GETTING TO THE BOTTOM LINE: AN EXPLORATION OF GENDER AND EARNINGS QUALITY

Gopal V. Krishnan
George Mason University

Linda M. Parsons*
George Mason University
School of Management
4400 University Drive, MSN 5F4
Fairfax, VA 22030
(703) 993-1755
Fax: (703) 993-1809
E-mail: Lparsons@gmu.edu

Biographies

Gopal Krishnan is an associate professor and holds the VSCPA Northern Chapter Professorship in Public Accounting at the School of Management at George Mason University. He has published several articles on corporate governance and the role of auditors in journals such as *Accounting Horizons*, *Contemporary Accounting Research*, *Journal of Accounting, Auditing and Finance* and *Auditing: A Journal of Practice & Theory*.

Linda Parsons is an assistant professor at the School of Management at George Mason University. She is the author of several papers that examine the value relevance of accounting in the nonprofit sector, especially as it impacts decision-making by donors. Her work has appeared in journals such as *Journal of Accounting, Auditing and Finance*, *Research in Governmental and Nonprofit Accounting*, and *Journal of Accounting Literature*.

* corresponding author

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Abstract

For stakeholders, such as investors and lenders, to appropriately assess a company's financial performance, the reported accounting earnings must closely reflect the economic reality of the organization's financial activity throughout the reporting period. The degree to which reported earnings capture economic reality is called earnings quality. Managers have an ethical obligation to report high quality earnings to interested stakeholders in a timely matter.

Accounting research has identified conditions within an organization, such as management compensation contracts and pending litigation, that can impact earnings quality. We extend this line of research by exploring whether another characteristic of an organization, gender diversity in senior management, influences the quality of reported earnings. Companies with more women in senior management are found to be more profitable and have higher stock returns after initial public offerings than those with fewer women in the management ranks. Our findings suggest that the improved bottom line for companies with more women senior executives is not produced through the management of earnings or lower quality earnings. Instead, earnings quality is positively associated with gender diversity in senior management.

Keywords: Earnings quality; Gender; Diversity; Ethics; Conservatism

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Introduction

The issue of earnings quality has received much attention in the accounting literature. Earnings quality refers to the degree to which reported earnings capture a firm's economic reality. If financial information users are "fooled" by reported earnings, then financial statements are less useful and resource allocation by stakeholders is affected (Healy and Wahlen, 1999). Managers have a professional responsibility and an ethical obligation to report high quality earnings to interested stakeholders in a timely matter.

Earnings management involves selecting accounting estimates that result in reporting earnings that are advantageous to the company or its managers at the expense of external stakeholders. Using results from a survey of general managers and managers in finance, control and audit, Bruns and Merchant (1990) establish earnings management as an ethical issue. Prior research identifies certain conditions within an organization, such as the existence of performance-based compensation, debt covenants or pending litigation, that can motivate earnings management (Healy, 1985; Jones, 1991; Beaver and Engel, 1996; Hall and Stammerjohan, 1997). Regulators, investors and other users of accounting information are interested in mechanisms that mitigate the tendency of managers to engage in earnings management and dilute earnings quality. We extend this line of literature by exploring whether another characteristic of an organization, gender diversity in senior management, influences the quality of earnings or likelihood of earnings management. Our evidence suggests that the inclusion of women in senior management positions within a company is positively associated with earnings quality.

Gender, Money and Ethics

The issue of earnings quality encompasses the issues of money/finance and ethics. Researchers examining issues of ethics and finances frequently include gender as a predictor variable. Several studies present findings that suggest men and women behave differently in the workplace, especially when money and finances are involved. Women are thought to be more focused on helping people, while men are more concerned with making money and getting ahead in their companies (Betz, et al. 1989; Bernardi and Arnold, 1997). These studies suggest that women are less likely to engage in unethical behavior in the workplace to gain financial rewards. Other studies highlight the differences between men and women in handling money. Women are expected to be more risk averse, which impacts the types of investments they make, and men are thought to have more confidence with money matters (Barber and Odean, 2001; Bliss and Potter, 2002). If women lack confidence in money matters and are less likely to focus on financial results that benefit them personally, this may affect the approach men and women take to reporting financial information.

The evidence that gender differences impact ethical behavior is mixed. Betz, et al. (1989) find that men are more likely than women to break the laws against insider trading and violate company policy regarding expense reports, in order to profit personally. Bernardi and Arnold (1997) find that women in public accounting firms score higher than their male colleagues on a moral development measure. However, Owhoso (2002) finds that male and female auditors at the same experience level were equally likely to detect fraud risk when planning an audit. Ford and Richardson (1994) list thirteen studies that consider gender as a factor in ethical decision making. Eight of those studies find that women are more likely to

behave ethically than men, while five do not support a link between gender and ethical behavior.

There is evidence that men and women differ in the area of money and finances. For example, research has demonstrated that men and women vary in their success with investing money. Barber and Odean (2001) find that women hold securities in their investment accounts for a longer period on average than men do, and as a result have higher returns. They attribute the difference to men's overconfidence in their abilities to trade. Bliss and Potter (2002) find that among mutual fund managers, women do not compile less risky portfolios than men, and women managers outperform men in domestic funds (men and women perform equally well in managing international funds).

Even the financial performance of companies has been linked to the prevalence of women in the management ranks. While studying the determinants of success of initial public offerings (IPOs), Welbourne (1999) discovered that firms with a higher percentage of women in top management (as listed in the prospectus) experience better firm performance, as measured by Tobin's Q (market value per share to book value per share), higher growth in stock price over the three-year period following the IPO, and higher growth in earnings per share. Adler (2001) finds that Fortune 500 companies with a larger number of female executives exceed industry median on three separate measures of profitability. Similarly, Catalyst, a nonprofit organization that studies various issues of women and the workplace, examines profitability of certain Fortune 500 companies during the period 1996-2000. They report that companies with the most gender diversity (ranked in the top 25 percent of women in senior management; females representing 14.3 to 38.3 percent of executives) outperformed those with the least gender diversity (ranked in the bottom 25 percent of women in senior

management; females representing zero to 5.1 percent of executives) on return on equity and total return to shareholders (Catalyst, 2004). Finally, Carter, et al. (2003) study diversity of boards of directors and find that companies with more diverse boards (including women and minorities) have a higher average firm value. Therefore, we look to see if men and women behave differently when it comes to reporting high quality earnings.

Accounting policy choices, including accounting estimates (called accruals) that affect overall earnings quality, involve professional judgment. If women are more ethical than men in the workplace, will they manage earnings less often than their male counterparts? If companies with more female managers are reporting better results, are these results real or are they the product of earnings management techniques?

To date, only two papers have addressed the relationship between the quality of earnings and gender. Both papers deal specifically with earnings management. Clikeman, et al. (2001) surveys accounting students to ascertain whether gender or national origin impacts attitudes toward common methods used to manage reported earnings. Al-Hayale and Lan (2004) question company managers and external auditors in Jordan to assess their views of earnings management techniques that can be used to increase or decrease reported net income. Both studies find no significant differences in the men's and women's attitudes about earnings management. However, neither study examined actual behavior related to financial reporting or other aspects of earnings quality. The surveys used hypothetical situations to determine attitudes toward a specific behavior. We extend the existing research by examining actual reported financial numbers and comparing the earnings quality in companies with higher percentages of women to those with fewer women in the senior ranks.

Research Design

Though prior research regarding differences in the ethical behavior of men and women has produced mixed results (see Ford and Richardson (1994) for a summary), gender diversity in senior management and on the board of directors has been linked to higher reported profitability and firm value (Welbourne, 1999; Adler, 2001; Carter, et al., 2003; Catalyst, 2004). These findings motivate our research question as follows.

RQ: Are the quality of reported earnings related to the percentage of women in the senior management ranks?

To investigate the relation between earnings quality and the number of women in top management positions, we examine several attributes of earnings quality that prior research shows are desired by accounting regulators, investors, and other users of financial statements. For example, the recent spate of accounting scandals in the U.S. and elsewhere has underscored the importance of accounting conservatism, i.e. the timely recognition of bad news about future cash flows. Ball (2001) notes that the timely incorporation of economic losses in accounting earnings is a key requirement to ameliorate information asymmetry between the firm and parties contracting with the firm. Further, evidence of earnings management implies that management is intentionally altering financial reports to "either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on accounting numbers" (Healy and Wahlen, 1999, p. 368). Finally, prior research shows that the higher sustainability (persistence) of earnings is associated with higher market values (Kormendi and Lipe, 1987; Collins and Kothari, 1989). Therefore we rely on multiple proxies of earnings quality to minimize measurement error associated with estimating earnings quality.

Measures of Earnings Quality

Asymmetric timeliness and conservatism. Using negative and positive stock returns to proxy for bad news and good news about future cash flows, Basu (1997) demonstrates that the contemporaneous association between accounting earnings and stock returns is stronger for bad news than for good news. He argues that this *asymmetric timeliness* of accounting earnings is an indication of accounting conservatism, i.e., the quicker recognition of bad news in earnings than good news. Bad news is reflected in both accounting earnings and stock returns as soon as it is known. However, while stock market prices incorporate good news as soon as it is publicly available, good news is recognized later in accounting earnings because accountants tend to require more verification for recognizing good news than bad news (Basu, 1997, p. 4). For example, while certain unrealized losses from assets are recognized immediately, unrealized gains are deferred and recognized only at the time the asset is sold. The asymmetric timeliness of accounting earnings has been empirically documented internationally (Pope and Walker, 1999; Ball, et al., 2000; Giner and Rees, 2001) and over time in the U.S. (Givoly and Hayn, 2000; Holthausen and Watts, 2001; Ryan and Zarowin, 2003). The property of asymmetric timeliness is positively associated with earnings quality.[1]

Using Basu's (1997) measure of asymmetric timeliness of accounting earnings, we estimate model (1) to examine whether earnings of firms where gender diversity is high are more sensitive to bad news than earnings of firms where gender diversity is low:

$$X_{it} / P_{it-1} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 GROUP_{it} + \alpha_3 DR_{it} \times GROUP_{it} + \beta_0 R_{it} + \beta_1 R_{it} \times DR_{it} + \beta_2 R_{it} \times GROUP_{it} + \beta_3 R_{it} \times DR_{it} \times GROUP_{it} \quad (1)$$

where X_{it} is net income per share for firm i in fiscal year t and P_{it-1} is price per share at the beginning of the fiscal year. R_{it} is buy-and-hold fiscal year stock return. DR_{it} is a dummy

variable that equals 1 if $R_{it} < 0$ and 0 otherwise. If the earnings amount is more sensitive to bad news than good news, meaning earnings have a greater association with negative stock returns relative to positive stock returns, we expect β_1 to be positive and greater than β_0.

$GROUP_{it}$ is a dummy variable that equals 1 for observations in the high gender diversity group and 0 for observations in the low gender diversity group. We interact $GROUP_{it}$ with R_{it}, DR_{it}, and R_{it} x DR_{it} to directly examine whether the contemporaneous association between accounting earnings and negative stock returns is statistically different for observations in the high gender diversity group relative to observations in the low gender diversity group. Observing $\beta_3 > 0$ would provide evidence that asymmetric timeliness is greater when gender diversity is high. No prediction is offered for β_2. Greater asymmetric timeliness is evidence of more conservatism in reported earnings, which implies higher quality earnings.

Earnings skewness. Another measure of conservatism is earnings skewness. Several studies in the accounting and finance literature document that conservative accounting leads to a negatively skewed distribution of earnings (Basu, 1997; Ball, et al., 2000; Givoly and Hayn, 2000; Lang, et al., 2003). This is because Generally Accepted Accounting Principles require early recognition of bad news about future cash flows and delayed and gradual recognition of good news. This fundamental feature of financial reporting contrasts with the distribution of stock returns, which reflect both bad news and good news as they become publicly available and should be normally distributed. Following Givoly and Hayn (2000), we measure skewness coefficient as $(x - \mu)^3 / \sigma^3$ where x is net income per share deflated by price at the beginning of the year and μ and σ are mean and standard deviation of the distribution. A negatively skewed earnings distribution provides evidence of conservatism, a

feature of high quality earnings. We compare the skewness of earnings distribution in the high gender diversity group to the low gender diversity group to determine whether differences exist.

Accrual-Based Measure of Conservatism. Over the life of a company, total accounting earnings (before depreciation) should equal cash flows from operating activities. However, Givoly and Hayn (2000) demonstrate a tendency towards more conservative accounting during the 1980s and 1990s. They document an accumulation of negative accruals for most of the last two decades. Cumulative accruals are negative when accounting earnings (before depreciation of fixed assets) are consistently below cash flows from operating activities (which excludes capital transactions).

Ahmed, et al. (2002) use the findings of Givoly and Hayn (2000) to develop an accrual-based measure of conservatism, defined as the mean of accruals over a period of time. Following Ahmed, et al. (2002), we define the accrual-based measure of conservatism as follows:

$$CONACC_{it} = -1 * [(NI_{it} - Depr_{it} - CFO_{it}) + (NI_{it-1} - Depr_{it-1} - CFO_{it-1}) + (NI_{it-2} - Depr_{it-2} - CFO_{it-2}) / 3] / TA_{it} \quad (2)$$

where NI_{it} is net income, $Depr_{it}$ is depreciation, and CFO_{it} is cash flows from operating activities for firm i in year t. TA is total assets at the beginning of the year. The accrual-based conservatism measure is the three-year average of accruals (the difference between accounting earnings before depreciation and operating cash flows).

If accounting earnings are consistently below operating cash flows, the three-year average will be negative. We multiply average accruals by -1 so that a larger number is indicative of greater conservatism, which is attributed with higher quality earnings. We

compare the accrual-based conservatism measure in the high gender diversity group to that in the low gender diversity group to ascertain whether there are differences between the groups.

Smoothness. Earnings smoothing, an earnings management technique, refers to attempts by managers to conceal economic shocks to the firm's operating cash flows either by accelerating the reporting of future revenues to mask poor performance in the current year or by accelerating the reporting of future costs to create reserves for the future. Following Leuz, et al. (2003) and Francis, et al. (2003), we measure earnings smoothness as the ratio of a firm's standard deviation of income before extraordinary items divided by total assets at the beginning of the year to its standard deviation of cash flows from operations also divided by total assets at the beginning of the year. We compare this measure between the low and high gender diversity groups. A large value indicates *less* earnings management than a small value. In other words, this measure is positively associated with earnings quality.

Loss avoidance tendency. Several studies present evidence that managers use accounting discretion to avoid reporting small losses (Bhattacharya, et al., 2003; Degeorge, et al., 1999; Burgstahler and Dichev, 1997). Leuz, et al. (2003) posit that while managers have incentives to avoid reporting losses of any magnitude, they often have limited discretion and may not be able to report profits in the presence of large losses. Leuz, et al. (2003) argue that small losses, on the other hand, are more likely to be driven by managers' accounting discretion. Following Leuz, et al. (2003), we measure the loss avoidance tendency (another earnings management technique) as the ratio of "small profits" to "small losses". Profits and losses are calculated as net income over total assets at the beginning of the year. Small profits and small losses are defined as less than or equal to one percent of beginning assets. A large ratio of small profits to small losses implies greater earnings management (loss avoidance

behavior) and therefore, implies *lower* earnings quality. A ratio close to 1.0, where small losses are as probable as small profits, implies a lack of earnings management.

Persistence. Earnings persistence is an indicator of earnings permanence, i.e., sustainability (Schipper and Vincent, 2003). Analysts and investors attach importance to this feature because high persistence is associated with higher valuations (Kormendi and Lipe, 1987; Collins and Kothari, 1989). We measure earnings persistence as the slope coefficient δ_i in the following model:

$$EARN_{it} = \delta_0 + \delta_1 EARN_{it-1} + \delta_2 GROUP_{it} + \delta_3 EARN_{it-1} \times GROUP_{it} \qquad (3)$$

where $EARN_{it}$ is income before extraordinary items divided by total assets for firm *i* in fiscal year *t*. We estimate model (3) to test whether the coefficient δ_1 is greater for the high gender diversity group relative to the low gender diversity group. A larger value for δ_3 is consistent with higher earnings quality in the high gender diversity group. Earnings are considered more (less) permanent as δ_1 approaches one (zero).

In summary, attributes of higher earnings quality are greater conservatism (earnings are more sensitive to bad news than good news), lower earnings smoothing, lower incidence of loss avoidance behavior, and greater earnings persistence.

Sample

Our initial set of sample firms comes from the database of Fortune 500 companies identified by Catalyst (2004).[2] Using its annual censuses of women as corporate officers and top earners, Catalyst determined the number of women in senior management positions for 353 of the Fortune 500 companies during the period 1996-2000 and ranked them from the largest to smallest representation by women in top management.[3] The Catalyst censuses

provide the most accurate count of women in top positions and Catalyst requests that companies verify publicly available data on gender diversity (Catalyst, 2004, p. 17).

Based on the gender diversity rankings, Catalyst divided the ranked list into quartiles. For the companies in the first quartile (most gender diversity; average of 20.3 percent of senior managers are women) and the fourth quartile (least gender diversity; average of 1.9% of senior managers are women), we search the *Compustat* database for data to compute various measures of earnings quality for the period 1996-2000. We then compare the indicators of earnings quality for companies in the first and fourth quartiles to determine if significant differences appear.[4]

In terms of industry representation, it appears that both low and high gender diversity groups come from common industry categories. Out of 42 two-digit SIC categories examined, 23 (about 55 percent) industry categories are represented by both groups. These 23 two-digit SIC categories represent more than 84 percent (648 / 770 firm-year observations) of the total sample. All observations are audited by a brand-name (Big 5) auditor.

Results

[Insert Table 1 about Here]

Descriptive statistics for reported earnings, stock returns, and firm size for low and high gender diversity groups are in Table 1. Observations in the high gender diversity groups appear to have performed better in terms of stock returns and return on equity, and are larger than observations in the low gender diversity group. Results of univariate analysis indicate that mean differences between the two groups are not statistically significant at the 0.10 level for accounting earnings, percentage of loss firms, and stock returns. Similarly, median

differences are not significant for reported earnings and percentage of loss firms. Mean and median differences in percentage of firms with negative stock returns and the median difference in annual stock returns is significant at the 0.10 level. Median return on equity is significantly different between the two groups at the 0.05 level. For firm size (market value of equity) both mean and median differences are significant at the 0.01 level. We control for firm size in our models to mitigate the concern that differences in earnings quality is merely driven by firm size.

[Insert Table 2 about Here]

Table 2 reports the results of model (1). Recall that model (1) is a regression of accounting earnings on stock returns with a dummy variable that equals 1 for negative returns and 0 for positive returns, and another that equals 1 for observations in the high gender diversity group and 0 for observations in the low gender diversity group.

To control for year-specific and industry-specific factors, we include four year-dummy variable D_Y representing years 1996 through 2000 and ten industry-dummy variables D_I representing the following groupings of two-digit SIC codes: SIC 20, SIC 27, SIC 28, SIC 35, SIC 36, SIC 37, SIC 49, SIC 50, SIC 60 and SIC 63. For the sake of simplicity, industry coefficients are not reported.

The coefficient of interest (β_1) is positive, larger than β_0, and significant at the 0.01 level for a two-tailed test. These findings are consistent with the asymmetric timeliness of earnings, i.e., firms are more timely in reporting bad news about future cash flows than good news (Basu, 1997).

The key finding here is that the difference in the slope coefficients for bad news between low and high gender diversity groups is statistically significant at the 0.01 level (see

β_3). Overall, these results suggest that the property of quicker recognition of bad news in earnings (asymmetric timeliness of earnings) is greater for the high gender diversity group relative to the low gender diversity group. This implies earnings for the high gender diversity group are measured more conservatively than for the low diversity group.

To corroborate results in Table 2 we examine the skewness of earnings, another measure of the timeliness of earnings. The skewness coefficient for earnings per share divided by beginning of the year stock price per share for the low (high) gender diversity group is –3.079 (–6.396). In other words, earnings are more negatively skewed (and more conservative) for the high gender diversity group relative to the low gender diversity group. This finding is consistent with results in Table 2 that earnings of high gender diversity firms are more sensitive to bad news than earnings of the low gender diversity firms.

[Insert Table 3 about Here]

Table 3 presents the results of the analysis of the accrual-based conservatism measure, defined in Model (2). Following Givoly and Hayn (2000) and Ahmed, et al. (2002), we compare accounting earnings (exclusive of depreciation) to operating cash flows to explore for differences between the high and low gender diversity groups. We measure accrual-based conservatism over the period from 1996 to 2000. A large number is evidence of greater accounting conservatism, where accounting earnings are consistently below cash flows from operations.

We find that the median accrual-based measure of conservatism in the high gender diversity group is 0.002, while the median accrual-based conservatism measure in the low gender diversity group is -0.003. A nonparametric, two sample median test indicates the

difference between the groups is significant at the 0.01 level. The result indicates that high gender diversity firms report more conservative earnings than low diversity firms.

[Insert Table 4 about Here]

The results from the examination of the measure of earnings smoothness are presented in Table 4. Following Leuz, et al. (2003), we relate variability in cash flows (a measure of unsmoothed earnings) to variability in accounting earnings to gauge the extent to which managers engage in earnings smoothing. A larger ratio of standard deviation of earnings over standard deviation of cash flows is consistent with less earnings smoothing. Results in Table 4 indicate that the ratio is greater for the high gender diversity group relative to the low gender diversity group (0.74 *vs.* 0.60). This finding is consistent with the notion that the degree of earnings smoothing is lower for firms where more women are part of the senior management than for firms where fewer women serve in senior managerial positions.

Another measure of earnings management is the loss avoidance measure. Following Leuz, et al. (2003), we divide the number of observations reporting small profits (earnings up to one percent of beginning total assets) by the number of observations reporting small losses (negative earnings up to one percent of beginning total assets). The values for the low and high gender diversity groups are, respectively, 8.67 and 5.80. A higher ratio, where small profits are more common than small losses, is consistent with greater loss avoidance behavior. Thus, it appears that the loss avoidance behavior is lower for firms where more women are part of the senior management.

[Insert Table 5 about Here]

The results of our test of earnings persistence are summarized in Table 5. Model (3) includes dummy variables to capture year- and industry-specific factors (coefficients not

reported). A value for δ_1 that is closer to one implies earnings persistence. Results confirm that the difference in earnings persistence between the high and low gender diversity groups is statistically significant at the 0.05 level (see δ_3). In short, earnings persistence (and therefore earnings quality) is greater for the high gender diversity group.

Control for Firm Size

To address the concern that the reported results are driven by firm size, we reconstitute observations in the two groups to minimize difference in firm size. Recall that firms in the high gender diversity group are larger than firms in the low gender diversity group (see Table 1). We exclude very small firms from the low gender diversity group and very large firms from the high gender diversity group. This process results in a sample of 333 firm-year observations for each group. The median difference in firm size between the two groups is no longer significant at the 0.10 level, suggesting that observations in the two groups are comparable in size. We re-estimate model (1) using this size-adjusted sample and the results are in Table 6.

[Insert Table 6 about Here]

The coefficient of interest, β_3, has become larger compared to results in Table 2 and continues to be significant at the 0.01 level. On the other hand, β_1, the bad news coefficient for the low gender diversity group is positive but not significant at the 0.10 level. In short, asymmetric timeliness of earnings has become even greater for the high gender diversity group relative to the low gender diversity group once we control for size differences. We also re-estimate other measures of earnings quality using the size-adjusted sample and the results are consistent with the results reported earlier.

In summary, accounting earnings of observations in the high gender diversity group appear to be different from accounting earnings of observations in the low gender diversity groups along several attributes – quicker recognition of bad news than good news, lower earnings smoothing, lower incidence of loss avoidance, and greater sustainability of earnings. The evidence suggests that earnings quality is greater for the high gender diversity group than the low gender diversity group.

Summary

This study extends the literature that examines earnings quality to include gender diversity among senior managers as an explanatory factor. Several studies demonstrate that men and women differ in their approach to money and investing (Barber and Odean, 2001; Bliss and Potter, 2002). Other studies demonstrate that companies that have more women in senior management or on boards of directors are more profitable and have higher firm value (Welbourne, 1999; Adler, 2001; Carter, et al., 2003; Catalyst, 2004). Still others show that women are more likely to exhibit ethical behavior in the workplace even when they can benefit personally from unethical behavior (Betz, et al., 1989; Bernardi and Arnold, 1997). Earnings quality combines the issues of ethical workplace behavior with attitudes toward money and finance. This study is the first to specifically explore whether gender diversity in senior management impact earnings quality of reported numbers.

Though other studies have examined earnings quality and gender, the studies do not examine actual reporting behavior. Instead, they survey participants about their attitudes toward certain earnings management techniques. Clikeman, et al. (2001) use accounting students as a proxy for managers responsible for financial reporting, while Al-Hayale and Lan (2004) limit their subjects to company managers and external auditors in Jordan. The

external validity of these studies may be limited if the subject pool is not representative of senior managers in U.S. companies. Controlling for firm size and industry, we examine several measures of earnings quality reported during the period 1996 to 2000 for firms with high gender diversity (women represent 14.3 to 38.3 percent of senior executives) and low gender diversity (women comprise zero to 5.1 percent of senior executives) to determine whether the prevalence of women in the senior management ranks predicts the quality of reported earnings. Our findings suggest that the improved bottom line for companies with more women in the senior management ranks is not produced through the management of earnings or with lower quality earnings. Instead, though our results do not imply that hiring more women will result in increased quality of reported earnings, earnings quality is positively and significantly related to high gender diversity in senior management.

[1] Givoly, et al. (2004) suggest using multiple measures of accounting conservatism to avoid problems with measurement error. In this study we do not rely on a single measure of accounting conservatism, but instead use multiple measures of earnings quality to determine whether differences exist between high and low diversity firms.

[2] Catalyst is an independent, nonprofit research and advisory organization working to advance women in business, with offices in New York, San Jose, and Toronto.

[3] Catalyst defines a top management position as a corporate officer who has day-to-day responsibility for corporate operations and has the power to legally bind her company, and represent her company on major decisions.

[4] Catalyst only provides the company ranking of gender diversity, not the actual percentage of women in senior management positions. Catalyst does not indicate the area within the firm where women serve as senior managers (e.g. human resources vs. finance department).

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TABLE 1
Descriptive Statistics

Variable	Low Gender Diversity	High Gender Diversity
% of firms with accounting loss	6.75%	7.01%
% of firms with negative stock returns[a]	36.62%	30.91%
Accounting earnings		
Mean	0.060	0.051
Median	0.063	0.057
Return on equity		
Mean	0.143	0.161
Median[b]	0.159	0.169
Annual stock returns		
Mean	0.167	0.209
Median[a]	0.109	0.161
Firm size (in millions)		
Mean[c]	$15,666.1	$23,671.1
Median[c]	5,682.8	9,464.9

Data are for years 1996 through 2000. Total number of firm-year observations is 385 for both low and high gender diversity groups. Accounting earnings is net income per share, deflated by price per share at the beginning of the fiscal year. Annual stock returns are buy-and-hold returns for the fiscal year obtained from *Compustat*. Firm size is the market value of outstanding shares at fiscal year-end.

[a, b and c] indicate difference is significance at the 0.10, 0.05 and 0.01 levels for a two-tailed test.

TABLE 2
Cross-Sectional Regressions of Accounting Earnings on Stock Returns, Year, and Industry: Comparison of Asymmetric Timeliness of Earnings by Gender Diversity

$$X_{it} / P_{it-1} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 GROUP_{it} + \alpha_3 DR_{it} \times GROUP_{it} + \beta_0 R_{it} + \beta_1 R_{it} \times DR_{it} + \beta_2 R_{it} \times GROUP_{it} + \beta_3 R_{it} \times DR_{it} \times GROUP_{it}$$

α_0 (t-stat)	α_1 (t-stat)	α_2 (t-stat)	α_3 (t-stat)	β_0 (t-stat)	β_1 (t-stat)	β_2 (t-stat)	β_3 (t-stat)	Adjusted R^2
0.064	0.010	-0.016	0.052	0.034	0.120	0.009	0.211	19.24%
(6.64)[a]	(-0.82)	(-1.61)	(2.79)[a]	(2.83)[a]	(2.89)[a]	(0.54)	(3.58)[a]	

Data are for years 1996 through 2000. Total number of firm-year observations are 770.

X_{it} is net income per share for firm *i* in fiscal year *t*, P_{it-1} is price per share at the beginning of the fiscal year. Annual stock returns (R_{it}) are buy-and-hold fiscal year returns calculated from *Compustat*. DR_{it} is a dummy variable that equals 1 if $R_{it} < 0$ and 0 otherwise. *GROUP* equals 1 (0) for high (low) gender diversity group.

Model (1) includes four year-dummy variables D_Y representing years 1996 through 1999 and ten industry-dummy variables D_I representing the following two-digit SIC codes: SIC 20, SIC 27, SIC 28, SIC 35, SIC 36, SIC 37, SIC 49, SIC 50, SIC 60 and SIC 63.

[a] indicates significance at the 0.01 level for a two-tailed test.

TABLE 3
Comparison of Accrual-Based Conservatism Measure by Gender Diversity

$$CONACC_{it} = -1 * [(NI_{it} - Depr_{it} - CFO_{it}) + (NI_{it-1} - Depr_{it-1} - CFO_{it-1}) + (NI_{it-2} - Depr_{it-2} - CFO_{it-2}) / 3] / TA_{it}$$

Group	Median *CONACC*	Median Test Z-Statistic
Low Gender Diversity	-0.00324	
High Gender Diversity	0.00176	
		2.8653[a]

Data are for years 1996 through 2000. Total number of firm-year observations for low and high gender diversity groups are 333 and 333.

NI_{it} is net income, $Depr_{it}$ is depreciation, and CFO_{it} is cash flows from operating activities for firm *i* in year *t*. *TA* is total assets at the beginning of the year. The accrual-based conservatism measure is the three-year average of accruals (the difference between accounting earnings before depreciation and operating cash flows). We multiply average accruals -1 so that a larger number is indicative of greater conservatism.

[a,] indicates significance at the 0.01 level for a two-tailed test.

TABLE 4
Comparison of Earnings Smoothing by Gender Diversity

Variable	Low Gender Diversity	High Gender Diversity
Standard deviation of accounting earnings	0.057	0.060
Standard deviation of cash flows	0.095	0.081
Ratio of standard deviation of accounting earnings over standard deviation of cash flows	0.599	0.740

Data are for years 1996 through 2000. Total number of firm-year observations for low and high gender diversity groups are 361 and 361.

Following Leuz, et al. (2003) accounting earnings is defined as income before extraordinary items divided by total assets at the beginning of the year. Cash flows is operating cash flows divided by total assets at the beginning of the year. A high ratio implies *less* earnings smoothing.

TABLE 5
Cross-Sectional Regressions of Current Earnings on Past Earnings, Year, and Industry: Comparison of Earnings Persistence by Gender Diversity

$$EARN_{it} = \delta_0 + \delta_1 EARN_{it-1} + \delta_2 GROUP_{it} + \delta_3 EARN_{it-1} \text{ x } GROUP_{it}$$

δ_0 (t-statistic)	δ_1 (t-statistic)	δ_2 (t-statistic)	δ_3 (t-statistic)	Adjusted R^2
0.007	0.640	-0.009	0.172	34.04%
(1.18)	(9.57)[a]	(-1.55)	(2.02)[b]	

Data are for years 1996 through 2000. Total number of firm-year observations are 770.

$EARN_{it}$ is income before extraordinary items divided by total assets for firm *i* in fiscal year *t*. *GROUP* equals 1 (0) for high (low) gender diversity group.

Model (2) also includes four year-dummy variables D_Y representing years 1996 through 1999 (coefficients not reported) and ten industry-dummy variables D_I representing the following two-digit SIC codes: SIC 20, SIC 27, SIC 28, SIC 35, SIC 36, SIC 37, SIC 49, SIC 50, SIC 60 and SIC 63. Industry coefficients not reported.

[a and b] indicate significance at the 0.01 and 0.05 levels for a two-tailed test.

TABLE 6

Cross-Sectional Regressions of Accounting Earnings on Stock Returns, Year, and Industry: Comparison of Asymmetric Timeliness of Earnings by Gender Diversity, Adjusted for Size

$$X_{it} / P_{it-1} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 GROUP_{it} + \alpha_3 DR_{it} \times GROUP_{it} + \beta_0 R_{it} + \beta_1 R_{it} \times DR_{it} + \beta_2 R_{it} \times GROUP_{it} + \beta_3 R_{it} \times DR_{it} \times GROUP_{it}$$

α_0 (t-stat)	α_1 (t-stat)	α_2 (t-stat)	α_3 (t-stat)	β_0 (t-stat)	β_1 (t-stat)	β_2 (t-stat)	β_3 (t-stat)	Adj. R^2
0.066	-0.006	-0.016	0.077	0.028	0.037	0.015	0.334	22.21%
(6.55)[a]	(-0.42)	(-1.52)	(3.95)[a]	(2.30)[b]	(0.77)	(0.86)	(5.14)[a]	

Data are for years 1996 through 2000. Total number of firm-year observations is 666. Observations in low and high gender diversity groups are comparable in terms of firm size. The median two-sample test indicates that statistically there is no difference in median size between the two groups.

X_{it} is net income per share for firm i in fiscal year t, P_{it-1} is price per share at the beginning of the fiscal year. Annual stock returns (R_{it}) are buy-and-hold fiscal year returns calculated from *Compustat*. DR_{it} is a dummy variable that equals 1 if $R_{it} < 0$ and 0 otherwise. *GROUP* equals 1 (0) for high (low) gender diversity group.

Model (1) also includes four year-dummy variables D_Y representing years 1996 through 1999 and ten industry-dummy variables D_I representing the following two-digit SIC codes: SIC 20, SIC 27, SIC 28, SIC 35, SIC 36, SIC 37, SIC 49, SIC 50, SIC 60 and SIC 63. Year and industry coefficients are not reported.

[a and b] indicate significance at the 0.01 and 0.05 levels for a two-tailed test.