

Lobbying on Accounting Regulation: Evidence from the Oil Industry*

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ABSTRACT

This work aims to identify the determining factors in the submission of comment letters to the International Accounting Standards Board (IASB) on the discussion paper Extractive Activities as a lobbying strategy in the context of accounting regulation. The results show that size is a determining factor in all models used, indicating that large oil companies are more likely to lobby. This tendency is especially evident for companies that are predominantly opposed to the IASB proposals, which suggests that the IASB's review/replacement of International Financial Reporting Standards 6 (IFRS 6) will be a complex process subject to pressure from oil companies to maintain the status quo.

Keywords: Lobbying. Accounting regulation. Oil industry. Accounting choices.

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1 INTRODUCTION

In the field of accounting regulation of oil exploration and production activities, the debate over which accounting model best captures economic transactions in the oil industry dates back to the 1960s and 1970s. Even in the U.S., which has been a pioneer in the development of the theoretical and normative frameworks of accounting in the oil industry, both the Securities and Exchange Commission (SEC) and Financial Accounting Standards Board (FASB) have disagreed with each other about the appropriate standards for the oil industry; as a result, two conflicting accounting methods have been allowed to coexist in the U.S.: the "successful efforts" method and the "full cost" method (Cortese, Irvine, & Kaidonis, 2009).

This scenario, in which oil companies can freely choose between two different accounting methods, was the result of an intense lobbying campaign by oil and gas companies that effectively pitted the FASB and the SEC against each other. On one side, the FASB defended the successful efforts method in its Statements of Financial Accounting Standard no. 19 - Financial Accounting and Reporting by Oil and Gas Producing Companies (SFAS 19); on the other side, the SEC defended the full cost method in its Regulation SX 4-10. The two accounting standards continue to coexist in the U.S. today.

The same situation exists within the context of international standard setting, wherein attempts since 1998 to develop a single international accounting standard for the oil industry have been unsuccessful. In 2004, the International Accounting Standards Board (IASB) issued International Financial Reporting Standards 6 - Exploration for and Evaluation of Mineral Resources (IFRS 6) to provide guidance to extractive companies listed in the European Union, which were required to adopt International Financial Reporting Standards (IFRS) in 2005. Although IFRS 6 provided general guidelines for the different accounting methods used by international companies in extractive industries, it did not address the merits of each method and did not indicate which method should be adopted by international companies.

More than six years have passed since the issuance of IFRS 6, and discussions relating to the issuance of definitive international accounting standards for extractive industries are still ongoing. In this regard, the discussion paper Extractive Activities (DPEA), which was published by the IASB as part of its IFRS 6 review/replacement project, presents and discusses ten key questions regarding the recognition, measurement and disclosure of financial events relating to extractive activities.

With respect to the accounting regulation process, this study is based on the economic theory of regulation and the proposition of Watts and Zimmerman (1978) that agents have economic incentives to influence regulatory bodies through lobbying to obtain regulatory standards that satisfy their interests. This study thus aims to answer the following research question: what are the determining factors in the submission of comment letters to lobby on accounting regulation of the oil industry?

The objective is to identify the determining factors in lobbying strategies in accounting regulation of the oil industry to ascertain the key features that cause interest groups comprising oil companies' financial statement preparers to try to influence the IASB by submitting comment letters to public comment period.

To achieve the proposed goal, multivariate data analysis techniques (binomial and multinomial logistic regressions and Poisson regression) are used to ascertain whether there is correlation between variables representing firms' characteristics and the submission of comments on the DPEA to the IASB. The study therefore aims to define the factors that determine the adoption of this lobbying strategy for the oil industry's accounting regulation process.

Econometric modeling is conducted for a sample comprising both lobbying oil companies (those that submitted comment letters to the IASB) and non-lobbying oil companies (those that did not submit comment letters) to identify the preponderant economic factors involved in the adoption of lobbying strategies by such interest groups (oil companies) before the IASB.

This research strategy has been used to identify the reasons for lobbying and the lobbying strategies adopted by various interest groups in numerous studies, including the studies of Dhaliwal (1982), Sutton (1984), Francis (1987), Deakin (1989), Kenny and Larson (1993), Tutticci, Dunstan and Holmes (1994), Weetman, Davie and Collins (1996), Georgiou and Roberts (2004), Asekomeh, Russel and Tarbert (2006), Hansen (2011) and Ginner and Arce (2012), among others.

In this regard, it is necessary to clarify that the concept of lobbying employed in this study is very particular and refers to explicit statements contained in comment letters submitted at public consultation on accounting standards, as in the case of the DPEA.

However, analysis of the *modus operandi* of the IASB in issuing an IFRS, for example, reveals that the lobbying process does not only occur via the submission of comment letters. A number of lobbying strategies are possible, including those listed below:

- (a) participation in meetings with board or staff members, whether formal or informal, in-person or remote (e.g., videoconferences);
- (b) participation in public sessions (round-tables) or field visits (outreach) during the established public comment period;
- (c) appointing members to the sponsor foundation and its various bodies, such as the board and its technical or advisory committees (e.g., the IFRS Advisory Council, IFRS Interpretation Committee and the new Accounting Standards Advisory Forum (ASAF), which is a consultative forum wherein members attempt to contribute to the development of globally accepted, high-quality normative standards) or even participation in different working groups;
- (d) funding for the sponsors of the regulatory bodies;
- (e) use of audit firms and professional associations as mediators before the board; and

(f) other strategies, including surveys and leafleting, among others. Orens, Jorissen, Lybaert and Tas (2011) developed a

schematic diagram that describes a set of lobbying strategies that can be used during different stages of the IASB's standard-setting process, as shown in Table 1.

Table 1 Methods of participation to influence the IASB

	Formal Lobbying Methods	Informal Lobbying Methods
Direct Lobbying Methods	<ul style="list-style-type: none"> ◆ Submission of public comment letters on proposed standards. ◆ Participation in project groups as consultants. ◆ Participation in public round-table discussions. 	<ul style="list-style-type: none"> ◆ Participation in private meetings or teleconferencing with Board members.
Indirect Lobbying Methods	<ul style="list-style-type: none"> ◆ Submission of comments to members of the IFRS Advisory Council (formerly known as the Standards Advisory Council – SAC). ◆ Submission of comments to the European Financial Reporting Advisory Group (EFRAG). 	<ul style="list-style-type: none"> ◆ Intermediation via an external auditor. ◆ Intermediation via associations.

Source: Orens, Jorissen, Lybaert and Tas (2011).

Notwithstanding this acknowledgment that ‘lobbying’ is a much more comprehensive concept in practice, due to methodological constraints, this study considers a lobbying strategy to be a strategy that uses the submission of public comment letters in response to public consultation of standard-setting bodies.

In defense of the use of comment letters to assess lobbying activities, Asekomeh et al. (2006) argue that unlike responses to questionnaires, which can be skewed/biased, comment letters provided in response to questions raised in public consultation provide a more accurate picture of lobbying actions because the statements contained in comment letters contribute significantly to the understanding of the position of each agent involved in the standard-setting process.

Georgiou (2004) investigated the effectiveness of multiple lobbying methods, including but not limited to comment letters. The results showed that even when parties used other lobbying methods – such as intermediation by audit firms and meetings with the UK’s Accounting Standards Board (UKASB) – these methods were significantly associated with use of comment letters. The author concluded that companies that submitted comment letters were more likely to use other, complementary lobbying methods than companies

that did not submit comment letters (Georgiou, 2004).

The selection for this study of the oil industry and, consequently, of the accounting standards applicable to the oil industry stems from the fact that historical evidence provided by Collins, Dent and O’Connor (1978); Solomons (1978); Deakin (1979); Collins, Rozeff and Salatka (1982); Deakin (1989); Zeff (2005); and King (2006), among others, has shown that the U.S. regulatory framework applicable to accounting in the oil industry emerged as a result of a strong lobbying system that exerted pressure and influence on the SEC and FASB. This phenomenon was also observed with respect to the issuance of IFRS 6 by the IASB. Specifically, Cortese, Irvine and Kaidonis (2010) presented evidence that demonstrated that the international accounting body was captured by the regulated companies, resulting in a standard that maintained the *status quo* (i.e., the free choice of accounting methods), which clearly serves the interests of the oil companies.

In this context, the publication of the DPEA provides another opportunity to observe lobbying by oil companies to influence the IASB’s regulation of oil industry accounting. This is the basis for this study and the reason why it is important.

2 THEORETICAL FRAMEWORK

According to Viscusi, Harrington and Vernon (2005), the theory of regulation can be viewed from three angles: the public interest theory; the capture theory; and the economic theory of regulation, which is also known as the interest group theory. This study adopts the perspective of the economic theory of regulation.

The basic assumption of the economic theory of regulation is that regulation is conducted to meet the needs and contribute to the welfare of the interest groups that exert the greatest pressure on standard setters (Viscusi, Harrington & Vernon, 2005). Given this assumption, the economic theory of regulation is also known as the interest group theory. The main expo-

nents of the economic theory of regulation are researchers Stigler (1971), Posner (1974), Peltzman (1976) and Becker (1983).

According to the economic theory of regulation, regulation is performed to serve the interests of groups that are more politically effective in convincing regulators to act on their behalf. Watts and Zimmerman (1978, 1986), in line with Stigler (1971), Peltzman (1976) and Posner (1974), assume that individuals act to maximize their own utility and, therefore, that the process of accounting regulation (standardization) is the result of a political process in which individuals and groups compete for wealth transfers.

Stigler (1971) and Peltzman (1976) argue that economic

theory in the political process focuses on incentives for individuals to come together in groups in order to lobby (influence regulators) for transfers of wealth. Thus, according to Solomons (1978), assuming that the standard-setting process is political, accounting standards are not necessarily guided by theoretical or technical issues but by the different interests of the affected parties, who exert pressure for individual gain.

According to Kothari, Ramanna and Skinner (2010), regulators are endowed with their own ideologies, and standards are the joint result of the regulators' ideologies and the effects of the pressure (lobbying) exerted by special interest groups. Under this theory, lobbying is not viewed as an illegal or immoral activity but as a mechanism through which regulators are informed of companies' policies and practices.

The studies on lobbying in accounting regulation can be considered a subset of the studies on accounting choice (Francis, 1987; Kenny and Larson, 1993) because, according to Francis (2001), lobbying activities represent only one dimension of accounting choice.

According to Fields, Lys and Vincent (2001), an accounting choice is a decision whose primary purpose is to influence (in form or in substance) the output of the accounting system. Based on this definition, the theory of accounting choice is linked with the theory of interest groups because accounting choice is based on various existing economic incentives, and such incentives are present in the regulation process itself. Thus, managers lobby the standard-setting body at the origin of standard development to obtain standards that meet their interests from the outset.

Watts and Zimmerman (1986) formulated three hypotheses regarding firms' accounting choices that are relevant to the accounting regulation process: (1) the management compensation hypothesis, which states that managers have incentives to make choices that maximize their compensation; (2) the debt covenant hypothesis, which predicts that managers will make choices that avoid violating the terms of a loan; and (3) the political cost hypothesis, which posits that managers make accounting choices that will avoid political and public scrutiny.

More specifically, the management compensation hypothesis, also known as the bonus plan hypothesis, states that managers who receive variable compensation (e.g., bonuses, stock or stock options) often use accounting methods that shift reported earnings from future periods to the current period, thereby increasing their variable compensation for the current period (Watts and Zimmerman, 1986).

Regarding the debt covenant hypothesis, Watts and Zimmerman (1986) argue that managers of companies that have higher degrees of debt are more likely to use accounting methods that increase profits. The assumption is that the higher the debt level, the more

the company will be stifled by restrictions and conditions imposed by creditors, and the more stringent the restrictions imposed by creditors, the greater the likelihood that the company will violate the restrictions. By increasing company profits, managers ultimately relax the restrictions imposed by creditors (Watts and Zimmerman, 1986).

Under the political cost hypothesis, the authors assert that large companies tend to use accounting methods that reduce profits more often than small companies, because size influences the amount of political attention received by a company. The assumption is that higher profits may attract adverse attention from regulators, professional associations, media, environmentalists and consumer groups, among others (Watts and Zimmerman, 1986).

Watts and Zimmerman (1978, 1986) argue that regulation is performed according to the interests of groups that are more politically effective in convincing the regulator/standard setter to act on their behalf, which accords with the economic theory of regulation (Stigler 1971, Peltzman, 1976, Posner, 1974; Becker, 1983).

By aligning accounting choice with the process of accounting regulation, managers have economic incentives to lobby regulators against or for accounting standards that enable the managers to, e.g., reduce or defer the payment of taxes; reduce political costs and information production (disclosure); or increase the receipt of bonuses.

Watts and Zimmerman (1978) empirically tested the formulated hypotheses using discriminant analysis on a sample of 52 comment letters submitted by companies on the FASB discussion memorandum regarding the accounting standard for general price level adjustments, and they concluded that managers have economic incentives to participate in the standard-setting process by lobbying the regulator.

Several other studies on the subject of lobbying on accounting regulation have been conducted based on the work of Watts and Zimmerman (1978). For example, Francis (1987) and, later, Ndubizu, Choi and Jain (1993) investigated the issuance process of SFAS 87 (Employers' Accounting for Pensions). In the first study, Francis (1987) formulated a logit model that was applied to a sample of 218 companies that submitted comment letters on the FASB's preliminary views of SFAS 87 (lobbying companies) and 582 other companies (non-lobbying companies). The authors formulated hypotheses for size, debt (as a proxy for the effects of the standard on the balance sheet) and pension expense (as a proxy for the effects of the standard on the financial statement). The results indicated that size is not the only important factor in the decision to lobby a standard-setting body; rather, there is also the possibility that the new standard will have adverse effects on financial statements.

Ndubizu et al. (1993) investigated the exposure draft step of SFAS 87 using a sample of 1,802 firms, including 156 lobbying companies who spoke against the exposure draft and 1,646 other (non-lobbying) companies. The results of Ndubizu et al. (1993) differed from those reported by Francis (1987) in that Ndubizu et al. (1993) found that only earnings volatility – a variable not included in the previous study – was relevant in explaining the decision to submit comments on the exposure draft. This result confirmed the formulated hypothesis that companies with high earnings volatility prior to the adoption of a new standard are more likely to lobby.

Deakin's (1989) work sought to study the process of accounting regulation in the oil industry for companies that made submissions to the FASB. The author used a sample of companies that used the full cost method because these companies would be most affected by the FASB proposal. To define the dependent variable, the author classified companies as lobbying (those submitting comments on the FASB discussion memorandum or exposure draft) and non-lobbying (those not submitting any comments). The author used a logistic regression model to test hypotheses related to the existence of restrictive financial covenants and performance-based management compensation plans and found that the empirical evidence was consistent with these hypotheses.

Also noteworthy is the study by Georgiou and Roberts (2004) that analyzed the behavior of companies that lobbied the UKASB on the "deferred tax" standard. Their results indicated that the size and behavior of a company in past public consultation (frequency of lobbying) were key factors in the decision to submit comments to the UKASB on deferred taxes. Their results also indicated that companies submitting comments against the proposed standard were more likely to have contracts with debt covenants than companies in favor of the proposed standard.

Finally, their evidence showed that companies with performance-based management compensation plans were more likely to provide comments in favor of the proposal than companies without performance-based management compensation plans (Georgiou and Roberts, 2004).

More recently, the process of lobbying on accounting regulation has been studied from the perspective of institutional theory (Bengtsson, 2011; Chatham, Larson and Vietze, 2010; Fogarty, 1992; Giner and Arce, 2012; Kenny and Larson, 1993; Koh, 2011; Larson 2002, 2008; Larson and Kenny, 2011). This theory suggests that the actions of organizations should be understood as attempts to obtain legitimacy and to maintain credibility with external constituents (Fogarty, 1992).

Tavares, Paulo, Anjos and Carter (2013) reiterated Riahi-Belkaouri's (2004) assertion that the promulgation of a standard is a social choice that forces regulators to adopt a political process aimed at accommodating various interests, including their own. In other words, according to institutional theory, the regulator is motivated to adopt strategies that will maintain its power and credibility in the community and facilitate the re-election of its members.

Institutional theory places organizations within a social setting and explicitly recognizes the influence of the external social environment on the internal activities of an organization, which seeks to obtain legitimacy or to retain social acceptance (Kenny and Larson, 1993).

In this context, organizations such as the IASB seek legitimacy from their constituents in order to survive. The solicitation of comments on its products (accounting standards) from interested parties is one strategy employed by the IASB in its quest for legitimacy (Kenny and Larson, 1993).

Consequently, various interest groups, which also seek legitimacy and recognition from their peers, can freely participate in the standard-setting process of these regulatory bodies, even when the interest groups are not directly affected by a normative proposal (Chatham et al., 2010).

Given that the standard-setting process is a political one, organizations such as the IASB must continuously monitor the needs of their constituents and adjust their operations to accommodate those needs (Kenny and Larson, 1993; Larson and Kenny, 2011).

According to Bengtsson (2011), institutional theory has been used in studies on accounting standard setting to complement the explanatory framework of political economy (from which the economic theory of regulation follows), and the focus of these studies has been on how external pressures influence the adoption of accounting standards.

Because this study is based on a discussion paper (the DPEA), it is not yet possible to know which opinions will ultimately be accepted or rejected by the IASB. To understand the accommodations that are made, this study uses the assumptions of institutional theory to complement the notions that participation in the public consultation process (lobbying) is legitimate and that companies seek to promote their accounting choices in the regulatory process. The study then turns to the economic theory of regulation to identify factors that lead companies to participate in the regulatory process.

A summary of the major studies on the topic is shown in Table 2.

Table 2 *Studies on lobbying in accounting regulation*

Study	Objective
MacArthur (1988)	Investigate whether the submission of comments to the UKASB (on 28 proposals) is related to any economic issue (impact on accounting numbers) or political issue (political costs hypothesis).
Fogarty (1992)	Analyze the existence and operating process of the FASB using institutional theory.
Kenny and Larson (1993)	Investigate lobbying on the exposure draft regarding joint ventures.
Meier, Alam and Pearson (1993)	Investigate lobbying undertaken by audit firms on seven proposed standards affecting banks and savings and loan associations.
Tutticci, Dustan and Holmes (1994)	Understand the Australian standard-setting due process by performing content analysis of submissions on the exposure draft regarding intangible assets.
Weetman, Davie and Collins (1996)	Answer questions such as (a) Can the strategies of lobbyists be identified? (b) What are the possible reasons why non-lobbying companies do not submit comments?
Tandy and Wilburn (1996)	Investigate the participation of the academic community in the standard-setting process by analyzing letters submitted on the discussion memorandums and exposure drafts for SFAS 1-117.
Larson (1997)	Investigate the characteristics of respondents and analyze significant differences between lobbying companies and non-lobbying companies with regard to company size, country of origin of the respondents (13 countries) and listing on stock exchanges (U.S.).
McLeay, Ordelheide and Young (2000)	Examine the impact of lobbying activities on German accounting regulation with respect to the positions of preparers, auditors and scholars.
Hill, Shelton and Stevens (2002)	Investigate lobbying activities in the issuing process of SFAS 123 (Accounting for Stock-Based Compensation)
Larson (2002)	Establish a framework based on institutional theory for evaluating whether the Standing Interpretations Committee (SIC) has been effective and legitimate.
Georgiou (2004)	Analyze the effectiveness of lobbying during different stages of the regulatory process, i.e., earlier stages (formation of the discussion agenda of the board) and later stages (period of public consultation regarding the draft standard).
Georgiou (2005)	Capture the trend in lobbying strategy by companies over the long-term by analyzing a series of events (setting of several standards) over time.
Larson (2008)	Investigate whether political pressures rather than highly technical discussions decisively affected the issuance of SIC 12, which addresses the consolidation of special purpose entities. This study is grounded on institutional theory.
Chatham, Larson and Vietze (2010)	Analyze the comments submitted on the discussion paper regarding financial instruments to identify the main issues cited by respondents, in light of the fact that the European Union rejected full adoption of IAS 39, which in turn required additional effort by the IASB to reverse the situation. This study is grounded on institutional theory.
Georgiou (2010)	Investigate the nature and volume of participation by UK investment fund managers in the standard-setting process of the IASB during 2001-2006.
Stenka and Taylor (2010)	Understand the complexity of lobbying activities on four exposure drafts. Lobbyists are classified into two groups (corporate and non-corporate) and analyses are performed with the use of ANOVA and univariate regression.
Hansen (2011)	Provide evidence on how the IASB generates its standards in the presence of lobbyists with different preferences. Comment letters (629 letters) submitted during five public consultation organized by the IASB were used.
Larson and Kenny (2011)	Investigate the behavior of the IASB when issuing accounting standards regarding voluntary financial donations received from its constituents.
Bengtsson (2011)	Use institutional theory to investigate how the IASB responded to political pressure from the European Union following the global financial crisis as observed based on financial instrument standards.
Koh (2011)	Examine the characteristics of firms regarding the decision to lobby or not. For firms that submitted opinions on the FASB stock option standard, the study analyzed whether lobbying was for or against the standard under discussion.
Giner and Arce (2012)	Analyze the behavior of lobbyists based on institutional theory and evaluate lobbyists' influence on the decisions of the IASB regarding IFRS 2.
Tavares, Anjo, Paulo and Carter (2013)	Investigate the most frequent opinions submitted to the IASB/FASB regarding Revised Exposure Draft – Revenue from Contracts with Customers.
Matos, Gonçalves, Niyama, e Marques (2013)	Investigate whether standards with a higher level of inconsistency with local GAAPs were changed/approved in accordance with the geographical participation of the IASB board member.
Oliveira, Costa Júnior, e Silva (2013)	Analyze the public consultation process of the Accounting Pronouncements Committee (Comitê de Pronunciamentos Contábeis - CPC) during 2007 to 2011. The study concludes that the CPC focused its efforts on obtaining maximum convergence with IFRS.

The cited studies, especially those by Watts and Zimmerman (1978), Francis (1987), Deakin (1989), Ndubizu et al. (1993) and Georgiou and Roberts (2004) are methodologically aligned with the objective of this

3 METHODOLOGY

The following research strategies are used to identify the determinant factors of lobbying activity on accounting regulation in the oil industry.

Based on the 141 comment letters published by the IASB on its website, the first step is to perform content analysis of the letters submitted by oil companies to measure the dependent variable used in the econometric models.

The second step of the study is based on quantitative analysis and uses econometric models to identify the economic factors that determine the adoption of a lobbying strategy that employs the submission of comment letters.

Depending on the characteristics of the dependent variable, binomial and multinomial logistic regressions and Poisson regression are used. In the case of binomial regressions, the dependent variable takes a value of "1" where comments on the DPEA have been submitted and a value of "0" otherwise.

In multinomial logistic regression, the dependent variable is decomposed into three categories: "0" to represent companies that submitted no comments on the DPEA; "1" to represent the companies that submitted predominantly favorable comments; and "2" to represent companies that submitted predominantly unfavorable comments.

Finally, Poisson regression is employed when the dependent variable is intended to express the degree of agreement or disagreement with the ten questions presented in the DPEA. Thus, it can take values from zero, in the case of companies that submitted no comments, up to ten, which represents the maximum number of times a company could agree or disagree with the proposals addressed in the DPEA questions.

3.1 Definition of Variables and Research Hypotheses.

As stated earlier, the dependent variable used as a proxy for lobbying refers to the explicit statements contained in comment letters submitted to the public consultation on the DPEA. This model has been widely used in accounting studies on lobbying, including studies by Watts and Zimmerman (1978), Francis (1987), Deakin (1989), Ndubizu et al. (1993) and Georgiou and Roberts (2004).

In this study, lobbying strategies are limited to comment letters because the use of other lobbying strategies to measure the dependent variable usually involves private information, which makes modeling difficult to implement (Holthausen and Leftwich, 1983). Although the exclusive use of comment letters is an inherent limitation of the present study, several studies have defended this modeling

work, which is to establish the determining factors that led oil companies to submit comments on the DPEA, i.e., to lobby.

approach, including Asekomeh et al. (2006), Chung (1999), Sutton (1984) and Georgiou (2004). Thus, this modeling approach is adopted for the present study.

Accordingly, depending on the type of regression used, the dependent variable has the characteristics listed in Table 3.

Table 3 Characteristics of the dependent variable

Binomial Logistic Regression		Poisson Regression			
		Extent of Favorability		Extent of Unfavorability	
Code	Frequency	Code	Frequency	Code	Frequency
0	127	0	127	0	127
1	25	1	0	1	2
Multinomial Logistic Regression		2	3	2	2
		3	3	3	3
Code	Frequency	4	9	4	5
0	127	5	4	5	3
1	13	6	2	6	6
2	12	7	1	7	1
		8	2	8	3
		9	1	9	0
		10	0	10	0

Regarding the independent variables, size has often been used in the literature on lobbying on accounting regulation to express a company's exposure (political cost hypothesis) (Watts and Zimmerman, 1978; Francis, 1987; Deakin, 1989; Ndubizu, Choi and Jain, 1993 and Georgiou and Roberts, 2004).

Size has also been associated with the hypothesis that a lobbying strategy is only adopted if the benefits of lobbying outweigh the costs (Sutton, 1984). In this sense, Koh (2011) states that because large companies have more resources, they usually tend to influence the final result and hence reap the benefits of lobbying.

To operationalize the size variable, the following four proxies were used: net revenue for the period (NETREV); total assets for the period (TOTASS); average net profit for the last three periods (AVPROF); and exploration and development costs incurred in the period (UPSTREAM). The test hypothesis for size is defined as:

H₁: Large oil companies are more likely to lobby, whether for or against the proposed standard, than other oil companies.

The extant literature presents two other variables representing economic incentives for accounting choice (in this case, the decision to lobby the standard-setting body). First, it is assumed that managers of companies with performance-based compensation plans that de-

pend on indicators derived from financial information tend to choose accounting models that benefit themselves. In other words, these companies will opt for proposed standards that incorporate accounting methods that increase or diminish profits, according to their respective interests.

The second characteristic is the existence of restrictive debt covenants. This theory holds that managers tend to choose accounting standards that result in the non-violation of those covenants. Thus, the closer the company is to a covenant threshold based on accounting numbers, the greater the probability that the manager will use accounting procedures that increase revenue and/or reduce the level of debt (Holthausen and Leftwich, 1983).

To operationalize these two characteristics, the MANCOMP and COVENANT binary variables are used, which take the value of "0" in cases in which the company does not have the characteristic of interest and the value of "1" in cases in which the company has the characteristic of interest. These variables are measured by searching the explanatory notes to companies' financial statements (available on their websites) for references to the existence (or absence) of performance-based management compensation plans and restrictive debt covenants.

These variables can be operationalized in different ways, and the binary coding of "0" or "1" for these variables based on the existence or absence of the testable characteristic is a limitation of the study. This is because the manner in which binary variables are operationalized cannot properly capture the magnitude of the characteristic they aim to investigate. Deakin (1989), Georgiou and Roberts (2004), Georgiou (2005) and Koh (2011) are examples of studies that offer alternative methods of operationalizing these variables.

The testable hypotheses are:

H₂: Oil companies with performance-based management compensation plans are more likely to lobby, whether in favor of or against the proposed standard, than oil companies without performance-based management compensation plans.

H₃: Oil companies with restrictive debt covenants are more likely to lobby, whether in favor of or against the proposed standard, than oil companies without restrictive debt covenants.

To capture the risk of possible changes in the accounting regulation of the oil industry, the test model also considers the USLISTING and METHOD variables. Current international accounting regulation applicable to extractive activities is based on the IFRS 6 standard, which states that extractive companies can freely define their respective accounting policies. In practice, IFRS 6 does not mandate any specific method for asset recognition and measurement. As a result, companies subject to international standards ultimately choose between one of the two best-known international ac-

counting methods, namely, the successful efforts and full cost methods, both of which were established by the United States.

Such an attitude can be understood from the perspective of institutional theory and the concept of mimetic isomorphism in particular. According to the concept of mimetic isomorphism, organizations tend to copy the practices of other organizations, particularly within the same industry, even when the organizations are not required to follow specific standards (Koh, 2011).

The adoption of the successful efforts or full cost method is therefore a global reality and facilitates the publication of financial statements by non-US companies in the U.S. when, for example, non-U.S. companies are traded on the New York stock exchange.

The use of the USLISTING variable aims to capture the risk of possible changes in accounting regulation from the perspectives of both U.S. companies and non-U.S. companies whose stocks are traded on the U.S. market.

In the case of U.S. companies, although there is no clear expectation that the U.S. will adopt the IFRS for U.S. companies, the evidence shows that the participation of U.S. companies in the process of IASB standard-setting is relevant; in some cases, U.S. companies are the parties with the greatest involvement in IASB public consultation (Larson, 1997; Larson and Kenny, 2011; Giner and Arce, 2012).

In the present study, 27 letters (19%) of the 141 letters received by the IASB on the DPEA were from interested U.S. parties. Thus, U.S. parties were second only to European parties, who submitted 76 letters.

Giner and Arce (2012) analyzed the IFRS 2 issuance process and showed that 264 of the 539 letters received by the IASB were submitted by U.S. companies. They argued that the strong participation by U.S. companies in the IASB's standard-setting process was motivated by fears about the possibility that the FASB and SEC will change their position regarding the adoption of IFRS for domestic companies (Giner and Arce, 2012).

From the perspective of non-U.S. companies that adopt IFRS, Larson (1997) and Georgiou (2005) argued that changes in international standards can increase transaction costs by requiring accounting adjustments and the disclosure of additional information to meet the needs of U.S. investors. Thus, non-U.S. companies have an incentive to lobby the IASB to maintain the *status quo*.

Therefore, this study considers that U.S. oil companies and oil companies that trade on the U.S. stock market have an incentive to lobby the IASB to maintain the *status quo*, i.e., to maintain the companies' freedom to choose between the successful efforts and full cost methods, and thereby avoid the possible transaction costs associated with convergence to new standards. The test hypothesis corresponds to:

H₄: Oil companies listed on the U.S. stock market are

more likely to lobby against the proposed standard than oil companies not listed on the U.S. stock market.

One of the proposals under consideration by the IASB establishes a new method for asset recognition and measurement applicable to extractive activities and eliminates the choice between the successful efforts and full cost methods.

The IASB's proposal would establish that the legal right to exploit natural resources is the key basis for the recognition of assets and that other costs incurred to confirm and ensure the commercial exploitation of resources are enhancements of that legal right. Thus, this scenario is a departure from the experience of companies accustomed to the successful efforts or full cost method.

Zeff (2002) argued that the setting of a new standard that eliminates choice or imposes additional disclosure requirements is a trigger for constituents to put pressure on the standard setter to meet their needs. This argument is also found in Saemann (1999), who maintained that such a scenario typically leads interested parties to oppose the standard setter's proposals.

Tavares et al. (2013) argued that regulation restricts accounting choice to the extent that the regulator has the power to decide the accounting policies that regulated companies should follow.

In this context, the DPEA proposal eliminates oil companies' choice by establishing a single method of asset re-

cognition and measurement. Thus, under Zeff's (2002) theory, companies have an incentive to lobby the IASB to maintain the *status quo*. This incentive is also supported in Watts and Zimmerman (1978, 1986), who argue that financial statement preparers consider the potential impact of a new accounting approach on expected future cash flows when deciding whether to lobby.

As discussed in Santos, Lopes and Silva (2010), companies that follow the successful efforts method would be most affected by the proposal in the DPEA because adoption of this proposal would lead to significant changes in the accounting policies of these companies. Accordingly, it is expected that companies using the successful efforts method are more likely to lobby against the proposals in the DPEA.

Thus, the METHOD variable aims to determine whether there is an association between the choice of the successful efforts method (labeled "1") and the probability of submitting comments against the DPEA. The testable hypothesis corresponds to:

H₅: Oil companies using the successful efforts method are more likely to lobby against the proposed standard than oil companies using the full cost method.

3.2 Specification of Econometric Models.

The reasoning presented above leads to the following econometric model:

$$PROB(LOBBYING_i) = \frac{1}{1 + e^{-\left(\alpha_0 + \beta_1 NETREV_i + \beta_2 TOTASS_i + \beta_3 AVPROF_i + \beta_4 UPSTREAM + \beta_5 MANCOMP_i + \beta_6 COVENANT_i + \beta_7 USLISTING_i + \beta_8 METHOD_i + \varepsilon_i\right)}}$$

where i represents the company, and LOBBYING takes the value "1" for companies who submitted comments on the DPEA and the value "0" for companies that did not submit comments. The error term of the regression is indicated by parameter ε ; α is the intercept; and $\beta_1, \beta_2, \beta_3, \dots, \beta_8$ are the estimated coefficients, which are expected to be statistically significant and positive.

According to Favero, Belfiore, Silva and Chan (2009),

$$\ln \left[\frac{PROB(LOBBYING = 1|X)}{PROB(LOBBYING = 0|X)} \right] = \alpha_1 + \beta_1 NETREV_i + \beta_2 TOTASS_i + \beta_3 AVPROF_i + \beta_4 UPSTREAM + \beta_5 MANCOMP_i + \beta_6 COVENANT_i + \beta_7 USLISTING_i + \beta_8 METHOD_i + \varepsilon_i$$

$$\ln \left[\frac{PROB(LOBBYING = 2|X)}{PROB(LOBBYING = 0|X)} \right] = \alpha_1 + \beta_1 NETREV_i + \beta_2 TOTASS_i + \beta_3 AVPROF_i + \beta_4 UPSTREAM + \beta_5 MANCOMP_i + \beta_6 COVENANT_i + \beta_7 USLISTING_i + \beta_8 METHOD_i + \varepsilon_i$$

where LOBBYING assumes a value of "0" for companies that did not submit comments on the DPEA; "1" for companies that submitted comments that were predominantly in favor of the DPEA; and "2" for companies that submitted comments that were predominantly against the DPEA.

The analyses are conducted by comparing (1) com-

panies that submitted predominantly favorable comments to companies that did not submit comments and (2) companies that submitted predominantly unfavorable comments to companies that did not submit comments (Favero, Belfiore, Silva and Chan, 2009).

The multinomial logistic regression has the following specification:

panies that submitted predominantly favorable comments to companies that did not submit comments and (2) companies that submitted predominantly unfavorable comments to companies that did not submit comments (Favero, Belfiore, Silva and Chan, 2009).

The Poisson regression model uses the following specification:

$$LOBBYING_i = \frac{\mu^{LOBBYING} e^{-\left(\alpha_1 + \beta_1 NETREV_i + \beta_2 TOTASS_i + \beta_3 AVPROF_i + \beta_4 UPSTREAM_i + \beta_5 MANCOMP_i + \beta_6 COVENANT_i + \beta_7 USLISTING_i + \beta_8 METHOD_i\right)}}{LOBBYING!} + u_i$$

where LOBBYING assumes values ranging from "0" to "10", with "0" assigned to companies that did not submit comments on the DPEA and "10" being the maximum possible value of agreement (or disagreement) with respect to the DPEA.

To exemplify the use of these three models, suppose that a company submitted comments on the DPEA and that the company's responses to the 10 questions comprised 7 responses against the proposed standards and 3 responses in favor of the proposed standards. In the first model (binomial logistic regression), the company would be coded as "1" (submitted comments); in the multinomial logistic regression model, it would receive code "2" (predominantly against the proposed standards); and, finally, in the Poisson regression it would be coded as "3" in the "lobbying in favor" panel and "7" in the "lobbying against" panel.

3.3 Sample Characteristics.

Because the sample must contain both lobbying and non-lobbying companies, oil companies that submitted comment letters on the DPEA were identified. The IASB received 141 comment letters, of which 39 (28%) were submitted by extractive companies and 33 (23%) were submitted by non-governmental entities. The group comprising national issuers, accounting profession entities and capital market regulators contributed 25 letters (18%). The groups comprising investors/individual users, oil industry consulting firms/professional associations and audit firms submitted 17, 12 and 8 comment letters, respectively. Eight other letters were submitted by various stakeholders.

Of the 39 comment letters submitted to the IASB by extractive companies, 28 of the letters were from oil companies and 11 were from mining companies. Thus, the initial

focus was on these 28 oil companies, 3 of which could not be used due to the unavailability of information necessary for the study.

The database of Evaluate Energy[®], which is a leading consultancy firm that provides information about the oil and gas industry, was consulted. Because the DPEA was in public consultation from April to July 2010, industry information for 2009 was used. The Evaluate Energy[®] database had 2009 information from 262 companies in the oil industry.

Because the Evaluate Energy[®] database does not include information necessary to operationalize the MANCOMP and COVENANT variables, a random selection from the 237 companies in the database (excluding the 25 already pre-selected to represent lobbying companies) was conducted to select non-lobbying companies.

To define the sample size for the random selection, the expression $n = N \times n_0 / N + n_0$ was used, in which $n_0 = 1 / E_0^2$, where n_0 is the first approximation of sample size; E_0^2 is the tolerable sampling error; N is the size of target population; and n is the sample size. Thus, for a target population (N) of 237 and tolerable sampling error (E_0^2) of 6%, we arrive at 127 companies, which, when added to the 25 lobbying companies, yields a final sample of 152 oil and gas companies.

The sample comprises companies of different sizes, as shown in Table 4. For example, the average net revenue (NETREV) in 2009 was (in logarithmic values) USD 8.84 million. However, there is considerable variation between the minimum value of USD 2.42 million and the maximum value of USD 12.54 million, which provides a standard deviation of USD 1.95 million. The same behavior is observed for other variables, such as the average net profit (AVPROF), which range from a minimum value of USD 1.60 million to a maximum value of USD 20.7 million.

Table 4 Descriptive statistics of continuous variables

Variable (in USD millions)	Mean	Median	Minimum	Maximum	Standard Deviation	KS Test p-value
NETREV	8.843	9.001	2.422	12.536	1.947	0.953
UPSTREAM	0.945	6.338	-20.720	10.083	11.550	0.000
AVPROF	12.787	12.719	1.596	20.703	4.009	0.994
TOTASS	9.520	9.603	4.378	12.694	1.579	0.984

Note: NETREV: net revenue for the period; UPSTREAM: exploration and development costs incurred in the period; AVPROF: average net profit for the last three periods; TOTASS: total assets for the period; KS test: Kolmogorov-Smirnov test of normality (p-value > 0.05).

Although the assumption of normality of the residuals is not a requirement for logistic regression, the continuous variables were natural-log transformed to achieve a normal distribution in an effort to mitigate possible "scale effects" in the regressions. As shown in Table 4, after transformation, only the UPSTREAM variable remained non-normally distributed.

Regarding the dichotomous variables (Table 5), 25 of the 152 sampled companies provided comments on the DPEA to the IASB, corresponding to 16% of the sample. For the purposes of this study, these 25 companies are characterized as lobbying companies, whereas the remaining companies in the sample are considered non-lobbying companies.

Table 5 Descriptive statistics of dichotomous variables

Variable	Value "0"	Value "1"	Total
LOBBYING	127	25	152
	84%	16%	100%
COVENANT	41	111	152
	27%	73%	100%
COMPGEN	40	112	152
	26%	74%	100%
METHOD	74	78	152
	49%	51%	100%
USLISTING	64	88	152
	42%	58%	100%

Note: LOBBYING: "0" if no comments were submitted and "1" if comments were submitted; COVENANT: "0" if no covenant is present and "1" if covenant is present; MANCOMP: "0" if no performance-based management compensation plan is present and "1" if performance-based management compensation plan is present; METHOD: "0" if company uses the full cost method and "1" if company uses the successful efforts method; USLISTING: "0" if company does not trades on the U.S. stock market and "1" if company trades on the U.S. stock market.

Regarding the COVENANT and MANCOMP variables, the sampled companies have almost the same distribution among those that have covenants (73%) or performance-based management compensation plans

(74%) and those that do not.

As for the accounting methods used by companies in the sample, the results are balanced, with 51% of companies using the successful efforts method and 49% using the full cost method. Companies with stocks traded on the U.S. stock market constitute a majority of the sample, corresponding to 88 companies, or 58% of the sample.

Regarding the correlation between the variables, Table 6 shows that variables relating to size exhibit a reasonably statistically significant association with the dependent variable LOBBYING, with correlation ranging from 24% to 42%. Unexpectedly, such association is not observed with the other variables.

The correlation between the explanatory variables allows an inference on the assumption of multicollinearity. Specifically, the results show that the variables relating to size feature high degrees of significant associations, especially among NETREV, AVPROF and TOTASS, ranging from 77% to 89%, which indicates a possible violation of the assumption of multicollinearity.

Table 6 Pearson correlation matrix

	LOBBYING	NETREV	UPSTREAM	AVPROF	TOTASS	COVENANT	MANCOMP	METHOD
LOBBYING	1							
NETREV	0,335 **	1						
UPSTREAM	0,245 **	-0,004	1					
AVPROF	0,422 **	0,767 **	0,363 **	1				
TOTASS	0,400 **	0,894 **	0,269 **	0,882 **	1			
COVENANT	0,070	-0,265 **	0,148	-0,203 *	-0,194 *	1		
MANCOMP	0,104	-0,197 *	0,084	-0,181 *	-0,181 *	0,445 **	1	
METHOD	0,148	0,130	0,363 **	0,266 **	0,236 **	0,031	0,016	1
USLISTING	0,127	-0,236 **	0,226 **	-0,066	-0,155	0,412 **	0,489 **	0,075

Note: LOBBYING: "0" if no comments were submitted and "1" if comments were submitted; NETREV: Net revenue for the period; UPSTREAM: exploration and development costs incurred in the period; AVPROF: Average net profit for the last three periods; TOTASS: total assets for the period; COVENANT: "0" if no covenant is present and "1" if covenant is present; MANCOMP: "0" if no performance-based management compensation plan is present and "1" if performance-based management compensation plan is present; METHOD: "0" if company uses the full cost method and "1" if company uses the successful efforts method; USLISTING: "0" if company does not trades on U.S. stock market and "1" if company trades on the U.S. stock market. Significance: ** (1%) and * (5%).

As a result of the above, a model was developed containing all proxies for size, and the Variance Inflation Factor (VIF) test was performed to analyze the assump-

tion of multicollinearity. Other models were then constructed with only one of these proxies to provide robustness to the analyses.

4 ANALYSIS OF RESULTS

It can be said that oil companies that submitted comment letters (lobbying companies in this study) were in favor of the proposals presented in four of ten the questions in the DPEA (the 1st, 6th, 7th and 8th questions), as shown in Table 7.

Companies were largely in favor of the notion that the scope of an extractive activities IFRS should be limited to upstream activities (1st question), and unanimously agreed that historical cost should be the basis for measuring the assets of the extractive sector, as opposed

to the assets' fair value (6th question). On this point, it is important to note that the DPEA working group argued that although fair value would offer the best representation of relevant economic events and would provide more useful information to users, measurement based on fair value would be very complex and subjective. Accordingly, the DPEA working group concluded that historical cost should be the basis used by financial statement preparers, due to the lack of a better choice.

Table 7 Analysis of companies' positioning toward the DPEA

QUESTION # 1				QUESTION # 2				QUESTION # 3			
Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total
18	2	5	25	9	10	6	25	11	13	1	25
72%	8%	20%	100%	36%	40%	24%	100%	44%	52%	4%	100%
QUESTION # 4				QUESTION # 5				QUESTION # 6			
Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total
6	19	0	25	12	12	1	25	25	0	0	25
24%	76%	0%	100%	48%	48%	4%	100%	100%	0%	0%	100%
QUESTION # 7				QUESTION # 8				QUESTION # 9			
Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total
14	9	2	25	13	11	1	25	6	19	0	25
56%	36%	8%	100%	52%	44%	4%	100%	24%	76%	0%	100%
QUESTION # 10				SUMMARY				MAINTENANCE OF THE STATUS QUO			
Agrees	Disagrees	NA	Total	Agrees	Disagrees	NA	Total	YES	NO	NA	Total
1	23	1	25	115	118	17	250	107	39	4	150
4%	92%	4%	100%	46%	47%	7%	100%	71%	26%	3%	100%

Note: NA - did not answer the question. The list of questions is provided in Annex 1.

The majority of lobbying companies also agreed with the propositions relating to the applicability of the IAS 36 standard (7th question) and the objectives of financial statements prepared by extractive companies (8th question).

However, the results show largely unfavorable positions with respect to the question regarding the possible adoption of a new and unique accounting method (and the implied elimination of the successful efforts and full cost methods) (4th question), as well as with respect to questions regarding proposals to increase the level of disclosure in the explanatory notes of financial statements (9th and 10th questions).

The main arguments presented by companies opposed to the adoption of a new accounting method and increased disclosure requirements were that the concept of assets contained in the DPEA damaged the conceptual framework by allowing costs that are unrelated to future economic benefits to be recognized; that the increased disclosure requirements would mandate the disclosure of too much information; and that the costs of producing the information required to be disclosed under the proposal in the DPEA would outweigh the benefits of its disclosure.

A review of all of the comments shows that there is almost a stalemate, with 115 opinions in favor of the propositions contained in the DPEA and 118 opinions against. However, when considering only the propositions that imply changes in the *status quo* (the establishment of a new asset recognition method, the adoption of the fair value basis, and an increase in mandatory disclosure items, i.e., the 4th, 5th, 6th, 7th, 9th and 10th questions), the results show that companies lobbied to reject any possibility of changing the *status quo*. Specifically, 107 opinions (71%) were in favor of maintaining the current situation, and only 39 (26%) argued in favor of the changes proposed in the DPEA.

These findings are consistent with the finding by Kenny and Larson (1993) that lobbying companies act to avoid any change to the *status quo*, as well as with the

argument of Holthausen and Leftwich (1983) that possible changes to the *status quo* affect managers' decisions whether to lobby on accounting regulation.

Therefore, one can infer that the oil companies' current asset recognition model and the current disclosure requirements satisfy the needs of the oil companies. Thus, institutional theory suggests that any change to the *status quo* would have to be well "tailored" by the IASB to accommodate the needs of its diverse constituents, including the constituents most affected by the proposed changes, i.e., the oil companies.

To ascertain the main characteristics that led oil companies to submit comment letters on the DPEA, multivariate data analysis was conducted on the results described above. The logistic regression results are expressed in five regressions (Table 8). The first regression considers all model variables, whereas the remaining regressions each consider one of the selected variables for the size hypothesis.

Using a chi-square distribution, which is analogous to the *F* test for multiple regression, it is clear that the model variables are collectively significant from a statistical point of view, with an estimated likelihood ratio of 35.296 and a *p*-value of 0.000. Therefore, there is at least one nonzero coefficient at the 1% level.

The Nagelkerke measure resembles the R^2 of a multiple regression and is used to measure the goodness-of-fit of the model. The result shows that the model has an explanatory power of 40.8%. Because this study is interested in the statistical significance of the coefficients of the variables used, and not necessarily in making predictions, this goodness-of-fit is consistent with the proposed objectives.

Another way to analyze the goodness-of-fit of the model is to check the extent to which the model correctly classifies events considering the cutoff point used, which in this study is 16.5% (i.e., the percentage of sampled companies that present the event of interest). The results indicate that the model correctly classified 76.3% of cases.

Table 8 Results of binomial logistic regression
$$PROB(LOBBYING_i) = \frac{1}{1 + e^{-(\alpha_0 + \beta_1 SIZE_i + \beta_2 MANCOMP_i + \beta_3 COVENANT_i + \beta_4 USLISTING_i + \beta_5 METHOD_i + \epsilon_i)}}$$

Coef.	Variables	Expected Sign	Regression 1			Regression 2		Regression 3		Regression 4		Regression 5	
			Coef.	Sign.	VIF	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.
α	CONSTANT		-10.858	0.002	-	-7.408	0.000	-2.264	0.007	-7.905	0.000	-11.359	0.000
β_1	NETREV	+	-0.022	0.959	7.485	0.689	0.000****	-	-	-	-	-	-
β_2	UPSTREAM	+	0.047	0.452	1.881	-	-	0.173	0.097*	-	-	-	-
β_3	AVPROF	+	0.348	0.023**	5.137	-	-	-	-	0.468	0.000***	-	-
β_4	TOTASS	+	0.258	0.590	10.857	-	-	-	-	-	-	1.019	0.000***
β_5	COVENANT	+	0.732	0.393	1.406	0.724	0.267	-0.017	0.978	0.767	0.262	0.731	0.280
β_6	MANCOMP	+	1.151	0.144 †	1.483	0.671	0.340	0.494	0.475	1.208	0.109 †	0.919	0.209
β_7	METHOD	+	-0.126	0.824	1.183	0.451	0.383	0.283	0.564	-0.029	0.958	0.164	0.762
β_8	USLISTING	+	0.209	0.744	1.522	0.553	0.347	0.261	0.653	0.255	0.676	0.376	0.534
Chi-Square Test			41.946	0.000***		28.833	0.000***	16.568	0.005***	40.553	0.000***	35.932	0.000***
Nagelkerke R ²				40.8%			29.2%		17.5%		39.6%		35.6%
"Correctly Predicted" Cases				76.3%			76.3%		59.9%		75.7%		77.6%
ROC Curve				86.9%			80.9%		81.2%		86.1%		84.5%
Number of Observations				152			152		152		152		152

Note: NETREV: net revenue for the period; UPSTREAM: exploration and development costs incurred in the period; AVPROF: average net profit for the last three periods; TOTASS: total assets for the period; COVENANT: "0" if no covenant is present and "1" if covenant is present; MANCOMP: "0" if no performance-based management compensation plan is present and "1" if performance-based management compensation plan is present; METHOD: "0" if company uses the full cost method and "1" if company uses the successful efforts method; USLISTING: "0" if company does not trades on U.S. stock market and "1" if company trades on the U.S. stock market. VIF: variance inflation factor test. Significance: *** (1%), ** (5%), * (10%) and † (15%).

The ROC (Receiver Operating Characteristic) curve, which measures a model's discriminatory power, was also used to evaluate model fit. With a value of 86.9%, the final model specification has excellent discriminatory power according to the classifications of Favero et al. (2009), who state that an ROC curve less than or equal to 0.5 (50%) indicates no discrimination; an ROC curve between 0.5 and 0.8 (80%) indicates acceptable discrimination; and an ROC curve greater than 0.8 indicates excellent discrimination.

The results show that only the AVPROF variable is statistically significant within normally used levels. Because the estimated coefficient was greater than zero, the interpretation is that the higher the company's average net profit, the greater the likelihood that the company will lobby by comment letter. The estimated coefficient indicates that an increase of USD 1 million in average net profit increases the logit by 0.348 or, calculating the antilogarithm, an increase in net profit increases the likelihood of lobbying by a factor of 1.416.

It is also possible to determine that the MANCOMP variable showed marginal statistical significance of 14.4%, which, although it is outside the usual levels, may be considered relevant depending on the risk.

Given the high correlation observed between the independent variables, especially those representing size (as shown in Table 6), the VIF test was used to formally evaluate the assumption of multicollinearity. As suspected, this assumption was not met, due to the high VIF values for TOTASS and NETREV. The issue is that highly correlated independent variables provide similar information to explain and predict the dependent variable, which makes it difficult to separate the effects of each independent variable and causes one of them to lose significance in the

explanation of the phenomenon under analysis (Corrar, Paulo, & Dias Filho, 2007).

Because the presence of multicollinearity tends to distort the estimated slope coefficients, thereby hindering the assessment of the real effect of the independent variable on the phenomenon under investigation, the regression results of the first model are biased. This may explain the lack of statistical relevance of some of the independent variables and may even explain the negative sign of NETREV.

To work around this issue, new models were constructed, each including only one of the size variables. When variables related to size were placed in the model separately, each of them was statistically significant and the sign of the coefficient was as expected, which confirms the effect of multicollinearity.

The general parameters of the regressions remained practically stable from a qualitative point of view, which, when considering all of the variables, suggests that the models are statistically significant, in accordance with the likelihood ratio tests. Nagelkerke's R² of the models was between 17.5% and 39.6%, and the ROC curves showed excellent discrimination (except for model 2, which had only acceptable discrimination - 66%).

The marginal relevance of the MANCOMP (10.9%) variable was observed again in model 4, which included the AVPROF variable as proxy for size. This suggests that oil companies with performance-based management compensation plans are more likely to lobby via comment letters than oil companies without performance-based management compensation plans. Further, oil companies with performance-based management compensation plans were more likely to lobby by a factor of 3.347 (antilogarithm of 1.208) compared

to companies without performance-based management compensation plans.

The results support acceptance of the political cost hypothesis developed by Watts and Zimmerman (1978), according to which large companies tend to lobby on accounting legislation to obtain results that are more favorable to them. The results are also consistent with the findings of Francis (1987), Deakin (1989) and Georgiou and Roberts (2004) regarding size. Thus, there is no evidence to reject hypothesis H_1 based on binomial logistic regression modeling.

The binomial logistic regression also supports (albeit less convincingly) the theoretical hypothesis presented in the literature that company managers who receive performance-based compensation that depends on financial indicators tend to lobby on legislation to obtain the accounting models that best benefit them.

The econometric model used here and in the majority of the studies on lobbying (Francis, 1987; Deakin, 1989; Ndubizu et al, 1993; Georgiou and Roberts, 2004) has been criticized because the binary dependent variable used in the

model cannot capture the extent of the respondent's position (Holthausen and Leftwich, 1983). Rather, the variable only captures whether comments are submitted (code 1) or not (code 0), or whether companies were in favor of (1) or against (0) the proposal.

Because the DPEA has ten questions, respondents may have provided comments in response to all of the questions or only to some of them, and may have been in favor of some of the proposals but against others. These situations are not captured by the binomial logistic regression model. To address this issue, a multinomial logistic regression model was used, the results of which are shown in Table 9.

The multinomial logistic regressions are arranged in two blocks. The first set contains the results of the comparison between oil companies in favor of the DPEA proposals and oil companies that did not submit comments on the DPEA, whereas the results of the second block refer to the comparison between oil companies opposed to the proposals in the DPEA and oil companies that did not submit comments.

Table 9 Results of multinomial logistic regression

$$\ln \left[\frac{\text{PROB}(\text{LOBBYING} = 1|X)}{\text{PROB}(\text{LOBBYING} = 0|X)} \right] = \alpha_1 + \beta_{1-4} \text{SIZE}_i + \beta_5 \text{MANCOMP}_i + \beta_6 \text{COVENANT}_i + \beta_7 \text{USLISTING}_i + \beta_8 \text{METHOD}_i + \varepsilon_i$$

$$\ln \left[\frac{\text{PROB}(\text{LOBBYING} = 2|X)}{\text{PROB}(\text{LOBBYING} = 0|X)} \right] = \alpha_1 + \beta_{1-4} \text{SIZE}_i + \beta_5 \text{MANCOMP}_i + \beta_6 \text{COVENANT}_i + \beta_7 \text{USLISTING}_i + \beta_8 \text{METHOD}_i + \varepsilon_i$$

Coef.	Variables	Expected Sign.		Regression 6		Regression 7		Regression 8		Regression 9	
				Coef.	Sign.	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.
α	CONSTANT		Predominantly in Favor of DPEA	-6.952	0.002***	-3.360	0.000***	-8.285	0.000***	-10.010	0.000***
β_1	NETREV	+		0.352	0.067*	-	-	-	-	-	-
β_2	UPSTREAM	+		-	-	0.073	0.153	-	-	-	-
β_3	AVPROF	+		-	-	-	-	0.323	0.003***	-	-
β_4	TOTASS	+		-	-	-	-	-	-	0.639	0.012**
β_5	COVENANT	+		0.838	0.341	0.485	0.581	0.952	0.281	0.869	0.321
β_6	MANCOMP	+		0.776	0.391	0.730	0.422	1.180	0.206	0.960	0.294
β_7	METHOD	+		0.433	0.481	0.152	0.808	-0.015	0.982	0.154	0.808
β_8	USLISTING	+		0.026	0.970	-0.365	0.599	-0.164	0.813	-0.054	0.938
α	CONSTANT		Predominantly Against of DPEA	-18.242	0.000***	-14.568	0.000***	-17.044	0.000***	-23.972	0.000***
β_1	NETREV	+		1.394	0.000***	-	-	-	-	-	-
β_2	UPSTREAM	+		-	-	1.451	0.001***	-	-	-	-
β_3	AVPROF	+		-	-	-	-	0.801	0.000***	-	-
β_4	TOTASS	+		-	-	-	-	-	-	1.844	0.000***
β_5	COVENANT	+		0.770	0.404	-0.270	0.772	0.800	0.411	0.775	0.434
β_6	MANCOMP	+		0.286	0.788	0.663	0.564	1.312	0.240	0.763	0.496
β_7	METHOD	+		0.276	7.488	-0.330	0.700	-0.154	0.859	0.057	0.951
β_8	USLISTING	+		1.212	0.257	1.027	0.438	0.858	0.412	1.126	0.313
Chi-Square Test				41.759	0.000***	39.107	0.000***	49.798	0.000***	47.089	0.000***
Nagelkerke R ²				35.6%		33.6%		41.4%		39.5%	
"Correctly Predicted" Cases				84.9%		86.8%		86.8%		86.2%	
Number of Observations				152		152		152		152	

Note: NETREV: net revenue for the period; UPSTREAM: exploration and development costs incurred in the period; AVPROF: average net profit for the last three periods; TOTASS: total assets for the period; COVENANT: "0" if no covenant is present and "1" if covenant is present; MANCOMP: "0" if no performance-based management compensation plan is present and "1" if performance-based management compensation plan present; METHOD: "0" if company uses the full cost method and "1" if company uses the successful efforts method; USLISTING: "0" if company does not trades on the U.S. stock market and "1" if company trades on the U.S. stock market. Significance: *** (1%), ** (5%) and * (10%).

In view of the multicollinearity issue, the multinomial logistic regressions were performed separately for each independent variable for size. The general parameters of the four regression models are valid because the chi-square test reveals a statistical significance at the 1% level. The goodness-of-fit of the models according to Nagelkerke's *pseudo* R² varies between 33% and 41%, which are adequate values for this study. Finally, over 85% of cases were correctly predicted, which indicates a good fit of the regressions performed.

Analyzing the estimated coefficients, the results show that the size variables in each model, apart from the constant, were statistically significant in both blocks of results (except for UPSTREAM in the first block), which reinforces the findings on the political cost hypothesis. It can therefore be inferred that large oil companies are more likely to lobby via comment letters than other oil companies.

A closer look at the likelihood of lobbying via comment letters indicates that this trend is greater for companies lobbying against the proposal, as demonstrated by the results obtained with increased net revenue. On the one hand, an increase in net revenue (NETREV) increases the likelihood of lobbying in favor of a proposal relative to not lobbying by a factor of 1.421 (antilogarithm of 0.352). On the other hand, there is a 4.031 factor increase in the likelihood of lobbying against a proposal relative to not lobbying when net revenue increases.

The same behavior is observed with respect to increases in AVPROF (increases the likelihood of lobbying in favor by a factor of 1.381 compared with a factor of 2.227 for lobbying against) and TOTASS (increases the likelihood of lobbying in favor by a factor of 1.895 compared with a factor of 6.321 for lobbying against). In the case of exploration costs (UPSTREAM), the likelihood of lobbying is observed only if the lobbying is against the

proposals presented.

The results obtained by multinomial logistic regression give robustness to the consideration of size as a determining economic factor for companies to lobby via comment letters. Thus, there is still no evidence to reject hypothesis H₁.

For modeling using Poisson regression (Table 10), regressions were performed considering the extent to which oil companies lobbied in favor of the proposals contained in the DPEA as opposed to not lobbying (panel A) and the extent to which companies lobbied against the proposals contained in the DPEA as opposed to not lobbying (panel B).

The results contained in Table 10 show that all general parameters of the regressions performed can be considered valid because the statistical significance of the chi-square test was within the 1% level. In addition, McFadden's R² ranged from 13% to 35%, which is a relatively low goodness-of-fit but consistent with the objectives of this study.

Starting with an analysis of the results that consider the extent to which companies lobbied in favor of the DPEA proposals (panel A), the net revenue (NETREV), average net profit (AVPROF) and total assets (TOTASS) variables show statistical significance and once again give robustness to the consideration of size as indicative of companies' likelihood to lobby via comment letters.

It is also possible to show the statistical significance of the MANCOMP variable in the presence of the NETREV, AVPROF and TOTASS variables. This result was suggested somewhat in the binomial logistic regression analyses, and the Poisson regression confirms those analyses, demonstrating that this characteristic (having a performance-based management compensation plan) is relevant to lobbying in favor of the DPEA.

Table 10 Results of Poisson regression

$$LOBBYING_i = \frac{\mu^{LOBBYING} e^{-(\alpha_1 + \beta_1 SIZE_i + \beta_2 MANCOMP_i + \beta_3 COVENANT_i + \beta_4 USLISTING_i + \beta_5 METHOD_i)}}{LOBBYING!} + u_i$$

Panel A: Lobbying in Favor of DPEA										
Coef.	Variables	Expected Sign.	Regression 10		Regression 11		Regression 12		Regression 13	
			Coef.	Sign.	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.
α	CONSTANT		-5.089	0.002***	-1.892	0.314	-5.740	0.000***	-7.510	0.000***
β ₁	NETREV	+	0.373	0.007***	-	-	-	-	-	-
β ₂	UPSTREAM	+	-	-	0.159	0.441	-	-	-	-
β ₃	AVPROF	+	-	-	-	-	0.290	0.000***	-	-
β ₄	TOTASS	+	-	-	-	-	-	-	0.589	0.000***
β ₅	COVENANT	+	0.551	0.378	0.150	0.773	0.624	0.284	0.602	0.320
β ₆	MANCOMP	+	0.950	0.139 †	0.952	0.159	1.271	0.035**	1.096	0.070*
β ₇	METHOD	+	0.182	0.707	-0.046	0.915	-0.224	0.648	-0.004	0.993
β ₈	USLISTING	+	0.001	0.998	-0.243	0.603	-0.247	0.585	-0.146	0.757

continuous

continued

Chi-Square Test	49.003	0.000***	41.021	0.000***	34.856	0.000***	42.237	0.000***		
McFadden R ²	13.2%		13.8%		23.4%		18.4%			
Number of Observations	152		152		152		152			
Panel B: Lobbying Against DPEA										
Coef.	Variables	Expected Sign	Regression 14		Regression 15		Regression 16		Regression 17	
			Coef.	Sign.	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.
α	CONSTANT		-7.224	0.000***	-2.190	0.470	-6.844	0.000***	-10.139	0.000***
β_1	NETREV	+	0.608	0.000***	-	-	-	-	-	-
β_2	UPSTREAM	+	-	-	0.232	0.537	-	-	-	-
β_3	AVPROF	+	-	-	-	-	0.373	0.000***	-	-
β_4	TOTASS	+	-	-	-	-	-	-	0.855	0.000***
β_5	COVENANT	+	0.413	0.401	-0.214	0.701	0.377	0.404	0.390	0.423
β_6	MANCOMP	+	0.111	0.853	0.045	0.946	0.525	0.338	0.311	0.553
β_7	METHOD	+	0.278	0.536	0.282	0.528	-0.045	0.913	0.169	0.710
β_8	USLISTING	+	0.665	0.228	0.600	0.265	0.394	0.421	0.476	0.363
Chi-Square Test	25.343	0.000***	45.651	0.000***	23.623	0.000***	19.001	0.000***		
McFadden R ²	28.5%		16.5%		35.1%		33.9%			
Number of Observations	152		152		152		152			

Note: NETREV: net revenue for the period; UPSTREAM: exploration and development costs incurred in the period; AVPROF: average net profit for the last three periods; TOTASS: total assets for the period; COVENANT: "0" if no covenant is present and "1" if covenant is present; MANCOMP: "0" if no performance-based management compensation plan is present and "1" if performance-based management compensation plan is present; METHOD: "0" if company uses the full cost method and "1" if company uses the successful efforts method; USLISTING: "0" if company does not trades on U.S. stock market and "1" if company trades on the U.S. stock market. Significance: *** (1%), ** (5%), * (10%) and † (15%).

When the dependent variable considers the extent to which the company lobbied against the DPEA proposals, the results of the Poisson regression also point to the statistical relevance of the NETREV, AVPROF and TOTASS variables.

This evidence also supports Watts and Zimmerman's (1978) political cost hypothesis, i.e., large companies tend to lobby to obtain regulation that is more favorable to them. In the case of the Poisson regression, an analysis of the coefficients indicates that the propensity to reject a proposal in the DPEA is greater than the propensity to accept a proposal in the DPEA; therefore, lobbying is conducted to reject any change to the *status quo*.

Interestingly, exploration costs (UPSTREAM) were not significant in either of the Poisson regression models (regressions 11 and 15), which is inconsistent with expectations.

Based on the Poisson regression results, it appears that regardless of the extent to which a company was in favor of or against the DPEA proposals, size and the existence of a performance-based management compensation plan (marginally) represent determining factors for lobbying by the oil companies. This finding indicates that com-

panies with these characteristics tend to have a lobbyist posture, either for or against accounting regulations regarding extractive activities, which supports the theory developed throughout this study.

With respect to the formulated test hypotheses, there is no evidence to reject hypothesis H₁, and hypothesis H₂ cannot be completely ruled out.

This study attempted to establish a conclusive analysis regarding the variables representing size, because these variables serve to explain the same phenomenon and are highly correlated. For that purpose, this study conducted technical factor analysis (Table 11) to establish a factor representative of size that could be used as a dependent variable in binomial and multinomial logistic regressions and in Poisson regression.

Factor analysis assumptions were met: normality of the variables (except for UPSTREAM); significant correlations between NETREV, UPSTREAM, AVPROF and TOTASS variables; adequacy of the sample to factor analysis, with a Kaiser-Meyer-Olkin (KMO) measure of 0.826; and, finally, inequality between the correlation matrix and the identity matrix, with Bartlett's sphericity test being highly significant ($p < 0.001$).

Table 11 Regressions after factor analysis

		Binomial Logistic Regression		Multinomial Logistic Regression				Poisson Regression			
				Predominantly in Favor of DPEA		Predominantly Against DPEA		Lobbying in Favor of DPEA		Lobbying Against DPEA	
Variables	Expected Sign	Regression 18		Regression 19		Regression 20		Regression 21		Regression 22	
		Coef.	Sign.	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.	Coef.	Sign.
CONSTANT		-1.379	0.000***	-3.601	0.000***	-4.643	0.000***	-1.474	0.016**	-1.255	0.047**
SIZE	+	1.076	0.000***	0.697	0.036**	1.446	0.000***	0.445	0.000***	0.595	0.000***
COVENANT	+	0.776	0.294	0.778	0.380	0.772	0.481	0.550	0.337	0.418	0.420
MANCOMP	+	0.884	0.251	0.904	0.326	0.672	0.571	0.949	0.141 †	0.072	0.902
METHOD	+	0.280	0.594	0.367	0.554	0.059	0.946	0.119	0.801	0.196	0.678
USLISTING	+	-0.022	0.971	-0.301	0.663	0.592	0.594	-0.338	0.509	0.267	0.635
Chi-Square Test		30.194	0.000***	38.492		0.000***		50.017	0.000***	40.312	0.000***
Nagelkerke R ²		30.5%		33.2%				-		-	
McFadden R ²		-		-				11.8%		25.1%	
Number of Observations		152		152				152		152	

Note: SIZE: variable resulting from factor analysis, which is based on the values of the coefficients of the factor scores of each of the NETREV, UPSTREAM, AVPROF and TOTASS variables; COVENANT: "0" if no covenant is present and "1" if covenant is present; MANCOMP: "0" if no performance-based management compensation plan is present and "1" if performance-based management compensation plan is present; METHOD: "0" if company uses the full cost method and "1" if company uses the successful efforts method; USLISTING: "0" if company does not trades on U.S. stock market and "1" if company trades on the U.S. stock market. Significance: *** (1%), ** (5%), * (10%) and † (15%).

Principal component analysis (PCA) was used to obtain the factors. PCA seeks to summarize most of the variance of the variables in a minimum number of factors. Using the Kaiser criterion (discarding eigenvalues less than 1 due to their insignificance), it was possible to define a single factor that explained 86.1% of data variance. The results of factor analysis are presented in Appendix 1.

Thus, based on the values of the coefficients of the factor scores for each of the four variables (NETREV, UPSTREAM, AVPROF and TOTASS), the factor analysis establishes a new predictor variable named "SIZE". New regressions were generated using this variable; the results are shown in Table 11.

5 CONCLUSIONS

The results are robust and support the fact that there are determining factors in the adoption of lobbying strategies by oil companies regarding established (or proposed) accounting regulations. The results also confirm the political cost hypothesis (the size hypothesis) advocated by Watts and Zimmerman (1978), which holds that large companies tend to lobby standard setters on accounting regulation to obtain standards that meet their needs.

The size factor was modeled using different approaches and proved relevant in all econometric models used, which supports the hypothesis that large oil companies are more likely to lobby. This trend was especially evident for companies that were predominantly opposed to the proposals in the DPEA.

The evidence also indicates, in a marginal way, that oil

The results demonstrate and confirm the previous findings that size is a relevant feature that increases the likelihood that a company will lobby via comment letter. In all cases (regressions 18 to 22), the size variable was statistically significant. Analyzing the coefficients obtained, the likelihood is greater that lobbying in general will be against the DPEA proposals.

However, this configuration does not confirm the relevance of management compensation plans (MANCOMP) to the likelihood of lobbying via comment letter. In the situations tested, there was statistical significance only when the extent of agreement (disagreement) with the DPEA proposals was tested using Poisson regression (regression 21), and such significance was marginal.

companies with performance-based management compensation plans are more likely to lobby than other oil companies, as was previously demonstrated by Watts and Zimmerman (1978), Deakin (1989) and Georgiou and Roberts (2004).

By combining the results, one can infer that large companies in the oil industry will lobby against changes to the *status quo* when the IASB attempts to introduce new accounting regulations for the oil industry. In other words, financial statement preparers are in favor of the use of historical cost as the basis for asset value and the freedom to choose between two different accounting methods (successful efforts and full cost). Furthermore, they are opposed to changes that would increase disclosure requirements.

From the perspective of institutional theory, the

IASB's due process for standard setting seeks high levels of participation by its constituents at all stages of standard development to make the standard-setting process more neutral and legitimate. At the same time, according to the economic theory of regulation, companies participate in the due process of standard setting to obtain standards that benefit themselves.

Therefore, considering that standard-setting by the IASB is a political process characterized by the interaction of numerous conflicting interests, it is expected that the review/replacement of IFRS 6 by the IASB will be complex and subject to significant pressure from oil companies to maintain the *status quo*. All of this reinforces Larson's (2002) argument that due to external and political factors, the IASB may adopt less neutral positions to accommodate its constituents' interests; it also supports the possibility that the review/replacement of IFRS 6 by the IASB could be captured by the oil industry, as suggested by Cortese, Irvine, and Kaidonis (2010).

The results presented in this study pertain only to oil companies and cannot be generalized to other economic sectors or to the overall IASB standard-setting process. However, the econometric models used in this study can be generalized and reproduced in other studies, particularly the models that use multinomial and Poisson regressions, which are new to research on lobbying on accounting regulation.

Although the concept of lobbying used here has been widely used in the accounting literature, it limits

the results of this study, given that the submission of comment letters to the IASB's public consultation was the only lobbying activity considered. Therefore, other modeling studies could be conducted to expand on the present study; for example, future studies could use questionnaires and interviews to include other forms of lobbying in the analysis, similar to the work performed by Georgiou (2004).

In addition, it is important to note that the proxies used to define firms' characteristics are not necessarily limited to those used here, and other economic determinants may be possible. Moreover, the variables used here – especially the variables relating to restrictive covenants (COVENANT) and management compensation (MANCOMP) – may take on other dimensions. For example, instead of assuming only binary values (0 or 1), the MANCOMP variable could be modeled as a continuous variable representing, e.g., the percentage of a manager's total compensation attributable to variable compensation, based on the hypothesis that a greater dependence on variable compensation makes it more likely that the manager will make accounting choices that benefit him or her.

Finally, the limitations inherent in the use of the Evaluate Energy® database must be reported because it is necessary to consider the possibility of errors in data entry (as is true with respect to all databases). Thus, judgments regarding the integrity of the database may represent researcher bias.

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ANNEX 1

Questions presented by the IASB in the discussion paper Extractive Activities

Question # 1: Do you agree that the scope of an extractive activities IFRS should include only upstream activities for minerals, oil and gas?

Question # 2: Do you agree that there should be a single accounting and disclosure model that applies to both the minerals industry and the oil and gas industry?

Question # 3: Do you agree that the mineral reserves and resource definitions established by the Committee for Mineral Reserves International Reporting Standards and that oil and gas reserve and resource definitions established by the Society of Petroleum Engineers (together with other industry bodies) should be used in an IFRS for extractive activities?

Question # 4: Do you agree that legal rights, such as rights of exploration and extraction, should be the basis for recognizing mineral or oil and gas assets and that the information obtained from subsequent exploration and evaluation activities and development works to access minerals or oil and gas deposits should be treated as enhancements of these legal rights?

Question # 5: Do you agree that the geographical boundary of the unit of account for a minerals or oil and gas property should be defined initially based on the exploration rights held, and that as exploration, evaluation and development activities take place, the unit of account would contract progressively until it becomes no greater than a single area or group of contiguous areas for which the legal rights are held and which is expected to generate largely independent cash flows?

Question # 6: Do you agree that minerals and oil and gas assets should be measured based on historical cost but that detailed information should be disclosed to enhance the relevance of the financial statements?

Question # 7: Do you agree that exploration properties should not be tested for impairment in accordance with IAS 36 and that an exploration property should be written down to its recoverable amount in those cases where management has enough information to make this determination?

Question # 8: Do you agree that the disclosure goals for extractive activities are to enable users of financial statements to evaluate: (a) the value attributable to an entity's minerals or oil and gas assets; (b) the contribution of these assets to current period financial performance; and (c) the nature and extent of the risks and uncertainties associated with these assets?

Question # 9: Do you agree that information to be disclosed in the explanatory notes of financial statements should include: (a) quantities of proved reserves and proved plus probable reserves, with reserve quantities disclosed separately by commodity and material geographical area; (b) the main assumptions used in estimating reserves quantities and a sensitivity analysis; (c) a reconciliation of changes in reserve quantity estimates from year to year; (d) a current value measurement that corresponds to reserves quantities disclosed with a reconciliation of changes in current value measurement from year to year; (e) separate identification of the exploration, development and production cash flows for the current period and as a time series over a defined period (for example, five years); and (f) separate identification of production revenues by commodity?

Question # 10: Do you believe that a requirement to disclose the payments made by an entity to governments on a country-by-country basis is justifiable on cost-benefit grounds?

APPENDIX 1

Factor Analysis Results

Table *KMO, Bartlett and Communalities test*

Measures	Value	Communalities			
		Variables	Initial	Extraction	
Kaiser-Meyer-Olkin (KMO) Test	Sample Adequacy	0.826	NETREV	1.000	0.878
			UPSTREAM	1.000	0.805
Bartlett's Sphericity Test	Chi-Square	607.017	AVPROF	1.000	0.864
	df	6	TOTASS	1.000	0.896
	Significance	0.000			

Table *Eigenvalues and percentage of variance explained by factors*

Components	Initial Eigenvalues			Percentage of Explained Variance		
	Total	% of Variance	% Accumulated	Total	% of Variance	% Accumulated
1	3.443	86.080%	86.080%	3.443	86.080%	86.080%
2	0.270	6.749%	92.829%			
3	0.192	4.797%	97.627%			
4	0.095	2.373%	100.000%			

Table *Factor loadings and coefficient matrix of factor scores*

Factor Loadings		Matrix of Coefficients of Factor Scores	
Variables	Component1	Variables	Component1
NETREV	0.937	NETREV	0.272
UPSTREAM	0.897	UPSTREAM	0.261
AVPROF	0.929	AVPROF	0.270
TOTASS	0.946	TOTASS	0.275