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Poor Performance and CEO Turnover in Community Banks: The Role of Gender in Managerial Successions[☆]

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Abstract

This paper examines the impact of poor financial performance on community bank CEO turnover and addresses the role of CEO gender in these successions and subsequent bank actions and outcomes. We document that poor performance has a causal impact on CEO turnover in U.S. community banks. Although poor financial performance is a key determinant of CEO turnovers, it is neither linked to the gender of the bank's dismissed nor the incoming CEO. We find strong evidence of asymmetric post-turnover operational and balance sheet adjustments depending on the gender of the incoming CEO, especially for banks undergoing CEO turnover amidst periods of poor performance. These adjustments suggest differential attempts at reducing leverage and risk for banks transitioning to female leadership. However, we do not find conclusive evidence that transitions to female leadership would lead to post-turnover improvements in financial performance or risk profile.

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1. Introduction

This paper studies the impact of poor financial performance on community bank CEO turnover and the role of CEO gender in these successions and subsequent bank actions and outcomes. The antecedents, consequences, and underlying mechanisms of CEO turnover have been extensively examined in the literature over the last four decades. In general, previous studies have documented that a firm's financial performance, level of risk-taking and financial distress, and governance mechanisms are among the key factors that influence CEO turnover (see e.g., Coughlan and Schmidt, 1985; Gilson, 1989; Murphy and Zimmerman, 1993; Farrell and Whidbee, 2003; Arthaud-Day et al., 2006; Bushman, Dai and Wang, 2010; Conyon and He, 2014; Jenter and Kanaan, 2015; Jenter and Lewellen, 2021; Burns, Minnick and Starks, 2023). Prior literature also suggests that CEO turnover may significantly affect firm's strategic direction, financial and investment policies, and other corporate outcomes, including the potential triggers of CEO turnover such as poor performance or financial distress (e.g., Beatty and Zajac, 1987; Kesner and Dalton, 1994; Weisbach, 1995; Shen and Cannella, 2002; Huson, Malatesta and Parrino, 2004; Fiordelisi and Ricci, 2014; Gao, Harford and Li, 2017; Lin et al., 2020).

While a vast body of literature has examined CEO turnover in public nonfinancial firms, comparatively less attention has been devoted to CEO turnover in banks and in particular community banks, which are fundamentally different from nonfinancial firms in terms of their business models, opaqueness, exposure to regulations and supervision, and societal importance. Furthermore, despite the extensive literature on CEO turnovers, only a few studies have considered the role of CEO gender as a potential factor in influencing managerial turnovers and post-turnover

corporate decisions and outcomes (Adams, Gupta and Leeth, 2009; Elsaid and Ursel, 2011; Rigolini, Gabaldon and Le Bruyn Goldeng, 2021; Ma, 2022).

This paper contributes to the extant literature by considering three interrelated questions associated with CEO turnover in community banks. First, we investigate whether poor financial performance is associated with CEO turnover in community banks and also assess whether such an association is potentially affected by the gender of the incumbent CEO. Second, we examine whether the association between poor financial performance and CEO turnover depends on the gender of the outgoing or incoming CEO. Finally, we explore whether the gender of the incoming CEO, and especially a change in CEO gender, influences the bank's policy decisions, financial performance, and risk-taking in the aftermath of the turnover. In our empirical analysis, we exploit unique data on CEO turnovers covering nearly all U.S. community banks between the years 2008 and 2017 to address these questions.

While a linkage between CEO turnover and poor performance is critical to affirming a degree of managerial discipline in community banks, the question about incoming CEO gender has received surprisingly little attention in the literature. Thus, in addition to considering CEO turnover-performance sensitivity, we also examine whether troubled community banks turn to female leadership specifically because they are in trouble, consistent with the so-called glass cliff hypothesis proposed by Ryan and Haslam (2005, 2007). Our empirical findings indicate that poor financial performance has a causal impact on CEO turnover in community banks. In addition, we find that although poor performance is a key determinant of CEO turnovers, it is not linked to the gender of the bank's dismissed nor the incoming CEO. This suggests that troubled, poorly

performing banks are not more likely to retain their incumbent female CEOs or to replace male CEOs with female ones.

After documenting a positive causal linkage between poor performance and CEO turnovers in community banks, we proceed to examine whether the gender of the incoming CEO affects bank actions and outcomes in the aftermath of executive turnovers. To the extent that the gender of the incoming CEO may influence bank risk-taking preferences and policies, we expect female CEOs to pursue more conservative and less risky strategies based on the well-documented gender-based differences in risk preferences and tolerance of individuals (see e.g., Levin, Snyder and Chapman, 1988; Johnson and Powell, 1994; Powell and Ansic, 1997; Jianakoplos and Bernasek, 1998; Sunden and Surette, 1998; Barber and Odean, 2001; Agnew, Balduzzi and Sunden, 2003; Watson and McNaughton, 2007; Halko, Kaustia and Alanko, 2012).

Consistent with this presumption, we document that a transition from a male CEO to a female CEO leads to post-turnover deleveraging and derisking actions. Among the community banks with executive turnovers, the banks with incoming female CEOs take actions to reduce both assets and liabilities while banks with male CEOs do not do so. In contrast, when the incoming CEO is male, we observe increases in the amounts of loans and risky assets. These gender-related asymmetries in bank actions following leadership changes are most pronounced for banks in which CEO turnover occurs amidst poor performance. Specifically, our findings indicate that poorly performing community banks with incoming female CEOs pursue reductions in assets, risk-weighted-assets, and the number of employees and bank branches. These banks also exhibit reductions in liabilities, deposits, and brokered deposits in the aftermath of CEO turnover. Poorly

performing community banks that do not experience a transition to female leadership either do not have reductions or comparable levels of reductions in their assets and liabilities.

We also examine the role of incoming CEO gender in influencing the bank's financial performance and riskiness after changes in leadership. If the gender of the incoming CEO influences the bank's strategic decisions with respect to asset and liability growth, such decisions could affect post-turnover performance and the level of risk. We find that banks with CEO turnover experience reductions in default risk and earnings volatility. While these reductions tend to be greater after a transition from a male CEO to a female CEO, the reductions are not necessarily economically different from comparable changes in banks that do not undergo a transition to female leadership. In addition, we find no evidence that transitions to female leadership would lead to post-turnover improvements in capital levels or profitability. Our findings suggest that attempts to reduce leverage or risk by poorly performing banks transitioning to female leadership are effective in improving outcomes but may not be consistently superior to other strategies. In other words, the post-turnover strategies used by banks that do not transition to female leadership are often as effective.

Our paper contributes to several strands of literature. First, we extend the extensive literature on CEO turnovers which generally suggests that poor financial performance increases the likelihood of CEO turnover (see e.g., Coughlan and Schmidt, 1985; Gilson, 1989; Murphy and Zimmerman, 1993; Conyon and He, 2014; Jenter and Kanaan, 2015; Jenter and Lewellen, 2021). Most previous work examines publicly-listed nonfinancial firms, and the few exceptions focusing on CEO turnovers in banks are the studies by Schaeck et al. (2012), Bornemann et al. (2015), Srivastav et al. (2017), Chen and Ebrahim (2018), Sarkar, Subramanian and Tantri (2019), and

Bunkanwanicha, Di Giuli and Salvade (2022). In brief, these studies suggest that CEO turnovers in banks are positively related to poor performance, the degree of risk-taking and financial distress, and the stringency of board and regulatory monitoring. Overall, as contended by Becht, Bolton and Roell (2011), Adams and Mehran (2012), de Haan and Vlahu (2016), and Palvia, Vähämaa and Vähämaa (2020), among others, banks are fundamentally different from nonfinancial firms in terms of their business models, governance structures, and supervision and regulation, and consequently, additional research on the antecedents and consequences of CEO turnovers in the banking industry is warranted.

Second, our paper contributes to the scant literature on community bank governance and, more specifically, on CEO turnovers and the effects of these turnovers on community bank actions and outcomes. While banks, in general, are different from nonfinancial firms, community banks have a unique set of characteristics relative to large, publicly-traded financial institutions, including their business models, risk management strategies, ownership and governance structures, and differences in regulatory oversight. In community banks, CEOs often have closer ties with the board members, employees, and shareholders, and their governance structures are influenced by personal relationships between the different stakeholders.[1] As a consequence, the CEOs of community banks may not face the same extent of managerial discipline by the board of directors and shareholders. These characteristics make community banks a particularly interesting setting to examine CEO turnovers.

[1] For instance, a single influential executive could potentially have an outsized role as community banks often have limited numbers of executives and board members.

The only previous studies on CEO turnovers in community banks we are aware of are those of Schaeck et al. (2012), Palvia (2012), and Dahl et al. (2018). In terms of factors triggering turnovers, Palvia (2012) documents a linkage between regulatory monitoring and CEO turnovers, while the findings of Schaeck et al. (2012) indicate that increased default risk increases the likelihood of CEO dismissal. Schaeck et al. (2012) also examine the effect of CEO turnovers on community banks' financial performance and risk profile and find no evidence that leadership changes would improve bank performance. Finally, Dahl et al. (2018) focus on the impact of CEO turnovers on regulatory assessment of managerial performance. Their findings suggest that CEO turnovers neither weaken nor improve management performance ratings. Our study is the first to examine the potential role of CEO gender, and specifically the impact of appointing female CEOs, in influencing community bank actions and outcomes after leadership successions.

The third related stream of literature investigates female CEOs and the effects of female leadership on corporate decisions and outcomes. This body of literature shows that firms led by female executives make less risky financing choices and investment decisions and are more conservative with respect to financial reporting practices (e.g., Peni and Vähämaa, 2010; Huang and Kisgen, 2013; Francis et al., 2015; Faccio, Marchica and Mura, 2016; Adhikaria, Agrawal and Malm, 2019; Hrazdil et al., 2020; Janahi, Millo and Voulgaris, 2021; Peltomäki et al., 2021;). Hence, the existing empirical evidence generally suggests that the behavioral differences between female and male executives are reflected in corporate-level outcomes. In the banking context, the implications of female leadership have been previously examined by Berger, Kick, and Schaeck (2014), Palvia, Vähämaa, and Vähämaa (2015), Skala end Weill (2018), Fan et al. (2019), and Palvia, Vähämaa and Vähämaa (2020). Collectively, the findings of these studies are consistent

with the view that female executives and directors may promote more conservative and less risky business strategies and financial decisions in the banking industry. We extend this literature by documenting that a transition to female leadership in community banks leads to post-turnover deleveraging and derisking actions.

Finally, our study contributes to the small body of literature about the role of CEO gender in managerial turnovers. Elsaid and Ursel (2011) and Rigolini et al. (2021) document that a transition to a female CEO is associated with a decrease in firm risk, while Ma (2022) finds that female CEOs are more likely than their male counterparts to be dismissed after performance declines. Ryan and Haslam (2005, 2007) argue that women are more likely than men to be appointed to risky leadership positions which they coin the "glass cliff" form of gender discrimination. Consistent with this view, Cook and Glass (2014a) and Elsaid and Ursel (2018) document that companies are more likely to appoint female CEOs after experiencing poor financial performance. On the other hand, the findings of Adams et al. (2009), Elsaid and Ursel (2011), and Cook and Glass (2014b) suggest that poor performance or pre-turnover financial distress are not associated with the appointment of female CEOs. Given the mixed empirical evidence, it is of interest to examine the role of incoming CEO gender in poorly performing community banks. We document that poorly performing community banks are not more likely to appoint female CEOs, and thereby our empirical findings do not provide support for the glass cliff hypothesis.

The remainder of the paper is organized as follows. Section 2 reviews the related literature and presents our research hypotheses. Section 3 describes the data on U.S. community banks and presents the empirical framework used in our analysis. The empirical findings on the impact of poor financial performance on community bank CEO turnovers and the role of CEO gender in

executive turnovers are reported in Section 4. Finally, the last section summarizes our findings and concludes the paper.

2. Background and hypotheses

2.1. Related literature

The two broad strands of literature our study builds upon focus on the antecedents and consequences of CEO turnovers and the influence of CEO gender on firm-level financial decisions and outcomes. The extensive extant literature on CEO turnovers indicates that poor or declining financial performance and increasing levels of riskiness and financial distress increase the likelihood of CEO turnover (e.g., Coughlan and Schmidt, 1985; Gilson, 1989; Murphy and Zimmerman, 1993; Jenter and Kanaan, 2015; Jenter and Lewellen, 2021). As noted by Arthaud-Day et al. (2006), when firms are in trouble, the replacement of the incumbent CEO may be an attractive and powerful means of legitimacy restoration when the firm aims to make a strategic change to recover from a critical situation. In a recent study, Jenter and Lewellen (2021) document that 38 to 55 percent of CEO turnovers are performance-driven. The prior literature also demonstrates that CEO turnovers often lead to changes in the firm's strategic direction, financial and investment decisions, and various other outcomes (e.g., Beatty and Zajac, 1987; Kesner and Dalton, 1994; Shen and Cannella, 2002; Huson et al., 2004; Gao et al., 2017; Lin et al., 2020).

CEO turnovers in the banking industry have been previously examined by Palvia (2012), Schaeck et al. (2012), Bornemann et al. (2015), Srivastav et al. (2017), Chen and Ebrahim (2018), Dahl, Milchanowski and Coster (2018), Sarkar et al. (2019), and Bunkanwanicha, Di Giuli and

Salvade (2022). Broadly consistent with the studies based on nonfinancial firms, these studies suggest that CEO turnovers in banks are positively related to weak profitability and losses, the degree of risk-taking and financial distress, and the stringency of board and regulatory monitoring. Collectively, the prior literature on CEO turnovers provides motivation to further explore the antecedents and consequences of CEO turnovers in community banks which are unique in terms of their business models, risk management strategies, and ownership and governance structures.

The motivation for examining the role of CEO gender in managerial turnovers stems from the prior literature on gender-based behavioral differences between women and men and especially from previous studies that have linked CEO gender and female leadership to corporate decisions and outcomes. Over the last few decades, gender-based differences in overconfidence, conservatism, and risk preferences and tolerance of individuals have been extensively documented in the cognitive psychology and behavioral economics literature (see e.g., Levin, Snyder and Chapman, 1988; Feingold, 1994; Johnson and Powell, 1994; Powell and Ansic, 1997; Jianakoplos and Bernasek, 1998; Sunden and Surette, 1998; Fehr-Duda et al., 2006; Charness and Gneezy, 2012).

The effects of female CEOs on firms' business strategies, financial and investment decisions, risk profile and the level of risk-taking, and various other corporate outcomes have been examined by Peni and Vähämaa (2010), Elsaid and Ursel (2011), Huang and Kisgen (2013), Khan and Vieito (2013), Faccio et al. (2016) Hrazdil et al. (2020), and Peltomäki et al. (2021), among many others. Collectively, these studies provide evidence that the gender-based behavioral differences are reflected in corporate decisions that the top executives make. This stream of literature shows that female-led firms make less risky financing choices and investment decisions, have lower risk

profiles, are less likely to issue debt and conduct acquisitions, and are more conservative with respect to their financial reporting practices than male-led firms.

In the banking context, the implications of female CEOs have been previously examined by Palvia et al. (2015, 2020) and Skala and Weill (2018). Palvia et al. (2015) document that female-led banks hold more conservative levels of equity capital and are less likely to fail after controlling for the bank's asset risk and other attributes, and in a similar vein, Skala and Weill (2018) report that banks with female CEOs are associated with higher capital ratios. Palvia et al. (2020) examine the effect of real estate lending exposure and real estate shocks on bank performance and document that female-led banks have lower loan charge-offs and non-accrual loans relative to similar male-led banks.

Finally, the role of CEO gender in managerial turnovers has been previously studied by Ryan and Haslam (2005, 2007), Adams et al. (2009), Elsaid and Ursel (2011, 2018), Cook and Glass (2014a, 2014b), Rigolini et al. (2021), and Ma (2022). The findings of Elsaid and Ursel (2011) and Rigolini et al. (2021) indicate that a transition to a female CEO is associated with a decrease in firm risk, while Ma (2022) finds that female CEOs are more likely than their male counterparts to be dismissed in response to poor financial performance. Cook and Glass (2014a) and Elsaid and Ursel (2018) document that companies are more likely to appoint female CEOs after experiencing poor financial performance, while the findings of Adams et al. (2009), Elsaid and Ursel (2011), and Cook and Glass (2014b) suggest that poor performance or pre-turnover financial distress are not associated with the appointment of female CEOs.

2.2. Hypotheses

Our hypotheses are built upon the aforementioned strands of prior literature. Previous studies have documented that weak or declining financial performance increases the likelihood of CEO turnover in nonfinancial firms and also in the banking industry. The linkage between poor performance and CEO turnover tends to be amplified by strong governance structures and effective oversight by the board of directors and other internal and external stakeholders. Given that in community banks, the CEOs often have closer ties with the board members and shareholders and the governance structures are influenced by personal relationships, community bank CEOs may not necessarily face the same extent of managerial discipline in response to weak financial performance as the CEOs of larger banks. Thus, the association between community bank performance and CEO turnover is ultimately an empirical question. We address this question by testing the following two competing hypotheses:

$H1_a$: *Poor performance increases the likelihood of CEO turnover in community banks.*

$H1_b$: *Poor performance does not increase the likelihood of CEO turnover in community banks.*

We proceed by examining the role of CEO gender in managerial successions. There are two opposing theories that are relevant in the context of the dismissal and appointment of female CEOs. The glass cliff hypothesis proposed by Ryan and Haslam (2005, 2007) suggests that women are more likely than men to be appointed to leadership positions during periods of crisis or weak performance, placing them in precarious roles with a higher risk of failure. Under this "glass cliff" form of gender discrimination, females are more likely to hold leadership positions in poorly-performing banks while also being more likely to be appointed as the replacement of the incumbent

CEO in these banks. If female CEOs are set up for failure, an alternative manifestation of the glass cliff hypothesis can be a reduced likelihood of CEO turnover in response to weak performance in female-led banks. Specifically, appointing females to leadership positions at times of distress is conceptually analogous to the bank being less likely to dismiss an incumbent female CEO when the risk of bank failure is high. These glass cliff arguments lead to the following two hypotheses related to the role of CEO gender in turnovers:

H2: *Poor performance increases the likelihood of a managerial turnover in which the incoming CEO is a female.*

$H3_a$: *Poorly-performing community banks are less likely to dismiss an incumbent female CEO.*

As an alternative to the glass cliff hypothesis, the role congruity theory of Eagly and Karau (2002) posits that it is difficult for females to achieve and retain leadership positions through achievement and success. Under this view, female CEOs of weakly performing firms may face more scrutiny due to role incongruity with respect to the societal expectations of traditional leadership norms. Based on the role congruity theory, it can be expected that female CEOs are more likely than male CEOs to be dismissed in response to weak or declining performance. Thus, we propose an alternative version of $H3_a$ as follows:

$H3_b$: *Poorly-performing community banks are more likely to dismiss an incumbent female CEO.*

After studying the impact of poor financial performance on CEO turnover and considering the role of CEO gender in these successions, it is of interest to further investigate whether the

gender of the incoming CEO affects community bank actions and outcomes in the aftermath of the turnover. In this regard, our hypotheses draw on the behavioral differences between women and men that have been documented in the cognitive psychology and behavioral economics literature. Previous studies have documented gender-based differences in overconfidence, conservatism, and risk preferences and risk tolerance of individuals, suggesting that women are generally more cautious and risk-averse than men in financial decisions. Moreover, building on the upper echelons theory of Hambrick and Mason (1984), prior studies have documented that gender-based behavioral differences influence the decisions that top executives make, and as a consequence, are reflected in firm-level decisions and outcomes. If female CEOs are likely to promote more conservative and less risky strategies and financial decisions, a transition to female leadership in community banks can be expected to influence post-turnover policy decisions related to assets and liabilities as well as post-turnover changes in performance and risk-taking. Thus, we posit the following hypothesis:

> ***H4:*** *The gender of the incoming CEO influences the bank's post-turnover deleveraging and derisking actions.*

> ***H5:*** *The gender of the incoming CEO influences the bank's post-turnover performance and risk outcomes.*

We contend that if incoming female CEOs are more conservative and risk-averse than their male counterparts, *H4* should hold, and we should observe that banks with incoming female CEOs are more likely to make operational decisions that reduce the bank's leverage and risk. Such operational adjustments may include reducing the bank's assets and favoring less risky assets as well as reducing the bank's liabilities while opting for less volatile liabilities. While conservative

and risk-averse policy decisions and operational actions should unambiguously affect the bank's post-turnover risk-taking behavior, it remains an empirical question whether these actions will lead to a reduced realized risk profile or improved financial performance. If female CEOs are more risk-averse and their conservative approach aligns with the bank's operating environment, a transition to female leadership could lead to both a lower post-turnover risk profile and improved financial performance. For instance, more conservative decision-making could provide a bank facing high losses and limited lending opportunities with a better chance to reduce its risk exposure and improve its financial health. Thus, turnovers with incoming female CEOs may have a positive influence on post-turnover performance while being negatively associated with realized risk.

3. The empirical setup

3.1. Data

The data used in this study comprises U.S. community banks. Following the Federal Reserve, we define community banks as commercial banks with total assets below $10 billion.[2] We obtain balance sheet and income statement data for community banks from the bank Call Reports through the Federal Deposit Insurance Corporation's (FDIC) Research Information System (RIS). The data on CEO turnovers and the genders of the bank's dismissed and incoming CEOs are constructed from SNL Financial. Our CEO turnover data covers virtually the entire population of community banks with missing information affecting only about 3 percent of bank-

[2] See https://www.federalreserve.gov/supervisionreg/community-and-regional-financial-institutions.htm for more details. Our main findings remain unchanged if a stricter threshold of $1 billion in total assets is used.

quarters. After excluding commercial banks above the size threshold and removing bank-quarters with missing CEO, gender, or other data, we obtain a sample of 6,832 individual community banks and an unbalanced panel of 52,504 bank-year observations over the sample period of 2008 to 2017. The final sample used in our empirical analysis essentially includes all community banks with available data in the U.S., and on average, there are about 5,200 individual banks in the sample in any given year.

Following Palvia et al. (2015, 2020), we deduce the genders of community bank CEOs based on the names of these individuals as reported in SNL Financial. At a given point in time, SNL Financial provides the names of the incumbent bank CEOs. Because historical data on CEO names are unavailable from SNL Financial, we use historical snapshots of the data taken at the end of June of each individual year included in our sample. For each community bank and for each fiscal year, we manually determine the gender of the bank's CEO based on their first names. In the case of unisex names, we require that at least 80 percent of the name holders belong to a particular gender to determine the gender of a given CEO.[3] For ambiguous first names, we performed an internet search to determine CEO gender. Any unclear cases that could not be gender assigned based on these searches were excluded from the final sample.

[3] Following Palvia et al. (2015, 2020), the unclear names were coded to females and males based on various online sites including http://www.nameplayground.com. The latter website provides percentages for the popularity of a given name in the U.S. in both genders. For instance, 39.7 percent of individuals named Pat are males and 60.3 percent are females. This does not meet the 80 percent threshold and, consequently, CEOs named Pat were excluded from the sample.

3.2. Empirical tests

We begin our empirical analysis by examining the association between CEO turnover and poor financial performance. Specifically, we estimate the following regression specification to test the linkage between poor performance and CEO turnover in community banks ($H1_a$ and $H1_b$):

$$\begin{aligned} CEO\ turnover_{i,t} = {} & \beta_0 + \beta_1 Poor\ performance_{i,t\text{-}1} + \beta_2 CEO\ gender_{i,t\text{-}1} \\ & + \beta_{3\text{-}14}(Bank\text{-}specific\ controls)_{i,t\text{-}1} + \beta_{15\text{-}17}(Other\ controls)_{i,t\text{-}1} \\ & + \sum_{y=2009}^{2017} \omega_y\ Year_i^y + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The dependent variable $CEO\ turnover_{i,t}$ is an indicator variable that equals one if there was a CEO turnover in bank i during year t. Whereas previous studies often classify CEO turnovers into forced and unforced turnovers based on different ad hoc rules, we include all turnovers in our tests because it is not possible to distinguish between different types of CEO turnovers using such rules in community banks which are small and generally privately-owned firms.[4] However, as argued by Jenter and Lewellen (2021), the commonly used approaches of classifying forced and unforced CEO turnovers by age and other attributes may lead to downwards biased estimates with respect to the linkage between CEO turnover and firm performance. In addition, given that unforced turnovers are unlikely to be correlated with firm performance as suggested by Jenter and

[4] For instance, criteria such as departing CEO age or usage of certain keywords as an expressed reason for the turnover in news reports are sometimes used to classify CEO turnovers into forced and unforced turnovers. Governance characteritics are typically only available for large, publicly traded financial institutions and news reports also generally tend to focus on larger publicly traded firms.

Lewellen (2021), the inclusion of unforced CEO turnovers in our sample is likely to generate noise in the estimations rather than bias.

The main independent variable of interest in Equation (1) for testing $H1_a$ and $H1_b$ is *Poor performance*. We use two alternative measures of poor financial performance in our regressions: (i) *Low ROA* is defined as a dummy variable that equals one for bank-year observations with return on assets in the bottom decile, and (ii) *High charge-offs* is a dummy variable that equals one for bank-year observations with the ratio of loan charge-offs to total assets in the top decile. $H1_a$ predicts that the coefficient estimate for *Poor performance* will be positive (i.e., $\beta_1 > 0$), while $H1_b$ predicts that the coefficient equals zero.

We use four alternative indicator variables in Equation (1) for *CEO gender*. When testing $H1_a$ and $H1_b$, *CEO gender* is a dummy variable that equals one if the bank's incumbent CEO in year t is a female. In these regressions, a non-zero value for β_2 would indicate that the likelihood of CEO turnover is linked to the gender of the outgoing CEO. We also estimate regressions in which the female CEO dummy variable is interacted with *Poor performance* to examine whether the linkage between poor performance and the likelihood of CEO turnover is influenced by the gender of the incumbent CEO ($H3_a$ and $H3_b$). We further test $H2$, $H3_a$, and $H3_b$ with similar regression specifications to Equation (1) but with various adjustments to the dependent variable and the sample as required in each case. In particular, based on the genders of the bank's outgoing and incoming CEOs, the turnovers are categorized into the following three indicator variables for testing hypotheses regarding the role of CEO gender: (i) *Female-to-male CEO turnover*, (ii) *Male-to-female CEO turnover*, and (iii) *Same gender CEO turnover*.

We include a number of control variables in the regressions to account for the potentially confounding effects of factors such as bank size, governance structure, organizational changes, and merger activity on CEO turnovers. The control variables used in Equation (1) are defined as follows: (i) *Total assets* is the logarithm of the bank's total assets, (ii) *Large bank* is a dummy variable which equals one for community banks with total assets in excess of $1 billion, (iii) *CEO duality* is a dummy variable which equals one if the same individual is the bank's CEO and the chairperson of the board, (iv) *Related board chair* is a proxy for family control and ownership defined as a dummy variable which equals one if the bank's CEO and chairperson of the board are different individuals but have the same last names, (v) *Female board chair* is a dummy variable which equals one if the chairperson of the board is a female, (vi) *Public* is a dummy variable for publicly traded banks, (vii) *Subchapter S* is a dummy variable assigned to one for closely held banks that are organized under the subchapter-S, (viii) *MBHC* is a dummy variable which equals one for banks that are affiliated with a multibank holding company, (ix) *Bank age* is the logarithm of the age of the bank, (x) *Organizational change* is a dummy variable which equals one for banks that experienced any kind of a change in holding company structure, (xi) *Merger activity* is a dummy variable for banks that were involved in a merger during the year preceding CEO turnover, (xii) *Number of states* is the number of states the bank operates in, (xiii) *Market concentration* is the Herfindahl-Hirschman Index of deposit market concentration in the combined statistical area or county of the bank, (xiv) *Unemployment* is the state unemployment rate, and (xv) *RPCI* is the real per-capita income in the state. We also include year fixed-effects in the regressions to account for any systematic variation in the amount of CEO turnovers over time. The definitions of all the variables used in the regressions are provided in Table 1.

After examining the impact of poor bank performance on CEO turnover, we proceed by studying community bank actions and outcomes following the turnovers and especially the role of the gender of the incoming CEO. To test *H4* and *H5*, we regress changes in bank assets and liabilities as well as various performance and risk outcome measures on three different CEO turnover variables that are constructed based on the genders of the bank's outgoing and incoming CEOs. Specifically, we estimate alternative versions of the following regression specification:

$$\begin{aligned}\Delta y_{i,t} = {} & \beta_0 + \beta_1 Poor\ performance_{i,t\text{-}1} + \beta_2 Male\text{-}to\text{-}female\ CEO\ turnover_{i,t\text{-}1} \\ & + \beta_3 Female\text{-}to\text{-}male\ CEO\ turnover_{i,t\text{-}1} + \beta_4 Same\ gender\ CEO\ turnover_{i,t\text{-}1} \\ & + \alpha_1 (Bank\text{-}specific\ controls)_{i,t\text{-}1} + \alpha_2 (Other\ controls)_{i,t\text{-}1} \\ & + \sum_{b=1}^{N\text{-}1} \omega_b Bank_b + \sum_{y=2009}^{2017} \omega_y Year_y + \varepsilon_{i,t}\end{aligned} \quad (2)$$

where the dependent variable $\Delta y_{i,t}$ is the annual change in a specific (i) bank asset measure, (ii) liability measure, (iii) performance measure, or (iv) risk measure for community bank *i* from year *t*-1 to year *t*. Our tests effectively consider the one-year evolution in these balance sheet and outcome measures to gauge bank actions and financial outcomes following the CEO turnover. The four different bank asset measures used in the regressions are (i) *Total assets*, (ii) *Loans*, (iii) *Employees*, and (iv) *Branches*. The four bank liability measures are (i) *Total liabilities*, (ii) *Deposits*, (iii) *Brokered deposits*, and (iv) *Non-deposit liabilities*. All the asset and liability measures are used in logarithmic form. Finally, the four bank outcome measures used as the dependent variables are (i) return on assets (*ROA*), (ii) earnings volatility (*ROA volatility*), (iii) *Z-score*, and (iv) *Capital ratio*.

Similar to Equation (1), *Poor performance* is measured either with *Low ROA* or *High charge-offs*. The variables of interest in Equation (2) for testing *H4* and *H5*, are *Male-to-female CEO turnover*, *Female-to-male CEO turnover*, and *Same gender CEO turnover* which are dummy variables constructed based on the genders of the bank's outgoing and incoming CEOs.

In addition to the control variables included in Equation (1), we augment the set of controls depending on the specification.[5] For specifications considering shifts in the bank's assets, we include three additional controls representing bank liquidity or asset risk. These variables are *Loans to assets*, *Cash balances to assets*, and *Risk-weighted assets to assets*. In the regressions with liability measures as the dependent variables, we include the following three additional controls that represent bank funding risk: (i) *Deposits to liabilities*, (ii) *Brokered deposits to liabilities*, and (iii) *Deposit interest rate*. Finally, in the regressions with the four different bank outcome measures as the dependent variables, we include all six additional control variables. We also include bank fixed-effects and year fixed-effects in Equation (2) to control for unobserved heterogeneity across banks and any systematic variation in the different dependent variables over time.

(Insert Table 1 about here)

[5] In contrast to Equation (1), *CEO gender* is not included in Equation (2) because *Female-to-male CEO turnover*, *Male-to-female CEO turnover*, and *Same gender CEO turnover* effectively incorporate the genders of both the incoming and outgoing CEO.

3.3. Descriptive statistics

The descriptive statistics for the variables used in the empirical analysis are presented in Table 2. As can be noted from Panel A, our sample of 52,504 bank-year observations includes 5,270 community bank CEO turnovers. In most of these turnovers, the genders of the bank's outgoing and incoming CEOs are the same. Our sample includes 330 CEO turnovers, corresponding to 6.3 percent of the turnover observations, in which a male is replaced by a female (i.e., *Female-to-male CEO turnover*) and 214 turnovers (4.1 percent of turnovers) in which a female CEO is replaced by a male CEO (i.e., *Female-to-male CEO turnover*).

The descriptive statistics in Panel B of Table 2 indicate that there is considerable dispersion in our sample with respect to bank performance as measured by return on assets (ROA) and loan charge-offs. The mean value of ROA is 0.7 percent with the 10^{th} to 90^{th} percentile range being from –0.03 percent to 1.7 percent. The 10^{th} percentile of the charge-off ratio is essentially zero and the 90^{th} percentile is about 0.2 percent. Regarding the control variables, it can be noted from Table 2 that there is a wide variation in our bank-years in terms of size, funding and asset structure, growth, and financial performance. The logarithm of total assets has a mean of 12.10, which implies total assets of $200 Million. Similarly, the 5^{th} percentile to 95^{th} percentile range varies from 10.34 to 14.20, or $31 Million to $1.47 Billion.[6] The average bank holds about 70 percent of its loan portfolio in residential real estate loans, thereby suggesting a very substantial exposure to real-estate price shocks. The statistics also show substantial variation in our distributions for the various balance sheet controls for assets (*Loans to assets*, *Cash balances to assets*, and *Risk-*

[6] Financial data in Call Reports are reported in thousands of U.S. dollars.

weighted assets to assets) and liabilities (*Deposits to liabilities*, *Brokered deposits to liabilities*, and *Deposit interest rate)*.

In approximately 35 percent of the community banks, the positions of the CEO and board chair are held by the same individual. Interestingly, the chairperson of the board is related to the CEO in 6 percent of the banks. The descriptive statistics also indicate that 18 percent of the community banks in our sample are publicly traded, about 37 percent are subchapter-S banks, and approximately 15 percent of the banks are affiliated with a multibank holding company. Lastly, it can be observed that most of the community banks operate in a single state with the mean being 1.12 and the 75th percentile being 1.

(insert Table 2 about here)

4. Results

4.1. Poor performance and CEO turnovers

We begin our analysis by looking at the extent of CEO turnover across community banks. Figure 1a shows that CEO turnover ranges from about 13 percent of total annual observations in 2008 to less than 8 percent in 2017. This indicates that CEO turnovers were particularly common during the global financial crisis of 2007-2008 when bank performance was deteriorating swiftly. We then classify banks with return on assets in the bottom decile and the ratio of loan charge-offs to total assets in the top decile as poorly performing community banks. Figures 1b and 1c show that CEO turnovers are substantially more prevalent in poorly performing community banks. The difference in CEO turnover rate between poorly performing banks and other banks is ubiquitous

throughout the sample period and is not only specific for the financial crisis and its immediate aftermath.

(Insert Figure 1 about here)

To formally examine the impact of poor performance on community bank CEO turnover, we regress CEO changes from year *t*-1 to *t* on indicators of poor financial performance and a set of control variables at time *t*-1. The estimation results of alternative versions of Equation (1) are reported in Table 3. Model 1 is a baseline version without *Poor performance* whereas Models 2-5 include either *Low ROA* or *High charge-offs* as the measure of poor performance.

(insert Table 3 about here)

As can be seen from Table 3, the coefficient estimates for *Low ROA* or *High charge-offs* are positive and statistically significant at the 1 percent level. Consistent with $H1_a$, the regression results suggest that poor performance increases the likelihood of CEO turnover in community banks. The estimated coefficient for *Female CEO* is insignificant, indicating that the gender of the incumbent CEO does not affect the likelihood of CEO turnover. Thus, the empirical results do not provide support for $H3_a$ or $H3_b$.

Regarding the control variables, it can be noted from Table 3 that the coefficient estimates for *CEO duality* and *Related board chair* are negative and highly significant. This indicates that greater CEO power relative to the board of directors reduces the likelihood of CEO turnover in community banks. The coefficients for *MBHC*, *Organizational change*, *Unemployment*, and *Large bank* are positive and significant, while the coefficients for *Total assets* and *Bank age* are negative and significant. This suggests that the likelihood of CEO turnover is higher in very large

community banks that have experienced recent changes in the organizational structure and lower in older and more established banks. The opposing signs of the coefficients for *Total assets* and *Large bank* indicate a non-monotonic relationship between CEO turnover and bank size.

4.2. Endogeneity

The estimation results of the panel regressions reported in Table 3 demonstrate that poor financial performance is positively associated with the likelihood of CEO turnover. Although we have controlled for a range of bank-specific characteristics as well as state-level economic indicators in the regressions, it is possible that we have omitted correlated variables or some unobservable bank characteristics that have a simultaneous effect on bank performance and managerial succession. We next attempt to alleviate these endogeneity concerns by utilizing instrumental variable regressions.

Our identification strategy relies on exploiting exogenous geographically and time-varying housing price shocks which are defined based on state-level housing price index (HPI) obtained from the FHFA. We employ two alternative versions of a shock to HPI as instruments for poor performance in our two-stage instrumental variable regressions: (i) *HPI 10 percent shock* is defined as a year-over-year decline of at least 10 percent in the HPI during the two years prior to CEO turnover in the regions in which the bank operates and (ii) *HPI 20 percent shock* is a similar measure but with at least 20 percent decline in the HPI.[7] We presume that HPI shocks should be

[7] A bank is classified as having been exposed to a 20 percent or a 10 percent HPI shock if the state in which a bank operates suffers a decline in HPI by these amounts. For banks operating in multiple states, we use a deposit-weighted HPI based on the states from where the bank has deposits to estimate bank-level HPI.

positively associated with poor bank performance while not being directly correlated with CEO turnover in community banks. The estimates of the first-stage regressions are not tabulated for brevity. Tests for under-identification and weak identification are rejected in all model specifications, thereby confirming the validity of the instruments.[8]

(insert Table 4 about here)

The results of the second-stage regressions with the instrumented measures of poor performance are reported in Table 4. The main variables of interest are instrumented *Low ROA* in Models 1-4 and instrumented *High charge-offs* in Models 5-8. In Models 2, 4, 6, and 8, the regressions are based on a subsample of community banks with high real estate lending exposure. For this purpose, we define banks with the ratio of residential real estate loans to total loans in the top quartile before the observed real estate shock as the high real estate exposure banks.

The estimates of the second-stage regressions indicate that poor performance has a causal impact on CEO turnover. The coefficient estimates for instrumented *Low ROA* and instrumented *High charge-offs* are positive and statistically significant throughout the different model specifications. In addition to being statistically significant, the estimated linkage between poor performance and CEO turnover can be considered economically significant. Models 1 and 5 suggest that poor performance increases the likelihood of CEO turnover by 11 and 9 percent, respectively. This is roughly as high as the unconditional mean of CEO turnover reported in Table 2. It is also worthwhile to note that the estimated coefficients for the instrumented poor performance variables are somewhat higher but in the same general range as the coefficient

[8] The under-identification and weak identification tests reported in Table 4 are the Klieibergern-Paap rank LM and Cragg-Donald Wald F-Statistics, respectively.

estimates for *Low ROA* and *High charge-offs* in Table 3. When the instrumental variable regressions are estimated using the subsample of banks with high real estate lending exposure, the coefficients for the instrumented poor performance variables are substantially larger in magnitude. Overall, the instrumental variable regressions provide support for $H1_a$ and indicate that there is a causal relationship between poor performance and CEO turnover in community banks.

4.3. The role of gender in CEO turnover

We further analyze the relationship between poor performance and CEO turnover by examining whether performance influences the gender of the incoming CEO. The glass cliff hypothesis posits that women are more likely than men to be appointed to leadership positions during periods of crisis or weak performance, placing them in precarious roles with a higher risk of failure ((Ryan and Haslam, 2005, 2007). As a precursor to considering the effect of CEO gender on bank decisions and outcomes following CEO turnovers, we first investigate whether changes in CEO gender are themselves potentially driven by poor performance. For this purpose, we focus on the banks that experienced a CEO turnover during our sample period (n = 5,270). Figure 2 depicts the unconditional means of CEO turnover in poorly performing community banks and other banks. The percentages of female-to-male CEO turnovers, male-to-female CEO turnovers, and same-gender CEO turnovers appear relatively similar regardless of bank performance.

(Insert Figure 2 about here)

Table 5 presents the regression results with different types of CEO turnovers as the dependent variables. In Panel A, we examine whether poor performance is associated with the gender of the incoming CEO. As can be noted from the table, the coefficients for *Low ROA* and *High charge-offs* are mostly insignificant, with the only exception being the positive coefficient for *Low ROA* in the case of same-sex CEO turnovers. Panel B of Table 5 reports the second-stage estimates of instrumental variable regressions. The coefficients for the instrumented poor performance measures are statistically insignificant throughout the different model specifications. Thus, inconsistent with *H2* and the glass cliff hypothesis, our estimates suggest that poor performance does not influence the gender of the bank's incoming CEO. Interestingly, the regressions indicate that banks with female board chairs are more likely to replace dismissed CEOs with an incoming CEO of the opposite gender and are particularly more likely to replace female CEOs with males.

We further examine the glass cliff and the role congruity hypotheses ($H3_a$ and $H3_b$) by estimating the likelihood of CEO turnover conditional on the incumbent CEO being female. In addition to the baseline model with *Female CEO* dummy as the variable of interest, we also estimate regressions in which the *Female CEO* is interacted with *Poor performance*. The results of these regressions are reported in Panel C of Table 5. While the coefficients for *Low ROA* and *High charge-offs* are again positive and highly significant, the coefficient estimates for *Female CEO* and *Female CEO* × *Poor performance* are insignificant. This suggests that the likelihood of CEO turnover and the linkage between poor performance and the likelihood of CEO turnover are not influenced by the gender of the incumbent CEO. Thus, we do not find support for $H3_a$ or $H3_b$.

(Insert Table 5 about here.)

4.4. Bank actions after CEO turnovers

To the extent that poor performance causes CEO turnover, it is important to investigate whether the gender of the incoming CEO potentially influences post-turnover bank deleveraging and derisking actions. Specifically, we aim to examine if the gender of the incoming CEO plays a role in the evolution of bank balance sheets towards a reduced and less risky asset and liability composition. We begin with univariate analyses depicted in Figures 3a and 3b. These figures show that male-to-female CEO turnovers are associated with a decrease in both asset growth and liability growth. For instance, Figure 3b indicates that the unconditional mean for employee and office growth is negative after male-to-female CEO turnovers while being positive for the other types of CEO turnovers. The growth rates in assets, loans, total liabilities, and deposits also appear to be lower for banks that transition to female leadership.

(insert Figure 3 about here)

Table 6 reports the estimates of different versions of Equation (2). In Panel A, the coefficient estimates for *Male-to-female CEO turnover* are negative and statistically significant in the regressions with changes in *Total assets*, *Risk-weighted assets*, *Employees*, and *Branches* as the dependent variables. This suggests that banks with incoming female CEOs take actions to reduce the bank's assets. In addition to being statistically significant, the results can be considered economically significant. For instance, the estimates of Model 1 suggest that a male-to-female CEO turnover is associated with about 1.7 percent decline in total assets. This corresponds to about 0.1 standard deviations and about half of the median change in assets. As can be noted from Panel A, the coefficient estimates for *Female-to-male CEO turnover* and *Same gender CEO turnover* are insignificant.

(insert Table 6 about here)

We proceed by examining changes in bank liabilities and deposits following CEO turnovers. The estimates of Equation (2) with different liability measures as the dependent variables are presented in Panel B of Table 6. The coefficients for *Male-to-female CEO turnover* are negative and significant in the regressions with *Total liabilities* and *Deposits* as the dependent variables, while being insignificant when *Brokered deposits* and *Non-deposit liabilities* are used as the dependent variables. Similar to Panel A, the coefficients for *Female-to-male CEO turnover* and *Same gender CEO turnover* are insignificant throughout the different model specifications. The negative relation between male-to-female CEO turnovers and changes in liabilities and deposits is economically meaningful; Model 1 indicates that a transition to female leadership is associated with a 2.4 percent decline in the bank's total liabilities. Overall, the estimates in Panels A and B provide support for *H4*.

Next, we consider how poor performance influences the post-turnover deleveraging actions of the incoming CEO. Figures 4a–d depict the changes in bank assets and liabilities in poorly performing banks by different types of CEO turnovers. The differences in bank actions are striking; male-to-female CEO turnovers are associated with substantial declines in all sub-categories of bank assets, while female-to-male CEO turnovers seem to lead to increases in assets. Similar patterns can be observed for bank liabilities, at least to some extent. As shown in Figures 4c-4d, there is a large post-turnover decline in brokered deposits and non-deposit liabilities for banks that transition to female leadership but not for the banks in which the incoming CEO is male.

(Insert Figures 4a-d about here)

As the next step of the analysis, we assess the post-CEO turnover actions of poorly performing banks in a multivariate setting. Specifically, we estimate regressions in which the three different types of CEO turnover dummy variables interacted with bank performance measures. The estimation results are reported in Table 7. Overall, the regression results indicate that incoming female CEOs are likely to take more substantial actions to reduce the bank's assets and liabilities, and especially riskier assets and liabilities when the bank performing poorly. Somewhat similar actions can also be observed for banks with same-gender CEO turnovers. Nevertheless, the magnitude of the coefficient estimates and the number of specifications with statistically significant coefficients are generally higher in the subset of banks that experience a male-to-female CEO turnover.

(Insert Table 7 about here)

4.5. Bank performance and risk profile changes after CEO turnovers

Finally, we examine the evolution of bank performance and risk profile after CEO turnovers. Panel A of Table 8 reports the estimates of Equation (2) with one-year changes in various performance and risk outcome measures as the dependent variables. The estimates in Panel A indicate that CEO turnover in poorly performing banks generally leads to improvements in performance regardless of CEO gender. The coefficients for *Male-to-female CEO turnover* and *Same gender CEO turnover* are significant in the regressions with *Earnings volatility* and *Z-score* as the dependent variables, suggesting that the riskiness of bank decreases after male-to-female and same-gender CEO successions. The significant coefficients for *Male-to-female CEO turnover* are larger in magnitude than the coefficients for *Same gender CEO turnover*.

(Insert Table 8 about here)

In Panel B of Table 8, we use two-year changes in the performance and risk outcome measures as the dependent variables to assess whether CEO turnovers induce longer-term changes in bank outcomes. In general, the estimation results in Panel B are very similar to Panel A but with coefficients that are larger in magnitude and statistically more significant. Consistent with Panel A, the regression results in Panel B suggest that CEO turnovers are associated with improvements in bank performance and risk profile regardless of the gender of the incoming CEO gender. The estimated coefficients for *Male-to-female CEO turnover*, *Female-to-male CEO turnover*, and *Same gender CEO turnover* are statistically significant in Models 1 and 5 with *Z-score* as the dependent variable. In Models 4 and 8 with *Earnings volatility* as the dependent variable, the coefficients are significant for *Male-to-female CEO turnover* and *Same gender CEO turnover*, but insignificant for *Female-to-male CEO turnover*. Overall, our empirical findings do not provide conclusive support for *H5*.

Collectively, the regression results reported in Tables 6-8 suggest that a transition to female leadership leads to post-turnover deleveraging and derisking actions. However, the operational adjustments taken by incoming female CEOs do not necessarily lead to post-turnover improvements in capital levels or financial performance. The lack of consistently larger post-turnover reductions in risk or improvements in performance for banks with incoming female CEOs relative to other banks experiencing CEO turnover suggests that conservatism is not necessarily a superior strategy for poorly performing banks.

5. Conclusions

This paper studies the impact of poor financial performance on community bank CEO turnovers and the role of CEO gender in these successions. Specifically, we examine three interrelated questions. First, we investigate whether poor financial performance is associated with CEO turnover in community banks and also assess whether such an association is potentially affected by the gender of the incumbent CEO. Second, we examine whether the association between poor financial performance and CEO turnover depends on the gender of the outgoing or incoming or outgoing CEO. Finally, we explore the role of the incoming CEO gender in influencing the bank's policy decisions, financial performance, and risk-taking in the aftermath of the turnover. In our empirical analysis, we use unique CEO turnover data that covers nearly all U.S. community banks over the period 2008-2017.

Our empirical findings indicate that poor financial performance has a causal impact on CEO turnover in community banks. Although weak performance is a key determinant of CEO turnovers, it is not linked to the gender of the bank's dismissed nor the incoming CEO. This suggests that troubled, weakly performing banks are not more likely to retain their incumbent female CEOs or to replace male CEOs with female ones. Furthermore, we document that a transition to female leadership leads to post-turnover deleveraging and derisking actions. Banks with incoming female CEOs take actions to reduce both assets and liabilities while male-led banks do not. In contrast, when the incoming CEO is male, we observe increases in the amounts of loans and risky assets. These gender-related asymmetries in bank actions following leadership changes are most pronounced for banks in which CEO turnover occurs amidst periods of poor performance. Our findings also indicate that managerial successions are generally associated with reductions in

default risk and earnings volatility. We do not, however, find conclusive evidence that transitions to female leadership would lead to greater post-turnover reductions in realized risk or improvements in bank performance. Overall, our findings suggest that CEO gender meaningfully influences community bank decisions but not necessarily outcomes in the aftermath of executive turnovers.

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Figure 1a. CEO turnovers in community banks during 2008-2017.

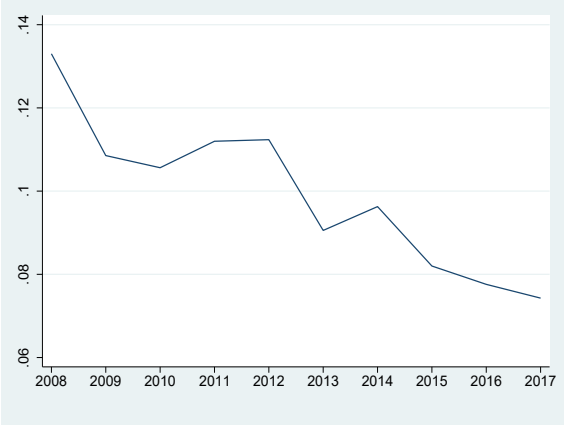


Figure 1b. CEO turnovers in community banks with low return on assets.

Figure 1c. CEO turnovers in community banks with high loan charge-offs.

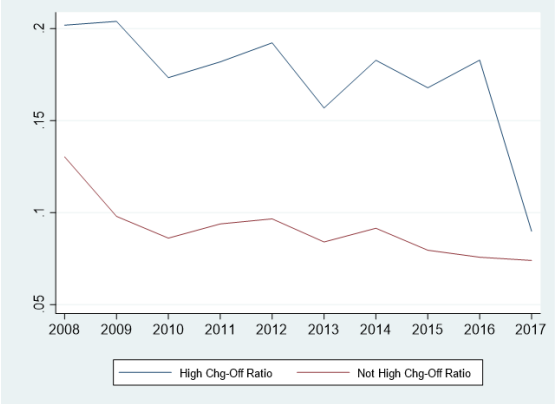


Figure 2a. Different types of CEO turnovers in community banks with low return on assets.

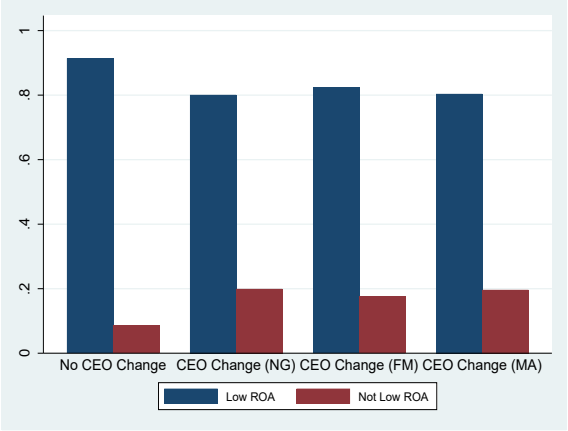
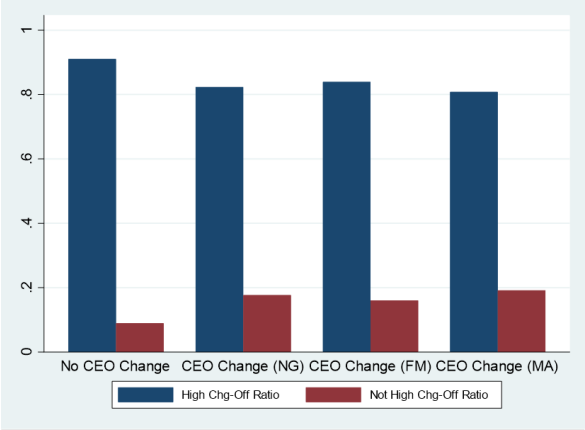


Figure 2b. Different types of CEO turnovers in community banks with high loan charge-offs.



Figures 2a and 2b depict the percentage of community banks that are classified as poorly performing banks based on low return on assets or high loan charge-offs, respectively, for the following four subsamples: (i) banks without CEO turnover, (ii) banks with a same-gender CEO turnover, (iii) banks with a male-to-female CEO turnover, and (iv) banks with a female-to-male CEO turnover.

Figure 3a. Changes in community bank assets after CEO turnovers.

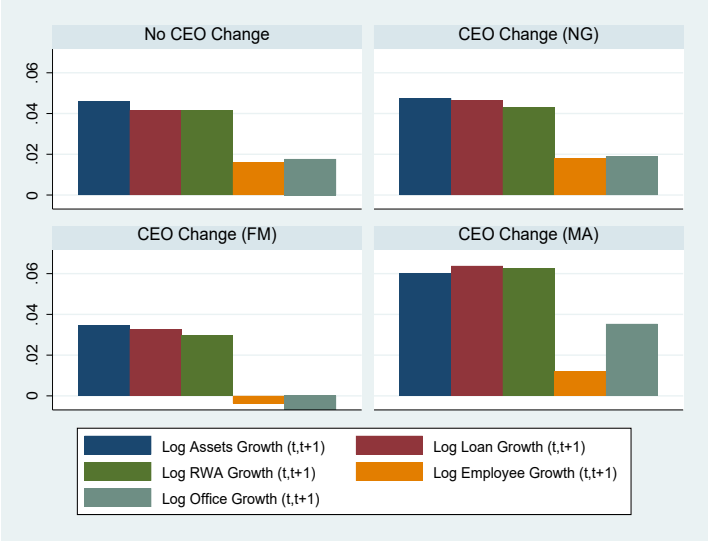
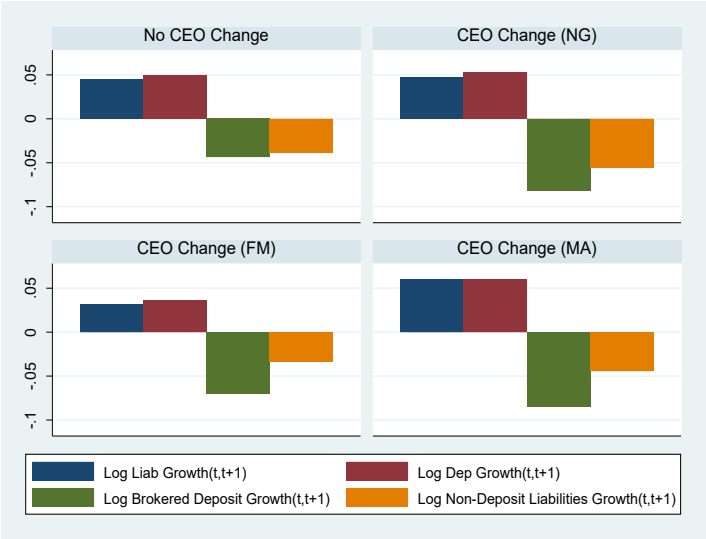


Figure 3b. Changes in community bank liabilities after CEO turnovers.



Figures 3a and 3b depict the post-turnover changes in community bank assets and liabilities for the following four subsamples: (i) banks without CEO turnover, (ii) banks with a same-gender CEO turnover, (iii) banks with a male-to-female CEO turnover, and (iv) banks with a female-to-male CEO turnover.

Figure 4a. Changes in assets after CEO turnovers in community banks with low return on assets.

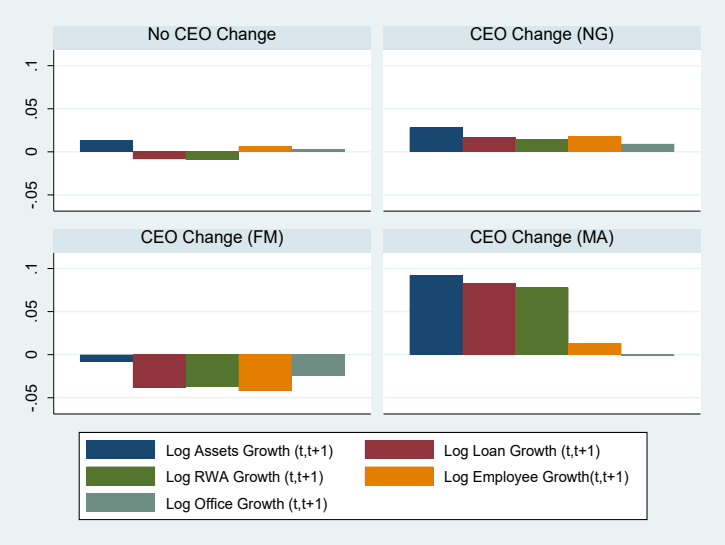


Figure 4b. Changes in assets after CEO turnovers in community banks with high loan charge-offs.

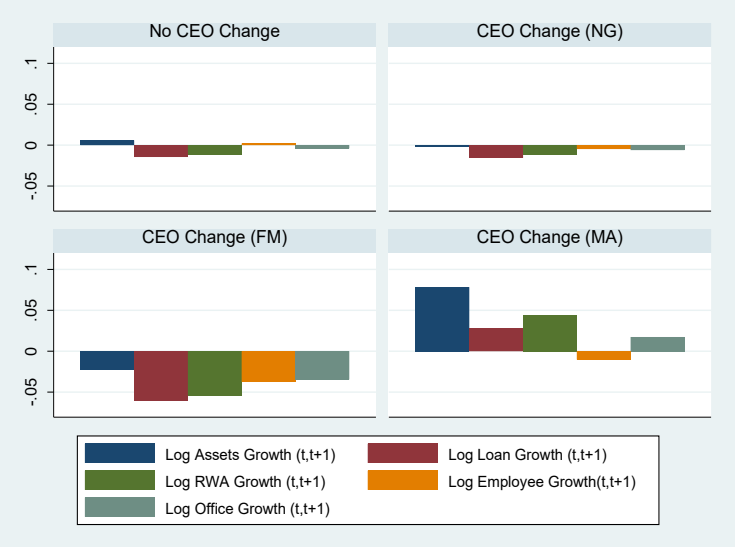


Figure 4c. Changes in liabilities after CEO turnovers in community banks with low return on assets.

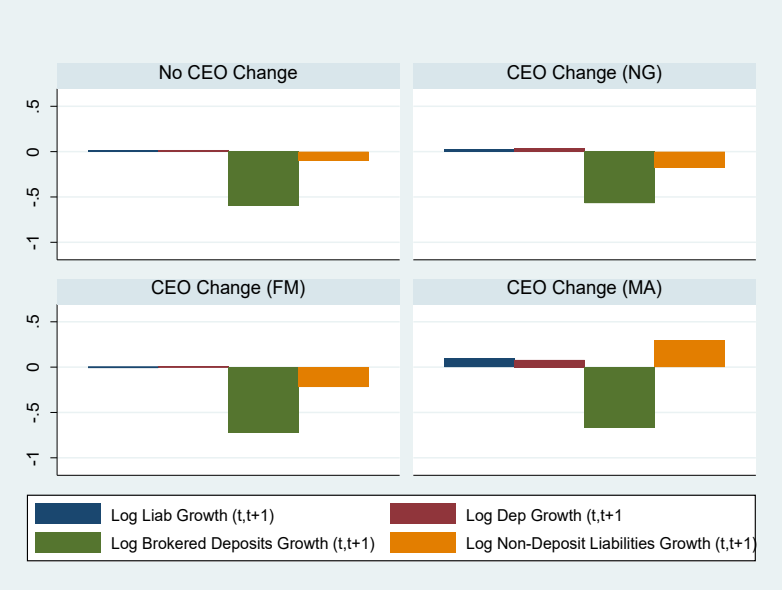
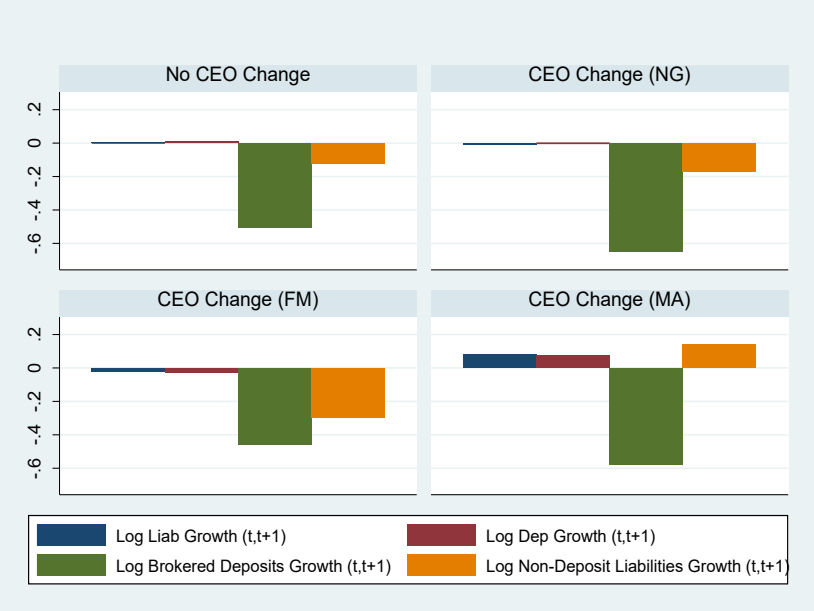


Figure 4d. Changes in liabilities after CEO turnovers in community banks with high loan charge-offs.



Figures 4a-4d depict the post-turnover changes in assets and liabilities for community banks that are classified as poorly performing banks based on low return on assets or high loan charge-offs, respectively, for the following four subsamples: (i) banks without CEO turnover, (ii) banks with a same-gender CEO turnover, (iii) banks with a male-to-female CEO turnover, and (iv) banks with a female-to-male CEO turnover.

Table 1. Variable definitions.

Variable	Definition
CEO turnover	A dummy variable that equals one for bank-years with a CEO turnover
Same gender CEO turnover	A dummy variable that equals one for same-gender CEO turnovers
Male-to-female CEO turnover	A dummy variable that equals one for male-to-female CEO turnovers
Female-to-male CEO turnover	A dummy variable that equals one for female-to-male CEO turnovers
Low ROA	A dummy variable that equals one for bank-years with return on assets in the bottom decile
High charge-offs	A dummy variable that equals one for bank-years with loan charge-offs ratio in the top decile
Female CEO	A dummy variable that equals for banks with a female CEO
Total assets	Logarithm of total assets (ASSET*)
Large bank	A dummy variable that equals one for banks with total assets in excess of $1 billion (ASSET*)
CEO duality	A dummy variable that equals one if the same individual is the bank's CEO and the chairperson of the board
Related board chair	A dummy variable that equals one if the bank's CEO and board chair are different individuals with the same last name
Female board chair	A dummy variable that equals one for banks with a female board chair
Public	A dummy variable that equals one for publicly traded banks
Subchapter S	A dummy variable that equals one for subchapter-S banks (SUBCHAPS*)
MBHC	A dummy variable that equals one for banks that are affiliated with a multibank holding company
Bank age	Logarithm of the age of the bank
Organizational change	A dummy variable that equals one for banks that experienced a change in holding company structure
Merger activity	A dummy variable that equals one for banks that were involved in a merger before CEO turnover
Number of states	The number of states the bank operates
Market concentration	The Herfindahl-Hirschman Index of deposit market concentration in the bank's operating state(s)
Unemployment	Unemployment rate in the bank's operating state(s)
RPCI	Real per-capita income in the bank's operating state(s)
Residential RE Loan Share	Share of residential real estate loans:(LNRE*-LNCOMRE*)/LNLS*
Loans	Logarithm of loans and leases (LNLS*)
Employees	Logarithm of the number of employees (NUMEMP*)
Branches	Logarithm of the number of bank branches (OFFSOD*)
Total liabilities	Logarithm of total liabilities (LIAB*)
Deposits	Logarithm of total deposits (DEP*)
Brokered deposits	Logarithm of brokered deposits (BRO*)
Non-deposit liabilities	Logarithm of non-deposit liabilities (LIAB* - DEP*)
Return on assets	Return on assets (annualized QNETINC*/ASSET*)
Earnings volatility	Standard deviation of return on assets over four quarters
Z-score	Z-score calculated as the sum of return on assets and equity-to-assets divided by the standard deviation of return on assets over four quarters
Capital ratio	The ratio of equity to total assets (EQ*/ASSET*)
Loans to assets	The ratio of loans to total assets (LNLS*/ASSET*)
Cash balances	The ratio of cash balances to total assets (CHBAL*/ASSET*)

Table 1. *Continued*.

Variable	Definition
Risk-weighted assets	The ratio of risk-weighted assets to total assets (RWAW*/ASSET*)
Deposits to liabilities	The ratio of deposits to liabilities (DEP*/LIAB*)
Brokered deposits to liabilities	The ratio of brokered deposits to liabilities (BRO*/LIAB*)
Deposit interest rate	The average deposit interest rate (annualized EINTEXP*/DEP*)
Residential real estate loans	The ratio of residential real estate loans to total loans ((LNRE*-LNCOMRE*)/LNLS*)

The table provides the definitions of the variables used in the regressions. Most variables are derived from the Bank Call Reports obtained from the FDIC Research Information System (RIS). Where applicable, the FDIC RIS variable names are referenced with an asterisk . The RIS dictionary can be accessed at https://www7.fdic.gov/dict/app/templates/Index.html#!/Main).

Table 2. Descriptive statistics.

Panel A: Descriptive statistics for CEO turnovers

	No. of obs.	Mean	No. of CEO turnovers	Percentage of CEO turnovers
CEO turnover	52504	0.100	5270	
Same gender CEO turnover	52504	0.090	4726	87.70%
Male-to-female CEO turnover	52504	0.006	330	6.30%
Female-to-male CEO turnover	52504	0.004	214	4.10%

Panel B: Descriptive statistics for other variables

	Mean	St. dev.	P10	P25	Median	P75	P90	No. of obs.
Return on assets	0.007	0.011	-0.003	0.004	0.009	0.012	0.017	52504
Charge-offs ratio	0.001	0.001	0	0	0	0.001	0.002	52504
Total assets	12.104	1.163	10.702	11.315	12.014	12.779	13.632	52504
Large bank	0.079	0.269	0	0	0	0	0	52504
Loans to assets	0.621	0.158	0.399	0.524	0.644	0.739	0.806	52504
Cash balances	0.089	0.085	0.020	0.033	0.062	0.116	0.191	52503
Risk-weighted assets	0.678	0.134	0.494	0.593	0.689	0.773	0.840	52504
Deposits to liabilities	0.945	0.062	0.864	0.917	0.966	0.992	0.997	52504
Brokered deposits to liabilities	0.035	0.083	0	0	0	0.034	0.111	52504
Deposit interest rate	0.002	0.002	0.001	0.001	0.002	0.003	0.005	52504
Female CEO	0.059	0.236	0	0	0	0	0	52504
Female board chair	0.058	0.233	0	0	0	0	0	52504
CEO duality	0.351	0.477	0	0	0	1	1	52504
Related board chair	0.060	0.238	0	0	0	0	0	52504
Public	0.175	0.38	0	0	0	0	1	52504
Subchapter S	0.372	0.483	0	0	0	1	1	52504
MBHC	0.148	0.356	0	0	0	0	1	52504
Bank age	3.935	1.028	2.251	3.359	4.421	4.677	4.804	52504
Organizational change	0.069	0.254	0	0	0	0	0	52504
Merger activity	0.080	0.271	0	0	0	0	0	52504
Number of states	1.117	0.569	1	1	1	1	1	52504
Market concentration	0.234	0.127	0.113	0.147	0.204	0.285	0.394	52504
Unemployment	0.064	0.022	0.038	0.046	0.061	0.081	0.095	52504
RPCI	0.043	0.006	0.036	0.039	0.043	0.046	0.051	52504
Residential RE Loan Share	0.699	0.185	0.437	0.598	0.737	0.834	0.900	52504
Change in total assets	0.046	0.125	-0.051	-0.006	0.033	0.080	0.145	50301
Change in loans	0.042	0.157	-0.089	-0.024	0.035	0.094	0.167	50289
Change in risk-weighted assets	0.042	0.144	-0.085	-0.020	0.035	0.092	0.163	50301
Change in employees	0.016	0.141	-0.087	-0.034	0	0.049	0.119	50283
Change in branches	0.018	0.142	0	0	0	0	0.020	50301
Change in total liabilities	0.045	0.135	-0.058	-0.010	0.033	0.082	0.152	50301
Change in deposits	0.050	0.151	-0.054	-0.008	0.036	0.086	0.159	50301
Change in brokered deposits	-0.047	2.197	-0.662	0	0	0	0.432	50301

Table 2. *Continued*.

	Mean	St. dev.	P10	P25	Median	P75	P90	No. of obs.
Change in non-deposit liabilities	-0.040	0.842	-0.769	-0.287	-0.023	0.201	0.659	50290
Change in Z-score	-0.005	1.123	-1.355	-0.631	0.011	0.641	1.310	50134
Change in capital ratio	0	0.017	-0.012	-0.005	0.001	0.006	0.012	50301
Change in return on assets	0	0.012	-0.005	-0.002	0	0.002	0.006	50301
Change in earnings volatility	0	0.015	-0.006	-0.002	0	0.002	0.006	50301

The table reports descriptive statistics for the variables used in the regressions. The definitions of all the variables are provided in Table 1.

Table 3. Poor performance and CEO turnovers.

	Model 1	Model 2	Model 3	Model 4	Model 5
Low ROA		0.112***		0.108***	
		(0.01)		(0.01)	
High charge-offs			0.084***		0.082***
			(0.01)		(0.01)
Female CEO				0.000	0.000
				(0.01)	(0.01)
CEO duality				-0.019***	-0.019***
				(0.00)	(0.00)
Female board chair				0.005	0.005
				(0.01)	(0.01)
Related board chair				-0.039***	-0.040***
				(0.00)	(0.00)
Public				-0.003	-0.002
				(0.00)	(0.00)
Subchapter S				-0.003	-0.004
				(0.00)	(0.00)
MBHC				0.025***	0.024***
				(0.00)	(0.00)
Bank age				0.000	-0.005***
				(0.00)	(0.00)
Organizational change				0.056***	0.061***
				(0.01)	(0.01)
Merger activity				-0.005	-0.003
				(0.01)	(0.01)
Total assets	-0.002	0.000	-0.003**	-0.002	-0.005***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Large bank	0.015**	0.014**	0.015**	0.015**	0.017**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Number of states	0.004	0.003	0.003	0.002	0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Market concentration	-0.013	0.007	-0.005	0.009	0.005
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Unemployment	0.771***	0.396***	0.586***	0.344***	0.439***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
RPCI	-0.251	-0.249	-0.113	-0.186	-0.093
	(0.27)	(0.26)	(0.26)	(0.26)	(0.26)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
No. of observations	52504	52504	52504	52504	52504
Adjusted R^2	0.005	0.016	0.011	0.021	0.017
F-stat.	15.501	32.317	25.673	28.163	24.657

The table reports the estimates of alternative versions of Equation (1). The definitions of all the variables are provided in Table 1. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 4. Second-stage instrumental variable regressions.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Sample:	All banks	High RE exposure	All banks	High RE exposure	All banks	High RE exposure	All banks	High RE exposure
Instrument:	HPI 10 % shock	HPI 10 % shock	HPI 20 % shock	HPI 20 % shock	HPI 10 % shock	HPI 10 % shock	HPI 20 % shock	HPI 20 % shock
Low ROA	0.112**	0.198**	0.087**	0.148**				
	(0.05)	(0.08)	(0.04)	(0.06)				
High charge-offs					0.090**	0.159**	0.083**	0.166**
					(0.04)	(0.06)	(0.03)	(0.07)
Female CEO	0.005	-0.021*	0.005	-0.019*	0.005	-0.019	0.005	-0.019
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Total assets	-0.003	-0.008**	-0.003	-0.009**	0.006***	0.019***	0.006***	0.019***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Large bank	0.016**	0.027**	0.016**	0.028**	0.017***	0.040***	0.017***	0.040***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO duality	0.020***	0.018***	0.019***	0.018***	0.020***	0.016***	0.019***	-0.016**
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Female board chair	0.000	-0.001	0.000	-0.001	-0.001	0.000	0.000	-0.001
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Related board chair	0.039***	-0.014	0.039***	-0.015	0.040***	-0.013	0.040***	-0.013
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Public	-0.003	-0.007	-0.003	-0.007	-0.002	-0.005	-0.002	-0.005
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Subchapter S	-0.003	-0.011	-0.003	-0.012	-0.004	-0.015**	-0.004	-0.015**
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
MBHC	0.024***	0.031***	0.024***	0.031***	0.023***	0.028***	0.023***	0.027***
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Bank age	-0.001	0.005	-0.002	0.003	-0.004**	-0.002	-0.005**	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Organizational change	0.056***	0.052***	0.057***	0.053***	0.060***	0.054***	0.060***	0.054***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

Table 4. *Continued*.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Sample:	All banks	High RE exposure	All banks	High RE exposure	All banks	High RE exposure	All banks	High RE exposure
Instrument:	HPI 10 % shock	HPI 10 % shock	HPI 20 % shock	HPI 20 % shock	HPI 10 % shock	HPI 10 % shock	HPI 20 % shock	HPI 20 % shock
Merger activity	-0.004	-0.004	-0.005	-0.005	-0.003	-0.002	-0.003	-0.002
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Number of states	0.002	0.003	0.002	0.003	0.002	0.004	0.002	0.004
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Market concentration	0.008	0.062**	0.007	0.057**	0.005	0.059**	0.005	0.059**
	(0.01)	(0.03)	(0.01)	(0.03)	(0.01)	(0.03)	(0.01)	(0.03)
Unemployment	0.316**	0.223	0.378***	0.374	0.396***	0.360	0.412***	0.339
	(0.15)	(0.34)	(0.13)	(0.30)	(0.13)	(0.30)	(0.12)	(0.32)
RPCI	-0.164	0.087	-0.179	-0.022	-0.077	0.222	-0.089	0.248
	(0.26)	(0.48)	(0.26)	(0.45)	(0.27)	(0.50)	(0.26)	(0.50)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	52502	13368	52502	13368	52502	13368	52502	13368
Adjusted R^2	0.016	0.004	0.017	0.014	0.013	0.008	0.013	0.007
F-stat.	19.10	5.26	19.02	5.35	18.73	5.15	18.69	5.14
RMSE	0.30	0.31	0.30	0.31	0.30	0.31	0.30	0.31
Underidentification (Kleibergen-Paap)	272.74	86.51	324.4	108.88	392.66	146.63	356.39	97.16
Weak Identification (Cragg-Donald)	645.55	167.06	1279.89	300.92	974.10	295.16	1366.15	271.61

The table reports the estimates of the second-stage instrumental variable regressions with the instrumented *Low ROA* and *High charge-offs*. We employ two alternative instruments: (i) *HPI 10% shock* is defined as a year-over-year decline of at least 10 percent in the HPI during the two years prior to CEO turnover in the regions in which the bank operates and (ii) *HPI 20% shock* is a similar measure but with at least 20 percent decline in the HPI. Models 2, 4, 6, and 8 are estimated using a subsample of community banks with high real estate lending exposure. The definitions of all the variables are provided in Table 1. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5. Poor performance and different types of CEO turnovers.

Panel A: Poor performance, CEO turnover, and CEO gender

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Same-gender CEO turnover		Male-to-female CEO turnover		Female-to-male CEO turnover	
Low ROA	0.025**		-0.014		-0.012	
	(0.01)		(0.01)		(0.01)	
High charge-offs		0.006		-0.005		-0.001
		(0.01)		(0.01)		(0.01)
CEO duality	0.008	0.007	0.001	0.001	-0.009	-0.009
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female board chair	-0.194***	-0.194***	0.026	0.026	0.168***	0.168***
	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Related board chair	0.010	0.010	-0.009	-0.009	-0.001	-0.001
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	5270	5270	5270	5270	5270	5270
Adjusted R^2	0.03	0.03	0.01	0.01	0.04	0.04
F-stat.	5.15	4.96	2.21	2.10	5.07	5.03

Panel B: Second-stage instrumental variable regressions

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Same-gender CEO turnover		Male-to-female CEO turnover		Female-to-male CEO turnover	
Low ROA	0.091		-0.055		-0.036	
	(0.15)		(0.11)		(0.09)	
High charge-offs		0.073		-0.045		-0.029
		(0.12)		(0.09)		(0.07)
CEO duality	0.009	0.008	0.001	0.001	-0.009	-0.009
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female board chair	-0.197***	-0.195***	0.028	0.027	0.169***	0.168***
	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Related board chair	0.011	0.011	-0.01	-0.01	-0.001	-0.001
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	5269	5269	5269	5269	5269	5269
Adjusted R^2	0.03	0.03	0.00	0.00	0.04	0.04
F-stat.	4.94	4.89	2.08	2.06	5.02	4.99

Table 5. *Continued*.

Panel C: Poor performance, CEO turnover, and incumbent female CEOs

	Model 1	Model 2	Model 3	Model 4
Low ROA	0.108***	0.110***		
	(0.01)	(0.01)		
High charge-offs			0.082***	0.083***
			(0.01)	(0.01)
Female CEO	0.005	0.008	0.005	0.007
	(0.01)	(0.01)	(0.01)	(0.01)
Low ROA x Female CEO		-0.029		
		(0.02)		
High charge-offs x Female CEO				-0.017
				(0.02)
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
No. of observations	52504	52504	52504	52504
Adjusted R^2	0.021	0.021	0.017	0.017
F-stat.	28.16	27.12	24.66	23.81

The table reports the estimates of alternative versions of Equation (1). Panel A examines whether *Poor performance* is associated with the gender of the incoming CEO. Panel B reports the estimates estimates of the second-stage instrumental variable regressions with the instrumented *Low ROA* and *High charge-offs*. Panel C examines the likelihood of CEO turnover conditional on the incumbent CEO being female. The definitions of all the variables are provided in Table 1. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 6. Changes in bank assets and liabilities after CEO turnovers.

Panel A: Changes in bank assets

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
	ΔAssets	ΔLoans	ΔRWA	ΔEmployees	ΔBranches	ΔAssets	ΔLoans	ΔRWA	ΔEmployees	ΔBranches
Low ROA	-0.020***	-0.026***	-0.024***	-0.006	-0.015***					
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)					
High charge-offs						-0.021***	-0.027***	-0.026***	-0.007**	-0.017***
						(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Same gender CEO turnover	-0.002	0.001	-0.002	-0.002	-0.002	-0.002	0.001	-0.002	-0.002	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Male-to-female CEO turnover	-0.017**	-0.014	-0.018**	-0.027***	-0.026***	-0.017**	-0.014	-0.018**	-0.027***	-0.026***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Female-to-male CEO turnover	-0.005	-0.002	-0.004	-0.021	0.01	-0.005	-0.002	-0.004	-0.021	0.01
	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	50254	50242	50254	50237	50254	50254	50242	50254	50237	50254
Adjusted R^2	0.158	0.155	0.147	0.047	0.048	0.158	0.155	0.147	0.047	0.048
F-stat.	45.33	91.04	81.16	15.95	13.98	45.48	88.33	77.32	15.95	14.25

Table 6. *Continued*.

Panel B: Changes in bank liabilities

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	ΔLiabilities	ΔDeposits	ΔBrokered deposits	ΔNon-deposit liabilities	ΔLiabilities	ΔDeposits	ΔBrokered deposits	ΔNon-deposit liabilities
Low ROA	-0.027***	-0.025***	-0.417***	-0.053***				
	(0.00)	(0.00)	(0.05)	(0.02)				
High charge-offs					-0.030***	-0.029***	-0.338***	-0.068***
					(0.00)	(0.00)	(0.05)	(0.02)
Same gender CEO turnover	-0.003	-0.002	0.003	-0.01	-0.003	-0.002	-0.002	-0.01
	(0.00)	(0.00)	(0.04)	(0.01)	(0.00)	(0.00)	(0.04)	(0.01)
Male-to-female CEO turnover	-0.024***	-0.024***	0.004	-0.025	-0.024***	-0.024***	0	-0.025
	(0.01)	(0.01)	(0.12)	(0.05)	(0.01)	(0.01)	(0.12)	(0.05)
Female-to-male CEO turnover	-0.007	-0.008	-0.123	-0.082	-0.007	-0.008	-0.128	-0.082
	(0.02)	(0.02)	(0.21)	(0.08)	(0.02)	(0.02)	(0.21)	(0.08)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	50255	50255	50255	50244	50255	50255	50255	50244
Adjusted R^2	0.121	0.124	0.032	0.111	0.122	0.125	0.032	0.112
F-stat.	33.36	41.66	22.92	64.21	31.50	41.95	22.66	64.42

The table reports the estimates of alternative versions of Equation (2) with changes in bank asset and liability measures as the dependent variables. The definitions of all the variables are provided in Table 1. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 7. Poor performance and changes in bank assets and liabilities after CEO turnovers.

Panel A: Changes in bank assets

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
	ΔAssets	ΔLoans	ΔRWA	ΔEmployees	ΔBranches	ΔAssets	ΔLoans	ΔRWA	ΔEmployees	ΔBranches
Poor performance measure:	Low ROA	Low ROA	Low ROA	Low ROA	Low ROA	High ch.-offs	High ch.-offs	High ch.-offs	High ch.-offs	High ch.-offs
Poor performance ×	-0.011*	-0.008	-0.009	-0.001	-0.007	-0.026***	-0.026***	-0.026***	-0.015**	-0.014**
Same gender CEO turnover	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Not poor performance ×	-0.002	0.001	-0.001	-0.003	-0.002	0.001	0.004	0.001	0.000	-0.001
Same gender CEO turnover	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Poor performance ×	-0.049*	-0.062**	-0.058**	-0.08**	-0.058**	-0.052*	-0.097***	-0.077***	-0.085**	-0.058*
Male-to-female CEO turnover	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)
Not poor performance ×	-0.012*	-0.006	-0.012	-0.018*	-0.021**	-0.012*	-0.001	-0.009	-0.017*	-0.021**
Male-to-female CEO turnover	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Poor performance ×	0.023	0.023	0.014	-0.022	-0.026	0.045	0.009	0.015	-0.027	0.01
Female-to-male CEO turnover	(0.06)	(0.07)	(0.07)	(0.05)	(0.04)	(0.06)	(0.07)	(0.06)	(0.05)	(0.04)
Not poor performance ×	-0.013	-0.01	-0.009	-0.021	0.016	-0.017	-0.007	-0.01	-0.02	0.008
Female-to-male CEO turnover	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Controls variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	50254	50242	50254	50237	50254	50254	50242	50254	50237	50254
Adjusted R^2	0.156	0.153	0.145	0.047	0.048	0.157	0.154	0.145	0.047	0.048
F-stat.	41.98	82.87	72.38	14.97	12.98	42.43	82.67	72.38	15.18	12.86

Table 7. *Continued*.

Panel B: Changes in bank liabilities

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	ΔLiabilities	ΔDeposits	ΔBrokered deposits	ΔNon-deposit liabilities	ΔLiabilities	ΔDeposits	ΔBrokered deposits	ΔNon-deposit liabilities
Poor performance measure:	Low ROA	Low ROA	Low ROA	Low ROA	Low ROA	High ch.-offs	High ch.-offs	High ch.-offs
Poor performance ×	-0.018**	-0.013	-0.250**	-0.117***	-0.037***	-0.036***	-0.374***	-0.096***
Same gender CEO turnover	(0.01)	(0.01)	(0.12)	(0.04)	(0.01)	(0.01)	(0.11)	(0.03)
Not poor performance ×	-0.001	-0.001	0.032	0.009	0.002	0.003	0.05	0.003
Same gender CEO turnover	(0.00)	(0.00)	(0.04)	(0.02)	(0.00)	(0.00)	(0.04)	(0.02)
Poor performance ×	-0.049*	-0.051*	-0.412	-0.122	-0.062**	-0.096**	-0.255	-0.220**
Male-to-female CEO turnover	(0.03)	(0.03)	(0.31)	(0.13)	(0.03)	(0.04)	(0.33)	(0.10)
Not poor performance ×	-0.020***	-0.020**	0.062	-0.011	-0.018**	-0.012*	0.028	0.006
Male-to-female CEO turnover	(0.01)	(0.01)	(0.13)	(0.05)	(0.01)	(0.01)	(0.13)	(0.06)
Poor performance ×	0.021	0.012	-0.699	0.209	0.042	0.038	-0.532	0.124
Female-to-male CEO turnover	(0.06)	(0.06)	(0.60)	(0.19)	(0.06)	(0.05)	(0.64)	(0.19)
Not poor performance ×	-0.015	-0.015	-0.024	-0.153*	-0.02	-0.021	-0.06	-0.134
Female-to-male CEO turnover	(0.01)	(0.01)	(0.22)	(0.09)	(0.01)	(0.01)	(0.21)	(0.09)
Controls variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	50255	50255	50255	50244	50255	50255	50255	50244
Adjusted R^2	0.119	0.123	0.031	0.112	0.121	0.124	0.031	0.111
F-stat.	29.94	39.02	20.82	60.86	30.93	39.74	20.78	60.60

The table reports the estimates of modified versions of Equation (2) in which the different types of CEO turnover variables are interacted with the measures of poor performance and changes in different bank asset and liability measures are used as the dependent variables. The definitions of all the variables are provided in Table 1. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 8. Changes in bank performance and risk profile after CEO turnovers.

Panel A: One-year changes in bank performance and risk measures

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	ΔZ-score	ΔCapital ratio	ΔROA	ΔEarnings volatility	ΔZ-score	ΔCapital ratio	ΔROA	ΔEarnings volatility
Low ROA	0.823***	0.003***	0.006***	-0.011***				
	(0.03)	(0.00)	(0.00)	(0.00)				
High charge-offs					0.588***	0.003***	0.004***	-0.008***
					(0.03)	(0.00)	(0.00)	(0.00)
Same gender CEO turnover	0.077***	0.000	0.000	-0.001*	0.089***	0.000	0.000	-0.001**
	(0.02)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.00)	(0.00)
Male-to-female CEO turnover	0.185***	0.000	0.001	-0.003**	0.194***	0.000	0.001	-0.003**
	(0.07)	(0.00)	(0.00)	(0.00)	(0.07)	(0.00)	(0.00)	(0.00)
Female-to-male CEO turnover	0.134	0.001	0.004	-0.002	0.148	0.001	0.004	-0.002
	(0.09)	(0.00)	(0.00)	(0.00)	(0.09)	(0.00)	(0.00)	(0.00)
Controls variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	50087	50254	50254	50254	50087	50254	50254	50254
Adjusted R^2	0.071	0.033	0.047	0.044	0.061	0.033	0.041	0.029
F-stat.	104.00	43.38	38.27	27.15	98.35	41.67	34.98	23.90

Table 8. *Continued*.

Panel B: Two-year changes in bank performance and risk measures

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	ΔZ-score	ΔCapital ratio	ΔROA	ΔEarnings volatility	ΔZ-score	ΔCapital ratio	ΔROA	ΔEarnings volatility
Low ROA	1.026***	0.005***	0.007***	-0.013***				
	(0.03)	(0.00)	(0.00)	(0.00)				
High charge-offs					0.703***	0.005***	0.005***	-0.009***
					(0.03)	(0.00)	(0.00)	(0.00)
Same gender CEO turnover	0.104***	0.000	0.001**	-0.001***	0.119***	0.000	0.001***	-0.001***
	(0.02)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.00)	(0.00)
Male-to-female CEO turnover	0.156**	0.000	0.000	-0.003**	0.165**	0.000	0.001	-0.003**
	(0.08)	(0.00)	(0.00)	(0.00)	(0.08)	(0.00)	(0.00)	(0.00)
Female-to-male CEO turnover	0.193*	0.000	0.004	-0.002	0.200*	0.000	0.004	-0.002
	(0.10)	(0.00)	(0.00)	(0.00)	(0.11)	(0.00)	(0.00)	(0.00)
Controls variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	47947	48085	48085	48085	47947	48085	48085	48085
Adjusted R^2	0.100	0.048	0.065	0.069	0.084	0.047	0.054	0.049
F-stat.	103.98	51.42	39.24	31.63	92.69	49.04	37.10	28.25

The table reports the estimates of alternative versions of Equation (2) with changes in bank performance and risk measures as the dependent variables. The definitions of all the variables are provided in Table 1. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.