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*Exporting corporate governance:  
Do foreign and local proxy advisors differ?*

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# **Exporting corporate governance: Do foreign and local proxy advisors differ?<sup>1</sup>**

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# **Exporting corporate governance: Do foreign and local proxy advisors differ?**

## **Abstract**

European regulators are concerned that US-based proxy advisors might export US corporate governance by not considering sufficiently the unique aspects of the local setting. In contrast, local proxy advisors are expected to have a deeper understanding of the local setting. Using the German setting, we examine the pattern and the impact of shareholder voting recommendations by foreign (ISS, Glass Lewis) and local (IVOX) proxy advisors. First, we find that the voting recommendations diverge more between foreign and local proxy advisors than among foreign proxy advisors. Second, we document that against-recommendations by the local proxy advisor have an incremental impact on voting outcomes even after controlling for the voting recommendations by foreign proxy advisors. Third, we observe that the impact of the voting recommendations on voting outcomes increases with a higher proportion of institutional investors. Dividing the proportion into foreign and local institutional investors reveals that against-recommendations by foreign proxy advisors influence the voting decisions of both groups similarly. Overall, our study provides novel evidence that the informational contents of voting recommendations by foreign and local proxy advisors differ, implying that foreign proxy advisors may not fully integrate unique aspects of the local setting in their voting recommendations.

# **Exporting corporate governance: Do foreign and local proxy advisors differ?**

## **1. Introduction**

Proxy advisors are a relatively new type of information intermediaries. Information intermediaries, e.g., auditors, credit-rating agencies or financial analysts, help to reduce information asymmetries between firms and shareholders (Healy & Palepu, 2001). Proxy advisors serve the role of information intermediaries, as they provide information in form of voting recommendations for each agenda item of firm's annual general meeting (AGM). In order to arrive at the voting recommendations, proxy advisors gather information about AGM agenda items and process it in consideration of voting guidelines developed by themselves or by their clients. Institutional investors purchase the voting recommendations and accompanying information from proxy advisors to comply with their fiduciary duty of casting informed votes at the AGMs of companies, in which they hold shares (e.g., ESMA 2012; Iliev & Lowry, 2015). In this study, we compare the type of voting recommendations published by foreign and local proxy advisors and their impact on voting outcomes.

Proxy advisors can realize economies of scale by selling their voting recommendations to a large number of institutional investors. Reflecting these economic realities, the proxy advisory market has an oligopolistic structure. Institutional Shareholder Services (ISS) and Glass Lewis (GL), both headquartered in the US, dominate the market worldwide. ISS is the market leader, covering approximately 40,000 meetings each year and advising more than 1,700 institutional clients (ISS 2017). GL is the second largest proxy advisor, covering more than 20,000 meetings each year and having more than 1,200 institutional clients who collectively manage more than \$35 trillion in assets (GL 2017). In some countries, smaller local proxy advisors exist, who regularly take on a role as local specialists (ESMA 2013). For

instance, IVOX was a local proxy advisor in Germany, covering more than 2,500 companies (GL 2015).<sup>1</sup>

In Europe, the European Securities and Markets Authority (ESMA) monitors closely the development of the proxy advisory industry to identify whether regulation is needed to address potential market failures. In 2012, ESMA published a discussion paper raising the question whether improvements are necessary to ensure that proxy advisors take local market conditions into account (ESMA 2012). Representatives of corporations responding to the discussion paper expressed their “strong feeling that proxy advisors do not take into account local legal framework and practices [...], that they do not devote enough resources and that there is a lack of specific knowledge” (ESMA 2013, p. 16). Institutional investors agree that “there is still room for improvement” (ESMA 2013, p. 16), but also emphasize that “local practices and culture can never justify proposals on the agenda which, if approved, may result in weak governance structures” (ESMA 2013, p. 16). Recently, article 3j of the Shareholder Rights Directive of the European Commission introduced transparency requirements for proxy advisors, including a description “whether and, if so, how they take national market, legal, regulatory and company-specific conditions into account” when preparing their voting recommendations (EU, 2017).

This study investigates the question whether foreign proxy advisors consider local market conditions in their voting recommendations. In order to do so, we compare the type of voting recommendations by foreign and local proxy advisors and their impact on voting outcomes. First, we compare the level of agreement in voting recommendations among foreign proxy advisors and between foreign and local proxy advisors. Assuming that local proxy advisors are experts of the local institutional setting (e.g., ESMA 2012), a relatively high level of

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<sup>1</sup> IVOX was acquired by GL in June 2015. As the integration of the system took place at the end of 2015 (GL 2015), IVOX still used its own methodology for our full sample period (2013-2015).

disagreement between foreign and local proxy advisors would indicate that foreign proxy advisors do not comprehensively take local factors into account. Second, we test whether the voting recommendations by the local proxy advisor still matter for voting outcomes after controlling for the voting recommendations by foreign proxy advisors. A significant incremental effect of the local proxy advisor would imply that local proxy advisors incorporate some local factors in developing their voting recommendations not considered by foreign proxy advisors. Third, we test whether local institutional investors, presumably best in the position to evaluate the validity of the advice of proxy advisors for local corporations, differ from foreign institutional investors in their response to the voting recommendations by foreign and local proxy advisors. If local proxy advisors considered some local aspects missed by foreign proxy advisors, we would expect that local institutional investors are relatively more sensitive toward voting recommendations by local proxy advisors and relatively less sensitive toward voting recommendations by foreign proxy advisors compared to foreign institutional investors.

We use the German setting to compare the voting recommendations by the US-based foreign proxy advisors ISS and GL to those of the German-based local proxy advisor IVOX. As IVOX was originally set up as an initiative of the German investment fund association, the Bundesverband Investment and Asset Management e. V. (ESMA 2012), the voting recommendations by IVOX may be considered as best practice reflecting the views of local institutional investors. Therefore, we use it as a benchmark for voting recommendations reflecting the unique local institutional aspects. Moreover, the German setting seems suitable for addressing our research question, as its relationship-based corporate governance system strongly contrasts with the market-based Anglo-Saxon corporate governance system (e.g., La Porta, Lopez-de-Silanes, Shleifer, & Vishny 2000). The particularities of the relationship-based German corporate governance system might render it particularly challenging for US proxy

advisors most familiar with market-based corporate governance systems to sufficiently take into account the local institutional setting.<sup>2</sup>

The findings largely support our conjectures. First, we find that the foreign proxy advisors ISS and GL show a relatively high level of agreement in their voting recommendations compared to the level of agreement between the local proxy advisor IVOX and either one of the two foreign proxy advisors. This result suggests that foreign proxy advisors share a more similar perspective compared to the perspective of the local proxy advisor. In other words, local proxy advisors might bring in a different perspective compared to foreign proxy advisors. Second, we observe that against-recommendations by both foreign and local proxy advisors have an incremental impact on voting outcomes, suggesting that investors integrate both the perspective of foreign and local proxy advisors in their voting behavior. Further, it implies that local proxy advisors still matter despite the dominance of the foreign proxy advisors. Third, we conduct some analyses to provide some evidence on the channel through which voting recommendations have an impact on voting outcomes. We find that a greater proportion of local institutional investors enhances the impact of the voting recommendation of the local proxy advisor. Further, we observe that both the proportion of foreign and local institutional investors strengthen the impact of the voting recommendations of foreign proxy advisors. This latter finding implies that local institutional investors are similarly attentive to the advice of

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<sup>2</sup> One prominent example of a potentially problematic influence of foreign proxy advisors in Germany is the 2013 AGM of Lufthansa AG, the largest German airline. The former CEO of Lufthansa (until 2010), Wolfgang Mayrhuber, was proposed as a candidate for the supervisory board. ISS recommended voting against him based on their guidelines prescribing a cooling-off period of 5 years and restricting the maximum number of other supervisory board mandates. In contrast, the German Stock Corporation Law considers a shorter cooling-off period of 2 years and a higher number of other supervisory board mandates acceptable, given the strict separation of the executive and supervisory board in the German dualistic corporate governance system. In response to the negative recommendation of ISS, Wolfgang Mayrhuber withdrew his candidature. However, one day later, after securing the support of important institutional investors, he was again proposed as a candidate. At the AGM, he was elected with a support of 63% of the votes, an exceptionally low result given an average voting outcome of 94.5% for director elections in our sample. Lufthansa issued a press statement claiming that the voting recommendation of ISS was based on a misunderstanding of the German dualistic corporate governance system (Lufthansa AG 2013). Interestingly, IVOX as local proxy advisor also recommended voting against the election of Wolfgang Mayrhuber.



foreign proxy advisors as are foreign institutional investors. In additional analyses, we exploit a natural experiment. This natural experiment uses the temporarily lower participation of foreign institutional shareholders at annual general meetings of some firms exogenously triggered by the uncertainty about the interpretation of a court ruling. Using a difference-in-differences design, we find a significant drop of the influence of foreign proxy advisors for the relevant firms during that period.

Our study contributes to the emerging literature on the role of proxy advisors as an information intermediary. Most prior literature focuses on the impact of US proxy advisors within the US setting. These studies investigate the determinants and consequences of voting recommendations (e.g., Cai, Garner, & Walking 2009; Ertimur, Ferri, & Oesch 2013, 2017). One exception is the recent study by Hitz and Lehmann (2017), documenting an important economic role of the US proxy advisors in Europe. Hitz and Lehmann (2017) show that ISS and GL cover a large part of the market, that the proportion of against-recommendations differs substantially across the European countries, that their voting recommendations have a significant impact on voting outcomes, and that the market reacts negatively to against-recommendations. Overall, they conclude that their finding of internationally heterogeneous voting recommendations by ISS and GL implies that these proxy advisors use country-specific methodologies.

Our study expands literature on the role of foreign proxy advisors in an international context in two ways. First, we use a novel dataset that enables us to compare the role of both foreign and local proxy advisors. Our findings show that foreign and local proxy advisors differ substantially in their recommendations and that local proxy advisors have an incremental effect on voting outcomes. These findings do not rule out that foreign proxy advisors use country-specific methodologies, but suggest that foreign proxy advisors do not fully integrate local factors in their voting recommendations. Second, we provide new insights on the effects of the

ownership structure by distinguishing between local and foreign institutional investors. We find that local institutional investors – presumably familiar with local market factors – do not seem to discount the recommendations by foreign proxy advisors. Instead, they incorporate these recommendations in their voting decisions to a similar degree as foreign institutional investors. Therefore, one may conclude from our findings that foreign proxy advisors satisfy preferences for international best practice shared by both foreign and local institutional investors. This conclusion is consistent with prior studies documenting that investors describe proxy advisors’ services as being useful (McCahery, Saunter, & Starks 2016), perceiving no need for a stronger regulation of the proxy advisor industry (ESMA 2013).

## **2. Literature Review and Hypothesis Development**

### *2.1 Agreement in Voting Recommendations between Foreign and Local Proxy Advisors*

In a first step, we investigate the level of agreement in the voting recommendations by foreign and local proxy advisors. The idea is that a low level of agreement provides an indication that the methodologies used by proxy advisors differ. For this purpose, we document differences in the proportion of against-recommendations and examine whether the pattern of voting recommendations differs between local and foreign proxy advisors overall and across specific agenda item categories.

Prior literature has investigated the frequency of negative recommendations and the level of agreement between ISS and GL. In terms of US AGMs, findings are that ISS tends to issue less against-recommendations than GL. For director elections, Choi et al. (2010) show a rejection rate of 6.8% for ISS and 18.8% for GL. Ertimur et al. (2013) confirm this tendency for the frequency of against-recommendations for the agenda item say-on-pay. They observe a rejection rate of 11.3% for ISS and 21.7% for GL. Further, they document that ISS and GL issue the same type of recommendation in 77.0% of all cases. However, the level of agreement

drops to 17.9% for controversial cases, where at least one of the two proxy advisors issues an against-recommendation.

One of the few studies comparing the voting patterns of ISS and GL outside of the US is Hitz and Lehmann (2017). For the 14 European countries in their sample, they find that the proportion of against voting recommendations is 14.9% for ISS and 17.5% for GL. ISS is more critical on board and shareholder rights issues, whereas GL is more critical on compensation and audit issues. Overall, the level of agreement is 84%. The level of agreement on controversial cases is 34%.

We expand prior literature by contrasting foreign vs. local proxy advisors' recommendation types. Regulators and corporations are concerned that foreign proxy advisors do not take into account unique features of the local market when rendering their recommendation, whereas local proxy advisors are expected to do so (ESMA 2012, 2013). Based on the argument that local proxy advisors have a different perspective on corporate governance issues compared to foreign proxy advisors, we expect that the level of agreement between foreign and local proxy advisors is lower than that among foreign proxy advisors.

**H1:** The level of agreement in voting recommendations is lower between foreign and local proxy advisors than among foreign proxy advisors.

## *2.2. Effects of Voting Recommendations of Foreign and Local Proxy Advisors on Voting Outcomes*

Next, we are interested whether the voting recommendations by the local proxy advisor have an incremental impact on voting outcomes after controlling for the voting recommendations by foreign proxy advisors. Evidence for such an incremental effect would suggest that the voting recommendations by local proxy advisors entail a distinct informational value, presumably linked to the consideration of unique local market factors.

Extensive literature investigates the impact of the largest proxy advisor ISS in the US. In one of the first studies, Bethel and Gillian (2002) show that a negative recommendation of ISS is associated with a 13.6 to 20.6% lower voting outcome for management proposals, depending on the type of proposal. In a large-scale study on director election, Cai et al. (2009) show that a negative-recommendation by ISS is associated with a 19% lower voting outcome. Using a regression-discontinuity design based on an arbitrary compensation threshold in the voting guidelines of ISS, Malenko and Shen (2016) provide evidence that the reduction of up to 25% in voting support in response to an ISS against-recommendation is causal.

Some studies investigate whether the recommendations by the second largest proxy advisor GL still matter after controlling for recommendations by the largest proxy advisor ISS. These studies regularly show that the incremental effect of GL is still significant - albeit weaker - than the effect of ISS. For example, in case of say-on-pay votes, Ertimur et al. (2013) find that the effect of a negative-recommendation on a reduction in voting support is 12.9% for GL, but 24.8% for ISS. For Europe, Hitz and Lehmann (2017) observe an average effect of 3.1% for GL and 8.5% for ISS.

Very few studies consider the effects of voting recommendations by other proxy advisors beyond ISS and GL on voting outcomes. One exception is Choi et al. (2010) comparing the effects of four US proxy advisors and their power to change votes in uncontested director elections. They find that only ISS and GL have a significant impact on voting outcomes. In contrast, the incremental effects of the other two proxy advisors, Egan Jones and Proxy Governance, are insignificant after controlling for the voting recommendations by ISS and GL. These finding suggests that the voting recommendations by ISS and GL together capture most of the relevant information content in an US context.

Our study is the first one investigating the impact of a local proxy advisor on voting outcomes after controlling for the impact of the two most important foreign proxy advisors ISS

and GL. The finding of prior literature, namely that ISS and GL together capture most of the relevant information content in a US context, would suggest that local players may not have any additional incremental effect on voting outcomes. However, local players may still capture some unique local market factors missed by the foreign proxy advisors. Based on this latter argument, we expect that local proxy advisors have an incremental effect on voting outcomes after controlling for the voting recommendations by the foreign proxy advisors.

**H2:** The voting recommendations by local proxy advisors have an impact on voting outcomes after controlling for the voting recommendations by foreign proxy advisors.

### *2.3. Differential Impact of Foreign and Local Institutional Investors on the Effects of Voting Recommendations on Voting Outcomes*

In the third hypothesis, we turn to the role of the institutional investors. We are interested in whether local institutional investors differ from foreign institutional investors in the manner in which they integrate the voting recommendations of foreign and local proxy advisors.

Observing the voting behavior of specific investors is often not possible due to a lack of data. One way of approximating for it is to test whether the impact of proxy advisors' recommendation varies with the shareholder structure. For example, Ertimur et al. (2013) finds that the voting recommendations by ISS and GL have a stronger impact on voting outcomes if the share of institutional investors is higher, especially if the institutional investors are non-blockholders. Larcker et al. (2015) show that the impact of negative-recommendations by ISS and GL on voting outcomes is stronger in case of corporations with a high proportion of passive institutional investors. This finding suggests that non-blockholders and passive institutional investors are particularly likely to follow the advice of the proxy advisors. With respect to

Europe, Hitz and Lehmann (2017) find a moderating role of ownership structure, e.g., the impact of foreign proxy advisors is higher for firms with a larger free float.

In our study, we split up the proportion of institutional investors based on their origin. In particular, we are interested in whether local institutional investors integrate the advice of local and foreign proxy advisors differently than foreign institutional investors. If both local and foreign institutional investors shared a common understanding of international best practice, we would expect that both groups respond similarly to the advice of proxy advisors. However, if local institutional investors have a particular preference for unique local features, we would expect local institutional investors to be more responsive to local and less responsive to foreign proxy advisors compared to foreign institutional investors. Based on these arguments, we formulate the following hypotheses.

**H3a:** The interaction effect between voting recommendations by *local proxy advisors* and the proportion of institutional investors on voting outcomes is *stronger* for a higher share of *local institutional investors* than for a higher share of *foreign institutional investors*.

**H3b:** The interaction effect between voting recommendations by *foreign proxy advisors* and the proportion of institutional investors on voting outcomes is *weaker* for a higher share of *local institutional investors* than for a higher share of *foreign institutional investors*.

### **3. Data**

#### *3.1 Sample Selection*

Table 1, Panel A, shows the sample selection. The starting sample are all German companies publicly listed in the regulated market at the Frankfurt stock exchange (CDAX). Our sample period is 2013 to 2015, including between 432 and 497 CDAX firms each year,

resulting in a total of 1,396 firm-year observations. We obtained the proxy reports for all German AGMs covered during the sample period directly from the proxy advisors ISS, GL, and IVOX.<sup>3</sup> We find that 876 firm-years (62.8% of all CDAX firm-years) are covered by at least one proxy advisor, featuring a total of 8,552 agenda items.

In order to investigate the agreement in voting recommendations between the proxy advisors (H1) and the impact of voting recommendations on voting outcomes (H2), we focus only on firm-years covered by all three proxy advisors, excluding 355 firm-years associated with 2,953 agenda items. We also exclude agenda items that do not feature a vote, resulting in the loss of four firm-year and 771 agenda item observations. We also exclude 87 special agenda items, e.g. shareholder proposals or resolutions about the agenda. Finally, we drop 125 agenda items for which we were not able to collect information on voting results, resulting in the loss of six firm-years. We obtained data on voting outcomes from ISS and IVOX for most of the firms covered by these two proxy advisors. For the other firms, we manually gathered the information from firm websites or, if not available, contacted firms by email. The final sample for the examination of the type and impact of voting recommendations includes 511 firm-years with 4,616 agenda items.

We also investigate whether the impact of the voting recommendations differ in terms of the origin of the institutional investor (H3). We use Hoppenstedt to derive information on the shareholder structure of the firms. Hoppenstedt provides information on the name and location of the shareholder, enabling us to identify institutional investors and their origin for 411 firm-years with 3,770 agenda items.

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<sup>3</sup> ISS and GL have self-developed voting guidelines. IVOX uses the guidelines of the Bundesverband Investment and Asset Management e.V. (BVI). In addition, all three proxy advisors provide customized recommendations based on customer provided guidelines.

### 3.2 Proxy Advisor Coverage

Table 1, Panel B provides an overview of the coverage of CDAX firms for each individual proxy advisor during our sample period. We observe that ISS has the largest coverage with more than 260 firms in each year. The coverage of GL has decreased during our sample period from 242 firms to 200 firms, while the coverage of IVOX has increased from 198 to 239 firms. Overall, ISS covers 56.8 %, GL 46.8 %, and IVOX 45.6% of all CDAX firm-years between 2013 and 2015. As the proxy advisors tend to cover larger firms, each of them covers approximately 95 % of the market in terms of market capitalization. Together, they cover 876 firm-years (62.8% of the CDAX) and an aggregated market share of €3,060 Bn (97.8% of the CDAX) over the three-year period.

Table 1, Panel C presents a cross tabulation of the coverage of firms by proxy advisors for all of the 876 firm-years covered by at least one proxy advisor. ISS and GL have a joint coverage of 608 firm-years or 43.6% of all CDAX firms. ISS covers 185 firm-years not covered by GL, while GL covers only 45 firm-years not covered by ISS, reflecting the higher overall coverage of ISS. The cross tabulation of firms covered by ISS and IVOX reveals a very similar picture as for ISS and GL. Finally, the cross tabulation of GL and IVOX shows a smaller number of 533 firm-years covered by both firms.

[Insert Table 1 about here]

## 4. Results

### 4.1. Agreement in Voting Recommendations between Foreign and Local Proxy Advisors (H1)

In the first step, we investigate differences in voting recommendations between foreign and local proxy advisors. We are interested in the proportion of against-recommendation issued and in the level of agreement between the proxy advisors. We expect that the foreign proxy advisors are more aligned in their voting recommendations compared to the local proxy advisor.



Table 2, Panel A shows a cross tabulation of the voting recommendations by proxy advisor.<sup>4</sup> We observe a high level of agreement in the voting recommendations by ISS and GL. Both issue a for-recommendation in 89.2% and an against-recommendation in 3.3% of all cases, resulting in a total level of agreement of 92.5%. In contrast, the frequency of agreement is much smaller between each of the foreign proxy advisors ISS and GL and the local proxy advisor IVOX. ISS and IVOX agree in 77.6% of all cases with 73.6% joint for-recommendations and 4.0% joint against-recommendations. For GL and IVOX, the level of agreement is 76.9% with 72.7% joint for-recommendations and 4.2% joint against-recommendations.

Table 2, Panel B shows the level of agreement between the proxy advisors by agenda category providing further information on the proportion of against-recommendations and average voting results. The results show that the level of agreement between the foreign proxy advisors of 92.5% is much higher than the average level of agreement between each foreign proxy advisor and the local proxy advisor of 77.3%, a difference of 15.2%. This difference in the level of agreement is particularly high for auditor elections, director elections, and director ratifications. One explanation for this observation might be that these items reflect particularities of the local corporate governance system. In Germany, auditor election is mandatory at AGMs, whereas in the US, auditors are only ratified on a voluntary basis. Further, the agenda items of director elections and director ratifications require attention to the specifics of the German corporate governance system, which features a dualistic structure compared to the monistic board structure in the US and most other Anglo-Saxon countries.

Table 2, Panel C repeats the analysis of Panel B for controversial cases. In line with prior literature (e.g., Ertimur et al. 2013; Hitz & Lehmann 2017), we define controversial cases as

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<sup>4</sup> For reasons of conciseness, we include abstain-recommendations into the category of for-recommendations.

those where at least one proxy advisor issues an against-recommendation. For this subsample of agenda items, we find an even stronger difference between the level of agreement between the foreign proxy advisors (74.0%) and the level of agreement between each foreign proxy advisor and the local proxy advisor (22.5% for ISS/IVOX and 20.2% for GL/IVOX), resulting in an average difference between agreement rates of 52.7%. Again, we observe the strongest differences in case of auditor elections, director elections, and director ratifications. In addition, we observe a strong difference in the level of agreement rates for executive ratifications.

In summary, our analysis documents a similar level of agreement between ISS and GL as found in prior literature (e.g., Ertimur et al. 2013; Hitz & Lehmann 2017). Going beyond prior literature, our study provides novel evidence of a much lower level of agreement between foreign and local proxy advisors, supporting our first hypothesis. The high level of disagreement is driven by a high level of against-recommendations issued by the local proxy advisor for items that are strongly linked to particularities of the German corporate governance system.

In addition, we observe that the local proxy advisor is much more critical in its voting recommendations compared to the foreign proxy advisors overall. IVOX recommends to vote against management proposals in 23.9%, whereas the proportion of against-recommendations is 6.5% for ISS and 7.6% for GL. One reason might be that IVOX, as a specialized local proxy advisor, evaluates the agenda items more critical than the foreign proxy advisors in order to differentiate itself from the foreign competitors. Further, IVOX might intend to satisfy specific demands of German institutional investors such as a higher transparency of the firms.

[Insert Table 2 about here]

#### *4.2. Effects of Voting Recommendations of Foreign and Local Proxy Advisors on Voting Outcomes (H2)*

In the next step, we investigate the impact of against-recommendations on voting outcomes. We are interested whether local proxy advisors matter for voting results after controlling for the impact of foreign proxy advisors.

Table 3, Panel A, shows the average voting results for the different combinations of against-recommendations by the three proxy advisors in our sample. We observe a very high level of support (98.3%) if all proxy advisors issue a for-recommendation. Focusing on the cases where only one proxy advisor issues an against-recommendation, we observe that the voting support drops stronger in case of ISS against-recommendations (84.1%) and GL against-recommendations (93.4%) compared to IVOX against-recommendations (96.1%). Combinations of ISS and GL against-recommendations have, on average, the lowest level of support (81.2%), whereas combinations of ISS and IVOX (85.6%) and GL and IVOX (92.9%) have, on average, slightly higher rates of support. The average level of support is 85.0% if all three proxy advisors recommend voting against.

To test the effects of voting recommendations on voting outcomes, we estimate the following models with OLS.<sup>5</sup>

$$\%Voting\ result_{j,f,t} = \alpha_0 + \sum_{i=1}^3 \beta_i Recommendation_{i,j,f,t} + Fixed\ effects + \varepsilon_{j,f,t} \quad (1)$$

The level of observation is agenda item  $j$  at the AGM of firm  $f$  in year  $t \in [2013, 2015]$ . We use the voting result in percent for each item of the respective  $Recommendation_{j,f,t}$  of proxy advisor  $i$ , which is either ISS, GL or IVOX.  $\beta_i$  represents the coefficients of interest. In particular, we are interested in the coefficients for the against-recommendations by the proxy advisors. We include fixed effects at firm-year level, controlling for the average effects of firm-year-specific characteristics on voting results, capturing, for example, general shareholder

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<sup>5</sup> The results remain virtually unchanged when estimating Tobit models (Tobin 1958). As fixed effects estimations with Tobit models are more difficult to interpret, we report OLS results.

dissatisfaction with a firm's performance (Cai et al. 2009). Further, we include fixed effects at agenda-category level, controlling for average differences in support. We use heteroscedasticity robust estimators.

Table 3, Panel B reports the results. The coefficients of all proxy advisors are significantly negatively associated with the voting outcome. Including each proxy advisor at a time (column 1-3), we observe that the estimated negative impact on voting outcomes of an against-recommendation is 12.12% for ISS, 6.35% for GL, and 3.79% for IVOX. Including the recommendations of all three proxy advisors simultaneously (column 4), we find that all proxy advisors still have an incrementally significant impact. An ISS against-recommendation has the greatest impact on the voting outcome with 10.71% lower voting support. GL and IVOX have a distinct, albeit lower impact than ISS with a reduced voting outcome of 2.03% and 2.22%, respectively. The results remain virtually unchanged for the restricted sample used later on for testing H3, which excludes observations with missing information on the shareholder structure (column 5).

The regression model that includes all proxy advisors (column 4) estimates the marginal impact of each proxy advisor, i.e. correcting for commonly available information in the market that is interpreted similarly by all proxy advisors and their clients. Accordingly, the coefficient for IVOX may be interpreted as reflecting the information content attributable to considering unique local market conditions when controlling for international best practice incorporated in the voting recommendations of GL and ISS. Our results show that the information content incorporated in the recommendations of the local proxy advisor still matter even after controlling for the recommendations of foreign proxy advisors, supporting H2.

[Insert Table 3 about here]

### 4.3. Differential Impact of Foreign and Local Institutional Investors on the Effect of Voting Recommendations on Voting Outcomes (H3)

In the next step, we integrate the shareholder structure of the companies in our investigation:

$$\begin{aligned} \%Voting\ result_{j,f,t} = & \alpha + \sum_j^3 \beta_i Recommendation_{i,j,f,t} \\ & + \sum_{i=1}^3 \theta_j Recommendation_{i,j,f,t} * X + Fixed\ effects + \varepsilon_{j,f,t} \end{aligned} \quad (2)$$

Regression model (2) extends regression model (1) by including additionally interaction effects between the recommendation of each proxy advisor and a set of measures for the shareholder structure  $X$ . As prior studies document that non-blockholders rely stronger on the advice of proxy advisors than blockholders, we include the proportion of free float as a first measure for the shareholder structure into the model (e.g., Ertimur et al. 2013). Further, we are particularly interested whether the impact of foreign and local proxy advisors differs between foreign and local institutional investors. For deriving an estimate for this differential impact, we include both the proportion of (non-blockholder) local and foreign institutional investors as measures for the shareholder structure of the firm into the model. We define non-blockholders as those holding less than 5% of the shares. As the proportion of non-blockholders constitutes free float, we adjust the proportion of free float by subtracting the proportion of (non-blockholder) local and foreign institutional investors in models that include all those measures for shareholder structure. Please note that we do not need to include the measures for shareholder structure as main effects into the model because firm-year fixed effects already capture those factors.

Table 4, Panel A shows the descriptive statistics. In comparison to the previous analyses, the sample excludes observations with missing information on the shareholder structure (see

also Table 1, Panel A). The average voting result and the proportion of against-recommendations remain virtually unchanged in comparison to the results of the larger sample previously reported (see Table 2, Panel B). The average proportion of free float is 64.6%. We are able to identify an average proportion of non-blockholder local (foreign) institutional investors of 1.3% (3.7%). Please note that these proportions for non-blockholder institutional investors represent lower boundaries, as non-blockholders are regularly not legally required to disclose their shareholdings.

Table 4, Panel B reports the results. In the first two columns, we test for the interaction effects between each proxy advisor recommendation and free float. We use two models to show that the results remain robust when using the same sample as for testing H2 (column 1) and when using the restricted sample excluding observations for missing information about the proportion of local and foreign institutional investors (column 2). Consistent with prior literature, we find that the impact of ISS and GL is stronger the larger the free float. We provide novel evidence that this relation also holds for against-recommendations by the local proxy advisor IVOX.

Table 4, Panel B, column 3 tests our hypotheses (H3a & H3b). First, we observe that a higher proportion of local (non-blockholder) institutional investors enhances the impact of against-recommendations by the local proxy advisor IVOX on voting results, a marginally significant effect (Coef. = -0.27, p-value = 0.050). In contrast, the ratio of foreign (non-blockholder) institutional investors does not have a significant interaction effect with IVOX against-recommendations (Coef. = 0.04, p-value = 0.508). The difference between the two coefficients is marginally significantly different from zero ( $F(1, 410) = 3.43$ , p-value = 0.065). This finding is consistent with H3a. It suggests that only local, yet not foreign non-blockholder institutional investors show a voting behavior that is aligned with the advice of the local proxy advisor. Assuming that the recommendations by the local proxy advisor capture unique local

factors, one implication of the finding is that only local, yet not foreign institutional investors consider these specific factors in their voting decisions.

Second, we observe that a higher proportion of local and foreign (non-blockholder) institutional strengthens the relation between ISS voting recommendations and voting results. The interaction effect is marginally significant for local non-blockholder institutional investors (Coef. = -0.66, p-value = 0.076) and significant for foreign non-blockholder institutional investors (Coef. = -0.71, p-value = 0.031), with both coefficients not being significantly different from each other ( $F(1,410) = 0.01$ ; p-value = 0.932). This finding does not support H3b. It suggests that both local and foreign non-blockholder institutional investors show a voting behavior consistent with ISS recommendations. In terms of ISS recommendations representing international best practice, it is not only that the foreign non-blockholder institutional investors export it, but also that the local non-blockholder institutional investors seem to embrace it.

Finally, the interaction effect between GL recommendations and the proportion of local and foreign non-blockholder institutional investors is not significant. These insignificant effects reflect the lesser influence of GL compared to ISS.

[Insert Table 4 about here]

#### *4.4. Measuring the Influence of Foreign Proxy Advisors Using a Natural Experiment*

The German AGM season of 2013 was characterized by the absence of foreign investors. The reason was a judgment of the Higher Court of Cologne issued after the 2012 AGM season. The court decreed that any beneficial owner of registered shares is to be entered into the share register to cast votes validly (OLG Köln 2012). This judgment particularly affected international investors. While local institutional investors had registered their shares directly

with the issuer even prior to the court ruling, foreign institutional investors often held their shares through custodians, who registered their own name on behalf of institutional investors. Because of the court ruling, custodians had to re-register, this time explicitly naming the foreign institutional investors. As custodians regularly blocked the shares during the registration process, institutional investors often decided against registering and accepted the consequence of not being able to vote (Petraokopoulou & Horstmeier 2013). After the proxy season 2013, the German Federal Financial Supervisory Authority (BaFin) issued a statement emphasizing that a registration of the beneficial owner is not required. Finally, the German federal parliament passed a bill in April 2015, immediately prior to the 2015 AGM season, further clarifying that such a registration was not necessary.

Table 5, Panel A shows the effect of the legal controversy for the turnout at the AGMs of Germany's largest 30 companies (DAX 30), using data provided by the SdK (2015). The turnout at AGMs for companies with *registered shares* plummeted from 50.2% in 2012 to 34.7% in 2013, before recovering in 2014 (43.9%) and 2015 (42.8%). In contrast, the turnout at AGMs for companies with *bearer shares* – not affected by the OLG Cologne Judgment – hardly changed over the years. These numbers are consistent with foreign institutional investors being absent from AGMs of German companies with registered shares in 2013. However, as turnout rates are not available disaggregated by shareholder category, it is not possible to answer whether most foreign institutional investors returned in 2014 after the BaFin statement or whether they waited until 2015 when the German federal parliament fully resolved the controversy.

We use the legal development as the exogenous event to set up a difference-in-differences estimator. As the legal controversy concerned only registered shares, the treatment group consists of firms issuing registered shares and the control group of issues with bearer shares. The base year is 2013, in which foreign investors were absent at AGMs of German



firms with registered shares due to the OLG Cologne Judgment. The controversy sparked by the court ruling was partially resolved by the BaFin in 2014, before it was fully settled with a law change in 2015. Given this transition period, we include separate dummies for 2014 (Y2014) and 2015 (Y2015) in interaction with share type and voting recommendation type into the model. Share type is captured by the dummy variable *registered shares*, taking the value of 1 if the firm issues name shares (mean = 0.20, non-tabulated).

We are interested whether the exogenously driven changes in participation of foreign institutional investors at AGMs of firms with registered shares from 2013 to 2015 influences the impact of foreign proxy advisors. We estimate the following difference-in-differences regression model using OLS.

$$\begin{aligned}
 \%Voting\ result_{j,f,t} = & \alpha + \sum_i^3 \beta_i Recommendation_{i,j,f,t} \\
 & + \beta_4 Recommendation_{X,j,f,t} * registered\ shares \\
 & + \beta_5 Recommendation_{X,j,f,t} * Y2014 \\
 & + \beta_6 Recommendation_{X,j,f,t} * Y2015 \\
 & + \beta_7 Recommendation_{X,j,f,t} * registered\ shares * Y2014 \\
 & + \beta_8 Recommendation_{X,j,f,t} * registered\ shares * Y2015 \\
 & + Fixed\ effects + \varepsilon_{j,f,t}
 \end{aligned} \tag{3}$$

All models include the recommendation of each proxy advisor as a main effect. In each model, we include interaction effects for one proxy advisor X. The coefficients of interest are  $\beta_7$  and  $\beta_8$ . They show whether the impact of the voting recommendations by proxy advisor X increased with the stronger presence of foreign institutional investors in 2014 and 2015 relative to the year 2013. *Registered shares* is a binary variable, taking the value of 1 for issuers with registered shares. *Y2014* and *Y2015* are dummy variables, taking the value of 1 for 2014 and

2015, respectively. Please note that *registered shares*, *Y2014* and *Y2015* are not included as main variables into the model, because these factors are already captured through firm-year fixed effects. Further, we include agenda category fixed effects as in the previous model.

Table 5, Panel B shows the main results. Model 1 finds that the negative impact of ISS against-recommendations on voting outcomes does not increase significantly for issuers with registered shares in 2014 ( $\beta_7 = - 0.33$ , p-value = 0.942), but increases significantly for these issuers in 2015 ( $\beta_8 = - 10.03$ , p-value = 0.015). Model 2 shows a similar pattern for GL against-recommendations. Their impact on voting outcomes does not increase significantly for issuers with registered shares in 2014 ( $\beta_7 = - 1.15$ , p-value = 0.696), but increases significantly for these issuers in 2015 ( $\beta_8 = - 6.38$ , p-value = 0.012). Model 3 confirms that the impact of recommendations by the local proxy advisor IVOX does not change significantly for registered shares over the years.

This result provides causal evidence that a stronger presence of foreign institutional investors enhances the association between voting recommendations by foreign proxy advisors and voting results. Further, they suggest that most foreign institutional investors waited until the German federal parliament resolved the controversy by changing the law in 2015 before returning to AGMs of German companies with registered shares.

[Insert Table 5 about here]

## 5. Conclusion

Our paper sheds light on the role of foreign (ISS, GL) and local (IVOX) proxy advisors in international corporate governance using the German setting. First, we find that the three proxy advisors ISS, GL and IVOX differ significantly in their voting recommendations. In particular, the local proxy advisor stands out, suggesting that the information content provided by the local proxy advisors differs from that provided by the foreign proxy advisors. Second, we find that the local proxy advisor has an incremental impact on voting outcomes, even after

controlling for the effects of foreign proxy advisors, implying that the additional information provided by the local proxy advisor is valuable for the institutional investors. Third, we find that the impact of proxy advisors is stronger for companies with a larger free float. Integrating separate measures for the proportion of local and foreign (non-blockholder) institutional investors, we observe that local institutional investors integrate the recommendations by the local proxy advisor more strongly than do foreign institutional investors. However, we also observe that both local and foreign investors are similarly attentive to the voting recommendations of foreign proxy advisors. Therefore, our results show that the influence of foreign proxy advisors is not only driven by foreign institutional investors but also by local institutional investors.

Our study expands the literature on the role of foreign proxy advisors in an international context. We use a novel dataset that enables us to compare the role of both foreign and local proxy advisors. Assuming that local proxy advisors capture unique local market factors, we conclude that foreign proxy advisors do not fully consider these factors in their voting recommendations. However, we also provide descriptive evidence that institutional investors familiar with the local market factors do not seem to discount this advice. Instead, they incorporate it in their voting decisions in a manner similar to foreign institutional investors. Thus, we do not find evidence that the quality of voting recommendations by foreign proxy advisors suffer from not taking into account all local market factors. Therefore, one may conclude that foreign proxy advisors do not forcefully export their views of corporate governance, but rather satisfy preferences for international best practice shared by both foreign and local institutional investors. This conclusion is consistent with prior studies documenting that investors describe proxy advisors' services as being useful (McCahery, Saunter & Starks 2016), perceiving no need for a stronger regulation of the proxy advisor industry (ESMA 2013).

Our studies has limitations, implying opportunities for future research. First, we focus on the recommendations of proxy advisors and their impact on voting results as outcome variables. Future research could extend our study by comparing the proxy advisors' guidelines as input variables. One challenge of drawing conclusions from a comparison of proxy advisors' guidelines is that they do not constitute strict rules, providing room for the exercise of professional judgment by the proxy advisor analyst. Second, we infer the influence of proxy advisors through institutional investors by interacting the voting recommendations with variables relating to the ownership structure. One possibility for future research could be to investigate in more detail the role of institutional investors as channels for the influence of proxy advisors, e.g., by investigating whether institutional investors use both foreign and local proxy advisors. Issues of data availability restrict us from conducting such an analysis. Third, we do not investigate market consequences of voting recommendations. In our study, we cannot perform such an analysis because IVOX, the local proxy advisor in our sample, does not provide information on the publication date of its voting recommendations. Future research with access to this kind of data could address the question whether the voting recommendations of foreign and local proxy advisors have a different impact on market consequences.

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**Table 1.** Sample selection and firm coverage

<b>Panel A. Sample selection</b>		
	Firm-years	Agenda items
Companies listed at the regulated market (CDAX, 2013-2015)	1,396	
AGMs covered by at least one PA	876	8,552
Exclude if not covered by all PA	-355	-2,953
Exclude agenda items without voting recommendations	-4	-771
Exclude special agenda items	0	-87
Exclude if voting result missing	-6	-125
Sample for testing H1 (agreement) and H2 (recommendation impact)	511	4,616
Exclude if shareholder information missing	-100	-846
Sample for testing H3 (recommendation impact by origin of institutional investors)	411	3,770

<b>Panel B. Coverage of CDAX firms by PA</b>					
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2013-2015</u>	
	Firms	Firms	Firms	Firm-years	Market cap.
ISS coverage	266	263	264	793	2,976
	53.5%	56.3%	61.1%	56.8%	95.1%
GL coverage	242	211	200	653	2,963
	48.7%	45.2%	46.3%	46.8%	94.7%
IVOX coverage	198	199	239	636	2,966
	39.8%	42.6%	55.3%	45.6%	94.8%
Covered by all PA	169	167	185	521	2,900
	34.0%	35.8%	42.8%	37.3%	92.7%
Covered by at least one PA	303	285	288	876	3,060
	61.0%	61.0%	66.7%	62.8%	97.8%
CDAX	497	467	432	1,396	3,129

<b>Panel C. Cross tabulation of coverage by PA</b>					
		<u>ISS</u>		<u>IVOX</u>	
		Yes	No	Yes	No
<u>GL</u>	Yes	608	45	533	120
		43.6%	3.2%	38.2%	8.6%
	No	185	552	103	634
		13.3%	39.5%	7.4%	45.4%
<u>IVOX</u>	Yes	586	50		
		42.0%	3.6%		
	No	207	547		
		14.8%	39.2%		



**Table 2. Voting recommendations**

<b>Panel A. Cross tabulation of recommendations by PA</b>					
		<u>ISS</u>		<u>IVOX</u>	
		For	Against	For	Against
<u>GL</u>	For	4117 89.2%	150 3.2%	3358 72.7%	157 3.4%
	Against	197 4.3%	152 3.3%	909 19.7%	192 4.2%
<u>IVOX</u>	For	3397 73.6%	118 2.6%		
	Against	917 19.9%	184 4.0%		

<b>Panel B. PA recommendations and agreement by agenda item</b>									
	N	Voting result	<u>Against recommendation</u>			<u>Agreement</u>			Diff
			ISS	GL	IVOX	ISS/GL	ISS/IVOX	GL/IVOX	
Auditor election	512	97.8%	1.2%	5.3%	25.8%	95.5%	73.8%	72.1%	22.6%
Capital authorization	531	92.7%	17.3%	14.3%	16.6%	89.5%	91.0%	89.5%	-0.8%
Change of bylaws	179	98.2%	4.5%	6.1%	1.1%	95.0%	95.5%	93.9%	0.3%
Director election	864	94.8%	17.1%	15.5%	49.5%	82.4%	54.9%	56.7%	26.6%
Director ratification	937	97.3%	0.2%	6.4%	33.6%	93.8%	66.2%	62.5%	29.5%
Dividends	444	99.3%	2.9%	0.0%	0.5%	97.1%	96.6%	99.5%	-1.0%
Executive compensation	194	94.0%	16.5%	18.0%	25.8%	84.0%	79.4%	76.8%	5.9%
Executive ratification	604	98.2%	0.2%	1.0%	13.7%	99.2%	86.4%	86.3%	12.8%
Intra-company agreement	351	99.9%	0.0%	0.0%	0.3%	100.0%	99.7%	99.7%	0.3%
Total	4,616	96.8%	6.5%	7.6%	23.9%	92.5%	77.6%	76.9%	15.2%

<b>Panel C. PA recommendations and agreement for controversial cases</b>									
	N	Voting result	<u>Against recommendation</u>			<u>Agreement</u>			Diff
			ISS	GL	IVOX	ISS/GL	ISS/IVOX	GL/IVOX	
Auditor election	152	94.8%	3.9%	17.8%	86.8%	84.9%	11.8%	5.9%	76.0%
Capital authorization	128	86.7%	71.9%	59.4%	68.8%	56.3%	62.5%	56.3%	-3.1%
Change of bylaws	15	85.9%	53.3%	73.3%	13.3%	40.0%	46.7%	26.7%	3.3%
Director election	503	92.7%	29.4%	26.6%	85.1%	69.8%	22.5%	25.6%	45.7%
Director ratification	363	95.9%	0.6%	16.5%	86.8%	84.0%	12.7%	3.3%	76.0%
Dividends	15	87.9%	86.7%	0.0%	13.3%	13.3%	0.0%	86.7%	-30.0%
Executive compensation	73	87.7%	43.8%	47.9%	68.5%	57.5%	45.2%	38.4%	15.8%
Executive ratification	86	95.4%	1.2%	7.0%	96.5%	94.2%	4.7%	3.5%	90.1%
Intra-company agreement	1	98.5%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
Total	1,336	93.0%	22.6%	26.1%	82.4%	74.0%	22.5%	20.2%	52.7%

Table 2, Panel B, shows the type of voting recommendations issued by each proxy advisor (PA) and the resulting levels of agreement. The level of agreement is defined as the percentage of agenda items for which the two proxy advisors issue either both for recommendations or both against-recommendations.

Table 2, Panel C, restricts the sample and the calculation of agreement levels to controversial cases where at least one of the proxy advisors issues an against-recommendation.

Diff is the difference between the level of agreement between ISS/GL and the average of the level of agreement between ISS/IVOX and GL/IVOX.

For reasons of conciseness, we include abstain recommendations into the category of for recommendations.

**Table 3.** Effect of voting recommendations on voting results

<b>Panel A. Descriptive statistics</b>					
	N	Voting results			
		Mean	SD		
All for	3,280	98.3%	5.0%		
Only ISS against	78	84.1%	13.1%		
Only GL against	117	93.4%	11.2%		
Only IVOX against	837	96.1%	5.0%		
Only ISS & GL against	40	81.2%	15.8%		
Only ISS & IVOX against	72	85.6%	8.8%		
Only GL & IVOX against	80	92.9%	6.7%		
All against	112	85.0%	11.0%		
Total	4,616	96.8%	6.9%		

  

<b>Panel B. Regression analysis</b>					
	(1)	(2)	(3)	(4)	(5)
ISS against	-12.12*** (0.884)			-10.71*** (0.916)	-10.77*** (1.019)
GL against		-6.35*** (0.700)		-2.03*** (0.623)	-2.36*** (0.610)
IVOX against			-3.79*** (0.347)	-2.22*** (0.295)	-2.11*** (0.317)
Constant	98.05*** (0.190)	98.26*** (0.192)	98.84*** (0.206)	98.68*** (0.175)	98.92*** (0.345)
Firm-year FE	Incl.	Incl.	Incl.	Incl.	Incl.
Agenda item FE	Incl.	Incl.	Incl.	Incl.	Incl.
N	4,616	4,616	4,616	4,616	3,770
R <sup>2</sup> (within)	0.306	0.180	0.158	0.326	0.345

Table 3, Panel B, uses a regression model with firm-year and agenda item fixed effects and robust standard errors. It reports coefficients and, in brackets, standard errors. Column (1)-(4) use the full sample for testing H2. Column (5) uses the sample employed for testing H3 that excludes observations with missing information on the shareholder structure.

**Table 4.** Effect of voting recommendations and shareholder structure on voting results

<b>Panel A. Descriptive statistics</b>			
	N	Mean	SD
Voting result	3,770	96.8%	6.7%
ISS against	3,770	6.5%	24.7%
GL against	3,770	7.5%	26.4%
IVOX against	3,770	25.4%	43.5%
Free float	3,770	64.6%	24.7%
Local institutional investors	3,770	1.3%	2.2%
Foreign institutional investors	3,770	3.7%	5.3%

  

<b>Panel B. Regression analysis</b>			
	(1)	(2)	(3)
ISS against	-1.02 (2.01)	-1.98 (2.24)	-2.39 (2.24)
GL against	0.96 (1.54)	1.66 (1.51)	1.93 (1.51)
IVOX against	-0.18 (0.58)	0.03 (0.67)	0.27 (0.71)
ISS against * free float	-0.17*** (0.04)	-0.15*** (0.04)	-0.11** (0.04)
ISS against * local institutional investor			-0.66* (0.37)
ISS against * foreign institutional investor			-0.71** (0.33)
GL against * free float	-0.05* (0.03)	-0.07*** (0.02)	-0.07*** (0.02)
GL against * local institutional investor			-0.15 (0.25)
GL against * foreign institutional investor			-0.05 (0.13)
IVOX against * free float	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)
IVOX against * local institutional investor			-0.27* (0.14)
IVOX against * foreign institutional investor			0.04 (0.07)
Constant	98.75*** (0.168)	98.26*** (0.192)	99.05*** (0.178)
Firm-year FE	Incl.	Incl.	Incl.
Agenda item FE	Incl.	Incl.	Incl.
N	4,616	3,770	3,770
R <sup>2</sup> (within)	0.360	0.381	0.393

Table 4, Panel B, uses a regression model with firm-year and agenda item fixed effects and robust standard errors. It reports coefficients and, in brackets, standard errors. Column (1) uses the full sample for testing H2. Column (2) and (3) use the sample employed for testing H3 that excludes observations with missing information on the shareholder structure. Local and foreign institutional investors include only non-blockholders. Local (foreign) institutional investors are those (not) registered in Germany.

**Table 5.** Natural experiment

<b>Panel A.</b> AGM turnout at DAX30 firms by type of share						
	2010	2011	2012	<b>2013</b>	2014	2015
Registered shares	46.6%	48.6%	50.2%	<b>34.7%</b>	43.9%	42.8%
Bearer shares	62.4%	63.3%	67.8%	<b>65.0%</b>	65.7%	67.1%

  

<b>Panel B.</b> Regression analysis (Difference-in-Differences)			
	(1)	(2)	(3)
	<i>X</i> : ISS	<i>X</i> : GL	<i>X</i> : IVOX
ISS against	-11.65***	-10.74***	-10.72***
	(2.02)	(0.91)	(0.91)
GL against	-1.97***	-2.21*	-2.06***
	(0.61)	(1.15)	(0.62)
IVOX against	-2.20***	-2.20***	-1.93***
	(0.29)	(0.29)	(0.65)
<i>X</i> against * registered shares	5.06*	3.43*	-0.16
	(2.83)	(1.78)	(2.83)
<i>X</i> against * Y2014	-1.71	0.60	0.74
	(2.91)	(1.92)	(0.90)
<i>X</i> against * Y2015	2.84	-0.38	-0.80
	(2.38)	(1.65)	(0.79)
<b><i>X</i> against * registered shares * Y2014</b>	<b>-0.33</b>	<b>-1.15</b>	<b>-1.99</b>
	<b>(4.59)</b>	<b>(2.94)</b>	<b>(1.65)</b>
<b><i>X</i> against * registered shares * Y2015</b>	<b>-10.03**</b>	<b>-6.38**</b>	<b>-0.35</b>
	<b>(4.09)</b>	<b>(2.54)</b>	<b>(1.60)</b>
Constant	98.66***	98.68***	98.79***
	(0.172)	(0.175)	(0.176)
Firm-year FE	Incl.	Incl.	Incl.
Agenda item FE	Incl.	Incl.	Incl.
N	4,616	4,616	4,616
R <sup>2</sup> (within)	0.334	0.329	0.328

Table 5, Panel B, uses a regression model with firm-year and agenda item fixed effects and robust standard errors. It reports coefficients and, in brackets, standard errors. Y2014 (Y2015) is a dummy variable, indicating whether the AGM took place in 2014 (2015).