

Research Article

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Remuneration of Non-Executive Directors in German Listed Firms: An Empirical Analysis from a Practitioners' Perspective

Abstract: We analyze director compensation in German listed firms for the 2005–2009 period. Our sample covers all listed companies in the German Prime Standard of the Frankfurt Stock Exchange, specifically firms with shares listed in the indices of DAX, MDAX, SDAX, and TecDAX. In the last years, non-executive directors are facing increasing duties and (legal) responsibilities. From that perspective, it is quite surprising that the remuneration of non-executive directors has received rather little attention so far. In this study, we examine the German experience. We present the status quo of non-executive director remuneration and discuss its challenges. Specifically, we will look at the level of director remuneration and the (possible) problem of limited incentives.

Keywords: varieties of corporate governance, Germany, director compensation, stock options

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1 Introduction

While a firm may have thousands of investors and stakeholders, a handful of executive managers effectively run the firm. Thus, most regulators dictate a board structure (at least for listed firms) that consists of executive managers and non-executive directors. Thereby, they direct the latter to act as stand-ins for investors (and possibly other stakeholders) in order to monitor (and advise) the former.¹

Clearly, globalization, technological progress, and increasing firm size makes supervising executives (their proposals and behavior) an increasingly challenging task, which requires profound business (and other) experience on the one hand and is quite time consuming on the other hand. The demand for effective supervision is also reflected in the latest regulatory initiatives throughout the world in the aftermath of the recent financial crises. A key issue in all these plans is to strengthen the effective monitoring and control by non-executive directors. It seems fair to guess that altogether this will substantially increase the demand for experienced and effective non-executive directors.

From that perspective, it is quite surprising that the remuneration of non-executive directors has received so little attention so far.² This is the starting point of our study: examining the German experience, we will present the status quo of non-executive director remuneration and discuss its challenges from the practitioners' perspective.³ Specifically, we will look at the absolute level of pay and the (possible) problem of limited incentives. Thereby, we will focus on listed firms.

1 Throughout the world, we observe various organization forms of a firm's board. The two most well-known are the *one-tier system*, where firms' establish a single board consisting of executives and non-executives simultaneously, and the *two-tier system*, where firms' have to establish two separated boards. In Germany, which is in the focus of this study, the regulator has established a two-tier system.

2 For a recent study, see Andreas, Rapp, and Wolff (2012) and references therein.

3 There is an extensive literature discussing the role of the board within the firm, its functioning as well as various characteristics of its members. Discussing these issues is far beyond the scope of this article, instead we refer to The Conference Board Task Force on Improving Corporate/Investor Engagement (2012) and references therein.

The remainder of the article proceeds as follows. Section 2 gives some institutional background. Section 3 briefly outlines our data. Section 4 discusses the level of director remuneration, and Section 5 discusses the different compensation components and the resulting incentive structure. Finally, Section 6 concludes on our key findings.

2 Institution background

As might be well-known, most German listed firms are – by law – governed by a two-tier system with two distinct bodies resulting in a separation between management and monitoring activities.⁴ While executive directors constitute the management board (*Vorstand*) and are responsible for managing the company and running its operations, non-executive directors are members of the so-called supervisory board (*Aufsichtsrat*), which is responsible for overseeing and advising the management board. More specifically, German law dictates that supervisory board members are not simultaneously a member of the management board (§105 AktG – “German Stock Corporation Law”), but instead have to monitor and control the members of the management board (§111 AktG). Furthermore, the supervisory board members represent the company in all types of disputes with management board members (§112 AktG), hire the auditor(s) (§111 AktG), and appoint management board members (§84 AktG).⁵ Thus, it seems fair to argue that the supervisory board represents the central inspectorate from the stakeholders’ (including shareholders) point of view.

However, supervisory board members are faced with increasingly complex tasks and challenges, specifically due to regulatory changes in the aftermath

⁴ Generally, German listed firms are registered in form of a stock corporation (*Aktiengesellschaft – AG*), for which the two-tier board regulation applies. Typical examples are Adidas AG, SAP AG, and BMW AG. Similarly, firms registered as association limited by shares (*Kommanditgesellschaft auf Aktien – KGaA*), e.g. Henkel KGaA and Merck KGaA, are also required – by law – to implement a two-tier structure. However, since the end of 2004, German firms may also register in the form of a *Societas Europaea (SE)*, which offers firms the possibility to adopt a one-tier system with an Anglo-Saxon type board of directors. While there are already some firms, which have adopted the SE structure, e.g. BASF SE or Allianz SE, most firms in our sample still stick to the commonly accepted two-tier structure. The German Corporate Governance Code, accessible via www.corporate-governance-code.de, summarizes the most important regulatory rules concerning the board system of German listed firms.

⁵ Note that while the number of management board members is basically unregulated, the law requires a minimum number of supervisory board members who are regulated by law (§95 AktG). For details on the German corporate governance system and its development, see Goyer (2006) or Vitols (2005).

of various corporate scandals and the recent financial crisis. Among other things, government has tightened various laws related to the supervisory board's activities, turning supervisors into real controllers and sparring partners for the management board. Examples for such regulations are found in the German Accounting Law Modernization Act (BilMoG) and in the Law Act on the Appropriateness of Management Board Compensation (Gesetz zur Angemessenheit der Vorstandsvergütung). Overall, these regulatory changes turned the formerly "honorary post" of a supervisory board member (non-executive director) into a time-consuming position with substantial responsibilities (and also liabilities).

From an economic perspective, remuneration of non-executive directors should reflect the challenges of the position such that the (supervisory) board can perform obligations in the best possible way. Nevertheless, German legislature neither dictates to compensate supervisory board members for their activities nor provides extensive guidelines for the arrangement of a possible compensation (cf. §113 AktG). Instead, guidelines with regard to the structure, suitability and design of non-executive director remuneration can be found in the German Corporate Governance Code (DCGK) which was introduced in 2002 and amended from time to time. Based on comprehensive empirical support, we document subsequently that (i) firms follow the guidelines provided by the DCGK only partially and (ii) the current compensation practices offer only limited incentives for "professional" non-executive directors. Our results suggest that there is still need for action, particularly in small- and medium-sized firms.

3 Data

Subsequently, we present selected empirical evidence on director remuneration in German listed firms. Thereby, we draw on data from three recent studies (Metzner, Rapp, & Wolff 2012; Andreas et al., 2012; Rapp & Wolff, 2012). This allows us to examine (non-)executive remuneration in German Prime Standard firm over the period 2005–2011.⁶ The data we use are carefully hand-collected

⁶ Since our analysis requires detailed information on the remuneration of non-executive directors, we restrict our sample to firms opting for a listing in the *Prime Standard* at the Frankfurt Stock Exchange (FWB – Frankfurter Wertpapierbörse). The Prime Standard is the market segment with the highest reporting and disclosure requirements at FWB. Note that FWB is the most important German stock exchange and that the Prime Standard covered more than 99% of FBW capitalization in 2011 (measured in free float-weighted market capitalization). For more details, see Deutsche Börse Group (2009).

from annual reports and aggregated in a comprehensive database. Overall, our study covers more than 300 firms in more than 2,250 firm-year observations.

4 Level of non-executive director remuneration

In a first step, we discuss the level of non-executive director pay (per capita total compensation).⁷ Therefore, we proceed in two steps. First, we look at the absolute level. Second, we compare the remuneration of non-executives to executives' compensation packages.

4.1 Absolute level of remuneration

According to a Kienbaum study, the average supervisory board member saw only limited increases in its compensation package: the average compensation level grew from EUR 8,000 to EUR 18,000 over the period 1976–2006, i.e. by only some 3% per annum.⁸ However, many regulatory changes became effective only recently. Thus, we concentrate on the 2005–2011 period.

Figure 1 illustrates the development of average per capita total compensation from 2005 to 2011 in German Prime Standard firms. In 2011, a non-executive director's average total compensation amounted to EUR 51,000. Starting with a mean of EUR 34,000 in 2005, this translates into an annual growth rate of 7% over the 2005–2011 period.⁹

Figure 1 also shows that there is a wide dispersion in per capita total compensation, and therefore, the presented mean figures are biased upwards by high remunerations of non-executive directors from a few firms. Consequently, the median of per capita total compensation of EUR 38,000 in 2011 is significantly below the mean. Moreover, the figures indicate that in 2011, one-fourth of non-executive directors earned more than EUR 65,000. In contrast, non-executive directors in the lowest quartile earned only up to EUR 22,000. Over time, there

⁷ In our empirical analysis, we determine “per capita total compensation” as total compensation to non-executive director in a particular year standardized by the number of non-executive directors in that year.

⁸ See Kienbaum (2007). The sample of the study consists of 1,500 firms.

⁹ Note that the 2007–2009 reflects the financial crisis (and its impact on economic performance of firms). During this period, directors in supervisory boards saw lower performance-related compensation. Further analysis of the performance-related compensation components is discussed in Section 5.

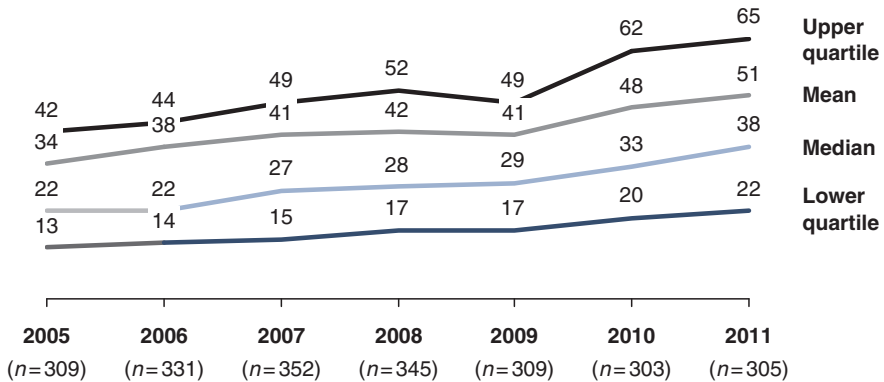


Figure 1: Development of average total compensation and variation per capita (EUR '000) from 2005 to 2011.

is a slight increase in compensation, as suggested by the lowest quartile and the median. Still, from an economic perspective, the low level of non-executive director pay, in particular in the lowest quartile, is surprising and somehow problematic. Effectively, it remains unclear whether current pay levels actually reflect the relevance of the position and the responsibilities (and also liabilities) coming along with it. Also, it seems fair to question the appropriateness of incentives resulting from such pay levels.

Figure 2 illustrates that the problem of low compensation levels is concentrated in the “small” listed firms. Therefore, the figure classifies the firms according to the index they belong to and reports the mean pay level in each index.¹⁰ It turns out that there are considerable differences in per capita total compensation across the respective indices: in 2011, a DAX supervisory board director received an average total compensation of EUR 140,000. This number corresponds approximately to director remunerations paid by Infineon and Daimler. Non-executive directors of E.ON, Siemens, and Volkswagen, for

¹⁰ Four German indices of global importance are calculated by Deutsche Börse AG: DAX comprises the segment of blue chips traded at the Prime Standard and comprises the 30 largest and most actively traded companies listed at the Frankfurt Stock Exchange. MDAX tracks 50 mid-cap companies from traditional and classic sectors which are ranked below the DAX in terms of size and turnover. TecDAX comprises the 30 largest and most liquid issues from technology sectors of the Prime Standard. SDAX comprises 50 issues from the traditional and classic sectors that are ranked below the MDAX. Other Prime comprises all other companies not relating to any index. For a detailed overview of the selection criteria for the indices, cf. Deutsche Börse (2011).

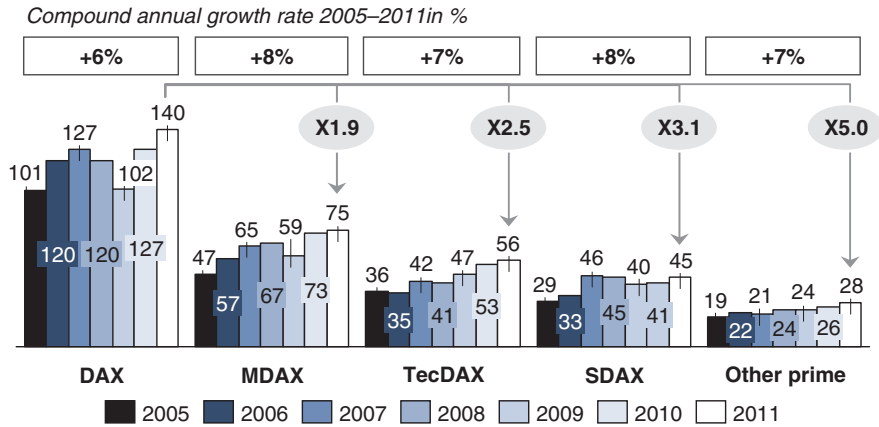


Figure 2: Development of average total compensation per capita and per index (EUR '000; description of the indices is described in Footnote 7) from 2005 to 2011.

example, received a per capita remuneration exceeding EUR 200,000. Therefore, they belong to the best paid non-executive directors across the 30 DAX firms. Lufthansa, Deutsche Post and Adidas with approximately EUR 70,000 of non-executive director remuneration are within the lowest DAX quartile. In 2011, a fourth of DAX non-executive directors earned less than EUR 90,000.

Supervisory board members in DAX firms earned 1.9 times as much as their MDAX counterparts. This reflects the fact that DAX firms are the largest listed firms.¹¹ Comparing DAX firms with firms outside the four major indices, this factor increases to 5.0. In other Prime Standard companies, one-fourth of non-executive directors earned less than EUR 15,000 (MDAX: EUR 39,000, SDAX: EUR 30,000, and TecDAX: EUR 41,000) and, corresponding to only slightly more than EUR 1,000 per month.

4.2 Comparing executive and non-executive compensation levels

Next, we compare the level of non-executive director remuneration to the pay level of executives. Figure 3 depicts the development of executive compensation levels over time.

¹¹ For a detailed analysis of the determinants of supervisory board director compensation such as company size, cf. Andreas et al. (2012).

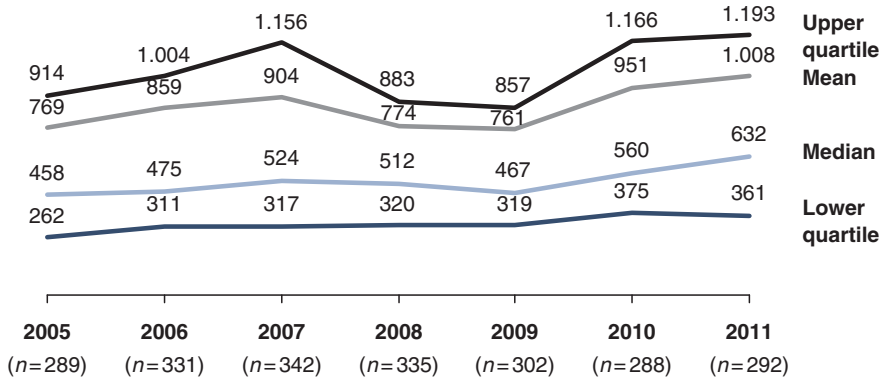


Figure 3: Development of average total executive director remuneration and variation per capita (EUR '000) from 2005 to 2011.

In 2011, an executive directors' average total compensation in a Prime Standard company amounted to EUR 1,008,000 in 2011. This compares with EUR 56,000 for a non-executive director in the same year, i.e. a multiplier of approx. 20x, and shows that compensation packages for executive directors are substantially larger than those for non-executive directors. In light of the increasingly complex tasks and challenges non-executive directors face and given the fact that the job has become much more time consuming, this ratio does not appear to be properly balanced. According to the Kienbaum study referred to in Section 4.1, the ratio was 8x in 1963 illustrating different developments of executive and non-executive director compensation over the last decades.

Figure 4 shows the average total executive director remuneration per capita across several indices for the year 2011 and the multiplier when comparing the

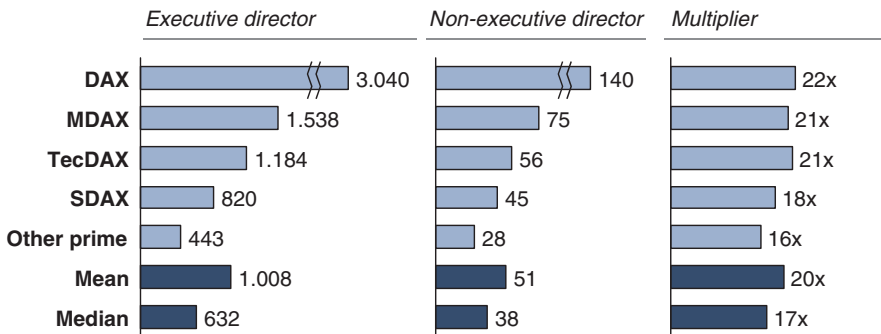


Figure 4: Comparison of average total compensation per capita (EUR '000) of executive and non-executive directors in 2011.

package with non-executive directors' compensation. Multipliers range from $16\times$ to $22\times$, while multipliers for larger firms (e.g. DAX companies) are roughly 40% higher than for smaller firms (e.g. other Prime Standard companies).

4.3 Interim conclusion

Formerly, a position in a supervisory board was considered as an “honorary post”. Apparently, looking at the current pay levels, this still seems to be the case, in particular among small- and medium-sized firms. This, however, comes at a surprise, given the regulatory changes resulting in increasing responsibilities and liabilities.

Nevertheless, the development of total compensation within the respective indices shows that companies have recognized the need for action to a certain extent. The annual increase in total compensation from 2005 to 2011 amounts to 6% in DAX companies, whereas in small- and medium-sized firms the growth is slightly higher: 8% in MDAX, 7% in TecDAX, 8% in SDAX, and 7% in other Prime Standard companies.

5 Structure of non-executive director remuneration

The DCGK concretizes the wide discretionary powers as formulated in §113 AktG regarding the structure of non-executive director remuneration. Since its introduction in 2002, the DCGK recommended splitting compensation into two parts: (i) non-performance-related component and (ii) performance-related component. However, in 2012, the DCGK has been modified and now does not explicitly recommend performance-related components anymore. It only incorporates a rather “generic” recommendation for cases in which performance-related components are granted. In such cases, the performance-related component shall be designed in a way to foster a sustainable development of the firm.

From an economic point of view, director remuneration should embody several compensation components:

- A basic remuneration (fixed remuneration) rewarding, among other things, the basic willingness to hold a director position. Within this context, the fixed remuneration is non-performance based.
- A function- and effort-related remuneration as a reward for (i) participating or chairing a committee and (ii) personal efforts, for instance, by means of attendance fees.

- A component dependent on firm performance, which can be further divided in a short-term and a long-term component. Short-term components focus on a performance measure for the fiscal year under review. The long-run component is supposed to ensure the development of sustainable firm performance. It takes into account more than one fiscal year in the performance measurement.

5.1 Function-related remuneration

In almost every firm, function-related compensation components reward the chairmanship in the supervisory board through a higher compensation, although the proportion of companies rewarding the deputy chairmanship decreases continuously with declining firm size. The 2/1.5 compensation ratio is the one most widely used in the full sample. It indicates that the chairman receives twice as much – and the deputy chairman 1.5 times as much – as an ordinary member.

Attendance fees as an expenditure-compensation instrument have gained increased importance over the last few years: In 2011, 70% (2005: 50%) of DAX, 57% (2005: 33%) of MDAX, and 52% (2005: 57%) of TecDAX companies remunerated the attendance of meetings, compared to only one-third of all SDAX and other Prime Standard companies. Attendance fees ranged from EUR 200 to 5,000 per meeting in the full sample. The mean attendance fee amounted to EUR 1,160, whereas the median is EUR 1,000.

5.2 Performance-related remuneration

Figure 5 splits the sample according to whether firms pay performance-related compensation components.¹² Over time, there are only minor changes in the structure of director remuneration. The percentage of companies remunerating their directors exclusively by means of fixed compensation components decreased from 41% in 2005 to 36% in 2010. However, starting in 2011, there is a rebound in firms using only fixed compensation. This development has continued in 2012 (based on decisions in shareholder meetings) and is primarily

¹² In doing so, we assume that attendance fees, the remuneration of both chairmanship and deputy chairmanship, as well as committee participation represent non-performance-related director compensation components and therefore, they are referred to as “fixed remuneration”.

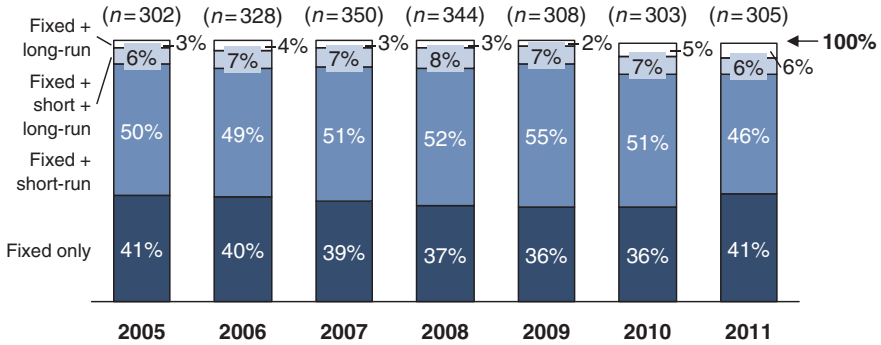


Figure 5: Composition of supervisory board directors' compensation between fixed, short-run, and long-run performance-bases from 2005 to 2011.

driven by the amendment to the DCGK which does not explicitly recommend performance-based components any more.

Although 59% of all firms employ performance-related components in 2011, only 12% use long-run performance-related components. As can be seen from Figure 5, this situation has scarcely improved since 2005 despite the fact that this remuneration component is essential to harmonize interest of stakeholders (including shareholders) and non-executive directors.

Figure 6 shows compensation structures for different indices in 2011. There are large differences with regard to compensation components across the indices in our sample. The use of performance-related compensation components declines considerably with decreasing company size. Accordingly, directors in DAX companies receive performance-related payments in the majority of cases

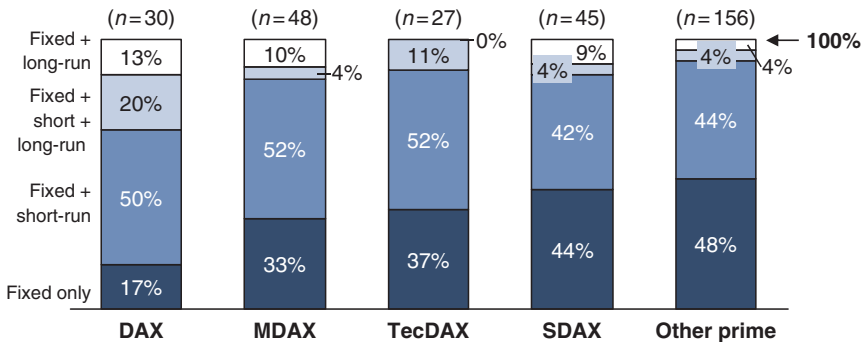


Figure 6: Composition of supervisory board directors' compensation between fixed, short-run, and long-run performance-bases for different indices in 2011.

(~85%), whereas this fraction shrinks to ~50% for other Prime Standard companies. Long-run incentive mechanisms are used by 33% of all DAX companies, while this fraction significantly drops to 15% for MDAX companies and even to 8% for other Prime Standard companies.

5.3 Assessment basis for the performance-related remuneration

Neither the DCGK nor §113 AktG provides detailed guidelines with regard to the choice of a suitable assessment basis for variable compensation components. In §113 AktG, for example, there is only one calculation rule using annual net accounting income as allocation base for director compensation. Furthermore, Prime Standard companies also use other and to some extent very different success criteria. Figure 7 indicates that in 2011, 37% of all firms employed the magnitude of the distributed dividend as assessment basis for short-run performance-related compensation components. Dividend is a “dangerous” criteria for non-executive director compensation. It clearly has the benefit of being measurable with no angle for manipulation with regard to the accounting number itself as opposed to non-GAAP measures as EBITDA or EBIT. However, it has a severe disadvantage: non-executive directors are involved in the decision making process for the dividend proposal put forward to shareholders, that is, they can directly influence their own salary. In contrast,

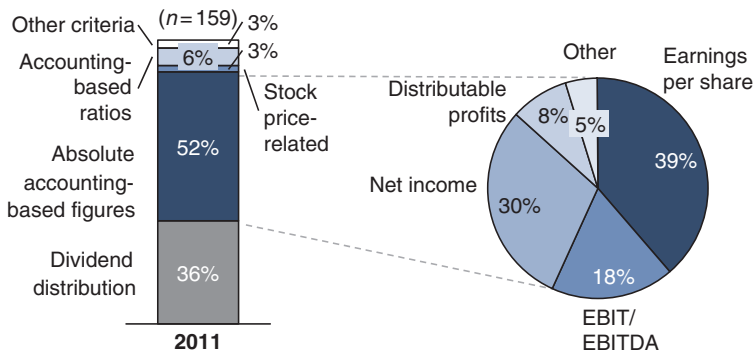


Figure 7: Criteria for the assessment of short-run performance-related compensation in 2011 (in %) (The item “Others” within the absolute accounting success criteria refers to for example revenue or cash flow figures as assessment basis for short-run performance-oriented director compensation.).

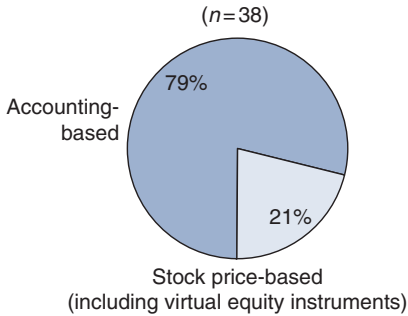


Figure 8: Criteria for long-run variable compensation in 2011 (in %).

52% of all companies selected absolute accounting-based performance figures. Among those, 39% of the firms approximated performance by the earnings per share ratio.¹³ In 39% of the cases, obligatory calculation rules according to §113 AktG have been applied.

Summing up, our evidence indicates that firms often choose assessment criteria based on accounting measures. From an economic point of view, the use of accounting income entails several problems, because it can heavily be influenced by accounting decisions which should actually be monitored and certified by the supervisory board. This might lead to some conflict of interest between supervisory board duties and compensation.

Furthermore, the design of long-run variable compensation deserves to be analyzed. Figure 8 shows that ~80% of companies with long-run variable compensation in place use performance measures such as earnings per share ratio or EBIT that have to meet certain criteria over a period of three to five years. The remaining 20% have linked this component to the development of the firms share price. None of the firms uses stock options or other security-based remuneration components.

5.4 Regulatory positions on stock options and other security-based remuneration components

The non-existence of stock price-based compensation mechanisms such as stock options results from, among other things, the German regulations and the uncertainty of firms with respect to possible lawsuits.

¹³ Admission to Prime Standard requires the application of international accounting standards (IFRS/IAS) or US accounting standards (US-GAAP).

As an example, in the Shareholders Meeting 2001 of Mobilcom AG, the articles of association were changed to provide its non-executive directors stock options as part of their compensation package. To supply the necessary shares, the company was authorized to acquire own shares according to §71 (1) No. 8 (5) AktG. Thereby, the subscription rights of the existing shareholders were excluded according to §186 (3), (4) AktG. Members of the “Deutsche Schutzvereinigung für Wertpapierbesitz”, an association for private investors, filed a suit against this decision. According to this “Mobilcom” case, the German Federal Supreme Court of Justice (BGH) refused the grant of stock options for supervisory board members when they are met by a conditional increase capital or the repurchase of own shares. Furthermore, in November 2005, the German Act on Corporate Integrity and Modernization of the Right of Rescission (UMAG) confirmed the interpretation by the BGH and additionally extended it to the grant of convertible bonds. Consequently, it is not permitted to grant stock options and convertible bonds as a remuneration for non-executive directors.¹⁴ This restriction is in sharp contrast to the basically non-existence of legal restrictions concerning the use of stock-based incentives such as stocks and stock options for executive directors in Germany.

The reasons for this judgment are twofold. On the one hand, existing shareholders’ have legal priority on new shares to be issued: this legal right is to be protected. On the other hand, the alignment of interests of executive and supervisory board members due to stock options or convertible bonds shall be avoided.

Altogether, stock options are not prohibited by law as a compensation component for non-executive directors. In particular, the law does not explicitly prohibit virtual equity instruments (e.g. stock appreciation rights or phantom stocks), as they are purely cash settled. Therefore, stock price related types of compensation are not prohibited by law. However, it is very important that virtual equity instruments schemes, whenever employed to compensate supervisory board members, differ considerably from the managerial board’s incentive program, for instance in terms of their time frame or their exercise parameters.

6 Summary and conclusion

Summing up, our study provides the following insights about the status quo and challenges of non-executive director remuneration in German listed firms:

¹⁴ For a detailed description regarding the “Mobilcom” case, see Reidenbach (2004).

1. Current pay levels for non-executive directors appear not to be commensurated to the importance of the tasks and challenges coming along with it. This is especially true for small- and medium-sized firms. We suggest that the size and relative weight of performance-related and function-related remuneration should be increased.
2. Since 2011, there is an increasing tendency to limit non-executive director remuneration to non-performance-related components only. This tendency is facilitated by the amendment of the DCGK which does not explicitly recommend a performance-related compensation component anymore. We are skeptical about that development, since this breaks up the *risk–reward–responsibility relation* for those in charge. From an economic perspective, a proper compensation package for non-executive directors should consist of a fixed component, a function-oriented component, and a performance-linked component preferably linked to long-term sustainable performance.
3. German firms resist linking the remuneration of their non-executive directors to the stock price by using stock options and other equity-based compensation schemes. Appendix confirms this evidence for executive directors in Germany.

Appendix: stock-based incentives for executives of German listed firms

While stock-based incentives are rarely used for German non-executive directors, they are relatively common in executive compensation packages. Figure 9 shows

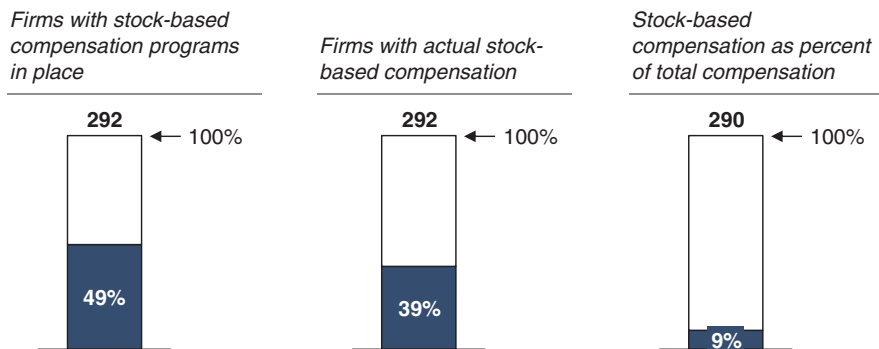


Figure 9: Usage of stock-based compensation and proportion of total average compensation per capita for executive directors in 2011.

the proportion of firms that have stock-based compensation programs in place for the compensation of their executive directors.¹⁵ It further shows the share of firms that eventually have made use of such component as part of the overall compensation in 2011. While some 50% of firms have stock-based compensation programs in place in 2011 only 41% of them actually granted stock-based incentives. Overall, stock-based incentives account for only 9% of executive compensation. While legally allowed only since 1996, stock-based incentives are still of rather limited relevance in Germany for the compensation of executive directors.

References

- Andreas, J., Rapp, M. S., & Wolff, M. (2012). Determinants of director compensation in two-tier systems: Evidence from German panel data. *Review of Managerial Science*, 6(1), 33–79.
- Deutsche Börse. (2011). *Guide to the equity indices of Deutsche Börse*. Berlin: Deutsche Börse.
- Deutsche Börse Group. (2009). *Facts & figures – Prime Standard, General Standard, Entry Standard*. Frankfurt: Deutsche Börse Group.
- Goyer, M. (2006). Varieties of institutional investors and national models of capitalism: The transformation of corporate governance in France and Germany. *Politics Society*, 34(3), 399–430.
- Kienbaum. (2007). *30 Jahre Vorstands- und Aufsichtsratsvergütung in Deutschland, Gammersbach*. London: Kienbaum.
- Metzner, Y. Rapp, M. S. & Wolff, M. (2012). *Vergütung deutscher Aufsichtsratsorgane von 2005 bis 2011 – Analyse der Unternehmen des deutschen Prime Standards*. Düsseldorf: Fachverlag.
- Rapp, M. S. & Wolff, M. (2012). *Vergütung deutscher Vorstandsorgane von 2005 bis 2011 – Analyse der Unternehmen des deutschen Prime Standards*. Düsseldorf: Fachverlag.
- Reidenbach, D. (2004). No stock options for supervisory board members of a German Stock Corporation: A comment on In re Mobilcom AG, BGH II ZR 316/02 of 16 February 2004. *German Law Journal*, 5(4), 347–354.
- The Conference Board Task Force on Improving Corporate/Investor Engagement. (2012). *The Underpinnings of Corporate Governance Approaches and the Shareholder Value Model*. White Paper.
- Vitols, S. (2005). Changes in Germany's bank based economy financial system: Implications for corporate governance. *Corporate Governance: An International Review*, 13(3), 386–396.

¹⁵ Data are based on the same sample of firms as our analysis in this article. For further details, see Rapp and Wolff (2012).