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By Duc Duy (Louis) Nguyen, Jens Hagendorff, and Arman Eshraghi

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Key words: Banks, Executives, Market value, Age, Gender, Education, Experience

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1. Introduction

Considerable debate remains amongst the public, policymakers and academics over whether individual executives matter for firm performance and behaviour. A growing body of research demonstrates that executives are a heterogeneous group and suggests that executive behaviour is governed by more than economic trade-offs. Studies have shown that executive heterogeneity affects firm performance (e.g. Adams, Almeida, & Ferreira, 2005; Bennedsen, Perez-Gonzalez, & Wolfenzon, 2008; Kaplan, Klebano, & Sorensen, 2012; Malmendier & Tate, 2008), firm policy choices (e.g. Bertrand & Schoar, 2003; Malmendier, Tate, & Yan, 2011), and executive compensation (e.g. Custodio, Ferreira, & Matos, 2013; Graham, Li, & Qiu, 2012). Other studies argue that individual executives have little impact on firm performance and behaviour because seemingly unique manager-specific 'styles' may in fact be shaped by the board of directors and that new executives are appointed with desired characteristics to take a firm in the direction determined by the board (Fee, Hadlock, & Pierce, 2013). This study sheds new light on whether and how executive heterogeneity matters by demonstrating that variations in observable demographic and experience characteristics of executives have market valuation effects.

With existing work mostly limited to non-financial firms, there is an inherent lack of analysis concerning the banking sector. Since banks are complex institutions and may require employees with specialised skills (Philippon & Reshef, 2012), selecting the right top executives may give banks significant competitive edge to perform well and contribute to the growth of the economy. Recently, the banking sector has received much criticism for its contribution to the financial crisis that started in 2007. Many blame incompetent banking executives for engaging in activities that endangered the safety and soundness of the financial system and gave rise to unprecedented government support of the banking sector. By the same token, certain bank

executives have been credited with steering their organisations successfully through the financial crisis.[1]

We argue that top executive[2] characteristics, such as age, education, and employment history offer a useful way to proxy for executive experience, skills and competencies. We use variations among executive characteristics as sources of heterogeneity to examine how heterogeneity creates shareholder wealth in a sample of US banks. In particular, we study whether the stock market reaction to the appointment of an executive is driven by observable characteristics of the appointee. In an efficient capital market, the market reaction is indicative of the anticipated future performance conditional on relevant information (Perez-Gonzalez, 2006; Warner, Watts, & Wruck, 1988). Thus, market returns will be higher when an appointee with desirable characteristics is named to the bank because investors believe that this appointee will improve performance. We investigate a sample of single and externally-hired appointment announcements. That is, our sample consists of announcements where one appointee announced and this appointee has not worked in the bank prior to the announcement. This offers a suitable setting in which to examine the value of characteristics that the appointee brings to the bank.

Our sample consists of 252 executive appointment announcements by 145 US banks. Exploring this dataset, we examine whether the stock market reaction to the appointment announcement is affected by seven characteristics of the appointee: (1) age, (2) gender, (3) number of prior executive directorships, (4) number of current non-executive directorships (busyness), (5) experience in non-banking industries, (6) Ivy League education and (7) the award of a PhD degree.

[1]For example, John Stumpf from Wells Fargo and Jamie Dimon from JPMorgan are often cited as successful bank executives. See "Jamie Dimon, the last King of Wall Street", Tom Braithwaite, *Financial Times,* 17 May 2013.
[2] We follow Custodio & Metzger (2013) in defining top executives. They include CEO, Chairman, President, COO, CFO, Other C-class executives such as CRO or CMO, Executive and Senior VP, Division CEO/Chairman/President, Head of Division, Regional CEO/Chairman/President.

There are two main econometric challenges we face in our analysis. First, a bank's decision to make a top executive appointment could be driven by endogenous factors, e.g., when a bank is not performing well and faces shareholder pressure to improve performance by making new appointments (Berger, Kick, & Schaeck, 2014; Fee et al., 2013). We therefore exclude appointments where the press coverage indicates an appointment followed investor dissatisfaction with management or corporate strategy. The second challenge is that, since we are interested in the expected performance effects linked to a new appointment, our sample only contains single appointment announcements which involve external appointments (executives who have previously not worked for the sample bank). This might introduce a selection bias when the decision to make a single (rather than multiple) appointment announcements or to choose an external (rather than an internal) appointee correlates with factors which also explain the announcement returns. We address this problem using the Heckman (1979) two-step procedure and the findings we report in this paper are robust to controlling for selection bias.

Our key findings are as follows. First, new announcement returns following appointments are statistically positive, suggesting that the addition of human capital, on average, is valuable for US banks. Second, we examine whether the market reaction to executive appointments is influenced by characteristics of the executive. Overall, our findings suggest that the age, education and prior experience of the executives create shareholder wealth in the US banking sector. In contrast, gender, experience outside the banking sector or a PhD degree do not lead to any measurable market returns. In addition, the appointment of executives who hold non-executive directorships with an unaffiliated firm at the time of the appointment attracts negative returns, consistent with the hypothesis that busy executives have less attention to focus on an individual bank (Fich & Shivdasani, 2006).

Third, our analysis of interaction terms shows that the wealth effects linked to executive heterogeneity are moderated by how much influence the incoming executive is expected to have on the bank. Thus, the expected performance effects of top executives are reduced as bank boards become more independent. By contrast, the expected performance effects are higher for CEOs, confirming that the CEO is the most important individual in the bank.

Overall, our study makes three significant contributions to the literature. First, we contribute to a growing literature that uses manager fixed effects to address the question of how important executive 'styles' are to various corporate outcomes (Adams et al., 2005; Bamber et al., 2010; Bertrand & Schoar, 2003; Frank & Goyal, 2007; Graham et al., 2012). It is empirically challenging to quantify the effects of individual executives on firm performance. Fee et al. (2013) argue that executive turnover, which forms the empirical basis to work out executive styles, may frequently be endogenous (e.g., when they follow a period of underperformance. When focusing on 'exogenous' CEO replacements (brought about by CEO retirements and deaths), the authors do not find evidence of manager fixed effects in corporate policy choices. This raises the question that the results of the 'styles' literature may be biased and that, broadly speaking, executives may not matter for corporate outcomes.

Our paper offers an alternative route to showing that executives indeed matter. Unlike Fee et al. (2013) we do not focus on time-invariant executive 'styles', but on demographic and experience variables of executives. However, we similarly focus on exogenous variation in executive turnover (since we omit appointments where the press coverage indicates an appointment following investor dissatisfaction with management or corporate strategy) and show that a majority of executive appointments are linked to value gains around the announcement of an appointment. By analysing the variation in short-term returns following exogenous

appointments, we can exclude that events other than the appointment cause the observed effect. We thus interpret our results as evidence demonstrating that it matters who bank executive are in a similar way that much of the executive styles literature demonstrates.

Second, we provide direct empirical evidence on the value of top executive characteristics in the US banking sector. Existing work in this area has focused on non-financial firms (e.g. Masulis & Mobbs, 2011). We are unaware of any published research that looks at the value of top executives in the banking sector. Since the banking sector is relatively opaque, complex and skill-intensive (Philippon & Reshef, 2012), we contribute by uncovering the "black box" of desirable characteristics top corporate leaders should possess to boost performance in the banking sector. In addition, our findings add to the current debate on the value of generalists versus specialists in banking. While many studies recognise the growing importance of general skills (Custodio et al., 2013; Lazear, 2004), we show that cross-industry experience is not value-relevant to US bank shareholders.

Third, our paper contributes to the scant literature on governance in executive suites. Despite the central roles CEOs and other executives play in managing the company, there are surprisingly few studies that focus on top executives (e.g. Berger et al., 2014; Landier, Sauvagnat, Sraer, & Thesmar, 2013; Masulis & Mobbs, 2011). Previous studies examine how divergent self-interest among top executives influence governance in executive suites (Acharya, Myers, and Rajan, 2011; Landier, Sraer, and Thesmar, 2009). We add to this literature by studying how differences in observable characteristics of top executives create wealth for shareholders. Our analysis of interaction terms also demonstrates how standard governance mechanisms such as board independence influence power inside the executive suites. Overall, we

offer new evidence showing that CEOs *and* other top executives have a measurable impact on firm value.

This paper proceeds as follows. Section 2 surveys major theoretical and empirical evidence and develops our primary hypotheses. Section 3 describes our sample and event-study methodology. Section 4 shows market reaction data, univariate analysis and our empirical strategy. Section 5 presents our main empirical results and the discussions of these results. Section 6 concludes the paper.

2. Literature review

2.1. Theoretical background

Prior corporate governance literature pays considerable attention to studying corporate governance at both firm-level and board-level.[3] For example, recent studies analyse the effects of board size on firm value (e.g., Coles, Daniel, & Naveen, 2008), the optimal balance between non-executive and executive directors (e.g. Dahya & McDonnell, 2007; Dulewicz & Herbert, 2004), the impact of board diversity on firm value (e.g., Carter, D'Souza, Simkins, & Simpson, 2010; Erhardt, Werbel, & Shrader, 2003), the value of firm-level governance practices (e.g., Van Essen, Engelen, & Carney, 2013; Ward, Brown, & Rodriguez, 2009). There is also a stream of research that looks at the impact of gender diversity on firm performance (e.g., Adams & Ferreria, 2009; Adams & Funk, 2012; Farrell & Hersch, 2005).

Despite this large literature, there remains considerable uncertainty around whether or not individual executive heterogeneity matters for corporate outcomes. Thus, neoclassical theory assumes that individuals are homogeneous and different executives are perfect substitutes for

[3]See Adams, Hermalin and Weisbach (2010) and De Haan and Vlahu (2013) for a review on recent developments of corporate governance literature in the non-financial and financial industries respectively.

each other. Agency theory, while acknowledging that executives pursue different courses of action to advance their personal interests, sees executive actions shaped by the quality of corporate governance in the organisation.

In contrast, the management literature and Hambrick and Mason's (1984) upper echelons theory suggests that individual characteristics matter. Upper echelons theory argues that executives' idiosyncratic experiences affect their interpretations of strategic decision-making situations and, in turn, affect their strategic choices and performance levels (see also Hambrick, 2007). Upper echelons theory predicts individual differences among executives will be most salient when the decision-making situations are complex and ambiguous as would be the case for banking organisations.

To summarise, existing theories make contradicting predictions regarding whether executive heterogeneity matters for firm outcomes. To shed light on this issue, we use variations among executive characteristics as sources of executive heterogeneity to answer two key empirical questions: (1) *whether* top executive heterogeneity matters and (2) *how* it matters.

2.2. Hypotheses development

In this section, we develop hypotheses around how demographic and experience variables affect the announcement returns. The characteristics we focus on are (1) age, (2) gender, (3) number of prior executive directorships, (4) number of current non-executive directorships and (5) number of non-banking industries (in which the executive has experience), (6) Ivy League education and (7) the award of a PhD degree.

Age. The age of the appointees could impact their decision-making capability, risk-taking behaviour, career concerns and economic incentives. These could in turn influence shareholder wealth. Compared to younger appointees, older individuals have more experience in making decisions when they face complex and ambiguous tasks (Worthy, Gorlick, Pacheco, Schnyer, & Maddox, 2011). Furthermore, older appointees face less career uncertainty and have fewer incentives to improve their job security. Thus, they are less likely to engage in value-destroying excessively risky activities. For example, Yim (2013) shows that younger CEOs are more likely to engage in M&A activities and tend to perform worse. Hence, older appointees could create wealth for bank shareholders.

However, younger appointees have more energy and drive (Harman, 1991; Roberts & Rosenberg, 2006). This could translate into other characteristics such as enthusiasm, decisiveness and ambition. In addition, compared to older appointees, younger ones have more ideas and are quicker in learning new technologies (Grund & Westergård-Nielsen, 2008) and are able to make innovative decisions. With these qualities, younger appointees can create shareholder wealth. We hypothesise:

Hypothesis 1. The age of an appointed executive affects shareholder wealth.

Gender. Female appointees possess unique skills, experience and networks, allowing them to contribute to the functional decision making capability of the bank. In addition, female appointees could counterbalance potentially excessive risk-taking behaviour by male colleagues. For example, Muller-Kahle and Lewellyn (2011) find that the greater the percentage of women in the financial firm board, the less likely it is to specialise in subprime lending, an excessive

risk-taking initiative. Since excessive risk-taking could destroy value, the appointment of a female executive could create wealth for bank shareholders.

However, there is a possibility of conflict between the newly appointed female executive and the existing male executives. It may prove difficult for female executives to be listened to on an equal basis by other board members if there are very few females in the boardroom (Terjesen, Sealy, & Singh, 2009). This could impose psychic costs on members inside the executive suites which could result in performance losses (Becker, 1957). In addition, Medland (2004) suggests that a major barrier to female directorships is that the informal social network linking executives consists mainly of men. This potentially results in the loss of access to external constituencies, including capital, top corporate elites and bank regulators.

Empirical results that attempt to link the presence of female executives to firm performance are mixed. On the one hand, Lee and James (2007) find a significant negative stock market reaction to the news of female CEO appointments. On the other hand, Gupta and Raman (2013) find no gender-specific difference in the stock reactions to the news of the CEO appointment or in the post-appointment operating performance of firms.

Hypothesis 2. The appointment of a female executive affects shareholder wealth.

Prior executive directorships experience. It is possible that there is a unique set of skills and managerial abilities acquired by those with prior executive directorships that sets them apart from other individuals (Fama, 1980; Fama & Jensen, 1983). Hence, holding prior executive directorships in listed firms signals the appointee's proven track record and accomplishments. In addition, experienced appointees also bring to the bank their existing social ties and networks. This places the bank in the networks of other firms, giving it access to various external

constituents such as industry regulators (Hillman, Cannella, & Paetzold, 2000). Fich (2005) finds that reactions to non-executive director appointments are more favourable when appointees are CEOs of other companies. Thus, we hypothesise that appointees with prior executive directorships experience have high potential to create shareholder wealth.

Hypothesis 3. The appointment of an executive with prior executive directorships in listed firms affects shareholder wealth.

Current non-executive directorships (busyness). The appointment of an executive with non-executive directorships could give the bank "endorsement benefits", allowing it to access to corporate elites and external resources (Fich, 2005; Masulis & Mobbs, 2011). The extensive social ties and networks are other benefits associated with multiple directorships.

However, appointees holding non-executive directorships can be distracted from their responsibilities at the bank (Ferris, Jagannathan, & Pritchard, 2003; Fich & Shivdasani, 2006). They might not have the time and energy to fulfil their duties. Multiple directorships have been associated with lower board inputs from busy directors (Jiraporn, Davidson, DaDalt, & Ning, 2009). Bar-Harva, Gu and Lev (2013) show that when busy directors resign from one of the board positions, investors of firms which the directors continue to serve react positively to the news. Finally, examining US commercial banks, Grove, Patelli, Victoravich and Xu (2011) show that the proportion of busy directors exhibits a weak inverted-U relationship with bank performance.

Hypothesis 4. The appointment of an executive holding non-executive directorships at the time of the appointment affects shareholder wealth.

Experience in non-banking industries. Several studies suggest that the general skills acquired through experience in a diversified set of industries are becoming increasingly important and value-adding (e.g. Cremers & Grinstein, 2013; Custodio et al., 2013; Lazear, 2004). This allows appointees to make a variety of decisions in different contexts. However, as the banking industry is highly specialised, appointees with experience in multiple non-banking industries might have less exposure to complex financial knowledge and thus, are less capable of making technical decisions. Thus, we hypothesise:

Hypothesis 5. The appointment of an executive with prior experience at non-banking industries affects shareholder wealth

Ivy League education. We choose Ivy League institutions[4] as an indicator of highly reputable universities. While this is not a perfect proxy for academic excellence, there is empirical evidence showing that Ivy League graduates perform better than non-Ivy ones. For example, Laderman (1994) finds that during the period from 1989 to 1993, mutual fund managed by Ivy League graduates generally outperformed their non-Ivy counterparts. In similar research, Chevalier and Ellison (1999) show that mutual fund managers who attend institutions requiring higher SAT scores have systematically higher risk-adjusted excess returns. In addition, Ivy League graduates often have access to certain elite groups including successful businesspeople or experts in their own areas.

However, Ivy League educated appointees might choose to engage only with peers with similar educational background and refuse to coordinate with other members in the executive team. This could result in an unhealthy corporate culture where different social groups compete

[4]Ivy League institutions are eight North Eastern American institutions, including Brown University, Columbia University, Cornell University, Dartmouth College, Harvard University, Princeton University, University of Pennsylvania and Yale University.

for power (Farnum, 1990). Since conflicts of social preferences can impose psychic costs on team members and lower overall group performance (Becker, 1957), the presence of Ivy League educated appointees could destroy shareholder wealth.

Hypothesis 6. The appointment of an executive with an Ivy League education affects shareholder wealth.

PhD degree. A PhD degree is valuable because of the personal attributes one might acquire from the process of obtaining a doctoral degree: intellectual curiosity, creativity, problem solving skills, good work ethic, effective communication skills etc. (Mumford, Stokes, & Owen, 1990; Stewart, Williamson, & King, 2010). In addition, appointing an executive with a PhD degree gives the bank access to elite researchers in different fields. Overall, an appointee with a PhD degree could enhance the functional ability of the bank, particularly in terms of complex problem-solving and technical decision-making (Forbes & Milliken, 1999).

However, due to the highly specialised nature of the PhD degree, appointees with a PhD degree might be reluctant to contribute when the problems encountered fall outside their area of expertise. As banking executives could face unstructured and diversified tasks every day, over-specialisation could handicap their contribution to the bank. In addition, having highly educated executives could place pressure on other executives, causing them to be reluctant to voice their views.

Hypothesis 7. The appointment of an executive with a PhD degree affects shareholder wealth.

3. Data and methodology

3.1. Data

We examine the announcements of top executives who are appointed to US banks from January 1999 to December 2011. We start by obtaining a list of all banks on *BoardEx*, a leading business intelligence service that provides information on executive characteristics. *BoardEx* covers in excess of 700 US banks which is far more than other similar databases which track executives over time, allowing us to also include smaller banks into our sample. Recently, several studies have used *BoardEx* to obtain their director-level data. For example, Custodio et al. (2013) use it to track the lifetime work experience of S&P 1500 CEOs and Van Essen et al. (2013) use it to obtain board characteristics of European firms. Since *BoardEx* covers executive-level information from 1999 onward in good detail, our sample period starts in 1999.

We then use Factiva to search for newspapers articles containing the search terms executives ("officer", "executive" etc.) and appointments ("appoint", "name" etc.). To avoid missing appointment events, we keep our search terms generic and avoid using specific terms such as "executive director". We retain appointments to executive positions including CEO, Chairman, President, COO, CFO, Other C-class executives such as CRO or CMO, Executive and Senior VP, Division CEO/Chairman/President, Head of Division, Regional CEO/Chairman/President.

The event date is defined as the earliest trading day when the announcement is made. In the final sample, we impose two exclusion criteria to ensure that the stock market reaction is purely driven by the event of the incoming executive appointment. First, we remove all appointment announcements that are simultaneously announced with other corporate events (e.g. earnings or merger announcements) because the stock market reactions might be convoluted by

the other news items in these cases. Second, we exclude all appointment announcements that are made simultaneously with announcements of *unplanned* executive departures. We exclude these announcements, because the stock market reaction to this type of event might be driven by the predecessor's unplanned departure rather than by the incoming executive appointment. Planned (that is, previously announced executive departures due to retirement) are kept in the sample.[5] We also remove appointment announcements where appointee information cannot be retrieved from *BoardEx* and where daily stock returns are not available from the Center for Research in Security Prices (CRSP) database. We then cross-check each announcement with information disclosed in *BoardEx* and in the bank's financial reports to verify the accuracy of the information.

This generates a set of 658 executive appointment announcements by 308 banks. Our 658 appointment announcements are classified into three categories: (1) single appointment announcements of externally-hired executives (252 cases), (2) single appointment announcements of internally promoted executives (271 cases), and (3) appointment announcements where two or more executives are simultaneously appointed (135 cases).

Our sample of interest consists of single and externally-hired appointment announcements. We restrict our sample to externally-hired executives to enable us to unambiguously measure the marginal value effect linked to the inclusion of new human capital. Similarly, we cannot separate the announcement effects linked to individual executives when multiple executives are simultaneously appointed. Table 1 summarises our classification of 658 executive appointment announcements.

[5]Since investors are already aware of the retirement of the outgoing executive, we argue that the stock market reactions to planned retirement announcements are purely driven by the joining event of the incoming executive

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Insert table 1 about here

We obtain data on appointee characteristics from *BoardEx*. We first include two basic demographic measures: AGE measures the age of the appointee at the time of the appointment and FEMALE is a dummy that that equals to 1 if the appointee is a female and 0 otherwise. Second, we include three variables that capture the appointee experience and competitiveness in the external labour market: #EXECUTIVE DIRECTORSHIPS measures the number of executive directorships with listed firms that the appointee has held prior to joining the bank. BUSYNESS measures the number of non-executive directorships the appointee holds at the time of the appointment. #NON-BANKING INDUSTRIES measures the number of non-banking industries (based on 4-digit SIC codes) the appointee has worked in prior to joining the bank. Finally, we include two variables that capture executive educational background: IVY LEAGUE is a dummy that equals to 1 if the appointee obtains at least one degree from Ivy League institutions and 0 otherwise and PHD is a dummy that equals to 1 if the appointee possesses a PhD degree and 0 otherwise.

3.2. Event study methodology

We use event study methodology to examine the stock market reactions to single and externally-hired appointment announcements (N=252). Following prior studies on director appointments, we concentrate on the time period immediately surrounding the appointment announcement. Specifically, we estimate the following market model:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} t = -300, \ldots, -46 \quad (1)$$

where R_{it} are the daily stock returns for firm *i* at day *t* and R_{mt} are equally-weighted CRSP index return for day *t*. We estimate the model parameters using 255 daily return observations starting from 300 to 46 days before the executive announcement date. We construct cumulative abnormal returns (CARs) as the sum of the prediction errors of the market model. To test for the statistical significance of the abnormal returns (ARs) and the cumulative abnormal returns (CARs), we run the Patell-Z test and the Wilcoxon sign-ranked test.

4. Event study results

4.1. Announcement returns

Panel A of Table 2 presents the cumulative abnormal returns (CARs) surrounding single-, external executive appointment announcements. The stock market reaction to the appointment news, on average, is positive. For example, over a 5-day event window of [0, +4], shareholders of banks that make single-, external appointment announcements experience a return of +0.96% (statistically significant at 5% level). Similarly, event window of [0, +5] observes a return of 0.87% (at 5% level). Using a sign-ranked test to examine median significance, we find a statistically positive effect at 5-10% level for both [0, +4] and [0, +5] event windows.

Insert table 2 about here

The investor reaction is an informative and intuitive indicator of the anticipated future performance conditional on all relevant information (Perez-Gonzalez, 2006; Warner et al., 1988). Thus, the positive abnormal returns indicate that, on average, investors expect the external appointee to create wealth for the bank shareholders. While existing studies have focused on the value of non-executive employees (Philippon & Reshef, 2012) and CEOs (Falato &

Kadyrzhanova, 2012), our study contributes by shedding light on the value of top executives to US banks.

Although the average CAR is positive, CARs are not always positive. For example, 122 out of 252 news (48.4%) are associated with negative returns over the event window of [0, +3]. Therefore, the next sections will investigate the determinants of stock market reactions to single and externally-hired executive announcements.

Panel B of Table 2 presents data on appointee characteristics ranked by the market reactions to single and externally-hired executive announcements. In particular, we report appointee characteristics for the highest and lowest quintile of announcement returns based on CARs of event window [0, +3]. If a certain characteristic adds value, we expect to find more observations of that particular characteristic in the high-return quintile than in the low-return quintile.

The results displayed in Panel B of Table 2 lend support to our hypotheses that executive heterogeneity affects shareholder wealth. In particular, we show that various executive characteristics create wealth. For example, AGE is 50.73 in the top quintile and 49.40 in the bottom quintile (difference is statistically significant at 10%). Similarly, #EXECUTIVE DIRECTORSHIPS is 0.80 in the top quintile and 0.58 in the bottom quintile (difference is statistically significant at 5%) and PHD is 0.10 in the top quintile and 0.02 in the bottom quintile (difference statistically significant at 10% level). On the contrary, our result reveals that executive busyness destroys value as we find more observations of this characteristic in the lower-return quintile than in the high-return quintile (difference statistically significant at 10% level).

We cannot find any statistically significant difference between the high and low market reaction quintiles for other heterogeneity measures. As such, there is little inference we can make about how investors evaluate these characteristics.

In essence, our univariate results show that executive heterogeneity influences post-announcement shareholder wealth creation. However, univariate tests can be criticised on the basis that they do not take into account other factors that could drive market returns. Thus, we may falsely attribute market returns to variations in appointee characteristics while they are in fact driven by fluctuations of other omitted variable bias. In addition, since there is a potential self-selection bias of the bank making an executive appointment, the results might not fully reflect market investor evaluation of executive heterogeneity. The next section will discuss this bias in more details.

4.2. Empirical strategy

Our main purpose is to investigate how market investors evaluate appointee characteristics using the stock market reactions to executive appointments. Since our approach is to employ only single appointment announcements involving appointees external to the bank, we face two main challenges.

First, the bank decision to make an executive appointment could be driven by endogenous factors, e.g., when it is not performing well and faces shareholder pressure to improve its performance by making new appointments (Berger et al., 2014; Fee et al., 2013). The stock market reaction to such appointments, therefore, could be driven by investor satisfaction with the bank decision to take action rather than the performance effects linked to a new appointment. Since we are interested in examining how appointee characteristics are evaluated

by market investors, we exclude appointment announcements that are made because the bank is not performing well. We rely on the contents provided in the press coverage to judge whether an appointment is made due to poor performance. In particular, if there is information indicating that the appointment is made because the bank is facing "disappointing performance" or trying to "seek a turnaround" for example, we do not include such appointment announcements in our sample.

The second challenge is that using only the sample of single and externally-hired executive appointment announcements might be prone to a selection bias. This happens when the decision to make a single (rather than multiple), external (rather than internal) appointment correlates with factors which also explain the announcement returns. For example, if underperforming banks are more likely to make single, external appointment announcements and this causes negative returns, then ignoring this possibility will bias our estimates.

By observing single, external appointment joint with other appointment types (i.e., multiple executive appointments and single, internal executive appointments), we are able to address this problem using the Heckman (1979) two-step procedure. In the first step, we construct a probit model to estimate the probability that the bank will make a single and externally-hired executive appointment announcement. We let a dummy variable be equal to 1 if the bank makes a single-, external announcement and 0 otherwise. The value of q would be determined by:

$$q = \varsigma^{*}Z + \varepsilon$$

where Z contains appointee-level and bank-level variables that may influence the bank's decision to make a single and externally-hired appointment. The predicted individual probabilities obtained in the probit model are then used to calculate the inverse Mill's ratio and

included to the second-stage model as an additional explanatory variable (Heckman, 1979). Essentially, this procedure allows us to take into account of potential selection bias when banks choose to make a single, external appointment instead of other appointment types. In the second-step, we estimate the following regression model to examine the effects of appointee characteristics on the stock price reaction for [0, +3] event window:

$$\text{CAR } [0, +3] = \alpha + \beta_1 \text{ appointee characteristics} + \beta_2 \text{ control variables} + \beta_3 \sigma \frac{\phi(q)}{\phi(q)} + \varepsilon \quad (2)$$

The dependent variables are CARs [0, +3] around the announcement of a single, external executive appointment. Appointee characteristics measures are defined as previously. Control variables refer to a set of variables that we include to ensure that our results on appointee characteristics are robust with the inclusion of these variables in the regression. The Heckman procedure requires us to identify an instrument in the form of a variable that influences the first step (the probability that a bank makes single, external appointment), but not the second-step (the appointment announcement CARs).

We use institutional ownership as an instrument. Following Sur, Lvina, and Magnan (2013), we define institutional ownership as the percentage of share ownership by institutional investors (pension funds, mutual funds, banks and trusts, insurance companies, investment advisors, and other financial companies). We argue that institutional investors will restrain the bank from making multiple executive appointments, because multiple appointments of executives will dilute board independence and result in a more insider-controlled board. Equally, institutional investors will restrain the bank from making appointments using internal promotions where CEOs could select their favourite candidate to further their control.

We postulate that institutional ownership should be a suitable instrument, because we expect higher levels of institutional ownership are associated with a higher probability of the bank making a single and externally-hired appointment. However, there is no reason to assume that institutional ownership affects the market valuation effects linked to the announcement of a single and externally-hired executive.

5. Regression results

5.1. Determinants of single and externally-hired executive appointments

We first study the characteristics of appointees and banks that make single and externally-hired executive appointments. Our model reports the probit estimates where the dependent variable equals 1 if banks make a single, external executive appointment and 0 otherwise. This analysis is estimated over the full sample of appointment announcements (N=658).

The explanatory variables we include are appointee-level and bank-level variables. Appointee-level variables are the seven appointee characteristics defined as previously. We then include bank-specific variables, including bank size, which is the natural logarithm of the bank total assets (BANKSIZE); charter value, which is the ratio between the market value of equity and book value of equity (CHARTERVALUE); bank risk, which is the ratio of total (book) liabilities to the book value of equity (LEVERAGE). We also control for the prior bank performance using an accounting-based performance measure: return on assets (ROA), which is the ratio of net income to total assets. All bank-specific variables are lagged at time *(t-1)*. Bank accounting information is collected from fourth quarter Consolidated Financial Statements for

Bank Holding Companies (BHCs), i.e. Form FR 9Y-C from Federal Reserve Board and is complemented with information obtained from BANKSCOPE.

We also include a set of bank governance variables that could have significant impacts on the probability of banks making a single, external appointment. We include board characteristics, such as the total number of executive and non-executive directors on the board (BOARDSIZE), the proportion of non-executive directors on the board (BOARDIND), and whether the CEO is also a chairman (DUALITY). Furthermore, since the nominating committee is responsible for searching and nominating executive directors, its characteristics could influence the appointment decision (Shivdasani & Yermack, 1999). Hence, we add a dummy variable that equals to 1 if the CEO sits on the nominating committee and 0 otherwise (CEOINNOMI). When the bank does not have a standing nominating committee, CEOINNOMI takes the value of 1. Data on bank governance are collected from *BoardEx.* Finally, we add a dummy to indicate whether the incoming executive joins as a CEO (CEOPOST) and whether the appointment is made after the 2008 financial crisis (POST_CRISIS). Table 3 shows the summary statistics and variable definitions.

Insert table 3 about here

Table 4 presents the results of the first-stage probit regression. Consistent with our expectations, column 3 of table 4 shows that INSTITUTIONAL OWNERSHIP is positively related to the likelihood of single, external appointments (Column 3: $\beta=0.02$, $p<0.01$) confirming its suitability as an instrument. In terms of appointee-level variables, the probability of single, external appointment is higher when the appointees possess an Ivy League education (Column 3: $\beta=0.30$, $p<0.1$). This could be because in deciding between different potential candidates, banks

tend to look for an unambiguous signal of high competence. An Ivy League education could easily allow one candidate to stand out from other candidates. Thus, they are more likely to be appointed. In addition, a single external appointment is more likely to include appointees with experience in non-banking industries (Column 3: β=0.19, $p<0.05$) and is less likely to include those having prior executive directorship experience (Column 3: β= -0.39, $p<0.001$).

Insert table 4 about here

In terms of bank-level characteristics, our results indicate that the growth prospect of the bank, measured by CHARTER VALUE, is inversely related to the likelihood of single, external appointment (Column 3: β= -0.19, $p<0.01$). This finding supports the notion that banks look for external human capital when they need someone with new perspectives to enhance their growth potentials. Finally, banks are much less likely to appoint an external candidate to a CEO position (Column 3: β= -0.46, $p<0.001$). Instead, when appointing a CEO, they usually pick an internal candidate and/or simultaneously appoint multiple executives to several positions. This result is consistent with Cremers and Grinstein (2013), who report that external CEO succession is much less common than internal CEO succession in the banking industry.

In essence, along with appointee-level characteristics, bank-level characteristics may differ systematically in different types of appointment. Not accounting for this selection could bias the estimates of investor evaluation of appointee characteristics.

5.2. Announcement effects and appointee characteristics

In this section, we investigate the relationship between the announcement effects and various appointee characteristics. The dependent variables are CARs [0, +3] around the

announcement of a top executive appointment. Appointee characteristics measures are defined as previously. We include a set of control variables identical to those in Table 4 to ensure that our results on appointee characteristics are robust to the inclusion of these variables in the regression.

Table 5 shows the pairwise correlations between the variables. Most notably, we observe that there is a low and insignificant correlation between the level of institutional ownership and CARs. Thus, the choice of institutional ownership as an exogenous instrument variable makes both statistical and economic sense.

Insert table 5 about here

Table 6 shows the results of our second-stage regressions against CARs [0, +3]. In columns 1, 3, 6 and 8, we show that the stock market returns are positively and significantly related to three appointee characteristics: (1) age, (2) number of executive directorships, and (3) Ivy League education. The magnitude for each of the coefficient estimates is generally consistent across columns. The coefficient estimates indicate that CARs are 1.3% higher when the appointee is 10 years older, 1.7% higher when the appointee has one prior executive directorships position and 2.4% higher when the appointee has an Ivy League education. This offers a first indication that executive heterogeneity, as proxied by variations among appointee characteristics, has a statistically and economically measurable impact on shareholder returns.

Insert table 6 about here

With respect to age (Column 1: $\beta=0.13$, $p<0.05$), among several possible explanations, we argue that younger appointees have more incentives to increase their job security by engaging in risky and value-destroying activities. Thus, market investors react less favourably to the appointment of a young appointee because they envisage that this appointment will impose an additional agency cost to the bank.

The positive coefficient estimates for number of executive directorships (Column 3: $\beta=1.71$, $p<0.05$) demonstrate that the prior experience performing functional tasks as a top executive equips the appointee with the most relevant expertise and skills to excel in the new job (Gary & Nowland, 2013). In addition, the existing social connections (Fich, 2005) and the ability to develop new ties with other executives (Westphal, 1999) set experienced appointees apart from others. In an unreported regression analysis, we replace number of executive directorships with number of CEO directorships. Consistent with our expectation, we obtain statistically significant and positive coefficient estimate for number of CEO directorships. Finally, our results show that investors value appointees with an Ivy League education more than those without one (Column 6: $\beta=2.35$, $p<0.05$). This lends support to the signalling models of education (Spence, 1973), which postulates that attendance of more selective colleges signals an individual superior skills. Although prior studies usually control for executive talents using schooling proxy (e.g. Fich, 2005; Gary & Nowland, 2013; Nguyen & Nielsen, 2010), they find little evidence suggesting that school matters.

Overall, our results uncover important evidence on several desirable characteristics of banking executives. Interestingly, each of these variables represents a different dimension of individual characteristics (i.e. age is a *demographic* measure, number of executive directorships is an *experience* measure, and Ivy League education is an *education* measure). Using these

variables as specific examples, we point to the possibility that any demographic, experience and education characteristic of the executive could create shareholder wealth. Thus, our study contributes to the current debate on whether executive heterogeneity matters (e.g. Adams et al., 2005; Bertrand & Schoar, 2003; Fee et al., 2013) by demonstrating that variations among appointee characteristics could lead to substantial shareholder wealth creation. Our study also adds to the strand of literature on inside directors (e.g. Masulis & Mobbs, 2011; Rosenstein & Wyatt, 1997).

Columns 2, 5, 7 and 8 show that stock market returns are not affected by three executive characteristics: (1) Female, (2) number of non-banking industries, and (3) PhD degree.[6] With respect to gender, our result implies that investors do not expect performance of banks appointing female executives to differ from that of banks appointing male executives. Thus, our findings suggest that the gender of the executive does not matter for their future performance in the bank. Therefore, any claim that questions female executives' ability to perform well in top banking positions is unsubstantiated.

The insignificant coefficient estimate for number of non-banking firms can be explained by the highly specialised nature of the banking industry. Diversified experience in too many non-banking industries could mean that the appointee lacks necessary banking expertise to perform well as a bank executive. Hence, the costs of experience in multiple industries outweigh its benefits, resulting in the insignificant coefficient estimate. Finally, the insignificant estimate for PhD highlights investor scepticism about whether the skills the appointee obtains throughout the process of earning a doctoral degree would actually translate into positive future performance.

[6] Table 5 indicates a high correlation of 0.56 between the number of non-banking industries and number of current non-executive directorships (busyness). Thus, in column 8, we exclude the number of prior non-banking industries to prevent the problem of multicollinearity.

Columns 4 and 8 show that the coefficient estimates for busyness are statistically negative (Column 4: β= -3.10, $p<0.01$). The magnitude of the coefficient is economically large, indicating that CARs are 3.10% lower for each additional non-executive directorship the appointee holds. Hence, investors expect banks appointing busy executives to perform significantly worse than those appointing more committed executives. This is consistent with the busy director hypothesis (see Fich & Shivdasani, 2006) that executives who hold several board seats lack time to contribute to the bank.

The coefficients of the control variables generally have the expected signs. We report positive and significant estimated coefficients for ROA (Column 1: β= 0.93, $p<0.05$). This implies that the bank makes better executive appointment decisions when it is performing well. We also obtain negative and significant estimates for the CHARTER VALUE dummy (Column 1: β= -1.43, $p<0.01$). This highlights that investors react more positively single and externally-hired appointments when the bank growth rate is low. The result suggests that investors expect the externally-hired executive to bring new perspectives and ideas and improve the bank growth opportunities. Finally, we observe negative and significant estimated coefficients for POST_CRISIS (Column 1: β= -5.33, $p<0.01$).

In column 6, we obtain statistically positive coefficient estimates for LAMBDA, the inverse Mill's ratio obtained from the first stage probit regression (β= 1.74, $p<0.1$), providing cursory evidence on the existence of a selection bias. This positive selection bias suggests that investors favour single and externally-hired appointments to internal and multiple appointment news. This is consistent with Falato and Kadyrzhanova (2012) finding that the short-term stock market returns are significantly higher for external than internal CEO successions.

5.3. Alternative specifications and robustness checks

We repeat the regression analysis in column 8 of table 6 using different event windows. Columns 1 and 2 of Table 7 reproduce our main coefficient estimates for the CARs of [0, +4] and [0, +5] as alternative dependent variables, respectively. Both specifications produce qualitatively similar results to those of the previous section. Thus, our main results are relatively robust to different choices of event windows.

Insert table 7 about here

Furthermore, although most announcements are standardised, a few might go beyond announcing a new executive. For example, one announcement explains that a chief risk officer is appointed because the bank is battling with regulatory authorities and needs to improve its image after a scandal. Therefore, the stock market reactions could be interspersed with other non-essential information. We exclude 10 such announcements and redo the analysis we did in column 8 of Table 6.[7] As column 3 of Table 7 shows, our new coefficient estimates are similar to those obtained previously.

To show that the estimation results we obtained in table 6 are non-random, we run a placebo test against three-day CARs of event window [-15, -13]. Since this event window is safely before the appointment announcement date, we expect none of the main coefficient estimates to take significant values. Column 4 of Table 7 confirms this expectation. In addition, the R-squared we obtain for [-15, -13] is only 7.45% as compared to the R-squared of 21% we obtain for [0, +3]. Thus, this shows that the coefficient estimates we obtained for the event window [0, + 3] are indeed driven by the event of the incoming executive appointment.

[7] Among the excluded announcements, two contain political sentiments and eight point out the specific rationale behind the appointment. The rationales include: stabilising bank operations (2 cases), improving bank image after the scandal, making aggressive expansion into a new product market or geographical area (5 cases).

5.4. Executive heterogeneity and board independence

In Table 8, we examine whether the proportion of non-executive directors (BOARDIND) influences the market evaluation of appointee characteristics. The corporate governance literature argues that non-executive directors must actively monitor and advise top executives to alleviate the conflict of interests between owners and managers (Andres & Vallelado, 2008; Harris & Raviv, 2008). More non-executive directors sitting on the board implies more monitoring pressure on the top executives. Thus, a board with more non-executive directors could inhibit executive influence and thus, diminish the expected performance effects linked to the appointee characteristics. To verify this, we include several interaction terms which are the products of executive characteristics and the proportion of non-executive directors, such as BOARDIND*AGE into our regression model.

Controlling for potential selection bias using Heckman's (1979) model, Panel A of Table 8 shows the results of our regression against CARs [0, +3]. We find that board independence has a statistically negative effect on investor evaluation of (1) Ivy League education (β= -19.41, $p<0.05$), (2) #executive directorships (β= -6.83, $p<0.1$) and (3) PhD degree (β= -21.78, $p<0.1$). Although insignificant, board independence also exerts a negative effect on investor evaluation of (4) Age, (5) Female, and (6) number of non-banking industries.

Insert table 8 about here

To further investigate whether board independence diminishes the wealth effects of executive characteristics, we construct an F-test. The results of which are displayed in Panel B of Table 8. Most interestingly, the results imply that when a board is more dominated by non-executive directors, market returns are *not* affected by any of the executive characteristic. This is

consistent with the prediction that non-executive directors act as monitors to inhibit top executive discretion and influence. Thus, when the level of influence of the incoming executive is diminished, their characteristics become less relevant to investors. Consequently, in a highly independent board, the positive wealth effects of all executive characteristics disappear.

Overall, we argue that executive heterogeneity creates value except when the board of directors is highly independent. In such cases, executive heterogeneity becomes value irrelevant.

5.5. Are CEOs different?

In Table 9, we examine whether the CEO dummy (CEOPOST) influences the market evaluation of appointee characteristics. In our sample of executive appointment announcements, we mix CEOs with other executives such as CFOs or CROs. Because the CEO is the single most important decision maker in the bank, investors might value CEO characteristics differently from other lower-ranked executives. Thus, we include several interaction terms which are the products of appointee characteristics and CEO dummy, such as CEOPOST*AGE into our regression model.

Controlling for potential selection bias using Heckman's (1979) model, Panel A of Table 9 shows the results of our regression against CARs [0, +3]. We find that CEOPOST has a positive effect on investor evaluation of: (1) Ivy League education (β= 3.94, $p<0.1$) and (2) number of executive directorships (β=1.64, $p<0.05$). This implies that market investors place additional reward on talented and experienced CEOs relative to other executives. By contrast, CEOPOST has a negative effect on investor evaluation of (3) busyness (β= -25.56, $p<0.001$) and (4) number ofnon-banking industries (β= -3.51, $p<0.1$). As the CEOs are required to focus their full attention on the banks they lead, investors place an additional value cost on a CEO who is

busy holding too many non-executive directorships. Likewise, experience in several different industries implies a CEO's lack of banking expertise. Thus, we observe a negative interaction term.

Insert table 9 about here

To further investigate the wealth effects of CEO characteristics, we construct another F-test the results of which are displayed in Panel B of Table 9. Panel B shows that the wealth effects of all characteristics are enhanced when the appointee is named to the CEO position. Most interestingly, from being a value irrelevant characteristic, number of non-banking industries becomes a value-destroying characteristic. In essence, our results show that the CEO is a special executive, receiving more rewards for having desirable characteristics and more penalties for having undesirable characteristics.

6. Discussion and conclusion

Our paper investigates the value of executive heterogeneity in the US banking industry by using variations among executive characteristics when appointed as sources of heterogeneity. Our argument is that if executive heterogeneity leads to expected increases in performance, announcement returns will be higher when executives with certain desirable characteristics are appointed to s bank. We employ an event study to compute the expected performance gains linked to executive characteristics such as age, education and experience.

Using a hand-collected sample of 252 executive appointments to 145 US banks from 1999 to 2011, we demonstrate that executive heterogeneity creates shareholder wealth. In particular, we show that market returns are higher when the appointee is older, has an Ivy League

education and has prior experience working as an executive director. By contrast, the appointment of a busy executive who holds more non-executive directorships at the time of the appointment attracts negative returns. In addition, the gender of the appointee and experience in non-banking industries do not affect stock market returns.

More importantly, we show that the level of influence that the appointee is expected to exert on the bank moderates the value which shareholders attach to appointee characteristics. We first document that the wealth effects disappear or diminish substantially the higher the proportion of non-executive directors. This implies that increased board monitoring and involvement in board decision making of non-executive directors reduces the influence of the incoming executive and therefore diminishes any wealth effects linked to their appointment. In addition, our findings demonstrate that the wealth effects are enhanced when the appointee is named to a CEO position, consistent with the view that the CEO is the most important decision maker in the bank.

Overall, our study complements existing literature on why and how individual executives matter for firm performance. This stresses the crucial roles of the nominating committee, which is responsible for searching and hiring directors (Shivdasani & Yermack, 1999). Our results also have important policy implications. First, we echo De Haan and Vlahu (2013) that appointing more executives with expertise to the bank is an important policy concern. Our findings are consistent with calls by policy makers to appoint more executives that are highly qualified and possess relevant industry experience. Second, our study does not show that the expected performance effects linked to executives varies by gender. Therefore, our results do not support a 'business case' for gender diversity and do not support legislation mandating banks to appoint more female executives if the motivation for such legislation is to boost performance. Of course,

proposals to mandate more female executives can be driven, and in many cases are indeed driven, by agendas other than improvements in bank performance.

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TABLE 1
Sample distribution

This table reports the composition of the sample of 658 announcements of executive appointments to 308 US banks between 01 January 1999 and 31 December 2011. Based on the information provided in the newspapers announcements, we classify the appointment announcements into three categories: (1) single and externally-hired appointment announcements, (2) single and internally-promoted appointment announcements, and (3) multiple executive appointment announcements. For clarity, we further classify 252 single and externally-hired appointment announcements into joining announcements and joining mixed with planned retirement announcements.

		Number
Single and externally-hired appointment announcements		
Joining announcements of the incoming executives	201	
Joining mixed with planned retirement announcements	51	**252**
Single and internally-promoted appointment announcements		**271**
Multiple appointment announcements		
All internal candidates	99	
At least one external candidate	36	**135**
All		**658**

TABLE 2
The stock market reaction to announcements of single and externally-hired appointments

This table shows the stock price reactions to 252 single and externally-hired executive appointment announcements to 145 US banks between 01 January 1999 and 31 December 2011. Panel A reports cumulative abnormal returns (CARs) for different event windows surrounding executive appointment announcements. In addition to the mean and the median abnormal return, we also report the Patell-Z test, the percentage of positive CARs, and the Wilcoxon sign-raked test. Panel B reports the univariate results. AGE indicates the age of the appointee at the time of the appointment, measured in years. FEMALE is a dummy that equals to 1 when the appointee is a female and 0 otherwise. #EXECUTIVE DIRECTORSHIPS measures the number of executive directorships with listed firms that the appointee holds prior to joining the bank. BUSYNESS measures the total number of non-executive directorships the appointee holds at the time of the appointment. #NON-BANKING INDUSTRIES measures the number of non-banking industries the appointee has worked in prior to joining the bank. IVY LEAGUE is a dummy that equals to 1 when the appointee obtains at least one degree from Ivy League institutions and 0 otherwise. PHD is a dummy that that equals to 1 when the appointee possesses a PHD and 0 otherwise. The symbols ***,**, * denote significance at the 1%, 5% and 10% level, respectively.

Panel A: Abnormal returns

	N	Mean Abnormal returns	Patell-Z	Median Abnormal returns	Sign-ranked	% Positive CARs
0	252	0.31	1.23		0.53	48..4
+1	252	0.30	2.06**		1.49*	52.0
+2	252	-0.29	-2.17**		-1.79**	45.2
+3	252	0.14	0.30		0.57	50.0
CAR[0, +3]	252	0.46	0.71	0.11	0.40	51.6

Panel B: Univariate results

	Market reaction: CAR [0, +3] (%)			
	Lowest Quintile Q1	Highest Quintile Q4	Difference Q4-Q1	t-stat
AGE	49.40	50.73	1.33	1.66*
FEMALE	0.10	0.08	-0.02	-0.35
#EXECUTIVE DIRECTORSHIPS	0.58	0.80	0.22	2.11**
BUSYNESS	0.18	0.02	-0.16	-1.85*
#NON-BANKINGINDUSTRIES	0.18	0.18	0.00	0.00
IVY LEAGUE	0.12	0.16	0.04	0.58
PHD	0.02	0.10	0.08	1.72*

TABLE 3
Summary Statistics

This table reports the descriptive statistics of the variables in our sample. The sample consists of 252 single-, external executive appointment announcements to 145 US banks between 01 January 1999 and 31 December 2011.

Variable	Definition	N	Mean	SD	Min	Max
Panel A: Executive characteristics						
AGE	The age of the appointee	252	49.47	6.54	34.00	67.00
FEMALE	Dummy that equals to 1 if the appointee is a female and 0 otherwise.	252	0.06	0.24	0.00	1.00
#EXECUTIVE DIRECTORSHIPS	Number of executive directorships at listed firms that the appointee holds prior to joining the bank	252	0.69	0.86	0.00	5.00
BUSYNESS	Number of non-executive directorships the appointee holds at the time of the appointment.	252	0.06	0.32	0.00	3.00
#NON-BANKING INDUSTRIES	Number of non-banking industries the appointee has worked in prior to joining the bank.	252	0.25	0.80	0.00	6.00
IVY LEAGUE	Dummy that equals to 1 if the appointee obtains at least one degree from Ivy League institutions and 0 otherwise	252	0.15	0.35	0.00	1.00
PHD	Dummy that equals to1 if the appointee possesses a PhD degree and 0 otherwise	252	0.08	0.28	0.00	1.00
Panel B: Bank characteristics						
ROA	Earnings before interests and taxes (EBIT) divided by book value of total assets.	252	1.26	1.27	-4.49	10.50
BANKSIZE	Natural logarithm of total assets	252	22.83	2.06	18.82	28.43
CHARTER VALUE	Market value of equity divided book value of equity	252	1.67	1.06	0.12	10.03
LEVERAGE	Book value of liabilities divided the book value of equity	252	9.95	3.50	0.52	29.07
BOARDSIZE	Number of executive and non-executive directors on the board.	252	12.10	3.58	6.00	29.00
BOARDIND	The proportion of non-executive directors on the board.	252	0.76	0.14	0.00	0.93
CEOINNOM	Dummy that equals to 1 if the CEO sits in the nominating committee and 0 otherwise	252	0.10	0.30	0.00	1.00
DUALITY	Dummy that equals to 1 if the CEO is also a Chairman and 0 otherwise	252	0.52	0.50	0.00	1.00
CEOPOST	CEOPOST equals to 1 if the appointee is appointed to a CEO position and 0 otherwise.	252	0.27	0.43	0.00	1.00
INSTITUTIONAL OWNERSHIP	The percentage of share ownership owned by institutional investors	252	28.73	16.03	0.05	73.81

TABLE 4
Probit estimates of probability of single and externally-hired appointments

This table estimates the likelihood that the bank is going to make single and externally-hired appointments. The sample includes all 658 announcements of executive appointments to 308 US banks between 01 January 1999 and 31 December 2011. The dependent variable is a dummy that equals to 1 if the bank makes a single-, external appointment. Year fixed-effects are included. All other variables are defined in Table 3. The robust standard errors are in brackets. The symbols ***,**, * denote significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)
Appointee-level characteristics			
AGE	-0.01*	-0.01	-0.01
	(0.01)	(0.01)	(0.01)
FEMALE	-0.24	-0.25	-0.24
	(0.21)	(0.22)	(0.22)
#EXECUTIVE DIRECTORSHIPS	-0.36***	-0.39***	-0.39***
	(0.09)	(0.09)	(0.09)
BUSYNESS	-0.28	-0.29	-0.28
	(0.20)	(0.20)	(0.20)
#NON-BANKING INDUSTRIES	0.20**	0.21**	0.19**
	(0.09)	(0.09)	(0.09)
IVY LEAGUE	0.36**	0.35*	0.30*
	(0.17)	(0.18)	(0.18)
PHD	0.17	0.18	0.21
	(0.22)	(0.22)	(0.22)
Bank-level characteristics			
ROA	0.08	0.08	0.06
	(0.06)	(0.06)	(0.06)
BANKSIZE	0.29	0.52	-0.11
	(0.46)	(0.48)	(0.51)
$BANKSIZE^2$	-0.01	-0.01	0.00
	(0.01)	(0.01)	(0.01)
CHARTERVALUE	-0.18**	-0.18**	-0.19***
	(0.07)	(0.07)	(0.07)
LEVERAGE	-0.01	-0.02	-0.01
	(0.02)	(0.02)	(0.02)
BOARDSIZE	-0.02	-0.01	-0.01
	(0.01)	(0.02)	(0.02)
BOARDIND	0.67	0.35	0.23
	(0.43)	(0.47)	(0.47)
DUALITY	-0.12	-0.13	-0.13
	(0.11)	(0.11)	(0.11)
CEOINNOM	0.32*	0.45**	0.50**
	(0.18)	(0.21)	(0.21)
CEOPOST	-0.51***	-0.50***	-0.46***
	(0.14)	(0.14)	(0.14)
POST_CRISIS	0.05	0.29	0.18
	(0.14)	(0.36)	(0.37)
INSTITUTIONAL OWNERSHIP			0.02***
			(0.01)
Year fixed-effects	No	Yes	Yes
Pseudo R-squared	9.45%	10.10%	11.18%
Observations	658	658	658

TABLE 5
Correlation matrix

This table presents the pairwise correlation coefficients between the variables used in the regression analysis. All other variables are defined in Table3. Bold coefficients denote statistical significance at 5% level.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) CAR [0, +3]	1.00																	
(2) AGE	0.09	1.00																
(3) FEMALE	0.01	-0.06	1.00															
(4) #EXEC DIRECTORSHIPS	**0.14**	**0.15**	-0.02	1.00														
(5) BUSYNESS	-0.07	**0.19**	0.02	**0.12**	1.00													
(6) #NON-BANK INDUSTRIES	-0.04	**0.14**	0.00	**0.25**	**0.56**	1.00												
(7) IVY LEAGUE	**0.11**	0.07	-0.06	0.07	**0.17**	**0.12**	1.00											
(8) PHD	0.01	0.06	-0.02	0.02	0.04	**0.10**	**0.14**	1.00										
(9) INSTITUTIONAL OWNER	0.07	-0.05	0.03	**0.12**	**0.15**	**0.21**	**0.22**	0.03	1.00									
(10) ROA	-0.11	**-0.13**	0.00	**-0.09**	0.02	-0.02	**0.09**	-0.02	**0.17**	1.00								
(11) BANKSIZE	0.03	0.02	0.02	**0.16**	**0.23**	**0.30**	**0.26**	0.09	**0.67**	0.08	1.00							
(12) CHARTERVALUE	**-0.24**	-0.08	0.03	-0.05	0.00	0.02	**0.08**	0.00	**0.15**	**0.50**	**0.11**	1.00						
(13) LEVERAGE	-0.02	0.04	0.01	0.01	-0.03	0.04	**0.12**	0.01	-0.01	-0.09	**0.20**	**0.13**	1.00					
(14) BOARDSIZE	-0.01	0.03	0.02	0.05	**0.09**	0.07	**0.09**	0.09	**0.24**	0.06	**0.38**	**0.14**	0.04	1.00				
(15) BOARDIND	**0.21**	-0.01	0.03	**0.11**	0.02	0.04	**0.09**	0.03	**0.20**	**-0.24**	**0.18**	**-0.23**	-0.01	-0.08	1.00			
(16) CEOINNOM	0.02	0.01	-0.07	**-0.10**	-0.03	-0.05	-0.03	-0.04	**-0.18**	0.04	**-0.13**	0.03	0.03	0.01	**-0.26**	1.00		
(17) DUALITY	0.04	-0.02	**0.09**	0.04	0.02	0.03	**0.08**	-0.04	**0.17**	**0.09**	**0.21**	**0.10**	**0.12**	**0.10**	-0.02	0.02	1.00	
(18) CEOPOST	-0.09	**0.17**	**-0.08**	**0.10**	-0.02	-0.04	-0.01	-0.03	**-0.30**	-0.07	**-0.28**	0.00	0.01	-0.06	-0.06	0.04	**-0.22**	1.00

TABLE 6
Appointee characteristics and stock market reactions to executive appointments news

This table reports the results of multivariate Heckman (1979) regression analyses of stock market reactions to the announcements of single and externally-hired executive appointments. The dependent variables of all models are CARs [+0, +3] (%). POST_CRISIS equals to 1 if year is 2008-2011 and 0 otherwise. LAMBDA represents the inverse Mill's ratio of the first stage probit regression that estimates the likelihood of the bank making a single-, external executive appointment announcements. All other variables are defined in Table 3. The robust standard errors are in brackets. The symbols ***,**, * denote significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
AGE	0.13**							0.14**
	(0.06)							(0.06)
FEMALE		-0.61						0.81
		(1.42)						(1.50)
#EXEC DIRECTORSHIPS			1.71**					1.57**
			(0.68)					(0.75)
BUSYNESS				-3.10***				-3.65***
				(1.15)				(1.18)
#NON-BANK INDUSTRIES					-0.56			
					(0.46)			
IVY LEAGUE						2.35**		1.94**
						(1.06)		(0.96)
PHD							0.30	-1.23
							(1.24)	(1.34)
ROA	0.93**	0.74*	0.57	0.68*	0.65	0.79*	0.73*	0.74*
	(0.41)	(0.41)	(0.43)	(0.40)	(0.41)	(0.41)	(0.41)	(0.43)
BANKSIZE	5.94*	5.17	4.59	2.92	4.27	5.70*	5.03	3.24
	(3.22)	(3.27)	(3.37)	(3.29)	(3.27)	(3.26)	(3.25)	(3.40)
$BANKSIZE^2$	-0.13*	-0.11	-0.10	-0.06	-0.09	-0.13*	-0.11	-0.07
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
CHARTERVALUE	-1.43***	-1.38***	-0.93*	-1.35***	-1.29***	-1.53***	-1.37***	-1.10**
	(0.48)	(0.49)	(0.54)	(0.48)	(0.49)	(0.49)	(0.49)	(0.53)
LEVERAGE	0.15	0.12	0.17	0.09	0.12	0.10	0.12	0.15
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
BOARDSIZE	0.05	0.04	0.10	0.08	0.05	0.04	0.04	0.15
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
BOARDIND	3.91	3.11	0.91	2.88	2.87	3.44	3.10	1.80
	(3.10)	(3.12)	(3.33)	(3.08)	(3.11)	(3.12)	(3.12)	(3.29)
CEOINNOM	1.14	1.20	0.34	1.47	1.22	1.55	1.23	0.73
	(1.30)	(1.32)	(1.42)	(1.31)	(1.32)	(1.33)	(1.33)	(1.43)
DUALITY	-0.33	-0.43	-0.01	-0.54	-0.57	-0.72	-0.45	-0.25
	(0.73)	(0.74)	(0.79)	(0.73)	(0.74)	(0.75)	(0.74)	(0.78)
CEOPOST	-1.08	-1.06	0.28	-1.10	-1.02	-1.74	-1.03	-0.32
	(1.06)	(1.08)	(1.23)	(1.06)	(1.07)	(1.12)	(1.08)	(1.33)
POST_CRISIS	-5.33**	-4.92*	-5.10*	-4.26	-4.84*	-5.22*	-4.92*	-4.98*
	(2.71)	(2.73)	(2.72)	(2.71)	(2.72)	(2.71)	(2.73)	(2.64)
LAMBDA	0.08	0.78	-3.57	0.96	0.55	1.74*	0.76	-3.23
	(1.33)	(1.33)	(2.18)	(1.30)	(1.32)	(1.04)	(1.33)	(2.60)
Time fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	0.08
Single, external appointments	252	252	252	252	252	252	252	(1.33)
R-Squared	14.77%	12.98%	14.58%	15.37%	13.44%	14.65%	12.93%	20.80%

TABLE 7
Additional evidence on the value of appointee characteristics

This table reports the results of multivariate Heckman (1979) regression analyses of stock market reactions to the announcements of single and externally-hired appointments for different specifications. Specifications 1 and 2 report the coefficient estimates for alternative event windows of [0, +4] and [0, +5], respectively. Specification 3 excludes announcements that contain sentiments. Specification 4 performs a placebo regression on event window [-15, -13]. All regressions include other control variables as in Table 6.The robust standard errors are in brackets. The symbols ***,**, * denote significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)	(4)
AGE	0.13*	0.12	0.14**	0.01
	(0.07)	(0.08)	(0.06)	(0.07)
GENDER	0.69	0.73	0.95	0.45
	(1.76)	(1.93)	(1.51)	(1.68)
#EXECUTIVE DIRECTORSHIPS	1.73*	1.82*	1.61**	-0.62
	(0.89)	(0.98)	(0.76)	(0.85)
BUSYNESS	-3.66***	-6.23***	-3.66***	-0.19
	(1.39)	(1.53)	(1.23)	(1.33)
IVY LEAGUE	1.30	1.04	1.69*	0.97
	(1.39)	(1.52)	(1.00)	(1.32)
PHD	-1.15	0.10	-1.41	-0.13
	(1.55)	(1.69)	(1.42)	(1.47)
Other control variables	Yes	Yes	Yes	Yes
Time-fixed effects	Yes	Yes	Yes	Yes
External appointments	252	252	242	252
R-Squared	14.99%	15.03%	21.30%	7.45%

TABLE 8
Appointee characteristics, board independence and stock market reactions to executive appointment news

This table reports the results of multivariate Heckman (1979) regression analyses of stock market reactions to announcements of single and externally-hired appointments. The dependent variables of all models are CARs [0, +3] (%). CHARACTERISTIC refers to the appointee characteristic shown in the column specification. BOARDIND is the proportion of non-executive directors on a board. LAMBDA represents the inverse Mill's ratio of the first stage probit regression that estimates the likelihood of the bank making a single-, external executive appointment announcements. All regressions include other control variables as in Table 6. The robust standard errors are in brackets. The symbols ***,**, * denote significance at the 1%, 5% and 10% level, respectively.

	AGE	FEMALE	# EXEC DIRECTORSHIPS	BUSYNESS	# NON BANKING	IVY LEAGUE	PHD
Panel A: Regression results							
BOARDIND*CHARACTERISTIC	-0.21	-0.15	-6.83*	2.11	-3.30	-19.41**	-21.78*
	(0.42)	(16.12)	(4.04)	(17.66)	(5.20)	(8.12)	(11.49)
CHARACTERISTIC	0.30	-0.49	6.95**	-4.80	2.09	17.28***	9.37
	(0.33)	(12.86)	(3.33)	(14.27)	(4.20)	(6.33)	(8.94)
BOARDIND	14.30	3.11	7.55*	2.82	3.52	5.34*	3.56
	(21.16)	(3.16)	(3.95)	(3.12)	(3.28)	(3.18)	(3.15)
LAMBDA	0.07	0.78	-3.02	0.95	0.60	1.48	0.82
	(1.33)	(1.33)	(2.16)	(1.30)	(1.32)	(1.38)	(1.33)
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Single-, external appointments	252	252	252	252	252	252	252
R-Squared	14.98%	13.36%	15.27%	15.80%	13.89%	16.57%	13.70%
Panel B: H0 = BOARDIND*CHARACTERISTIC + CHARACTERISTIC = 0							
F-test	0.38	0.01	0.41	0.69	1.27	1.27	0.66
Prob> Chi^2	(0.54)	(0.93)	(0.52)	(0.41)	(0.27)	(0.26)	(0.41)

TABLE 9
Appointee characteristics, CEO dummy and stock market reactions to executive appointment news

This table reports the results of multivariate Heckman (1979) regression analyses of stock market reactions to announcements of single and externally-hired appointments. The dependent variables of all models are CARs [0, +3] (%). CHARACTERISTIC refers to the appointee characteristic shown in the column specification. CEOPOST equals to 1 if the appointee is appointed to a CEO position and 0 otherwise. LAMBDA represents the inverse Mill's ratio of the first stage probit regression that estimates the likelihood of the bank making a single and externally-hired executive appointment announcement. All regressions include other control variables as in Table 6.The robust standard errors are in brackets. The symbols ***,**, * denote significance at the 1%, 5% and 10% level, respectively.

	AGE	# EXEC DIRECTORSHIPS	BUSYNESS	# NON-BANKING	IVY LEAGUE	PHD
Panel A: Regression results						
CEOPOST*CHARACTERISTIC	-0.01	1.64**	-25.56***	-3.51*	3.94*	3.61
	(0.16)	(0.78)	(5.23)	(2.12)	(2.29)	(3.15)
CHARACTERISTIC	0.14**	1.11**	-1.94*	-0.42	1.69	-0.38
	(0.06)	(0.55)	(1.12)	(0.46)	(1.18)	(1.37)
CEOPOST	-0.69	-0.72	-0.17	-0.41	-1.88	-1.42
	(8.13)	(1.14)	(1.03)	(1.12)	(1.24)	(1.13)
LAMBDA	0.07	-2.75	0.39	0.27	2.25**	0.82
	(1.33)	(1.74)	(1.25)	(1.32)	(1.12)	(1.33)
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed-effects	Yes	Yes	Yes	Yes	Yes	Yes
Single-, external appointments	252	252	252	252	252	252
R-Squared	14.90%	14.80%	22.90%	14.56%	15.30%	13.77%
Panel B: H0 = CEOPOST*CHARACTERISTIC + CHARACTERISTIC = 0						
F-test	0.76	10.44***	28.95***	3.57*	7.36***	1.29
Prob> Chi^2	(0.38)	(0.00)	(0.00)	(0.06)	(0.01)	(0.26)

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