

# CFO Board Membership - The Effects on Firm Performance and Accruals Quality

Lien Duong\* and John Evans†

School of Accounting, Curtin Business School, Curtin University, Australia

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## Abstract

This paper investigates the effects of an Australian CFO serving on their own company's board of directors on both company performance and earnings quality. We find no evidence of improved operating performance in companies whose CFOs have seats on their boards. Firms with CFOs as board insiders do however experience significantly lower stock market returns and accruals quality. These results are consistent with the agency perspective that the inclusion of a company CFO on the board of directors reduces board independence and has a negative influence on company outcomes. Our results are in sharp contrast to the US market, where CFO board membership is positively associated with accruals quality and firm performance.

**Keywords:** Accruals Quality, Board Composition, Board Independence, CFO Board Membership, Firm Performance.

**JEL classification:** G34, M41.

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\***Address for correspondence:** Lien Duong (l.duong@curtin.edu.au), School of Accounting, Curtin University, Bentley campus, GPO Box U1987, Perth, Western Australia 6845

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# 1 Introduction

In past decades, the role of Chief Financial Officers (CFOs) within companies has changed substantially. CFOs now actively develop and define their companies' overall strategies instead of simply overseeing the financial aspects (Zorn 2004). A large number of public companies now position their CFOs as board members with fiduciary director responsibilities. The significance of the CFO function in an organization has been further crystallized after the enactment of legislation in the US and Australia. Section 302 of the Sarbanes-Oxley Act (US) and Section 295A of the Corporations Act (Australia) now impose a statutory duty on CFOs that requires both Chief Executive Officers (CEOs) and CFOs to attest to the truth and fairness of published reports. The legislative elevation of CFOs to the same level of financial oversight responsibility expected of CEOs enables the former to be treated as a unique and relatively homogeneous role within the executive ranks. Some recent US studies have provided empirical evidence that CFOs' influence on companies' financial management can be stronger than that of the CEOs. For example, Frank & Goyal (2007) find that the CFO is at least as important as the CEO when it comes to determining corporate leverage. Jiang et al. (2010) show that earnings management is significantly greater with CFO equity incentives than with CEO equity incentives. Similarly, Chava & Purnanandam (2010) note that CFOs' equity incentives have relatively stronger power in explaining company debt structure and accruals management than those of CEOs.

The literature on corporate board governance reveals that board composition, such as the representation of outside or female directors on the board, can have a substantial effect on firm outcomes (Klein 2002, Adams & Ferreira 2009, Adams et al. 2010, Srinidhi et al. 2011). In this paper, we continue with that line of research by investigating the effect that another aspect of board structure, namely, the inclusion of a company CFO on the board of directors, has on company performance and accruals management. There are few studies in the literature that differentiate between CFOs as board insiders and other board directors. Treating all of the directors on the board as a single group implies similarity, yet CFOs differ from other corporate executives due to their specialized role and knowledge in the financial reporting function. In addition, given the increasing awareness of the significance of CFOs after the collapse of several high-profile corporations, it is important to assess whether a CFO who holds a seat on the board of directors influence firm performance and accruals quality (both of which encompass the CFOs' areas of authority).

There are two contradicting views on the influence of CFOs as board insiders. Agency theory argues that adding insiders to the board reduces its effectiveness, thus negatively affecting corporate performance and financial reporting quality (Finkelstein 1992, Klein 2002). In contrast, friendly board theory (Adams & Ferreira 2007) claims that insiders can contribute to a board's effectiveness by sharing better communication and collaboration. Under this perspective, the inclusion of the company CFO on the board of directors may have a positive effect on company outcomes (Mobbs 2014, Bedard et al. 2014). One contribution of this study is that it investigates the effect of CFO board membership on firm performance and earnings quality with reference to both theories. To our knowledge, there has been no research in Australia on the fiduciary responsibility of CFOs who are board insiders.

Although there are a number of studies in the US that investigate the effect of CFO board membership on firm outcomes (Mobbs 2014, Bedard et al. 2014), it is interesting to see whether the US findings apply in Australia given there are a number of structural differences in the two markets.<sup>1</sup> For example, the capital market in Australia is relatively small with highly concentrated resources and industrial stocks when compared to the US market. Another distinguishing aspect is that the proportion of CFOs who are board members is about five times higher in Australia than the US. Our data show that approximately 42% of the Australian boards have CFOs as board insiders, whereas this proportion for the US boards is roughly 8% (Bedard et al. 2014). This difference indicates that Australian CFOs are more likely to involve in developing and instigating strategic changes than their US counterparts.

Australia, in many aspects, follows better board corporate governance practices than the US (Kiel & Nicholson 2003). For instance, Australian boards are on average smaller, have a substantially lower proportion of CEOs that chair the board and have a higher percentage of non-executive directors on the board (Bugeja et al. 2012, Duong & Evans 2015). However, the regulatory framework for earnings management in Australia generally follows a "principle-based" approach and provides a lower level of scrutiny than that in the US (Wilson 2011). For example, Section 301 of the Sarbanes-Oxley Act requires that all audit committees of exchange-listed US firms consist of solely independent directors, and at least one member must have accounting or financial expertise. There is, however, no equivalent legislation in Australia about this matter, and Australian firms are merely advised to follow best practice

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<sup>1</sup>It is acknowledged that both countries have similarities, such as similar market structures and corporate participants, and a regulatory framework that requires both CEOs and CFOs to certify company financial reports.

guidelines issued by the Australian Securities Exchange (ASX). This difference coupled with the earlier cited difference of a higher proportion of CFOs as board insiders can potentially influence Australian firms' earnings management behaviour. It also implies that the results of the US research may not be directly applicable in Australia.

Our analysis uses a sample of 555 firm-year observations of Australian exchange-listed firms from 2006 to 2010. We investigate the effect of CFO board membership on firm performance and accruals quality in connection with the agency and friendly board theories. Firm performance is controlled for by using both accounting and market performance measures. The market measure chosen is the company's annual common stock return, the selected accounting measures are return on assets (*ROA*) and operating cash flows scaled by total assets (*CF/TA*). There are two measures of accruals quality: the absolute value of forward-looking discretionary accruals (*DA*) from the modified Jones (1991) model, and the accrual estimator errors (*AEE*) developed by Dechow & Dichev (2002). We find that companies with CFOs on the board have significantly lower stock market performance<sup>2</sup> and lower accruals quality. Our findings are contrary to the US evidence (Mobbs 2014, Bedard et al. 2014) and support the agency argument that CFO board membership contributes to insider power on the board. This suggests that CFO insider board membership should be optimized as it is detrimental to firm outcomes and having a CFO on the board is not in itself a value-adding strategy.

The rest of this paper is structured as follows. Section 2 provides an overview of the literature and hypothesis development. In Section 3 the data used in the study and our research methodology are presented. The empirical results are discussed in Section 4, followed by a summary of the findings and conclusions in Section 5.

## 2 Literature review and hypothesis development

### 2.1 Background

Corporate governance refers to the set of mechanisms inside the firm that can influence executives' decisions when there is a separation of ownership and control. The structuring of the board of directors is one monitoring mechanism that helps to determine various aspects, such as the mix of directors sitting on the board. The literature on board governance reveals that the composition of a company's board of directors can influence firm performance

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<sup>2</sup>Companies with CFOs serving on their own boards also experience lower operating performance. However, the difference is not statistically significant.

and financial reporting quality (e.g. Morck et al. 1988, Byrd & Hickman 1992, Klein 2002, Larcker et al. 2007, Adams et al. 2010, Srinidhi et al. 2011, Bedard et al. 2014). Many studies have concentrated on the association between board independence and firm value. For example, Rosenstein & Wyatt (1990) provide evidence that shareholder wealth is affected by the proportion of outside directors by documenting a significantly positive stock price reaction (0.2%) at the announcement of appointing an additional outside director. Byrd & Hickman (1992) find that bidding firms in which independent outside directors hold at least 50% of the board seats have higher announcement-date abnormal returns than other bidders. However, the evidence on the importance of outside directors is mixed. Some empirical research (e.g. Baysinger & Butler 1985, Hermalin & Weisbach 1991, Yermack 1996, Klein 1998, Bhagat & Black 2002, Cotter & Silvester 2003) finds no significant correlation between the proportion of independent directors and various measures of firm performance. Their findings suggest that firms with more independent boards do not perform better than other firms.

Other empirical research investigates whether different board structures are associated with firm value and performance. Yermack (1996) finds that companies with smaller boards have higher firm performance (as measured by *Tobin's Q*) and more favourable financial ratios. However, Bhagat & Black (2002) observe no correlation between board size and firm performance. Masulis et al. (2012) show that firms with foreign independent directors (FIDs) on the board exhibit significantly lower ROA, especially when firms' business presence in the FIDs home region becomes less important. Bae et al. (2012) find that Asian firms with weaker corporate governance experienced a larger drop in their share values during the 1997 Asian financial crisis. This positive link between corporate governance and firm value is probably due to the fact that the managerial incentive to expropriate minority shareholders increases with the managers expropriation power during the crisis period (Bae et al. 2012).

Many studies in the literature investigate the effect of corporate governance on earnings management (e.g. Klein 2002, Larcker et al. 2007, Srinidhi et al. 2011, Bedard et al. 2014, Lin et al. 2016). Their findings generally indicate that the composition of the board can improve the estimation of accounting accruals by senior managers. Klein (2002) finds a negative relationship between board independence and abnormal accruals. Cornett et al. (2008) show that institutional ownership of shares, institutional investor representation on the board of directors, and the presence of independent outside directors on the board all reduce the use of discretionary accruals. Srinidhi et al. (2011) document that firms with female directors on

the board exhibit higher earnings quality. Bedard et al. (2014) find that companies whose CFOs hold board seats exhibit higher accruals quality.

Research also shows that the structure of a firm's audit committee can influence earnings quality. Klein (2002) documents that the independence of the audit committee leads to lower magnitudes of discretionary accruals. Xie et al. (2003) argue that an active, well-functioning, and well-structured audit committee may be able to prevent earnings management. In particular, they show that firms whose board and audit committee members have corporate or financial backgrounds exhibit smaller discretionary current accruals. Badolato et al. (2014) find that audit committees with both financial expertise and high relative status<sup>3</sup> are associated with lower levels of earnings management, as measured by accounting irregularities and abnormal accruals.

## 2.2 CFO board membership

With the legislative elevation of CFOs to the same level of financial oversight responsibility as CEOs, it is arguable that CFOs can significantly influence their firm performance. A number of studies show that CFOs play an active role in controlling abnormal accruals. Geiger & North (2006) find that a firm's discretionary accruals are reduced during the appointment of a new CFO. Dichev et al. (2013) indicate that 99.4% of CFOs (in a survey of 169 CFOs) believe that at least some firms manage earnings. Dejong & Ling (2013) demonstrate that CFOs tend to have a larger influence on abnormal accruals than CEOs after controlling for firm policy decisions.

In addition, there is evidence in the literature to show that CFOs can have an important effect on firm performance. Girigori (2013) documents that CFO expertise can significantly affect firm profitability as measured by ROA. Wang et al. (2012) find that CFOs earn significantly higher abnormal returns following their purchases of company shares, compared with CEOs. They further show that CFO purchases are followed by more positive future earnings surprises than those made by CEOs. Their study suggests that trades made by CFOs are more informative about future stock returns than those made by CEOs, and that CFOs' trades incorporate better information about future earnings. Moreover, Shin & Wang (2011) find evidence that only CFOs, not CEOs, time their trades to take advantage of the disagreement

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<sup>3</sup>Badolato et al. (2014) define status as an individual's ability to influence outcomes based on perceived skills, qualities and personal attributes. They argue that individuals with higher status are perceived to have higher ability, command more authority and obtain better information.

between current earnings reports and future earnings prospects. In summary, the literature shows that CFOs could significantly influence accruals management and company profitability. It is indicative that the inclusion of CFOs on the board of directors may also affect firm outcomes. CFO board membership can create more insider power on the board as the CFOs can vote on many important corporate issues. This creates interdependency similar to that created when the CEO chairs the board meeting (Bedard et al. 2014).

Agency theory argues that having board membership could provide executives with more power and influence (Finkelstein 1992), reducing the board's independence in exercising its monitoring role. The literature (e.g., Byrd & Hickman 1992, Klein 2002) shows that less board independence can have a significantly negative effect on firm performance and accruals quality because the executive (as a board insider) can align with the CEO against the shareholders' best interests. According to this perspective, CFOs holding board seats could reduce the board's effectiveness, which could be detrimental to corporate performance and financial reporting quality. In contrast, friendly board theory, which is advanced by Adams & Ferreira (2007), claims that board's advisory role is more effective when management shares more information. Several studies find that firm performance improvements are associated with greater involvement of insiders on the board. For example, Klein (1998) finds that insiders on the finance and investment committees are related to higher company stock market returns. Similarly, Adams et al. (2005) document that a lack of insiders on the board is associated with increased volatility of company performance. Board seats allow CFOs to share more relevant financial information with other board members, which may strengthen the board's advisory role. Under this approach, CFOs holding board seats may improve companies' overall performance and enhance the quality of financial reporting.

There is no evidence in the Australian literature on the effect of CFO board membership on company outcomes. The US literature shows that company performance and financial reporting quality are positively influenced by boards that include their CFOs. Bedard et al. (2014) document that companies with CFOs who hold board seats exhibit higher accruals quality. Their result implies that the CFOs in those firms perform their roles better than other CFOs. Mobbs (2014) argues that CFOs are granted board seats for strategic purposes, and that firms with CFOs as board insiders are associated with improved operating performance. The US evidence supports friendly board theory. Our study investigates the effect of CFO board membership on both firm performance and earnings quality with regard to

both agency and friendly board theories. Two research questions are addressed in this paper. First, does CFO board membership effect accruals quality and overall company performance? Second, which theory (agency or friendly board theory) is more prevalent in explaining the influence that CFO board insiders have on company performance and earnings quality?

### 3 Data and methodology

#### 3.1 Research method

##### 3.1.1 Company performance

The following model is estimated to examine the association of CFO board membership with company performance:

$$\begin{aligned}
 \text{CompanyPerformance} = & \gamma_0 + \gamma_1(\text{CFOBoard}) + \gamma_i(\text{CFOCharacteristics}) \\
 & + \gamma_j(\text{CorporateGovernance}) + \gamma_k(\text{FinancialVariables}) \\
 & + [\text{YearDummies}] + [\text{IndustryDummies}] + \epsilon
 \end{aligned} \tag{1}$$

We use both accounting and stock market measures to control for company performance. The market performance is measured as the company’s annual common stock return (*Stock return*). The selected accounting measures are return on assets (*ROA*) and cash flow from operations deflated by total assets (*CF/TA*). Although *ROA* is a common proxy for company operating performance, cash flows are incrementally useful for market participants, as they are less susceptible to earnings management and thus potentially more reflective of true performance (DeFond & Hung 2003, Masulis & Mobbs 2011).

The variable of interest, *CFO Board*, is a binary variable equal to 1 if the company CFO is on its board of directors. If the agency perspective is prevalent, more CFO participation on the board might be detrimental to company performance, thus the coefficient of the *CFO Board* variable is expected to be significantly negative. Alternatively, as a member of the board, the CFO can potentially leverage the knowledge and experience of other board members and extract valuable strategic inputs to improve overall company performance. Under the theory of friendly board, the presence of the CFO on their company board is positively associated with company performance. The coefficient of the *CFO Board* variable is consequently expected to be significantly positive for all types of company performance measures.

The remaining independent variables in model (1) are from the literature and provide controls for CFO characteristics, corporate governance and company financial characteristics

(Larcker et al. 2007, Aldamen et al. 2012, Mobbs 2014). For CFO characteristics, we use the number of years in service of the current CFO (*CFO Tenure*) and the percentage of company shares owned by the CFO (*CFO Ownership*). To control for company corporate governance, we use the size of the board (*Board Size*), the size of the audit committee (*AC Size*)<sup>4</sup>, the percentage of executive directors on the board (*Insider Ratio*) and the proportion of audit committee members who have financial accounting expertise (*PAFE*). We include firm size, firm leverage, firm age, firm growth and investment opportunities, and variability in company performance as financial control variables. Firm size ( $TotalAssets_{t-1}$ ) is measured by the natural logarithm of company total assets in the previous year. Firm leverage is calculated as total debt divided by the market value of equity in the previous year. Firm age is the number of years since the company was incorporated. The firm growth opportunity is captured by the market-to-book equity ratio (*M/B ratio*), and is winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles to control for outliers in the data. We control for investment opportunities by including capital expenditures over sales (*CAPEX/Sales*). For the variability in company performance of *ROA*, *CF/TA* and *Stock return*, we use the standard deviation of each measure over the previous five years.

### 3.1.2 Accruals quality

To investigate whether the presence of a CFO on the board affects a company's earnings equality, the following regression model is estimated:

$$\begin{aligned}
AccrualsQuality = & \alpha_0 + \alpha_1(CFOBoard) + \alpha_i(CFOCharacteristics) \\
& + \alpha_j(CorporateGovernance) + \alpha_k(FinancialVariables) \\
& + [YearDummies] + [IndustryDummies] + \epsilon
\end{aligned} \tag{2}$$

Following the literature (Chava & Purnanandam 2010, Jiang et al. 2010, Bedard et al. 2014), the dependent variable of model (2) has two measures for the extent to which managers use their flexibility with accruals to manage earnings. The first measure of accruals quality is the absolute value of forward-looking discretionary accruals (*DA*) from the modified model of Jones (1991), developed by Dechow et al. (2003). To construct this measure, we first estimate the forward-looking accruals from the following regression for every industry in Global Industry Classification Standard (GICS):

$$\begin{aligned}
TotalAccruals_t = & \phi_0 + \phi_1((1+k)\Delta Sales_t - \Delta REC_t) + \phi_2PPE_t + \phi_3TotalAccruals_{t-1} \\
& + \phi_4SalesGrowth_{t+1} + [YearDummies] + \epsilon
\end{aligned} \tag{3}$$

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<sup>4</sup>The *Board Size* and *AC Size* variables are used alternatively in the regression analysis due to their high degree of correlation.

where  $k$  is the slope coefficient from a regression that captures the expected changes in accounts receivables ( $\Delta REC_t$ ) on a given change in sales ( $\Delta Sales_t$ ) for each two-digit GICS sector.  $TotalAccruals_t$  is calculated as the difference between operating cash flows and income before extraordinary items of the current year, scaled by average total assets.  $PPE_t$  is the end of year property, plant and equipment, scaled by average total assets.  $TotalAccruals_{t-1}$  is the lagged total accruals by one year;  $SalesGrowth_{t+1}$  is the change in sales from the current to next financial year, scaled by current sales. The estimated coefficients from equation (3) are then used to calculate the expected level of accruals. The absolute value of the difference between total and expected accruals is our first measure of earnings management. A higher absolute value of discretionary accruals signifies lower reporting quality.

The second measure of accruals quality is based on the accrual estimator errors ( $AEE$ ) developed by Dechow & Dichev (2002). Initially, the regression of the changes in working capital ( $\Delta WC$ ) on the last, current and next year cash flows from operations ( $CF$ ) for all firms in each GICS industry sector is estimated as follows:

$$\Delta WC_t = \beta_0 + \beta_1(CF)_t + \beta_2(CF)_{t-1} + \beta_3(CF)_{t+1} + \epsilon \quad (4)$$

Consistent with Francis et al. (2005), the changes in working capital from year  $t-1$  and year  $t$  are calculated as the difference between the changes in current assets and those in current liabilities:  $\Delta WC_t = (\Delta CA_t - \Delta Cash_t) - (\Delta CL_t - \Delta STDebt_t)$ . Cash and short-term debt are excluded because they do not represent operating accruals. All of the variables in equation (4) are scaled by average total assets. According to Dechow & Dichev (2002), the residuals from equation (4) measure the extent to which current accruals do not map into cash flow realizations. The Dechow/Dichev measure of accruals quality is the standard deviation of the residuals for each firm over a period of five years, where a higher standard deviation denotes lower accruals quality.

The agency perspective suggests that CFOs with board membership might take advantage of the flexibility in accruals to manipulate earnings and reduce financial reporting quality. As a result, a significantly positive association is expected between *CFO Board* and all measures of accruals quality ( $DA$  and  $AEE$ ) under the agency approach. However, the theory of friendly board contends that CFOs sitting on the board can better collaborate with other board members, and consequently develop better plans and obtain more resources to address any identified problems in the financial reporting process. Accordingly, the coefficient of the

*CFO Board* variable should be significantly negative for both *DA* and *AEE* measures under the theory of friendly board.

In addition to the independent variables used in model (1), model (2) includes variables to control for financial factors that might affect earnings quality (Dechow & Dichev 2002, Dhaliwal et al. 2010, Srinidhi et al. 2011); namely, the proportion of firms making a loss over the past 5 years (*Prop. Loss Years*), the ratio of inventory plus receivables to total assets (*INVREC*) and the standard deviation of sales to total assets (*Std dev(Sales/TA)*). In both models, we also control for industry and time fixed effects due to the differences in company performance and accruals quality across industries<sup>5</sup> and over time. Following Petersen (2009), we estimate the standard errors of the coefficients using clustered standard errors in each regression, as this method better accounts for the dependence in a panel data set (Rogers 1993).

## 3.2 Data

### 3.2.1 Sample construction

We start our sample with the 500 largest companies by market capitalization listed on the ASX over the 2006-2010 period. Firm financial information is extracted from the FinAnalysis database. The data on CFO board membership, CFO characteristics and company corporate governance are initially sourced from the S&P Capital IQ and SIRCA Corporate Governance databases. The companies' annual reports are also manually checked to obtain the required information when it is not available on electronic databases. Companies with a change in CFO during any financial year or with missing data are excluded from our sample. The final sample of company performance contains 555 firm-year observations. From this base, the sample size used in the analysis of accruals quality is lower due to additional data requirements. It consists of 450 observations for the first measure of accruals quality which is discretionary accruals (*DA*), and 362 observations for the second measure which is accruals estimation errors (*AEE*). The definitions of the variables used in the study together with the data sources are presented in Table 1.

[Insert Table 1]

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<sup>5</sup>Firms are sorted according to their 2-digit GICS codes.

### 3.2.2 Descriptive statistics

Table 2, which shows the breakdown of firms with CFOs on the board classified by industry, indicates that 41.8% of the firms in our sample include their CFOs as board members. The proportion of Australian firms that include their CFOs on their boards is four to five times larger than that reported in the US.<sup>6</sup> Although CFO board membership is most prevalent in the telecommunication industry (71.43%), there is no representation of CFOs on the board in information technology and utilities firms. Table 3 shows the descriptive statistics of the variables for the whole sample and for the two sub-samples partitioned by whether the company CFO has a seat on their board. Tests of the mean and median differences between two sub-samples with and without CFO board membership are also presented. Panel A of Table 3 describes the variables used in model (1) and Panel B presents the additional variables included in model (2) that are not previously described.

*[Insert Table 2 and Table 3]*

As Table 3 shows, the CFOs in our sample hold an average 0.18% of company shares and have been in their jobs for more than five years. The average size of the board is approximately eight with the majority (61%) being non-executive. The median size of the audit committee is three, approximately 55% of whom have financial expertise. Half of the firms in our sample have total assets of more than \$703 million, have been incorporated for more than 35 years and spend at least 5% of their sales on capital expenditures. The average firm has a financial leverage ratio of 0.49, a M/B ratio of 3.22 and a ratio of inventory and receivables to total assets of 0.2. The percentage of firms making a net loss over the past six years is, on average, 24.48%. More than 50% of the firms within our sample have *ROA*, *CF/TA* and stock return that are higher than 5.54%, 6.48% and 8.10%, respectively. The volatility in *ROA* for firms in our sample is on average much lower than that in the company stock returns (11.92% versus 53.54%). The standard deviation of sales to total assets is 24.83%, on average, and this figure for operating cash flows to total assets is 14.57%. For our sample, the median figure for the absolute value of forward-looking discretionary accruals is 0.08 while that of accrual estimator errors is 0.06.

Table 3 also reveals significant differences between firms with and without CFOs on the board. CFOs who are board insiders have, on average, higher stock ownership (0.32% versus 0.08%) and stay longer in their positions (6.19 versus 4.6 years). In companies with CFOs on

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<sup>6</sup>The percentage of CFO board membership in the US firms is between 7.9% for the 2004-2007 period (Bedard et al. 2014) and 10% from 1997 to 2008 (Mobbs 2014).

their boards, each board is less independent (i.e., more executive directors on it) and larger, and the size of the audit committee is slightly smaller. With reference to company financial characteristics, firms with CFO board memberships have been incorporated longer, have more financial leverage, higher growth opportunity (M/B ratio) and lower levels of capital expenditures to sales. Companies with their CFOs on their boards are also, on average, less likely to incur a net loss (18.43% versus 29.23%) and tend to have a higher ratio of inventory and receivables to total assets (0.26 versus 0.16). Although the volatility of ROA, of cash flows to total assets and of sales to total assets are all higher among firms with CFOs on their boards than their counterparts, the volatility of company stock returns is significantly lower. The median figures of both (inverse) measures of accruals quality are higher in firms with CFOs board memberships (0.09 versus 0.06 for the *DA* measure and 0.072 versus 0.056 for the *AEE* measure), implying that accruals quality is lower in those firms. Companies with CFOs as board insiders also have lower stock market returns with average figures of 5.65% versus 10.04%. However, the difference between the two groups of companies is not significant for company accounting performance (*ROA* and *CF/TA*), firm size and the proportion of financial expertise on the audit committee.

## 4 Empirical results

Table 3 shows the univariate analysis of the difference in company overall performance and accruals quality between firms with and without CFO board members. In this section, the multivariate models (1) and (2) are examined to control for factors other than the CFO board membership that may influence company performance and accruals quality. For each dependent variable, we estimate two regressions as two independent variables, *Board Size* and *AC Size*, are included alternatively due to the high degree of correlation between them.<sup>7</sup>

### 4.1 Company accounting and stock performance

Table 4 presents the results of estimating model (1), which investigates the association between CFO board membership and company overall performance. Column (1) and (2) show the results for *ROA*, Column (3) and (4) exhibit the results for *CF/TA*, Column (5) and (6) display the results for company stock return. Table 4 reveals that the coefficient of the *CFO*

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<sup>7</sup>The Pearson and Spearman rank correlations are estimated among all of the independent variables in models (1) and (2). The correlation magnitudes do not indicate serious multicollinearity issues in our analyzes. The untabulated results are available upon request.

*Board* variable is negative but not significant for two measures of accounting performance (*ROA* and *CF/TA*). However, there is a negative relationship between CFO board membership and company stock market performance at the 5% significance level. Controlling for other factors, firms with CFO board memberships have 15% lower annual stock returns than those without. These results are consistent with the univariate results presented in Table 3, yet contrary to the results in the US market (Mobbs 2014) where the presence of a CFO on the board results in better company operating performance. Our results provide support for agency theory which indicates that CFOs on the board do not always act in shareholders' best interests, which can result in decreased firm performance.

[Insert Table 4]

The results for our control variables are generally consistent with the literature. Gibbons & Murphy (1992) argue that managerial ability is unknown to shareholders and the board of directors when the executives are in their early years in the firm. As the executives gain experience, the board learns more about their unobservable abilities. Therefore, a positive relationship is expected between executive tenure and firm performance, as evidenced in firm accounting performance (*ROA* and *CF/TA*). The coefficient of the *Board Size* variable is significantly negative for both measures of accounting performance, consistent with Yermack (1996)'s suggestion that firms with bigger boards perform worse than those with smaller boards. A positive relationship is found between the audit committee size and firm stock market performance, suggesting that having more members in the audit committee provides more effective monitoring, and improving firm stock market performance. There is a negative association between leverage and all measures of performance, implying that the cost of bankruptcy in highly financial-levered firms may have a negative effect on firm value (Horne 2002). The coefficient of the *CAPEX/Sales* variable is found to be significantly negative for accounting performance measures, as capital expenditures reduce net income and lead to lower firm value. Firms with higher growth opportunities (proxy by *M/B ratio*) are found to have significantly higher stock performance. Mature firms (proxy by *Firm Age*) are positively related to measures of accounting performance. We find firm size to be positively associated with accounting performance, but negatively related to stock market performance. Our finding of a negative relationship between firm size and the stock market return is consistent with the well-known size effect, whereby smaller firms persistently, on average, generate higher stock returns (Banz 1981).

## 4.2 Accruals quality

In the second analysis, we investigate whether CFOs who are board insiders deliver higher earnings quality. The results of estimating model (2) are presented in Table 5, where Columns (1) and (2) show discretionary accruals ( $DA$ ), and Columns (3) and (4) show accruals estimation errors ( $AEE$ ). The coefficients on both (inverse) measures of accruals quality ( $DA$  and  $AEE$ ) are significantly positive, implying that the quality of accruals is lower for companies with CFOs serving on the board of directors than that for other firms. This finding is consistent with the univariate tests in Table 3, but is in contrast to the evidence presented in the US market by Bedard et al. (2014). Our finding supports the agency perspective that CFOs with seats on the board could potentially use their increased power to add more bias into the financial reporting process.

*[Insert Table 5]*

Consistent with prior studies on earnings management (Dechow & Dichev 2002, Kothari et al. 2005, Cornett et al. 2008), the coefficient of firm size is significantly negative, indicating that larger firms are associated with lower abnormal accruals (i.e., higher quality of accruals). This is probably due to the management in larger firms facing more scrutiny from regulators, which may cause them to be less involved in managing accruals. In addition, larger firms have more stable and predictable operations and therefore they have fewer and smaller errors in estimating accruals (Dechow & Dichev 2002). For corporate governance,<sup>8</sup> board size is positively related to discretionary accruals ( $DA$ ), signifying that firms with larger boards are associated with greater use of earnings management. This is consistent with Yermack (1996)'s conclusion that smaller boards are more effective monitors than larger boards. The negative relationship between firm leverage and  $AEE$  indicates that companies with high financial leverage deliver higher quality accruals. This is probably due to the degree of lender monitoring; that is, lenders are more likely to monitor highly-levered firms more closely. Therefore, managers in these firms may be less likely to use income-increasing or income-decreasing abnormal accruals. Similar to Klein (2002) and Menon & William (2004), we find that the first measure of abnormal accruals ( $DA$ ) is positively associated with  $M/B$  ratio, indicating that growth companies are more likely to have higher discretionary accruals. We also find a negative relationship between  $Firm\ Age$  and  $DA$ , implying that more mature companies have better accruals quality (Ashbaugh-Skaife et al. 2007). Consistent with Dechow & Dichev

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<sup>8</sup>The other governance variables have a weaker effect on abnormal accruals. Neither audit committee characteristics nor any of the CFO characteristics such as tenure or ownership have a significant effect on companies' accruals practices.

(2002), the coefficients on the *Prop. Loss Years* and *Std dev(Sales/TA)* variables are positive, suggesting that firms with a higher number of years of reported net loss or firms with higher sales volatility experience lower quality of accruals.

### 4.3 Robustness tests

In this section, we describe the additional sensitivity tests of models (1) and (2) using different measures of company performance and accruals quality. Initially, we replace the company's annual stock return in model (1) with the industry-adjusted stock returns which capture firms' annual excess returns on their GICS industry sectors. The data on the returns of 10 GICS industry sectors<sup>9</sup> are obtained from the S&P/ASX 200 index.<sup>10</sup> The regression result for the industry-adjusted stock return yields coefficient estimates similar to those shown in Columns (5) and (6) of Table 4. This result provides further support for the agency view, as firms with CFOs on the board have lower performance relative to the industry in which they operate.

The analyzes in Table 4 use the contemporaneous measures for both accounting and stock market performance. Another way to assess the effect of CFO board membership on firm value is to examine future performance, as there is evidence in the literature that governance structures can be associated with various measures of firms' future performance (Gompers et al. 2003, Larcker et al. 2007). We then replace all of the contemporaneous measures of performance in model (1) by the next year's performance, i.e.  $ROA_{t+1}$ ,  $CF/TA_{t+1}$ , and  $StockReturn_{t+1}$ . The regression results are similar to those presented in Table 4, except the coefficient of *CFO Board* is no longer statistically significant when future performance is measured as  $StockReturn_{t+1}$ . Firms with CFOs on their boards have lower future performance compared with other firms, but the difference is not statistically significant.

Finally, we use a different measure of accrual estimation errors in model (2). The *AEE* variable is originally calculated as the standard deviation of the residuals from model (4) for each firm over the last five years (Dechow & Dichev 2002). Following Ittonen et al. (2013), we change the calculation of the *AEE* variable to the absolute value of the residuals from

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<sup>9</sup>S&P/ASX 200 classifies the 10 GICS sectors as Consumer Discretionary, Consumer Staples, Energy, Financials, Health Care, Industrials, Information Technology, Materials, Telecommunication Services, and Utilities.

<sup>10</sup>We initially go to the website of the S&P/ASX 200 index (<http://au.spindices.com/indices/equity/sp-asx-200-consumer-discretionary-sector>) and then search for the relevant index to get the required industry return.

model (4). The different measure of *AAE* also produces similar results to those presented in Column (3) and (4) of Table 5, with comparable coefficient estimates in both sign and magnitude. This implies that CFOs who are board insiders significantly engage more in accruals management activities, supporting the argument of the agency perspective.

#### 4.4 Discussion of results

The aforementioned analyzes suggest that Australian firms that include their own CFOs on the board of directors perform relatively worse in terms of both company stock returns and accruals quality, compared with other firms. Our results are in sharp contrast to the US evidence, which shows that CFOs as board insiders improve operating performance (Mobbs 2014) and deliver higher accruals quality (Bedard et al. 2014). This difference could be due to the fact that CFO board membership is more prevalent in Australia, where the proportion of Australian CFOs serving on their own boards is five times higher than that in the US. The higher percentage of CFO board members may be subject to less scrutiny by stakeholders and regulators in Australia compared with their US counterparts. Research shows that the accuracy of analysts' forecasts is reduced substantially when they have to deal with a number of companies and industries (Clement & Tse 2005). Therefore, it may be easier for Australian CFOs with board membership to use their increased power to gather more resources for themselves at the expense of their shareholders.

Our results are consistent with the findings of prior studies, which indicate that the lack of board independence associated with greater insider presence is damaging to financial reporting quality (Beasley 1996, Klein 2002). Low quality in the financial reporting process cannot lead to an improvement of firm performance or enhancement of firm market value (Wild 1996). Our findings contradict the theory of friendly board, which claims that greater insider membership may lead to better board monitoring and firm outcomes. We support the prediction of agency theory that the monitoring of executives is best done by an independent board, and that insider board membership should be optimized.

Our findings also have implications for the boards and regulators. As defined by the ASX Corporate Governance Council,<sup>11</sup> corporate governance is the “framework of rules, relationships, systems and processes within and by which authority is exercised and controlled in

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<sup>11</sup>“Corporate Governance Principles and Recommendations, 2014, 3rd edition, ASX Corporate Governance Council.

corporations". It can also influence how the company objectives are set and achieved, how risks are monitored and assessed, and how performance is optimized. As such, good corporate governance structures should encourage companies to create value and improve the quality of earnings, thus constraining earnings management. Overall, our results demonstrate that CFO board membership does not enhance board effectiveness with respect to firm performance and the quality of financial reports. Therefore, boards should carefully consider the decision to appoint CFOs as board members. As previously discussed, situations where CFOs hold board seats create insider power similar to when CEOs also serve as board chairmen. The ASX Corporate Governance Council, in Recommendation 2.5, specifies that a board should be chaired by an independent director, not the company's CEO. Our findings suggest that the Council should consider the effects of CFOs as board insiders and make recommendations that improve the corporate governance of Australian listed firms.

## 5 Conclusion

The board of directors is an integral part of a company's governance structure. The quality and composition of the board underpin good corporate governance. In the modern corporations where ownership is separated from control, a board's effective performance and decision making is intimately linked to the corporation's performance. Boards vary in size, composition and knowledge sets. Numerous facets of corporate boards have been well-researched, in particular, board size, board independence and CEO characteristics. An important area of study is also the knowledge sets an individual brings and an insiders role on the board. Our work focuses on CFOs, as there has been a significant shift in their role in the last two decades, from undertaking operational responsibility to developing and instigating strategic changes. A number of listed companies have appointed their CFOs as board members. This paper investigates whether CFOs who become board members with fiduciary director responsibilities influence firm performance and reporting quality, with reference to the agency perspective and friendly board theory.

We find that having the CFO on the board does not improve firm operating performance. Firms with CFO board members have significantly lower stock market returns and lower accruals quality. Our findings are consistent with the prediction of agency theory; specifically, that CFOs who are board insiders reduce board independence, which can be detrimental to firm outcomes. Our results are contrary to the US market, where CFO board members

lead to positive company outcomes, probably due to enhanced director communication. Our study indicates that differences in corporate governance arrangements across two countries contribute to different findings on the association between CFO board membership and firm performance. The results of this study also have implications for boards deciding whether to appoint CFOs as board members, and whether awarding board memberships to their CFOs will enhance the firms' monitoring effectiveness and outcomes.

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Table 1: Variable definitions.

Variables	Definition	Sources of data
<b>Company accounting and stock performance</b>		
<i>ROA</i>	Earnings before tax divided by total assets.	DatAnalysis
<i>CF/TA</i>	Operating cash flows deflated by total assets at the beginning of the year.	
<i>Stock return</i>	The return on company shares, calculate as the percentage of change in share price from current year to previous year.	
<b>Accruals quality</b>		
<i>Discretionary Accruals (DA)</i>	The absolute value of the difference between total accruals (measured as the difference between firm earnings and operating cash flows, scaled by total assets in previous year) and estimated forward-looking non-discretionary accruals from the modified Jones model which was developed by Dechow et al. (2003).	DatAnalysis
<i>Accrual Estimation Errors (AEE)</i>	The standard deviation of residuals (obtained from firm-specific regressions of changes in working capital on past, present and future operating cash flows) over the past 5 years. It is based on the model of Dechow & Dichev (2002).	
<b>Financial characteristics</b>		
<i>Total Assets</i>	The book value of total assets in the prior year.	DatAnalysis & Capital IQ database
<i>Leverage</i>	Total debt divided by the market value of equity.	
<i>M/B Ratio</i>	The market value of equity divided by the book value of equity.	
<i>Firm Age</i>	The number of years from the current year to the year of incorporation.	
<i>CAPEX/Sales</i>	Capital expenditures over sales.	
<i>INVREC</i>	Inventory plus receivables to total assets.	
<i>Prop. Loss Years</i>	The proportion of years that a company made loss over the last six years.	
<i>Std dev (ROA)</i>	Standard deviation of ROA over the last five years.	
<i>Std dev (Sales/TA)</i>	Standard deviation of sales scaled by total assets over the last five years.	
<i>Std dev (CF/TA)</i>	Standard deviation of operating cash flows scaled by total assets over the last five years.	
<i>Std dev (Stock return)</i>	Standard deviation of company stock return over the past five years.	
<b>Governance and CFO characteristics</b>		
<i>CFO Board</i>	A binary variable coded as one if the CFO is on the company board of directors, zero otherwise.	Capital IQ database, Boardroom database & company annual reports
<i>CFO Ownership</i>	The percentage of company shares owned by the CFO.	
<i>CFO Tenure</i>	The number of years since the CFO was appointed.	
<i>Board Size</i>	The number of directors on the board of directors.	
<i>Insider Ratio</i>	The percentage of executive directors on the board.	
<i>PAFE</i>	The proportion of audit committee members who are financial accounting experts, i.e. the biography indicates at least one of the followings: CPA, CFO, auditor, controller, treasurer, or finance manager.	
<i>AC Size</i>	The number of directors on the audit committee.	

Table 2: Sample by Industry.

<b>Industry</b>	<b>Number of observations</b>	<b>Firms with CFOs on Board</b>	<b>Firms without CFOs on Board</b>	<b>% of firms with CFOs on Board</b>
Consumer Discretionary	56	22	34	39.29%
Consumer Staples	37	17	20	45.95%
Energy	60	18	42	30.00%
Financials	91	29	62	31.87%
Healthcare	46	15	31	32.61%
Industrials	94	59	35	62.77%
Information Technology	18	0	18	0%
Materials	133	62	71	46.62%
Telecommunications	14	10	4	71.43%
Utilities	6	0	6	0%
<b>Total</b>	<b>555</b>	<b>232</b>	<b>323</b>	<b>41.80%</b>

Table 3: Descriptive Statistics.

Variables	Pooled sample	CFO on Board	CFO not on Board	(2)-(3)
	Mean (Median) (1)	Mean (Median) (2)	Mean (Median) (3)	t-stat (Mann-Whitney) (4)
<b>Panel A: Company accounting and stock performance</b>				
	N = 555	N = 232	N = 323	
<b>Dependent Variables</b>				
<i>ROA</i>	3.29% (5.54%)	3.03% (5.51%)	3.54% (5.57%)	-0.29 (-0.66)
<i>CF/TA</i>	6.25% (6.48%)	6.16% (6.42%)	6.39% (6.62%)	-0.15 (-0.25)
<i>Stock return</i>	6.41% (8.10%)	5.65% (6.23%)	10.04% (9.97%)	<b>-1.91*</b> <b>(1.62)*</b>
<b>Independent variables</b>				
<i>CFO Board</i>	41.80%			
<i>CFO Ownership</i>	0.18% (0.03%)	0.32% (0.06%)	0.08% (0.02%)	<b>5.28***</b> <b>(4.54***)</b>
<i>CFO Tenure (years)</i>	5.26 (4.17)	6.19 (5.33)	4.60 (3.50)	<b>4.91***</b> <b>(5.50***)</b>
<i>PAFE</i>	55.29% (60.00%)	55.82% (66.67%)	54.91% (50.00%)	0.38 (0.54)
<i>AC Size</i>	3.47 (3.00)	3.38 (3.00)	3.54 (3.00)	<b>-1.97**</b> (1.38)
<i>Board Size</i>	7.86 (8.00)	8.43 (8.00)	7.45 (7.00)	<b>4.49***</b> <b>(4.09)***</b>
<i>Insider Ratio</i>	39.02% (37.50%)	44.39% (42.86%)	35.16% (33.33%)	<b>7.58***</b> <b>(7.33***)</b>
<i>Total Assets<sub>t-1</sub> (\$mil)</i>	21,071 (703)	15,835 (977)	24,832 (537)	-1.24 (1.13)
<i>Leverage</i>	0.49 (0.48)	0.57 (0.53)	0.44 (0.44)	<b>2.37**</b> <b>(4.15***)</b>
<i>M/B Ratio</i>	3.22 (2.23)	3.39 (2.74)	3.07 (2.05)	1.11 <b>(2.28**)</b>
<i>Firm Age (years)</i>	50.13 (35.00)	61.06 (53.5)	46.46 (25.00)	<b>3.64***</b> <b>(4.87***)</b>
<i>CAPEX/Sales</i>	1.35 (0.05)	1.05 (0.06)	1.56 (0.07)	-1.42 <b>(2.09**)</b>
<i>Std dev (ROA)</i>	11.92% (2.92%)	18.40% (2.78%)	7.26% (3.17%)	<b>2.62***</b> 1.34
<i>Std dev (CF/TA)</i>	14.57% (5.30%)	20.42% (5.33%)	10.37% (5.21%)	<b>3.56***</b> <b>(1.77*)</b>
<i>Std dev (Stock return)</i>	53.54% (43.63%)	50.86% (40.84%)	55.55% (45.55%)	-1.49 <b>(1.70*)</b>

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Variables	Pooled sample	CFO on Board	CFO not on Board	(2)-(3)
	Mean (Median) (1)	Mean (Median) (2)	Mean (Median) (3)	t-stat (Mann-Whitney) (4)
<b>Panel B: Accruals quality</b>				
	N = 450	N = 198	N = 252	
<b>Dependent Variables</b>				
<i>DA</i>	0.36 (0.08)	0.37 (0.09)	0.35 (0.06)	0.30 <b>(1.94*)</b>
<i>AEE</i>	0.093 (0.061)	0.097 (0.072)	0.091 (0.056)	0.52 <b>(1.87*)</b>
<b>Independent variables</b>				
<i>INVREC</i>	0.20 (0.15)	0.26 (0.25)	0.16 (0.12)	<b>6.48***</b> <b>(6.38)***</b>
<i>Prop. Loss Years</i>	24.48% (0.00%)	18.43% (0.00%)	29.23% (0.00%)	<b>-3.10***</b> <b>(2.73***)</b>
<i>Std dev (Sales/TA)</i>	24.83% (14.74%)	30.44% (17.47%)	20.43% (10.84%)	<b>1.93*</b> <b>(4.20***)</b>

This table presents the summary statistics of the firms in our sample for the 2006-2010 period. They are reported for the whole sample and also partitioned by CFO board membership. Panel A has variables used to analyze company performance. *ROA* is return on assets, calculated as earnings before tax divided by total assets. *CF/TA* is operating cash flow deflated by total assets at the beginning of the year. *Stock return* is the return on company shares, calculated as the percentage of change in share price from the current to the previous year. *CFO Board* is a binary variable coded as one if the CFO is on the company's board of directors. *CFO Ownership* is the percentage of company shares owned by the CFO. *CFO Tenure* is the number of years since the CFO was appointed, expressed in natural logarithm. *PAFE* is the proportion of audit committee members who are financial accounting experts. *AC Size* is the size of the audit committee. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Total Assets<sub>t-1</sub>* is the book value of total assets in the prior year, expressed in natural logarithm. *Leverage* is firm financial leverage, calculated as total debt divided by market value of equity. *M/B Ratio* is the market value of equity divided by the book value of equity. *Firm Age* is the number of years since company incorporation, expressed in natural logarithm. *CAPEX/Sales* is the ratio of capital expenditures to sales. *Std dev (ROA)* is the standard deviation of ROA over the last five years. *Std dev (CF/TA)* is the standard deviation of operating cash flows scaled by total assets over the last five years. *Std dev (Stock return)* is the standard deviation of company share return over the previous five years.

Panel B contains additional variables for the analysis of accruals quality. *DA* is the absolute value of discretionary accruals from the modified Jones model which was developed by Dechow et al. (2003). *AEE* is accrual estimation errors, proxied as standard deviation of residuals over the last five years from the model of Dechow & Dichev (2002). *INVREC* is the ratio of inventory and account receivables to total assets. *Prop. Loss Years* is the proportion of loss years over the last years. *Std dev (Sales/TA)* is the standard deviation of sales scaled by total assets ROA over the last five years.

Tests for difference in mean and median of each variable in the two sub-samples are displayed in the table. Bold figures show that there is a significant difference (at the significance level of 10% or better) between the two sub-samples. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5% or 1% level.

Table 4: Regression Results of Estimating Company Accounting and Stock Performance.

	ROA		CF/TA		Stock return	
	(1)	(2)	(3)	(4)	(5)	(6)
CFO Board	-0.05 [-1.40]	-0.01 [-0.55]	-0.03 [-1.00]	-0.003 [-0.11]	<b>-0.14**</b> [-2.47]	<b>-0.15**</b> [-2.51]
CFO Ownership	-0.03 [-1.06]	-0.03 [-0.97]	-0.03 [-1.41]	-0.03 [-1.35]	-0.05 [-1.44]	-0.06 [-1.62]
CFO Tenure (ln)	<b>0.03**</b> [2.36]	<b>0.02*</b> [1.76]	<b>0.03**</b> [2.57]	<b>0.02**</b> [2.20]	0.01 [0.28]	0.01 [0.28]
PAFE	0.01 [0.27]	0.02 [0.50]	0.02 [0.71]	0.03 [0.90]	0.10 [1.17]	0.06 [0.77]
AC Size	-0.01 [-0.87]		-0.01 [-0.62]		<b>0.05**</b> [2.11]	
Board Size		<b>-0.02**</b> [-2.28]		<b>-0.02**</b> [-2.26]		0.01 [0.52]
Insider Ratio	0.14 [1.57]	0.06 [0.79]	0.09 [1.21]	0.02 [0.25]	0.01 [0.07]	0.003 [0.02]
Total $Assets_{t-1}$ (ln)	<b>0.02*</b> [1.83]	<b>0.03**</b> [2.36]	<b>0.01*</b> [1.69]	<b>0.02**</b> [2.48]	<b>-0.05***</b> [-2.71]	<b>-0.04**</b> [-2.28]
Leverage	<b>-0.12***</b> [-8.91]	<b>-0.13***</b> [-9.56]	<b>-0.10***</b> [-14.99]	<b>-0.10***</b> [-15.97]	<b>-0.14***</b> [-7.71]	<b>-0.14***</b> [-7.84]
M/B Ratio	0.002 [0.97]	0.002 [1.23]	0.001 [0.49]	0.001 [0.79]	<b>0.02***</b> [3.09]	<b>0.02***</b> [3.20]
Firm Age (ln)	<b>0.03***</b> [2.86]	<b>0.03***</b> [2.90]	<b>0.03***</b> [2.76]	<b>0.03***</b> [2.84]	0.04 [1.63]	0.04 [1.59]
CAPEX/Sales	<b>-0.01*</b> [-1.83]	<b>-0.01*</b> [-1.91]	-0.01 [-1.55]	<b>-0.01*</b> [-1.66]	-0.001 [-0.13]	-0.001 [-0.11]
Std dev(ROA)	-0.01 [-0.28]	-0.01 [-0.19]				
Std dev(CF/TA)			0.01 [0.43]	0.01 [0.41]		
Std dev (Stock return)					0.06 [0.48]	0.05 [0.43]
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted $R^2$	28.38%	30.82%	23.62%	26.06%	24.04%	23.52%
Total observations	555	555	555	555	555	555

This table presents the regression results on company performance. The sample of 555 observations is from 2006 to 2010. *ROA* is return on assets, calculated as earnings before tax divided by total assets. *CF/TA* is operating cash flow deflated by total assets at the beginning of the year. *Stock return* is the return on company shares, calculated as the percentage of change in the share price from the current to the previous year. *CFO Board* is a binary variable coded as one if the CFO is on the company board of directors. *CFO Ownership* is the percentage of company shares owned by the CFO. *CFO Tenure* is the number of years since the CFO was appointed, expressed in natural logarithm. *PAFE* is the proportion of audit committee members who are financial accounting experts. *AC Size* is the size of the audit committee. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Total Assets<sub>t-1</sub>* is the book value of total assets in the prior year, expressed in natural logarithm. *Leverage* is firm financial leverage, calculated as total debt divided by market value of equity. *M/B Ratio* is the market value of equity divided by the book value of equity. *Firm Age* is the number of years since company incorporation, expressed in natural logarithm. *CAPEX/Sales* is the ratio of capital expenditures to sales. *Std dev (ROA)* is the standard deviation of ROA over the last five years. *Std dev (CF/TA)* is the standard deviation of operating cash flows scaled by total assets over the last five years. *Std dev (Stock return)* is the standard deviation of company share return over the previous five years. Each regression uses the clustered standard errors estimation (Rogers 1993). It also includes industry-specific and year-specific fixed effects to control for systematic differences in compensation across industries and over time. The figures in square brackets are *t*-statistics. Emboldened figures indicate statistical significance at the 10% level or better with \*, \*\*, \*\*\* indicating statistical significance at the 10%, 5% or 1% level.

Table 5: Regression Results of Accruals Quality.

	Discretionary Accruals (DA)		Accrual Estimation Errors (AEE)	
	(1)	(2)	(3)	(4)
CFO Board	<b>0.16*</b> [1.76]	<b>0.11*</b> [1.66]	<b>0.03**</b> [1.96]	<b>0.02*</b> [1.70]
CFO Ownership	-0.08 [-1.21]	-0.09 [-1.49]	0.02 [0.93]	0.02 [0.83]
CFO Tenure (ln)	0.06 [1.04]	0.07 [1.23]	0.003 [0.41]	0.002 [0.36]
PAFE	-0.05 [-0.41]	-0.12 [-1.15]	0.03 [1.13]	0.02 [0.85]
AC Size	0.07 [1.43]		0.01 [1.13]	
Board Size		<b>0.04*</b> [1.94]		0.003 [0.97]
Insider Ratio	-0.31 [-0.83]	-0.23 [-0.61]	-0.03 [-0.63]	-0.02 [-0.44]
Total $Assets_{t-1}$ (ln)	<b>-0.02**</b> [-2.55]	<b>-0.03***</b> [-2.74]	<b>-0.02***</b> [-4.12]	<b>-0.02***</b> [-3.71]
Leverage	0.03 [0.12]	-0.03 [-0.10]	<b>-0.05*</b> [-1.85]	<b>-0.05*</b> [-1.90]
M/B Ratio	<b>0.02*</b> [1.80]	<b>0.02*</b> [1.87]	0.0001 [0.13]	0.0001 [0.24]
Firm Age (ln)	<b>-0.09**</b> [-2.14]	<b>-0.10**</b> [-2.43]	0.01 [0.76]	0.01 [0.76]
INVREC	0.33 [1.20]	0.26 [0.96]	-0.05 [-1.60]	-0.05 [-1.63]
Prop. Loss Years	<b>0.28*</b> [1.85]	<b>0.29*</b> [1.88]	<b>0.07***</b> [2.96]	<b>0.06***</b> [2.89]
Std dev(Sales/TA)	0.07 [0.66]	0.07 [0.62]	<b>0.01**</b> [2.17]	<b>0.01**</b> [2.18]
Std dev(CF/TA)	0.21 [1.04]	0.22 [1.03]	-0.01 [-0.40]	-0.01 [-0.39]
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
Adjusted $R^2$	28.22%	28.37%	25.11%	25.23%
Total observations	450	450	362	362

This table presents the regression results on accruals quality. The sample is from 2006 to 2010. *DA* is the absolute value of discretionary accruals from the modified Jones model which was developed by Dechow et al. (2003). *AEE* is accrual estimation errors, proxied as standard deviation of residuals over the last five years from the model of Dechow & Dichev (2002). *CFO Board* is a binary variable coded as one if the CFO is on the company board of directors. *CFO Ownership* is the percentage of company shares owned by the CFO. *CFO Tenure* is the number of years since the CFO was appointed, expressed in natural logarithm. *PAFE* is the proportion of audit committee members who are financial accounting experts. *AC Size* is the size of the audit committee. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Total Assets<sub>t-1</sub>* is the book value of total assets in the prior year, expressed in natural logarithm. *Leverage* is firm financial leverage, calculated as total debt divided by market value of equity. *M/B Ratio* is the market value of equity divided by the book value of equity. *Firm Age* is the number of years since company incorporation, expressed in natural logarithm. *INVREC* is the ratio of inventory and account receivables to total assets. *Prop. Loss Years* is the proportion of loss years over the last years. *Std dev (Sales/TA)* is the standard deviation of sales scaled by total assets ROA over the last five years. *Std dev (CF/TA)* is the standard deviation of operating cash flows scaled by total assets over the last five years. Each regression uses the clustered standard errors estimation (Rogers 1993). It also includes industry-specific and year-specific fixed effects to control for systematic differences in compensation across industries and over time. The figures in square brackets are *t*-statistics. Emboldened figures indicate statistical significance at the 10% level or better with \*, \*\*, \*\*\* indicating statistical significance at the 10%, 5% or 1% level.