

## PERCEPTION OF FINANCIAL ANALYSTS ABOUT THE RELEVANCE OF INFORMATION IN THE ELECTRIC SECTOR

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(Free translation of the original version in Portuguese)

### ABSTRACT

The main objective of this research is to analyze the perceptions of investment analysts and credit analysts regarding the information of the corporate and regulatory accounting information of the electricity sector. Questionnaires were sent, in the period of February until April 2017, to 56 financial analysts indicated on the websites of the electric energy firms. The response rate was 46%, that is, a survey obtained 26 respondents of which 14 are investment analysts and 12 credit analysts. The results showed that: i) the items in the income statement are more relevant than the balance sheet items; ii) investment analysts consider a regulatory income statement more suitable for their analyses and credit analysts; iii) a perception of impairment for an analysis, due to the delay in disclosure of regulatory statements, was greater for investment analysts than the credit analyst; and iv) the current format for disclosure of financial information of electricity firms is not considered ideal for financial analysts.

**Keywords:** Relevance of accounting information. Regulatory accounting. Corporate accounting. Electrical sector.

### 1 INTRODUCTION

In November 2009, Brazilian entity Accounting Pronouncements Committee (CPC, in the Portuguese abbreviation) prepared technical interpretation ICPC 01 – Concession Contracts, which regulated the accounting method for concessionaires. After approval by the Securities and Exchange Commission of Brazil (CVM, in the Portuguese abbreviation) no. 611/2009, ICPC 01 became mandatory for Brazilian publicly-held corporations as from 2010.

Before this technical interpretation, the energy sector infrastructure would be accounted for as a fixed asset. After the regulation, the information preparers began to disclose the public infrastructure of the concession agreement as a financial asset and/or an intangible asset.

In December 2010, in order to clarify doubts about ICPC 01, guidance OCPC 05 – Concession Contracts was issued. For the electric sector, OCPC 05 established that the accounting processing that best reflects the transmission companies' operations is the recognition of the infrastructure as a financial asset, since the activity has the unconditional right of receiving cash or any other financial asset from the granting authority. On the other hand, distribution and

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generation companies tend to be more suited to the bifurcated model, that is, partly accounted for as a financial asset and partly as an intangible asset (OCPC 05 – items 63 to 130, 2010).

Brazilian government Electricity Regulatory Agency (ANEEL, in the Portuguese abbreviation) has not approved all the changes caused by the adoption of the above standards. The agency then instituted a regulatory accounting through Normative Resolution ANEEL No. 396/2010, which reformulated the Accounting Manual of the Electric Sector (MCSE, in the Portuguese abbreviation), in order to meet the regulatory agency's needs.

ANEEL, through Normative Resolution No. 605 dated March 11, 2014 has approved the updating of the Accounting Manual of the Electric Sector with the intention of including a new chart of accounts for the sector. Beginning in 2015, concessionaires were required to present the most complete regulatory statements, including explanatory notes and an independent audit report. Previously, ANEEL would only require the disclosure of accounts that would be impacted due to differences in accounting practices.

In November 2014, OCPC 08 guidance was issued, aiming to address the requirements for initial registration and subsequently measurement of assets and/or liabilities dealing with regulatory tariffs in the companies' financial statements. Its application is exclusive to electric energy distribution companies (OCPC no. 08, 2014). Notably, the implementation of OCPC 08 made it possible to approximate corporate and regulatory rules in relation to the distribution sector.

Thus, electricity distribution concessionaires have amended their contracts identifying the granting authority as the counterparty responsible for the liquidation of regulatory assets and liabilities, which, even in the event of extinction, shall be included in the indemnification base. As a result, the bodies responsible for accounting standards have understood that there are no more uncertainties making it impossible to recognize and measure regulatory assets and liabilities of electric power distributors (OCPC no. 08, 2014).

In the electric sector's regulatory body's opinion, the introduction of ICPC 01 in Brazilian electric companies has not caused improvement in the quality of information (ANEEL, 2010).

According to Ribeiro (2016), ANEEL's interviewed analyst stated that IFRIC 12 is perfectly suited to highway concessionaires and therefore its examples are all related to this industry. For the electricity sector regulator, developing estimates for tariff remuneration and recognizing the infrastructure in the bifurcated model does not reflect the reliable value of the economic activity since only the financial asset is updated, which makes it difficult for inspection to be carried out by the agency. Ribeiro (2016) also states that there is an agreement on the difficulties that companies face in the adequacy of the systems, concern with the quality of the information and the approximation of the corporate and regulatory statements with the adoption of OCPC 08. On the other hand, it was possible to identify that there is no consensus yet on the possibility of unification of accounting processing for the electricity sector.

In turn, Hoppe (2012) has concluded that disclosing regulatory information to the public is positive in order to complement the volume of data that has already been disclosed by corporate statements.

In view of the above, the present study has the objective of analyzing investment and credit analysts' perceptions regarding the usefulness of the electricity sector's accounting and regulatory accounting information.

One of the reasons for carrying out this research lies in the fact that few national studies were identified that sought to understand the relevance of the electric sector's accounting information to financial analysts.

As a practical contribution, this study intends to investigate and report users' perception of the electric sector's information regarding accounting information disclosed in two different models and thus help regulatory bodies (of the sector and of the capital market) in developing accounting regulations of measurement, recognition and disclosure, taking into account users' needs. This study also expects to contribute to the literature of relevance of accounting information regarding the understanding of users' heterogeneity and their different needs.

## 2 PREVIOUS STUDIES

The relevance of accounting information has been discussed for about five decades and still remains a current subject, since its definition and application are considered subjective and complex. Morton (1974) was concerned with understanding the relationship between the concepts of relevance and comprehensibility of financial statements by preparers, auditors and market analysts.

More recently, researchers have analyzed various sources of information and financial statements have been considered as the main source of information for a variety of users. In most studies, investors and creditors, investigated in different developed markets.

Although financial statements are the main source of information for external users, Zimmerman (2013) states that he has never heard anything like “we shall improve the quality of external financial reporting to increase investor wealth” and also says that Chief Financial Officers (CFOs) view financial statements as a compliance activity and not as a way to increase the company’s value.

Even so, it is the information that is part of users’ decision making, even if its quality increase is not necessarily the main effect to increase the company’s value. It is important that information be reliable and relevant to capital providers.

Figure 1 presents studies that address information usefulness/relevance by users, particularly investors and creditors. These studies were carried out using research instruments such as questionnaires, interviews or experiments.

Despite the importance attributed to statements as the main sources of information, a study by Bartlett and Chandler (1997) has shown that even over time the perception of usefulness of accounting reports by English investors has not changed so much. However, surveys were conducted in times of low timeliness and difficult access to information. In addition, results are contradictory, since they consider financial statements as the main source for decision making and little used.

Also, according to Figure 1, it can be observed that for both emerging and developed markets, accounting information is the main source, according to the users included in the literature, and that recent research on perceptions of usefulness of information have been carried out in emerging markets.

Based on the studies mentioned, there is little attribution of value by investors and creditors to nonfinancial reports, such as socio-environmental reports and the company CEO’s statement (management message), while the auditor’s report has a larger importance when compared with the aforementioned ones. Despite this, Hodge (2003) states that investors consider audited financial information as the most relevant information but believe that there is some loss in its reliability due to the perception of independence decline among audit firms and companies.

As shown in Figure 1, the studies selected have a qualitative approach and the use of questionnaires as a collection tool. It is possible to notice that throughout the years the response rate has been diminishing in relation to the oldest searches.

By means of the studies examined, users (investors and creditors) consider the balance sheet, income statements and cash flows as the most important items in financial statements, as previously mentioned in the literature. In less developed countries, cash flows have not proved to be so important, suggesting that there is a low level of maturity among users and that companies have insufficient disclosure quality.

It is noted that both emerging and developed market users have distinct needs for the use of information. There are differences within subgroups of users and also divergent understandings. While some have more sophisticated tools and only capture the accounting data to feed their bases and conduct their assessments, others are limited to what companies disclose and supplement that information with nonfinancial data released by the media.

Author (year)	Objective	Search method/data collection	Sample/Country	Result of the Study
Morton (1974)	To demonstrate the relationship, if any, among concepts of relevance and understanding perceived by four groups of participants in the financial reporting process in relation to financial data disclosure.	Questionnaires. Auditors, controllers, credit and insurance analysts.	From a universe of 213, the response rate was 63%. The United States.	There is a positive trend in the relation among objectives of understandability versus relevance. The study suggests that more understandable information is considered more relevant. It implies that unfavorable information may be inherently more difficult to understand. The company may intentionally present unfavorable disclosures in a more incomprehensive manner.
Bouwman, Frishkoff and Frishkoff (1995)	The purpose of this study is to observe financial analysts while they make investment decisions.	Questionnaires and interviews. Financial analysts.	From the 20 interviewees, the final sample represented 40% of the population identified. United States (San Francisco and New York)	Results suggest that GAAP (Generally Accepted Accounting Principles)-based information primarily serves a screening function, quickly eliminating "unattractive" users. However, it plays a much less important role in developing a positive case to invest in the company. This decision depends largely on qualitative information and information on individual segments. When deciding which company to invest in, analysts look for disaggregated and future information that allows them to evaluate the earnings potential of individual segments.
Bartlett and Chandler (1997)	The goal is to examine whether shareholders use and understand information from company reports. (A replica of studies by Lee and Tweedie in the 1970s)	Questionnaires adapted from Lee and Tweedie. Period of application: December 1994. A group of shareholders of a company was identified for questionnaires to be sent.	From a universe of 300, the response rate was 25.3%. United Kingdom	Results show that annual accounting reports are not widely read yet. The level of voluntary information has increased. However, it may be a management strategy to try to manipulate shareholders. Few read the new sections, either because they need to become familiar with the new standards or because they do not consider them important. Finally, annual general purpose statements are unlikely to meet information needs of a large investor scope.
Ho and Wong (2001)	The goal is to explore the practice, perceptions of effectiveness (and ways to improve) of corporate disclosure by companies listed in Hong Kong. Compares perceptions about the variety of information flow, disclosure and efficient market issues.	Questionnaires. Applied from November 1997 to January 1998. Information preparers and investment analysts.	There were 610 preparers and 535 users interviewed. With a response rate of 16.8% and 17.2%, respectively. China.	Analysts have identified more than preparers that there is a need for increased monitoring of financial reporting. Both groups do not believe that improving disclosure is the only sufficient requirement to do away with financial reporting problems. Instead, they suggested the need for improved communication and, by more appropriate means, a more proactive disclosure strategy and more voluntary information required by users.

Continue

Figure 1 (continued)

Author (year)	Objective	Search method/data collection	Sample/Country	Result of the Study
Hodge (2003)	The article investigates whether nonprofessional investors perceive SEC's concerns about independent auditors' work and the reliability of audited financial information and fundamental analysis.	Questionnaires. Divided into two groups, a prize pre-announcement for respondents and other post ads. Investors of NAIC.	13,250 questionnaires were sent, with 3% response rate. The United States.	Results show that investors perceive that the financial information audited from the year 2001 is more relevant but less reliable due to the perception of less independence among audit companies and audited companies.
Campbell and Slack (2008)	To explore the usefulness and relevance of disclosures in explanatory notes to financial statements.	Semi-structured interview for one hour with sell-side analysts. Conducted between the end of 2004 and the half of 2006. Banking Sector.	There were 19 interviewees. United Kingdom.	Participants demonstrated that there was a general belief that the explanatory notes were not immediately applicable nor useful in the primary sell-side tasks (which is the construction of forecasting models and buy-sider reports). Despite this, researchers were unable to identify specific uses of a particular category of financial reports disclosure. The management report and the socio-environmental report are irrelevant. As for risk disclosure, it was considered extremely important and corporate governance reports are generally not read, as UK banking governance has a high level of confidence on the part of analysts.
Zoysa and Rudkin (2010)	To report how users of annual financial statements in emerging markets view these reports.	Questionnaire.	264 respondents. Sri Lanka.	Results show that most use the annual reports to obtain information on stock transactions. Despite the delay in publishing and the lack of availability of public access in general, most identify them as an important source of information. Compared to developed markets, Sri Lankan users rely more on information on financial statements than on information provided by brokers, newspapers and other media commentators.
Cascino <i>et al.</i> (2016)	To investigate the use of financial information by capital providers.	Questionnaire. Experiment. Institutional investors.	81 participants from 16 countries.	Results of research indicated that the purpose of the use of information matters. They attach greater importance to the outcome information. Participants reported that, despite all the sources of information available today, financial statements remain the first to be used in their decisions. Especially for those who want to analyze managerial performance.

Figure 1. Previous studies on users' perception of the relevance of accounting information

Source: Prepared by the authors.

Other aspects noted by these studies were some concerns that users have about financial information, such as lack of availability, non-timely disclosure and communication deficiency, which are commonly reported in surveys. It is perceived that they are concerns related to other qualitative characteristics of the information such as those established by the conceptual structure, namely timeliness and understandability.

Information preparers and investment analysts do not believe that improving disclosure is a sufficient requirement to tackle financial reporting problems (Ho & Wong, 2001).

Compared with international literature, studies carried out in Brazil on the relevance of the information, with a qualitative approach, are incipient and with little academic repercussion.

Results found in a study by Boff, Procianoy and Hoppen (2006) corroborate international studies in emerging countries regarding the lack of external information from companies. Antunes and Leite (2008) have also identified that there is little disclosure of intangible assets, even though investment analysts consider as an important account for decision making, even if indirectly.

Convergence to international standards has brought a greater burden of mandatory disclosure. The above mentioned studies were either outside the convergence period or early on. They suggest that this reality may have changed with the maturity of international standards, interpretations and guidelines developed by regulatory agencies.

With respect to studies on the relevance of the electric sector accounting information, it was possible to identify that there is a greater amount of research on value relevance for the sector than the use of a qualitative approach on the information relevance. Nevertheless, studies such as those by Ribeiro, Macedo and Marques (2012) and by Gomes (2013) have sought to identify the importance of indicators or accounting data for different groups of information users. The first study was carried out with creditors and the second one with managers (internal users) who, although not being the focus of this study, are also part of the accounting information recipients. Results corroborate previous studies that the accounting information is relevant, whether for a basis of indicators or for internal use.

### 3 METHODOLOGY

The research is characterized as descriptive. The data collection tool for this study was the questionnaire made available online through the Google Forms tool. In order to capture credit and investment analysts' perceptions in relation to the Brazilian electricity sector's corporate and regulatory accounting, it was necessary to conduct a qualitative-quantitative approach.

The survey questionnaire was designed to understand how analysts perceive the usefulness of a company's accounting information in an industry that is qualified as a reference for investment, maintenance or disinvestment decisions. It includes a set of issues accompanied by a model of financial statements that shall serve as a basis for analysis.

In order to place participants in a situation closer to the reality of a financial analyst specialized in the electric energy sector, two cases were developed with situations that simulate the divergences of accounting classifications of an electric sector company's infrastructure. In addition, financial statements were formatted comparing the corporate model with the regulatory model.

Financial statements used as reference in the survey were prepared based on data from a private company in the electricity sector that develops energy distribution activity in a state of Brazil. Data were summarized to enable application with questionnaire respondents in a time frame not exceeding one hour.

Questions used in the questionnaire were developed from the questionnaire developed by Cascino *et al.* (2016). Some modifications were made to suit the objective of the present research. The research instrument questions include questions on the following topics: Respondents' profile – intending to know the target audience (block 1); accounting information relevance – the purpose of this block was to capture perceptions regarding financial information in general for those respondents by means of closed questions (block 2); concession contract – in this part, two cases of accounting records of a public infrastructure for a concessionaire were presented, according to ICPC 01. Examples were developed in order to simulate the situation of an electric transmission company and an electric energy distributor, respectively (block 3); and, finally, relevance of

regulatory accounting information – in order to identify what this group of users believes to be important for its analysis regarding electricity distribution companies (block 4). In the last block, perceptions were collected by means of a simplified analysis of an electric distribution company's corporate and regulatory statements and also through some closed questions and only one open.

To measure respondents' perception, a seven-item Likert scale with the following designation was adopted: (a) strongly disagree; (b) mostly disagree; (c) slightly disagree; (d) neutral; (e) slightly agree; (f) mostly agree and (g) strongly agree. Each of these responses was assigned a number on an ordinal scale of one to seven. Based on this ordinal scale, it was possible to apply nonparametric statistical tests, as normally applied in scientific studies using questionnaires.

Regarding the identification of market professionals, 14 companies in the electricity sector were analyzed, which disclosed the contacts (e-mail address and telephone number) of the financial analysts appointed by the company on their Investor Relations (IR) website. In total, 224 names of financial analysts were found. Excluding names that had no contact data and duplicates, the workforce was reduced to 56 "expert" financial analysts in the power sector. The final sample comprised 26 financial analysts (46.4% of the total) who answered the questionnaires sent.

These professionals were selected due to accessibility and convenience and because the literature suggests that this type of analyst usually uses accounting information in their decision-making processes. In addition, although there is already a large volume of research in the field of information usefulness, there were no significant studies in the local literature seeking to identify financial analysts' perception in a sector with accounting and regulatory peculiarities such as electricity.

The research used the frequency descriptive statistics tools, the Chi-squared test and the nonparametric Mann–Whitney U test for two independent samples.

#### 4 RESULTS ANALYSIS

In the first part of the questionnaire, respondents provided information on age, gender, main academic background, current occupation, length of service, number of companies analyzed per year, type of analyst, type of company in which they work and financial information used for composing their analyses. To better present the data, two tables were developed, summarizing each part of the questionnaire. The first one (Table 1) deals with the respondents' profile.

The final sample consisted of 26 financial analysts listed by the electric sector companies in their Investor Relations sites, representing 46.4% of the population identified. 65% of the sample consisted of men and 35% of women. Based on the Chi-squared test, it can be stated that there is no statistically significant difference between the ratio of men and women in the sample in relation to the population analyzed [ $\chi^2 = 0.813$  ( $p\text{-value} > 0.10$ )]. The result of this statistical test allows to conclude that the sample gender composition does not present distortions in relation to the analyzed population's profile.

**Table 1**  
**Respondent Profile**

Panel A - Gender		Sample (N=26)		Population (N=56)		X <sup>2</sup> Test ( <i>p-value</i> )
		Quantity	%	Quantity	%	
Female		9	35%	14	25%	0.813 (0.367)
Male		17	65%	42	75%	
Total		26	100%	56	100%	
Panel B - Academic Background		Quantity		Panel C - Analyst Type		
		Quantity	%	Quantity	%	
Economy		12	46%	'Buy side' investment	12	46%
Engineer		9	35%	'Sell side' investment	2	8%

Continue

**Table 1 (continued)**

Accounting	3	12%	Credit and similar	11	42%
Business Administration	2	8%	Rating Analyst	1	4%
	26	100%		26	100%

**Note.** n = 26 respondents.

Source: Prepared by the authors based on the questionnaires received.

According to Panel C, Table 1, the predominant professional activities in the responses are intended to be “buy side” and “credit and the like” investments. They make up 46% and 42%, respectively. It is noteworthy that two different groups were formed for the analyses. Respondents were classified as investment analyst or credit analyst and the like (rating analyst), accounting for 54% and 46% of the total, respectively.

Table 2 below presents the average values (average ranking according to the seven-item Likert scale) calculated based on the two groups of analysts’ response frequency according to their education and the total respondents’ average value and, in addition, the nonparametric test results for two independent samples (type of analyst) of the indicators evidenced in Panel A.

Panel A in Table 2 presents the average indices found for the economic-financial indicators. In general terms, indicators of Net Debt/EBITDA and Net Debt/Shareholders’ Equity presented higher degrees of agreement, while indicators based on equity accounts were those that presented a lower level of similarity in the answers ranging from 4.1 to 4.5. Indexes in scale 4 are considered “neutral”, that is, for research interpretation they are “indifferent” to the respondents’ analyses.

Panel B in Table 2 reveals that most respondents admit that Income Statement, Balance Sheet, Cash Flow Statement and Explanatory Notes are fully relevant to their analyses. For these statements, average ranking ranged between 6.9 and 7.0.

Results presented are consistent with those found by Ohara (2014), who analyzed the difference between financial indicators calculated based on information from the two accounting systems of the main companies in the electricity sector and found that indicators such as “Net Debt/EBITDA”, “Net Income/Shareholders’ Equity” and “Net Income/Income” present significant differences due to the divergence of corporate and regulatory processes.

Considering the nonparametric test results, it is possible to observe that there is no statistically significant difference in the perception about the relevance of most financial economic indicators among investment analysts and credit analysts and the like [ $p$ -value > 0.10]. Only for the index of current assets/liabilities [ $X^2 = 37.50$  and  $p$ -value < 0.10] it was observed that credit analysts attribute more importance than investment analysts, 5.4 and 4.9, respectively.

Table 2

### Relevance of accounting information – Financial indicators, financial statements and bookkeeping account – by type of analyst

Indicators	Analyst Type		Main Academic Background				Test
	Investment Analyst	Creditors and the like	Business and Accounting	Economy	Engineer	Total	Mann-Whitney
							( $p$ -value)
Current Assets/Current Liabilities	4.9	5.4	6.2	4.8	6.0	5.5	37.5 (0.014)
Total Assets/Total Liabilities	3.7	4.5	4.2	4.2	3.6	4.1	64.0 (0.298)
Gross Debt/Equity	5.1	5.0	4.8	5.2	5.1	5.1	78.5 (0.773)
Net Debt/Ebitda	6.8	6.1	4.8	6.8	6.8	6.5	62.5 (0.174)
Net Debt/Equity	5.7	6.3	6.0	5.8	6.2	6.0	64.5 (0.290)
Fixed assets/Equity	4.2	4.9	4.6	3.8	5.2	4.5	66.5 (0.358)
Net profit/Total assets	4.5	4.3	4.2	4.4	4.2	4.4	82.0 (0.916)
Net Profit/Equity	5.4	4.8	4.4	5.1	4.9	5.1	68.0 (0.392)

Continue

**Table 2 (continued)**

Panel B – Importance of financial statements						
Financial Statements	Analyst Type		Main Academic Background			
	Investment Analyst	Creditors and the like	Business and Accounting	Economy	Engineer	Total
Balance Sheet	6.8	7.0	7.0	6.8	6.9	6.9
Income Statement (DRE)	7.0	7.0	7.0	7.0	7.0	7.0
Cash Flow Statement (DFC)	7.0	6.9	7.0	7.0	6.9	7.0
Shareholders' Net Worth Changes Statement (DMPL, in the Portuguese abbreviation)	4.9	5.3	5.8	4.6	4.3	5.0
Value Added Statement (DVA, in the Portuguese abbreviation)	4.6	3.8	2.6	4.2	4.9	4.2
Explanatory Notes	6.9	6.9	7.0	7.0	6.8	6.9
Auditor's Opinion	5.5	6.2	6.8	5.6	5.6	5.8
Management Report	6.1	5.2	5.0	5.8	5.9	5.7
Social Accounting	4.8	4.1	4.0	4.3	4.8	4.5

  

Panel C – Importance of bookkeeping account						
Bookkeeping account	Analyst Type		Main Academic Background			
	Investment Analyst	Creditors and the like	Business and Accounting	Economy	Engineer	Total
Net Revenues (DRE)	6.5	6.4	5.8	6.5	6.8	6.5
Net Profit (DRE)	6.9	6.1	5.6	6.8	6.6	6.5
Cash flow generated by operations (DFC)	6.8	6.8	7.0	6.9	6.6	6.8
EBITDA (DRE)	6.8	6.3	5.2	6.8	6.8	6.5
Fixed Assets (BP)	6.1	5.9	5.0	6.2	6.1	6.0
Intangible Assets (BP)	5.4	5.0	5.4	5.2	5.1	5.2
Financial Asset (BP)	5.3	5.8	5.8	5.4	5.6	5.5

**Note.** N = 26 respondents.

(a) The mean values indicated were calculated according to the seven-item Likert scale. (b) (1) strongly disagree; (2) mostly disagree; (3) slightly disagree; (4) neutral; (5) slightly agree; (6) mostly agree and (7) strongly agree.

Source: Prepared by the authors.

In order to capture the respondents' opinion on the concession assets infrastructure accounting record, two examples (similar to that of ICPC 01) were developed regarding accounting of a transmission network infrastructure and the other one of an electricity distribution network. ICPC 01 interpretation, together with OCPC 05, establishes that the concession infrastructure that is within the scope of the standard should be recorded as a financial asset and/or intangible asset, as described in the references of this study.

Table 3 presents a summary of the preference for presentation of corporate and regulatory information format by investment analysts and credit analysts. It shows that only 38% of the respondents opted for a separate disclosure of the corporate and regulatory statements, which is the current way of doing so. The corporate statement is filed at CVM and the regulatory statement at ANEEL. Most of the respondents chose to have a statement showing the comparative of the corporate and regulatory or an explanatory note in the corporate statement with the reconciliation of Shareholders' Equity and Net Income, representing 38% and 19%, respectively. Only one respondent with a background in accounting sciences believes that the disclosure should be only for the financial statement.

**Table 3****Respondents' preference for disclosure of information**

Panel A – Number of respondents by type of analyst						
Disclosure	Investment Analyst			Creditors and the like		
	Investment Analyst	Creditors and the like	Total	Investment Analyst	Creditors and the like	Total
Corporate	0	1	1	0%	4%	4%
Reconciliation	3	2	5	12%	8%	19%
Separate	5	5	10	19%	19%	38%
Comparative	6	4	10	23%	15%	38%
Total	14	12	26	54%	46%	100%

**Continue**

**Table 3 (continued)**

Disclosure	Panel B – Number of respondents per professional training				Business and Accounting			
	Business and Accounting	Economy	Engineer	Total	Business and Accounting	Economy	Engineer	Total
Corporate	1	0	0	1	4%	0%	0%	4%
Reconciliation	0	2	3	5	0%	8%	12%	19%
Separate	2	6	2	10	8%	23%	8%	38%
Comparative	2	4	4	10	8%	15%	15%	38%
	5	12	9	26	20%	46%	35%	100%

**Note.** (a) Both the corporate and regulatory statements must be separately disclosed; (b) A comparative of the two (corporate and regulatory) statements should be disclosed in an integrated report; (c) An explanatory note reconciling Shareholders' Equity and Net Income from corporate and regulatory accounting; (d) Regulatory information should not be published, only made available to the competent regulatory body. (n = 26 respondents).

Source: Prepared by the authors.

In Panel A of Table 3 it is seen that all "Investment Analysts" prefer disclosure of both pieces of information. Results suggest that there is a tendency among analysts to prefer this information in a more detailed way, considering that the separate and comparative disclosure tends to be more informative than the disclosure of reconciliation of accounts impacted by the divergence of accounting models or only of the companies' financial statements.

In order to analyze preferences on the income statement format, whether regulatory or corporate, respondents were asked which of the two formats they considered most appropriate for their analyses. A summary of responses is given in Table 4.

**Table 4****Preference for the Income Statement format**

	Investment Analyst	Creditors and the like	Total	Investment Analyst	Creditors and the like	Total	Test X <sup>2</sup> (p-value)
Regulatory	11	4	15	42%	15%	58%	5.418
Corporate	3	8	11	12%	31%	42%	0.02
Total	14	12	26	54%	46%	100%	

Note. n = 26 respondents.

Source: Prepared by the authors.

Table 4 shows that although the majority of respondents prefer the Regulatory DRE to compose their analyses, totaling 58% of the sample, the corporate DRE model also presented a high degree of preference (42%) by respondents. Statistical evidence suggests that investment analysts have greater preference for regulatory DRE, while credit analysts have opted for the corporate income statement [ $X^2 = 5.418$  ( $p\text{-value} < 0.10$ )].

To better understand participants' preferences, they justified their choices in a dissertative manner. The summary of results found is reported in Figure 2. Examining justifications by respondents who chose the regulatory DRE, it is possible to notice that there is a trend of answers regarding their importance: a) generation of cash flow and b) discrimination of the Installment A costs. As for those who opted for the corporate model, they tended to respond that in the regulatory income statement there is excessive information.

Corroborating the statistical test result, where it is possible to see that there is greater interest by investment analysts in the regulatory DRE, in 9 of the 11 justifications cash flow is cited as the reason for the preference. As for credit analysts or the like, who prefer the corporate DRE for the most part, they commented that there is too much information in the regulatory DRE.

<p>Panel A – Investment Analysts</p> <p style="text-align: center;"><u>Regulatory</u></p> <ul style="list-style-type: none"> <li>– “Interest in effective cash generation” (Economy);</li> <li>– “More clarity of concession data beyond short-term volatility” (Engineering);</li> <li>– “Better information for correct calculation of companies’ cash flows” (Engineering);</li> <li>– “The cash effect is better reflected in the regulatory statements, besides discriminating between Installment A cost and Installment B cost” (Economy);</li> <li>– “Regulatory LL has no non-cash effects such as the revaluation of Financial Assets (a non-cash and non-operating item of the distributor) and also highlights the differences between accounting and regulatory depreciation (an item that impacts almost all accounts)” (Economy);</li> <li>– “Both are important but in terms of Cash Flow analysis, the regulatory one provides further details of information” (Economy);</li> <li>– “Because there are fewer accounting entries and they better portray companies’ actual cash generation” (Economy);</li> <li>– “More adequately reflects the cash generation of the period” (Economy);</li> <li>– “Better reflects the business’ economics” (Engineering);</li> <li>– “The regulatory model facilitates understanding recurring profitability due to Installment A variations in the corporate format” (Economy);</li> <li>– “Closer relationship with FCF” (Economy).</li> </ul>	<p style="text-align: center;"><u>Corporate</u></p> <ul style="list-style-type: none"> <li>– “Closer to actual cash flow” (Engineering);</li> <li>– “For purposes of equity analysis, corporate results are more important” (Economy);</li> <li>– “Reflects companies’ true financial health” (Engineering);</li> <li>– “The corporate model represents the competence and it is possible to see the receipt (or not) and the financing (or not) of rights and duties in the Balance Sheet” (Adm. and Accounting).</li> </ul>
<p>Panel B – Credit Analysts and the like</p> <p style="text-align: center;"><u>Regulatory</u></p> <ul style="list-style-type: none"> <li>– “In the regulatory DRE I see the composition of the tariff” (Adm. and Accounting);</li> <li>– “It correctly covers the breakdown of taxes, charges and costs” (Engineering);</li> <li>– “You better understand what Installment A is, which the costs that the company can not manage are and Installment B, which are the ones that it can get. If the company is generating low results after Installment A, it can be understood that the business model is not sustainable. By differentiating Installments A and B, one can have a better understanding of the company’s cash generation” (Adm. and Accounting);</li> <li>– “Better tax breakdown” (Engineering).</li> </ul>	<p style="text-align: center;"><u>Corporate</u></p> <ul style="list-style-type: none"> <li>– “Basic statement for dividends” (Adm. and Accounting);</li> <li>– “Because the regulatory model depends on decisions by the granting authority” (Economy);</li> <li>– “Information from the Regulatory DRE is complementary in the analysis, bringing data from the operational performance. In this way the corporate model reflects the company’s economic-financial status, being more appropriate for credit risk analyses” (Adm. and Accounting);</li> <li>– “The regulatory model is noisy and may vary with regulatory changes” (Economy);</li> <li>– “Tends to better demonstrate the company’s results as well as being clearer” (Engineering).</li> <li>– “I’m not interested in a separation among accounts. Excess of information” (Economy);</li> <li>– “The cost/expense format is the most understandable way to evaluate the company at first” (Engineering).</li> </ul>

**Figure 2.** Qualitative Data Analysis (n = 26 respondents)

Source: Prepared by the authors.

Also in the disclosure question, participants were asked if the disclosure date of the regulatory statement after the date of the corporate disclosure harms their analyses, in order to identify whether investment or credit analysts perceive that the presentations at different dates affect their analyses. Table 5 summarizes the results for such questioning.

Table 5 shows that, on average, participants agree that there is some loss to their analyses in view of the disclosure of regulatory information that is subsequent to the corporate information, representing a total of 74% of agreement with such loss. Segregating by type of analyst it turns out that 27% are investment analysts, who agree that they miss information with disclosure at a later date.

Table 5  
**Perceived impairment in analyses due to difference in disclosure date**

	Analyst Type		Main Academic Background			Total
	Investment Analyst	Creditors and the like	Adm. or Accounting	Economy	Engineer	
Totally Disagree	4%	-	-	4%	-	4%
Mostly Disagree	4%	-	-	4%	-	4%
Partially Disagree	-	4%	-	-	4%	4%
Neutral	4%	12%	8%	8%	-	15%
Partially Agree	-	12%	4%	4%	4%	12%
Mostly Agree	15%	15%	4%	12%	15%	31%
Totally Agree	27%	4%	4%	15%	12%	31%
Average Ranking	5.7	5.1	5.2	5.2	5.9	5.4
Mann Whitney test		X <sup>2</sup>			p-value	
		49.0			(0.063)	

**Note.** n = 26 respondents.

Source: Prepared by the authors.

Based on the results found in the statistical test, it can be seen that investment analysts and credit analysts and the like perceive differently the impairment in their analyses due to the disclosure of regulatory statements at a later date [*p-value* < 0.10]. Considering the average values found and the statistical test result, it is possible to note that investment analysts are more in agreement than credit analysts with respect to the existence of informational loss for their analyses due to the difference in the corporate and regulatory statements date of disclosure.

Table 6 shows respondents' degree of perception on the electricity sector bookkeeping account, which, for the most part, makes up the income statement, in addition to two accounts of the balance sheet. There are accounts that are seen in both models as there are also accounts presented in only one of the accounting processes. All of them are related either to ICPC 01 or to the Accounting Manual of the Electric Sector (MCSE, in the Portuguese abbreviation).

Examining Table 6, it is possible to observe that there is an agreement in which accounts related to the tariffs composition are relevant for analysis of the companies of the sector in question. Accounts such as "regulatory asset", "regulatory liability", "Installment A tariff recomposition" and "Installment A costs" obtained an average level of concordance between 6.0 and 6.4. The "construction costs" account, which is purely corporate in nature, received the lowest average score (3.7) among investment analysts.

Results found in the nonparametric test suggest that it is possible to see that investment analysts consider the regulatory asset (BP), regulatory liability (BP), network (N) availability accounts more relevant than credit analysts do [*p-value* < 0.10], with the exception of the "construction cost" account. Investment analysts tend to disagree that this account is relevant to compose their analyses and credit analysts and the like seem to agree that they are important.

Table 6  
**Importance of bookkeeping account in the regulatory DRE**

Bookkeeping account	Analyst Type		Main Academic Background			Total	Test Mann-Whitney ( <i>p-value</i> )
	Investment Analyst	Creditors and the like	Adm. and Accounting	Economy	Engineer		
Regulatory Asset	6.9	5.8	5.4	6.5	6.8	6.4	43.0 (0.013)
Regulatory Liabilities	6.7	5.8	5.4	6.4	6.7	6.3	49.5 (0.042)
Installment A tariff recomposition	6.5	6.0	6.0	6.3	6.4	6.3	68.5 (0.859)
Energy supply	6.1	5.7	5.0	5.9	6.4	5.9	51.5 (0.390)
Network availability	6.0	5.2	4.6	5.8	6.0	5.6	84.0 (0.082)
Installment A costs	6.2	5.8	5.8	6.0	6.2	6.0	52.0 (1.000)
Construction Costs	3.7	5.4	4.6	2.8	6.0	4.5	52.0 (0.093)

**Continue**

**Table 6 (continued)**

Bookkeeping account	Analyst Type		Main Academic Background			Total	Test Mann-Whitney (p-value)
	Investment Analyst	Creditors and the like	Adm. and Accounting	Economy	Engineer		
Advance Expenses – CVA	5.9	5.6	4.4	5.6	6.4	5.8	74.5 (0.610)
Deferred Taxes	5.2	5.0	3.6	5.1	5.4	5.1	75.0 (0.635)
Remuneration of Financial Assets	4.8	6.0	6.0	4.8	6.2	5.3	61.0 (0.205)

**Note.** n = 26 respondents.

Source: Prepared by the authors.

The results have shown that investment analysts, credit analysts and the like use the accounting information and, in general, consider financial statements important to compose their analyses. Income statement (DRE, in the Portuguese abbreviation), balance sheet (BP, in the Portuguese abbreviation) and cash flow statement (DFC, in the Portuguese abbreviation) have been perceived as the most important for these analysts, confirming results found in previous studies (see, for example, Cascino *et al.*, 2016).

Profit and loss accounts are valued as most relevant to equity accounts. Additionally, cash flow generated by the operations, evidenced in the DFC, was considered very important by respondents. Regarding the indicators, the “Net Debt/EBITDA” index is highlighted, which, together with “Net Debt/Shareholders’ Equity”, were considered relevant for the participants’ analyses.

Considering that participants attributed greater importance to DRE, DFC and EBITDA, it is possible to assume that investment analysts and credit analysts use the information in order to estimate future cash flow generation, since they are assigning greater importance to financial performance (profitability) and accounts (and indexes) that are used to analyze companies’ cash generation capacity in order to pay their debts. They corroborate the findings in a research by Cascino *et al.* (2016), which demonstrated that demand and use of financial information are carried out to meet the need to predict or estimate cash flows and that asset items are not as relevant because information role is more confirmatory than predictive.

Both the analysts investigated in this research and those in the study by Cascino *et al.* (2016) evaluated EBITDA as of high relevance for their analyses, since it is a fast access measure of companies’ cash generation.

Participants were asked about the relevance of specific accounts of the electricity sector for their analyses. Results showed that accounts such as regulatory assets, regulatory liabilities, tariff recomposition – Installment A and Installment A costs – were considered important for participants.

Prior to OCPC 08, companies in the electricity sector could not recognize regulatory accounts as regulatory (equity) assets and liabilities and, consequently, income statements related to them (energy supply, network availability and Installment A costs and charges) in corporate statements. The IASB asserted that such assets and liabilities did not have the characteristics established in the conceptual framework to be recognized as assets or liabilities. With the adoption of OCPC 08 and the amendment of contracts, companies became guarantors of the granting authority and were able to recognize such amounts in corporate statements, considered important for energy tariff revision. Regulatory asset and liability accounts, now recorded in corporate statements, were considered important for analyses by these respondents.

Analyzing the two groups, it is possible to see that the regulatory statement disclosure at a later date than that of the corporate statement is detrimental to analyses by both types of analysts. This loss is perceived as greater by investment analysts. This evidence corroborates results from the preference for income statements, where investment analysts consider the regulatory DRE to be more adequate to meet their analyses needs.

Results suggest that credit analysts may have already standardized analyses models. Probably because of this reason, they do not assign so much importance to regulatory accounts and DRE and do not perceive informational loss in disclosure on different dates, since there is evidence that the corporate information already meets their standardized models. Despite this,

credit analysts consider regulatory information to be relevant and the evidence suggests that it is used as complementary information in the analyses carried out by companies in the electricity sector.

Results also show that only 38%, less than half, of respondents believe that the best form of disclosure is the current formatting, separate corporate and regulatory statements. These results suggest possible need to rethink disclosure of energy companies' corporate and regulatory information. Additionally, it is possible to suggest that the two statements be used, since only one respondent opted for disclosure of only the corporate statement. Most participants chose the regulatory income statement as the most appropriate to compose their analyses.

Although more than half of respondents agree that the disclosure of information on different dates may cause some impairment in their analyses, there is not a considerable number of respondents who have opted for disclosure of information in a comparative format or a reconciliation note of both (regulatory and corporate) approaches in the financial statements, prepared in accordance with accounting standards in force in the country. These would be the two types of diffusion in formatting that is different from the current one and that include corporate and regulatory information on a single date of disclosure, which reveals that there is not a consensus among participants of how statements should be disclosed in a way that would soften the loss caused by disclosure on different dates.

## 5 CONCLUSIONS

The purpose of this study was to analyze financial and credit analysts' perceptions regarding the usefulness of corporate and regulatory accounting information from companies in the electricity sector.

To reach the objective, a questionnaire was used as a data collection instrument. The population was identified by means of information available on electric power companies' websites, which indicate professionals who perform analyses on them. Of the 56 professionals identified, 26 responded to this study. Following the profile of these participants, two groups were created: investment analysts and credit analysts and their equivalent.

Results showed that: i) items in the income statement are more relevant than balance sheet items; ii) investment analysts consider the regulatory DRE to be more adequate for their analyses than credit analysts and the like; iii) perception of impairment for the analysis, due to delay in disclosure of the regulatory statements, was greater for investment analysts than for credit analysts; and iv) the current disclosure format (a corporate and regulatory accounting statement) of electric power companies' financial information is not considered ideal by financial analysts.

In line with the literature, the findings of this study confirm that financial statements are used by financial analysts and that information on income statement is more important than equity information, especially for analysts who have the objective of evaluating the companies' cash flows. For this reason, investment analysts believe that the regulatory income statement provides them with more adequate information on companies' operating results in the electricity sector than the corporate income statement. Additionally, investment analysts realize that disclosure on different dates causes them some informational loss.

Regardless of the type of professionals, most respondents do not seem to be satisfied with the current disclosure format for corporate and regulatory financial statements, since they believe there should be other formats for such information. Although the current formatting is separate, one with filing with CVM and another with ANEEL, there are companies, such as Transmissora Aliança de Energia Elétrica S.A. (TAESA), which (voluntarily) present their results to investors in the comparative format of these statements. This suggests that there may be a demand for this type of disclosure from external users of the information.

Results found in this research may be important for regulators to evaluate a better way of disclosure of corporate and regulatory statements by companies in the electricity sector, without causing informational damages to external users. Another contribution of the study was to highlight what is considered relevant by analysts appointed by companies in the electricity sector

in order to help in the format of standards (such as CVM Resolution No. 727/2014), which propose a reduction of information details disclosed in financial reports.

In addition to practical contributions, this study contributes to the development of the literature on the relevance of accounting information, since it presents findings about a group of specific users that have perceptions similar to those already found in previous studies.

It should be noted that financial statements perceptions of users who participated in this study are personal and do not represent the totality of the interviewees' perceptions. Of course, qualitative surveys based on questionnaires are of a subjective nature and depend on respondents' understanding of the research instrument.

As a suggestion for future research, it is recommended to deepen the knowledge of accounting information relevance by means of studies that evaluate the use of this information by other groups of users or in other economic segments that present regulatory accounting statements.

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