

# **Changes in Bank Profitability Post-CEO Succession: Does Prior CEO Experience Improve Bank Performance?**

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## **Abstract**

Based on a unique hand-collected dataset of CEO succession events in US bank holding companies (BHCs), we find that prior CEO experience of the newly appointed CEO improves bank profitability post-CEO succession, but primarily in underperforming banks. We distinguish prior CEO experience based on where the experience was obtained and find that the performance effect is driven by the experience gained outside the bank. Moreover, our study indicates that new CEOs with previous CEO experience acquired outside the bank are more likely to enhance profitability through earnings manipulation than those who obtained CEO experience within the bank or those who do not have any prior CEO experience.

**Keywords:** CEO Succession; Prior CEO Experience; Bank Profitability; Earnings Manipulation

**JEL Classification:** G21; G34; J24

## 1. Introduction

Selecting a CEO is one of the most important events in an organization. Banks are more complex institutions and require employees with special skills (Philippon and Reshef, 2009), thus selecting the right CEO could give banks a significant competitive edge. Furthermore, banking sector plays an important role in the economy and some regulators have attributed the recent financial crisis to bank CEOs not having the necessary skills, raising the question on how to select an appropriate CEO in the banking industry (Federal Reserve, 2017; Office of the Comptroller of the Currency, 2019; European Banking Authority and European Securities and Markets Authority, 2021).

Over the past decade, there has been an important new trend in CEO succession with companies increasingly hiring executives with former experience as CEOs (Murphy and Zabochnik, 2007; Karlsson and Neilson, 2009). Several recent studies have explored the value of prior CEO experience on firm performance in non-financial industries (Elsaid et al., 2011; Hamori and Koyuncu, 2015; Bragaw and Misangyi, 2017). However, the banking industry has witnessed a similar trend which gets rare attention from academia. More importantly, it is unknown whether and how prior CEO experience affect bank performance. In addition, existing studies in non-financial firms have overlooked the fact that CEO experience may be gained in different contexts (Quinones et al., 1995).

To understand through which channel CEOs with different forms of prior CEO experience are associated with changes in firm's profitability in the post-succession period, we focus on newly appointed CEOs in the banking sector. To conduct the analysis, we carefully construct a unique hand-collected dataset that captures the information of 142 CEO succession events in bank holding companies (BHCs) from 1993 to 2015. The empirical analysis starts by examining the relation between prior CEO experience and the profitability changes after CEO

succession. The results indicate that prior CEO experience is positively related to bank profitability changes in the post-succession period—longer years of prior CEO experience is associated with a higher level of profitability improvement post-turnover. This contrasts with the findings in existing studies based on the influence on performance played by the previous experience of the newly appointed CEO as a CEO in other firms and on samples of non-financial firms (Elsaid et al., 2011; Hamori and Koyuncu, 2015).

In addition, previous studies suggest that certain contextual conditions under which prior CEO experience was acquired affect the performance consequences (Bragaw and Misangyi, 2017). Therefore, we argue that the place where CEO experience was obtained matters. More specifically, we investigate whether experience gained inside the bank group (Inside CEO experience, thereafter) and experience gained outside (Outside CEO experience, thereafter) play different roles<sup>1</sup>. Our results show that there is a significant positive relation between outside CEO experience and the change in bank profitability after succession. No effect is found on the experience gained inside the bank. The analysis indicates that the positive performance effect is mainly driven by outside experience, so that successors with prior CEO experience in a different organization bring better skill sets that enhance bank profitability. Also, we find a continuous positive relation between prior CEO experience and bank profitability change up to 5 years after the turnover event. Our results suggest that the new CEO's prior experience improves both short and long-term bank performance.

We cautiously interpret our results as the outcome of CEO succession can be driven by the succession context. In addition, there is a concern that endogenous matching between CEOs and firms is driving the results. For instance, banks with bad financial status might be more

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<sup>1</sup> In our study, the term Inside/Outside CEO experience refers to prior CEO experience obtained within or outside the bank group. The concept of inside/outside CEO experience is different from that of insider/outsider CEOs used in other academic studies. In this case, insider/outsider CEOs refer to CEO who were promoted internally or externally.

willing to appoint a more experienced CEO to enhance profitability. In this sense, the pre-turnover bank performance may drive the results in the analysis. To address the above concern, we control for the succession context in the empirical analysis. The results suggest that there is higher level of profitability improvement in poorly performing banks. Meanwhile, the positive effect of outside CEO experience on bank profitability change still holds. Our further analysis with an interaction term between outside CEO experience and poorly performing banks indicates that prior CEO experience helps to improve performance only in banks that performed poorly before the CEO turnover.

To identify the channel through which prior CEO experience improves the bank profitability, we investigate whether the performance improvement is due to any change in each item on the bank income statement. We find that outside CEO experience is not related to the change in any income item. By contrast, it is negatively associated with the change in bank cost. The empirical results indicate that successors with outside CEO experience are more likely to cut down non-interest cost to enhance bank profitability.

Existing studies show that newly appointed CEOs tend to engage in greater income-increasing manipulation in the early years of their tenure due to career concerns (Fama, 1980; Holmstrom, 1982; Gibbons and Murphy, 1992; Hermalin and Weisbach, 1998; Holmström, 1999). We speculate that the profitability improvement post-CEO succession may be an outcome of the new CEO's earnings manipulation, especially for CEO with experience gained outside the bank group. To test our conjecture, we construct a proxy for CEO earnings manipulation in banks: discretionary Loan Loss Provision (LLP) (Beatty, A.L. et al., 2002; Bushman and Williams, 2012; Beatty, A. and Liao, 2014; Cohen et al., 2014; Jiang et al., 2016). The results show that outside CEO experience is negatively related to the change in discretionary Loan Loss Provision (LLP). The results indicate that the new CEOs with prior CEO experience obtained from outside the bank tend to improve bank profitability through

managing the adjustable parts of expenses—the non-interest expenses such as employment salaries, property and equipment expenses, as well as understating the discretionary part of LLP, in order to boost profitability. In addition, as CEOs with outside CEO experience are often outsiders, our results also support the idea that CEOs recruited from outside the company are more likely to manipulate firm earnings than those promoted from inside, because they have a stronger desire to demonstrate superior performance immediately after taking the helm (Kuang et al., 2014). This is an important ethical issue which has not been fully addressed in the literature.

Our paper contributes to the existing literature in the following ways: First, the study contributes to the stream of research on the importance of CEO characteristics for firm performance (Adams et al., 2005; Bennedsen et al., 2006; Delgado-García et al., 2010; Ramdani and Witteloostuijn, 2010; Espedal et al., 2012; Kaplan et al., 2012; Custódio et al., 2013; Louca et al., 2020), and contributes to the studies on CEO experience (Elsaid et al., 2011; Hamori and Koyuncu, 2015; Bragaw and Misangyi, 2017). We extend the definition of “prior CEO experience” in a banking context, accounting for not only the experience as a top CEO but also the experience as a subsidiary/division leader. Our study documents an opposite result to the related literature on non-financial firms. While previous studies in CEO experience found a negative relation between prior experience and firms’ accounting performance (Elsaid et al., 2011; Hamori and Koyuncu, 2015), our analysis supports the hypothesis that prior CEO experience improves bank profitability. Moreover, our paper differentiates inside and outside CEO experience. We find that generally assuming, as previous studies did, that all types of prior CEO experience is important, is likely to mask the contribution of inside/outside CEO experience.

Second, our paper contributes to the research on earnings management and earnings manipulation literature in banks. Although studies in the banking industry have investigated

earnings management in many aspects, for instance, earnings management and earnings decline (Beatty, A.L. et al., 2002), the relation between earnings manipulation and bank stock return (Kanagaretnam et al., 2009), bank earnings management and tail risk (Cohen et al., 2014), earnings management and discipline of banks' risk-taking (Bushman and Williams, 2012), no study examines banks' earnings management by newly appointed CEOs and whether it is related to specific CEO characteristics. By studying the features of bank earnings management surrounding the CEO turnover event, we obtain evidence that earnings manipulation in the form of understating bank discretionary LLP can partly explain the bank profitability improvement in the post-succession period. Moreover, we find this is more likely to occur for new CEOs with prior CEO experience obtained outside the bank.

Furthermore, the study extends the limited number of studies on CEO succession in banks. Although CEO succession has been studied for decades, the majority of existing studies are restricted to non-financial firms and there is a lack of attention given to the banking sector. Several studies concerning the banking industry mainly focuses on the question as to what drives CEO turnover (Webb, 2008; Palvia, 2011; Schaeck et al., 2011). However, few studies look at the effect of CEO characteristics of the newly appointed CEOs. To the best of our knowledge, our paper is the first to investigate the impact of CEO characteristics on bank performance in CEO succession events, and is the first to examine the long-term performance effect of CEO succession in the banking sector.

The rest of the paper is organized as follows. Section 2 summarizes the existing literature and develops hypotheses. Section 3 describes the data and variables. Section 4 discusses the methodology and empirical results. Section 5 provides some additional test and section 6 gives conclusions.

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

## 2.1 Prior CEO Experience and Firm Performance

As CEOs are responsible for firms' strategy, management and performance, and requires comprehensive and specific skills, it is reasonable that the previous experience of a CEO matters because of the acquired human capital and the enhanced understanding in managing the firm, and in particular, if the experience comes from a similar position before taking the helm. Human capital theory emphasises that an individual's ability/skill/knowledge are directly related to his/her past experience and career path (Becker, 1993). In such a case, prior CEO experience should be beneficial to the new firm as the newly appointed CEO brings honed general management skills (Harris and Helfat, 1997; Bailey and Helfat, 2003; Murphy and Zabojnik, 2007). Furthermore, social capital theory emphasises the importance of social network and resources in individual's career success (Seibert et al., 2001). For example, many scholars have found that, to be successful in his or her job, a newly appointed CEO needs to understand the company culture and have a good relationship with the existing board of directors (Zhang and Rajagopalan, 2003). In such a case, under both human capital theory and social network theory, past CEO experiences should positively relate with firm performance.

In addition, compared with non-financial firms, banks are more complex and require managers with special knowledge and skill sets (Philippon and Reshef, 2009). The job-specific experience from prior CEO positions can bring forward some valuable skills to the current position. In addition, banks are similar in their business. Those in our sample are all traditional commercial banks which focus on lending business. We speculate, therefore, that the skills and experience obtained from a similar position are more easily transferred to a new position. Based on the above reasoning, it is highly likely that a successor's prior CEO experience has a positive effect on bank performance after the CEO succession. Thus we propose:

*Hypothesis 1: a CEO's prior CEO experience is positively associated with the change in bank profitability post-CEO succession.*



## **2.2 Firm Performance and Where the Prior CEO Experience was Gained**

The prior CEO experience can be gained in different contexts and this matters for firm performance. Along these lines, Bragaw and Misangyi (2017) contend that the beneficial effect of prior CEO experience on market performance is contingent on the context in which such skills are developed. They document that when CEOs gain their experience in a dynamic industry, it will ameliorate the negative effect such experience has on subsequent market-based performance. To take a further step, Bailey and Helfat (2003) argue that CEO experience within the firm/industry have a firm/industry-specific human capital and this type of human capital is not easily transferable.

For banking industry, we argue that an important perspective regarding the context is whether the prior CEO experience was obtained from inside or outside the company. As large commercial banks are normally operated as bank groups, prior CEO experience as a bank CEO can be divided into CEO experience gained inside the bank group, and experience gained outside.

Although no study has analysed the context of prior CEO experience in terms of that gained inside or outside the firm, there have been extensive studies on the origin of new CEOs. Existing studies in the succession area have grouped CEO turnover as internal and external successions based on the origin of the new CEO. The CEO is an outsider if employed at the firm for one year or less at the time of the succession, and all other CEOs are classified as insiders (Parrino, 1997; Huson, Mark R et al., 2001). Earlier studies have done a lot of work regarding how CEO origin affects the firm's accounting performance. However, a consensus has not been reached. For instance, Huson, Mark R. et al. (2004) find a positive relation between outside appointment and firms' operating performance. In contrast, Zajac (1990) documents that firms appointing insider CEOs have better profitability after succession events.

There are also studies showing the mixed consequences of outside succession (Davidson et al., 1990; Davidson III et al., 2002; Bailey and Helfat, 2003).

There is a trend that companies appear to have a growing appetite for hiring outside CEOs, particularly those who have prior experience as a CEO (Murphy and Zabochnik, 2007; Elsaid et al., 2011). These trends reflect a shift in the relative importance of “general managerial ability” (managerial skills critical in leading a complex modern corporation but not specific to any organization) and “firm-specific managerial ability” (skills, knowledge, contacts, and experience valuable only within the organization) (Murphy and Zabochnik, 2007). It is assumed that when firms hire outsider CEOs, they choose candidates with high general skills. Similarly, insider CEOs are more likely to have high firm-specific skills (Palomino and Peyrache, 2013). Studies on generalists and specialists find evidence that generalist CEOs get higher payment than their counterparts (Custódio et al., 2013) and are associated with higher expected returns (Mishra, 2014).

Our study aims to investigate whether banks’ accounting performance post-succession is affected by the context in which prior CEO experience was obtained—whether the experience was obtained from inside or outside the bank. It must be noted that the context where the prior CEO experience was obtained, and the origin of the CEO are two different but related concepts. CEO origin describes all the CEOs and distinguishes between those hired from inside the company and outside the company. By contrast, the context where the prior CEO experience was obtained focuses on only those CEOs who have prior CEO experience and examines whether it was gained within or outside the bank. However, there are some links between the two concepts, for instance, a newly appointed CEO with prior CEO experience obtained within the bank is highly possible to be an insider at the time of the appointment. Likewise, there is a high possibility that one with prior CEO experience gained outside the bank is an outsider. Our sample confirms the overlap and inconsistency of the two concepts. As the results regarding

the performance effect of CEO origins remain blurred, and there is lack of evidence found in CEO experience studies, it is still an open question how bank profitability is affected by where the prior CEO experience was obtained. Thus, we make two alternative hypotheses regarding the relation between two types of prior CEO experience and the change in bank profitability:

*Hypothesis 2a: prior CEO experience gained inside the bank is positively associated with the change in bank profitability post-CEO succession.*

*Hypothesis 2b: prior CEO experience gained outside the bank is positively associated with the change in bank profitability post-CEO succession.*

### **2.3 The Succession Context and Performance Effect**

The outcome of CEO succession can be driven by the succession context. As noted by Finkelstein et al. (2009), it is not the event of CEO succession per se, but the succession context, that affects post-succession firm performance. The succession type is an important context that may determine the succession outcome through strategic change or strategic continuity. For example, according to power circulation theory (Ocasio, 1994; Ocasio and Kim, 1999), a contender succession coincides with a mandate for strategic change. In this situation, the succession reflects a successful internal power contest against the CEO, and the successor is a contending executive who has won the support and approval of the board of directors. They are more likely to be charged with a mandate to initiate strategic change, rather than a mandate to maintain strategic continuity. In contrast, if an inside successor is appointed following the predecessor's ordinary retirement rather than dismissal, the successor's mandate is more likely to maintain strategic continuity (Brady and Helmich, 1984; Datta and Rajagopalan, 1998; Friedman and Singh, 1989; Shen and Cannella, 2002). In other words, a forced turnover (CEO dismissal) is more likely to be followed with strategic change, while a voluntary turnover (CEO retirement) is more likely to be followed with strategic continuity.

Existing studies have shown a negative relation between firm performance and CEO turnover. There is an increased likelihood of CEO turnover following poor firm performance (Coughlan and Schmidt, 1985; Warner et al., 1988; Weisbach, 1988; Parrino, 1997; Huson, Mark R. et al., 2004; Louca et al., 2020). Poor performance typically makes organizations more open to changes in the status quo, and under such conditions, the board and other stakeholders are more likely to urge the changes to be made (Boeker, 1989). If a CEO is forced out due to poor performance, the board would expect the new CEO to initiate strategic changes to improve firm performance. Huson, Mark R. et al. (2004) find evidence that the change in firm performance preceding forced turnover is larger in absolute value than that preceding voluntary turnovers.

Based on the above analysis, the succession context and specifically, whether the succession is forced or voluntary, is a non-negligible factor that affects the level of firm performance change post-succession through strategic change or continuity. Due to the data availability, we are not able to access the data whether the succession is forced or voluntary. However, since a forced CEO turnover is usually associated with poor firm performance, we use pre-turnover bank performance as a proxy for forced turnover vs. voluntary turnover. When the bank is performing poorly, a forced turnover is more likely to happen and the board is more likely to urge strategic changes, which may bring greater improvement in bank performance. To empirically test whether there is a link between pre-turnover bank performance and the succession outcome, we propose that:

*Hypothesis 3: poorly performing banks are associated with greater changes in bank profitability post-CEO succession.*

## **2.4 External CEO Experience, Firm Risk and Post succession performance**

There is evidence that newly appointed CEOs tend to engage in greater income-increasing manipulation in the early years of their tenure due to career concerns (Ali and Zhang, 2015). Previous studies argue that the market's perception of a CEO's ability is a valuable asset, because it is associated with several long-term benefits to the CEO, such as higher future compensation, reappointments, and managerial autonomy (Fama, 1980; Hermalin and Weisbach, 1998). The market tends to be more uncertain about CEOs' ability in the early years of their services, thus earnings reported during this period would have a greater effect on the market's assessment of their ability (Fama, 1980; Gibbons and Murphy, 1992; Hermalin and Weisbach, 1998; Holmström, 1999). To avoid being labelled as having low ability, which may adversely affect their future compensation and autonomy and may lead to their dismissal, CEOs are likely to have strong incentives to report good performance in the early years of their service. Holmstrom (1982) argues that managers are motivated to work harder in the early years of service in order to generate good performance, while the market is still assessing their ability. To favourably influence the market's perception of their ability, new CEOs also have greater incentives to overstate earnings in the early stage of their service (Coates et al., 2002; Kusnadi et al., 2016; Guthrie et al., 2017). Ali and Zhang (2015) find that discretionary accruals are significantly higher and abnormal discretionary expenses, such as R&D expenses, are significantly lower in the early years (the first three years) than in the later years of CEOs' service. The annual ROA overstatement in the early years as compared to the later years of CEOs' service is about 25 percent.

Based on the above evidence, we suspect that newly appointed CEOs more likely to adopt the account method and manipulate banks' earnings at a greater magnitude, thus there would be changes in the level of earnings manipulation surrounding the CEO appointment. Furthermore, successors with more prior CEO experience possess more knowledge and skills in managing banks, thus we conjecture that experienced CEOs are more likely to manipulate

earnings towards their aims. While new CEOs have the motivation to boost bank profitability through earnings management, the place where the CEO is promoted might affect the incentive. Kuang et al. (2014) examine the influence of CEO origin on earnings management and find that outside CEOs engage in greater income-increasing manipulation in the early years of their tenure. Previous studies suggest that external labour market considerations, contract constraints, board pressures, and similar factors cause the job security of CEOs recruited from outside the company to relate more closely to firm performance than is the case for CEOs promoted from inside (Friedman and Saul, 1991; Hermalin and Weisbach, 1998; Shen and Cannella, 2002). As a result, outside CEOs usually exhibit a stronger desire to demonstrate superior performance after taking the helm. Combined with the context of our study, CEOs who gained prior CEO experience from outside the organization are likely to be outsiders, and we expect that those CEOs have more incentives to prove their ability by improving bank performance, so are more likely to engage in earnings management. Thus we propose:

*Hypothesis 4: prior CEO experience gained outside the bank is positively associated with the change in CEO earnings manipulation prior- and post-CEO succession.*

### **3. Data and Variables**

#### **3.1 Sample and Data**

This paper focuses on new CEO appointments in large, publicly traded US BHCs between 1993 and 2015. We use ExecuComp as the starting point to form the sample. Although ExecuComp provides data since 1992, we drop this year because of the small number of observations. Following Fahlenbrach and Stulz (2011)'s method, we download firm-year observations for firms with Standard Industry Classification (SIC) codes between 6000 and 6300 from year 1993 to 2015, and exclude firms with SIC code 6099 (Functions Related to Depository Banking, not elsewhere classified), 6111 (Federal Credit Agencies), 6141 (Personal

Credit Institutions), 6153 (Short-Term Business Credit Institutions, except Agricultural), 6159 (Miscellaneous Business Credit Institutions), 6163 (Loan Brokers), 6200 (Security & Commodity Brokers), 6211 (Security Brokers & Dealers), and 6282 (Investment Advice). In addition, we manually go through the list of firms with SIC code 6199 (Finance Services) and exclude Renn Fund Inc. We exclude these firms because they are not in the lending business. This leaves 269 unique banks.

We only keep records for CEOs on a yearly basis and identify a new CEO appointment as taking place when the name of the annual CEO changes from the previous year within one bank. From this initial list, we manually verify the appointment information according to banks' annual reports and proxy statements. Only the records with the correct information are kept. We drop CEO succession events that happen after mergers and acquisitions, because it is difficult to compare bank performance pre and post the event. We also drop the events where two co-CEOs are appointed at the same time. In addition, as the primary analysis looks at bank profitability in two years post-succession, we only keep observations where the CEO stays in the position for at least two years. Finally, we only retain CEOs for whom detailed background information can be collected.

We then collect information for newly appointed CEOs. We retrieve CEO age information from ExecuComp and recover missing values from Bloomberg. Other information such as CEO origin, education background, industry experience, prior CEO experience is hand-collected from a variety of data sources including: companies' annual reports (10-K report in SEC filings), proxy statements (DEF 14A report in SEC filings), S&P Capital IQ, Bloomberg and web sources. By doing this, we construct a unique dataset for CEOs' demographic and background information. The accounting data for banks is obtained from Compustat. The market data is collected from the Centre for Research in Securities Prices (CRSP) database. Information of board size and board independence is obtained from BoardEx and Institutional

Shareholder Services (ISS). We retrieve data from Bloomberg and S&P Capital IQ to fill some missing data. Our final sample consists of 142 CEO successions from year 1993 to 2015, taking place in 99 unique banks. The first CEO succession event we record occurs in November 1993 and the last succession event occurs in November 2015.

## **3.2 Measures**

### **3.2.1 Dependent Variables**

The main question of this study is how prior CEO experience of the newly appointed CEO affects the bank profitability change post-CEO succession. We first examine the change in ROA (**ROA\_change**), an indicator of profitability. **ROA\_change** is measured by the difference of ROA before and after the succession. In choosing the “event window”, we use a similar approach as in Huson, Mark R. et al. (2004)’s study. Profitability before succession is measured by ROA in year  $t-1$ , and profitability after succession is calculated as the average over years  $t+1$  and  $t+2$ , the post two years after CEO succession event. ROA is calculated using net income divided by book value of assets. We choose accounting-based performance measures instead of short-term market-based performance measures because, as noted by previous studies, realized long-run outcomes of public events and announcements need not be consistent with short-run market reactions. The initial reaction of the market may be an inefficient long-run predictor of firm value (DeLong and Deyoung, 2007). To control for industry effects, we use an industry-adjusted ROA, which is defined as a bank’s ROA minus the mean ROA of all other banks in the specific year. This approach has been adopted by other CEO-related studies (Parrino, 1997; King et al., 2016). By using an industry-adjusted performance measure, we can eliminate any effect that is driven by the outside environment and is beyond the CEO’s control (Holmstrom, 1982; Gibbons and Murphy, 1990; Schaeck et al., 2011; Jenter and Kanaan, 2015).



In order to study the channel of profitability improvement, we break down the bank income statement and examine the items that affect bank profitability. The first step is to look at the change in bank income (**Income\_change**), the difference of industry-adjusted income between year-1 and the average over years t+1 and t+2. Income is the total current operating revenues scaled by total assets. We then examine both the interest income and non-interest income. The change in interest income (**Interest\_change**) is the difference of industry-adjusted interest income between year t-1 and the average over years t+1 and t+2. Interest income is the value of net interest income divided by the sum of net interest income and non-interest income. The change in non-interest income (**Non\_interest\_change**) is the difference of industry-adjusted non-interest income between year t-1 and the average over years t+1 and t+2. Non-interest income is the value of non-interest income divided by the sum of net interest income and non-interest income.

In the next step, we examine whether the change in profitability is a result from the cost management of the new CEOs. We compute the change in bank cost (**Cost\_change**) as the difference of industry-adjusted cost-income ratio between year t-1 and the average over years t+1 and t+2. Cost-income ratio is the total current operating expenses divided by the sum of net interest income and non-interest income. We then decompose cost and analyse each cost item. First, we examine the change in interest expense (**Intexp\_change**), which is the difference of industry-adjusted interest expense between year t-1 and the average over years t+1 and t+2. Interest expense is the value of interest expense divided by the sum of interest expense and non-interest expense. Second, we examine the change in non-interest expense (**Nonintexp\_change**), which is the difference of industry-adjusted non-interest expense between year t-1 and the average over years t+1 and t+2. Non-interest expense is the value of non-interest expense divided by the sum of interest expense and non-interest expense. Third, as loan loss provision (LLP) is an important part of banks' operating expenses, we investigate

the change in LLP (**LLP\_change**), the difference of industry-adjusted LLP between year t-1 and the average over years t+1 and t+2.

We also break down LLP into discretionary and non-discretionary LLP (estimation method is illustrated in section 4.6.3). With the same method, we construct the change in discretionary LLP (**Discre\_LLPC\_change**) as the difference of industry-adjusted discretionary LLP between year t-1 and the average over years t+1 and t+2. The definition and estimation method of discretionary LLP will be explained in detail in section 4.6.3. Likewise, the change in non-discretionary LLP (**NonDiscreLLP\_change**) is the difference of industry-adjusted non-discretionary LLP between year t-1 and the average over years t+1 and t+2. **NonDiscreLLP** is the value of total LLP subtracted by the amount of discretionary LLP.

The last part of the analysis investigates whether the change in profitability improvement is due to the new CEO's risk-taking behaviour. We compute two measures of the change in bank risk pre- and post-CEO succession. The first measure is the change in earnings volatility (**VOL\_change**). Earnings volatility pre-succession is calculated as the standard deviation of industry-adjusted ROA over years t-3 through t-1, while earnings volatility post-succession is the standard deviation of industry-adjusted ROA over years t through t+2. The second measure is the change in bank leverage risk (**CAPR1\_change**), the difference of Tier 1 capital ratio between year t-1 and the average over years t+1 and t+2. Tier 1 capital ratio is the fraction of Tier 1 regulatory capital to risk-weighted assets.

We multiply all the changes by 100 to indicate the percentages of change in these variables. These results in the tables indicate how many percentage points of change occur pre and post the CEO succession event.

### **3.2.2 Independent Variables**

The study looks into how bank profitability changes are affected by a new CEO's prior CEO experience and where the experience was obtained. Quinones et al. (1995) develop a framework of work experience measurements, suggesting that the appropriate measurement mode for job-specific experience is the time spent on the job. Employing this concept, our first method measures prior CEO experience as the number of years that each CEO spent in prior CEO positions. **CEO\_years** is defined as the natural logarithm of total number of years the successor worked as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one. As many BHCs are conglomerates with a number of subsidiaries and various divisions, we identify prior CEO experience if the successor has prior experience in the following situations: 1) The successor worked as the top CEO of a company or bank group before the appointment. For example, Walter V. Shipley was appointed as CEO of JPMorgan Chase & Co in 1994 and he previously worked as the CEO of the Chemical Banking Corp from 1983 to 1991. 2) The successor worked as the CEO of a bank subsidiary. For instance, Henry L. Meyer was hired as the new CEO of KeyCorp in 2001 and previously he was the CEO of KeyBank National Association, a subsidiary of KeyCorp. 3) The successor worked as the CEO of a market division. For example, James M. Wells, III, the new CEO of Suntrust Bank Inc in 2007, was the president and CEO of the bank's Mid-Atlantic region from January to August 2000.

We find that the length of a new CEO's prior CEO experience varies substantially within our sample. While some new CEOs have no prior CEO experience at all, some have a short period of experience in a former CEO position, and some CEOs have long years of prior CEO experience. For instance, Dennis J. Kuester, the new CEO of Marshall & Ilsley Corp in 2002, has 3 months' experience in a prior CEO position—he was the CEO of Marshall & Ilsley Bank, a subsidiary of Marshall & Ilsley Corporation, from October 2001 to January 2002. Larry D. Richman, the new CEO of Privatebancorp Inc in 2007, has 9 months' experience in a prior

CEO position—he was the CEO of LaSalle Bank, N.A. from March 2007 to November 2007. In contrast, some CEOs have a lot of prior CEO experience. For example, George F. Jones, Jr., the new CEO of Texas Capital Bancshares Inc in 2008, holds about 10 years’ prior CEO experience in Texas Capital Bank National Association. The most experienced CEO in our sample is Robert G. Wilmers, the new CEO of M&T Bank Corp in 2007, holds experience of 22 years and 2 months in former CEO positions.

Based on where the CEO experience was gained, prior CEO experience is split into two types: prior CEO experience gained inside the bank, and prior CEO experience gained outside the bank. **CEO\_years\_inside** is defined as the natural logarithm of total number of years the successor worked as a CEO within the bank group before the appointment, plus one. **CEO\_years\_outside** is the natural logarithm of total number of years the successor worked as a CEO outside the bank group prior to the current position, plus one. We find that some CEOs only have prior CEO experience within the bank group. For instance, E. Philip Wenger, the new CEO of Fulton Financial Corp in 2013, has 3 years’ prior CEO experience. This was gained in Fulton Bank NA, a subsidiary of Fulton Financial Corp. In contrast, some CEOs only have prior CEO experience gained outside the bank. For example, Russell D. Goldsmith, II, the new CEO of City National Corp in 1995, had prior CEO experience for 8 years, with all the experience obtained in Republic Pictures Corporation, a movies and entertainment company. There are also some CEOs with prior CEO experience both inside and outside the bank. For example, Kessel D. Stelling, Jr., the new CEO of Synovus Financial Corp in 2010, was the CEO of Riverside Bancshares Inc from 1996 to 2006. He was also a former CEO in the subsidiary of Synovus Financial Corp from 2008 to 2010.

We measure prior CEO experience with two alternative dimensions as a robustness test. One alternative measure of prior CEO experience is the number of CEO positions that the successor has held before their appointment. We find that some CEOs hold more than one CEO

positions prior to the current position. Take Mark A. Hoppe, the new CEO of Taylor Capital Group Inc in 2010 as an example. Before the appointment, Mark was previously the CEO of Cole Taylor Bank from January 2008 to March 2010, CEO of LaSalle Bank Midwest National Association from September 2005 to December 2007, and CEO of Standard Federal Bank from April 2005 to September 2005. John C. Dean, Jr., the new CEO of Central Pacific Financial Corp in 2011, worked in 6 CEO positions before, including the experience as the CEO of First interstate System Inc from 1981 to 1986, CEO of Silicon Valley Bank from 1993 to 2001, CEO of Entrepreneurs' Foundation from September 2001 to February 2002. He also has CEO experience in First Interstate Bank, First Interstate Bank of Washington NA, and Pacific First Bank. We believe that the number of prior CEO positions will affect the new CEO's business decisions, thus bringing differences to bank performance and risk. We measure **CEO\_positions** as the natural logarithm of total number of CEO positions the successor held as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one. Likewise, **CEO\_positions\_inside** is defined as the natural logarithm of total number of CEO positions the successor held within the bank group before the appointment, plus one. **CEO\_positions\_outside** is defined as the natural logarithm of total number of CEO positions the successor held outside the bank group prior to the current position, plus one.

Another measure of prior CEO experience is a dummy variable. **ExCEO** is a dummy that equals one if the successor held at least one CEO position before their appointment. **ExCEO\_inside** is a dummy that equals one if the successor held at least one CEO position within the bank group prior to their current position. **ExCEO\_outside** is a dummy that equals one if the successor held at least one CEO position outside the bank group prior to their current position.

Table 1 presents a distribution of CEO successions over the sample years. The table lists the total number of CEOs in each year, the number of new CEO appointments for the year, and among them how many are insiders/outside. There are 142 CEO appointments between year 1993 and 2015, among the 142 new CEOs 113 are insiders and 29 are outsiders.

[Insert Table 1 here]

Table 2 gives a distribution of the new CEOs' prior CEO experience in our sample. Panel A shows the number and percentage of CEOs with prior CEO experience, prior CEO experience inside the bank, and prior CEO experience outside the bank. Among the 142 CEO successors 41.55% have prior CEO experience before the appointment. 15.49% obtained the experience within the bank, while 29.58% obtained the experience outside the bank. In addition, we find that almost all the CEOs with prior CEO experience inside the bank are insider CEOs—among the CEOs who gained prior CEO experience within the bank, 95.45% of them are insiders using the definition in this study. There is one special case in our sample who gained prior CEO experience inside the bank is defined as outsider based on the definition in our analysis. Vikram S. Pandit, the new CEO of Citigroup Inc in 2007, was former CEO of the bank's market divisions before the appointment. However, his work experience in Citigroup was less than one year. Thus Vikram S. Pandit is an outsider based on the definition of "Outsider" (the definition of Outsider is given in Section 2.3.3).

[Insert Table 2 here]

Meanwhile, for CEOs who gained the experience outside the bank, the proportion of insiders and outsiders are nearly half-and-half. We find 47.62% outsiders and 52.38% insiders among the CEOs who obtained the experience outside the bank. The results further confirm the necessity to differentiate the two concepts: the context where prior CEO experience was obtained, and the insider/outsider CEO: where the CEO was appointed from. Panel B of Table

2 shows the distribution of how many CEO positions the new CEO held prior to the current position. It shows that 22.54% of the new CEOs hold one CEO position before the appointment, and 19.01% hold more than one prior CEO positions. The table also presents the distribution of the number of prior CEO positions inside and outside the bank.

### 3.2.3 Control Variables

To take account of other possible explanations of changes in bank profitability, we control for factors at both the CEO level and the firm level. At the CEO level, the control variables include CEO age (**CEO Age**), outsider (**Outsider**), industry experience (**Industry Experience**), and education background (**MBA Degree** and **AF Degree**). **CEO Age** is the natural logarithm of the age of the new CEO at the time of appointment. **Outsider** is a dummy that equals one if the CEO is an outsider and zero if the CEO is an insider. The study follows Parrino (1997) and Huson, Mark R et al. (2001)'s definition that an outsider is a new CEO who has been employed at the firm for one year or less at the time of the succession, and all other CEOs are classified as insiders. **Industry Experience** is defined as the natural logarithm of total number of years the CEO has worked in financial firms such as banks, insurance companies and accounting firms, plus one. **MBA Degree** is a dummy that equals one if the CEO has an MBA degree. **AF Degree** is a dummy that equals one if the CEO has an accounting or finance related degree.

In terms of bank-specific factors that may influence the dependent variables, we control for firm-level conditions measured in the year prior to the CEO turnover event, including bank size, bank age, equity capital, charter value, and deposits. Earlier studies on executive succession have consistently identified the role of firm size and firm age on organization performance (Tushman and Rosenkopf, 1996; Karaevli, 2007). Therefore, we put **Bank Size** and **Bank Age** as control variables for performance. **Bank Size** is measured as the natural

logarithm of total assets. **Bank Age** is measured as the natural logarithm of total number of years the bank has been in Compustat. There is evidence that the level of capitalisation and investment opportunities also influence bank performance (Berger and Bouwman, 2013; Demirguc-Kunt et al., 2013), thus the analysis controls for these traits through **Equity Capital** (the fraction of equity book value to total assets, which is also called the equity ratio) and **Charter Value** (the natural logarithm of market to book value of equity). We also control for **Deposits** (the fraction of customer deposits to total assets) as banks with a larger amount of deposits are less likely to face funding fragility thus influencing performance (Demirguc-Kunt et al., 2013).

Recent studies have documented the influence of board size (Coles et al., 2008) and board independence (Dulewicz and Herbert, 2004; Dahya and McConnell, 2007) on firm performance. We include both as corporate governance controls. **Board Size** is measured as the natural logarithm of total number of directors sitting on the board. **Board Independence** is measured as the ratio of independent directors to the total directors on the board.

In order to control for bank characteristics and board features before CEO appointment, all firm-level and corporate governance controls are lagged by one year, thus the values in year  $t-1$  are applied. All the variables are winsorized at the 2.5% and 97.5% levels. Table 3 presents summary statistics of the variables used in the analysis. The variable definitions and data source are given in Table A1 in the Appendix.

[Insert Table 3 here]

## 4. Methodology and Results



#### 4.1 The New CEO's Prior CEO Experience and Changes in Bank Profitability

The main test of the study addresses the question: does prior CEO experience of the new CEO affect bank profitability post-CEO succession? In this section, we investigate the relation between prior CEO experience and the change in bank profitability measured by change in ROA. The analysis is conducted with the following regression model:

$$\text{The Change in Bank Profitability} = \alpha + \beta_1 * \text{Prior CEO Experience} + \gamma * \text{Controls} + \varepsilon \quad (1)$$

We follow Huson, Mark R. et al. (2004)'s method in studying the changes in performance surrounding the CEO succession. Bank profitability before CEO succession is measured as the industry-adjusted ROA in year t-1. Bank profitability after the succession is measured as the average industry-adjusted ROA over event years t+1 and t+2. The industry-adjusted ROA is ROA of the bank minus the mean value of the industry ROA in the specific year.

To examine the relation between prior CEO experience and bank performance, we run ordinary least squares (OLS) regressions in which the dependent variable is **ROA\_change**, and the independent variable is **CEO\_years**. Columns (1) to (3) of Table 4 report the results. In column (1) we include only bank-level controls such as bank size, bank age, equity capital, charter value, and deposits. In column (2) we add CEO-level controls including CEO age, whether the CEO is an outsider, the CEO's industry experience, and the education background. In column (3) we further add corporate governance controls: board size and board independence. As our dataset covers about two decades during which there are substantial variations in economic conditions and the regulatory environment, we include year fixed effect in all the specifications.

[Insert Table 4 here]

The results show that prior CEO experience is positively associated with the change in bank profitability: the independent variable enters all model specifications with a positive coefficient

that is significant at customary levels. The effect holds when we add CEO-level controls and corporate governance controls. The results for prior CEO experience are statistically significant: a one standard deviation increase in prior CEO experience leads to an increase in the change of ROA by 0.211 percentage using the coefficients obtained from column (1). And with the coefficients obtained from column (2) and column (3), the figure is 0.213 and 0.179 respectively.

Our results are different from the findings in previous studies on prior CEO experience in non-financial firms. While Elsaid et al. (2011) and Hamori and Koyuncu (2015) find a negative relation between prior CEO experience and firms' accounting performance, our study documents an opposite result, that prior CEO experience creates value to banks' accounting performance post-succession. One reason for the inconsistency might be: we test the relation in a new industry—the banking sector. Previous studies explain the negative relation with the argument that prior CEO experience is firm-specific and difficult to transfer. CEOs who come into their jobs with prior CEO experience tend to have a hardened worldview and set of actions, which makes it slower for them to adapt and learn in a new environment (Bragaw and Misangyi, 2017). Given this explanation, we argue that the portability of prior CEO experience is different in the banking industry. The banking sector is unique—they are more complex organizations and the operation of banks require special skills (Philippon and Reshef, 2009) so prior experience in a similar position would be valuable to management activities in banks. In addition, the banking industry is homogeneous in the nature of business (the banks in our sample are all commercial banks that focus on the lending business), thus the skills and experience obtained from a similar position would be easier to be transferred to the new CEO position, and improve bank profitability. The empirical results support our hypothesis.

Moving to the analysis of the control variables, we find weak evidence that the change in bank profitability is negatively related to bank size—the coefficient is significant at the 10%

level after controlling for board size and board independence. This indicates that larger banks are associated with less improvement in profitability after CEO turnover events. The results also suggest that profitability changes are negatively associated with the level of equity capital and charter value, suggesting that better-capitalised banks and banks with higher charter values have less performance improvement. The coefficients of equity capital and charter value are significant at the 5% levels across all the specifications. Our results are generally consistent with existing studies on performance change (Huson, Mark R et al., 2001; Huson, Mark R. et al., 2004).

## 4.2 Does the Context Where Prior CEO Experience was Gained Matter?

In the next step, we examine whether the relation between prior CEO experience and the change in bank profitability is affected by the context where the experience was obtained. Prior CEO experience is distinguished between the experience gained inside the bank and the experience obtained outside the bank. The regression model below is applied to test this effect:

$$\begin{aligned} \text{The Change in Bank Profitability} = & \alpha + \beta_1 * \text{Inside CEO Experience} + \beta_2 * \text{Outside CEO} \\ & \text{Experience} + \gamma * \text{Controls} + \varepsilon \end{aligned}$$

(2)

The dependent variable in the model is **ROA\_change**, with **CEO\_years\_inside** and **CEO\_years\_outside** as independent variables. Columns (4) to (6) of Table 4 display the OLS results from regressing the change in bank profitability on two types of prior CEO experience. In column (4) we only include firm-level controls. Then we add CEO-level controls in column (5), and finally add corporate governance controls in column (6). The results show that the change in ROA is positively related to prior CEO experience gained outside the bank: outside CEO experience enters all model specifications with a negative coefficient that is significant at the 5% levels. This suggests that banks have a greater improvement in profitability when

they appoint a CEO with more prior CEO experience outside the organization. Specifically, a one standard deviation increase in outside CEO experience leads to an increase in the change of bank profitability by 0.186 percentage using the coefficients obtained from column (4). And the increase in the change of bank profitability is 0.265 and 0.255 percentage with the coefficients obtained from column (5) and column (6) respectively. In contrast, we find no significant effect of inside CEO experience on bank profitability changes post-succession.

Interestingly, we find the economic impact of CEO experience is stronger if we differentiate between inside and outside CEO experience. Comparing the results in column (3) and column (6) where all relevant controls are included, the economic significance of outside CEO experience is higher than prior CEO experience in general. In addition, the R-squared of the regression model also rises from column (3) to column (6). This suggests that differentiating the contexts of prior CEO experience is important both conceptually and in the empirical sense on its economic impact. Generally assuming that all types of prior CEO experience are important is likely to mask the importance of outside CEO experience.

With regard to the control variables, we find that the change in bank profitability is negatively related to bank size after adding the board governance controls. Profitability change is negatively and significantly related to the level of equity capital and charter value. The results are consistent with the analysis in the previous section.

In summary, whilst prior CEO experience enhances bank profitability in general, the context where the CEO obtained the experience matters. The positive performance effect is driven by the experience gained outside the bank, which indicates that the knowledge and skills obtained from a different organization create value to the bank. Thus hypothesis 2a is rejected and hypothesis 2b is supported.

### **4.3 Alternative Measures of Prior CEO Experience**

As a robustness test, we measure prior CEO experience with two alternative dimensions: the number of CEO positions that the successor has held before the appointment, and a dummy variable whether the successor held a former CEO position. Based on where the experience was obtained, we also construct the number of CEO positions that the successor held inside/outside the bank, and the dummy variable whether the successor held a CEO position inside/outside the bank before the appointment. We replicate the regression process in section 4.1 and 4.2, and change the independent variable accordingly. Table 5 presents the results. In regressions (1)–(6), prior CEO experience is measured with the number of positions. The independent variable in regressions (1)–(3) is **CEO\_positions**, and the independent variables in regressions (4)–(6) are **CEO\_positions\_inside** and **CEO\_positions\_outside**. The results suggest that the change in bank profitability is positively related to the number of CEO positions the successor held before the appointment. The more prior CEO positions the successor held, the greater improvement in bank profitability post-succession. In addition, the change in profitability is positively related to the number of CEO positions the successor held outside the bank, while no significant effect of inside CEO experience is found. The results are consistent with the findings in the previous section that the profitability improvement is driven by CEO experience gained outside the organization.

[Insert Table 5 here]

Columns (7)–(12) give results where prior CEO experience is measured with dummy variables. The independent variable in regressions (7)–(9) is **ExCEO**, a dummy that equals one if the successor held at least one former CEO position before the appointment. The independent variables in regressions (10)–(12) are **ExCEO\_inside** and **ExCEO\_outside**, dummy variables that equal one if the successor held at least one CEO position within/outside the bank group prior to the current position. In line with the prior analysis, it is found that banks have greater improvement in profitability if the successor is a former CEO before the appointment.

Successors with outside CEO experience are associated with more significant profitability improvement than those without prior CEO experience or the ones who gained the experience inside the bank.

To sum up, the results in this section reveal that banks appointing experienced CEOs have greater improvement in profitability, and the performance effect is driven by prior CEO experience obtained outside the bank. The results are consistent across different measures of CEO experience.

The analysis also shows that results become stronger empirically after differentiating between inside and outside CEO experience. For example, the impact of prior CEO experience with the dummy measure is weak (columns (7)–(9)). However, results become significantly stronger after differentiating between two types of CEO experience (columns (10)–(12)): the coefficient of outside CEO experience dummy is significant at the 5% levels in all the three specifications. The results further confirm the importance of considering the context where prior CEO experience is gained. The traditional model where people use prior CEO experience may underestimate the impact of outside experience.

#### **4.4 Does the Performance Effect Continue in a Longer Post-succession Period?**

So far, our analysis has documented that banks appointing more experienced CEOs, especially those who obtained the experience outside the bank, are associated with a greater improvement in profitability post-CEO succession. Although we have investigated the effect in two years post-succession: the profitability change from year  $t-1$  to the average over years  $t+1$  and  $t+2$ , it is unknown whether the performance effect continues in a longer period post-succession.

To answer this question, we replicate the analysis of previous sections and examine whether the change in bank profitability is affected by two types of prior CEO experience in up to five

years after the succession event. Results are reported in Table 6. Panels A, B and C present the performance effect in 3 years, 4 years and 5 years post-succession respectively. To make the analysis more convincing, we conduct tests with three measures of prior CEO experience: CEO experience measured by the number of years, the number of CEO positions held, and the dummy variables. The independent variables in regressions (1)–(3) are **CEO\_years\_inside** and **CEO\_years\_outside**. Independent variables in regressions (4)–(6) are **CEO\_positions\_inside** and **CEO\_positions\_outside**. Finally, independent variables in regressions (7)–(9) are **ExCEO\_inside** and **ExCEO\_outside**.

[Insert Table 6 here]

The results in Table 6 continuously show a positive relation between outside CEO experience and the change in bank profitability in post-succession years. And the coefficients are significant at the customary levels. Banks that appoint CEOs with outside CEO experience are associated with a greater profitability improvement up to 5 years after the succession. Meanwhile, the results are consistent across different measures of prior CEO experience. The sample size drops with time because we only keep CEOs who are still in position at the time the performance effect is examined.

#### **4.5 Does the Succession Context Matter?**

The findings in previous sections are consistent with an effect of prior CEO experience on a bank's accounting performance. However, it is possible that the outcome of CEO succession is driven by the succession context. For example, if the succession is a forced turnover due to poor performance, the successor is more likely to be charged with a mandate to initiate strategic change to improve firm performance. In this situation, the bank is more likely to have a larger extent of performance change after a new CEO appointment, irrespectively what kind of CEO is hired. In contrast, if the successor is appointed following the predecessor's ordinary

retirement rather than dismissal, the successor's mandate is more likely to maintain strategic continuity (Brady and Helmich, 1984; Datta and Rajagopalan, 1998; Friedman and Singh, 1989; Shen and Cannella, 2002). In this case, there should be less performance change after the succession. Another concern is that endogenous matching between CEOs and firms is driving the results. For instance, banks with bad financial status might be more willing to appoint a more experienced CEO to enhance profitability. In this sense, the pre-turnover bank performance may drive the results in the analysis.

To address the above concern, we control for the succession context in the empirical analysis. Due to the data constraint, we are not able to evaluate the impact of forced vs. voluntary turnover directly. However, since a forced CEO turnover is usually associated with poor firm performance, we use the bank's financial status pre-turnover as a proxy. We examine whether the change in bank profitability is affected by two types of prior CEO experience after controlling for the pre-turnover bank performance. Otherwise, the tests replicate exactly the setup in Table 4. Two dummy variables are used to measure bank performance pre-turnover. The first measure is **ROA\_neg**, a dummy that equals one if the bank's industry-adjusted ROA pre-turnover is negative. Columns (1)–(3) of Table 7 report the results after controlling for this dummy. The results show that poorly performing banks are associated with more significant bank profitability changes post-succession. At the same time, outside CEO experience is positively related to the change in profitability after controlling for these banks whose ROA is below the industry mean.

[Insert Table 7 here]

The second measure is **ROA\_p25**, a dummy that equals one if the bank's industry-adjusted ROA pre-turnover is below the 25<sup>th</sup> percentile of the sample. We obtain similar results with this dummy, as reported in columns (4)–(6) of the table. For completeness, we also conduct a regression with alternative measures of prior CEO experience when pre-turnover bank



performance is included and obtain similar findings. The results are not reported. To conclude, our results in this section support hypothesis 3 that poorly performing banks are associated with greater changes in bank profitability post-CEO succession. Meanwhile, prior CEO experience outside the bank is positively related to the profitability change after controlling for poorly performing banks.

To capture the influence of poorly performing banks, we estimate models with interaction terms between outside CEO experience and ROA dummies. The results in Table 8 suggest that outside CEO experience is associated with profitability improvement only in banks that performed badly pre-turnover. We replicate the test with alternative measures of prior CEO experience and obtain consistent results across all the measures.

[Insert Table 8 here]

Overall, the analysis discussed in this section suggests that succession context is a non-negligible factor that affects post-succession bank performance. The positive relation between outside CEO experience and profitability improvement still exists, however, after controlling for the succession context. Further analysis with the interaction term indicates that prior CEO experience outside the bank helps to enhance profitability only in banks with poor financial status before CEO turnover.

#### **4.6 The Channels of Profitability Improvement**

In this section we evaluate through which channel prior CEO experience (specifically, the experience obtained outside the bank) leads to improvement in bank profitability. Our approach is to examine each item in bank income statement that affects the profitability of banks. As bank profit is the difference between income and cost, a new CEO may implement new business policies to boost revenue or cut down expenses, in whichever way, to create improvement in bank profitability. Thus, this section investigates the driving force of

profitability improvement from both the income and cost sides. We also break bank income into interest income and non-interest income, and break cost into interest expense and non-interest expense. Furthermore, we examine the change in the provision of loan loss (LLP), an expense set aside as an allowance for uncollected loans and loan payments. In addition, we decompose LLP into discretionary LLP and non-discretionary LLP, and analyse the two parts separately.

#### **4.6.1 Is the Profitability Improvement due to an Increment in Bank Income?**

The improvement in bank profitability may be due to either an increase in bank income or a decrease in bank cost. We start the analysis by examining whether outside CEO experience is associated with a change in bank income. Column (1) of Table 9 reports the regression results of the change in bank income on two types of prior CEO experience. We do not find any significant relation between the dependent variable and explanatory variables. As bank income is composed of interest income and non-interest income, we then examine both components respectively. Column (2) of Table 9 reports the regression results of the change in interest income on two types of prior CEO experience. Column (3) of Table 9 reports the regression results of the change in non-interest income on two types of prior CEO experience. There is no evidence found that any type of CEO experience is related to any of the two income components. The results suggest that although outside CEO experience is associated with improvement in bank profitability, this is not due to the increment in bank income.

[Insert Table 9 here]

#### **4.6.2 Is the Profitability Improvement due to a Deduction in Bank Cost?**

A newly appointed CEO may choose to cut down bank cost to boost profitability. To examine whether the increase in profitability is due to the CEO's cost management, we test the

relation between prior CEO experience and the change in the bank cost post-CEO succession. Column (4) of Table 9 presents the regression result in which the dependent variable is the change in cost-income ratio, and independent variables are two types of prior CEO experience. The estimated coefficient on outside CEO experience is negative and significant at the 1% level, supporting our speculation that banks managed by experienced CEOs are associated with cost-reducing activities. Specifically, a one standard deviation increase in outside CEO experience leads to a decrease in the change of bank cost by approximately 15.307 percent. The results suggest that CEOs who gained knowledge from a different organization are more likely to cut down expenses thus enhancing bank profitability. By contrast, we do not find a significant relation between the change in cost and prior CEO experience inside the bank.

Next, we analyse whether outside CEO experience is related to the change in interest expense or non-interest expense. Column (5) of Table 9 reports the regression result of the change in bank interest expense on two types of prior CEO experience. There is no relation found between any type of prior CEO experience and the change in interest expense. Column (6) of Table 9 reports the regression result of the change in bank non-interest expense on two types of prior CEO experience. It shows that outside CEO experience is negatively related to the change in non-interest expense at the 10% level, while no effect is found between inside CEO experience and the change in non-interest expense. The result indicates that new CEOs who has outside prior CEO experience is likely to the improve bank profitability by reducing non-interest expenses. This may include salaries and fringe benefits paid to employees, property and equipment expenses, or other non-interest expenses. Compared to interest expenses—the sum of interest paid on all interest-bearing liabilities, such as deposit accounts, CDs, short-term borrowing and long-term debt, the non-interest expenses of banks are more flexible and adjustable. Therefore, it is easy to understand why new CEOs tend to reduce non-interest expense rather than interest expense in order to boost bank profitability.

#### **4.6.3 Is the Profitability Improvement an outcome of the new CEO's earnings manipulation?**

Other than the interest expense and non-interest expense, the loan loss provision (LLP) is another important part of cost that is deducted from bank income. It is the amount charged against earnings to establish a reserve sufficient to absorb expected loan losses. Prior research shows that loan loss provision is used as a tool to manage earnings by listed banks (Ma, 1988; Collins et al., 1995; Kanagaretnam et al., 2003; Leventis et al., 2011). Bank managers tend to save earnings through LLP in good times and borrow earnings using LLP in bad times (Kanagaretnam et al., 2003). This suggests that the level of LLP is closely related to bank profitability, at least the reported earnings.

There is evidence that newly appointed CEOs tend to engage in greater income-increasing manipulation in the early years of their tenure due to career concerns (Ali and Zhang, 2015). As the market tends to be more uncertain about CEOs' ability in the early years of their services, managers are motivated to work harder in this stage in order to generate good performance, while the market is still assessing their ability (Holmstrom, 1982). To favourably influence the market's perception of their ability, new CEOs have greater incentives to overstate earnings in the early stage of their service (Ali and Zhang, 2015). We speculate that the profitability improvement post-CEO succession may be an outcome of the new CEO's earnings manipulation.

To test our conjecture whether the profitability improvement an outcome of the new CEO's earnings manipulation, we construct a proxy for earnings manipulation and examine whether outside CEO experience is associated with a change in the level of CEO earnings manipulation. A large number of studies have used *Discretionary Loan Loss Provision* as a proxy for earnings manipulation in banks, which is the "discretionary" part of LLP (Beatty, A.L. et al., 2002;

Bushman and Williams, 2012; Beatty, A. and Liao, 2014; Cohen et al., 2014; Jiang et al., 2016).

As discretionary LLP is a form of bank expenses, if the profitability improvement of banks is related to new CEOs' earning management, we would expect that new CEOs understate the value of discretionary LLP in order to cut down cost and enhance bank profitability. We test this conjecture by examining whether prior CEO experience, especially outside CEO experience, is associated with a change in the level of LLP, discretionary LLP, and non-discretionary LLP respectively.

The discretionary LLP is estimated with the following model:

$$LLP_t = \alpha_0 + \alpha_1 \Delta NPA_{t+1} + \alpha_2 \Delta NPA_t + \alpha_3 \Delta NPA_{t-1} + \alpha_4 SIZE_{t-1} + \alpha_5 \Delta LOAN_{t-1} + \alpha_6 EBLLP_t + \alpha_7 CAP_{t-1} + \delta_j + \varepsilon_t \quad (3)$$

In this model,  $LLP_t$  represents loan loss provision scaled by lagged total loans.  $\Delta NPA_t$  is the change in nonperforming assets scaled by lagged total loans. Following Bushman and Williams (2012) and Jiang et al. (2016), this model includes current period  $\Delta NPA_t$  and next-period  $\Delta NPA_{t+1}$  because banks might use current and forward-looking information on nonperforming assets in selecting LLPs. We do not include  $\Delta NPA_{t-2}$  as in Beatty, A. and Liao (2014)'s study because it eliminates many observations. However, including it does not affect the results.  $SIZE_{t-1}$  is the natural logarithm of total assets in year  $t-1$ .  $\Delta LOAN_{t-1}$  is the change in total loans divided by total loans.  $EBLLP_t$  is the earnings before loan loss provisions and taxes for year  $t$  scaled by lagged total loans.  $CAP_{t-1}$  is equity capital to total assets in year  $t-1$ . We also include state fixed effect  $\delta_j$ , to account for any time-invariant state characteristics that shape loan loss provision.

We estimate Model (3) with OLS regressions by year. We obtain discretionary LLP as the residuals from the model. The residuals represent the “abnormal” accrual of LLP—the component of LLP unexplained by the regression's fundamental determinants. An extensive

literature uses error terms from these models to proxy for earnings management, as discussed in Dechow et al. (2010), Ali and Zhang (2015), Kanagaretnam et al. (2009), and Cohen et al. (2014). After getting the value of discretionary LLP, we compute the non-discretionary LLP (**NonDiscreLLP**) as the value of total loan loss provision subtracted by the amount of discretionary LLP. Then we construct the change in non-discretionary LLP and discretionary LLP.

In the first step, we investigate whether prior CEO experience affects the change in LLP. Column (7) of Table 9 reports the regression results. There is no evidence that the change in LLP is related to any type of prior CEO experience. We then examine whether prior CEO experience is related to discretionary LLP and the non-discretionary LLP respectively. Columns (8) of Table 9 report the regression result whether two types of prior CEO experience affect the change in discretionary LLP. The result shows that the change in discretionary LLP is negatively related to prior CEO experience outside the bank. The impact is statistically significant at the level of 5%. A one standard deviation increase in outside CEO experience leads to a decrease in the change of discretionary LLP by approximately 0.281 percent. There is no significant effect found between inside CEO experience and the change in non-discretionary LLP. Columns (9) of Table 9 report the regression results whether two types of prior CEO experience affect the change in non-discretionary LLP. It suggests that the change in non-discretionary LLP is not related to any type of prior CEO experience.

To assess the robustness of our results, we estimate discretionary LLP and non-discretionary LLP with an alternative method. Instead of estimating Model (3) for banks by year, we estimate the model using a pooled, time series regression for all banks in all years. The results are consistent across different estimation methods.

To summarize, the results in this section indicate new CEOs with prior CEO experience obtained from outside organizations are more likely to improve bank profitability by cutting

down cost rather than enhance bank income. In addition, they tend to reduce cost items that are adjustable. On the one hand, they may choose to cut down non-interest expense such as employee salaries, property and equipment expenses, and other operating expenses. On the other hand, CEOs with outside CEO experience may reduce cost by understating the value of discretionary LLP. Our results support the findings of Kanagaretnam et al. (2003) that managers adjust discretionary LLP to manage earnings. Although the mechanism of bank profitability improvement can be complicated and with various reasons, our analysis provides some possible explanations to the question why prior CEO experience outside the bank is positively related to the change in bank profitability.

## **5. Additional Tests**

### **5.1 Is the Performance Improvement due to the New CEO's Risk-taking Behaviour?**

Thus far, the results suggest that the improvement of bank profitability is related to the new CEO's cost management through non-interest expense and discretionary LLP. Another possible mechanism is that new CEOs might undertake risky activities to boost profitability. CEOs who gained experience from outside the bank are more likely to do so because they have a stronger motivation to prove their ability as an outsider. If this is the case, we expect to find a positive relation between outside CEO experience and the change in bank risk.

To test our speculation, we replicate the analysis of profitability effect and replace the dependent variable with the change in bank risk. Results are presented in Table 10. Our first measure of bank risk is earnings volatility, and results are reported in columns (1)–(3). The second measure of bank risk is Tier 1 capital ratio, an indicator of leverage risk. Results are reported in columns (4)–(6). We find weak evidence that outside CEO experience is negatively related to changes in bank risk. The coefficient in Column (1) is significant at the 10% level. Coefficients in other columns are negative but not statistically significant. The results suggest

that the improvement of bank profitability is not due to the risk-taking behaviour of the new CEOs. CEOs who have prior CEO experience from outside the bank can actually lower the bank risk whilst improving bank profitability. Although existing studies have tested the market reaction towards prior CEO experience (Elsaid et al., 2011), the relation between prior CEO experience and firms' accounting performance (Elsaid et al., 2011; Hamori and Koyuncu, 2015) as well as market-based performance (Bragaw and Misangyi, 2017), there is no study looking at how prior CEO experience of the newly appointed CEO affect firm risk. Therefore, the analysis is a good complement to existing studies on prior CEO experience.

[Insert Table 10 here]

## **5.2 Addressing Endogeneity**

In this subsection, we discuss the potential endogeneity issue when analysing the prior CEO experience and changes in bank profitability. On one hand, it is possible that there are some unobservable CEO or bank characteristics that determine both the CEO's prior CEO experience and bank profitability. On the other, reverse causality may be a potential problem in that banks with better performance may be willing to appoint CEOs with more prior experience. By taking into account these possible endogenous relationships, we conduct a 2-stage least-squares (2SLS) estimation. Due to the unique data structure of our study and the small sample size, it is not possible to conduct some approaches such as fixed effects or difference-in-difference analysis. We believe that a 2SLS estimation with instrumental variables is the most suitable and feasible approach for our study.

We use the adoption of Inevitable Disclosure Doctrine (IDD) by US states as an instrument of prior CEO experience. The IDD is a legal doctrine to prevent an employee from accepting a job offer or limit his or her responsibility in the new firm in case of a disclosure of trade secrets (Godfrey, 2004). From 1999 through 2006, a total of 21 states in the US had adopted the IDD



(although some of them eventually rejected it afterwards). The adoption of the IDD by a state court enhances the protection of trade secrets for firms located in the state by reducing the risk that departing employees who know their firm's trade secrets will reveal them to rival companies (in any state), or use them to start a rival company. Therefore, the IDD provides a way for firms to restrict the mobility of their employees and, hence, limits cross-firm knowledge spillover (Png and Samila, 2015). CEOs and top managers are usually those who have access to a company's trade secrets, thus we argue that the adoption of IDD will reduce the mobility of these people. There is evidence that the rejection of IDD leads to an increase in CEOs' outside opportunities (Na, 2020), and an increase of executive job-hopping (Chen et al., 2020). On the contrary, we believe that the adoption of IDD would restrict top executives' outside opportunities, and job-hopping. In other words, the job market will become more stable and there will be less labor flow.

We use IDD adoption as an instrumental variable because we believe that the adoption of IDD is related to prior CEO experience, but not directly related to changes in bank profitability. The logic is that, if a person was already in a CEO position at the time when the state adopted IDD, the adoption of IDD will reduce the chance of CEO job-hopping, and the possibility of losing their job (for example, if the CEO performs badly in the position) as the competition from outside environment is reduced. The CEO is more likely to stay in the position and accumulate CEO experience compared to the situation if the state didn't adopt IDD. If a person was not in a CEO position when the state adopted IDD, as the IDD adoption reduces the competition from outside, it will be easier for them to be promoted to the CEO position in comparison to the situation if the state did not adopt IDD. Thus the adoption of IDD would enhance the possibility of starting gaining CEO experience for non-CEO managers. In whichever the case, the adoption of IDD tends to increase the accumulation of CEO experience. At the same time, it is very unlikely that the adoption of IDD in a state will affect bank

profitability directly in the focal state. The first stage of our regressions (untabulated) suggests that our instrument is valid.

In Table 11, we present the results of second-stage instrumental variables regressions. The table reports the results from regressions where prior CEO experience is instrumented with IDD adoption. Column (1) of the table report the result where prior CEO experience is measured with **CEO\_years**. Columns (2) and (3) present results where prior CEO experience is measured with **CEO\_positions** and **ExCEO** respectively. The results confirm the robustness of our findings, as prior CEO experience (which was replaced by the fitted values of the instrument) has a significant positive relation with the change in bank profitability and are consistent across different measures of prior CEO experience. In addition, we use the mean value of prior CEO experience as another instrument variable. Our results still hold.

[Insert Table 11 here]

## 6. Conclusions

This paper examines how prior CEO experience of the newly appointed CEO affects long-term bank accounting performance post-CEO succession. Based on a unique hand-built dataset of 142 CEO succession events in US BHCs from 1993 through 2015, we offer robust evidence that experience in former CEO positions improves bank performance post-succession, and the effect is driven by the experience obtained outside the bank. Banks that appoint CEOs with longer years of prior CEO experience, especially when the experience was gained outside the organization, tend to have a more significant improvement in bank profitability. The performance effect holds across different measures of prior CEO experience and continues up to five years in the post-succession period. At the same time, we find that the succession context, more specifically the pre-turnover bank performance, matters. Although the performance effect still holds after controlling for banks with poor financial status, the analysis

suggests that prior CEO experience helps to improve bank profitability only in banks that have performed poorly before CEO turnover.

To explain what drives the profitability improvement, the study examines whether prior CEO experience is associated with any change in items on bank income statement. We find that experienced CEOs are more likely to cut down expenses in order to boot profitability. Specifically, we find that CEOs who obtain prior CEO experience from outside the bank tend to reduce non-interest expense to enhance bank profitability. In addition, we find that outside CEO experience is negatively related to the change in discretionary LLP. This suggests that the decrease in bank cost and the improvement in bank profitability can be partly explained by the new CEO's earnings manipulation.

In additional tests, we find weak evidence that outside CEO experience is negatively related to bank risk. It indicates that the improvement of bank profitability is not due to the new CEO's risk-taking behaviour. In addition, we account for the endogeneity between prior CEO experience and changes in bank profitability by using a 2SLS estimation with instrumental variables. The results confirmed the robustness of our findings.

As the first study on prior CEO experience in the banking sector, the paper broadens the concept of prior CEO experience due to the uniqueness of banks: we include not only the experience as top CEOs of bank groups or companies, but also CEO experience in bank subsidiaries or market divisions. Furthermore, the paper extends existing studies on prior CEO experience by distinguishing the experience based on the context where the experience was obtained: CEO experience gained inside the bank and CEO experience gained outside the bank. Our study has quite different findings with earlier studies on CEO experience in non-financial firms: we document a positive relation between prior CEO experience and the change in bank profitability. The performance effect is related to the cost management and earnings manipulation by new CEOs who gained prior experience outside the bank, as they have more

incentives to show their ability with superior performance in their early years of tenure. The paper contributes to CEO succession studies in the banking industry and gives implications on the role of prior CEO experience. It also provides new indications on CEO earnings management in banks.

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Table 1. Distribution of CEO Successions

The table presents the number of CEO successions from 1993 to 2015. It gives the total number of CEO appointments in each year, among the newly appointed CEOs how many are insiders, and how many are outsiders. An outsider is a new CEO who has been employed at the bank for one year or less at the time of the succession. An insider is a new CEO who has been working in the bank for more than one year (Parrino, 1997; Huson, Mark R et al., 2001).

Year	Total Number of CEO Successions	Number of Insiders	Number of Outsiders
1993	2	2	0
1994	7	6	1
1995	8	6	2
1996	3	2	1
1997	4	4	0
1998	5	5	0
1999	1	1	0
2000	11	9	2
2001	11	6	5
2002	5	5	0
2003	4	3	1
2004	5	5	0
2005	3	3	0
2006	6	5	1
2007	13	9	4
2008	9	8	1
2009	9	4	5
2010	10	9	1
2011	9	7	2
2012	5	3	2
2013	8	7	1
2014	2	2	0
2015	2	2	0
Total	142	113	29

## Table 2. Distribution of Prior CEO Experience

The table presents the distribution of new CEOs' prior CEO experience. Panel A shows the number and percentage of successors with prior CEO experience, with prior CEO experience gained inside the bank and prior CEO experience gained outside the bank. Panel B gives the distribution of the number of CEO positions that the successors held prior to the current position, and the number of CEO positions held inside/outside the bank.

<b>Panel A:</b> Distribution of prior CEO experience		
	Number of Successors	Percentage
New CEO with Prior CEO experience	59	41.55%
New CEO with prior CEO experience inside the bank	22	15.49%
New CEO with prior CEO experience outside the bank	42	29.58%
<b>Panel B:</b> Distribution of the number of prior CEO positions held		
Number of Prior CEO Positions	Number of Successors	Percentage
0	83	58.45%
1	32	22.54%
2	22	15.49%
3	5	3.52%
Total	142	100.00%
Number of Prior CEO Positions inside the Bank	Number of Successors	Percentage
0	120	84.51%
1	14	9.86%
2	8	5.63%
Total	142	100.00%
Number of Prior CEO positions outside the Bank	Number of Successors	Percentage
0	100	70.42%
1	27	19.01%
2	15	10.56%
Total	142	100.00%

**Table 3. Descriptive Statistics**

The table gives summary of descriptive statistics of all the variables employed in the analysis. It presents the number of observations, mean, median, standard deviation, minimum, and maximum for each variable. All variables are winsorized at the 2.5% and 97.5% levels. Variable definitions are provided in Table A1 in the Appendix.

Variable	N	Mean	Median	SD	Min	Max
<b>Dependent variables:</b>						
ROA_change	142	-0.036	0.022	0.988	-2.376	3.542
VOL_change	141	0.055	0.013	0.593	-1.657	1.935
CAPRI_change	133	1.355	9.785	198.493	-521.227	470.273
Income_change	135	-0.154	-0.210	0.869	-2.510	1.726
Interest_change	134	-0.330	-0.533	5.011	-13.948	11.766
Non_interest_change	112	0.457	0.317	7.642	-17.051	20.666
Cost_change	112	-0.519	1.700	42.887	-134.520	84.507
Intexp_change	112	1.894	1.792	14.172	-30.639	32.052
Nonintexp_change	112	0.061	0.503	13.520	-31.602	45.983
LLP_change	135	-0.044	0.035	1.050	-3.047	2.589
Discre_LLPL_change	113	-0.053	-0.025	0.941	-3.195	2.257
NonDiscreLLP_change	113	-0.026	0.065	0.571	-1.678	1.097
<b>Independent Variables:</b>						
CEO_years	142	0.688	0.000	0.914	0.000	2.651
CEO_years_outside	142	0.505	0.000	0.841	0.000	2.485
CEO_years_inside	142	0.197	0.000	0.500	0.000	1.946
CEO_positions	142	0.375	0.000	0.473	0.000	1.386
CEO_positions_outside	142	0.248	0.000	0.398	0.000	1.099
CEO_positions_inside	142	0.130	0.000	0.315	0.000	1.099
ExCEO	142	0.415	0.000	0.495	0.000	1.000
ExCEO_ouside	142	0.296	0.000	0.458	0.000	1.000
ExCEO_inside	142	0.155	0.000	0.363	0.000	1.000
<b>CEO-level Controls:</b>						
CEO Age	142	3.978	3.989	0.100	3.761	4.174
Outsider	142	0.204	0.000	0.405	0.000	1.000
Industry Experience	142	3.093	3.258	0.526	1.386	3.664
MBA Degree	142	0.401	0.000	0.492	0.000	1.000
AF Degree	142	0.289	0.000	0.455	0.000	1.000
<b>Firm-level Controls:</b>						
Bank Size	142	9.785	9.527	1.559	7.482	13.908
Bank Age	142	3.103	3.178	0.567	1.609	3.871
Equity	142	9.241	8.748	2.604	4.792	17.160
Charter	142	0.381	0.410	0.568	-1.044	1.456
Deposits	142	68.938	70.991	12.859	27.812	86.789
ROA	142	0.000	0.001	0.009	-0.036	0.016
VOL	141	0.005	0.002	0.006	0.000	0.025
ROA_neg	142	0.408	0.000	0.493	0.000	1.000
ROA_p25	142	0.246	0.000	0.432	0.000	1.000
<b>Corporate Governance Controls:</b>						
Board Size	142	2.574	2.565	0.293	1.946	3.135

**Table 3 (continued)**

Board Independence	142	0.789	0.815	0.122	0.455	0.952
<b>Instrumental Variable:</b>						
IDD Adoption	142	0.486	0.000	0.502	0.000	1.000

**Table 4. Prior CEO Experience and Changes in Bank Profitability**

The table reports results from regressions examining whether the change in bank profitability surrounding CEO appointment is affected by the new CEO's prior CEO experience, and where the experience was obtained. The dependent variable is **ROA\_change**, the difference of industry-adjusted ROA between year t-1 and the average over years t+1 and t+2. The independent variable in regressions (1)-(3) is **CEO\_years**, the natural logarithm of total number of years the successor worked as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one. The independent variables in regressions (4)-(6) are **CEO\_years\_inside** and **CEO\_years\_outside**, the natural logarithm of total number of years the successor worked as a CEO within/outside the bank group prior to the current position, plus one. **CEO Age** is the natural logarithm of the natural age of the new CEO at the time of appointment. Regressions (7)-(9) excludes CEOs with outside CEO experience and tests how inside CEO experience affects bank profitability changes. Regressions (10)-(12) excludes CEOs with inside CEO experience and tests how outside CEO experience affects bank profitability changes. **Outsider** is a dummy that equals one if the CEO is an outsider and zero if the CEO is an insider. **Industry Experience** is the natural logarithm of total number of years the CEO has worked in financial firms such as banks, insurance companies and accounting firms. **MBA Degree** is a dummy that equals one if the CEO has an MBA degree. **AF Degree** is a dummy that equals one if the CEO has an accounting or finance related degree. **Bank Size** is the natural logarithm of total assets. **Bank Age** is the natural logarithm of total number of years the bank has been in Compustat. **Equity Capital** is the fraction of equity book value to total assets. **Charter Value** is the natural logarithm of market to book value of equity. **Deposits** is the fraction of customer deposits to total assets. **Board Size** is the natural logarithm of total number of directors sitting on the board. **Board Independence** is the ratio of independent directors to the total directors on the board. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

	(1) Years	(2) Years	(3) Years	(4) Years	(5) Years	(6) Years
CEO Experience	0.231** (0.106)	0.233** (0.115)	0.203* (0.109)			
CEO Experience_outside				0.300** (0.133)	0.314** (0.149)	0.303** (0.139)
CEO Experience_inside				0.051 (0.156)	0.058 (0.154)	-0.013 (0.156)
CEO Age		0.907 (0.933)	0.839 (0.948)		0.919 (0.926)	0.822 (0.932)
Outsider		-0.003 (0.267)	0.133 (0.255)		-0.093 (0.285)	0.026 (0.271)
Industry Experience		-0.164 (0.157)	-0.157 (0.153)		-0.144 (0.149)	-0.125 (0.147)
MBA Degree		0.051 (0.194)	0.013 (0.204)		0.030 (0.196)	-0.016 (0.208)
AF Degree		0.024 (0.193)	0.018 (0.189)		0.029 (0.191)	0.027 (0.185)
Bank Size	-0.083 (0.080)	-0.078 (0.082)	-0.171* (0.093)	-0.078 (0.077)	-0.079 (0.078)	-0.178** (0.089)
Bank Age	0.190 (0.188)	0.177 (0.191)	0.190 (0.202)	0.215 (0.189)	0.202 (0.195)	0.223 (0.207)
Equity Capital	-0.098** (0.040)	-0.105** (0.041)	-0.106** (0.042)	-0.101** (0.040)	-0.106** (0.040)	-0.109*** (0.041)
Charter Value	-0.568** (0.251)	-0.564** (0.255)	-0.560** (0.248)	-0.553** (0.245)	-0.555** (0.244)	-0.556** (0.236)
Deposits	0.008 (0.008)	0.008 (0.009)	0.004 (0.009)	0.007 (0.008)	0.007 (0.008)	0.003 (0.009)
Board Size			0.936*** (0.329)			0.990*** (0.346)
Board Independence			-0.005 (0.807)			0.062 (0.811)
Observations	142	142	142	142	142	142
R-squared	0.307	0.315	0.353	0.320	0.328	0.371
Year Dummy	YES	YES	YES	YES	YES	YES
Adj. R-squared	0.135	0.106	0.140	0.144	0.115	0.155

**Table 5. Prior CEO Experience and Changes in Bank Profitability – Alternative Measures of Prior CEO Experience**

The table reports results from regressions examining whether the change in bank profitability surrounding CEO appointment is affected by the new CEO's prior CEO experience, and where the experience was obtained, with alternative measures of prior CEO experience. The dependent variable is **ROA\_change**, the difference of industry-adjusted ROA between year t-1 and the average over years t+1 and t+2. The independent variable in regressions (1)-(3) is **CEO\_positions**, the natural logarithm of total number of CEO positions the successor held as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one. The independent variables in regressions (4)-(6) are **CEO\_positions\_inside** and **CEO\_positions\_outside**, the natural logarithm of total number of CEO positions the successor held within/outside the bank group prior to the current position, plus one. The independent variables in regressions (7)-(9) is **ExCEO**, a dummy variable that equals one if the successor held at least one CEO position prior to the current position, plus one. The independent variables in regressions (10)-(12) are **ExCEO\_inside** and **ExCEO\_outside**, dummy variables that equal one if the successor held at least one CEO position within/outside the bank group prior to the current position. **CEO Age** is the natural logarithm of the natural age of the new CEO at the time of appointment. **Outsider** is a dummy that equals one if the CEO is an outsider and zero if the CEO is an insider. **Industry Experience** is the natural logarithm of total number of years the CEO has worked in financial firms such as banks, insurance companies and accounting firms. **MBA Degree** is a dummy that equals one if the CEO has an MBA degree. **AF Degree** is a dummy that equals one if the CEO has an accounting or finance related degree. **Bank Size** is the natural logarithm of total assets. **Bank Age** is the natural logarithm of total number of years the bank has been in Compustat. **Equity Capital** is the fraction of equity book value to total assets. **Charter Value** is the natural logarithm of market to book value of equity. **Deposits** is the fraction of customer deposits to total assets. **Board Size** is the natural logarithm of total number of directors sitting on the board. **Board Independence** is the ratio of independent directors to the total directors on the board. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

	(1) Positions	(2) Positions	(3) Positions	(4) Positions	(5) Positions	(6) Positions	(7) Dummy	(8) Dummy	(9) Dummy	(10) Dummy	(11) Dummy	(12) Dummy
CEO Experience	0.461** (0.195)	0.476** (0.212)	0.381* (0.211)				0.351* (0.186)	0.349* (0.201)	0.280 (0.197)			
CEO Experience_outside				0.644** (0.256)	0.721** (0.294)	0.647** (0.288)				0.494** (0.224)	0.534** (0.251)	0.508** (0.243)
CEO Experience_inside				0.108 (0.259)	0.106 (0.247)	0.001 (0.260)				0.088 (0.233)	0.083 (0.228)	-0.002 (0.234)
CEO Age		0.989 (0.958)	0.928 (0.970)		1.029 (0.954)	0.946 (0.961)		1.017 (0.967)	0.943 (0.973)		1.028 (0.959)	0.936 (0.962)
Outsider		-0.028 (0.267)	0.115 (0.257)		-0.136 (0.280)	-0.004 (0.270)		-0.003 (0.267)	0.143 (0.255)		-0.092 (0.276)	0.032 (0.264)
Industry Experience		-0.173 (0.155)	-0.160 (0.153)		-0.160 (0.150)	-0.141 (0.147)		-0.140 (0.156)	-0.134 (0.154)		-0.144 (0.147)	-0.129 (0.145)
MBA Degree		0.049 (0.196)	0.019 (0.205)		0.002 (0.203)	-0.036 (0.216)		0.039 (0.199)	0.007 (0.208)		0.010 (0.203)	-0.033 (0.215)
AF Degree		0.019 (0.189)	0.011 (0.189)		0.059 (0.187)	0.051 (0.185)		0.015 (0.191)	0.008 (0.189)		0.043 (0.190)	0.042 (0.185)
Bank Size	-0.091 (0.082)	-0.087 (0.083)	-0.173* (0.093)	-0.073 (0.078)	-0.075 (0.079)	-0.166* (0.088)	-0.095 (0.084)	-0.093 (0.087)	-0.184* (0.096)	-0.084 (0.081)	-0.086 (0.083)	-0.183* (0.093)
Bank Age	0.192 (0.187)	0.178 (0.192)	0.186 (0.203)	0.205 (0.189)	0.194 (0.196)	0.212 (0.210)	0.188 (0.189)	0.183 (0.194)	0.192 (0.205)	0.209 (0.190)	0.203 (0.199)	0.224 (0.214)
Equity Capital	-0.093** (0.040)	-0.100** (0.041)	-0.101** (0.042)	-0.098** (0.040)	-0.103** (0.041)	-0.106** (0.042)	-0.099** (0.041)	-0.104** (0.042)	-0.106** (0.043)	-0.101** (0.041)	-0.106** (0.041)	-0.109** (0.042)
Charter Value	-0.566** (0.253)	-0.563** (0.257)	-0.563** (0.252)	-0.547** (0.252)	-0.545** (0.253)	-0.545** (0.247)	-0.575** (0.259)	-0.576** (0.263)	-0.573** (0.257)	-0.551** (0.252)	-0.552** (0.252)	-0.552** (0.245)
Deposits	0.009 (0.009)	0.009 (0.009)	0.006 (0.009)	0.009 (0.009)	0.009 (0.009)	0.005 (0.009)	0.008 (0.009)	0.008 (0.009)	0.005 (0.009)	0.007 (0.009)	0.007 (0.009)	0.003 (0.009)
Board Size			0.877*** (0.313)			0.905*** (0.324)			0.946*** (0.321)			0.973*** (0.332)
Board Independence			-0.048 (0.795)			0.090 (0.804)			-0.042 (0.787)			0.083 (0.802)

**Table 5 (continued)**

Observations	142	142	142	142	142	142	142	142	142	142	142	142
R-squared	0.309	0.319	0.351	0.321	0.333	0.368	0.295	0.304	0.342	0.311	0.321	0.362
Year Dummy	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adj. R-squared	0.138	0.111	0.137	0.146	0.121	0.151	0.120	0.091	0.125	0.133	0.105	0.144

**Table 6. Prior CEO Experience and Changes in Bank Profitability in a Longer Post-succession Period**

The table reports results from regressions examining whether the change in bank profitability is affected by two types of prior CEO experience in a longer post-succession period. The results in different panels show the effect as time goes by. The dependent variable is **ROA\_change**, the difference of industry-adjusted ROA between year t-1 and the average over years post-succession. The independent variables in regressions (1)-(3) are **CEO\_years\_inside** and **CEO\_years\_outside**, the natural logarithm of total number of years the successor worked as a CEO within/outside the bank group prior to the current position, plus one. The independent variables in regressions (4)-(6) are **CEO\_positions\_inside** and **CEO\_positions\_outside**, the natural logarithm of total number of CEO positions the successor held within/outside the bank group prior to the current position, plus one. The independent variables in regressions (7)-(9) are **ExCEO\_inside** and **ExCEO\_outside**, dummy variables that equal one if the successor held at least one CEO position within/outside the bank group prior to the current position. Control variables in regression (1), (4) and (7) are firm-level controls only: Bank Size, Bank Age, Equity Capital, Charter Value, and Deposits. Regression (2), (5) and (8) add CEO-level controls including CEO Age, Outsider, Industry Experience, MBA Degree, and AF Degree. Regression (3), (6) and (9) further add corporate governance controls: Board Size and Board Independence. Variable definitions can be found in Table A1 in the Appendix. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

	(1) Years	(2) Years	(3) Years	(4) Positions	(5) Positions	(6) Positions	(7) Dummy	(8) Dummy	(9) Dummy
<b>Panel A: from year t-1 to t+3</b>									
CEO Experience_outside	0.287** (0.119)	0.293** (0.131)	0.285** (0.125)	0.603*** (0.228)	0.665** (0.261)	0.617** (0.261)	0.468** (0.202)	0.493** (0.225)	0.471** (0.222)
CEO Experience_inside	0.025 (0.142)	0.046 (0.141)	-0.012 (0.141)	0.077 (0.248)	0.089 (0.241)	0.013 (0.253)	0.074 (0.215)	0.080 (0.213)	0.013 (0.220)
CEO-level Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Firm-level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Corporate Governance Controls	No	No	Yes	No	No	Yes	No	No	Yes
Observations	127	127	127	127	127	127	127	127	127
<b>Panel B: from year t-1 to t+4</b>									
CEO Experience_outside	0.319** (0.129)	0.295** (0.130)	0.293** (0.123)	0.716*** (0.255)	0.699** (0.267)	0.653** (0.261)	0.590** (0.235)	0.543** (0.229)	0.518** (0.224)
CEO Experience_inside	-0.075 (0.173)	0.011 (0.182)	-0.054 (0.173)	-0.075 (0.297)	0.023 (0.300)	-0.064 (0.291)	-0.037 (0.267)	0.064 (0.263)	-0.007 (0.258)
CEO-level Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Firm-level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Corporate Governance Controls	No	No	Yes	No	No	Yes	No	No	Yes
Observations	107	107	107	107	107	107	107	107	107
<b>Panel C: from year t-1 to t+5</b>									
CEO Experience_outside	0.340** (0.129)	0.325** (0.154)	0.303** (0.139)	0.610** (0.272)	0.612* (0.340)	0.523 (0.315)	0.523** (0.230)	0.504* (0.268)	0.449* (0.249)
CEO Experience_inside	0.105 (0.150)	0.139 (0.157)	0.048 (0.161)	0.203 (0.271)	0.250 (0.269)	0.129 (0.276)	0.217 (0.248)	0.266 (0.254)	0.142 (0.275)
CEO-level Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Firm-level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Corporate Governance Controls	No	No	Yes	No	No	Yes	No	No	Yes
Observations	78	78	78	78	78	78	78	78	78



**Table 7. Prior CEO Experience and Changes in Bank Profitability – Controlling for Pre-turnover Bank Performance**

The table reports results from regressions examining whether the change in bank profitability is affected by two types of prior CEO experience after controlling for pre-turnover bank performance. The dependent variable is **ROA\_change**, the difference of industry-adjusted ROA between year t-1 and the average over years t+1 and t+2. The independent variables are **CEO\_years\_inside** and **CEO\_years\_outside**, the natural logarithm of total number of years the successor worked as a CEO within/outside the bank group prior to the current position, plus one. In regressions (1)-(3) we control for **ROA\_neg**, a dummy that equals one if the bank's industry-adjusted ROA pre-turnover is negative. In regressions (4)-(6) we control for **ROA\_p25**, a dummy that equals one if the bank's industry-adjusted ROA pre-turnover is below the 25<sup>th</sup> percentile of the sample. CEO-level controls include CEO Age, Outsider, Industry Experience, MBA Degree, and AF Degree. Firm-level controls include Bank Size, Bank Age, Equity Capital, Charter Value, and Deposits. Corporate Governance Controls are Board Size and Board Independence. Variable definitions can be found in Table A1 in the Appendix. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

	(1) ROA_neg	(2) ROA_neg	(3) ROA_neg	(4) ROA_p25	(5) ROA_p25	(6) ROA_p25
CEO Experience_outside	0.309** (0.125)	0.336** (0.145)	0.322** (0.134)	0.230* (0.120)	0.252* (0.135)	0.240* (0.124)
CEO Experience_inside	0.170 (0.145)	0.236 (0.150)	0.175 (0.155)	0.162 (0.138)	0.178 (0.140)	0.111 (0.145)
ROA Dummy	0.744*** (0.196)	0.824*** (0.209)	0.796*** (0.210)	0.910*** (0.261)	0.976*** (0.271)	0.959*** (0.264)
CEO-level Controls	No	Yes	Yes	No	Yes	Yes
Firm-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Corporate Governance Controls	No	No	Yes	No	No	Yes
Observations	142	142	142	142	142	142
R-squared	0.393	0.412	0.445	0.398	0.415	0.454
Year Dummy	YES	YES	YES	YES	YES	YES
Adj. R-squared	0.228	0.218	0.247	0.235	0.222	0.260

**Table 8. Prior CEO Experience and Changes in Bank Profitability – Controlling for the Interaction Between Pre-turnover Bank Performance and Prior CEO Experience**

The table reports results from regressions examining whether the change in bank profitability is affected by two types of prior CEO experience after controlling for the interaction between pre-turnover bank performance and prior CEO experience. The dependent variable is **ROA\_change**, the difference of industry-adjusted ROA between year t-1 and the average over years t+1 and t+2. The independent variables are **CEO\_years\_inside** and **CEO\_years\_outside**, the natural logarithm of total number of years the successor worked as a CEO within/outside the bank group prior to the current position, plus one. In regressions (1)-(3) the interaction term is **ROA\_neg**, a dummy that equals one if the bank's industry-adjusted ROA pre-turnover is negative. In regressions (4)-(6) the interaction term is **ROA\_p25**, a dummy that equals one if the bank's industry-adjusted ROA pre-turnover is below the 25<sup>th</sup> percentile of the sample. CEO-level controls include CEO Age, Outsider, Industry Experience, MBA Degree, and AF Degree. Firm-level controls include Bank Size, Bank Age, Equity Capital, Charter Value, and Deposits. Corporate Governance Controls are Board Size and Board Independence. Variable definitions can be found in Table A1 in the Appendix. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

	(1) ROA_neg	(2) ROA_neg	(3) ROA_neg	(4) ROA_p25	(5) ROA_p25	(6) ROA_p25
CEO Experience_outside	-0.070 (0.126)	-0.103 (0.166)	-0.092 (0.148)	-0.052 (0.119)	-0.055 (0.159)	-0.060 (0.140)
CEO Experience_inside	0.105 (0.154)	0.205 (0.174)	0.192 (0.185)	0.015 (0.129)	0.049 (0.138)	0.016 (0.151)
ROA Dummy	0.373** (0.170)	0.440** (0.186)	0.458** (0.186)	0.440* (0.224)	0.474** (0.232)	0.484** (0.227)
ROA Dummy * CEO Experience_outside	0.766*** (0.233)	0.815*** (0.245)	0.774*** (0.236)	0.774*** (0.275)	0.768*** (0.290)	0.758*** (0.277)
ROA Dummy * CEO Experience_inside	0.197 (0.363)	0.124 (0.387)	0.011 (0.391)	0.589 (0.399)	0.574 (0.430)	0.394 (0.456)
CEO-level Controls	No	Yes	Yes	No	Yes	Yes
Firm-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Corporate Governance Controls	No	No	Yes	No	No	Yes
Observations	142	142	142	142	142	142
R-squared	0.473	0.492	0.515	0.485	0.494	0.526
Year Dummy	YES	YES	YES	YES	YES	YES
Adj. R-squared	0.319	0.311	0.329	0.334	0.315	0.345

**Table 9. The Channels of Bank Profitability Improvement**

The table reports the results examining different channels of bank profitability improvement. Columns (1) to (9) reports results from regressions examining whether two types of CEO experience affect the change in bank income, net interest income, non-interest income, bank cost, interest expenses, non-interest expense, loan loss provision (LLP), non-discretionary LLP, discretionary LLP respectively. The dependent variables are **Income\_change**, **Non\_interest\_change**, **Net\_interest\_change**, **Cost\_change**, **Intexp\_change**, **Nonintexp\_change**, **LLP\_change**, **NonDiscreLLP\_change**, **Discre\_LL\_P\_change** from specification (1) to (9). The independent variables are **CEO\_years\_inside** and **CEO\_years\_outside**, the natural logarithm of total number of years the successor worked as a CEO within/outside the bank group prior to the current position. CEO-level controls include CEO Age, Outsider, Industry Experience, MBA Degree, and AF Degree. Firm-level controls include Bank Size, Bank Age, Equity Capital, Charter Value, and Deposits. Corporate Governance Controls are Board Size and Board Independence. Variable definitions can be found in Table A1 in the Appendix. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

VARIABLES	(1) Income	(2) Net interest income	(3) Non-interest income	(4) Cost	(5) Interest expense	(6) Non-interest expense	(7) LLP	(8) Discre_LL_P	(9) NonDiscreLLP
CEO Experience_outside	-0.054 (0.096)	-0.106 (0.855)	1.502 (1.355)	-18.270*** (6.939)	-3.578 (2.510)	-4.657* (2.542)	-0.262 (0.166)	-0.352** (0.148)	-0.001 (0.188)
CEO Experience_inside	-0.099 (0.170)	-0.322 (1.033)	-1.992 (1.889)	6.705 (7.520)	6.006* (3.224)	3.101 (2.824)	-0.101 (0.221)	-0.072 (0.183)	-0.016 (0.146)
CEO Age	0.241 (0.828)	-2.718 (5.374)	-3.404 (7.436)	-5.480 (41.323)	7.955 (15.840)	20.013 (13.540)	-1.093 (1.056)	-0.728 (0.935)	-0.825 (0.828)
Outsider	0.197 (0.200)	-2.771** (1.224)	2.011 (2.336)	-4.714 (12.532)	2.763 (3.641)	-2.123 (4.650)	-0.036 (0.340)	0.107 (0.235)	-0.183 (0.341)
Industry Experience	-0.083 (0.168)	2.283** (0.958)	-0.662 (1.545)	2.962 (7.568)	-3.696 (2.983)	-4.721 (2.949)	0.350* (0.184)	0.331* (0.176)	0.202 (0.179)
MBA Degree	0.084 (0.177)	-0.967 (1.116)	-2.192 (1.932)	6.224 (9.588)	3.724 (3.118)	3.393 (3.224)	-0.216 (0.238)	-0.190 (0.209)	-0.027 (0.209)
AF Degree	0.192 (0.155)	-0.973 (1.009)	2.249 (1.718)	-11.572 (8.278)	-3.439 (2.729)	-3.308 (3.170)	-0.042 (0.230)	-0.232 (0.193)	0.167 (0.194)
Bank Size	-0.188* (0.105)	-1.308* (0.678)	0.591 (0.923)	5.537 (4.504)	2.146 (1.681)	0.869 (1.594)	-0.025 (0.130)	-0.096 (0.098)	0.130 (0.106)
Bank Age	0.049 (0.236)	0.649 (1.515)	1.862 (2.160)	-5.839 (9.018)	0.389 (3.271)	-2.029 (2.804)	0.074 (0.308)	0.079 (0.220)	-0.227 (0.241)
Equity Capital	0.018 (0.035)	0.348 (0.258)	-0.748** (0.309)	5.434*** (1.686)	0.892 (0.562)	1.008* (0.594)	0.089* (0.052)	0.035 (0.044)	0.062 (0.042)
Charter Value	-0.610*** (0.225)	-0.666 (1.473)	-2.702 (1.817)	24.970** (9.713)	5.960* (3.186)	6.040** (2.658)	0.317 (0.282)	0.018 (0.294)	0.370 (0.252)
Deposits	-0.011 (0.009)	-0.025 (0.057)	0.010 (0.109)	0.004 (0.553)	0.205 (0.205)	0.078 (0.194)	-0.013 (0.012)	-0.009 (0.011)	-0.006 (0.011)
Board Size	0.230 (0.312)	4.495* (2.353)	-0.134 (3.989)	-34.072* (18.046)	-13.244* (7.393)	-4.938 (6.802)	0.349 (0.468)	0.264 (0.372)	0.042 (0.518)
Board Independence	0.250 (1.033)	-0.448 (6.177)	10.715 (10.447)	-7.446 (40.814)	-5.098 (16.241)	-21.799 (13.110)	1.109 (1.216)	0.240 (0.932)	0.737 (0.884)
Observations	135	134	112	112	112	112	135	116	116
R-squared	0.369	0.245	0.313	0.433	0.402	0.342	0.247	0.196	0.273
Adj. R-squared	0.137	-0.025	0.035	0.203	0.160	0.076	-0.030	-0.127	-0.020

**Table 10. Prior CEO Experience and Changes in Bank Risk**

The table reports results from regressions examining whether the change in bank risk is affected by two types of prior CEO experience. Columns (1)-(3) report results whether the change in bank earnings volatility is affected by two types of prior CEO experience. The dependent variable is VOL\_change, the difference of earnings volatility pre- and post-CEO succession. Earnings volatility pre succession is the standard deviation of industry-adjusted ROA over years t-1 through t-3. Earnings volatility post succession is the standard deviation of industry-adjusted ROA over years t through t+2. Columns (4)-(6) report results whether the change in bank leverage risk measured by Tier 1 capital ratio is affected by two types of prior CEO experience. The dependent variable is CAPR1\_change, the difference of Tier 1 capital ratio between year t-1 and the average over years t+1 and t+2. Tier 1 capital ratio is the fraction of Tier 1 regulatory capital to risk-weighted assets. The independent variables are CEO\_years\_inside and CEO\_years\_outside, the natural logarithm of total number of years the successor worked as a CEO within/outside the bank group prior to the current position, plus one. CEO-level controls include CEO Age, Outsider, Industry Experience, MBA Degree, and AF Degree. Firm-level controls include Bank Size, Bank Age, Equity Capital, Charter Value, and Deposits. Corporate Governance Controls are Board Size and Board Independence. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

VARIABLES	(1) Earnings Volatility	(2) Earnings Volatility	(3) Earnings Volatility	(4) Leverage Risk	(5) Leverage Risk	(6) Leverage Risk
CEO Experience_outside	-0.127* (0.066)	-0.109 (0.067)	-0.108 (0.067)	-18.733 (22.674)	-18.099 (25.336)	-20.155 (25.073)
CEO Experience_inside	0.125 (0.090)	0.148 (0.098)	0.151 (0.100)	13.053 (28.044)	-0.647 (31.046)	-12.159 (27.633)
CEO-level Controls	No	Yes	Yes	No	Yes	Yes
Firm-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Corporate Governance Controls	No	No	Yes	No	No	Yes
Observations	141	141	141	133	133	133
R-squared	0.340	0.353	0.354	0.376	0.387	0.410
Year Dummy	YES	YES	YES	YES	YES	YES
Adj. R-squared	0.168	0.146	0.130	0.208	0.183	0.197

**Table 11. Prior CEO Experience and Changes in Bank Profitability - Instrumental Variable (IV) Estimation**

The table reports the results of instrumental variable regressions examining whether the change in bank profitability surrounding CEO appointment is affected by the new CEO's prior CEO experience. Prior CEO experience is instrumented with **IDD adoption**, a dummy variable that equals one if the state has adopted the Inevitable Disclosure Doctrine (IDD). The dependent variable is **ROA\_change**, the difference of industry-adjusted ROA between year t-1 and the average over years t+1 and t+2. The independent variable in regressions (1) is **CEO\_years**, the natural logarithm of total number of years the successor worked as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one. The independent variable in regressions (2) is **CEO\_positions**, the natural logarithm of total number of CEO positions the successor held as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one. The independent variable in regressions (3) is **ExCEO**, a dummy variable that equals one if the successor held at least one CEO position prior to the current position. CEO-level controls include CEO Age, Outsider, Industry Experience, MBA Degree, and AF Degree. Firm-level controls include Bank Size, Bank Age, Equity Capital, Charter Value, and Deposits. Corporate Governance Controls are Board Size and Board Independence. Variable definitions can be found in Table A1 in the Appendix. Robust standard errors are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5% and 10% levels.

VARIABLES	(1) ROA_change	(2) ROA_change	(3) ROA_change
CEO_years	1.117** (0.570)		
CEO_positions		2.217* (1.157)	
ExCEO			2.107* (1.118)
CEO_age	-0.408 (1.159)	-0.105 (1.151)	-0.115 (1.214)
Outsider	-0.622 (0.419)	-0.817 (0.521)	-0.864 (0.543)
Industry_experience	-0.507** (0.256)	-0.589** (0.282)	-0.509** (0.254)
Edu_MBA	-0.020 (0.240)	-0.003 (0.243)	-0.096 (0.270)
Edu_AF	0.204 (0.253)	0.155 (0.252)	0.231 (0.283)
Bank_size	-0.095 (0.111)	-0.101 (0.112)	-0.137 (0.115)
Bank_age	0.202 (0.256)	0.149 (0.254)	0.204 (0.266)
Equity	-0.115*** (0.041)	-0.112*** (0.043)	-0.124*** (0.045)
Charter	0.008 (0.252)	-0.031 (0.256)	-0.105 (0.233)
Deposits	-0.006 (0.012)	0.002 (0.011)	-0.004 (0.012)
Board_size	0.321 (0.441)	-0.056 (0.527)	0.102 (0.482)
Board_independence	0.319 (0.759)	0.437 (0.823)	0.465 (0.801)
Observations	142	142	142

# Appendix

**Table A1. Variable Definitions**

The table gives definitions of all the variables employed in the analysis.

Variable	Definition	Data Source
<b>Dependent variables:</b>		
ROA_change	The difference of industry-adjusted ROA between year t-1 and the average over years t+1 and t+2.	Compustat
VOL_change	The difference of earnings volatility pre- and post-CEO succession. Earnings volatility pre-succession is the standard deviation of industry-adjusted ROA over years t-3 through t-1. Earnings volatility post-succession is the standard deviation of industry-adjusted ROA over years t through t+2.	Compustat
CAPR1_change	The difference of Tier 1 capital ratio between year t-1 and the average over years t+1 and t+2. Tier 1 capital ratio is the fraction of Tier 1 regulatory capital to risk-weighted assets.	Compustat
Income_change	The difference of industry-adjusted income between year t-1 and the average over years t+1 and t+2. Income is total current operating revenues scaled by total assets.	Compustat
Interest_change	The difference of industry-adjusted interest income between year t-1 and the average over years t+1 and t+2. Interest income is the value of net interest income divided by the sum of net interest income and non-interest income.	Compustat
Non_interest_change	The difference of industry-adjusted non-interest income between year t-1 and the average over years t+1 and t+2. Non-interest income is the value of non-interest income divided by the sum of net interest income and non-interest income.	Compustat
Cost_change	The difference of industry-adjusted cost-income ratio between year t-1 and the average over years t+1 and t+2. Cost-income ratio is total current operating expenses divided by the sum of net interest income and non-interest income.	Compustat
Intexp_change	The difference of industry-adjusted interest expense between year t-1 and the average over years t+1 and t+2. Interest expense is the value of interest expense divided by the sum of interest expense and non-interest expense.	Compustat
Nonintexp_change	The difference of industry-adjusted non-interest expense between year t-1 and the average over years t+1 and t+2. Non-interest expense is the value of non-interest expense divided by the sum of interest expense and non-interest expense.	Compustat
LLP_change	The difference of industry-adjusted loan loss provision (LLP) between year t-1 and the average over years t+1 and t+2.	Compustat
Discre_LLPL_change	The difference of industry-adjusted discretionary LLP between year t-1 and the average over years t+1 and t+2. Discretionary LLP is estimated with Model (3).	Compustat
NonDiscreLLP_change	The difference of industry-adjusted non-discretionary LLP (NonDiscreLLP) between year t-1 and the average over years t+1 and t+2. NonDiscreLLP is the value of total LLP subtracted by the amount of discretionary LLP.	Compustat

**Table A1 (continued)**

<b>Dependent variables:</b>		
CEO_years	The natural logarithm of total number of years the successor worked as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one.	Hand-collected
CEO_years_inside	The natural logarithm of total number of years the successor worked as a CEO within the bank group prior to the current position, plus one.	Hand-collected
CEO_years_outside	The natural logarithm of total number of years the successor worked as a CEO outside the bank group prior to the current position, plus one.	Hand-collected
CEO_positions	The natural logarithm of total number of CEO positions the successor held as the top CEO of a company/bank group, CEO of a subsidiary, or CEO of a market division prior to the current position, plus one.	Hand-collected
CEO_positions_inside	The natural logarithm of total number of CEO positions the successor held within the bank group prior to the current position, plus one.	Hand-collected
CEO_positions_outside	The natural logarithm of total number of CEO positions the successor held outside the bank group prior to the current position, plus one.	Hand-collected
ExCEO	A dummy variable that equals one if the successor held at least one CEO position prior to the current position.	Hand-collected
ExCEO_inside	A dummy variable that equals one if the successor held at least one CEO position within the bank group prior to the current position.	Hand-collected
ExCEO_outside	A dummy variable that equals one if the successor held at least one CEO position outside the bank group prior to the current position.	Hand-collected
<b>CEO-level Controls:</b>		
CEO Age	The natural logarithm of the natural age of the new CEO at the time of appointment.	Execucomp
Outsider	Dummy that equals one if the CEO is an outsider and zero if the CEO is an insider.	Hand-collected
Industry Experience	The natural logarithm of total number of years the CEO has worked in financial firms such as banks, insurance companies and accounting firms, plus one.	Hand-collected
MBA Degree	Dummy that equals one if the CEO has an MBA degree.	Hand-collected
AF Degree	Dummy that equals one if the CEO has an accounting or finance related degree.	Hand-collected
<b>Firm-level Controls:</b>		
Bank Size	The natural logarithm of total assets.	Compustat
Bank Age	The natural logarithm of total number of years the bank has been in Compustat.	Compustat
Equity Capital	The fraction of equity book value to total assets.	Compustat
Charter Value	The natural logarithm of market to book value of equity.	CRSP, Compustat, Bloomberg

**Table A1 (continued)**

Deposits	The fraction of customer deposits to total assets.	Compustat, S&P Capital IQ, Bloomberg
ROA_neg	Dummy that equals one if the bank's industry-adjusted ROA pre-turnover is negative.	Compustat
ROA_p25	Dummy that equals one if the bank's industry-adjusted ROA pre-turnover is below the 25 <sup>th</sup> percentile of the sample.	Compustat
<b>Corporate Governance Controls:</b>		
Board Size	The natural logarithm of total number of directors sitting on board.	BoardEx, ISS, annual report
Board Independence	The ratio of independent directors to the total directors on the board.	BoardEx, ISS, annual report
<b>Instrumental Variable:</b>		
IDD Adoption	A dummy variable that equals one if the state has adopted the Inevitable Disclosure Doctrine (IDD).	Na (2020)