

EARNINGS MANAGEMENT AND THE QUALITY OF NON-FINANCIAL REPORTING IN A REGULATED CONTEXT

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Abstract

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This research aims to study the relationship between firms' accounting earning management practices and the quality of non-financial information disclosed in their annual reports. It is part of the ongoing debate on the reality or symbolism of corporate social responsibility (CSR) practices of companies and their transparency in this area (Buertey, Sun, Lee, & Hwang, 2019; Bozzolan, Fabrizi, Mallin, & Michelon, 2015; Prior, Surroca, & Tribo, 2008; Riahi-Belkaoui, 2003). We apply generalized least squares (GLS) regression on panel data obtained by a content analysis of annual reports of French SBF 120 listed firms, for the 2012 to 2015 period. The study confirms that upward earnings management led to the disclosure of more mandatory environmental information, but no effect is detected on their objectivity. Environmental disclosures contribute to drawing an image of regulatory compliance and divert stakeholders' attention from the opportunistic discretionary intervention on financial reporting. Findings support the substitution relationship between financial and non-financial reporting (Francis, Nanda, & Olsson, 2008; Yip, Van Staden, & Cahan, 2011). However, we evidenced that firms that are practicing more aggressive earning management are providing less comprehensive mandatory environmental reporting. Our findings differ from previous studies in that we consider information disclosed in response to regulatory requirements. Also, we analyze not only the comprehensiveness of information but also their objectivity, and demonstrate that earnings management practices have different effects on these characteristics.

Keywords: Earnings Management, Environmental Disclosure, Information Quality, Mandatory Reporting, Managerial Opportunism

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1. INTRODUCTION

Firms' corporate social responsibility (CSR) disclosures in their annual reports have been extensively studied in the last decades. Some authors claimed that non-financial information is used to conceal earnings management practices and to distract stakeholders' attention (Almahrog, Marai, & Knežević, 2015; Prior, Surroca, & Tribo, 2008; Riahi-Belkaoui, 2003). On the other side, others

argued that they constitute a contribution of additional transparency, used to report on a firm's actual situation and its future performance (Chih, Shen, & Kang, 2008; Hong & Andersen, 2011; Kim, Park, & Wier, 2012).

In recent years, there has been an international regulatory movement calling for extra-financial information disclosures to motivate firms to be more transparent in various areas, such as environment, governance, or social responsibilities.

In particular, this trend to require CSR information is coming not only from regulators but also from investors and many other stakeholders.

However, firms are accused of using CSR practices to influence stakeholders' perceptions. Thus, the disclosures made in their annual reports are used as a showcase to mask their less ethical practices in their real activities. Accordingly, earnings management is one of these practices which can serve managers' opportunistic aspirations, or more generally, the firm interests against those of other stakeholders. Accounting earnings, one of the most commonly used measures to evaluate firm performance and forecast their potential growth, are an object of discretionary manipulation which questions their reliability and can mislead users.

On the other hand, firms that place themselves in a CSR orientation are considered more ethical and many researchers agree that this aura of morality is also reflected in their accounting practices. Thus, if a company is involved in social practices by moral convictions, it will avoid accounting manipulations which may tarnish their reliability following the same principles that direct their actions (Hong & Andersen, 2011; Kim et al., 2012).

In this context, we focus on a particular dimension of CSR; namely, the environmental aspects. Additionally, our study examines the quality of environmental information disclosed by French listed firms in their annual reports in response to mandatory requirements. This is little considered by previous researches (Balluchi, Lazzini, & Torelli, 2021). Therefore, there is a fertile ground to study this relationship, few explored in the French regulated context. Actually, we want to check whether non-financial information is used to conceal earnings management despite regulation.

Our aim in this paper is to study the effect of accounting earnings management practices on mandatory environmental information quality disclosed by a sample of French listed firms in their annual reports.

Firms earnings management behavior has mobilized a large part of the accounting and financial literature. Indeed, the reliability of accounting numbers is of crucial importance for an unbiased evaluation of a firm's present and future value. However, as mentioned above, environmental information can be used to cover this behavior, which implies a discretionary intervention questioning the neutrality and, therefore, the reliability of this information.

With regards to the previous literature, our contribution resides in considering the impact of earnings management practices on the quality of environmental disclosures as measured by two dimensions: the comprehensiveness and the objectivity of the information disclosed. Actually, we go beyond simply verifying the presence of certain disclosures or measuring the quantity of disclosures as applied by the vast majority of previous research. To this end, we consider a specific regulated media generally used to disclose this type of information by the firms studied. Moreover, research has mainly addressed the determinants and impacts of voluntary CSR disclosures (Fifka, 2013; Huang & Watson, 2015; Morris & Tronnes, 2018). In addition, most examined the impact of CSR practices or disclosures on earnings management (Ben Mahjoub & Khamoussi, 2013; Buertey, Sun, Lee, & Hwang, 2019; Sun, Salama,

Hussainey, & Habbash, 2010; Toukabri & Jilani, 2013), but very few considered the opposite effect (Grougiou, Leventis, Dedoulis, & Owusu-Ansah, 2014; Prior et al., 2008). We adopt the vision that this information will be used either as a complement to financial reporting transparency or as an ecological showcase to divert the stakeholders' attention from earnings management practices. In these respects, the reverse impact is more appropriate in our research. Therefore, we retain and test the perspective of Francis, Nanda, and Olsson (2008) concerning the complementarity or substitution relationship between financial and extra-financial reporting transparency.

We have considered the French context, one of the pioneers in the regulation of this sort of information. Indeed, France has been one of the first countries in the European Union to regulate extra-financial reporting. Since 2002, the listed French firms have been required to disclose environmental information in their annual reports (Law n°2001-420 of May 15, 2001). In addition, this country has tightened the requirements for this type of information through the Grenelle II Law in 2010. This law has introduced more specifications for the required information and the obligation to verify their presence by a third-party and independent accredited organism.

This paper is organized as follows. Section 2 is dedicated to the theoretical foundations and literature review dealing with the relationship between environmental disclosures and earnings management which allows us to formulate our research hypotheses. Section 3 aims to present the study approach and the methodological aspects. Then, we present the empirical findings in Section 4. We end up with their discussion in Section 5 and the main conclusions of the study in Section 6.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Literature review

The management of earnings, whether real or accounting, is intended to vary the result upwards or downwards to reach a threshold desired or expected by the financial market and the influential stakeholders. It may also be designed to limit the variation of earnings from one year to another to avoid political costs or to limit the uncertainty perceived by the investors and funders. The desired goal depends on the motivations underlying this behavior. Different theoretical frameworks have been mobilized to explain this phenomenon.

From a business financial perspective, earnings management is supposed to be done to increase or keep the wealth of firms and their owners or managers. Particularly, the last is involved in the process and control of the information. Two main theoretical axes have been exploited within this perspective, to identify managers' earnings and management behavior motivations: the political-contractual theory and the signal theory. Beinesh (2001) believes that the motivations based on the political-contractual theory (political costs, debt, and remuneration) are part of the opportunistic perspective of earnings management. But the incentives based on the signal theory are referred to as the informative perspective of earnings management.

Other theoretical frameworks, with a civic perspective of business, are proposed as a complementary or an alternative in explaining many of the firms' practices including earnings management (Chih et al., 2008; Gibbins, Richardson, & Waterhouse, 1990; Mezas, 1990). They suggest taking into account the influence of ethical principles and values, as well as that of social objectives, on business conduct.

Proponents of the business ethics approach consider corporate engagement in social and environmental practices as an emanation of a greater morality of managers (Carroll, 1979, 1991; Jones, 1995; Phillips, Freeman, & Wicks, 2003). Some researchers argue that proactive firms in these areas should limit earnings management for ethical considerations. This proposal is stated by Kim et al. (2012) through the transparent financial reporting hypothesis according to which active firms, at the level of social responsibility, are less involved in the management of results. This negative relationship has been validated in several recent researches (Almahrog, Ali Aribi, & Arun, 2018; Bozzolan, Fabrizi, Mallin, & Michelin, 2015; Calegari, Chotigeat, & Harjoto, 2010; Hong & Andersen, 2011; Kim et al., 2012; Litt, Sharma, & Sharma, 2014; Scholtens & Kang, 2013). They suggest that ethical considerations are likely to lead managers to more transparent financial reporting (Bozzolan et al., 2015; Hong & Andersen, 2011).

Lastly, in the context of a social or institutional approach of business, earnings management is deemed as illegitimate and outside the boundaries of institutionalized practices. This behavior is thus limited by the institutional forces and by those which legitimize the firms and their leaders to preserve the continuity of their activities. Thus, firms that are subject to rising attention and meticulous monitoring are less likely to be embroiled in an openly opportunistic and easily detectable earnings management. If they do that, the informative or the real activities management of earnings will be advantageous because they are more commonly accepted (Lamrani, 2012).

From the point of view of maintaining legitimacy and compliance with the social expectations, many researchers have shed the light on the influence of environmental visibility and, more generally, of the social orientation of the firms on their earnings management practices (Bozzolan et al., 2015; Litt et al., 2014; Sun et al., 2010). Indeed, firms are required to apply accounting methods within the limits of the standards in force, according to a coercive or normative isomorphism (Mezas, 1990). On the other hand, if the company decides not to comply with institutionalized practices, it risks tarnishing its reputation and threatening its legitimacy (Meyer & Rowan, 1977; Oliver, 1991; Suchman, 1995). A communication effort is then needed, either to justify its position in order to change the social expectations. Or to divert the attention from the unacceptable practices to others, conform to the socially shared principles and values. Firms could also use communication to portray an image of symbolic conformity (Oliver, 1997; Quairel, 2004; Savage, Cataldo, & Rowlands, 2000).

We retain this perspective for our study. Francis et al. (2008) suggest that the quality of the accounting results has an impact on the business decisions in terms of voluntary disclosures of information in general. They affirm

that the relationship can be of complementarity or substitution. Such as Yip, Van Staden, and Cahan (2011), we think that this point of view is valid for environmental disclosures. We present, in the following sections, these two relationships and develop the one that we have retained in our work.

The complementarity relationship

Information asymmetry between managers and shareholders or other stakeholders is a fertile ground for earnings manipulation. Social and environmental disclosures are supposed to provide greater transparency to financial reporting. Therefore, the requirement of greater transparency in social and environmental disclosures could limit information asymmetry between the different parties and hence should reduce these practices.

Likewise, a firm's commitment to social and environmental activities is seen as a guarantee of managers' high ethical standards, and their values and moral principles implementation in the firm management (Chih et al., 2008; Kim et al., 2012; Litt et al., 2014). This ethical foundation is supposed to be reflected in better financial information quality, far from any discretionary intervention which may distort the firm actual image described through its financial statements. Indeed, earnings management is an unethical practice for the business ethics movement advocates. They question the reliability of accounting data provided to the financial statements users, which may compromise their judgment.

In addition, such a practice may call a firm's reputation into question and threaten its legitimacy. This can lead to major economic losses threatening the position of the managers in the firm. Indeed, it is the managers who value the reputation of their company. So, they should not place themselves in a full risks area by implementing suspicious practices like earnings management. Social and environmental disclosures are used to demonstrate their sound management of these dimensions and their accordance with the social expectations as part of the accounting policy (Chih et al., 2008; Ben Mahjoub & Khamoussi, 2013). Or, they can be used proactively to limit potential political costs (Patten & Trompeter, 2003). Hence, they will have a better disclosures quality.

In other words, the most environmentally responsible firms are assumed to be more ethical or at least seek to show, to their stakeholders and society, their greater responsibility by providing better financial and extra-financial reporting. They are able enough to bring a great precision as well as the justifications of the faithfulness of the information that they disclose.

On the contrary, firms that conduct earnings management will symbolically use environmental disclosures to pretend their engagement, but in fact, the opposite is true. Hence, the quality of the disclosures should be at the level of these practices far away from accountability. They can also limit disclosures to the legal minimum, or choose nondisclosure and fuzziness for certain points. Consequently, this will result in less complete and less accurate information.

The substitution relationship

Managers use social and environmental information to mask their discretionary intervention on accounting figures to the detriment of shareholders and other stakeholders. So, it is supposed that opportunistic managers would compensate for this behavior by blameless management of environmental and social problems

(Prior et al., 2008). This management, and especially the disseminated information, will affect the firm financial performance. They will, therefore, help to disperse all stakeholders' doubts about the possibility of manipulation. In this regard, Yip et al. (2011) came to the conclusion that managers facing high public scrutiny seem to less manage their earnings and disclose more CSR information. These results suggest that managers seeking to take advantage of opportunistic behavior without being worried are more likely to engage in such disclosures. Similarly, Grougiou et al. (2014) demonstrate in their study, via a simultaneous equation model for the US banking sector that directors seem to conceal their earnings management practices through a commitment to CSR. This is also the case concerning CSR disclosures for banks in emerging states like Bangladesh (Rahman, Abdul Rasid, & Basiruddin, 2020) or Indonesia (Setiawan, Prabowo, Arnita, & Wibawa, 2019).

This type of disclosure can also be used to gain public support in case of shareholders' potential actions against the managers after a manipulation or mismanagement detection. Managers will describe, through information disclosed, a policy aimed at satisfying a large number of stakeholders. In case of a problem, managers will seek stakeholders sustain against owners for their management. In doing so, the latter help managers in their entrenchment strategy in the firm (Makni Gargouri, Shabou, & Francoeur, 2010; Prior et al., 2008; Toukabri & Jilani, 2013).

Alternatively, earnings management can be informative, and so, it is implemented by managers to limit information asymmetry between firms' internal and external parts. CSR information is used beside earnings management in a signaling policy to reduce this asymmetry and the level of uncertainty perceived by investors (Riahi-Belkaoui, 2003).

All these motivations link environmental disclosures to a financial reporting not very faithful to reality. These can be used symbolically to abuse one or more stakeholders and to obtain a margin of action with the minimum risk to be bothered. Accordingly, firms whose financial reporting is of higher quality through the great faithfulness of the published results are less inclined to use this type of disclosure symbolically. It should be noticed that we consider firms subject to a legal obligation to disclose such information. Therefore, it is the quality of the information to be provided that should vary with the accounting behavior.

2.2. Study hypotheses

In our work, we suggest considering the second vision which assumes a substitution relationship between financial and non-financial reporting. In other words, firms that are managing their earnings will present a better quality environmental reporting in order to:

- satisfy the stakeholders and win their support against the owners, if these practices are revealed;
- divert the audiences' attention from the opportunistic earnings management practices; or
- report the best financial situation of the company if the results management is informative.

We are, then, testing a positive relationship that seriously questions the quality of environmental disclosures in annual reports, in accordance with a substitution relationship. Indeed, these would be subject to managers' discretion in order to influence users' impressions. On the contrary, a negative relation affirms that the quality of this information increases as financial reporting quality rises. This goes in the sense of a complementarity relationship between financial and environmental reporting.

Thus, we propose to test the hypotheses which enable us to formulate the first proposal for each of the environmental reporting quality dimensions selected in our study, as follows:

H1: Firms' propensity to manage accounting earnings has a positive effect on the level of mandatory environmental thematic coverage in annual reports.

H2: Firms' propensity to manage accounting earnings has a positive effect on the level of mandatory environmental information objectivity disclosed in annual reports.

3. RESEARCH METHODOLOGY

As part of a quantitative approach to business behavior study, we develop empirical models to test our assumptions about the effect of firms' earnings management propensity on environmental disclosures quality. Our study is applied to a selected sample (see firms list in Appendix, Table A.1) by employing the following criteria:

- listed firms regularly selected at SBF 120 index for the period from 2012¹ to 2015;
- French industrial firms; and
- availability of annual reports from 2012 to 2015.

We decided to exclude financial sectors companies because of the application of specific accounting standards that may introduce biases in the analysis of our data (particularly for earnings management estimation).

The sector profile of the observations according to environmental visibility of activity is shown in Table 1.

Table 1. Sector profile and environmental visibility of observations

Sectors	Total
<i>Low environmental visibility</i>	60
Food and beverage	16
Household and care products	20
Health	12
Technology	12
<i>Average environmental visibility</i>	71
Cars and equipment	20
Construction industry	19
Industrial goods and services	32
<i>High environmental visibility</i>	28
Chemical industry	8
Raw materials	8
Oil and gas	12
Total	159

The procedure of selecting and collecting these documents, on the website of the French Authority of Financial Markets (AMF) as well as on the websites of some firms, led to the obtaining of 159² documents for a final sample of 40 listed French industrial firms.

¹ First year of application of the Grenelle II Law.

² One of the firms merged at the last year of the study period.

Nearly half of the observations are related to the firms belonging to the CAC 40 index gathering the largest market capitalizations at the Euronext Paris market.

Thereafter, we present the approach deployed to test our research hypotheses. Then, we present the variables of the study and the measurement procedures implemented to apprehend them.

3.1. Hypotheses test approach

The test of our hypotheses is performed by applying the linear regression method to three models. In fact, this method enables us to relate, in one side, environmental reporting quality variables as a dependent; and on the other side, firms' propensity of earnings management variables and other control variables, as independent ones:

$$QUALITY RE = f(EARNING MANAGEMENT, CONTROL) \quad (1)$$

These models have been tested on panel data to consider the variations between firms (40 firms), and the variations over time for each company (4 years, from 2012 to 2015). The database is made up of 159 firm-year observations (one of the firms experienced a merger in 2015).

The test procedure has gone through several steps. Initially, the descriptive analysis and the associations enable us to check that the selected variables are adapted to statistical treatments and confirm the validity of the relations proposed in our hypotheses.

Since our models have been applied on panel data, it was necessary to apply all model specification tests. To this end, three steps have been followed. The first step permits to diagnose the individual effects for each tests model. A series of tests have been thus implemented. Fisher's test demonstrates the existence of individual fixed effects, and Breusch-Pagan's Lagrange multiplier

(LM) test reveals the existence of significant individual random effects. So, our data can be treated as for panel data.

The second step was necessary to select the most adapted model to the nature of the individual effects detected: a model with random effects or with fixed effects. By applying the test of Hausman, such a selection can be made. Finally, in the third step, we tested the potential existence of heteroscedasticity problems and the autocorrelation of the models' errors (residuals). The tests generally applied are those of Breusch-Pagan and that of Wald which are modified to detect heteroscedasticity, and the test of Wooldridge for autocorrelation. The test procedure, lead us to use the generalized least squares (GLS) regression for all specified random effects models (using STATA statistical processing software).

3.2. Variables identification and measurement

To verify our research hypotheses, we need to measure the two main variables related to the studied relationship; namely: the quality of mandatory environmental information disclosed through firms' annual reports and the level of earning management applied by managers.

We developed a content analysis index to apprehend the two dimensions of environmental information quality: thematic coverage and objectivity. It was applied manually to information disclosed in annual reports.

In order to improve the predictive power of our hypothesis test models, we introduced control variables that have been identified and, most often, validated by literature as determinants of our interest variables (Brammer & Pavelin, 2006; Clarkson, Li, Richardson, & Vasvari, 2008; Kim et al., 2012; Litt et al., 2014; Prior et al., 2008; Riahi-Belkaoui, 2003; Toukabri & Jilani, 2013). Table 2 presents all study variables as well as their measurement indicators.

Table 2. Study variables and indicators

<i>Interest variables</i>		
Environmental information quality		Earnings management: Modified Jones' model by Kothari, Leone, and Wasley (2005).
<i>Thematic coverage ratio (TCOV):</i> Numbers of items disclosed/numbers of items required by law.		<i>Discretionary accruals aggressiveness (DACA):</i> Absolute value of discretionary accruals.
<i>Disclosure objectivity score (DOBJ):</i> Weighted score according to information nature: literal, numerical, compared.		<i>Discretionary accruals direction (DACD):</i> Categorical variable based on the sign of discretionary accruals: 1 for earning management decrease with discretionary accruals significantly less than 0; 2 for neutral earning management with discretionary accruals equal to 0; and 3 for earning management increase with discretionary accruals significantly up to 0.
<i>Control variables</i>		
<i>Quantitative</i>		
<i>Debt level (DEBT):</i> Long-term debt divided by total assets.		<i>Economic performance (PERF):</i> Return on assets (ROA).
<i>Categorical</i>		
<i>Firms size (SIZE):</i> 1 – small firms; 2 – middle firms; 3 – large firms, according to quartiles based on Ln total assets.	<i>Capital dilution (DILT):</i> Dummy variable based on the median of capital percentage detained by the public with 1 if the percentage is superior or equal to 62.5%, and 0 otherwise.	<i>Environmental visibility (VISB):</i> Based on the activity sector pollution level as identified in the literature with 1 – low visibility, 2 – average visibility, and 3 – high visibility.

The mandatory thematic coverage ratio: It gives indications on firms' efforts to provide the information required by law. These elements of information have been delimited after a process of consultation with the main stakeholders. They are

supposed to provide a clearer picture of the firms' management of environmental aspects. The indicator is a rate obtained by the ratio between the number of mandatory elements treated by the firms and the total number of elements

specified in the decree implementing the Grenelle II Law, as listed in our content-analysis index.

The mandatory information objectivity variable: It permitted us to capture the provision of precise and quantified data by firms. Indeed, this type of data should lead to a better representation of firms' environmental performance (Hopwood, 2009). The applied measure corresponds to the arithmetic average of scores weighted by the number of mandatory environmental information sentences, according to the following scale:

- Score 1: for descriptive information with literal form (but not including quantified data).

- Score 2: for information containing quantified data without comparison in time or space.

- Score 3: for information containing quantified data with evolution over time or compared to objectives set by the company according to the regulatory or sector standards, or compared to a benchmark.

Earning management variables: The accounting earnings management component was used to assess our independent variables. It indicates the effect of accounting adjustments on income. Two main reasons prompted this choice. The first stems from the ability to precisely identify this type of practice by analyzing firms accounting data, easily accessible. In contrast, earnings management by the real activities is less obvious to apprehend. This difficulty has discouraged the majority of researchers to consider this form of earnings management. In addition, the use of discretionary

accruals for estimating earnings management has largely been validated by previous researches as a reliable proxy of the phenomenon (Kothari et al., 2005).

In the literature, the Jones (1991) and the modified Jones' model by Dechow, Sloan, and Sweeney (1995) are generally used by researchers to estimate discretionary accruals. Kothari et al. (2005) suggest an improvement for the modified Jones' model which limits the problems of heteroscedasticity and misspecification encountered when it is applied. This change has been adopted by many recent studies, including those considered in our work (Kim et al., 2012; Sun et al., 2010; Yip et al., 2011). This model is particularly adapted to our study because it leads to good results even when the sample is not randomly selected (Kothari et al., 2005).

4. RESEARCH RESULTS

4.1. Descriptive statistics and bivariate analysis

The descriptive statistical data, presented in Tables 3 and 4, shows that almost all variables show significant variations in observed values, both between individuals and over time. In addition, most of them show a fairly homogeneous observations distribution with median values very close to the sample mean. This enhances their treatment in the form of panel data.

Table 3. Descriptive statistics of quantitative variables

<i>Variables</i>		<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
TDAC	overall	-0.032	-0.041	0.107	-0.266	1.057
	between			0.078	-0.240	0.323
	within			0.074	-0.354	0.702
DACA	overall	0.062	0.047	0.093	0.000	1.057
	between			0.059	0.004	0.323
	within			0.072	-0.260	0.796
TCOV	overall	0.852	0.812	0.112	0.333	1.000
	between			0.093	0.593	0.963
	within			0.065	0.553	0.960
DOBJ	overall	1.782	1.783	0.275	1.255	2.513
	between			0.257	1.374	2.422
	within			0.116	1.533	2.127

Notes: TDAC: Total discretionary accruals (estimated by modified Jones' model of Kothari et al., 2005); DACA: Discretionary accruals aggressiveness (absolute value of discretionary accruals); TCOV: Thematic coverage ratio (numbers of items disclosed/numbers of items required); DOBJ: Disclosure objectivity score (weighted score according to disclosed environmental information nature: literal, numerical, and compared).

Table 4. Frequencies of discretionary accruals categorical variable

DACD	Overall		Between		Within
	Frequency	Percent	Frequency	Percent	Percent
1. Decrease	109	68.55	35	87.50	78.10
2. Neutral	32	20.13	18	45.00	45.37
3. Increase	18	11.32	9	22.50	50.00
Total	159	100.00	62	155.00	64.52

Notes: DACD: Discretionary accruals direction (categorical variable based on the sign of discretionary accruals: 1 for earning management decrease, 2 for neutral earning management, and 3 for earning management increase with discretionary accruals significantly up to 0).

Our sample firms have an active accounting earnings management behavior as shown by discretionary accruals, the means of which are significantly different from zero. The predominant behavior is management to decrease earnings. The position of these companies, among the most active securities on the financial market, places them under the scrutiny of government authorities,

investors, and financial analysts. This leads them to manage the level of their income to maintain stability and minimize the level of risk perceived by shareholders and potential investors or lenders, or to avoid potential political costs.

The rate of coverage of regulatory themes by environmental disclosures is quite high. That is quite understandable because of their financial

market listing and financial index membership. The objectivity scores average of environmental disclosures reflects a significant amount of numerical information for most firms. Also, the study of quartiles shows that 75% of the firms publish more than 30% of environmental information as numerical.

Table 5 shows the distribution of environmental information quantity disclosed in annual reports according to the general themes of our content analysis index, as well as the numbers of items disclosed.

Table 5. Thematic distribution of environmental information

<i>Observation: 159</i>	<i>Mean</i>	<i>Median</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
DQTE	556.422	496	355.180	94	2066
Theme 1	100.503	90	55.013	16	310
Theme 2	131.717	98	126.082	13	845
Theme 3	158.629	130	122.060	26	622
Theme 4	106.881	95	85.301	6	513
Theme 5	58.692	46	47.073	0	233
ITEMS	21.918	23	3.015	9	27
TCOV	0.812	0.852	0.112	0.333	1

Notes: DQTE: Environmental information quantity disclosed in annual reports as a regulatory requirements responses (in sentences number); Theme 1: Disclosure quantity in the number of sentences under the theme "General Environmental Policy"; Theme 2: Disclosure quantity in the number of sentences under the theme "Pollution and Waste Management"; Theme 3: Disclosure quantity in the number of sentences under the theme "Sustainable Use of Resources"; Theme 4: Disclosure quantity in the number of words under the theme "Climate Change and Biodiversity Protection"; Theme 5: Disclosure quantity in the number of sentences under the theme "Relations with Stakeholder on Environmental Issues"; ITEMS: A number of regulatory items identified in the content analysis index provided by firms through their environmental reporting; TCOV: Mandatory thematic coverage ratio (numbers of items disclosed divided by the total number of items required (27 items)).

The environmental disclosures quantities are fairly large on average, but they vary greatly from one firm to another. Moreover, there are also important variations concerning the reporting configuration for the themes and items discussed in annual reports.

Indeed, the number of items covered varies from 9 (33% of the items required by law) to 27 (100%) for the companies in the sample over the entire period. The overall average is quite notable with more than 21 items covered (more than 80% of the required items). This is not surprising given the experience of over a decade for French listed companies in providing this type of information in response to the Law n°2001-420 of May 15, 2001 implemented in 2002. Overall, most of the themes are fairly well covered by all the companies, except for Theme 5 dealing with stakeholder relations for environmental aspects.

This is probably due to the novelty of this legal requirement. The themes directly related to ecological impacts are the most fully covered, in particular those related to the sustainable use of natural resources (Theme 3) and the management of pollutions and wastes (Theme 2).

The Pearson correlation matrix (Table 6 below) shows that only the regulatory thematic coverage rate has a negative and significant correlation coefficient (at less than 5%), with the level of discretionary accruals in absolute values that reflect earnings management aggressiveness. For control variables, the correlations are globally in line with previous research findings.

Finally, we can note that none of the coefficients exceed the critical limit of 0.8. So we do not expect potential multicollinearity problems between independent variables for our models.

Table 6. Pearson correlation matrix

	<i>TCOV</i>	<i>DOBJ</i>	<i>DACA</i>	<i>DACD</i>	<i>SIZE</i>	<i>PERF</i>	<i>DEBT</i>	<i>DILT</i>	<i>VISB</i>
<i>TCOV</i>	1.000								
<i>DOBJ</i>	0.4488*	1.000							
<i>DACA</i>	-0.1958*	ns	1.000						
<i>DACD</i>	ns	ns	-0.3837*	1.000					
<i>SIZE</i>	0.2539*	ns	-0.1843*	ns	1.000				
<i>PERF</i>	-0.1939*	ns	0.5762*	-0.5727*	-0.2531*	1.000			
<i>DEBT</i>	0.1838*	0.2286*	-0.2642*	0.3563*	ns	ns	1.000		
<i>DILT</i>	0.1392	-0.2938*	ns	ns	0.2308*	-0.1599*	ns	1.000	
<i>VISB</i>	ns	ns	0.2140*	ns	0.2608*	-0.3437*	0.1708*	0.2607*	1.000

Notes: The variables are defined in Table 2.

4.2. Results of hypotheses tests

The general assumption of our study predicts a positive effect of firms' propensity to manage their accounting earnings on mandatory environmental information quality disclosed in annual reports. Two indicators are used in our work to apprehend the quality of environmental reporting: the mandatory thematic coverage ratio as identified in our content analysis index, and the objectivity score of these environmental disclosures. We have

formulated a specific hypothesis for each of these variables taken as the dependent variable of the corresponding model. The general model has the following form:

Model G:

$$ERQL_{it} = \beta_0 + \beta_1 DACA + \beta_2 DACD + \beta_3 SIZE_{it} + \beta_4 PERF_{it} + \beta_5 DEBT_{it} + \beta_6 DILT_{it} + \beta_7 VISB_{it} + \varepsilon_{it} \quad (2)$$

where:

ERQL: Environmental reporting quality;
TCOV: Mandatory thematic coverage ratio;
DOBJ: Environmental disclosures' objectivity score;
DACA: Discretionary accruals aggressiveness;
DACD: Discretionary accruals direction. It is introduced as two binary factors in the model: *DACD* (decrease) and *DACD* (increase) with neutral discretionary accruals taken as the basis for both.
SIZE: Firms size. It is introduced as two binary factors in the model: *SIZE* (middle) and *SIZE* (large) with small size taken as the basis for both;
PERF: Economic performance;
DEBT: Debt level;
DILT: Capital dilution;
VISB: Environmental visibility. It is introduced as two binary factors in the model: *VISB* (medium) and *VISB* (high) with low visibility taken as the basis for both.
The variables are defined in Table 2.

According to the specific hypothesis that has been tested, we have two estimates for this model:

- Model 1 — with the dependent variable *TCOV*;
- Model 2 — with the dependent variable *DOBJ*.

Table 7 summarizes *H1* and *H2* test results, concerning earnings management effect on the thematic coverage ratio as well as on mandatory environmental disclosures' objectivity. Both models have significant predictive powers.

Table 7. Models estimation of earning management effects on environmental disclosures quality

<i>Models 1, 2</i>	<i>TCOV</i>	<i>DOBJ</i>
<i>DACA</i>	-0.368 (-3.10)***	0.003 (0.02)
<i>DACD</i> (decrease)	0.012 (0.73)	0.011 (0.38)
<i>DACD</i> (increase)	0.044 (2.65)***	-0.051 (-1.11)
<i>SIZE</i> (middle)	0.096 (6.81)***	0.087 (1.72)*
<i>SIZE</i> (large)	0.087 (6.20)***	0.123 (2.12)**
<i>PERF</i>	0.099 (0.78)	-0.335 (-0.92)
<i>DEBT</i>	-0.001 (-0.37)	0.017 (1.25)
<i>DILT</i>	0.017 (1.44)	-0.152 (-4.40)***
<i>VISB</i> (medium)	-0.007 (-0.70)	0.072 (1.55)
<i>VISB</i> (high)	-0.013 (-0.75)	-0.003 (-0.05)**
<i>_cons</i>	0.754 (40.71)***	1.745 (28.11)***
	Wald Chi ² (10) = 95.51	Wald Chi ² (10) = 39.05
	Prob > Chi ² = 0.0000	Prob > Chi ² = 0.0000
Observations: 159 Groups: 40		

Notes: *, **, *** results significant at respectively 10%, 5% and 1%. The variables are defined in Table 2.

The estimates highlight significant coefficients for the two independent variables reflecting earnings management. However, this stands only for the first model that tests the effect on mandatory environmental thematic coverage ratio (*H1*). It is estimated as a ratio between the number of items filled in by firms, and the total number of items listed in our index based on regulatory requirements.

The accounting earning management categorical variable shows a positive effect on mandatory environmental thematic coverage variable, for firms whose discretionary accruals are

positive. Thus, in accordance with our hypotheses, firms that increase the level of their current earnings are making more comprehensive environmental disclosures in their annual report. This finding is consistent with previous studies (Grougiou et al., 2014; Makni Gargouri et al., 2010; Prior et al., 2008; Toukabri & Jilani, 2013), that support a substitution relationship between financial and non-financial reporting. The latter is used as a showcase to conceal less ethical practices in the former.

On the other hand, the absolute value of discretionary accruals shows a negative effect on the comprehensiveness of environmental reporting. Thus, a high level of earnings management aggressiveness is associated with a low level of coverage of mandatory topics by the environmental information disclosed by firms. This result contradicts the *H1*. This noticeable contradiction in the results for these two variables may be due to the higher representation of observations concerning earnings decrease behaviors in the sample. In fact, 68% of observations concern behaviors of managing earnings to decrease them, whereas only 11% of them are engaged to increase results. Indeed, the average of discretionary accruals is negative (Table 3). Therefore, this behavior has greater weight in determining the level of earnings management aggressiveness.

However, regardless of the direction of earnings management, the level of aggressiveness of these practices has a negative effect on the level of thematic coverage, which may be a sign of the behavior of these firms faced with regulation. They seem to care neither about the risk of detecting their practices which limit the sincerity of the published accounting earnings, nor about the provision of environmental information expected by the regulator. Nevertheless, it is clear that companies that manage their accruals to increase profits seem to use environmental information in their annual reports, particularly through compliance with regulatory requirements, as a substitute for their opportunistic accounting practices.

Some observations can be made on the control variables introduced in our explanatory models of environmental reporting quality. The categorical variable reflecting the firm size has significant positive effects on the two variables used to consider the quality of environmental disclosures. This effect is noted for the medium and large firms in our sample compared to those of small size.

The visibility level of the business sector has a negative effect on the objectivity of environmental disclosures for the category of high-polluting firms. So, firms in the chemical industry, oil and gas, and raw materials sectors tend to have less objective mandatory environmental information in their annual report. But, these do not stand out for the level of regulatory coverage of disclosures.

Finally, there is another significant coefficient related to the capital dilution variable. Indeed, firms with dispersed ownership structures disclose less objective environmental information in their annual reports. This result is in opposition to the previous literature expectations (Cormier & Magnan, 2013; Prior et al., 2008).

To summarize, our results confirm the use of environmental information to mask opportunistic earnings management behavior in line with several previous studies but for regulatory disclosures.

However, contrary to expectations we also highlight that firms practicing more aggressive earnings management disclose less environmental information in response to regulatory requirements. Moreover, our study provides additional clarification to previous work regarding the objectivity of information. It appears to be outside the discretion of the firms that are managing their earnings.

5. DISCUSSION OF THE RESULTS

This study presents empirical evidence on the existence of a relation between earnings management and firms' environmental disclosure in annual reports in the French regulated context. In particular, we notice that earnings management has an effect on one of the indicators of environmental information quality: the ratio of coverage of mandatory environmental themes. It indicates the comprehensiveness of the environmental disclosures in annual reports.

The findings show that the two earnings management indicators considered have opposite effects on the comprehensiveness of environmental disclosures. In fact, we validate the *H1* predicting a positive effect of earnings management on the environmental thematic coverage ratio. Particularly, the firms in our sample that increase their earnings through shifting expenses to future periods will accompany these practices with greater coverage of regulatory environmental information items. Actually, they seemingly use environmental information to show their compliance with the regulations and divert attention away from opportunistic discretionary intervention in financial reporting. This is in line with the argument stating that managers' commitment to CSR activities could be opportunistic, and serve as a cover-up to the pursuit of their personal interest (Grougiou et al., 2014; Prior et al., 2008; Yip et al., 2011).

However, earnings management practices do not seem to have an effect on the objectivity of the environmental information provided in the annual reports by the sampled firms. An explanation may be related to the mandatory nature of the environmental information considered which limits the margins of maneuver available for firms. In particular, the obligation to verify the disclosed environmental information, and more precisely the quantified information, may be a barrier to the symbolic manipulation of these data. It can also be a motivation for all firms to make greater efforts in their environmental disclosures and, thus, the link with earnings management practices cannot be perceived. In addition, firms are required to prove the existence of the social and environmental information required by regulations and establish it by an independent third party accredited by COFRAC (French Accreditation Commission). As a result, the environmental information coverage of mandatory themes indicator is highly visible to stakeholders. It is, therefore, quite conceivable that the firms which opportunistically manage their earnings are more regulatory-compliant concerning their environmental disclosures to reduce suspicions about these practices.

On the other hand, the level of thematic coverage of regulatory information seems to be decreasing with the higher level of accounting adjustments made by firms on their accounting

earnings. As a result, it seems that the firms performing more aggressive accounting earnings management lay little emphasis on regulatory compliance for both financial and environmental reporting. Indeed, according to our results, these firms do not seek to conceal the manipulation of accounting figures by better environmental disclosures. On the contrary, their environmental disclosures are less comprehensive, with regards to the treatment of regulatory information items, than others with neutral or less aggressive earnings management behavior. This behavior seems to oppose our expectation, but it may be indicative of earnings management used for informational purposes as part of a signaling strategy. These practices are considered acceptable by various stakeholders to the extent that they limit information asymmetry, and offer the firm the opportunity to stand out from its competitors in the financial market. It is then useless for them to hide their intervention in the process of earnings determination. On the contrary, their action has to be more visible and difficult to be imitated by other firms, and this can explain discretionary accruals' important values.

Thus, the theories of signal and agency are reliable to explain our results. Particularly, our study seems to comfort the assumption of discretionary use of environmental reporting, more specifically the level of coverage of mandatory themes, alongside a discretionary intervention on accounting earnings. Similar to Yip et al. (2011), the results of our study have shown that a substitution relationship between environmental reporting and financial reporting seems conceivable. Actually, we provide empirical evidence about the use of mandatory environmental information in conjunction with opportunistic management of accounting earnings. The results are consistent with those of Toukabri and Jilani (2013) dealing with voluntary disclosures in the American context. It is also in keeping with the studies of Makni Gargouri et al. (2010) in the Canadian context, and Prior et al. (2008) in more than twenty countries.

6. CONCLUSION

Our study shows that environmental information is used to mask opportunistic intervention in financial reporting despite their regulation and the assurance requirement for French listed companies. However, this phenomenon concerns the provision of more complete environmental reporting but does not affect the objectivity of the information disclosed, which seems to be beyond the control of these firms. We believe this reflects the assurance requirements efficacy. Hence, some conclusions and recommendations can be drawn from the study findings.

First, our findings indicate to firms that place themselves in an open strategy of signaling, to pay their attention not only to regulatory compliance for CSR disclosures but also and above all to strengthen the objectivity of the disclosed information to stand out effectively from others. Moreover, another implication of our findings can be exploited by regulators. In fact, we see that the mandatory nature of environmental information tends to limit the margins of maneuver available for firms. In particular, the obligation imposed on firms by French regulations to have the environmental

information verified by an accredited third party, and in particular the quantified information, may constitute a limitation to the symbolic manipulation of these data. This should lead legislators of other countries to regulate this type of information or to introduce more precision and control into the regulatory framework of this information. Finally, stakeholders, and in particular shareholders, should consider putting in place stronger control mechanisms in corporate governance bodies to prevent opportunistic behavior by managers.

At this point, it is worth noting that some aspects of the study limit the external validity of the results. Indeed, the application of specific criteria for selecting the firms in the sample improves the quality of the econometric models but

reduces the scope of the study. It would be interesting to see the situation for firms in the financial sector or unlisted firms. Similarly, limiting the analysis to regulatory disclosures implies missing another important aspect on which executives act: voluntary disclosures in annual reports or outside. But it is a huge amount of information to analyze. Also, we consider the accounting earnings management while the managers can also resort to the real management of the earnings. This is another avenue that can be investigated. Finally, the study concerns the French context with its specificities, but other countries have adopted the regulation of this type of information. An international study may allow considering contextual and institutional factors.

REFERENCES

1. Almahrog, Y., Ali Aribi, Z., & Arun, T. (2018). Earnings management and corporate social responsibility: UK evidence. *Journal of Financial Reporting and Accounting*, 16(2), 311-332. <https://doi.org/10.1108/JFRA-11-2016-0092>
2. Almahrog, Y., Marai, A., & Knežević, G. (2015). Earnings management and its relations with corporate social responsibility. *Facta Universitatis*, 12(4), 347-356. Retrieved from <http://casopisi.junis.ni.ac.rs/index.php/FUEconOrg/article/view/839/1073>
3. Balluchi, F., Lazzini, A., & Torelli, R. (2021). Credibility of environmental issues in non-financial mandatory disclosure: Measurement and determinants. *Journal of Cleaner Production*, 288, 1-13. <https://doi.org/10.1016/j.jclepro.2020.125744>
4. Bartov, E. (1993). The timing of assets sales and earnings manipulation. *The Accounting Review*, 68(4), 840-855. Retrieved from <https://www.jstor.org/stable/248507>
5. Ben Mahjoub, L., & Khamoussi, H. (2013). Environmental and social policy and earnings persistence. *Business Strategy and the Environment*, 22(3), 159-172. <https://doi.org/10.1002/bse.1739>
6. Beneish, M. D. (2001). Earnings management: A perspective. *Managerial Finance*, 27(12), 3-17. <https://doi.org/10.2139/ssrn.269625>
7. Bozzolan, S., Fabrizi, M., Mallin, C. A., & Michelon, G. (2015). Corporate social responsibility and earnings quality: International evidence. *The International Journal of Accounting*, 50(4), 361-396. <https://doi.org/10.1016/j.intacc.2015.10.003>
8. Brammer, S., & Pavelin, S. (2006). Voluntary environmental disclosure by large UK corporations. *Journal of Business Finance & Accounting*, 33(7-8), 1168-1188. <https://doi.org/10.1111/j.1468-5957.2006.00598.x>
9. Buerter, S., Sun, E.-J., Lee, J. S., & Hwang, J. (2019). Corporate social responsibility and earnings management: The moderating effect of corporate governance mechanisms. *Corporate Social Responsibility and Environmental Management*, 27(1), 256-271. <https://doi.org/10.1002/csr.1803>
10. Calegari, M. F., Chotigeat, T., & Harjoto, M. A. (2010). Corporate social responsibility and earnings reporting. *Journal of Current Research in Global Business*, 13(20), 1-14. Retrieved from https://scholarworks.sjsu.edu/acc_fin_pub/4/
11. Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *The Academy of Management Review*, 4(4), 497-505. <https://doi.org/10.2307/257850>
12. Carroll, A. B. (1991). The pyramidal of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39-48. [https://doi.org/10.1016/0007-6813\(91\)90005-G](https://doi.org/10.1016/0007-6813(91)90005-G)
13. Chih, H.-L., Shen, C.-H., & Kang, F.-C. (2008). Corporate social responsibility, investor protection, and earnings management: Some international evidence. *Journal of Business Ethics*, 79(1-2), 179-198. <https://doi.org/10.1007/s10551-007-9383-7>
14. Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting Organizations and Society*, 33(4-5), 303-327. <https://doi.org/10.1016/j.aos.2007.05.003>
15. Cormier, D., & Magnan, M. (2013). The economic relevance of environmental disclosure and its impact on corporate legitimacy: An empirical investigation. *Business Strategy and the Environment*, 24(6), 431-450. <https://doi.org/10.1002/bse.1829>
16. DeAngelo, L. E. (1986). Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders. *The Accounting Review*, 61(3), 400-420. <https://www.jstor.org/stable/247149>
17. Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *The Accounting Review*, 70(2), 193-225. Retrieved from <https://www.jstor.org/stable/248303>
18. Fifka, M. S. (2013). Corporate responsibility reporting and its determinants in comparative perspective — A review of the empirical literature and a meta-analysis. *Business Strategy and the Environment*, 22(1), 1-35. <https://doi.org/10.1002/bse.729>
19. Francis, J., Nanda, D., & Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. *Journal of Accounting Research*, 46(1), 53-99. <https://doi.org/10.1111/j.1475-679X.2008.00267.x>
20. Gibbins, M., Richardson, A., & Waterhouse, J. (1990). The management of corporate financial disclosure: Opportunism, ritualism, policies, and processes. *Journal of Accounting Research*, 28(1), 121-143. <https://doi.org/10.2307/2491219>
21. Grougiou, V., Leventis, S., Dedoulis, E., & Owusu-Ansah, S. (2014). Corporate social responsibility and earnings management in U.S. banks. *Accounting Forum*, 38(3), 155-169. <https://doi.org/10.1016/j.accfor.2014.05.003>
22. Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics*, 7(1-3), 85-107. [https://doi.org/10.1016/0165-4101\(85\)90029-1](https://doi.org/10.1016/0165-4101(85)90029-1)

23. 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. <https://doi.org/10.2308/acch.1999.13.4.365>
24. Hong, Y., & Andersen, M. L. (2011). The relationship between corporate social responsibility and earnings management: An exploratory study. *Journal of Business Ethics*, 104(4), 461–471. <https://doi.org/10.1007/s10551-011-0921-y>
25. Hopwood, A. (2009). Accounting and the environment. *Accounting, Organizations and Society*, 34(3–4), 433–439. <https://doi.org/10.1016/j.aos.2009.03.002>
26. Huang, X. B., & Watson, L. (2015). Corporate social responsibility research in accounting. *Journal of Accounting Literature*, 34, 1–16. <https://doi.org/10.1016/j.acclit.2015.03.001>
27. Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193–228. <https://doi.org/10.2307/2491047>
28. Kim, Y., Park, M. S., & Wier, B. (2012). Is earnings quality associated with corporate social responsibility? *The Accounting Review*, 87(3), 761–796. <https://doi.org/10.2308/accr-10209>
29. Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163–197. <https://doi.org/10.1016/j.jacceco.2004.11.002>
30. Lamrani, E. M. (2012). Éthique et gestion du résultat comptable. *RIMHE: Revue Interdisciplinaire Management, Homme & Entreprise*, 1(2), 17–32. <https://doi.org/10.3917/rimhe.002.0017>
31. Litt, B., Sharma, D., & Sharma, V. D. (2014). Environmental initiatives and earnings management. *Managerial Auditing Journal*, 29(1), 76–106. <https://doi.org/10.1108/MAJ-05-2013-0867>
32. Loi n°2001-420 du 15 mai 2001 relative aux nouvelles régulations économiques [Law n°2001-420 of May 15, 2001 relating to new economic regulations]. Retrieved from <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000223114>
33. Makni Gargouri, R., Shabou, R., & Francoeur, C. (2010). The relationship between corporate social performance and earnings management. *Canadian Journal of Administrative Sciences*, 27(4), 320–334. <https://doi.org/10.1002/cjas.178>
34. Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *The American Journal of Sociology*, 83(2), 340–363. <https://www.jstor.org/stable/2778293>
35. Mezas, S. J. (1990). An institutional model of organizational practice: Financial reporting at the fortune 200. *Administrative Science Quarterly*, 35(3), 431–457. <https://doi.org/10.2307/2393312>
36. Morris, R. D., & Tronnes, P. C. (2018). The determinants of voluntary strategy disclosure: An international comparison. *Accounting Research Journal*, 31(3), 423–441. <https://doi.org/10.1108/ARJ-10-2015-0126>
37. Oliver, C. (1991). Strategic responses to institutional processes. *The Academy of Management Review*, 16(1), 145–179. <https://doi.org/10.2307/258610>
38. Oliver, C. (1997). The influence of institutional and task environment relationships on organizational performance: The Canadian construction industry. *Journal of Management Studies*, 34(1), 99–124. <https://doi.org/10.1111/1467-6486.00044>
39. Patten, D. M., & Trompeter, G. (2003). Corporate responses to political costs: An examination of the relation between environmental disclosure and earnings management. *Journal of Accounting and Public Policy*, 22(1), 83–94. [https://doi.org/10.1016/S0278-4254\(02\)00087-X](https://doi.org/10.1016/S0278-4254(02)00087-X)
40. Phillips, R., Freeman, R. E., & Wicks, A. C. (2003). What stakeholder theory is not. *Business Ethics Quarterly*, 13(4), 479–502. <https://doi.org/10.5840/beq200313434>
41. Prior, D., Surroca, J., & Tribo, J. (2008). Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility. *Corporate Governance: An International Review*, 16(3), 160–177. <https://doi.org/10.1111/j.1467-8683.2008.00678.x>
42. Quairel, F. (2004). Responsable mais pas comptable: Analyse de la normalisation des rapports environnementaux et sociaux. *Comptabilité Contrôle Audit*, 10(1), 7–36. <https://doi.org/10.3917/cca.101.0007>
43. Rahman, M., Abdul Rasid, S. Z., & Basiruddin, R. (2020). Does socially committed bank manager manipulate earnings through discretionary accruals? Empirical evidence from an emerging economy. *Journal of Sustainability Science and Management*, 15(8), 136–166. <https://doi.org/10.46754/jssm.2020.12.012>
44. Riahi-Belkaoui, A. (2003). The impact of corporate social responsibility on the informativeness of earnings and accounting choices. In *Advances in environmental accounting and management* (Vol. 2, pp. 121–136). [https://doi.org/10.1016/S1479-3598\(03\)02005-3](https://doi.org/10.1016/S1479-3598(03)02005-3)
45. Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370. <https://doi.org/10.2139/ssrn.477941>
46. Savage, A., Cataldo, A. J., & Rowlands, J. (2000). A multi-case investigation of environmental legitimation in annual reports. In *Advances in environmental accounting and management* (Vol. 1, pp. 45–81). [https://doi.org/10.1016/S1479-3598\(00\)01005-0](https://doi.org/10.1016/S1479-3598(00)01005-0)
47. Scholtens, B., & Kang, F.-C. (2013). Corporate social responsibility and earnings management: Evidence from Asian economies. *Corporate Social Responsibility and Environmental Management*, 20(2), 95–112. <https://doi.org/10.1002/csr.1286>
48. Setiawan, D., Prabowo, R., Arnita, V., & Wibawa, A. (2019). Does corporate social responsibility affect earnings management? Evidence from the Indonesian banking industry. *Business: Theory and Practice*, 20, 372–378. <https://doi.org/10.3846/btp.2019.35>
49. Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *The Academy of Management Review*, 20(3), 571–610. <https://doi.org/10.2307/258788>
50. Sun, N., Salama, A., Hussainey, K., & Habbash, M. (2010). Corporate environmental disclosure, corporate governance and earnings management. *Managerial Auditing Journal*, 25(7), 679–700. <https://doi.org/10.1108/02686901011061351>
51. Toukabri, M., & Jilani, F. (2013). Le rôle instrumental et incitatif du reporting Sociétal dans la gestion des résultats. *Global Journal of Management and Business Research*, 13(5), 24–39. Retrieved from <https://journalofbusiness.org/index.php/GJMBR/article/download/1154/1065/>
52. Yip, E., Van Staden, C., & Cahan, S. (2011). Corporate social responsibility reporting and earnings management: The role of political costs. *Australasian Accounting, Business and Finance Journal*, 5(3), 17–34. Retrieved from <https://ro.uow.edu.au/aabfj/vol5/iss3/3/>

APPENDIX

Table A.1. Sample composition

No.	Companies	Sectors	CAC 40 (2015)
1.	Air Liquide	Chemical industry	yes
2.	Alcatel-lucent	Technology	yes
3.	Alstom	Industrial goods and services	no
4.	Arkema	Chemical industry	no
5.	Bic	Household and care products	no
6.	Bonduelle	Food and beverage	no
7.	CGG (Veritas)	Oil and gas	no
8.	Danone	Food and beverage	yes
9.	Eiffage	Construction industry	no
10.	Essilor International	Health	yes
11.	Faurecia	Cars and equipments	no
12.	Hermes INTL	Household and care products	no
13.	Imerys	Raw materials	no
14.	Ingenico	Technology	no
15.	IPSEN	Health	no
16.	Lafarge	Construction industry	yes
17.	Legrand	Construction industry	yes
18.	L'Oréal	Household and care products	yes
19.	LVMH	Household and care products	yes
20.	MERSEN (Carbone Lorraine)	Industrial goods and services	no
21.	Michelin	Cars and equipment	yes
22.	Neopost	Industrial goods and services	no
23.	Nexans	Industrial goods and services	no
24.	Pernod-Ricard	Food and beverage	yes
25.	PSA Peugeot Citroën	Cars and equipment	yes
26.	Remy-Cointreau	Food and beverage	no
27.	Renault	Cars and equipment	yes
28.	Safran	Industrial goods and services	yes
29.	Saft	Industrial goods and services	no
30.	Saint Gobain	Construction industry	yes
31.	Sanofi	Health	yes
32.	Schneider-electric	Industrial goods and services	yes
33.	SEB	Household and care products	no
34.	Technicolor (Thomson)	Technology	no
35.	Technip	Oil and gas	yes
36.	Thalès	Industrial goods and services	no
37.	Total	Oil and gas	yes
38.	Valeo	Cars and equipment	no
39.	Vallourec	Raw materials	no
40.	Vinci	Construction industry	yes