

RESEARCH ARTICLE

# Determinants of Earnings Management Choice among Publicly Listed Industrial Firms in the Philippines

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**Abstract:** Earnings management involves the use of acceptable accounting rules and procedures as well as circumventing business activities to achieve desired ends. In the literature, earnings management through discretionary accruals has always been associated with an opportunistic motive to mislead various stakeholders about a business' financial performance to the advantage of owners and managers. However, the literature presented two possible motives behind earnings management, namely: an opportunistic, a self-serving perspective which mirrors the agency problem; and an efficient motive which utilizes earnings management as a signalling mechanism to send signals about the firm to its stakeholders. In this paper, we investigate the type of earnings management employed by industrial firms in the Philippine Stock Exchange (PSE). Evidence was found that managers use earnings management in an efficient perspective to signal private information to stakeholders. In addition, the study examined firm-specific characteristics in terms of profitability, leverage, cash flows from operations, and firm size. Furthermore, this study also examined corporate governance variables such as the number of independent board of directors, the presence of CEO duality, board size, and audit quality. We also examined the effect of these variables on a firm's tendency to engage in earnings management using discretionary accruals. Results revealed that among the firm specific characteristics, leverage and cash flow from operations are both significantly and positively related to a firm's level of discretionary accruals, while profitability was found to be negatively related. However, we found that corporate governance variables such as board size, board independence, CEO duality, and audit quality were all insignificant predictors of a firm's earnings management activities.

**Keywords:** earnings management, opportunistic, signalling

**JEL Classification:** M41

Earning or profit, also known as a result of operation, is one of the most important figures in a financial statement that receive much attention from different stakeholders of a business. A firm's earning is said to be one of the most important accounting numbers since it conveys information about the entity's performance in the short-run and potentials in the long-run.

Financial reporting has allowed the exercise of choice and judgment in the light of providing more relevant information to all interested users of financial statements. However, accounting choice and judgment appeared to be a double-edged sword that affected reported earnings quality over the past decades. In the exercise of accounting choice, comes earnings management.

Earnings management involves the use of acceptable accounting rules and procedures as well as circumventing business activities to achieve desired ends. Earnings management is a form of disclosure management that affects the financial reporting process in order to obtain some private gain (Schipper, 1989). Financial statements contain accounting numbers and disclosures, which are vital information for stakeholders. As such, it can be a source of manipulations to convey a desired outcome of an entity.

According to the literature, earnings management motivations can be classified as either opportunistic or signalling. Earnings management is deemed to be signalling when the use of discretionary accruals permits communication of information related to future firm performance. On the contrary, the more common form of earnings management that is widely discussed in the literature is about opportunistic earnings management wherein managers use their judgement through discretionary accruals in order to maximize their personal gain.

In this paper, we investigated the type of earnings management utilized by publicly-listed companies in the industrial sector of the Philippine Stock Exchange whether it is efficient (signalling) or opportunistic. In addition, we assessed how firm-specific factors (cash flow, profitability, size, and leverage) and corporate governance constraints (board size, independent directors, CEO duality, and audit quality) influence the level of earnings management employed by these companies. It is of interest because in general, the use of earnings management is associated towards an opportunistic behavior. We aimed to investigate whether a different type of earnings management is being employed in the Philippine setting, specifically, the industrial sector; and how the presence of firm-specific characteristics and corporate governance constraints affect their level of earnings management.

## **Review of Related Literature**

### ***Type of Earnings Management***

In terms of motivation to conduct earnings management, the literature has classified earnings management as either efficient or opportunistic. An opportunistic behavior towards earnings management mirrors the classic agency problem wherein managers would use their discretion or judgement to maximize

their personal gain. On the contrary, earnings management is said to be efficient or signalling if the use of discretion is exercised to send private signals about the firm to market participants (Beaver, 2002).

Much of the literature on earnings management research has associated the use of discretionary accruals towards an opportunistic behavior wherein managers would exercise their discretion towards reported earnings due to tied benefits or associated incentives that lead to maximizing their own utility to the point of deceiving financial statement users. This was observed by Burgstahler and Eames (2003) where managers use discretionary accruals to avoid reporting losses. A similar finding has been observed by Balsam, Bartov, and Marquardt (2002) wherein investors reassess reported earnings figures using other financial statements. Because of the re-assessment, substantial change in stock price is expected. In this light, investors view the use of accruals management as an opportunistic behavior.

On a different perspective, earnings management is observed to be an efficient means of communicating private information, instead of being opportunistic alone. This is where discretion is exercised to improve the ability of earnings to reflect fundamental value (Subramanyam, 1996). In this regard, earnings management is deemed to be efficient as it is used to send positive signals about the firm's future profitability. Specifically, evidence was observed where managers use discretionary accruals to send positive signals about their beliefs to the market (i.e., their optimism about future firm performance), which now highlighted the role of discretionary accruals as a signaling device contrary to an opportunistic motive (Louis & Robinson, 2005). In addition, the use of discretionary accruals permits the communication of more value-relevant information which is not captured under the non-discretionary accruals (Subramanyam, 1996).

According to Siregar and Utama (2008), the motivation behind earnings management can be tested with the ability of discretionary accruals to influence a firm's future profitability. If earnings management is utilized for a signaling perspective, it is expected that discretionary accruals significantly and positively influence future profitability. In this case, the use of discretionary accruals improves predictability of the firm's reported earnings thus, reducing the level of information asymmetry. On the contrary, if earnings

management is used opportunistically, discretionary accrual would negatively influence future profitability or would not influence it at all. We can then hypothesize that a firm's discretionary accrual influences future profitability.

### ***Firm Specific Characteristics and Earnings Management***

**Firm size.** Based on the literature, there were varying evidences as to how a firm's size affects its use of discretionary accruals to manage reported earnings. In a study by Shu and Chiang (2014) and Teoh, Wong, and Rao (1998), they noted that large firms use discretionary accruals when placing seasoned equity offerings as opposed to smaller firms which rely more on timing the seasoned equity offering. Furthermore, the use of discretionary accruals suggests good prospects on the growth of large firms when issuing seasoned equity offerings.

A similar finding has been observed by Burgstahler and Dichev (1997) when they assessed how earnings management varies across firm size. The results of their study revealed that earnings management to avoid losses is prevalent across three firm sizes (small, medium, and large). However, the magnitude of the use of earnings management to prevent incurring losses is observed to be greater and more prevalent for firms with medium and large sizes.

On the other hand, Charfeddine, Riahi, and Omri (2013) found out that firm size is positively related to discretionary accruals such that larger firms are more likely to engage in using discretionary accruals as opposed to smaller firms. On the contrary, the results of Bassiouny (2016) provided a different insight wherein firm size was determined to be an insignificant determinant of a firm's level of earnings management, using the case of listed firms in Egypt. The same case was observed in Albania where earnings management across varying firm sizes, whether large or small, does not vary significantly (Llukani, 2013). For firm size, it can then be hypothesized that it is positively associated with its level of discretionary accruals, as there would be more incentives for larger firms to engage in earnings management.

**Leverage.** A firm's degree of financial leverage measures its level of indebtedness. One motivation of firms to engage in earnings management is to influence contractual outcomes, specifically in the case of debt

covenants. Debt covenant provisions require firms to maintain or achieve a certain level of earnings as a part of the borrowing arrangement. This then introduces pressure on firms to engage in earnings management to influence such contractual outcomes in its favor. Managers use voluntary accounting changes in order to increase earnings and eventually avoid violations of debt covenants or contractual arrangements (Fields, Lys, & Vincent, 2001). Thus, it is expected that highly-leveraged firms are more likely to engage in opportunistic earnings management to avoid debt covenant or other contractual violations and to avoid projecting an image of financial distress.

According to Beatty and Weber (2003), managers would engage in voluntary accounting changes that would lead towards increasing reported income in order to affect or influence contract costs and calculations. It can be inferred that earnings management is used by managers to avoid violations on debt agreements that might impose higher costs on their end. As such, it is expected that highly leveraged firms will have a higher engagement in opportunistic earnings management. This is further supported by Bassiouny (2016) wherein a firm's degree of financial leverage positively influences the level of earnings management. A similar finding was observed by Fung and Goodwin (2013) where a positive association between short-term debt and discretionary accruals was observed for low-credit worthy firms. This further implies that highly indebted firms tend to resort in opportunistic earnings management because they are subjected to monitoring and would face consequences because of debt covenant violations. On the contrary, using the case of developing countries, a firm's level of indebtedness, as measured by its leverage is deemed to be an insignificant predictor of its use of discretionary accruals to manipulate earnings (Charfeddine et al., 2013).

Given the above-mentioned cases, it can be hypothesized that a firm's leverage is positively associated with earnings management. Highly indebted firms would have higher discretionary accruals to avoid violations of debt covenants or other related contractual arrangements.

**Cash flows from operations.** A firm's cash flows can be used by managers to invest into projects that can lead towards maximizing shareholders' wealth. On the contrary, it can be used to maximize

the managers' own personal gain, following an opportunistic perspective. According to the Free Cash Flow Theory, managers would often use excess cash flows in investments that would maximize their own wealth, rather than the shareholders' wealth, which then raises the classic agency problem (Jensen, 1986).

Empirical evidences were obtained for firms with a high level of free cash flows but low growth opportunities, which suggests that a higher level of free cash flows provides more incentives for managers to engage in earnings management through the use of discretionary accruals (Bukit & Iskandar, 2009; Chalak & Mohammadnezhad, 2012). Thus, it is expected that opportunistic earnings management is most likely to occur on firms with higher free cash flows but with lower growth opportunities. However, the effect of cash flows from operations on a firm's tendency to earnings management is mitigated by the presence of an audit committee as found by Bukit and Iskandar (2009). Firms with high free cash flows report lesser discretionary accruals, given the presence of an audit committee.

Thus, it is hypothesized that a firm's level of discretionary accruals is positively influenced by the level of its free cash flow.

### ***Corporate Governance and Earnings Management***

In the literature, the occurrence of opportunistic earnings management can be prevented or mitigated by the presence of corporate governance mechanisms in place. In this study, we focused on four corporate governance variables that can help mitigate the occurrence of earnings management through discretionary accruals.

**Board size.** Board of directors performs an oversight role in a corporation. In the literature, there were mixed evidence obtained as to the effectiveness of large vis-à-vis small board sizes. For instance, having a large board size can create more disparity between members of the board that can affect their effectiveness in performing their oversight role (Jenssen, 1993). However, according to Dalton, Daily, Johnson and Ellstrand. (1999), the presence of more board of directors in a corporation brings in more expertise in the table that can help improve firm performance. In relation to earnings management, it is then expected that board size negatively affects a firm's tendency to engage in earnings management.

However, mixed evidence was obtained regarding the effect of board size on earnings management. For instance, board size as measured by the number of board of directors in a firm was deemed to be an insignificant predictor of an entity's tendency to engage in earnings management (Banderlipe, 2009). A similar case was also observed by Jamaludin, Sanusi, and Kamaluddin (2015) where board size does not significantly influence managers' tendency to engage in earnings management using the case of Malaysian firms. This is in contrast with the results of Rahman and Ali (2006) and Ramachandran, Ngete, Subramanian, and Sambasivan, (2015) the core objective of this study is to test whether the roles of board of directors and other key committees influence Earnings Management (EM where board size was observed to be positively related with a firm's level of discretionary accruals.

Given that the number of members of the board of directors increases the expertise in the table that helps in mitigating opportunistic earnings management, it is hypothesized that a firm's board size, as measured by the number of its board of directors is negatively related to its level of discretionary accruals.

**Board independence.** In the Philippine setting, publicly listed companies are required by the Securities and Exchange Commission (SEC), under the revised Corporate Governance Code to have at least two independent directors or a number of independent directors that constitutes 20% of the members of the board, whichever is lesser, but in no case, it shall be less than two.

The presence of independent board of directors can be seen as a constraint to earnings management. According to Peasenell, Pope and Young (2000), as the number of independent directors increases, the probability of managers to engage in income increasing discretionary accruals decreases. This is further supported by the findings of Klein (2002) where a negative relationship between abnormal accruals and the number of independent board of directors was observed. A similar observation as also noted for the case of manufacturing firms where abnormal accruals (i.e., discretionary accruals) is negatively related to the proportion of a corporation's independent directors (Ebrahim, 2007).

However, a contrasting result was noted by Rahman and Ali, (2006), Siregar and Utama (2008) and Banderlipe (2009) where board independence

does not significantly influence earnings management. This can be explained by the dominance of the entity's management in its board of directors, which outweighs the relatively smaller proportion of independent directors.

Independent directors provide additional check and balance. Thus, it is expected that the number of independent directors is negatively related to a firm's level of discretionary accruals used for an opportunistic perspective.

**CEO duality.** CEO duality occurs when a single individual handles the top leadership roles in a corporation, both being the CEO and Chairman of the Board. According to Dechow, Sloan, and Sweeney (1996) I want to return to the first point I made - Dechow et al. have a very interesting sample and, with the financing and governance-structure variables, they have focused our attention on important variables related to earnings manipulation. Dechow et al. caution readers that the results for their sample firms, which undertook extreme earnings manipulation, may not generalize to firms managing earnings within the bounds of GAAP. Indeed, it may be the case that the firms in their sample turned to extreme earnings manipulation (in many cases, manipulation characterized as fraud, companies with CEO duality are more likely to be subjected to scrutiny by the Securities and Exchange Commissions (SEC) due to violations of Generally Accepted Accounting Principles (GAAP). In the revised SEC Corporate Governance Code, a separation between the President and Chairman of the Board is mandated to ensure better accountability and balance of power. This would also promote better checks and balances in an organization whenever decisions are being made. The presence of CEO duality then leads to more discretions being exercised. Thus, it is expected that CEO duality would have a negative impact on a firm's level of earnings management through discretionary accruals.

However, despite the theoretical link as to how CEO duality would affect earnings management, a different result was observed through empirical evidence. The results of Banderlipe (2009) and Ebrahim (2007) both indicated that CEO duality does not significantly affect a company's tendency to engage in earnings management. This is further supported by the results of Marra, Mazzola, and Prencipe (2011) wherein CEO duality, in the pre and post-IFRS era did not

significantly affect a company's use of discretionary accruals to manipulate reported earnings.

Therefore, the presence of CEO duality is hypothesized to be positively associated with a firm's level of discretionary accruals.

**Audit quality.** The presence of external auditors who provide reasonable assurance on the correctness and accuracy of financial statements is expected to reduce the level of information asymmetry between managers of the firm and its stakeholders (Becker, Defond, Jiambalvo, & Subramanyam, 2003). Even though the presence of an external auditor can serve as a constraint to limit a firm's use of discretionary accruals to manage earnings, the intervention of external auditing lies on the audit quality being applied. The literature has discussed various proxies used to denote audit quality such as auditor membership in Big 4 or Big 6 audit firms around the world, audit firm size, and international affiliation. The higher the audit quality, the less likely that firms will engage in income-increasing discretionary accruals (Becker et al., 2003).

Based from previous studies, results obtained revealed that audit quality is negatively associated with earnings management. According to Ebrahim (2007), firms which are audited by big auditing firms reported lesser discretionary accruals. The same is true for the results reported for firms perceived to have lower audit quality. Because these firms are not audited by firms belonging to the Big 6, they reported higher discretionary accruals. In a similar study by Siregar and Utama (2008), results revealed that firms audited by Big 4 audit firms in Indonesia do not use efficient earnings management more than firms audited by non-Big 4 firms.

However, a contradicting result was obtained in the case of Taiwanese firms wherein audit quality did not significantly influence the level of discretionary accruals used in the light of seasoned equity offerings (Shu & Chiang, 2014) and Teoh, Wong, and Rao (1998). Banderlipe (2009) found similar results using the case of publicly-listed firms in the Philippines, wherein auditor type that was proxied by whether a company is audited by Big 4 or non-Big 4 audit firms in the Philippines was found to be an insignificant predictor of earnings management. According to Lee and Choi (2002), the impact of auditor type on discretionary accruals loses its significance if firm size is controlled

**Table 1. Population and Participants**

Electricity, Energy & Power	12
Food, Beverage & Tobacco	21
Construction, Infrastructure & Allied Services	7
Chemicals	6
Other Industrials	8
<b>Total Number of Firms</b>	<b>54</b>
<b>Final Number of Firms</b>	<b>54</b>

because it is then expected that larger firms would be audited by Big 4 firms.

Given the role played by auditors, it is then hypothesized that firms which are audited by Big 4 audit firms that are expected to have higher audit quality would report lesser discretionary accruals, as they were already scrutinized by their auditors.

### Data and Methodology

In conducting the study, we used publicly listed companies belonging to the Industrial Sector of the Philippine Stock Exchange (PSE). In order to be part of the population, a company must have been listed under PSE at least by 2014. From a total of 64 publicly-listed firms in the Industrial Sector, we were able to arrive at a final count of 54 firms, with 10 firms being eliminated due to the presence of data constraints (unavailability of data needed to compute for discretionary accruals). Presented below is the breakdown of the 54 firms, classified using the subsector in which they belong to. In addition, the study was designed to be cross-sectional, focusing on firms for a single time period, year 2014 in this case. Year 2015 was not used in the study because one-period ahead change in earnings is needed and thus, 2016 figures are still unavailable as of this point.

In order to proceed with the study, the first thing done was to estimate the level of discretionary accruals, the proxy for earnings management. In this study, the modified Jones (1995) model as proposed by Dechow, Sloan and Sweeney (1995) was used. This is a modification of the original Jones (1991) model. The estimation was done using the following regression model:

$$\frac{TACC_{it}}{TA_{t-1}} = \beta_0 + \beta_1 \left( \frac{1}{TA_{it-1}} \right) + \beta_2 \left( \frac{\Delta Rev_{it} - \Delta AR_{it}}{TA_{t-1}} \right) + \beta_3 \frac{PPE_{it}}{TA_{t-1}} + \varepsilon_{it} \quad (1)$$

where:

$TACC_i$  = total accruals of firm  $i$

$TA_{it-1}$  = total assets of firm  $i$  at the beginning of the year

$\Delta Rev_{it}$  = change in revenues from year  $t-1$  to year  $t$

$\Delta AR_i$  = change in accounts receivable from year  $t-1$  to year  $t$

$PPE_i$  = gross property, plant and equipment of firm  $i$   
 $TA_{it-1}$  was used to scale the variables in the regression model.

We used the above regression equation to run among the sample firms in the industrial sector. The parameters obtained from such regression equation was then used to separate a firm's non-discretionary accruals and discretionary accruals. Effectively, the residuals obtained from the equation is the measure used for discretionary accruals. After discretionary accruals were obtained, the next phase of the study was undertaken wherein the type of earnings management utilized by industrial firms was determined, along with how it was affected by firm-specific and corporate governance-related variables.

### Type of Earnings Management Employed

In order to determine whether industrial firms in PSE employ opportunistic or efficient earnings management, the following regression model was adopted:

$$\Delta EARN = \beta_0 + \beta_1 NDACC_i + \beta_2 DACC_i + \beta_3 CFO_i + \beta_4 PROF_i + \beta_6 LEV_i + \beta_7 SIZE_i + \varepsilon \quad (2)$$

where:

$\Delta EARN$  change in Net Income (future earnings)  
*DACC* discretionary accruals  
*NDACC* non-discretionary accruals  
*CFO* cash flows from operations  
*PROF* profitability, return on assets  
*LEV* leverage, debt ratio  
*SIZE* firm size, natural log of total assets

*PROF* profitability, return on assets  
*LEV* leverage, debt ratio  
*SIZE* firm size, natural log of total assets  
*INDEPDIR* proportion of independent directors  
*CEODUAL* dummy for CEO Duality; 1 if there is CEO duality, otherwise, 0.  
*BIG 4* dummy for audit quality; 1 if audited by Big 4 audit firms otherwise, 0.  
*BSIZE* board size, the number of board of directors

If firms are engaged in opportunistic earnings management, it is expected that discretionary accruals significantly and negatively affects the change in net income, one period after. On the contrary, earnings management is deemed to be efficient if earnings management significantly and positively influences the change in net income one period after. Non-discretionary accruals, cash flow from operations, profitability, and leverage were used as control variables.

**Determinants of Earnings Management**

$$DACC = \beta_0 + \beta_1 CFO_i + \beta_2 PROF_i + \beta_3 LEV_i + \beta_4 SIZE_i + \beta_6 INDEPDIR_i + \beta_7 CEODUAL_i + \beta_8 BIG4_i + \beta_9 BSIZE_i + \varepsilon \tag{3}$$

where:

*DACC* discretionary accruals  
*CFO* cash flows from operations

The above cross-sectional regression equation was used to determine which firm-specific or corporate governance mechanisms significantly influences a firm’s earnings management activities as denoted using discretionary accruals.

**Results and Discussion**

Based on the results displayed in Tables 2 and 3, it can be observed that for the time period covered, the mean change in future earnings is at 0.010295200, which then implies that firms experienced an increase in future earnings. With respect to reported accruals, non-discretionary accruals (which is more of a result of the firm’s working capital needs and normal operating cycle) composed a larger percentage of the firm’s total accruals. For the case of discretionary accruals, it can be observed that firms, in the period covered, engaged in income-increasing discretionary accruals (positive discretionary accruals) as evidenced by a mean of 0.000000640.

**Table 2.** Descriptive Statistics for Continuous Variables

	Mean	Standard Deviation	Minimum	Maximum
EARN	0.010295200	0.097934000	-0.417813900	0.342382300
NDACC	0.005958000	0.067947200	-0.420580500	0.140897900
DACC	0.000000640	0.116952100	-0.349194000	0.352735900
CFO	0.076968700	0.092612400	-0.120415500	0.381645800
PROF	0.061438900	0.105689900	-0.401100000	0.349600000
SIZE	15.64917000	2.327648000	10.611700000	19.647070000
LEV	0.552405600	0.915812800	-2.168200000	4.442500000
INDEPDIR	0.243629800	0.091854100	0.000000000	0.500000000
BSIZE	9.092593000	2.058288000	5.000000000	15.000000000

**Table 3** Summary for Dummy Variables

	Dummy = 1		Dummy = 0	
	Frequency	Proportion	Frequency	Proportion
CEODUAL	30	55.56%	24	44.44%
BIG4	37	68.52%	17	31.48%

**Table 4.** Regression of Future Profitability on Discretionary Accruals

$\Delta$ EARN	Coefficient	p-value
NDACC	0.2950874	0.002***
DACC	0.9628574	0.000***
CFO	-1.094127	0.000***
PROF	1.076956	0.000***
SIZE	-0.0028074	0.352
LEV	-0.0016127	0.831
constant	0.0714084	0.110
N	54	
Adj. R-squared	0.8060	
F-statistic	37.70	
p-value (F-statistic)	0.0000	

\*\*\*Significant at 1%, \*\*significant at 5%, \*significant at 10%

### **Type of Earnings Management Employed**

From the above regression output, it can be observed that discretionary accruals significantly influence future profitability of industrial firms. Further investigation also reveals that discretionary accruals positively affect future profitability. The results of the study confirm that for the case of the industrial firms listed in PSE, earnings management is used in the context of an efficient, rather than in an opportunistic perspective. It can be observed that the use of discretionary accruals improved the predictability of the firms' future profitability and thus, can be seen as a signaling mechanism. This is in contrast with the typical expectations attached with earnings management, that it is always taken in the context of an opportunistic behavior.

In this regard, earnings management through discretionary accruals is used as a signaling mechanism that reduces information asymmetry between the firm and its stakeholders to communicate value relevant information. Through their exercise of judgment and discretion in reporting discretionary accruals,

managers can improve the ability of earnings to reflect fundamental value (Subramanyam, 1996). Through discretionary accruals, managers can also communicate private information reflected in earnings as well as their prospects regarding the firm's future profitability and performance that can also help improve earnings predictability. The results of the study confirm the findings of Siregar and Utama (2008), Louis and Robinson (2005), and Subramanyam (1996) wherein earnings management was observed to be a signaling mechanism that helps communicate pertinent information about the firm's future performance.

### **Determinants of Earnings Management**

Among the firm-specific characteristics that can influence a firm's level of discretionary accruals, it can be observed that only cash flows from operations, profitability, and leverage significantly influence earnings management. Firm size, on the other hand, does not significantly influence earnings management.

Cash flows from operations significantly and positively influences a firm's discretionary accruals. It



**Table 5.** Regression of Discretionary Accruals on Firm Specific Characteristics and Corporate Governance Variables

DACC	Coefficient	p-value
<i>CFO</i>	0.89854210	0.000***
<i>PROF</i>	-0.62035960	0.000***
<i>SIZE</i>	-0.0092267	0.125
<i>LEV</i>	0.0325080	0.037**
<i>BSIZE</i>	0.0012227	0.864
<i>INDEPDIR</i>	-0.065136	0.653
<i>CEODUAL</i>	0.0273477	0.269
<i>BIG4</i>	-0.0081714	0.758
<i>cons</i>	0.0905445	0.414
<i>N</i>	54	
<i>Adj. R-Squared</i>	0.4596	
<i>F-Statistic</i>	6.64	
<i>p-value (F-statistic)</i>	0.0000	

\*\*\*Significant at 1%, \*\*significant at 5%, \*significant at 10%

can be inferred that firms with higher cash flows from operations, which are more likely to have higher excess cash, would present more incentives for managers to engage in earnings management. Firms with relatively higher free cash flows would use discretionary accruals as a means of offsetting low or unfavorable earnings figures reported (Chung, Firth, & Kim, 2005).

Leverage, or the firm's debt ratio, also significantly and positively influences discretionary accruals. This result is in line with the debt-contracting hypothesis. Firm's which are highly leveraged, who are exposed to higher amounts of debt have higher incentives to engage in earnings management. As the firm's level of debt increases, it can be confronted with varying contractual restrictions, debt covenants, and other arrangements. Thus, it is expected that managers would exercise their discretion in reporting earnings in these cases in order to avoid possible costs and conflicts due to non-compliance with debt-related agreements and arrangements. Firms which are highly indebted are exposed to incurring possible costs if they fail to meet certain conditions or contractual requirements associated with their borrowings and thus, presents an opportunity for them to engage in earnings management via discretionary accruals to avoid violating such conditions. The results obtained in the study confirm the results of Fung and Goodwin

(2013) wherein a positive association between debt and earnings management was also observed.

Profitability, on the contrary, negatively influences earnings management. This implies that less profitable firms are more likely to engage in earnings management than more profitable firms. It is quite expected that managers of firms that are less profitable would engage in earnings management to at least paint a better picture of the firm's performance or results of operations. Furthermore, this is also consistent with the Prospect Theory (Kahneman and Tversky, 1979). Managers of firms incurring losses (or less profitable) are more likely to engage in earnings management. This is consistent with a risk-seeking behavior since it gives them clearer incentives to manipulate reported earnings. In this case, the incentive comes in improving the firm's image to its stakeholders.

For the case of corporate governance variables such as board size, board independence, CEO duality, and audit quality, it was observed that none of these variables significantly influences a firm's level of discretionary accruals. With respect to board size and board independence, as measured by the number of board of directors, the result of the study confirms the findings of Banderlipe (2009) and Jamaludin et al. (2015). While it is intuitive that the presence of more board of directors brings in more skills or expertise that

can help mitigate earnings management, it cannot be inferred that these directors would have the necessary financial expertise to understand earnings management and eventually help mitigate it. Perhaps, it is the financial expertise of the board of directors that can then be considered as a possible mitigating factor of earnings management.

CEO duality, as a possible determinant of earnings management, was also proven to be insignificant. This can be explained by the fact that the Securities and Exchange Commission (SEC) corporate governance code mandates that in the event the positions of CEO and Chairman of the Board are unified, proper checks and balances should be in place. The result of the study confirms the findings of Ebrahim (2007) and Banderlipe (2009) wherein CEO duality did not also significantly influence earnings management.

Lastly, audit quality was also proven to be an insignificant predictor of earnings management. It can be explained that an audit is designed to provide reasonable assurance as to the correctness and accuracy of financial statements. Discretionary accruals are not quite directly observable from financial statement evidence. Auditors would have to scrutinize the financial statements further to see clear evidences of earnings management. Thus, whether a company is audited by a Big 4 audit firm or a non-Big 4 audit firm, it cannot be expected that detecting earnings management would be on top of their list for audit work. The results obtained confirmed the findings of Banderlipe (2009) and Lee and Choi (2002).

## Conclusions and Recommendations

The results obtained in the study answered the following questions, “What type of earnings management strategy is employed by industrial firms in the Philippines?”; and “What factors influence these industrial firms’ earnings management activities?” First, it was observed that earnings management, in this case, is used from an efficient perspective as a signaling device to help communicate information to stakeholders, as opposed to an opportunistic motive.

For the determinants of earnings management, among firm-specific characteristics, it was only cash flows from operations, profitability, and leverage that significantly influence discretionary accruals.

Cash flows from operations and leverage positively influence discretionary accruals while profitability negatively influences discretionary accruals. Corporate governance variables, board size, board independence, CEO duality, and audit quality were all insignificant predictors of earnings management.

For future studies to further establish the determinants of earnings management, extending the time period covered can be considered instead of focusing on a single year. Furthermore, to provide a better understanding as to how corporate governance variables affect earnings management, other variables can be considered such as ownership type which can either be proxied through family ownership, intuitional ownership, or managerial ownership. With respect to the role of board of directors, we can also consider financial expertise of the members of the board, aside from just considering their number.

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