The Gender Gap in Australian CFO Compensation

Abstract

The gender gap in executive compensation continues to elicit considerable debate among social commentators and labour market reformers. In this paper we contribute to the existing body of knowledge by examining the gender pay gap in compensation of Chief Financial Officers (CFOs). In a sample of 556 listed firms in Australia from 2006-2010, we find that female CFOs tend to concentrate in small and medium enterprises (SMEs). The number of female CFOs remains low with only 7.37% of firms in our sample companies employing female CFOs. It is found that there is a gender pay gap in CFO compensation. Female CFOs earn substantially less than their male counterparts and yet hold the same level of qualifications and the performance of companies is not significantly impacted by the gender of the CFO. For the small number of female CFOs (41) that we are able to match using the propensity score method, we find the average of all compensation types are lower for female CFOs but the difference is not statistically significant. One possible explanation for the pay disparity could be the size effect as it is generally recognized that larger firms primarily offer higher remuneration packages to their executives.

Keywords: CFO Compensation, Gender Pay Gap.

JEL classification: G34, J33, M41

1 Introduction

During the last two decades, there has been significant positive changes in society's attitude to discrimination and equality and yet there has been little change in the gender pay gap over that period. As reported by the National Centre for Social and Economic Modelling in 2010,[1] the gender pay gap, defined by the OECD as the difference between male and female earnings expressed as a percentage of male earnings, has remained in the narrow 15%-17% range since 1990. It is documented by Australian Bureau of Statistics (ABS) that the average full-time weekly earnings of women in Australia in 2012 was 18% less than that of men.[2] The gender pay gap also becomes evident within starting graduate salaries, as reported by Graduate Careers Australia. The median starting salary in 2012 for female graduates was equivalent to 90.9% of the median starting salary earned by their male counterparts.[3] The gender pay gap typically widens as women climb the corporate ladder. ABS data in 2012 also showed that the average weekly total cash earnings of female chief executives and managing directors was 25% less than their male counterparts.

There has been ongoing discussion and an abundance of papers and reports on the question of why there is a gender pay gap. The Queensland government in a fact sheet[4] from the Department of Justice and Attorney General listed a number of factors contributing to the gender pay gap. In particular, women are likely to be paid less because of "poor recognition of qualifications, absence of appropriate classification structures, absence of previous and detailed assessment of their work and working in industries that are female dominated" (p.2 of the fact sheet). If we critically review the cited reasons then no such gender pay gap should exist in roles such as Chief Executive Officers (CEOs) and Chief Financial Officers (CFOs) which historically have been male dominated, have a significant accountability and assessment component, and for public companies the incumbents' qualifications are on the public record.

It is however acknowledged in the literature that there is a gender earnings gap at senior man-

[1]The report is from the website of the National Centre for Social and Economic Modelling (http://www.natsem.canberra.edu.au/publications/); "The impact of a sustained gender wage gap on the Australian economy" by R. Cassells, Y. Vidyattama and R. Miranti and J. McNamara, March 2010.

[2]Data is from the ABS website (http://www.abs.gov.au) under Category 6306.0 Employee Earnings and Hours, Australia, 2012.

[3]The report is available from the website of Graduate Careers Australia (http://www.graduatecareers.com.au/research/researchreports/graduatesalaries/); "Graduate Salary Report 2012 - A report on the earnings of new Australian graduates in their first full-time employment" by N. Haidar and G. Bryant, 2013.

[4]The fact sheet, titled "Why is there a gender pay gap" in September 2010, is from the website of the Department of Justice and Attorney General, Queensland (http://www.justice.qld.gov.au).

agement levels (Roth 2003, Kulich et al. 2011, Shin 2012, Lam et al. 2013). Previous works have mainly emphasized on the gender pay gap of either CEOs or all executive directors. The aim of our paper is to focus on CFOs and to determine if a gender pay gap is present in CFOs. As a result of a number of high profile corporate collapses, the enactment of legislation in the US and in Australia, the work of CFOs and the importance of the CFOs has been crystalized.[5] The result of these changes and the corresponding elevation of the role of CFOs enables CFOs to be treated as a unique and relatively homogeneous role within the executive ranks.[6] Another contribution of this study is that we focus on all pay elements of CFO remuneration including bonuses, salaries and the non-cash compensation when examining whether CFO pay differs with gender. In addition, we make comparison about CFO gender pay difference based on both an original sample and a matched sample using propensity matching score method. To our knowledge, this is the first work in Australia that investigates the gender pay gap at CFO compensation level and is an important first step in uncovering pay inequity in this defined executive role. The outcome of this work will likely lead to improved transparency on gender pay equity. As stated by Professor Kristjanson, the Vice-Chancellor of Swinburne University, "Gender is only one aspect of diversity but gender equity creates a more inclusive culture more generally in an institution".[7]

Our evidence is based on the original sample of 556 listed firms in Australia from 2006 to 2010. We find that female CFOs mainly work for small and medium enterprises (SMEs) and are concentrated in consumer stables and financial industries. There is no female CFOs in male-dominated industries such as information technologies, telecommunication and utilities. The majority of firms employ male CFOs with only 7.37% of firms in our sample employing female CFOs. There is a clear gender pay gap in Australian CFO compensation; female CFOs are remunerated significantly less than their male counterparts. Furthermore, this pay gap does not decrease when there are female directors on the company board or on the compensation committee. We also provide evidence on the matched sample, that is, firms with female CFOs

[5]According to Section 295A of the Corporations Act (Australia) and Section 302 of the Sarbanes-Oxley Act (US), both CEOs and CFOs are required to certify the material accuracy and completeness of the financial information and related disclosures by the company. As an outcome of legislative elevation of CFOs, the US Securities and Exchange Commission has required disclosure about CFO compensation since December 2002. In Australia, the Corporate Law and Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004 (also known as CLERP 9) requires expanded disclosure of executive remuneration by introducing a remuneration report within the directors' report of company financial reports.

[6]There is evidence in the literature that CFOs possess superior information due to their roles in the firm's financial policy and financial reporting process (Geiger & North 2006, Jiang et al. 2010). Wang et al. (2012) find that CFO trades are more informative about future stock returns than CEO trades. Similarly, Wang & Wang (2014) shows that CFOs trades are predictive of new information in future earnings for firms in a poor information environment.

[7]The quote is from an article, "Swinburne aims for equality in numbers and pay" by A. Trounson, *The Australian* newspaper, 6th August 2014, Higher Education section, page 28.

are paired with firms having male CFOs using the propensity matching score method. With the propensity score matched sample, we find female CFOs still earn less than male CFOs but the difference between their compensation is not significant. One possible explanation in explaining the result is the firm size effect. Female CFOs in our sample are mainly employed in SMEs which historically pay less in executive remuneration than larger public companies.

The remainder of the paper is organized as follows. Section 2 provides a brief overview of prior literature. Section 3 describes the research method, sample and data collection. In section 4 the empirical results, robustness tests and discussion of the findings are presented. The paper is concluded in Section 5.

2 Literature review

It is widely documented in the literature that there is a gender earnings gap at senior management levels (Munoz-Bullon 2010, Kulich et al. 2011, Shin 2012, Lam et al. 2013). Women in managerial positions typically face a "glass ceiling", namely an invisible barrier that prevents them climbing the corporate ladder (Daily et al. 1999). The obstacles that women encounter can become more prominent as they further progress in their careers (Powell 1999). As a result, there is a very small proportion of top-level positions with companies are occupied by women. For example, women only account for 1.97% of CEOs in the US over the the period 1998-2010 (Bugeja, Matolcsy & Spiropoulos 2012), or 4.4% of Chinese CEOs during the years between 2000 and 2008 (Lam et al. 2013). When taking a sample of CEOs and CFOs of listed firms in the US, Huang & Kisgen (2013) find the proportion of female executives is 6.6% for the years 1993-2005.

The majority of work on director gender pay has looked at all executives as one group and generally supports the proposition that there is gender bias in executive compensation. Kulich et al. (2011) provide evidence of gender pay gap in UK corporate boardrooms during the period 1998 to 2004. Their results indicate that bonuses paid to male executives are larger than that paid to female executives. In addition, bonuses for male CEOs are more closely linked to performance while women CEOs are neither rewarded nor punished for performance. Munoz-Bullon (2010) finds that male executives in the US are compensated significantly at higher levels than female executives for the years 1992 to 2006. Similarly, Shin (2012) explores the role of US female executives and the gender gap in their compensation over the period 1998-2005. He finds

a gender gap in executive compensation and this gap is smaller when there is a representation of women on the board or remuneration committee.

In a study of executive compensation of the US publicly traded firms between 1991 and 2006, Gayle et al. (2012) also find that female executives earn significantly less than male executives. However, after controlling for the executive rank, they show no gender pay difference for the CEO group. Their results are consistent with Bertrand & Hallock (2001), who find that there is no economic or significant pay gap between female and male executives after controlling for firm type and executive position. Similarly, Vieito & Khan (2012) provide evidence that the gender difference of executive compensation is not statistically significant for technology firms but find that the executive pay gap persists for S&P 1500 listed firms during the period from 1992 to 2004.

There are studies in the literature that examine the impact of gender on compensation which focus exclusively on the CEO group. The results on the association between gender and CEO compensation are mixed. Jordan et al. (2007) document that female CEOs of firms in the Fortune 100 do not earn significantly less than their male peers. Their results however are based on a small sample size and univariate analysis. Bugeja, Matolcsy & Spiropoulos (2012), investigating CEO compensation of US listed firm between 1998 and 2010, show that the remuneration of female CEOs is equivalent to the male counterparts. Their results are robust for both the original sample and the matched subsample using the propensity score matching method which identifies a control firm for each firm employing a female CEO. However, Lam et al. (2013), in a study of Chinese-listed enterprises, find that female CEOs receive significantly less compensation than male CEOs and find no evidence to explain this differential when comparing firm performance.

As previously discussed, the legislative elevation of CFOs to the same level of financial oversight responsibility as CEOs has emphasized the important role of CFOs beyond that of other company executives. It indicates that CFOs should be treated as a homogenous group within the executive ranks. There are a number of studies that have been undertaken to examine the gender pay gap in executive compensation but little work to date has specifically included the role of CFOs in this discussion. Roth (2003), in a US study on gender inequality in the professions, finds a strong gender inequality exists in the finance profession. In this paper, we aim at filling this gap by investigating the impact of gender on CFO compensation in Australia. Built on previous literature, two research questions are addressed in this study. Firstly, is there a

significant pay gap between male and female CFOs? Secondly, if the gender pay disparity exists in CFO compensation, does it reduce when firms with female CFOs are matched to similar firms that employ male CFOs?

3 Data and methodology

3.1 Research method

The following model is estimated to investigate whether CFO gender has an impact on the level of CFO compensation (our first research question):

$$\begin{aligned} CFOComp. = \alpha &+ \beta_i (FemaleCFOs)_i + \gamma_j (FemaleDirectors)_j + \\ &+ \delta_k (CFOCharacteristics)_k + \theta_m (GovernanceCharacteristics)_m \\ &+ \lambda_n (FinancialCharacteristics)_n + [YearDummies] + [IndustryDummies] + \epsilon \end{aligned} \tag{1}$$

The dependent variable in equation (1) is the compensation paid to CFOs during the year. We examine four measures of CFO compensation: annual bonus, annual salary, total annual non-cash compensation (the sum of restricted stock rewards and stock option awards granted to CFOs), and total annual compensation (the sum of total cash and non-cash compensation).

The independent variable, *Female CFOs*, is a binary variable equal to 1 if the company CFO is female. We also control for the presence of female directors on the board or on the remuneration committee. Shin (2012), based on the social identity theory of Hogg & Terry (2000), suggests that female directors would evaluate female executives more favourably than they would evaluate male executives. He finds that the gender pay gap in executive compensation is smaller when there is a greater proportion of female directors on the board or on the compensation committee. Based on the findings of Shin (2012), we include in the regression (1) the percentage of female directors on the board or on the remuneration committee.[8] In addition, the interaction variable between the presence of female directors on the board (or the compensation committee) and the *Female CFOs* dummy variable is also included in the model.

The remaining independent variables in model (1) are drawn from the prior literature in executive compensation and provide controls for CFO, governance and company financial characteristics. We also control for industry and time fixed effects due to the differences in CFO compensation across industries[9] and time.

[8] These two variables are included alternatively in the model (1) due to their high degree of correlation.

[9] Firms are sorted according to their 2-digit Global Industry Classification System (GICS) codes.

CFO characteristics

The CFO characteristics in model (1) control for CFO qualification, managerial power and experience. It is reasonable to expect that firms will compensate more for CFOs with higher qualification. Banghoj et al. (2010) shows that there is a significantly positive relationship between compensation paid to executives and their level of education in Danish private firms. Our first control for CFO characteristics is a binary variable equal to 1 if the CFO has an MBA degree (*MBA Qualification*). CFOs that have a longer tenure with the firm, or have greater equity ownership, or have a seat on the board of directors are expected to exert greater influence over the board on setting their remuneration (Bedard et al. 2014, Duong & Evans 2014). We control for CFO tenure using the natural logarithm of the number of years in service of the current CFO (*CFO Tenure*). We include the percentage of company shares owned by the CFO (*CFO Ownership*) as our next control variable. The last control is an indicator variable equal to 1 if the CFO is a member of the company board of directors (*CFO Board*).

Governance characteristics

In model (1), we also control for differing structures of the company board of directors. The number of directors on the board (*Board Size*) and the percentage of executive directors on the board (*Insider Ratio*) are used as measures of board governance characteristics. As evidenced in Rosenstein & Wyatt (1990) and Yermack (1996), smaller boards and boards with higher proportions of outside directors are more effective and may act to constrain executive compensation.

Company financial characteristics

Consistent with prior work on executive compensation (e.g. Murphy 1985, Smith & Watts 1992, Ferreira et al. 2013, Bedard et al. 2014, Fortin et al. 2014), we include sales, firm leverage, growth opportunity and firm performance as financial control variables. We use *Sales* as measured by the natural logarithm of company sales in the previous year to control for size. Firm leverage is calculated as total debt divided by the market value of equity in the previous year. The firm growth opportunity is captured by the market-to-book equity ratio (*M/B ratio*), and is winsorized at the 1^{st} and 99^{th} percentiles in order to control for outliers in the data. Finally, 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 (*Stock Returns*) and the selected accounting measure is return on assets (*ROA*). The evidence presented in the literature generally concludes that executive compensation is higher for companies with larger size, greater

investment/growth opportunities, and better firm performance.

To examine the second research question, we match firms with female CFOs to firms with male CFOs using the propensity-score matching approach adopted by Armstrong et al. (2010). This approach is also to address the potential selection bias of female CFOs not being randomly assigned to firms. The probability of a firm having a female CFO is modeled using a logistic regression with both firm size (*Sales*) and firm leverage as the independent variables. We include these two variable as the results from Panel B of Table 4[10] shows that there is a difference of financial characteristics across the gender of CFOs in firm size and firm leverage. Industry and year effects are also controlled for in the logit regression. We then use the propensity scores obtained from the logistic regression and perform a one-to-one nearest neighbour match with replacement. This procedure is to ensure that each female CFO firm is paired with a male CFO firm in the same industry with the lowest difference in propensity scores. We pool the treatment sample (female CFOs) and the matched sample (male CFOs) together and examine gender differences in CFO compensation using the model (1) above.

3.2 Sample and data

Our data is extracted from the Top 500 firms by market capitalization listed on the Australian Securities Exchange (ASX) between 2006 and 2010. Data on CFO compensation, CFO characteristics and corporate governance for each company are taken from the S&P Capital IQ database. Where the information in the S&P Capital IQ database is not available, we extract the data from the firm's annual report. Company accounting and financial data are obtained from Aspect FinAnalysis database. In estimating model (1), we exclude from the sample all companies with a change in CFO in any year and any observations with missing data. Our final sample consists of 556 firm-year observations. Table 1 provides a summary of definitions of the variables used in the study together with the data sources.

[Insert Table 1]

Table 2 shows the frequency of firms with female CFOs classified by industry. It is clear that the majority of firms employ male CFOs. In an era where the majority of graduates from Australian business schools is female,[11] the number of female CFOs remain low with only 7.37%

[10] Table 4 is presented in Section 4.2 later.

[11] The average percentage of Australian female graduates in the field of management and commerce course between 2010 to 2012 is 52%. Data is obtained from Department of Education (Australian Government), Higher Education Statistics Data Cube (uCube).

of our sample companies employing female CFOs. Female CFOs are concentrated in consumer staples and financial industries. There is no representation of female CFOs in male-dominated industries such as information technologies, telecommunications and utilities.

[Insert Table 2]

4 Empirical results

4.1 Univariate analysis

Table 3 presents descriptive data on the total pooled sample as well as the two subsamples partitioned by CFO gender. It is clear from Panel A of Table 3 that female CFOs are paid significantly less than their male counterparts in all types of compensation for the years 2006-2010. The average amount of salary paid to female CFOs is 34% less than what male CFOs earn. The average total remuneration of female CFOs is $566,428 which is less than a half of the average of $1.2 million in remuneration for male CFOs. For the bonus component, the difference between pay of men and women is far greater: female CFOs on average receive $75,908 which equates to only a quarter of the bonus paid to their male peers ($300,575). The story of male CFOs earning more than female CFOs is also reported in a December 2012 study published by the *Australian Financial Review* newspaper.[12] In this survey, it is shown that the average remuneration of the 10 highest paid male CFOs is $4.39 million which is more than three times of the average $1.37 million paid for female CFOs.

[Insert Table 3]

In terms of compensation structure, female CFOs get paid significantly more in cash and less in non-cash components compared to male CFOs.[13] While female CFOs have 84% of their total compensation in cash and the remaining 16% in non-cash component, the figures for male CFOs are 77% and 23%, respectively. Within the cash compensation, female CFOs have a larger proportion of salary and a smaller percentage of bonus than that of the male counterparts. The salary paid to female CFOs accounts for 56% of their total compensation and their bonus component contributes a further 13%. For male CFOs, the percentage of salary to their total compensation is only 40% but the proportion of their bonus component makes up 25%. The

[12] "Top CFOs' pay rises 10pc" by S. Durummond and E. Tadros, *Australian Financial Review* newspaper, 10 December 2012.

[13] Overall, Australian CFOs receive an average annual total compensation of $1.16 million during the period 2006-2010 with 78% of their total compensation in cash and the remaining 22% in non-cash component. This is similar to the compensation structure paid to Australian CEOs whose remuneration is weighted heavily towards the cash component (Chalmers et al. 2006, Bugeja, da Silva Rosa, Duong & Izan 2012, Matolcsy et al. 2012).

difference in compensation structure suggests that female CFOs may be less risk-taking than male CFOs. This assertion is consistent with previous findings in the literature that women are relatively more risk averse than men (Sunden & Surette 1998, Agnew et al. 2003)

Panel B of Table 3 describes the financial characteristics of firms when separated by the gender of the CFO. There is no significant difference in M/B ratio, ROA and stock returns between firms with male or female CFOs. However, firms with female CFOs are significantly smaller in size and have lower leverage. Our finding of lower leverage in firms with female CFOs is consistent with the work of Huang & Kisgen (2013) who found that male executives issue debt more often than female executives. Their finding may suggest that male CFOs exhibit relative overconfidence in significant corporate decision making compared with women CFOs.

Panel C of Table 3 displays the corporate governance and CFO characteristics of firms divided by the CFO gender. In total, 21% of CFOs have an MBA degree and there is no significant difference across the gender of CFOs.[14] Female CFOs own significantly more company shares, have shorter tenure and are less likely to have a seat on the board of directors when compared with male CFOs. Firms with female CFOs have a significant higher proportion of female directors on the board than firms with male CFO. However, the percentage of female directors on the remuneration committee is not different by CFO gender. Consistent with the firm size effect, firms with a female CFO have a significantly smaller board size and more inside directors on the board.

4.2 Multivariate analysis

The previous section shows the univariate analysis of the pay gap between female and male CFOs. In this section, the multivariate model (1) is estimated to control for factors other than the gender effect that may influence CFO compensation. Given that a number of firms do not pay bonuses or offer an equity component, that is, there are zero values in bonus and total non-cash compensation, we separate CFO compensation into two sub samples for the regression analysis. The first sub group is compensation figures using dollar value (full sample) and the second sub group is compensation figures measured in logarithmic scale (sample without zero-value compensation).

[14] In the pooled sample, 73% of CFOs have either CA or CPA qualification and no gender difference is observed. We do not add the CA/CPA qualification variable in our model (1) as it is an insignificant variable in the regression analysis. The insignificant result of CPA variable is also observed in a study of Loyeung & Matolcsy (2014) when they examine Australian CFO compensation in the transition year to International Financial Reporting Standards (IFRS).

Table 4 presents the regression results when compensation data is expressed in dollar value. In Panel A of Table 4, we show the tobit regression results of bonus and total non-cash compensation since this group contains a number of zero-value observations. The ordinary least squares (OLS) results of salary and total compensation are presented in Panel B. As can be seen from the two panels of Table 4, the coefficient on the experimental variable, *CFO Female*, is significantly negative in all models. This indicates that there is a significant gender pay gap and male CFOs receive higher compensation than their female counterparts. This finding is consistent with the univariate evidence reported in Table 3 and with previous studies on executive gender pay gap (Roth 2003, Kulich et al. 2011, Shin 2012, Lam et al. 2013).

[Insert Table 4]

The coefficients for the proportion of female directors on the board (*% Female Board*) and on the remuneration committee (*% Female Remu.*) variables are both significantly positive. It suggests that CFOs, in general, receive more compensation when there is a greater representation of women on the board or on the remuneration committee. However, the gender pay gap in CFO compensation is not reduced when there is a presence of female directors on the board or on the compensation committee. The interaction term between the female indicator variable, *CFO Female*, and the presence of women on the board (or on the compensation committee) is statistically insignificant. This finding is consistent with the work of Lam et al. (2013) in their investigation of CEO compensation in Chinese companies. They find the participation of women on the company board of directors does not increase female CEO remuneration.

The results for the control variables are generally consistent with previous studies in the literature. CFOs with an MBA degree receive significantly more in bonus and total non-cash compensation, suggesting that CFOs are paid for their talent and efforts. CFOs who are board members or have higher equity ownership earn more in salary and total compensation. In addition, CFOs with a shorter tenure receive significantly higher salary. These results may indicate that CFOs use their power to extract greater pay and this is consistent with the finding in Duong & Evans (2014). As expected, larger firms and those with the greater number of directors on the board pay CFOs more in all types of compensation. Firms with higher growth potential (as measured by the market-to-book ratio) reward their CFOs more in the non-cash component. This finding may suggest that high growth opportunity firms have less liquidity relative to lower growth opportunity firms and are more inclined to use shares to compensate

their CFOs. The *Stock Returns* variable is found to be significantly positive in bonus, non-cash and total compensation. Our finding of a positive association between CFO compensation and stock performance measure is also evident in previous studies (Balsam et al. 2012, Hoitash et al. 2012, Bedard et al. 2014, Duong & Evans 2014)

The analysis presented in Table 4 contains a number of variables that are right skewed (all CFO compensation and *CFO Ownership* variables (see statistics in Table 3)). To mitigate the problem, we conduct additional testing and transform the variables using logarithmic scales. Table 5 presents the results of the analysis of the transformed variables. The results in Table 5 are similar to those in Table 4 with a significantly negative association between the *CFO Female* dummy variable and all types of CFO compensation. The gender disparity in CFO compensation is persistent when using transformed variables. Women who rise through the "glass ceiling" to the level of CFO are still remunerated lower than their male counterparts. In addition, this pay gap does not narrow when there is a higher percentage of female directors on the board or on the compensation committee.

[Insert Table 5]

4.3 Matched firms using a propensity matching score

Given the large disparity in the number of firms with male and female CFOs, we conduct additional analysis of CFO gender pay gap using a matched sample to address our second research question. As detailed in Section 3.1, the propensity-score matching approach is adopted to pair each female CFO firm to a male CFO firm in the same industry with the lowest difference in propensity scores. The treatment sample (female CFOs) and the matched sample (male CFOs) are pooled together in order to investigate CFO gender pay difference. Table 6 displays descriptive statistics for the paired subsample and univariate tests of differences between male and female CFO firms. By construct there is no significant difference found in firm size and leverage between firms with female and male CFOs. The t-test and Mann-Whitney test indicate that there is no gender difference in any measure of CFO compensation. The average and median figures of all compensation types are lower for female CFOs but the difference is not statistically significant.

[Insert Table 6]

The regression results of estimating model (1) using the propensity score matched sample are

presented in Table 7 (when compensation in dollar value) and Table 8 (when compensation in logarithmic scale).[15] Consistent with the univariate evidence in Table 6, the coefficient on the *Female CFOs* variable is insignificant for all measures of CFO compensation. This finding indicates that the gender pay gap does not exist if firms with female CFOs are appropriately matched to firms with male CFOs. One explanation is that the big gender pay gap found in the previous section (Section 4.2) is likely due to the firm size effect.
[Insert Table 7 and Table 8]

4.4 Additional analysis

As a robust test, we further identify matched firms with two different matching methods. The first method is to keep using the propensity score procedure with different parameters. In the logistic regression of finding the probability of a firm having a female CFO, the first independent variable, firm size (*Sales*), is kept the same, while the other variable is changed to the percentage of female directors on the company board of directors (*Female Dir.%*). We use the percentage of female directors on the company board as a control variable since our univariate evidence in Table 3 and previous research (Elkinawy & Starter 2011, Shin 2012) show that a female executive is more likely to be employed when the board comprises more female directors.

The second matching technique is to select firms based on size only. Firms with male CFOs are matched on the basis of similar firm size (proxied by *Sales*) in the same year and industry. Regardless of the matching methods, the results[16] are similar to those presented in Table 6, 7 and 8. The gender pay gap of CFO compensation in the whole sample disappears when firms with male CFOs are matched to firms with female CFOs.

4.5 Discussion of results

Our empirical analysis shows that female CFOs only account for a small proportion (7.37%) of firms in our sample and they generally work in small firms. It is possible that gender discrimination explains, at least partially, the small fraction of women compared to men who become CFOs in the publicly listed firms. Consistent with the resilient gender pay gap internationally, it is also found that there is a gender disparity in Australian CFO compensation. Overall, fe-

[15]For simplicity, we only present the results with the percentage of female directors on the remuneration committee. The results with the proportion of female directors on the board are similar.

[16]For brevity, the results of univariate evidence and multivariate regression of the two matching techniques are not presented. The results are available upon authors' request.

male CFOs earn significantly less than their male counterparts even though they have obtained similar qualifications. In addition, the company accounting and stock market performance are not significantly impacted by CFO gender. However, this pay gap does not exist in the matched sample when firms with female CFOs are matched to firms with male CFOs. We conduct different matching techniques based on firm characteristics which include firm size, firm leverage and the percentage of female board directors. The gender differences in CFO pay is likely due to the firm size effect as it is widely acknowledged that larger firms reward their executives more than smaller firms (Smith & Watts 1992, Bedard et al. 2014, Duong & Evans 2014). Our finding is consistent with the conclusion of the 2012 report by the Workplace Gender Equality Agency[17] that the gender pay gap is mostly influenced by firm size amongst other factors. Reliance on the award system to set wages has seen a smaller pay gap emerge in small firms in Australia.

Women may choose to work in smaller firms for other reasons. It is often believed that social and family pressures may exert influence in limiting the workforce mobility of women. Lam & Dreher (2004) argue that an executive gender pay gap may not be so much an issue of labour market discrimination but rather family pressures that limit women's work choices. Women may only consider high-level positions when they are able to match the work commitment with family life. This may result in a female executive intentionally sacrificing personal salary enhancement in favour of family convenience (Lam et al. 2013). Similarly, Gayle et al. (2012) claim that the higher exit rate for female executives could be another factor in explaining the executive gender pay gap. Although female executives are most commonly beyond childbearing age, there is evidence that such women are more likely to exit the firm for personal or family-related reasons than their male peers (Sicherman 1996). This idea is reinforced by Professor Kristjanson that the lower pay to senior women at Swinburne University "was likely due to their careers often being interrupted by child bearing and rearing, which left them "playing catch up" with their male colleagues".[18]

[17]The Workplace Gender Equality Agency (WGEA) is an Australian Government statutory agency in charge of promoting and improving gender equality in the Australian workplace. The report's title is "Attitudes to gender pay equity in smaller firms" by R. Barrett, version as at February 2012. It is available for downloading at the WGEA website (https://www.wgea.gov.au).

[18]The quote is from the article, "Swinburne aims for equality in numbers and pay" by A. Trounson, on *The Australian* newspaper, 6th August 2014, Higher Education section, page 28.

5 Conclusion

Increasing business complexity and recent economic shocks have acted to elevate the importance and significance of the role of CFO in an organization. It is therefore essential to further explore and investigate attributes, characteristics and skill sets of CFOs. The primary objective of this paper is to focus in on one such characteristic, namely CFO gender and CFO remuneration.

In our study we pose two underlying research questions, namely is there a significant pay gap between male and female CFOs and does such a gap exist when firms are matched using propensity score matching? The results in our paper clearly indicate a gender pay disparity between male and female CFOs. Female CFOs are not only paid less than male CFOs but are also totally unrepresented in a large number of industry groupings. In an era wheren the majority of graduates from Australian Business Schools are female, these findings raise a number of questions. We do however find that when firms are matched on size and leverage, the remuneration of female CFOs is not significantly less than male CFOs.

Our findings also provide some insights into different pay components between male and female CFOs as well as articulate the very strong preponderance of female CFOs in SMEs. Female CFOs receive a larger proportion of their pay in cash, have smaller bonus payments and are highly represented in the consumer stables and finance industry groupings. We also show that firms with female CFOs incur less debt than those firms with male CFOs but other characteristics, such as, M/B ratio, company performance and qualifications held by the CFO are similar to those of male CFOs. One inference of this is that we are able to eliminate two possible reasons for female pay inequity, namely, qualification differentials and differing company performance levels.

References

Agnew, J., Balduzzi, P. & Sunden, A. (2003), 'Portfolio Choice and Trading in a Large 401(K) Plan', *The American Economic Review* **93**(1), 193–215.

Armstrong, C., Ittner, C. & Larcker, D. (2010), 'Chief Executive Officer Equity Incentives and Accounting Irregularities', *Journal of Accounting Research* **48**(2), 225–271.

Balsam, S., Irani, A. J. & Yin, Q. J. (2012), 'Impact of Job Complexity and Performance on CFO Compensation', *Accounting Horizons* **26**(3), 395–416.

Banghoj, J., Gabrielsen, G., Petersen, C. & Plenborg, T. (2010), 'Determinants of Excecutive Compensation in Privatey Held Firms', *Accounting and Finance* **50**(3), 481–510.

Bedard, J. C., Hoitash, R. & Hoitash, U. (2014), 'Chief Financial Officers as Inside Directors', *Contemporary Accounting Research (Forthcoming)*.

Bertrand, M. & Hallock, K. (2001), 'The Gender Gap in Top Corporate Jobs', *Industrial and Labor Relations Review* **55**(1), 3–21.

Bugeja, M., da Silva Rosa, R., Duong, L. & Izan, H. (2012), 'CEO Compensation from M&As in Australia', *Journal of Business Finance & Accounting* **39**(9), 1298–1329.

Bugeja, M., Matolcsy, Z. P. & Spiropoulos, H. (2012), 'Is There a Gender Gap in CEO Compensation?', *Journal of Corporate Finance* **18**(4), 849–859.

Chalmers, K., Koh, P. & Stapledon, G. (2006), 'The Determinants of CEO Compensation: Rent Extraction or Labour Demand?', *The British Accounting Review* **38**(3), 259–275.

Daily, C. M., Certo, S. T. & Dalton, D. R. (1999), 'A Decade of Corporate Women: Some Progress in the Boardroom, None in the Executive Suite', *Strategic Management Journal* **20**(1), 93–99.

Duong, L. & Evans, J. (2014), CFO Compensation: Evidence from Australia. *Working paper, Curtin Business School*.

Elkinawy, S. & Starter, M. (2011), 'Gender Differences in Executive Compensation: Variation with Board Gender Compensation and Time', *Journal of Economics and Business* **63**(1), 23–45.

Ferreira, N., Matos, P. & Murphy, K. J. (2013), 'Are U.S. CEOs Paid More? New International Evidence', *The Review of Financial Studies* **26**(2), 323–367.

Fortin, S., Subramaniam, C., Wang, X. & Zhang, S. (2014), 'Incentives Alignment through Performance-focused Shareholder Proposals on Management Compensation', *Journal of Contemporary Accounting & Economics* **10**(2), 130–147.

Gayle, G., Golan, L. & Miller, R. (2012), 'Gender Differences in Executive Compensation and Job Mobility', *Journal of Labour Economics* **30**(4), 829–871.

Geiger, M. & North, D. (2006), 'Does Hiring a New CFO Change Things? An Investigation of Changes in Discretionary Accruals', *The Accounting Review* **81**(4), 781–809.

Hogg, M. A. & Terry, D. J. (2000), 'Social Identity and Self-categorization Process in Organizational Contexts', *Academy of Management Review* **25**(1), 121–140.

Hoitash, R., Hoitash, U. & Johnstone, M. (2012), 'Internal Control Material Weekness and CFO Compensation', *Contemporary Accounting Research* **29**(3), 768–803.

Huang, H. & Kisgen, D. (2013), 'Gender and Coporate Finance: Are Male Excecutives Overconfident Relative to Female Executives?', *Journal of Financial Economics* **108**(3), 822–839.

Jiang, J. X., Petroni, K. R. & Wang, I. Y. (2010), 'CFOs and CEOs: Who Have the Most Influence on Earnings Management', *Journal of Financial Economics* **96**(3), 513–526.

Jordan, C., Clark, S. & Wardon, M. (2007), 'Gender Bias and Compensation in the Executive Suite', *Journal of Organizational Culture, Communications and Conflict* **11**(1), 19–29.

Kulich, C., Trojanowski, G., Ryan, M. K., Haslam, S. A. & Renneboog, L. D. R. (2011), 'Who Gets the Carot and Who gets the Stick? Evidence of Gender Disparities in Executive Compensation', *Strategic Management Journal* **32**(3), 301–321.

Lam, K. C., McGuinness, P. B. & Vieito, J. P. (2013), 'CEO Gender, Executive Compensation and Firm Performance in Chinese-listed Enterprises', *Pacific-Bsin Finance Journal* **21**(1), 1136–1159.

Lam, S. S. & Dreher, G. E. (2004), 'Gender, Extra-Firm Mobility and Compensation Attainment in the United States and Hong Kong', *Journal of Organizational Behavior* **25**(7), 791–805.

Loyeung, A. & Matolcsy, Z. (2014), 'CFO's Accounting Talent, Compensation and Turnover', *Accounting and Finance (Forthcoming).*

Matolcsy, Z., Shan, Y. & Seethamraju, V. (2012), 'The Timing of Changes in CEO Compensation from Cash Bonus to Equity-based Compensation: Determinants and Performance Consequences', *Journal of Contemporary Accounting & Economics* **8**(2), 78–91.

Munoz-Bullon, F. (2010), 'Gender-Compensation Differences among High-Level Executives in the United States', *Industrial Relations* **49**(3), 346–370.

Murphy, K. J. (1985), 'Corporate Performance and Managerial Remuneration: An Empirical Analysis', *Journal of Accounting and Economics* **7**(1-3), 11–42.

Powell, G. N. (1999), Reflections on the Glass Ceiling. In *Handbook of Gender and Work*, Powell, G.N. (ed), SAGE, London, UK, 325-345.

Rosenstein, S. & Wyatt, J. G. (1990), 'Outside Directors, Board Independence, and Shareholder Wealth', *Journal of Financial Economics* **26**(2), 175–191.

Roth, L. M. (2003), 'Selling Women Short: A Research Note on Gender Differences in Compensation on Wall Street', *Social Forces* **82**(2), 783–802.

Shin, T. (2012), 'The Gender Gap in Executive Compensation: The Role of Female Directors and Chief Executive Officers', *The Annals of the American Academy of Political and Social Science* **639**(1), 258–278.

Sicherman, N. (1996), 'Gender Differences in Departures from a Large Firm', *Industrial and Labor Review* **49**(3), 484–505.

Smith, C. W. & Watts, R. L. (1992), 'The Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies', *Journal of Financial Economics* **32**(3), 263–292.

Sunden, A. & Surette, B. (1998), 'Gender Differences in the Allocation of Assests in Retirement Savings Plans', *The American Economic Review* **88**(2), 207–211.

Vieito, J. P. & Khan, W. A. (2012), 'Executive Compensation and Gender: S&P 1500 Listed Firms', *Journal of Economics and Finance* **36**(2), 371–399.

Wang, W., Shin, Y. & Francis, B. B. (2012), 'Are CFOs' Trades More Informative Than CEOs' Trades?', *Journal of Financial and Quantitative Analysis* **47**(4), 743–762.

Wang, W. & Wang, X. (2014), 'Predicting Earnings in a Poor Information Environment', *Journal of Contemporary Accounting & Economics* **10**(1), 46–58.

White, H. (1980), 'A Heteroscedasticity Consistent Covariance Matrix Estimator and a Direct Test of Heteroscedasticity', *Econometrica* **48**(4), 817–838.

Yermack, D. (1996), 'Higher Market Valuation of Companies with a Small Board of Directors', *Journal of Financial Economics* **40**(1), 185–211.

Table 1: Variable definitions

Variables	Definition	Sources of data
CFO compensation		
Salary	The sum of salary and superannuation paid to the CFO during the year	Capital IQ
Bonus	Bonus paid to the CFO in the year	Capital IQ
Total Non-cash Comp.	Total value of restricted stock rewards and stock options awards granted to the CFO as part of their remuneration package	Capital IQ
Total Comp.	The CFO total compensation, calculated as the sum of cash and non-cash compensation	Capital IQ
Financial characteristics		
Sales	The gross sales figure after credit and returns in prior year	FinAnalysis
Leverage	The firm financial leverage, calculated as total debt divided by market value of equity in the previous year	FinAnalysis
M/B Ratio	The market value of equity divided by the book value of equity	FinAnalysis
ROA	Earnings before tax divided by total assets in the prior year	FinAnalysis
Stock Returns	The unadjusted return on company's shares during the year, calculated as the current year share price divided by the previous year share price, expressed in natural logarithm	FinAnalysis
Governance and CFO characteristics		
CFO Female	An indicator variable coded as one if the CFO of company is female, zero otherwise	Capital IQ database, Boardroom database and company annual financial reports
MBA Qualification	An indicator variable coded as one if the company CFO has an MBA degree, zero otherwise	
CFO Board	An indicator variable coded as one if the CFO is on the company board of directors, zero otherwise	
% Female Board	The percentage of female directors on the company board	
% Female Remu.	The percentage of female directors on the remuneration committee	
CFO Ownership	The percentage of company shares owned by the CFO	
CFO Tenure	The number of years since the CFO was appointed	
Board Size	The number of directors on the board of directors	
Insider Ratio	The percentage of executive directors on the board	

Table 2: Sample industry - separated between female and male CFOs firms

Industry	**No. of firms**	**Female CFOs**	**Male CFOs**	**Percentage of female CFOs**
Consumer Discretionary	53	4	49	7.55%
Consumer Staples	32	3	29	9.38%
Energy	66	10	56	1.52%
Financials	97	9	88	9.28%
Healthcare	50	2	48	4.00%
Industrials	88	3	85	3.41%
Information Technology	17	0	17	0%
Materials	134	10	124	7.46%
Telecommunications	13	0	13	0%
Utilities	6	0	6	0%
Total	**556**	**41**	**515**	**7.37%**

Table 3: Descriptive statistics - Total sample

	Pooled sample N = 556			Female CFOs N = 41			Male CFOs N = 515			Diff. in mean/median	
	Mean	Median	Std dev	Mean	Median	Std dev	Mean	Median	Std dev	t-stat	Mann-Whitney stat
Panel A: CFO compensation ($)											
Salary	470,608	364,299	302,731	317,746	275,229	177,550	482,778	375,000	307,393	**-3.39*****	**3.45*****
Bonus	284,008	100,000	462,893	75,908	14,100	126,564	300,575	114,876	475,800	**-3.01*****	**3.92****
Total Non-cash Comp.	259,696	83,426	558,985	91,710	35,458	114,274	273,070	90,058	577,877	**-2.01****	**2.04****
Total Comp.	1,155,591	665,629	1,1317,673	566,428	383,557	402,132	1,202,495	696,825	1,353,617	**-2.99*****	**3.55*****
Panel B: Financial characteristics											
Sales ($mil)	3,589	505	8,646	991	64	2,314	3,796	559	8,929	**-2.01****	**3.71*****
Leverage	0.47	0.49	0.26	0.38	0.34	0.28	0.48	0.49	0.27	**-2.28****	**2.18****
M/B Ratio	3.48	2.30	4.46	3.40	1.97	4.29	3.49	2.31	4.48	-0.12	0.90
ROA	3.70%	6.50%	19.36%	0.91%	4.02%	18.38%	3.92%	6.59%	19.43%	-0.96	1.58
Stock Returns	7.44%	8.79%	59.73%	4.39%	0.96%	54.23%	7.69%	9.16%	60.18%	-0.34	0.30
Panel C: Governance and CFO characteristics											
CFO Female	7.37%										
MBA Qual.	20.50%			26.89%			20.00%			1.04	
CFO Board	43.08%			31.71%			54.98%			**-2.76*****	
% Female Board	6.49%	0%	8.58%	9.73%	11.11%	9.71%	6.36%	0%	8.45%	**2.52****	**2.24****
%Female Rem.	8.13%	0%	14.14%	6.99%	0%	15.20%	8.22%	0%	14.08%	-0.50	0.63
CFO Ownership	0.21%	0.03%	0.64%	0.68%	0.07%	1.52%	0.17%	0.03%	0.50%	**4.98*****	**1.95***
CFO Tenure (years)	5.26	4.17	3.86	4.02	2.92	3.25	5.36	4.33	3.89	**-2.14****	**2.39****
Board size	7.08	8.00	2.59	6.32	6.00	1.65	7.92	8.00	2.61	**-3.87*****	**4.11*****
Insider ratio	39.49%	37.50%	15.76%	48.53%	50.00%	21.51%	38.77%	37.50%	15.01%	**3.86*****	**3.01*****

This table presents summary statistics of firms in our sample for the years 2006 to 2010. It is reported for the whole sample of 556 firm-year observations and also partitioned by gender. There are 41 firm-year observations that have female CFOs and 515 firm-year observations that have male CFOs. All variables are defined in Table 1. 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 statistically significant at the 10%, 5% or 1% level.

Table 4: Regression results of CFO compensation - Total sample (compensation in $'000)

Panel A: Bonus and Non-cash compensation ($'000) - Tobit regression

	Bonus	Bonus	Non-cash	Non-cash
Female CFOs	**-129.98***	**-170.77****	**-156.49****	**-180.66****
	[-1.70]	**[-1.99]**	**[-2.07]**	**[-2.00]**
% Female Board	**83.12***		**674.64*****	
	[1.81]		**[2.92]**	
(Female Board)*(Female CFOs)	-55.78		-149.39	
	[-0.51]		[-1.24]	
% Female Remu.		**472.67*****		**577.37*****
		[3.47]		**[3.10]**
(Female Remu.)*(Female CFOs)		72.59		21.83
		[0.58]		[0.17]
MBA Qualification	**182.32****	**188.49*****	**153.61***	**163.59***
	[2.52]	**[2.62]**	**[1.74]**	**[1.87]**
CFO Board	-19.83	-12.13	74.55	72.62
	[-0.39]	[-0.24]	[1.15]	[1.13]
CFO Ownership	-25.25	-22.26	62.58	77.90
	[-0.42]	[-0.36]	[1.03]	[1.27]
CFO Tenure (ln)	39.76	39.61	-57.95	-55.65
	[1.19]	[1.23]	[-1.51]	[-1.49]
Board Size	**28.42****	**28.46****	**87.64*****	**86.00*****
	[2.34]	**[2.37]**	**[3.31]**	**[3.21]**
Insider Ratio	-95.92	-39.36	-65.14	-34.51
	[-0.60]	[-0.24]	[-0.36]	[-0.19]
Sales (ln)	**81.45*****	**81.79*****	**93.31*****	**92.21*****
	[6.71]	**[7.26]**	**[4.43]**	**[4.27]**
Leverage	82.37	64.90	49.52	41.69
	[0.80]	[0.64]	[0.28]	[0.23]
M/B Ratio	2.52	0.70	**11.55****	**9.46***
	[0.62]	[0.15]	**[2.18]**	**[1.69]**
ROA	-132.79	-114.64	-54.13	-69.58
	[-1.56]	[-1.42]	[-0.45]	[-0.57]
Stock Returns	**111.97*****	**119.13*****	**78.11***	**85.28***
	[2.80]	**[2.94]**	**[1.70]**	**[1.70]**
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
No. zero observations	144	144	128	128
No. non-zero obs.	412	412	428	428
Total observations	556	556	556	556

continued on next page

continued from previous page

Panel B: Salary and Total compensation ($'000) - OLS regression

	Salary	Salary	Total comp.	Total comp.
Female CFOs	**-91.33*****	**-108.42*****	**-271.04****	**-358.35*****
	[-2.77]	**[-3.32]**	**[-2.07]**	**[-2.60]**
% Female Board	**300.99*****		**1,411.77*****	
	[2.66]		**[3.03]**	
(Female Board)*(Female CFOs)	59.55		26.56	
	[1.01]		[0.13]	
% Female Remu.		**195.51*****		**1,045.58*****
		[2.73]		**[3.02]**
(Female Remu.)*(Female CFOs)		98.70		251.43
		[1.62]		[1.20]
MBA Qualification	12.14	10.86	183.76	208.78
	[0.55]	[0.48]	[1.44]	[1.57]
CFO Board	**96.60*****	**90.98*****	**227.65****	**208.45****
	[4.57]	**[4.22]**	**[2.32]**	**[2.06]**
CFO Ownership	13.85	**52.52****	54.16	**142.64***
	[0.83]	**[2.36]**	[1.07]	**[1.80]**
CFO Tenure (ln)	**-22.49***	**-23.91***	-0.98	7.84
	[-1.80]	**[-1.86]**	[-0.02]	[0.12]
Board Size	**37.70*****	**36.69*****	**204.42*****	**202.81*****
	[6.81]	**[6.33]**	**[4.98]**	**[4.72]**
Insider Ratio	-162.19	-158.57	-31.38	25.01
	[-1.48]	[-1.27]	[-0.11]	[0.08]
Sales (ln)	**66.17*****	**69.72*****	**224.32*****	**233.54*****
	[13.23]	**[12.53]**	**[8.21]**	**[7.63]**
Leverage	7.21	-18.24	70.28	40.10
	[0.18]	[-0.40]	[0.35]	[0.17]
M/B Ratio	1.41	1.18	9.16	8.00
	[0.64]	[0.50]	[0.97]	[0.78]
ROA	-27.79	-39.50	-259.52	-318.45
	[-0.51]	[-0.66]	[-1.19]	[-1.35]
Stock Returns	-18.61	-18.57	**132.35***	**136.52***
	[-1.13]	[-1.07]	**[1.76]**	**[1.68]**
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
Adjusted R^2	63.95%	63.15%	46.66%	45.99%
Total observations	556	556	556	556

This table presents the regression results on CFO compensation which is expressed in dollar value ($'000), separately for *Bonus*, *Salary*, *Total non-cash Comp.* and *Total Comp.* The sample of 556 observations is for the years 2006 to 2010. *Female CFOs* is an indicator variable equal to 1 if the CFO is female. *% Female Board* (or *% Female Remu.*) is the proportion of female directors on the board (or on the remuneration committee). *(Female Board)*(Female CFOs)* (or *(Female Remu.)*(Female CFOs)*) is the interaction variable between the variable indicating the presence of female on the board (or on the remuneration committee) and the *Female CFOs* variable. *MBA Qualification* is a binary variable equal to 1 if the CFO has an MBA degree. *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. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Sales* is the gross sales figure after credit and returns in 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 market value of equity divided by the book value of equity. *ROA* is return on assets, calculated as earnings before tax divided by total assets. *Stock Returns* is the unadjusted return on company's shares during the year, calculated as the current year share price divided by the previous year share price, expressed in natural logarithm. Each regression uses White (1980) heteroskedasticity consistent covariance estimates. It also includes industry-specific and year-specific fixed effects to control for systematic differences in compensation across industries and over time. Figures in square brackets are *t*-statistics. Emboldened figures indicate statistical significance at 10% level or better with *, **, *** indicating statistically significant at the 10%, 5% or 1% level.

Table 5: Regression results of CFO compensation - Total sample (log(compensation))

Panel A: Bonus and Non-cash compensation (log) - OLS regression

	Ln(Bonus)	Ln(Bonus)	Ln(Non-cash)	Ln(Non-cash)
Female CFOs	**-0.46***	**-0.47***	**-0.55***	**-0.43***
	[-1.83]	**[-1.67]**	**[-1.95]**	**[-1.72]**
% Female Board	0.18		0.57	
	[0.29]		[0.82]	
(Female Board)*(Female CFOs)	0.15		-0.87	
	[0.36]		[-0.95]	
% Female Remu.		0.29		**1.08****
		[0.89]		**[2.51]**
(Female Remu.)*(Female CFOs)		0.22		-0.61
		[0.47]		[-1.03]
MBA Qualification	**0.26****	**0.29*****	0.22	**0.24***
	[2.44]	**[2.64]**	[1.57]	**[1.74]**
CFO Board	0.01	0.01	-0.03	-0.02
	[0.04]	[0.12]	[-0.22]	[-0.17]
CFO Ownership	0.15	0.08	**0.55*****	**0.65*****
	[1.35]	[0.31]	**[3.56]**	**[3.89]**
CFO Tenure (ln)	0.02	0.02	0.01	0.02
	[0.22]	[0.27]	[0.14]	[0.20]
Board Size	**0.12*****	**0.12*****	**0.14*****	**0.14*****
	[4.61]	**[4.42]**	**[3.98]**	**[3.91]**
Insider ratio	0.14	0.23	-0.39	-0.34
	[0.29]	[0.47]	[-0.61]	[-0.53]
Sales (ln)	**0.30*****	**0.31*****	**0.29*****	**0.28*****
	[11.55]	**[11.21]**	**[7.82]**	**[7.48]**
Leverage	0.18	0.16	-0.03	-0.04
	[0.64]	[0.58]	[-0.08]	[-0.09]
M/B Ratio	-0.002	-0.001	**0.03***	0.03
	[-0.13]	[-0.07]	**[1.92]**	[1.53]
ROA	-0.39	-0.50	-1.27	-1.67
	[-1.16]	[-1.37]	[-1.60]	[-1.39]
Stock Returns	**0.21***	**0.21***	-0.17	-0.14
	[1.80]	**[1.72]**	[-0.16]	[-0.99]
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
Adjusted R^2	55.71%	55.05%	35.70%	36.02%
Total observations	412	412	428	428

continued on next page

continued from previous page

Panel B: Salary and Total compensation (log) - OLS regression

	Ln(Salary)	Ln(Salary)	Ln(Total comp.)	Ln(Total comp.)
Female CFOs	**-0.19****	**-0.23****	**-0.19***	**-0.32****
	[-2.04]	**[-2.49]**	**[-1.65]**	**[-2.24]**
% Female Board	**0.53****		**0.93*****	
	[2.21]		**[2.96]**	
(Female Board)*(Female CFOs)	0.26		-0.03	
	[1.01]		[-0.13]	
% Female Remu.		0.24		**0.65*****
		[1.51]		**[3.26]**
(Female Remu.)*(Female CFOs)		0.29		0.29
		[1.05]		[1.44]
MBA Qualification	0.08	0.05	**0.13***	**0.14****
	[1.46]	[0.85]	**[1.86]**	**[2.08]**
CFO Board	0.08	**0.10***	**0.10***	0.09
	[1.48]	**[1.83]**	**[1.65]**	[1.49]
CFO Ownership	0.04	**0.18*****	**0.17****	**0.17****
	[0.90]	**[2.89]**	**[2.48]**	**[2.42]**
CFO Tenure (ln)	-0.01	-0.03	-0.01	-0.01
	[-0.32]	[-0.14]	[-0.25]	[-0.21]
Board Size	**0.05*****	**0.05*****	**0.09*****	**0.09*****
	[3.45]	**[3.20]**	**[4.94]**	**[4.75]**
Insider ratio	-0.36	-0.42	-0.50	-0.46
	[-1.57]	[-1.49]	[-1.28]	[-1.04]
Sales (ln)	**0.15*****	**0.16*****	**0.21*****	**0.21*****
	[13.31]	**[12.69]**	**[12.37]**	**[12.34]**
Leverage	0.10	0.07	0.07	0.06
	[0.81]	[0.54]	[0.44]	[0.34]
M/B Ratio	-0.001	-0.001	0.003	0.001
	[-0.14]	[-0.10]	[0.32]	[0.10]
ROA	-0.05	-0.08	-0.23	-0.26
	[-0.42]	[-0.61]	[-1.24]	[-1.35]
Stock Returns	-0.13	-0.11	0.05	0.05
	[-1.63]	[-1.39]	[0.75]	[0.81]
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
Adjusted R^2	62.66%	62.43%	62.71%	62.75%
Total observations	556	556	556	556

This table presents the regression results on CFO compensation which is expressed in natural logarithm, separately for *Bonus*, *Salary*, *Total non-cash Comp.* and *Total Comp.* The sample of 556 observations is for the years 2006 to 2010. *Female CFOs* is an indicator variable equal to 1 if the CFO is female. *% Female Board* (or *% Female Remu.*) is the proportion of female directors on the board (or on the remuneration committee). *(Female Board)*(Female CFOs)* (or *(Female Remu.)*(Female CFOs)*) is the interaction variable between the variable indicating the presence of female on the board (or on the remuneration committee) and the *Female CFOs* variable. *MBA Qualification* is a binary variable equal to 1 if the CFO has an MBA degree. *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. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Sales* is the gross sales figure after credit and returns in 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 market value of equity divided by the book value of equity. *ROA* is return on assets, calculated as earnings before tax divided by total assets. *Stock Returns* is the unadjusted return on company's shares during the year, calculated as the current year share price divided by the previous year share price, expressed in natural logarithm. Each regression uses White (1980) heteroskedasticity consistent covariance estimates. It also includes industry-specific and year-specific fixed effects to control for systematic differences in compensation across industries and over time. Figures in square brackets are *t*-statistics. Emboldened figures indicate statistical significance at 10% level or better with *, **, *** indicating statistically significant at the 10%, 5% or 1% level.

Table 6: Descriptive statistics - Matched subsample

	Female CFOs N = 41			Matched Male CFOs N = 41			Difference in mean/median	
								Mann-Whitney
	Mean	Median	Std dev	Mean	Median	Std dev	t-stat	stat
Panel A: CFO compensation ($)								
Salary	317,746	275,229	177,550	357,040	271,234	297,722	-0.73	0.17
Bonus	75,908	14,100	126,564	126,692	62,115	190,608	-1.42	1.56
Total Non-cash Comp.	91,710	35,458	114,274	139,575	49,438	211,920	-1.28	0.59
Total Comp.	566,428	383,557	402,132	699,600	432,000	643,571	-1.12	1.01
Panel B: Financial characteristics								
Sales ($mil)	991	64	2,314	1,155	106	2,429	-0.31	0.44
Leverage	0.38	0.34	0.28	0.39	0.38	0.29	-0.15	0.14
M/B Ratio	3.40	1.97	4.29	2.58	2.25	1.92	1.12	0.20
ROA	0.91%	4.02%	18.38%	6.10%	8.88%	14.60%	-1.42	1.62
Stock Returns	4.39%	0.96%	54.23%	8.60%	20.64%	61.91%	-0.33	0.48
Panel C: Governance and CFO characteristics								
CFO Board	31.71%			36.58%			-0.46	
MBA Qual.	26.89%			20.00%			0.72	
% Female Board	9.73%	11.11%	9.71%	3.69%	0%	6.89%	**3.25*****	**2.69*****
% Female Remu.	4.29%	0%	10.77%	7.95%	0%	13.92%	-1.23	0.85
CFO Ownership	0.68%	0.07%	1.52%	0.17%	0.06%	0.42%	**2.04****	0.52
CFO Tenure (years)	4.02	2.92	3.25	5.62	4.33	4.13	**-1.95***	**1.80***
Board Size	6.32	6.00	1.65	6.90	7.00	2.42	-1.28	1.13
Insider Ratio	48.53%	50.00%	21.51%	42.23%	40.00%	19.64%	1.39	1.57

This table presents summary statistics of firms in our matched subsample using a propensity score procedure. The probability of a firm having a female CFO is modeled using a logit regression with firm size and firm leverage, controlling for both industry and year fixed effects. Using the results from this logit model, each firm led by a female CFO (from the original 41 firm-year observations) is matched to a firm headed by a male CFO with the lowest difference in propensity scores. All variables are defined in Table 1. 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 statistically significant at the 10%, 5% or 1% level.

Table 7: Regression results of CFO compensation - Matched subsample (compensation in $'000)

	Bonus	Salary	Non-cash	Total comp.
	Tobit	OLS	Tobit	OLS
Female CFOs	-45.08	-12.94	-35.01	-38.78
	[-1.03]	[-0.25]	[-0.64]	[-0.41]
% Female Board	-77.30	305.58	-67.36	564.91
	[-0.25]	[0.66]	[-0.20]	[0.64]
(Female Board)*(Female CFOs)	-26.58	-53.51	-17.76	-193.82
	[-0.40]	[-0.52]	[-0.22]	[-0.95]
MBA Qualification	**92.82****	41.18	**75.44***	114.23
	[2.36]	[0.88]	**[1.66]**	[1.31]
CFO Board	-60.87	80.30	-0.84	1.64
	[-1.27]	[1.18]	[-0.01]	[0.01]
CFO Ownership	4.37	14.11	43.92	65.96
	[0.13]	[0.74]	[1.21]	[1.54]
CFO Tenure (ln)	-32.97	-17.30	**-45.93***	-92.37
	[-1.21]	[-0.65]	**[-1.65]**	[-1.59]
Board Size	**61.72*****	**41.26*****	26.31	**147.63*****
	[4.05]	**[3.09]**	[1.32]	**[5.18]**
Insider Ratio	302.54	87.47	53.47	576.82
	[1.49]	[0.68]	[0.47]	[1.25]
Sales (ln)	**24.36*****	**28.94****	**19.31****	**60.87*****
	[3.38]	**[2.57]**	**[2.13]**	**[3.49]**
Leverage	-21.72	31.18	251.17	223.68
	[-0.37]	[0.37]	[1.36]	[1.04]
M/B Ratio	-7.07	-9.58	-6.09	-28.20
	[-1.63]	[-1.41]	[-0.81]	[-1.52]
ROA	178.27	-37.78	229.50	213.18
	[0.89]	[-0.21]	[1.13]	[0.60]
Stock Returns	**107.60***	-8.30	65.83	50.23
	[2.10]	[-0.23]	[1.46]	[0.67]
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
Adjusted R^2		53.75%		68.26%
No. zero observations	28		21	
No. non-zero obs.	54		61	
Total observations	82	82	82	82

This table presents the regression results on CFO compensation of our matched subsample using a propensity score procedure. The probability of a firm having a female CFO is modeled using a logit regression with firm size and firm leverage, controlling for industry and year fixed effects. Using the results from this logit model, each firm led by a female CFO (from the original 41 firm-year observations) is matched to a firm headed by a male CFO with the lowest difference in propensity scores. CFO compensation is expressed in dollar value ($'000), separately for *Bonus*, *Salary*, *Total non-cash Comp.* and *Total Comp.* *Female CFOs* is an indicator variable equal to 1 if the CFO is female. *% Female Board* is the proportion of female directors on the board. (*Female Board)*(Female CFOs)* is the interaction variable between the variable indicating the presence of female on the board and the *Female CFOs* variable. *MBA Qualification* is a binary variable equal to 1 if the CFO has an MBA degree. *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. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Sales* is the gross sales figure after credit and returns in 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 market value of equity divided by the book value of equity. *ROA* is return on assets, calculated as earnings before tax divided by total assets. *Stock Returns* is the unadjusted return on company's shares during the year, calculated as the current year share price divided by the previous year share price, expressed in natural logarithm. Each regression uses White (1980) heteroskedasticity consistent covariance estimates. It also includes industry-specific and year-specific fixed effects to control for systematic differences in compensation across industries and over time. Figures in square brackets are *t*-statistics. Emboldened figures indicate statistical significance at 10% level or better with *, **, *** indicating statistically significant at the 10%, 5% or 1% level.

Table 8: Regression results of CFO compensation - Matched subsample (log(compensation))

	Ln(1+Bonus)	Ln(Salary)	Ln(1+Non-cash)	Ln(Total comp.)
	Tobit	OLS	Tobit	OLS
Female CFOs	-2.60	-0.05	1.87	-0.05
	[-1.50]	[0.40]	[1.04]	[-0.31]
% Female Board	-14.03	1.29	11.86	0.27
	[-1.20]	[1.40]	[1.20]	[0.22]
(Female Board)*(Female CFOs)	1.77	0.01	-3.50	-0.07
	[0.62]	[0.03]	[-1.31]	[-0.21]
MBA Qualification	1.89	**0.21***	2.10	0.16
	[1.11]	**[1.72]**	[1.30]	[1.10]
CFO Board	1.87	**0.22***	0.45	**0.12***
	[0.98]	**[1.74]**	[0.21]	**[1.80]**
CFO Ownership	-0.23	-0.03	1.12	0.07
	[-0.17]	[-0.56]	[0.88]	[0.89]
CFO Tenure (ln)	**-2.67****	-0.01	0.44	-0.08
	[-2.48]	[-0.09]	[0.43]	[-0.86]
Board Size	-0.02	**0.07****	0.34	**0.12*****
	[-0.03]	**[2.53]**	[0.90]	**[3.42]**
Insider Ratio	-4.83	-0.05	-5.92	0.23
	[-1.13]	[-0.17]	[-1.47]	[3.42]
Sales (ln)	**1.01*****	**0.10*****	**0.76****	**0.10*****
	[3.12]	**[3.91]**	**[2.39]**	**[3.67]**
Leverage	0.83	0.14	2.92	0.34
	[0.34]	[0.65]	[0.91]	[1.13]
M/B Ratio	-0.19	-0.02	0.20	**-0.03***
	[-0.86]	[-1.31]	[1.23]	**[-1.93]**
ROA	5.01	0.10	7.38	0.28
	[0.62]	[0.27]	[1.35]	[0.49]
Stock Returns	**5.13*****	0.03	**3.57****	**0.22***
	[2.63]	[0.25]	**[2.35]**	**[1.68]**
Include fixed effects? (Industry & Year)	Yes	Yes	Yes	Yes
Adjusted R^2		58.28%		58.11%
No. zero observations	28		21	
No. non-zero obs.	54		61	
Total observations	82	82	82	82

This table presents the regression results on CFO compensation of our matched subsample using a propensity score procedure. The probability of a firm having a female CFO is modeled using a logit regression with firm size and firm leverage, controlling for industry and year fixed effects. Using the results from this logit model, each firm led by a female CFO (from the original 41 firm-year observations) is matched to a firm headed by a male CFO with the lowest difference in propensity scores. CFO compensation is expressed in natural logarithm, separately for *Bonus*, *Salary*, *Total non-cash Comp.* and *Total Comp.* *Female CFOs* is an indicator variable equal to 1 if the CFO is female. *% Female Board* is the proportion of female directors on the board. *(Female Board)*(Female CFOs)* is the interaction variable between the variable indicating the presence of female on the board and the *Female CFOs* variable. *MBA Qualification* is a binary variable equal to 1 if the CFO has an MBA degree. *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. *Board Size* is the number of directors on the board of directors. *Insider Ratio* is the percentage of executive directors on the board. *Sales* is the gross sales figure after credit and returns in 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 market value of equity divided by the book value of equity. *ROA* is return on assets, calculated as earnings before tax divided by total assets. *Stock Returns* is the unadjusted return on company's shares during the year, calculated as the current year share price divided by the previous year share price, expressed in natural logarithm. Each regression uses White (1980) heteroskedasticity consistent covariance estimates. It also includes industry-specific and year-specific fixed effects to control for systematic differences in compensation across industries and over time. Figures in square brackets are *t*-statistics. Emboldened figures indicate statistical significance at 10% level or better with *, **, *** indicating statistically significant at the 10%, 5% or 1% level.