The Longer the Better? The Impact of Internal vs. External CEO Hires and Tenure on Organizational Performance: Evidence from the Banking Industry of the Republic of Korea*

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Abstract: This study investigates the effect of internal vs. external CEO hiring and cumulative presidency on bank profitability (return on assets, return on equity) and asset quality (substandard loans, nonperforming loans) in the Republic of Korea's banking industry. We also try to find evidence of a nonlinear effect of long-term CEO tenure to check whether it gradually increases or decreases over time. Using the panel data of five state-owned banks, six private banks and six local banks from 2000-2019, we found that CEOs hired from the inside improve performance more than those hired from the outside and that CEOs with long tenures do as well. However, an investigation of a non-linear term of tenure yields an inverted u-curve, meaning the effect of longer tenure dissipates over time. These results thus offer reasons to avoid the short-termism that prevails today. The coefficient of the main regressors remained mostly the same with several robustness tests.

Keywords: CEO turnover, CEO origin, CEO tenure, Short-termism

INTRODUCTION

The role of the chief manager in transforming organizational performance has long been the subject of study in the literature of the field. Notwithstanding various external environmental conditions and the traits of the organization he or she over-

* All errors contained herein are our responsibility.

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sees, the chief manager usually exerts substantial influence on organizational performance (Han, Kim, and Kwak, 2017, p. 58). One strand of studies has focused on the effect of external vs. internal hires and of the length of time in office of the predecessor or incumbent (Boyne & Dahya, 2002; Dherment-Ferere, & Renneboog, 2000; Huson, Malatesta, & Parrino, 2004; Jeong & Han, 2014; Kim, Ko, &Lee, 2017; Han et al., 2017; Moon & Park, 2019). This approach is useful in understanding Korean society because it is more relevant to contexts in which the state predominates over the civic sphere (Yang, 2015). As we have argued elsewhere (2019), the influence of chief managers from bureaucracies on the organizational performance of banks in Korea is indisputable. Bureaucrats were assigned as CEOs of Korean private banks in their early stages and in in times which they faced the jeopardy of bankruptcy. However, these interventions came to be perceived as resulting in inefficiency over several sectors, embodied in "directed economy policies" and carried out by "high-handed personnel." In line with this criticism of CEOs with bureaucratic backgrounds banks began to prefer to appoint successors who had been with the company for a long time. The question thus arises as to whether a different pattern of appointing new CEOs improves organizational performance and also whether the duration of chief manager's oversight plays a role (Henderson Miller, & Hambrick, 2006; Kim & Lee, 2013; Hughes, Hughes, Mellahi, & Guermat, 2010; Simsek, 2007). A longer tenure enables a CEO to accumulate organization-specific knowledge, which can lead to improved organizational performance, but others contend that a longer tenure produces sluggish organization, making it difficult to respond to changes in external circumstances changes and compromising performance. Even though a longer tenure might eventually produce a rebound effect, the effects of a longer tenure might still outweigh the disadvantages so-called short-termism. Short-termism refers to an excessive focus on short-term results at the expense of long-term interests, putting pressure on CEOs and corporations to respond to reduce their expenditures for research and development or to forego investment opportunities with positive long-term potential. Financial intermediaries also have shown an increasing short-term outlook in recent years (see https://www.cfainstitute.org/en/advocacy/issues/short-termism). We explore the possibility that a short CEO tenure might be detrimental to bank performance using Korean banking industry data.

Managerial succession is not as well studied in the public administration field compared to that of business administration. The difficulty of getting reliable data on public organizations has encouraged most researchers to focus on listed firms and private corporations, for which there are well-established databases that supply all the information that is required to conduct a rigorous study. In addition, selecting good measures of public organization performance has always been trying.

Banking organizations, however, are easier to research. Because they are financial institutions, they are required to provide relevant and enough information to their related stakeholders, and so we can draw on that. Second, unlike in the case of other public organizations, even the performance of state-owned banks can be easily assessed using common evaluating criterion like CAMELS.[1] From our own panel data of 5 state-owned, 6 private, and 6 local banks from 2000 to 2019, we found that outsiders can exert a positive influence on bank performance over several measures. Similarly, length of CEO tenure is correlated with improved performance, but its effect marginally decreases over time in our sample. This finding was robust, as we additionally figured in time effects to control for the unobserved time-specific effect, included another performance indicators, and excluded outliers. Gyeong-Hoon Kang and Youngsoo Bae (2018) conducted a similar research on effect of CEO tenure, but their sample was limited to only private and local banks. Our study draws on a broader dataset that includes state-owned banks. Kang and Bae's study also only focuses on the cumulative term served by CEOs, neglecting the "time-decaying" aspect of CEO tenure. We incorporate nonlinear terms into our estimation model and provide guidance for organizational management. Our study further presents more detailed and up-to-date evidence regarding CEO turnover, while other studies have relied on older data (1993-1997 in Kang, 1996, 2005-15 in Seo & Jeon, 2017, and 2000-14 in Kang & Bae, 2018).

The remainder of this article proceeds as follows. We provide a literature review of managerial succession theory in terms of leadership and the relationship between external and internal CEO hires, length of term, and performance from which arise the hypotheses we posit in the second section. We outline the research design in the third section and the findings and estimation in the fourth section. Discussion and implications of our research form the conclusion of this paper.

LITERATURE REVIEW

Overview of Managerial Succession Theory

Executive succession (turnover) is an inevitable event if an organization is to

1. A state-owned bank is a bank founded by federal legislation. For instance, the Korea Development Bank was founded in 1954 in accordance with the Korea Development Bank Act for the purpose of supplying and managing major industrial capital to help develop Korean industries and the national economy.

survive (Stewart & Diebold, 2017, p. 742), and it might be defined as the process by which new managers are vetted and then appointed to replace existing managers for various reasons. Managerial succession needs to be understood in the context of leadership change. Though there are a lot of contesting explanations as to what leadership means, much of leadership involves getting things done through other people, so power and influence represent core activities of leaders (Jex & Britt, 2000, p. 303). And leaders are often called on to provide strategic direction and vision to groups and, in many cases, to entire organizations. Therefore, the importance of managerial succession goes beyond a simple change in personnel; it also is a matter of leadership, which represents the possibility of overall organizational transformation. Further, the spirit and characteristics of leadership can vary across type of organizations in which it is implemented. According to the National Human Resources Development Institute (2018, pp. 23-24) the disparity in the functioning of public and private organizations produces variation in many aspects of organizational behavior including job satisfaction and commitment, motivation, perception of rewards, structure, decision patterns, and performance (Bozeman & Bretschneider, 1994, p. 200). George Boyne and Jay Dahya (2002), Nicolai Petrovsky, Oliver James, and Boyne (2014), and Gregory Hill (2005) have all constructed useful frameworks for analyzing the effect of managerial change on performance, and there is a growing body of work on manager turnover in public administration field. Yet the scope of this work is still limited to certain types of organizations. Most studies focus on the CEOs of public enterprises or organizations. Jisu Jeong and Seunghui Han (2014) analyzed the effect of chief managers' background in Korean organizations using the Workplace Panel Survey (WPS) from the period between 2005 and 2011 (conducted biannually). Eon-Cheol Yoo and Hong-Lim Yoo (2014) investigated the magnitude of the influence of CEOs' former careers on organizational performance in 49 public enterprises and quasigovernment organizations in South Korea using data from Public Management Performance Evaluation in 2011 and 2012. Other studies have analyzed the effect of managerial succession in various fields such as professional baseball teams in South Korea (Kang, 2010), national basketball teams in USA (Pfeffer & Davis-Blake, 1986), professional football teams in Germany (Wagner, 2010) and the UK (Hughes et al., 2010), and manufacturing corporations (Park, 2007). Nevertheless, only a handful of studies has researched the banking industry (Kang, 1996; Seo & Jeon, 2017; Kang & Bae, 2018). Considering the importance of the banking industry in a country's economic system, it is worth investigating it more closely.

External vs. Internal CEO Hires and Performance

Petrovsky his colleagues (2014) have claimed that the fit between a successor and an organization can be understood as the degree of overlap between capabilities of the successor and requirements of the organization. Fit thus denotes the match between the chief executive's experience and his or her new organization and the expectation that a good fit will produce good results (Petrovsky et al., 2014, p. 220). The fit can be better or worse depending on the circumstances and contexts of the organization in question. On this view, an outsider from a different organization may serve as a bridge between organizations he or she is assigned to and various stakeholders, thereby smoothing the relationship between them and improving performance, and may also be able shake up the old organizational culture and introduce new ways of running the organization. For example, in a 1961 study, John Carlson showed that among new school district superintendents, outsiders are more likely to establish new rules and administrative overheads. An outside candidate who has a lot of experience with politicians, public funding, and regulatory constraints in the banking industry is likely to be a better fit for leadership in the public sector (Petrovsky et al., 2014, p. 220). Michael Weisbach (1988), William Chan (1996) and Kenneth Borokhovich, Robert Parrino, and Teresa Trapani (1996) also expect CEOs hired from outside the firm to be more beneficial to stockholders than insiders, bringing improved returns. Mark R. Huson, Paul H. Malatesta, Robert Parrino(2004) support this view, finding that the degree of performance improvement is positively related to the level of institutional shareholdings, the presence of an outsider-dominated board, and the appointment of an outsider as CEO.

However, although outsiders may be more prepared to consider radical change, other researchers argue that they may lack the detailed knowledge of an organization that is required for quick and effective implementation of a new strategy. Insiders are more likely to be successful in helping failing organizations improve performance. The reason for this, these researchers suggest, is perhaps that the scope for radical strategic change (for example, quitting a difficult market) is limited, so hiring committees instead place a premium on leaders who already know strengths and weaknesses of an organization and can move quickly to address performance problems (Boyne & Meier, 2009, pp. 841-842). An insider on this view is likely to be familiar with current problems and to have already considered feasible strategies for change or turnaround and therefore in a position to make rapid moves towards organizational recovery. Isabelle Dherment-Ferere and Luc Renneboog (2000, pp. 5-6) have described two main advantages an insider has over an outsid-

er. First, over the years they have had the opportunity to accumulate valuable company-specific knowledge or to become familiar with technologies unique to the company. Second, they can exploit an already existing social network to acquire specific internal information, suggesting their publicness fit is superior to that of an outsider. Axel Kind and Yves Schläpfer (2010, pp. 5-6) also argue that managers hired from within possess organization-specific knowledge and skills that can be easily converted into better performance. An insider's accumulation of company-specific human capital can make him or her more attractive than an outsider for a CEO position. Another explanation for the reluctance to appoint outside candidates to the CEO position arises from the inability of hiring committees to fully estimate outsiders' qualifications. The history of an insider in the company automatically generates a performance record that can be easily searched and exploited by directors. After considering both positions, we are more persuaded by the second view and thus posit that managerial succession from within the bank is more likely to be positively associated with organizational performance even if an outsider can have a positive effect in the near short term.

CEO Term and Organizational Performance

Studies into whether a longer CEO term results in better performance have been conducted in many fields. Andrew Henderson, Danny Miller, and Donald C. Hambrick (2006, p. 449) assert that new CEOs are more flexible in their ability to handle external environmental change than longer-tenured CEOs. Over time, the environmental conditions that a new CEO was initially equipped to face change, and such mismatches between a CEO's paradigm and the environment are likely to negatively affect organizational performance.

In addition, as Zeki Simsek (2007, pp. 654-655) reports, short-tenured CEOs may lack sufficient awareness to notice and assess strategic risks. They are also unknown, untested, and lack legitimacy, which might limit their competences. Therefore, short-tenured CEOs' efforts to spur change may be less than optimal. Long-tenured CEOs, by contrast, attain a deeper knowledge of the organizational environment and acquire firm- and job specific skills. Moreover, a CEO with a longer tenure can be assumed to have been integrated into the networks of key stakeholders and therefore to have established the resources and coalitions that he or she can exploit. Thus, long tenures can lead to the accumulation of knowledge, learning, and power, which leads us to speculate that longer CEO terms are positively associated with bank performance indicators.

The effect of the length of a CEO term also can be interpreted in connection

with the flow of time. Newly appointed successors may have trouble getting used to their organizations at first, and during the apprentice period, performance may be compromised. The negative effect of turnover with the hire of an outsider will be very large, but as time passes the positive effect of turnover that comes with the CEO's adaptation will offset the initial disruptive effects, resulting in higher level of organizational stability and diminishing the external transaction costs of managers, allowing them to improve performance (Hill, 2005, p. 591). This view implies that a longer tenure would lead to improved performance after a certain threshold, resulting in a u-curve in the graph of the relationship between CEO tenure and performance. However, according to Mathew Hughes, Paul Hughes, Kamel Mellahi, and Cherif Guermat (2010, p. 575) improvement inevitably drops off because managers' successes over time lead them to reinforce their preconceptions, stick with "tried and true" strategies, and shape organization initiatives around their own biases. On this view there is a "time- decaying" effect, which produces an inverted u-curve relationship between CEO tenure and performance. From this conjunction, we posit that the positive effect of a longer tenure dissipates over time.

DATA AND METHODOLOGY

Sample Construction

This paper uses a hand-collected panel data covering the years 2000-2019 of 17 banks; 12 private-owned banks (including 6 local banks) and 5 state-owned banks.[2] For CEO information, we mainly relied on annual or quarterly business reports and audit reports of each bank that are released at the end of each fiscal year and can be accessed electronically through several websites.[3] For supplementary material, we looked through the homepage and the 50th anniversary yearbooks of each bank and reviewed news articles about them. Next, we gathered performance information from the management performance reports of each bank and the Financial Statistics Information System (run by the Financial Supervisory Service of Republic of Korea).[4] The databases we searched were missing a small number of items for our

2. If bank A is government-owned or was founded on a legal basis, we treat it as the state-owned bank (Moon & Park, 2019, p. 8).
3. For private banks, we used the Data Analysis, Retrieval and Transfer System of the Financial Supervisory Service; for state-owned banks, we used the All Public Information In One database of the Ministry of Economy and Finance of Republic Of Korea.
4. See http://m.fss.or.kr:8000/fss/board/lawCaseDetail.do?page=1&cFn=&workType=&lawDi

sample period. We also collected data for the control variables from multiple sources such as bank yearbooks and Korean Statistical Information Services webpage. With this information, we built a balanced panel data.

Variables

Independent variables

One of the main explanatory variables is the status of the succeeding CEO as either an internal or external hire. Following the suggestion of Huson and his colleagues (2004), we adopt a dichotomous approach. We assign a score of 1 for outsider status if the successor was with the bank for one year or less from the date of appointment date and 0 otherwise. The difference between an outsider and an insider can be ambiguous. Personnel reshuffling within two banks that belong to the same financial group can obscure the distinction between outsider and insider. For example, Kim Han became the CEO of Gwangju Bank in 2014, but at the time he was already the chairman of Jeonbuk Bank, bank of which belonged to the JB Financial Group. To tackle the problem of how to categorize a CEO in such circumstances, we treat him or her as an insider only if he or she has worked in the assigned bank over one year, even if before that he or she worked for a subsidiary. The distinction between inside and outsider is also blurry in the case of state-owned banks, because almost all CEOs of state-owned banks come from the public sector (they are mainly bureaucrats from the Ministry of Economy and Finance). However, we treat new CEOs of state-owned banks as insiders if they do not have a record of working as a bureaucrat.[5] Some might assert that bureaucrats should be treated as insiders in the case of state-owned banks no matter what, given that the government controls them and because they are founded by an act of federal legislation. However, among 5 state-owned banks there were several cases in which inside staff members were promoted to the position of CEO, which confirms that not all CEOs of state-owned banks come from government, and so it's not appropriate to ipso facto regard bureaucrats as insiders

Regarding the hypothesis that longer CEO terms are positively associated with bank performance indicators, we adopt the cumulative terms of chief managers as

v=&replyYear=&searchKeyword=&postSeqNo=&seqNo=151.

5. Hong Ki Taek, who served as a chief manager of the Korea Development Bank from April 15, 2013, to February 5, 2016, was a professor in the School of Economics at Chung-Ang University and did not have any work experience as a bureaucrat.

an explanatory variable, following Kang and Bae (2018). First we collected the date of inauguration and resignation of the CEOs of each bank. Then we calculated terms of office in terms of day and converted them into years (see table 1). We exclude cases of interim or acting CEOs because they are not official representatives and their term is relatively short. Last, to check for nonlinear effects we inserted a squared term of the time of CEO presidency into the estimation model.

Table 1. Example of the Conversion Process Used to Calculate Length of CEO Term

Bank Name	CEO Name	Appointment Date	Resignation Date	Duration of Presidency (in Years)
A	Kim	July 29, 2010	July 12, 2013	2.95

↓

Bank Name	CEO Name	Year	Beginning Date of Term	Ending Date of Term	Total Number of Terms	Number of Days Served Annually	Number of Days Served Cumulatively Term
A	Kim	2010	July 29, 2010	December 31, 2010	2.95	0.42	0.42
A	Kim	2011	January 1, 2011	December 31, 2011	2.95	1	1.42
A	Kim	2012	January 1, 2012	December 31, 2012	2.95	1	2.42
A	Kim	2013	January 1, 2013	July 12, 2013	2.95	0.53	2.95

Dependent Variables

In accordance with conventional methods of evaluating bank soundness, we use variables that are in line with the CAMELS system. CAMELS is a supervisory rating system that was adopted by the U.S. Federal Financial Institutions Examination Council in 1979 and that is used in on-site examinations of banks. It requires that financial institutions be evaluated according to six criteria: capital adequacy, asset quality, management, earnings and liquidity, and sensitivity to market risk (the last one was added in 1997) (Ferrouhi, 2018, p. 65). CAMELS was developed and originally used in USA, but now it is also widely applied to financial institutions out-

side the USA, and many researchers rely on it in their studies (Lee, Kwak, Park, & Park, 2009; Kim & Lee, 2013; Kang & Bae, 2018). We adopt substandard/nonperforming loans to total assets as a measure of asset quality and ROA (return on assets), a representative indicator of how profitable a company is relative to its total assets, as a measure of profitability. We use ROE (return on equity), an indicator of how much income or revenue an investment generates, as a supplemental measure of profitability. Loan classification is a widely accepted criteria by which bank loan portfolios are assessed in terms of asset adequacy or prudential requirements, and the terms "substandard" and "nonperforming" are used in different frameworks to classify questionable loans—the former is an accounting term used in recording problematic debt, while the latter is used in regulatory environments. Under a rule of the U.S. Bureau of Industry and Security, a substandard loan is one that is not protected by the financial worth of the obligor; such loans may be further weakened by being "doubtful" (meaning they are unlikely to be repaid) or a "loss" (meaning the loan is likely worthless and should be written off). A nonperforming loan is typically a loan that has been in default for 90 days, but this can depend on the contract terms (see http://koreanlii.or.kr/w/index.php/NPL). According to the Financial Services System, "substandard loan" is a term used in the context of expectations pertaining to borrowers' future ability to repay debts, while the term "nonperforming loan" is used in the context of the lack of accrual of interest revenue. We use nonperforming loans as the main variable in assessing asset quality and substandard loans as an ancillary indicator.

Control variables

Following the suggestion of the Korean National Assembly Budget Office (2007), Lee, Jae Hwa et al. (2009) and our previous research (2019) we categorize control variables into four groups broadly. First, the size and history of organization can affect performance. Organizations is that are larger and that have a longer history are better able to buffer internal and external pressures and so are more likely perform better (Park & Cho, 2014, p. 422). We obtained a natural log of total assets and figures from separate end-of-year financial statements or accounts of each bank. Bank age is measured as (current year (2020) – year of establishment) + 1. Second, the number of branches owned by a bank can affect management performance. Banks with many branches can perform better than banks with few branches, and so we control the effect of this variable (Kondo, 2017). Third, the productivity of each bank matters. The two most popular indicators of bank productivity are preprovision operating profit and total loan amount per employee. Due to limit-

ed data access we adopt the latter as a proxy to control productivity effect.[6] Finally, for overall macroeconomic variables affecting bank profitability, we choose real GDP growth rate. We include a year dummy to capture year-specific events that might influence the performance of banks.

Analysis Method

We use the following estimation models in evaluating the effect of each regressor on performance.

$$Performance_{i,t} = \beta_0 + \beta_1 turnover_{i,t} + \beta_2 outsider_{i,t} + \beta_3 turnover_{i,t} \times outsider_{i,t} + X_{i,t} + yeardummy + \varepsilon_{i,t} \quad \ldots\ldots (1)$$

$$Performance = \gamma_0 + \gamma_1 CEOtenurei,t + d'_2 CEOtenure2_{i,t} + X_{i,t} + yeardummy + \varepsilon_{i,t} \quad \ldots\ldots (2)$$

$Performance_{i,t}$ denotes the performance of bank I at year t. In equation 1, β_1 captures the effect of CEO turnover at bank I at year t. β_2 is linked with the effect of a CEO that is hired from the outside. In addition, we added an interaction term between CEO turnover and whether the hire was internal or external in order to consider the effect of the CEO hired from the outside. $X_{i,t}$ is a covariate of control variables, and $\varepsilon_{i,t}$ stands for spherical disturbances. Equation 2 measures the effect of CEO tenure on performance. γ_1 estimates the linear effect of CEO tenure on performances, and γ_2 is associated with a nonlinear effect. If the sign of γ_2 is positive we infer that the effect of longer tenure is longer lasting, which results in a u-curve relationship between tenure and performance. On the other hand, a negative sign means that the effect of a long tenure deteriorates at a certain point. We selected a panel linear regression model. Because both random effect and fixed effect methods have advantages and shortcomings, we conducted a Hausman test to determine which model fit the panel estimation and report the results with relevant statistics derived using STATA 15 software.

6. For instance, the Export-Import Bank of Korea doesn't disclose data pertaining to preprovision operating profit per employee for the course of our sample (2000-2019).

FINDINGS AND DISCUSSION

Overview of Summary Statistics

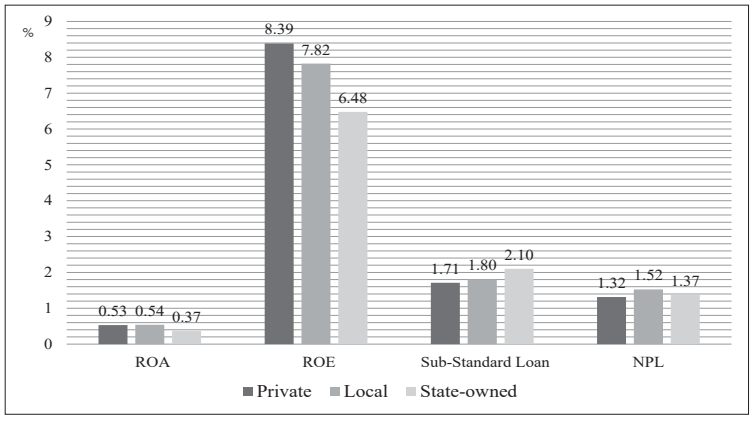
In our own sample total, there were 102 CEO turnovers over 20 years (2000-2019). As table 2 shows, 61 (or 59.8%) of new CEO hires were external and 41 (40.2%) were internal. There is no significant difference of the number of turnovers by bank ownership type (there were 35 in private banks, 34 in local banks, and 33 in state-owned banks), which implies that CEO turnover is common in all types of organizations, as Amanda J. Stewart and Jeffrey Diebold note (2017, p. 742). It also reflects the New Public Management dictum that public organizations should be more strictly controlled by outcomes (Eom, 2009, p. 31), a goal that is achieved by regular review of CEO ability and that leads to frequent turnover. It is more common in private banks than in local or state-owned ones for CEOs to be hired from the inside (hires from within accounting for about 80% of total turnover). Private banks are relatively free from the influence of government and have a more diverse pool of CEO candidates from which to choose, which facilitates the promotion of internal personnel as chief managers. The hiring of outsiders is more prevalent than the hiring of insiders in both local and state-owned banks. Most of outsiders come from the same financial group the local bank belongs to. Plus, in the early 2000s many local banks were not very profitable and did not have a lot of capital. Thus managers from government were frequently assigned to oversee them, and that's why outsider CEOs are now more dominant in local banks, while owing to the nature of bureaucracy, it's natural that the CEOs of state-owned banks come from outside.

Table 2. Frequency of Inside and Outside Hires in CEO Turnover

Turnover Type			Number
Private Bank	Total: 35	outside hire	8
		inside hire	27
Local Bank	Total : 34	outside hire	23
		inside hire	11
State-Owned Bank	Total : 33	outside hire	23
		inside hire	10
Total			102

Figure 2 and table 3 report the summary statistics of the variables of our study. First, the average tenure of CEOs across our sample is about 2.26 years. It is notable that the average is the shortest in state-owned banks (2.03 years) rather than in private (2.21 years) or local banks (2.49 years), except in outlier cases.[7] This is at odds with our common belief that private organizations such as for-profits are more responsive to environmental changes in market, resulting in short-termism. Second, mean performance varies according to type of bank. The higher the profitability figure, the better because it indicates that the bank earns more money on less investment (ROA) and generates more cash internally (ROE). The profitability figure of both private and local banks is larger than that of state-owned banks. This result is indirectly linked to criticisms that public organizations tend to be run more inefficiently than their private counterparts owing to, for example, absence of goal clarity. Combined with the relatively higher frequency of CEO turnover in state-owned banks, the lower profitability of state-owned banks indicates the need to reforming public organizations. With respect to substandard loans, state-owned banks hold the highest number. This may be because state-owned banks often assume the bad debts of unsound companies in the form of a bailout. Local banks display the highest ratio of nonperforming loans to total assets, reflecting the harsh management environment of small-scale local banks. Local banks' assets, resources, and buffers are small compared to those of big private banks and state-owned banks. So local banks are more likely to be negatively affected by economic turndowns or recessions, resulting in a higher number of nonperforming loans.

Figure 2. Overview of Performance by Bank Type (Mean)



7. Ha Young-gu served 9.5 years between 2004 and 2013 at CitiBank, and Jung Dae Geun presided for 8 years at NongHyup Bank.

Table 3. Summary Statistics of Variables

Type	Variable	Obs.	Mean	Standard Deviation	Minimum	Maximum
Private Bank (6)	Turnover (dummy)	120	0.2916667	0.456436	0	1
	Outsider (dummy)	120	0.15	0.358569	0	1
	Tenure (cumulative)	120	**2.210667**	1.783001	0.04	9.5
	Tenure (squared)	120	8.039648	13.53241	0.0016	90.25
	ROA	120	0.5325333	0.616512	-4.36	1.86
	ROE	120	8.38775	11.74683	-83.59	33.03
	Substandard loan ratio	120	1.710583	2.001787	0.37	14.04
	Nonperforming loan ratio	120	1.315167	1.622604	0.29	11.53
	Loan amount per employee (million ₩)	120	8836.925	3465.017	2400	17700
	Number of manned branches	120	646.6833	346.5083	43	1245
	Total assets (log)	120	18.55873	0.773782	17.05233	19.75433
	Age	120	58	30.58807	18	121
	GDP growth	120	4.105	2.002723	0.8	9.1
Local Bank (6)	Turnover (dummy)	120	0.2833333	0.452506	0	1
	Outsider (dummy)	120	0.6583333	0.476257	0	1
	Tenure (cumulative)	120	**2.490917**	1.790206	0.1	8.88
	Tenure (squared)	120	9.382796	13.7302	0.01	78.8544
	ROA	120	0.5406667	0.619035	-4.05	1.2
	ROE	120	7.82375	20.05004	-165.1	34.19
	Substandard loan ratio	120	1.801917	2.157587	0.36	15.65
	Nonperforming loan ratio	120	1.523667	2.001606	0.36	14.68
	Loan amount per employee (million ₩)	120	7464.942	3350.163	1800	17300
	Number of manned branches	120	143.525	73.41936	30	272
	Total assets (log)	120	16.41517	0.94263	14.13785	17.83814
	Age	120	41.16667	5.895923	30	52
	GDP growth	120	4.105	2.002723	0.8	9.1
State-Owned Bank (5)	Turnover (dummy)	100	0.33	0.472582	0	9
	Outsider (dummy)	100	0.67	0.472582	0	1
	Tenure (cumulative)	100	**2.0319**	0.475138	0	9
	Tenure (squared)	100	7.500745	14.41761	0	81
	ROA	100	0.371	0.944745	-6.75	2.58
	ROE	98	6.477551	7.781967	-22.77	23
	Substandard loan ratio	100	2.1006	1.751425	0.13	11.95
	Nonperforming loan ratio	99	1.368384	1.115167	0.1	9
	Loan amount per employee (million ₩)	98	19496.62	16576.41	2900	73139
	Number of manned branches	100	355.43	408.432	7	1189
	Total assets (log)	100	18.09582	1.044093	15.83107	19.50172
	Age	100	47.9	9.314375	25	66
	GDP growth	100	4.105	2.004408	0.8	9.1

Estimation and Discussion

In this section, first we report the estimation result of our hypothesis that the hiring of CEOs from within is likely to be positively associated with performance. Details are reported in table 4. First, in the event of turnover, we can check whether the profitability (ROA) decreases while asset quality (ratio of nonperforming loans to total assets) deteriorates (a higher ratio indicates the percentage of nonprofitable loans to total assets is increasing). The statistical significance of CEO turnover is supported in most models without controlling for time effect; for ROA and nonperforming loans its p-value is less than 0.05. These results comport with our earlier findings (2019). Hughes and his colleagues (2010, p. 577) suggest that what explains this outcome is that incumbent managers know how to handle organization turnover efficiently, so when those managers leave, organization-specific human capital leaves with him or her, necessitating additional learning for whoever steps in, which can improve performance in the short term but that that effect does not necessarily last. Next, the outsider dummy exhibits a negative sign for profitability and a positive sign for asset quality. Thus, CEOs who come from the within the bank seem to contribute to improving performance of the bank he or she is assigned to over the longer term, which is in line with previous studies which support positive effect of hiring managers from the inside (Dherment-Ferere & Renneboog, 2000; Boyne & Meier, 2009; Kind & Schläpfer, 2010) and its impact remains constant over indicators. What catches our interest is the coefficient of interaction term, which indicates the effect of the outside hire in the year of CEO turnover. For all performance indicators the interaction term exerts positive influence on profitability and a negative one on asset quality. This may reflect expectations that a newly appointed CEO might serve as a kind of "external shock" to banks, refreshing organizational culture and therefore improving performance for a while. Buoying up the argument of Petrovsky and his colleagues (2014), in this case the benefits of the adaptive effect exceed the disruptive costs, resulting in overall positive sign of all coefficients. However, this effect is temporary and cannot offset the negative influence of turnover itself. In the case of ROA, the sum of three dummy coefficients is still negative and a similar pattern is found over another dependent variable. This suggests that a positive conjunction between tenure and performance might only be valid to a certain point regardless of whether the CEO is hired internally or externally, which leads us to consider the interconnectedness between performance and time.

Table 4. Estimation Result of the Hypothesis That Internal CEO Hires Are More Likely to Be Positively Associated with Organizational Performance

Variable	Time Effect Not Included		Time Effect Included	
	Profitability	Asset Quality	Profitability	Asset Quality
	ROA	Nonperforming loan	ROA	Nonperforming loan
Turnover	**-.2666****	**0.5437****	**-0.1908***	**0.3276***
Outsider	-0.1029	**0.6091*****	-0.0686	**0.4742****
Interaction	0.0776	**-0.6622***	0.141	**-0.7716****
Age	-.0462**	0.0069*	-0.0029	0.0083**
Total Assets (Log)	0.1019	0.2317	0.127	-0.0985
Number of Manned Branches (Log)	-0.5482**	-0.3426**	-0.0554	-0.0581
Loan Amount per Employee (million ₩) (Log)	0.4738**	-0.9739***	-0.2332	-0.1542
GDP Growth Rate	-.0745***	0.2735***	-0.2607***	0.7124***
Constant	-0.0154	6.2754***	1.4318	1.7311
Model	fixed effect	random effect	random effect	random effect
Observations	338	337	338	337
Prob>F	0.0282	0.0039		0.0001
Wald Chi2		150.73	183.28	356.36
R-Square	0.0908	0.3149	0.3653	0.5402

Notes: 1.Turnover is the dummy variable, which takes value 1 if managerial turnover happens in a certain year; otherwise it takes 0. 2. Outside is the dummy indicator that is assigned a 1 if the CEO comes from outside the bank; otherwise it is assigned 0. 3. Interaction is an indicator that is combined with succession and the outsider dummy. 4. We obtained all results using a panel linear estimation model whose model fits were verified by Hausman test. 5. Year dummies for controlling time effect were included but are not reported here for the sake of brevity. 6. Prob>F is the result of test that all =0. 7. Within r-squared for the fixed model and overall r-squared for the random model. 8. Regarding p-value and its significance, * p<0.1; **p<0.05; *** p<0.01.

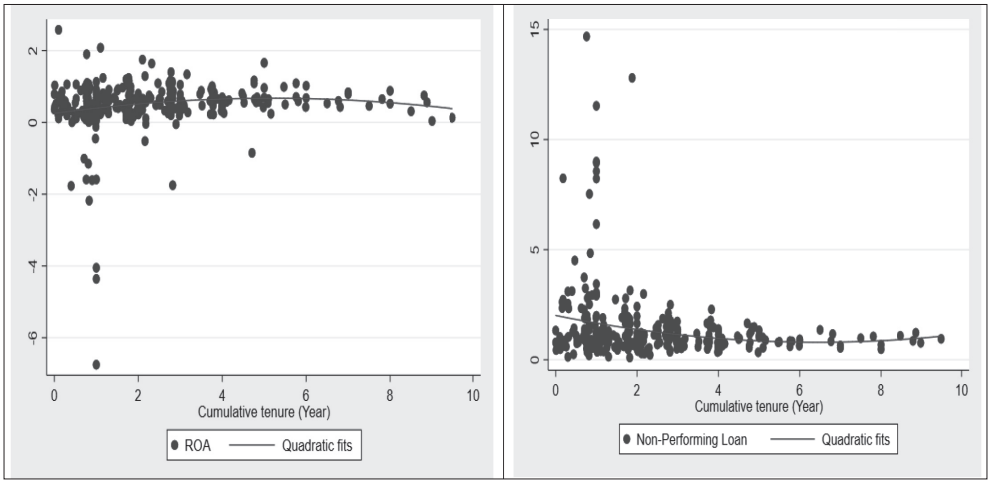
Regarding the hypothesis of CEO tenure, Table 5 offers empirical evidence of the positive effect of a longer tenure, generating and an inverted U-shaped relation between CEO tenure and all types of performances. All coefficients exhibit a positive sign for profitability and negative for asset quality, suggesting sustaining that a longer tenure might result in enhanced performance, as Simsek (2007, p. 657) predicts. Similarly, the negative effect of squared term of tenure also holds across all regression specifications. And the nonlinear relation between tenure and performance is also robust when controlled for time effect. This result is in a conformity with the findings of Peter Limbach, Markus Schmid, and Meik Scholz. (2016) which exhibits an inverted U-shaped relationship between firm value and merger and acquisition announcement returns. When we draw a plot between the performance of each bank and the length of the CEO term, this finding stands out even more (see figure 3). For the profitability indicator, the squared term yields an inverted U-shaped curve, indicating that performance decreases in the wake of overly lengthy tenures. Regarding nonperforming loans, a lower figure indicates that a bank has fewer insolvent debts and that its financial soundness is solid and strong. On these indicators, the plot takes a form of U-curve, and we may conclude longer tenure could be associated with an unstable future. Kang and Bae (2018, p. 198) suggest that an excessively long tenure might be a result of managerial entrenchment, a situation in which managers use their position to benefit themselves and not the shareholders (Alphabridge, 2019). At an early stage, the knowledge and knowhow of a CEO might improve performance, but after a certain point, this effect can dissipate, particularly if the CEO is using the organization to benefit himself or herself rather than shareholders. The curve of the relationship between tenure and performance changes at a certain threshold, which is close to 5-6 years. However, this graph needs to be interpreted cautiously and seen as auxiliary evidence for a gradual dissipation of the positive effect of a longer tenure.

Table 5. Estimation Result of the Hypothesis That Longer CEO Terms Are Positively Associated with Bank Performance Indicators

Variable	Time Effect Not Included		Time Effect Included	
	Profitability	Asset Quality	Profitability	Asset Quality
	ROA	Nonperforming loan	ROA	Nonperforming loan
Tenure (Cumulative)	**0.1288****	**-0.298****	0.0337	-0.0849
Tenure (Squared)	-0.0102	**0.0252***	-0.0051	0.0082
Age	-0.0419**	0.0439	-0.0033*	0.0084**
Total Assets (Log)	0.0236	0.1939	0.0899	-0.1106
Number of Manned Branches (Log)	-0.5099**	0.8238	-0.0113	-0.0594
Loan Amount per Employee (million ₩) (Log)	0.5189**	-1.8883***	-0.1829	-0.1159
GDP growth Rate	-0.0648**	0.2491***	-0.259***	0.7194***
Constant	0.2008	7.992	1.3911*	2.2349
Model	fixed effect	fixed effect	random effect	random effect
Observations	338	337	338	337
Prob>F	0.0432	0.0322		
Wald Chi2			175.33	351.64
R-Square	0.0846	0.3369	0.36	0.53

Notes: 1. The length of CEO tenure is calculated in cumulative years. See table 1. 2. All results were obtained from a panel linear estimation model whose model fits were verified by Hausman test. 3. Year dummies for controlling time effect were included but are not reported here for the sake of brevity. 4. Prob>F is the result of test that all =0. 5. Within r-squared for the fixed model and overall r-squared for the random model. 6. Regarding p-value and its significance, * p<0.1; **p<0.05; *** p<0.01.

Figure 3. Graphical Plot between Tenure (Squared) and Performance (ROA and Nonperforming Loans)

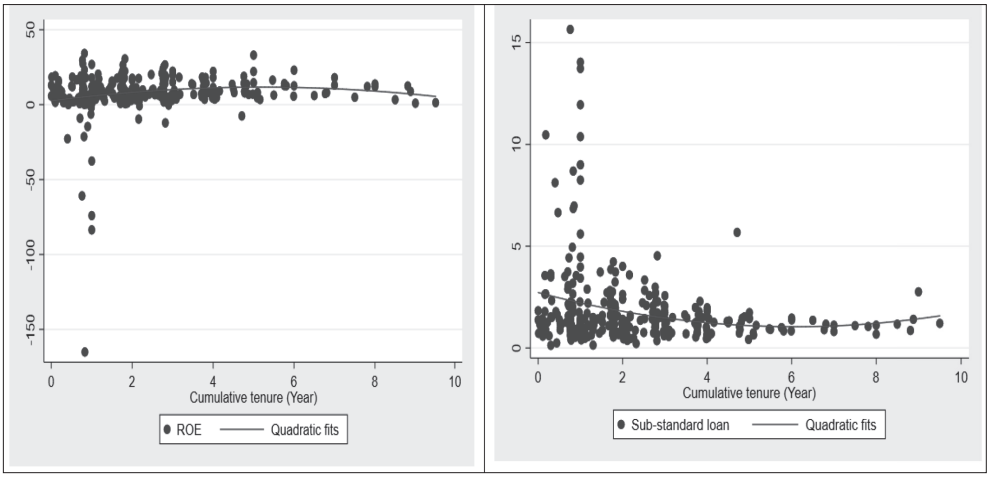


Robustness Test

In this section, we perform several additional tests to enhance robustness of our work. Regarding the hypothesis that managerial succession from within a bank is more likely to be positively associated with organizational performance, first we included additional performance indicators (ROE, substandard loan) and carried out the same test, obtaining the same results (see appendix A). When we divide the sample up by type of bank and conduct the same regression, the coefficient of the regressor holds constant for private banks, while the state-owned and local banks do demonstrate fluctuations but with no statistical significance (see appendixes B, C, and D). This variation might stem from the relatively small size of the observations (98, 120 respectively). Some researchers suggest that the sample size should be at least 200 or more in order to prevent a violation of statistical assumptions (McKinly, 2016, p. 163). This variation thus might disappear if one were to incorporate more observation into sample either through increasing the time span covered or the number of subjects. Regarding the hypothesis that longer CEO terms are positively associated with bank performance indicators, we also introduced additional indicators, and the results are the same, indicating almost constant statistical significance (see appendix E). To prevent outliers from exerting too much influence on coefficients, we performed the same regression on outliers in each bank category (3 observations in full sample), and the result was equal to that of

full sample (see appendix F). Finally, the graphical plot of the relationship between tenure and other bank performance indicators (ROE and substandard loans) also yields an inverted U-curve, demonstrating that the "time-decaying" effect of a lengthy CEO tenure is also witnessed in the case of other variables (see figure 4).

Figure 4. Graphical Plot between Tenure (Squared) and Performance (ROE and Substandard Loans)



CONCLUSION

Our study reveals that insiders are more likely to enhance performance than outsiders. Outsiders only can bring a temporary beneficial effect. A longer CEO term can also contribute to improving performance, but a graphical plot shows that the positive relationship between performance and CEO tenure dissipates over time. We shed light on recent literature exploring the relationship between the effect of internal vs. external CEOs and tenure using data from the Korean banking industry. The result we present implies that banks need to design staffing policies that guarantee not only longer CEO tenures but also a system that preclude the possibility of excessively long tenures. As Hughes and his colleagues (2010, p. 587) point out, longer tenures allow managers time to develop company-specific knowledge, and swift changes that result in the loss of such resources can make for a long recovery period as new managers struggle to learn about and adapt to the organization. Hence, our study also challenges a prevalent acceptance of short-termism that results in low-performing CEOs being instantly fired. Our research also provides a more com-

prehensive picture of the effect of several factors regarding CEO turnover.

Further research would make our work more persuasive. First, the main regressors might be endogenous variables that are affected by the regressand (performance), which could result in a spurious negative effect. CEO tenure itself can be related to the poor performance of predecessors, therefore leading to outsider-oriented turnover. This might capture the negative effect of CEOS hired from the outside.[8] To mitigate this endogeneity issue, it would be necessary to rule out several alternative explanations of performance by exploring the relationship between performance and alternative measures for CEO tenure such as age, ownership, managerial power, or tenure of the board of directors that could be captured by the CEO's tenure, as Limbach and his colleagues (2016) have suggested. Second, our results may not be generalizable to other fields. The subject of our study is the banking industry of Korea, but a country's banking system heavily depends on the nature of the society in which it is embedded. Third, though we tried to expand the scope of investigation by including local banks, a small n problem remains. As Kind and Schläpfer (2010) point out, a strand of studies focusing on CEO turnovers has a relatively small sample size, varying from 59 to 854; however, in turn, sample size also depends on the time span covered by the study. To guarantee a higher level of external validity we need to look further into the record of CEO succession. Next, we only include surviving corporations in our sample to preserve the integrity of the subject over time, but results from this sample may thus face the problem of survival bias. So we need to consider defunct corporations as well to mitigate this problem. Lastly, it is important to explore other relevant theories on turnover. For instances, "big bath" accounting is deeply correlated with turnover events. As Chia-Feng Yu (2012, p. 3) explains, big bath accounting is an earnings management strategy that manipulates a company's income statement to make poor results look even worse and is often deployed when a new CEO is incoming. Much of the literature on big bath accounting contends that newcomers have an incentive to use this strategy so they can blame the company's poor performance on the previous CEO and take credit for the next year's improvements. Min Seok, Hansoo Kim, and Kwan Choi (2012), for example, report that evidence of big bath accounting can be seen in the case of Kookmin Bank in 1998, 2004, and 2010; this is an area for further research.[9]

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8. We thank the anonymous reviewer for pointing out this causality-related problem.
9. An outside CEO is less likely to take a big bath due, since he or she is unfamiliar with a bank's system. So it might be possible to infer a big bath event from accruals. We thank the anonymous reviewer for this comment.

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Appendix

A. Estimation Result of the Hypothesis That Internal CEO Hires Are More Likely to Be Positively Associated with Organizational Performance with Additional Performance Indicators

Variable	Time Effect Not Included				Time Effect Included			
	Profitability		Asset Quality		Profitability		Asset Quality	
	ROA	ROE	nonperforming loan	substandard loan	ROA	ROE	nonperforming loan	substandard loan
Turnover	-.2666**	-3.7257	0.5437**	**0.567****	-0.1908*	-2.8166	0.3276*	0.212
Outsider	-0.1029	-1.7738	0.6091***	0.2317	-0.0686	-1.6513	0.4742**	0.0843
Interaction	0.0776	0.2241	-0.6622*	-0.1823	0.141	1.0719	-0.7716**	-0.2759
Age	-.0462**	-1.241***	0.0069*	0.0483	-0.0029	-0.0341	0.0083**	-0.6659*
Total Assets (Log)	0.1019	1.8241	0.2317	0.5535	0.127	-1.08	-0.0985	0.1873
Number of Manned Branches (Log)	-.5482**	-9.1837**	-0.3426**	1.0413**	-0.0554	2.4929*	-0.0581	1.217***
Loan Amount per Employee (million ₩) (Log)	.4738**	11.571**	-0.9739***	-2.7***	-0.2332	1.1976	-0.1542	-0.6657*
GDP Growth Rate	-.0745***	-1.568***	0.2735***	0.3458***	-0.2607***	-4.2419***	0.7124***	-0.7306
Constant	-0.0154	-11.629	6.2754***	7.0487	1.4318	14.2037	1.7311	-2.6989*
Model	fixed effect	fixed effect	random effect	fixed effect	random effect	random effect	random effect	fixed effect
Observations	338	336	337	338	338	336	337	338
Prob>F	0.0282	0.0376		0.0039				0.0001
Wald Chi2			150.73		183.28	156.75	356.36	
R-Square	0.0908	0.0914	0.3149	0.3906	0.3653	0.3366	0.5402	0.7481

B. Estimation Result of the Hypothesis That Internal CEO Hires Are More Likely to Be Positively Associated with Organizational Performance: State-Owned Banks (98 Observations)

Variable	Time Effect Not Included				Time Effect Included			
	Profitability		Asset Quality		Profitability		Asset Quality	
	ROA	ROE	nonperforming loan	substandard loan	ROA	ROE	nonperforming loan	substandard loan
Turnover	**-0.5943***	**-5.3261****	0.3679	0.4027	-0.2148	-2.9228	0.1197	-0.1023
Outsider	0.2947	2.9665	0.2240	0. 0831	0.3611	**3.2484***	0.1343	-0.1275
Interaction	-0.0169	2.9156	-0.2243	0.4674	-0.2163	0.9792	-.2670	0.5595
Model	random effect	random effect	random effect	Random effect	random effect	random effect	random effect	random effect

C. Estimation Result of the Hypothesis That Internal CEO Hires Are More Likely to Be Positively Associated with Organizational Performance: Local Banks (120 observations)

Variable	Time Effect Not Included				Time Effect Included			
	Profitability		Asset Quality		Profitability		Asset Quality	
	ROA	ROE	nonperforming loan	substandard loan	ROA	ROE	nonperforming loan	substandard loan
Turnover	-0.2198	-4.8423	0.8320	0.7323	-0.0390	1.3135	0.5051	0.0611
Outsider	**-0.2959***	-3.2442	0.5901	0. 3448	-0.1372	1.4544	0.4305	-0.0709
Interaction	0.1956	-3.0730	-1.0754	-0.4073	0.0784	-7.9205	-1.1523	-0.1042
Model	random effect	random effect	random effect	random effect	random effect	random effect	random effect	random effect

D. Estimation Result of the Hypothesis That Internal CEO Hires Are More Likely to Be Positively Associated with Organizational Performance: Local Banks (120 observations)

	Time Effect Not Included				Time Effect Included			
Variable	**Profitability**		**Asset Quality**		**Profitability**		**Asset Quality**	
	ROA	ROE	nonperforming loan	substandard loan	ROA	ROE	nonperforming loan	substandard loan
Turnover	**-0. 1491**	**-1.8956**	0.3937	0.5193	-0.1783	-2.5340	.3391	0.4376
Outsider	**-0.9298*** **	**-16.7912*** **	**1.2614***	**1.4413***	**-1.1036*** **	**-20.1813*** **	**1.3256** **	**1.3874** **
Interaction	**1.2899*** **	**24.1254*** **	**-1.9727** **	**-2.6299** **	**1.3123*** **	**24.7585*** **	**-2.0491*** **	**-2.6442*** **
Model	random effect	random effect	random effect	random effect	random effect	random effect	random effect	random effect

E. EEstimation Result of the Hypothesis That Longer CEO Terms Are Positively Associated with Bank Performance Indicators with Additional Performance Indicators

Variable	Time Effect Not Included				Time Effect Included			
	Profitability		Asset Quality		Profitability		Asset Quality	
	ROA	ROE	nonperforming loan	substandard loan	ROA	ROE	nonperforming loan	substandard loan
Tenure (Cumulative)	**0.1288****	**2.8386****	**-0.298****	**-0.4237*****	0.0337	1.1919	-0.0849	-0.0611
Tenure (Squared)	-0.0102	**-0.2809***	**0.0252***	**0.0376****	-0.0051	-0.1269	0.0082	0.0094
Age	-0.0419**	-1.1584***	0.0439	0.0381	-0.0033*	-0.0381	0.0084**	0.0125***
Total Assets (log)	0.0236	0.2803	0.1939	0.7339	0.0899	-0.9561	-0.1106	-0.047
Number of Manned Branches (Log)	-0.5099**	-8.045*	0.8238	0.9192*	-0.0113	2.5813*	-0.0594	-0.1096
Loan Amount per Employee (million ₩) (Log)	0.5189**	12.3697***	-1.8883***	-2.7781***	-0.1829	0.8346	-0.1159	0.1906
GDP Growth Rate	-0.0648**	-1.4222***	0.2491***	0.3233***	-0.259***	-4.2759***	0.7194***	1.1555***
Constant	0.2008	-8.0531	7.992	6.6707	1.3911*	11.6244	2.2349	-2.5476*
Model	fixed effect	fixed effect	fixed effect	fixed effect	random effect	random effect	random effect	random effect
Observations	338	336	337	338	338	336	337	338
Prob>F	0.0322	0.0407	0.0432	0.0039				
Wald Chi2					175.33	153.58	351.64	798.19
R-Square	0.0846	0.0913	0.3369	0.3906	0.36	0.3313	0.53	0.719

F. Estimation Result of the Hypothesis That Longer CEO Terms Are Positively Associated with Bank Performance Indicators Ruling Out Outliers

Variable	Time Effect Not Included				Time Effect Included			
	Profitability		Asset quality		Profitability		Asset quality	
	ROA	ROE	nonper-forming loan	substan-dard loan	ROA	ROE	nonper-forming loan	Substan-dard loan
Tenure (Cumulative)	**0.1159***	**2.6436****	**-0.3089****	**-0.4098****	0.0231	1.0222	-0.0975	-0.0486
Tenure (Squared)	-0.0078	-0.2439	0.0272	**0.0349****	-0.0031	-0.0936	0.0107	0.0066
Age	-0.0423**	-1.1915***	0.0463	0.0424	-0.0032*	-0.0369	0.0082**	0.0123***
Total Assets (Log)	0.0266	0.5156	0.1800	0.7056	0.0891	-1.0098	-0.1188	-0.0282
Number of Manned Branches (Log)	-0.5144**	- 8.3101*	0.8393**	0.9529*	-0.0111	2.6172*	-0.0423	-0.1239
Loan Amount per Employee (million ₩) (Log)	0.5199**	12.563***	-1.9074***	-2.8081***	-0.1813	.9432	-0.1066	0.1530
GDP Growth Rate	-0.0651**	-1.4336***	0.2495***	0.3245***	-0.259***	-4.2637***	0.7194***	1.1507***
Constant	0.1953	-10.6277	8.2136	7.0306	1.3952*	11.4181	2.225	-2.4358*
Model	fixed effect	fixed effect	fixed effect	fixed effect	random effect	random effect	random effect	random effect
Observations	336	334	335	336	336	334	335	336
Prob>F	0.0344	0.0418	0.0424	0.0049				
Wald Chi2					174.13	152.62	349.69	797.93
R-Square	0.0854	0.0928	0.3372	0.4008	0.3597	0.3313	0.5296	0.7202