

# Corporate Governance and Earnings Management: The Role of Board of Directors and Audit Committee in Financially Distressed Firms

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## ABSTRACT

*This study investigates the association between corporate governance and earnings management practices of Australian's financially distressed firms. Based on a sample of 164 firm-year incorporating non-financial firms experiencing financial distress, the cross-sectional modified Jones (1991) model is used to measure discretionary accruals (the proxy for earnings management). Board of directors and audit committee characteristic variables are employed as the key predictor variables for measuring the effectiveness of corporate governance. This study finds that the companies are seeking to reduce their reported earnings to increase the likelihood of making a profit in the following year with the goal of avoiding bankruptcy; a larger number of directors on a board is less effective in detecting and constraining the practices of earnings management by managers of distressed firms; an active audit committee plays a positive role in detecting and reducing the probability of earnings management. The findings of this study have implications especially to regulators and corporate governance reformists that determine corporate governance rules. This is primarily in regard to the efforts made by listed companies in maintaining their sustainability through more emphases on the process for monitoring and selection of board of directors and audit committee members to reinforce effectiveness in managerial performance evaluation.*

**Keywords:** *Bankruptcy; corporate governance; distressed firms; earnings management; Australia*

## **INTRODUCTION**

Organizational roles of the board of directors and special committees in the corporate governance become more crucial in the context of financial sustainability. The purpose of this study is to further investigate the practices of corporate governance and earnings management of firms with financial distress standing. Although corporate distress has been a topic of research interest for many years, the practice of earnings management of Australian firms with financial distress standing has received relatively little attention. Shahwan (2015) documents that the association between financially distressed firms and corporate governance has become an academic debate since 1980s. Whilst, several studies (e.g. Abdullah, 2006; Kesner, Victor & Lamont, 1986; Levitt, 1998) indicate that corporate failures have led to criticism of corporate governance systems. They suspect that boards of directors and audit committees are not doing their jobs well. Furthermore, Demirkan and Platt (2009), Dimitras, Kyriakou and Iatridis (2015) and Segal and Segal (2016) did find that the quality of corporate governance plays a significant role in the decision to exercise earnings management in financially distressed firms. However, research into the effectiveness of corporate governance in mitigating earnings management behaviours in financially distressed firms in Australia is lacking. This study provides further evidence of the relationship between corporate governance monitoring mechanisms and the level of earnings management in firms having financial distress standing in Australia for a twenty-year period from 1989 to 2008. This data is from a domestic setting that has not been investigated previously. The reasons for selecting Australia are, firstly, the Australian economy maintained strong growth throughout the entire study period. Therefore, in such a robust environment, distressed firms are of special interest. Secondly, Australia follows free market policies like the United States. We seek to provide external validation of the results documented based on studies on the largely US market. Our study contributes to the international understanding of the empirical question that, in the past, has been drawn on data from the United States (Charitou, Lambertides & Trigeorgis, 2007; Demirkan & Platt, 2009), Canada (Elloumi & Gueyie, 2001), Germany (Jostarndt & Sautner, 2008), China (Chen, Chen & Huang, 2010; Hui & Jing, 2008; Li, Wang & Deng, 2008), Spanish (Ajona, Dallo & Alegria, 2008), Malaysia (Abdullah, 2006; Rahmat & Iskandar, 2009), Taiwan (Chang, 2009), Mexico (Price, Roman & Rountree, 2011),

and Europe (Dimitras *et al.*, 2015). In the Australian context, Hensher and Jones (2007); and Chancharat, Davy, McCrae and Tian (2010) examine the determinants of multiple states of corporate financial distress. This study is one of the first<sup>1</sup> to analyse corporate governance in Australian firms with financial distress standing.

Our study provides empirical evidence to fill the gap in the literature, whilst it may seem intuitive that earnings management and corporate governance linkage for financially healthy firms is also true for financially distressed firms. There have already been a considerable number of studies examining the corporate governance and earnings management practices that are carried out for financially healthy companies (e.g. Garcia-Meca & Sanchez-Ballesta, 2009; Hazarika, Karpoff & Nahata, 2012; Hutchinson, Percy & Erkurtoglu, 2008; Jaggi & Leung, 2007; Lo, Raymond & Firth, 2010; Peasnell, Pope & Young, 2005; Xie, Davidson & DaDalt, 2003; Zgami & Halioui, 2016).

Additionally, Shahwan (2015) investigates the quality of corporate governance practices and their impact on firm performance and financial distress. Whilst, most other previous studies investigate the association between financial distress and corporate governance that falls into the basic stream of studies aiming at clarifying whether the association between corporate governance mechanisms and earnings management practices in healthy firms differs from those in distressed firms and their impact on the probability of default (Al-Tamal-Tamimi, 2012; Swain, 2009). Previous studies on financial distressed firms, such as Muranda (2006) are mainly concerned with the impact of corporate governance mechanisms on the survival of distressed firms. This study completes previous research in two ways. First, it focuses on firms that are already in financial distress standing. Second, it provides useful information on the relationship between earnings management and some corporate governance's characteristics of

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1 Izan 1984, 'Corporate distress in Australia', *Journal of Banking and Finance*, 8: 303–320 examines the indications of Australian corporate distressed firms. Whilst, Davidson, *et al.* 2005, 'Internal governance structures and earnings management' *Accounting and Finance*, 45, 2: 241–267 investigate the association between internal governance characteristics and earnings management in Australian normal or healthy companies.

the financial years prior to reaching a distress standing of Australian firms, whilst it also controls firms' financial characteristics.

The paper is organized as follows. Section 2 establishes the theoretical framework underlying corporate governance and earnings management linkages. Section 3 outlines the research design. The primary results including descriptive statistics, correlations and regression analysis are then presented in Section 4. Conclusions and implications for future research are discussed in the final section.

## **THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

Managers of distressed firms are more likely to manage their reported earnings to conceal or postpone a firm's distressed condition (e.g. Burgstahler & Dichev, 1997; Campa & Camacho-Minano, 2015; Charitou *et al.*, 2007; DeAngelo & DeAngelo, 1994; Gombola, Ho & Huang, 2016; Lin, Lo & Wu, 2016; Rosner, 2003). Earnings management is intended to conceal the true reporting earnings figure and has potentially negative effects on investors' interests. This need to protect shareholders' rights leads to the need to monitor management behaviour. To ensure that managers act in the best interests of the shareholders, the board of directors is charged with the task of monitoring the activities of management (Jensen & Meckling, 1976).

The theoretical linkage between corporate governance and financial distress originates from organizational theory literature. The literature reports that the effectiveness of boards in protecting the shareholders' value is associated with the independence of a board of directors (Dechow, Ge & Schrand, 2010). Furthermore, Kim, Liao & Wang (2015) and Ye (2014) find that the portion between insider and independent directors as representation on boards influences a firm's financial condition through the board involvement in the strategic decision making process. Fama (1980) suggests that the domination of the board of directors by top management and the deficiency of involvement of the independent directors of the board directors in the strategic decision making can lead to conspiracy and transfer of stockholder wealth and this condition may be extremely harmful to the firm during a period of financial distress. The lack of involvement in strategic

decision making by an independent director may be a potential explanation of distress which is supported by Elloumi and Gueyie (2001) who find that firms in persistent financial distress tend to have weak corporate governance. Previous studies that investigate the association between corporate governance and financial distress also document that dominant CEOs tend to be associated with firm bankruptcy (Hambrick & D'Aveni, 1992) and the percentage of insider directors is higher on boards of declining firms (Hambrick & D'Aveni, 1992). However, the implications of an economics approach to the organizational theory as a system of negotiations has not been well developed and agency theory has been widely used to examine organizations from a transaction perspective. This study refers to the agency theory in developing the hypotheses that explain the relationship between corporate governance and earnings management.

Using a sample of US and Chinese firms, Klein (2002) and Firth, Fung and Rui (2007), respectively, report a negative association between board independence and the magnitude of earnings management. In addition, Dechow, Sloan and Sweeney (1996) reveal that the greater the proportion of independent directors the less likely a firm is to be subjected to SEC enforcement actions for violations of U.S. GAAP. Expanding this rationale and based on the theoretical framework, it is suggested that managers of distressed firms are more likely to manage their reported earnings to conceal or postpone a firm's distressed condition (e.g. Burgstahler & Dichev, 1997; Charitou et al., 2007; DeAngelo & DeAngelo, 1994; Rosner, 2003).

Furthermore, the majority of previous studies investigating the relationship between a board of directors' composition and firm value concentrates on the role of the board at large; however, a great deal of the board's decision making occurs at the committee level (Ellstrand, Daily & Johnson, 1999). It is expected that this committee provides shareholders with the greatest protection in maintaining the reliability and credibility of a company's financial statements (Bradbury, 1990). The study of United Kingdom firms by Collier (1993b) suggests that firms establish audit committees to alleviate their agency problem and reduce information asymmetry between insiders and outsiders. Evidence from prior studies shows that the formation of audit committees associates positively with the informativeness of reported earnings (Mitra, Hossain & Deis, 2007) and less financial fraud (Dechow *et al.*, 1996; McMullen & Raghunandan, 1996).

The audit committee plays a key role in assisting the board of directors to fulfil its corporate governance and oversight responsibilities in issues relevant to the integrity of a company's financial reporting. Prior literature indicates that the effectiveness of an audit committee is dependent on its objectivity as audit committees can play an important role in the financial reporting process and in stimulating the audit quality (Bedard, Chtourou & Courteau, 2004; Davidson, Goodwin-Stewart & Kent, 2005; Kasipillai & Mahenthiran, 2013). An audit committee would ideally be composed entirely of non-executive or independent directors (Lipton & Lorch, 1992; Menon & Williams, 1994). This argument is consistent with the finding of Yin, Gaou, Li and Lu (2015) that audit committee independence is associated with a higher degree of active oversight and Jiambalvo (1996) that audit committee independence is associated with a lower incidence of financial statements fraud. Expanding this rationale of its objectivity or independence to financial distress, one can assume that the effectiveness of an audit committee in financially distressed firms is expected to be the same as that of in healthy firms. The audit committee plays an important role in reducing earnings management initiated by the management of an organization. Previous studies document that audit committees are associated with lower levels of earnings management (Badolato, Donelson & Ege, 2014). Based on the above reasoning, we hypothesise that:

H<sub>1a</sub>: There is a negative association between the proportion of independent directors of the board of directors in financially distressed firms and the level of earnings management.

H<sub>1b</sub>: There is a negative association between the proportion of independent members of the audit committee in financially distressed firms and the level of earnings management.

The literature has documented that meeting frequency indicates the effectiveness both in the case of board of directors' as well as audit committees' functionality (Greco, 2011; Sharma, Naicker & Lee, 2009). Board and audit committee meeting frequency has been used as a proxy for the level of monitoring an activity (Greco, 2011; Wijethilake, Ekanayake & Parera, 2015). A primary impediment to board of directors' effectiveness is a lack of time spent in executing their duties (Lipton & Lorch, 1992) and Vafeas (1999) did argue that an increase in the number of board meetings

might enhance the level of oversight of the financial reporting process, thereby improving board performance. Cohen, Hayes, Krishnamoorthy, Monroe and Wright (2016) further suggest that when the meetings between auditors and the audit committee are more frequent, then the audit committee becomes more involved and issues discussed are more substantive. Past research also supports the importance of audit committee meeting frequency. Beasley, Carcello, Hermanson and Lapides (2000) document that audit committees of “reputable” companies meet more often than those companies later convicted of fraudulent activities. Additionally, audit committees of companies that meet at least four times a year are less likely to have restated their financial statements (Abbott, Parker & Peter, 2004). Furthermore, Xie *et al.* (2003) also provide an evidence that audit committee meeting frequency is negatively related to the levels of discretionary accruals. Expanding this reasoning to financial distressed firms that finally reach a financial distress standing, we hypothesize, bifurcated to take into account both board of directors’ meeting frequency as well as audit committee meeting frequency that:

H<sub>2a</sub>: There is a negative association between the board of directors’ meeting frequency in financially distressed firms and the level of earnings management.

H<sub>2b</sub>: There is a negative association between the audit committee meeting frequency in financially distressed firms and the level of earnings management.

Many empirical studies have sought to find the optimal size of a company’s governing boards. Study on data from an international comparison incorporating French and Canadian listed companies, Joubert and Fakhfakh (2012) document that an effective board of directors is able to provide a monitoring mechanism to ensure a high quality of earnings. Uzun, Szewczyk and Varma (2004) find that the board size is larger for fraud companies than no fraud companies. Huther (1997) suggests that, as in any other decision making body, governing boards face coordination problems. These problems increase as the size of governing boards increases.

More recently, Pucheta-Martinez and Garcia-Meca (2014) document that audit committees and board structure and composition significantly

enhance financial reporting quality. However, there is a mixed evidence in the relation between audit committees and the board's structure and composition. Fodio, Ibikunle and Oba (2013) find that audit committee size is significant and negatively associated with discretionary accruals. Whilst, He and Yang (2014) suggest that audit committee size is positively associated with earnings management. Thus, the influence of the audit committee and board structure on earnings management documents mixed directions; the direction of the earnings management could be income-increasing or income-decreasing. Expanding this rationale to financial distress, one can assume that financial distress experienced by firms provides incentives to managers for earnings manipulation. In this study, we investigate empirically the effectiveness of the audit committee and board structure in firms prior to the financial distress standing. Based on these prior findings, we hypothesize that:

H<sub>3a</sub>: There is an association between the number of directors on a board in financially distressed firms and the level of earnings management

H<sub>3b</sub>: There is an association between the number of members on an audit committee in financially distressed firms and the level of earnings management.

Yasser and Al Mamun (2015) and Stockmans, Lybaert and Voordeckers (2013) investigate the influence of CEO duality on earnings management. They document that CEO duality, where there is a dual role in that the CEO is also the chairman of the board, causes dysfunctional audit committee. They find that CEO duality positively influences the level of earnings management. Previous studies of CEO duality on distressed firms also find that CEO duality in distressed firms is more likely to experience bankruptcy. For example, Daily and Dalton (1994) report that firms with the CEO acting as the board chairman are more likely to go bankrupt than those firms that have separately designated roles for the CEO and the board chair. Therefore, we hypothesize that:

H<sub>4</sub>: There is a positive association between CEO duality in financially distressed firms and the level of earnings management.



Overall it is posited that these hypotheses will help predict the extent of earning management in financially distressed firms in the periods prior to and in the year that a firm finally reaches a financial distress standing.

## **RESEARCH DESIGN**

This study focuses on Australian firms with financial distress standing. The data population of this study are extracted from the ORBIS databases of Bureau Van Dijk (BvD). To be included in the analyses, firms must meet two criteria. Firstly, each firm must have been in a financial distress standing. In this study, we extracted financially distressed firms defined as those are classified as bankrupt, dissolved, in liquidation or inactive (companies that are no longer listed following, for example, a takeover or merger due to the financial difficulties). Secondly, each firm must have its annual reports available.

In this study, we identify Australian non-financial firms that fall into a categorization as financial distressed firms by ORBIS databases of Bureau Van Dijk (BvD) occurring between the periods of 1998 and 2008. Then, we match the firms with their annual reports availability. There were 68 firms with a financial distress standing, having their annual reports available. Then, we use the financial data of those 68 firms. We examined the financial data of those firms for six years prior to the distress standing plus that of the year of distress standing for each firm. The corporate governance information is hand collected from each firm's annual report. Then, we scrutinized all of those 68 firms with financial distress standing occurring in the periods of 1998 and 2008 that forms an imbalanced panel of 272 firm-year. The panel is imbalanced because firms reach their financial distress standing occur in different years during the period of the study. Nevertheless, the estimations based on the imbalanced panels are as reliable as those based on the balanced panels (Pucheta-Martinez & Garcia-Meca, 2014). For the technical analysis, we need one extra year's data to compute discretionary accruals; that is a proxy for earnings management. Of the 272 firm-year, there were 204 observations providing a complete data set to compute discretionary accruals. However, 40 of the 204 observations for the control variables data was not available. Finally, this study is based on a final sample of 164 firm-year incorporating non-financial firms experiencing financial distressed.

This study uses discretionary accruals to proxy for earnings management. Consistent with contemporary studies in earnings management, this study focuses on the absolute (unsigned or non-directional) value rather than the actual sign of discretionary accruals as a proxy for earnings management. The magnitude of unsigned discretionary accruals is the best measure to indicate the opportunistic behaviour of management without any concern as to whether they manage earnings number upwards or downwards (Ferguson, Seow & Young, 2004; Francis, Maydew & Sparks, 1999; Walker, 2004). Prior to estimating discretionary accruals, total accruals (‘TAC’) are calculated as:

$$TAC_{jt} = (\Delta CA_{jt} - \Delta Cash_{jt}) - (\Delta CL_{jt} - \Delta LTD_{jt} - \Delta ITP_{jt}) - DPA_{jt}$$

Where:  $TAC_{jt}$  = total accruals for firm  $j$  in time period  $t$ ;  $\Delta CA_{jt}$  = change in current assets for firm  $j$  from time period  $t-1$  to  $t$ ;  $\Delta Cash_{jt}$  = change in cash balance for firm  $j$  from time period  $t-1$  to  $t$ ;  $\Delta CL_{jt}$  = change in current liabilities for firm  $j$  from time period  $t-1$  to  $t$ ;  $\Delta LTD_{jt}$  = change in long-term debt included in current liabilities for firm  $k$  from time period  $t-1$  to  $t$ ;  $\Delta ITP_{jt}$  = change in income tax payable for firm  $j$  from time period  $t-1$  to  $t$ ; and  $DPA_{jt}$  = depreciation and amortization expense for firm  $j$  from time period to  $t$ .

TAC then is decomposed into normal accruals (‘NAC’) and discretionary accruals (‘DAC’) using the cross-sectional modified Jones (1991) model<sup>2</sup> defined formally as:

$$TAC_{jk,t} / TA_{jk,t-1} = \alpha_{jt} [1 / TA_{jk,t-1}] + \beta_{jt} [(\Delta REV_{jk,t} - \Delta REC_{jk,t}) / TA_{jk,t-1}] + \gamma_{j,t} [PPE_{jk,t} / TA_{jk,t-1}] + \varepsilon_{jk,t}$$

Where:  $TAC_{jk,t}$  = total accruals for firm  $j$  in industry  $k$  in year  $t$ ;  $TA_{jk,t-1}$  = total assets for firm  $j$  in industry  $k$  at the end of year  $t-1$ ;  $\Delta REV_{jk,t}$  = change in net sales for firm  $j$  in industry  $k$  between years  $t-1$  and  $t$ ;  $\Delta REC_{jk,t}$  = change in receivables for firm  $j$  in industry  $k$  between years  $t-1$  and  $t$ ;  $PPE_{jk,t}$  = gross property, plant and equipment for firm  $j$  in industry  $k$  in the year  $t$ ;  $\alpha_j$ ,  $\beta_j$ ,  $\gamma_j$  = industry specific estimated coefficients; and  $\varepsilon_j$  = error term.

2 We also estimate discretionary accruals using alternative techniques by inclusion (in separate estimations) to the modified Jones (1991) model of (a) cash flow operating activities (Dechow, 1994; Kim *et al.*, 2003) and (b) return on assets (Ashbaugh *et al.*, 2003; Kothari *et al.*, 2005). Findings using alternative discretionary accruals model estimates are not yielding any significant qualitative differences to the main result.

NAC is defined as the fitted values from Equation 2 whilst DAC is the residual (TAC minus NAC). As discussed above, we use seven different measures of governance monitoring mechanisms from the past literature. These governance mechanisms are grouped by those that relate to the board of directors and those that relate to audit committees: the CEO duality and the number of, independence and meeting frequency of board of directors (Abdullah, 2006; Boo & Sharma, 2008; Carcello et al., 2002; Chang, 2009; O'Sullivan, 2000); and audit committee size, audit committee independence and the number of audit committee meetings (Abbott et al., 2004; Boo & Sharma, 2008; Rahmat & Iskandar, 2009; Stewart & Munro, 2007).

To enhance the explanatory power and fit of the regression model, the following control variables are used: leverage, firm size, auditor quality and type of industry.<sup>3</sup> Following prior earnings management studies (e.g. Becker, DeFond, Jambalvo & Subramanyam, 1998; Chen et al., 2010; Davidson et al., 2005; Francis, Reichelt & Wang, 2005; Frankel, Johnson & Nelson, 2002; Godfrey & Koh, 1998; Gul, Chen & Tsui, 2003), we predict that the coefficients of leverage and industry will be positive whereas the audit quality and firm size will be negative. Proxy measures for the dependent, independent and control variables are explained in the following research model.

To test our hypotheses, we develop the following multivariate model:

$$AbsDAC_i = a_i + a_{i1}\%IndBOD_i + a_{i2}\%IndAudCom_i + a_{i3}BODFreq_i + a_{i4}AudComFreq_i + a_{i5}BODSize_i + a_{i6}AudComSize_i + a_{i7}Duality_i + a_{i8}FSize_i + a_{i9}Leverage_i + a_{i10}AuditQuality_i + a_{i11}Industry_i + \varepsilon_i$$

Where,

*AbsDAC*: Absolute *DACs* firm *i* for year *t* measured by Modified Jones (1991) model.

3 We classify companies into high and low profile industries. High profile industries appear as industries with consumer visibility, a high level of political risk, and concentrated, intense competition (Roberts, 1992). In this study, high profile industries are defined as those from agriculture, mining, basic industry and chemicals, consumer goods, and property, real estate and building construction.

*%IndBOD*: Percentage of non-executive directors on the board of firm *i* for their fiscal year *t*.

*%IndAudCom*: Percentage of the audit committee members are non-executive directors

*BODFreq*: Frequency of board meetings of firm *i* for their fiscal year *t*.

*AudComFreq*: Frequency of audit committee meeting of firm *i* for their fiscal year *t*.

*BODSize*: Total number of board members of firm *i* for their fiscal year *t*.

*AudComSize*: Total number of audit committee members of firm *i* for their fiscal year *t*.

*Duality*: Indicator variable with firm *i* scored one (1) if the board chairman and CEO roles are combined; otherwise scored zero (0).

*FSize*: Natural logarithm of the total sales of firm *i* for their fiscal year *t*.

*Leverage*: Ratio of total debt of firm *i* for year *t* to total owners' equity of firm *i* for year *t*.

*Audit Quality* Indicator variable with firm *i* scored one (1) if its auditor in fiscal year *t* is a Big-4 firm; otherwise scored zero (0).

*Industry*: Indicator variable with firm *i* scored one (1) if high profile industries (from the agriculture; mining; basic industry and chemicals; consumer goods; property, real estate and building construction); otherwise scored zero (0).

## **EMPIRICAL RESULTS**

Table 1 reports the mean figures of leverage, return on assets ('ROA') and accruals performance for the sample firms from six years prior to the bankruptcy filing (t-6) to the year of bankruptcy.

As shown in Table 1, the level of debt to the total owner's equity (Leverage) increases significantly starting at five years prior to bankruptcy-filing reaching the highest level in t-2 (74%). A recovery seems to occur in t-1 (-70%), falling to the lowest level around the event year (-32%). Return on assets also drops consistently from t-6 to three years prior to bankruptcy-filing (from -1% to -37%). A recovery takes place in t-2 (-9%). The accounting earnings falls to its lowest performance in t -1 (-98%) increasing significantly in the event year (-2%). Overall, there is a clear and consistent decline in financial performance indicating serious financial problems in the sample firms (see Figure 1).

**Table 1: Mean Leverage, ROA and Accruals Levels**

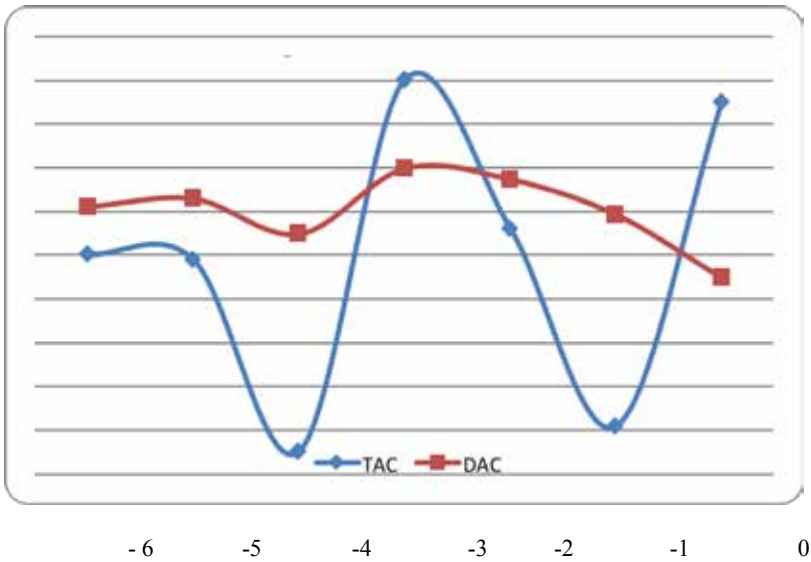
Year	-6	-5	-4	-3	-2	-1	0
Leverage	39.83	39.37	53.56	58.13	74.32	69.74	31.90
ROA	-1.17	-7.59	-23.07	-37.26	-9.46	-98.46	-1.67
TAC	-0.0484	-0.0545	-0.2737	0.1513	-0.0192	-0.2446	0.1256
DAC	0.0064	0.0157	-0.0247	0.0503	0.0379	-0.0026	-0.0746
N	7	18	23	33	40	38	5

**Legend:** Leverage is the ratio of total debt to total owners' equity; ROA (return on assets) is the ratio of net income to total assets; TAC is the total accruals; DAC is the discretionary accruals



Legend: Leverage is the ratio of total debt to total owners' equity; ROA (return on assets) is the ratio of net income to total assets.

**Figure 1: Mean Leverage and ROA**



Legend: TAC is the total accruals; DAC is the discretionary accruals.

**Figure 2: Mean TAC and DAC**

The behaviour of DAC, standardized by beginning-of-year total assets, follows a similar pattern to TAC. As shown in Table 1 and Figure 2, DAC declines gradually from t-6 to t-4 and recovering at about t-3. Starting from t-3, both accruals (TAC and DAC) for a second time decline noticeably. Mean TAC decreases deeply compared to DAC. By t-1, TAC reaches its lowest level at -24% whilst the lowest level of DAC occurs at the bankruptcy-filing event (t 0). In summary, the negative performance of accruals, especially TAC, indicates that the sample firms are facing severe financial distress.

**Table 2: Descriptive Statistics Dependent, Independent and Control Variables**

<b>Panel A– Continuous Variables</b>					
	Mean	Median	Std Deviation	Minimum	Maximum
AbsDAC	0.13	0.07	0.15	0.01	0.75
%IndBOD	70.54	75.00	15.87	20.00	100.00
%IndAud-Com	89.65	100.00	16.22	33.33	100.00
BODFreq	10.88	11.00	4.84	2	27
AudComFreq	3.53	3.00	2.05	1	16
BODSize	6.02	6.00	1.93	3	11
AudComSize	3.21	3.00	0.83	2	6
FSize (in thousand AUD)	653,438.77	120,453.00	1,476,517.42	317.00	10,487,800.00
Leverage	60.49	38.70	112.87	1.01	531.51
<b>Panel B – Categorical Variables</b>					
				Frequency	Percentage (%)
Duality:					
Board only				25	15.24
Board and CEO				139	84.76
Audit Quality:					
Non Big 4				31	18.90
Big 4				133	81.10
Industry:					
Low Profile				58	35.37
High Profile				106	64.63

**Legend:**

*AbsDAC*: Absolute *DACs* firm *i* for year *t* measured by Modified Jones (1991) model. *FSize*: Natural logarithm of the total sales of firm *i* for their fiscal year *t*.

*Leverage*: Ratio of total debt of firm *i* for year *t* to total owners' equity of firm *i* for year *t*.

*Audit Quality* Indicator variable with firm *i* scored one (1) if its auditor in fiscal year *t* is a Big-4 firm; otherwise scored zero (0).

*Industry*: Indicator variable with firm *i* scored one (1) if high profile industries (from the agriculture; mining; basic industry and chemicals; consumer goods; property, real estate and building construction); otherwise scored zero (0).

*BODSize*: Total number of board members of firm *i* for their fiscal year *t*.

*%IndBOD*: Percentage of non-executive directors on the board of firm *i* for their fiscal year *t*.

*BODFreq*: Frequency of board meetings of firm *i* for their fiscal year *t*.

*Duality*: Indicator variable with firm *i* scored one (1) if the board chairman and CEO roles are combined; otherwise scored zero (0).

*AudComSize*: Total number of audit committee members of firm *i* for their fiscal year *t*.

*%IndAudCom*: Percentage of the audit committee members are non-executive directors

*AudComFreq*: Frequency of audit committee meeting of firm *i* for their fiscal year *t*.

Table 2 provides the descriptive statistics for the dependent, independent and control variables. Panel A shows the descriptive statistics for the continuous variables in the regression model. Panel B exhibits details for the categorical variables.

As shown in Table 2, average absolute value of discretionary accruals ('AbsDAC') is 0.13% of the total assets at the beginning of the year. The sample firms have, on average, 6 and 3 members sitting on the board and audit committee respectively. On average, 71% of the directors on boards and 90% of the directors on audit committee are non-executive directors. The data reveals that around two thirds of the sample firms have 100% independent directors on their audit committees. Board of directors and audit committees hold, on average, 11 and 3 meetings respectively in a typical financial year. The sample firms have a mean total average assets ('FSize') of \$A653.4 million ranging from \$A0.3 million to \$A10.5 billion. Furthermore, average leverage of the sample firms is 60.49%.

Panel B of Table 2 indicates that 85% of board of directors is structured such that the board chairman and the CEO roles are combined (duality of positions). Additionally, 81% of the sample firms use the services of Big 4 audit firms. Finally, 65% of the Australia's distressed firms in the sample are classified as being in high profile industries.

### **Correlation Matrix**

Table 3 provides a Pearson correlation matrix among the dependent, independent and control variables.



**Table 3: Pearson Correlation Matrix**

	<b>%Ind BOD</b>	<b>%Ind AudCom</b>	<b>BODFreq</b>	<b>Aud ComFreq</b>	<b>BODSize</b>	<b>Aud ComSize</b>
AbsDAC	0.006	-0.083	-0.014	-0.120	0.090	0.086
%IndBOD		0.235*	0.320*	0.261*	0.236*	0.248*
%IndAudCom			0.142	-0.008	0.034	-0.344*
BODFreq				0.219*	0.079	0.158**
AudComFreq					0.277*	0.414*
BODSize						0.422*
AudComSize						
FSize						
Leverage						
Duality						
Audit Quality						

(continued)

**Table 3 (continued): Pearson Correlation Matrix**

	<b>Fzise</b>	<b>Leverage</b>	<b>Duality</b>	<b>Audit Quality</b>	<b>Industry</b>
AbsDAC	-0.101	-0.022	-0.022	-0.011	0.040
%IndBOD	0.254*	0.093	-0.268*	0.127	0.109
%IndAudCom	0.148	-0.171**	-0.070	0.181*	0.215**
BODFreq	0.088	0.241*	0.081	0.001	-0.105
AudComFreq	0.252*	0.094	-0.089	0.011	0.124
BODSize	0.604*	0.188**	-0.119	0.256*	0.093
AudComSize	0.263*	0.076	-0.139	0.158**	0.000
FSize		0.228*	-0.137	0.326*	-0.023
Leverage			0.056	0.078	0.140
Duality				-0.031	-0.101
Audit Quality					0.001

**Legend:** \* and \*\* indicate significance at  $p < 0.01$  and  $p < 0.05$  (based on two-tailed tests).

*AbsDAC*: Absolute DACs firm  $i$  for year  $t$  measured by Modified Jones (1991) model. *FSize*: Natural logarithm of the total sales of firm  $i$  for their fiscal year  $t$ . *Leverage*: Ratio of total debt of firm  $i$  for year  $t$  to total owners' equity of firm  $i$  for year  $t$ . *Audit Quality* Indicator variable with firm  $i$  scored one (1) if its auditor in fiscal year  $t$  is a Big-4 firm;

otherwise scored zero (0).

*Industry*: Indicator variable with firm *i* scored one (1) if high profile industries (from the agriculture; mining; basic industry and chemicals; consumer goods; property, real estate and building construction); otherwise scored zero (0). *BODSize*: Total number of board members of firm *i* for their fiscal year *t*. *%IndBOD*: Percentage of non-executive directors on the board of firm *i* for their fiscal year *t*. *BODFreq*: Frequency of board meetings of firm *i* for their fiscal year *t*. *Duality*: Indicator variable with firm *i* scored one (1) if the board chairman and CEO roles are combined; otherwise scored zero (0). *AudComSize*: Total number of audit committee members of firm *i* for their fiscal year *t*. *%IndAudCom*: Percentage of the audit committee members are non-executive directors. *AudComFreq*: Frequency of audit committee meeting of firm *i* for their fiscal year *t*.

Pearson correlation results reported in Table 3 do not provide a comprehensive support for the study's hypotheses. AbsDAC is negatively correlated with BODFreq, Duality, %IndAudCom and AudComFreq, but it is positively correlated with BODSize, %IndBOD and AudComSize. However, these relationships are not significant. There are some significant positive and negative correlations among the seven alternative measures of monitoring devices, with the correlation values ranging from 16% to 42%. In respect to correlations between independent and control variables, and amongst the control variables themselves, the highest correlations ( $r = 60\%$ ) are between BODSize and FSize. Table 3 shows the correlation matrix in which we notice that there are no high correlations among the variables across sample and hence multicollinearity is not a concern in the model estimations, which is confirmed by VIF as shown in Table 4.

## Multivariate Main Results

The main results for testing the hypotheses are reported in Table 4. Table 4 reports that the regression model estimates are statistically significant (F-statistic  $p < 0.01$ ) with explanatory power of 5%. The achieved  $R^2$  level is common in studies examining corporate governance attributes (Rahmat & Iskandar, 2009). The results shown in Table 4 suggest that amongst our hypotheses, only Hypothesis 2b and Hypothesis 3a are statistically supported. Two variables (AudComFreq and BODSize) are significantly associated with the measure of earnings management as hypothesized.

The independent variable AudComFreq is negatively and significantly related to AbsDAC. Therefore, the proposed hypothesis concerning a

negative association between the audit committee meeting frequency and the level of earnings management ( $H_{2b}$ ) is supported. This finding suggests that an active audit committee plays an effective role in detecting and the reducing the probability of earnings management as hypothesized. This finding is consistent with the previous research (e.g. Klein, 2002; Xie et al., 2003) that observes a negative association between the frequency of audit committee meetings and the magnitude of earnings management; however, our findings are one of the first to do so in an Australian context during a robust economic period.

**Table 4: Multiple Regression Results of *Absdac* as the Dependent Variable**

	Prediction	Beta	t-statistic	VIF
(Constant)			2.533*	
Independent Variables:				
%IndBOD	-	0.030	0.362	1.138
%IndAudCom	-	-0.020	-0.234	1.244
BODFreq	-	0.007	0.091	1.058
AudComFreq	-	-0.177	-2.080**	1.242
BODSize	- /+	0.221	2.173**	1.284
AudComSize	- /+	0.124	1.388	1.377
Duality	+	-0.025	-0.325	1.032
Control Variables:				
FSize	-	-0.223	-2.317**	1.594
Leverage	+	-0.006	-0.073	1.061
Audit Quality	-	-0.014	-0.172	1.145
Industry	+	0.037	0.478	1.040
Model Summary:				
R-Squared		0.075		
Adj. R-Squared		0.051		
F-Statistic		3.201*		
Sample Size		164		

**Legend:** \*, \*\*, and \*\*\* indicate significance at  $p < 0.01$ ,  $p < 0.05$  and  $p < 0.10$  respectively (based on two-tailed tests).

Table 5 shows the result of further scrutinization by employing Independent Sample T-tests. The result indicates that the AbsDAC is significantly lower (9% compared to 14%) when an audit committee meets at least four times a year.

Table 4 also shows the positive and significant (at  $p < 0.05$ ) association between BODSize and AbsDAC (the measure of earnings management). This result supports *the hypothesis proposing an association between the number of directors on a board and the level of earnings management ( $H_{3a}$ )*. This finding suggests that a relatively larger number of directors sitting on the board is indicative of a less effective board in detecting and constraining the practices of earnings management by the financially distressed firms in Australia. This result suggests the importance of keeping boards small in order to improve firm performance. A company will face communication, coordination and decision making effectiveness problems among a larger group of people than a smaller group.

The variables %IndBOD, BODFreq, Duality, AudComSize and %IndAudCom are not statistically significant, thus, hypotheses 1, 2, 3a, 4b, and 5 are not supported. Therefore, our study provides useful information that these potential predictors for earnings management do not assist in explaining the behaviour for discretionary accruals of companies' managers of Australia's financially distressed firms. Corporate governance which could have a positive effect is only partially supported. Presumably, some of the distressed companies may have spent some of their final years in administration in order to comply with the legal requirements and other obligations on the information that disclosures to the administrators that they have to prepare.

**Table 5: T-test for Earnings Management and Audit Committee Meeting Frequency**

	N	AbsDAC (proxy for earnings management)			
		Mean	SD	t-value	Sig
Up to four meetings	123	0.1352	0.1722	2.194	<b>0.030</b>
Above four meetings	41	0.0933	0.0709		
	164				

Finally, none of the control variables are significantly associated with AbsDAC except for FSize. The negative and significant coefficient on FSize (at  $p < 0.05$ ) supports the notion that large size firms exhibit less aggressive behaviour in practising earnings management as hypothesized. This result strongly supports the political costs hypothesis, which argues

that in comparison to smaller firms, larger firms are subjected to more public scrutiny and political actions (Moses, 1987; Watts & Zimmerman, 1986).

## **CONCLUSION**

This study finds a differential behaviour in financially distress firms in the financial years prior to and at the bankruptcy-filing event. A firm's financial condition (leverage and ROA), in general, gradually gets worse from six years prior to bankruptcy. Following the decline of firms' financial condition, in  $t-1$ , discretionary accruals are negative. The negative discretionary accruals continue to the event year ( $t$ ), inferring that managers attempt to reduce reported earnings when they have recognized that loss in two consecutive years, especially at  $t-1$ , is unavoidable. It may be that our sample firms choose the "big bath", an earnings management strategy that has been espoused in the accounting literature, by manipulating their earnings to make poor results even worse in the slowing economic period and thus artificially enhancing next year's earnings (Abarbanell & Lehavy, 2003; Walsh, Craig & Clarke, 1999). The "big bath" approach may equally apply to poorly performing firms; however, it does not seem to have been successful in avoiding a financial distress standing.

Findings from the regression analyses do not support the contention that the board of directors' diligence, CEO duality, board independence, audit committee size, and audit committee independence explain the practices of earnings management in Australian firms with financial standing. This finding indicates the different behaviour which might exist in regards to governance structure and practices among firms with financial distress status and healthy firms. This study provides further empirical evidence on corporate governance and earnings management in Australian firms with the financial distress standing.

One important aspect in an Australian context is that we find that an active audit committee plays a positive role in detecting and reducing the probability of earnings management. Specifically, our results clearly reveal a negative association between audit committee meeting frequency and the magnitude of earnings management. This evidence is consistent with prior research, which suggests that the more frequently an audit committee meets

the more effective it is in carrying out its oversight and monitoring the role of managers' activities (Collier, 1993a; Song & Windram, 2000; Vafeas, 1999). Furthermore, our results imply that the role of the audit committee becomes more effective when it meets at least four times in a financial year.

Overall, our study provides an important insight into understanding the association between corporate governance practices and structures and the earnings management of Australian firms in financial distress standing. The findings reveal certain unique features in the Australian context. Corporate governance structures emanating from the full board of directors do not seem to impede earnings management for financially distressed firms. Unlike evidence from other countries' study findings, CEO duality, percentage of non-executive directors and frequency of full board meetings seemingly have inconsequential effect on earnings management behaviour. Only a "smaller" number of full board members has an impact. However, the frequency of annual audit committee board meetings is a key influential factor in constraining an Australian financially distressed firm's earnings management in the financial years prior to reaching a financial distress standing. The findings of this study have implications, especially for regulators and corporate governance reformists that determine corporate governance rules. Special attention needs to be given by Australian policy makers in strengthening the corporate governance framework. This is primarily in regard to the efforts made by listed companies in maintaining their sustainability through more emphases on the process for monitoring and selection of board of directors and audit committee members; as well as to reinforce effectiveness in managerial performance evaluation.

Finally, this study is not without certain caveats. One limitation in this study is the possible misspecification of the model estimated. Earnings management and monitoring mechanisms rely on proxy measures that, whilst previously used extensively in the research literature, are not free from criticism. For example, discretionary accrual models measure discretionary accruals with error (see Bernard & Skinner, 1996 for a deeper discussion). These problems, however, are endemic to the earnings management literature. Therefore, we also estimate discretionary accruals using alternative techniques by inclusion (in separate estimations) to the modified Jones (1991) model of (a) cash flow operating activities (Dechow, 1994; Kim *et al.*, 2003) and (b) return on assets (Ashbaugh, LaFond & Mayhew, 2003; Kothari, Leone & Wasley, 2005). Findings using alternative

discretionary accruals model estimates are not yielding any significant qualitative differences to the main result. A future research can also be carried out for a comparative study between firms with financial distress status across jurisdictions. A comparative study in this area of research between firms with financial distress and healthy firms can also be an interesting future investigation.

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