

# **The Role of Education and Experience in CFO Career and Compensation**

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*We examine the educational and experience backgrounds of chief financial officers (CFOs) of large and medium firms and investigate how measures of education and experience affect CFO career and compensation. We find that, compared to medium firms, large firms have more CFOs with MBA degrees and fewer CFOs with M.Acc degrees or who are also CPAs, suggesting that large firms prefer CFOs with more general knowledge than CFOs with a specific knowledge. We also find that firm size and CFO's tenure at their current company consistently dominate measures of education and experience in determining CFO compensation.*

## **INTRODUCTION**

The role of the modern chief financial officer (CFO) has become increasingly complex, and CFOs are now subject to new responsibilities, especially since the implementation of the Sarbanes-Oxley Act (SOX) in 2002. SOX requires chief executive officers (CEOs) and CFOs to certify and sign their firm's financial statements and holds them personally financially responsible for any inaccuracies found in the financial statements. McConnell and Banks (2003) report that CFOs are now responsible for overseeing the company's internal control compliance. Chappuis, Kim, and Roche (2008) find that not only stricter regulations, but also increased shareholder activism, higher shareholder expectations, the growing presence of blockholders, more active M&A activities, and more complex finance/accounting environment create a much more complicated environment in which CFOs operate. As a result, CFOs are more directly accountable for the company's performance. Erhemjamts, Gupta, and Tumennasan (2009) find that the proportion of firms in which the CFO is one of the five highest paid executives in a company increased from 54% in 1994 to 93% in 2006. This finding shows the growing importance of the CFO position in the company and signals the shift of the CFO position from bookkeeper to top-level executive. Kahn (2002) reports that in addition to supervising all of the company's financial functions, CFOs also carry out strategic planning for the company's future. Undoubtedly, to succeed in this complex and rapidly changing business environment, a successful CFO needs the right education and experience.

Finance or accounting students commonly express curiosity regarding the level of education and experience necessary to become a CFO. Any answer, however, is quite vague. Some suggest that internal work experience, for example as a controller or a treasurer, is an excellent stepping stone to becoming a CFO. Stuart (2002) reports that, in the post-SOX regulatory environment, CFOs with controller skills are at an advantage when they want to move to another company or switch industries. Others argue that

specific external work experience, such as having worked for one of the Big Four accounting firms, is crucial to become a CFO. It is, in fact, not uncommon for someone who work in a Big Four accounting firm to assume the CFO position at his or her client company. Although young professionals do not start at the executive level in a Big Four firm, they are, nonetheless, introduced to top executives at their client firms. These connections provide them with excellent networking opportunities that they can tap later in their career when they are pursuing a position as a CFO. In general, however, no consensus exists on the ideal work experience to pursue a career as a CFO.

The most direct educational path toward becoming a CFO is equally unclear. Some CFOs holds a master of business administration (MBA); others pursue a master of accounting (M.Acc). Some CFOs also obtain a professional certification, most notably, as a certified public accountant (CPA). What education or training best prepares a CFO to navigate the increasingly complex financial environment? Despite its high costs, executive MBA programs are proliferating around the world because even seasoned executives are finding that they need new finance or accounting knowledge to succeed in the highly quantitative business world. In addition, O'Sullivan (2004) reports that after the SOX in 2002, executive recruiters favor CFO candidates with a CPA. In the midst of the complexity of the accounting environment created by SOX and the overall business environment created by the ever-increasing globalization of the marketplace, CFOs may choose to specialize in the study of accounting practices or broaden their vocation to include the more generalized study of business and finance.

We address these issues by examining the work and education background in a sample of CFOs from medium and large firms (CFO biographical information for small firms is rarely available). Furthermore, to determine impact of education and work experience on a CFO's career, we examine how different measures of CFOs' education and experience affect their compensation, both in salary and in total compensation.

We find that CFOs in large firms have different education characteristics from CFOs in medium firms. Our results show that large firms value CFOs with more general skills than CFOs with more specific accounting skills. Specifically, large firms have a higher proportion of CFOs with an MBA, compared to CFOs in medium firms. Interestingly, large firms have a lower proportion of CFOs with an M.Acc or CPA certification, compared to medium firms. In addition, we find that CFO compensation is mostly driven by the size of the firm, the CFO's tenure at the current company, and previous experience as a CFO at another company. Conversely, CFOs' education or experience showed little impact on CFO compensation.

## DATA

Our sample consists of the S&P 500 firms (large firms, henceforth) and the S&P Mid Cap firms (medium firms, henceforth). We collect the 2009 CFO biography information from different sources such as the company proxy statement, *Business Week*, Reuters, and *Forbes* websites. The data include CFOs' sex (SEX), age (AGE), and measures of education and professional certification, namely, whether a CFO holds an MBA (MBA), an M.Acc (MACC), or a CPA certification (CPA). We also collect measures of work experience, namely, experience as a controller (CONT), a treasurer (TREA), or a CFO in another company (PCFO), or in an accounting firm before joining the current firm as CFO (ACC).

For the purpose of controlling the effect of experience on compensation, we collect the number of years that a CFO has been working at the current firm (EXP). We expect that a CFO with a longer tenure should have higher compensation. Anticipating that the characteristics of CFOs and the CFOs' compensation may depend on the size of the firm, we use the firm's total assets in 2010, taken from Compustat, as a control variable.

For the CFO compensation data, we collect salary (SALARY) and total compensation (TCOMP) data reported to U.S. Securities and Exchange Commission from the company proxy statement. We create dummy variables for SEX, MBA, MACC, CPA, CONT, TREA, PCFO, and ACC. Accordingly, the dummy variables take a value of 1 if a CFO is a man; has an MBA, an M.Acc, or CPA certification; has work experience as a controller, treasurer, or CFO in another company; or has work experience in an

accounting firm before joining the current firm as CFO, and zero otherwise. We use the natural log of salary for SALARY and the natural log of total compensation for TCOMP.

For a control variable, we use size of the firm and define SIZE as the natural log of firm's total assets. We exclude CFOs without any biography information from the sample. Our final sample consists of 790 CFOs with available education and experience background.

## **EMPIRICAL RESULTS**

### **Descriptive Statistics**

Table 1 presents the descriptive statistics of variables used in the sample. We divide the sample into two sub-samples: large firms and medium firms. Panels A, B, and C provide the descriptive sample statistics for the full sample, large firms, and medium firms, respectively. We find that more than 90% of the CFOs are men for both sub-samples (large firms = 92.08%; medium firms = 93.39%). The average age of all CFOs is 50.84 years and nearly identical for both sub-samples (large firms = 50.96 years; medium firms = 50.68 years). Compared to medium firms, large firms have a higher proportion of CFOs with an MBA (large firms = 44.80%; medium firms = 27.01%) and a lower proportion of CFOs with an M.Acc (large firms = 1.36%; medium firms = 4.02%). Large firms also have a lower proportion of CFOs with a CPA than medium firms (large firms = 30.77%; medium firms = 37.64%). (See Appendix Table 1)

These data may suggest that as firm size (measured by total assets) increases, the business environment becomes more complex, thus requiring more divisions and subsidiaries. As a result, CFOs of large companies need not only accounting skills but also more general management skills. Therefore, large firms seek out CFOs who are trained in more general fields of knowledge (represented by CFOs with MBA degrees) than CFOs who are specialized in a specific field of knowledge (represented by CFOs with M.Acc degrees or CPA certification).

Work experience as a controller seems to be a very important determinant in CFO career selection in both sub-samples (large firms = 63.35%; medium firms = 62.64%). However, less than one-half of the CFOs had prior work experience as a treasurer (large firms = 44.57%; medium firms = 45.40%). It appears that large firms prefer candidates who have prior work experience as a CFO more than medium firms (large firms = 52.71%; medium firms = 47.13%). In addition, medium firms have a higher proportion of CFOs who have worked in a Big Four accounting firm than large firms (large firms = 35.92%; medium firms = 29.41%). This finding reinforces the argument that large firms value the CFOs with general knowledge skills and that medium firms gravitate toward CFOs with a specific skill sets.

### **Univariate Regression Analysis**

We present the univariate correlations among variables in Table 2. The correlations between variables that are significant at 5% level are in bold. We find that, in general, the relation between salary (SALARY) and each of the measures of education and experience is insignificant at 5% level. This finding may be because company executives voluntarily choose to receive less in salary but more in other compensation forms such as bonus or stock options (some CEOs voluntarily choose to receive \$1 in annual salary in exchange for higher bonuses or stock options). Therefore, we also look at the relation between total compensation and each of the measures of education and experience. In so doing, we see more statistically significant correlations between total compensation and measures of education and experience. As previously indicated in the discussion of our descriptive statistics, we again find that specific knowledge or certification such as holding an M.Acc, CPA certification, or work experience at a big accounting firm lower the total compensation of a CFO, whereas having a more general degree and experience such as an MBA or prior experience as a CFO increase the CFO total compensation. (See Appendix Table 2)

Although we find evidence that male CFOs receive higher compensation than female CFOs, the correlation is insignificant at the 5% level for both sub-samples. Finally, we find positive and significant correlations between measures of compensation (SALARY and TCOMP) and CFO's age. These results support the argument that older and more experienced CFOs are more highly compensated.

### Multivariate Regression Analysis

To examine how measures of CFOs' education and experience affect compensation, we use two ordinary least squares (OLS) regressions where the dependent variables are salary and total compensation and the independent variables are measures of CFOs' education and experience as previously defined. Using the univariate analysis, we find that the correlation between compensation (SALARY) and measures of CFO's education and experience in general is insignificant. However, this result may be skewed if SALARY is not a good measure of modern CFO compensation. Therefore, we supplement the analysis by adding TCOMP as the dependent variable in this multivariate regression analysis.

We control for the firm size and the number of years that a CFO has been working for the current company. Model 1 reports the OLS regression model using SALARY as the dependent variable:

$$\text{SALARY} = \beta_0 + \beta_1 \text{SEX} + \beta_2 \text{AGE} + \beta_3 \text{MBA} + \beta_4 \text{M.ACC} + \beta_5 \text{CPA} + \beta_6 \text{CONT} + \beta_7 \text{TREA} \\ + \beta_8 \text{PCFO} + \beta_9 \text{ACC} + \beta_{10} \text{SIZE} + \beta_{11} \text{EXP} + \varepsilon \quad (1)$$

Model 2 reports the OLS regression model using total compensation as the dependent variable:

$$\text{TCOMP} = \beta_0 + \beta_1 \text{Sex} + \beta_2 \text{Age} + \beta_3 \text{MBA} + \beta_4 \text{M.Acc} + \beta_5 \text{CPA} + \beta_6 \text{CONT} + \beta_7 \text{TREA} \\ + \beta_8 \text{PCFO} + \beta_9 \text{ACC} + \beta_{10} \text{SIZE} + \beta_{11} \text{EXP} + \varepsilon \quad (2)$$

We present results for the multivariate regression analysis in Table 3. Using SALARY as the dependent variable, we find that SALARY is mostly driven by the size of the company and by how long the CFO has been working at current company. This relation is found in the full sample and both the sub-samples. We also find that previous work experience as a treasurer, in fact, reduces CFO compensation in the full sample and in the medium firm sample but not in the large firm sample. Finally, we find that having prior experience as a CFO at another company significantly increases the CFO compensation in the full sample and in the large firm sample but not in the medium firm sample. (See Appendix Table 3)

Using TCOMP as the dependent variable, we re-run the regressions in all three samples. Interestingly, we find that CFOs receive higher total compensation when they have an MBA degree and that TCOMP declines for CFOs who hold an M.Acc or CPA certification. As before, prior experience as a CFO at another company increases CFO compensation. Further, we still find that a CFO's tenure at his or her current company and the size of the company are very significant CFO compensation determinants. However, our evidence is mixed regarding how large and medium firms hire CFOs, and thus we are unable to draw definitive conclusions based on our CFO compensation data. Because the measures of compensation that we use in this study may not fully reflect the impact of varying degrees of education and experience, further study is required in this area of research.

### CONCLUSION

We examine the CFO's education and experience background in S&P 500 (large firms) and S&P Mid Cap firms (medium firms) and then investigate how those measures of education and experience affect CFO career and compensation. Compared to medium firms, large firms have more CFOs with an MBA and fewer CFOs with an M.Acc. In other words, large firms seem to prefer CFOs with more general knowledge than CFOs who are specialized in a specific field of knowledge. This preference argument also explains our finding that large firms employ fewer CFOs with a CPA than medium firms. We find that the size of the company as well as the CFO's tenure at current company consistently dominate the measures of CFOs' education and experience to explain CFO compensation. Due to our mixed results, we cannot draw definitive conclusions regarding how our measures of CFOs' education and experience affect CFO compensation. We leave that to future examination.

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APPENDIX

**TABLE 1**  
**SUMMARY STATISTICS ON CFO VARIABLES**

Panel A: Full Sample								
VARIABLE	N	Q1	Mean	Median	Q3	Min	Max	Std. Dev.
SEX	790	1	0.927	1	1	0	1	0.261
AGE	790	47	50.841	51	55	0	1	6.068
MBA	790	0	0.370	0	1	0	1	0.483
MACC	790	0	0.025	0	0	0	1	0.157
CPA	790	0	0.338	0	1	0	1	0.473
CONT	790	0	0.630	1	1	0	1	0.483
TREA	790	0	0.449	0	1	0	1	0.498
PCFO	790	0	0.503	1	1	0	1	0.503
ACC	790	0	0.323	0	1	0	1	0.468
EXP	790	2	5.297	4	7	0	28	4.467
SIZE	790	7.772	8.795	8.601	9.666	5.876	14.434	1.391
SALARY	790	12.858	13.145	13.108	13.385	10.297	15.919	0.528
TCOMP	790	13.997	14.458	14.440	14.919	11.467	17.022	0.738

Continued

**TABLE 1 CONTINUED**

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Panel B: Large Firms

VARIABLE	N	Q1	Mean	Median	Q3	Min	Max	Std. Dev.
SEX	442	1	0.921	1	1	0	1	0.270
AGE	442	47	50.966	51	54	34	67	5.912
MBA	442	0	0.448	0	1	0	1	0.498
MACC	442	0	0.014	0	0	0	1	0.116
CPA	442	0	0.308	0	1	0	1	0.462
CONT	442	0	0.634	1	1	0	1	0.482
TREA	442	0	0.446	0	1	0	1	0.498
PCFO	442	0	0.527	1	1	0	1	0.500
ACC	442	0	0.294	0	1	0	1	0.456
EXP	442	2	4.946	4	7	0	25	4.189
SIZE	442	8.547	9.497	9.378	10.247	6.816	14.434	1.289
SALARY	442	12.998	13.290	13.226	13.512	11.513	15.919	0.519
TCOMP	442	14.322	14.758	14.818	15.169	12.003	17.022	0.671

Continued

**TABLE 1 CONTINUED**

Panel C: Medium Firms

VARIABLE	N	Q1	Mean	Median	Q3	Min	Max	Std. Dev.
SEX	348	1	0.934	1	1	0	1	0.249
AGE	348	46	50.681	51	55	35	68	6.265
MBA	348	0	0.270	0	1	0	1	0.445
MACC	348	0	0.040	0	0	0	1	0.197
CPA	348	0	0.376	0	1	0	1	0.485
CONT	348	0	0.626	1	1	0	1	0.484
TREA	348	0	0.454	0	1	0	1	0.499
PCFO	348	0	0.471	0	1	0	2	0.506
ACC	348	0	0.359	0	1	0	1	0.481
EXP	348	2	5.744	4	8	0	28	4.767
SIZE	348	7.243	7.904	7.807	8.515	5.876	10.653	0.930
SALARY	348	12.750	12.961	12.946	13.164	10.297	14.779	0.480
TCOMP	348	13.683	14.078	14.120	14.442	11.467	16.132	0.639

Continued

**TABLE 2**  
**UNIVARIATE CORRELATIONS AMONG VARIABLES**

	SEX	AGE	MBA	MACC	CPA	CONT	TREA	PCFO	ACC	EXP	TA	SALARY	TCOMP
SEX	1.000												
AGE	<b>0.070</b>	1.000											
MBA	-0.056	-0.002	1.000										
MACC	0.045	-0.038	<b>-0.123</b>	1.000									
CPA	0.006	<b>-0.080</b>	<b>-0.126</b>	<b>0.106</b>	1.000								
CONT	-0.035	-0.014	<b>-0.093</b>	<b>0.107</b>	<b>0.181</b>	1.000							
TREA	<b>-0.117</b>	0.035	0.020	0.000	0.000	0.070	1.000						
PCFO	0.011	<b>0.089</b>	<b>0.148</b>	-0.017	0.047	0.061	0.008	1.000					
ACC	0.008	<b>-0.105</b>	<b>-0.181</b>	<b>0.130</b>	<b>0.537</b>	<b>0.170</b>	-0.052	0.015	1.000				
EXP	0.005	<b>0.355</b>	<b>-0.092</b>	<b>-0.087</b>	-0.025	-0.006	<b>0.089</b>	<b>-0.194</b>	-0.027	1.000			
SIZE	-0.009	<b>0.082</b>	<b>0.117</b>	-0.050	<b>-0.097</b>	<b>-0.147</b>	-0.047	0.019	<b>-0.095</b>	-0.065	1.000		
SALARY	0.014	<b>0.125</b>	0.052	-0.028	-0.069	-0.069	-0.066	0.062	-0.044	<b>0.134</b>	<b>0.460</b>	1.000	
TCOMP	0.003	<b>0.113</b>	<b>0.167</b>	<b>-0.092</b>	<b>-0.129</b>	-0.059	-0.053	<b>0.104</b>	<b>-0.102</b>	0.048	<b>0.483</b>	<b>0.626</b>	1.000

**TABLE 3**  
**MULTIVARIATE REGRESSION ANALYSIS**

This table presents regression results of CFO's education/experience and the CFO compensation. The logs of salary and total compensation are the dependent variables. SEX is a dummy variable that takes a value of 1 if a CFO is male. MBA, MACC, CPA are dummy variables that take a value of 1 if a CFO has an MBA, a M.Acc., and a CPA, respectively. CONT is a dummy variable that takes a value of 1 if a CFO has worked as a controller before. TREA is a dummy variable that takes a value of 1 if a CFO has worked as a treasurer before. PCFO is a dummy variable that takes a value of 1 if the CFO had worked as a CFO at another company before he joined the current company. ACC is a dummy variable that takes a value of 1 if the CFO has experience working for an accounting firm. EXP is the number of year a CFO has been working at the current company. SIZE is the log of company's total assets. (1) represents all sample firms (2) represents large firms and (3) represents medium firms. P-values are in parantheses. Statistical significance at the 1%, 5%, and 10% level is indicated by \*\*\*, \*\*, \*, respectively.

	SALARY			TCOMP		
	1	2	3	1	2	3
Intercept	11.380*** (0.000)	11.328*** (0.000)	12.018*** (0.000)	11.920*** (0.000)	12.458*** (0.000)	13.065*** (0.000)
SEX	0.015 (0.809)	-0.009 (0.917)	0.063 (0.530)	0.021 (0.813)	-0.046 (0.670)	0.153 (0.262)
AGE	0.001 (0.638)	0.000 (0.943)	0.003 (0.481)	0.003 (0.418)	0.003 (0.619)	0.004 (0.506)
MBA	0.005 (0.894)	-0.009 (0.850)	-0.017 (0.765)	0.149*** (0.002)	0.098 (0.104)	0.100 (0.203)
MACC	0.047 (0.663)	0.042 (0.828)	0.058 (0.655)	-0.201 (0.173)	0.234 (0.355)	-0.322* (0.068)
CPA	-0.037 (0.376)	0.037 (0.537)	-0.058 (0.320)	-0.115** (0.044)	-0.056 (0.479)	-0.117 (0.141)
CONT	0.002 (0.963)	0.001 (0.983)	-0.033 (0.546)	0.053 (0.279)	-0.024 (0.699)	0.033 (0.658)
TREA	-0.063* (0.060)	-0.023 (0.602)	-0.108** (0.034)	-0.067 (0.148)	-0.010 (0.871)	-0.155** (0.024)
PCFO	0.092*** (0.007)	0.086* (0.061)	0.079 (0.128)	0.143*** (0.002)	0.099 (0.102)	0.175** (0.013)
ACC	0.020 (0.629)	-0.058 (0.338)	0.091 (0.129)	0.002 (0.974)	-0.039 (0.622)	0.045 (0.571)
EXP	0.021*** (0.000)	0.021*** (0.000)	0.023*** (0.000)	0.016*** (0.006)	0.016** (0.043)	0.022*** (0.006)
SIZE	0.176*** (0.000)	0.192*** (0.000)	0.079*** (0.005)	0.248*** (0.000)	0.218*** (0.000)	0.067* (0.077)
Adj-R	0.240	0.237	0.075	0.263	0.198	0.051
N	790	442	348	790	442	348