

***Value Relevance of the Statement of Cash Flows in the Pre and Post IFRS Period in Brazil***

***Value Relevance da Demonstração dos Fluxos de Caixa no Período Pré e Pós IFRS no Brasil***

***Value Relevance de la demonstración de flujos de efectivo en el período anterior y posterior a las NIIF en Brasil***

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**Abstract:** *This study analyzes the value relevance of the Cash Flow Statement of Brazilian public companies in the pre and post International Financial Reporting Standards period. The research is quantitative, descriptive in terms of objectives and documentary, with data available on Economática® from companies listed on the stock exchange, Brasil, Bolsa Balcão S.A. (B3) from 2005 to 2016, based on the model by Martins and Oliveira (2013), of the two models analyzed using different samples. The resulting sample is from 326 companies, non-probabilistic of an intentional type. The results indicate that the variables of operating cash flow, investments and financing (FCO, FCI and FCF) – model 1 - do not present statistical significance in determining the price of shares (PA) in the capital market Brazilian, not being able to explain the variation of shares in the periods before and after convergence to IFRS standards. It should be noted, however, that in the regression model 2 that examines the relevance of operating profit (LO) and net profit (LL) together with operating cash flow (FCO) and net cash flow (FCL), only the FCO had a significant influence on the price of shares in the post-IFRS period. Thus, Model Two shows that Operating Cash Flow has a significant influence on the share price in the post-IFRS period. In summary, the results indicate that the convergence with international accounting standards - IFRS did not cause significant impacts on the value relevance of accounting information, with the exception of FCO, which presents value relevance in the “post” IFRS period. The study contributes to the deepening of DFC's value relevance research, after the adoption of IFRS.*

**Keywords:** *Value Relevance. Cash Flow. International Accounting Standards*

**Resumo:** Este estudo analisa o *value relevance* da Demonstração do Fluxo de Caixa das companhias abertas brasileiras no período pré e pós a adoção das *International Financial Reporting Standards* (IFRS). A pesquisa é quantitativa, descritiva e documental, com dados disponíveis no Economática® de companhias listadas na Brasil, Bolsa Balcão S.A. (B3) do período de 2005 a 2016, fundamentada em Martins e Oliveira (2013), por duas modelagens, utilizando-se amostras distintas. A amostra resultante é de 326 companhias, não probabilística de tipo intencional. Os resultados apontam que as variáveis de fluxo de caixa operacional, de investimentos e de financiamento (FCO, FCI e FCF) – modelo 1 - não apresentam significância estatística na determinação do preço das ações (PA), não sendo capazes de explicar a variação das ações nos períodos pré e pós convergência às normas IFRS no mercado de capitais brasileiro. Cabe notar, porém, que no modelo 2 que examina a relevância do lucro operacional (LO) e do lucro líquido (LL) juntamente com FCO e o fluxo de caixa líquido (FCL), o FCO apresentou influência significativa sobre o PA no período pós IFRS. Assim, o Modelo Dois evidencia que o fluxo de caixa operacional exerce influência significativa sobre o preço da ação, no período pós IFRS. Em síntese, os resultados indicam que a convergência às normas internacionais de Contabilidade – IFRS não causou impactos relevantes no *value relevance* da informação contábil, com exceção do FCO, que apresenta *value relevance* no período “pós” IFRS. O estudo contribui para o aprofundamento das pesquisas de *value relevance*, após a adoção das IFRS.

**Palavras-chave:** *Value Relevance*. Fluxo de Caixa. Normas Internacionais de Contabilidade.

*Resumen: Este estudio analiza el value relevance del Estado de Flujo de Efectivo de las empresas públicas brasileñas en el período “pre” y “post” adopción de las Normas Internacionales de Información Financiera – NIIF. La investigación es cuantitativa, descriptiva en términos de objetivos y documental, de 2005 a 2016, con datos disponibles en Economática® de empresas listadas en la bolsa de valores de Brasil, Bolsa Balcão S.A. (B3), basado en el modelo de Martins y Oliveira (2013), de los dos modelos analizados utilizando diferentes muestras. La muestra resultante es de 326 empresas, no probabilística de tipo intencional. Los resultados indican que las variables de flujo de caja de operaciones, de inversiones y de financiamiento (FCO, FCI y FCF) – modelo 1 - no presentan significancia estadística en la determinación del precio de las acciones (PA) en el mercado de capitales brasileño, revelando-se incapaz de explicar la variación de acciones en los periodos antes y después de la convergencia a las NIIF. Cabe señalar, sin embargo, que en el modelo 2 que examina la relevancia de la utilidad operativa y del beneficio neto, con FCO y FCL, apenas el FCO tuvo influencia significativa en el PA en el período posterior a las NIIF. Por lo tanto, el Modelo 2 evidencia que el Flujo de Caja de Operaciones tiene una influencia significativa en el precio de la acción en el período posterior a las NIIF. En resumen, los resultados indican que la convergencia a las Normas Internacionales de Información Financiera - NIIF no causó impactos significativos en el value relevance de la información contable, con excepción de FCO, que presenta relevancia de valor en el período “post” NIIF. El estudio contribuye para la profundización de la investigación del value relevance de los Estados de Flujo de Efectivo, luego de la adopción de las NIIF.*

**Palabras clave:** *Value Relevance*. Flujo de Caja. Normas Internacionales de Información Financiera.

## Introduction

Driven by the global convergence movement towards the International Financial Reporting Standards (IFRS), international researchers (Aharony et al., 2010; Callao, et al., 2007; Hung & Subramanyam, 2004; Ricquebourg, 2013) and national researchers (Alves Filho et al., 2013; Barcellos et al., 2012; Borsato et al., 2009; Martins & Paulo, 2010; Santos & Calixto, 2010; Oliveira & Lemes, 2013; Prado, 2013; Ricquebourg, 2013) have examined the impact of the transition from local accounting standards (Generally Accepted Accounting Principles—GAAP) to IFRS with regard to the quality and relevance of the information in financial statements disclosed in accordance with this accounting standard.

Some of these studies show that the adoption of IFRS has a positive impact on quality (Alves Filho et al., 2013; Borsato et al., 2009; Calixto, 2010; Martins & Paulo, 2010; Oliveira & Lemes, 2013;

Prado, 2013) and on the relevance of accounting information (Aharony et al., 2010; Bartov et al., 2001; Horton & Serafeim, 2010; Hung & Subramanyam, 2004; Ricquebourg, 2013).

Other studies have examined changes in accounting disclosure patterns, focusing on differences in the relevance of information between local accounting standards (GAAPs) based on IFRS (Aharony et al., 2010; Bartov et al., 2001; Callao et al., 2007; Clarkson et al., 2011; Choi et al., 2013; Devalle et al., 2010; Horton & Serafeim, 2010; Hung & Subramanyam, 2004; Macedo et al., 2011; Macedo et al., 2012; Machado et al., 2014; Malacrida, 2009; Martins & Oliveira, 2013; Ramos & Lustosa, 2013; Ricquebourg, 2013). In these studies, comparative analyses are conducted between financial statements disclosed under different GAAPs (U.S., U.K., Spanish, French, Canadian, German, Japanese, among others) and those prepared in accordance with IFRS, or, alternatively, the analysis of the impact on the value relevance of accounting information resulting from the process of accounting convergence to IFRS (Bartov et al., 2001; Hung & Subramanyam, 2004). Among the relevant accounting information identified by the seminal literature are Net Income (NI) and Net Cash Flow (NCF) (Ball & Brown, 1968; Beaver, 1968). Holthausen and Watts (2001) highlight that most research on the value relevance of addresses the relationship between accounting information and stock prices in the capital markets. Dunham and Grandstaff (2022), reviewing the literature on the value relevance of organizations worldwide, clarify that studies from diverse perspectives have analyzed the value relevance associated with market movements.

Some of the research has provided evidence that the adoption of IFRS leads to a significant increase in the value relevance of accounting information (total assets, equity, net income, goodwill, research and development expenses, asset revaluation, cash flow) disclosed by companies compared to that prepared based on local accounting standards (Aharony et al., 2010; Bartov et al., 2001; Dunham & Grandstaff, 2022; Hung & Subramanyam, 2004; Puspa et al., 2023; Ricquebourg, 2013). In this regard, the study by Ricquebourg (2013) stands out, as it analyzed the relevance of direct cash flow information prepared in accordance with IFRS and compared it with that presented based on local GAAPs. The results showed a significant increase in the value relevance of Operating Cash Flow (OCF) and direct cash flow components. In Indonesia, Puspa et al. (2023) observed that accounting profit and cash flow exhibit value relevance for investors in investment decision-making following full convergence with IFRS.

In Brazil, studies conducted by Prado and Bernardino (2012), Souza and Prado (2014), and Ferreira et al. (2019) indicate that convergence to the IFRS accounting standard generated significant changes in companies' accounting metrics and, consequently, in their market value-, since this value is calculated using accounting data such as Liabilities (LL) and Net Equity (NE). In this regard, the works of Lemes and Silva (2007), Santos and Calixto (2010), Barcellos et al. (2012), and Prado (2013) stand out, as they examine the impacts of the new standards on balance sheet items (intangible assets, deferred income tax, accounts payable, inventory, equity) and income statement items (revenue, other revenue and operating expenses, net income, earnings per share) of companies; and, on the other hand, the studies by Borsato et al. (2009), Martins and Paulo (2010), Prado (2013), Oliveira and Lemes (2013), Di Domenico et al. (2014), and Souza and Prado (2014), who studied the impacts of IFRS on liquidity indicators (current liquidity, general liquidity), indebtedness indicators (debt-to-equity ratio, debt-to-total-liabilities ratio, fixed assets), and profitability (return on investment, return on equity, return on assets), as well as other performance indicators such as gross margin, operating margin, net margin, market value, dry liquidity, and value metrics such as Economic Value Added (EVA) and

Market Value Added (MVA).

In summary, some studies show that convergence with IFRS has led to improvements in the quality of accounting information and that the OCF and NCF, reported in accordance with IFRS, increase value relevance compared to local accounting standards, as this information is relevant for forecasting future profits. In this context, it is appropriate to examine whether the changes implemented as a result of the accounting convergence process (which, according to academic doctrine, is associated with increased quality and transparency of information) have, in fact, provided greater relevance to the accounting information presented in the Statement of Cash Flows. To this end, the following question is posed: what is the impact of adopting the International Financial Reporting Standards on the value relevance of the Statement of Cash Flows in Brazil? To answer this question, the study aims to analyze the value relevance of the Statement of Cash Flows of Brazilian publicly traded companies in the pre- and post-IFRS periods from 2005 to 2016.

The adoption of IFRS standards is cited in both international and national literature as a means to improve the transparency and comparability of financial information, promote market integration, reduce the cost of capital, enhance the credibility of the financial market, and, notably, improve the quality of accounting information (Aharony et al., 2010; Calixto, 2010; Daske et al., 2008, Dunham & Grandstaff, 2022; Lourenço et al., 2015; Martins & Paulo, 2010;).

Studies that have investigated the value relevance of financial statements before and after the convergence process in Brazil have varied approaches, focusing on specific topics, and have yielded inconclusive results. In this context, the present study joins others, with the primary aim of expanding knowledge regarding the impacts resulting from compliance with IFRS, in this case, through an analysis of the value relevance of the Statement of Cash Flows in the pre- and post-convergence periods to IFRS in Brazil.

Lourenço and Castelo Branco (2015) highlight that the results of the initial studies may still be strongly influenced by the effect of the initial adoption of IFRS and that, for this reason, the real impacts of adopting IFRS are likely to be captured only after several years of applying these standards. In this context, the continuation of studies is important and may represent a step forward in consolidating and deepening existing knowledge on the subject. It is hoped that this study will contribute to further research on the value relevance of Statement of Cash Flows following the adoption of IFRS.

Regarding studies that examined the relationship between accounting information (profit and/or cash flows) and stock price or return, notable works include those by Rayburn (1986), Malacrida (2009), Macedo et al. (2011), Martins and Oliveira (2013) and Ricquebourg (2013), who found evidence that investing and financing cash flows are not relevant in explaining stock prices. For these authors, the adoption of IFRS does not cause significant impacts on the value relevance of the Statement of Cash Flows, except in relation to FCO, which is relevant for explaining stock prices in the post-IFRS period.

## **Theoretical elements of the research**

### **Value relevance of accounting information**

Until the 1960s, accounting research adopted Normative Theory; its verification process was

logical-deductive, and empirical analyses to validate theories were scarce (Kothari, 2001). Starting in the 1960s, with the development of studies in the fields of Economics and Finance, capital market research gained momentum, laying the groundwork for the positive approach to accounting research, whose objective is “[...] to explain and predict accounting practices” (Watts & Zimmermann, 1986, p. 2). Positive Theory aims to provide a basis for explaining and predicting accounting phenomena. It differs from normative theory, which seeks to recommend how accounting data should be communicated and presented, seeking to explain what ought to be, rather than what is (Hendriksen & Van Breda, 1999; Martins; Oliveira, 2013).

Attracted by the positive approach to accounting research, researchers expanded their studies and turned to analyzing the relationship between the disclosure of accounting information (such as cash flow, profit, and net worth) and fluctuations in companies’ stock prices. In academia, the term “value relevance of accounting information” is used to refer to studies aimed at empirically testing the relevance of accounting information to the capital markets. This class of research emerged most intensely in the late 1990s and early 2000s, with the purpose of identifying the needs of this market—that is, assessing what information is essential and important to investors (Martins & Oliveira, 2013). In recent years, these studies have been increasing and standing out among the approaches of positive theory in accounting (Martins & Oliveira, 2013).

Thus, accounting information is considered value-relevant when it is capable of impacting measures of market value, such as stock price and return (Barth et al., 2001b; Dunham & Grandstaff, 2022; Holthausen & Watts, 2001; Puspa et al., 2023; Macedo et al., 2011; Ramos & Lustosa, 2013). Most studies analyzing the relevance of accounting information are theoretically grounded in the firm valuation model developed by Ohlson (1995). The author used accounting variables (profit and equity) to explain abnormal stock returns using regression analysis, to verify whether the accounting variable is significantly related to the dependent variable (stock price, for example).

This methodology had a significant impact on academic studies of capital markets, as it led to the adoption of econometric models that use accounting and market variables to analyze empirical evidence regarding the relationship between accounting information and market values reflected in stock prices (Barth et al., 2001b; Beaver, 2002; Holthausen & Watts, 2001; Macedo et al., 2011; Ramos & Lustosa, 2013). Thus, value relevance studies employ various methods to assess whether the availability of specific accounting information is associated with changes in asset values (stock price reactions), with a view toward specific objectives and alternative hypotheses (Dunham & Grandstaff, 2022).

Using the efficient market hypothesis, Ball and Brown (1968) produced a seminal study on the relevance of accounting information in the U.S. capital market. Using data from 261 U.S. companies available in the Compustat database for the period from 1946 to 1966, the researchers analyzed the relationship between net income and stock prices. The results of this study empirically demonstrated that the announcement of net income has informational value for the market and is related to stock prices. However, the authors note that the annual disclosure of earnings is absorbed too quickly by the market, leading analysts to seek out- y information contained in other performance measures disclosed by companies in their reports (such as cash flow, for example, even when this was not yet mandatory). A similar study was conducted by Beaver (1968) with 143 companies from 1961 to 1965, revealing that stock prices and trading volume are influenced by the disclosure of accounting information, particularly in the week of disclosure, thereby attributing relevance to the informational content of

accounting elements.

Another line of research has compared the value relevance of accounting information across different accounting standards, as in the studies by Harris et al. (1994), Hung and Subramanyam (2004), Barth et al. (2008), and Puspa et al. (2023). In this regard, Harris et al. (1994) compare the relevance of accounting information recognized and measured under German accounting standards and US-GAAP on the stock returns of 230 companies from 1982 to 1991. The results indicate that accounting earnings of German corporations are relevant, with greater explanatory power in consolidated data and no significant change when aligned with U.S. practices (U.S. GAAP). Hung and Subramanyam (2004), using a previously unpublished research method (same set of firm-years), compared, for the same set of 80 companies over the same period (1918 to 2002), the accounting information disclosed under German GAAP with that under IAS. As a result, they demonstrate that total assets and shareholders' equity, as well as changes in net income and shareholders' equity, are more significant under the international IFRS standard than under the German standard. In a study examining whether the adoption of international accounting standards leads to an increase in the quality of accounting information across 21 countries that adopted IAS between 1994 and 2003 (327 companies), Barth et al. (2008) highlight that companies applying IAS generally engage in less earnings management, demonstrate more timely recognition of losses, and show a stronger correlation between book values and stock prices and returns.

In general, in addition to the seminal studies by Ball and Brown (1968) and Beaver (1968), the empirical evidence in the international accounting literature confirms the efficient market hypothesis by showing that the capital market reacts to the information provided by accounting, adjusting market value and stock prices to the new information. In this regard, the following studies stand out: Bartov et al. (2001), Hung and Subramanyam (2004), Daske et al. (2008), Horton and Serafeim (2010), Aharony et al. (2010), Devalle et al. (2010), Clarkson et al. (2011), Choi et al. (2013), and Puspa et al. (2023). In Brazil, this line of research was marked by the pioneering study by Lopes (2002), who, based on Ohlson's (1995) model, conducted a study on the role of accounting information in explaining the price behavior of securities traded on the São Paulo Stock Exchange (Bovespa) from 1995 to 1999. The main results showed that accounting information was more significant than dividends in explaining current security prices.

From another perspective, studies focused on analyzing the relevance of information revealed in cash flows for the capital markets in the late 1990s and early 2000s. These studies seek to relate the predictive power of earnings and cash flow, using stock price and return as a proxy to project expected cash flows. Notable studies in international literature include those by Rayburn (1986), Bowen et al. (1986), Greenberg et al. (1986), Dechow (1994), Dechow et al. (1998), Barth et al. (2001a), Bartov et al. (2001), Kim and Kross (2005), Devalle et al. (2010), Ricquebourg (2013), Choi et al. (2013), and Puspa et al. (2023). In the Brazilian literature, the studies by Lopes (2002; 2004) stand out as pioneers, in addition to Lima and Terra (2004), Teixeira et al. (2004), Sarlo Neto et al. (2005), Sarlo Neto et al. (2006), Scarpin et al. (2007), Lopes et al. (2007), Rezende et al. (2008), Santos and Lustosa (2008), Malacrida (2009), Macedo et al. (2011; 2012), Martins and Oliveira (2013), and Ferreira et al. (2019). The summaries of some of these studies can be found in the section on related studies.

## Related studies and research hypothesis

Rayburn (1986) analyzed the relationship between OCF and accruals and stock returns in 175 companies from 1962 to 1982. OCF was defined as net income plus accruals (depreciation, amortization, and depletion expenses, changes in deferred taxes, and changes in operating assets and liabilities). The results confirm the hypothesis of an association between OCF and aggregate accruals with abnormal stock returns.

Bowen et al. (1986) analyzed the relationship between OCF and net income and the abnormal stock returns of 324 companies from 1972 to 1981. From another perspective, the study examines whether earnings calculated on an accrual basis contain incremental informational content beyond that found in cash flow information. Thus, in addition to examining whether this information is relevant to the capital markets, the research identifies which of the two is incrementally more relevant than the other. The main conclusions suggest that net operating income and net cash flow are relevant for explaining abnormal stock returns and that cash flow possesses incremental informational content relative to that provided by net operating income.

Dechow (1994) investigated the circumstances under which accruals enhance earnings' ability to measure firm performance, as reflected in stock returns. The author compared the explanatory power of net income and operating cash flow accruals, concluding that earnings are more strongly correlated with stock returns than cash flow. However, the results indicated that there is an increase in the explanatory power of cash flow measures as the measurement period increases. This study expanded the literature on the subject, as it examines the association of stock returns with quarterly and annual rates, net income, and operating cash flow. In comparison with previous research, which focused on the relative information content of cash flows, earnings, and accruals, Dechow (1994) determined which variable provides the best measure of firm performance. Furthermore, the study demonstrated that accruals play an important role in enhancing earnings' ability to predict a firm's future performance.

In line with other international studies, Barth et al. (2001a) analyzed the role of accruals in explaining stock returns and predicting future cash flows. The authors conducted a complementary analysis focusing on the predictive power of current earnings broken down into various components. The econometric models used discounted cash flow, stock price, and stock returns as proxies for expected future cash flows, and earnings were broken down into cash flow and six accrual components, namely: changes in accounts receivable, inventory, accounts payable, depreciation, amortization, and others. The results indicate that FCL (current) has better predictive power for future cash flow than aggregate earnings. However, earnings disaggregated into OCF and accruals have greater predictive power for future OCF.

Bartov et al. (2001) analyzed whether the legal system (code law or common law) in force in a country affects the relationship between earnings, accruals, cash flow, and stock returns. The authors selected samples from five countries and divided them into two groups based on the legal system adopted: the first group consisted of the United States, the United Kingdom, and Canada (common law), and the second group consisted of Germany and Japan (code law).

Based on the socioeconomic characteristics of the countries (which include the accounting rules of the time), the authors compared the relevance of reported earnings under German GAAP, IFRS, and US GAAP for publicly traded companies from 1988 to 1996. The results indicated that the relevance

of accounting information varies according to the socioeconomic environment, resulting in differences in financial reporting systems and stock pricing. Empirical evidence indicated that in Anglo-Saxon and n countries (the United States, the United Kingdom, and Canada), earnings are more relevant for explaining stock returns than cash flow, which was not the case in Germany and Japan. The authors also demonstrate that, when considered simultaneously, earnings and cash flow possess incremental informational content (except for the cash flows of Canadian firms), and that accounting information disclosed under US GAAP and IFRS is more value-relevant when compared to the German accounting standard. The most important contribution of this study, according to the authors themselves, is that the results demonstrate that the superiority of earnings over cash flows is not universal. On the contrary, this depends on the reporting regime adopted by each country.

The study by Kim and Kross (2005) investigates the relationship between current earnings and future cash flows from financing activities (CFF) of firms, covering the period from 1973 to 2000. They adopted the regression model of Dechow et al. (1998) and the cross-sectional approach of Barth et al. (2001a), with one-year cash flow forecasts. The authors highlight that although some studies indicate that, over time, the relationship between earnings and stock price tends to weaken, the study shows that the relationship between current earnings and CFF increased during this period (1973 to 2000).

Under the IFRS framework, Devalle et al. (2010) investigated the effects of adopting IFRS on the value relevance of accounting information and dividend payments by companies listed on five European stock exchanges (Frankfurt, Madrid, Paris, Milan, and London) for 3,721 firms from 2002 to 2007. The study demonstrates that IFRS increased the relevance of earnings reported by German, French, and British companies, while the relevance of book value of equity decreased (except for companies listed on the London Stock Exchange). Furthermore, due to significant differences between the legal systems (and, consequently, accounting standards) in effect across European countries, the study's results varied by country, indicating that the primary objective of IFRS—to improve the transparency of financial statements through the harmonization of accounting standards—may not have been achieved.

Ricquebourg (2013) analyzed the relevance of the information presented in the financial statements prepared using the direct method under IFRS and compared it with that disclosed based on the accounting standards in effect in Australia (Australian GAAPs). The author used data from the cash flow statements of 459 companies listed on the Australian stock exchange, filed between 2000 and 2010, covering the “pre” and “post” adoption periods of IFRS in that country. In summary, the cash flow statement prepared using the direct method is more value-relevant under IFRS than under AGAAP, and analysts use the information in this statement to estimate future cash flows and trade stocks.

Choi et al. (2013) examined the effects of the introduction of IFRS on the information content of reported earnings and projected earnings, in accordance with generally accepted accounting practices in the United Kingdom (UKGAAP) and IFRS. The results indicate that the value relevance of reported earnings increased significantly after the adoption of IFRS, while projected earnings showed a decrease in their value relevance.

Investigating Latin American countries (Argentina, Brazil, Chile, Colombia, Mexico, and Peru) Ferreira, Salotti, and Flores (2019), using a sample of 7,407 observations from 2000 to 2017, found that earnings per share (EPS) and net income per share (NIP) exhibited a linear, significant, and

positive relationship with the stock price at a 1% significance level, thereby providing more substantial support for the decision-making process.

In Brazil, when compared to international studies, some studies have focused on the relevance of earnings and/or cash flow to the capital markets, such as Lustosa and Santos (2007), Malacrida (2009); Macedo et al. (2011), Macedo et al. (2012); Martins and Oliveira (2013), and Ramos and Lustosa (2013).

Lustosa and Santos (2007) empirically examined whether eliminating the permanent differences between OCF and net income increases the relevance of accounting information using 88 non-financial companies listed on the Bovespa from 1995 to 2004. The study also sought to analyze whether the correlation between net income, OCF, and adjusted OCF- s increases when the period is extended. The results indicate that the market reacts more strongly to OCF without the permanent differences that separate it from net income than to OCF calculated according to FAS-95. The authors also found evidence that the relationship between OCF and net income increases over time. In the latter case, the relationship is even stronger between net income and adjusted OCF.

Malacrida (2009) examined the ability of current earnings, accruals, and OCF to predict future OCF and estimate stock returns for 68 Brazilian publicly traded companies from 2000 to 2007. The research was based on the model by Barth et al. (2001a), adapted from Dechow et al. (1998), and on the study conducted by Bartov et al. (2001). The author noted that current earnings are more relevant than current OCF in explaining current stock returns, and that current OCF is more relevant than current earnings in explaining future stock returns. However, according to the author, the accounting information of Brazilian companies does not prove significant in predicting future OCF for periods beyond one year.

The study by Macedo et al. (2011) analyzed the impact on the informational content of the Statement of Sources and Uses of Funds (SSUF), which was replaced by the Statement of Cash Flows, resulting from the changes introduced by Law 11.638/07. The sample consisted of 247 publicly traded non-financial companies listed among the top 500 largest in the country, according to the annual publication of FIPECAFI-EXAME Magazine, for the period from 2005 to 2007. Empirical evidence indicates that the OCF is more relevant than the Source of Funds from Operations for the capital markets, as it more effectively explains the variation in the stock prices of the companies surveyed. The authors demonstrated that the replacement of the statement with convergence to the IFRS standard was beneficial for users of accounting information in Brazil.

Macedo et al. (2012) analyzed the impact of the convergence process to IFRS on the relevance of accounting information from 55 publicly traded non-financial companies listed on Bovespa, which voluntarily restated their 2007 financial statements in 2009, incorporating the changes introduced by Law No. 11,638/07 and the Accounting Pronouncements Committee. The data collected included net income, shareholders' equity, stock price, and number of shares. The main results show that Earnings Per Share (EPS) and Book Value Per Share (BVPS) for the 2007 fiscal year (prior to adoption) are significant for the capital markets, even when analyzing the data disclosed following the changes resulting from the first phase of the accounting convergence process with international standards. Furthermore, the information disclosed in 2009 (regarding the restatement of the 2007 financial statements) incorporates additional elements considered by the capital market, indicating that there was an informational gain for accounting information following the first phase of the IFRS adoption process.

In turn, Martins and Oliveira (2013) analyzed the value relevance of Operating Cash Flow (OCF), cash flows from investing activities (CFI) and cash flows from financing activities (CFF), as reported in the cash flow statement in developed markets, represented by the United States; and emerging markets, represented by Brazil, during the period from 2010 to 2011. The authors specifically assessed which of these metrics serves as the best proxy (whether it is OCF, CFI, or CFF) and whether market development affects their efficiency in absorbing such information. To do so, they used a sample of 2,338 non-financial companies listed on the São Paulo Stock Exchange and 6,107 non-financial companies listed on the New York Stock Exchange (NYSE). The analyses were conducted using multiple linear regression (applied to both samples), in which the dependent variable was the companies' market value (MV) and the explanatory variables were the balances of OCF, CFI, and CFF. The results indicate that in both markets (developed and emerging), OCF was the only significant variable. The study also indicates that Statement of Cash Flows presented lower informational content for the U.S. market compared to the Brazilian market, suggesting that “[...] the development of the capital market did not influence its efficiency in reflecting this set of information in stock prices” (Martins & Oliveira, 2013, p. 46).

Ramos and Lustosa (2013) examined whether the adoption of IFRS standards in Brazil made financial statements more relevant to the capital market. The sample includes 579 companies listed on BM&FBOVESPA, with quarterly information disclosed from March 2004 to March 2012. The results show an increase in the adjusted  $R^2$  (value relevance) during the analyzed period, corroborating the assertion that the relevance of accounting information to firm value increased following convergence with international standards. With this increase, the authors point to evidence that convergence with IFRS has the effect of bringing accounting information closer to fair market value.

Considering that empirical evidence demonstrates that accounting information is relevant when it impacts stock price and returns (Barth et al., 2001b; Dunham & Grandstaff, 2022; Holthausen & Watts, 2001; Macedo et al., 2011; Puspa et al., 2023; Ramos & Lustosa, 2013) in line with Efficient Market Theory—that is, the capital market reacts to accounting information disclosed by companies, adjusting their market value and stock prices to the new information (Aharony et al., 2010; Ball & Brown, 1968; Bartov et al., 2001; Beaver, 1968; Clarkson et al., 2011; Choi et al., 2013; Daske et al., 2008; Devalle et al., 2010; Dunham & Grandstaff, 2022; Horton & Serafeim, 2010; Hung & Subramanyam, 2004; Puspa et al., 2023).

Research demonstrates that net income and cash flow contain value-relevant information for the capital markets (Ball & Brown, 1968; Beaver, 1968). In these studies, researchers examine the predictive power of net income and cash flow, using stock price and returns as a proxy for expected future cash flows. Since the implementation of international accounting standards, another group of scholars has investigated the effects of adopting IFRS on the value relevance of accounting information, concluding that international financial reporting standards (IFRS) provide more relevant information than that previously provided to the market by analysts based on local accounting rules (Choi et al., 2013; Devalle et al., 2010; Dunham & Grandstaff, 2022; Macedo et al., 2011; Macedo et al., 2012; Ramos & Lustosa, 2013; Puspa et al., 2023; Ricquebourg, 2013).

Therefore, the research hypothesis is: convergence toward the IFRS in Brazil has a positive impact on the value relevance of the accounting information presented in the financial statements.

## Methodological elements of the research

This study applies a quantitative approach to the problem within the field of accounting, with descriptive objectives and a documentary methodology based on technical data collection procedures. The population consists of Brazilian publicly traded companies whose shares are traded on the stock exchange, Brasil Balcão S.A. (B3). The non-probabilistic, purposive sample was selected based on the following criteria: i) companies that voluntarily disclosed their Statement of Cash Flows prior to 2010; ii) availability of information regarding the study variables contained in the database; iii) not being financial companies. The resulting sample consisted of 326 companies, of which 26 provided all variables for the entire period. Thus, due to the unavailability of certain information for the entire period, some companies were excluded from the sample for the analysis of one model but not necessarily for another (Table 2). Consequently, a separate sample was drawn for each of the analyzed models.

The data covers the period from 2005 to 2016. These are: i) variables of interest: Net Income (NI), Operating Income (OI), Operating Cash Flow (OCF), Investment Cash Flow (ICF), Financing Cash Flow (FCF), and Net Cash Flow (NCF); ii) dependent variable: Stock Price (SP). These were collected from the Economatica® database in August 2017 and tabulated as panel data in Excel®. The information on the variables was presented in two periods: before (2005–2009) and after the adoption of IFRS (2010–2016). This time frame follows the methodology of Ricqebourg (2013).

Initially, the data were analyzed using descriptive statistics (Gujarati, 2000) with the use of RStudio® software (version 3.4.2). The analysis of the value relevance of Statement of Cash Flows for the capital market was developed based on the adapted model by Martins and Oliveira (2013), which is based on the studies conducted by Vishnani and Shah (2008). Table 1 presents the initial and final regression models analyzed, along with the sample size for each.

Table 1

### Econometric models analyzed

Model	Equation
(1) 326 firms	Initial: $SP_{i,t} = \alpha + \beta_1 OCF_{i,t} + \beta_2 CFI_{i,t} + \beta_3 CFF_{i,t} + \varepsilon_i$ Final: $SP_{i,t} = \alpha + \beta OCF_{i,t} + \varepsilon_i$
(2) 285 firms	Initial: $SP_{i,t} = \alpha + \beta_1 OCF_{i,t} + \beta_2 CFI_{i,t} + \beta_3 NI_{i,t} + \beta_4 OI_{i,t} + \varepsilon_i$ Final: $PA_{i,t} = \alpha + \beta OI_{i,t} + \varepsilon_i$

**Source:** survey data based on Martins and Oliveira (2013).

**Note:** NI Net Income, OI Operating Income, OCF Operating Cash Flow, CFI Investment Cash Flow, CFF Financing Cash Flow, NCF Net Cash Flow, SP Stock Price.

The Backward method (Efroymson, 1960) was used to select the model variables at a 5% significance level. Given that the number of observations is not uniform across years, unbalanced panel data (unbalanced pool) were used. To test the homoscedasticity of the models, the Breusch-Pagan test (Breusch & Pagan, 1979) was used, while to test the independence of the errors, the Wooldridge

autocorrelation test (Wooldridge, 2002) and the Wilcoxon test (Hollander & Wolfe, 1999) to enable comparison of variables from the period before (2005–2009) and after the adoption of IFRS (2010–2016). To verify the normality of the model residuals, the Jarque-Bera test (Jarque & Bera, 1980) was used.

To check for multicollinearity among the variables, the Variance Inflation Factor (VIF) was used (Montgomery, Peck, & Vinning, 2015), noting that variables with a VIF greater than 10 indicate the presence of multicollinearity. In econometric models, it is also common to encounter problems of heteroscedasticity and autocorrelation in the data. The tests by White (1980) and MacKinnon and White (1985) indicated the HAC estimator (Andrews, 1991) for the covariance matrix of the estimated coefficients.

The main limitation of the research lies in the fact that there is a different sample for each regression model, making it impossible to obtain a uniform representative sample for all models in the study.

Therefore, the results and conclusions presented in this study are restricted to the publicly traded companies that comprised the samples during the period under investigation and cannot be generalized. Furthermore, this study is limited to analyzing the ability of accounting information (cash flows and profit) to explain the stock returns of companies listed on the Brazilian capital market using the adapted model of Vishnani and Shah (2008) used by Martins and Oliveira (2013), and is limited to the chosen time frame (2005–2016), as well as the method of data selection and collection.

## Presentation and discussion of results

### Descriptive and correlation- y analyses of the variables

Table 2 presents the descriptive analyses of the variables for the entire period, using measures of central tendency, dispersion, and position.

Table 2

#### **Descriptive statistics of the variables for the period from 2005 to 2016 in thousands of reais**

Variable	Obs.	Mean	Standard Deviation	1st Quartile	2nd Quartile	3rd Quartile
Net Income	6,061	0.259	1.992	-0.001	0.013	0.131
Operating Profit	3,012	0.484	2.683	0.000	0.013	0.156
Operating Cash Flow	5,167	0.594	4.918	0.000	0.030	0.286
Investing Cash Flow	5,168	-0.553	3.827	-0.244	-0.027	0.000
Cash Flow from Financing Activities	5,168	0.086	3.310	-0.065	0.000	0.048
Net Cash Flow	5,167	0.135	3,300	-0.010	0.000	0.032
Stock Price	3,169	51.973	349.65	4,964	10,889	22,609

**Source:** survey data.

**Note:** Variables divided by one million, except for the stock price.

The resulting Pearson correlation matrix shows that the strongest associations among the most relevant study variables are between LL and LO (0.95) and FCI (-0.45), between LO and FCO (0.50) and FCI (-0.65), and between FCO and FCI (-0.57) and FCL (0.54).

## **Analysis of the informational capacity of Statement Of Cash Flows**

Table 3 presents the results of the regressions for Model 1 of the value relevance (informational capacity) analysis of OCF, ICF, and CFF in determining stock prices in the capital market, including the initial and final models (Table 1), covering the “entire” period, as well as the “pre-” and “post-” IFRS periods.

Analyzing the OCF for the entire period, it is observed that it has a marginally significant influence on the SP (p-value = 0.078), such that for every one million reais obtained in the OCF, a decrease of -0.610 [-1.29; 0.07] reais in the SP is predicted. Thus, the higher the OCF, the lower the SP. Additionally, the results show that OCF was able to explain 0.01% of the variability in SP over the entire period, unlike ICF and CFF, which were unable to explain such variability.

In the “pre-IFRS” period, there is no significant influence (p-value = 0.196) of OCF on SP, and this variable is not capable of explaining the variability of SP (Adjusted  $R^2 = 0.00\%$ ) in the period preceding the adoption of IFRS in Brazil (2005 to 2009).

In the “post” IFRS adoption period, no significant influence (p-value = 0.964) of OCF on SP is observed, and this variable is unable to explain the variability of SP (Adjusted  $R^2 = 0.00\%$ ). It is worth noting that the final models for the pre- and post-IFRS periods were different, with the former comprising the operating cash flow variable and the latter the investing cash flow variable.

The Breusch-Pagan test did not detect heteroscedasticity in the residuals, and the basic assumption of homoscedasticity was not violated in the three periods analyzed (p-value = 0.769, 0.820, and 0.951). The Wooldridge autocorrelation test reveals evidence of autocorrelation in the residuals (p-value = 0.000).

Furthermore, the Jarque-Bera test confirms that the residuals do not follow a normal distribution (p-value = 0.000). Thus, to obtain consistent estimators for the standard errors (standard errors robust to heteroscedasticity and autocorrelation), the HAC estimator was adopted for the covariance matrix.

In summary, the results indicate that the OCF, OCF, and CFF variables are not statistically significant in determining stock prices in the Brazilian capital market and are unable to explain stock price variation in the period before and after convergence to IFRS.

The results of the regressions for this model (1) partially corroborate the study by Martins and Oliveira (2013) conducted after the adoption of IFRS, in which the authors indicate that ICF and CFF are not relevant for explaining stock prices.

However, it should be noted that, contrary to the conclusions of this study, the aforementioned authors, along with Rayburn (1986), Macedo et al. (2011), and Ricquebourg (2013), find evidence that the OCF exhibits value relevance in the context of the capital markets, with an increase in relevance following convergence with International Financial Reporting Standards. Thus, based on this evidence demonstrating that the adoption of IFRS does not have a significant impact on the value relevance of

the Statement of Cash Flows, the hypothesis of this study— —cannot be accepted for the sample in question.

Table 3

Analysis of the value relevance of cash flows (Model 1  $SP_{it} = \alpha + \beta_1 OCF_{it} + \beta_2 CFI_{it} + \beta_3 CFF_{it} + \epsilon$ )

Entire study period (N=326 firms)

Model 1	Initial Model				Final Model			
	$\beta$	E.P.( $\beta$ )*	95% CI*	p-value*	$\beta$	E.P.( $\beta$ )*	95% CI*	p-value*
Intercept	46.605	12.339	[22,42; 70,79]	0.000	46.744	12.326	[22.59; 70.90]	0.000
OCF/100.000	-0.469	0.408	[-1.27; 0,33]	0.251	-0.610	0.346	[-1.29; 0,07]	<b>0.078</b>
ICF/100.000	0.069	0.427	[-0.77; 0,91]	0.872				
CFF/100.000	0.516	0.560	[-0.58; 1,61]	0.356				
Breusch-Pagan test			0.993				<b>0.769</b>	
Autocorrelation Test			0.000				0.000	
Jarque-Bera Test			0.000				0.000	
VIF – Maximum			2.814				-	
Adjusted R <sup>2</sup>			0.00%				<b>0.01%</b>	

“Pre-IFRS” Period (N=267 empresas)

Model 1	Initial Model				Final Model			
	$\beta$	E.P.( $\beta$ )	95% CI	p-value	$\beta$	S.D.( $\beta$ )	95% CI	p-value
Intercept	77.288	36.824	[5.11; 149.46]	0.036	76.747	36.408	[5.39; 148.11]	0.035
OCF/100,000	-2.237	1.591	[-5.36; 0.88]	0.160	-1.335	1.032	[-3.36; 0.69]	<b>0.196</b>
ICF/100,000	-0.795	0.901	[-2.56; 0.97]	0.378				
CFF/100,000	-1.100	0.845	[-2.76; 0.56]	0.193				
Breusch-Pagan test			0.995				<b>0.820</b>	
Autocorrelation Test			0.000				0.000	
Jarque-Bera Test			0.000				0.000	
VIF – Maximum			3.698				-	
Adjusted R <sup>2</sup>			<b>0.00%</b>				<b>0.00%</b>	

“Post-IFRS” Period (N=322 companies)

Model 1	Initial Model				Final Model			
	$\beta$	E.P.( $\beta$ )	95% CI	p-value	$\beta$	S.D.( $\beta$ )	95% CI	p-value
Intercept	35.588	4.920	[25.95; 45.23]	0.000	35.240	4.815	[25.80; 44.68]	0.000
OCF/100,000	0.140	0.328	[-0.50; 0.78]	0.668				
ICF/100,000	0.537	0.488	[-0.42; 1.49]	0.272	-0.012	0.253	[-0.51; 0.48]	<b>0.964</b>
CFF/100,000	1.596	1.070	[-0.50; 3.69]	0.136				
Breusch-Pagan test			0.885				<b>0.951</b>	
Autocorrelation Test			0.000				0.000	
Jarque-Bera Test			0.000				0.000	
VIF – Maximum			3.580				-	
Adjusted R <sup>2</sup>			<b>0.00%</b>				<b>0.00%</b>	

**Source:** survey data.

**Note:** (\*) Calculated using the HAC estimator for the covariance matrix. OCF Operating cash flow, ICF Investing cash flow, CFF Financing cash flow.

Table 4 presents the results of the initial and final regressions covering the “entire” period, as well as the “pre-” and “post-” IFRS periods, in relation to Model 2 to analyze the informational capacity of OCF, ICF, NI, and OI in determining stock prices.

The Breusch-Pagan test (p-value = 0.649, 0.707, and 0.646) indicates the absence of heteroscedasticity in the residuals of the final model, and the basic assumption of homoscedasticity is not violated in the three periods. The Wooldridge autocorrelation test provides evidence of autocorrelation in the residuals (p-value = 0.000), and the Jarque test reveals that the residuals do not follow a normal distribution (p-value = 0.000). Thus, the HAC estimator was adopted for the covariance matrix to obtain consistent estimators for the standard errors.

The regression result covering the entire period (Table 4) shows that there is a significant negative influence (p-value = 0.049) of operating profit on the stock price, such that for every one million reais of operating profit, a reduction of -2.961 [-5.91; -0.01] reais in the stock price is expected.

In the “pre-IFRS” period, there is a marginally significant influence (p-value = 0.091) of operating profit on stock price, such that for every one million reais of operating profit, there is an indication of a reduction of -3.625 [-7.82; 0.57] reais in the stock price. During this period, operating profit was able to explain 0.01% of the variability in the stock price.

However, in the “post-IFRS” period, there is a significant influence (p-value = 0.038) of OCF on SP, such that for every one million reais earned in OCF, a reduction of -0.361 [-0.70; -0.02] reais in SP is expected. The final models for the pre- and post-IFRS periods were different, with the former comprising the independent variable OI and the latter comprising the independent variable OCF. The latter (OCF) was able to explain 0.01% of the variability in the Stock Price during the post-convergence period.

Regarding the variables OI and OCF, it is observed that the former exerts a marginally significant influence on the share price in the pre-IFRS period [p-value=0.091] and the latter (OCF) in the period following the adoption of international accounting standards [0.038]. The remaining variables (NCF, NI and OI) do not impact on the stock price in the period following the adoption of IFRS.

Thus, based on the regressions of the analyzed models, the research hypothesis—that convergence to the international IFRS standard causes significant impacts on the value relevance of the Statement of Cash Flows, with the exception of OCF, which exhibits value relevance in the “post-IFRS” period (Model 2)—cannot be accepted.

The results obtained for Model 2 are consistent with the findings of Macedo et al. (2011), who demonstrate that the process of harmonization with international IFRS standards added relevance to the accounting information presented in the Statement of Cash Flows (more specifically in OCF), to the extent that it began to explain stock price variation more effectively.

The results confirm, in particular, the conclusions of the study by Rayburn (1986), Macedo et al. (2011), and Martins & Oliveira (2013), which show that OCF is relevant accounting information for the capital markets, and those of Ricquebourg (2013), who presents evidence that OCF increased its value relevance in the post-IFRS period in Brazil.

Tabela 4

**Analysis of the value relevance Model 2** ( $SP_{it} = \alpha + \beta_1 OCF_{it} + \beta_2 CFI_{it} + \beta_3 NI_{it} + \beta_4 OI_{it} + \epsilon$ )

Entire study period (N = 285 firms)								
Model 2	Initial Model				Final Model			
	$\beta$	E.P.( $\beta$ )*	95% CI*	p-value*	$\beta$	E.P.( $\beta$ )*	95% CI*	p-value*
Intercept	65.130	28.532	[9.21; 121.05]	0.023	74.747	23.496	[28.69; 120.8]	0.002
OCF/100.000	0.081	0.271	[-0.45; 0.61]	0.765				
ICF/100.000	0.016	0.333	[-0.64; 0.67]	0.961				
NI/100.000	-0.674	2.863	[-6.29; 4.94]	0.814				
OI/100.000	-2.131	1.985	[-6.02; 1.76]	0.283	-2.961	1.505	[-5.91; -0.01]	<b>0.049</b>
Breusch-Pagan test			0.995				<b>0.649</b>	
Autocorrelation test			0.000				0.000	
Jarque-Bera Test			0.000				0.000	
VIF – Maximum			11.169				-	
Adjusted R <sup>2</sup>			0.00%				<b>0.01%</b>	
“Pre-IFRS” Period (N=274 companies)								
Modelo 2	Initial Model				Final Model			
	$\beta$	E.P.( $\beta$ )	95% CI	p-value	$\beta$	E.P.( $\beta$ )	95% CI	p-value
Intercept	79.044	37.893	[4.77; 153.31]	0.037	86.382	28.639	[30.25; 142.51]	0.003
OCF/100.000	0.477	0.493	[-0.49; 1.44]	0.335				
ICF/100.000	-0.410	0.411	[-1.21; 0.40]	0.319				
NI/100.000	-0.256	7.035	[-14.04; 13.53]	0.971				
OI/100.000	-3.448	4.374	[-12.02; 5.12]	0.431	-3.625	2.141	[-7.82; 0.57]	<b>0.091</b>
Breusch-Pagan test			0.996				0.707	
Autocorrelation Test			0.000				0.000	
Jarque-Bera Test			0.000				0.000	
VIF – Maximum			18.299				-	
Adjusted R <sup>2</sup>			0.00%				<b>0.01%</b>	
Post-IFRS” Period s (N=322 companies)								
Modelo 2	Initial Model				Final Model			
	$\beta$	E.P.( $\beta$ )	95% CI	p-value	$\beta$	E.P.( $\beta$ )	95% CI	p-value
Intercept	24.084	9.006	[6.43; 41.74]	0.008	35.617	4.936	[25.94; 45.29]	0.000
OCF/100.000	-0.645	0.732	[-2.08; 0.79]	0.379	-0.361	0.174	[-0.70; -0.02]	<b>0.038</b>
ICF/100.000	0.911	1.038	[-1.12; 2.95]	0.381				
NI/100.000	-0.129	0.836	[-1.77; 1.51]	0.878				
OI/100.000	0.179	0.681	[-1.16; 1.52]	0.793				
Breusch-Pagan test			0.978				0.646	
Autocorrelation Test			0.636				0.000	

Jarque-Bera Test	0.000	0.000
VIF – Maximum	8.002	-
Adjusted R <sup>2</sup>	0.00%	<b>0.01%</b>

**Source:** survey data.

**Note:** \* Calculated using the HAC estimator for the covariance matrix. . OCF Operating Cash Flow, NCF Net Cash Flow, NP Net Profit, OP Profit Operating Profit.

## Final Considerations

The study includes data from companies with shares traded on B3 from 2005 to 2016, thereby enabling a comparison of the financial information disclosed by Brazilian companies between the five years preceding convergence with the International Financial Reporting Standards and the mandatory adoption of the Statement of Cash Flows (2010), and the seven years that followed (full IFRS).

Based on a multiple linear regression analysis using unbalanced panel data, we examined the value relevance of Statement of Cash Flows in the pre- and post-IFRS periods in Brazil using two initial models [ $SP_{it} = \alpha + \beta_1 OCF_{it} + \beta_2 CFI_{it} + \beta_3 CFF_{i,t} + \varepsilon_i$ ] and [ $SP_{it} = \alpha + \beta_1 OCF_{it} + \beta_2 CFI_{it} + \beta_3 NI_{i,t} + \beta_4 OI_{it} + \varepsilon_i$ ], adapted from the model proposed by Martins and Oliveira (2013).

Regarding the relevance of cash flows (OCF, ICF, and CFF), the study's results demonstrate that these variables did not provide statistical evidence to explain stock price variation in the pre- and post-IFRS periods. It should be noted, however, that in the regression model examining the relevance of OI and NI alongside OCF and NCF, only OCF had a significant influence on the stock price in the post-IFRS period, a result that aligns with the studies by Rayburn (1986), Macedo et al. (2011), and Martins and Oliveira (2013), who recognize the relevance of OCF in the capital market, disregarding ICF and CFF in this context, and with Ricquebourg (2013), who demonstrates that OCF increased its value relevance in the post-IFRS period. Considering the body of analyses, convergence to the international IFRS standard does not cause significant impacts on the value relevance of the Statement of Cash Flows, with the exception of OCF, which exhibits informational capacity in the "post-IFRS" period (Model 2).

As a limitation, it should be noted that this study focused on companies that voluntarily presented the Statement of Cash Flows up to 2009, prior to the mandatory disclosure requirement in Brazil. The presentation of this statement was not required in the country until the enactment of Law No. 11,638/2007. However, even before the legal requirement, some companies were already preparing the Statement of Cash Flows as a supplementary statement (Malacrida, 2009; Souza et al., 2008;).

Finally, it should be noted that the research results are limited to the group of publicly traded companies that comprised the sample during the period under investigation. Therefore, these results cannot be generalized to all Brazilian publicly traded companies, as the length of the analyzed period (12 years) does not provide a uniform sample. Furthermore, the selection of variables (OCF, ICF, CFF, NCF, NI and OI) was based on the studies by Lustosa and Santos (2007), Machado et al. (2014), and Martins and Oliveira (2013). Thus, the possibility of factors unrelated to the observations that may have influenced the results of this study cannot be ruled out. Consequently, the results presented here reflect only a snapshot of reality and are not suitable for providing definitive answers to the problem under investigation. However, it is observed that, considering its findings, the discretionary choice of

cash flow and profit variables for the analysis, and the scarcity of national studies on this topic, such limitations do not invalidate it.

On the contrary, it presents results that contribute to the dissemination of knowledge regarding research on value relevance and the informational capacity of cash flow statements. Furthermore, through a long-term approach, the reaction of the Brazilian capital market and the cash flows associated with the disclosure of financial statements was analyzed at two distinct points in time: before and after convergence to international accounting standards.

Regarding this, it is recommended for future studies, using a uniform sample for all regression models involved in the research, that the role of other variables in the predictive and informational capacity of entities be examined; as well as analyzing the results by the companies' operating sectors.

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