

Big Bath Accounting in an Emerging Market: Evidence from Newly Appointed CEOs in Brazil

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Abstract: This study examines the prevalence of big bath accounting in an emerging market context, focusing on newly appointed CEOs of Brazilian firms. We find evidence of big bath accounting in Brazil and extends the big bath and CEO turnover literature by documenting a limit to downward earnings manipulation and by using Brazil as a source of study. Our results suggest that incumbent CEOs have incentives to manage profits downward only when the company was previously profitable, rather than risking worsening an already bad situation, in the case of unprofitable firms. We also find that they are more likely to use accrual earnings management, rather than reducing production or increasing discretionary expenditures, as tool to decrease earnings level. Overall, our study fills a gap in the literature and supports future research in understanding the big bath CEO turnover scenario in Brazilian firms.

Keywords: Earnings management; big bath; CEO turnover

Resumen: Este estudio examina la prevalencia del big bath accounting en un contexto de mercado emergente, centrándose en los CEOs recién nombrados de empresas brasileñas. Encontramos evidencias de big bath accounting en Brasil y ampliamos la literatura sobre big bath y rotación de CEOs, documentando un límite a la manipulación de beneficios a la baja y utilizando Brasil como fuente de estudio. Nuestros resultados sugieren que los CEOs tienen incentivos para gestionar los beneficios a la baja sólo cuando la empresa es rentable, en lugar de arriesgarse a empeorar una situación ya de por sí mala, en el caso de las empresas no rentables. También descubrimos que es más probable que utilicen la gestión de beneficios por devengo, en lugar de reducir la producción o aumentar los gastos discrecionales, como herramienta para disminuir el nivel de beneficios. En general, nuestro estudio llena un vacío en la literatura y apoya la investigación futura para entender el escenario de rotación de los CEOs en las empresas brasileñas.

Palabras clave: administración de ganancias; rotación de directores

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1. Introduction

Numerous empirical studies describe a phenomenon known as “big bath accounting”, in which newly appointed CEOs strategically engage in earnings management in an effort to lower earnings in their first year in office. According to the big bath and CEO turnover literature, an incoming CEO can take earnings baths to lower performance targets and save earnings for future periods while attributing what went wrong to the outgoing CEO to lessen the impact on the new CEO’s reputation (see for instance Moore, 1973; Reitenga & Tearney, 2003; Bornemann et al., 2015; Breuer et al., 2021).

The majority of evidence on earnings management tools used by incumbent CEOs to manage earnings comes from the United States and other developed markets and have focused in companies that were previously profitable. According to survey evidence from interviews with more than 500 strategy consultants from 35 countries, Big bath accounting is pervasive globally, however, the extent to which CEOs engage in it is correlated with the amount of discretion available in their respective countries but is not significantly moderated by country-level investor protection (Glaum et al., 2022). This evidence emphasizes the need for empirical studies that take into account other institutional environments.

The purpose of this study is to examine the prevalence and antecedents of big bath accounting in an emerging market. Specifically, the study aims to explore if newly appointed CEOs of Brazilian firms engage in earnings management to reduce performance targets and save earnings for future periods. The study also seeks to determine whether newly appointed CEOs are more likely to forego taking big bath early in their tenure if the company was previously unprofitable.

Our results suggest that incumbent CEOs have incentives to manage profits downward only when the company is profitable, rather than risking worsening an already bad situation, which may be consistent with the lack of margin for this matter. We also find that they are more likely to use accrual earnings management rather than reducing production and cutting discretionary expenditures.

Our research extends the big bath and CEO turnover literature by documenting a limit to downward earnings manipulation and by using Brazil as a source of study, which has an interesting institutional environment that differs significantly from the major countries studied thus far. Brazil is one of the four biggest emerging economies in the BRIC group. Its market is the biggest and most representative in all of Latin America, and it abides by a few corporate governance principles, including a minimum dividend payout requirement, a legal

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requirement for the disclosure of both parent and consolidate earnings statements, and segmentation of traded firms by level of corporate governance. Brazil is also known for its “accommodating” informal institutions, which work around formal institutions that are effectively enforced but constrictive and reconcile divergent goals held by participants in both formal and informal institutions (Estrin & Prevezer, 2011).

Previous studies in Brazil found mixed results regarding the existence of big bath accounting (Theisset et al., 2019; Souza Neto et al., 2021). To the best of our knowledge, no prior research has assessed the CEO’s involvement in big bath accounting by reducing production or cutting discretionary expenditures. This paper aims to fill this gap in order to support future research and existing literature in understanding the big bath CEO turnover scenario in Brazilian firms.

The remainder of the paper is organized as follows: Section 2 examines the relevant literature and formulates the hypotheses; Section 3 describes the methodology; Section 4 analyses and discusses the results; and Section 5 concludes.

2. Literature review and hypothesis development

Kim et al. (2016) suggest that CEOs are not passive participants in the succession game and may use managerial discretion to prevent their own company’s demise. They discover that CEOs facing termination try to boost earnings performance by cutting discretionary spending such as R&D, advertising, and rent in order to boost earnings and improve financial performance. According to Cheng et al. (2021) incumbent CEOs of publicly traded firms manage earnings upward before forced turnovers, supporting the cover-up hypothesis while closely held firms show no evidence of this relationship.

Prevalence evidence from studies of CEO turnover indicates that performance is essential for CEOs to avoid being fired. Zhang and Rajagopalan (2004) examined 204 CEO transitions in non-diversified U.S. manufacturing companies and discovered that the number of internal candidates had a positive association with pre-succession firm performance. However, evidence outside the US suggest that this relationship can be moderated by other factors.

Kim et al. (2021), by analyzing Korean firms, show that greater gender and educational diversity of firms can moderate this relationship. According to these authors a diverse workforce signals an organization’s social inclusion and has complementary skills and behaviors that can deal with uncertainty better and promotes long-term exchange relationships.

Evidence also points to the possibility that CEOs could be let go following poor business results brought on by external factors. According to a Jenter and Kanaan (2015), CEOs are much more likely to lose their jobs following poor market and industry performance. According to Huang et al. (2020), firms are more likely to hire an external CEO as a successor if disagreement with the departing CEO is higher, and a lower level of CEO-investor disagreement serves to partially “protect” CEOs from being fired. While career concerns

drive the manager to shift earnings backwards with optimal contracts, a “negative” big bath may result in equilibrium, meaning the manager may inflate earnings after a CEO turnover. This is the conclusion reached by Hensel and Schöndube (2022) who have focused on understanding why big bath accounting is not observed in some cases.

Souza Neto et al. (2021) tested the relationship between CEO turnover and earnings management using accruals metrics and found significant results, while Theiss et al.(2019), conducting similar tests, found no significant relationship. We add to this debate by considering level of previous reported earnings and accounting for real activity earnings management practices. By characterizing the big bath practice’s prevalence in Brazil, this study seeks to help close this gap in the literature.

Based on the existing literature and the lack of studies evaluating the big bath practice in settings such as Brazil, this study will test the following hypothesis:

H1: New CEOs of profitable companies are more likely to engage in big bath accounting at the beginning of their tenure.

CEOs of companies that are not profitable enough to use the big bath mechanism, on the other hand, may not use this management tool due to a lack of profits available to burn. Consequently, the next hypothesis will be examined:

H2: In loss-making companies, it is less likely that new CEOs will engage in big bath accounting at the beginning of their tenure.

3. Methodology

3.1 Data sources

The study used a sample of 175 Brazilian companies listed on the Brazilian stock exchange between 2016 and 2020, yielding 660 observations. Accounting data were extracted using the Economática software, and CEO turnover was extracted using the R-Studio software through the reference report.

The CEO change event was defined by whenever the CEO’s name changed from year to year in the reference reports published by Brazilian firms. For the purpose of comparing this change, a dummy variable equal 1 was defined for the time period in which a CEO change occurred, and equal 0 otherwise.

3.2 Models

We follow the methodology used by Geertsema et al. (2020), estimating discretionary accruals with the modified Jones model from Dechow et al. (1995). The following equation was used to estimate total accruals using the cash flow model:

$$AT_{it} = FCO_{it} - LL_{it}$$

Where *AT* stands for total accruals, *FCO* for cash flow, and *LL* for net income. Non-discretionary accruals were calculated using the modified Dechow et al. (1995) Jones model, as shown in the equation below:

$$\frac{AT_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta R_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{AtI\text{mob}_t}{A_{t-1}}\right) + \varepsilon_t$$

Where AT is the total accruals, ΔR is the change in revenue, AtI mob is the total fixed assets and A is total assets. In order to measure non-discretionary accruals the estimated betas of the previous equation were used , as follows:

$$NAD_{it} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta R_t - \Delta CR_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{AtI\text{mob}_t}{A_{t-1}}\right)$$

NAD are the non-discretionary accruals, and ΔCR is the variation in accounts receivable, the other variables are identical to the previous model. To estimate discretionary accruals, the following equation was used:

$$DACC_{it} = AT_{it} - NAD_{it}$$

Where DACC is discretionary accruals, AT is total accruals, and NAD is non-discretionary accruals. Negative DACC is a proxy for negative earnings management.

Following Roychowdhury (2006), earnings management was also estimated taking into account two real activities: overproduction and cuts in discretionary expenses. In order to calculate overproduction, the following equation was used:

$$\frac{Prod_t}{A_{t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{t-1}} + \alpha_2 \frac{Rec_t}{A_{t-1}} + \alpha_3 \frac{\Delta Rec_t}{A_{t-1}} + \alpha_4 \frac{\Delta Rec_{t-1}}{A_{t-1}} + \varepsilon_t$$

Where A denotes total assets, Rec denotes revenue, and Prod denotes cost of goods sold. Delaying the recording of expenses is one more possible alternative for managing earnings that CEOs have, according to Roychowdhury (2006). To control earnings at a desired level, the CEO could decide to accelerate or delay expense recording. To determine earnings management through a delay in recording expenses, the following equation was used:

$$REM_{it} = Ab_Prod_{it} + (-1 * Ab_Desp_{it})$$

where the variable Ab_Prod represents the overproduction residual from the earnings management estimation model. The residuals from the estimation of earnings management through expenses management are represented by the variable Ab_Desp.

To test our hypothesis, we follow Geertsema et al. (2020)'s model was employed:

$$absDACC_t = \beta_0 + \beta_1 lucroceo_t + \beta_2 d_ceo_t + \beta_3 vm_t + \beta_4 roa_t + \beta_5 tam_t + \beta_6 bigA_t + \beta_7 resultpassado_t + \beta_8 end_t + \varepsilon_t$$

Table 1 lists and defines all variables used in this paper.

Table 1 - Variables Description

Acronym	Variable	Formula	Theory
DACC	Modified Jones Model Discretionary Accruals	Modified Jones Model	Dechow (1995)
TACC	Discretionary accruals model Kothari et al. (2005)	Model Kothari et al. (2005)	Kothari et al. (2005)
AbExp	Abnormal discretionary expenses	Model Roychowdhury	Roychowdhury (2006)
AbProd	Abnormal discretionary production cost	Model Roychowdhury	Roychowdhury (2006)
REM	Earnings management by actual activities	Sum of variable Ab_Despe Ab_Prod	Geertsema et al. (2020) Roychowdhury (2006)
abs-DACC	Discretionary accruals in absolute value modified Jones model	Absolute value of the variable DACC	Dechow (1995)
absTACC	Discretionary accruals in absolute value model Kothari et al.	Absolute value of the variable TACC	Kothari et al. (2005)
absAbExp	Abnormal discretionary expenses in absolute value	Model Roychowdhury (2006)	Roychowdhury (2006)
absAbProd	Abnormal discretionary production costs in absolute value	Model Roychowdhury (2006)	Roychowdhury (2006)
AbsREM	Construct of management via expenditure and production	Model Roychowdhury (2006)	Roychowdhury (2006)
d_dacc	Dummy negative accruals modified Jones model	1 for companies with negative DACC, 0 otherwise	Dechow (1995)
d_tacc	Dummy negative accruals modified Kotari	1 for companies with negative TACC, 0 otherwise	Kothari et al. (2005)

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INTERACTION	profitceo	Interaction dummy between profitable companies with CEO change	1 for interaction between profitable companies and CEO change, 0 otherwise	Elaborated by the authors
	Lossceo	Dummy of interaction between companies with loss and with change of CEO	1 for interaction between companies with loss and change of CEO, 0 otherwise	Elaborated by the authors
CEO	d_ceo	Dummy CEO change	1 for period in which CEO change occurred, 0 otherwise	Geertsema et al. (2020)
CONTROLS	Mv	Market value	Number of shares * quoted value last day of the year	Myers et al. (2007)
	Roa	Return on assets	Net Income / Total Assets	Lee et al. (2006)
	Size	Size	Log total asset	Ali et al. (2015)
	big4	Dummy Audit performed by Big Four	1 for Big Four audited periods, 0 otherwise	Becker et al. (1998)
	pastresult	Dummy negative past result	1 for t-1 at a loss, 0 otherwise	Elaborated by the author
	Indeb	Indebtedness	Current and non-current liabilities / Equity	Rodríguez-Pérez & Van Hemmen (2010)

Source: Prepared by the author

4. Results

The Hausman test was used to determine whether the model should be used in fixed or variable effect panel data. With a p-value of 0.000, the Hausman test rejects the hypothesis that the estimation coefficients are not different. As a result, estimations in the study were performed using the fixed effect panel model. In addition to the panel model, the models were also estimated in logit.

Table 1 shows the descriptive statistics of the sample by groups, panel A shows the characterization of the entire sample, and panel B shows

the test of difference in means between the groups of companies that changed the CEO and those that did not.

According to descriptive statistics, there are 546 observations referring to periods when there was no CEO change, compared to 114 when there was. Earnings management variables based on accruals produce negative results up to the second quintile, whereas earnings management variables based on real activities are more related to negative results.

Table 1 - Characterization of the sample**Panel A - Descriptive statistics**

Variables	Obs	Average	St dev.	Min.	0,25	0,5	0,75	Max
DACC	660	0,02	0,14	-0,83	-0,04	0,01	0,09	0,8
TACC	660	0,03	0,15	-1,2	-0,04	0,01	0,09	0,78
Ab_Exp	660	0,14	0,12	0	0,06	0,12	0,19	0,84
Ab_Prod	660	0,44	0,23	-0,01	0,28	0,4	0,53	1,64
REM	660	0,29	0,12	-0,09	0,22	0,27	0,34	0,8
absDACC	660	0,09	0,1	0	0,03	0,06	0,12	0,83
absTACC	660	0,09	0,12	0	0,03	0,06	0,12	1,2
absAb_Exp	660	0,14	0,12	0	0,06	0,12	0,19	0,84
absAb_Prod	660	0,44	0,23	0,01	0,28	0,4	0,53	1,64
absREM	660	0,29	0,12	0,01	0,22	0,27	0,34	0,8
d_dacc	660	0,44	0,5	0	0	0	1	1
d_tacc	660	0,46	0,5	0	0	0	1	1
Profitceo	660	0,12	0,32	0	0	0	0	1
Lossceo	660	0,06	0,23	0	0	0	0	1
d_ceo	660	0,17	0,38	0	0	0	0	1
Mv	660	0,77	0,84	0,01	0,25	0,5	0,88	4,31
Roa	660	0,04	0,17	-0,85	0	0,04	0,08	2,98
Size	660	15,54	1,68	9,59	14,52	15,57	16,65	20,03
big4	660	0,36	0,48	0	0	0	1	1
Pastresult	660	0,27	0,44	0	0	0	1	1
Indeb	660	103	205,4	-388,7	23,88	60,76	121,3	1308

Panel B - Difference of means test

Variables	Profitable without CEO turnover			Profitable with CEO turnover			P-value
	Obs	Average	St dev.	Obs	Average	St dev.	
DACC	546	0,019	0,126	114	0,038	0,177	0,195
TACC	546	0,025	0,146	114	0,032	0,143	0,606
Ab_Exp	546	0,148	0,122	114	0,127	0,116	0,088 *
Ab_Prod	546	0,445	0,235	114	0,406	0,225	0,102
REM	546	0,295	0,116	114	0,279	0,118	0,189

Source: Prepared by the author

Notes: The table is divided into panel A and B. Panel A shows the descriptive statistics of the study variables. In panel A, they report the number of observations, the mean, the standard deviation, the minimum value, the 25%, 50% and 75% of the sample and the maximum value. The DACC variable is the accruals estimated by the Modified Jones model. TACC is the accruals estimated by the Kotari et al model. Ab_Exp is the accruals of the management estimation model by actual expenditure increase activities. Ab_Prod is the accruals of the management estimation model by actual production increase activities. REM is the construct Roychowdhury (2006). The variables absDACC, absTACC, absAb_Exp, absAb_Prod and absREM are the accruals in absolute value. The variables d_dacc and d_tacc is a dummy equal to 1 for companies with negative accruals. The profitceo variable is a dummy equal to 1 for profitable companies that have changed their CEO. On the contrary, lossceo is a dummy variable equal to 1 for loss-making companies that changed their CEO. MV is the market value. ROA is return on assets. SIZE is the variable log of total assets. BIG4 is a dummy variable equal to 1 for companies audited by the big four. PASTRESULT is a dummy variable equal to 1 for companies that have losses in the previous period. INDEB is a debt variable. Panel B presents the test for the difference in means of the earnings management variables.

Table 2 shows that occurred 114 CEO turnovers from 2016 to 2021. This total volume is distributed at random over time, with 2018 having the highest turnover volume. Panel B of Table 2 depicts the volume of CEO changes by sector. Electric Power Generation, Transmis-

sion, and Distribution experienced the most turnover, with 19 CEO changes over the six-year study period. Other industries do not have high turnover rates. The other sectors in the table were grouped together because they all have a single turnover evidence.

Table 2 - CEO turnover	
Panel A - Frequency of CEO turnover	
Year	Frequency
2016	15
2017	21
2018	26
2019	23
2020	14
2021	15
Total	114

Source: Prepared by the author

Table 3 shows the results of the correlation matrix of the variables. Results do not suggest a significant relationship between earnings management variables, including those derived from real activities and CEO turnover. At the same level of significance, the market va-

lue variable are positively correlated with the real activities earnings management : Ab_Desp, Ab_Prod, and REM. This finding suggests a positive relationship between earnings manipulation and market value.

Table 2 Panel B - CEO turnover frequency by sector		
Sector	Frequency	
Generation, transmission and distribution of electricity	19	16,67%
Slaughterhouses	7	6,14%
Construction of residential buildings	7	6,14%
Real estate rental company	6	5,26%
Telecommunications	4	3,51%
Auto parts industry	4	3,51%
Oil wholesale trade	3	2,63%
Clothing store	3	2,63%
Other industries	3	2,63%
Water, sewer and other systems	3	2,63%
Business and enterprise management	3	2,63%
Dealers of other motor vehicles	2	1,75%
Software publishers	2	1,75%
Body and trailer industry	2	1,75%
Aerospace equipment industry	2	1,75%
Paper, cellulose and cardboard industry	2	1,75%
Chemical industry	2	1,75%
Metal mining	2	1,75%
Other heavy and engineering constructions	2	1,75%
Business support services	2	1,75%
Data processing services	2	1,75%
Tourist transport	2	1,75%
Auxiliary transport activities	2	1,75%
Weavings	2	1,75%
Transformation of steel into steel products	2	1,75%
Other sectors	24	21,05%
Total	114	100,00%

Source: Prepared by the author

Notes: Panel A of Table 2 shows the amount of CEO turnover per year. In panel B, turnover by sector is detailed. The Other sectors sector makes up all other sectors there is only 1 CEO change.

Table 3 - Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11
1 DACC	1										
2 TACC	0,7322*	1									
3 Ab_Exp	-0,0574	0,007	1								
4 Ab_Prod	-0,0197	0,025	0,9443*	1							
5 REM	0,0157	0,033	0,8158*	0,9548*	1						
6 absDACC	0,111	0,026	-0,0293	-0,0661	-0,0983	1					
7 absTACC	0,008	0,07	0,0148	-0,0081	-0,0373	0,6635*	1				
8 absAb_Exp	-0,0577	0,008	1,0000*	0,9441*	0,8156*	-0,029	0,0157	1			
9 absAb_Prod	-0,0198	0,025	0,9444*	1,0000*	0,9546*	-0,066	-0,008	0,9442*	1		
10 absREM	0,0145	0,033	0,8185*	0,9560*	0,9980*	-0,1	-0,0393	0,8183*	0,9560*	1	
11 d_dacc	-0,6511*	-0,5098*	0,0275	-0,0081	-0,0351	-0,12	-0,102	0,0277	-0,008	-0,033	1
12 d_tacc	-0,5349*	-0,6187*	-0,0712	-0,0976	-0,1140	-0,119	-0,1660*	-0,071	-0,0975	-0,112	0,6675*
13 profitceo	-0,117	-0,0149	-0,0193	-0,0215	-0,0175	-0,029	-0,003	-0,019	-0,0215	-0,019	0,117
14 lossceo	0,2430*	0,0531	-0,0815	-0,0738	-0,0592	0,1653*	-0,0276	-0,082	-0,0739	-0,06	-0,1816*
15 d_ceo	0,0505	0,0201	-0,0665	-0,0637	-0,0512	0,0774	-0,019	-0,066	-0,0637	-0,053	-0,013
16 Mv	-0,0714	0,0347	0,0753	0,0523	0,0308	-0,03	0,0924	0,0761	0,0522	0,0292	0,0977
17 Roa	-0,5677*	-0,0512	0,1969*	0,1230	0,0361	0,0486	0,0446	0,1969*	0,1230	0,0369	0,2357*
18 size	-0,0397	0,0183	-0,0785	-0,0115	0,0298	-0,2130*	-0,1210	-0,08	-0,0112	0,0351	-0,028
19 big4	0,0318	-0,001	0,0149	0,0117	0,0119	-0,0729	-0,091	0,014	0,0116	0,0101	-0,005
20 pastresult	0,2246*	0,0042	-0,1170	-0,1270	-0,1240	0,2042*	-0,006	-0,117	-0,1260	-0,1210	-0,1692*
21 indeb	0,041	0,0197	0,0995	0,1080	0,1090	-0,018	0,025	0,0989	0,1080	0,1100	-0,12
	12	13	14	15	16	17	18	19	20	21	
12 d_tacc	1										
13 profitceo	0,055	1									
14 lossceo	-0,086	-0,089	1								
15 d_ceo	-0,007	0,7895*	0,5409*	1							
16 Mv	-0,095	-0,005	-0,104	-0,0647	1						
17 Roa	0,0700	0,1692*	-0,2671*	-0,0217	0,1486*	1					
18 size	-0,023	0,111	-0,086	0,0403	-0,1140	0,0648	1				
19 big4	-0,009	-0,012	-0,022	-0,0231	0,0526	-0,0277	-0,0315	1			
20 pastresult	-0,000	-0,1434*	0,2762*	0,0491	-0,1377*	-0,2733*	-0,2303*	-0,0021	1		
21 indeb	-0,043	0,012	-0,049	-0,0198	-0,0595	0,0027	0,2194*	-0,0412	-0,043	1	

Source: Prepared by the author

Notes: * p<0,1, ** p<0,05, *** p<0,01

Table 4 reports results where the variable of interest is profitceo. This variable represent the interaction between the profit dummy variable (equal 1 for profitable companies and 0 otherwise), with the CEO change dummy (equal to 1 for companies that changed CEOs and 0 otherwise). This variable will be used to test wether profitable firms that have undergone CEO change, will be likely to use earnings management on the begining of CEO tenure.

Models 1 to 3 test this hypothesys considering absolute discretionary accruals using modified Jones model and models 4 to 6 considers Kothari et al. model, using linear regression models. The remaining models considers dummy variables as dependent variables that are equal 1 if the firm has engaged in downward earnings management, considering modified Jones model (models 7 to 9) and Kothari et al.(2005) model (models 10 to 12), using logit models.

The models were estimated controlling for year fixed effects, industry fixed effects and both, as reported on the botton of the table. Models 1 to 3 reports significant coefficients at the 5% level for the *profitceo* variable. These results show that *profitceo* variable significantly explain an increase on the use of earnings management, estimated using modified Jones model. This finding suggest that profitable companies that have changed their CEOs are more likely to manage their earnings on the beginning period of CEO tenure. However, models 4 to 6 reported no significant results when considering Kothari et al.(2005) model to estimated accruals. Results on models 7 to 9 show that profitable companies that have changed their CEOs are more likely to manage their earnings downward on the beginning period of CEO tenure.

Table 4 – Earnings Management and CEO Turnover in Profitable Companie – Models panel e logit

	1	2	3	4	5	6	7	8	9	10	11	12
	Abs DACC	Abs DACC	Abs DACC	Abs TACC	Abs TACC	Abs TACC	d_dacc	d_dacc	d_dacc	d_tacc	d_tacc	d_tacc
Profitceo	0,075** (0,029)	0,072*** (0,026)	0,072*** (0,026)	0,042 (0,052)	0,032 (0,050)	0,032 (0,050)	1,864*** (0,711)	1,687** (0,735)	2,890*** (0,882)	1,063** (0,481)	0,859* (0,516)	1,061* (0,623)
d_ceo	-0,077*** (0,026)	-0,069*** (0,026)	-0,069*** (0,026)	-0,039 (0,049)	-0,029 (0,050)	-0,029 (0,050)	-1,374** (0,658)	-1,401** (0,673)	-2,398*** (0,816)	-0,780* (0,412)	-0,838* (0,440)	-0,985* (0,521)
Mv	-0,019* (0,011)	-0,014 (0,010)	-0,014 (0,010)	-0,025 (0,019)	-0,018 (0,018)	-0,018 (0,018)	-0,000 (0,129)	-0,055 (0,161)	0,068 (0,257)	-0,307*** (0,116)	-0,357*** (0,130)	-0,242 (0,217)
Roa	0,965*** (0,181)	1,042*** (0,163)	1,042*** (0,163)	1,094*** (0,344)	1,142*** (0,351)	1,142*** (0,351)	5,987*** (-1,834)	10,913*** (-2,686)	15,826*** (-4,975)	1,181 (0,798)	3,238** (-1,311)	5,193** (-2,403)
Size	0,068** (0,034)	0,129*** (0,039)	0,129*** (0,039)	0,104* (0,060)	0,146** (0,069)	0,146** (0,069)	-0,073 (0,056)	-0,065 (0,066)	0,110 (0,146)	-0,049 (0,050)	-0,034 (0,057)	0,176* (0,106)
big4	-0,005 (0,010)	0,008 (0,010)	0,008 (0,010)	0,011 (0,011)	0,015 (0,011)	0,015 (0,011)	-0,028 (0,177)	-0,157 (0,196)	0,077 (0,260)	-0,022 (0,166)	-0,169 (0,183)	0,026 (0,237)
Pastresult	0,009 (0,016)	-0,003 (0,017)	-0,003 (0,017)	0,004 (0,014)	-0,006 (0,016)	-0,006 (0,016)	-0,193 (0,233)	0,041 (0,265)	0,444 (0,385)	0,130 (0,205)	0,381* (0,228)	0,472 (0,328)
Indeb	0,000** (0,000)	0,000*** (0,000)	0,000*** (0,000)	0,000* (0,000)	0,000** (0,000)	0,000** (0,000)	-0,002*** (0,001)	-0,002** (0,001)	-0,002** (0,001)	-0,000 (0,000)	-0,000 (0,000)	-0,001 (0,001)
Constant	-1,048** (0,525)	-2,132*** (0,612)	-2,132*** (0,612)	-1,634* (0,927)	-2,350** (-1,056)	-2,350** (-1,056)	0,855 (0,900)	-2,182* (-1,159)	-6,928** (-3,020)	0,840 (0,796)	-1,816* (0,987)	-7,568*** (-2,140)
Obs	293	293	293	293	293	293	660	660	601	660	660	598
R2	0,475	0,530	0,530	0,459	0,480	0,480						
R2 Aj	0,460	0,508	0,508	0,444	0,456	0,456						
Year Fixed Effect	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Sector Fixed Effect	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes

In Table 5, we further examine the relationship between earnings management through real activities, following Roychowdhury (2006), taking into account only a subsample of firms that have been previously identified as having engaged in big bath practices through the use of accruals. All results are negative and statistically significant at

the 5% level across all models, taking into account year-fixed effects, industry-fixed effects, and both. These results suggest that companies that engage in big bath accounting after a CEO change via accruals are more likely to engage in less intensive earnings management through real activities, changing production levels or expenses payment dates.

Table 5 - Earnings Management via actual activities and CEO turnover in profitable companies – Models panel

	1	2	3
	AbsREM	AbsREM	AbsREM
Profitceo	-0,029** (0,012)	-0,031** (0,014)	-0,031** (0,014)
d_ceo	0,023* (0,013)	0,027* (0,016)	0,027* (0,016)
Mv	0,004 (0,007)	0,005 (0,008)	0,005 (0,008)
Roa	0,081 (0,052)	0,076 (0,060)	0,076 (0,060)
Size	-0,021 (0,015)	-0,020 (0,019)	-0,020 (0,019)
big4	-0,000 (0,007)	0,001 (0,007)	0,001 (0,007)
Pastresult	-0,008 (0,013)	-0,008 (0,015)	-0,008 (0,015)
Indeb	-0,000 (0,000)	-0,000 (0,000)	-0,000 (0,000)
Constant	0,605** (0,239)	0,593* (0,310)	0,593* (0,310)
Obs	293	293	293
R2	0,027	0,045	0,045
R2 Aj	-0,000	0,001	0,001
Fixed Effect Year	No	Yes	Yes
Sector Fixed Effect	No	No	Yes

5. Final discussion and concluding remarks

In this study we analyse the relationship between CEO turnover and the use of big bath practices within Brazilian companies. We documented the existence of big bath accounting practices in Brazil and show that downward earnings management occurs only for profitable firms, which is plausible given that non-profitable firms have less leeway to allow poor earnings results.

Additional findings indicate that profitable firms engaging in big bath practices are less likely to do so through the use of real earnings management techniques. Our findings add to the literature on big bath accounting and CEO turnover by providing Brazilian evidence on CEO behavior during transitional periods, particularly in profitable firms. This study, consistent with previous research, suggests that CEOs may have incentives to engage in downward earnings management (big bath) in the period following CEO transition.

To build on this research and contribute to future studies, we propose expanding these tests to markets with distinct levels of regulation and corporate governance. Another suggestion is to investigate the primary incentives for managers to adopt big bath practices, as well as the relationship between different types of CEO turnover and earnings management in other markets.

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