GESTÃO, FINANÇAS E CONTABILIDADE

MANAGEMENT EARNINGS FORECAST DISCLOSURE: A STUDY ON THE RELATIONSHIP BETWEEN EBITDA FORECAST AND FINANCIAL PERFORMANCE

EVIDENCIAÇÃO DE PROJEÇÕES DE RESULTADOS FUTUROS: UM ESTUDO DA RELAÇÃO ENTRE A PROJEÇÃO DO EBITDA E O DESEMPENHO FINANCEIRO

ELUCIDACIÓN DE PREVISIONES DE RESULTADOS FUTUROS: UN ESTUDIO SOBRE LA RELACIÓN ENTRE LA PREVISIÓN DEL EBITDA Y EL DESEMPEÑO FINANCIERO

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ABSTRACT
The creation of overly optimistic information can compromise the decision-making process on part of shareholders and other stakeholders. Considering that this type of information can create problems and additional costs stemming from erroneous choices made by users, the present work sought to identify financial indicators associated with the disclosure of Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA) estimates in Management Earnings Forecasts (Guidance) reporting. The sample examined was composed of 42 companies and analyses were carried out using logistic and multiple linear regression techniques. The results showed that larger (as per total assets) and more-leveraged companies show a higher level of disclosure. Companies with higher return on equity (ROE) and Current Liquidity ratios, as well as lower Net Margins, present less precise earnings forecast. The companies providing more timely forecasts are also the ones that show higher ROE and Current Liquidity ratios, as well as lower Net Margins. These results indicate that users must take caution when basing decisions on such information, given that the possibility exists that companies bearing these characteristics are more likely to better-timed albeit less-accurate disclosure.
Keywords: Guidance. Forecast. EBITDA. Financial indicators.

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RESUMO
A geração de informações excessivamente otimistas pode ser prejudicial à tomada de decisão de acionistas e outros stakeholders. Considerando que este tipo de informação pode gerar problemas e custos adicionais provenientes de decisões equivocadas tomadas pelos usuários, o presente estudo teve o objetivo de identificar as características econômico-financeiras que se relacionam com a divulgação de estimativas de lucros antes dos juros, impostos, depreciação e amortização (EBITDA) por meio de relatórios de projeções de resultados futuros (guidance). A amostra pesquisada foi composta por 42 empresas e as análises foram realizadas por intermédio das técnicas de regressão logística e de regressão linear múltipla. Os resultados demonstraram que as empresas que mais divulgam são maiores (medidas pelo ativo total) e com maior endividamento. As empresas com projeções menos precisas são as que possuem maiores índices de retorno sobre o patrimônio líquido (ROE) e Liquidez Corrente e menor Margem Líquida. As empresas cujas projeções são mais tempestivas também são as que possuem maiores índices de ROE e Liquidez Corrente e menor Margem Líquida. Estes resultados denotam que os usuários devem ter cautela no uso destas informações, pois é possível que empresas que tenham estas características estejam mais propensas à divulgação de projeções mais tempestivas, porém com menor grau de precisão.
Palavras-chave: Guidance. Projeções de Resultado Futuro. EBITDA. Situação econômico-financeira.

RESUMEN
La generación de informaciones excesivamente optimistas puede ser perjudicial a la toma de decisiones de accionistas y otros stakeholders. Tomando en cuenta que este tipo de información puede producir problemas y costos adicionales debidos a decisiones equívocas tomadas por los usuarios, el presente estudio tiene como objetivo la identificación de las características económico-financieras que a la divulgación de estimaciones del beneficio antes de intereses, impuestos, depreciaciones y amortizaciones (EBITDA) se refieren, mediante informes de previsiones de resultados futuros (guidance). La amuestra investigada fue composta por 42 sociedades y los análisis fueron realizadas por medio de técnicas de regresión logística y regresión linear múltiple. Los resultados demostraran que las sociedades que más divulgan son mayores (medidas en termos del activo total) y con mayor endeudamiento. Las sociedades con preanuncios menos exactas son las que presentan mayores índices de rendimiento sobre el patrimonio neto (ROE) y Liquidez Corriente, y menores márgenes netos. Las sociedades cuyos preanuncios son más tempestivos también son las que demuestran mayores índices de ROE y Liquidez Corriente, y menor Margen Neto. Estos resultados implican que los usuarios deben tener cuidado al interpretar estas informaciones, dado que puede que las sociedades que tengan estas características estén más propensas a la divulgación de preanuncios más tempestivos, a pesar de con un menor grado de precisión.
Palabras clave: Guidance. Previsiones de Resultado Futuro. EBITDA. Situación económico-financiera.

1. INTRODUCTION

The disclosure of information is an integral part of a company’s strategy. While other companies can make use of this information in order to improve and compare their respective bottom lines, investors can also incorporate it into their evaluation of the viability of equity investment. Beside this, upon analysis of information made public, all parties involved with a company, in any regard, are afforded the chance assemble an overall view as to whether or not their interests might be served by it. Towards these ends, disclosure can be either mandatory or voluntary.

A great variety of users can use mandatory disclosure, and the choice to provide it, along with the selection of the channel for doing so and the content of said reports, is not left to the company. On the other hand, voluntary disclosure is by definition optional, and companies stand to gain an advantage as a result of providing it. Discretionary Disclosure Theory posits that the managers elect to disclose such information when the benefits it provides outweigh the costs incurred from it (VERRECCHIA, 2001). As such, it can be gathered that voluntary disclosure, in whatever fashion, leads to benefits for the firm.

The voluntary disclosure is also used to control the information and conclusions that investors will have about the company in this respect, Dye (1985) argues that when investors observe the existence of undisclosed information, they think that this information is unfavorable to them, and thus devalue the value of the company. And so, managers are encouraged to disseminate information.

Their otherwise discretionary nature notwithstanding, as per Glover et al. (2002), the disclosure of sales and net income forecasts were nearly made mandatory in the past. A Securities and Exchange Commission (SEC) proposal placed the requirement for the disclosure information of this type in 1975, but due to the pressures of the private sector, it became optional and simply encouraged as of the following year. However, “safe harbor” rules were approved in 1979 in order to reduce possible subsequent liabilities, on part of reporting companies, related to forecast disclosure. With this, the investing community grew apprehensive that these rules would encourage the creation of opportunistic forecasts – inconsistent and without base in fact- that could mislead investment decisions.

In the case of Brazil, earnings guidance reporting (hereafter, guidance) is an example of voluntary disclosure, which is to say that it is not required by law. Regardless, regulations do permit it, and the *Comissão de Valores Mobiliários´* (CVM) -similar to U.S. Securities and Exchange Commission (SEC) and responsible for monitoring Brazilian capital and debt markets- Reference Form (FR) represents a medium that companies can employ towards that end. In this way, should the company elect to disclose information of this type despite not being required to do so it must do so responsibly, given the risk of damaging its own reputation along with that of its managers. This is especially true when considering overly optimistic and unrealistic forecasts (CODIM, 2008).

Some studies suggest that the voluntary disclosure of information is associated with company size, profitability (SINGHVI; DESAI, 1971), low stock returns on earnings and the issuance of securities (LANG; LUNDHOLM, 1993) and the level of corporate reputation (FORTE et al., 2015). No relationship between voluntary disclosure and financial leverage has been shown (CHOW; WONG-BOREN, 1987). Further, in their study, Kato, Skinner, and Kunimura (2009) demonstrated that Japanese companies published optimistic initial forecasts, which were re-evaluated over the course of the year so that they could be met by its end.

As earnings guidance entails the voluntary presentation of information that can be of use for decision-making on part of external parties, management can employ it as a tool for attracting shareholders and/or other stakeholders. In these cases, disclosure is characterized by forecasts with a high degree of optimism and a low chance of realization. It should be noted that this condition contradicts the idea of true and far view provided by the Framework for the

Preparation and Disclosure of Accounting and Financial Report. Thus, the disclosure made by lack of quality characteristics and limitation in principles attendance, is not able to provide a true and fair accounting representation.

The literature suggests that practices of this type result from a series of factors, which include actual performance and the economic and financial situation of the company. It bears emphasizing that, given that these practices can go on to yield problems as well as increased costs for information users, the factors involved in the creation of guidance must be explored, primarily so that the discrepancy between projected and achieved values might be better understood.

In this light, the motives that lead a company to disclose discretionary information, especially when it is financial in nature and dealing directly with earnings, as in the case of EBITDA, merit a discussion. **From this, the following Research Question emerges: which financial performance indicators are associated with the disclosure of EBITDA estimates in management earnings forecast reports?** In order to provide a response to this query, the objective of the present work is **to identify financial performance indicators associated with the disclosure of EBITDA estimates by means of management earnings forecast reports.**

We believe that this study will contribute to the literature by way of the creation of knowledge regarding factors related to earnings forecast disclosure in Brazil, including the likelihood of disclosing such information, as well as the accuracy, and timeliness of those reports. Beside this, we expect that the results obtained in the study might be of use to capital market participants and all corporate information stakeholders, allowing for the observation and understanding of indicators of image management practices.

Following this introductory section, the theoretical framework used during the development of the research process is illustrated. In the third and fourth sections, the research methodology adopted in the study and the results obtained from it detailed. Finally, the fifth section presents the conclusions gathered from the study, as well as suggestions for further works.

2. THEORETICAL FRAMEWORK

This section outlines the approaches taken to clarify information disclosure, management earnings forecasts, EBITDA and existing studies related to the topic in question, serving as the theoretical base of the present work.

2.1. Disclosure

Disclosure of accounting and financial reports constitutes one of the objectives of accounting (CPC 00, 2011). Iudícibus (2010) attests to this, adding that those objectives provide additional information to the varied users that require them. As such, accounting seeks to provide useful information for user decision-making, whether they be shareholders, suppliers, creditors, or other stakeholders. This is to say, any individual affected by the entity´s decisions is, by extension, a user of the content of its financial reports.

In 1991, the disclosure of accounting information was a topic of discussion in the AICPA (American Institute of Certified Public Accountants), which formed a commission to provide recommendations on the type and scope of financial reports made available to stakeholders. Following several years of analysis, the commission recommended that a series of additional materials be provided to investors, including “segment details, supplemental non-financial data, and additional forward-looking information" (HEALY; HUTTON; PALEPU, 1999, pg. 4).

From this, two types of disclosure emerge: mandatory and voluntary. Mandatory disclosure deals with information required by corresponding corporate law and regulatory bodies, accounting rules, and laws concerning financial statements. Currently, the following accounting reports that are mandatory in Brazil: the Balance Sheet, Income Statement, Statement of Comprehensive Income, Statement of Changes in Equity, and Statement of Cash Flows, Notes to the Financial Statements (containing a summary of significant accounting policies and other explanatory information), as well as comparative information from previous operating years. These are required of large corporations by Article 3 of Law N° 11.638/07, and corporations overall by Article 1 of Law N° 6.404/76, in accordance with IAS 1 and stipulated in CPC 26 (2011). Further, Law N° 6.404/76 also mandates the disclosure of the Statement of Value Added in Brazil.

Apart from these, there are other items on which disclosure is also mandatory, as per Art. 133 of Law N° 6.404/76, including the Management Report, Independent Auditor´s Report, and some of the contents of the Reference Form (as stipulated in CVM Instruction N° 480/09), among others. Regardless, other items are optional –deemed voluntary disclosures- and as such, disclosed on the company´s own accord. In light of this, academic research has sought to identify the motives that lead companies to disclosure information despite their not being required to do so.

Verrecchia (2001) presents the following three considerations of voluntary disclosure: the existence of endogenous proprietary costs, the lack of true information, and management´s objective maximizing market capitalization. In broaching these topics, the author shows that the disclosure of discretionary information involves a larger context, spanning accurate information to those that attract resources (i.e. equity investment). Parallel to this, the author goes on to state that the main strength of the disclosure of discretionary information is the mitigation of informational asymmetry between managers and stakeholders -chief amongst which, its shareholders. However, Dye (1985) believes that managers are encouraged to disclose information so as not to decrease the value of the company.

Previous studies sought to examine the associations between the disclosure of information, and market and accounting variables both financial and non-financial in nature, examples of which being stock price-based incentives (NAGAR; NANDA; WYSOCKI, 2003), attracting investors via expanded disclosure (HEALY; HUTTON; PALEPU, 1999), the composition of management, its boards and committees (AJINKYA; BHOJRAJ; SENGUPTA, 2005; KARAMANOU; VAFEAS, 2005), and the characteristics and composition of the board and management (VAFEAS, 1999). These are some of the questions emerging from a company's decisions vis-à-vis voluntary information.

Taking the above into consideration, accounting disclosures must display all of the information necessary for their evaluation, avoiding misinterpretation and misleading users (ARS N° 1, AICPA, 1961). In this way, any and every additional information on the company´s current situation that can be obtained is useful for stakeholders, serving to assist their decision-making as well as assessment of past financial data.

2.2. Management Earnings Forecasts (Guidance)

When dealing with business, management earnings forecasts are the product of a grouping of perspectives on financial performance and future events that come to be between the moment the forecast is made and the end of the period it encompasses. Along with this, in the business world, forecasts are termed guidance: an abbreviated version of the term management earnings guidance, which is used in American capital markets (VERGILI, 2008) to indicate an expectation of future financial performance. However, this term has been adopted in Brazil to represent any information regarding an organization´s future performance, in either quantitative or qualitative terms (CODIM, 2008).

The practices of reporting on guidance is optional, due to which it falls under the category of voluntary disclosure, and it is a point of interest for academic research in the accounting discipline. As per Lansford, Lev and Tucker (2013), influential organizations requested that companies cease to provide earnings guidance; notwithstanding, Karamanou and Vafeas (2005) point out that sensible financial disclosure reduces informational asymmetry existing between shareholders and managers, while also referring to accounting scandals resulting from inadequate or misleading disclosure that deceived shareholders. Given these circumstances, a conflict in the disclosure of forecasts becomes apparent.

Despite the complex nature of the decision to disclose forecasts, some studies suggest that the internal environment and its interests are also influential (AJINKYA, BHOJRAJ, & SENGUPTA 2005; KARAMANOU & VAFEAS, 2005; HUTTON, 2005; ROGERS & STOCKEN, 2005; BRANDÃO et al., 2013). The results of Rogers and Stocken (2005) are noteworthy for demonstrating that the incentive for management to misrepresent information varies as a result of the market´s capacity to detect it.

The affirmation might be made that a company´s guidance disclosure exerts an influence on market analysts´ evaluations. Cotter, Tuna, and Wysocki (2006) provides evidence suggesting that guidance steers analyst opinions on attainable profit targets. Consequently, forecasts to be disclosed by a given company must be in line with what it really stands to achieve, as opposed to what it would have users see.

Along with this, the timeliness of forecasts, defined as the time between the disclosure of the forecast and the realization of the targets contained in it, must be sufficient to allow for users to make decisions. Similarly, the commitment to meeting those targets leads the user´s confidence in making use of the disclosed information. Even still, performing beyond a set target is not always met with a positive reaction, and managers might lower their forecasts to ensure that they are always attained.

In considering this phenomenon, the CODIM (Market Disclosure Advising Committee - Brazil), in its Pronouncement N° 04/2008, provides directions for guidance reporting, outlining the responsibility inherent in disclosing information to the investing community. Thusly, the CODIM emphasizes that this responsibility can be greater when forecasts are financial in nature, including cash flows, earnings per share, and EBITDA.

2.3. EBITDA

Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA) is a financial indicator based on information drawn from the Income Statement that aims to link effective financial performance with operating cash flows (FREZATTI, 2007). Assaf Neto (2009) states, using other terms, that EBITDA is the equivalent of operating cash flows before income taxes.

Assaf Neto (2009) goes on to highlight that EBITDA is understood as a measurement of operational cash generation for all equity holders (shareholders and creditors). Assaf Neto and Lima (2009) describe EBITDA as sales revenues from operations, reduced by costs and expenses, save non-cash expenses, such as depreciation, amortization, and depletion.

EBITDA is frequently used by analysts and investors (ZANOLLA; LIMA, 2011). For them to achieve their respective goals, King (2001) outlined the following four applications of EBITDA, as observed in current market trends and practices: (i) a substitution of analyses based on the price-earnings ratio; (ii) financial analysis on newly formed companies that are most likely operating at a loss; (iii) a way of estimating a given company´s valuation, similar to the Price/Earnings ratio; and (iv) insight as to the funds available for the company to use.

Despite this, the adequacy of EBITDA for financial analysis is currently debated by several authors, given that it might not accurately represent the reality of the company. Along these lines, Stumpp (2000) puts forth ten criticisms of EBITDA, which are shown in Chart 1.

Chart 1 – Criticisms of EBITDA

- ✓ EBITDA ignores changes in working capital and overstates cash flow in periods of working capital growth;
- ✓ EBITDA can be a misleading measure of liquidity;
- ✓ EBITDA does not consider the amount of required reinvestment – especially for companies with short lived assets;
- ✓ EBITDA says nothing about the quality of earnings;
- ✓ EBITDA is an inadequate standalone measure for comparing acquisition multiples;
- ✓ EBITDA ignores distinctions in the quality of cash flow resulting from differing accounting policies – NOT all revenues are cash;
- ✓ EBITDA is not a common denominator for cross-border accounting conventions;
- ✓ EBITDA offers limited protection when used in indenture covenants;
- ✓ EBITDA can drift from the realm of reality;
- ✓ EBITDA is not well suited for the analysis of many industries because it ignores their unique attributes.

Source: Stumpp (2000, p. 1)

Thus, the use of EBITDA despite criticism can contribute to business valuation and assists outside analysts for allowing an easier approach of operating cash flow in the period (FREZATTI; AGUIAR, 2007).

2.4. Related Studies

Voluntary disclosure has been addressed in the literature, and more specifically, guidance reporting has been broached in respect to how information is disclosed to investors, the integrity of said disclosures, and several other topics of relevance to the present study. Apart from these, previous works that aimed to examine the relationship between guidance disclosure and economic-financial performance specifically are presented here.

Singhvi and Desai (1971) sought to identify characteristics of American companies associated with the quality of their respective disclosure – measured by 34 disclosure items –, going on to find a greater tendency of inadequate information in the following scenarios: few shareholders; unlisted companies; audited by non-Big N firms; lower profitability (as per Return on Equity – ROE); and, lower profitability (in terms of net profit margin).

In their study, Chow and Wong-Boren (1987) strove to correlate voluntary disclosure and company size, financial leverage, and assets under control, using a sample of Mexican companies. Their findings indicate that voluntary disclosure, as well as the extent to which it is carried out, are positively associated with company size. Conversely, no significant relationship was found between disclosure and financial leverage, nor assets under control.

An empirical study by Lang and Lundholm (1993) examined the factors that promote voluntary disclosure. Companies displaying the following characteristics were shown as having a greater degree of disclosure: strong performers (gauged in returns); larger size; a weaker relationship between stock returns and earnings; and securities-issuing firms.

The objective of Meek, Roberts, and Gray (1995) was also to analyze factors influencing voluntary disclosure, albeit dealing specifically with the annual reports of multinational companies. Their research determined that larger multinationals disclose significantly more information than small ones.

Kato, Skinner, and Kunimura (2009) carried out a study focusing on companies based in Japan, with hypotheses based on the way in which those firms disclose their forecasts as well as the accuracy of those figures, along with the factors that affect it. Among the results of the study, the authors found that initial forecasts tend to be optimistic, which creates the need for adjustments over the course of the year in order to ensure their being met. A negative relationship between initial optimism and company financial performance was also shown in the data. Beside this, optimism was seen to increase along with greater participation of insiders in both companies of small size and those with a history of optimistic forecasts.

The goal of Brandão et al. (2013) was to evidence the characteristics of Brazilian companies that drive guidance disclosure, finding that companies of large size and greater profitability, listed in higher governance indexes and those that use stock options for compensating their managers are more likely to disclose on guidance.

3. METHODOLOGICAL PROCEDURES

This section outlines the methodology employed in order to carry out the research at hand, the sample selection criteria, the empirical model construction procedures and a description of the variables analyzed during the development of the study.

3.1. Sample Selection

In order to assemble a population for analysis, 72 companies classified in the Construction and Transport, and 59 in Non-Cyclical Consumer Goods, sectors of the São Paulo Stock Exchange were selected during the month of June 2014. According to Brandão, De Luca and Vasconcelos (2013), these are the sectors that most disclose on guidance. Following this, an additional 100 companies gathered from the BM&FBovespa IBrX-100 index – composed by 100 most traded shares –, as well as an additional 186 noted for those pertaining to the “Nível 1”, “Nível 2” and “Novo Mercado” on the BM&FBovespa corporate governance classification, were added to the population, which yielded a total of 417. From this, 146 were removed due to their repetition, in the sense that they displayed two or more of the above-mentioned criteria, including industry, listing on the IBrX-100, or corporate governance standout. Ultimately, 271 companies went on to be analyzed in the subsequent research procedures.

This stage of the sample selection is shown in Table 1.

Table 1 – Initial Stage of Company Sample Selection

Category	Quant.
Construction and Transport Sector	72
Non-Cyclical Consumer Goods Sector	59
Companies listed on the IBrX 100	100
"Nível 1", "Nível 2" and "Novo Mercado" on the BM&FBovespa corporate governance classification	186
Total	**417**
(-)Repeated companies	-146
Total of non-repeated Companies	**271**

Source: research data (2015)

Following the selection of the above companies, the Reference Forms pertaining to the 2012 operating year disclosed by each were analyzed. This, with the goal of identifying which of the companies in question practice EBITDA disclosure by way of guidance. The number of companies shown to engage in this practice totaled 21, while the other 250 do not. From the latter, 21 were randomly selected and were then joined with the disclosing firms (21) to form a random balanced sample of 42 companies.

3.2. Empirical Model

The relationships between the following three aspects of EBITDA forecasts and financial performance were examined in the present study: i) the association between the choice to disclose (or not) EBITDA forecasts and financial performance indicators (using binary logistic regression); ii) the relationship between forecasts accuracy (as per relative variation between projected and achieved values) and financial performance (by way of multiple linear regression); and iii) the relationship between the timeliness of adjustments to forecasts (measured using a logarithmic transformation of the number of days between the last forecast –being either an adjustment or a forecast *per se*- and the disclosure of financial reports) and financial performance (employing multiple linear regression as well).

The control and independent variables selected to establish the empirical model were submitted to multivariate testing in order to identify the relationship between the latter and the phenomenon in question. During this process, the independent and control variables displayed in Chart 2 were used.

Chart 2 – Independent and Control Variables

Control Variables	***Variable Code***	***Study***
Log of Total Assets	LnAssets	Hutton (2005)
Performance and Financial Indicators		
Return on Equity	ROE	Singhvi and Desai (1971)
Current Liquidity Ratio	CLR	Karamanou and Vafeas (2005)
Debt to Assets Ratio	DAR	Macedo Neto et al. (2012)
Net Margin	NM	Singhvi and Desai (1971)
Cost of Goods Sold / Net Revenues	CGSR	Applied by the authors
Interval between Forecast 1 and Financial Reports	IF1FR	Applied by the authors
Variation over Total Assets	FVTA	Applied by the authors

Source: compiled by the authors (2015)

As shown in Figure 1, the variables of interest were initially evaluated by way of the literature, which confirmed their relevance to the topic of voluntary disclosure. Due both to the frequency of use of EBITDA, on part of analysts and investors (ZANOLLA; LIMA, 2011), and the fact that the above variables deal directly with financial performance, an analysis of the relationship between EBITDA forecasts with the other indicators was deemed apt for the purposes of this study, testing for the existence of possible associations.

The use of variable of Cost of Goods Sold / Net Revenues took the best negotiations, there may be, with suppliers when the company presents expectations of future results, therefore, it is possible to improve the purchasing conditions.

Further, the present work´s inclusion in the field of applied social sciences allowed for the use of a 10% significance level ($p<0.10$), consistent with the procedures adopted by Ajinkya, Bhojraj, & Sengupta 2005 and Karamanou & Vafeas, 2005, at which all of the above variables were tested in order to determine which among them are associated with the choice to disclose (or not) EBITDA forecasts, as well as the timeliness and accuracy of the same. Subsequently, only those that conformed to the phenomenon in question, within the Brazilian scenario, were used to construct the model. The statistical software IBM® SPSS® v.21 was employed for analysis procedures.

4. RESULTS

In agreement with the methodological procedures outlined above, 8 variables were tested during analysis, of which the ones that best conform to the multivariate models used were identified. In the first model (Table 2), the association between the decision to disclose (or not) EBITDA forecasts via guidance and financial performance measures were examined. As this deals with a dichotomous dependent variable, a logistic regression model was used (Table 2).

Table 2 – Logistic regression model for the analysis of the decision to disclosure (or not) EBITDA forecasts in guidance reports

Variables	Coef.	Exp(B)	Significance
LnAssets	0.960	2.611	0.002
CGSR	-6.940	0.001	0.006
DAR	5.867	353.285	0.067
NM	0.017	1.017	0.077
Constant	-13.782	0.000	0.013
-2 Log likelihood	35.285		
Pseudo R² (Cox & Snell R²)	0.421		
Pseudo R² (Nagelkerke R²)	0.561		
Significance	0.000		
Overall percentage correct	83.3%		

Source: compiled by the authors (2015)

As shown by the results provided by the model (Table 2), all of the coefficients were statistically significant at the $p<0.10$ level. Based off these coefficients, we use the model to construct Equation 1:

$$Prob(Disclosure) = -13{,}782 + 0{,}960 \times LnAssets - 6{,}940 \times CGSR + 5{,}867 \times DAR + 0{,}017 \times NM \quad \textbf{(1)}$$

As shown in Table 2, the following variables were significant at the $p<0.01$ level: Log of Total Assets (positive relationship); and Cost of Goods Sold over Net Revenues (negative relationship). However, at the $p<0.10$ level, the Debt to Assets Ratio (positive relationship) and Net Margin (positive relationship) were also shown to be significant. These findings indicate that these companies are more prone to disclose EBITDA. These results suggest that larger companies, as well as those with a higher debt level, have a greater propensity to disclose EBITDA forecasts, while companies with a higher percentage of costs relative to revenues are less prone to do so.

The results of this initial analysis corroborate the findings of Chow and Wong-Boren (1987) as well as Lang and Lundholm (1993), which found that larger companies are positively tend to have greater levels of voluntary disclosure. As such, one might note that, along with a larger size, a company is likely to have a greater degree of disclosure than that required by law.

A possible explanation for the higher degree of disclosure on part of larger companies is that, due to or along with their size, better internal controls may be in place, which would lead to a greater confidence concerning EBITDA forecasts. Parallel to this, companies with higher debt ratios might disclose EBITDA forecasts so as to present a positive image of their solvency and ability to repay creditors, given that EBITDA demonstrates expectations (from a financial perspective) of current and future profitability. Along these lines, firms with a high cost margin might use EBITDA as well, as the apparent assurance of repayment stands to assist them in bargaining for better terms and rates with their suppliers.

Model 2 captured the behavior of the financial indicators in relation to Forecast Accuracy (ForAc) observed in the data, in order to check for associations between them (Table 3).

Table 3 – Multiple linear regression model to test Forecast Accuracy (ForAc)

Independent Variables	**Coefficient**	**Standard Error**	**Beta Coef.**	**T-value**	**P-value**	**VIF**
Constant	0.055	0.052		1.047	0.313	
LnAssets	-0.004	0.003	-0.168	-1.525	0.150	1.109
ROE	0.050	0.008	0.887	6.181	0.000	1.884
CLR	0.027	0.007	0.628	3.786	0.002	2.518
NM	-0.062	0.031	-0.337	-1.986	0.067	2.637
DAR	-0.006	0.028	-0.030	-0.225	0.825	1.575
IF1FR	-7.496E-5	0.000	-0.326	-2.345	0.034	1.770

Statistics					
R	0.920	Adjusted R²	0.782	F	12.927
R²	0.847	Standard Error	0.01532	Sig.	0.000
Durbin-Watson	1.653				

Source: compiled by the authors (2015)

Using the coefficients displayed in Table 3 as a reference, the model allows for the following equation (2):

$$ForAc = 0{,}055 - 0{,}004 \times LnAssets + 0{,}050 \times ROE + 0{,}027 \times CLR - 0{,}062 \times NM - 7{,}496E - 5 \times IF1FR \quad \textbf{(2)}$$

The results of the multiple linear regression indicate that Forecast Accuracy (i.e. the dependent variable) and the financial indicators of interest (independent variables) bear a degree of association of 92%, which is shown in Table 3 and denoted by the Pearson Correlation Coefficient, while the Determination Coefficient (R^2 value) is shown at approximately 84%.

Based on these results, significant relationships between ROE (positive variation) and Current Liquidity (positive variation) are shown at the $p<0.01$ level. At the $p<0.10$ level, only Net Margin (negative variation) was of significance. The Interval between the initial forecast and the close of the financial reporting period was shown to be significant at the $p<0.05$ level (positive variation), and despite the fact that its corresponding coefficient is not, it is still of importance to the model on the whole. At a slightly higher significance level ($p<0.10$), Log of Total Assets (positive variation) isn't significant. As per data analysis, we cannot attest that the variable Debt to Assets Ratio is associated with the variation between projected and achieved forecast values.

These results indicate that companies with greater ROE and Current Liquidity ratios are prone to a greater variation in terms of forecasts. Along with this, the data suggests that companies with greater returns on equity tend to make bolder forecasts, some of which cannot be met, and the increase in current liquidity coincides with more advantageous payment term negotiations due to the favorable image that it casts. A possible cause of this is the objective of attracting new investors and by extension capital, in order to bolster the company´s Net Margin. Beside this, the absence of an association between the Debt to Assets Ratio and forecasts variations was displayed

Similar to previous related studies, a relationship between the size of the company and forecast accuracy was observed; Singhvi and Desai (1971) found that smaller companies are more susceptible to inadequate information. The opposite was shown in the case of ROE, which also corresponds to said studies: higher ROE ratios coincide with greater chances of an increase in the variation between projected and achieved values.

Model 3 concerns the Timeliness of Forecast Adjustments (TFA) -it, the dependent variable- and the effect of the independent financial performance variables on the same. The results of this analysis are shown in Table 4.

Table 4 – Multiple regression model for Timeliness of Forecast Adjustments (TFA)

Independent Variables		**Coefficient**	**Standard Error**	**Beta Coef.**	**T-value**	**P-value**	**VIF**
Constant		362.642	370.633		0.987	0.344	
LnAssets		-23.360	21.622	-0.201	-1.080	0.298	1.194
ROE		198.748	97.202	0.809	2.045	0.060	5.409
CLR		194.087	49.642	1.032	3.91	0.002	2.436
NM		-533.537	206.188	-0.666	-2.588	0.021	2.287
DAR		48.293	199.640	0.052	0.242	0.812	1.575
FVTA		-3762.602	1604.367	-0.865	-2.345	0.034	4.695
Statistics							
R	0.771		Adjusted R^2		0.421	F	3.419
R^2	0.594		Standard Error		108.504	Sig.	0.027
Durbin-Watson	2.024						

Source: compiled by the authors (2015)

Using the coefficients displayed in Table 4 as a reference, the model allows for the following equation (3):

$$TFA = 362{,}642 - 23{,}360 \times LnAssets + 198{,}748 \times ROE + 194{,}087 \times CLR - 533{,}537 \times NM - 3762{,}602 \times FVTA \qquad \textbf{(3)}$$

The above regression model showed a degree of association of approximately 77% between the Timeliness of Forecast Adjustments with the financial performance variables, based on the Pearson Correlation coefficient of 0.771. As per the R^2 value of 0.594, approximately 59% of the financial performance variables' influence on the behavior of the Interval dependent variable is explained by the model.

Significant relationships between said Interval and the Current Liquidity independent variable were shown at the $p<0.01$ level in the regression model; at the $p<0.05$ level, Net Margin and Variation over Total Assets (FVTA) were also significant, while at $p<0.1$, ROE was, as well. From this, the results suggest that companies with higher Net Margins and greater FVTA are more likely to adjust their forecasts near the end of the forecast period. On the other hand, companies with higher ROE and Current Liquidity are more likely to make further-reaching forecasts, in relation to the end of the interval. In other words, higher values of said ratios coincide with earlier-set forecasts.

The data gathered by way of the model suggests that the timeliness of EBITDA forecasts is, in part, a result of some financial performance indicators. Specifically, companies with lower ROE and/or Current Liquidity Ratio, as well as those with greater variations in projected and achieved EBITDA values, take more time to disclose or adjust said forecasts. It can be concluded that, despite that additional time, these companies are more likely to release inaccurate forecasts.

The disclosure delay in question can also be considered from another angle, which is that, given the larger time span, one could expect a higher quality of the information disclosed. Regardless, this was not always shown in the data, which could be harmful to the timeliness of the information and also compromise its relevance to the user.

5. CONCLUSIONS

Voluntary disclosure of information is a choice made by managers; discretionary disclosure theory affirms that their respective analyses are based on the benefits that the process stands to provide. The lack of true information and the need to attract new, or build existing, investment are also central issues. EBITDA forecasts fall under this discussion, and as such, they were the object of the present study. With that, we sought to identify the relationship between financial performance indicators and the following variables: the decision to disclose (or not) such forecasts, the accuracy of the EBITDA values within them, and disclosure timeliness.

The results show that larger companies, as well as those with higher debt ratios, are more likely to disclose EBITDA forecasts. Regardless, the opposite is true for those with a higher percentage of costs in relation to revenues. Beside this, neither the size of the company nor its debt level were shown to be associated with forecast accuracy or timeliness.

New associations were shown in the subsequent tests for accuracy and timeliness. Upon analysis of the results provided by the respective models, companies with higher ROE and Current Liquidity ratios, as well as those with lower Net Margins, were shown to be less prone to forecast EBITDA accurately, as well as more likely to have a larger interval between their latest forecast and the balance sheet date. In this way, the results demonstrate that companies of these characteristics are disclosing overly optimistic forecasts earlier, as well as failing to meet them.

Several causes may be behind this phenomenon, which may include the need to attract investors, bargaining power with suppliers regarding payment terms, incentives for stakeholder optimism and other factors possibly related to the expectation of a greater EBITDA.

Regardless, it may be noted that a lesser degree of timeliness is associated with a greater relative variation in Total Assets, which suggests that variations of greater significance take place tend to be disclosed near the end of the operating year.

The present work sought to contribute to the literature by way of the creation of academic knowledge, providing insight to investors and other parties concerned with corporate information. As such, the overall goal was not to conclude studies on the topic, but rather to further the research on future earnings forecasts, which, in comparison to other topics, is not frequently addressed in Brazil. For financial accounting research and the capital markets fields, this study contributes to the empirical verification of the voluntary information disclosure impact on financial performance – such as the management earnings forecast disclosure –. This approach can also contribute to the understanding of the determinants of non-compulsory disclosure and the benefits obtained by companies.

It should be noted, however, that although a sample of 42 companies and Interval of confidence $p < 0.10$ have a low predictive power, because it is a topic whose operation is still incipient, there is a contribution by the start of the search for expansion of scientific knowledge on this subject. Thus, this study is limited to the sample size, the companies selected to sample, the variables identified in the literature for composition of models and studies that had access to the theoretical framework and the confidence interval and therefore, the results cannot be generalized.

As a recommendation for future research, similar studies might be carried out with data from different time periods, countries, and contexts, perhaps employing additional techniques or analyzing other forecast-related variables.

REFERENCES

AICPA, American Institute Of Certified Public Accountants. **Accounting research study**. ARS 1. 1961.

AJINKYA, Bipin; BHOJRAJ, Sanjeev; SENGUPTA, Partha. The Association between Outside Directors, Institutional Investors and the Properties of Management Earnings Forecasts. **Journal Of Accounting Research.** v. 43, n. 3, p.343-376, jun. 2005.

ASSAF NETO, Alexandre. **Mercado Financeiro.** 9. ed. São Paulo: Atlas, 2009. 318 p.

ASSAF NETO, Alexandre; LIMA, Fabiano Guasti. **Curso de administração Financeira.** São Paulo: Atlas, 2009. 820 p.

BRANDÃO, Isac de Freitas et al. Fatores determinantes do disclosure de guidance das companhias listadas na BM&FBOVESPA. **Revista Contemporânea de Contabilidade,** Florianópolis, v. 10, n. 21, p.87-114, 2013.

BRANDÃO, Isac de Freitas; DE LUCA, Márcia Martins Mendes ; VASCONCELOS, Alessandra Carvalho de. Características do guidance nas maiores empresas da bm&fbovespa;. In: CONGRESSO ANPCONT, 7., 2013, Fortaleza - Ce. **Anais...** Fortaleza –CE, 2013. p. 1 - 17.

BRASIL. Lei 6.404, de 15 de Dezembro de 1976. Diário Oficial da União, Brasília, 28 dez. 2007.

BRASIL. Lei 11.638, de 28 de Dezembro de 2007. Diário Oficial da União, Brasília, 28 dez. 2007.

CHOW, Chee W.; WONG-BOREN, Adrian. Voluntary Financial Disclosure by Mexican Corporations. **The Accounting Review,** v. 62, n. 3, p.533-541, jul. 1987.

CODIM - COMITÊ DE ORIENTAÇÃO PARA DIVULGAÇÃO DE INFORMAÇÕES AO MERCADO. Pronunciamento nº 04, de 17 de abril de 2008. Melhores práticas de divulgação de informações sobre o desempenho futuro da companhia – guidance. Necessidade de padronização de divulgação, como forma de contribuir para a adoção de boas práticas de relações com investidores e governança corporativa. **Pronunciamento de OrientaÇÃo Nº 04, de 17 de Abril de 2008**. Disponível em: <http://www.codim.org.br/downloads/Pronunciamento_Orientacao_04.pdf>. Acesso em: 02 maio 2014.

COTTER, Julie; TUNA, Irem; WYSOCKI, Peter D.. Expectations Management and Beatable Targets: How Do Analysts React to Explicit Earnings Guidance? **Contemporary Accounting Research,** v. 23, n. 3, p.593-624, maio 2006.

COMISSÃO DE VALORES MOBILIÁRIOS (CVM). Instrução CVM nº 480, de 7 de dezembro de 2009. Disponível em: <http://www.cvm.gov.br/>. Acesso em: 10 maio 2010.

CPC 00 - COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS. **Pronunciamento Técnico 00:** Estrutura Conceitual para Elaboração e Divulgação de Relatório Contábil-Financeiro. Aprovado em: 02/12/2011. Disponível em: < www.cpc.gov.br>. Acesso em: 10 maio 2014.

CPC 26 - COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS. **Pronunciamento Técnico 26:** Apresentação das Demonstrações Contábeis. Aprovado em: 02/12/2011. Disponível em: < www.cpc.gov.br>. Acesso em: 10 maio 2014.

DYE, Ronald Allen. Disclosure of Nonproprietary Information. **Journal Of Accounting Research,** v. 23, n. 1, p.123-145, jan. 1985.

FORTE, Lianny Maria et al. DETERMINANTS OF VOLUNTARY DISCLOSURE: A Study in the Brazilian Banking Sector. **Revista de Gestão, Finanças e Contabilidade**, v. 5, n. 2, p.23-37, abr. 2015.

FREZATTI, Fabio. **Orçamento empresarial, planejamento e controle gerencial**. São Paulo; Atlas, 2007.

FREZATTI, Fabio.; AGUIAR, Andson Braga. EBITDA: Possíveis impactos sobre o gerenciamento das empresas. **Revista Universo Contábil**, v. 3, n. 3, p. 7-24, set./dez. 2007.

GLOVER, Jonathan C., et al. **The Emerging Needs to Separate Facts and Forecasts: Exploring 'Intertemporal Financial Statements' with Two Time-Phases**. Vol. 20. working paper, Graduate School of Industrial Administration, Carnegie Mellon University, Pittsburgh, PA, 2002.

GRADILONE, Cláudio. **Para que serve a EBITDA?** Revista Exame. 08/ago/2002. Disponível em: http://exame.abril.com.br/revista-exame/edicoes/0772/noticias/para-que-serve-o-ebitda-m0052337 acessado em maio/2014.

HEALY, Paul M.; HUTTON, Amy P.; PALEPU, Krishna G.. Stock Performance and Intermediation Changes Surrounding Sustained Increases in Disclosure. **Contemporary Accounting Research.** v. 16, n. 3, p.485-520, 1999.

HUTTON, Amy P.. Determinants of Managerial Earnings Guidance Prior to Regulation Fair Disclosure and Bias in Analysts' Earnings Forecasts. **Contemporary Accounting Research.** v. 22, n. 4, p.867-914, 2005.

IUDÍCIBUS, Sergio de. **Teoria da Contabilidade**, 10ed. São Paulo: Atlas, 2010.

KARAMANOU, Irene; VAFEAS, Nikos. The Association between Corporate Boards, Audit Committees, and Management Earnings Forecasts: An Empirical Analysis. **Journal Of Accounting Research**. v. 43, n. 3, p.453-486, jun. 2005.

KATO, Kazuo; SKINNER, Douglas J.; KUNIMURA, Michio. Management Forecasts in Japan: An Empirical Study of Forecasts that Are Effectively Mandated. **The Accounting Review,** v. 84, n. 5, p.1575-1606, set. 2009.

KING, Alfred M.. Warning Use Of Ebitda May Be Dangerous To Your Career. **Strategic Finance,** p.1-3, set. 2001.

LANG, Mark; LUNDHOLM, Russell. Cross-Sectional Determinants of Analyst Ratings of Corporate Disclosures. **Journal Of Accounting Research,** v. 31, n. 2, p.246-271, set. 1993.

LANSFORD, Benjamin; LEV, Baruch; TUCKER, Jennifer Wu. Causes and Consequences of Disaggregating Earnings Guidance. **Journal Of Business Finance & Accounting.** v. 40, p.26-54, jan. 2013.

MACEDO NETO, Helio *et al*. Fatores Incentivadores Da Publicação De Guidance Pelas Empresas Do Ibovespa E Sua Conformidade Com O Pronunciamento De Orientação N° 04/2008 Do Codim. *In*: ENCONTRO DA ASSOCIAÇÃO NACIONAL DE PÓS-GRADUAÇÃO E PESQUISA EM ADMINISTRAÇÃO, 36., 2012. *Anais*... Rio de Janeiro: Anpad, 2012.

MEEK, Gary K.; ROBERTS, Clare B.; GRAY, Sidney J.. Factors Influencing Voluntary Annual Report Disclosures By U.S., U.K. And Continental European Multinational Corporations. **Journal Of International Business Studie,** v. 26, n. 3, p.555-572, out. 1995.

NAGAR, Venky; NANDA, Dhananjay; WYSOCKI, Peter. Discretionary disclosure and stock-based incentives. **Journal Of Accounting And Economics.** v. 34, p.283-309, maio 2003.

ROGERS, Jonathan L.; STOCKEN, Phillip C.. Credibility of Management Forecasts. **The Accounting Review.** v. 80, n. 4, p.1233-1260, mar. 2005.

SINGHVI, Surendra S.; DESAI, Harsha B.. An Empirical Analysis of the Quality of Corporate Financial Disclosure. **The Accounting Review,** v. 46, n. 1, p.129-138, jan. 1971

STUMPP, Pamela M.. **Putting EBITDA in Perspective:** Ten Critical Failings Of EBITDA As The Principal Determinant Of Cash Flow. 2000. 24 p

VAFEAS, Nikos. Board meeting frequency and firm performance. **Journal of Financial Economics**, n. 53, p. 113-142, jan. 1999.

VERGILI, Rodney. CODIM DIVULGA PRONUNCIAMENTO SOBRE GUIDANCE. **Revista RI.** v. 121, p.32-34, abr. 2008.

VERRECCHIA, Robert E. Essays on disclosure. **Journal of Accounting and Economics**, n. 32, p. 97-180, abr. 2001.

ZANOLLA, Ercílio; LIMA, Alvaro Vieira. Fluxos De Recursos Operacionais: Estudo Comparativo Entre Métodos, Aplicado Em Amostra De Empresas Industriais Brasilieras. **Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ,** Rio de Janeiro, v. 16, n. 2, p.116-132, mai. 2011.