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Value relevance of the new operating income: evaluation of the exposure draft 2019/07

Relevancia informacional del nuevo resultado operativo: evaluación del proyecto de norma 2019/07

***Value relevance* do novo resultado operacional: avaliação do *exposure draft* 2019/07**

Authors

Rummenigue Farias Lima
Master's student in Accounting Sciences at University of Brasília (UnB) - Postgraduate Program in Accounting Sciences (PPGCont/UnB). Address: University of Brasília (UnB) – FACE Building – Campus Darcy Ribeiro s/n -Asa Norte, Brasília -DF, zip code 70910-900. Phone: (61) 3107-0812. Identifiers (ID):
Orcid: https://orcid.org/0000-0002-7488-6620
Research Gate: https://www.researchgate.net/profile/Rummenigue-Farias-Lima
Lattes: http://lattes.cnpq.br/5687117932147579
E-mail: rummenigue@gmail.com

Luiz Ricardo da Costa
Master's student in Accounting Sciences at the University of Brasília (UnB) - Postgraduate Program in Accounting Sciences (PPGCont/UnB). Address: University of Brasília (UnB) – FACE Building – Campus Darcy Ribeiro s/n -Asa Norte, Brasília -DF, zip code 70910-900. Phone: (61) 3107-0812. Identifiers (ID):
Orcid: https://orcid.org/0000-0001-9542-9077
Research Gate: https://www.researchgate.net/profile/Luiz-Costa-25
Lattes: http://lattes.cnpq.br/5249758598254368
E-mail: lricardo.costa@hotmail.com

Jomar Miranda Rodrigues
Doctor in Accounting Sciences (PMIICC UnB/UFRN/UFPB). Address: University of Brasília (UnB) – FACE Building –Campus Darcy Ribeiro s/n -Asa Norte, Brasília -DF, zip code 70910-900. Phone: (61) 3107-0812. Identifiers (ID):
Orcid: https://orcid.org/0000-0001-5961-243X
Research Gate: https://www.researchgate.net/profile/Jomar-Rodrigues-2
Lattes: http://lattes.cnpq.br/4371492514010904
E-mail: jomar@unb.br

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Abstract

Purpose: To analyze the value relevance of the new operating result proposed by ED/2019/07 in Brazilian companies in relation to the gaap and non-gaap measure, assessing the relevance of the new operating result associated with the market value of companies.

Methodology: We used economic and financial data, available at Economatica, from 149 companies from the 9 economic sectors of B3, which had the annual information necessary to carry out the study in the period from 2010 to 2019. For data analysis, we used a restatement of the current income statement, to assess the new operating income provided for in the Exposure Draft. To assess value relevance, the model by Ohlson (1995) was used, which allows evaluating the explanatory power of the R^2 of the regression.

Results: The results of the analyzes suggest that, for the analyzed companies, the value relevance of New Operating Income (R^2=0.4439) is higher than EBITDA (R^2 = 0.4321), followed by Net Income (R^2 = 0.4094). Such results show that the New Operating Result has greater explanatory power for the companies' market value. So, the results corroborate the conclusions of Barton et al. (2010) in which the Operating Result and EBITDA have greater value relevance than the gaap measure and, consequently, a greater association with stock returns.

Contributions of the Study: The study provides empirical evidence on the possible impacts of the new income statement, with practical implications, and on how the change in the presentation of the income statement can impact the predictability of actions. In addition to theoretical and practical contributions, as it is a future standard that, it seems, will be implemented in the coming years, this research can contribute to accounting professionals, auditors and regulatory bodies in understanding the benefits and impacts of the proposed changes.

Keywords: New operating result; *Exposure draft*; Income statement; Value relevance.

Resumen

Objetivo: Analizar la relevancia del valor de los nuevos resultados operativos propuestos por el ED/2019/07 en las empresas brasileñas en relación con la medida gaap y non-gaap, evaluando la relevancia de lo nuevo resultado operativos asociados al valor de mercado de las empresas.

Metodología: Utilizamos datos económicos y financieros, disponibles en Economatica, de 149 empresas de los 9 sectores económicos de B3, que contaban con la información anual necesaria para realizar el estudio en el período de 2010 a 2019. Para el análisis de datos se utilizó un Re expresión de la cuenta de resultados actual, para evaluar el nuevo resultado operativo previsto en el Proyecto de Norma. Para evaluar la relevancia del valor se utilizó el modelo de Ohlson (1995), que permite evaluar el poder explicativo del R^2 de la regresión.

Resultados: Los resultados de los análisis sugieren que, para las empresas analizadas, la relevancia valorativa del nuevo resultado operativo (R^2 =0,4439) es superior al EBITDA (R^2= 0,4321), seguida por la utilidad neta (R^2= 0,4094). Tales resultados muestran que el nuevo resultado operativo tiene mayor poder explicativo del valor de mercado de las empresas. En este sentido, los resultados corroboran las conclusiones de Barton et al. (2010) en el que el resultado operativo y el EBITDA tienen mayor relevancia de valor que la medida del gaap y, en consecuencia, una mayor asociación con la rentabilidad de las acciones.

Contribuciones del Estudio: El estudio aporta evidencia empírica sobre los posibles impactos de la nueva cuenta de resultados, con implicaciones prácticas, y sobre cómo el cambio en la presentación de la cuenta de resultados puede impactar en la previsibilidad de las acciones. Además de aportes teóricos y prácticos, por tratarse de una norma futura que, al parecer, será implementada en los próximos años, esta investigación puede contribuir a los profesionales contables, auditores y organismos reguladores en la comprensión de los beneficios e impactos de los cambios propuestos.

Palabras clave: Nuevo resultado operativo; Proyecto de norma; Demostración de resultados; Relevancia contable.

Resumo

Objetivo: Analisar o *value relevance* do Novo Resultado Operacional proposto pelo ED/2019/07 nas empresas brasileiras em relação às medidas *gaap* e não-*gaap*, avaliando a relevância do novo resultado operacional associado ao valor de mercado das empresas.

Metodologia: Utilizou-se dados econômico-financeiros, disponíveis na Economatica, de 149 empresas de 9 setores econômicos da B3, que detinham as informações anuais necessárias para a realização do estudo no período de 2010 a 2019. Para análise dos dados utilizou-se de um *restatement* da atual demonstração de resultado, para avaliar o novo resultado operacional disposto no *Exposure Draft*. Para avaliação do *value relevance* foi utilizado o modelo de Ohlson (1995), que permite avaliar o poder explicativo do R^2 da regressão.

Resultados: Os resultados das análises sugerem que, para as empresas analisadas, o *value relevance* do Novo Resultado Operacional (R^2=0.4439) é superior ao EBITDA (R^2 = 0.4321), seguido pelo Lucro Líquido (R^2 = 0.4094). Tais resultados evidenciam que o Novo Resultado Operacional possui maior poder explicativo para o valor de mercado das empresas. Neste sentido, os resultados corroboram com as conclusões de Barton et al. (2010) em que o Resultado Operacional e o EBITDA possuem maior *value relevance* que a medida *gaap* e, consequentemente, maior associação com os retornos das ações.

Contribuições do Estudo: O estudo traz evidências empíricas sobre os possíveis impactos da nova demonstração do resultado, com implicações práticas, e de como a alteração na forma de apresentação da demonstração de resultado pode impactar na previsibilidade das ações. No âmbito social, por tratar-se de uma futura norma que, ao que tudo indica, será implementada nos próximos anos, a presente pesquisa pode contribuir com profissionais contábeis, auditores e órgãos normativos no entendimento dos benefícios e impactos das alterações propostas.

Palavras-chave: Novo resultado operacional; *Exposure draft*; Demonstração do resultado; *Value relevance*.

1 Introduction

It is expected that the increase in the quality and comparability of financial statements will have positive impacts on investors' ability to predict. The International Financial Reporting Standards (IFRS) USE could lead to an improvement in the investors' ability to make financial decisions, improve investment and financing conditions, and consequently in an efficient allocation of financial resources worldwide (Lourenço & Branco, 2015).

The International Accounting Standards Board (IASB) advocates in its conceptual framework, Conceptual Framework for Financial Reporting (IASB, 2018a), that accounting information should be useful to its users. To be useful, information needs to be relevant and faithfully represent what it purports to represent. Therefore, information is relevant in financial statements if it is capable of making a difference in decision making, which can help analysts in forecasting future results or confirming or correcting previous expectations.

IASB increasingly seeks to develop IFRS standards that bring transparency, accountability and efficiency to financial markets around the world, with a focus on investors and creditors. Silva (2018) reinforces that the importance of these users (investors and creditors) is the result of a historical process that led both to important positions on the IASB Board. This fact is evidenced mainly in the Conceptual Frameworks of 2010 and 2018, in which IASB highlighted the central role of these agents by indicating them as main users.

With the capital market development and with the increasing adherence to IASB standards worldwide, there was a lack of standard in the financial statement presentation. This lack of standard has brought to light problems of comparability among countries and even in certain sectors, due to the flexibilities allowed in IAS 1 - Presentation of Financial Statements.

Another point, not less important, was the growing use of alternative performance measures to present the results of companies through information that does not use the accounting standard (non-gaap measures). According to Black, Christensen, Ciesielski & Whipple (2021), the recent proliferation of non-gaap performance measures has led regulators and professionals to emphasize the importance of evaluating the consistency of results over time and comparability among companies.

Thus, in order to meet the demand for standardization of financial statements, IASB started, in 2015, the Project for Disclosure and Primary Financial Statements Initiatives. This project aims to improve the way in which accounting information is communicated in the financial statements, focusing mainly on the Income Statement (gaap measures) and management performance measures (non-gaap measures).

After several studies and discussions, in December 2019, IASB issued the Exposure Draft ED/2019/07 (General Presentation and Disclosures - Primary Financial Statements), which proposed a new way of presenting the Income Statement, in order to increase the comparability and transparency of company results. The Exposure Draft (ED) seeks to solve disclosure problems, such as the segregation of results by activities (operating, investments and financing) and the transparent and consistent disclosure of management performance measures, also known as non-gaap measures. ("GAAP" Generally Accepted Accounting Principles).

Regarding the segregation of results by activities, Penman (2016) emphasizes that the segregation by subtotals in the financial statements must be designed to meet the information needs of common shareholders, in order to increase the quality of accounting information, especially for users. unqualified.

The quality of accounting information can be evaluated by one or a set of attributes. In the literature, there are studies and metrics that use proxies to assess this quality, such as conditional conservatism, persistence of accounting results, earnings management and value relevance (Paulo, 2007; Barth, Landsman & Lang, 2008; Dechow, Ge & Schrand, 2010). For Barth, Beaver and Landsman (2001), when information impacts stock prices, it means that this information is relevant to the capital market.

So, the present study seeks to answer the following research problem: Does the New Operating Result proposed by ED/2019/07 increase value relevance compared to other models for Brazilian companies? Regarding the objective of the study, we seek to analyze the value relevance of the New Operating Result proposed by ED/2019/07 in Brazilian companies in relation to gaap and non-gaap measures, evaluating the relevance of the new operating result associated with market value of companies.

The study was based on the companies' financial information, official documents issued by the IASB, as well as articles related to the topic. It is noteworthy that no studies were found that evaluated the relevance of the accounting information of the new income statement proposed by the Exposure Draft applied to the Brazilian environment, representing a gap in the literature regarding the process of disclosing accounting information.

As a theoretical contribution, the research shows the applicability of the value relevance model proposed by Ohlson (1995) for the analysis of new accounting information associated with the market values of Brazilian companies. In the social sphere, the research presents subsidies for future discussions among academics, norms, regulators and companies, since, after the issuance of the respective IFRS, Brazil has used, in practice and with few changes, IASB standards.

Regarding the practical contribution, this research provides an assessment of the new income statement relevance that is being drafted within the scope of IASB. Most studies analyze the accounting impacts after the use of a certain standard, in this case, the study differs because it deals with the future use of a standard in the Brazilian scenario. Additionally, as the Exposure Draft gains more relevance, the study will serve as input for cross country studies on the same topic.

The article is structured in five sections, considering this introduction as section 1. Next, section 2 presents a review of the research literature. Section 3, the methodology. Section 4 shows analysis and discussion of the survey results. Section 5, the final considerations. Finally, the references that supported the study are highlighted.

2 Literature Review

2.1 *Exposure Draft* 2019/07 x Law n° 6.404/1976 (Corporation Law)

In December 2019, IASB launched the Exposure Draft (ED) 2019/07 - General Presentation and Disclosures, which seeks to propose improvements in the way financial statements are presented, especially the Income Statement. This is a project that forms part of IASB's work on Best Practices for Communicating Financial Reporting. The matter was prioritized in the board with the aim of solving the structure problem and content of the income statement, which presents certain divergences among entities, even in the same sector, which reduces the comparability and predictability of stock returns.

Among the proposed changes, the main one is the change in the presentation of the Income Statement, as shown in Table 1.

Table 1
Proposal of Result Demonstration of the Exposure Draft

Description	$	Activities
Operating income	X	
Operational expenses	(X)	**Operational**
Operational result	**X**	
Equity in subsidiaries and wholly owned joint ventures	X	**Wholly owned affiliates and joint ventures**
Operating and equity income and full joint ventures	**X**	
Profit sharing of non-integral associates and joint ventures	X	
investment income	X	**Investment**
Result before financing and income tax	**X**	
Expenses from financing activities	(X)	
Reversal of discount on pension plan liabilities and provisions	(X)	**Financing**
Income before taxes	**X**	
Income taxes	(X)	
Income for the year	**X**	

Source: *Adapted from IFRS (2019)*

The Income Statement role is to provide a structured and comparable summary of the income and expenses recognized in the entity, to allow a better comparison among different entities and moments, as well as to identify items on which users may wish to seek additional information in the explanatory notes (IFRS, 2019). As shown in Table 2, ED proposes the segregation of the Income Statement into activities:

Table 2
Segregation of the income statement by activities

Activities	Description
Operational	Income and expenses from the main business activities and those that are not included in the other groups.
Investments	Investment income and expenses generated individually and largely independently of other resources held by an entity.
Financing	Income and expenses from wholly-owned associates and joint ventures (results from equity interests).

Source: *Adapted from IFRS (2019)*

Another innovation brought by ED is the consistent disclosure of management performance measures and subsequent reconciliation among the alternative measure (non-gaap measure) and the respective book values (gaap measures). This is a demand from users who find performance measures defined by management useful for analyzing performance or making predictions about the entity future.

Despite the apparent advantages of non-gaap measures, they have been the subject of much controversy, mainly because these alternative performance measures are not formally defined and are not calculated consistently across companies. (Venter, Emanuel & Cahan, 2014). Thus, the ED is seeking consistency in the presentation of these measures, since entities provide this information without often defining or explaining the intended purpose, reducing their usefulness.

Non-gaap measures are so called because they do not meet generally accepted accounting principles, principles inherent to financial statements. According to Black, Christensen, Ciesielski and Whipple (2018), the number of companies reporting results on a non-gaap basis has increased dramatically in the last decade, becoming information commonly used in capital markets. According to the authors, this proliferation of non-gaap information has renewed the regulators' interests and accounting standard setters in these alternative metrics, especially in knowing whether or not these measures are misleading for investors.

Regarding non-gaap measures, Barton, Hansen and Pownall (2010) carried out a study with almost 20 thousand companies in 46 countries from 1996 and 2005, concluded that there is no global consensus among the performance measures evaluated by investors, but the Operating Result and Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) have greater value relevance as they have a greater association with stock returns. The authors, in their findings, interpreted that performance measures that most reflect changes in operating cash flows are most useful to investors.

In this context, the literature shows that the information that makes up the profit has additional content and differences in its predictive capabilities that must be taken into account (Dechow & Ge, 2006). Therefore, the need to review the presentation of the Income Statement arises, since this accounting piece has great relevance in the process of evaluating companies and decision-making. Barth, Cram and Nelson (2001) argue that the choice of format for presenting accounting information in financial statements can also influence users in carrying out their projections.

In the Brazilian scenario, there are discrepancies in the financial statement presentation among the standards of IAS 1 and CPC 26 (R1) – Presentation of Financial Statements, mainly due to Law No. 6,404/1976. Among the main differences, the law determines, for example, that companies break down their expenses in the income statement in a similar way to the segregation by function (more synthetic), thus not allowing them to make the presentation with expenses segregated by nature (more analytical) on its face, but only in explanatory notes.

In that case, art. 187 of the Brazilian Corporation Law determines a minimum content for the income statement and the disclosure of specific items/subtotals as shown in Table 3.

Table 3

Segregation of the income statement

Description (IAS 1)	Description (Lei n° 6.404/1976)
• Revenue • Expenses and Costs • Income from affiliates and joint ventures (Equity method) • Tax expenses • Total discontinued operations • Net income for the period (controlling and non-controlling interests)	• Revenue • Cost of products and services sold • Gross profit • Selling, general, administrative and other operating expenses and income • Income before financial income and expenses • Result before income taxes • Net income for the period

Source: *Adapted from IAS 1 and Law n° 6.404/1976*

About subtotals, Law No. 6,404/1976 has some advantages over the model proposed by IAS 1, since, according to the study by Barton et al. (2010) the "intermediate" subtotals of the income statement, such as operating income, had a stronger association with stock returns, compared with top line or bottom-line information.

Considering the specific characteristics of each country, ED proposal may be adapted, mainly due to the respective legislation. In the future, when the Accounting Pronouncements Committee (CPC) discusses the standard use originated by ED, it will be necessary to analyze the suitability of the Corporate Law about the defined by IASB and with the new market dynamics, with regard to the comparability of financial statements.

When analyzing the changes proposed by ED and the Brazilian standards, it is observed that some changes proposed by IASB are already required in the Brazilian environment, such as the segregation of groupings and the disclosure of management performance measures. Although the Corporate Law includes financial income and expenses in the operating category, CVM Instruction 564/08, which approved CPC 12 – Adjustment to Present Value, allowed the segregation (operational or financing) of these amounts in the presentation of the Income Statement.

Regarding management performance measures, CVM Instruction No. 527/2012 provides for the voluntary disclosure of information of a non-accounting nature (non-gaap) called EBITDA (Earnings Before Interest, Income Taxes including Social Contribution on Net Income, Depreciation and Amortization) and EBIT (Earnings Before Interest and Income Taxes including Social Contribution on Net Income). The instruction reinforces that for the calculation and presentation of these measures, the numbers presented in the financial statements must be based on and accompanied by the accounting reconciliation of these values, which is in line with what is being proposed in ED.

2.1 *Value Relevance*

To identify the quality and usefulness of accounting information, proxies or metrics that capture this phenomenon are used. Therefore, there is an abundance of research in the literature that seeks to use proxies to determine whether or not information is useful for users' decision making, such as conditional conservatism, persistence of accounting results, earnings management and value relevance. (Paulo, 2007; Barth, Landsman & Lang, 2008; Dechow, Ge & Schrand, 2010).

Value relevance is a technique that seeks to measure the degree of usefulness of certain accounting information by relating stock prices to the accounting numbers of a particular entity (Barth, Beaver & Landsman, 2001). According to the authors, it is assumed that, if certain accounting information was capable of interfering with the price of a share, then it is relevant to the pricing process, as well as some degree of reliability.

Although Ball and Brown (1968) and Beaver (1968) studies are indicated as the first to use value relevance techniques, since they sought the relationship among accounting earnings and stock value, Barth, Beaver and Landsman (2001) indicated that the first study to reference the term value relevance in stock price assessments along with accounting numbers was by Amir, Harris and Venuti (1993).

In the Brazilian scenario, Lopes' thesis (2001) that discusses the relevance of accounting information for the capital market using Ohlson model (1995) applied to the Brazilian stock exchange is considered a pioneering study on value relevance. The author concluded that there is evidence that has great explanatory power for the accounting information produced in Brazil, but this explanatory power is concentrated in equity and not in profit. It should be noted that during the study period, the dynamics of Brazilian accounting was highly regulated and strongly influenced by tax legislation.

The seminal study by Ohlson (1995) assumes that the market value of a company is equivalent to the present value of expected dividends. The development of the model shows the relevance of abnormal (or residual) earnings as they influence the difference from market and book value, that is, they influence a company's goodwill.

In general, Ohlson (1995) presents a reference model that can be used to conceptualize how the value of a company is related to accounting variables (net income, equity and dividends). The model satisfies a series of economic properties, which makes it somewhat coherent and intuitive, in addition to allowing a certain realism in accounting since the theory is directly supported by the clean surplus ratio and the characteristic that dividends reduce book value but do not affect current earnings.

To contribute to the discussions about value relevance, Holthausen and Watts (2001) developed three classifications for techniques related to value relevance: relative, incremental and marginal information content. Relative Association Studies seek the association among stock market values, with different forms of measurement or alternatives among accounting standards, comparing the coefficient of determination (R^2) of the regression models, to determine the most relevant model.

Incremental Association studies (Holthausen & Watts, 2001) seek to analyze whether accounting information is useful to explain values or returns over periods. In this case, the value has incremental information content, if the estimated regression coefficient is statistically different from zero.

Finally, value relevance studies with Marginal Information Content (Holthausen & Watts, 2001) test whether an accounting number would add some information to investors. Thus, event study methodologies are used, assessing whether the availability of certain information is statistically associated with the change in the asset value.

The value relevance concept is consolidated in the literature, but with the use of IFRS and the new market dynamics, the relevance of accounting information has gained prominence in order to assess the explanatory power of these standards and the profit itself. According to Barth, Li and McClure (2021), the value relevance of accounting information has evolved as the economy has moved from being primarily industrial to a "new economy" based on services and information technology.

Barth et al. (2021) evaluated a sample of 246,295 company-year observations from 1962 to 2018 to verify how value relevance evolved as the economy transitioned from an industrial economy to one based on services and information technology "new economy". The authors concluded that profit (book value) has become less relevant over time and that book values related to intangible assets, growth opportunities and alternative measures of performance have become more relevant.

Santos, Lemes and Barboza (2019) sought to identify, through a meta-analysis, the impact of IFRS on the value relevance of net income and equity in the Brazilian scenario. The authors identified evidence that with IFRS use there was an increase in the net income relevance, however, equity lost explanatory value.

2.2 Research Hyphotesis

In order to verify the informative power of the new operating result, the hypotheses are based on the assumption that the market reacts to the results disclosed by the company. As mentioned earlier, the empirical approach chosen to relate market value and accounting information in order to verify their informative power is value relevance.

Therefore, considering the study by Barth et al. (2021) who concluded that other accounting values, including alternative performance measures, have greater informative power than the net result itself, Hypothesis 1 (H_1) emerges from the research.

H_1: The new operating result, along the lines of the ED, has an informative power superior to the Net Income (gaap measure).

Then, based on the conclusions of Barton et al. (2010) that there is no global consensus among performance measures, Hypothesis 2 (H_2) arises, in order to investigate whether the new operating result "future gaap measure" has a superior relative association to non-gaap measure, commonly used by market analysts proposes to assess whether:

H_2: The new operating result, along the lines of the ED, has a higher information power than the non-gaap measure.

3 Methodology

The research is characterized as descriptive, since it seeks to highlight the characteristics of a given phenomenon through samples, indicating the relationship among the variables. It is quantitative research, which is based on quantifiable and statistical data (Gil, 2002).

To achieve the research objective, publicly traded Brazilian companies listed in the special listing segments of B3 (Bovespa Mais, Bovespa Mais Level 2, Novo Mercado, Level 2 and Level 1) were analyzed. The choice of these segments is justified because they are companies that value differentiated corporate governance rules, which go beyond the obligations that companies have under the Brazilian Corporate Law. Companies in the financial sector were excluded from the sample, given that they are governed by specific accounting rules.

Table 4
Sample

Description	Quantity
Companies listed in special segments	230
Insufficient information	(81)
Companies analyzed	**149**
Novo Mercado	116
Bovespa Mais	3
Level 1	19
Level 2	11

Source: *Research Data*

According to Table 4, the sample corresponded to 149 companies from 9 economic sectors of B3, available in the Economatica database, which had all the annual information necessary to carry out the study in the analysis period (2010 to 2019). The analysis is from 2010, the year in which Brazilian companies started to use IFRS, up to 2019. Due to Coronavirus pandemic, it was decided to remove the 2020 financial year from the sample, since that other factor influenced the economic situation of the capital market in general and the market value of companies.

3.1 Restatement of the new Operational Result and EBITDA

To assess the new operating result along the lines of the ED, a restatement of the income statements of the companies evaluated was carried out to allow the evaluation of value relevance. The income statement available at Economatica is in accordance with the precepts established in Law No. 6,404/1976, in which there is a mandatory presentation by function (more synthetic), instead of by nature (more analytical), which is presented in the explanatory notes. For restatement, items were classified by function that have characteristics related to operational activities, as shown in Table 5.

Table 5
Restatement of the New Operating Income

Origin	Result Demonstration
Operational	+ Operating net revenue
Operational	- Cost of Products Sold
Total	**= Gross Profit**
Total	**- Operating expenses (revenue)**
Operational	+ Selling Expenses
Operational	+ Administrative expenses
Investments	+ Per to not recover. from at.
Operational	- Other operational revenue
Operational	+ Other operating expenses
Equivalence	- Equity
Total	**= Earnings before interest & tax**
Total	**+ Financial result**
Financial	+ Financial income
Financial	- Financial expenses
Total	**= Profit before tax**
Total	**- Income tax and social contribution**
Taxes	Income tax provision
Taxes	Deferred income tax
Total	**= Operating profit continued**
Total	**+ Operation discontinued**
Investments	Profit or loss disc. operat.
Investments	Earnings or loss without op.
Net profit	**=Profit**

Origin	Result Demonstration
Operational	+ Operating net revenue
Operational	- Cost of goods sold
Operational	- Sales expenses
Operational	- Administrative costs
Operational	+ Other revenue operational
Operational	- Other operating expenses
Total	**=New Operating Result**

Source: *Made by the authors*

The group classification with operational characteristics, as shown in Table 5, was the methodology used by the authors to achieve the objectives proposed in the research. It should be noted that the explanatory notes were not evaluated to verify the breakdown of these balances, and therefore, it is understood to be a weak aspect of the study, since there may be values agglutinated in these items that were used in investment or financing activities. ED reinforces that in the segregation of revenues and expenses by activities, it will also be necessary to evaluate the nature of these values, for the best classification according to the classification by activity.

For EBITDA analysis, which consists of earnings before interest and taxes (EBIT) plus depreciation, amortization and depletion, information available at Economatica was used. EBITDA was chosen because it is a non-gaap measure widely used by the market to evaluate companies' performance and because it is part of the study by Barton et al. (2010).

3.2 Value Relevance Model

In general, research uses models that derive from studies carried out by Ohlson (1995). This research is a relative association value relevance study (Holthausen & Watts, 2001), which seeks to associate stock market values with other financial information, in this case, Net Income (gaap), EBITDA (not -gaap) and the New Operating Result (future gaap). This model compares the coefficient of determination (R^2) of the regression models to determine the most relevant model, indicating that this relationship, if any, evidences greater relevance or higher levels of informational content for users.

It is important to highlight that the value relevance of relative association is analyzed by the explanatory power of the R^2, which demonstrates the quality of the regression model's adjustment. The R^2 is between 0 and 1, and the closer to 1, the better the adjustment. In addition, the variables analyzed must be relevant, therefore, the coefficients of β1 and β2 of the models are expected to be statistically significant, regardless of the sign.

To assess whether the New Operating Income has a better relative association with market value, the value relevance model proposed by Ohlson (1995) was used, which takes into account the company's market value as a dependent variable and net income and equity as explanatory variables, as follows:

$$VM_{it} = \alpha + \beta_1 LL_{\ it} + \beta_2 PL_{it} + \varepsilon_{it} \qquad \text{(Equation 1)}$$

Where VM_{it} is the market value of company i in year t. The variable $LL_{\ it}$ is equivalent to the net income of company i in year t and the PL_{it} represents the equity of company i in year t. Considering the objective of the study, then, an alternative model is proposed that replaces the result variable $LL_{\ it}$ by the variable $EBITDA_{it}$ (equation 2) and, later, by the variable $NRO(ED)_{it}$ (equation 3), leaving the models as follows:

$$VM_{it} = \alpha + \beta_1 EBITDA_{it} + \beta_2 PL_{it} + \varepsilon_{it} \qquad \text{(Equation 2)}$$

$$VM_{it} = \alpha + \beta_1 NRO(ED)_{it} + \beta_2 PL_{it} + \varepsilon_{it} \qquad \text{(Equation 3)}$$

$EBITDA_{it}$ is equivalent to earnings before interest, taxes, depreciation and amortization of company i in year t. The $NRO(ED)_{it}$ is equivalent to the New Operating Result of company i in year t, as proposed in the restatement of Table 5.

For data normalization, the variables variáveis $VM_{it}, LL_{\ it}, PL_{it}, EBITDA_{it}$ e $NRO(ED)_{it}$ were scaled by Total Assets (AT_{it}), being the company's total assets i in year t. To improve the empirical results, control variables for sector and year were used in all equations.

4 Analysis and discussion of results

This section presents the analyzes and discussions of the results that were obtained using the *Stata*® computational package. Table 6 presents the distribution of the 149 companies analyzed, segregated by year and sector, which presented all the annual information necessary to carry out the analysis.

Table 6

Number of companies by sector and year

Economic Sector B3	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Industrial goods	20	20	21	21	21	20	20	21	21	22
Communications	2	2	2	2	2	2	2	2	2	2
Cyclical consumption	30	34	35	39	40	40	40	45	45	47
Non-cyclical consumption	9	12	12	12	12	12	12	14	14	14
Basic materials	16	16	16	16	17	16	17	17	17	17
Oil, gas and biofuels	5	7	7	7	7	7	7	8	8	8

Health	6	8	8	8	9	10	11	12	14	14
Information Technology	2	2	2	3	3	3	3	3	3	3
Public utility	16	17	17	18	19	19	20	21	21	22
Total	**106**	**118**	**120**	**126**	**130**	**129**	**132**	**143**	**145**	**149**

Source: *Research Data*

Table 7 presents the descriptive statistics of the variables used in the models, scaled by the respective assets of the companies.

Table 7
Descriptive analysis of variables

Variable	Minimum	Maximum	Average	Standard Deviation	Observ. No.
VM	.010112	3.467555	.6013021	.6508675	1,298
PL	-1.686495	.8774883	.3675368	.3103228	1,298
LL	-.4651679	.2056528	.0194108	.0977705	1,298
EBITDA	-.3422453	.2723821	.0861696	.0951076	1,298
NRO (ED)	-.314885	.2410198	.0575201	.0844691	1,298

Source: *Research Data*

Table 8 presents the results of the regressions used according to the equations presented in the methodology.

Table 8
Regression results with Net Income / EBITDA / New Operating Result

Variables		Equation-1 (Net profit)	Equation-2 (EBITDA)	Equation-3 (New Operational Result)
PL_{it}	Coeficient	.1472915	.2504884	.2287494
	P-value	0.057	0.002	0.004
LL_{it}	Coeficient	2.372507	--	--
	P-value	0.000	--	--
$EBITDA_{it}$	Coeficient	--	2.516702	--
	P-value	--	0.000	--
$NRO\ (ED)_{it}$	Coeficient	--	--	2.990453
	P-value	--	--	0.000
Constant	Coeficient	.3363148	.0951583	.1461898
	P-value	0.000	0.138	0.017
Durbin-Watson		2.039893	2.057501	2.060082
VIF		1.73	1.71	1.71
Prob > F		0.0000	0.0000	0.0000
R-squared		0.4094	0.4321	0.4439
N		1.298	1.298	1.298
Year and sector effect, robust standard errors		Yes	Yes	Yes

Source: *Research Data*

According to Table 8, the analysis of 1298 observations is observed, considering 149 companies in the ten-year period (2010 to 2019), considering the OLS regressions with fixed effect of year, sector and robust standard errors. The VIF test (Variance Inflation Factor) of multicollinearity among the variables showed low values for the models used, which demonstrates the acceptability of the data regarding this assumption. The Durbin-Watson also demonstrated the acceptability of the data regarding the assumption of autocorrelation in the residuals by presenting values close to 2.

For the Net Income equation, the coefficient β1 (Shareholders' Equity) presented a p-value above 5%, demonstrating that this variable is not statistically significant for the model, corroborating the study by Santos et al. (2019) in which, in the Brazilian scenario, equity lost explanatory power with IFRS.

Regarding β2 coefficients (Net Income, EBITDA and New Operating Result) the p-value showed significance, being, therefore, below 5% (0.0000), denoting that they are useful information to explain the behavior of the companies' market value.

The R^2 of the three models are shown in Table 8 for each model of interest. Considering that R^2 indicates the explanatory power of the model, the closer to 1, the greater the explanatory power, indicating that this relationship evidence greater relevance or higher levels of informational content for users.

The results of the analyzes suggest that, for the analyzed companies, the value relevance of New Operating Income (R^2 = 0.4439) is higher than EBITDA (R^2 = 0.4321), followed by Net Income (R^2 = 0.4094). Such results show that the New Operating Result has greater explanatory power for the companies' market value. So, the results corroborate the conclusions of Barton et al. (2010) in which the Operating Result and EBITDA have greater value relevance than the gaap measure and, consequently, a greater association with stock returns.

The results presented here indicate that, for the analyzed companies, hypothesis 1 (H_1) and hypothesis 2 (H_2) are accepted and that the New Operating Income has greater accounting relevance than Net Income and EBITDA, evidencing that the proposal for a new financial statement of the result with the segregation by operational activities presents greater informational content for the users in the predictability of the market value of the companies.

5 Final Considerations

The objective of this article was to assess the value relevance of the New Operating Result proposed by ED/2019/07 for B3 companies. To achieve this objective, an analysis was carried out of the main changes proposed by the ED and a restatement of the income statements to obtain the New Operating Result and thus assess its relevance through the value relevance model (Ohlson, 1995).

Relative association value relevance studies seek to associate the market values of companies with accounting measures, in order to assess which accounting measure has greater informational attributes. Thus, the New Operating Result measure was compared with two other pieces of information, one gaap (Net Income) and the other non-gaap (EBITDA). Net income was chosen because it is a traditional gaap measure in accounting, while EBITDA was chosen because it is a non-gaap measure widely used by financial analysts.

From the results, it is concluded that, in general, the change proposed by IASB, regarding the new way of presenting the income statement, will be very useful for users, especially for non-qualified investors, since they approximate accounting information information used by market analysts. In the case of the analyzed companies, it was found that the New Operating Result has greater explanatory power than EBITDA and Net Income, demonstrating that the

IASB, through the proposed changes in ED, improves the quality of accounting information, seeking to solve problems disclosure, in addition to increasing the comparability of the income statement.

The study provides empirical evidence on the possible impacts of the new income statement, with practical implications, and on how the change in the presentation of the income statement can impact the predictability of actions. In addition to theoretical and practical contributions, as it is a future standard that will be implemented in the coming years, this research can contribute to accounting professionals, auditors and regulatory agencies in understanding the benefits and impacts of the proposed changes.

It should be noted that the explanatory notes were not evaluated to verify the breakdown of these balances, and therefore, it is understood to be a weakness of the study, since there may be values agglutinated in these items that were used in investment or financing activities. ED reinforces that in the segregation of revenues and expenses by activities, it will be necessary to evaluate these values, for the best classification according to the classification by activity.

As there is no global consensus among management performance measures, the main ones being the operating result and EBITDA (Barton et al., 2010), the analysis by value relevance may vary among countries and sectors, so it is suggested to future research that includes other value relevance models, other segments and countries, including cross country studies, as well as other performance measures in order to assess the value relevance of gaap or non-gaap information in different scenarios.

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