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## **Social Desirability Bias and Earnings Management around the World**

### **Abstract**

In this paper we test whether inter-country variation in individuals' tendency to conform, as measured by the Lie (social desirability) scale used in the Eysenck Personality Questionnaire, can explain differences in the propensity to employ corporate earnings management around the world. Such a link is feasible, given that survey data suggest executives tend to be under severe pressure to meet earnings benchmarks, to which they often succumb by engaging in earnings management (to the detriment of the company's long-term prospects). We hypothesize that in countries where the propensity to act in a socially desirable (outsider-satisfying) way is stronger, earnings management should be more prevalent. Research results support our hypothesis, and demonstrate the existence of a positive relationship between the prevalence of earnings management in a country and the mean score of individuals from that country on the Eysenck Lie scale, which further evidences that capital market pressure is a significant determinant of earnings management.

**Keywords:** personality traits, impression management, conformity, earnings manipulation, financial reporting

**JEL:** G15, G32, M41

### **Introduction**

Managers have various reasons for performing corporate earnings management, many of which relate to their own interests (for example, earnings management can help them

boost their compensation; see Healy and Wahlen, 1999). However, in many cases earnings management is implemented under pressure from stockholders, analysts or other stakeholders to achieve expected levels of income. In other words, managers are often motivated to engage in ethically questionable practices in order to achieve what is desired by other parties. Financial market pressures are, in fact, so high that the majority of financial executives surveyed by Graham et al. [2005] have stated that they would forego an investment with a positive net present value in order to meet an earnings target, in effect sacrificing the long-term prospects of the company solely to meet the expectations of others.

There is considerable variation in the level of earnings management around the world, which has been linked with differences in the level of investor protection [e.g. Leuz et al., 2003; Enomoto et al., 2014] and investor attention [Jin, 2013]. If, as current research suggests, conformity does indeed play a salient role in determining the decision to perform earnings management, we would expect that some of the between-country variation is caused by cross-country differences in how one handles third-party expectations. In this paper we test this hypothesis by investigating whether differences in the tendency to respond in a socially desirable fashion correspond to differences in the prevalence of earnings management across countries.

The paper is organized as follows. Firstly, we present research that highlights the role that pressure from the capital market has on earnings management practices. Secondly, we describe the social desirability scale and show how it can be linked with financial reporting. Next, we present the data and methodology used in the study, followed by a discussion of the results. We conclude by describing the limitations of this study and areas for future research.

## **Corporate Earnings Management and the Pressure to Meet Expectations**

Executives seem to believe that there are several consequences of failures to meet outsiders' earnings expectations. Based on a survey of 401 financial executives, Graham et al. [2005] show that the majority of participants feel that failure to meet benchmarks can create uncertainty about their firm's prospects and make outsiders think that the firm has encountered unspecified problems, with nearly 30% of them also agreeing that it might cause concerns that their firm lacks flexibility. In a related study, Dichev et al. [2013] show that 93% of surveyed financial executives believe that earnings management is performed in response to outside pressure to hit earnings benchmarks. Financial executives thus acknowledge that pressure from third-parties is a significant determinant of the decision to engage in earnings management. Although the standard benchmark for earnings is set by analysts, the company's stakeholders also expect<sup>2</sup> positive earnings, and meeting or exceeding their previous levels [Degeorge et al., 1999].

It is important to point out that engaging in earnings management often adversely affects the operations of the firm. Graham et al. [2005] reveal that the majority of financial executives they have surveyed would prefer to engage in real actions (e.g. by decreasing R&D spending or selling a patent) instead of performing within-GAAP accounting manipulations.<sup>3</sup> In accordance with the responses obtained by these researchers, Roychowdhury [2006] shows that executives do in fact engage in real activities designed to generate positive earnings or meet analysts' forecasts. It is clear that by doing so they ultimately work against the interest of long-term shareholders [Bhojrah et al., 2009]. Thus, financial executives that resist the temptation to conform to market expectations (or impress stakeholders by beating forecasts) and instead focus more on the long-term prospects should be cherished.<sup>4</sup> In the next section we will discuss an existing tool that could be used to identify managers that have the potential to destroy value in order to meet third-party expectations.

## **Socially Desirable Responding and the Propensity to Manage Earnings**

Social desirability scales have been used since the 1950s, and include the Marlowe-Crowne Social Desirability Scale, the Lie scale of the Eysenck Personality Inventory [Eysenck, Eysenck, 1964], Eysenck Personality Questionnaire [Eysenck, Eysenck, 1975], and the Balanced Inventory of Socially Desirable Responding [Ones et al., 1996]. The purpose of such scales is to capture the tendency to provide more favourable or overly positive answers [Paulhus, 2002]. One method of identifying such a behaviour is ask respondents to assess whether a particular statement describing a behaviour that is culturally approved, but very rarely occurs, would relate to him/her [Crowne, Marlowe, 1960]. An example (derived from the Marlowe-Crowne Social Desirability Scale) would be the following statement: "Before voting I thoroughly investigate the qualifications of all the candidates." – if one states that this sentence is true, it would indicate wanting to distort how one is perceived, as it is very unlikely that such a statement is in fact true. By aggregating answers to such statements, it is possible to assess whether one has a tendency to make improbably positive self-descriptions [Paulhus, 2002]. While some researchers [e.g. McCrae and Costa, 1983; Ones et al., 1996] suggest that people scoring highly on social desirability scales do in fact possess a combination of desirable traits, the consensus seems to be that such scales actually measure distortions in how a person presents himself [Paulhus, John 1998; Paulhus, 2002].

The Eysenck Lie scale is the only social desirability scale for which cross-country data are available, which limits researchers interested in the analysis of international differences in socially desirable behaviours to this specific tool. However, research suggests that this

specific scale is well-suited for analyzing differences in the tendency to conform. Eysenck and Eysenck [1976] acknowledge that apart from its core function to capture one's propensity to present himself in an overly positive light (e.g. by inflating one's extraversion score and deflating one's neuroticism score, which are generally perceived in most societies as positive and negative traits, respectively), the Lie scale also serves as a measure of social conformity. This scale also seems appropriate when investigating cross-country differences in the propensity to perform earnings management, as it is related to the gamma factor [Paulhus, 1991], termed 'propagandistic bias' by Damarin and Messick [1965] and referred to as 'impression management' by Paulhus [1984].<sup>5</sup> In turn, this component of social desirability is related to the propensity to promote a desirable public image [Paulhus, 2002] or impress an audience [Paulhus, John, 1998].

Our line of investigation is legitimatised by the fact that the concept of impression management also appears in the literature on interactions between company management and its stakeholders, which identifies earnings management as a default way to create a perception that the company is meeting stakeholder expectations.<sup>6</sup> However, it should be pointed out that earnings management is not the only tool that can be used to influence how the company and its management is perceived. More subtle ones [Merkl-Davies, Brennan, 2007] include impression management, which can be implemented via discretionary corporate narrative disclosures in the form of the CEO's or chairman's statements [e.g. Clatworthy and Jones, 2006], and graphs presented in financial reports [e.g. Godfrey et al., 2003].

The findings presented in the strands of literature that focus on the social desirability bias and impression management in financial reporting encourage one to posit that differences in the mean Eysenck Lie scale scores between countries could explain some of the variation in earnings management practices around the world. More specifically, it would be expected that in countries where individuals have a greater tendency to provide an outsider-satisfying image (i.e. to conform), companies are more likely to engage in earnings management, consistent with the research suggesting that the capital market puts strong pressure on company executives to produce a 'desirable' earnings path biased on the immediate future [e.g. Rappaport, 2005]. Of course, this connection will be revealed if the average social desirability scores of the executives that can manipulate company earnings – the Chief Financial Officer, the Chief Executive Officer, and any other applicable officers – either correspond on average to the mean scores of individuals whose personalities have been investigated, or differ from the lay population, but to the same degree across all countries.<sup>7</sup>

## Data and Methodology

As a proxy for the tendency of managers from different countries to engage in earnings management we utilize an aggregate earnings management score, computed by

Leuz et al. [2003], which is based on accounting data for corporations originating from 31 countries from 1990 to 1999. This score averages the rank of each country, where each rank is computed using a different method of capturing earnings management practices, i.e. (1) a country's median ratio of the firm-level standard deviation of operating earnings divided by the firm-level standard deviation of cash flow from operations; (2) the correlation between changes in accounting accruals and changes in operating cash flows; (3) the magnitude of accruals (a country's median of the absolute value of firms' accruals, scaled by the absolute value of firms' cash flow from operations); and (4) the ratio of small reported profits to small reported losses.

As mentioned earlier, only one of the social desirability scales, i.e. Eysenck's Lie scale, has been investigated to such an extent that would allow academics to make cross-cultural comparisons. However, the literature provides not one – but two – estimates for the mean score achieved on the aforementioned scale, which are reported in Eysenck and Barrett [2013], and Van Hemert et al. [2002]. We use both of these estimates in this study.

To minimize the probability of reporting a spurious result, we consider the effect of several control variables. Based on previous findings, we control for the effect of variation in individualism<sup>8</sup> and other dimensions in Hofstede's [1980] model of national culture (for an investigation of the effect of national culture on earnings management, see Han et al., 2008). Apart from controlling for cultural differences as described by Hofstede, we also control for the effect of legal and institutional ('investor protection') characteristics of each country investigated in Leuz et al. [2003], namely: outside investor rights, legal enforcement, importance of equity market, ownership concentration, and a disclosure index. Finally, we control for the existence of potential differences between earnings management behaviour and social desirability bias in highly industrialized and emerging markets, by including in the regressions GDP per capita (logged).

## Results

Table 1 presents the aggregate earnings management score for each country and the mean rate of socially desirable responses in each country for which an earnings management score is available. Overall, 20 countries with an earnings management score and either an Eysenck and Barrett [2013] or a Van Hemert et al. [2002] Lie scale score (henceforth: the EBL- and VHL-score, respectively) are presented. The earnings management scores range from 2.0 (United States) to 28.3 (Greece), and vary considerably (the coefficient of variation is equal to 55.8%). Apart from Greece, exceptionally high scores are obtained for South Korea, Portugal, and Italy. As for the Lie scale scores, it is difficult to discern which country or group of countries has the highest propensity towards socially desirable responding, given some considerable differences between the EBL- and VHL-scores (still, the correlation between the two scores is relatively high (0.798)). However, it should be

noted that the VHL-scores seem to be more representative, as they are based on the evaluations of 44,767 individuals (or 2,633 evaluations per country), whereas the EBL-scores are based on 18,283 individuals (with an average of 1,016 evaluations per country).<sup>9</sup> The VHL-score suggests that the tendency to provide socially desirable answers is lowest in Canada, Ireland, and the United Kingdom, whereas the propensity to conform is the highest in Italy, Greece, and Singapore.

Before discussing the regressions, in Table 2 we present correlations between the earnings management score, our measure of social desirability, and the remainder of independent variables. Unfortunately, there are many high correlations between the variables investigated in this study, which could affect the accuracy of estimates and the extraction of robust inferences. Out of these correlations two are especially noteworthy, namely, the negative and statistically significant correlation between social desirability and: (a) individualism, (b) GDP per capita (logged).

The key results are presented in Tables 3 and 4, which show the relationship between social desirability bias and the earnings management score of each country before and after considering the effect of other variables and separately for the Lie scale estimates provided by Eysenck and Barrett [2013] and Van Hemert et al. [2002]. In Table 3 we present estimates for specifications where the key independent variable is the EBL-score. In the first column we regress each country's earnings management score solely on the EBL-score, that is prior to considering the effect of any of the control variables. Given that the coefficient is positive (and statistically significant,  $p < 0.01$ ) this regression strongly supports the hypothesis that companies based in countries where individuals have a greater tendency to conform (as measured by our specific social desirability score) also obtain higher earnings management scores (this finding is not surprising, however, given the correlation presented in Table 2). More specifically, a one standard deviation increase in the EBL-score leads to a 0.659 standard deviation increase in the aggregate earnings management score. In columns 2–6 we present regressions that include each of the four cultural dimensions initially extracted by Hofstede, the log of GDP per capita of the country, and an investor protection variable (each specification includes only one such variable due to a high degree of correlation between them). In general, the results provide further support for the hypothesized relationship between earnings management and the Lie scale score in a country. In all cases, the coefficients are positive, and more importantly, statistically significant in most cases. However, there are two instances in which the EBL-score loses its statistical significance (although marginally), i.e. in the regressions that include legal enforcement or the importance of equity market variable. In our opinion, the addition of these regressors does not undermine the efficacy of the Lie scale score, but only points to multicollinearity issues, as the standard errors for the EBL-score increase considerably in these specifications. This multicollinearity is likely caused by the high degree of correlation between legal enforcement and the Lie scale score ( $-0.649$ ), and between the importance of the equity market variable and uncertainty

avoidance (-0.749). The fact that these two investor protection variables are significantly related to earnings management as indicated in the correlation matrix, and not significantly related to the dependent variable in the regressions, provides more evidence for the detrimental role of multicollinearity.

**TABLE 1. Earnings management and Lie scale scores**

Country	Earnings management score	Lie scale score		
		Eysenck and Barrett, 2013	van Hemert et al., 2002	Sample size
Australia	4.8	7.58	10.24	654/1452
Canada	5.3	13.92	9.46	1257/1652
Finland	12.0	11.57	11.49	949/949
France	13.5	14.59	-	811/-
Germany	21.5	10.96	10.31	1336/2548
Greece	28.3	16.61	16.61	1301/1301
Hong Kong	19.5	14.37	14.57	732/732
India	19.1	18.38	15.17	981/2275
Ireland	5.1	-	9.72	-/2804
Italy	24.8	16.89	16.88	802/2609
Japan	20.5	9.62	10.56	1318/258
Netherlands	16.5	16.09	13.19	876/1401
Norway	5.8	11.68	11.75	802/802
Portugal	25.1	14.12	-	1163/-
Singapore	21.6	16.32	16.32	994/994
South Korea	26.8	15.74	-	1200/-
Spain	18.6	15.81	14.11	1030/2986
Sweden	6.8	-	12.54	-/126
United Kingdom	7.0	12.11	9.86	1198/17725
United States	2.0	9.46	11.54	879/4153
Countries/total	20	18	17	18283/44767
Mean	15.23	13.66	12.61	
Standard deviation	8.50	3.01	2.56	
Coefficient of variation	55.8%	22.0%	20.3%	

Notes: This table reports the aggregate earnings management score in each country (based on four measures – see Data and Methodology), which is sourced from Leuz et al. [2003], and the mean score of individuals in each country on the Lie scale from the Eysenck Personality Questionnaire. The mean scores on the Lie scale score in each country are expected to correspond to (or be a linear transformation of) the mean Lie scale score of top managers. The sample sizes correspond to the Eysenck and Barrett [2013] and Van Hemert et al. [2002] studies, respectively.

Source: own elaboration.



TABLE2. Correlation between the earnings management score, the Lie scale score, and control variables

	1	2	3	4	5	6	7	8	9	10	11	12
1 Earnings management score		.706***	-.700***	.449*	.330	.655***	-.524**	-.640***	-.484*	.785***	-.712***	-.272
2 Lie scale score	.613***		-.618**	.094	-.051	.715***	-.281	-.679***	-.204	.796***	-.452*	-.377
3 Individualism	-.763***	-.478**		-.037	-.114	-.807***	-.046	.409	-.030	-.614**	.281	.247
4 Uncertainty avoidance	.483**	.078	-.198		.315	-.025	-.457*	-.370	-.688***	.240	-.662***	.032
5 Masculinity	.114	-.244	.055	.048		.365	.106	-.361	-.055	-.001	-.391	-.102
6 Power distance	.614***	.645***	-.740***	.099	.148		.227	-.716***	.068	.544**	-.472*	-.587**
7 Outside Investor Rights	-.599***	-.225	.099	-.533**	.123	.094		.081	.692***	-.496*	.366	-.196
8 Legal Enforcement	-.691***	-.649***	.558**	-.431*	-.121	-.661***	.237		.477*	-.615**	.737***	.757***
9 Importance of Equity Market	-.519**	-.272	.078	-.749***	.011	-.084	.705***	.514**		-.412	.589**	.208
10 Ownership Concentration	.657***	.545**	-.486**	.186	-.087	.414*	-.396	-.417*	-.321		-.515**	-.273
11 Disclosure Index	-.661***	-.375	.439*	-.667***	.034	-.409*	.392	.635***	.561**	-.503**		.493*
12 GDP per capita (logged)	-.303	-.548**	.298	.003	-.017	-.548**	-.132	.723***	.220	-.236	.413*	

Notes: This table reports Pearson correlations between the variables used in the study. The lower triangle corresponds to the 18 country subsample based on the Eysenck and Barrett [2013] scores, whereas the upper triangle corresponds to the 16 country subsample based on the Van Hemert et al. [2002] scores (in the latter case, one country has been excluded due to lack of data on the Disclosure Index).

\* Significant correlation at the 10% level.

\*\* Significant correlation at the 5% level.

\*\*\* Significant correlation at the 1% level.

Source: own elaboration.

**TABLE 3. Regression results obtained while using the Eysenck and Barrett [2013] Lie scale score**

	(1)	(2)	(3)	(4)	(5)	(6)
Lie scale score	1.699***	0.788**	1.558	1.264	1.263*	1.548**
	(0.563)	(0.353)	(0.864)	(0.721)	(0.639)	(0.685)
Individualism		-0.199**	-0.232***	-0.246***	-0.207**	-0.217**
		(0.067)	(0.062)	(0.067)	(0.072)	(0.084)
Uncertainty avoidance		0.026	0.094**	0.014	0.090**	0.045
		(0.025)	(0.042)	(0.055)	(0.033)	(0.062)
Masculinity		0.109**	0.127*	0.121*	0.121*	0.134*
		(0.041)	(0.067)	(0.056)	(0.058)	(0.071)
Power distance		-0.024	-0.177	-0.131	-0.153	-0.179
		(0.153)	(0.130)	(0.147)	(0.146)	(0.208)
Outside Investor Rights		-2.816***				
		(0.569)				
Legal Enforcement			-0.084			
			(2.172)			
Importance of Equity Market				-0.380		
				(0.273)		
Ownership Concentration					9.439	
					(8.391)	
Disclosure Index						-0.216
						(0.276)
GDP per capita (logged)		-0.427	0.428	0.996	0.252	1.127
		(1.757)	(2.929)	(1.007)	(1.726)	(1.609)
Number of observations	18	18	18	18	18	18
Adjusted R <sup>2</sup>	0.337	0.950	0.762	0.829	0.804	0.803
F-statistic	9.6	46.8	8.8	12.8	10.9	10.9
Lie scale score-IP correlation		-0.225	-0.649	-0.272	0.545	-0.375

Notes: This table reports regression results where the dependent variable is the aggregate earnings management score in each country. The Lie scale score is the mean score of individuals in each country on the Lie scale from the Eysenck Personality Questionnaire, sourced from Eysenck and Barrett [2013]. The mean scores on the Lie scale score in each country are expected to correspond to the mean Lie scale score of top managers. Lie scale score-IP correlation denotes the Pearson correlation between the Lie scale score and the investor protection variable used in the specification. Robust standard errors are shown in parentheses.

\* Significant coefficient at the 10% level.

\*\* Significant coefficient at the 5% level.

\*\*\* Significant coefficient at the 1% level.

Source: own elaboration.

**TABLE 4. Regression results obtained while using the Van Hemert et al. [2002] Lie scale score**

	(1)	(2)	(3)	(4)	(5)	(6)
Lie scale score	2.379***	0.807*	1.953*	1.460**	1.060	1.044
	(0.496)	(0.426)	(1.056)	(0.580)	(1.311)	(1.263)
Individualism		-0.187***	-0.132	-0.158**	-0.116	-0.146
		(0.043)	(0.095)	(0.071)	(0.147)	(0.111)
Uncertainty avoidance		0.045	0.128***	0.039	0.098	0.016
		(0.036)	(0.040)	(0.069)	(0.090)	(0.087)
Masculinity		0.083**	0.092	0.076	0.062	0.041
		(0.033)	(0.058)	(0.057)	(0.075)	(0.070)
Outside Investor Rights		-2.798**				
		(0.803)				
Legal Enforcement			1.728			
			(1.694)			
Importance of Equity Market				-0.349		
				(0.351)		
Ownership Concentration					12.401	
					(31.173)	
Disclosure Index						-0.472
						(0.410)
GDP per capita (logged)		-1.088	-1.283	0.635	-0.010	1.523
		(0.953)	(1.393)	(0.753)	(5.965)	(2.387)
Number of observations	17	17	17	17	17	16
Adjusted R <sup>2</sup>	0.501	0.888	0.710	0.765	0.730	0.752
F-statistic	17.1	22.0	7.5	9.7	8.2	8.6
Lie scale score-IP correlation		-0.281	-0.679	-0.204	0.796	-0.452

Notes: This table reports regression results where the dependent variable is the aggregate earnings management score in each country. The Lie scale score is the mean score of individuals in each country on the Lie scale from the Eysenck Personality Questionnaire, sourced from Van Hemert et al. [2002]. The mean scores on the Lie scale score in each country are expected to correspond to the mean Lie scale score of top managers. Lie scale score-IP correlation denotes the Pearson correlation between the Lie scale score and the investor protection variable used in the specification. Robust standard errors are shown in parentheses.

\* Significant coefficient at the 10% level.

\*\* Significant coefficient at the 5% level.

\*\*\* Significant coefficient at the 1% level.

Source: own elaboration.

Table 4 presents regression results using the VHL-score.<sup>10</sup> The first specification demonstrates – analogously to the results presented in Table 3 – a positive relationship between the propensity to provide socially desirable responses and earnings management

at the country level ( $p < 0.01$ ). More specifically, a one standard deviation increase in the VHL-score leads to a 0.786 standard deviation increase in the aggregate earnings management score. Interestingly, the Lie scale score sourced from Van Hemert et al. [2002] explains even more (50.1%) of the variation in the tendency to perform corporate earnings management than the EBL-score. Parameter estimates reveal a similar result to the one presented in Table 3 – while all of the coefficients for the Lie scale score are positive, two of them are statistically insignificant. Once again, this is most likely the result of multicollinearity – in specifications that include ownership concentration or the disclosure index, standard errors for the VHL-score are much more pronounced than in other specifications.

## Discussion

While our findings generally support our hypothesis by showing a positive correlation between a country's earnings management score and the tendency of its' inhabitants to act in a socially desirable fashion, as measured by the mean Lie scale score obtained in a country, these results are not unequivocal. As demonstrated in Tables 3 and 4, the addition of some investor protection variables causes the Lie scale score to lose statistical significance. As argued above, the loss of significance in a few cases should not undermine the overall findings, as it is most likely caused by difficulties in the estimation of the effect of each of the variables, resulting from a small sample size and a high correlation between regressors.

Based on the regression results, the Lie scale score has been robust to the inclusion of two variables that could affect the propensity to behave in a socially desirable fashion. More specifically, the investigated effect is robust to the inclusion of individualism, which has been shown to be inversely related to conformity (in other words, collectivistic countries tend to conform more, see Bond and Smith [1996]). Our results are also robust to the inclusion of GDP per capita in a country, which serves as a proxy for a country's wealth (Van Hemert et al. [2002] have shown that the Lie scale score is negatively related to affluence). Altogether, the effect of variation in the Lie scale score on earnings management is significant when both cultural (as defined by Hofstede's dimensions) and economic determinants of the propensity to behave in a socially desirable way are considered.

## Conclusions

While the tendency to manipulate corporate earnings can be driven by various factors, responses provided by financial executives [Graham et al., 2005] suggest that the pressure to meet third-party expectations plays a crucial role in this process. According to our results, a significant part of the variation in the tendency to manage earnings

in corporations in different countries might be due to differences between individuals from various countries to conform, as measured by the mean score on the Lie scale of the Eysenck Personality Questionnaire. More specifically, our investigation indicates a positive relationship between the mean Lie scale score in a country (the average tendency to provide socially desirable answers, which we expect to be similar for executives), and the tendency to manage earnings in public companies, as measured by an aggregate earnings management score. This relationship is robust to the addition of the majority of control variables (i.e. it is robust to the addition of all variables that relate to cultural differences, but not all that relate to legal and institutional characteristics). Short of what is most likely a multicollinearity issue, these results are consistent through the study.

Despite our findings on the existence of a link between the tendency of executives from a particular country to perform earnings management and the social desirability bias, there are potential issues affecting the robustness of our results. Firstly, Van Hemert et al. [2002] provide some evidence that the Lie scale may have different meanings on the between-country and within-country level.<sup>11</sup> Another limitation of our study stems from the limited set of countries included. Finally, our results assume that the scores of executives responsible for making the decision to engage in earnings management correspond to (or can be presented as a transformation of) the scores of the individuals sampled in each country.

Given that, to the best of our knowledge, this is the first paper that attempts to link the tendency to provide socially desirable responses with financial decision-making, this area of research requires further investigation. To gain more insight into this topic, a more direct approach could be employed (i.e. a study focusing on individuals, instead of countries; to overcome the limitations of this paper, the number of sampled individuals should be considerable). A particularly insightful study would require financial executives to fill out personality questionnaires, preferably ones that focus specifically on social desirability. The results of these questionnaires could then be contrasted with the executives' attitudes towards earnings management, or with data that would allow an assessment of the extent to which they perform earnings management (i.e. on the basis on their company's financial reports). If the link between earnings management and social desirability is confirmed, the implication would be profound: investors would be given a tool to discriminate between executives that serve the long-term interests of the company and managers that focus on the short-term. Unfortunately, financial executives will likely be reluctant to provide information that would help investors and other stakeholders reveal their true 'type'. In effect, researchers might be forced to adopt more indirect approaches, similar to research that attempts to assess CEO narcissism or overconfidence.

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**Notes**

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<sup>2</sup> In order to beat a benchmark executives could adopt an alternative strategy by managing the expectations of analysts i.e. providing guidance to analysts that will cause them to make a downwardly biased forecast, which will in effect lead to a positive earnings surprise (for an empirical investigation of expectations management see e.g. Bartov et al. [2002], Matsumoto [2002], and Burgstahler and Eames [2006]).

<sup>3</sup> Such a preference does not seem to stem from a high-risk of detection, as accounting manipulations are difficult to unravel [e.g. Dichev et al., 2013]. These manipulations are facilitated by the fact that even sell-side analysts – who are relatively sophisticated users of financial reports – state that they put little effort in detecting financial misrepresentation [Brown et al., 2014].

<sup>4</sup> Of course, even those financial executives that are interested solely in the long-term prospects of their firm cannot entirely neglect the expectations of stakeholders, who might in general have a more short-term horizon: failure to produce satisfactory performance in the near future will likely lead to the termination of their employment. However, the less conformable executives will undeniably be less likely to make value-destroying decisions in order to produce outcomes that would exceed their short-term objectives. Instead, they will focus to a larger extent on the more value-creating decisions, which will bear fruit at a later date.

<sup>5</sup> The current consensus is that social desirability can be broken down into impression management and self-deception (and the latter component even further into self-deceptive enhancement and self-deceptive denial [Paulhus, 2002]).

<sup>6</sup> Researchers usually make the distinction between earnings management and impression management in financial reporting, to highlight that the latter refers to non-accounting methods of influencing the perceptions of stakeholders.

<sup>7</sup> Graham et al. [2013] show that CEOs are more risk-tolerant and optimistic than the general population, which suggests that they might also differ in their level of conformity. However, our inferences will remain valid if executives responsible for performing earnings management differ psychometrically from the general population, but with the divergence being uniform across all countries. In other words, our results will be robust if the mean scores of financial executives in each country can be presented as a linear transformation of the mean scores that were obtained via the sampled lay people.

<sup>8</sup> Controlling for this dimension is especially salient, given that collectivism (the opposite of individualism) is related to conformity [Bond, Smith, 1996].

<sup>9</sup> These differences stem from the fact that the EBL-scores are based on a single study for each country, whereas the VHL-scores are in most cases based on more than one study.

<sup>10</sup> All of the regressions exclude power distance, as the addition of this variable produces high variance inflation factors, which indicates very severe multicollinearity.

<sup>11</sup> Evidence that the Lie scale might measure slightly different concepts across cultures can be found in studies that attempt to breakdown the Lie scale into two components – such attempts do not yield in all cultures [e.g. Loo, 1995].

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