model A.2 OLS		Model A.3 OLS		Model A.4 OLS	
	Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation		Dep. var.: compensation	
	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.	coeff.	t-stat.
LN TOTAL ASSETS	1.99E-01	(9.5956) ***	2.05E-01	(7.5573) ***	2.51E-01	(15.498) ***	1.79E-01	(6.5450) ***
LEVERAGE	8.29E-03	(2.0961) **	7.28E-03	(1.6809) *	6.97E-03	(1.4431)	8.06E-03	(2.0848) **
FREE CASH FLOW	-4.07E-06	(-0.2254)	1.28E-08	(0.0006)	4.62E-06	(0.2346)	-4.39E-06	(-0.2424)
MARKET TO BOOK VALUE	6.66E-03	(0.7575)	5.93E-03	(0.6755)	6.45E-03	(0.6745)	7.55E-03	(0.8676)
RISK (VOLA3)	5.28E-02	(0.4130)	3.40E-02	(0.2656)	5.39E-02	(0.4212)	6.46E-03	(0.0517)
DIVIDEND PAYOUT	6.39E-04	(0.4891)	1.06E-03	(0.7093)	8.86E-04	(0.5938)	8.11E-04	(0.5970)
RETURN ON ASSETS	-1.52E-04	(-0.1600)	-4.06E-04	(-0.4363)	-6.27E-04	(-0.6428)	-2.82E-04	(-0.3064)
# MEETINGS PER YEAR	5.44E-02	(4.3993) ***	5.99E-02	(4.9335) ***	5.92E-02	(4.9322) ***	5.64E-02	(4.5437) ***
TENURE	4.39E-02	(3.5825) ***	4.44E-02	(3.2672) ***	4.56E-02	(3.3813) ***	4.47E-02	(3.4047) ***
OWNER CONTROLLED MANAGING BOARD (0, 1)	-1.64E-01	(-2.2809) **	-1.74E-01	(-2.3367) **	-1.94E-01	(-2.6458) ***	-1.64E-01	(-2.2297) **
EXTERNAL BLOCKHOLDER (0, 1)	-1.42E-01	(-2.3192) **	-1.29E-01	(-2.0655) **	-1.61E-01	(-2.5571) **	-1.37E-01	(-2.2548) **
EX MANAGER (0, 1)	1.08E-01	(1.8109) *	1.25E-01	(2.0125) **	1.30E-01	(2.1032) **	1.04E-01	(1.7378) *
MAXIMUM AVERAGE COMPENSATION OF DIRECTORS' NETWORK (-1)	3.10E-06	(4.9653) ***					3.12E-06	(4.4921) ***
INDEX COMPENSATION (-1)			5.90E-06	(2.2661) **			1.91E-06	(0.6879)
MARKET COMPENSATION (MEDIAN) (-1)					6.25E-05	(5.5237) ***	4.74E-05	(3.7836) ***
CONSTANT	Yes***		Yes***		Yes***		Yes***	
Year effects	Yes***		Yes***		Yes		Yes*	
Industry effects	Yes*		Yes*		Yes*		Yes*	
Firm effects	No		No		No		No	
R^2-adjusted	0.537		0.522		0.517		0.541	
No. of observations	1317		1317		1317		1317	

*Table R5 shows the regression results of the Ordinary Least Square models with the variable MARKET COMPENSATION (MEDIAN) instead of MARKET COMPENSATION as representative of our third pillar. The variable describes the median of directors' compensation over all companies in the entire market instead of the average, which is the variable in our original model. The rest of the model stays the same to ensure a high level of conformity with the original model in order to show the robustness of our results. We analyze the impact of corporate characteristics, corporate performance and corporate governance features as control variables on our dependent variable, which is the logarithm of the directors' per capita compensation. Furthermore we investigate the influence of social comparison: In the first column the individual experience is the only variable representing the social comparison, in the second column it is peer group compensation and in the third it is market compensation (median). In the fourth column all three variables are plugged in together. We also use White clustered standard errors on the company level to mitigate the effect of heteroskedasticity. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level respectively.*

Table R5: Robustness – Market Compensation measured with the median compensation instead of the average compensation