


## Effects of adoption of international financial reporting standards (IFRS) in the economic and financial indicators of Brazilian financial institutions


Impactos da adoção das *international financial reporting standards* (IFRS) nos indicadores econômico-financeiros de instituições financeiras brasileiras

Efectos de la adopción de las normas internacionales de información financiera (NIIF) en los indicadores económicos y financieros de las instituciones financieras brasileñas

**Thaís de Freitas Daneberg**

Mestre em Ciências Contábeis (UNISINOS)  
Professora da Universidade Católica de Pelotas,  
Pelotas/RS, Brasil  
tdaneberg@gmail.com  
<https://orcid.org/0000-0001-5512-8165> 

**Roberto Frota Decourt\***

Doutor em Administração (UFRGS)  
Professor do Programa de Pós-Graduação em Ciências Contábeis  
(UNISINOS), Porto Alegre/RS, Brasil  
rfdecourt@unisinios.br  
<https://orcid.org/0000-0002-9419-498X> 

**Primary contact address for correspondence\***

Av. Palmeira, 725, CEP: 90470-300 – Porto Alegre/RS, Brasil

### Abstract

The objective of this research was to evaluate the impact of adopting IFRS (IAS 7, IAS 19, IAS 32, and IAS 39) on the financial indicators of Brazilian financial institutions, through the solvency indicators, capital structure and funding, and profitability. The method used was to compare the year 2009 when their financial statements were published according to BR GAAP and IFRS. The averages were compared for each of the economic indicators, calculated in both accounting standards, and to identify whether the differences were significant was applied Mann Whitney test. As a robustness test, the proportions of positive and negative variations of the analyzed indicators were compared. The chi-square test was applied to identify whether the differences were significant. The results suggest that the adjustment to the impairment of loans and advances and the adjustment to the fair value of financial assets influenced so that the loan portfolio and the equity of the analyzed financial institutions presented in general higher values as stated in IFRS, which raised Financial Independence indicators; Loans / Deposits and reduced leverage indicators; Borrowing participation; Return on Equity. We could not find any significant difference, probably due to the small sample size. This research aims to have contributed to improving the understanding of the impact of the convergence process of the accounting of Brazilian financial institutions, which often are excluded from searches by its peculiarities, to the international standard; as well as to assist business managers and users of financial information, especially those from the capital market, regulatory authorities and academia.

**Keywords:** IFRS; Financial indicators; Financial Institution

### Resumo

O objetivo desta pesquisa é avaliar os impactos da adoção das IFRS (IAS 7, IAS 19, IAS 32 e IAS 39) nos indicadores econômico-financeiros de instituições financeiras brasileiras, por meio dos indicadores de solvência, estrutura patrimonial e de captação, e de rentabilidade. O método utilizado foi comparar os resultados referentes ao ano de 2009 e que tiveram suas demonstrações financeiras publicadas de acordo com as normas BR GAAP e IFRS. Foram comparadas as médias de cada um dos indicadores econômico-financeiros, calculados em ambos os padrões contábeis e para identificar se as diferenças encontradas eram significativas foi aplicado o teste *Mann Whitney*. Como teste de robustez foram comparadas as proporções de variações positivas e negativas dos indicadores analisados e para identificar se as diferenças eram significativas foi aplicado o teste chi-quadrado. Os resultados encontrados sugerem que o ajuste ao valor

recuperável de empréstimos e adiantamentos e o ajuste ao valor justo de ativos financeiros influenciaram para que a carteira de crédito e o patrimônio líquido das instituições financeiras analisadas apresentassem de maneira geral valores maiores quando demonstradas em IFRS, o que elevou os indicadores Independência Financeira; Empréstimos/Depósitos e reduziu os indicadores Alavancagem; Participação dos Empréstimos; Retorno sobre o Patrimônio Líquido. Não foi possível constatar nenhuma diferença significativa, provavelmente devido a pequena amostra trabalhada. Esta pesquisa pretende ter contribuído para aprimorar o entendimento dos impactos do processo de convergência da contabilidade das instituições financeiras brasileiras, que por muitas vezes são excluídas das pesquisas por suas particularidades, para o padrão internacional; bem como, para auxiliar os gestores de negócios e os usuários da informação financeira, especialmente aqueles oriundos do mercado de capitais, as autoridades reguladoras e a academia.

**Palavras-chave:** IFRS; Indicadores econômico-financeiros; Instituições Financeiras

## Resumen

El objetivo de esta investigación fue evaluar el impacto de la adopción de los IFRS (IAS 7, IAS 19, IAS 32 and IAS 39) en los indicadores financieros de las instituciones financieras brasileñas, a través de la estructura de los indicadores de solvencia de capital y financiación, y la rentabilidad. El método utilizado fue el de comparar los resultados para el año 2009, cuando sus estados financieros se publicarán de conformidad con el BR GAAP e IFRS. Las medias se compararon para cada uno de los indicadores financieros, calculada en ambos estándares de contabilidad e identificar si las diferencias fueron significativas, se aplicó la prueba de Mann Whitney. Como prueba de robustez, se compararon las proporciones de variaciones positivas y negativas de los indicadores analizados y para identificar si las diferencias eran significativas se aplicó la prueba de chi-cuadrado. Los resultados sugieren que el ajuste al deterioro de los préstamos y anticipos y el ajuste al valor razonable de los activos financieros influenciados por lo que la cartera de crédito y el capital de las instituciones financieras analizadas se presentan en valores superiores generales como se indica en IFRS, lo que elevó la independencia financiera indicadores; Préstamos / depósitos y la reducción de los indicadores de apalancamiento; El préstamo de la participación; Rentabilidad sobre recursos propios. No hemos podido encontrar ninguna diferencia significativa, probablemente debido al pequeño tamaño de la muestra. Esta investigación tiene como objetivo han contribuido a mejorar la comprensión de los efectos del proceso de convergencia de la contabilidad de las instituciones financieras brasileñas, que a menudo son excluidos de las búsquedas por sus peculiaridades, a la norma internacional; así como para ayudar a los gerentes de empresas y usuarios de la información financiera, especialmente los del mercado de capitales, las autoridades reguladoras y el mundo académico.

**Palabras-clave:** NIIF; Indicadores financieros; Institución financiera

## 1 Introduction

The assessment of the economic and financial situation of the organizations is directly related to the quality of the information and its historical evolution. Therefore, the user who uses this information to support the decision-making process will seek reliability in what is being presented. Ludícibus (2010, p.121) mentions "that the essence of disclosure is to offer quantitative and qualitative information in an orderly manner, aiming at an adequate consultation base for the user."

Klan and Beuren (2011) highlight the need for greater comparability and transparency in accounting information due to expanding the international financial market. The dynamism of the capital markets has broadened the search for useful information for decision-making (Neves et al., 2012).

In this sense, the globalization of business has become a fundamental element for accounting harmonization (Perez Junior, 2009). Bueno and Lopes (2005) conceptualize accounting harmonization as a process that approximates information, reducing the variety of accounting practices, and thus contributing to this desired comparability.

The new accounting standard developed to align accounting internationally is the International Financial Reporting Standards (IFRS). Mackenzie et al. (2013, p. 1) describe that the objective of the International Accounting Standards Board (IASB), the body responsible for issuing IFRS standards, is "to develop a single set of standards for financial statements based on well-defined principles, resulting in higher quality."

In Brazil, convergence to international standards took place based on Law 11.638 / 2007 and the Technical Pronouncements issued by the Accounting Pronouncements Committee (CPC). According to Carvalho (2009, p.6), "the company that is following the CPC, which proposes details and guidance on how to apply Law No. 11,638 / 07, will automatically be adhering to IFRS standards".

In the field of financial institutions, the Central Bank of Brazil (BACEN) shows recognition of the validity of this harmonization when it determines, through Communiqué 14.259 / 06, that all financial intermediaries under its supervision, disclose from 2010, regularly, its financial statements under IFRS standards.

According to Tombini (2013), the use of international standards increases the quality and transparency of accounting information, facilitating the access of institutions in the National Financial System to international

financial and capital markets. Likewise, it reduces funding costs in these markets, as it enables the comparison of the accounting reports of Brazilian institutions with foreign ones.

As a result, financial institutions now have an opportunity for expansion that results in economic growth. And this new scenario, starting in 2010, awakens and enables the intention of carrying out studies, which involve the understanding of these standards and their impacts on the financial statements.

Several studies use a lengthy historical series to try to answer the most diverse questions. With the change in accounting criteria, the indicators used in these studies can be modified and distort the results. Therefore, it is essential to understand the impact of changes in accounting standards on economic and financial indicators. The financial sector is of particular importance, as they are often taken from research.

Given this context, the study's objective is to assess the impacts of the adoption of IFRS on the economic and financial indicators of Brazilian financial institutions by comparing the 2009 indicators published in BR-GAAP and the same indicators republished in IFRS. The following specific purposes were established to achieve the objective: (a) to identify in the literature the economic and financial indicators used for the analysis of financial institutions; (b) to analyze the variation in economic and financial indicators through statistical tests; (c) to describe the main changes caused by the adoption of IFRS in the accounting of financial institutions, as well as list them with the results found.

The research is justified by the need to understand how accounting changes can affect the economic and financial interpretation of companies. The IFRS came to reduce the information asymmetry between companies and users of accounting information and even to facilitate the understanding of the international public, less familiar with Brazilian accounting standards.

However, the improvements resulting from the adoption of IFRS also brought about a break in the historical series of indicators and economic-financial relations already consolidated by accounting information users. There are currently many works that reduce this gap for industrial companies, such as Amrutha, Selvam, and Kathiravan (2019) and Pires and Decourt (2015). However, this gap still exists for financial institutions in Brazil, which will be reduced with this research. The expansion of studies in financial institutions and international accounting standards in Brazil, thus supporting new studies and contributing as a source of consultation for investors, market analysts, accounting professionals, financial institutions, regulators, and researchers in general.

This article is structured and has five parts. It starts with this introduction, goes through the literature review related to the theme, and presents the main methodological aspects. The study also includes the presentation and analysis of data and conclusion. Finally, there is a list of references used in the development of the research.

## 2 IFRS and the National Financial System

In the National Financial System, Resolution No. 3.786/09 provided guidance on the first adoption of IFRS for financial institutions and defined this adoption applicable to open financial institutions or with audit committees, requiring the publication of IFRS financial statements. Since then, in compliance with the regulatory agency's rules, these institutions have prepared their reports according to two accounting standards: one defined by the IASB and the other embodied in the Accounting Plan of the Institutions of the National Financial System.

BACEN did not authorize the use of IFRS in the individual balance sheets of financial institutions, nor for the consolidated statements disclosed together with the individual ones. For these, the use of the standard established by COSIF was maintained, following the guidelines of Laws No. 6.404/76, 11.638/07 and 11.941/09 for accounting for operations, in association with CVM and CPC rules, but prioritizing the format COSIF for when there are differences (Fé Junior, 2013).

Although BACEN did not adopt the same procedure for financial institutions in receiving technical pronouncements issued by CPC, BACEN recognizes the need for convergence with international accounting standards, in addition to being a recommendation of the Basel Committee, because of competition in the global financial market with transparent and comprehensible information worldwide.

In an event sponsored by BACEN, its representative stated that the institution recognizes the need for convergence with international accounting standards about accounting regulation (Anjos, 2010).

If the regulatory body recognizes the need and relevance of adopting the International Accounting Standards, it is asked why the convergence has not occurred in the same way as in the CVM. The justification is in the particularity of the financial system. BACEN's mission is to ensure the soundness and efficiency of the National Financial System. Therefore, the impacts generated by the adoption of a standard must be assessed from a macroeconomic perspective.

A relevant fact about the subject, addressed by Gebhardt and Novotny-Farkas (2010) is regarding fair value: they highlight that this evaluation method was accused of having contributed to exacerbating the effects of the crisis. However, in the study on accounting quality in the mandatory adoption of IFRS in twelve European banks, loans amounted to around 60% of these institutions' assets, which are valued at cost.

In terms of credit deterioration, the standard had a significant impact on the sample institutions' results. The concept for provision in IFRS is the loss incurred and in the local Generally Accepted Accounting Principles

(GAAPs) was an expected loss. The results found suggest that the approach of loss incurred leads to a late recognition of bad debts, which could result in less useful and transparent information about credit risk in banks' financial statements. Postponing the recognition of losses, for periods when the realized cash flows are reduced, can aggravate economic crises.

Finally, it should be noted that the rules issued by the IASB are intended to generate information aimed primarily at investors, financiers, and other creditors, while BACEN's mission, as a regulator, will not necessarily be in synergy with the investor's objective.

In summary, in Brazil, the harmonization of law occurred with the advent of Law 11.638/07, and in fact, with the mandatory use of the rules. Adherence to international standards brings the expectation of an increase in the level of confidence in the information disclosed, thus reflecting directly on the movement of resources in the financial market.

In the case of Brazil, specifically, it is expected that the new accounting practices arising from the convergence process will provide greater transparency and quality in the accounting information presented by the entities, which are strongly marked by the regulation of government agencies (Calixto, 2010).

## 2.1 Brazilian Empirical Studies

Assessing the Brazilian context, the studies are precisely more focused on impacts, comparisons, and the level of adherence to the new accounting standards. The identification of these groups meets the stage of convergence with international standards in Brazil. It is observed that companies have been facing difficulties with the changes provided for by legislation and regulatory bodies.

Most studies seek to predict, quantify, and explain the changes and possible impacts of international accounting standards on companies. In this article, the central segment analyzed was finance. National authors such as Klan (2007), Almeida (2010), Valério (2011), Sterzeck (2011), Sayed (2012), Calçado et al. (2013), Silveira (2014) and Farias et al. (2014) researched the topic, the most relevant of which are cited below.

Observing prudential and profitability indicators, Almeida (2010) studied the reclassification of financial assets and the possible impacts on Brazilian banks' indicators. With a focus on the introduction of IFRS 9, a simulation of the reclassification of financial assets, from the category available for sale to fair value, was carried out in a sample of 38 banks, comparing the before and after in each of the indicators. In the results presented, there was no significant change in the immobilization index. Still, as for ROA, ROE, and Basel index, the tests indicated a statistically significant variation.

Another study regarding financial institutions and international standards is about the effect of convergence on conservatism. Sterzeck (2011) analyzed financial institutions' behavior in the face of changes in the Brazilian regulatory environment, resulting from the process of convergence to international accounting standards. The degree of conservatism was analyzed using the model proposed by Basu (1997) and the statistical method of panel data. The regression statistics indicated a more significant impact of the negative return on profit than the return as a whole. According to the model used, this is an indicator of conservatism. However, these coefficients were not statistically significant. In this case, therefore, the results indicated that it is not possible to infer that the accounting profits of financial institutions were affected by the new standard, concerning the degree of asymmetric recognition of economic losses and, also, that the accounting profit reflects, promptly, the financial result.

Calçado et al. (2013), with the article entitled Economic-Financial Indicators of Brazilian Banks: Impacts Associated with the Accounting Standards of IASB and BACEN, verified the difference between the economic-financial indicators of these institutions for the statements prepared in the two accounting models. The empirical tests were carried out based on the 2010 and 2011 financial statements of eighteen banks. Indicators representative of the blocks of analysis of the CAMELS methodology were selected. Descriptive statistics were calculated. Also, tests of differences in means and medians between the two standards were applied. The results pointed out relevant differences in the indicators of equity fixed assets, quality of credit operations, net margin, level of mandatory reserve, and net exposure in foreign currency, which can be justified by the differences in parameters between the two accounting models. The empirical tests showed how the disclosure of the same objective reality could be significantly influenced due to the use of accounting models with different recognition, measurement, and disclosure precepts.

Silveira (2014) evaluated whether the adoption of international accounting standards resulted in a change in the diversity of the economic and financial indexes of companies listed on the BOVESPA. Two statistical analysis techniques were used: change of the coefficient of variation and the test of equality of means (ANOVA). It was concluded that it was not possible to identify changes in the diversity of economic and financial indexes of companies listed on the Brazilian capital market, before, during, and after the transition to IFRS.

Farias et al. (2014), in their article Impacts of the Adoption of IFRS on the Consolidated Statements of Banks Listed on the BM & FBovespa, investigated the impact on the representation of the equity, economic, and financial situation of 18 banks listed on the BM & FBovespa. Significant differences were observed in the liquidity and quality indicators of the credit portfolio, indicating that the financial statements prepared in IFRS indicate less liquidity and lower quality of the credit portfolio when compared to BR GAAP. As for shareholders'

equity, it was found that the financial statements under BR GAAP are more conservative compared to those under IFRS.

## 2.2 International Empirical Studies

Concerning conducting international studies on the subject, the following can be cited: Ernest and Young (2005), Miranda (2008), Chiqueto (2008), Gebhardt and Novotny-Farkas (2010), Leventis, Dimitropoulos and Anandarajan (2010), Girbina et al. (2012), Amrutha et al. (2019) and Kraft, Landsman and Shan (2020).

Ernest and Young (2005), with the IFRS study - The Implications for European Banks, disclosed the primary international accounting standards that caused impacts on the net equity (PL) of 15 European financial institutions. IAS 39 - Financial Instruments: Recognition and Measurement, caused combined effects of increase and reduction in banks' PL. Most of the gains were due to the fair value of investments classified as "available for sale," which were previously valued at historical cost. The reductions were caused mainly by the increase in provisions for losses on loan operations (loan impairment) and the recognition of derivatives as the negative net amount. IAS 32 caused reductions in the PL of financial institutions due to reclassifications to liabilities of financial instruments previously classified in the PL as minority interests or non-equity preferred shares. A third standard that resulted in significant changes in the PL of the institutions analyzed by Ernest & Young was IAS 19 - Employee Benefits. This standard was responsible for decreases in the net worth of European banks due to the recognition of deficits in employee benefit funds.

Miranda (2008) carried out a study that aimed to identify significant changes in the economic and financial indicators of financial institutions in the European Union after the adoption of IFRS. For this, the indicators were calculated individually for each bank based on the balance sheet in local GAAP and IFRS standards (the two calculations referred to the same fiscal year of 2004). Therefore, comparisons were made between the numbers calculated in the two methods, using hypothesis testing for differences in means (T-Student) to test the hypothesis that the difference between the means of the two sets of indicators was not significant. As a result, it was concluded that the adoption of IFRS standards could cause considerable changes in some countries' indicators. The current research replicated the study for Brazil.

Focusing specifically on IAS number 39, it is observed that Chiqueto (2008) verified the impacts on the provision for doubtful accounts of European banks listed on the New York Stock Exchange after the adoption of IFRS. The work brought up the main concepts involving the criteria for measuring the allowance for loan losses. Through statistical techniques, the relevance of the impact on the balance of European banks provision in 2005. It was concluded that the adoption of international standards for accounting by European banks caused insignificant effects on the allowance for doubtful accounts, regardless of the relative conceptual similarity between the British model and that determined by IAS.

Gebhardt and Novotny-Farkas (2010) analyzed the implications of adopting IFRS on the quality of banks in twelve European countries. They investigated how the application of IAS 39 incurred in losses affects the main item of operational (commercial) competence of banks, the loss of available credit. Besides, they also found that the effects of adopting IFRS are significantly less pronounced under more stringent supervisory regimes and widely maintained ownership structures. In the last set of analyzes, they confirmed that banks recognize bad debt in a less timely manner after adopting IFRS. Specifically, using a profit persistence test, they found that yields decrease due to the increase in loan loss provisions that are not immediately reversed but tend to persist in future periods. Therefore, the incurred loss approach can provide incentives for managers, especially during good times, to postpone the recognition of loan loss to periods when cash flows are reduced, allowing them to pass on consequences to subsequent generations. This behavior can further fuel bank profits and exacerbate economic crises.

Leventis et al. (2010), likewise analyzed the provision for credit losses related to earnings management by banks in the European Union. The objective was to examine the impact of IFRS implementation on provisioned credit losses to manage capital gains. They used a sample of 91 banks over ten years (before and after IFRS implementation). Overall, they identified that earnings management (with loan loss provisions) for early or late adopters is significantly reduced after the implementation of IFRS. They also found that, for risk banks, earnings management behavior is more notable than lower-risk banks but is significantly reduced in the post-IFRS period. In general, it can be concluded that the implementation of IFRS in the European Union seems to have improved the quality of profit, reducing the trend of earnings management using the provisions for losses.

Girbina et al. (2012) studied the perceptions of Romanian banks' preparation for the implementation of IFRS. The objective of the study was to investigate the perceptions of the leading banks operating about the costs and benefits involved with the use of IFRS as a standard report. It was observed that most preparers consider the application of IFRS to be positive in terms of cost-benefit. However, they find the nature of IFRS complex and insufficient application guidance, especially about IAS 39, which they consider the most challenging. Among the positive results listed in the questionnaire are: better comparability, transparency, and confidence for the investor. Furthermore, many commented that even if it was not a requirement of the Romanian Law, adoption of IFRS would be necessary.

Amrutha et al. (2019) identified a significantly more significant impact on the accounting indices prepared under IFRS compared to those prepared under GAAP. Kraft et al. (2020) demonstrated that the average and median absolute percentage prediction errors are more significant for financial and non-financial companies after the mandatory IFRS adoption. The authors also found that in the post-adoption period, forecasting errors are more significant for companies in countries with weaker institutions, such as low levels of property rights and more restrictive access to credit.

No studies have been found at the national or international level that replicates the study by Miranda (2008) in Brazil. This study complemented the disclosure of international standards' impacts on the economic and financial indicators of financial institutions. The closest national review was that of Farias et al. (2014).

### 3 Method

Following Communiqué 14,259 of March 10, 2006, from the Central Bank of Brazil, based on the diagnosis of changes in the world economic scenario, which imposed the need for convergence to international accounting standards, procedures were prepared for the preparation and publication of consolidated financial statements, in line with IASB pronouncements from 2010.

According to Pires and Decourt (2015), for a complete transition to IFRS, in 2010, companies had to republish the financial statements for 2009, showing the reconciliation between the two methods (BR GAAP and IFRS). In this way, the 2009 financial statements provided a unique opportunity for a better understanding of the impacts of adopting IFRS on the accounting of Brazilian financial institutions since it was possible to compare the same assets and results reported according to two different accounting standards.

Therefore, the units of analysis in this study were the nineteen financial institutions listed on the BM&FBovespa in 2009 that had all their financial statements for the year 2009, and Caixa Econômica Federal (in 2010 the companies restated 2009, so the consolidated financial statements in BR GAAP and IFRS for 2009 were obtained). Caixa Econômica Federal, despite not being listed on the BM&FBovespa, participates in the sample due to its representativeness with the national economy.

The companies that comprised the sample were: Banestes SA, BCO ABC Brasil SA, BCO Alfa de Investimento SA, BCO Bradesco SA, BCO Brasil SA, BCO BTG Pactual SA, BCO Daycoval SA, BCO Estado do Sergipe SA, BCO State of Rio Grande do Sul SA, BCO Industrial e Comercial SA, BCO Indusval SA, BCO Mercantil do Brasil SA, BCO Nordeste do Brasil SA, BCO Patagônia SA, BCO Pine SA, BCO Santander (Brasil) SA, BRB BCO de Brasília SA, ITAU Unibanco Holding SA, Paraná BCO SA and Caixa Econômica Federal.

Working with 2009 data is a unique opportunity, as it was the year with the most relevant changes and had its numbers published in two accounting standards. In the following years, there continued to be developments in IFRS as a natural evolution, but without the opportunity to compare the figures in BR-GAAP and IFRS as we had for the 2009 accounting year.

The selection of the economic and financial indicators to be calculated was based on a bibliographic review of these at the national and international levels. The indicators selected by Miranda (2008) regarding their representativeness in the study were validated and considered relevant for replication based on the financial statements. Financial institutions listed on the BM&FBovespa.

An indicator that was not calculated in Miranda's dissertation (2008) was included, the return on equity, representing the block of profitability. Subsequently, the selected economic and financial indicators were calculated for the financial statements in BR GAAP and IFRS.

Block	Indicator	Formula	Abbreviation
Capital Adequacy (equity and funding structure)	Financial Independence (capitalization)	Shareholders' Equity / Total Assets	CAP
Capital Adequacy (equity and funding structure)	Loans / Deposits	Credit Portfolio / Total Deposits	EMPDEP
Capital Adequacy (equity and funding structure)	Leverage	Third Party Liabilities / Shareholders' Equity	ALAV
Liquidity (solvency)	Voluntary Funding	Cash / Cash Deposits	ENCV
Liquidity (solvency)	Immediate liquidity	Cash and Cash + Interbank Deposits / Demand Deposits	LIQIME
Liquidity (solvency)	Loan Participation	Credit / Total Asset Portfolio	PAREMP
Results (profitability)	Return on Equity	Net Income / Shareholders' Equity	ROE

**Figure 1: List of Economic and Financial Indicators**

Source: Elaborated by the authors.

To verify the impact in 2009 of the adoption of IFRS, an analysis was performed by comparing the averages of each of the economic and financial indicators calculated in both formats, BR GAAP and IFRS. Statistical tests were also carried out to verify whether the differences found were significant or not, despite

the knowledge that it would be difficult to find substantial differences in a sample with only 20 financial institutions.

First, adherence to normality was verified with the Shapiro-Wilk test. The results found by the W test with an alpha decision level = 0.05 signaled that the data were mostly not normal. To expand the analysis results between 0.05 and 0.10 were also considered, but still, the data mainly were not normal; 42.86% accepted H0 (they are normal), and 57.14% rejected H0 (are no normal).

Subsequently, considering the greater acceptance of hypothesis 1 (one), where the data are not normally distributed, we opted for a non-parametric test, Mann Whitney, since other tests require the sample to have a normal distribution.

The results found by the Mann Whitney test with alpha decision level = 0.05 signaled that there is no significant difference between the indicators calculated in BR GAAP and IFRS. To expand the analysis, results between 0.05 and 0.10 were also considered, however, the previous statement was maintained. It was not possible to identify significant differences, which was already expected by the small sample with which it was possible to work.

As a robustness test and a small sample, a test of proportions was performed, Pearson's chi-square test, suggested by Campbell (2007) for research in Medicine with a small sample due to the rarity of a condition or the limited resources. The situation in this small sample of accounting data is precisely the same and the test is adequate.

## 4 Results and analysis

The seven economic and financial indicators calculated in this study are divided into three blocks: capital adequacy (equity and funding structure), liquidity (solvency), and results (profitability and profitability). Each block provides a specific view of the economic and financial situation of financial institutions, so the results of the survey are presented in a segmented way.

### 4.1 Capital Adequacy (Equity Structure and Funding)

As shown in Table 1, the relationship between loans/deposits (EMPDEP) does not show a pattern among the banks analyzed. The average for IFRS is slightly higher (5.47%), but seven banks showed a reduction in this indicator, and 13 showed a high. This difference is not significant by the chi-square test.

**Table 1:**  
**Loan/Deposit Indicators (EMPDEP), Leverage (ALAV) and Capitalization (CAP)**

#### Equity Structure and Funding

Financial Institution	Indicator - Accounting Model			Indicator - Accounting Model			Indicator - Accounting Model		
	EMPDEP		Variation To IFRS	ALAV		Variation To IFRS	CAP		Variation To IFRS
	BR GAAP	IFRS		BR GAAP	IFRS		BR GAAP	IFRS	
1	0.6902	0.6544	-5.19%	12.4477	12.0521	-3.18%	0.0744	0.0766	2.96%
2	2.4366	2.4219	-0.60%	5.0546	4.8789	-3.48%	0.1652	0.1701	2.97%
3	0.9315	0.5948	-36.15%	9.9293	8.8245	-11.13%	0.0915	0.1018	11.26%
4	0.6963	0.8860	27.24%	11.1240	9.9680	-10.39%	0.0825	0.0912	10.55%
5	1.0120	0.8744	-13.60%	18.6169	16.3383	-12.24%	0.0510	0.0577	13.14%
6	0.2102	0.2483	18.13%	5.7544	5.8483	1.63%	0.1481	0.1460	-1.42%
7	1.4548	1.6074	10.49%	3.1713	2.6975	-14.94%	0.2397	0.2705	12.85%
8	0.3914	0.3979	1.66%	14.2293	11.3357	-20.34%	0.0657	0.0811	23.44%
9	0.8337	0.8505	2.02%	7.5329	7.3860	-1.95%	0.1172	0.1192	1.71%
10	1.6159	1.6895	4.55%	5.4535	5.3474	-1.95%	0.1550	0.1575	1.61%
11	1.2442	0.9846	-20.86%	5.3098	5.1560	-2.90%	0.1585	0.1624	2.46%
12	1.0682	1.2508	17.09%	13.3978	20.1401	50.32%	0.0695	0.0473	-31.94%
13	0.9533	1.4592	53.07%	8.2412	7.6805	-6.80%	0.1082	0.1152	6.47%
14	0.6977	0.7814	12.00%	4.4227	4.0682	-8.02%	0.1844	0.1973	7.00%
15	1.1554	1.4361	24.29%	7.4633	8.5135	14.07%	0.1182	0.1051	-11.08%
16	1.0741	0.8929	-16.87%	4.3079	3.5617	-17.32%	0.1884	0.2192	16.35%
17	0.6587	0.6104	-7.33%	10.3731	11.2235	8.20%	0.0879	0.0818	-6.94%
18	1.1632	1.1788	1.34%	11.0014	8.7936	-20.07%	0.0833	0.1021	22.57%
19	1.2332	1.4340	16.28%	2.3182	2.3750	2.45%	0.3014	0.2963	-1.69%
20	0.6398	1.0085	57.63%	25.0071	20.1700	-19.34%	0.0385	0.0472	22.60%
<b>Average</b>	<b>1.0080</b>	<b>1.0631</b>	<b>5.47%</b>	<b>9.2578</b>	<b>8.8179</b>	<b>-4.75%</b>	<b>0.1264</b>	<b>0.1323</b>	<b>4.67%</b>

Source: Developed by the authors

The differences in the Third Party Liabilities / Equity (ALAV) and Net Equity / Total Assets (CAP) indicators showed minor percentage differences, but with greater consistency in the pattern between the banks analyzed, with 16 having a drop in the Third Party Liabilities / Shareholders' Equity and only 4 of them increased. And in the Equity / Total Assets indicator, the relationship was reversed. These differences in proportion were significant at 5%.

**Table 2:**  
**Impacts of IFRS Adoption on EMPDEP, ALAV and CAP indicators of Financial Institutions**

Indicator	Number of observations	Average BR-GAAP	Average IFRS	U Test Result	Bilateral p-value	Positive / negative variation ratio	P-value
EMPDEP	20	1.008	1.0631	191	0.8077	1.85	0.3434
ALAV	20	9.2578	8.8179	193	0.8498	0.20	0.0495
CAP	20	0.1264	0.1323	193	0.8498	4.00	0.0495

The equity and funding structure indicators showed the origins of the financial institution's sustainability. In general, the greater the use of third party capital, the greater the uncertainty concerning the expected results, however a large share of own resources will not necessarily reflect a favorable situation (Assaf Neto, 2010; Miranda, 2008). In the case of financial institutions, the capital level acts as a protection mechanism for depositors. The accounts listed in the capital adequacy indicators are credit portfolio, total deposits, shareholders' equity, total assets, and liabilities of third parties.

The leverage indicator measures the proportion of use of third party resources. Average financial institutions use 9.3 times more third-party resources than their resources to leverage their business, according to the accounting statements under BR GAAP. According to the international standard, financial institutions use 8.8 times more resources from third parties, showing lower average leverage under IFRS than under BR GAAP. These differences were mainly motivated by the fair value of credit and derivative transactions and the smaller provision for doubtful accounts made in the IFRS statements. This trend towards reducing financial institutions' leverage was significant, as can be seen by the chi-square test. However, the difference was not large enough to find a substantial difference with a sample of only 20 financial institutions.

Regarding the capitalization indicator (CAP), also known as financial independence, the descriptive statistics show that the use of the standards established by the IASB results in a greater proportion of shareholders' equity about total assets.

The capitalization index represents the portion of total assets covered by the company's resources. On average, financial institutions have a capitalization index of 0.1264, based on the financial statements in BR GAAP, and 0.1323, considering the financial statements in IFRS. This indicates that the net equity of these financial institutions covers an average of 13% of their assets (considering the Brazilian standard and/or IFRS), but that, with the adoption of IFRS, it is possible to see an increase of 4.67% in this relationship. The main causes of differences in the PL are: (i) BR GAAP excluded the participation of controlling shareholders, in IFRS it is considered; (ii) adjustment to the recoverable amount of loans and advances (loan portfolio); (iii) adjustment to the fair value of financial assets included in the portfolio of consolidated exclusive investment funds; (iv) adjustment to the fair value of financial assets - equity securities; (v) constitution of a tax credit on the difference in rate; and (vi) deferred income and social contribution taxes on IFRS adjustment. The chi-square test reinforces the perception of an increase in this relationship, but the size of the growth is not enough for the difference to be significant.

For the loans/deposits indicator, the results confirm the results of the studies by Miranda (2008) and Farias et al. (2014). In the study by Farias et al. (2014), different results were observed for the leverage and capitalization indicators, as well as in the study by Miranda (2008). However, it should be noted that for Miranda (2008), it was not in all countries that the differences were relevant. Here in Brazil, not even an upward or downward trend can be observed.

## 4.2 Liquidity (Solvency)

The Cash / Cash Deposits (ENCV) indicator does not show any well-defined trend. There are a few more cases of increased liquidity according to the IFRS criteria with BR-GAAP. Still, when the difference is negative, the values are higher, making the average negative. The vast majority of differences are less than 10%, reinforcing the idea that IFRS had a relevant impact on classifying assets as cash and cash equivalents.

The Immediate Liquidity classification was more affected by IFRS. The vast majority of financial institutions had a negative variation, but not enough to say that the difference is significant. The same effect occurs with the participation of loans, which had an average increase of more than 10% and increased in most financial institutions, but not enough to significantly differ.



**Table 3:**  
**Voluntary Funding Indicators (ENCV), Immediate Liquidity (LIQIME) and Loan Participation (PAREMP)**

Financial Institution	Indicator - Accounting Model			Indicator - Accounting Model			Indicator - Accounting Model		
	ENCV			LIQIME			PAREMP		
	BR GAAP	IFRS	Variation To IFRS	BR GAAP	IFRS	Variation To IFRS	BR GAAP	IFRS	Variation To IFRS
1	0.5242	0.5242	0.00%	3.4087	3.4087	0.00%	0.3870	0.3550	-8.27%
2	0.2827	0.2827	0.00%	3.2975	3.0182	-8.47%	0.7757	0.7740	-0.22%
3	0.0031	0.0034	9.68%	0.0961	0.0433	-54.94%	0.3996	0.4342	8.66%
4	0.7182	0.7264	1.14%	2.9065	3.1359	7.89%	0.4287	0.5248	22.42%
5	0.5690	0.5311	-6.66%	3.5104	2.6582	-24.28%	0.3695	0.4071	10.18%
6	0.0160	0.0154	-3.75%	3.0591	3.0299	-0.95%	0.0626	0.0548	-12.46%
7	0.4890	0.4952	1.27%	0.9137	0.8867	-2.96%	0.4908	0.5948	21.19%
8	0.1336	0.1569	17.44%	0.6894	0.6998	1.51%	0.3280	0.3313	1.01%
9	0.8382	0.8382	0.00%	3.3882	2.4930	-26.42%	0.4692	0.4699	0.15%
10	0.9262	0.9306	0.48%	3.8032	2.1800	-42.68%	0.8238	0.8748	6.19%
11	0.1489	0.1474	-1.01%	0.8674	0.6100	-29.67%	0.5754	0.5817	1.09%
12	0.0502	0.0532	5.98%	0.7270	0.7300	0.41%	0.5794	0.5673	-2.09%
13	0.5971	0.5971	0.00%	1.7067	1.2708	-25.54%	0.3373	0.4978	47.58%
14	0.2400	0.2213	-7.79%	0.7610	0.3516	-53.80%	0.4729	0.5478	15.84%
15	0.0496	0.0456	-8.06%	1.0623	0.9037	-14.93%	0.4605	0.5673	23.19%
16	0.1248	0.0714	-42.79%	1.0930	0.6460	-40.90%	0.3560	0.4816	35.28%
17	0.0197	0.0202	2.54%	0.4485	0.4558	1.63%	0.4909	0.4574	-6.82%
18	0.1282	0.1287	0.39%	0.8579	1.5422	79.76%	0.3648	0.3886	6.52%
19	0.1736	0.1735	-0.06%	0.2216	0.2203	-0.59%	0.4700	0.5225	11.17%
20	0.1566	0.1571	0.32%	0.9757	0.8109	-16.89%	0.3379	0.5292	56.61%
<b>Média</b>	<b>0.3095</b>	<b>0.3060</b>	<b>-1.13%</b>	<b>1.6897</b>	<b>1.4547</b>	<b>-13.91%</b>	<b>0.4490</b>	<b>0.4981</b>	<b>10.94%</b>

Source: Developed by the authors

**Table 4:**  
**Impacts of IFRS Adoption on ENCV, LIQIME and PAREMP Indicators of Financial Institutions**

Indicator	Number of observations	Average BR-GAAP	Average IFRS	U Test Result	Bilateral p-value	Positive / negative variation ratio	P-value
ENCV	20	0.3095	0.306	197	0.9353	1.29	0.72730
LIQIME	20	1.6897	1.4547	166.5	0.3648	0.36	0.13800
PAREMP	20	0.449	0.4981	145	0.1368	3.00	0.10690

The liquidity indicators have the function of revealing the financial institution's capacity to transform its assets into cash to meet its financial obligations adequately. When observing the actual values of the accounts listed in these indicators, it is possible to see the rules that changed them. The related reports are cash and cash equivalents, short-term investments, credit portfolio, total assets, and deposits.

The variation in the results of the voluntary cash flow indicators (ENCV) and immediate liquidity (LIQIME) was due to the classification of cash equivalents and consolidation bases. In the IFRS standard, repo operations and interbank investments are considered cash equivalents. For an investment to qualify as a cash equivalent, following IAS 7, the amount must be readily convertible into cash and present an insignificant risk of change in fair value. Also, the resource must respect a maturity less than or equal to three months from the date of acquisition. The averages are statistically higher in the BR GAAP model.

The variation in the ENCV indicator was small (-1.13%) and did not represent a statistically significant difference, as in the studies by Miranda (2008) and Farias et al. (2014). The result of the LIQIME indicator showed a much more significant variation (-13.91%) due to the changes in the groups of accounts Net Assets. However, still, it was not possible to find a significant difference. The same trend seen in the study by Miranda (2008) was observed, however, it is believed that due to the sample size, the same results were not confirmed, statistically significant changes. Comparing with a study by Farias et al. (2014) the present study confirms the absence of significant differences.

The analyzed data show that the loan participation indicator (PAREMP) is lower in the BR GAAP model than the IFRS standard. This means that the IASB model's use implied greater credit operations participation on the institution's assets. This situation is mainly based on credit operations provisions, which in the IFRS model were lower than those established under the parameters of BR GAAP. The tests of differences in means indicate that the differences presented are not statistically relevant, as in the study by Miranda (2008), however the same is not confirmed in the study by Farias et al. (2014).

In the explanatory notes to the financial statements in IFRS (2010) of Bradesco S / A, the main changes between BR GAAP and IFRS are listed. Consolidation in the reconciliations presented by financial institutions, the new consolidation basis is shown, which interferes positively or negatively on balance; and in the loan portfolio, impacts are referring to IAS 32 and 39, which relate: The deferral of fees for financial services and direct costs, and the loss due to impairment.

Financial institutions work with the concept of expected and not incurred loss. This new understanding may generate surprises for financial institutions in the long term, excess profits on one date, with significant losses on another.

The reduction in the allowance for loan losses and the inclusion of the effective interest rate adjustment increased the loan portfolio's representativeness about the total assets from 45% in BR GAAP to 50% in IFRS. However, the significance of this variation was not statistically confirmed.

### 4.3 Profitability

A profitability indicator seeks to highlight the financial return that the company's activities provide. In this study, the return on equity (ROE) indicator was selected. The sample composition was reduced compared to the other economic and financial indicators. The number of observations was thirteen, as seven of the financial institutions did not present the net profit for 2009, making the calculation impossible.

**Table 5:**  
**Impacts of the adoption of IFRS on the ROE indicator of Financial Institutions**

Indicator	Number of observations	Average BR-GAAP	Average IFRS	U Test Result	Bilateral p-value	Variation to IFRS	Significant difference
ROE	13	0.1659	0.1560	73	0.5554	BR>IFRS	No

Source: Elaborated by the authors

In the BR GAAP model, the return on equity in seven of the thirteen financial institutions was greater than the IFRS model. The analytical examination of the accounting balances reveals that the adjustment to the fair value of financial assets was the most significant item to imply an increase in equity in the IFRS model. Another adjustment reflected in higher equity in the IFRS statements is related to the participation of non-controlling shareholders.

The mean difference test did not show any statistically significant difference between the two accounting standards, as in the study by Farias et al. (2014). Subsequently, table 6 was developed, which aimed to analyze possible trends in economic and financial indicators.

**Table 6:**  
**Variations and Trends**

Indicator	EMPDEP		ALAV		CAP		ENCV	
	Nº of FI's	Variation %	Nº of FI 's	Variation %	Nº of FI 's	Variation %	Nº of FI's	Variation %
<b>Variation IFRS - BR GAAP</b>								
IFRS > BR GAAP	13	65	5	25	15	75	9	45
IFRS < BR GAAP	7	35	15	75	5	25	7	35
IFRS = BR GAAP	0	0	0	0	0	0	4	20
<b>TOTAL</b>	<b>20</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>20</b>	<b>100</b>
Indicator	LIQIME		PAREMP		ROE		TOTAL	
	Nº of FI's	Variation %	Nº of FI 's	Variation %	Nº of FI 's	Variation %	Nº of FI's	Variation %
<b>Variation IFRS - BR GAAP</b>								
IFRS > BR GAAP	5	25	15	75	6	46	68	51
IFRS < BR GAAP	14	70	5	25	7	54	60	45
IFRS = BR GAAP	1	5	0	0	0	0	5	4
<b>TOTAL</b>	<b>20</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>13</b>	<b>100</b>	<b>133</b>	<b>100</b>

Source: Elaborated by the authors

As shown in table 6 of trend observation, it was possible to identify that indicators such as EMPDEP, CAP, PAREMP when calculated for financial institutions after adherence to international standards, presented superior results in IFRS, considering for each indicator 75%, 65% respectively and 75%, it is believed that there will be a strong tendency towards greater representativeness for the coming periods. As for the ALAV (75%) and LIQIME (70%) indicators, where the effect was reversed, international standards reduced the real numbers when compared to BR GAAP, and this scenario was confirmed for a significant percentage of financial institutions.

Only indicators such as ROE, where the sample was reduced, and ENCV, where 20% of financial institutions did not change the actual numbers when comparing BR GAAP and IFRS, it was impossible to observe a relevant trend of increase or decrease with the adoption of international standards.

However, it is possible to see the primary international standards that caused changes in the indicators studied: IAS 7, IAS 19, IAS 32, IAS 39. Table 7 shows the main impacts of each International Accounting Standards.

**Table 7:**  
**Impact of International Accounting Standards on indicators**

Standard	Indicator	Impact
IAS 7	voluntary plug-in indicators	It reduces the liquidity of financial institutions, since for an investment to be qualified as a cash equivalent, in accordance with IAS 7, the value must be readily convertible into cash and present an insignificant risk of change in fair value.
	immediate liquidity	
IAS 39	direct costs	Securities valued at fair value through profit or loss and loans and receivables are valued at cost amortized.
	impairment loss	
IAS 32	deferral of fees for financial services	It caused reductions in the PL of financial institutions, as a result of reclassifications to liabilities, of financial instruments previously classified in the PL as minority interests or non-equity preferred shares.
IAS 19	Financial independence (capitalization)	Benefícios aos Empregados. Essa norma foi responsável por diminuições nos patrimônios líquidos dos bancos devido ao reconhecimento de déficits em fundos de benefícios a empregados.
	Return on Equity	

Source: Elaborated by the authors

It is confirmed, even without the identification of significant changes, that the IFRS favored the growth of equity and the credit portfolio. Thus, the indicators with these variables in the numerator presented higher values, and the indicators with these variables in the denominator showed minors' values. The number of total deposits and interbank investments tended to decrease when the IFRS standards were applied. The new accounting rules changed the conservatism of financial institutions.

It is believed that in a longitudinal scale survey, it will be possible to visualize the reflexes in the economic-financial indicators of financial institutions since international standards have brought new concepts. Moreover, these will be better applied according to the stabilization and use of the IFRS method.

It is recalled that for some financial institutions, 2009 was the first year with the adoption of IFRS. Therefore, a better adaptation is expected in the coming years, even regarding the explanatory notes' declarations regarding the application.

It is also believed that, with larger reception and incorporation of international standards by the Central Bank of Brazil, financial institutions will be able to concentrate efforts in a single direction. As just as in 2009, until today, financial institutions maintain their financial statements in BR GAAP (soon adapted and extracted COSIF data) and in IFRS.

## 5 Concluding Remarks

The purpose of this study was to assess the impacts of adopting IFRS on the economic and financial indicators of Brazilian financial institutions. Financial statements for the same year were compared using different accounting standards.

For the economic-financial indicators voluntary cash flow, immediate liquidity, leverage, and return on equity, the average results were higher in BR GAAP format. For loans, loans/deposits, and capitalization participation, the highest averages were found in IFRS. The number of financial institutions that showed an increase in these indicators surpassed the number of companies that reduced these indicators. This difference was significant.

As for the variation in the results of the voluntary cash flow and immediate liquidity indicators, the new classification of cash equivalent is related. It is also identified that financial institutions have a lower leverage indicator in the IFRS format, which defines that third party resources have less significance when adopting international standards. These differences are mainly motivated by the measurement of the recoverable value of credit and derivative transactions and by the lower provision for doubtful accounts made in the IFRS statements.

The return on equity is higher when calculated under local regulations. The variation arises from the application of the concept of fair value to financial assets. Further, shareholders' equity suffers, reflecting the participation of non-controlling shareholders.

For the indicators in which the averages were higher in IFRS, the variation in provisions for credit operations was mainly observed, which in the IFRS model were lower than those constituted under the parameters of BR GAAP. The loan participation indicator showed that using the IASB model implies giving a more significant share of credit operations over the institution's assets. These variations explain a large part of the differences identified. Still, to verify whether this is an IFRS standard concerning BR-GAAP, it is suggested that further research should go deeper into these aspects.

Regarding the capitalization indicator, the use of the standards established by the IASB resulted in a more significant proportion of shareholders' equity concerning total assets. The capitalization index indicated that the net worth of these financial institutions covered 13.23% of their assets, while under BR GAAP 12.64%. The related causes for these differences were: in BR GAAP, the participation of controlling shareholders are excluded, and in IFRS, the application of the adjustment to the recoverable value of loans and advances (credit portfolio), of the adjustment to the fair value of financial assets included in the consolidated exclusive investment fund portfolio, the adjustment to the fair value of financial assets - equity securities, the constitution of a tax credit on the difference in rate, deferred income tax and social contribution on IFRS adjustment. It is a relevant difference between the two accounting standards that increase shareholders' equity to total assets.

For the loans/deposits indicator, the IFRS's reflection was based on the change in the credit portfolio due to provisions. Based on the study developed, it is considered that the adoption of international standards from the point of view of the credit portfolio makes the financial statements less conservative, as it postpones the recording of losses, reflecting in the results.

Comparing the current research with an international study by Miranda (2008), the solvency, voluntary allocation, and participation of loans indicators confirmed the results. For the indicator of immediate liquidity, it was impossible to verify with a worked sample and with the ratio between similar positive and negative variations.

In the equity and funding structure, the three indicators in the study developed did not present relevant differences between the averages, contradicting the general results of the study by Miranda (2008) regarding two indicators, leverage, and capitalization.

Another relevant study for comparison purposes was that of Farias et al. (2014), which also calculated the economic-financial indicators for Brazilian financial institutions, but with a different methodology, based on data from 2010 and sample variations. As for the significance of the differences in the averages, they were confirmed only for the participation of loans, leverage, and capitalization. The study shows a change in the quality of the loan portfolio, which is the result of provisions for doubtful accounts; they also identified lower liquidity in the IFRS format.

Listing the studies related to the current research, Chiqueto (2008) meets the results found. He analyzed the new rules for the provision for bad debts, and Valério (2011) confirmed that in structural terms, the financial statements already changed a lot, but that the IFRS still needs to be more detailed for an adequate interpretation. Sterzeck (2011), along the same lines, compared the accounting profits in both to the norms, and Sayed (2012) sought to evidence the impact of fair value. More recently, Silveira (2014) evaluated whether there was variation in the diversity of economic and financial indicators in periods before or after the adoption of IFRS. All related authors did not find results that significantly affirm the impact of international standards, but it was possible to visualize the application of the new standards.

The present study met the general objective of verifying the occurrence of the impact of adopting IFRS on the economic and financial indicators of financial institutions. It is essential to highlight the representative percentage of financial institutions that had their indicators impacted in the same direction. On average, 72% of financial institutions showed similar trends for the indicators analyzed. Only the ROE indicator, where the sample studied was smaller, and the ENCV, where 20% of financial institutions presented equal numbers before and after adopting the standards, it was not possible to trace a trend.

Some considerations are related to the incurred loss approach, which is related numerous times when the credit portfolio is evaluated. As Gebhardt and Novotny-Farkas (2010) stated, this concept can provide managers incentives in good times, postponing the recognition of loan losses to periods when cash flows are reduced. This behavior can feed false bank profits and thus exacerbate economic crises this understanding was related to the position of the Central Bank of Brazil regarding the reception of international standards: IFRS have been adhered to with caution and constant assessment of economic impacts.

A positive point seen by authors is regarding the possibility of reducing the trend to earnings management, as in BR GAAP the use of provisions for losses could have this purpose (Leventis et al., 2010). In this research, no evidence of the use of loss provisions to modify net income was identified.

From the standpoint of the IFRS method, shareholders and investors will be experiencing less conservative results, which are positively received, while the BR GAAP regulation will provide managers of financial institutions with a more traditional position, both in the payment of taxes and in the remuneration of shareholders.

For shareholders and investors, already mentioned by Carvalho (2009), it is believed that the transition to the IFRS standard provided more transparent information, due to the extension of interpretations and applications, as listed in the course of this study. As for the reduction of the capital cost and increase in the institution's value generation, it is observed that a more representative adoption by the Central Bank of Brazil of international standards would be necessary. It will make financial institutions join forces in a sense that meets local legislation and the capital market.

However, it is worth remembering the particularities of the financial system. BACEN's mission is to ensure the system's solidity and efficiency. In this way, the assessment of IFRS and its impacts happens from a macroeconomic perspective and not at the speed expected by others. At the meeting, Gebhardt and Novotny-Farkas (2010) relate that in more stringent supervisory regimes, IFRS adoption's effects may be less pronounced. The small variations that we find here in Brazil may be the result of strict supervision by BACEN.

Even without significant statistical evidence, it is believed that in the long term, international standards will impact the economic and financial indicators of Brazilian financial institutions, according to the adherence of the Central Bank of Brazil, already mentioned, and also through the constant adaptation of the interpretations of new international regulations. It was agreed with the statement by Girbina et al. (2012) when he says that there are already positive results to be observed in the IFRS, such as better comparability, transparency, and investor confidence.

As a suggestion for future studies, it is recommended to examine the impact of international standards on a longitudinal scale (2010 to 2020) of Brazilian financial institutions, so there will be greater chances of identifying relevant differences between accounting standards. It would also be interesting to continue this research and to verify the impact on economic and financial indicators resulting from other changes that occurred in accounting standards.

## References

- Almeida, D. L. (2010). *Reclassificação dos ativos financeiros e os possíveis impactos nos indicadores prudenciais e de rentabilidade dos bancos brasileiros*. Dissertação de Mestrado, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo. doi:<https://doi.org/10.11606/D.12.2010.tde-13102010-182733>
- Amrutha, P., Selvam, M., & Kathiravan, C. (2019). Impact of Converging to IFRS on Key Financial Ratios with Reference to BSE Listed Firms. *International Journal of Psychosocial Rehabilitation*, 23(1). <https://doi.org/10.37200/IJPR/V23I1/PR190263>
- Anjos, S. O. (2010). Abertura. *Anais da Semana de Contabilidade do Banco Central do Brasil*. Editora Bacen. Disponível em: [http://www.bcb.gov.br/pre/evento/arquivos/2010\\_8\\_121/Sergio%20Odilon.pdf](http://www.bcb.gov.br/pre/evento/arquivos/2010_8_121/Sergio%20Odilon.pdf). Acesso em: 18 nov. 2013.
- Bueno, A. F., & Lopes, E. (2005). *Harmonização Global das Práticas Contábeis*. Contabilidade Internacional. São Paulo. Módulo 2.
- Calcado, E. D., Dantas, J. A., Niyama, J. K., & Rodrigues, J. M. (2013). Indicadores Econômico-Financeiros dos Bancos Brasileiros: Impactos Associados aos Padrões Contábeis do IASB e do BCB 2013. *Anais do 13º Congresso USP Controladoria e Finanças*. Disponível em: <http://www.congressousp.fipecafi.org/web/artigos132013/150.pdf>. Acesso em: 02 jun. 2013.
- Calixto, L. (2010). Análise das Pesquisas com Foco nos Impactos da Adoção do IFRS em Países Europeus. *Revista Contabilidade Vista & Revista*, 21(1):157-87.
- Campbell, I. (2007). Chi-squared and Fisher-Irwin tests of two-by-two tables with small sample recommendations. *Statistics in Medicine*, 26(19):3661-75. <https://doi.org/10.1002/sim.2832>
- Carvalho, L. N. (2009). Empresas ainda têm dúvida sobre qual o padrão seguir. In: International Financial Reporting Standards. *Journal – Ernst & Young*, 8. Disponível em: [http://www.ey.com.br/Publication/vwLUAssets/IFRS\\_Journal\\_8/\\$FILE/IFRS\\_Journal\\_8.pdf](http://www.ey.com.br/Publication/vwLUAssets/IFRS_Journal_8/$FILE/IFRS_Journal_8.pdf). Acesso em: 18 nov. 2013.
- Chiqueto, F. (2008). *Impactos na provisão para devedores duvidosos dos bancos europeus listados na Bolsa de Nova Iorque após a adoção das normas internacionais de contabilidade*. Dissertação de Mestrado, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo. doi: <https://doi.org/10.11606/D.12.2009.tde-27032009-150621>

Ernst & Young. (2005). *IFRS – the implications for European banks*. London: Eygm Limited. Disponível em: [http://www2.eycom.ch/publications/items/ifrs/single/200610\\_impact\\_euro\\_banks/200610\\_eyimpact\\_ifrs\\_euro\\_banks.pdf](http://www2.eycom.ch/publications/items/ifrs/single/200610_impact_euro_banks/200610_eyimpact_ifrs_euro_banks.pdf). Acesso em: 18 nov. 2013

Farias, J. B., Ponte, V. M. R., Oliveira, M. C., & Luca, M. M. M. (2014). Impactos da adoção das IFRS nas demonstrações contábeis consolidadas dos Bancos listados na BM & FBovespa. *Revista Universo Contábil*, 10(2):63-83. DOI: <https://doi.org/10.4270/RUC.2014212>

Fé Júnior, A. L. D. (2013). *Mudanças contábeis e reações do mercado na implantação compulsória do IFRS no setor bancário brasileiro*. Dissertação de Mestrado, Faculdade de Economia, Administração e Contabilidade de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto. doi: <https://doi.org/10.11606/D.96.2013.tde-22012014-170531>

Gebhardt, G., & Novotny-Farkas, Z. (2010). Mandatory IFRS Adoption and Accounting Quality of European Banks. *SSRN*. Disponível em: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1732166](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1732166). Acesso em: 14 out. 2013.

Girbina, M., Minu, M., Bunea, S., & Sacarin, M. (2012). Perceptions of Preparers from Romanian Banks Regarding IFRS Application. *Journal of Accounting and Management Information Systems*, 11(2):191-208.

International Accounting Standards Board (IASB). (2011). *IFRS – Normas Internacionais de Relatório Financeiro*. IBRACON.

Iudícibus, S. (2010). *Teoria da Contabilidade*. 10. ed. Editora Atlas.

Klan, R. C. (2007). *Impacto das diferenças de Normas Contábeis Brasileiras, Americanas e Internacionais em Indicadores de Desempenho de Empresas*. Dissertação de Mestrado, Universidade Regional de Blumenau, Blumenau, Brasil.

Klan, R. C., & Beuren, I. M. (2011). Efeitos da Convergência Contábil às IFRS no Gerenciamento de Resultados de empresas Europeias. *Anais V Congresso ANPCONT.*. Disponível em: <http://www.anpcont.com.br/site/docs/congressoV/CUE041.pdf>. Acesso em: 07 ago. 2012.

Kraft, P., Landsman, W. R., & Shan, Z. (2020). Effect of Mandatory IFRS Adoption on Accounting-Based Prediction Models for CDS Spreads. *European Accounting Review*. <https://doi.org/10.1080/09638180.2020.1760116>

Leventis, S., Dimitropoulos, P. E., & Anandarajan, A. (2010). Loan Loss Provisions, Earnings Management and Capital Management under IFRS: The Case of EU Commercial Banks. *Journal of Financial Services Research*, 39. Disponível em: <http://link.springer.com/article/10.1007%2Fs10693-010-0096-1#page-1>. Acesso em: 18 nov. 2013.

Lopes, A. B., Galdi, F. C., & Lima, I. S. (2011). *Manual de contabilidade e tributação de instrumentos financeiros e derivativos: CPC 38, CPC 39, CPC 40, OCPC 3, IAS 39, IAS 32, IFRS 7, Normas da Comissão de Valores Mobiliários, do Banco Central do Brasil e da Receita Federal do Brasil*. 2. ed. Editora Atlas.

Mackenzie, B., Coetsee, D., Njikizana, T., Chamboko, R., Colyvas, B., & Hanekom, B. (2013). *IFRS 2012: Introdução e Aplicação*. Editora Bookman.

Miranda, V. L. (2008). *Impacto da adoção das IFRS (Internacional Financial Reporting Standards) em indicadores econômico-financeiros de bancos de alguns países da União Europeia*. Dissertação de Mestrado, Universidade de São Paulo, São Paulo, Brasil. <https://doi.org/10.11606/D.12.2008.tde-14052008-125351>

Neves, T. J. G., Lagioia, U. C. T., Libonati, J. J., Nascimento, S. G. O A. S., Marinho, R. F., Lemos, L. V. (2012). Utilidade dos Relatórios Contábeis após a Implantação das IFRS: Um Estudo Sobre a Visão dos Investidores. *Anais do XXXVI Encontro da ANPAD*. Disponível em: [http://www.anpad.org.br/evento.php?acao=trabalho&cod\\_edicao\\_subsecao=848&cod\\_evento\\_edicao=63&cod\\_edicao\\_trabalho=14534](http://www.anpad.org.br/evento.php?acao=trabalho&cod_edicao_subsecao=848&cod_evento_edicao=63&cod_edicao_trabalho=14534). Acesso em: 06 ago. 2013.

Perez Junior, J. H. (2009). *Conversão de demonstrações contábeis*. 7. ed. Editora Atlas.

Pires, C. O., & Decourt, R. F. (2015). The impacts of the final phase of transition to IFRS in Brazil. *Revista Brasileira de Gestão e Negócios – FECAP*, 17(54):736-50. <https://doi.org/10.7819/rbgn.v17i54.1475>

Sayed, S. (2012). *O uso do valor justo e suas relações com os valores de mercado das instituições financeiras*. Dissertação de Mestrado, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo. doi: <https://doi.org/10.11606/D.12.2013.tde-03052013-184847>

Silveira, M. S. (2014). *O Impacto da Adoção das IFRS na Variabilidade dos Índices Econômicos-Financeiros de Empresas Listadas na Bovespa*. Dissertação de Mestrado, Universidade do Vale do Rio dos Sinos, São Leopoldo, Brasil.

Tombini, A. (2013). Discurso durante International Financial Reporting Standards. *Banco Central do Brasil*. Disponível em: <http://www.bcb.gov.br/pec/apron/apres/Discurso%20Tombini%20IFRS.pdf>. Acesso em: 18 nov. 2013.

Valério, L. H. (2011). *Impacto da Adoção das IFRS (International Financial Reporting Standards) em Indicadores Econômico-Financeiros. Um Estudo de Caso Múltiplo em Empresas do Setor de Transporte Aéreo Listadas na Bolsa de Valores de São Paulo*. Dissertação de Mestrado, Pontifícia Universidade Católica de São Paulo, São Paulo, Brasil.

## NOTES

### ACKNOWLEDGMENT

Not applicable.

### AUTHORITY CONTRIBUTION

Conception and elaboration of the manuscript: T. Daneberg, R. F. Decourt

Data collection: T. Daneberg

Data analysis: T. Daneberg, R. F. Decourt

Discussion of results: T. Daneberg, R. F. Decourt

Review and approval: T. Daneberg, R. F. Decourt

### SEARCH DATA SET

The dataset that supports the results of this study is not publicly available.

### FINANCING

Not applicable.

### CONSENT TO USE IMAGE

Not applicable.

### APPROVAL OF THE RESEARCH ETHICS COMMITTEE

Not applicable.

### CONFLICT OF INTERESTS

Not applicable.

### USE LICENSE

Copyrights for articles published in this journal are the author's, with first publication rights for the journal. Due to appearing in this Public Access Magazine, the articles are free to use, with their own attributions, in educational, professional and public management applications. The magazine adopted the [Creative Commons Attribution 4.0 International license - CC BY NC ND](https://creativecommons.org/licenses/by-nc-nd/4.0/). This license allows accessing, downloading (downloading), copying, printing, sharing, reusing and distributing the articles provided that the source is acknowledged, attributing the due authorship credits. In such cases, no permission is required from the authors or editors. Authors are authorized to assume additional contracts separately, for non-exclusive distribution of the version of the work published in this journal (eg, publishing in institutional repository or a book chapter).

### PUBLISHER

Federal University of Santa Catarina. Accounting Sciences Course and Postgraduate Program in Accounting. Publication on the [UFSC Journal Portal](https://ufsc.br/portal). The ideas expressed in this article are the responsibility of their authors, and do not necessarily represent the opinion of the editors or the university.



**EDITORS**

Carlos Eduardo Facin Lavarda and Suliani Rover

**HISTORIC**

Received on: 19/06/2019 – Peer reviewed on: 15/06/2020 – Reformulated on: 08/11/2020 – Recommended for publication on: 09/11/2020 – Published on: 15/01/2021





**This page intentionally left blank**

