Credit union performance: does CEO gender matter?

Fred H. Hays, Ph.D.
University of Missouri-Kansas City

Nancy Day, Ph.D.
University of Missouri-Kansas City

Sarah Belanus
University of Missouri-Kansas City

Abstract

This is an empirical paper that examines the hypothesis that CEO gender has no impact on financial performance of financial institutions. We examine data from all U.S. credit unions for time periods before (2006.4), during (2008.4) and after (2010.3) the Financial Crisis of 2008 using both univariate and multivariate analysis.

While CEOs in commercial banks are disproportionately male, the same is not true of credit unions. After examining the relevant literature on gender based performance differences, we developed a model that includes proxy variables for institutional asset size, return on assets, asset utilization, technology, risk taking, growth and liquidity. The managerial styles of male versus female CEOs are hypothesized to be associated with these variables and ultimately the financial performance of the institution. Discriminant analysis is utilized to measure multivariate differences in financial performance between credit unions led by a female vs. a male CEO.

Keywords: Gender; Financial Performance; Credit Union; Discriminant Analysis; Multivariate; Financial Crisis

INTRODUCTION

Currently, about 25 percent of U.S. executives are female. Although women made significant gains in organizational leadership in the early part of the century, lately those gains seem to have plateaued (Light, 2011), perhaps in tandem with poor economic conditions. Further, only one-third of surveyed employers reported that gender diversity in leadership was important to their organization (McKinsey & Company, 2009). A study by Catalyst reports that in the recent recession, women leaders were more likely to lose their jobs through downsizing than men: 19 percent of senior female leaders, versus 6 percent of senior male leaders, reported being laid off (Carter & Silva, 2009), despite downsizing rates being comparable for lower levels (12 percent of women and 10 percent of men).

This raises the question of performance. Were female leaders more likely to be laid off because they tend to be worse performers? What do we know about leadership effectiveness for women versus men?

This paper investigates differences in firm performance based on leader gender. In particular, we investigate whether credit unions led by female versus male leaders differ based upon a variety of metrics of financial performance. Credit unions are unique institutions. They are not-for-profit associations of members that share a "common bond," usually representing individuals working for the same company or institution. (Rose and Hudgins, 2010) They generally enjoy exemption from federal and state taxes, (Koch and MacDonald, 2010) which gives them a distinct advantage over their competitors in banks and other for-profit organizations.

The plan of the paper is to first review the literature regarding leader differences based on gender. We next apply this past research to credit union management, and derive a model. We present results, discuss them, and suggest future areas of investigation.

LITERATURE REVIEW

Since the number of women began increasing dramatically in the workforce over the past several decades, a great deal of research has been conducted on women and men's leadership styles. Although far from exhaustive, this review seeks to summarize key findings in women's preferences as leaders, issues women leaders face, differences between men and women in leadership style, and whether one gender is associated with better outcomes than the other.

Issues Women Leaders Face

Do women face an uphill battle?

Women may face obstacles in leadership that inhibit their ability to perform. For example, men's tenure as U.S. CEOs tends to be longer than that of women (Ryan & Haslam, 2009). Further, the "glass cliff" hypothesis states that women are more likely to be appointed to leadership positions when firms are in precarious financial situations, and some evidence exists to support this idea (Haslam & Ryan, in press). However, a study of British CEOs found that women tend to be chosen as leaders when the firm is in stable or good financial situation, while the opposite is true for men (Adams, Gupta, & Leeth, 2009).

The market tends to react less positively to the appointment of women CEOs than it does when male CEOs are appointed. Press coverage focuses more on gender and gender roles when reporting leadership appointments of women, but when male leaders are appointed, the focus is on job and organizational issues (Lee & James, 2006).

Konrad and her colleagues (2000) used meta-analysis to test the hypothesis that women occupy fewer leadership positions because they are less interested in leadership. However, they found that, over 21 studies, sex differences in preference for leadership were found in only 12, and those differences were quite small. Women managers expressed slightly more inclination for prestige, job security, good relationships with coworkers and supervisors, a positive physical environment, and more enriched jobs (including task significance, variety, and opportunity for growth). Male managers were more somewhat likely than women to prefer higher earnings and responsibility. Indeed, other factors probably contribute to the prevalence of male leaders: In a study of Indian banking executives, the most important factors distinguishing whether men or women emerged as leaders were the degree of equal opportunities, whether or not the environment was supportive, perceived managerial ability, and gender stereotypes (Sandhu & Mehta, 2008). Women reported unfair treatment in promotions, a lack of appreciation for their talents, and insensitivity to issues typical to female managers. Further, stereotypes of effective leaders tend to be associated masculine characteristics (Koenig et al., 2011). Women are negatively evaluated in roles that tend to be considered "male" (Garcia-Retamero & Lopez-Zafra, 2006).

Different criteria for performance.

Women leaders' effectiveness may be evaluated on criteria different than men's. For example, when presented with vignettes illustrating aversive leaders (leaders who are coercive and abuse power), students perceived female aversive leaders more negatively than they did male aversive leaders (Thoroughgood, Hunter, & Sawyer, 2010). Using results from a 360-degree performance assessment in a financial services firm, Hopkins and Bilimoria (2008) found that although male and female executives exhibited equal levels of emotional and social intelligence competencies, men were rated more overall successful than women.

Kulich et al. (2007) found that women leaders' performance tends to be assessed based on perceptions of their leadership traits rather than directly on company performance; men's performance is more likely to be based on company performance. Another study found that not only did male leaders receive larger bonuses, their pay tended to be more related to organizational performance than it did for women (Kulich, et al., 2011), who tended to be more rewarded for non-outcome-related criteria.

Differences in Leadership Styles

A great deal of research investigates differences between *how* women and men lead. Indeed, a meta-analysis found that women's typical leadership styles are more associated with effective leadership outcomes, while the styles men tend to exhibit are either unrelated to leadership outcomes, or associated with ineffective leaders (Eagly, Johannesen-Schmidt, & Engen, 2003). A McKinsey & Company study (2009) found that women tend to use more leader behaviors associated with effective organizations: They are more likely than men to develop people, set clear expectations and rewards, and perform role-model behavior.

Women may be better managers because they are more apt to encourage teamwork, inclusive decision making (Bass & Avolio, 1994), and democratic, participative styles than men (Eagly & Johnson, 1990; McKinsey & Company, 2009). Women may exhibit more transformational and inspirational leadership, styles associated with enhanced individual and organizational performance (Bass & Avolio, 1994; McKinsey & Company, 2009; Moore, Moore, & Moore, 2011).

Do Women Leaders Create Better Results?

Do women or men make better leaders? Obviously, many variables contribute to whether or not any leader is effective. For example, as noted above, men tend to be more effective in roles that are defined in masculine terms, and women more effective in roles defined as less masculine. Men have been found to be more effective in roles where there are numerically more men than women (Eagly, Karau, & Makhijani, 1995).

Indeed, meta-analytic research suggests that leader gender has no effect on organizational performance: Two meta-analyses found that gender has a negligible effect on leader effectiveness (DeRue, et al., 2011; Eagly, Karau, & Makhijani, 1995), and a study of head basketball coaches for women's NCAA teams found that whether the coach was female or male made no difference in terms of teams' win records (Dawley, Hoffman, & Smith, 2004).

However, in some studies, women leaders are associated with higher organizational success. Small and medium-sized services businesses led by women were found to perform better in terms of growth and profitability than those led by men, and this was attributed to women leaders having a stronger market orientation (Davis, Babkus, Englis, & Pett, 2010). Compared to firms with no top female leadership, those with three or more women at the top were significantly higher in ratings of capabilities, accountability, innovation, motivation, external orientation, and coordination and control (McKinsey & Company, 2009). Finally, firms whose boards of directors contain greater gender diversity have been reported to have greater economic growth, perhaps because of women's greater relational skills that make them more likely to establish and maintain relationships with multiple stakeholders, and to uphold ethical standards (Galbreath, 2011).

Because credit unions are organizations, unlike banks, that are established based on membership and a commitment to shared outcomes, we explore whether women will be more effective credit union leaders than men. Since women may possess greater relational and communication skills, in organizations such as credit unions where trust and egalitarianism are valued, they may make better leaders.

METHODOLOGY AND DATA ANALYSIS

This study utilizes data from the SNL financial institutions database, which contains detailed financial data for over 7,000 credit unions in the United States. This information must be reported to the National Credit Union Administration on a quarterly basis in a prescribed format. Data were imported into Excel 2010 using an SNL add-in and then exported to IBM SPSS Statistics 18.0 for further analysis. Any missing variables in the study were replaced with mean values.

A dichotomous category for gender was created by visual inspection of names of CEOs of credit unions in the SNL database with 0 representing a male CEO and 1 representing a

female CEO. In a few instances the gender could not be directly determined as in the case of names such as Lynn or Robin. These were simply coded as "na" for not available.

The financial crisis of 2008 (aka The Great Recession) represents a global economic downturn not seen since the Depression in the 1930's. There are numerous collections of articles related to various issues in the financial crisis. (Kolb, 2010 and Acharya et. al., 2011; Acharya & Richardson (ed),2009)

DESCRIPTIVE STATISTICS AND DEPENDENT VARIABLE IDENTIFICATION

Descriptive statistics are presented in Table 1. All credit unions in the SNL database are included (except for those where the gender of the CEO could not be determined). Dependent variables were chosen as measures of, or proxies for, size, return on assets, efficiency, technological innovation, risk-taking, market penetration, and liquidity. In this section we define the dependent variables and indicate if there is are simple gender differences.

Size. Since size could be related to overall credit union performance as well as the selection of a CEO based on gender, an attempt was made to minimize the impact of scale dependency by converting total asset size by using the log of total assets rather than total assets. In this study there is a statistically significant difference in the log of total assets at the 99% confidence level when institutional differences are based upon the gender of the CEO.

Return on assets. There is no significant difference in credit union return on assets based upon the gender of the CEO. As indicated earlier, unlike banks and other for-profit financial institutions, credit unions have different goals and objectives. Credit unions exist to serve their members by paying higher returns on deposits and charging lower rates on loans. Consequently the return on assets is not a significant metric as it is in bank analysis.

Efficiency. Assets per full-time equivalent employee is a proxy for efficiency that is within the control of management. The values for this measure increased from 2006.4 to 2010.3 indicating a relative improvement in productivity. Moreover, the values are higher for male CEOs compared with female CEOs. The differences based on gender are statistically significant at a 99% confidence level.

Technological innovation. Each year credit unions are asked several simple survey questions related to the use of technology in delivering services. One question asks whether financial services are delivered via the Internet or WWW. The response is a simple yes or no (encoded as a 1 or 0). This variable is a proxy for technological innovation. Male CEOs have a higher mean value for adoption of technology than do their female CEO counterparts. The difference is significant at a 99% level.

Risk taking. The ratio of total real estate loans to loans is used as a proxy for risk taking. Regulators have repeatedly warned of the dangers of excessive concentration of credit. This has been especially true in the recent financial crisis as falling real estate prices have resulted in an illiquid market and rising real estate delinquencies and charge-offs. Excessive loans in a single category potentially magnifies the effects of economic downturns. In credit unions with male CEOs the real estate exposure ranges from 9.5% and 13.5% higher than in institutions led by a female CEO who appear to be more risk averse. This sizable difference is also statistically significant at a 99% confidence level.

Market penetration. Individual credit unions are constrained by the number of potential members that may join from the same organization. The ratio of members to potential members

reflects how well management is able to penetrate the market. Female CEOs have a 5% to 10 % higher ratio of actual to potential members than male CEOs. The result is statistically significant.

Liquidity. Liquidity is the ability to convert assets into cash without substantial loss of value. Given the possible random demands for deposit withdrawal, financial institutions need to provide ample funds to meet unanticipated demands for funds. The financial crisis created intense liquidity demands throughout the global financial system. As shown in Table 1 there is a relatively small but statistically significant difference in liquidity between male and female CEOs. Again this is consistent with female CEOs being more risk averse than their male counterparts.

A MULTIVARIATE DISCRIMINANT MODEL OF GENDER/PERFORMANCE DIFFERENCES

In this section we develop a multivariate discriminant model to examine the financial performance differences between U.S. credit unions based on gender differences of CEOs. The variables discussed in Table 1 are incorporated in our discriminant model. Discriminant analysis permits examination of two or more groups, in this case credit unions led by male versus female CEOs. If there are significant differences in performance between institutions based on the gender of their leader, the model should be able to correctly assign any given credit union to the correct group with a level of accuracy that exceeds chance alone. If the number of male and female CEOs were equal, there would be a 50% probability of randomly selecting the correct group. For unequal group sizes, the expected probability of being assigned to the correct group is a function of the relative differences in group membership.

The multivariate discriminant model is of the general form:

$$Z_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \ldots\ldots\ldots\ldots\ldots + \beta_n X_n \quad (1)$$

The specific model we have developed is expressed by the function:

$$Zi = \alpha + \beta_1 LnTA + \beta_2 TREL2L + \beta_3 WWW + \beta_4 M2PotM + \beta_5 LiqA2A + \beta_6 A2FTE + \beta_7 ROAA \quad (2)$$

Where:

LnTA=	log of total assets (*size*)
TREL2L=	total real estate loans to total loans (*risk-taking)*
WWW=	Internet (WWW) based financial services offered (*technological innovation)*
M2PotM=	members to potential members (*market penetration)*
LiqA2A=	liquid assets to total assets (*liquidity)*
A2FTE=	total assets per full-time equivalent employee (*size)*
ROAA=	return on average assets; net income/average assets (*ROA)*

RELATIVE IMPORTANCE OF VARIABLES

In discriminant analysis the structure matrix contains information on the relative importance of individual variables. Table 2 shows that the first three variables, LnTA, the log of total assets, TREL2L, total real estate loans to total loans and WWW, the technology proxy are consistently ranked one, two and three in all three time periods. The credit union membership variable, M2PotM, is ranked fourth in two of the three periods. As expected, ROAA, return on average assets, which was not significant in the univariate analysis, is ranked last.

WILKS' LAMBDA AND FISHER'S LINEAR DISCRIMINANT FUNCTION

Table 3 provides results for Wilks' Lambda and Chi square tests of overall goodness of fit of the model. The model produces statistically significant results in all three time periods. (Hair, et. al., 2010). Table 4 provides Fisher's Linear Discriminant Functions for each group for all three time periods. Given these parameter estimates, a Z value can be calculated for any credit union assuming the availability of data for each variable. These calculated Z scores can then be used to predict membership in either the male or female CEO group. (Hair, et. al., 2010)

Table 4 also contains information on calculated group centroids for each group. The optimal cutting scores were hand calculated for each time period based on a procedure described in Hair et. al., 2010. These are equivalent to critical Z values, the dividing line between membership in each group for each time period.

CLASSIFICATION RESULTS

If credit unions differ because of gender related differences in management styles and approaches, the result should be evidenced by a model that correctly predicts group membership with greater accuracy than chance alone (a result associated with random coin tosses). Table 5 presents the results of our discriminant model for 2006.4, 2008.4 and 2010.3 representing the pre-crisis period, the depth of the financial crisis and the period of recovery by the last half of 2010. In general, the overall accuracy of the model exceeds 65% or equivalent to being correct on two of every three randomly selected credit unions. An expected probability using a proportional chance model can be calculated as: $C_{pro}= p^2 + (1-p)^2$. (Hair et. al., 2010) As an illustration, 47.1% of observations were male CEOs in 2008.4 while 52.9% were female. The proportional chance model would predict that a randomly selected credit union would be led by a female CEO 50.1682% of the time. Since the group sizes are fairly close, this is close to the 50% expectation determined by a coin flip.

The model correctly predicts female CEO group membership approximately 70% of the time and misclassifies male CEOs into the female CEO category about 30% of the time. Male CEOs are correctly classified as male with about 60% accuracy while the remaining 40% are misclassified as female.

SUMMARY AND CONCLUSIONS

Our research suggests that there may be important differences in the management skills and styles between female versus male CEOs in US credit unions. We examined over 7,000 credit union CEOs across three recent but very different economic environments from 2006.4 through 2008.3. Using both univariate descriptive statistics and multivariate discriminant analysis we found evidence that there are differences in financial performance. For example:

---male CEOs are associated with somewhat larger credit unions

---female CEOs are more risk averse as evidenced by lower real estate loan concentrations and higher liquidity

---male CEOs are more likely to introduce technology in the form of web-based financial services

---female CEOs are more aggressive in adding credit union members

We also found no statistically significant differences between male and female CEOs based upon the standard performance metric of return on average assets. We believe this conclusion is consistent with the overall objective of credit unions as not-for-profit organizations: to provide customers with lower loan rates and higher deposit rates along with more services rather than produce higher profits.

We believe these findings will serve as a basis for future research. Among interesting research questions that could be addressed would be an examination of the rise of female CEOs over an extended time period, perhaps since the mid-1990's. We also realize the need to more tightly control for asset size effects since these scale effects may be highly correlated with other metrics (for example, are male CEOs more technologically oriented because they are in larger credit unions with greater financial resources?) Another interesting question would be to examine institutions with senior management below the CEO who are also female.

The relationship between masculine and feminine management styles and specific financial performance metrics appears to be an area with many research possibilities. Also, if data is available, the age of the CEO may be a relevant variable. For example, how do male versus female CEOs differ across generations. Are "Baby Boomer" CEOs different, for example, than Gen X or Millennial CEOs? The number of the two later groups is limited at present but will provide many research opportunities going forward. In short, this study is a beginning rather than an end. Hopefully it will stimulate others to investigate these fascinating issues.

REFERENCES

Adams, S.M., Gupta, A., & Leeth, J.D. 2009. Are female executives over-represented in precarious leadership positions? *British Journal of Management*. 20, 1-12.

Acharya, Viral V. (ed.) *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance*. Hoboken, N.J.: John Wiley & Sons, 2011.

Acharya, Viral V. and Richardson, M. *Restoring Financial Stability: How to Repair a Failed System*. Hoboken, N.J.: John Wiley & Sons, 2009.

Bass, B.M., & Avolio, B.J. 1994. Shatter the glass ceiling: Women may make better managers. *Human Resource Management.* 33(4), 549-560.

Carter, N.M., & Siva, C. 2009. Opportunity or Setback? High Potential Women and Men During Economic Crisis. Catalyst. Retrieved July 22, 2011, from http://www.catalyst.org/file/305/opportunity_or_setback_final_081209.pdf.

Davis, P.S., Babakus, E., Englis, P.D., & Pett, T. 2010. The influence of CEO gender on market orientation and performance in serve small and medium-sized service businesses. *Journal of Small Business Management*. 48(4), 475-496.

Davis, A.L. & Rothstein, H.R. 2006. The effects of perceived behavioral integrity of managers on employee attitudes: A meta-analysis. *Journal of Business Ethics.* 67, 407-419.

Dawley, D., Hoffman, J.J., Smith, A.R. 2004. Leader succession: Does gender matter? *Leadership & Organizational Development Journal*. 25(7/8), 678-690.

DeRue, D.S., Nahrgang, J.D., Wellman, N., & Humphrey, S.E. 2011. Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*. 64, 7-52.

Eagly, A.H., & Johnson, B.T. 1990. Gender and leadership style: A meta-analysis. *Psychological Bulletin*. 108(2), 233-256.

Eagly, A.H., Karau, S.J., & Makhijani, M.G. 1995. Gender and the effectiveness of leaders: A meta-analysis. *Psychological Bulletin.* 117(1), 125-145.

Eagly, A.H., Johannesen-Schmidt, M.C., & van Engen, M.L. 2003. Transformational, transactional, and laissez-faire styles: A meta-analysis comparing women and men. *Psychological Bulletin.* 129(4) 569-591.

Hair, Joseph F., Jr., Black, W.C., Babin, B.J., Anderson, R.E. *Multivariate Analysis*, 7th ed., Upper Saddle River, N.J.: Prentice Hall, 2010.

Koenig, A.M., Eagly, A.H., Mitchell, A.A., & Ristikari, T. 2011. Are leadership stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin.* 137(4) 616-642.

Kolb, Robert W. (ed.) *Lessons from the Financial Crisis*, Hoboken, N.J.: John Wiley & Sons, 2010.

Galbreath, J. 2011. Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *Journal of Management & Organization*. 17, 17-38.

Garcia-Retamero, R., & Lopez-Zafra, E. 2006. Prejudice against women in male-congenial environments: Perceptions of gender role congruity in leadership. *Sex Roles*. 55(1-2), 51-61.

Haslam, S.A., & Ryan, M.K. (in press). The road to the glass cliff: Differences in the perceived suitability of men and women for leadership positions in succeeding and failing organizations. *Leadership Quarterly*.

Hopkins, M.H., & Bilimoria, D. 2008. Social and emotional competencies predicting success for male and female executives. *Journal of Management Development.* 27(1), 13-35.

Koch, Timothy W. and MacDonald, S.S. *Bank Management.* Mason, OH: South-Western Cengage Learning, 2010.

Konrad, A.M., Corrigall, E., Lieb, P., & Ritchie, J.E. Jr. 2000. Sex differences in job attribute preferences among managers and business students. *Group and Organization Management* 25(2) 108-131.

Kulich, C., Ryan, M.K., and Haslam, S.A. 2007. Where is the romance for women leaders? The effects of gender on leadership attributions and performance-based pay. *Applied Psychology: An International Review*. 56(4), 582-601.

Kulich, C., Trojanowski, Ryan, M.K., Haslam, S.A., & Renneboog, L.D.R. 2011. Who gets the carrot and who gets the stick? Evidence of gender disparities in executive remuneration. *Strategic Management Journal.* 32, 301-321.

McKinsey & Company. 2009. *Women Matter.3.* Retrieved July 22, 2011 from http://www.mckinsey.com/locations/paris/home/womenmatter/pdfs/Women_matter_dec2009_english.pdf.

Moore, D.P., Moore, J.L., & Moore, J.W. 2011. How women entrepreneurs lead and why they manage that way. *Gender in Management*. 26(3), 220-233.

Rose, Peter S. and Hudgins, S.C. *Bank Management & Financial Services*.New York: McGraw-Hill Irwin, 2010.

Ryan, M.K., & Haslam, S.A. 2009. Glass cliffs are not so easily scaled: On the precariousness of female CEOs' positions. *British Journal of Management*. 20, 13-16.

Sandhu, H.S., & Mehta, R. 2008. Using psychographic dimensions to discriminate between men and women executives: An empirical analysis. *Journal of Services Research*. 8(1), 139-153.

Thoroughgood, C.N., Hunter, S.T., & Sawyer, K.B 2010. Bad apples, bad barrels, and broken followers? An empirical examination of contextual influences on follower perceptions on reactions to aversive leadership. *Journal of Business Ethics*. 100, 647-672.

Table 1
Descriptive Statistics

Variable	2006.4	2008.4	2010.3	Significance level
log Total Assets				.000
Male CEO	10.16	10.26	10.38	
Female CEO	9.02	9.08	9.19	
Return on Assets				Not significant in any time period
Male CEO	.736	.184	.062	
Female CEO	.728	.205	-.054	
Assets per FTE Employee				.000
Male CEO	2648.44	2814.40	3190.86	
Female CEO	2222.76	2335.45	2656.79	
Internet Banking				.000
Male CEO	.716	.752	.772	
Female CEO	.606	.578	.612	
Total Real Estate Loans to Loans				.000
Male CEO	32.49	34.98	36.10	
Female CEO	19.93	21.52	22.47	
Members to Potential Members				.000
Male CEO	36.73	34.87	33.82	
Female CEO	41.77	44.25	43.05	
Liquid Assets to Total Assets				.000
Male CEO	23.60	24.48	25.54	
Female CEO	25.70	27.44	31.22	

Table 2
Structure Matrix

Variable	2006.4	2008.4	2010.3
ln Total Assets (LnTA)	**.887**	**.905**	**.927**
Total Real Estate Loans to Total Loans (TREL2L)	**.815**	**.831**	**.835**
Internet Banking (WWW)	**.643**	**.554**	**.509**
Members to Potential Members (M2PMem)	**-.520**	**-.512**	**-.398**
Liquid Assets to Total Assets (LiqA2A)	**-.362**	**-.490**	**-.515**
Assets per FTE Employee (A2FTE)	**.351**	**.357**	**.349**
Return on Average Assets (ROAA)	**.014**	**-.026**	**.046**

Table 3 Wilks' Lambda Statistics

Time Period	Wilks' Lambda	Chi-square	Degrees of Freedom	Significance
2006.4	.902	763.164	7	.000
2008.4	.902	765.151	7	.000
2010.3	.905	737.515	7	.000

Table 4
Fisher's Linear Discriminant Function

Variable		2006.4		2008.4		2010.3
	Male CEO	Female CEO	Male CEO	Female CEO	Male CEO	Female CEO
Log Total Assets (lnTA)	4.826	4.626	5.285	5.061	5.245	5.013
Liquid Assets to Assets (LiqA2A)	.237	.233	.294	.292	.308	.308
Members to Potential Members (M2PotM)	.096	.102	.095	.101	.058	.061
Total Real Estate Loans to Loans (TREL2L)	-.065	-.077	-.060	-.072	-.071	-.082
Internet (WWW)	-.035	-.175	.433	.554	-.049	.038
Assets to FTE Employees (A2FTE)	-.001	-.001	-.001	-.001	-.001	-.001
Return on Average Assets (ROAA)	.699	.686	.319	.295	.060	.055
Constant	-27.378	-25.159	-30.559	-28.282	-30.240	-27.788
Function at Group Centroids	.349	-.311	.350	-.311	.343	-.305
Optimal Cutting Score		.0381		.0387		.0378

Table 5
Classification Matrices

Time Period	Category	Male CEO	Female CEO	Overall Classification Accuracy
2006.4	Male CEO	2128 (61.0%)	1363 (39%)	65.6% correctly classified
	Female CEO	1185 (30.2%)	2736 (69.8%)	65.5% cross-validated
2008.4	Male CEO	2091 (59.9%)	1400 (40.1%)	65.6% correctly classified
	Female CEO	1152 (29.4%)	2769 (70.6%)	65.5% cross-validated
2010.3	Male CEO	2138 (61.2%)	1353 (38.2%)	66.1% correctly classified
	Female CEO	1157 (29.5%)	2764 (70.5%)	66.0% cross-validated