The Impact of Gender Diversity in Boards of Directors on "Earnings Minimization" in Italian Private Companies

Sergio Branciari&Simone Poli
Department of Management
Università Politecnica delle Marche
Piazzale R. Martelli 8, 60121, Ancona, Italy

Abstract

The study aims to verify whether and how gender diversity (here intended as the presence of females) in boards of directors affects Italian private (unlisted) companies' propensity to engage in "earnings minimization".This term refers to an earnings management practice consisting in the manipulation of earnings in order to bring them close to zero, generally stimulated by tax incentives. From a methodological standpoint, companies practicing earnings minimization are identified through the "earnings frequency distribution" approach suggested by Burgstahler and Dichev (1997) and research hypotheses are tested through logit regression analysis. The study shows that gender diversity in boards of directors does not contrast companies' propensity to practice earnings minimization, neither directly nor indirectly (moderating the impact that bank indebtedness has on the propensity to practice it).

Keywords*:* board gender diversity, earnings management, earnings minimization, private companies, Italy

1. Introduction

The study aims to verify whether and how gender diversity (here intended as the presence of females) in boards of directors affects Italian private (unlisted) Italian companies' propensity to engage in "earnings minimization" (EM).EM is an earnings management practice consisting in the manipulation of earnings in order to bring them close to zero, generally stimulated by tax incentives (Coppens and Peek, 2005; Marques et al., 2011).On the one hand, companies are incentivized to avoid losses in order to decrease the probability of tax audits. On the other hand, companies are incentivized to minimize earnings in order to minimize tax payments. As a result, companies are likely to report slightly positive earnings. Poli (2013a,2013b, 2017) has found that the practice of EM has great relevance and is widely popular among Italian private companies.Assuming that females are more ethical and more risk-averse than men, several previous studies have investigated the relationship between gender diversity in boards of directors and earnings management practices. However, these studies have focused on earnings management practices that are different from earnings minimization and on public (listed) companies. Consequently, the current knowledge on the relationship between gender diversity in boards of directors and earnings minimization in private companies appears to be limited. The study contributes to filling this knowledge gap. From a methodological standpoint, companies practicing EM are identified through the "earnings frequency distribution" approach suggested by Burgstahler and Dichev (1997) and research hypotheses are tested through logit regression analysis. The study is organized as follows. Section two reviews the literature and develops the research hypotheses. Section three describes the research design and the sample selection. Section four shows the empirical results. Section five summarizes and discusses the findings and highlights the main contributions to the literature, the limitations of the study, and possible further research opportunities.

2. Literature review and research hypothesis development

2.1. Earnings minimization and gender diversity in boards of directors

According to Healy and Wahlen (1999) and Roychowdhury (2006), earnings management can be considered an unethical and risky behavior. Consequently, companies' propensity to practice earnings minimization may depend on the level of ethics and risk-aversion of those individuals who, because of their position or role in the company, have the potential to encourage or discourage this practice. Among these individuals, the members of the board of directors occupy a leadership position and role.

Some studies have found that females are more ethical in a business context (Eynon et al., 1997; Khazanchi, 1995; Ruegger and King, 1992) and that they are less likely to engage in unethical behavior in the workplace to gain financial rewards (Bernardi and Arnold, 1997; Betz et al., 1989). Other studies have found that females are more risk-averse and/or more overconfident than males in the field of accounting and finance (Barber and Odean, 2001; Bliss and Porter, 2002; Dwyer et al., 2002; Graham et al., 2002;Jianakoplos and Bernasek, 1998; Johnson and Powell, 1994; Olsen and Cox, 2001; Schubert, 2006;Sunden and Surette, 1998; Watson and McNaughton, 2007; Watson and Robinson, 2003).Assuming that females are more ethical and risk-averse than males, numerous previous studies have investigated whether and how gender diversity (here intended as the presence of females)in boards of directors may impact on companies' propensity to practice earnings management(Abdullah and Ismail, 2016; Arun et al., 2015; Kyaw et al., 2015; Srinidhi et al., 2011).Although the findings of these studies are mixed, in most cases they show that gender diversity in boards of directors is negatively related to the propensity to practice earnings management. Therefore, the first research hypothesis being tested is the following:

H_1: *Gender diversity in boards of directors negatively impacts on companies' propensity to engage in EM.*

2.2. Earnings minimization and bank indebtedness

The impact of bank indebtedness on companies' propensity to practice earnings management has been theorized in two opposite ways (Park and Shin, 2004).On the one hand, (highly) indebted companies can be encouraged to practice earnings management to improve their performance results because better results can help them to maintain or increase their level of indebtedness. On the other hand, however, (highly) indebted companies can be discouraged from practicing earnings management because their financial statements are more closely monitored by lenders.With reference to EM, both theories lead to the hypothesis that it should be discouraged when companies are highly indebted. In fact, minimizing earnings could jeopardize a company's ability to maintain or increase of its level of indebtedness (with reference to the first theory) and the financial statements of such companies are more carefully monitored by lenders (with reference to the second theory). Especially for smaller companies, financial statements may be the main, if not the only, source of information on the economic and financial situation of these companies. Nevertheless, previous studies have yielded conflicting findings. Moreira (2006) has found that Portuguese private companies with a higher level of bank indebtedness have a lower propensity to manage earnings downward to minimize tax payments than companies with a lower level of bank indebtedness. Baralexis (2004) and Poli (2013b), instead, have found that the level of bank indebtedness does not constrain private companies' propensity to minimize earnings in the Greek and Italian contexts, respectively.
In accordance with theory, the second research hypothesis being tested is the following:

H_2: *Bank indebtedness negatively impacts on companies' propensity to engage in EM.*

Considering what has been written above, practicing EM may be risky when the company is indebted and the risk may increase when the level of indebtedness increases. The fact that females are more risk-averse than males suggests that the effect of bank indebtedness on the companies' propensity to practice EM may depend on the magnitude of gender diversity in boards of directors. This means that an interaction, or moderating effect, exists between gender diversity in boards of directors and bank indebtedness. Therefore, the third research hypothesis being tested is the following:

H_3: *Gender diversity in boards of directors moderates the impact of bank indebtedness on the companies' propensity to engage in EM.*

3. Research design and sample selection

To test the research hypotheses, a logit regression analysis is carried out. It is based on the logit regression models that can be written, in a general form, as follows:

$$DV_i = \beta_0 + \sum_{j=1}^{m} \beta_j IV_{ji} + \sum_{w=m+1}^{n} \beta_w CV_{wi} + \varepsilon_i \quad (1)$$

where:

DP	dependent variable
IV	independent variable
CV	control variable
β	regression coefficient
ε	residual

3.1. Dependent variable

The dependent variable is a dichotomous variable that takes a value of 1 when it is assumed that the company has practiced EM and a value of 0 otherwise. Companies practicing EM are identified through the "earnings frequency distribution" approach suggested by Burgstahler and Dichev (1997)(Baber and Kang, 2002; Beatty et al., 2002; Brown and Caylor, 2004; Collins et al., 1999; Coppens and Peek, 2005; Daske et al., 2006; Degeorge et al., 1999; Easton, 1999; Gore et al., 2007; Hamdiand Zarai, 2012; Hayn, 1995; Holland and Ramsay, 2003; Jacob and Jorgensen, 2007; Kerstein and Rai, 2007; Marques et al., 2011; Moreira, 2006; Phillips et al., 2004; Poli, 2013a, 2013b; Revsine et al., 2009).A company is assumed to have practiced EM when the ratio between net income of a fiscal year and total assets of the previous fiscal year is close to 0, specifically between 0 (excluded) and 0.005 (included).

3.2. Independent variables

To test research hypothesis H1, the independent variable is the portion of female directors in board of directors (FEM). If its sign is negative and statistically significant, research hypothesis H1 will be confirmed. Otherwise, it will be rejected. To test research hypothesis H1, another independent variable has also been used. It is a dichotomous variable that takes the value of 1 when the majority of directors is female and the value of 0 when the majority of directors is male. The empirical results referred to this second configuration of the independent variable are not reported below because they are qualitatively the same as those obtained using the first configuration of the independent variable. To test research hypothesis H2, the independent variable is the level of bank indebtedness (BANK), measured through the ratio between bank loans and total assets at the end of the fiscal year (Moreira, 2006; Poli, 2013b). If the sign of its coefficient is negative and statistically significant, research hypothesis H2 will be confirmed. Otherwise, it will be rejected. To test research hypothesis H3, the interaction term between the variable FEM and the variable BANK (FEM*BANK) is included. However, "[t]he interaction effect […] cannot be evaluated simply by looking at the sign, magnitude, or statistical significance of the coefficient on the interaction term when the model is nonlinear. Instead, the interaction effect requires computing the cross derivative or cross difference. Like the marginal effect of a single variable, the magnitude of the interaction effect depends on all the covariates in the model. In addition, it can have different signs for different observations, making a simple summary measure of the interaction effect difficult. […] [N]ot calculating the correct interaction effect would lead to wrong inference in a substantial percentage of the sample" (Ai and Norton, 2003, p. 129). Consequently, the interaction effect is evaluated by adopting the methodology (Stata command "inteff") suggested by Ai and Norton (2003) and Norton et al. (2004).In order to avoid multicollinearity problems, FEM and BANK are assumed in the centered form.

3.3. Control variables

Control variables are included to control for the influence of the factors that previous studies have found to affect companies' propensity to engage in EM (Baralexis, 2004; Burgstahler and Dichev, 1997; Marques et al., 2011; Moreira, 2006; Poli, 2013b). They are: company size (SIZE), fiscal incentives (ATR), previously displayed behavior (EM previous), and industry sector (SECTOR). Variables are measured as reported in Table 1.

Table 1 – Definitions of the variables

Variables	Definitions
EM	Dummy variable that takes value 1 when the ratio between net income of the fiscal year and total assets of the previous fiscal year assumes a value between 0 (excluded) and 0.005 (included), 0 otherwise.
FEM	The portion of female directors. Itis assumed in the centered form.
BANK	The ratio between bank loans and total assets at the end of fiscal year. It is assumed in the centered form.
FEM*BANK	The interaction term between variables FEM and BANK.
SIZE	The natural logarithm of total assets at the end of the fiscal year.
ATR	The difference between the income before taxes and the net income, scaled by the absolute value of the income before taxes, all referring to the fiscal year.
EMprevious	Dummy variable that takes value 1 when the ratio between net income of the previous fiscal year and total assets of the second previous fiscal year assumes a value between 0 (excluded) and 0.005 (included), 0 otherwise.
SECTOR	Set of 64 dummy variables based on the ATECO 2007 codes (the Italian system of classification of economic sectors). The base case is the sector that has more observations.

3.4. Sample selection and data

The sample of companies was extracted from the "Analisi Informatizzata Delle Aziende" (AIDA) database supplied by Bureau van Dijk. The AIDA database provides financial statement data for a vast set of Italian companies operating in sectors other than the financial one.It was selected on the basis of the criteria that follow: limited liability companies; active companies; unlisted companies;(non-consolidated) financial statements prepared in ordinary form according to Italian legislation and accounting standards; small- and medium-sized companies according to the quantitative limits set by European law; date of constitution prior to 1st January 2014; positive total shareholders' equity in 2015.

The number of companies that meet the above selection criteria amounts to 13,417.From this total the following observations were subtracted: (1) the observations with incomplete or invalid data (316), (2) the observations with outlier value of ATR (656), and (3) the observations of sectors represented by less than ten observations (63).Subtraction (2) was considered necessary in order to have a more homogeneous sample of companies on which to conduct the analysis. The outlier values are the values below the 2.5 percentile and the values above the 97.5 percentile. Subtraction (3) was considered necessary to ensure that each sector was represented by the minimum number of observations considered adequate for the analysis. The final sample of companies totals 12,386. Table 2 reports the sample building process.

Table 2 – Sample building process

	Observations
Initial observations, according to the selection criteria	13,417
Observations with incomplete or invalid data	-312
Observations with outlier value of ATR	-656
Observations of sectors represented by less than ten observations	-63
Final observations	12,386

4. Empirical results

4.1. Descriptive statistics

Table 3 shows the descriptive statistics referring to the variables used. Previous studies that have observed the presence of females in boards of directors have almost exclusively considered public companies, i.e. listed companies, in which the board of directors never appears to be composed exclusively of females. Within the sample, that is composed of private companies, i.e. unlisted companies, the board of directors is also composed exclusively of females. There are 6, 269 companies (approximately 51% of the sample companies) whose board of directors is composed only of males. There are 265 companies (approximately 2% of the sample companies) whose board of directors is composed only of females. The presence of females on boards of directors is neither widespread nor high.

Table 3 – Descriptive statistics

Panel a

Continuous variables	Observations	Mean	Standard deviation	First quartile	Median	Third quartile
FEM	12,386	0.1987	0.2444	0	0	0.3333
BANK	12,386	0.1865	0.1764	0.0030	0.1532	0.3167
SIZE	12,386	16.6842	0.7484	16.1640	16.6150	17.1225
ATR	12,386	0.3645	0.2347	0.2889	0.3430	0.4601

Panel b

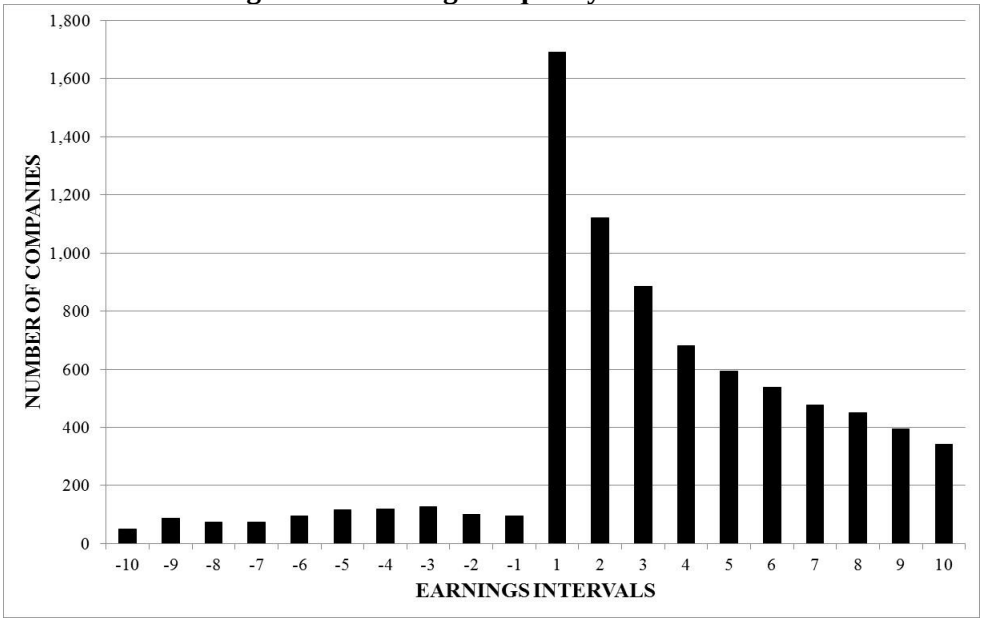
Dummy variables	Observations		
	Total	0	1
EM	12,386	10,694	1,692
EMprevious	12,386	10,428	1,958

*Note.*FEM and BANK, (only) in this table, are not centered, to facilitate a clearer understandability of the descriptive statistics.

Figure 1 shows the earnings frequency distribution (earnings are defined as the ratio between net income of a fiscal year and total assets of the previous fiscal year).The abscissa axis shows earnings intervals. The ordinate axis shows the number of observations falling in each earnings interval.

The interval amplitude is 0.005. So, interval "1" is the first positive interval to the right of zero (0; 0.005], interval "2" is the second positive interval to the right of zero (0.005; 0.01], and so on. Conversely, interval "-1" is the first negative interval to the left of zero (-0.005; 0], the interval "-2" is the second negative interval to the left of zero (-0.01; -0.005], and so on. The intervals exclude the lower limit and include the upper limit. The figure is truncated, showing only the first ten intervals of positive (from 1 to 10) and negative (from -1 to -10) earnings. It shows 8,110 observations, corresponding to about 78% of the overall sample (12,386 observations).

Figure 1 – Earnings frequency distribution



The earnings frequency distribution shows a peak of observations in the first positive interval (0-0.005] (+1), a marked discontinuity and a convex shape both to the left and to the right of this interval, that are the typical characteristics of earnings management practices aiming to minimize earnings (Coppens and Peek, 2005; Marques et al., 2011; Poli, 2013a, 2013b). The verification of the statistical significance of the two discontinuities, using the test statistics suggested by Burgstahler and Dichev (1997) and Garrod et al. (2006), for which the data is not reported, has revealed that they are statistically significant at a level of 1%. Figure 1 shows that the EM practices are widely popular among Italian private companies, confirming the findings of previous studies (Poli, 2013a, 2013b).Table 4 shows the correlation matrix. The magnitudes of correlation coefficient between independent and control variables exclude any multicollinearity problems. This has been confirmed by the magnitudes of Variance Inflation Factors (VIFs) that are not reported.

Table 4 – Correlation matrix

	1	2	3	4	5	6
1. FEM		0.041*	-0.060*	-0.021*	0.049*	0.027*
2. BANK	0.033*		-0.151*	0.040*	0.182*	0.217*
3. BANK*FEM	0.045*	-0.013*		-0.008	-0.010	-0.030*
4. SIZE	-0.041*	0.032*	-0.010		-0.073*	-0.005
5. ATR	0.048*	0.131*	0.015	-0.072*		0.263*
6. EMprevious	0.028*	0.215*	0.006	0.002	0.263*	

Note. * indicates significance at 5%. Spearman correlation coefficients are in the lower triangle. Pearson correlation coefficients are in the upper triangle.

4.2. Logit regression analysis results

Table 5 shows the results of the logit regression analysis. Model 1 does not include the interaction term (FEM*BANK). Model 2 includes also it.

Table 5 – Logit analysis results

Variables	Coefficients (Standard errors)	
	Model 1	Model 2
CONSTANT	-12.375***	-12.365***
	(0.945)	(0.946)
FEM	0.095	0.184
	(0.150)	(0.160)
BANK	1.673***	1.684***
	(0.215)	(0.215)
FEM*BANK		-1.301
		(0.820)
SIZE	0.343***	0.342***
	(0.055)	(0.055)
ATR	8.627***	8.634***
	(0.207)	(0.208)
EMprevious	1.495***	1.496***
	(0.080)	(0.080)
SECTOR	INCLUDED	INCLUDED
Pseudo R^2	0.483	0.483
Likelihood-ratio test	4,771.38***	4,773.90***
Correctly predicted results	92.57%	92.52%

*Note.**** and ** indicate significance at 1% and 5%.

In Model 1, the coefficient of FEM is positive and statistically not significant. Thus, research hypothesis H1 is rejected. This finding is not consistent with the findings of the majority of previous studies, nor is it consistent with the theory according to which females, considered to be more ethical and more risk-averse, are unlikely to practice earnings management.

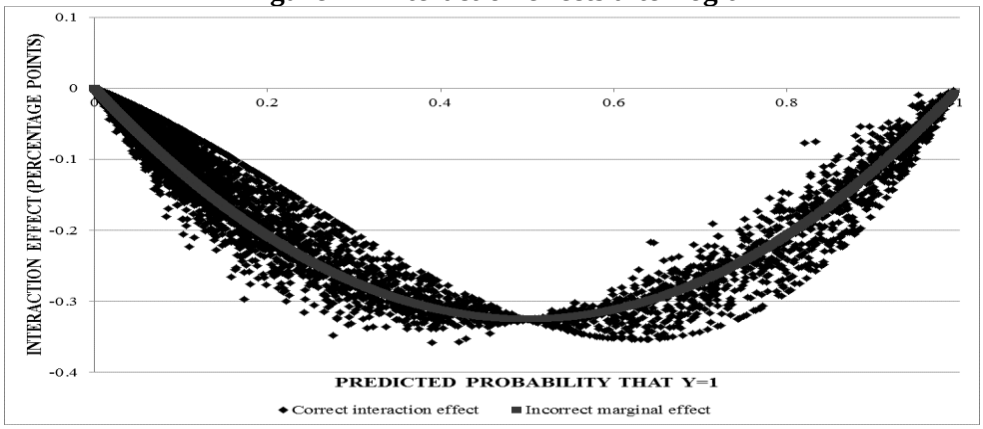
In the same model, the coefficient of BANK is positive and statistically significant ($p<0.01$). This means that the higher the level of bank indebtedness is, the higher the companies' propensity of the company to practice EM is. Thus, research hypothesis H2 is rejected. This finding is consistent with those of previous studies (Poli, 2013a, 2013b, 2017). However, it is notconsistent with the theory according to which bank indebtedness discourages earnings management practices.

Table 6 – Descriptive statistics of interaction effects, standard errors, and Z-statistics

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
Interaction effect	12,386	-0.0710	0.0946	-0.3582	0.0000
Standard error	12,386	0.0501	0.0615	0.0000	0.2461
Z-statistic	12,386	-1.2430	0.2200	-2.8912	-0.0021

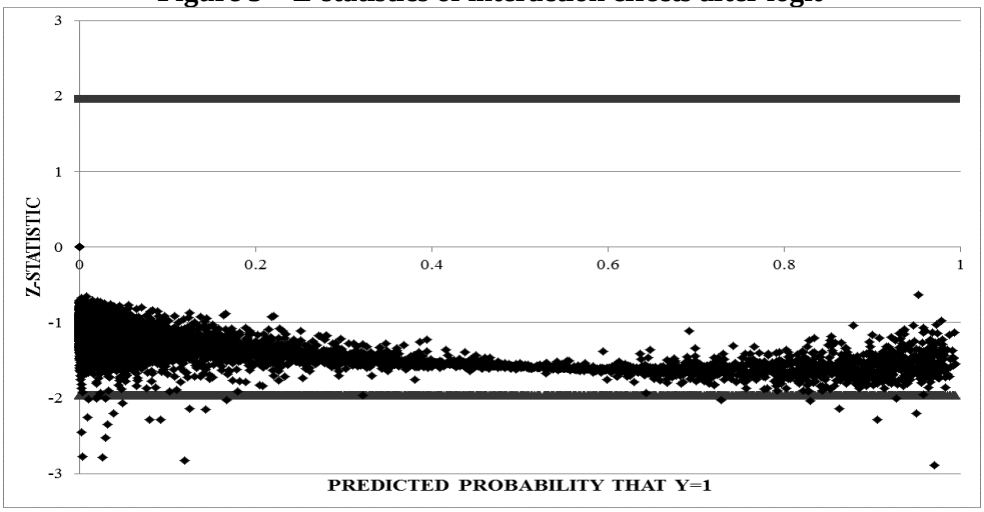
Note. Output of Stata command "inteff" (Norton et al., 2004).

Figure 2 – Interaction effects after logit



Note. Output of Stata command "inteff" (Norton et al., 2004).

Figure 3 – Z-statistics of interaction effects after logit



Note. Output of Stata command "inteff" (Norton et al., 2004).

In Model 2, the coefficient of FEM is positive and statistically not significant, that of BANK is positive and statistically significant ($p<0.01$), that of FEM*BANK is negative and statistically not significant. However, as statedin the methodology section, this is not sufficient to evaluate the existence of an interaction between the variables included in the interaction term (Ai and Norton, 2003; Norton et al., 2004).Table 6, Figure 2, and Figure 3 report the outputs of the Stata command "inteff". Interaction effects are always negative as shown in Table 6 (first row) and in Figure 2. However, their statistical significance is present only in rare cases as shown in Figure 3 (26 cases out of 12,386). The interaction effect exists only in rare cases. Thus, research hypothesis H3 can be rejected.

5. Conclusion

The study extends the current knowledge on the relationship between gender diversity and EM in Italian private companies. Poli (2017) has found that the gender diversity in the ownership structure of these companies does not contrast their propensity to practice EM. This study has shown that not even the gender diversity in boards of directors contrasts such a propensity, either directly or indirectly (moderating the impact that bank indebtedness has on the propensity to practice EM).

In light of this, female directors do not appear to be more risk-averse and ethical than male directors. The explanation may be, as suggested by Poli (2017), that fiscal incentives to minimize earnings strongly impact on the behavior of Italian female and male directors in the same way. On the one hand, companies are stimulated to avoid losses in order to decrease the probability of tax audits. On the other hand, companies are stimulated to minimize earnings in order to minimize tax payments. As a result, companies are likely to report slightly positive earnings. Bank indebtedness does not contrast EM because Italian banks do not traditionally rely very much on financial statements when they are considering whether or not to lend money to the type of organization under analysis in the study.

The main limitation of the study is the way companies practicing EM have been detected (Dechow et al., 2010). In fact, it is difficult to distinguish companies that report slightly positive earnings because of chance circumstances (or as a result of credible alternative explanations including non-accounting issues) from those that report them as a result of earnings management practices. Thus, caution should be used in interpreting findings.The study has focused on Italian private companies. However, Italy is a peculiar context of investigation because accounting and tax rules are still broadly aligned and tax incentives to minimize earnings are very strong. Future studies could extend the investigation to other countries.

References

Abdullah, S. N., Abdullah, S. N., Ismail, K. N. I. K., & Ismail, K. N. I. K. (2016). Women directors, family ownership and earnings management in Malaysia.*Asian Review of Accounting*,*24*(4), 525-550.

Ai, C., & Norton, E. C. (2003). Interaction terms in logit and probit models. *Economics letters*, *80*(1), 123-129.

Arun, T. G., Almahrog, Y. E., &Aribi, Z. A. (2015). Female directors and earnings management: Evidence from UK companies. *International Review of Financial Analysis*,*39*, 137-146.

Baber, V., & Kang, S. (2002). The impact of split adjusting and rounding on analysts' forecast error calculations. *Accounting Horizons*, *16*(4), 277-289.

Baralexis, S. (2004). Creative accounting in small advancing countries. *Managerial Auditing Journal*, *19*(3), 440-461.

Barber, B. M., &Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The Quarterly Journal of Economics*, *116*(1), 261-292.

Beatty, A. L., Ke, B., &Petroni, K. R. (2002). Earnings management to avoid earnings declines across publicly and privately held banks. *The Accounting Review*, *77*(3), 547-570.

Bernardi, R.A., & Arnold, D. F. (1997). An examination of moral development within public accounting by gender, staff level, and firm. *Contemporary Accounting Research*, *14*(4), 653-668.

Betz, M., O'Connell, L., & Shepard, J. M. (1989). Gender differences in proclivity for unethical behavior. *Journal of Business Ethics*, *8*(5), 321-324.

Bliss, R. T., & Potter, M. E. (2002). Mutual fund managers: Does gender matter? *Journal of Business & Economic Studies*, *8*(1), 1-15.

Brown, L. D., &Caylor, M. L. (2005). A temporal analysis of earnings management thresholds: Propensities and valuation consequences. *Accounting Review*, *80*(2), 423-440.

Burgstahler, D. C., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, *24*(1), 99-126.

Collins, D. W., Pincus, M., &Xie, H. (1999). Equity valuation and negative earnings: The role of book value of equity. *The Accounting Review*, *74*(1), 29-61.

Coppens, L., & Peek, E. (2005). An analysis of earnings management by European private firms. *Journal of International Accounting, Auditing and Taxation*, *14*(1), 1-17.

Daske, H., Gebhardt, G., & McLeay, S. (2006). The distribution of earning relative to targets in the European Union. *Accounting & Business Research*, *36*(3), 137-168.

Dechow, P. M., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2-3), 344-401.

Degeorge, F., Patel, J., &Zeckhauser, R. (1999). Earnings management to exceed thresholds. *The Journal of Business*, *72*(1), 1-33.

Dwyer, P. D., Gilkeson, J. H., & List, J. A. (2002). Gender differences in revealed risk taking: Evidence from mutual fund investors. *Economics Letters*, *76*(2), 151-158.

Easton, P. (1999). Security returns and the value relevance of accounting data. *Accounting Horizons*, *13*(4), 399-412.

Ford, R. C.,& Richardson, W. D. (1994). Ethical decision making: A review of the empirical literature. *Journal of Business Ethics*,*13*(3), 205-221.

Garrod, N., Ratej Pirkovic, S., & Valentincic, A. (2006). Testing for discontinuity or type of distribution. *Mathematics and Computers in Simulation*, *71*(1), 9-15.

Gore, P., Pope, P., & Singh, A. (2007). Earnings management and the distribution of earnings relative to targets: UK evidence. *Accounting and Business Research*, *37*(2), 123-150.

Graham, J. F., Stendardi, E. J., Myers, J. K., & Graham, M. J. (2002). Gender differences in investment strategies: An information processing perspective. *International Journal of Bank Marketing*, *20*(1), 17-26.

Hamdi, F. M., &Zarai, M. A. (2012). Earnings management to avoid earnings decreases and losses: Empirical evidence from Islamic banking industry. *Research Journal of Finance and Accounting*, *3*(3), 88-107.

Hayn, C. (1995). The information content of losses. *Journal of Accounting and Economics*, *20*(2), 125-153.

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, *13*(4), 365-383.

Herrmann, D., & Inoue, T. (1996). Income smoothing and incentives by operating condition: An empirical test using depreciation changes in Japan. *Journal of International Accounting, Auditing and Taxation, 5*(2), 161-177.

Holland D., & Ramsey, A. (2003). Do Australian companies manage earnings to meet simple earnings benchmarks? *Accounting and Finance, 43*(1), 41-62.

Jacob, J., & Jorgensen, B. N. (2007). Earnings management and accounting income aggregation. *Journal of Accounting and Economics, 43*(2-3), 369-390.

Jianakoplos, N. A., &Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry*, *36*(4), 620-630.

Johnson, J. E. V., Powell, P. L. (1994). Decision making, risk and gender: Are managers different? *British Journal of Management*, *5*(2), 123-138.

Kerstein J., & Rai, A. (2007). Intra-year shifts in the earnings distribution and their implications for earnings management. *Journal of Accounting and Economics*, *44*(3), 399-419.

Khazanchi, D. (1995). Unethical behavior in information systems: The gender factor. *Journal of Business Ethics*, *14*(9), 741-749.

Kyaw, K., Olugbode, M., &Petracci, B. (2015). Does gender diverse board mean less earnings management? *Finance Research Letters*, *14*, 135-141.

Marques, M., Rodrigues, L. L., & Craig, R. (2011). Earnings management induced by tax planning: The case of Portuguese private firms. *Journal of International Accounting, Auditing and Taxation*, *20*(2), 83-96.

Moreira, J. A. C. (2006). Are financing needs a constraint to earnings management? Evidence from private Portuguese firms. CETE discussion papers 0610, Faculdade de Economia, Universidade do Porto, unpublished results. Paper retrieved from http://www.fep.up.pt/investigacao/cete/papers/DP0610.pdf

Norton, E. C., Wang, H., & Ai, C. (2004). Computing interaction effects and standard errors in logit and probit models. *Stata Journal*, *4*, 154-167.

Olsen, R., & Cox, C. (2001). The influence of gender on the perception and response to investment risk: The case of professional investors. *The Journal of Behavioral Finance*, *2*(1), 29-36.

Park, Y. W., & Shin, H. H. (2004). Board composition and earnings management in Canada. *Journal of Corporate Finance*, *10*(3), 431-457.

Phillips, J. D., Pincus, M., Rego, S. O., & Wan, H. (2004). Decomposing changes in deferred tax assets and liabilities to isolate earnings management activities. *Journal of the American Taxation Association, 26*(supplement), 43-66.

Poli, S. (2013a).Small-sized companies' earnings management: Evidence from Italy. *International Journal of Accounting and Financial Reporting*, *3*(2), 93-109.

Poli, S. (2013b). The Italian unlisted companies' earnings management practices: The impacts of fiscal and financial incentives, *Research Journal of Finance and Accounting, 4*(11), 48-60.

Poli, S. (2017). Is gender diversity in ownership structure related to private Italian companies' propensity to engage in earnings management practices? *African Journal of Business Management, 11*(1), 1-11.

Revsine, L., Collins, D., Johnson, W., &Mittelstaedt, F. (2009). *Financial reporting and analysis* (4th ed.). New Jersey, NJ: Prentice Hall.

Roychowdhury, S. (2006). Earnings management through real activities manipulation.*Journal of Accounting and Economics*,*42*(3), 335-370.

Ruegger, D., & King, E. W. (1992). A study of the effect of age and gender upon student business ethics. *Journal of Business Ethics*, *11*(3), 179-186.

Schubert, R. (2006). Analyzing and managing risks - on the importance of gender differences in risk attitudes. *Managerial Finance, 32*(9), 706-715.

Srinidhi, B., Gul, F. A., &Tsui, J. (2011). Female directors and earnings quality.*Contemporary Accounting Research*, *28*(5), 1610-1644.

Sunden, A. E., & Surette, B. J. (1998). Gender differences in the allocation of assets in retirement savings plans. *The American Economic Review*, *88*(2), 207-211.

Watson, J., & McNaughton, M. (2007). Gender differences in risk aversion and expected retirement benefits. *Financial Analysts Journal*, *63*(4), 52-62.

Watson, J., & Robinson, S. (2003). Adjusting for risk in comparing the performances of male- and female-controlled SMEs. *Journal of Business Venturing*, *18*(6), 773-788.