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Do all new brooms sweep clean? Evidence for outside bank appointments

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Non-technical summary

Research Question

We investigate whether bank executive directors appointed from outside the bank ("outsiders") improve post-succession performance and whether some outsiders are better predisposed than others to turn around a bank's performance. In the case of banks, this question is highly relevant because regulatory authorities may regard the replacement of the management team as a chance to clean up financially distressed banks. Our sample compromises all universal banks for the period 1993 to 2014.

Contribution

First, the results of our study contribute to the existing literature on the post-succession effects of executive turnovers by documenting a performance differential between outsiders with strong and poor managerial abilities in the years following their appointment. Second, we add to the literature examining managerial ability by extracting managerial ability from the risk-return efficiency of executive directors' previous banks. Third, we add to the literature dealing with the financial crisis by measuring the performance effects separately for the pre- and post-crisis period.

Results

Our study documents the negative performance effects in the years following the appointment of an outsider on banks making such appointments. We find that executives with poor managerial abilities ("bad outsiders") underperform at their new banks during the post-appointment period whereas executives with strong managerial abilities ("good outsiders") do so only at the very beginning of the post-appointment period. Thus, not all executive directors appointed from outside are equally capable of improving bank performance. Our results further suggest that the performance differential between good and bad outsiders strengthens in the post-crisis period. We systematically rule out that these performance differentials following external appointments are driven by appointing good outsiders to boards of banks with a low risk exposure.

Nichttechnische Zusammenfassung

Fragestellung

In dieser Forschungsarbeit untersuchen wir, ob von außerhalb der Bank kommenden Vorstände ("Outsider") das Institut hinsichtlich seiner finanziellen Performance vorantreiben können, und ob einige Outsider besser dazu befähigt sind, eine Bank aus einer bestehenden Schieflage herauszuführen. Im Falle von Banken ist diese Frage von besonderem Interesse, da die Neubesetzung des Bankvorstandes auch als ein regulatorisches Mittel zur Sanierung von Banken in Schieflage genutzt werden kann. Unser Datensatz umfasst daher sämtliche deutschen Universalbanken im Zeitraum 1993 bis 2014.

Beitrag

Unsere Studie trägt zur bestehenden Literatur der Auswirkungen eines Vorstandswechsels bei, indem wir Performancedifferenziale von Banken nach der Ernennung eines Outsider mit hohen und niedrigen Managementfähigkeiten dokumentieren. Weiterhin trägt unsere Analyse zur Literatur der Managementfähigkeiten bei, da wir die Managementfähigkeiten eines Outsiders aus der Risiko-Rendite Effizienz seiner früheren Bank ableiten. Darüber hinaus leisten wir einen Beitrag zur Literatur, die sich mit den Auswirkungen der Krise beschäftigt, indem wir die Performanceeffekte seperat in der Vor- und Nachkrisenzeit messen.

Ergebnisse

Banken, die einen Outsider in den Vorstand ernennen, weisen grundsätzlich negative Performanceeffekte in den Jahren nach der Ernennung auf. Unsere Studie zeigt, dass Banken, die einen Outsider mit geringer Managementfähigkeit ("schlechte Outsider") ernannt haben, eine schlechte Performance aufweisen, wohingegen die negativen Auswirkungen von Outsidern mit hoher Managementfähigkeit ("gute Outsider") nur in den sehr frühen Jahren nach Ernennung zu beobachten sind. Wir zeigen somit, dass nicht alle Vorstandsernennungen zur Verbesserung der Performance führen. Unsere Ergebnisse zeigen zudem, dass sich die Performanceunterschiede zwischen guten und schlechten Outsidern nach der Krise verstärken. Wir schließen systematisch aus, dass andere Erklärungen, bspw. gute Outsider wählen Banken mit geringerem Risiko, unsere Ergebnisse erklären.

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Abstract

Banks in bad financial shape are more likely to appoint executive directors from the outside than those in good shape. It is, however, not clear whether all of these appointments necessarily lead to the desired turnaround. We analyze the performance effects of new board members with external boardroom experience (outsiders) by distinguishing between good and bad managerial abilities of executives based on either ROA or risk-return efficiency of their previous employers. Our results show that banks appointing bad outsiders underperform other banks while those appointing good outsiders do so to a lesser extent. The performance differentials are highly pronounced in high-risk banks and in the post-crisis period.

Keywords: Executive directors, outside appointments, bank performance, managerial ability

JEL classification: G21, G32, G34, C23.

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1 Introduction

Appointing a new executive director from the outside involves greater uncertainty as concerns the abilities of the executive than appointing someone from the inside. At the time of their appointment, executive directors from outside are less well informed about the company and its employees than those appointed from inside. Thus, promoting a suitable candidate from any internal position to a senior management position may be preferable to bringing in an outsider. Therefore, banks may only risk hiring executive directors whose abilities are not well known if it is absolutely necessary to do so. They may appoint an executive from the outside either because no suitable internal candidate with the skills needed is available (Dalton and Kesner, 1985) or because the bank is in dire financial straits. In line with the latter reason, a large number of studies show that executive turnovers are often preceded by poor performance (e.g. Barro and Barro, 1990; Houston and James, 1995; Webb, 2008; Palvia, 2011) and high risk (Schaeck, Cihak, Maechler, and Stolz, 2012). In times of financial difficulties, the incoming executive from the outside is expected to catch up, revise the strategy and restructure the organization. For example, the appointment of John Cryan as the new CEO of Deutsche Bank in 2015 was described as follows: "Cryan is cleaning up" (*Frankfurter Allgemeine Zeitung*, October 8, 2015).

A key question in this context is which executive director will be of most help in turning around bad financial performance and whether it is possible to identify executives who outperform others. We study this question by investigating appointments to the executive boards of German universal banks from 1993 to 2014. The answer to this question is relevant for academics and practitioners alike. In the case of banks, whose governance mechanisms potentially differ from those of non-financial firms (Adams and Mehran, 2003), it is even more relevant because regulatory authorities often order financially distressed banks to replace (in whole or in part) the management team in the hope that incoming executive directors will clean up the bank. The German banking system is an excellent playground to address this question because German companies, especially the *German Mittelstand* (i.e. small and mid-sized companies), (still) rely heavily on bank lending (e.g. Koetter and Wedow, 2010). Therefore, one may argue that finding good successors is of even greater importance in this country than in those where a firm's finance is less tied to banks.

We focus on managerial ability, as executives with high ability are expected to do a better job than those with low ability. Unfortunately, managerial ability is not directly observable. We use two proxies of managerial ability to differentiate among outside appointments. Both measures follow the literature that suggests information of the previous banks as possible indicators of managerial talent (e.g. Kaplan and Reishus, 1990; Fee and Hadlock, 2003; Demerjian, Lev, and McVay, 2012). Fee and Hadlock (2003) postulate that labor markets use firm performance as an indicator of managerial ability and that executives from superior-performing firms have developed valuable management skills – in the sense that these managers have learned "how to win" (Fee and Hadlock, 2003, p. 1324). Following this line of reasoning, we build our first measure with the performance of executive directors' previous banks observed directly before they are appointed to another bank. The second measure is based on risk-return efficiency, which we will describe below.

In line with the argument that external successors are often appointed in bad financial times, we find negative performance effects for banks after appointing executive directors from the outside. We extend the literature on post-turnover performance effects (Schaeck et al., 2012) by showing that executives with low managerial abilities, which we call *bad outsiders*, underperform with their new banks in the post-appointment period whereas executives with high managerial abilities, called *good outsiders*, only did so at the very beginning of the post-appointment period. These different performance paths indicate that not all executive directors appointed from outside are equally capable of improving bank performance. To the best of our knowledge, our study is one of the first to investigate the link between post-appointment financial performance and managerial abilities of executive directors appointed to German banks. Documenting this heterogeneity in post-appointment performance is our first contribution to the literature.

Our second contribution is methodological in nature and relates to how our second measure of managerial ability is constructed.[1] We extract managerial ability from risk-return efficiency of executive directors' previous banks. Many recent studies have distilled managerial ability from cost efficiency (e.g. Demerjian et al., 2012; Francis, Hasan, Mani, and Ye, 2016) and profit efficiency (Andreou, Philip, and Robejsek, 2016) by separating full efficiency into a part caused by firm or bank characteristics and another part which is attributed to managerial ability. We use their approach of separating full efficiency, but we do not rely on cost or profit efficiency. Rather, we follow another strand of the banking literature arguing that risk, which is immanent in the banking industry, is not sufficiently controlled for in cost and profit efficiency measures (Koetter, 2008; Hughes, Lang, Mester, and Moon, 1996). Therefore, we estimate bank risk-return efficiency and determine the proportion of efficiency that can be attributed to the management by using a Tobit regression. In doing so, we enhance the existing literature of managerial ability with a combination of two approaches that have thus far been unconnected.

A built-in problem of studies dealing with the link between performance and managerial heterogeneity, for instance in terms of managerial ability, is that executives are not randomly assigned to institutions (Chang, Dasgupta, and Hilary, 2010). Good outsiders may outperform bad outsiders not because the former are necessarily the better managers, but because they, due to their previous track record, have the opportunity to select the better banks. In other words, the performance differential between banks appointing good and bad outsiders might be driven by the managerial ability of the good outsiders or, alternatively, by their self-selection into better banks. Not all executive directors will accept job offers at high-risk banks because these positions may come with a higher likelihood of failure (Bushman, Zhonglan, and Wang, 2010; Schaeck et al., 2012) and executive directors care about their market value and reputation in the job market for bank managers. One potential source of selection is that good outsiders (who may receive many job offers because of their managerial ability) select low-risk banks while for bad outsiders (who may receive few job offers) high-risk banks may be the only viable employment option. To disentangle the two lines of reasoning, we exploit cross-sectional variation in the data. We build our regression model[2] in such a way that we are able to

[1]We thank an anonymous referee for this valuable suggestion.

[2]We estimate performance effects with dynamic panel estimations on several risk-adjusted perfor-

compare the post-appointment performance effects of good and bad outsiders in banks with similar risk profiles in the pre-appointment period. We find that good outsiders outperform bad outsiders especially, but not exclusively, at high-risk banks.

Studies dealing with bank corporate governance (see, the literature review by Haan and Vlahu (2016)) can be distinguished into three strands: (i) boards, (ii) ownership, and (iii) compensation (e.g. Diamond and Rajan, 2009; Fahlenbrach and Stulz, 2011). Our study contributes to the first two strands. While recent literature deals with ownership structures (e.g. Berger, Clarke, Cull, Klapper, and Udell, 2005) and shareholder activism (e.g. Roman, 2015), we can only measure performance differentials of outside appointments separately for savings and private banks (cooperative as well as private commercial banks). This is because few German private commercial banks are publicly listed with dispersed ownership. Consequently, our main contribution to the bank corporate governance literature is related to the boards. While most studies deal with firms and banks in one-tier board systems, our study comes from a country with a two-tier system. Therefore, we use the term "outsider" in a different way. For instance, studies on US banks divide the board of directors into inside and outside directors. In these studies, directors who are employed full-time at the bank are classified as insiders, whereas directors who are independent of the bank are called outside directors (e.g. Adams, Hermalin, and Weisbach, 2010). By contrast, the German corporate governance system often requires a dual board structure with an executive board (first tier) and a supervisory board (second tier) (Hackethal, Schmidt, and Tyrell, 2003). Almost all German universal banks have an executive and a supervisory board, with only very few exceptions, for instance, among small private commercial banks. The members of the executive board who manage the bank are monitored and advised by the supervisory board, which appoints or dismisses members of the executive board and approves executive directors' salaries. The executive board has to report to the supervisory board on a regular basis. The supervisory board's responsibilities are similar to those of US boards (Kaplan, 1994; Fauver and Fuerst, 2006). In this study, we deal with the first tier of the system and investigate the performance implications of appointing executive directors from the outside.

In this two-tier bank board system, several measures developed in the context of one-tier systems to describe CEO entrenchment and the strength of the board of directors (independence, non-staggered boards, anti-takeover protections) are either not defined or are unknown. More specifically, CEO duality often used in US studies to measure CEO entrenchment (e.g. Pathan and Skully, 2010; Pathan, 2009) cannot be applied since CEOs serving on the executive board are not allowed to serve on the supervisory board at the same time. Also, many dimensions of strength of the board of directors (e.g. Pathan, 2009; Pathan and Faff, 2013; Beltratti and Stulz, 2012; Berger, Imbierowicz, and Rauch, 2016; Roman, 2015) are not applicable. The supervisory board consists of shareholders' representatives and elected employees according to the German codetermination law. Representatives of shareholders are from the outside (one possible exception could be former CEOs appointed to the supervisory board after having finished serving on the executive board) and therefore all of them have to be classified as independent. Thus, an independence measure of the supervisory board will show little variation across banks.

mance measures, in which we reduce performance persistence by sampling every other year.

While we cannot replicate board measures used in studies on US banks, we test whether our results are robust to several measures that capture different facets of the executive board, such as executive directors' tenure, age and academic degrees. These robustness tests do not alter our conclusion: banks hiring good outsiders outperform those hiring bad outsiders.

Studying bank corporate governance is of particular relevance because recent studies identify it as a contributing factor to the financial crisis (e.g. Diamond and Rajan, 2009; Berger et al., 2016). Berger et al. (2016), for example, find that in the case of US banks non-CEO managers with high ownership stakes take higher risks, which consequently increases the probability of bank default. However, not all studies come to the same conclusion. For example, Beltratti and Stulz (2012) investigate performance implications of shareholder-friendly boards. During the crisis, banks with shareholder-friendly boards significantly underperformed other banks. We follow this literature by measuring outside post-appointment effects separately for the pre- and post-crisis period. We find that the performance differentials between good and bad outsiders strengthen in the post-crisis period.

The remainder of this paper is organized as follows. Section 2 develops our hypotheses and introduces our study design. Section 3 describes the data, provides descriptive statistics, and introduces our econometric model. Section 4 discusses the results of bank performance in the post-appointment period, and delivers complementary results. Section 5 provides a conclusion to the study.

2 Hypothesis development and study design

Our study deals with members of the executive board who are appointed from outside the bank. Such outside appointees already possess board experience and have developed a set of skills in managing a bank, for example, with respect to implementing strategies, hedging financial risks and supervising a large number of employees. Thus, hiring an executive director from outside may inject additional expertise into the boardroom (Boeker, 1997) and potentially enhances the current management quality (Huson, Malatesta, and Parrino, 2004). This increase in management quality is expected to lead to an increase in performance. In line with this, several studies document that operating performance of non-financial firms improves following senior executive turnover events (Denis and Denis, 1995; Huson et al., 2004). However, Schaeck et al. (2012), who are among the first to examine post-turnover effects in the banking industry, find negative post-turnover performance effects. They argue that turnovers incurred costs (by the turnover itself or by the ongoing restructuring process) that may contribute to greater losses and reduced profitability in the post-turnover period.

An interesting and relevant question is whether all outside appointments entail similar post-appointment performance effects since the literature documents that the group of corporate executives is not homogeneous. Executives have different managerial styles, and heterogeneity among them matters for corporate decisions (Bertrand and Schoar, 2003). Masulis and Mobbs (2011) document considerable differences among non-CEO inside directors in the US. They find that firms' post-appointing operating performance is higher when inside directors hold outside directorships (which is interpreted as a proxy for experience and management quality). Examining individual characteristics, Kaplan, Klebanov, and Sorensen (2012) find that subsequent firm performance after the appointment of CEOs is strongly related to what they call the general talent of those CEOs. We hypothesize that the group of executive bank directors appointed from the outside is not homogeneous, and possesses varying levels of managerial ability. We expect outsiders with good managerial ability to outperform outsiders with bad managerial ability in the post-appointment period.

Unfortunately, managerial ability cannot be directly observed. However, several studies find evidence supporting the argument that past performance is an indicator of managerial ability. Chang et al. (2010) argue that if past performance reflects CEO ability, then the stock market reaction to CEO departure should depend on past performance, which is the result they find. Higher past performance leads to more outside directorships, as shown by Kaplan and Reishus (1990) for senior executives, Ferris, Jagannathan, and Pritchard (2003) for corporate directors and executives, and Harford and Schonlau (2013) for CEOs and directors. Fee and Hadlock (2003) find that CEOs appointed from outside the company come from firms with above-average stock performance. The merger-related literature also delivers insights into the relationship between past performance and management outcomes. Wulf and Singh (2011) and Bargeron, Schlingemann, Stulz, and Zutter (2009) find that target CEOs who perform better have a higher retention probability. We follow the idea of measuring managerial ability by past performance and use the past performance of the executives' previous banks to distinguish between two types of outside appointments.

In addition to past performance, we follow the novel approach of Demerjian et al. (2012) and rest our second measure on managerial efficiency. Demerjian et al. (2012) find that the strong negative relationship between equity financing and returns is substantially lower for managers with higher managerial cost efficiency. They argue that the managers' ability enables them to select the most promising projects with positive net present values. This implies that managers with high managerial efficiency use issue proceeds more effectively. Francis et al. (2016) use the values of managerial ability provided by Demerjian et al. (2012) to build an index of relative peer quality. They find that firms with higher relative peer quality tend to earn higher risk-adjusted stock returns and to have higher profitability growth than firms with lower values. Using managerial profit efficiency, Andreou et al. (2016) find that banks managed by executives with higher abilities create more liquidity and take on more risk. Our hypothesis is consequently that executive directors with higher values of managerial efficiency help the bank more in turning around poor performance than those with lower values of managerial efficiency.

An outside appointment is very likely not an exogenous event (Murphy and Zimmermann, 1993; Masulis and Mobbs, 2011; Fee, Hadlock, and Pierce, 2013). Adams and Ferreira (2007) argue that directors who are appointed from the outside face an informational disadvantage compared to those appointed from the inside. This reasoning also holds for appointing directors to executive boards. Insiders are already incorporated in the business; they know the strategy in place as well as managers at lower management levels. However, existing management may be responsible for poor performance. Parrino (1997) and Huson, Parrino, and Starks (2001) provide evidence that executives are much more likely to be appointed from the outside when the corporation faces financially bad times. Bornemann, Kick, Pfingsten, and Schertler (2015) argue that external successors are more often appointed when the bank needs a clear revision of its strategy. Thus, poor-performing and high-risk banks tend to appoint outsiders more often than other banks in order to bring in new talent, increase expertise in the boardroom and clean up the bank. Thus, appointments of executive directors from the outside and bank performance are simultaneously determined.

In such a setting, ordinary least square and fixed-effects regressions may deliver biased estimates (Wintoki, Linck, and Netter, 2012). To deal with this endogeneity issue, our study design contains three elements. First, we consider lagged performance measures in our estimations to control for as many unobservable effects as possible and reduce performance persistence by considering every other year only. Consequently, we use an estimation method well suited to such a dynamic panel data model: we estimate the performance effects of outside appointments using dynamic panel generalized method of moments (GMM) estimations. This estimation method is well established in the context of board structure and performance and has also been employed in a number of recent studies (e.g. Wintoki et al., 2012; Pathan and Faff, 2013; Pathan, 2009; García-Meca, García-Sánchez, and Martínez-Ferrero, 2015; Bornemann et al., 2015).

Second, we use a large number of bank-specific and macroeconomic variables to control for differences in banks' financial situations, business models, ownership structures, and so forth to ensure that the post-appointment effect we measure is not driven by other characteristics of the banks. More specifically, we include several measures of capitalization, measures to capture credit and other risk exposures, as well as off-balance sheet items. GDP growth and the government spread curve are used to control for the macroeconomic environment. All these variables will be introduced in more detail later in the data section. By using such a large number of control variables, we seek to minimize the problem of omitted variables and control for the observation that outsiders are more often appointed to high-risk banks than insiders.

In addition to the aforementioned two elements, we attempt to deal with a potential selection issue of good outsiders. Candidates from high-performing banks and a proven track record may be unwilling to take job offers from risky banks (Dalton and Kesner, 1985), while bad outsiders may receive job offers only from high-risk banks. Good outsiders may forgo appointments to boards of high-risk banks because they may fear damage to their reputation and reduced chances in the job market for executive directors. Executive directors who are fired may incur reputational damage both irrespective of their management qualities and of whether they were responsible for the poor performance. Jenter and Kanaan (2015) document that corporate boards do not filter out exogenous shocks to firm performance before deciding on CEO dismissal. In order to ascertain whether post-appointment performance effects are driven by selection rather than executives' managerial abilities, we create interaction terms in order to identify the performance effects of good outsiders at high-risk banks, which we then compare with the performance effects of bad outsiders at similarly high-risk banks. Thus, our strategy basically builds on the insight that selection should involve a clear cross-sectional order of appointments. For these tests, we interact our key outsider variables with banks' risks in the pre-appointment year and use several risk metrics to build interaction terms in order to provide robust findings.

3 Data

3.1 Sample

The data used in this study is taken from the Deutsche Bundesbank's prudential database, BAKIS, which contains information on the financial statements and supervisory reports of German banks. We use this database to obtain balance-sheet information for all banks belonging to the German universal banking system between 1993 and 2014. This system comprises three different types of universal banks: private commercial banks, cooperative banks and savings banks. These banking groups differ in terms of ownership structure, business models and also regional focus. Savings banks operate not only commercially but, in contrast to commercial and cooperative banks, they also have a public mandate (Brunner, Decressin, Hardy, and Kudela, 2004). Cooperative banks are established as mutual organizations and serve the interest of their owners. Commercial banks include large banks that are internationally active and listed on stock exchanges, and smaller commercial banks, which are partnerships, private limited companies or sole proprietors (Brunner et al., 2004). We consider all three types of universal banks. BAKIS also contains information on executive board members which allows us to trace their movements from one bank board to another.

Table 1 shows how we build up our sample. Overall we count 3,956 banks, which deliver as many as 53,285 bank-years. We exclude observations for which neither balance-sheet information nor information on the executive board is available for the current or previous year. In our sample period, a large number of merger and acquisition (M&A) transactions took place. The target bank is then integrated and no longer files reports under its former institutional ID. Such an M&A transaction not only increases the acquirer's size, but also influences risk and capitalization as well as returns. We control for these M&A transactions by artificially creating a "new bank". The new bank is independent of its pre-M&A entities and begins its existence in the M&A year. When applying a dynamic model, this M&A treatment removes appointments to the executive board in the year in which the bank acquires another bank, which ensures that we do not commingle appointments driven by mergers with those that result for any other reason. Our sample contains 2,793 banks before and 4,205 banks after the M&A treatment with 38,892 bank-year observations.

Table 1: Sampling.

	bank-years	No. of banks before merger	No. of banks after treatment
all universal banks	53,285	3,956	
no consecutive board information	3,172	460	
missing balance sheet and board information	11,221	703	
annual data	**38,892**	**2,793**	**4,205**
2-year sampled data	**15,491**	**2,582**	**3,108**

Note: The table shows the number of German universal banks and bank-years for the period 1993 to 2014. We present all reasons as to why particular banks and bank-years do not enter the sample. The M&A treatment artificially creates a "new bank" independent of the pre-M&A entities, which begins operations in the merger year. This M&A treatment increases the number of cross-sections in our sample.

3.2 Appointments from the outside and performance

We use board information for two consecutive years to identify new appointees to the executive board. When at least one new executive director shows up on the board, we classify this as an appointment regardless of whether the total number of board members increases, remains constant or decreases. Table 2 provides the number of banks with appointments to executive boards between 1994 and 2014. The number gradually decreases over time, which is due to the reduced number of banks in Germany, a trend that is related to the consolidation wave in the banking industry. Overall, we count 7,203 appointments of executive directors including those from inside the bank as well as those from outside with an employment history at another bank. We call executive directors who have boardroom experience at another bank and no previous employment history in the boardroom of the appointing bank *outsiders*.[3] At the bank level, an outside appointment occurs when at least one executive director from outside the bank is appointed to the executive board. In contrast, inside appointments are those in which the appointee has no boardroom experience at a German bank.

[3] Denis and Denis (1995) and Berger, Kick, Koetter, and Schaeck (2013) also use previous employments to distinguish between appointments from the outside and inside.

Table 2: Number of appointments.

Year	Appointments	Outsider	Historical ROA		Managerial RRE	
			GOOD	*BAD*	*GOOD*	*BAD*
1994	411	46	22	24	20	26
1995	377	56	29	27	27	29
1996	422	85	42	43	43	42
1997	427	81	37	44	36	45
1998	416	79	37	42	39	40
1999	364	84	39	45	41	43
2000	473	131	58	73	56	75
2001	374	109	50	59	51	58
2002	362	117	52	65	53	64
2003	339	93	45	48	45	48
2004	336	108	51	57	49	59
2005	289	94	43	51	44	50
2006	289	83	38	45	37	46
2007	320	76	37	39	33	43
2008	300	90	46	44	43	47
2009	332	90	40	50	44	46
2010	291	74	35	39	36	38
2011	303	72	36	36	35	37
2012	278	60	27	33	27	33
2013	261	69	33	36	30	39
2014	239	59	28	31	26	33
Total	***7,203***	***1,756***	***825***	***931***	***815***	***941***
of which...						
savings banks	*2,741*	*673*	*319*	*354*	*314*	*359*
cooperative banks	*3,583*	*932*	*432*	*500*	*434*	*498*
commercial banks	*879*	*151*	*74*	*77*	*67*	*84*

Note: The table reports the number of appointments to German banks' executive boards. *Outsider* denotes appointments in which at least one executive director with boardroom experience at another bank is appointed to the executive board. *Historical ROA* and *managerial RRE* denote the ability measures used to split the group of outside appointments into *GOOD* and *BAD*. *GOOD* (*BAD*) refers to appointments in which at least one outsider with above-median (below-median) value in the ability measure is hired.

Further, we classify outside appointments as good or bad by using either *historical ROA* or *managerial RRE*. Historical ROA is based on balance-sheet information for the executives' previous banks. We employ risk-, size- and time-adjusted performance measures of the previous bank and proceed as follows: first, we consider risk by using ROA relative to its standard deviation. To control for size effects, we calculate a mean $\frac{ROA}{\sigma}$ for ten deciles (peer group) formed on banks' total assets in each year. Calculating this for each year removes time effects. Afterwards, we subtract the mean of the peer group from a bank's $\frac{ROA}{\sigma}$ to determine how the bank performed relative to its peer group in the same fiscal year. We use up to four fiscal years before the outsider left the previous bank to calculate the average of her/his previous bank's adjusted performance. Then, we classify appointments of outsiders as good (bad) if the average historical ROA of their previous bank lies in the upper (lower) half of the previous-bank historical ROA distribution.

Our second measure of managerial ability[4] combines two strands of the literature, namely the literature on bank efficiency and managerial ability. Bank efficiency considers input prices, the output mix and provides an overall, objectively determined ranking value (Berger and Humphrey, 1997). It is often estimated with stochastic frontier analysis because an important drawback of nonparametric frontier approaches like data envelopment analysis, used to investigate firm efficiency (Demerjian et al., 2012), rest on the assumption of no random errors (Berger and Humphrey, 1997). Thus, the stochastic frontier analysis is better equipped to accommodate noise in the measurement of input, output, and price variables (Andreou et al., 2016). Instead of estimating cost efficiency (e.g. Demerjian et al., 2012; Francis et al., 2016) or profit efficiency (e.g. Andreou et al., 2016), we estimate risk-return efficiency, hereafter RRE, because Koetter (2008) and Hughes et al. (1996) argue that efficiency estimates control insufficiently for bank risk and may be misleading especially when risk preferences differ. We follow banking efficiency studies (i.e., Hughes et al., 1996; Hughes, Mester, and Moon, 2001; Koetter, 2008; Andreou et al., 2016), and choose the stochastic frontier analysis (SFA) to estimate the RRE frontier. Then, we use the intuition by Demerjian et al. (2012) to parse out managerial ability from full efficiency. For this, we regress the full bank RRE on various bank-specific characteristics, such as size and risk, to control for bank-specific efficiency determinants. The remaining residual from this regression is our second measure of managerial ability. We use the managerial efficiency information from up to four fiscal years before the outsider left the previous bank to calculate the average managerial RRE and classify outsiders as good (bad) if the average managerial RRE lies in the upper (lower) half of the distribution.

Table 2 shows that we identify as many as 1,756 bank-years with outside appointments, which include 825 (815) good and 931 (941) bad outside appointments based on historical ROA (managerial RRE). We classify cases as bad outside appointments if both types of executive directors from the outside are appointed to the same bank board in the same year.[5] Our findings, however, do not depend on this classification. Since almost 90% of all outside appointments are appointments of one executive director only, we do not discriminate between cases with one and more executive directors appointed from outside in the same year. Our number of appointments is lower than that reported by Berger et al. (2013) since we exclude executive directors appointed in merger years. Moreover, our number of outside appointments is lower than their number because our definition of outside appointments rests on identifying the previous bank of the executive director in the year directly before s/he is appointed. Thus, an executive director who has not served on an executive board in the previous 10 years but served on an executive board 11 years ago is classified as an insider in our study.

We consider two alternative proxies of bank performance: risk-adjusted return on equity (RROE) and risk-adjusted return on assets (RROA). We divide each performance measure by its standard deviation to obtain risk-adjusted performance measures. In Table 3, we first present univariate tests on performance effects of good and bad outsiders, which we compare with the performance effects around insider appointments. More specifically,

[4]We describe the estimation procedure of managerial RRE in more detail in the Appendix.

[5]When using historical ROA (managerial RRE), bad outside appointments include 14 (35) cases where the information of the executive's previous bank was not available.

we present performance measures averaged over various windows, from one year up to five years, both before and after the event occurred. The table delivers two insights. First, before the event occurs, banks appointing an executive director from the outside have significantly lower performance than those that appoint an insider to the executive board. This holds regardless of whether we study performance in the one- or five-year window before the appointment. This is in line with the findings in the literature that outsiders are more often appointed to clean up banks. Second, differences in risk-adjusted performance between insiders and bad outsiders after the event become less significant for higher windows, indicating that banks appointing bad outsiders are catching up, relatively speaking. For good outsiders and applying the historical ROA as an ability measure, we even see a change in the order: before the appointment event, insider banks performed better, on average, than banks appointing good outsiders, but after the event, the opposite holds when we measure performance over more than two years. When using managerial RRE as an ability measure, we also find that good outsiders catch up compared to insiders, however, the effect is less pronounced.

Table 3: Performance before and after appointments.

		Insider (mean)	*BAD* (mean)	*GOOD* (mean)	*Insider* versus *BAD* ($t - value$)	*Insider* versus *GOOD* ($t - value$)
Historical ROA	*Windows before*		*RROE*			
	1	1.98	1.45	1.74	8.82	3.89
	3	2.02	1.56	1.80	7.69	3.56
	5	2.05	1.73	1.89	5.03	2.37
	Windows after					
	1	1.94	1.50	1.75	6.94	2.88
	3	1.83	1.60	1.89	3.72	-0.82
	5	1.79	1.67	1.96	1.73	-2.40
	Windows before		*RROA*			
	1	2.11	1.57	1.85	8.41	3.97
	3	2.14	1.66	1.87	7.40	3.80
	5	2.15	1.79	1.96	5.11	2.50
	Windows after					
	1	2.12	1.63	1.92	7.13	2.68
	3	2.02	1.74	2.07	4.12	-0.56
	5	1.98	1.81	2.17	2.35	-2.51
Managerial RRE	*Windows before*		*RROE*			
	1	1.98	1.46	1.70	8.67	4.52
	3	2.01	1.54	1.75	7.86	4.03
	5	2.02	1.62	1.87	6.04	2.06
	Windows after					
	1	1.94	1.44	1.63	7.64	4.65
	3	1.79	1.51	1.71	4.41	1.12
	5	1.71	1.54	1.75	2.55	-0.48
	Windows before		*RROA*			
	1	2.12	1.56	1.82	8.63	4.28
	3	2.12	1.63	1.85	7.67	3.85
	5	2.10	1.67	1.95	6.18	2.06
	Windows after					
	1	2.12	1.57	1.80	7.96	4.44
	3	2.00	1.66	1.92	4.95	1.15
	5	1.95	1.73	2.00	2.96	-0.61

Note: The table displays mean values of *RROE* and *RROA* of banks that appoint insiders, and good and bad outsiders. *Historical ROA* and *managerial RRE* denote the ability measures used to split the group of outsiders. *GOOD (BAD)* refers to appointments in which at least one outsider with above-median (below-median) value in managerial ability is hired. *Windows* refers to the number of years considered when calculating the mean either before or after the appointment. $t - value$ comes from two-tailed t-tests.

3.3 Econometric model and control variables

We use the following baseline econometric model, from which we derive all subsequent specifications, to determine the effects of executive directors appointed from outside on bank performance:

$$
\begin{aligned}
y_{i,t} = \alpha + \sum_{j=0}^{4} \beta_{1+j} \cdot Outsider_{i,t-j} \ + \sum_{k=1}^{2} \beta_{5+k} \cdot Board\,Controls_{i,t} + \\
\sum_{l=1}^{10} \beta_{7+l} \cdot Bank\,Controls_{i,t-1} \ + \sum_{m=1}^{2} \beta_{17+m} \cdot Merger_{i,t} + \\
\sum_{n=1}^{2} \beta_{19+n} \cdot Macro_{t} + \sum_{o=1}^{10} \beta_{21+o} \cdot Year_{t} \ + \beta_{32} \cdot y_{i,t-1} + \mu_i + \epsilon_{i,t}.
\end{aligned}
\tag{1}
$$

where $y_{i,t}$ denotes the performance measure of bank i in year t. To account for the high persistence in German bank profitability, we follow Wintoki et al. (2012) and only use observations for every second year (1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012 and 2014).[6] Table 1 shows that the 2-year sampling leads to 2,582 banks and 15,491 bank-year observations.

Table 4 delivers descriptive statistics of the performance measures, outsider variables and control variables, and a detailed definition of all variables used is given in Table 5. We remove extreme values by winsorizing the performance measures and control variables at the 1st and 99th percentiles. We see that the sample mean (median) RROE is 2.04% (1.91%) and that of RROA equals 2.21% (2.09%), which are comparable to the values presented in Busch and Kick (2015) for the German banking industry.

[6] We also replicate our analysis on data for every year between 1993 and 2014. The results of our analysis remain unchanged, but the outcomes of diagnostic tests become less significant, which may point to autocorrelation. These results are available upon request.

Table 4: Descriptive statistics.

	mean	sd	p1	p50	p99
$RROE_{i,t}$	2.04	1.56	-1.43	1.91	6.35
$RROA_{i,t}$	2.21	1.74	-1.48	2.09	6.99
$Outsider_{i,t}$	0.03	0.18	0	0	1
$BAD_{i,t}$	0.02	0.13	0	0	1
$GOOD_{i,t}$	0.02	0.12	0	0	1
$\Delta\, Board\, Size_{i,t}$	0.02	0.74	-2.00	0	2.00
$Board\, Diversity_{i,t}$	2.18	0.52	1.39	2.08	2.77
$CAR_{i,t-1}$	10.59	12.31	5.14	8.88	31.64
$DISS_{w3}$	0.07	0.25	0	0	1
$Share\, Fee_{i,t-1}$	11.77	6.93	1.94	10.85	38.06
$OBS_{i,t-1}$	2.77	2.98	0.06	2.08	12.82
$CL_{i,t-1}$	57.86	13.77	16.67	59.82	85.68
$NPL_{i,t-1}$	3.35	2.92	0.07	2.70	13.96
$HHI_{i,t-1}$	3.33	0.32	2.89	3.25	4.52
$TA_{i,t-1}$	19.56	1.47	16.83	19.47	23.34
$D\_SAVINGS_i$	0.24	0.43	0	0	1
D_COOP_i	0.70	0.46	0	1	1
D_PRIV_i	0.06	0.23	0	0	1
D_BIG_i	0.01	0.08	0	0	0
$Acquirer_{i,w3}$	0.06	0.24	0	0	1
$Target_{i,w3}$	0.06	0.23	0	0	1
$GDP\, Growth_t$	1.87	1.28	0.1	1.50	4.19
$Spread_t$	1.54	0.80	0.53	1.53	3.21

Note: The table displays descriptive statistics for performance measures, outsider variables and explanatory variables. *mean (sd)* denotes the mean (standard deviation) of each variable. The value *px* indicates the *xth* percentile of the distribution of the respective variable. All variables are defined in Table 5.

Table 5: Variable Definition.

$ROE_{i,t}$	Return on equity of bank i in year t.
$ROA_{i,t}$	Return on total assets of bank i in year t.
$RROE_{i,t}$	Risk-adjusted return on equity of bank i in year t (i.e. ROE is divided by its standard deviation.)
$RROA_{i,t}$	Risk-adjusted return on total assets of bank i in year t (i.e. ROA is divided by its standard deviation.)
$Outsider_{i,t}$ / $Outsider_{i,t-j}$	Dummy variable equals 1 if a new executive director who has experience as a board member at another bank (outsider) is appointed to the executive board in year t / in year $t-j$ or in the year before $t-j$.
$BAD(GOOD)_{i,t}$ / $BAD(GOOD)_{i,t+1}$ / $BAD(GOOD)_{i,t-j}$	Dummy variable equals 1 if a BAD (GOOD) outsider with a below-median (above-median) value of historical ROA or managerial RRE of the previous bank is appointed in year t / in year $t+1$ / in year $t-j$ or in the year before $t-j$.
$\Delta\, Board\, Size_{i,t}$	Change in board size from year $t-1$ to year t.
$Board\, Diversity_{i,t}$	Board diversity index (ln) of bank i in year t calculated as an index of age, gender, education, and job experience.
$CAR_{i,t-1}$	Tier 1 capital to risk-weighted assets of bank i in year $t-1$.
$Share\, Fee_{i,t-1}$	Fee income relative to total income of bank i in year $t-1$.
$OBS_{i,t-1}$	Off-balance sheet items to total assets of bank i in year $t-1$.
$CL_{i,t-1}$	Customer loans to total assets of bank i in year $t-1$.
$NPL_{i,t-1}$	Non-performing loans to total assets of bank i in year $t-1$.
$HHI_{i,t-1}$	Herfindahl-Hirschman Index (ln) for the loan portfolio based on 8 sectors. The index distinguishes between agriculture, forestry and fishing, mining, energy and water supply, manufacturing, building and construction, commerce, maintenance and repair of vehicles and durables, transportation and communication, financing and insurance, and services. A higher value indicates a higher concentrated loan portfolio of bank i in year $t-1$.
$TA_{i,t-1}$	Value of total assets (ln, deflated) of bank i in year $t-1$.
$D\_SAVINGS_i$	Dummy variable equals 1 if bank i is a savings bank.
D_COOP_i	Dummy variable equals 1 if bank i is a cooperative bank.
D_PRIV_i	Dummy variable equals 1 if bank i is a private commercial bank.
D_BIG_i	Dummy variable equals 1 if bank i is a very large commercial bank, or a head institution of a cooperative or savings bank.
$DISS_{w3}$	Dummy variable equals 1 if bank i receives a capital injection, is subject to severe regulatory intervention (i.e. moratorium), or has exited the market in a distress merger in a window of three years.
$Target_{i,w3}$	Dummy variable equals 1 if bank i is targeted in t or $t+1$.
$Acquirer_{i,w3}$	Dummy variable equals 1 in the first two years after bank i acquires another bank.
$GDP\, Growth_t$	Annual percentage change in per-capita real GDP at the federal state level in year t.
$Spread_t$	Interest rate spread between 10-year and 1-year government bonds in year t.

To examine the performance effects of outside appointments, we start with a dummy variable $Outsider_{i,t}$, which equals 1 for the bank that appoints an outsider in year t, and zero otherwise. Additionally, we derive lags of this dummy variable to examine the post-appointment effects. We use four dummy variables for the post-appointment period spanning an overall time period of up to eight years after the outside appointment. Accordingly, the dummy variable $Outsider_{i,t-j}$ equals 1 if the bank appoints an outsider in the past $t-j$ whereas each time step, $j = 1, 2, 3$ *or* 4, contains two years since we sample every second year. Each lagged outsider dummy variable equals 1 in two years instead of one year to capture post-appointment performance effects of outsiders in the sampled and omitted years.

$Board\, Controls_{i,t}$ contains two variables to control for elements of corporate governance. We follow recent literature of corporate governance (Berger, Kick, and Schaeck, 2014; Berger et al., 2013; García-Meca et al., 2015; Delis, Gaganis, Hasan, and Pasiouras, 2016) and measure the diversity of banks' executive board structure with $Board\, Diversity$ (ln), which was introduced by Anderson, Reeb, Upadhyay, and Zhao (2011) and implemented for German banks by Berger et al. (2013). Our board diversity considers the banks' board dimensions in age, gender, education (measured by academic degrees), and job experience (computed by tenure). To yield this index, we first calculate coefficient of variation (which equals the ratio of the standard deviation divided by the mean) for each of the four dimensions. For each of the four dimensions, we assign a value of 1 (2, 3, 4) if the bank's value falls into the 1st (2nd, 3rd, 4th) quartile of the distribution. Finally, the index of board diversity results from summing up the four different dimensions. We take the natural log since the index is skewed. Our second board control measure is the change in board size from the previous to the current year with the variable $\Delta\, Board\, Size$.[7]

$Bank\, Controls_{i,t-1}$ comprises the first lag of all bank-specific continuous and discrete control variables. We justify the use of a large number of bank controls in light of endogeneity concerns. We use the capital adequacy ratio, CAR, to control for a bank's financial leverage measured in terms of regulatory equity. A higher CAR is likely to indicate a healthier bank. The sample mean (median) CAR is 10.59% (8.88%). We further include a dummy variable, $DISS_{w3}$, to control for banks which receive capital injections, or are subject to severe regulatory interventions (i.e. moratorium) or exit the market in a distressed merger. We include fee income to total income, $Share\, Fee$. The mean (median) $Share\, Fee$ in our sample equals 11.77% (10.85%) and higher than those for savings banks in Bornemann et al. (2015) since our sample considers private commercial banks, which are more active in fee business than savings and cooperative banks. We also include the ratio of off-balance sheet items to total assets, OBS, for two reasons. One is that banks might use off-balance sheet items to reduce their risks. Another is that off-balance sheet items themselves may include risky investment assets, which may decrease performance when they materialize, in many cases at the same time (Kick and Prieto, 2015). The mean (median) of OBS in our sample is equal to 2.77% (2.08%). We consider customer loans to total assets, CL, because loans represent a main source of income for German banks (Memmel and Schertler, 2012). The sample mean (median) CL is 57.86% (59.82%). We use the ratio of non-performing loans to total assets, NPL, to proxy the quality of credit exposure (Meeker and Gray, 1987). The sample mean (median) NPL equals 3.35% (2.70%). Following Berger et al. (2014), our second credit risk measure is a Herfindahl-Hirschman Index, HHI, for concentration in the loan portfolio, calculated with 8 sectors and log-transformed because it is skewed. A high HHI indicates a more concentrated loan portfolio and thus higher credit risk. The sample mean (median) HHI (ln) is 3.33% (3.25%).

Size effects are controlled for using bank size, measured by the natural logarithm of total assets (deflated), TA. This accounts for the fact that larger banks have more complex business structures and networks, invest more resources in high-quality risk management, work with a wider range of customers and can therefore better diversify their income structure than small banks. The sample mean (median) TA (ln) is 19.56 (19.47). Ownership structures are controlled for using pillar dummy variables. The majority of banks in our sample are cooperative banks (70%) followed by savings banks (24%), private commercial banks (6%) and the very large commercial banks and head institutes of cooperative and savings banks (1%). We include the dummies D_COOP, D_PRIV and D_BIG to

[7] We only include board size as an additional explanatory variable in robustness tests (see Section 4.4) because it is highly correlated with bank size.

account for the bank pillar of cooperative and private commercial banks and for the very large institutes and omit the dummy for savings banks to avoid perfect collinearity.

The process of incorporating target banks may induce structural changes not only in the year of the M&A transaction; it may, in fact, take much more than a year to integrate entities. Especially in savings and cooperative banks, M&A transactions are mostly conducted with a strong eye on social comparability for the employees. This might be more cost-intensive and extend the time needed for integration. In most cases, the transaction is prepared in the pre-merger year and affects the financial situation of the acquirer in the post-merger years. In addition to our aforementioned treatment of M&A transactions, we include $Merger_{i,t}$ which comprises two dummy variables. The dummy variable $Target_{i,w3}$ equals 1 if the bank is the target of an M&A transaction in the current or following year, zero otherwise. We set the dummy equal to 1 in two years instead of one year because most target banks no longer report data in the merger year. For the post-merger period of the acquirer bank, we use a dummy variable $Acquirer_{i,w3}$ that equals 1 in the first two years after completion of the M&A transaction. Setting this dummy variable equal to 1 only in the post-merger year would remove it from the dynamic panel estimations.

Finally, $MacroControls_t$ comprises $GDP\,Growth$ and $Spread$ (interest rate spread between 10-year and 1-year government bonds) with which we control for the macroeconomic environment. $Year_t$ refers to year dummy variables to control for remaining time effects. μ_i is a fixed effect for bank i, and $\epsilon_{i,t}$ denotes the remaining disturbance term.

In order to ensure that our specifications do not suffer from multicollinearity, we present pair-wise correlation coefficients between performance measures and explanatory variables in Table 6. Since the correlation coefficients between the explanatory variables are not higher than 0.30 (the highest value between TA and HHI and $DISS_{w3}$ and NPL is 0.30 and the next peak between CAR and $Share\,Fee$ is 0.28), multicollinearity is not a problem in our regression specifications.

Table 6: Correlations.

		1	2	3	4	5	6	7	8	9	10	11
1	$RROE_{i,t}$	1										
2	$RROA_{i,t}$	0.94*	1									
3	$Outsider_{i,t}$	-0.09*	-0.09*	1								
4	$BAD_{i,t}$	-0.08*	-0.07*	0.73*	1							
5	$GOOD_{i,t}$	-0.05*	-0.05*	0.67*	-0.02*	1						
6	$\Delta\, Board\, Size_{i,t}$	-0.03*	-0.03*	0.26*	0.2*	0.16*	1					
7	$Board\, Diversity_{i,t}$	0.00	0.00	0.08*	0.06*	0.05*	0.11*	1				
8	$CAR_{i,t-1}$	-0.04*	-0.02	0.01	0.01	-0.01	-0.02	-0.01	1			
9	$DISS_{w3}$	-0.21*	-0.22*	0.09*	0.07*	0.06*	0	-0.02*	-0.03*	1		
10	$Share\, Fee_{i,t-1}$	-0.07*	-0.07*	0	0	0	-0.02*	-0.07*	0.28*	0.03*	1	
11	$OBS_{i,t-1}$	-0.04*	-0.07*	0.02*	0	0.03*	0.01	-0.01	0.02*	0.06*	0.07*	1
12	$CL_{i,t-1}$	0.02	0.02*	-0.02	-0.02*	-0.01	0.01	0	-0.26*	-0.02*	-0.19*	0.09*
13	$NPL_{i,t-1}$	-0.19*	-0.2*	0.03*	0.03*	0.01	-0.01	-0.03*	0.06*	0.3*	0.06*	0.21*
14	$HHI_{i,t-1}$	-0.11*	-0.12*	0.04*	0.04*	0.02*	0	0.04*	0.18*	0.01	0.1*	0.04*
15	$TA_{i,t-1}$	0.01	-0.01	0.11*	0.08*	0.07*	-0.02	0.12*	-0.05*	0.01	0.01	0.07*
16	$D\_SAVINGS_i$	0	0.02*	0.07*	0.05*	0.05*	0.01	0.2*	-0.05*	-0.08*	-0.16*	-0.05*
17	D_COOP_i	0.09*	0.08*	-0.08*	-0.06*	-0.05*	0	-0.18*	-0.08*	0.06*	0	-0.06*
18	D_PRIV_i	-0.15*	-0.17*	0.02*	0.01	0.01	0	-0.02*	0.25*	0.03*	0.32*	0.19*
19	D_BIG_i	-0.04*	-0.04*	0.05*	0.03*	0.04*	0.01	-0.01	-0.01	0	-0.08*	0.05*
20	$Acquirer_{i,w3}$	0	-0.03*	0.01	0.01	0	0.12*	0.02*	-0.03*	0.1*	-0.01	0.03*
21	$Target_{i,w3}$	-0.08*	-0.07*	0	-0.01	0.01	0	-0.02	-0.02	0.12*	-0.01	-0.01
22	$GDP\, Growth_t$	0.02	0.02*	-0.01	0	-0.01	0.01	0	0.01	-0.02*	0.02*	-0.03*
23	$Spread_t$	0.24*	0.21*	-0.01	-0.01	-0.01	0	0	0.01	-0.02*	-0.12*	0.06*

Continued from above

		12	13	14	15	16	17	18	19	20	21	22	23
12	$CL_{i,t-1}$	1											
13	$NPL_{i,t-1}$	0.13*	1										
14	$HHI_{i,t-1}$	-0.12*	-0.04*	1									
15	$TA_{i,t-1}$	-0.01	-0.1*	0.3*	1								
16	$D\_SAVINGS_i$	0.04*	-0.12*	0.1*	0.52*	1							
17	D_COOP_i	0.04*	0.07*	-0.29*	-0.59*	-0.85*	1						
18	D_PRIV_i	-0.1*	0.11*	0.37*	0.1*	-0.14*	-0.38*	1					
19	D_BIG_i	-0.14*	-0.06*	0.06*	0.32*	-0.05*	-0.12*	-0.02*	1				
20	$Acquirer_{i,w3}$	0.01	0	-0.02	0.04*	-0.03*	0.05*	-0.04*	0.01	1			
21	$Target_{i,w3}$	0.02*	0.06*	-0.03*	-0.12*	-0.03*	0.05*	-0.04*	-0.01	-0.06*	1		
22	$GDP\, Growth_t$	-0.03*	-0.06*	0.03*	0.03*	0	0	0	0	-0.01	-0.01	1	
23	$Spread_t$	-0.04*	-0.07*	-0.02*	-0.04*	0.01	-0.01	0	0	-0.05*	-0.1*	-0.21*	1

Note: The table displays correlation coefficients between performance measures, outsider variables and explanatory variables. All variables are defined in Table 5. * indicates the correlation coefficient is significant at the 1% level.

To further control for omitted variables and banks' past performance, we consider a lag of the dependent variable in our model. Therefore, we estimate Eq. (1) by using a dynamic panel estimator, which is a GMM estimator, with a finite sample correction developed by Windmeijer (2005). An important aspect of this estimator is the use of historical values as instruments for current changes. For these instruments to be valid, they must fulfill two criteria: the historical information must provide a source of variation for current values, and the instruments must be uncorrelated with the error in the performance equation. This implies that there must be no additional information contained in the econometric model, which remains unexplained and correlates with the instruments.

We use two two-year sampled lags of the dependent variable as instruments. Since our regression sample includes every second year, we include the information from up to six years before the outsider is appointed in our instruments. As suggested by Wintoki et al. (2012), two lags can be sufficient to capture the dynamic dimension between performance and board measures. Accordingly, we expect information from the previous six years to be sufficient. We check the reliability of GMM estimation results by performing two tests: the Hansen test of instrument validity and the Arellano and Bond (1991) test of serially uncorrelated error terms. The diagnostic tests of our various specifications show insignificant test statistics for Hansen J-statistics of over-identifying restrictions, indicating that the instruments are valid. By way of construction, the specifications document a significant first-order autocorrelation (AR(1)); second-order autocorrelation (AR(2)) is absent, however.

4 Empirical results

4.1 Pre- and post-appointment bank performance

In Table 7, we present regression results from running Eq. (1) for our dependent variables $RROE$ (Columns (1)-(5)) and $RROA$ (Column (6)). The negative and significant coefficient on $Outsider_{i,t}$ in Column (1) reveals that bank performance is significantly lower when executive directors with boardroom experience at other banks are appointed. Moreover, lower performance of appointing banks is persistent as we find significant effects in post-appointment years. The negative and significant coefficient on $Outsider_{i,t-1}$ reveals that banks with incoming outside executives perform significantly worse in the first and second years after appointing outsiders than banks without appointment events. Even after three and five years, as captured by the coefficients on $Outsider_{i,t-2}$ and $Outsider_{i,t-3}$, a bank with an outside appointment underperforms other banks. Only after seven years do we no longer observe a significant performance differential between bank-years with and without outside appointments. We regard these negative performance effects as being in line with the findings of Schaeck et al. (2012), who document that executive turnovers at US banks correlate with lower profitability and greater losses over a post-turnover period of three years.

Table 7: Pre- and post-appointment bank performance.

	(1)	(2)	(3)	(4)	(5)	(6)
$y_{i,t-1}$	0.257***	0.256***	0.255***	0.212***	0.267***	0.215***
	[0.018]	[0.018]	[0.018]	[0.028]	[0.023]	[0.022]
$Outsider_{i,t}$	-0.227***					
	[0.048]					
$Outsider_{i,t-1}$	-0.136***					
	[0.032]					
$Outsider_{i,t-2}$	-0.056*					
	[0.034]					
$Outsider_{i,t-3}$	-0.062*					
	[0.036]					
$Outsider_{i,t-4}$	-0.057					
	[0.042]					
$BAD_{i,t}$		-0.301***	-0.292***	-0.198**	-0.372***	-0.351***
		[0.054]	[0.072]	[0.081]	[0.073]	[0.058]
$BAD_{i,t-1}$		-0.209***	-0.179***	-0.180***	-0.222***	-0.241***
		[0.042]	[0.042]	[0.065]	[0.055]	[0.045]
$BAD_{i,t-2}$		-0.150***	-0.180***	-0.134**	-0.168***	-0.197***
		[0.045]	[0.045]	[0.067]	[0.062]	[0.048]
$BAD_{i,t-3}$		-0.126**	-0.102***	-0.172**	-0.083	-0.158***
		[0.051]	[0.050]	[0.073]	[0.071]	[0.055]
$BAD_{i,t-4}$		-0.051	-0.131**	0.011	-0.099	-0.074
		[0.055]	[0.056]	[0.084]	[0.074]	[0.058]
$GOOD_{i,t}$		-0.147*	-0.158***	-0.011	-0.277**	-0.129
		[0.083]	[0.060]	[0.082]	[0.131]	[0.101]
$GOOD_{i,t-1}$		-0.088*	-0.128***	0.070	-0.221***	-0.089*
		[0.047]	[0.043]	[0.062]	[0.070]	[0.051]
$GOOD_{i,t-2}$		0.019	-0.016	0.105	-0.024	0.006
		[0.047]	[0.047]	[0.074]	[0.062]	[0.050]
$GOOD_{i,t-3}$		0.007	-0.049	0.094	-0.035	0.005
		[0.047]	[0.052]	[0.065]	[0.069]	[0.053]
$GOOD_{i,t-4}$		-0.042	-0.050	0.052	-0.122	-0.025
		[0.055]	[0.065]	[0.072]	[0.082]	[0.060]
$BAD_{i,t+1}$		-0.135**	-0.168***	-0.135*	-0.142*	-0.128**
		[0.054]	[0.051]	[0.081]	[0.073]	[0.056]
$GOOD_{i,t+1}$		-0.075	-0.060	-0.061	-0.062	-0.096
		[0.058]	[0.061]	[0.082]	[0.080]	[0.059]
$\Delta\, Board\, Size_{i,t}$	-0.055***	-0.053***	-0.052***	-0.046**	-0.066***	-0.045***
	[0.015]	[0.015]	[0.015]	[0.019]	[0.021]	[0.016]
$Board\, Diversity_{i,t}$	0.007	0.007	0.007	-0.029	0.015	0.013
	[0.021]	[0.021]	[0.021]	[0.045]	[0.024]	[0.024]
$CAR_{i,t-1}$	0.005**	0.005**	0.005**	0.034***	-0.000	0.009**
	[0.003]	[0.003]	[0.003]	[0.012]	[0.002]	[0.004]

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	(1)	(2)	(3)	(4)	(5)	(6)
$DISS_{w3}$	-0.543***	-0.532***	-0.528***	-0.543***	-0.500***	-0.598***
	[0.050]	[0.049]	[0.049]	[0.124]	[0.055]	[0.052]
$Share\,Fee_{i,t-1}$	0.006**	0.006**	0.006**	0.035***	-0.000	0.003
	[0.003]	[0.003]	[0.003]	[0.013]	[0.003]	[0.003]
$OBS_{i,t-1}$	-0.016***	-0.016***	-0.016***	-0.009	-0.020***	-0.020***
	[0.004]	[0.004]	[0.004]	[0.016]	[0.005]	[0.006]
$CL_{i,t-1}$	0.000	0.000	0.000	0.003	-0.001	0.002
	[0.001]	[0.001]	[0.001]	[0.002]	[0.001]	[0.001]
$NPL_{i,t-1}$	-0.011**	-0.010**	-0.011**	-0.009	-0.012**	-0.024***
	[0.005]	[0.005]	[0.005]	[0.015]	[0.005]	[0.006]
$HHI_{i,t-1}$	-0.250***	-0.249***	-0.247***	-0.314**	-0.390***	-0.246***
	[0.053]	[0.053]	[0.053]	[0.122]	[0.058]	[0.064]
$TA_{i,t-1}$	0.131***	0.133***	0.131***	0.122***	0.096***	0.083***
	[0.015]	[0.015]	[0.015]	[0.029]	[0.017]	[0.017]
D_COOP_i	0.306***	0.305***	0.298***			0.192***
	[0.044]	[0.044]	[0.044]			[0.049]
D_PRIV_i	-0.410***	-0.414***	-0.417***			-0.662***
	[0.087]	[0.086]	[0.086]			[0.103]
D_BIG_i	-0.738***	-0.731***	-0.721***			-0.772***
	[0.144]	[0.145]	[0.145]			[0.140]
$Acquirer_{i,w3}$	0.120**	0.115**	0.118**	-0.018	0.155**	0.201***
	[0.056]	[0.056]	[0.056]	[0.110]	[0.064]	[0.062]
$Target_{i,w3}$	-0.212***	-0.216***	-0.210***	-0.239***	-0.235***	-0.150*
	[0.068]	[0.067]	[0.068]	[0.092]	[0.080]	[0.087]
$GDP\,Growth_t$	0.092***	0.092***	0.093***	-0.096**	0.134***	0.130***
	[0.014]	[0.014]	[0.014]	[0.043]	[0.017]	[0.015]
$Spread_t$	0.560***	0.559***	0.557***	0.371***	0.501***	0.546***
	[0.019]	[0.019]	[0.019]	[0.036]	[0.023]	[0.021]
Outsider JPE	-0.538***					
BAD JPE		-0.837***	-0.884***	-0.673***	-0.943***	-1.02***
GOOD JPE		-0.25	-0.402***	0.311	-0.679***	-0.232
F-Test JPE (p-value)		0.005	0.023	0.00	0.398	0.001
F-Test pre-appoint. (p-value)		0.45	0.174	0.532	0.451	0.702
No. of obs.	15,491	15,491	15,491	4,271	11,190	15,491
No. of banks	3,108	3,108	3,108	712	2,389	3,108
No. of instruments	32	39	39	36	36	39
AR(1) test (p-value)	0	0	0	0	0	0
AR(2) test (p-value)	0.733	0.832	0.813	0.58	0.887	0.638
Hansen test (p-value)	0.465	0.529	0.53	0.385	0.269	0.274

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. In Columns (1)-(5), the dependent variable is $RROE$, and in Column (6) it is $RROA$. In Column (1), we present the results of our baseline model given in Eq. (1) $Outsider_{i,t-j}$ with $j = 0, 1, 2, 3, 4$. In Columns (2) and (4)-(6), we replace outsider variables with dummy variables for good and bad outsiders split up according to historical ROA. In Column (3), we report the results for good and bad outsiders split up according to their managerial RRE. In Columns (2)-(6) we add $GOOD_{t+1}$ and BAD_{t+1} to control for the pre-appointment year. Column (4) shows the results for savings banks and Column (5) for private banks. Variables are listed in Table 5. Year dummies are included, but not reported. JPE (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider type. *, ** and *** indicate significance of the coefficients at the 10%, 5% and 1% level.

Next, we test whether this initial insight holds for all outsiders. In Columns (2) and (3) of Table 7 we display results where all outsider variables are replaced by ten dummy variables: five variables for each outsider type, maintaining the lagged variables to tackle post-appointment effects. Column (2) is based on historical ROA, and Column (3) uses managerial RRE as an ability measure. The coefficient on $BAD_{i,t}$ reveals that banks that appoint bad outsiders perform significantly more poorly in appointment years, whereas the coefficient on $GOOD_{i,t}$ is also negative but is only half the size of the bad coefficient. $RROE$ of banks with bad outsiders is 0.301 lower (Column (2)), which is large in economic terms since it accounts for more than 21% of the $RROE$'s standard deviation. Furthermore, coefficients on bad outsiders in the post-appointment period are significant whereas the higher order lagged coefficients on good outsiders are insignificant. In unreported tests, we find an insignificant performance differential for the fourth lag of good and bad outside appointments, while all others are significant. Thus, only after seven years following the appointment do banks appointing good outsiders no longer differ from those appointing bad outsiders. These findings hold regardless of the ability measure we employ.

We also calculate joint performance effects by summing up all coefficients of good and bad outsider dummy variables to determine how much lower the performance is overall for banks appointing good and bad outsiders. For historical ROA (Column (2)), the joint performance effect of bad outsiders is -0.837 and is highly significant, while the joint performance effect of good outsiders, which is -0.25, lacks significance. We test the null that the joint effects of good and bad outsiders are equal and obtain significant F-values for historical ROA (Column (2)) and managerial RRE (Column (3)), indicating that the performance path of banks hiring good outsiders differs significantly from that of banks appointing bad outsiders.

We additionally include variables that indicate the pre-appointment year of good and bad outsiders to figure out whether the risk-adjusted performance differs before the appointment. $GOOD_{i,t+1}$ ($BAD_{i,t+1}$) is a dummy variable which equals 1 in the year before a bank appoints a good (bad) outsider. Thus, following the approach of Kaplan and Minton (1994), we extend the investigation to the pre-appointment year. Doing so means that we control for an event that takes place in the future, which can be regarded as econometrically questionable. Therefore, the following findings should not be overstated. We see that bad outside appointments based on historical ROA and managerial RRE are significantly worse in the pre-appointment year than in non-appointment years. This negative effect of bad outsiders is in line with the finding in the literature that external successions are often preceded by poor accounting performance (e.g. Denis and Denis, 1995) and that external successors are expected to clean up banks (Bornemann et al., 2015). We test the null that the coefficients on good and bad outsiders in the pre-appointment year are equal and find insignificant F-values for both ability measures. Following from this, we can conclude that the performance of banks appointing good outsiders does not differ from the one of banks appointing bad outsiders in the pre-appointment year.

We present results for the subsamples of savings banks in Column (4), and for private banks in Column (5). Since our sample contains less than 140 private commercial banks with no more than 70 outside appointments, we combine them with cooperative banks to the group of *private banks* as they have a similar ownership structure. From the subsample of private banks, we exclude the few very large commercial banks, and the head institutions of cooperative banks, since they differ too greatly in size, business models and governance for us to analyze their performance together with the huge number of small and medium-sized banks. Regarding our key variables of interest, we find that the coefficients on bad outsiders are negative and significant while those for good outsiders are much lower. The subsample analysis highlights the fact that outsider effects differ somewhat across savings and private banks. The negative performance effect of bad outsiders in the post-appointment years is somewhat stronger for private banks than for savings banks. The joint performance effect of bad outsiders for savings banks is -0.673, while that for private banks is even higher, at -0.943. We conclude that performance effects of appointing an outsider in savings and private banks have the same tendency, but joint performance effects of good and bad outside appointments do not significantly differ in private banks.

In Column (6), we use $RROA$ as the dependent variable and see that it leads to similar conclusions to our baseline in Column (2). The estimated joint performance effect for bad outsiders for $RROA$ is somewhat higher than the one we find for $RROE$. The economic effects of bad outsiders are, however, very close to each other since the standard deviation of $RROA$ is higher than that of $RROE$. Thus, it matters little which risk-adjusted performance measure we use. We do not present subsample results for $RROA$, nor results on our alternative ability measure because they resemble the results of $RROE$.

Some control variables are also significantly and consistently related to risk-adjusted performance measures. The change in board size, $\Delta\, Board\, Size_{i,t}$, is significantly negative indicating lower performance when banks are in the process of extending their board.[8] The negative and significant coefficient on HHI indicates that a more concentrated loan portfolio is associated with worse performance. The coefficient on bank size identifies a positive relationship between a bank's total assets and performance. This is in line with the argument that larger banks are more diversified (Chiorazzo, Milani, and Salvini, 2008). Also the negative and significant coefficient on $DISS_{w3}$, which indicates a bank being in distress, is in line with the findings of the other risk measures. The effect of M&A transactions has more to do with the pre-merger year of the targets than with the acquiring banks. The effects of other bank-specific variables on performance depend on the specification and sample chosen. For instance, higher off-balance-sheet items, OBS, are associated with poorer performance of private banks. Thus, an increase in such items decreases bank performance. An increase in the volume of non-performing loans, NPL, which accompanies a lower credit quality (Meeker and Gray, 1987), is associated with poorer performance of private banks. A higher CAR is associated with improved performance for savings banks only, and an increase in $Share\, Fee$ leads to better risk-adjusted performance but only when measured by $RROE$ in the full sample. The positive and significant coefficients on $GDP\, Growth$ and $Spread$ suggest that bank performance increases pro-cyclically and with a positive yield curve for both savings and private banks.

[8] This variable also captures part of the effect stemming from inside appointments, which we investigate further in Section 4.4.

4.2 Outsider and pre-appointment bank risk

Our findings may indicate that good outsiders outperform bad outsiders. However, an alternative explanation for the performance differential between banks appointing good and bad outsiders may be that good outsiders select banks with lower risk, while bad outsiders are more likely to be hired by banks in very bad financial shape. Thus, the outside appointment dummy variable may simply pick up where this effect left off. Although we have already controlled for a large number of risk-related variables, this might be insufficient when these risk measures also determine which outsider accepts which job offer. Our next step, therefore, is to take into account risk differences between the banks before the outsider is appointed to trace possible selection effects by distinguishing between low- and high-risk banks appointing good and bad outsiders.

Our workhorse in this part of the analysis is a probability of bank distress (PD) of the banks in our sample. This PD comes from an econometric model, which is explained in detail in the Appendix, that considers balance-sheet as well as regulatory data on banks' capitalization, funding, lending and investment behavior. We use this as a workhorse, since it combines the different dimensions of bank risk into a single number for each bank and year. As alternative risk measures, we use the Herfindahl-Hirschman Index of the loan portfolio *(HHI, ln)*, and non-performing loans *(NPL)*. However these measures consider risk-bearing parts of balance-sheet composition and not a bank's risk exposure overall. A higher PD, HHI and NPL indicate higher risk.

In Table 8, we list descriptive statistics of the three proxies of bank risk for the full sample, and for the sample of good and bad outside appointments in the pre-appointment year. The numbers support the view that banks with outside appointments are riskier than banks without these appointments, which is in line with the argument that executive directors from the outside are more often appointed to clean up. Moreover, the displayed cross-section variations of PD, HHI and NPL, and in the pre-appointment year indicate that banks with bad outside appointments are more risky than those which appoint good outsiders. According to t-tests, the differences in risk are significant especially when we use historical ROA as an ability measure. This supports the selection argument for good and bad outsiders: good outsiders, on average, are hired by less risky banks than bad outsiders.

Table 8: Pre-appointment bank risk.

	Full sample	Outsider	Historical ROA GOOD	Historical ROA BAD	Managerial RRE GOOD	Managerial RRE BAD
			$PD_{i,t-1}$			
mean	3.84	5.94	5.28	7.19	5.64	7.06
p50	1.19	1.28	1.09	1.70	1.27	1.45
sd	7.89	10.63	9.94	11.90	10.32	11.84
GOOD-BAD (t-value)			*-4.90*		*-1.91*	
			$HHI_{i,t-1}$			
mean	3.3	3.39	3.39	3.41	3.40	3.40
p50	3.25	3.32	3.31	3.34	3.33	3.32
sd	0.32	0.34	0.35	0.35	0.34	0.36
GOOD-BAD (t-value)			*-1.98*		*-0.22*	
			$NPL_{i,t-1}$			
mean	3.35	3.94	3.81	4.29	3.89	4.21
p50	2.70	2.96	2.87	3.14	2.90	3.12
sd	2.92	3.55	3.48	3.76	3.49	3.78
GOOD-BAD (t-value)			*-4.34*		*-0.29*	

Note: The table displays mean, median *(p50)* and standard deviation *(sd)* of three proxies of bank risk for the full sample and subsamples of all, good and bad outsiders from their respective pre-appointment years. We use banks' probability of bank distress (PD), a Herfindahl-Hirschman Index (HHI, ln) that measures the concentration of the loan portfolio and the ratio of non-performing loans to total assets (NPL). $t-value$ comes from two-tailed t-tests between good and bad outside appointments.

To test whether this selection accounts for performance differentials, we split the dummy variables of good and bad outsiders into two parts according to the bank risk in the year before the executive director is appointed. We build the PD interaction term on the 90th percentile of the full sample distribution. This ensures that the group of high-risk banks includes those that are relatively close to financial distress; an alternative, splitting at the median PD, delivers too few observations for bad outsiders in low-risk banks. In Table 9, Panel A, we present the results for $RROE$ with these PD interaction terms for good and bad outsiders. To save space, we only report joint performance effects. Results on our control variables and diagnostic tests are similar to those presented earlier (for all tables to come, we present the full version in the Appendix of this paper). For high-default banks, we find that good outside appointments significantly outperform bad outside appointments, but less so for low-default banks. Thus, especially in banks needing the turnaround the most, good outsiders do a better job than bad outsiders.

To see whether this conclusion also holds for other risk measures, we employ HHI and NPL, and use the median of the aforementioned risk proxies of the full sample which delivers a sufficient number of cases in each group. For banks with a high concentration in HHI or a high ratio of NPL in their loan portfolios, our two measures of ability point toward the same conclusion as for the overall bank risk measure: good outsiders help the most in turning around bad bank performance.

Table 9: Outsider and pre-appointment bank risk.

Panel A	Historical ROA (1A)	Historical ROA (2A)	Historical ROA (3A)	Managerial RRE (4A)	Managerial RRE (5A)	Managerial RRE (6A)
High $PD_{i,t-1}$						
BAD JPE	-1.205***	-1.294***	-1.277***	-1.143***	-0.610	-1.429***
GOOD JPE	-0.439*	0.542	-0.796***	-0.659***	-0.582	-0.889***
F-Test High risk (p-value)	0.009	0.005	0.166	0.110	0.965	0.049
Low $PD_{i,t-1}$						
BAD JPE	-0.5***	-0.329	-0.742**	-0.573***	-0.477**	-0.613
GOOD JPE	-0.182	0.215	-0.733*	-0.161	0.361	-0.696*
F-Test JPE (p-value)	0.279	0.095	0.987	0.140	0.010	0.597
Panel B	(1B)	(2B)	(3B)	(4B)	(5B)	(6B)
High $HHI_{i,t-1}$						
BAD JPE	-0.953***	-0.805***	-0.941***	-1.038***	-0.561*	-1.505***
GOOD JPE	-0.427*	0.446	-0.958***	-0.403**	0.170	-0.573***
F-Test JPE (p-value)	0.065	0.003	0.966	0.024	0.074	0.026
Low $HHI_{i,t-1}$						
BAD JPE	-0.676***	-0.365	-1.225***	-0.519***	-0.524*	-0.403**
GOOD JPE	-0.123	0.141	-0.534	-0.320	0.170	-0.6*
F-Test JPE (p-value)	0.073	0.204	0.173	0.509	0.092	0.695
Panel C	(1C)	(2C)	(3C)	(4C)	(5C)	(6C)
High $NPL_{i,t-1}$						
BAD JPE	-0.983***	-0.768***	-1.244***	-1.15***	-0.715***	-1.629***
GOOD JPE	-0.679***	0.034	-1.241***	-0.617***	-0.063	-0.92***
F-Test JPE (p-value)	0.287	0.040	0.994	0.054	0.097	0.083
Low $NPL_{i,t-1}$						
BAD JPE	-0.575***	-0.387	-0.611**	-0.313	-0.321	-0.053
GOOD JPE	0.200	0.544*	-0.080	-0.137	0.359	-0.464
F-Test JPE (p-value)	0.011	0.029	0.269	0.569	0.123	0.378

Note: This table reports results from 18 GMM estimations with Windmeijer (2005) corrected standard errors. The dependent variable is $RROE$. Joint performance effects (JPE) of various outside appointments interacted with various risk categories are depicted. *High BAD* (*Low BAD*) is a bad outsider who enters a bank with high (low) risk. *High GOOD* (*Low GOOD*) is a good outsider who enters a bank with high (low) risk. Our risk classification is based on PD in Panel A, HHI in Panel B and NPL in Panel C, in all cases measured in the pre-appointment year. Columns (1) and (4) represent the full sample, Columns (2) and (5) show the results for savings banks and (3) and (6) for private banks. All bank-specific, macro and year dummy variables listed in Eq. (1) are included, but not reported. *, ** and *** indicate significance at the 10%, 5% and 1% level.

4.3 Outside appointments before and after the financial crisis

Since our sample spans the time before and after the financial crisis, we next test whether appointment effects differ in the pre- and post-crisis period. Thus, we have an eye on whether the years of the financial crisis changed the performance channel of appointing good and bad executive directors from the outside. To determine whether the financial crisis has implications, we measure the performance effect for good and bad outside appointments separately for the years 1993-2006, and 2007-2014.[9] In Table 10, we present

[9]Subsampling the data is not appropriate in a dynamic model with two-year sampling.

joint performance effects of good and bad outside appointments using historical ROA (Columns (1)-(3)), and managerial RRE (Columns (4)-(6)). For the full sample (Columns (1) and (4)), we find that banks with bad outside appointments underperform those with good outside appointments both in the pre-crisis and post-crisis period. The statistical significance is, however, always higher in the post-crisis period than in the pre-crisis period, but we do not find any significant differences between bad outside appointments before and after the crisis in the full sample.

Table 10: Outsider in the pre- and post-crisis period.

	Historical ROA			**Managerial RRE**		
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-crisis period						
BAD JPE	-0.649***	-0.389**	-0.846**	-0.591***	-0.201	-0.938***
GOOD JPE	-0.251	0.212	-0.709***	-0.349***	-0.024	-0.628***
F-Test JPE (p-value)	0.04	0.008	0.644	0.165	0.413	0.231
Post-crisis period						
BAD JPE	-0.658***	-0.775***	-0.544***	-0.637***	-0.702***	-0.549**
GOOD JPE	-0.046	0.162	-0.037	-0.074	0.152	-0.087
F-Test JPE (p-value)	0.016	0.011	0.168	0.03	0.024	0.208
F-Test BAD JPE (p-value)	0.964	0.238	0.283	0.827	0.104	0.185
F-Test GOOD JPE (p-value)	0.387	0.875	0.054	0.211	0.596	0.081

Note: This table reports results from 6 GMM estimations with Windmeijer (2005) corrected standard errors. The dependent variable is *RROE*. Joint performance effects (JPE) of various outside appointments separately measured for the pre- and post-crisis period are depicted. The pre-crisis period contains the years 1993-2006 and the post-crisis period the years 2007-2014. In Columns (1)-(3), we split up the group of outsiders according to historical ROA and in Columns (4)-(6) according to managerial RRE. Columns (1) and (4) represent the full sample. Columns (2) and (5) show the results for savings banks and Columns (3) and (6) for private banks. All bank-specific, macro and year dummy variables listed in Eq. (1) are included, but not reported. *, ** and *** indicate significance at the 10%, 5% and 1%.

Interesting are the findings for private banks, as the separation in a pre-crisis and post-crisis period delivers new insights. Results in Table 7 seem to indicate that private banks have a similar pattern of appointment effects than savings banks in the sense that the joint performance effect of bad outsiders is more negative than that of good outsiders. However, we could not establish a significant difference of joint performance effects between good and bad outside appointments of private banks. Splitting the appointment effect in a pre-crisis and post-crisis period indicates that private banks have the same tendency in the post-crisis period but not in the pre-crisis period. This tendency stems from a change in the performance effects of good outside appointments. In the pre-crisis period, the performance effect of good outside appointments is significantly negative, which is not the case in the post-crisis period. According to an F-test, the performance effect of good outside appointments differs significantly between the pre- and post-crisis period, regardless of the managerial ability measure used to classify good and bad outside appointments.

With respect to our results on the pre- and post-crisis period, a note of caution is in order. While we label the period from 2007 to 2014 as the post-crisis period, the split may not capture effects stemming from the financial crisis as in other studies that primarily capture US banks (e.g. Fahlenbrach and Stulz, 2011; Berger et al., 2016). The reason for this is that the majority of banks in our sample are small and medium-sized banks with almost no exposure to US subprime products. Therefore, these small and medium-sized banks were not hit directly by the value drop in subprime mortgages, but most likely by the Euro crisis and monetary policy. Moreover, German banks are faced with higher regulatory requirements, which partly stem from the crisis. Thus, the post-crisis effect we measure for outside appointments captures all these influences at the same time.

4.4 Complementary results

In this section we present a number of robustness tests and extensions (detailed results are tabulated in the Appendix). First, we use difference-in-differences estimations to check whether our results are robust to an alternative approach, which has been used in many recent studies on manager and director appointments (e.g. Berger et al., 2014; Min, 2013). The treatment group are banks with newly appointed outsiders in which no further turnover, merger or distress event occurred in the three years surrounding the appointment year. The control group consists of banks without any turnover, merger or distress events in the preceding and following two years. For each bank in the treatment group we match control banks with replacement from the same year and banking group, and from the same size and ROA deciles in the year before the treatment bank appoints the outsider. Results from this alternative approach confirm our findings. More specifically, we find that banks with bad outside appointments significantly underperform control banks, while banks with good outside appointments do not. We use this approach as a robustness test rather than our main approach for the following reasons: first, for many of the treatment banks, we are not able to find an appropriate match partner in terms of pre-event size and ROA, so the number of banks considered is much lower, which may raise concerns of sample selection. Second, with the difference-in-differences approach we cannot control for the fact that several appointments to the same executive board occur in adjoining years. Also, difference-in-differences estimations require that the event is exogenous. However, for outside appointments it can hardly be argued that these events are exogenous since the risk-profile of banks may determine their outside appointment behavior. A natural exception to this rule is the unexpected death of a director.

Our second set of robustness tests deals with the structure of the executive board. First, we find that our results hold when we exclude the board diversity index and the change in board size. Second, we test whether adding inside appointments, i.e., executive directors who have not accumulated any boardroom experience outside their current bank, has an effect. Consequently, we add variables of insider appointments to the list of variables in Eq. (1). We find that appointments of insiders are associated with a negative joint performance effect, which is significantly weaker than the joint performance effect of bad outsiders in Column (2) of Table 7. Third, we consider the size of the executive board, which has a significant negative effect on risk-adjusted performance. Fourth, we add the boards' average age and experience, however neither are significantly related to the bank performance. Fifth, we add the average tenure of bank executive directors, which turns out to be significantly positively related to the performance indicating that either directors with longer tenure generate more value or that executive directors stay longer at banks with high performance. It is important for our conclusion that excluding or including these additional board characteristics does not change the post-appointment effects we find for good and bad outsiders.[10]

Finally, we examine whether potential causes of the appointment event are related to performance differentials. We distinguish three groups of appointments. The first group contains turnover events triggered by the retirement of an executive director. We classify an appointment as triggered by retirement when an incumbent executive director is older than 60 years and when s/he stops serving on this board in the appointment or pre-appointment year, as in e.g. Huson et al. (2004) and Bornemann et al. (2015).[11] The second group contains cases where outsiders are appointed to replace an incumbent executive director who is not retiring. Consequently, these turnover events are triggered by any other reason, such as a resignation or dismissal. The third group consists of appointments where the board size increases. These three types may differ substantially because retirement turnovers are a relatively orderly process (Khurana and Nohria, 2000) where the incumbent executive director might be involved in selecting her/his successors, which is even more likely when the CEO retires (Shivdasani and Yermack, 1999). Non-retirement turnovers are potentially less orderly and might be more disruptive events (Khurana and Nohria, 2000), such as the (in)voluntary resignation of an incumbent executive. Thus, these events might be characterized by a shortage of time to adequately structure the process. Appointments when the board size increases enhance the body of expertise in the boardroom since all other members will continue serve on the board.

Table 11 delivers information on the total number of outside appointments as well as the numbers of good and bad outside appointments based on the two ability measures on the one hand, and of retirement, non-retirement turnover and board-increase appointments, on the other. In our sample, relatively few outside appointments are associated with a replacement of incumbent executives who are not retiring. In only 15.72% of all outside appointments does an outsider replaces an executive director who is not retiring. We have no evidence that good outside appointments are more likely to be chosen during retirement turnovers, while bad outsiders are hired to serve on boards after non-retirement turnovers, or vice versa. As shown for historical ROA, 44.57% of all non-retirement turnovers and 49.84% of all retirement turnovers are associated with hiring a good outsider. Thus, good and bad outside appointments and replacement (retirement and non-retirement) and appointments with board increase seem to be fairly independent of one another.

[10] One other robustness test might be worth mentioning. As the German banking sector is characterized by conglomerate structures, we run a model excluding all banks that belong to a concern and we find our conclusion confirmed.

[11] Our classification differs from other studies such as Denis and Denis (1995) and Jenter and Kanaan (2015) where the retirement age is 64 years. We opted to use 60 years as the retirement age to have a sufficient number of cases in the retirement group. Using a higher retirement age, however, does not change our findings.

Table 11: Appointment triggers.

Ability measure		Retirement	Non-retirement turnover	Board increase	Total
Historical ROA					
GOOD	Number	314	123	388	825
	Column (%)	49.84	44.57	45.65	46.98
BAD	Number	316	153	462	931
	Column (%)	50.16	55.43	54.35	53.02
Managerial RRE					
GOOD	Number	285	141	389	815
	Column (%)	45.24	51.09	45.76	46.41
BAD	Number	345	135	461	941
	Column (%)	54.76	48.91	54.24	53.59
Total	Number	630	276	850	1756
	Row (%)	35.88	15.72	48.41	100.00

Note: The table relates *GOOD* and *BAD* outside appointments to retirement (i.e. when at least one incumbent executive director is older than 60 years and when s/he stops serving on this board in the appointment or pre-appointment year), non-retirement turnover and board increase (i.e. the number of executive directors increases and no director leaves the board). *GOOD (BAD)* refers to appointments when at least one outsider is hired with above-median (below-median) historical ROA or managerial RRE. *Column* refers to the observations in each cell of the table as a percentage of the number of observations in the respective column. *Row* shows the total observations in each column as a percentage of the total number of appointments.

To see whether the potential triggers of the appointment events involve performance differentials between good and bad outside appointments, we run models with interaction terms of the trigger. In Table 12 we present the results for *RROE* with our previously used dummy variables for good and bad outsiders and the 3 different appointment triggers. Again, to save space we report only joint performance effects. The results confirm our findings from the full sample in Table 7: the joint performance effect for bad outsiders is significantly negative for retirement turnovers and appointments with board increase. Thus, even in the case of a board increase when the outsider dummy variables capture the infusion of additional expertise into the boardroom, we find negative performance effects of bad outsiders. Bad outsiders in non-retirement turnovers do not show significantly negative performance effects; rather for savings banks we even find a positive post-appointment performance effect of good outsiders. This may indicate that in the case of non-retirement turnovers, good outsiders are better equipped to turn around bad bank performance. However, the information we have available to classify appointments into different types is limited. For instance, the percentage of forced turnovers (where the former executive director was fired because of poor bank performance) in our category of non-retirement turnovers may significantly differ between good and bad outside appointments. We leave this open for future research.

Table 12: Outsider and appointment triggers.

	Historical ROA			Managerial RRE		
	(1)	(2)	(3)	(4)	(5)	(6)
Retirement						
BAD JPE	-1.025***	-0.805***	-1.16***	-0.803***	-0.246	-1.4***
GOOD JPE	-0.546*	0.307	-1.903***	-0.645***	-0.179	-1.35***
F-Test JPE (p-value)	0.205	0.005	0.279	0.683	0.885	0.939
Non-retirement turnover						
BAD JPE	-0.195	0.444	-0.396	-0.254	0.802	-0.717*
GOOD JPE	0.553	1.301**	0.155	0.249	0.663*	0.051
F-Test JPE (p-value)	0.121	0.194	0.391	0.284	0.84	0.238
Board increase						
BAD JPE	-0.858***	-0.843***	-0.925***	-1.11***	-1.378***	-1.101***
GOOD JPE	-0.296	-0.119	-0.369	-0.378*	0.206	-0.637**
F-Test JPE (p-value)	0.04	0.095	0.148	0.015	0.002	0.255

Note: This table reports results from 6 GMM estimations with Windmeijer (2005) corrected standard errors. The dependent variable is $RROE$. Joint performance effects (JPE) of various outside appointments interacted with various appointment triggers are depicted. We classify outside appointments as retirement, non-retirement turnover and board increase. Retirement is when at least one incumbent executive director is older than 60 years and when s/he stops serving on this board in the appointment or pre-appointment year. Board increase means the size of the board increases and no executive director leaves the board. In Columns (1)-(3), we split up the group of outsiders according to historical ROA and in Columns (4)-(6) according to managerial RRE. Columns (1) and (4) represent the full sample. Columns (2) and (5) show the results for savings banks and Columns (3) and (6) for private banks. All bank-specific, macro and year dummy variables listed in Eq. (1) are included, but not reported. *, ** and *** indicate significance at the 10%, 5% and 1% level.

5 Concluding remarks

The aim of this paper was to test whether executive directors appointed from outside the bank are a homogeneous group of executive directors concerning post-appointment performance effects or whether some outsiders are better predisposed than others to turn around poor bank performance and can do it more quickly than others. We use two measures of ability, the historical return on assets and managerial risk-return efficiency, to distinguish between what we call good and bad outside appointments. For a sample of German banks from 1993 to 2014, we find performance differentials after appointing good and bad outsiders. Appointing outsiders with low ability creates lower performance than appointing outsiders with high ability. This is in line with the reasoning that some executives are better than others at turning around bank performance. We put forth an alternative explanation that might also create the patterns in the data we attribute to the managerial ability of executives appointed from the outside. The performance differential between good and bad outsiders could be driven by a positive selection on the part of good outsiders. All outsiders may want to maintain their individual reputation in the job market for bank executive directors. However, while good outsiders may decline offers from high-risk banks, bad outsiders may only receive offers from high-risk banks. We find that the pattern in performance differentials is not driven by selection via bank risk.

We further test whether the performance differential between good and bad outside appointments differs in the pre- and post-crisis period. Our results indicate that the performance differentials become more pronounced in the post-crisis period, especially because good outsiders do a much better job after than before the crisis. We find that banks appointing bad outsiders perform in the post-crisis period as poorly as before the crisis. As many of the banks in our sample did not have subprime exposure, the interpretation of the post-crisis effects we measure differs from post-crisis effects measured in studies using US data. In our study, the post-crisis effects combine the effects of the Euro crisis, monetary policy changes, and changes in regulatory requirements in response to the crisis.

A Appendix

A.1 Managerial RRE

Managerial RRE is our second measure of managerial ability and is based on banks' efficiency. Many studies have used cost efficiency (Demerjian et al., 2012; Francis et al., 2016) or profit efficiency (Andreou et al., 2016) to obtain information on managerial ability. However, an important drawback of using them for banks is that risk is not sufficiently controlled for (Koetter, 2008). Consequently, those efficiency estimates might be misleading. To get rid of this drawback in our measure of managerial ability, we follow Koetter (2008), who estimates risk-return efficiency *(RRE)* for German universal banks following Hughes and Moon (1995) and Hughes et al. (1996). They start with a utility-maximization setting based on an Almost Ideal Demand (AID) system consisting of profit and input share equations. The idea is that a focus on profit maximization or cost minimization is insufficient since bank managers may have different risk preferences and pursue alternative objectives (Koetter, 2008). For a detailed description of this structural model of bank production see Koetter (2008), Hughes et al. (1996), Hughes and Moon (1995), Hughes, Lang, Mester, and Moon (2000) and Deaton and Muellbauer (1980). Our estimation procedure, for which we introduce and summarize all variables in Table 13, starts with such a structural model of bank input and output equations (which is a 4-equation system as in Koetter (2008) and Hughes et al. (1996)), which we estimate with a seemingly unrelated regression equations (SURE) estimation and allow for heteroscedasticity.

Table 13: Variables in the three step estimation procedure.

First step: SURE estimation						
Variable	Definition	mean	sd	p1	p50	p99
$w1$	Price of fixed assets **	88.97	3188.76	4.51	11.81	107.17
$w2$	Price of labor ***	57.16	157.81	30.36	52.91	116.59
$w3$	Price of borrowed funds **	3.48	70.13	0.65	3.13	6.31
$y1$	Interbank loans *	504.42	5888.21	0.84	24.92	5809.91
$y2$	Customer loans *	1011.01	8614.33	6.09	149.56	13279.87
$y3$	Bonds and stocks *	497.83	5086.12	0.00	49.76	4886.00
$y4$	Off-balance sheet items *	287.86	3927.54	0.12	13.50	2715.27
z	Equity *	88.28	745.01	0.92	14.41	1127.65
C	Total operating costs *	103.19	966.76	1.01	13.96	1236.30
PBT	Profit before tax *	13.05	81.97	0.08	2.44	164.83
t	Tax rate **	0.20	0.02	0.17	0.20	0.24
$p * y + m$	Total revenue **	122.21	1094.20	1.23	17.29	1533.16
SW_w1	Input share fixed assets **	3.02	2.32	0.31	2.68	10.38
SW_w2	Input share labor **	22.73	6.32	4.80	22.61	38.39
SW_w3	Input share borrowed funds **	41.64	12.11	9.28	43.10	74.56
SW_p_π	Input share profit before tax **	32.61	9.48	15.98	30.60	65.31
π	Price of after tax profit	2.11	24.17	0.80	1.41	7.42
$\tilde{p}$	Mean output interest **	5.65	1.61	2.42	5.63	9.03
Second step: SFA						
$ER_{i,t}$	Expected return **	1.32	0.86	0.03	1.19	3.41
$RK_{i,t}$	Bank risk **	0.02	0.03	0.00	0.01	0.16
$D\_SAVINGS_i$	Savings banks	0.24	0.43	0	0	1
D_COOP_i	Cooperative banks	0.70	0.46	0	1	1
D_PRIV_i	Private commercial banks	0.06	0.23	0	0	1
D_BIG_i	Large commercial banks and head institutions of cooperative and savings banks	0.01	0.08	0	0	0
Third step: Tobit regression						
$Full\,RRE_{i,t}$	Bank risk-return efficiency	0.87	0.08	0.48	0.89	0.95
$TA_{i,t}$	Total assets, deflated (ln) ***	19.46	1.27	16.73	19.47	23.44
$NPL_{i,t}$	Non-performing loans to total assets **	0.03	0.03	0.00	0.03	0.14
$MARKET\,SHARE_{i,t}$	TA of $\sum TA$ German universal banks **	0.04	0.28	0.00	0.01	0.43
$CAR_{i,t}$	Tier 1 capital to risk-weighted assets **	0.11	0.12	0.05	0.09	0.30

Notes: The table displays descriptive statistics for the variables used to estimate *managerial RRE*. *mean (sd)* denotes the mean (standard deviation) of each variable. The value *px* indicates the *xth* percentile of the distribution of the respective variable. The number of bank-year observations is 50,123 and the number of banks is 3,567. * denotes values in millions of Euros; ** in percent and *** in thousands of Euros.

One of the 4 equations of the structural model delivers the input for the second step of our estimation procedure. We present this equation below:

$$\frac{\partial\, ln\, E}{\partial\, ln\, w_i} = \frac{p_\pi \pi}{p * y + m} = \frac{\partial\, ln\, P}{\partial\, ln\, p_\pi} + \mu\, [ln(p * y + m) - ln\, P]$$
$$= \eta_\pi + \eta_{\pi\pi}\, ln\, p_\pi + \psi_{p\pi}\, ln\, \tilde{p} + \sum_j \gamma_{j\pi}\, ln\, y_j + \sum_s \omega_{s\pi}\, ln\, w_s \quad (2)$$
$$+ \eta_{\pi z}\, ln\, z + \mu\, [ln(p * y + m) - ln\, P] + \epsilon_{p_\pi}$$

where

$$
\begin{aligned}
ln\ P = {} & \alpha_0 + \alpha_p\ ln\,\tilde{p} + \sum_i \delta_i\ ln\,y_i + \sum_j \omega_j\ ln\,w_j \\
& + \eta_\pi\ ln\,p_\pi + \rho\ ln\,z + \frac{1}{2}\ \alpha_{pp}\ (ln\,\tilde{p})^2 \\
& + \frac{1}{2}\ \sum_i \sum_j \delta_{ij}\ ln\,y_i\ ln\,y_j + \frac{1}{2} \sum_s \sum_t \omega^*_{st}\ ln\,w_s\ ln\,w_t \\
& + \frac{1}{2}\ \eta_{\pi\pi}\ (ln\,p_\pi)^2 + \frac{1}{2}\ \rho_{zz}\ (ln\,z)^2 + \sum_j \theta_{pj}\ ln\,\tilde{p}\ ln\,y_j \\
& + \sum_s \phi_{ps}\ ln\,\tilde{p}\ ln\,w_s + \psi_{p\pi}\ ln\,\tilde{p}\ ln\,p_\pi + \psi_{pz}\ ln\,\tilde{p}\ ln\,z \\
& + \sum_j \sum_s \gamma_{js}\ ln\,y_j\ ln\,w_s + \sum_j \gamma_{j\pi}\ ln\,y_j\ ln\,p_\pi \\
& + \sum_j \gamma_{jz}\ ln\,y_j\ ln\,z + \sum_s \omega^*_{s\pi}\ ln\,w_s\ ln\,p_\pi \\
& + \sum_s \omega_{sz}\ ln\,w_s\ ln\,z + \eta_{\pi z}\ ln\,p_\pi\ ln\,z.
\end{aligned}
\tag{3}
$$

This equation delivers the expected return and predicted risk, which are the key variables in the risk-return efficiency estimation. The expected return, ER, is the predicted profit divided by equity, z, $ER = E(p_\pi \pi / z)$. The predicted risk, RK, is the standard error of the predicted profit, $RK = S(E(p_\pi \pi / z)$. Thus, both measures, which are bank specific, depend on the bank's production plan and other explanatory variables of the bank. If the risk preferences of bank managers differ, the expected risk-return relationship may also vary across banks. Following Koetter (2008), the curve of risk-return optimums slopes upward since risk is positively related to return, albeit with a decreasing rate. Therefore, the RRE is estimated as an upper envelope of expected return of the following form:

$$
ER_{i,t} = \ \alpha_i + \beta_1 \cdot RK_{i,t} + \beta_2 \cdot RK^2_{i,t} + Bank\,Sectors_i + \epsilon_{i,t} \tag{4}
$$

After imposing the necessary homogeneity and symmetry restrictions, we estimate Equation (4) using stochastic frontier analysis (SFA). The banking structure in Germany, with its large number of small and medium-sized cooperative and savings banks, requires controlling for heterogeneity in efficiency analysis (e.g. Koetter and Wedow, 2010). Therefore, we control for systematic differences across the bank sectors by adding dummies to the deterministic kernel of the frontier. The results of this estimation are presented in Table 14.[12]

Banks' total deviation from the best practice risk-return frontier, $\epsilon_{i,t}$, is due to random noise, $v_{i,t}$, which is assumed to be i.i.d. with $v_{i,t} \sim N(0,\ \sigma^2_v)$ and inefficiency, $u_{i,t}$, which is

[12] This is the second specification from Koetter (2008). We do not control for size as multicollinearity problems are then severe.

i.i.d. with $u_{i,t} \sim$ N| $(0,\ \sigma_u^2)$ | and independent of the $v_{i,t}$. A point estimator of efficiency is given by $E(u_{i,t} \mid \epsilon_{i,t})$, i.e., the mean of u_i given ϵ_i (Kumbhakar and Lovell, 2000). We use $[exp(-u_{i,t})]$ to calculate RRE per bank and year. RRE of 1 implies a fully efficient bank; a RRE of around 0.87 implies that the bank has realized only 87% of potential returns at given production plan and risks.

Table 14: SFA.

Variables	
$RK_{i,t}$	48.08***
	[0.13]
$RK_{i,t}^2$	-212.31***
	[1.37]
Bank sector dummies	YES
Year effects	YES
σ_u^2	0.15***
σ_v^2	0.17***
λ	0.83***
ll	4187.22

Note: The table displays the coefficients from SFA estimations and standard errors below the coefficients in parentheses. All variables are defined in Table 13. The number of bank-year observations is 50,123 and the number of banks is 3,567. λ is defined as σ_u / σ_v.

The third step of our estimation procedure delivers our managerial RRE. We regress various bank-specific characteristics on the RRE to determine the proportion which can be attributed to the bank management (managerial efficiency). As in Demerjian et al. (2012), we use bank characteristics to parse out RRE into bank efficiency and managerial efficiency: bank size, bank market share, the ratio of Tier 1 capital to risk-weighted assets, the ratio of non-performing loans to total assets and dummy variables to account for the bank sectors. The model looks like this:

$$\begin{aligned} Full\ RRE_{i,t} = \alpha_0 + \beta_1 \cdot TA_{i,t} + \beta_2 \cdot Market\, Share_{i,t} + \\ \beta_3 \cdot CAR_{i,t} + \beta_4 \cdot NPL_{i,t} + Bank\, Sectors_i + \\ \sum_{n=1}^{21} \beta_{6+n} \cdot Year_t + \epsilon_{i,t}. \end{aligned} \tag{5}$$

The residual from this estimation is our measure of managerial ability.

We report various specifications in Panel A of Table 15, where we cluster standard errors by bank and year to control for cross-sectional and intertemporal correlation. In column (1) we show our baseline results, where we do not consider board characteristics. In columns (2)-(6) we consider various board characteristics such as age, academic degree, tenure and board diversity to control for possible influences on RRE. We show in Panel B descriptive statistics of managerial RRE from the various model specifications. We observe that the 1st and 99th percentile values of the managerial RRE are very close to each other. To further support this proximity, we report correlations of managerial RRE from the various specifications in Panel C. The correlation coefficients are larger than 0.99, indicating that board characteristics do not significantly change the managerial RRE in our sample. Therefore, we rest our analysis on the baseline specification since this yields a substantially higher number of observations for classifying outside appointments into good and bad appointees.

Table 15: Tobit regressions.

Panel A:	(1)	(2)	(3)	(4)	(5)
$TA_{i,t}$	2.89***	2.80***	3.03***	3.12***	3.00***
	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]
$MARKET\_SHARE_{i,t}$	-0.01***	-0.03***	-0.03***	-0.03***	-0.03***
	[0]	[0]	[0]	[0]	[0]
$CAR_{i,t}$	-0.02***	-0.02***	-0.02***	-0.01***	-0.02***
	[0.01]	[0]	[0]	[0]	[0]
$NPL_{i,t}$	-0.05***	-0.06***	-0.06***	-0.04***	-0.05***
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
$Board\,Size_{i,t}$		0.00***			
		[0]			
$Board\,Age_{i,t}$			-0.00***		
			[0]		
$Board\,Academic\,Degree_{i,t}$			-0.01***		
			[0]		
$Board\,Tenure_{i,t}$				0.00***	
				[0]	
$Board\,Diversity_{i,t}$					0.00
					[0]
$\Delta\,Board\,Size_{i,t}$					0.00
					[0]
Bank sector dummies	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes
No. of obs.	50,123	43,247	43,162	43,224	38,956
Panel B: Descriptive statistics of managerial RRE					
sd	0.06	0.06	0.06	0.06	0.06
p1	-0.57	-0.57	-0.57	-0.56	-0.57
p99	0.21	0.21	0.21	0.2	0.2
Panel C: Correlation					
(1)	1				
(2)	0.99***	1			
(3)	0.99***	0.99***	1		
(4)	0.99***	0.99***	0.99***	1	
(5)	0.99***	0.99***	0.99***	0.99***	1

Note: The table reports coefficients from Tobit regressions and standard errors below the coefficients. In column (1) we show our baseline results from equation (5). In columns (2)-(6) we consider various characteristics of the executive board. $Board\,Size_{i,t}$ denotes the number of directors serving on the executive board; $Board\,Age_{i,t}$ denotes the average age of the executive board; $Board\,Academic\,Degree_{i,t}$ is the percentage of directors who hold an academic degree; $Board\,Tenure_{i,t}$ is the average tenure of the executive directors; $Board\,Diversity_{i,t}$ is a board diversity index (ln) of age, gender, education, and job experience, and $\Delta\,Board\,Size_{i,t}$ is the change in board size from year $t-1$ to year t. Panel B reports summary statistics and Panel C correlation coefficients of managerial RRE from the various specifications. *sd* denotes the standard deviation and *px* indicates the *xth* percentile of the distribution of the managerial RRE. All variables (except board characteristics) are defined in Table 13. *** indicates significance at the 1% level.

A.2 Estimation of probability of bank distress

In order to discriminate between solvent and poorly capitalized banks, we apply a standard bank rating model which has been used in several other studies (e.g. Porath, 2006; Bornemann, Homölle, Hubensack, Kick, and Pfingsten, 2014 and Kick and Prieto, 2015).[13] Here, the Logit model is designed to predict the probability of a bank experiencing a severe distress event (i.e. capital support from the bankers association, a restructuring merger, or a moratorium) within the subsequent year with a distress frequency of 4.05%. Control variables in the model follow the usual CAMELS taxonomy: capital adequacy, asset quality, management, earnings, liquidity,[14] and sensitivity to market risk.

Table 16: Variables for the probability of bank distress.

Variable	Definition	mean	sd	p1	p50	p99
D_Bank Distress	Dummy variable equals one for banks receiving capital support measures from the bankers associations' insurance funds, or exiting the market in a distressed merger/in a moratorium.	0.04	0.20	0	0	1
CAR	Tier 1 capital to risk-weighted assets	10.07	5.27	5.14	8.61	32.92
Bank Reserves	Total bank reserves (according to sections 340f and 340g of the German Commercial Code) to total assets	1.34	1.10	0	1.05	4.26
Reserves Reduction	Dummy variable that equals one if hidden bank reserves are reduced	0.08	0.27	0	0	1
CL	Customer loans to total assets	57.60	14.05	14.11	59.87	84.92
OBS	Off-balance sheet items to total assets	5.91	4.13	0.556	4.94	23.59
HHI	Herfindahl-Hirschman Index of the bank loan portfolio	15.94	13.69	7.57	11.83	97.20
D_HL	Dummy variable that takes on one for banks with avoided write-offs on their balance sheets	0.11	0.31	0	0	1
Share Fee	Fee income to total income	11.80	7.14	1.63	10.7	43.47
ROE	Return on equity	14.06	10.82	-20.23	14.01	41.88
Spread	Interest rate spread between 10-year and 1-year government bonds	1.70	0.79	0.20	1.66	3.21
GDP Growth	Annual percentage change in per-capita real GDP at the federal state level	1.59	3.46	-7.57	1.35	12.5

Note: The table displays descriptive statistics for the variables used to estimate *PD*. *mean (sd)* denotes the mean (standard deviation) of each variable. The value *px* indicates the *xth* percentile of the distribution of the respective variable. The number of bank-year observations is 46,138.

[13] Similar models are also used in banking supervision as early warning tools and to determine the frequency of on-site inspections (which is, of course, higher for poorly rated banks).

[14] We wish to note that banks' real liquidity risk cannot be measured adequately with the data available at the Deutsche Bundesbank (Porath, 2006) and, in particular for small cooperative and savings banks, a high cash and interbank-loans to total assets ratio is rather an indicator of lacking business opportunities than low liquidity risk. Therefore, we follow Kick and Jahn (2014) and proxy banks' liquidity situation at an aggregate level instead by including the yield curve in the bank rating model.

Table 17: Logit bank rating model.

Variables	
$CAR_{i,t-1}$	-0.07***
	[0.02]
$Bank\,Reserves_{i,t-1}$	-1.59***
	[0.120]
$Reserves\,Reduction_{i,t-1}$	0.18**
	[0.08]
$CL_{i,t-1}$	-0.01**
	[0.00]
$OBS_{i,t-1}$	0.02*
	[0.01]
$HHI_{i,t-1}$	-0.02***
	[0.01]
$D\_HL_{i,t-1}$	0.59***
	[0.08]
$Share\,Fee_{i,t-1}$	0.02***
	[0.01]
$ROE_{i,t-1}$	-0.07***
	[0.00]
$Spread_{i,t-1}$	0.13***
	[0.04]
$GDP\,Growth_{t-1}$	-0.01
	[0.01]
Bank sector dummies	Yes
No. of obs.	46,138

Note: This table shows regression coefficients with standard errors in parentheses from a bank rating model that is based on a Logit function which transforms a set of bank-specific and macroeconomic covariates observed in year t-1 into the probability of bank distress (PD) of a bank in year t. The dependent variable is $D\_Bank\,Distress$. All variables are defined in Table 16. ** and *** indicate statistical significance at the 5% and 1% level, respectively.

A.3 Full versions of tables

We use the following baseline econometric model, from which we derive all subsequent specifications, to determine the effects of executive directors appointed from outside on bank performance:

$$\begin{aligned} y_{i,t} = \alpha + \sum_{j=0}^{4} \beta_{1+j} \cdot Outsider_{i,t-j} \; + \sum_{k=1}^{2} \beta_{5+k} \cdot Board\,Controls_{i,t} + \\ \sum_{l=1}^{10} \beta_{7+l} \cdot Bank\,Controls_{i,t-1} \; + \sum_{m=1}^{2} \beta_{17+m} \cdot Merger_{i,t} + \\ \sum_{n=1}^{2} \beta_{19+n} \cdot Macro_{t} + \sum_{o=1}^{10} \beta_{21+o} \cdot Year_{t} \; + \beta_{32} \cdot y_{i,t-1} + \mu_i + \epsilon_{i,t} \end{aligned} \tag{6}$$

where $y_{i,t}$ denotes the performance measure of bank i in year t.

Full version of Table 9 (PD) in KNS (2017).

Variables	(1)	(2)	(3)	(4)	(5)	(6)
$RROE_{i,t-1}$	0.258***	0.215***	0.269***	0.258***	0.215***	0.269***
	[0.018]	[0.028]	[0.023]	[0.018]	[0.028]	[0.022]
$Low \cdot BAD_{i,t}$	-0.149**	-0.146*	-0.122	-0.261**	-0.158*	-0.432*
	[0.068]	[0.080]	[0.121]	[0.113]	[0.082]	[0.239]
$Low \cdot BAD_{i,t-1}$	-0.090*	-0.101	-0.024	-0.081	-0.103	-0.011
	[0.053]	[0.067]	[0.087]	[0.054]	[0.064]	[0.091]
$Low \cdot BAD_{i,t-2}$	-0.083	-0.084	-0.052	-0.092	-0.065	-0.085
	[0.062]	[0.077]	[0.109]	[0.058]	[0.071]	[0.102]
$Low \cdot BAD_{i,t-3}$	-0.113*	-0.082	-0.153	-0.085	-0.099	-0.029
	[0.068]	[0.078]	[0.138]	[0.061]	[0.070]	[0.120]
$Low \cdot BAD_{i,t-4}$	-0.065	0.084	-0.392**	-0.053	-0.051	-0.057
	[0.098]	[0.114]	[0.175]	[0.069]	[0.084]	[0.122]
$High \cdot BAD_{i,t}$	-0.470***	-0.360*	-0.516***	-0.338***	-0.020	-0.454***
	[0.080]	[0.211]	[0.085]	[0.089]	[0.213]	[0.096]
$High \cdot BAD_{i,t-1}$	-0.275***	-0.244*	-0.307***	-0.223***	-0.084	-0.294***
	[0.062]	[0.139]	[0.066]	[0.063]	[0.156]	[0.067]
$High \cdot BAD_{i,t-2}$	-0.228***	-0.241*	-0.251***	-0.256***	-0.061	-0.348***
	[0.064]	[0.130]	[0.073]	[0.070]	[0.164]	[0.077]
$High \cdot BAD_{i,t-3}$	-0.123	-0.248	-0.102	-0.109	-0.190	-0.100
	[0.077]	[0.170]	[0.083]	[0.082]	[0.180]	[0.095]
$High \cdot BAD_{i,t-4}$	-0.110	-0.202	-0.101	-0.216**	-0.254*	-0.233**
	[0.080]	[0.155]	[0.096]	[0.090]	[0.144]	[0.114]
$Low \cdot GOOD_{i,t}$	-0.162	-0.052	-0.353	-0.047	-0.027	-0.052
	[0.121]	[0.085]	[0.252]	[0.070]	[0.079]	[0.127]
$Low \cdot GOOD_{i,t-1}$	-0.037	0.069	-0.198*	-0.031	0.094	-0.203**
	[0.059]	[0.067]	[0.105]	[0.055]	[0.068]	[0.091]
$Low \cdot GOOD_{i,t-2}$	0.005	0.088	-0.057	0.001	0.089	-0.085
	[0.058]	[0.080]	[0.085]	[0.060]	[0.083]	[0.093]
$Low \cdot GOOD_{i,t-3}$	0.027	0.079	-0.015	-0.007	0.109	-0.179
	[0.062]	[0.073]	[0.123]	[0.070]	[0.082]	[0.136]
$Low \cdot GOOD_{i,t-4}$	-0.016	0.031	-0.110	-0.076	0.095	-0.370**
	[0.070]	[0.078]	[0.144]	[0.094]	[0.110]	[0.161]
$High \cdot GOOD_{i,t}$	-0.118	0.197	-0.224*	-0.309***	-0.311	-0.319***
	[0.106]	[0.221]	[0.119]	[0.101]	[0.191]	[0.118]
$High \cdot GOOD_{i,t-1}$	-0.159**	0.118	-0.255***	-0.230***	-0.130	-0.259***
	[0.075]	[0.143]	[0.089]	[0.067]	[0.136]	[0.077]
$High \cdot GOOD_{i,t-2}$	-0.014	0.144	-0.084	-0.029	-0.100	-0.014
	[0.079]	[0.189]	[0.089]	[0.071]	[0.154]	[0.081]
$High \cdot GOOD_{i,t-3}$	-0.060	0.050	-0.072	-0.071	-0.046	-0.058
	[0.082]	[0.136]	[0.097]	[0.076]	[0.146]	[0.080]
$High \cdot GOOD_{i,t-4}$	-0.088	0.032	-0.162	-0.020	0.005	-0.045
	[0.093]	[0.152]	[0.115]	[0.084]	[0.163]	[0.100]

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Variables	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\, Board\, Size_{i,t}$	-0.055***	-0.046**	-0.068***	-0.055***	-0.048**	-0.067***
	[0.015]	[0.019]	[0.021]	[0.015]	[0.019]	[0.021]
$Board\, Diversity_{i,t}$	0.007	-0.031	0.015	0.006	-0.031	0.012
	[0.021]	[0.046]	[0.024]	[0.021]	[0.046]	[0.024]
$CAR_{i,t-1}$	0.005**	0.032***	-0.001	0.005**	0.032***	-0.001
	[0.002]	[0.012]	[0.002]	[0.002]	[0.012]	[0.002]
$DISS_{w3}$	-0.520***	-0.541***	-0.491***	-0.513***	-0.534***	-0.484***
	[0.051]	[0.124]	[0.057]	[0.051]	[0.122]	[0.057]
$Share\, Fee_{i,t-1}$	0.006**	0.035***	-0.000	0.006**	0.035***	-0.000
	[0.003]	[0.013]	[0.003]	[0.003]	[0.013]	[0.003]
$OBS_{i,t-1}$	-0.016***	-0.008	-0.020***	-0.016***	-0.007	-0.020***
	[0.004]	[0.016]	[0.005]	[0.004]	[0.016]	[0.005]
$CL_{i,t-1}$	0.000	0.003	-0.001	0.000	0.003	-0.001
	[0.001]	[0.002]	[0.001]	[0.001]	[0.002]	[0.001]
$NPL_{i,t-1}$	-0.010*	-0.008	-0.390***	-0.010*	-0.009	-0.011**
	[0.005]	[0.015]	[0.058]	[0.005]	[0.015]	[0.005]
$HHI_{i,t-1}$	-0.250***	-0.304**	-0.011**	-0.251***	-0.314***	-0.389***
	[0.053]	[0.122]	[0.005]	[0.053]	[0.121]	[0.058]
$TA_{i,t-1}$	0.131***	0.121***	0.095***	0.131***	0.118***	0.095***
	[0.015]	[0.030]	[0.017]	[0.015]	[0.030]	[0.017]
D_COOP_i	0.319***			0.316***		
	[0.045]			[0.045]		
D_PRIV_i	-0.394***			-0.396***		
	[0.086]			[0.086]		
D_BIG_i	-0.674***			-0.670***		
	[0.148]			[0.146]		
$Acquirer_{w3}$	0.114**	-0.017	0.154**	0.120**	-0.026	0.160**
	[0.056]	[0.110]	[0.064]	[0.056]	[0.110]	[0.065]
$Target_{w3}$	-0.207***	-0.230**	-0.230***	-0.204***	-0.230**	-0.227***
	[0.068]	[0.092]	[0.079]	[0.068]	[0.092]	[0.079]
$GDP\, Growth_t$	0.092***	-0.092**	0.134***	0.092***	-0.092**	0.135***
	[0.014]	[0.043]	[0.017]	[0.014]	[0.043]	[0.017]
$Spread_t$	0.560***	0.375***	0.501***	0.560***	0.375***	0.500***
	[0.019]	[0.036]	[0.023]	[0.019]	[0.035]	[0.023]
Low BAD JPE	-0.5***	-0.329	-0.742**	-0.573***	-0.477**	-0.613
Low GOOD JPE	-0.182	0.215	-0.733*	-0.161	0.361	-0.696*
F-Test Low risk (p-value)	0.279	0.095	0.987	0.140	0.010	0.597
High BAD JPE	-1.205***	-1.294***	-1.277***	-1.143***	-0.610	-1.429***
High GOOD JPE	-0.439*	0.542	-0.796***	-0.659***	-0.582	-0.889***
F-Test High risk (p-value)	0.009	0.005	0.166	0.110	0.965	0.049
No. of obs.	15,491	4,271	11,190	15,491	4,271	11,190
No. of banks	3,108	712	2,389	3,108	712	2,389
AR(1) test (p-value)	0	0	0	0	0	0
AR(2) test (p-value)	0.763	0.483	0.870	0.702	0.483	0.817
Hansen test (p-value)	0.515	0.363	0.278	0.498	0.383	0.272

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. The dependent variable is *RROE*. *High BAD* (*Low BAD*) is a bad outsider who enters a bank with high (low) risk. *High GOOD* (*Low GOOD*) is a good outsider who enters a bank with high (low) risk. Our risk classification is based on *PD* measured in the pre-appointment year. Columns (1) and (4) represent the full sample. Columns (2) and (5) show the results for savings banks and columns (3) and (6) for private banks. Year dummies are included, but not reported. *JPE* (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider type. *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively.

Full version of Table 9 (HHI) in KNS (2017).

Variables	(1)	(2)	(3)	(4)	(5)	(6)
$RROE_{i,t-1}$	0.258***	0.213***	0.270***	0.257***	0.216***	0.244***
	[0.018]	[0.027]	[0.023]	[0.018]	[0.027]	[0.025]
$Low \cdot BAD_{i,t}$	-0.293***	-0.229*	-0.380***	-0.210**	-0.200	-0.183
	[0.091]	[0.133]	[0.126]	[0.094]	[0.139]	[0.128]
$Low \cdot BAD_{i,t-1}$	-0.106	-0.039	-0.244***	-0.093	-0.102	-0.078
	[0.066]	[0.099]	[0.087]	[0.066]	[0.097]	[0.099]
$Low \cdot BAD_{i,t-2}$	-0.047	-0.049	-0.086	-0.065	0.008	-0.184**
	[0.069]	[0.106]	[0.090]	[0.066]	[0.098]	[0.093]
$Low \cdot BAD_{i,t-3}$	-0.146*	-0.031	-0.300***	-0.098	-0.067	-0.144
	[0.078]	[0.109]	[0.113]	[0.071]	[0.093]	[0.111]
$Low \cdot BAD_{i,t-4}$	-0.085	-0.016	-0.214	-0.054	-0.162	0.186
	[0.097]	[0.131]	[0.154]	[0.085]	[0.102]	[0.138]
$High \cdot BAD_{i,t}$	-0.305***	-0.176*	-0.370***	-0.347***	-0.089	-0.671***
	[0.064]	[0.096]	[0.085]	[0.102]	[0.090]	[0.174]
$High \cdot BAD_{i,t-1}$	-0.232***	-0.227***	-0.182***	-0.187***	-0.117	-0.271***
	[0.051]	[0.075]	[0.066]	[0.051]	[0.075]	[0.072]
$High \cdot BAD_{i,t-2}$	-0.219***	-0.184**	-0.240***	-0.239***	-0.149*	-0.265***
	[0.058]	[0.083]	[0.079]	[0.059]	[0.086]	[0.082]
$High \cdot BAD_{i,t-3}$	-0.112*	-0.227**	-0.002	-0.076	-0.154*	-0.009
	[0.067]	[0.099]	[0.084]	[0.067]	[0.091]	[0.096]
$High \cdot BAD_{i,t-4}$	-0.085	0.009	-0.147	-0.189**	-0.052	-0.289***
	[0.080]	[0.127]	[0.099]	[0.075]	[0.098]	[0.109]
$Low \cdot GOOD_{i,t}$	-0.046	-0.082	-0.044	-0.118	-0.123	-0.062
	[0.091]	[0.119]	[0.133]	[0.087]	[0.104]	[0.153]
$Low \cdot GOOD_{i,t-1}$	-0.047	0.101	-0.257**	-0.055	0.150*	-0.168
	[0.070]	[0.083]	[0.118]	[0.067]	[0.079]	[0.104]
$Low \cdot GOOD_{i,t-2}$	-0.014	0.030	-0.091	-0.007	-0.048	0.078
	[0.066]	[0.094]	[0.098]	[0.066]	[0.101]	[0.096]
$Low \cdot GOOD_{i,t-3}$	-0.065	0.118	-0.313***	-0.094	0.173*	-0.333***
	[0.072]	[0.084]	[0.116]	[0.077]	[0.096]	[0.124]
$Low \cdot GOOD_{i,t-4}$	0.049	-0.026	0.171	-0.044	0.018	-0.115
	[0.078]	[0.094]	[0.129]	[0.091]	[0.117]	[0.171]
$High \cdot GOOD_{i,t}$	-0.225*	0.054	-0.460**	-0.185**	-0.047	-0.203*
	[0.131]	[0.108]	[0.214]	[0.079]	[0.103]	[0.115]
$High \cdot GOOD_{i,t-1}$	-0.119**	0.055	-0.218***	-0.155***	-0.050	-0.196***
	[0.060]	[0.088]	[0.083]	[0.055]	[0.088]	[0.071]
$High \cdot GOOD_{i,t-2}$	0.003	0.186*	-0.057	-0.010	0.157	-0.076
	[0.065]	[0.111]	[0.080]	[0.064]	[0.103]	[0.086]
$High \cdot GOOD_{i,t-3}$	0.040	0.030	0.105	-0.008	-0.040	0.072
	[0.068]	[0.097]	[0.097]	[0.067]	[0.106]	[0.091]
$High \cdot GOOD_{i,t-4}$	-0.126	0.120	-0.328***	-0.045	0.150	-0.17
	[0.080]	[0.097]	[0.120]	[0.089]	[0.137]	[0.127]

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Variables	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\, Board\, Size_{i,t}$	-0.054***	-0.048**	-0.066***	-0.053***	-0.049**	-0.073***
	[0.015]	[0.019]	[0.021]	[0.015]	[0.019]	[0.023]
$Board\, Diversity_{i,t}$	0.007	-0.025	0.016	0.006	-0.031	0.021
	[0.021]	[0.046]	[0.024]	[0.021]	[0.045]	[0.025]
$CAR_{i,t-1}$	0.005**	0.033***	-0.001	0.005**	0.033***	0.015**
	[0.003]	[0.012]	[0.002]	[0.003]	[0.012]	[0.007]
$DISS_{w3}$	-0.532***	-0.538***	-0.504***	-0.528***	-0.532***	-0.499***
	[0.050]	[0.123]	[0.055]	[0.049]	[0.124]	[0.058]
$Share\, Fee_{i,t-1}$	0.006**	0.035***	-0.000	0.006**	0.037***	0.020***
	[0.003]	[0.013]	[0.003]	[0.003]	[0.013]	[0.006]
$OBS_{i,t-1}$	-0.016***	-0.009	-0.019***	-0.016***	-0.010	-0.027***
	[0.004]	[0.016]	[0.005]	[0.004]	[0.016]	[0.008]
$CL_{i,t-1}$	0.000	0.003	-0.001	0.000	0.003	0.001
	[0.001]	[0.002]	[0.001]	[0.001]	[0.002]	[0.002]
$NPL_{i,t-1}$	-0.231***	-0.292**	-0.383***	-0.230***	-0.301**	-0.251***
	[0.053]	[0.128]	[0.057]	[0.054]	[0.128]	[0.069]
$HHI_{i,t-1}$	-0.010**	-0.010	-0.011**	-0.011**	-0.009	-0.024***
	[0.005]	[0.015]	[0.005]	[0.005]	[0.015]	[0.007]
$TA_{i,t-1}$	0.131***	0.117***	0.094***	0.131***	0.115***	0.144***
	[0.015]	[0.029]	[0.017]	[0.015]	[0.029]	[0.020]
D_COOP_i	0.309***			0.306***		
	[0.044]			[0.044]		
D_PRIV_i	-0.416***			-0.419***		
	[0.086]			[0.087]		
D_BIG_i	-0.729***			-0.727***		
	[0.145]			[0.145]		
$Acquirer_{w3}$	0.120**	-0.008	0.155**	0.122**	-0.037	0.170***
	[0.056]	[0.110]	[0.064]	[0.056]	[0.111]	[0.066]
$Target_{w3}$	-0.210***	-0.238***	-0.234***	-0.207***	-0.243***	-0.261***
	[0.067]	[0.092]	[0.080]	[0.067]	[0.093]	[0.081]
$GDP\, Growth_t$	0.093***	-0.096**	0.138***	0.093***	-0.098**	0.122***
	[0.014]	[0.044]	[0.016]	[0.014]	[0.044]	[0.013]
$Spread_t$	0.560***	0.373***	0.499***	0.560***	0.373***	0.475***
	[0.019]	[0.036]	[0.023]	[0.019]	[0.035]	[0.027]
Low BAD JPE	-0.676***	-0.365	-1.225***	-0.519***	-0.524*	-0.403**
Low GOOD JPE	-0.123	0.141	-0.534	-0.32	0.17	-0.6*
F-Test Low risk (p-value)	0.065	0.003	0.966	0.509	0.092	0.695
High BAD JPE	-0.953***	-0.805***	-0.941***	-1.038***	-0.561*	-1.505***
High GOOD JPE	-0.427*	0.446	-0.958***	-0.403**	0.17	-0.573***
F-Test High risk (p-value)	0.073	0.204	0.173	0.024	0.074	0.026
No. of obs.	15,491	4,271	11,190	15,491	4,271	11,190
No. of banks	3,108	712	2,389	3,108	712	2,389
AR(1) test (p-value)	0	0	0	0	0	0
AR(2) test (p-value)	0.697	0.596	0.870	0.705	0.662	0.914
Hansen test (p-value)	0.477	0.361	0.263	0.483	0.354	0.277

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. The dependent variable is $RROE$. *High BAD* (*Low BAD*) is a bad outsider who enters a bank with high (low) risk. *High GOOD* (*Low GOOD*) is a good outsider who enters a bank with high (low) risk. Our risk classification is based on HHI measured in the pre-appointment year. Columns (1) and (4) represent the full sample. Columns (2) and (5) show the results for savings banks and columns (3) and (6) for private banks. Year dummies are included, but not reported. JPE (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider type. *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively.

Full version of Table 9 (NPL) in KNS (2017).

Variables	(1)	(2)	(3)	(4)	(5)	(6)
$RROE_{i,t-1}$	0.260***	0.217***	0.272***	0.264***	0.217***	0.274***
	[0.019]	[0.028]	[0.023]	[0.019]	[0.028]	[0.023]
$Low \cdot BAD_{i,t}$	-0.094	-0.074	-0.081	-0.057	-0.036	-0.022
	[0.074]	[0.100]	[0.111]	[0.077]	[0.105]	[0.114]
$Low \cdot BAD_{i,t-1}$	-0.158**	-0.161*	-0.131	-0.063	-0.151	0.065
	[0.064]	[0.094]	[0.090]	[0.065]	[0.096]	[0.092]
$Low \cdot BAD_{i,t-2}$	-0.126*	-0.034	-0.194*	-0.042	0.072	-0.106
	[0.069]	[0.097]	[0.103]	[0.069]	[0.097]	[0.100]
$Low \cdot BAD_{i,t-3}$	-0.086	-0.067	-0.070	-0.056	-0.111	0.073
	[0.075]	[0.085]	[0.132]	[0.077]	[0.092]	[0.129]
$Low \cdot BAD_{i,t-4}$	-0.111	-0.051	-0.136	-0.095	-0.094	-0.064
	[0.093]	[0.128]	[0.138]	[0.092]	[0.126]	[0.140]
$High \cdot BAD_{i,t}$	-0.431***	-0.302***	-0.511***	-0.462***	-0.207*	-0.663***
	[0.070]	[0.115]	[0.088]	[0.110]	[0.107]	[0.161]
$High \cdot BAD_{i,t-1}$	-0.191***	-0.130	-0.234***	-0.206***	-0.089	-0.307***
	[0.054]	[0.085]	[0.065]	[0.054]	[0.080]	[0.069]
$High \cdot BAD_{i,t-2}$	-0.167***	-0.221**	-0.165**	-0.231***	-0.187**	-0.296***
	[0.058]	[0.093]	[0.074]	[0.058]	[0.087]	[0.078]
$High \cdot BAD_{i,t-3}$	-0.133**	-0.175	-0.136*	-0.107*	-0.140	-0.122
	[0.067]	[0.115]	[0.080]	[0.062]	[0.093]	[0.085]
$High \cdot BAD_{i,t-4}$	-0.060	0.060	-0.198*	-0.144**	-0.091	-0.241**
	[0.076]	[0.112]	[0.104]	[0.071]	[0.080]	[0.115]
$Low \cdot GOOD_{i,t}$	-0.001	0.003	0.039	-0.039	-0.044	-0.018
	[0.090]	[0.099]	[0.145]	[0.086]	[0.096]	[0.146]
$Low \cdot GOOD_{i,t-1}$	0.027	0.138	-0.072	-0.059	0.103	-0.189**
	[0.068]	[0.092]	[0.103]	[0.064]	[0.088]	[0.094]
$Low \cdot GOOD_{i,t-2}$	0.096	0.172	0.058	-0.016	0.063	-0.042
	[0.070]	[0.106]	[0.093]	[0.068]	[0.102]	[0.095]
$Low \cdot GOOD_{i,t-3}$	0.149**	0.176*	0.149	0.095	0.197**	0.026
	[0.075]	[0.096]	[0.118]	[0.074]	[0.093]	[0.119]
$Low \cdot GOOD_{i,t-4}$	-0.070	0.055	-0.254*	-0.117	0.039	-0.241*
	[0.097]	[0.120]	[0.154]	[0.096]	[0.121]	[0.144]
$High \cdot GOOD_{i,t}$	-0.273**	-0.014	-0.505**	-0.252***	-0.129	-0.325***
	[0.134]	[0.121]	[0.203]	[0.082]	[0.120]	[0.110]
$High \cdot GOOD_{i,t-1}$	-0.180***	0.021	-0.346***	-0.176***	-0.025	-0.268***
	[0.065]	[0.086]	[0.091]	[0.059]	[0.089]	[0.076]
$High \cdot GOOD_{i,t-2}$	-0.081	0.029	-0.158*	-0.018	0.039	-0.030
	[0.062]	[0.099]	[0.081]	[0.063]	[0.105]	[0.080]
$High \cdot GOOD_{i,t-3}$	-0.127*	-0.026	-0.174*	-0.165**	-0.061	-0.185**
	[0.065]	[0.088]	[0.095]	[0.066]	[0.102]	[0.090]
$High \cdot GOOD_{i,t-4}$	-0.019	0.024	-0.057	-0.006	0.113	-0.111
	[0.066]	[0.076]	[0.111]	[0.079]	[0.118]	[0.111]

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Variables	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\, Board\, Size_{i,t}$	-0.055***	-0.046**	-0.068***	-0.056***	-0.051***	-0.068***
	[0.015]	[0.019]	[0.021]	[0.015]	[0.019]	[0.021]
$Board\, Diversity_{i,t}$	0.008	-0.028	0.016	0.006	-0.028	0.014
	[0.021]	[0.046]	[0.024]	[0.021]	[0.045]	[0.024]
$CAR_{i,t-1}$	0.005**	0.032***	-0.001	0.003	0.033***	-0.001
	[0.002]	[0.012]	[0.002]	[0.002]	[0.012]	[0.002]
$DISS_{w3}$	-0.521***	-0.541***	-0.480***	-0.519***	-0.539***	-0.469***
	[0.049]	[0.123]	[0.055]	[0.049]	[0.123]	[0.054]
$Share\, Fee_{i,t-1}$	0.006**	0.035***	-0.000	0.007**	0.035***	0.000
	[0.003]	[0.013]	[0.003]	[0.003]	[0.013]	[0.003]
$OBS_{i,t-1}$	-0.016***	-0.009	-0.020***	-0.016***	-0.005	-0.019***
	[0.004]	[0.016]	[0.005]	[0.004]	[0.016]	[0.005]
$CL_{i,t-1}$	0.000	0.003	-0.001	0.000	0.002	-0.001
	[0.001]	[0.002]	[0.001]	[0.001]	[0.002]	[0.001]
$NPL_{i,t-1}$	-0.252***	-0.305**	-0.392***	-0.230***	-0.301**	-0.392***
	[0.054]	[0.122]	[0.058]	[0.054]	[0.128]	[0.058]
$HHI_{i,t-1}$	-0.008	-0.005	-0.009	-0.007	-0.007	-0.009*
	[0.005]	[0.015]	[0.005]	[0.005]	[0.015]	[0.005]
$TA_{i,t-1}$	0.129***	0.114***	0.094***	0.113***	0.089***	0.094***
	[0.015]	[0.029]	[0.017]	[0.015]	[0.029]	[0.017]
D_COOP_i	0.303***			0.300***		
	[0.044]			[0.044]		
D_PRIV_i	-0.404***			-0.494***		
	[0.086]			[0.083]		
D_BIG_i	-0.700***			-0.676***		
	[0.146]			[0.143]		
$Acquirer_{w3}$	0.120**	-0.011	0.161**	0.125**	-0.031	0.163**
	[0.055]	[0.110]	[0.064]	[0.056]	[0.109]	[0.064]
$Target_{w3}$	-0.211***	-0.229**	-0.227***	-0.218***	-0.243***	-0.224***
	[0.068]	[0.092]	[0.080]	[0.068]	[0.093]	[0.080]
$GDP\, Growth_t$	0.094***	-0.089**	0.136***	0.096***	-0.102**	0.137***
	[0.014]	[0.043]	[0.017]	[0.014]	[0.043]	[0.016]
$Spread_t$	0.558***	0.381***	0.500***	0.561***	0.371***	0.499***
	[0.019]	[0.036]	[0.023]	[0.019]	[0.036]	[0.023]
Low BAD JPE	-0.575***	-0.387	-0.611**	-0.313	-0.321	-0.053
Low GOOD JPE	0.2	0.544*	-0.08	-0.137	0.359	-0.464
F-Test Low risk (p-value)	0.011	0.029	0.269	0.569	0.123	0.378
High BAD JPE	-0.983***	-0.768***	-1.244***	-1.15***	-0.715***	-1.629***
High GOOD JPE	-0.679***	0.034	-1.241***	-0.617***	-0.063	-0.92***
F-Test High risk (p-value)	0.287	0.04	0.994	0.054	0.097	0.083
No. of obs.	15,491	4,271	11,190	15,491	4,271	11,190
No. of banks	3,108	712	2,389	3,108	712	2,389
AR(1) test (p-value)	0	0	0	0	0	0
AR(2) test (p-value)	0.752	0.451	0.862	0.718	0.484	0.822
Hansen test (p-value)	0.484	0.412	0.246	0.388	0.516	0.228

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. The dependent variable is *RROE*. *High BAD* (*Low BAD*) is a bad outsider who enters a bank with high (low) risk. *High GOOD* (*Low GOOD*) is a good outsider who enters a bank with high (low) risk. Our risk classification is based on *NPL* measured in the pre-appointment year. Columns (1) and (4) represent the full sample. Columns (2) and (5) show the results for savings banks and columns (3) and (6) for private banks. Year dummies are included, but not reported. *JPE* (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider type. *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively.

Full version of Table 10 in KNS (2017).

Variables	(1)	(2)	(3)	(4)	(5)	(6)
$RROE_{i,t-1}$	0.255***	0.213***	0.263***	0.254***	0.213***	0.263***
	[0.018]	[0.028]	[0.022]	[0.018]	[0.028]	[0.022]
$Pre \cdot BAD_{i,t}$	-0.317***	-0.151	-0.444***	-0.322***	-0.071	-0.548***
	[0.063]	[0.095]	[0.083]	[0.093]	[0.096]	[0.140]
$Pre \cdot BAD_{i,t-1}$	-0.207***	-0.135*	-0.257***	-0.168***	-0.095	-0.237***
	[0.049]	[0.074]	[0.063]	[0.050]	[0.075]	[0.066]
$Pre \cdot BAD_{i,t-2}$	-0.125**	-0.103	-0.144**	-0.100**	-0.035	-0.154**
	[0.049]	[0.073]	[0.069]	[0.050]	[0.073]	[0.069]
$Pre \cdot BAD_{i,t-3}$	-0.115**	-0.172**	-0.070	-0.047	-0.118*	0.010
	[0.053]	[0.076]	[0.074]	[0.050]	[0.068]	[0.074]
$Pre \cdot BAD_{i,t-4}$	-0.047	0.012	-0.099	-0.071	-0.078	-0.069
	[0.056]	[0.085]	[0.075]	[0.052]	[0.070]	[0.079]
$Post \cdot BAD_{i,t}$	-0.266***	-0.308**	-0.217	-0.234**	-0.286**	-0.173
	[0.095]	[0.135]	[0.135]	[0.101]	[0.134]	[0.146]
$Post \cdot BAD_{i,t-1}$	-0.127*	-0.197*	-0.078	-0.083	-0.180*	-0.024
	[0.071]	[0.107]	[0.101]	[0.071]	[0.095]	[0.104]
$Post \cdot BAD_{i,t-2}$	-0.265***	-0.271*	-0.250*	-0.321***	-0.235*	-0.352***
	[0.100]	[0.147]	[0.140]	[0.090]	[0.126]	[0.131]
$Post \cdot BAD_{i,t-3}$	-0.078	0.086	-0.160	-0.230	-0.021	-0.314**
	[0.184]	[0.329]	[0.226]	[0.148]	[0.282]	[0.151]
$Pre \cdot GOOD_{i,t}$	-0.171	0.013	-0.374**	-0.175**	-0.098	-0.249**
	[0.111]	[0.103]	[0.176]	[0.070]	[0.092]	[0.100]
$Pre \cdot GOOD_{i,t-1}$	-0.096*	0.095	-0.287***	-0.143***	0.045	-0.307***
	[0.058]	[0.077]	[0.085]	[0.052]	[0.074]	[0.072]
$Pre \cdot GOOD_{i,t-2}$	0.017	0.103	-0.048	-0.031	0.029	-0.072
	[0.052]	[0.081]	[0.072]	[0.052]	[0.079]	[0.072]
$Pre \cdot GOOD_{i,t-3}$	0.018	0.102	-0.030	-0.048	0.042	-0.096
	[0.049]	[0.067]	[0.073]	[0.052]	[0.074]	[0.072]
$Pre \cdot GOOD_{i,t-4}$	-0.037	0.058	-0.122	-0.045	0.085	-0.144*
	[0.055]	[0.072]	[0.083]	[0.059]	[0.090]	[0.078]
$Post \cdot GOOD_{i,t}$	-0.083	-0.054	-0.057	-0.115	-0.060	-0.106
	[0.110]	[0.132]	[0.167]	[0.108]	[0.130]	[0.166]
$Post \cdot GOOD_{i,t-1}$	-0.018	0.044	-0.029	-0.052	0.014	-0.063
	[0.073]	[0.091]	[0.112]	[0.073]	[0.101]	[0.107]
$Post \cdot GOOD_{i,t-2}$	0.055	0.172	0.049	0.093	0.198	0.082
	[0.090]	[0.158]	[0.114]	[0.101]	[0.180]	[0.127]
$Post \cdot GOOD_{i,t-3}$	-0.157	-0.060	-0.161	-0.035	0.030	-0.036
	[0.115]	[0.181]	[0.153]	[0.172]	[0.187]	[0.266]

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Variables	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\, Board\, Size_{i,t}$	-0.055***	-0.049**	-0.068***	-0.055***	-0.049**	-0.066***
	[0.015]	[0.019]	[0.021]	[0.015]	[0.019]	[0.021]
$Board\, Diversity_{i,t}$	0.007	-0.028	0.015	0.007	-0.029	0.015
	[0.021]	[0.046]	[0.024]	[0.021]	[0.045]	[0.024]
$CAR_{i,t-1}$	0.005**	0.033***	-0.000	0.005**	0.033***	-0.000
	[0.003]	[0.012]	[0.002]	[0.003]	[0.012]	[0.002]
$DISS_{w3}$	-0.540***	-0.551***	-0.505***	-0.538***	-0.546***	-0.502***
	[0.049]	[0.124]	[0.055]	[0.049]	[0.124]	[0.054]
$Share\, Fee_{i,t-1}$	0.006**	0.035***	-0.000	0.007**	0.036***	-0.000
	[0.003]	[0.013]	[0.003]	[0.003]	[0.013]	[0.003]
$OBS_{i,t-1}$	-0.016***	-0.011	-0.020***	-0.016***	-0.011	-0.020***
	[0.004]	[0.016]	[0.005]	[0.004]	[0.017]	[0.005]
$CL_{i,t-1}$	0.000	0.003	-0.001	0.000	0.003	-0.001
	[0.001]	[0.002]	[0.001]	[0.001]	[0.002]	[0.001]
$NPL_{i,t-1}$	-0.011**	-0.009	-0.012**	-0.011**	-0.010	-0.012**
	[0.005]	[0.015]	[0.006]	[0.005]	[0.015]	[0.005]
$HHI_{i,t-1}$	-0.253***	-0.309**	-0.394***	-0.253***	-0.311**	-0.393***
	[0.053]	[0.122]	[0.058]	[0.053]	[0.122]	[0.059]
$TA_{i,t-1}$	0.132***	0.117***	0.097***	0.132***	0.115***	0.097***
	[0.015]	[0.029]	[0.017]	[0.015]	[0.030]	[0.017]
D_COOP_i	0.310***			0.306***		
	[0.044]			[0.044]		
D_PRIV_i	-0.409***			-0.410***		
	[0.087]			[0.088]		
D_BIG_i	-0.739***			-0.737***		
	[0.146]			[0.145]		
$Acquirer_{w3}$	0.118**	-0.012	0.152**	0.119**	-0.020	0.156**
	[0.055]	[0.109]	[0.064]	[0.056]	[0.110]	[0.064]
$Target_{w3}$	-0.215***	-0.231**	-0.235***	-0.213***	-0.236**	-0.232***
	[0.067]	[0.092]	[0.079]	[0.067]	[0.093]	[0.079]
$GDP\, Growth_t$	0.090***	-0.089**	0.129***	0.089***	-0.089**	0.129***
	[0.014]	[0.044]	[0.016]	[0.014]	[0.044]	[0.016]
$Spread_t$	0.562***	0.380***	0.507***	0.562***	0.380***	0.507***
	[0.019]	[0.037]	[0.023]	[0.019]	[0.037]	[0.023]
Pre-crisis BAD JPE	-0.649***	-0.389**	-0.846**	-0.591***	-0.201	-0.938***
Pre-crisis GOOD JPE	-0.251	0.212	-0.709***	-0.349***	-0.024	-0.628***
F-Test JPE (p-value)	0.04	0.008	0.644	0.165	0.413	0.231
Post-crisis BAD JPE	-0.658***	-0.775***	-0.544***	-0.637***	-0.702***	-0.549**
Post-crisis GOOD JPE	-0.046	0.162	-0.037	-0.074	0.152	-0.087
F-Test JPE (p-value)	0.016	0.011	0.168	0.03	0.024	0.208
F-Test BAD JPE (p-value)	0.964	0.238	0.283	0.827	0.104	0.185
F-Test GOOD JPE (p-value)	0.387	0.875	0.054	0.211	0.596	0.081
No. of obs.	15,491	4,271	11,190	15,491	4,271	11,190
No. of banks	3,108	712	2,389	3,108	712	2,389
AR(1) test (p-value)	0	0	0	0	0	0
AR(2) test (p-value)	0.827	0.487	0.944	0.763	0.471	0.89
Hansen test (p-value)	0.673	0.177	0.974	0.689	0.184	0.988

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. The dependent variable is $RROE$. The pre-crisis period contains the years 1993–2006 and the post-crisis period the years 2007–2014. Year dummies (crisis dummies) are included, but not reported. JPE (joint performance effect) depicts the sum of all coefficients belonging to a particular type of outsider. *, ** and *** indicate significance of the coefficients at the 10%, 5% and 1% level, respectively.

Full version of Table 12 in KNS (2017).

Variables	(1)	(2)	(3)	(4)	(5)	(6)
$RROE_{i,t-1}$	0.257***	0.216***	0.268***	0.256***	0.213***	0.269***
	[0.018]	[0.028]	[0.023]	[0.018]	[0.028]	[0.023]
$Retirement \cdot BAD_{i,t}$	-0.387***	-0.283**	-0.462***	-0.341**	-0.046	-0.760**
	[0.092]	[0.130]	[0.122]	[0.161]	[0.115]	[0.321]
$Retirement \cdot BAD_{i,t-1}$	-0.235***	-0.199**	-0.240**	-0.158**	-0.043	-0.268**
	[0.066]	[0.094]	[0.094]	[0.066]	[0.083]	[0.105]
$Retirement \cdot BAD_{i,t-2}$	-0.170**	-0.162	-0.173	-0.115	-0.026	-0.211*
	[0.074]	[0.104]	[0.110]	[0.070]	[0.090]	[0.113]
$Retirement \cdot BAD_{i,t-3}$	-0.218***	-0.171*	-0.259**	-0.127*	-0.091	-0.124
	[0.075]	[0.095]	[0.116]	[0.071]	[0.079]	[0.136]
$Retirement \cdot BAD_{i,t-4}$	-0.015	0.011	-0.025	-0.062	-0.040	-0.037
	[0.091]	[0.113]	[0.144]	[0.093]	[0.106]	[0.195]
$Retirement \cdot GOOD_{i,t}$	-0.367*	-0.016	-0.971**	-0.424***	-0.288**	-0.565***
	[0.188]	[0.120]	[0.396]	[0.105]	[0.134]	[0.154]
$Retirement \cdot GOOD_{i,t-1}$	-0.084	0.071	-0.275**	-0.140**	-0.081	-0.200*
	[0.069]	[0.082]	[0.112]	[0.071]	[0.099]	[0.103]
$Retirement \cdot GOOD_{i,t-2}$	0.086	0.141	0.037	0.066	0.024	0.080
	[0.070]	[0.095]	[0.103]	[0.077]	[0.121]	[0.100]
$Retirement \cdot GOOD_{i,t-3}$	-0.056	0.127	-0.345***	-0.051	0.148	-0.348***
	[0.075]	[0.089]	[0.119]	[0.092]	[0.123]	[0.111]
$Retirement \cdot GOOD_{i,t-4}$	-0.124	-0.017	-0.349**	-0.095	0.017	-0.318*
	[0.084]	[0.094]	[0.169]	[0.107]	[0.121]	[0.186]
$Non\,retirement \cdot BAD_{i,t}$	-0.206	0.081	-0.294	-0.152	0.177	-0.303
	[0.129]	[0.111]	[0.180]	[0.151]	[0.176]	[0.207]
$Non\,retirement \cdot BAD_{i,t-1}$	-0.034	0.345**	-0.165	-0.021	0.335**	-0.209*
	[0.090]	[0.154]	[0.102]	[0.103]	[0.153]	[0.124]
$Non\,retirement \cdot BAD_{i,t-2}$	-0.075	-0.055	-0.081	-0.132	0.056	-0.204
	[0.098]	[0.142]	[0.123]	[0.110]	[0.223]	[0.125]
$Non\,retirement \cdot BAD_{i,t-3}$	0.064	0.046	0.055	0.079	0.236	0.020
	[0.099]	[0.143]	[0.133]	[0.101]	[0.157]	[0.130]
$Non\,retirement \cdot BAD_{i,t-4}$	0.057	0.027	0.088	-0.028	-0.002	-0.021
	[0.114]	[0.154]	[0.149]	[0.125]	[0.187]	[0.159]
$Non\,retirement \cdot GOOD_{i,t}$	0.082	-0.119	0.149	0.033	-0.194	0.164
	[0.168]	[0.187]	[0.237]	[0.150]	[0.155]	[0.212]
$Non\,retirement \cdot GOOD_{i,t-1}$	0.105	0.361**	-0.091	0.021	0.249*	-0.109
	[0.107]	[0.148]	[0.143]	[0.094]	[0.145]	[0.115]
$Non\,retirement \cdot GOOD_{i,t-2}$	0.043	0.339*	-0.084	0.012	0.263*	-0.090
	[0.116]	[0.197]	[0.143]	[0.107]	[0.140]	[0.148]
$Non\,retirement \cdot GOOD_{i,t-3}$	0.174*	0.279**	0.194	0.140	0.147	0.196
	[0.103]	[0.138]	[0.136]	[0.103]	[0.115]	[0.155]
$Non\,retirement \cdot GOOD_{i,t-4}$	0.149	0.441**	-0.012	0.042	0.197	-0.110
	[0.132]	[0.194]	[0.165]	[0.113]	[0.138]	[0.167]
$Board\,Increase \cdot BAD_{i,t}$	-0.256***	-0.153	-0.343***	-0.292***	-0.268**	-0.292***
	[0.070]	[0.105]	[0.097]	[0.077]	[0.131]	[0.098]
$Board\,Increase \cdot BAD_{i,t-1}$	-0.199***	-0.225**	-0.213***	-0.183***	-0.276***	-0.149*
	[0.061]	[0.092]	[0.080]	[0.061]	[0.094]	[0.078]
$Board\,Increase \cdot BAD_{i,t-2}$	-0.159**	-0.143	-0.174**	-0.241***	-0.219**	-0.279***
	[0.063]	[0.097]	[0.085]	[0.064]	[0.103]	[0.084]
$Board\,Increase \cdot BAD_{i,t-3}$	-0.113	-0.249**	-0.032	-0.172**	-0.382***	-0.095
	[0.074]	[0.121]	[0.094]	[0.077]	[0.129]	[0.099]
$Board\,Increase \cdot BAD_{i,t-4}$	-0.131*	-0.073	-0.164*	-0.221***	-0.232**	-0.286**
	[0.076]	[0.128]	[0.098]	[0.085]	[0.111]	[0.133]
$Board\,Increase \cdot GOOD_{i,t}$	-0.036	0.053	-0.062	-0.052	0.111	-0.146
	[0.081]	[0.111]	[0.110]	[0.079]	[0.105]	[0.115]
$Board\,Increase \cdot GOOD_{i,t-1}$	-0.145*	-0.030	-0.217**	-0.211***	-0.023	-0.340***
	[0.074]	[0.111]	[0.100]	[0.068]	[0.099]	[0.094]
$Board\,Increase \cdot GOOD_{i,t-2}$	-0.060	-0.077	-0.038	-0.065	-0.030	-0.050
	[0.066]	[0.108]	[0.086]	[0.065]	[0.105]	[0.088]
$Board\,Increase \cdot GOOD_{i,t-3}$	-0.001	-0.060	0.048	-0.085	-0.048	-0.063
	[0.075]	[0.112]	[0.104]	[0.077]	[0.114]	[0.107]
$Board\,Increase \cdot GOOD_{i,t-4}$	-0.054	-0.006	-0.101	0.035	0.196	-0.037
	[0.079]	[0.125]	[0.105]	[0.100]	[0.179]	[0.114]

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Variables	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\, Board\, Size_{i,t}$	-0.057***	-0.051***	-0.505***	-0.056***	-0.051***	-0.068***
	[0.015]	[0.019]	[0.055]	[0.015]	[0.019]	[0.023]
$Board\, Diversity_{i,t}$	0.009	-0.023	-0.001	0.009	-0.022	0.016
	[0.021]	[0.045]	[0.002]	[0.021]	[0.046]	[0.024]
$CAR_{i,t-1}$	0.005**	0.034***	-0.001	0.005**	0.034***	-0.000
	[0.003]	[0.012]	[0.002]	[0.003]	[0.012]	[0.002]
$DISS_{w3}$	-0.543***	-0.548***	-0.505***	-0.539***	-0.536***	-0.498***
	[0.050]	[0.122]	[0.055]	[0.050]	[0.123]	[0.055]
$Share\, Fee_{i,t-1}$	0.006**	0.033**	-0.000	0.006**	0.035***	-0.000
	[0.003]	[0.013]	[0.003]	[0.003]	[0.013]	[0.003]
$OBS_{i,t-1}$	-0.016***	-0.011	-0.020***	-0.016***	-0.008	-0.020***
	[0.004]	[0.016]	[0.005]	[0.004]	[0.016]	[0.005]
$CL_{i,t-1}$	0.000	0.004	-0.001	0.000	0.003	-0.001
	[0.001]	[0.002]	[0.001]	[0.001]	[0.002]	[0.001]
$NPL_{i,t-1}$	-0.011**	-0.009	-0.012**	-0.011**	-0.009	-0.013**
	[0.005]	[0.015]	[0.005]	[0.005]	[0.015]	[0.005]
$HHI_{i,t-1}$	-0.247***	-0.313**	-0.389***	-0.246***	-0.314***	-0.388***
	[0.053]	[0.122]	[0.058]	[0.053]	[0.121]	[0.058]
$TA_{i,t-1}$	0.132***	0.121***	0.096***	0.130***	0.115***	0.096***
	[0.015]	[0.029]	[0.017]	[0.015]	[0.029]	[0.017]
D_COOP_i	0.305***			0.301***		
	[0.044]			[0.044]		
D_PRIV_i	-0.410***			-0.411***		
	[0.086]			[0.087]		
D_BIG_i	-0.725***			-0.711***		
	[0.148]			[0.148]		
$Acquirer_{w3}$	0.124**	0.001	0.157**	0.129**	-0.011	0.168***
	[0.055]	[0.109]	[0.064]	[0.056]	[0.109]	[0.065]
$Target_{w3}$	-0.214***	-0.229**	-0.237***	-0.209***	-0.242***	-0.229***
	[0.068]	[0.092]	[0.080]	[0.068]	[0.093]	[0.081]
$GDP\, Growth_t$	0.092***	-0.090**	0.136***	0.093***	-0.095**	0.137***
	[0.014]	[0.043]	[0.017]	[0.014]	[0.044]	[0.016]
$Spread_t$	0.558***	0.378***	0.499***	0.559***	0.374***	0.499***
	[0.019]	[0.036]	[0.023]	[0.020]	[0.035]	[0.023]
Retirement BAD JPE	-1.025***	-0.805***	-1.16***	-0.803***	-0.246	-1.4***
Retirement GOOD JPE	-0.546*	0.307	-1.903***	-0.645***	-0.179	-1.35***
F-Test JPE (p-value)	0.205	0.005	0.279	0.683	0.885	0.939
Non retirement BAD JPE	-0.195	0.444	-0.396	-0.254	0.802	-0.717*
Non retirement GOOD JPE	0.553	1.301**	0.155	0.249	0.663*	0.051
F-Test JPE (p-value)	0.121	0.194	0.391	0.284	0.84	0.238
Board Increase BAD JPE	-0.858***	-0.843***	-0.925***	-1.11***	-1.378***	-1.101***
Board Increase GOOD JPE	-0.296	-0.119	-0.369	-0.378*	0.206	-0.637**
F-Test JPE (p-value)	0.04	0.095	0.148	0.015	0.002	0.255
No. of obs.	15,491	4,271	11,190	15,491	4,271	11,190
No. of banks	3,108	712	2,389	3,108	712	2,389
AR(1) test (p-value)	0	0	0	0	0	0
AR(2) test (p-value)	0.761	0.547	0.974	0.753	0.455	0.829
Hansen test (p-value)	0.521	0.452	0.304	0.496	0.442	0.261

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. In columns (1)-(3), we split up the group of outsiders according to historical ROA and in columns (4)-(6) according to managerial RRE. Columns (1) and (4) represent the full sample. Columns (2) and (5) show the results for savings banks and columns (3) and (6) for private banks. Year dummies are included, but not reported. *JPE* (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider turnover-type interaction term. *, ** and *** indicate significance of the coefficients at the 10%, 5% and 1% level, respectively.

A.4 Untabulated complementary results

Table 18: Difference-in-differences estimations.

The treatment group is composed of banks with newly appointed outsiders in which no further turnover, merger and distress event occurred in the three years around this appointment year. The control group consists of banks without any turnover, merger and distress events in the preceding and following two years. For each bank in the treatment group we match control banks with replacement from the same year and banking group, as well as from the same size and ROA deciles in the year before the treatment bank appoints the outsider. Panel A shows the results on whether both groups differ regarding ROE, ROA, RROE, RROA and TA in the pre-event year.

Panel A:	**Historical ROA**			**Managerial RRE**		
	TREAT mean	Non-TREAT mean	Treat vs. Non-Treat *t-value*	TREAT mean	Non-TREAT mean	Treat vs. Non-Treat *t-value*
No. of obs.	308	1688		309	1688	
ROE	12.599	13.14	*0.717*	12.533	13.085	*0.737*
ROA	0.739	0.773	*0.79*	0.739	0.767	*0.664*
RROE	1.9	1.865	*-0.289*	1.891	1.853	*-0.31*
RROA	2.082	2.076	*-0.042*	2.076	2.061	*-0.106*
TA	19.138	19.037	*-0.699*	19.134	19.027	*-0.744*

In Panel B, coefficients come from the following difference-in-differences equation: $\Delta\, Performance_{i,t} = \beta_0 + \beta_1 \cdot BAD_i + \beta_2 \cdot GOOD_i + \beta_3 \cdot POST_{i,t} + \beta_4 \cdot BAD_i \cdot POST_{i,t} + \beta_5 \cdot GOOD_i \cdot POST_{i,t} + \epsilon_{i,t}$. $\Delta\, Performance_{i,t}$ denotes the annual change in $RROE$ in columns (1)-(2) and (5)-(6) and $RROA$ in columns (3)-(4) and (7)-(8). $POST_{i,t}$ equals 1 in the post-treatment period. BAD ($GOOD$) in columns (1)-(4) denotes appointments of outsiders with below-average (above-average) historical ROA, and in columns (5)-(8) with below-average (above-average) managerial RRE. We consider up to three years before and after appointment. All estimations include bank-fixed effects; therefore no estimate is reported for BAD and $GOOD$. Standard errors reported in parentheses are corrected for heteroscedasticity and are clustered at the level of the bank. ***, **, and * indicate that coefficients are significant at the 1%, 5%, and 10% level, respectively.

Panel B:	**Historical ROA**				**Managerial RRE**			
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$POST$	0.056	0.069	0.054	0.060	0.074	0.094	0.109	0.123*
	[0.058]	[0.057]	[0.062]	[0.061]	[0.064]	[0.063]	[0.069]	[0.068]
$BAD \cdot POST$	-0.186**	-0.171**	-0.193**	-0.174**	-0.133*	-0.152**	-0.210***	-0.224***
	[0.077]	[0.075]	[0.083]	[0.082]	[0.070]	[0.069]	[0.076]	[0.074]
$GOOD \cdot POST$	-0.022	-0.033	-0.001	-0.012	-0.032	-0.036	-0.096	-0.103
	[0.079]	[0.077]	[0.085]	[0.084]	[0.067]	[0.065]	[0.072]	[0.071]
Year effects	YES	YES	YES	YES	YES	YES	YES	YES
Bank controls	NO	YES	NO	YES	NO	YES	NO	YES
No. of obs.	2,691	2,691	2,691	2,691	2,691	2,691	2,691	2,691
No. of banks	397	397	397	397	397	397	397	397

Table 19: Board structure for historical ROA.

Variables	(1)	(2)	(3)	(4)	(5)
$RROE_{i,t-1}$	0.260***	0.252***	0.262***	0.259***	0.263***
	[0.018]	[0.018]	[0.018]	[0.018]	[0.018]
$BAD_{i,t}$	-0.334***	-0.319***	-0.284***	-0.335***	-0.315***
	[0.052]	[0.057]	[0.054]	[0.052]	[0.053]
$BAD_{i,t-1}$	-0.154***	-0.219***	-0.146***	-0.158***	-0.134***
	[0.041]	[0.042]	[0.041]	[0.042]	[0.042]
$BAD_{i,t-2}$	-0.146***	-0.153***	-0.143***	-0.149***	-0.130***
	[0.044]	[0.045]	[0.044]	[0.045]	[0.045]
$BAD_{i,t-3}$	-0.120**	-0.128**	-0.116**	-0.122**	-0.108**
	[0.050]	[0.051]	[0.050]	[0.051]	[0.051]
$BAD_{i,t-4}$	-0.049	-0.056	-0.045	-0.050	-0.041
	[0.055]	[0.055]	[0.055]	[0.055]	[0.055]
$GOOD_{i,t}$	-0.191**	-0.156*	-0.155*	-0.194**	-0.178**
	[0.084]	[0.082]	[0.083]	[0.084]	[0.083]
$GOOD_{i,t-1}$	-0.053	-0.096**	-0.047	-0.056	-0.034
	[0.046]	[0.047]	[0.046]	[0.046]	[0.046]
$GOOD_{i,t-2}$	0.022	0.020	0.022	0.019	0.038
	[0.046]	[0.046]	[0.046]	[0.046]	[0.046]
$GOOD_{i,t-3}$	0.018	0.001	0.015	0.016	0.030
	[0.048]	[0.048]	[0.048]	[0.048]	[0.048]
$GOOD_{i,t-4}$	-0.047	-0.048	-0.048	-0.048	-0.040
	[0.055]	[0.055]	[0.055]	[0.055]	[0.055]
$Insider_{i,t}$		-0.061**			
		[0.031]			
$Insider_{i,t-1}$		-0.092***			
		[0.021]			
$Insider_{i,t-2}$		-0.052**			
		[0.022]			
$Insider_{i,t-3}$		-0.087***			
		[0.024]			
$Insider_{i,t-4}$		-0.071***			
		[0.024]			
$Board\,Size_{i,t}$			-0.044***		
			[0.011]		
$Board\,Age_{i,t}$				-0.003	
				[0.003]	
$Board\,Academic\,Degree_{i,t}$				-0.080	
				[0.108]	
$Board\,Tenure_{i,t}$					0.006***
					[0.002]
Board controls	NO	YES	YES	YES	YES
Bank controls	YES	YES	YES	YES	YES
Insider JPE		-0.364***			
BAD JPE	-0.754***	-0.875***	-0.69***	-0.763***	-0.687***
GOOD JPE	-0.205	-0.279*	-0.165	-0.216	-0.145
F-Test JPE (p-value)	0.002	0.004	0.004	0.003	0.003
No. of obs.	15,838	15,491	15,831	15,826	15,829
No. of banks	3,108	3,108	3,108	3,108	3,108
AR(1) test (p-value)	0	0	0	0	0
AR(2) test (p-value)	0.561	0.937	0.577	0.608	0.546
Hansen test (p-value)	0.450	0.550	0.501	0.467	0.438

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. The dependent variable is $RROE$. We use historical ROA as an ability measure to separate good from bad outside appointments. In column (1) we present the results without any board variables. In column (2) we add 5 dummies to control for inside appointments. In column (3) we add board size, in column (4) we add the average age of the executive board and the average academic degree, and in column (5) we include the average tenure of the executive board members. All bank-specific, macro and year dummy variables listed in Equation (6) are included, but not reported. JPE (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider type. *, ** and *** indicate significance of the coefficients at the 10%, 5% and 1% level, respectively.

Table 20: Board structure for managerial RRE.

Variables	(1)	(2)	(3)	(4)	(5)
$RROE_{i,t-1}$	0.259***	0.252***	0.261***	0.259***	0.262***
	[0.018]	[0.018]	[0.018]	[0.018]	[0.018]
$BAD_{i,t}$	-0.336***	-0.302***	-0.293***	-0.339***	-0.321***
	[0.074]	[0.071]	[0.072]	[0.074]	[0.072]
$BAD_{i,t-1}$	-0.104**	-0.174***	-0.099**	-0.108***	-0.084**
	[0.041]	[0.043]	[0.041]	[0.041]	[0.041]
$BAD_{i,t-2}$	-0.125***	-0.134***	-0.125***	-0.128***	-0.107**
	[0.044]	[0.045]	[0.044]	[0.044]	[0.044]
$BAD_{i,t-3}$	-0.075	-0.068	-0.080*	-0.077	-0.062
	[0.048]	[0.048]	[0.048]	[0.048]	[0.048]
$BAD_{i,t-4}$	-0.076	-0.083	-0.076	-0.077	-0.069
	[0.051]	[0.052]	[0.051]	[0.051]	[0.051]
$GOOD_{i,t}$	-0.200***	-0.173***	-0.155***	-0.201***	-0.184***
	[0.058]	[0.064]	[0.059]	[0.058]	[0.059]
$GOOD_{i,t-1}$	-0.102**	-0.137***	-0.093**	-0.106**	-0.084*
	[0.043]	[0.043]	[0.043]	[0.043]	[0.044]
$GOOD_{i,t-2}$	-0.003	-0.016	0.001	-0.005	0.011
	[0.047]	[0.047]	[0.047]	[0.047]	[0.048]
$GOOD_{i,t-3}$	-0.012	-0.053	-0.005	-0.014	-0.001
	[0.050]	[0.051]	[0.050]	[0.050]	[0.050]
$GOOD_{i,t-4}$	-0.023	-0.054	-0.020	-0.025	-0.015
	[0.058]	[0.059]	[0.058]	[0.058]	[0.058]
$Insider_{i,t}$		-0.062**			
		[0.031]			
$Insider_{i,t-1}$		-0.092***			
		[0.021]			
$Insider_{i,t-2}$		-0.050**			
		[0.022]			
$Insider_{i,t-3}$		-0.089***			
		[0.024]			
$Insider_{i,t-4}$		-0.069***			
		[0.024]			
$Board\,Size_{i,t}$			-0.044***		
			[0.011]		
$Board\,Age_{i,t}$				-0.003	
				[0.003]	
$Board\,Academic\,Degree_{i,t}$				-0.081	
				[0.108]	
$Board\,Tenure_{i,t}$					0.006***
					[0.002]
Board controls	NO	YES	YES	YES	YES
Bank controls	YES	YES	YES	YES	YES
Insider JPE		-0.362***			
BAD JPE	-0.717***	-0.761***	-0.598***	-0.652***	-0.574***
GOOD JPE	-0.341**	-0.433***	-0.252**	-0.326**	-0.258**
F-Test JPE (p-value)	0.063	0.116	0.047	0.061	0.067
No. of obs.	15,838	15,491	15,831	15,826	15,829
No. of banks	3,108	3,108	3,108	3,108	3,108
AR(1) test (p-value)	0	0	0	0	0
AR(2) test (p-value)	0.494	0.896	0.509	0.536	0.482
Hansen test (p-value)	0.422	0.534	0.471	0.438	0.410

Note: Coefficients from dynamic panel estimations with Windmeijer (2005) corrected standard errors below the coefficients. The dependent variable is $RROE$. We use managerial RRE as an ability measure to separate good from bad outside appointments. In column (1) we present the results without any board variables. In column (2) we add 5 dummies to control for inside appointments. In column (3) we add board size, in column (4) we add the average age of the executive board and the average academic degree, in column (5) we include the average tenure of the executive board members. All bank-specific, macro and year dummy variables listed in Equation (6) are included, but not reported. JPE (joint performance effect) depicts the sum of all coefficients belonging to a particular outsider type. *, ** and *** indicate significance of the coefficients at the 10%, 5% and 1% level, respectively.

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