

CEO Turnover and Earnings Management in Banks: Evidence Using Age-based Retirement Policies*

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Abstract

We examine the effect of CEO turnover on earnings management in banks using *exogenous* variation generated by age-based retirement policies in Indian public sector banks. Banks experiencing CEO turnover report 23% lower profit-to-sales and 22% lower return-on-assets in the transition quarter. Increased provisions lead to these decreases though they do not associate with subsequent increases in non-performing assets. Shorter CEO tenure exacerbates earnings management by the incoming CEO. The real effects of earnings management are highlighted by a 1.7% decrease in lending and a 1.5% decrease in the stock price. None of these effects manifest for other public sector firms. Personal risk management accounts for earnings management by incoming bank CEOs.

Key Words: Banks, CEO, CEO turnover, Earnings Management, Financial Crisis, Public Sector Banks, Retirement, Superannuation, Tenure.

JEL Classification: G20, G21, G30, M41.

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I Introduction

After the recent global financial crisis, which had banks at its epicenter, managerial incentives in banks have come under the spotlight (see Acharya, Richardson, et al. (2009) and Fahlenbrach and Stulz (2011)). Distorted managerial incentives have copped a significant share of the blame for excessive risk taking by banks (Taylor, 2009) and earnings management by banks during the financial crisis (Acharya and Richardson (2009) and Huizinga and Laeven (2012)). We examine how personal risk management distorts managerial incentives and leads to earnings management coinciding with CEO turnover in banks.

A priori, earnings management can be a more important concern in banks than in non-financial firms because banks' operations are more opaque than that of non-financial firms. Although information asymmetries plague all sectors, banks are especially vulnerable to problems stemming from informational asymmetry. Because bank lending employs soft information (Petersen (2004); Ramakrishnan and Thakor (1984)), loan quality is not readily observable.¹ As well, banks can readily hide problems by extending loans to clients that cannot service previous debt obligations. Moreover, banks can alter the risks underlying their assets more quickly than firms in most non-financial industries (Myers and Rajan, 1998). Consistent with such opacity, Morgan and Stiroh (2001) find that bond analysts disagree more over the bonds issued by banks than by non-financial firms.

Such informational opacity combines with managerial risk-aversion especially when the senior management in a bank may be held personally liable for the bank's bad performance. Amihud and Lev (1981) and Acharya and Bisin (2009) examine the agency costs stemming from managers' desire to reduce personal risks. Because of the informational opacity of a bank's assets, it is extremely difficult to make the outgoing CEO reveal soft information about the loans lent (Stein, 2002). Therefore, an incoming CEO is likely to be wary about the quality of bank assets created during his/her predecessor's tenure. Such fears are particularly pronounced when the incoming CEO could be held personally liable for the bank's bad performance. For example, in December 2010, the Federal Deposit Insurance Corporation (FDIC) authorized lawsuits against several CEOs of failed financial institutions for their negligence.²

Our hypothesis for earnings management by incoming CEOs in banks represents a variant of the "big bath" hypothesis, which explains earnings management by incoming CEOs in firms. While the CEO's compensation being tied up with his performance motivates the "big bath," we argue that managerial risk-aversion may lead to earnings management in banks because of the informational opacity of a bank's operations.

In contrast to the above arguments, the literature on the efficient functioning of labor

¹Banks are not bound to disclose information about individual loans. Borrower disclosures about private lending arrangements are limited to publicly traded firms; moreover, filings need not include the name of the banks involved. As well, the information that regulators obtain by examining banks remains confidential.

²See, for example, <http://www.dandodiary.com/2011/08/articles/failed-banks/potential-liabilities-of-former-directors-of-failed-banks/>.

markets postulates that earnings management is futile from the CEO’s point of view. Fama (1980) argues that the cost that an agent imposes on the principal is ultimately borne by the agent through the mechanism of “wage settling up.” In the long run, strong labor market forces would equate the welfare loss to the principal with the ex-post wage settlement. Because the costs imposed by an agent will be deducted from the agent’s future wages, the wage settling up mechanism works as a deterrent against earnings management. Though Holmström (1982) suggests that when an agent nears the end of his career, the gains from earnings management may be higher than the costs imposed by way of ex-post settling up, (Brickley, Linck, and Coles, 1999) find that post-retirement board memberships act as a strong motivation for CEOs. Such motivations would then provide ample scope for the wage settling up mechanism to deter earnings management by incoming CEOs. Thus, whether or not an incoming bank CEO manages earnings remains an empirical question to be tested.

Indian public sector banks provide an ideal setting to study the above phenomenon. First, employees in Indian public sector banks face skewed incentives. While good performance is not rewarded, prosecution by the Central Vigilance Commission—the federal fraud investigating agency—remains a perennial threat particularly for senior managers in banks. In fact, in our sample we find several cases of the Chairman and Managing Directors of public sector banks being prosecuted by the Central Vigilance Commission. Therefore, personal risk management remains a strong motivation for earnings management by incoming chairmen of public sector banks in India.

Second, the age-based retirement policies for all employees of public sector enterprises in India provides strong *identification*. CEO turnovers often coincide with bad operational performance (Coughlan and Schmidt (1985)), which makes CEO turnover endogenous to firm performance. We identify the hypothesized effects by exploiting *exogenous* variation generated by age-based CEO retirement policies in Indian public sector firms. The Chairman and Managing Director (hereafter CMD or CEO) represents the highest ranked official in an Indian public sector firm. The CMD gets replaced only when he/she attains the prescribed age of superannuation.³ Moreover, the CMD does not demit office because of poor firm performance. Consistent with such exogenously determined turnover, we find no correlation between turnover and firm performance in either the last or second-last quarter of the exiting CMD. The exogenous variation therefore enables us to study the *causal* effect of CEO turnover on earnings management. As well, in our setting, the CEO’s horizon is deterministically known, which enables us to carefully study the effect of CEO horizon on earnings management by the incoming CEO.

We estimate a difference-in-difference effect of CEO turnover on earnings management. To fix ideas, consider the CEO change at Bank of Baroda in May 2008 when Mr. M D Mallya took over charge from Dr. A K Khandelwal. Since the April-June 2008 quarter represents the transition quarter in this instance, we first estimate the difference in reported

³Currently, public sector bank chairman retires on attaining the age of 60.

earnings/profits in the April-June 2008 quarter for Bank of Baroda vis-à-vis the average reported earnings/profits in all other quarters for Bank of Baroda. Then, we estimate the same difference for every other bank that did not experience a CEO turnover in the April-June 2008 period. The difference between these two differences provides a causal estimate of the effect on earnings management of the CEO change in Bank of Baroda in April-June 2008. This is because the second difference described above provides an estimate for the counterfactual question: what would have been the earnings change in Bank of Baroda if the particular CEO change had not occurred in April-June 2008?

We find that earnings go down significantly in the transition quarter when a new CMD assumes office. Compared to banks where there is no turnover, banks experiencing CEO turnover report 23% lower profit-to-sales and 22% lower return-on-assets in the transition quarter. Using an estimate of the Standardized Unexpected Earnings (SUE), we find a statistically and economically significant decline in earnings in the transition quarter. We identify provisions for bad and doubtful debts as the major source of fall in earnings in the transition quarter. When compared to the other quarters, provisions-to-sales increases by 10.8% in the transition quarter. Interestingly, though provisions are positively correlated with subsequent non-performing assets in general, the correlation of increased provisions in the transition quarter to subsequent non-performing assets is almost 50% lower. We investigate if the greater provisions in the transition quarter could possibly be due to the outgoing CMD reporting lower provisions towards the end of his/her tenure and the incoming CMD increasing them to bring it back to “normal ” levels. We do not find evidence of the same, which strongly indicates over provisioning by the incoming CEO in the transition quarter.

Shorter CEO tenure exacerbates earnings management by the incoming CEO. Economically, the effect of CEO turnover on earnings management for a CEO with long (i.e. above median) tenure is double that for a CEO with short (i.e. below median) tenure. Unlike previous studies examining CEO horizon and earnings management (see [Gong, Li, and Shin \(2011\)](#)), we are able to *cleanly identify* the impact of CEO horizon on the incentives for earnings management because CEO tenure is deterministic in our setting as CMD of public sector banks unambiguously know their expected date of retirement.

Next, we study the real effect of CEO turnover in banks. Because the incoming CEO cannot force the outgoing CEO to reveal all the soft information about the loans provided during the outgoing CEOs tenure, an incoming CEO is likely to be wary about the quality of bank assets created during his/her predecessor’s tenure. Given the likelihood of prosecution by the Central Vigilance Commission, the new CEO is unlikely to lend till he/she understands and obtains full information about the bank’s existing assets. Consistent with this prediction, we find that the market adjusted lending falls by INR 17 billion in the transition quarter, which represents a 1.7% decline compared to the average lending in a quarter by the bank that experienced CEO turnover. We test to see if the same reverts back in the next three quarters and find no evidence of such reversion. This effectively rules out postponing

revenue recognition as the source of lower profits in the transition quarter. We also examine the stock market reaction to the first earnings announcement by the incoming CEO. We find that the stock price falls by 1.1%, which seems to be the direct effect of expected reduction in lending in the transition quarter. These results suggest that the impact of CEO turnover in a bank extends beyond mere restatement of earnings.

Finally, we test our fundamental premise that personal risk management leads to earnings management by the incoming CMD of the bank. For this purpose, we examine if a higher accounting rate of return achieved during a CEO's tenure lowers the likelihood of prosecution by the Central Vigilance Commission. Our evidence confirms that this is indeed the case. We also examine if board memberships post retirement act as a motivation for CEOs to manage earnings as found by (Brickley, Linck, and Coles, 1999). We find that the accounting rate of return achieved during the bank CEO's tenure is uncorrelated with his/her chances of obtaining a corporate board membership post retirement.

We rule out alternative interpretations for our results. Contrary to the "big bath" hypothesis, the "finite horizon" hypothesis states that the outgoing CEO tries to shore up earnings towards the end of her tenure (see (Dechow and Sloan, 1991) and (James, 1999) among others). This explanation leads to the prediction that earnings management would manifest in the last quarter of the outgoing CEO. Our evidence is not consistent with the "finite horizon" hypothesis. First, we find that over-provisioning is the main mechanism through which lowered earnings are reported in the transition quarter. Provisions are discretionary in nature and are decided at the time of preparing the accounting statements. Moreover, in all the instances in our sample, the new CEO is in charge at that time of the preparation of the first accounting statements under his/her stewardship. Second, market-adjusted lending does not pick up in the first few quarters of the new CEO. If the outgoing CEO reduces lending, then we should see a pick up at least on a market-adjusted basis during the first few quarters of the new CEO. More importantly, we do not see any abnormal increase in earnings towards the end of the outgoing CEO's tenure.

Our setting also allows us to rule out the "coaching hypothesis," which states that the outgoing and incoming CEOs collude to manufacture a "smooth transition." For such a smooth transition to manifest, the outgoing CEO should have information well in advance regarding who the incoming CEO would be and should have the opportunity therefore to develop a collusive relationship with the incoming CEO. As we discuss in section II, in public sector firms the name of the new CEO is announced only a few days in advance. Moreover, the incumbent CEO has no official role in appointing the next CEO as a committee of bureaucrats fulfills this responsibility. These structural issues effectively rule out the possibility of collusion between the incoming and the outgoing CEO as predicted by the "coaching hypothesis."

In contrast to the above effects for public sector banks, we find no effect of CEO change in other public sector firms. Apart from serving as a useful placebo test that alleviates concerns about any omitted variables driving the above results for banks, this evidence is consistent

with the hypothesis that earnings management by incoming CEOs is significantly more likely in banks than in industrial firms. Because informational asymmetries are significantly lower in industrial firms when compared to banks, labor markets may operate efficiently in the case of industrial firms through the “wage settling up” mechanism. In contrast, such labor market efficiencies may not be achieved in the case of banks because a bank’s operations are informationally opaque.

To our knowledge, our study is the first to examine the effect of CEO turnover on earnings management in banks. To identify carefully the causal effect of CEO turnover, we have exploited the *exogenous* variation provided by age-based retirement policies in public sector firms in India. First, since government ownership of banks is quite large and pervasive (La Porta, Lopez-de Silanes, and Shleifer, 2002) and government-owned banks play an important role in the transmission of monetary policy (Morck, Yavuz, and Yeung, 2013), our finding of decreases in lending due to CEO turnover can have broader implications for credit and monetary policies in countries with significant state ownership of banks. As well, our finding that the incentives for earnings management by the incoming bank CEO decreases with longer CEO tenure has implications for regulators when deciding the optimal age for superannuation in public sector banks. Second, Bergstresser and Philippon (2006) show that the use of discretionary accruals to manipulate reported earnings is more pronounced at firms where the CEO’s potential total compensation is more closely tied to the value of stock and option holdings. Our study complements that of Bergstresser and Philippon (2006) by demonstrating the effect of managerial risk-aversion against possible prosecution in the use of earnings management by incoming CEOs. Finally, the paper also contributes to the literature on government ownership of banks. Government ownership of banks is widespread around the world and impacts economic and financial development in a significant manner (La Porta, Lopez-de Silanes, and Shleifer, 2002). There are two contradictory views about government participation in financial intermediation. The “development view” supports involvement of governments in banking with a claim that such an involvement would result in development of “strategic sectors”, help in reducing poverty and cause financial and economic development (see Gerschenkron et al. (1962), Hawtrey (1926), Burgess, Pande, and Wong (2005) and Myrdal et al. (1968)). As opposed to the “development view” there is a “political view” of government ownership of banks. The advocates of this view claim that government banks are tools in the hands of the ruling political dispensation to achieve their narrow political objectives (Kornai (1979), Shleifer and Vishny (1994), Khwaja and Mian (2005), Cole (2009)). While there has been a lot of focus on the “misuse” of government owned banks for political purposes (see Sapienza (2004), Barth, Brumbaugh, and Wilcox (2000)), there has not been much focus on earnings management in government owned banks especially at the time of entry of a new CEO. This paper fills this void in the literature.

The paper proceeds as follows. In the next section, we discuss the relevant literature and develop our hypotheses. In section II, we provide the institutional background for our study

where we describe the Indian banking system and the process for appointment of chairmen in public sector banks in India. In section IV, we describe our data. Section V details our empirical strategy and describes our results. Section VI concludes.

II Institutional Background

In this section, we describe the institutional background underlying our study. In particular, we describe the Indian banking system as well as the procedures adopted for appointment of new CMD in public sector firms in India.

II.A The Indian Banking System

At the time of Independence, the Indian banking system consisted of more than 50 banks operating over 1500 branches (Cole, 2009). Post independence, Indian banking can be divided into three phases. In the first phase, which lasted between 1947 and 1969, the banking system was characterised by a large number of private banks spread across the country. In the second phase (1969-1991), banks were nationalized in large numbers in the years 1969 and 1980. Bank nationalization was undertaken under the belief that leaving the banking business to private sector led to credit flowing only to big business and imposed severe credit constraints on small-scale industries and agriculture and that nationalization would solve these problems. Post nationalization, strict rules were imposed regarding branch expansion and lending. Banks were required to open branches in four unbanked locations in order to obtain a license to open a branch in a banked location (Burgess, Pande, and Wong, 2005). The government introduced regulations known as priority sector lending guidelines with the intention of directing the flow of credit to sectors which the government considered important. Regulations were introduced to limit interest rates (Cole, 2009). The third phase began with the onset of economic and financial liberalization initiated by the then Prime Minister Narasimha Rao. A number of such regulations imposed in the second phase were rolled back. Branching norms were eased and many restrictions on interest rates were done away with. More importantly, several private sector banks such as HDFC bank, ICICI bank, etc. were allowed to set up shop. The financial liberalization led to increased autonomy, lower interest rates, reduction in non-performing assets and higher competition among banks (Reddy, 2000). Liberalisation of the banking industry also led to the entry of foreign banks in India. Such an entry not only changed the dynamics of the banking industry but also had a positive impact on the accounting practices followed by the borrower firms (Gormley, Kim, and Martin, 2012). Thus India presently has a banking industry which consists of public sector banks, Indian private sector banks and foreign banks.

As on Mar 31, 2013, there were 157 commercial banks operating in India. The number of bank branches in India as on Mar 31, 2013 stood at 104,467.⁴ Government-owned banks

⁴Source:<http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/00QSB170913F.pdf>

account for 74.2% of aggregate amount loans outstanding to the banking sector. The State Bank of India and its associate banks alone account for 21.8% of total amount of loans outstanding. In terms of deposits, government owned banks account for 75.1% of total deposits of the banking sector. Here again State Bank of India and its associate banks have a share of 25.2% of total deposits of the banking sector.⁵ These numbers clearly show that the Indian banking system is dominated by the public sector banks.

II.B Appointment of CMD of a Public Sector Bank

In this section, we discuss the retirement and appointment procedures for public sector bank chairmen in India. Retirement of a bank CMD occurs when he/she attains the age of superannuation. The government of India specifies the age of superannuation from time to time. Since May 1998, the age for superannuation for all public sector employees has been fixed at 60. Crucially, a CMD of a public sector bank has not been removed on the basis of performance. This addresses a key concern raised in the literature that the exit of a CEO may be endogenously determined by firm's performance (Murphy and Zimmerman, 1993). Our setting rules out such endogeneity because the CEO's exit is exogenously determined by a rule which is linked to her age. As well, given age-based CEO exits, CEO tenure is deterministic in our setting.

We also describe the process of appointment of a new CMD since this process is important in the context of the "coaching hypothesis," which states that the incumbent and the newcomer manage transition in order to smooth earnings. The appointment procedure is rule-based with restrictions applied based on eligibility, tenure, etc. The new CMD is selected by a committee consisting of top bureaucrats such as the Secretary, Department of Financial Services of the Government of India, Deputy Governor of the Reserve Bank of India (the Indian Central Bank) among others. Elaborate guidelines have been issued by the Ministry of Finance, Government of India in this respect. All the Executive Directors of all nationalized banks, Managing Directors of the associate banks of State Bank of India⁶ and Deputy Managing directors of IDBI Bank Ltd⁷ comprise the pool of eligible candidates. As per the current rules laid down by the Government of India,⁸ these candidates have to fulfill two key conditions to be called for interview. First, the candidate should have completed two years of service in his/her current position. Second, the residual service (before the age of superannuation) should be at least two years. However, the Government is empowered

⁵Source:<http://www.rbi.org.in/scripts/PublicationsView.aspx?id=15044>

⁶State Bank of India has 5 associate banks namely a. State Bank of Hyderabad b. State bank of Mysore c. State Bank of Bikaner and Jaipur d. State Bank of Patiala e. State Bank of Travancore. The Chairman of State bank of India is the Chairman of these associate banks. However they have a managing director running the day to day operation. The managing Director of these associate banks can be roughly considered as equivalent to executive director of other banks.

⁷IDBI used to be a development financial institution. Recently this was converted in to a bank. Due to legacy reasons they have a different structure.

⁸Source: <http://www.business-standard.com/article/economy-policy/chairman-appointment-norms-in-govt-banks-relaxed-1130207011701.html>

to relax the guidelines in case the number of eligible candidates is less than 1.5 times the total number of vacancies.⁹ All eligible candidates are interviewed. Professional confidential reports given by the superiors of the candidates for last seven years are given careful consideration. Finally, the names have to be cleared by the Central Vigilance Commission (CVC), which is in charge of investigating alleged corruption and frauds. Thus, the outgoing CMD has no role to play in the appointment of a new CMD. Moreover, the new appointment is always announced very close to the exit date of the incumbent CMD. Therefore, in our setting the predecessor and successor are unlikely to collide to smooth earnings.

Unlike their private sector counterparts, CMD of public sector banks do not receive high powered incentives. They do not receive any performance linked bonuses or equity-based options. However, the job of a public sector bank CMD is a very prestigious job which bestows enormous discretionary power on the incumbent.

II.C Fear of prosecution for CMDs of public sector banks

Since public sector banks are owned by the government, employees of the bank are treated by law as public servants, and thus subject to government anti-corruption rules. [Banerjee, Cole, and Duflo \(2003\)](#) describe the “fear psychoses” among public sector bank officials in India. They state: “... it is very easy (for officials of public sector banks) to be charged with corruption. Some felt that *any financial loss to a government owned bank* would automatically lead to investigation, with the burden of proof on the banker to prove her or his innocence.” They quote an official of a public sector bank describing his fear of being charged with corruption as follows: “Fear of prosecution for corruption hangs over every loan officer’s head like a sword of Damocles.”

The CVC has a special chapter of the vigilance manual devoted to vigilance in public sector banks. The vigilance manual of the CVC mentions, for example, that “every loss caused to the organization, either in pecuniary or non-pecuniary terms, need not necessarily become the subject matter of a vigilance inquiry... once a vigilance angle is evident, it becomes necessary to determine through an impartial investigation as to what went wrong and who is accountable for the same.” (p. 5)

The legal proceedings surrounding charges of corruption by the CVC can drag on for years, leaving individuals charged with corruption in an uncertain state. An analysis by the CVC reveals that in 1999, the Central Vigilance Commission received 1,916 references, 72% of which were credit-related, of which 55% resulted in recommendations for major punishment. Their 2000 report states “Out of every 100 cases coming before it, the Commission would advice major penalty proceedings in 28 cases, minor penalty proceedings in 32 cases, and administrative warning/exoneration in 40 cases.” (p. 9).

⁹For example, in the year 2013, there were nine posts vacant and there were only nine “eligible” candidates. Hence, the Ministry of Finance liberalized the guidelines. The first condition was relaxed to six months and the second condition was relaxed to 21 months.

Consistent with Banerjee, Cole and Duflo (2007)'s description that any financial loss to a government owned bank could lead to prosecution by the CVC, we show later that the likelihood of prosecution by the CVC is negatively correlated with a CMD's performance over his/her tenure. Thus, CMD of a public sector bank in India is likely to be concerned about the risk of prosecution by the CVC because of bad performance during his/her tenure.

III Literature Review and Hypotheses

In this section we review the relevant literature and develop our hypotheses.

Manipulation of reported earnings by managers has been well documented in the literature. Healy and Wahlen (1999) define earnings management as follows: "Earnings Management is a process that occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." Teoh, Welch, and Wong (1998) show that companies adjust discretionary accruals before a seasoned equity offering in order to show higher net income. Similar earnings management has been reported even before IPOs (Teoh, Wong, and Rao, 1998). This paper focuses on another event which has also shown to be a fertile ground for manipulation, i.e. CEO turnover.

An important explanation for earnings management by incoming CEOs is what is known as the "big bath" hypothesis, which states that incoming managers bring down reported income during the initial part of their tenure. Incoming managers do this with a view to blame their predecessors for all the ills afflicting the firm and to set a low benchmark for their own performance evaluation. Pourciau (1993) examines 73 cases of non-routine transfers to show that the incoming CEOs manage accruals to decrease earnings in the year of CEO change and increase them later. They achieve this by recording large write-offs and special items in the year of change. DeAngelo and DeAngelo (1989) shows that in proxy contests successful dissidents show lower earnings when elected and higher earnings in later years. Elliott and Shaw (1988), Strong and Meyer (1987) and Moore (1973) have shown that large one time write-offs are associated with executive turnover.

We develop a variant of the "big bath" hypothesis as applied to earnings management by incoming CEOs of banks. Our hypothesis is based on agency problems stemming from personal risk management by CEOs. Agency related problems are well documented in the finance literature. Jensen and Meckling (1976), famously wrote "there is a good reason to believe that the agent (manager) will not always act on the best interest of the principal." Fama (1980), however, argued that the labor market's wage settling mechanism acts as a deterrent against agency related problems. However, the literature on "managerialism" has shown that the practice of the agent acting against the interest of the principal may persist in equilibrium when market forces fail to fix responsibility. Equilibrium gets restored

then with such costs being built into the managerial contract. Such an arrangement makes some practices self-fulfilling (see (Amihud and Lev, 1981) and (Acharya and Bisin, 2009)). Specifically, Amihud and Lev (1981) argue in the case of conglomerate mergers that the market may fail to distinguish between mergers that enhance operational synergy and those that reduce the personal risk of the CEO. They argue that such career concerns of CEOs explains the persistence of conglomerate mergers.

As described in the introduction, the risk management concerns of bank CMDs that we focus on stems from: (i) the opacity of banking operations, which makes it difficult for the incumbent CMD to ascertain the quality of assets created by his/her predecessor, and (ii) the possibility of prosecution by the Central Vigilance Commission, as described in section II.C, due to possible acts of omission/commission by his/her predecessor. While managerialism as argued by (Amihud and Lev, 1981) and (Acharya and Bisin, 2009) may lead to earnings management by the incoming CMD of a public sector bank, efficient functioning of the labor market as argued by (Fama, 1980) suggests that the incoming CMD of a public sector bank would not manage earnings. Therefore, our central hypothesis is that:

H1: Earnings management is more likely in the first quarter in which a new bank CMD assumes office.

As argued in the introduction, unlike the high level of information asymmetry involving the operations of a bank, problems stemming from information asymmetries are likely to be lower for industrial firms. As a result, labor markets for industrial firms are likely to operate more efficiently through the “wage settling up” mechanism. Therefore, we hypothesize that:

H2: Compared to a bank, earnings management is less likely in the first quarter in which a non-bank CMD assumes office.

We now describe our hypotheses for (i) the mechanism employed for earnings management, and (ii) the real effect of earnings management by the incoming CMD. The (real) effects of earnings management on R&D expenses (Dechow and Sloan, 1991), divestiture of previous acquisitions (Kaplan and Weisbach, 1992) and asset write-offs (Strong and Meyer, 1987) have been examined for non-financial firms. However, the real effects of earnings management on lending by banks has not received attention. We argued in the introduction that lending by a public sector banks experiencing turnover of its CMD is likely to be lower because the incoming CMD is likely to be wary about the quality of bank assets created during his/her predecessor’s tenure. Lending by the bank may also be affected by the CMD’s effort to signal to the stock and labor markets. Rajan (1994) highlights the use of credit policy by the bank management to signal their ability to the stock and labor markets. When a bank’s management is myopic and is concerned with outcomes in the short run, especially about the stock or labor market’s perception of its abilities, bank management may attempt to shape the market’s perceptions by manipulating current earnings. According to Rajan (1994), this is most easily done if the bank alters its credit policy. Since an incoming CEO would want

to signal to the market that the bank's operating performance under the previous CEO was poor, the incoming CEO may attempt to convince the market of the poor credit evaluation abilities of the outgoing CEO by (i) adopting a contractionary credit policy in the initial quarters; and (ii) increasing provisions for bad loans originated during the tenure of the previous CEO. Among the many accounting items relevant in the case of bank, provisions for loan losses are most susceptible to manipulation in banks. [Collins, Shackelford, and Wahlen \(1995\)](#) show that the provisions are used for earnings smoothing. [Anwar *et al.* \(1999\)](#) find evidence in support of the argument that banks use provisions for capital management. As well, while the Reserve Bank of India—the Indian central bank—mandates a minimum level of provisioning for loan losses, there is no upper limit imposed on provisions for loan losses. The incoming CMD of a bank can exercise discretion in provisioning for loan losses above the regulatory minimum.

H3: In the first quarter in which a new bank CMD assumes office, higher provision for loan losses are reported by the bank.

H4: In the first quarter in which a new bank CEO assumes office, the amount of lending by the bank decreases.

H5: In the first quarter in which a new bank CEO assumes office, the bank's stock return is negative.

CEO horizon possibly affects managerial incentives to undertake earnings management. [Antia, Pantzalis, and Park \(2010\)](#) devise a measure of expected CEO turnover based her age and the number of years of service and show that shorter CEO horizon leads to increased agency costs, lower firm valuation and information risk. We therefore predict that:

H6: Bank CEOs with shorter tenure are more likely to undertake earnings management in the transition quarter when compared to those with longer tenure.

Our final hypotheses relate to the basic motive for earnings management by the incoming CMD of a public sector bank. As mentioned in section [II.C](#), any financial loss to a government owned bank could lead to prosecution by the CVC. The motivation for earnings management may thus stem from having to manage the risk of prosecution. In contrast, career concerns may motivate CEOs to resort to earnings management. [Brickley, Linck, and Coles \(1999\)](#) show that higher accounting performance increases the CEO's probability of being elevated to the board of the same company post her retirement. Therefore, we hypothesize that:

H7: The probability of the CMD of a public sector bank being prosecuted by the CVC is

negatively correlated to the accounting performance of the bank during the tenure of the CMD.

H8: The probability of the CMD of a public sector bank obtaining corporate board memberships within two years of his retirement is positively correlated to the accounting performance of the bank during the tenure of the CMD.

IV Data and Summary Statistics

Our primary source of data is the Prowess database maintained by the Center for Monitoring Indian Economy (CMIE). Since complete data is available in Prowess from 2001 onwards, we begin our sample from the calendar year 2001. Our sample ends in the April-June quarter of 2013. We collect information on the balance sheet and the income statement for all the companies in the sample. With regards to banks, we collect additional banking related information such as capital adequacy ratios, gross and net non-performing assets, total advances and deposits. The data is available on a quarterly basis.

Since Prowess does not specify the exact date of joining of the new CMD, we hand-collect the data relating to joining dates of the CMD from various sources including press announcements, CVs and the company histories. We also hand-collect information relating to criminal proceedings against bank CEOs from various media sources. Our sample consists of all 21 public sector banks in India¹⁰ and other public sector enterprises, which are a part of the Bombay Stock Exchange public sector firms' index.

Identification of the transition quarter is critical to our results. We define the transition quarter as the first quarter for which the announcement of results is made by the new CEO. For example, if the outgoing CEO retired on say 1st July and the new CEO takes over on the 2nd of July, then April-June quarter is considered as the transition quarter because the results for the April-June quarter will be decided and announced by the new CEO. This definition of the transition quarter differs slightly from the definition used in the accounting literature. For example, [Murphy and Zimmerman \(1993\)](#) define the transition quarter as the quarter in which the new CEO takes over. Going by their definition, if a new CEO takes over on the 2nd of July, then the July-September would be considered as the transition quarter. Note that in order to influence accounting estimates and measures, it is sufficient that the new CEO is in charge at the time of finalization of accounts. In India, it usually takes around 45 days¹¹ after the end of the quarter to announce results. We collect information about the announcement date for the quarterly results from newspapers and bank websites and code the transition quarter to be the one where the incoming CEO assumed office 45 days before the announcement of the first quarterly result under his/her stewardship.

¹⁰We have not considered the subsidiaries of the State Bank of India separately. This is because as per section 2(bb) of the State Bank of India Act of 1955, Chairman of the State Bank of India is the Chairman of all its subsidiaries.

¹¹Source:<http://www.moneycontrol.com/earnings/>

The summary statistics are shown in Table 1. As mentioned before, we examine turnover of all CMDs in 21 public sector banks in India and 27 other public sector enterprises. The median tenure for the CMD of a public sector bank is about 2.9 years (11.5 quarters) as opposed to approximately 4 years (15.8 quarters) for the head of other public sector enterprises; the mean tenure for the CMD of a public sector bank is about 3.1 years (12.6 quarters) as opposed to approximately 4.4 years (17.4 quarters) for the head of other public sector enterprises. For comparison, consider CEO tenure in US firms. Average CEO tenure in the US has shrunk from about 8 years in the 1990s to about 4 years in the first half of the previous decade (Breton-Miller, Miller, et al., 2006). This drastic reduction in CEO tenure is often blamed for CEO myopia (Antia, Pantzalis, and Park, 2010). While the average tenure of other public sector enterprises compares well with the average CEO tenure in the US, the public sector bank CEO tenure is lower by about 25%. Thus, public sector banks in India represent a fit case for examining the consequences of short CEO tenure. As we have argued before in section II.B, unlike in previous studies, CEO tenure is deterministic in our setting.

We base all our tests on quarterly earnings statements as opposed to annual statements, which are used in other studies. This may lead to a concern that our focus horizon is too short to be meaningful. However, as we have pointed out the average tenure of a bank CMD is about 13 quarters (median equals 11.4 quarters). Because a quarter represents nearly 10% of her tenure, quarterly financial information enables us to capture earnings management better than would be possible with annual financial information.

Indian public sector banks maintain a healthy median profit-to-sales ratio of 10.9%. The net interest margin of these banks is between around 3 to 4%. The banks, by statute,¹² are required to hold a significant portion of their assets in government securities.¹³ The public sector enterprises have a median profit-to-sales ratio of 27.2%. Public sector banks have a median provision-to-sales ratio of 11.9%. Indian public sector banks have a healthy capital adequacy ratio of 12.79%. The median amount of advances made by all the public sector banks in a quarter is INR 637.92 bn, which is equivalent to USD 10.46 bn.

V Results

We first examine if our age-based identification of CEO turnover is exogenous. Many studies have shown that CEO turnover is more likely in bad times as compared to good times. Coughlan and Schmidt (1985) have shown that the CEO turnovers are often preceded by adverse share price performance. Warner, Watts, and Wruck (1988) also record a negative relationship between share prices and the possibility of CEO change. Murphy and Zimmerman (1993) argue that CEO change is often endogenous to firm performance, which

¹²Section 24 of the Banking Regulation Act, 1949

¹³As per RBI notification notification DBOD.No.Ret.91/12.02.001/2010-11 dated May 09, 2011, banks have to maintain 24% of their net time and demand liabilities as Statutory Liquidity Ratio.

then affects tests of both the “finite horizon” and “big bath” theories. We argued in Section II.B that in our setting CEO turnover is driven only by the age of the incumbent. Here we test if CEO turnover is associated with the declining profits in the quarters preceding the transition quarter. We run the regression specification of the form:

$$CEO\text{turnover}_{it} = \beta_0 + \beta_i + \beta_t + \beta_1 * ProfitToSales_{i,t-1} + \gamma X + \varepsilon_{it}, \quad (1)$$

where the dependent variable—CEO turnover—takes the value of 1 if a CEO exits from bank i in (year, quarter) t and equals 0 otherwise. β_i and β_t denote bank fixed effects and fixed effects for each (year, quarter) respectively. Many of our control variables do not exhibit cross sectional variation. For example, GDP growth varies by (year, quarter). We run the regression equation by dropping time fixed effects when we include such variables.

The results from equation (1) are presented in Table 2. We do not find any significant decline in the net profit-to-sales ratio either in the quarter preceding the transition quarter (column 1) or in the quarter before that (Column 2). Even when we use the market adjusted profit-to-sales ratio, the results remain unchanged. Thus, it is unlikely that the CMD is replaced because of below par performance in the quarters preceding the transition quarter.

V.A Earnings Management coinciding with CEO Turnover

Next, we investigate hypothesis H1 relating the effect of CEO turnover on earnings management in banks. Figures 1-5 display the earnings management in the transition quarter when compared to other quarters. In these figures, 0 in the x-axis corresponds to the transition quarter. Quarters -3 to -1 correspond to quarters prior to the transition quarter and quarters 1 to 3 correspond to quarters after the transition quarter. In figures 1, 2, and 3 respectively, we notice that the profit-to-sales ratio, the standardized unexpected earnings, and the return-on-assets are significantly lower in the transition quarter when compared to other quarters. In figure 4, we notice that the provision-to-sales ratio is significantly greater in the transition quarter when compared to other quarters. Finally, in figure 5, we observe that the market adjusted stock return is significantly lower in the transition quarter when compared to other quarters. The above effects, however, may be confounded by other factors. We now turn to regression based tests to identify the hypothesised effects. As argued above, CEO turnover in public sector firms in India is exogenous to firm performance. Therefore, we can infer the causal effect of CEO turnover on earnings management by estimating a difference-in-difference. To fix ideas, consider the CEO change at Bank of Baroda in May 2008 when Mr. M.D. Mallya took over charge from Dr. A K Khandelwal. Since the April-June 2008 quarter represents the transition quarter in this instance, we first estimate the difference in reported earnings/profits in the April-June 2008 quarter for Bank of Baroda vis-à-vis the average reported earnings/profits in all other quarters for Bank of Baroda. Then, we estimate the difference in reported earnings/profits in the April-June 2008 quarter vis-à-vis the average reported earnings/profits in all other quarters for every

other bank that did not experience a CEO turnover in the April-June 2008 period. The difference between these two differences provides a causal estimate of the effect on earnings management of the CEO change in Bank of Baroda in April-June 2008. This is because the second difference described above provides an estimate for the counterfactual question: what would have been the earnings management in Bank of Baroda if the particular CEO change had not occurred in April-June 2008?

Our baseline specification to estimate this difference-in-difference takes the form:

$$Y_{it} = \beta_0 + \beta_i + \beta_t + \beta_1 * NewCMD_{it} + \gamma X + \varepsilon_{it}, \quad (2)$$

where the dependent variable is a measure of the firm's profitability (profit-to-sales ratio, log of net profits or return-on-assets) for firm i in (year, quarter) t . The independent variable of interest is the $NewCMD_{it}$ dummy, which takes the value of 1 if the (year, quarter) i is a transition quarter and 0 otherwise. The firm fixed effects β_i enable us to control for various time in-varying factors that may be specific to the firm and that influence the profitability of the firm. The year fixed effects for each (year, quarter) β_t allows us to control for average time trends in profitability. The co-efficient β_1 compares the profitability in transition quarter with that of other quarters for company i . The coefficient, β_1 captures the difference-in-difference estimate of the impact of a new CMD on profitability:

$$\beta_1 = \overline{Y}_{\text{transition quarter}} - \overline{Y}_{\text{other quarters}} \Big|_{\text{bank experiencing CEO turnover in (year,quarter) } t} - \overline{Y}_{\text{transition quarter}} - \overline{Y}_{\text{other quarters}} \Big|_{\text{banks NOT experiencing CEO turnover in (year,quarter) } t} \quad (3)$$

In all the regressions, we estimate standard errors that are clustered by the firm to account for possible autocorrelation.

We first run the above regression on our entire sample of public sector companies including banks. The results from estimating equation (2) are presented in Table 3. We find that the entry of a new CEO has a negative and statistically significant impact on the net profit-to-sales ratio during the transition quarter. For example, from the first column of table 2, we observe that transition quarter net profit-to-sales ratio is lower by about 1.9%. In column (2), we introduce relevant controls as in [Petersen and Rajan \(1994\)](#) to show that credit policies pursued by banks vary with the state of the economy. Therefore, we use the GDP growth rate, non-farm credit growth, and the benchmark interest rate, for which we use the yeild on the 10-year benchmark Government of India security. Among these control variables, we find that the profit-to-sales ratio is positively correlated with GDP growth and is negatively correlated with the interest rates, which are along expected lines. Other control variables do not associate significantly with profitability. After introducing additional controls, in column 2 of Table 3, we observe that the net profit-to-sales ratio declines in the transition quarter compared to other quarter. Since the median profit-to-sales ratio equals 11%, this decline represents a 24% decrease.

V.B Earnings Management in Public Sector Banks vs. Other Public Sector Firms

We argued in Hypothesis H2 that industrial firms are less susceptible to earnings management by incoming CMDs when compared to banks. We test this by running the regression equation (2) separately for banks and for other firms. Columns (3) and (4) in table 3 show the results for banks with and without additional controls respectively. We note that net profit-to-sales ratio of public sector banks is 2.3% lower in transition quarter when compared to other quarters. Given that the median net profit-to-sales ratio is 10.9%, 2.3% is a significant fall since it equates to approximately 25% reduction in net profits in the transition quarter when compared to other quarters. Interestingly, among other public sector firms, the results for which are reported in columns (5) and (6) of Table 3, we do not find any significant difference in the net profit-to-sales ratio between the transition quarter and other quarters.

The results in table 3, therefore, support hypotheses H1 and H2.

V.C Market Adjustment using Median Net Profit

Following [Murphy and Zimmerman \(1993\)](#) we carry out a market adjustment for the variables of interest by first estimating the following regression equation:

$$Profit\ to\ Sales\ Ratio_{it} = \beta_0 + \beta_1 * MedianProfit\ to\ Sales\ Ratio_t + \varepsilon_{it} \quad (4)$$

The independent variable is the cross sectional median of the variable of interest for the entire sample. As in [Murphy and Zimmerman \(1993\)](#), we use median instead of mean to reduce the impact of extreme values. The dependent variable is the profit-to-sales ratio for company i in quarter t . We first compute the residuals from the equation (4) above. These residuals are expected to reflect the change in profits for company i after controlling for general change in profits for the median firm in the sample. We then use the residual thus computed as the dependent variable in regression equation (2). The results from estimating equation (2) using this market adjustment procedure are presented in Table 4. As expected neither the direction nor the statistical or economic significance of these results are any different from those resulted in Table 3. These results provide further support for hypotheses H1 and H2.

V.D Standardized Unexpected Earnings

The earnings shock as measured by the Standardized Unexpected Earnings(SUE) is the normalized gap in the announced vis-à-vis the analysts expectations. However, in the absence of large-sample data on analyst expectations in India we estimate [Chordia, Sadka,](#)

Goyal, Sadka, and Shivakumar (2007):

$$SUE_{it} = (Profit_{it} - Profit_{i,t-4})/\sigma_i, \quad (5)$$

where $Profit_{it}$ and $Profit_{i,t-4}$ are the quarterly profits in the t^{th} and $(t - 4)^{\text{th}}$ quarter respectively for firm i and σ_i equals the standard deviation of profits. To estimate the impact of the incoming CMD on SUE we estimate the following equation:

$$SUE_{it} = \beta_0 + \beta_i + \beta_t + \beta_1 * NewCMD_{it} + \varepsilon_{it} \quad (6)$$

The results from the above equation are presented in table 5. In line with our earlier results, SUE is also significantly lower in the transition quarter for all the public sector companies as seen in columns 1 and 2. However, this decline is driven primarily by the public sector banks as is clear from the regressions separately for the public sector banks (in columns 3 and 4) and non-banking public sector firms (in columns 5 and 6). While the transition quarter in the former leads to sharp decline in SUE, the coefficient of the new CMD dummy in the latter is insignificant indicating that the drop in unexpected earnings occurs only in public sector banks. These results provide further support for hypotheses H1 and H2.

V.E Effect on Return-on-Assets

As an alternative measure of profitability, we scale the net profit after taxes by net assets and use the same as the dependent variable in regression equation (2). The results from these tests are presented in table 6. Column (1) reports the results of tests without any control variables while the results employing additional control variables are reported in column (2). We observe that return-on-assets falls by a statistically significant 23% in the transition quarter. Given that the median net profits to assets ratio is 1%, the change is economically significant as well. These results thus buttress hypotheses H1 and H2.

V.F Change in Provisions

As discussed in section III, a number of studies have found that provisions for bad and doubtful debt is an easy target for earnings management in banks. For example, [Bikker and Metzmakers \(2004\)](#) find that provisions are used by bank management for income smoothing. To test hypothesis H3 regarding the effect of CEO turnover on provisions reported in the transition quarter, we estimate the following regression:

$$Provision_{it} = \beta_0 + \beta_i + \beta_t + \beta_1 * NewCMD_{it} + \varepsilon_{it} \quad (7)$$

A positive co-efficient value for new CMD indicates an increase in provisions in the transitional quarter. The result from estimating equation (7) are presented in Table 7. In column (1) we report results with only firm and (year, quarter) fixed effects. We find that the

transition quarter is associated with an increase in provisions by 1.4%. In column (2) we report the result by including additional controls. Here again we find that the provisions increase by about 2.3%. In both cases, the results are statistically significant. Given that provision-to-sales ratio is 10.9%, our results imply more than 25% increase in the absolute value of provisions in the transition quarter. This makes it economically significant as well. In columns (3) and (4), we run the same regression specification by employing a market adjustment using the median values of provisions as in equation (4) and find similar results. In unreported tests we also find that there was no significant decrease in the provision-to-sales ratio by the outgoing CMD in order to show higher profit in his last quarter.

V.G Correlation between Provisions and Future Non-Performing Assets

A question that naturally arises in this regard is whether the change in provisions is justified by the increase in non-performing assets in future. Alternatively, does the change in provisions reflect the anticipated change in non performing assets? [Bushman and Williams \(2012\)](#) distinguish between provisioning associated with earnings smoothing and provisioning associated with timely recognition of future losses. Higher sensitivity of current provisions to current earnings is considered as provisioning with an intent to achieve earnings smoothing. They find that provisions made to smooth earnings are associated with reduced discipline in risk taking and diminished transparency. On the other hand, provisions done in anticipation of higher future losses are associated with increased discipline in risk taking and enhanced transparency. We have already shown in table 7 that the transition quarter is associated with significant increased provisioning in banks.

We estimate the following regression equation to test whether the increase in provisions is an indicator of increased non-performing assets in the subsequent quarters. We test this by running the regression equation of the form:

$$\begin{aligned}
 NPA_{i,t+1} = & \beta_0 + \beta_i + \beta_t + \beta_1 * NewCMD_{it} + \beta_2 * Provision_{it} \\
 & + \beta_3 Provision_{it} * NewCMD_{it} + \varepsilon_{it}
 \end{aligned} \tag{8}$$

In the above regressions, the dependent variable is the ratio of non-performing assets to sales for bank i in quarter $t + 1$. The independent variable provisions reflects the provisions for bank i in quarter t . We expect β_2 to be positive since provisions in any quarter should be positively correlated with non-performing assets (NPA) in the subsequent quarter. If hypothesis H3 is true, then β_3 should be negative, which means that the correlation between NPA and provisions in the transition quarter should be lower than this correlation on average.

The results from estimating equation (8) are reported in Table 8. In columns (1)-(3) the results are reported for net NPA next quarter, two quarters later and three quarters later respectively. We find a positive association between provisions in a particular quarter and

the net non-performing assets in the subsequent quarter as seen in the positive coefficient for provisions.

Quite crucially, however, the interaction term between the new CMD dummy and provisions is negative and statistically significant in each of the three columns. Economically, the correlation between provisions in the transition quarter and net NPA in the next quarter is 43.4% lower than the correlation on average ($=1.551/3.596$). Similarly, the correlations between provisions in the transition quarter and net NPA two quarters later and three quarters later are 28.3% and 20.9% lower respectively than the correlation on average. We know from results in Table 7 that provisions increase in the transition quarter. Therefore, the evidence in table 8 is consistent with attempted earnings management by the incoming bank CEO and therefore supports hypothesis H1.

V.H Impact of CEO Tenure

We argued in section III that short tenure for the CEO creates greater divergence between optimal inter-temporal choices for the firm and for the manager. We find in Table 1 that the median tenure of a public sector bank CMD in India is less than 3 years. More importantly, in our setting, CEO tenure is deterministic and therefore the CEO has a clear idea of her exit date right at the time of her appointment. This is because the exit of CEO is due to retirement upon attaining the age of superannuation. This is in contrast to the settings in previous studies where the CEO tenure is not known precisely at the time when the CEO assumes office. Hence identification of the impact of short tenure is cleaner in our setting.

To test hypothesis H6 relating to the effect of CEO tenure on the incentives for earnings management, we run the regression equation (2) separately for CEOs with long and short tenures, where we define long and short tenures as those where the tenure is above and below the median tenure respectively. The results of these tests using profit-to-sales ratio, return-on-assets and provisions-to-sales ratio are reported in columns (1) and (2), columns (3) and (4) and columns (5) and (6) respectively of Table 9. We notice that the coefficient of the New CMD dummy is negative and statistically significant for profit-to-sales both when the CEO tenure is short and when it is long. However, crucially, the coefficient of the New CMD dummy in column (1) is 1.5 times that of the coefficient in column (2). Next, in columns (3)-(6), we notice that the coefficient of the New CMD dummy is negative (positive) and statistically significant for return-on-assets (provision-to-sales) when the CEO tenure is short. However, the coefficient of the New CMD dummy is insignificant when the tenure is long. Thus, the findings in table 9 support hypothesis H6. This is an important finding in the context of the ongoing debate in India about increasing the tenure of public sector bank CMD tenure to at least three years.¹⁴

¹⁴Source:<http://www.thehindubusinessline.com/industry-and-economy/psu-chiefs-may-get-fixed-minimum-tenure-of-3-years/article4657927.ece>

V.I Real Effects

In this section, we examine hypothesis H4 relating to the real effects of CEO turnover. We probe whether the impact of CEO turnover is limited to postponement of revenue recognition or if there are some real effects on the core operations of the bank. As discussed in section III, the literature has documented instances of manipulation of real activities to suit management’s short term goals. For example, Roychowdhury (2006) shows that managers resort to over-production to report lower cost of goods sold, price discounts to temporarily increase sales and reduction in discretionary expenditure to show improved earnings. Since the most important activity of a bank is lending, we examine if CEO turnover has any impact on lending. We compute the residuals of the amount lent by following the market adjustment procedure as described above. Since we are examining only public sector banks, we compute the cross sectional median lending by public sector banks. We run the regression specification of the form:

$$\text{Market Adjusted Advances}_{it} = \beta_0 + \beta_i + \beta_t + \beta_1 * \text{New CMD}_{it} + \varepsilon_{it} \quad (9)$$

If there is a fall in advances in the transition quarter, then the estimate of β_1 is expected to be negative. The dependent variable is the market adjusted amount of advances made in the (year, quarter) t by bank i.

The results from estimating equation (9) are presented in Table 10. In column (1), we observe that the coefficient of the new CMD dummy equals INR -17.0 billion; this coefficient is statistically significant at the 10% level. In column (2), after including additional controls, we find that market adjusted advances fall by INR 17.4 billion in the transition quarter. The average credit flow in a quarter is about INR 101.9 billion and thus fall in the transition quarter represents about 1.7% of the average advances. This shows that the fall in advances in the transition quarter is economically significant.

V.J Stock Market Impact

Next, we test hypothesis H5 whether the earnings management as well as the decrease in lending by a new CMD has an impact on the bank’s stock price. Given the reduction in lending, it is reasonable to expect abnormal negative returns for the stockholders. This is because the markets rationally anticipate that a CMD who reduces earnings in the transition quarter is also likely to reduce lending. This will have negative impact on the earnings in the short run. The existing literature often attributes negative stock returns as a reason for CEO resignation (see Weisbach (1988) and Goyal and Park (2002)). However, as we have argued, CEO turnover is exogenously determined in our setting. Therefore, any significant stock price reaction in the transition quarter would provide an estimate of the causal effect of CEO turnover on the stock price. We calculate the market adjusted return by taking the residuals from regressing the individual bank’s stock return on the CNX NIFTY index,

which is National Stock Exchange of India’s benchmark index for Indian equity market.¹⁵ The impact of the turnover quarter is thus obtained using the following regression:

$$\text{Market Adjusted Stock Returns}_{it} = \beta_0 + \beta_1 * \text{New CMD}_{it} + \varepsilon_{it} \quad (10)$$

The results from estimating equation (10) are presented in Table 11. In column (1), we test without including any firm specific controls such as the return-on-assets, profit-to-sales ratio, etc. while in column (2) we test after including these firm-specific controls. We find that the coefficient of the New CMD dummy is negative and statistically significant in column (2) though it is not significant in column (1). From column (2), we note that the stock price for the bank experiencing a CEO turnover falls by 1.5% after adjusting for the market return. This result is consistent with hypothesis H5.

V.K Motivation For Earnings Management

Finally, we examine the fundamental premise that personal risk management leads to earnings management by the incoming CMD of the bank. We hand-collect details about the CMD of a public sector bank being prosecuted during or after his tenure as the CMD. We run the following regression:

$$\text{DummyCriminalCharges}_i = \beta_0 + \beta_1 * \text{Accounting Rate of Return}_i + \varepsilon_i \quad (11)$$

where i denotes the CMD of a public sector bank. The accounting rate of return for CMD i is calculated over the time period starting from the transition quarter of CMD i and ending in the quarter prior to the transition quarter of the successor of CMD i . The results of this test is reported in column 1 of Table 12. Interestingly, we find that the accounting rate of return achieved in a CMD’s tenure is negatively correlated with the chances of prosecution. Next, following [Brickley, Linck, and Coles \(1999\)](#), we examine whether higher accounting return over the tenure of CMD i is correlated with the likelihood of obtaining corporate board memberships within two years of his retirement. For this purpose, we implement the following regression:

$$\text{DummyDirectorship}_i = \beta_0 + \beta_1 * \text{Accounting Rate of Return}_i + \varepsilon_i \quad (12)$$

The results of this test is reported in column 2 of Table 12, where we find that the accounting rate of return achieved in a CMD’s tenure is uncorrelated with the likelihood of obtaining corporate board memberships post retirement. Thus, the evidence in table 11 indicates that risk management seems to be the motive behind earnings management by incoming CMD’s of public sector banks.

¹⁵The National Stock Exchange of India is the largest stock exchange in India based on the volume of trading.

VI Conclusion

We examine the effect of CEO turnover on earnings management in banks. Since banking is intrinsically an opaque activity, we hypothesize that an incoming CEO of a bank is more likely to manage earnings than a counterpart in a non-financial firm. To identify the hypothesized effects, we exploit *exogenous* variation generated by age-based CEO retirement policies in Indian public sector firms. We show that at least in the context of Indian public sector banks, there is evidence in support of the view that CEO turnover leads to earnings management. We find evidence in favor of the “big bath” hypothesis, where the incoming CEO brings down earnings at the beginning of her tenure to create enough “room” for showing strong performance during her tenure. In contrast to banks, we observe no earnings management coinciding with CEO turnover for other public sector firms. To our knowledge, our study is the first to examine the effect of CEO turnover on earnings management in banks.

Our study is important from a policymaking perspective. First, our finding that shorter CEO tenure exacerbates earnings management by the incoming CEO and that such earnings management has real effects highlights an important cost stemming from short CEO tenure in banks. Also, since government ownership of banks is quite large and pervasive and government-owned banks play an important role in the transmission of monetary policy, our finding of decreases in lending due to CEO turnover can have broader implications for credit and monetary policies in countries with significant state ownership of banks.

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Table 1: SUMMARY STATISTICS

This table reports the descriptive statistics for the key variables of interest. The data is collected from the Prowess database maintained by the Center for Monitoring Indian Economy (CMIE) as well as from newspaper reports. The period for our study is Q1-2001 to Q4-2012. Panel A displays the summary statistics for all Public Sector Banks while Panel B displays the same for other Public Sector Companies.

Variables	Panel A: Public Sector Banks (21 Banks)				Panel B: Other Public Sector Companies (27 Companies)					
	Mean	Median	Minimum	Maximum	Standard Deviation	Mean	Median	Minimum	Maximum	Standard Deviation
No. of CEOs/Company	4.45	4.00	2.00	7.00	1.31	3.47	3.00	2.00	5.00	0.95
Tenure of CEOs (Quarters)	12.57	11.50	1.26	24.36	5.05	17.44	15.80	2.00	44.52	9.17
Profit-to-Sales Ratio	0.11	0.11	-0.07	0.25	0.07	0.27	0.11	-0.57	0.67	2.61
Standardized Unexpected Earnings	0.59	0.77	-2.79	2.82	1.37	0.31	0.34	-2.82	2.80	1.33
Return-on-Assets (ROA)	0.97	1.00	-1.00	3.00	0.45	—	—	—	—	—
Provisions to Sales Ratio	0.12	0.12	-0.05	0.74	0.07	—	—	—	—	—
Gross NPA to Advances Ratio	3.42	2.79	0.54	18.00	2.29	—	—	—	—	—
Net NPA to Advances Ratio	1.42	1.12	0.00	12.00	1.17	—	—	—	—	—
Capital Adequacy Ratio	12.54	12.51	8.09	23.70	1.54	—	—	—	—	—
Advances (INR bn)	1018.704	637.919	82.553	7902.201	1306.883	—	—	—	—	—

Table 2: EXOGENOUSLY DETERMINED EXITS OF CHAIRMAN IN PUBLIC SECTOR COMPANIES

This table presents the estimates from a logit regression where the dependent variable equals 1 in the quarter that a CMD exits and 0 otherwise. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Dummy for Last Quarter of Exiting CMD			
	(1)	(2)	(3)	(4)
Profit-to-Sales Ratio	0.976 [0.740]			
Profit-to-Sales Ratio one quarter before exit		0.092 [0.209]		
Market Adjusted Profit-to-Sales Ratio			1.047 [0.800]	
Market Adjusted Profit-to-Sales Ratio one quarter before exit				0.177 [0.408]
GDP Growth	-2.395* [-1.905]	-2.314* [-1.861]	-2.359* [-1.877]	-2.314* [-1.861]
Credit Growth	-0.277 [-0.679]	-0.269 [-0.656]	-0.264 [-0.644]	-0.267 [-0.652]
Benchmark Rate	17.182** [1.965]	16.717* [1.936]	16.996* [1.947]	16.735* [1.939]
Constant	-4.621 [-0.707]	-5.177 [-0.770]	-4.937 [-0.743]	-5.037 [-0.761]
Company Fixed Effect	Yes	Yes	Yes	Yes
Adjusted R ²	0.073	0.074	0.074	0.074
Observations	1,511	1,505	1,511	1,505
Number of Companies	48	48	48	48

Table 3: IMPACT OF NEW CMD'S APPOINTMENT ON PROFIT-TO-SALES RATIO

This table presents the estimates from OLS regression of Profit-to-Sales ratio on a dummy capturing the appointment of a new CMD. The dummy equals 1 in the quarter in which a new CMD assumes office and equals 0 otherwise. In the first panel, the sample consists of public sector companies selected from the widely tracked BSE-PSU index, while the second and third panel consists of only public sector banks and other public sector companies respectively. Additional controls include GDP growth, Credit Growth, inflation, 10-year benchmark Indian GoI Securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	All Companies		Bank		Non-Bank	
Profit-to-Sales Ratio	(1)	(2)	(3)	(4)	(5)	(6)
New CMD	-0.019** [-2.239]	-0.026*** [-2.748]	-0.021*** [-4.154]	-0.023*** [-3.914]	-0.022 [-1.379]	-0.008 [-0.657]
GDP Growth		0.003** [2.410]		0.004*** [4.925]		0.003 [1.138]
Credit Growth		0.002 [1.379]		0.000 [0.119]		0.002 [1.204]
Inflation		-0.356 [-1.353]		0.052 [0.801]		-0.465 [-1.194]
Benchmark Interest Rate		-0.013* [-1.804]		-0.019*** [-5.687]		-0.007 [-0.590]
Constant	0.080*** [15.617]	0.101* [1.757]	0.125*** [87.596]	0.193*** [4.303]	0.087*** [9.758]	0.088 [1.033]
Company Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
(Year, Quarter) Fixed Effect	Yes	No	Yes	No	Yes	No
Adjusted R ²	0.046	0.025	0.276	0.156	0.028	0.055
Observations	2,095	1,688	904	725	1,044	963
Number of Companies	48	48	21	21	27	27

Table 4: IMPACT OF NEW CMD'S APPOINTMENT ON MARKET-ADJUSTED PROFIT-TO-SALES RATIO

This table presents the regression estimates of dummy representing the joining quarter of a new CMD on the market adjusted profit-to-sales ratio. Where, market adjustment is done by taking the residuals from regressing profit-to-sales ratio on the cross sectional median. Each column reports the results of a separate regression where the dependent variable is the profit-to-sales ratio. In the first panel, the sample consists of all the public sector companies, while the second and third panel consists of only public sector banks and other public sector companies respectively. Additional controls include GDP, Credit Growth, inflation, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	All Companies			Bank		Non-Bank	
	(1)	(2)	(3)	(4)	(5)	(6)	(6)
Market Adjusted Profit-to-Sales Ratio							
New CMD	-0.019** [-2.191]	-0.024*** [-2.583]	-0.021*** [-4.183]	-0.022*** [-3.759]	-0.018 [-0.983]	-0.026 [-1.522]	
GDP Growth		0.000 [0.178]		-0.000 [-0.336]		0.001 [0.280]	
Credit Growth		0.002 [1.283]		-0.000 [-0.199]		0.003 [1.357]	
Benchmark Rate		-0.378 [-1.442]		0.004 [0.060]		-0.672 [-1.484]	
Constant		0.001 [0.086]		-0.003 [-0.910]		0.003 [0.225]	
Company Fixed Effect	-0.013*** [-2.798]	-0.016 [-0.287]	0.021*** [18.518]	0.024 [1.081]	-0.011 [-1.371]	-0.050 [-0.534]	Yes Yes
Year,Quarter Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	Yes	No	Yes	No	Yes	No	No
Observations	0.028	0.048	0.084	0.072	0.051	0.076	
Number of Companies	2,095	1,697	904	734	1,191	963	
	48	48	21	21	27	27	

Table 5: IMPACT OF NEW CMD'S APPOINTMENT ON STANDARDIZED UNEXPECTED EARNINGS

This table presents the regression estimates of dummy representing the joining quarter of a new CMD on the Standardized unexpected earnings (SUE), where $SUE = (Profit_t - Profit_{t-4})/\sigma$. In the first panel, the sample consists of all the public sector companies, while the second and third panel consists of only public sector banks and other public sector companies respectively. Additional controls include GDP growth, Credit Growth, inflation, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	All Companies		Bank		Non-Bank	
	(1)	(2)	(3)	(4)	(5)	(6)
Standardized Unexpected Earnings						
New CMD	-0.440*** [-4.407]	-0.459*** [-3.991]	-0.641*** [-5.127]	-0.706*** [-4.653]	-0.197 [-1.482]	-0.246 [-1.569]
GDP Growth		0.028* [1.780]		0.031 [1.280]		0.023 [1.028]
Inflation		-2.210 [-1.569]		-1.959 [-0.985]		-3.451 [-1.459]
Credit Growth		-0.005 [-0.684]		-0.016 [-1.348]		0.006 [0.698]
Benchmark Rate		-0.093** [-2.135]		-0.203*** [-2.871]		-0.015 [-0.249]
Constant	2.365*** [8.075]	1.243*** [3.249]	2.120*** [73.713]	2.505*** [3.799]	2.604*** [49.633]	0.264 [0.469]
Company Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Year, Quarter Fixed Effect	Yes	No	Yes	No	Yes	No
R2	0.028	0.048	0.084	0.072	0.051	0.076
Observations	2,095	1,697	904	734	1,191	963
Number of Companies	48	48	21	21	27	27

Table 6: IMPACT OF NEW CMD'S APPOINTMENT ON RETURN-ON-ASSETS

This table presents the regression estimates of dummy representing the joining quarter of a new CMD of PSU Banks on Return-on-Asset (RoA). Additional controls include GDP growth, Credit Growth, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Return-on-Assets	
	(1)	(2)
New CMD	-0.220*** [-4.328]	-0.232*** [-4.444]
GDP Growth		0.032*** [5.193]
Inflation		0.054 [0.142]
Credit Growth		-0.004 [-0.976]
Benchmark Rate		-0.151*** [-5.564]
Constant	1.077*** [171.260]	1.963*** [9.985]
Company Fixed Effect	Yes	Yes
(Year,Quarter) Fixed Effect	Yes	No
Adjusted R ²	0.251	0.179
Observations	750	729
Number of Companies	21	21

Table 7: IMPACT OF NEW CMD'S APPOINTMENT ON PROVISION-TO-SALES

This table presents the regression estimates of dummy representing the joining quarter of a new CMD of PSU Banks on the provision-to-sales ratio. In the first panel, the dependant variable is provision-to-sales ratio, while in the second panel the dependant variable market adjusted provision-to-sales ratio (where adjustment is done in the same method followed in Table2). Additional controls include GDP growth, Credit Growth, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Provision-to-Sales		Market Adjusted Provision-to-Sales	
	(1)	(2)	(3)	(4)
New CMD	0.014*** [3.339]	0.023*** [3.463]	0.015*** [3.633]	0.024*** [3.918]
GDP Growth		0.005*** [4.080]		0.003*** [2.883]
Inflation		0.463*** [5.640]		0.046 [0.629]
Credit Growth		0.000 [0.036]		0.001 [1.435]
Benchmark Rate		-0.019*** [-4.957]		-0.022*** [-5.944]
Constant	0.033*** [31.790]	0.201*** [9.676]	-0.028*** [-47.708]	0.115*** [5.417]
Company Fixed Effect	Yes	Yes	Yes	Yes
Year,Quarter Fixed Effect	Yes	No	Yes	No
Adjusted R ²	0.444	0.400	0.311	0.304
Observations	882	824	882	824
Number of Companies	21	21	21	21

Table 8: EFFECT OF NEW CMD ON THE RELATIONSHIP BETWEEN NPA AND PROVISIONS

In this table we present the regression estimates of dummy representing the joining quarter of a new CMD of PSU Banks, provision and their interaction term on Non Performing Assets of subsequent quarters. The positive impact of provisions on future NPAs are dampened when a new CMD joins. Additional controls include GDP growth, Credit Growth, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	One Quarter After Joining	Two Quarter After Joining	Three Quarter After Joining
Future Net-NPAs	(1)	(2)	(3)
New CMD	4,365.312*** [3.078]	2,353.221* [2.079]	831.293 [1.429]
Provision	3.596*** [16.319]	3.634*** [18.466]	3.619*** [24.674]
Provision * New CMD	-1.551*** [-5.497]	-1.025*** [-4.484]	-0.756*** [-8.495]
GDP Growth	-1,122.847*** [-4.273]	-1,286.004*** [-4.825]	-1,316.879*** [-5.199]
Inflation	-28,813.925 [-1.408]	-22,394.473 [-1.101]	-4,381.380 [-0.269]
Credit Growth	-188.797** [-2.097]	-231.045** [-2.195]	-270.875** [-2.386]
Benchmark Rate	1,055.681** [2.113]	1,622.176** [2.505]	2,196.238*** [2.942]
Constant	6,252.801** [2.374]	4,587.990* [1.775]	1,184.587 [0.437]
Company Fixed Effect	Yes	Yes	Yes
Adjusted R ²	0.659	0.671	0.671
Observations	736	729	721
Number of Companies	21	21	21

Table 9: EFFECT OF CMD'S TENURE ON EARNINGS MANAGEMENT

In this table we investigate the effect of tenure on different performance metric of a PSU Bank. The sample is divided into two groups with the median of CMD's tenure being the benchmark and separate regressions are run on each group. In the first panel, the dependant variable is profit-to-sales ratio, which is regressed on dummy representing the joining quarter of a new CMD of PSU Banks. In the second and third panel the dependent variables are Return-on-Assets and Provisions-to-Sales ratio respectively. Additional controls include GDP growth, Credit Growth, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Profit-to-sales Ratio		Return-on-Assets		Provision-to-Sales Ratio	
	<i>Tenure < Median</i>	<i>Tenure > Median</i>	<i>Tenure < Median</i>	<i>Tenure > Median</i>	<i>Tenure < Median</i>	<i>Tenure > Median</i>
New CMD	-0.030*** [-3.420]	-0.018** [-2.773]	-0.312*** [-3.607]	-0.114 [-1.228]	0.021*** [3.735]	-0.004 [-0.319]
GDP Growth	0.002* [1.886]	0.001 [1.694]	0.027** [2.619]	0.012 [1.206]	0.007 [1.437]	0.009*** [4.679]
Inflation	-0.079 [-0.992]	0.222** [2.127]	-0.499 [-0.741]	0.653 [1.046]	0.301* [1.86]	0.444*** [6.065]
Credit Growth	0.000 [0.295]	-0.000 [-0.608]	-0.004 [-0.661]	-0.007 [-1.144]	0.000 [0.497]	0.000 [0.623]
Benchmark Rate	-0.015** [-2.464]	-0.018*** [-4.880]	-0.169*** [-3.908]	-0.110*** [-3.433]	-0.030*** [-5.238]	-0.027*** [-6.749]
Constant	0.214*** [5.296]	0.244*** [9.919]	2.211*** [6.709]	1.870*** [8.134]	0.241*** [4.089]	0.217*** [7.999]
Company Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.082	0.190	0.165	0.118	0.350	0.255
Observations	371	357	343	285	365	354
Number of Companies	20	18	20	18	20	18

Table 10: EFFECT OF NEW CMD ON LENDING

This table reports the OLS estimates of regressing Market Adjusted Advances on the dummy representing the joining quarter of a new CMD of PSU Banks. This table lays down the real impact on the economy when a new CMD joins. Additional controls include GDP growth, Credit Growth, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Market Adjusted Advances (INR million)	
	(1)	(2)
New CMD	-16,993.331*	-17,406.631*
	[-1.674]	[-1.889]
GDP Growth		5,956.538***
		[2.944]
Benchmark Rate		21,143.318
		[0.553]
Tenure		-64.816
		[-1.264]
Constant	-8058746.878***	-143,658.414
	[-10,583.775]	[-0.569]
Company Fixed Effect	Yes	Yes
Year,Quarter Fixed Effect	Yes	No
Adjusted R ²	0.85	0.86
Observations	725	606
Number of accno	21	21

Table 11: STOCK MARKET IMPACT

This table reports the OLS estimates of regressing Market Adjusted Stock Returns on the dummy representing the joining quarter of a new CMD of PSU Banks. The first column reports the results excluding additional firm specific controls like profit-to-sales ratio return-on-assets etc. The second column includes all variables. Additional controls include GDP growth, Credit Growth, 10-year benchmark Indian GoI securities rate, company fixed effects and (year,quarter) fixed effects. The standard errors are clustered at company level and adjusted t-statistics are reported in parentheses below the regression estimates. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Market Adjusted Stock Returns	
	(1)	(2)
New CMD	-0.015** [-2.762]	-0.001 [-0.068]
Negative Earnings Surprise		0.012 [1.187]
New CMD * Negative Earnings Surprise		-0.036** [-2.241]
Constant	0.044*** [3.372]	-0.195*** [-4.437]
Other Firm Specific Controls	Yes	Yes
Company Fixed Effect	Yes	Yes
Year,Quarter Fixed Effect	Yes	No
Adjusted R ²	0.307	0.266
Observations	370	370
Number of Companies	21	21

Table 12: MOTIVATION FOR EARNINGS MANAGEMENT

This table reports the estimates from a logit regression, where the dependent variable is a dummy for prosecution of the CMD by the CVC in column 1 and a dummy for the CMD obtaining a directorship position in other companies within two years after retirement in column 2. The accounting rate of return is calculated over the time period starting from the transition quarter of a CMD to the quarter prior to the transition quarter of his/her successor. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	Criminal Charges	Directorship Post Retirement
Accounting rate of return	-0.447* [-1.711]	2.277 [1.255]
Constant	-1.506*** [-3.693]	-0.965*** [-3.003]
R^2	0.017	0.041
Observations	64	59

Figure 1: EFFECT OF NEW CMD ON PROFIT-TO-SALES RATIO IN TRANSITION QUARTER VS. OTHER QUARTERS

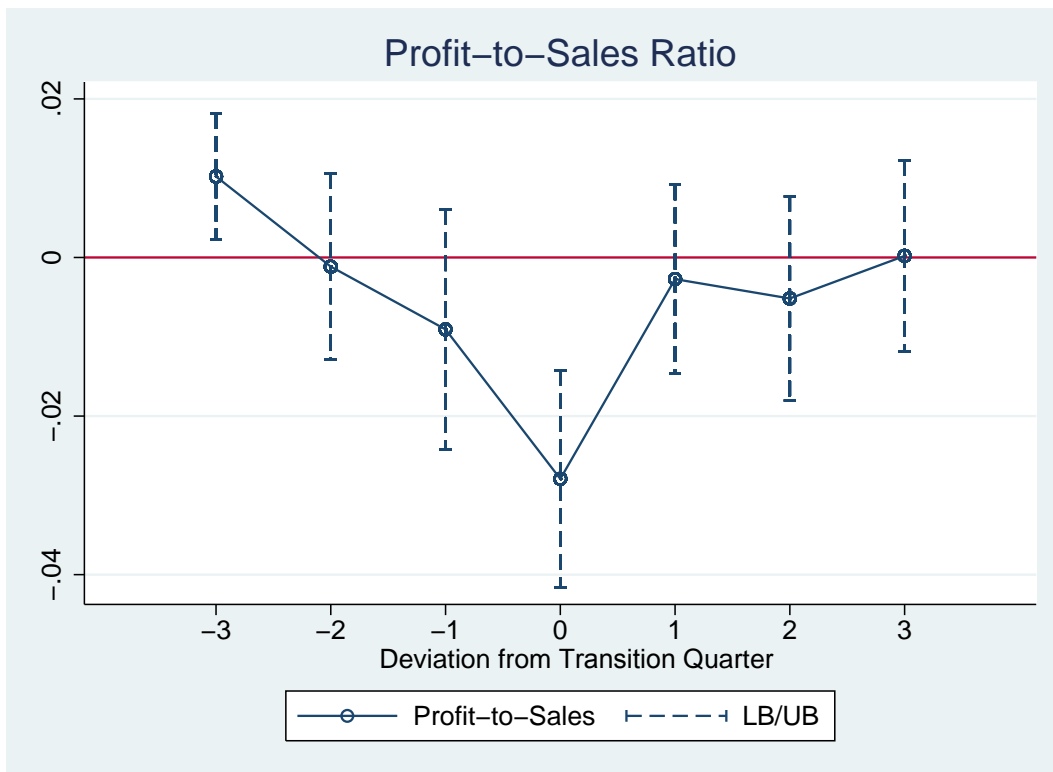


Figure 2: EFFECT OF NEW CMD ON EARNINGS SURPRISE IN TRANSITION QUARTER VS. OTHER QUARTERS

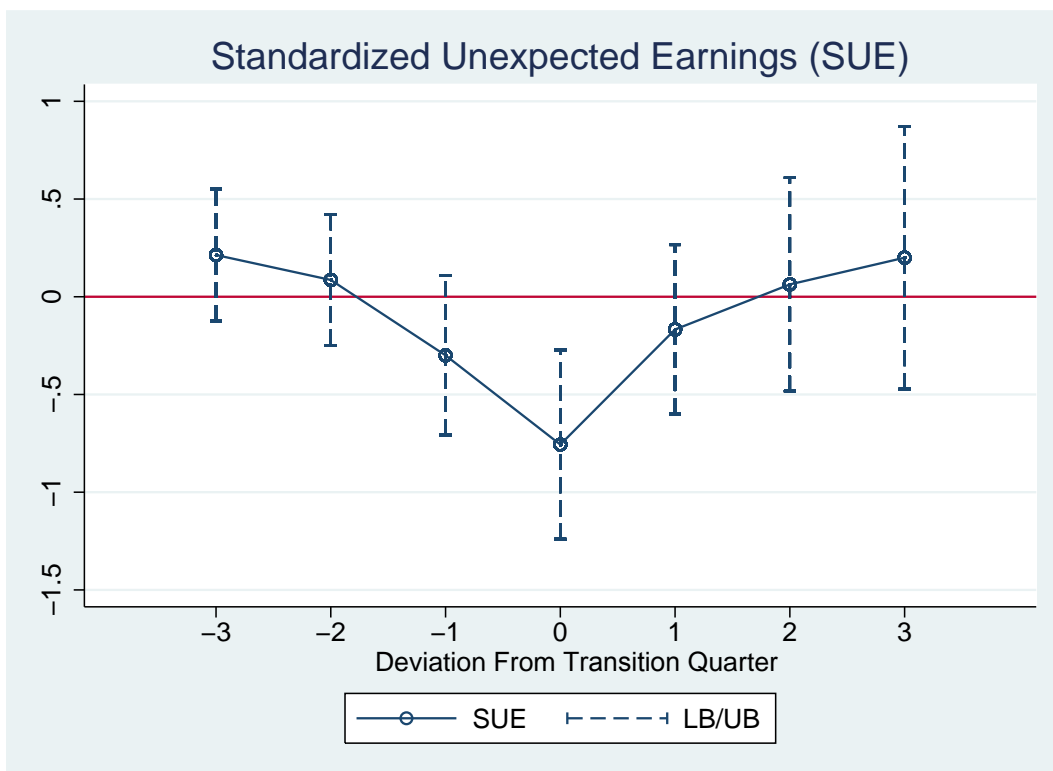


Figure 3: EFFECT OF NEW CMD ON RETURN-ON-ASSETS IN TRANSITION QUARTER VS. OTHER QUARTERS

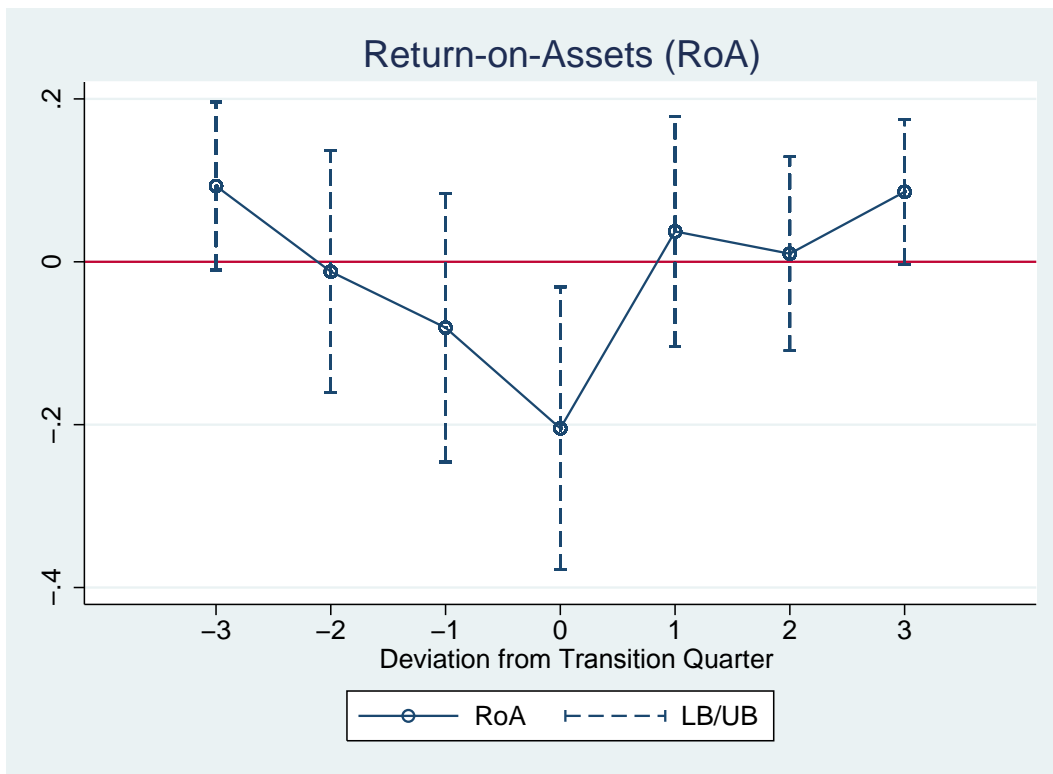


Figure 4: EFFECT OF NEW CMD ON PROVISIONS-TO-SALES RATIO IN TRANSITION QUARTER VS. OTHER QUARTERS

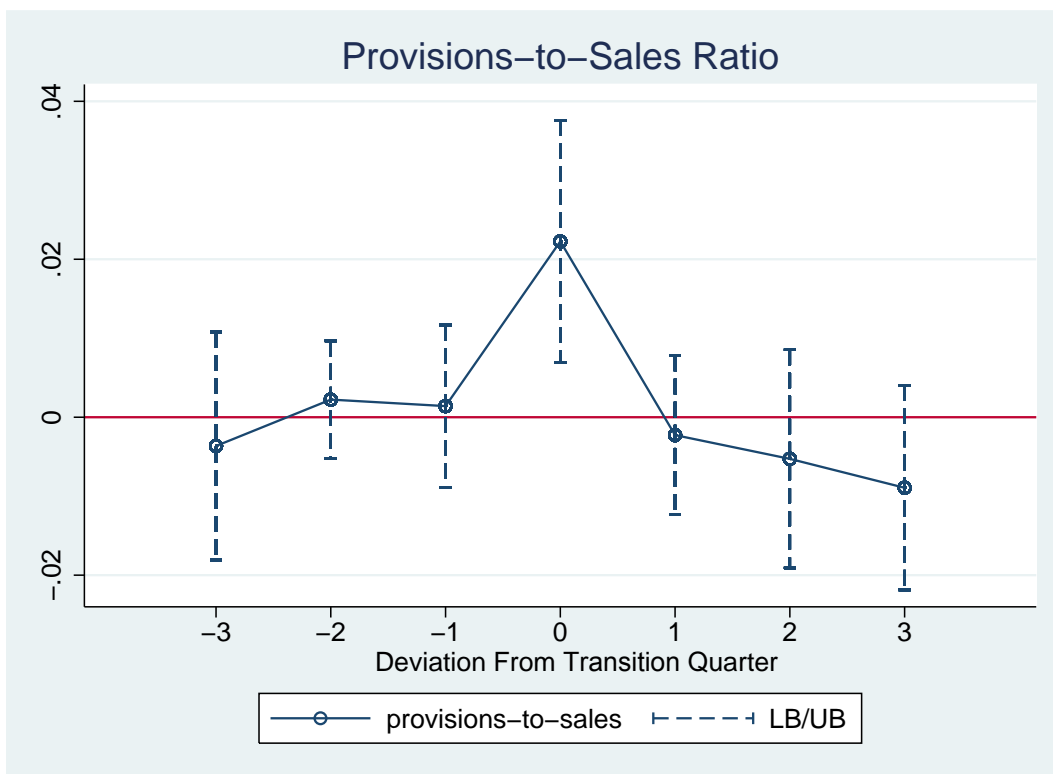


Figure 5: EFFECT OF NEW CMD ON MARKET ADJUSTED STOCK RETURNS IN TRANSITION QUARTER VS. OTHER QUARTERS

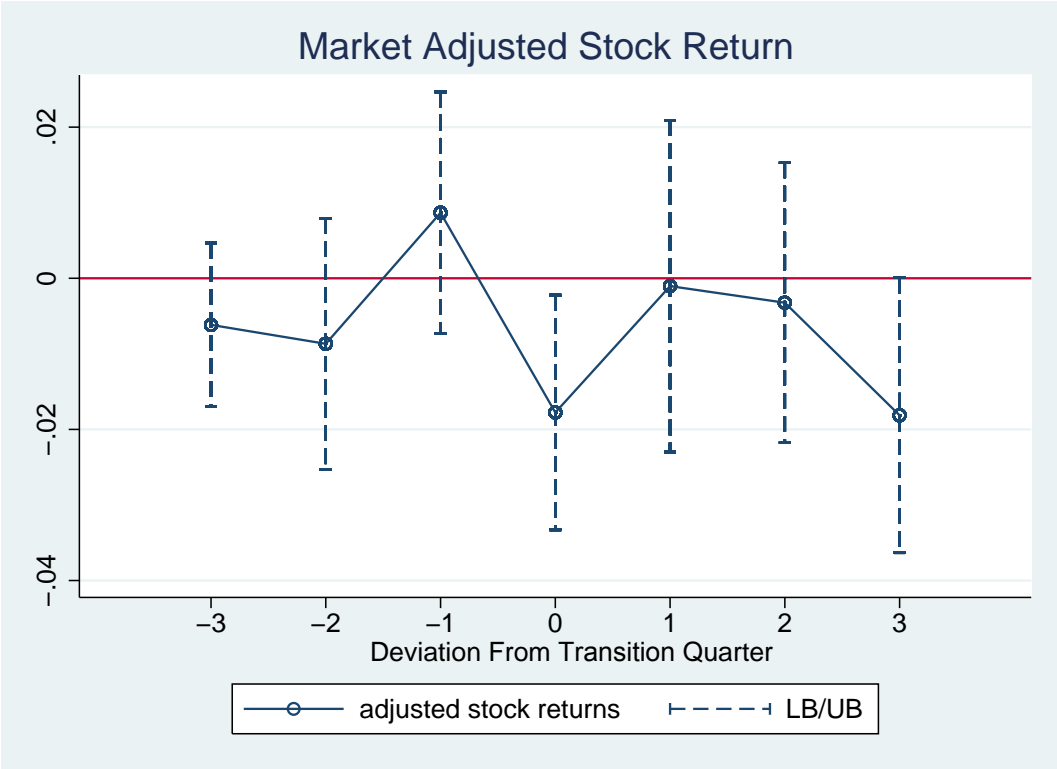


Table A.1: List Of PSU Bank's CMD And Their Time Of Joining

Bank	CMD	Month, Year of Joining
Allahabad Bank	Omkar Nath Singh	Dec-03
	A.C. Mahajan	Aug-06
	K.R. Kamath	Aug-08
	J.P.Dua	Dec-09
	S.A. Panse	Jan-12
Andhra Bank	B Vasanthan	May-00
	TS Narayan Sami	Apr-04
	Rama Krishnan	Oct-05
	RS Reddi	Aug-08
	Rama Chandran	Sep-10
	BA Prabhakar	Jan-12
Bank Of Baroda	P S Shenoy	May-00
	A K Khandelwal (Dr.)	Mar-05
	M D Mallya	May-08
	SS Mundra	Jan-13
Bank Of India	M Venugopalan	Aug-03
	M Balachandran	Jun-05
	T S Narayanasami	Jun-07
	Alok Kumar Misra	Aug-09
	Smt V.R.Iyer	Nov-12
Bank Of Maharashtra	M D Mallya	Mar-06
	Allen C A Pereira	Jun-08
	A S Bhattacharya	Oct-10
	Narendra Singh	Feb-12
Canara Bank	V P Shetty	Nov-04
	M B N Rao	Jun-05
	A C Manajan	Aug-08
	RK Dubey	Jan-13
Central Bank Of India	S Sridhar	Mar-09
	M V Tanksale	Jun-11
Corporation Bank	K Cherian Varghese	Nov-00
	V K Chopra	Dec-05
	B Sambamurthy	Apr-06
	J M Garg	Nov-08
	Ramnath Pradeep	Sep-10
	Ajai Kumar	Oct-11
Dena Bank	M V Nair	Mar-05
	P L Gairola	May-06
	D L Rawal	Jan-09
	Nupur Mitra (Smt.)	Nov-11
	ShriAshwani Kumar	Jan-13
I D B I Bank Ltd.	P P Vora	Sep-01
	M Damodaran	Jun-04
	V P Shetty	Mar-05
	Yogesh Agarwal	Jul-07
	R M Malla	Jul-10
	MS Raghavan	Jul-13

Table A.1: List Of PSU Bank's CMD And Their Time Of Joining (Contd.)

Bank	CMD	Month, Year of Joining
Indian Bank	M S Sundara Rajan	Jun-07
	T M Bhasin	Apr-10
Indian Overseas Bank	S C Gupta	Jul-01
	T S Narayanasami	Jun-05
	S A Bhat	Jun-07
	M Narendra	Nov-10
Oriental Bank Of Commerce	B D Narang	Jul-00
	K N Prithviraj	May-05
	Alok K Misra	Jun-07
	T Y Prabhu	Aug-09
	Nagendra Peda	Sep-10
	S L Bansal	Mar-12
Punjab & Sind Bank	N S Gujral	Feb-01
	G S VEDI	Aug-09
	D P Singh	Nov-11
Punjab National Bank	SS Kohli	Apr-00
	SC Gupta	Apr-05
	Kamalesh Chandra Chakrabarty (Dr.)	Jun-07
	KR Kammath	Oct-09
State Bank Of India	Janki Ballabh	Nov-00
	A K Purwar	Nov-02
	O P Bhatt	Jun-06
	Pratip Chowdhary	Apr-11
Syndicate Bank	Michael Bastian	Aug-02
	N Kantha Kumar	Jan-05
	C P Swarnkar	Apr-06
	George Joseph	Aug-08
	Basant Seth	Aug-09
	M G Sanghvi	Mar-12
	Sudheer Kumar Jain	Jul-13
Uco Bank	V Sridhar	Dec-04
	S K Goel	Jul-07
	Arun Kaul	Sep-10
Union Bank Of India	K Cherian Varghese	Dec-04
	M V Nair	Apr-06
	D Sarkar	Apr-12
	S C Gupta	Nov-08
	Bhaskar Sen	Mar-10
	Archana Bhargav	Apr-13
Vijaya Bank	M S Kapur	Aug-02
	Prakash Mallya	Apr-06
	Albert Tauro	Aug-08
	H S Upendra Kamath	Apr-11