

# INCENTIVE SCHEMES AND FEMALE LEADERSHIP IN FINANCIAL FIRMS

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## Abstract

Our purpose is to explore how performance in Swedish financial companies is affected by the presence of a female chief executive officer (CEO), the presence of an incentive scheme, and the proportion of female board members. The results indicate that a female CEO is associated with a lower return on equity (ROE) and a lower Tobin's Q, but we find no significant association between the proportion of female board members and firm performance. An incentive scheme is generally associated with a lower return on assets (ROA) and a higher Tobin's Q. In particular, a share-based incentive scheme is associated with a lower ROA, a lower ROE, and a higher Tobin's Q.

**Keywords:** ROA, Corporate Governance, Financial Firms, Female Leadership, CEO

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## 1 Introduction

Firm performance is a complex corporate governance issue. It is obviously not possible to isolate a few variables that in general explain the entire performance of firms. There will generally be huge differences between firms, branches, and countries owing to differences in micro- and macro-level circumstances. Thus, analyses of firm-level performance have to focus on the marginal impact of specific parameters in specific settings. One such parameter that has been researched a great deal (for a review, see Terjesen, Sealy, & Singh, 2009), possibly because of its political immediacy, is the impact of female leadership in large companies. Recently, Nielsen and Huse (2010) presented evidence that suggested that the ratio of female directors is positively associated with board strategic control, and that the positive effects of female directors on board effectiveness are mediated through increased board development activities and a decreased level of conflict.

In Sweden, the proportion of women on the board of listed firms is often taken as a measure of social equality in general debates regarding (the lack of) female power. As this proportion has always been rather low, quotas for women have long been demanded. There have been similar discussions in many countries (Terjesen & Singh, 2008). The arguments usually revolve around whether an increased number of women on boards should be considered an end in itself. However, from a strictly economic perspective, the only relevant question should be whether variations in the degree of female leadership is associated with firm performance, and if so, how.

Another parameter that has attracted considerable interest among researchers is the impact of incentive schemes for the management (for a review, see Prendergast, 1999). An obvious agency problem is the separation of ownership and management of a firm. Without a fundamental connection between firm performance and management compensation, incentives for management will, in many cases, deviate from the best interests of shareholders. The problem becomes apparent when we consider an extreme case. Assume that you are the chief executive officer (CEO) of a large firm, and that your yearly compensation is defined strictly as a percentage of the yearly increase in market value of the firm. If the value of the firm decreases, you get nothing. In this situation, it is evident that your optimal plan will be

to maximize the variance in the firm's market value rather than the firm's expected value. Hence, an ideal incentive scheme should fundamentally match the interests of the management with the interests of the shareholders. However, there are many different types of incentive schemes with different characteristics. From the shareholders' perspective, the primary issue will be whether firm performance is positively or negatively associated with the presence of incentive schemes.

In Sweden, the private sector is still more or less self-regulated with respect to female leadership and incentive schemes. However, a norm for what generally should be regarded as good corporate governance can be found in the Swedish Corporate Governance Code (hereinafter referred to as the Code), issued by the Swedish Corporate Governance Board. The Code aims to improve confidence in Swedish listed companies by promoting the positive development of corporate governance in these firms. It clearly states that 'the company is to strive for equal gender distribution on the board' (section 4.1), that 'variable remuneration is to be linked to predetermined and measurable performance criteria aimed at promoting the company's long-term value creation' (section 9.4), and that 'share- and share-price-related incentive schemes are to be designed with the aim of achieving increased alignment between the interests of the participating individual and the company's shareholders' (section 9.8). Thus, although the Code is not mandatory, it functions as a complement to legislation by specifying norms about female leadership as well as the design of incentive schemes in Swedish listed firms.

The overall aim of this study is to examine the impact of female leadership and incentive schemes on the performance of Swedish financial firms. We have three reasons to delimit the study to the financial sector. First, the financial sector has historically and traditionally been highly dominated by male executives (see Blair-Loy, 1999), which makes it more interesting to explore from a gender perspective. Second, developments in the financial sector itself largely determine the value of assets and liabilities in these firms. Hence, one can expect the connection between management decisions and the value of incentive schemes to be strongest in this sector. Third, firms in the financial sector are in some cases excluded from studies such as this (see Javine, 2009; Rose, 2007), because certain differences in fiscal and regulatory conditions often make comparisons between financial and non-financial firms difficult or even invalid.

The paper is organized as follows. The second section describes the theoretical background and derives the hypotheses to be tested. Our methodology, including the sample procedure, variables, and method of analysis, is presented in the third section. Then, the results are presented and analyzed in the fourth section. Finally, in the fifth section, we discuss the results in terms of implications for theory and practice and present some ideas for future research.

## **2 Theoretical background and hypotheses**

### **2.1 Female leadership**

It is historically well established that groups of people tend to select men as their leaders. The reasons for this are not entirely clear, but one possible explanation could simply be that a group will always prefer the individual who seems to have the highest capability to be its leader, and this generally seems to disfavour women. Gneezy, Niederle, and Rustichini (2003) found that women tend to perform relatively worse than men when competing against another individual, especially when the other individual happens to be a man. Reuben, Rey-Biel, Sapienza, and Zingales (2010) reported that groups select women as leaders much less often than they select men, probably on the basis of their individual past performance. Whether there actually was a difference in capability does not seem to matter in either case. Reuben et al. (2010) suggested that the overconfidence of men with regard to past performance could be the driving force behind the observed male dominance among leaders.

In competitive settings, when payoffs are related to performance, both performance and variance in performance are statistically higher for men than for women (Örs, Palomino, & Peyrache, 2008). This implies that, on average, differences in risk aversion might be the driving force for the higher performance of men. Men are less risk averse and may simply be rewarded in terms of higher expected performance. However, this does not mean that female leaders in companies perform worse than male leaders, because they are generally chosen not randomly but on performance. In a study comparing the performance of male and female CEOs with respect to stock returns in their firms, Wolfers (2006) found no systematic difference between the genders. Du Rietz and Henrekson (2000) analyzed the performance

of female entrepreneurs in several dimensions and found that they tend to underperform compared to men, although the difference is very small in large firms. In terms of profitability, they found no support for the underperformance of females. Finally, Rose (2007) did not find any significant association between female board representation and firm performance in terms of Tobin's Q.

Several studies have been made that associate female leadership and firm performance. However, the signs of this association are inconsistent between the studies. For example, Adams and Ferreira (2009) documented that firms perform worse when there is greater gender diversity on the board. Shrader, Blackburn, and Iles (1997) reported a significant negative relationship between the percentage of female board members and financial performance when examining Fortune 500 firms. On the other hand, Erhardt and Werbel (2003) documented a significant positive relation between board diversity and return on assets (ROA). Smith, Smith, and Verner (2006) reported that the proportion of women in top management jobs tend to have a positive effect on firm performance in different dimensions. Farrell and Hersch (2005) found that women tend to serve on boards of better-performing firms. Catalyst (2004) found that the 25% of the Fortune 500 firms with the highest representation of women in top management had significantly higher return on equity (ROE) than the 25% with the lowest representation of women. However, despite extensive research, we found no previous studies connecting firm performance and female leadership in the financial sector.

Several studies have shown that female leadership could also have an indirect impact on performance. For example, Ellis and Keys (2003) showed that Fortune's top diversity-promoting firms experience significantly positive abnormal returns on the date of announcing female directors; Adams and Ferreira (2004) found that firms facing more variability in their stock returns have fewer women on their boards of directors; and Nielsen and Huse (2010) reported that the ratio of female directors is positively associated with board strategic control. However, in summary, there is no conclusive evidence on how or whether female leadership in firms is associated with firm performance, especially in the financial sector, from neither theoretical nor empirical points of view. Therefore, we have the following two research hypotheses:

- H1: The proportion of female board directors is not associated with performance in financial firms
- H2: The presence of female CEOs is not associated with performance in financial firms

## **2.2 Incentive schemes**

In a classic article on incentives in firms, Prendergast (1999) concluded that agents respond positively to incentives, and that there are significant selection effects of contracts: better agents prefer performance-based pay. These conclusions were verified in an experiment conducted by Dohmen and Falk (2011), where the subjects had to choose between a fixed payment scheme and a variable payment scheme. They found that the performance of individuals is higher under variable payment schemes. The difference is largely driven by productivity sorting; that is, subjects with lower productivity prefer fixed payment contracts. Dohmen and Falk (2011) also showed that the likelihood of working under a variable payment scheme depends positively on one's willingness to take risks and negatively on one being female and endowed with preferences for reciprocity. This association between gender and preferred choice of payment scheme illustrates the importance of an integrated analysis of gender diversity and the existence of incentive schemes with respect to firm performance.

However, we have empirical evidence indicating that monetary incentives have widely varying effects on effort and does not necessarily improve performance at all (for a review, see Bonner, Hastie, Sprinkle, & Young, 2000). Bonner and Sprinkle (2002) presented a conceptual framework for the effects of monetary incentives on effort and task performance. They depict cognitive and motivational mechanisms such as expectancies, self-interest, and goals as mediating the relation between monetary incentives and effort. Variables related to the task, person, environment, and incentive scheme, on the other hand, moderate the relation between incentives and effort as well as effort and task performance. Thus, cognitive and motivational mechanisms have only an indirect impact on task performance, while variables related to a task, person, environment, and incentive scheme have a direct as well as indirect impact.

In this perspective, incentive-based management must be considered a very complex issue. This is illustrated by Brown (2009), who showed that firms that choose compensation schemes inconsistent with their characteristics suffer lower subsequent performance. Furthermore, Kale, Reis, and Venkateswaran

(2009) found that tournament incentives, in terms of pay differentials between the CEO and VPs, relate positively to firm performance. Chidambaran, Palia, and Zheng (2010) found no significant difference in future performance between firms that have a large increase in governance measures and those that have a large decrease in governance measures. They conclude that changing governance measures alone does not result in better future performance. Finegold, Benson, and Hecht (2007) concluded that there is no clear causal relation between director pay and company performance. In another study, however, Jaiswall and Firth (2009) found a positive relation between CEO compensation and firm performance in large listed Indian companies.

However, some previous studies have pointed certain connections between firm performance and governance structures in the financial sector. For example, Hermalin and Wallace (2001) found positive associations between CEO compensation and performance in the savings and loan industry. Brewer III, Hunter, and Jackson III (2003) reported that the equity-based component of bank CEO compensation increased significantly in the banking sector after deregulation, and that more risky banks pay significantly higher levels of equity-based compensation. Javine (2009) documented that bank directors are paid higher cash compensation, higher total compensation, and lower levels—but not proportions—of equity-based compensation after the Sarbanes-Oxley Act was approved compared to before the approval. Peni and Vähämaa (2011) found that banks with stronger corporate governance mechanisms had higher profitability, higher market valuations, and lower levels of negative stock returns during the 2008 financial crisis period. Webb (2008) showed that incentives for younger bank CEOs are impacted to a greater extent by their bank's market performance than for older CEOs. However, she did not include gender as a factor in her analysis.

In summary, there is no conclusive evidence, neither theoretical nor empirical, on how or whether incentive schemes in firms are associated with firm performance, especially not in the financial sector. Thus, we have the following research hypothesis:

- H3: The presence of incentive schemes is not associated with performance in financial firms

### 3 Method

#### 3.1 Data collection and sample

All Nordic stock exchanges (Stockholm, Helsinki, Copenhagen, Iceland, Riga, Tallinn, and Vilnius) use the Global Industry Classification Standard (GICS), developed by Morgan Stanley Capital International (MSCI) and Standard & Poor's (S&P), for industry classification of listed companies. The GICS structure comprises 10 sectors, 24 industry groups, 68 industries, and 154 sub-industries. We focus exclusively on sector 40 ('Financials'), which consists of 'Banks', 'Diversified Financials', 'Insurance', and 'Real Estate'. In total, 43 such companies were listed on the Stockholm Stock Exchange (NASDAQ OMX Stockholm) in January 2011. Our sample consists of data of all the 43 companies for 10 years, from 2001 to 2010. Since some companies appeared on the list during the period, our final sample comprises 351 firm-time observations. All data were obtained manually from each firm's annual report for each year. Further, since all the companies within the financial frame are included, we have no systematic problem due to missing data.

#### 3.2 Variables

The study is based on five independent variables, three dependent variables, and three control variables. Three of the independent variables are easily derived from our hypotheses:

- *FBRD*: The proportion of female board directors, defined as the number of female board members divided by the total number of board members
- *FCEO*: A dummy variable that equals 1 if there is a female CEO; otherwise it equals 0.
- *INC*: A dummy variable that equals 1 if there is an incentive scheme for top management; otherwise it equals 0.

However, incentive schemes can have different aspects. We need to separate the effects of long-term incentive schemes, where the agent receives variable compensation in terms of shares that cannot be sold for a predefined number of years (a share-based scheme), from the effects of short-term schemes, where

the agent receives variable compensation in cash or cash equivalents. Consequently, the independent variable INC was further subdivided into two variables:

- *INC1*: A dummy variable that equals 1 if there is a strictly or partially share-based incentive scheme for top management; otherwise it equals 0.
- *INC2*: A dummy variable that equals 1 if there is a strictly non-share-based incentive scheme for top management; otherwise it equals 0.

Three quite different performance measures are used in the study, namely, return on assets, return on equity, and Tobin's Q (*TOBQ*). ROA and Tobin's Q are the predominant approaches in studies such as this, but ROE is also widely used, often for comparison purposes. It can be said that ROA is the preferred measure to study the relation between performance and governance, because leverage, extraordinary items, and other discretionary items do not affect it (Core, Guay, & Rusticus, 2006). In order to incorporate short-term fluctuations as well as the possible time lag between implementation of governance structures and their impact on company performance, we use three-year post-period averages for ROA (see Kiel & Nicholson, 2003). ROE and ROA are both accounting-based measures of performance. Thus, they are historical and have a backward- and inward-looking focus, compared to Tobin's Q, which is a forward-looking financial market measure. Tobin's Q is also easy to interpret. When it exceeds 1.0, financial markets value the assets of the company higher than their book value, implying that the company should increase its capital expenditures in order to generate wealth for its shareholders. We use the approximation of Chung and Pruitt (1994) to calculate Tobin's Q. For consistency, we use three-year post-period averages for ROE and Tobin's Q.

We control for board size (*BSIZE*), measured as the log of the number of members on the board, since studies have shown that the number of directors on the board may have an impact on performance. However, both negative (see Conyon & Peck, 1998; Christensen, Kent, & Stewart, 2010) and positive (see Chiang, 2005; Haniffa & Hudaib, 2006) relations between performance and board size have been reported. General arguments can be found for larger as well as smaller boards in the literature (Williams, Fadil, & Armstrong, 2005; Jensen, 1993). In this context, it should be noted that the Code stipulates that a board must consist of at least three members. We further control for company size (*CSIZE*), measured as the log of book value of total assets. Smaller firms do not have the same level of resources as larger ones to devote to costly corporate governance provisions, and are hence likely to incur lower agency costs. Larger firms can also be expected to face greater agency problems due to increased monitoring requirements. Hence, they can also be expected to have more advanced corporate governance structures than smaller firms (see Klapper & Love, 2003). Finally, we control for leverage (*LEV*), measured as the total liabilities divided by total assets, since Christensen et al. (2010) found that leverage is significantly associated with ROA as well as Tobin's Q.

### **3.3 Method of analysis**

We developed multiple regression models to test whether female leadership and the existence of incentive schemes, in general, were associated with company performance. We tested three models as follows:

$$PERF = \beta_0 + \beta_1 CSIZE + \beta_2 LEV + \beta_3 BSIZE + \beta_4 FBRD + \beta_5 FCEO + \beta_6 INC + \varepsilon$$

where *PERF* denotes one of the alternative performance measure variables (*ROA*, *ROE*, or *TOBQ*).

In addition, we developed multiple regression models to test whether female leadership and the presence of share-based or non-share-based incentive schemes were associated with company performance. We tested three models as follows:

$$PERF = \beta_0 + \beta_1 CSIZE + \beta_2 LEV + \beta_3 BSIZE + \beta_4 FBRD + \beta_5 FCEO + \beta_6 INC1 + \beta_7 INC2 + \varepsilon$$

where *PERF* again denotes one of the alternative performance measure variables (*ROA*, *ROE*, or *TOBQ*).

## 4 Results

Table 1 depicts the descriptive statistics for the variables, with Panel A reporting the statistics for continuous variables, and Panel B, the statistics for dichotomous variables. The mean ROA and ROE are 0.05 and 0.11, respectively, while the mean Tobin's Q is 1.06. The mean proportion of female board members is 0.16; that is, there is, on average, around one female for every five male board members. Only 11 out of the 351 observations were characterized by a female CEO; 234 out of 351 (i.e. exactly 2/3) observations were characterized by the presence of an incentive scheme. The distribution between strictly non-share-based and at least partially share-based schemes is rather balanced, or, more exactly, 45–55.

**Table 1.** Descriptive statistics

Panel A					
Variable	n	Min	Max	Mean	S.D.
<i>ROA</i>	257	-.46	.43	.05	.10
<i>ROE</i>	257	-.71	.48	.11	.17
<i>TOBQ</i>	257	.34	2.92	1.06	.25
<i>CSIZE</i>	351	8.36	12.72	1.09	.98
<i>LEV</i>	351	.00	48.50	4.61	8.20
<i>BSIZE</i>	351	1.39	2.77	1.96	.29
<i>FBRD</i>	351	.00	.75	.16	.12
Panel B					
Variable	1 (yes)	0 (no)			
<i>FCEO</i>	11	340			
<i>INC</i>	234	117			
<i>INC1</i>	129	222			
<i>INC2</i>	105	246			

Table 2 reports a correlation matrix. The control variables CSIZE, LEV, and BSIZE are highly correlated, while all research variables are at most moderately associated with other variables. However, all VIFs (see tables 3 and 4) are safely below 10, suggesting that there are no multicollinearity problems with the conducted regressions. Note that dropping the variable with the highest VIF, that is, *CSIZE*, from the models lowers the highest VIF to below 2, but essentially the same regression results are obtained.

**Table 2.** Correlations

	<i>LEV</i>	<i>BSIZE</i>	<i>FBRD</i>	<i>FCEO</i>	<i>INC</i>	<i>INC1</i>	<i>INC2</i>
<i>CSIZE</i>	.70**	.82**	.48**	.29**	.24**	.36**	-.13*
<i>LEV</i>		.56**	.34**	.26**	.19**	.30**	-.12*
<i>BSIZE</i>			.32**	.26**	.30**	.32**	-.03
<i>FBRD</i>				.07	-.02	.01	-.03
<i>FCEO</i>						.17**	-.05

\* p < .05, \*\* p < .01

The results from the regressions are presented in table 3, with Panel A reporting the results where the presence of an incentive scheme was treated as a single dummy, and Panel B reporting the separation of share-based and non-share-based incentive schemes. The association between the control variables and accounting-based performance measures was significant, as one would expect. Hypothesis 1 was not rejected, as no significant association was found between the proportion of female board members and any firm performance measure.

Hypothesis 2 was rejected, as we found empirical support for the negative association between a female CEO and ROE in the case of non-separation ( $b = -.15$ ,  $p < .05$ ) as well as separation ( $b = -.15$ ,  $p < .05$ ) of incentive schemes. Hypothesis 2 was again rejected, as we found empirical support for the negative association between a female CEO and Tobin's Q in the case of non-separation ( $b = -.17$ ,  $p < .1$ ) as well as separation ( $b = -.18$ ,  $p < .1$ ) of incentive schemes.

Hypothesis 3 was also rejected, as the existence of an incentive scheme was negatively associated with ROA ( $b = .03$ ,  $p < .05$ ) and positively associated with Tobin's Q ( $b = .08$ ,  $p < .05$ ). It was again rejected, as the existence of a share-based incentive scheme was negatively associated with ROA ( $b = -.04$ ,  $p < .05$ ) as well as ROE ( $b = -.04$ ,  $p < .1$ ) and positively associated with Tobin's Q ( $b = .13$ ,  $p < .01$ ). Meanwhile, strictly non-share-based incentive schemes were not significantly associated with any measure of firm performance.

**Table 3.** Regression results

Panel A: without separation of incentive schemes										
VIF	Return on Assets			Return on Equity			Tobin's Q			
	Coeff.	S.E.	Std. coeff.	Coeff.	S.E.	Std. coeff.	Coeff.	S.E.	Std. coeff.	
CSIZE	4.94	.05***	.01	.53	.05*	.02	.30	-.01	.03	-.05
LEV	2.12	-.00*	.00	-.17	.01***	.00	.33	.00	.00	-.07
BSIZE	3.23	-.12***	.04	-.37	-.16**	.06	-.28	.14	.09	.17
FBRD	1.45	-.06	.06	-.08	-.04	.10	-.03	.10	.15	.05
FCEO	1.11	-.05	.04	-.09	-.15*	.06	-.16	-.17†	.09	-.12
INC	1.15	-.03*	.01	-.14	-.03	.02	-.08	.08*	.04	.16
Constant		-.19*	.09		-.10	.15		.85***	.24	
F		4.42			7.86			2.48		
p-value		< .001			< .001			.024		
R <sup>2</sup>		.10			.16			.06		

  

Panel B: with separation of incentive schemes										
VIF	Return on Assets			Return on Equity			Tobin's Q			
	Coeff.	S.E.	Std. coeff.	Coeff.	S.E.	Std. coeff.	Coeff.	S.E.	Std. coeff.	
CSIZE	5.07	.05***	.01	.55	.06*	.02	.33	-.02	.03	-.09
LEV	2.13	.00†	.00	-.17	.01***	.00	.33	.00	.00	-.08
BSIZE	3.24	-.12***	.04	-.37	-.16**	.06	-.28	.15	.09	.18
FBRD	1.47	-.07	.06	-.09	-.06	.10	-.04	.14	.15	.07
FCEO	1.12	-.05	.04	-.09	-.15*	.06	-.15	-.18†	.09	-.12
INC1	1.63	-.04*	.02	-.18	-.04†	.03	-.13	.13**	.04	.25
INC2	1.41	-.02	.01	-.11	-.01	.03	-.04	.05	.04	.08
Constant		-.20***	.09		-.13	.16		.94***	.24	
F		3.89			6.96			2.98		
p-value		< .001			< .001			.008		
R <sup>2</sup>		.10			.16			.07		

† p < .1, \* p < .05, \*\* p < .01, \*\*\* p < .001

## 5 Conclusions

Incentive schemes, in general, do have an impact on the performance of financial firms, but not the impact one would have expected. Incentive schemes are positively associated with Tobin's Q, suggesting that financial markets place a value on incentive schemes. However, while strictly non-share-based schemes do not have a significant impact on Tobin's Q, share-based schemes do. Hence, financial markets seem to prefer long-term governance structures. On the other hand, share-based incentive schemes are negatively correlated with the common accounting-based performance measures ROA and ROE. Thus, firms with share-based incentive schemes for top management tend to perform worse, which is important from an agency perspective. Although there is no separation of share-based and non-share-based schemes, the significant negative impact of incentive schemes still exists for ROA. A possible explanation could be that the costs of incentive schemes tend to outweigh the marginal improvements of firm performance generated by the schemes, creating a negative net effect.

While the proportion of female board members does not significantly impact performance in financial firms, having a female CEO does. Although only marginally significant, our results show that markets tend to place a lower value on firms with female CEOs. Furthermore, a female CEO is also associated with a significantly lower ROE. Hence, while incentive schemes are associated with lower accounting-based performance but higher market-based performance, female CEOs are associated with lower performance in both respects.

To summarize, in contrast to most of the previous studies on firm performance in relation to female leadership and incentive schemes, our results suggest that neither is beneficial for firm performance in the financial sector. However, there may be some systematic reasons for these results related to our study

design. First, in the Nordic culture, there is a long history towards gender equality. In Norway, for example, listed firms are required by law to have at least 40% female board members. Iceland too has instituted a law with similar content. Hence, having female executives may, in some cases, be seen as an end in itself rather than a way of optimizing the board. Second, we have studied firms exclusively in the financial sector, which may have some unique characteristics in the Swedish cultural context. Finding explanations for our results is an important direction for future research in this area. For now, these aspects should be treated as a possible limitation in this study.

Our sample size can be considered another limitation of the study. The number of firm-time observations was 351, which contextually can be seen as a rather small number. In particular, the small number of firm-time observations characterized by a female CEO is a potential problem. In addition, the majority of these observations comprise only a few companies with the same female CEO during a sequence of years. Hence, the results regarding female CEOs should probably be interpreted cautiously. However, given that the study was limited to the performance of listed firms in the Swedish financial sector during the last 10 years, the data set actually comprises a comprehensive survey. We believe that going further back in time to increase the number of firm-time observations would probably create a bias, since governance has changed a lot since the nineties. Extending the study to other sectors would create comparability issues. Hence, while we would have preferred a larger sample, it was not possible, given these limitations.

Several theoretical as well as practical implications can be drawn from this study. The main theoretical issue is that incentive schemes, especially share-based ones, have a negative impact on the performance of firms in the financial sector. Agency theory obviously suggests that governance structures linking pay to performance would create the opposite effect. Most empirical studies also, in general, concur with this. However, the equation may change when we take into account the fact that the financial market largely comprises financial firms. Cause and effect becomes fundamentally linked for these firms in a way that does not apply for companies in general. Thus, we may need a separate theory of governance for financial firms.

The main practical implication of this study is that governance structures in financial firms need to balance accounting-based and market-based performance. A large focus on the share price, especially at a certain time, creates short-term effects that are not necessarily optimal in the long run for shareholders.

## References

1. Adams, R.B. and Ferreira, D. (2004), Gender diversity in the boardroom, ECGI Working Papers in Finance.
2. Adams, R. B. and Ferreira, D. (2009), Women in the boardroom and their impact on governance and performance, *Journal of Financial Economics*, Vol 94, pp. 291-309.
3. Becher, D., Campbell, T. and Frye, M. (2005), Incentive compensation for bank directors: The impact of deregulation, *Journal of Business*, Vol 78, pp. 1753-1777.
4. Blair-Loy, M. (1999), Career patterns of executive women in finance: An optimal matching analysis, *The American Journal of Sociology*, Vol. 104, No. 5, pp. 1346-1397.
5. Bonner, S.E., Hastie, R., Sprinkle, G.B. and Young, S. M. (2000), A review of the effects of financial incentives on performance in laboratory tasks: Implications for management accounting, *Journal of Management Accounting Research*, Vol. 13, pp. 19-64.
6. Bonner, S.E. and Sprinkle, G.B. (2002), The effects of monetary incentives on effort and task performance: theories, evidence, and a framework for research, *Accounting, Organizations and Society*, Vol 27, pp. 303-345.
7. Brewer III E., Hunter, W.C. and Jackson III, W. (2003), Deregulation and the relationship between bank CEO compensation and risk taking, Working paper 2003-32, Federal Reserve Bank of Chicago.
8. Catalyst. (2004), The bottom line; connecting corporate performance and gender diversity, *Catalyst*, New York.
9. Chiang, H.T. (2005), An empirical study of corporate governance and corporate performance, *Journal of American Academy of Business*, Vol. 6, No. 1, pp. 95-101.
10. Chidambaran, N.K., Palia, D. and Zheng, Y. (2010), Does changing corporate governance alone result in better firm performance? Working paper, October 2010. Available at [http://www.bnet.fordham.edu/chidambaran/K\\_Gov\\_perf\\_2010.pdf](http://www.bnet.fordham.edu/chidambaran/K_Gov_perf_2010.pdf).

11. Christensen, J., Kent, P. and Stewart, J. (2010), Corporate governance and company performance in Australia, *Australian Accounting Review*, Vol. 55, No. 20, pp. 372-386.
12. Chung, K.H. and Pruitt, S.W. (1994), A simple approximation of Tobin's Q, *Financial Management*, Vol. 23, No. 3, pp. 70-74.
13. Conyon, M. J. and Peck, S. I. (1998): Board size and corporate performance: evidence from European countries, *The European Journal of Finance*, 4:3, pp. 291-304.
14. Core, J.E., Guay, W.R. and Rusticus, T.O. (2006), Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors Expectations, *Journal of Finance*, Vol. 61, No. 2, pp. 655-687.
15. Dohmen, T. and Falk, A. (2011), Performance pay and multi-dimensional sorting: Productivity, preferences and gender, *The American Economic Review*, Vol. 101, No. 2, pp. 556-590.
16. Du Rietz, A. and Henrekson, M. (2000), Testing the female underperformance hypothesis, *Small Business Economics*, Vol. 14, pp. 1-10.
17. Ellis, K.M. and Keys, P. Y. (2003), Stock returns and the promotion of workforce diversity, Working Paper, University of Delaware.
18. Erhardt, N.L. and Werbel, J.D. (2003), Board of director diversity and firm financial performance, *Corporate Governance: An International Review*, Vol. 11, pp. 102-111.
19. Farrell, K.A. and Hersch, P.L. (2005), Additions to corporate boards: The effect of gender, *Journal of Corporate Governance*, Vol. 11, pp. 85-106.
20. Finegold, D., Benson, G.S. and Hecht, D. (2007), Corporate boards and company performance: review of research in light of recent reforms, *Corporate Governance: An International Review*, Vol.15, pp. 865-878.
21. Gneezy, U., Niederle, M. and Rustichini, A. (2003), Performance in competitive environments: Gender differences, *Quarterly Journal of Economics*, Vol. 118, pp. 1049-1074.
22. Haniffa, R. and Hudaib, M. (2006), Corporate governance structures and performance of Malaysian listed companies, *Journal of Business Finance and Accounting*, Vol. 33, No. 7/8, pp. 1034-1062.
23. Hermalin, B.E. and Wallace, N. E. (2001), Firm performance and executive compensation in the savings and loan industry, *Journal of Financial Economics*, Vol. 61, pp. 139-170.
24. Hutchinson, M. and Gul, F.A. (2004), Investment opportunity set, corporate governance practices and firm performance, *Journal of Corporate Finance*, Vol. 10, pp. 595-614.
25. Jaiswall, M. and Firth, M. (2009), CEO pay, firm performance, and corporate governance in India's listed firms, *International Journal of Corporate Governance*, Vol. 1, No. 3, pp. 227-240.
26. Javine, V. (2009), The impact of Sarbanes-Oxley on bank CEO and director compensation, PhD diss., University of Tennessee.
27. Jensen, M. (1993), The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems, *Journal of Finance*, Vol. 48, No. 3, pp. 831-880.
28. Kale, J., Reis, E. and Venkateswaran, A. (2009), Rank order tournaments and incentive alignment: The effect on firm performance, *Journal of Finance*, Vol. 64, No. 3, pp. 1479-1512.
29. Kiel, G.C. and Nicholson, G.J. (2003), Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance, *Corporate Governance: An International Review*, Vol. 11, No. 3, pp. 189-205.
30. Klapper, L.F. and Love, I. (2004), Corporate Governance, Investor Protection, and Performance in Emerging Markets, *Journal of Corporate Finance*, Vol. 10, No. 5, pp. 703-28.
31. Nielsen, S. and Huse, M. (2010), The contribution of women on boards of directors: Going beyond the surface, *Corporate Governance: An International Review*, Vol. 18, No. 2, pp. 136-148.
32. Peni, E. and Vähämaa, S. (2011), Did good corporate governance improve bank performance during the financial crisis?, *Journal of Financial Services Research*, forthcoming, DOI 10.1007/s10693-011-0108-9.
33. Prendergast, C. (1999), The provision of incentives in firms, *Journal of Economic Literature*, Vol. 37, No. 1, pp. 7-63.
34. Reuben, E., Rey-Biel, P. Sapienza, P. and Zingales, L. (2010), *The emergence of male leadership in competitive environments*. IZA Discussion Paper No. 5300.
35. Rose, C. (2007), Does female board representation influence firm performance? The Danish evidence, *Corporate Governance: An International Review*, Vol. 15, No. 2, pp. 404-413.
36. Shrader, C., Blackburn, V. and Iles, P. (1997), Women in management and firm value: An exploratory study, *Journal of Managerial Issues*, Vol. 9, pp. 355-372.
37. Smith, N. Smith, V and Verner, M. (2006), Do women in top management affect firm performance? A panel study of 2,500 Danish firms, *International Journal of Productivity and Performance Management*, Vol. 55, No. 7, pp. 569-593.

38. Terjesen, S. and Singh, V. (2008), Female presence on corporate boards: A multi-country study of environmental context, *Journal of Business Ethics*, Vol. 83, pp. 55-63.
39. Terjesen, S., Sealy, R. and Singh, V. (2009), Women directors on corporate boards: A review and research agenda, *Corporate Governance: An International Review*, Vol. 17, No. 3, pp. 320-337.
40. Webb, E. (2008), Regulator scrutiny and bank CEO incentives, *Journal of Financial Services Research*, Vol. 33, pp. 5-20.
41. Williams, R.J., Fadil, P.A. and Armstrong, R.W. (2005), Top management team tenure and corporate illegal activity: The moderating influence of board size, *Journal of Managerial Issues*, Vol. 17, No. 4, pp. 479-493.
42. Wolfers, J. (2006), Diagnosing discrimination: Stock returns and CEO gender, IZA Discussion Paper No. 1944.
43. Örs, E., Palomino, F. and Peyrache, E. (2008), Performance Gender-Gap: Does Competition Matter?, CEPR Discussion Paper No. 6891.