

The Impact of IFRS 16 Lease Implementation on Financial Performance and Taxation: Evidence from Ecuador

Miguel Ruiz¹; Marlon Manyá¹; Vanessa Ormeño-Candelario²

¹Escuela Superior Politécnica del Litoral, Ecuador, miruiz@espol.edu.ec, mmanya@espol.edu.ec

²Universidad de Guayaquil, Ecuador, vanessa.ormenocan@ug.edu.ec

Abstract– *IFRS 16 Leases, which became effective in 2019, proposes a single recognition mechanism for lease transactions. Lessees who have control over the underlying asset must record this arrangement in their financial statements, recognizing both the right-of-use asset and the lease liability. This norm affects the lessee's accounting and financial treatment because these economic facts were previously ignored and must now be included in the balance sheet. Furthermore, this circumstance has caused significant changes in the financial parameters of 87 firms investigated in Ecuador. The results reveal that the rise in current liabilities caused by the recognition of the account payable for the financial lease has a considerable negative impact on liquidity indicators. Additionally, measures such as ROA and ROE decreased, but the operating margin increased. Finally, the tax legislation should include rules for recognizing tax assets and liabilities accumulated in leases to resolve conflicts between the tax and accounting bases.*

Keywords– *Lease, right-of-use asset, deferred taxes, Ecuador.*

I. INTRODUCTION

In 2016, the International Accounting Standard Board (IASB) released the new International Financial Reporting Standard IFRS 16 "Leases", which replaced IAS 17. This standard becomes effective on January 1, 2019, and has a direct influence on how lessees must recognize leases in their accounting. It also has an impact on lessors, as it causes them to adapt their business model in response to changes in client behavior.

IFRS 16 redefines how lessees should record their typical operational contracts, which are considered off-balance sheet. Previously, the contract information (amount, royalties, maturity, increments, and so on) was not included in the explanatory notes or reflected in the financial statements [1]. Currently, these must be considered in the lessee's balance sheet, causing changes in financial solvency indicators like asset indebtedness, equity indebtedness, and leverage, as well as liquidity, asset turnover, EBITDA, and EBIT, among others.

Under IFRS 16, this distinction in accounting for operational leases is no longer made. Instead, the lease debt and right-of-use asset must be treated as if it was financing leases. As a result, the expense recognized in the income statement for asset depreciation or contract amortization is emphasized, as well as the hidden and/or explicit financial charges that are decreasing as the contract's lifetime expires.

In the tax field, the differences revealed when comparing the lease payments/fees agreed upon in the contract to the charges in the Statement of Income are examined. These differences should be recorded in accordance with accounting procedure by the recognition of an asset with right of use. If

these differences cannot be reconciled (comparison of the accounting basis and the tax basis), these are considered permanent and, as a result, deferred taxes do not apply [2]. However, if the tax-deferred are included in the tax legislation, these differences can be resolved over time, resulting in a deductible temporary difference. This means that the establishment and subsequent reversal of a deferred tax asset, which must be recorded for the duration of the contract, corresponds to the amounts of income taxes to be collected in future years, as required by IAS 12 [3].

In contrast, the implementation of IFRS 16 in Ecuador has brought with it a series of substantial changes in accounting and in the presentation of financial statements of companies operating in the country. Since accounting regulations do not always align perfectly with local tax regulations, companies must carefully navigate the timing differences that arise between financial and tax accounting. These differences can result in the creation of deferred tax assets or liabilities, affecting tax planning and long-term tax management. Based on the above, it is critical to understand how businesses adjust to the new regulatory framework and how this affects their financial and tax performance. Furthermore, analyzing these dynamics will enable us to discover best practices for managing these variances, enabling a more efficient and strategic approach to tax planning, as well as increased regulatory compliance and transparency in financial reporting.

This paper is divided into five sections: the first section is the introduction which describe the context, objectives and motivation of the study, the second section explain the existing gaps in the literature, the third section describe the methodology and strategies used for the analysis, the fourth section presents the results and the mechanisms affecting the variables analyzed and the fifth section show the conclusions and recommendations.

II. LITERATURE REVIEW

According to ref. [4], IFRS 16 ensures the accounting treatment and display of leases that are not included in the reported Financial Statements. As a result, reports are more transparent, accurate, and comparable. Furthermore, the authors contend that this standard causes significant increases in assets and liabilities, raising the liability/asset ratio and reducing return on assets.

Ref. [5] suggested that the norm's influence is determined by the density of leasing use in companies as well as the industry in which they operate. Furthermore, the findings show that IFRS 16 can have an impact on future transactions

such as sale-leaseback, acquisitions and mergers, and lease-to-purchase.

Furthermore, ref. [6] stated that IFRS 16 implementation results in an increase in leased assets and financial liabilities on the balance sheet. As a result, their EBITDA will increase dramatically. To be more specific, the impact on the company's profit or loss was categorized as "individual lease" and "lease portfolio" assessments. In both circumstances, the entity's equity will be reduced in comparison to the former IAS 17 regulations. Because of the "portfolio" impact, the expected effects on pre-tax profit will be negligible, although operational profit would increase when lease charges are reclassified, and financial expenditures are included. Leverage is likely to increase, but interest coverage is predicted to drop.

Ref. [7] examined the 2016 annual reports of Australian corporates to determine the implementation of IFRS 16. According to the author, the upper and lower suggested capitalization rates added between \$127.7 and \$397 billion to the balance sheets, corresponding to 2.5% and 7.7% of real estate, machinery, and other assets, respectively. This corresponds to an additional 178.6% to 555.2% of current real estate values. Individual sectors varied, with the lowest rise reaching 100% and the highest topping 4,000%. This verifies the standard's implications for the management of leased corporate real estate, although it is unclear whether IFRS 16 alters holding preferences toward ownership.

Ref. [8] presented a case study on the IFRS 16 application in the real estate sector at the XX AECA International Meeting. The results demonstrated that the solvency ratios (debt to assets, equity indebtedness, and leverage) have increased dramatically. The liquidity indicator declined because of the current element recognition on the lease payment account, which increased current liabilities. The company's asset turnover decreases as its assets increase. However, when depreciation/amortization and lease debt financial charges are considered, the earnings after interest indication decreases in the first year of the contract.

Ref. [9] discovered that the liability method based on the balance sheet results in a deductible temporary difference that is offset over time. This is because IFRS 16 records an accounting expense for depreciation and interest that exceeds the lease's agreed-upon value, allowing for the recording of a deferred tax asset that will be fully offset at the contract's termination.

Ref. [10] discovered that the liability method based on the balance sheet results in a deductible temporary difference that is offset over time. This is because IFRS 16 records an accounting expense for depreciation and interest that exceeds the lease's agreed-upon value, allowing for the recording of a deferred tax asset that will be fully offset at the contract's termination.

According to Ref. [11] IFRS and the General Accounting Plan changed the record of deferred taxes from an approach based on differences between accounting and tax expense to a concept of deferred tax between the book value and the tax value of assets and liabilities in financial statements. However,

there are several exceptions to this idea, such as recording leases under IFRS 16. This may lead to the conclusion that it is unnecessary to record them, despite accounting logic indicating the opposite. To address this issue, the IASB produced a document in 2021 that specifies the accounting of deferred taxes related to assets and liabilities resulting from a single transaction. The modification reduces the scope of the exemption included in IAS 12, so that it no longer applies to transactions resulting in the initial recognition of taxable and deductible temporary differences for the same amount.

Finally, Ref. [12] mentioned that companies applying the IAS 17 and IFRS 16 framework must report deferred taxes for all temporary differences. These companies must calculate the current lease liability in each fiscal period. As a result, the temporary difference is determined using the discounted lease liability plus interest, as well as the value of the active right of use after any prospective depreciation. Furthermore, the laws require that any difference, whether as a deferred tax asset or a deferred tax obligation, be stated as a remark in supplemental information. The note should state the amount of the deferred tax asset or obligation, as well as how it has changed from one fiscal year to the next.

III. RECOGNITION OF LEASE CONTRACT

In accordance with IFRS 16, the following phases (figure 1) are considered for the recognition of a lease contract:

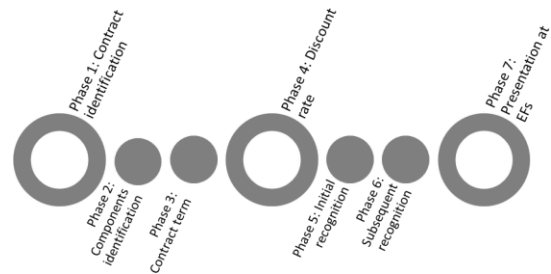


Fig. 1 Phases of a lease contract.

Source: By authors

A. Contract identification

A contract contains a lease if it offers the customer the right to control the asset's use for a specified period in exchange for payment. Control exists when a customer has the right to all economic advantages from the use of a specific item and the ability to direct that usage.

For this purpose, the norm highlights the characteristics that a lease contract must follow:

- a) There is an identified asset.
- b) The customer has the right to obtain all economic benefits from the asset throughout the period of use.

- c) The customer has the right to direct the manner and purpose of use of the asset throughout the period of use.
- d) The customer has the right to operate the asset throughout the period of use, without the supplier having any say.
- e) The customer knows how the asset will be used throughout the period of use.

The lessee may choose to waive the norm only when:

- a) The lease is short-term (less than or equal to 12 months).
- b) The underlying asset is considered of low value.

Finally, the standard does not establish a monetary value for an underlying asset to be considered low value but instead proposes considering the asset's valuation while it is new.

B. Components identification

The norm states that a leasing contract may consist of multiple components. For example, in our scenario, there is a stipulation indicating payment for warehouse maintenance; this is an identified component because an additional lease payment is made.

There are two choices. The first is to isolate all the lease components and account for them separately. The second, and most typical, method is not to segregate those that are not leases, but rather to treat all those outside the lease as a single component and account for them accordingly.

C. Contract term

Regarding the terms of the contract, the norm indicates that all non-cancellable periods of the lease are considered, in addition:

- a) Those covered periods where the lease extension option applies when such stipulation is exercised with certainty.
- b) Those covered periods where the option to terminate the lease applies when such stipulation is not executed with certainty.

D. Discount rate

To determine the discount rate, the norm provides two options for its recognition:

- a) Implicit interest rate (if it can be easily determined).
- b) Incremental interest rate.

It should be noted that the standard allows the use of any of these rates depending on which it is easier for the lessee to identify.

IV. IMPLICIT INTEREST RATE CALCULATION

To find the implicit rate we proceed to calculate the following steps:

Step 1: Determine the β_L (levered beta).

Step 2: De-leverage the beta using the following formula:

$$\beta_L = \left[1 + \frac{D}{P} (1 - T) \right] * \beta_U \quad (1)$$

D: Financial debt

P: Equity

T: Tax rate

β_U : Beta deleveraged

Step 3: Determine the return on shareholder's interest using the CAPM (Capital Asset Pricing Model) technique adjusted for country risk.

$$CAPM = k_e = R_f + \beta [R_m - R_f] + R_p \quad (2)$$

k_e : Expected shareholder return

R_f : Risk-free return

β : β_U : Beta deleveraged

R_m : Expected market return

R_p : Country Risk

Step 4: Calculate the implicit rate using the WACC (Weighted Average Cost of Capital) technique:

$$WACC = \frac{C}{A} k_e + \frac{D}{A} k_d (1 - T) \quad (3)$$

C: Capital

A: Assets

D: Financial debt

k_e : Expected shareholder return

k_d : Interest in debt

T: Tax rate

V. INCREMENTAL INTEREST RATE CALCULATION

When calculating a lease liability under IFRS 16, a lessee may also consider its incremental borrowing rate if the lease's implicit interest rate is difficult to calculate. This rate is defined as the interest that a lessee would have to pay to borrow funds for a similar duration and with equivalent security, to get an asset of comparable value to the right-of-use asset in a similar economic setting.

Depending on the nature of the underlying asset and the terms and conditions of the lease, a lessee may be able to use a readily observable rate as a starting point, such as publicly available benchmark data for real estate loans.

E. Initial Recognition

Once the contract has been determined to be a lease, the right to use the asset is recognized at the commencement date, which is defined as the date on which the lessor makes the asset accessible for use. The valuation is based on the liability's initial value plus the lessor's initial payments, and it includes direct costs incurred after discounting lease incentives.

Following that, the starting value of the lease liability is recorded. The initial valuation amount of the lease liability is the present value of the lease payments due, adjusted by a discount rate inherent in the lease, assuming that such rate is

easily identifiable. Otherwise, the lessee must calculate the incremental lease loan rate.

F. Subsequent Recognition

Right-of-use asset

Following the lease start date, the right-of-use asset is measured using the cost model or another measurement model. In the first situation, the lessee must reduce the right-of-use asset using IAS 16 principles and evaluate whether the asset's value has been impaired using IAS 36. In the second situation, the lessee who uses the IAS 40 fair value model for its investment properties must also use the same model for assets that fit the criteria of investment property by right of use.

The revaluation model of IAS 16 can also be selected if the use of the right-of-use asset is related to a class of property and equipment.

Lease liabilities

After the lease commencement date, the lease liability will be measured:

- Increasing the carrying amount to reflect the interest on the liability.
- Decreasing the carrying amount to reflect lease payments.
- Recalculating the carrying amount in the event of changes in the lease.

In other words, at the end of the period, the lease liability should be recognized after deducting all payments made during the year, in addition to the interest paid on the lease.

G. Financial Statements presentation

Among the disclosures, the following details shall be presented in the Financial Statements or explanatory notes:

TABLE I
INFORMATION TO BE DISCLOSED IN THE FINANCIAL STATEMENTS

FINANCIAL STATEMENT	DESCRIPTION
FINANCIAL POSITION STATEMENT	Right-of-use assets differentiated from other non-lease assets
	Lease liabilities differentiated from other liabilities not included in the lease.
COMPREHENSIVE INCOME STATEMENT	The financial expense of lease liabilities.
	Depreciation/amortization of right-of-use asset.
CASH FLOWS STATEMENT	Financing activities will include disbursements attributable to the lease liability.
	The expense attributable to interest expense on lease liability
	Operational activities include lease expenses not included in the lease liability.

Source: By author

VI. IMPLICIT INTEREST RATE CALCULATION

On base to the public data available from the Ecuadorian Superintendence of Companies' portal (table I), we highlight the following:

- The financial statements presented by the companies at the end of fiscal year 2020 are used as the reference period.
- The International Standard Industrial Classifier ISIC Level 6 is used for segmentation by economic activities.
- The study includes all companies that record in their financial statements: right-of-use assets, accumulated amortization/depreciation of such right-of-use assets, lease liabilities, amortization/depreciation expense and lease interest.
- Once the companies that meet the criteria described above have been identified, we proceed to obtain information on the financial indicators for the periods 2018 and 2020 (before and after IFRS 16 application).
- Only those companies that maintain information in both fiscal 2018 and fiscal 2020 are considered.
- The selected financial indicators include current liquidity, decisive test, asset indebtedness, equity indebtedness, leverage, financial burden impact, ROA, ROE, operational margin, operational margin on assets, operational margin on assets, operational return on equity.
- The financial indicators are determined individually for each company and for each fiscal period.
- The aggregate calculations are performed separately for each fiscal period, to obtain an average by financial indicator and economic activity, before and after the application of IFRS 16.

In total, 87 companies were identified for the analysis, concentrated in the following economic activities:

TABLE II
NUMBER OF COMPANIES BY ECONOMIC ACTIVITY REGISTERING ASSETS BY RIGHT OF USE.

ECONOMIC ACTIVITIES	NUMBER OF COMPANIES
AGRICULTURAL	6
MINING AND QUARRYING	1
MANUFACTURE	24
CONSTRUCTION	2
TRADE AND COMMERCE	33
TRANSPORTATION	1
ACCOMMODATION	2
COMMUNICATION	5
FINANCIAL	5
SCIENTIFIC/TECHNICAL	3
SERVICE	4
SOCIAL WORK	1
TOTAL	87

The largest number of companies is concentrated in the economic activities of commerce, manufacturing, agriculture, communication, finance, services, construction, respectively (table II). The financial indicators applied, the factor to which it belongs, and its calculation formula were verified, which are detailed below, and are verified:

TABLE III
FINANCIAL INDICATORS APPLIED AND CALCULATION FORMULA.

FACTOR	FINANCIAL INDICATOR	FORMULA
LIQUIDITY	Current liquidity	Current Assets/Current Liabilities
	Decisive test	(Current assets - Inventory)/Current liabilities
SOLVENCY	Asset indebtedness	Total liabilities/Total assets
	Equity indebtedness	Total Liabilities/Equity
	Leverage	Total Assets/Equity
MANAGEMENT	Impact of financial burden	Financial expenses/Sales
PROFITABILITY	ROA	Net Income/Total Assets
	ROE	Net Income/Equity
	Operational margin	Operational income/Sales
	Operational margin on assets	Operational Income/Total Assets
	Operational return on equity	Operational income/Equity

Table III show the formula to calculate the indicator, the average before and after IFRS 16 will be used to calculate the financial indicator's increase/decrease, as demonstrated by the nominal variation (in points) and relative variation (in percentages).

VII. RESULTS

During 2022, the companies analyzed present total assets of \$ 8,993 million, only 4.42% corresponds to assets with right of use (figure 2). Thus, we can also observe the relationship between the number of companies by economic activities and the value of assets with right of use registered, highlighting the following:

- 33 companies engaged in trading activities record \$263 million of right-of-use assets.
- 24 manufacturing companies record \$25.9 million of right-of-use assets.
- 6 agricultural companies record \$8.2 million in right-of-use assets.
- 5 companies in communication activities record \$ 43.5 million of right-of-use assets.
- 5 financial companies record \$ 4.2 million of right-of-use assets.
- 4 companies that belong to the service sector have \$ 18.4 million of right-of-use assets.
- 3 scientific/technical companies have \$ 18.0 million of right-of-use assets.

- 2 companies engaged in construction activities have \$ 6.1 million of right-of-use assets.

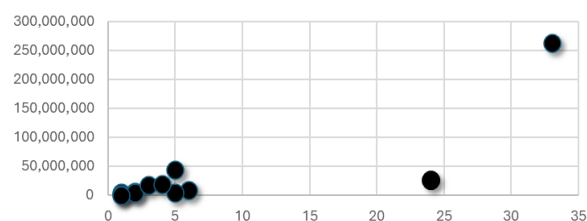


Fig. 2 Number of companies and amount of assets by rights of use.

The selected financial indicators comparison, before (IAS 17) and after the implementation of IFRS 16, are divided into liquidity, solvency, management, and profitability factors, for each of the economic activities.

Liquidity Factor: Following the IFRS 16, the average current liquidity indicator decreases by 1.54 points (-49.7%), while the decisive test decreases by 1.29 points (-52.9%). These indicators are reduced because the current element of the account payable for leases increases current liabilities.

TABLE IV
FINANCIAL INDICATORS APPLIED AND CALCULATION FORMULA.

ECONOMIC ACTIVITIES	CURRENT LIQUIDITY		DECISIVE TEST	
	Before (NIC 17)	After (NIIF 16)	Before (NIC 17)	After (NIIF 16)
AGRICULTURAL	1,86	0,99	1,61	0,74
MINING AND QUARRYING	20,81	7,07	20,55	6,93
MANUFACTURE	1,56	1,53	0,89	0,96
CONSTRUCTION	1,97	2,37	1,77	1,93
TRADE AND COMMERCE	4,83	1,37	3,72	0,85
TRANSPORTATION	0,99	1,04	0,73	0,70
ACCOMMODATION	0,91	0,58	0,73	0,39
COMMUNICATION	1,37	1,32	1,28	1,19
FINANCIAL	2,55	2,72	2,55	2,72
SCIENTIFIC/TECHNICAL	2,80	2,63	2,80	2,63
SERVICE	0,93	0,90	0,84	0,83
SOCIAL WORK	1,19	1,34	1,14	1,25
AVERAGE	3,09	1,55	2,44	1,15
NOMINAL VARIATION (POINTS)		-1.54		-1,29
RELATIVE VARIATION (%)		- 49.7%		- 52.9%

The results (table IV) indicate a decrease of 1.54 points; this is mainly due to the increase in liabilities. Currently, the standards require the recognition of the current portion of finance leases as an obligation in the statement of financial position. Consequently, the liquidity available to meet short-term obligations is affected.

Likewise, the acid test showed a pronounced contraction, with a 52.9% drop, decreasing from 2.44 to 1.15 points. This decrease reflects the immediate effect of the recognition of short-term lease liabilities on the company's financial structure, without a corresponding increase in liquid assets, which compromises the entity's ability to cover its immediate debts without relying on the sale of inventories or less liquid assets.

Solvency Factor: After the application of IFRS 16, the average debt-to-assets ratio increased by 0.04 points (6%), the average debt-to-equity ratio increased by 3.97 points (106.2%) and leverage also increased by 3.98 points (85.3%).

The average debt to assets ratio increased from 0.64 to 0.68. This increase demonstrates the capitalization of lease liabilities on the balance sheet, which has led to a higher debt to total assets ratio.

TABLE V
SOLVENCY FACTOR: FINANCIAL INDICATORS.

<i>Economic Activities</i>	<i>Asset Indebtedness</i>		<i>Equity Indebtedness</i>		<i>Leverage</i>	
	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>
Agricultural	0,65	0,78	3,53	6,79	4,53	7,46
Mining And Quarrying	0,10	0,15	0,11	0,18	1,11	1,18
Manufacture	0,62	0,61	2,29	2,08	3,21	2,96
Construction	0,60	0,79	3,90	34,72	4,90	35,72
Trade And Commerce	0,69	0,72	5,08	6,01	6,02	7,01
Transportation	1,20	0,81	5,99	4,29	4,99	5,29
Accommodation	0,85	0,99	5,87	121,53	6,87	122,53
Communication	0,55	0,70	2,01	2,71	3,01	3,71
Financial	0,43	0,47	1,88	1,60	2,88	2,60
Scientific/Technical	0,54	0,65	3,13	4,58	4,13	5,58
Service	0,66	0,69	5,74	6,38	6,74	7,38
Social Work	0,81	0,81	4,17	4,25	5,17	5,25
Average	0,64	0,68	3,74	7,71	4,67	8,66
Nominal Variation (Points)		0,04		3,97		3,98

<i>Relative Variation (%)</i>		6.0%		106.2%		85.3%
-------------------------------	--	-------------	--	---------------	--	--------------

Whereas the table shows that the average debt-to-equity ratio increased, rising from 3.74 to 7.71. This increase is attributable to the nature of the treatment of leases as financial liabilities under IFRS 16, which boosts the entity's debt-equity ratio. The change reflects a higher financial risk perceived by creditors, as the entity is now more dependent on external financing compared to its own resources.

In line with these results (table V), the leverage indicator also experienced an increase of 85.3%. This growth indicates that the company has taken on a higher debt burden in relation to its equity, which could affect its financial maneuverability in the medium and long term, especially in scenarios of economic fluctuations or changes in interest rates.

Management Factor: Table VI shows the financial indicator of the management factor. After IFRS 16 application, the financial burden impact indicator decreased by 0.01 points (-13.5%).

TABLE VI
MANAGEMENT FACTOR: FINANCIAL INDICATORS

<i>Economic Activities</i>	<i>Impact Of Financial Burden</i>	
	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>
Agricultural	0,03	0,03
Mining And Quarrying	0,00	0,00
Manufacture	0,03	0,04
Construction	0,00	0,01
Trade And Commerce	0,09	0,05
Transportation	0,01	0,01
Accommodation	0,03	0,04
Communication	0,02	0,02
Financial	0,00	0,02
Scientific/Technical	0,01	0,01
Service	0,04	0,15
Social Work	0,04	0,02
Average	0,05	0,04
Nominal Variation (Points)		-0,01
Relative Variation (%)		-13,5%

Following the capitalization of lease liabilities, the financial burden impact indicator experienced a decrease of 13.5. This reduce can be attributed to the reclassification of operating lease expenses to financial expenses and interest in financial liabilities, which reduces the direct financial burden recorded in the entity's results in terms of operating cash flow.

This reduction highlights a redistribution of expenses over the lease term. The financial impact is amortized in the short term due to the payment structure, which features higher interest expenses during the early stages of the lease. Over time, as the liability balance decreases, interest payments gradually decline.

Profitability Factor: After IFRS 16 application (table VII), ROA (return on assets) decreased by 0.02 points (-78%), ROE (return on equity) decreased by 0.25 points (-302.4%), while the operational margin increased by 0.80 points (117.3%).

TABLE VII
PROFITABILITY FACTOR: FINANCIAL INDICATORS (1)

<i>Economic activities</i>	<i>ROA</i>		<i>ROE</i>		<i>Operational margin</i>	
	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>
Agricultural	-0,05	-0,01	-0,15	-0,39	0,00	0,12
Mining and quarrying	0,00	0,05	0,00	0,06	-0,01	-0,09
Manufacture	0,04	0,02	0,08	0,05	0,15	0,10
Construction	0,09	0,02	0,00	-0,43	-0,39	0,21
Trade and commerce	0,03	0,00	0,12	0,03	-2,05	0,06
Transportation	-0,33	-0,18	-1,66	-0,96	-0,23	0,71
Accommodation	0,05	-0,04	0,35	-6,58	0,12	0,07
Communication	0,00	-0,06	0,04	-0,22	0,42	0,37
Financial	0,16	0,16	0,32	0,32	0,34	0,40
Scientific/technical	0,05	0,05	0,36	0,20	0,04	0,17
Service	0,03	-0,05	0,04	-0,32	0,35	-0,18
Social work	0,04	0,09	0,20	0,45	0,48	0,45
AVERAGE	0,03	0,01	0,08	-0,17	-0,68	0,12
Nominal variation (points)		-0,02		-0,25		0,80
Relative variation (%)		-78,0%		-302,4%		117,3%

Likewise, the operational margin to assets indicator showed a reduction of 0.06 points (28.9%), and the operational return on equity showed an increase of 0.03 points (3.6%). Return on Assets (ROA) experienced a significant decrease of 78%, equivalent to 0.02 points. This decline is primarily attributed to the increase in total assets resulting from the recognition of leased assets as rights of use. With leases now recorded as assets, the denominator of the ROA calculation increases, while net income remains comparatively lower due to higher financial and amortization costs associated with leases. This imbalance negatively impacts the return on assets.

Similarly, the return on equity (ROE) showed an even sharper decline, dropping by 0.25 point, from 0.08 to -0.17. This significant contract reflects the cumulative impact of lease liabilities, which increase the financial burden and reduce net income, thereby diminishing profitability attributable to shareholders. The steep drop in ROE highlights that the company's ability to generate returns on equity has been severely affected under the new accounting standards.

TABLE VIII
PROFITABILITY FACTOR: FINANCIAL INDICATORS (2)

<i>Economic Activities</i>	<i>Operational Asset Margin</i>		<i>Operational Return On Equity</i>	
	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>	<i>Before (NIC 17)</i>	<i>After (NIIF 16)</i>
Agricultural	0,12	0,10	0,57	0,35
Mining And Quarrying	0,00	-0,02	0,00	-0,02
Manufacture	0,18	0,09	0,62	0,29
Construction	0,40	0,07	0,45	0,86
Trade And Commerce	0,10	0,09	0,44	0,55
Transportation	-0,35	1,14	-1,76	6,01
Accommodation	0,30	0,06	2,11	7,97
Communication	0,54	0,20	1,43	0,77
Financial	0,66	0,70	4,04	3,41
Scientific/Technical	0,16	0,03	0,87	0,09
Service	0,20	-0,01	0,63	-0,21
Social Work	0,46	0,49	2,40	2,55
Average	0,20	0,14	0,82	0,85
Nominal Variation (Points)		-0,06		0,03
Relative Variation (%)		-28,9%		3,6%

Furthermore, to calculate the average contract term (table VIII), the depreciation/amortization expense was divided by the right-of-use asset, producing a contract term of 7 years. The average implicit interest rate used was 3.6% effective annual rate, defined as the ratio of financial expense to lease liability.

However, under the accounting limitations of the former standard IAS 17, the lease expense remained constant throughout time. Under IFRS 16, the right-of-use asset depreciation expense is recorded at a constant rate over time, whereas the interest expense decreases.

The total expense, encompassing depreciation and interest, is decreasing over time. Consequently, during the first half of the lease term, the expense recognized under the new standard is higher compared to the previous standard. However, in the second half of the lease term, the expense is comparatively lower. By the end of the lease period, the

cumulative expense incurred remains consistent across both standards, with the variation attributed to the temporal distribution of expense recognition.

The differences detected between IAS 17 application (operational expenses, which only includes lease payments) and IFRS 16 (depreciation/amortization and financial expenses) are shown in figure 3:

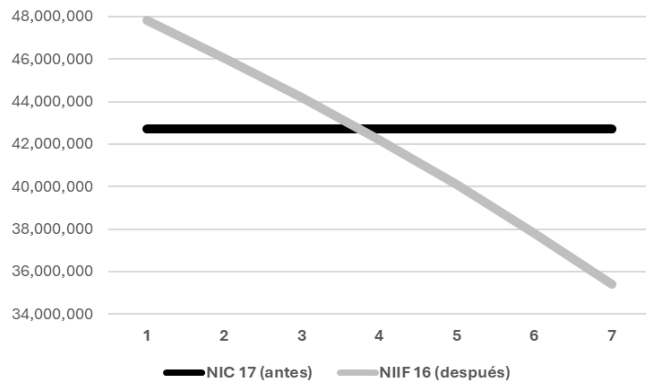


Fig. 3 Comparative Before (IAS 17) and After (IFRS 16).

If these variations cannot be reconciled (comparison of the accounting basis and the tax basis), these are regarded permanent differences, and deferred taxes are not applicable. If the tax legislation includes deferred taxes, the disparities can be resolved over time by charging a deductible temporary difference. This means that a deferred tax asset should be recorded over the contract's term because it corresponds to amounts of income taxes that will be collected in future periods, as specified in IAS 12.

During the initial three years, differences between the accounting basis and the tax basis are identified, amounting to an accumulated value of \$9.9 million. This difference is classified as a non-deductible expense. Applying Ecuador's 25% tax rate, an amount of \$2.4 million would be payable. However, as this temporary difference is considered deductible, the tax paid presently could potentially be recovered, either partially or fully, in the future.

From the fourth year until the termination of the contract, a negative difference between the accounting and tax bases is observed. This discrepancy can be reflected in the tax reconciliation process. To mitigate the tax payments from prior periods, the income tax liability would be offset by reversing the deferred tax asset.

VIII. CONCLUSIONS

IFRS 16 introduces a new framework for how lessees must account for traditional operating leases, previously treated as off-balance sheet items. Historically, such contracts—including details like amounts, royalties,

maturities, and adjustments—were excluded from the explanatory notes and omitted from the presentation of Financial Statements. Under the revised standard, these leases must now be recognized on the lessee's balance sheet. This shift impacts key financial solvency indicators, including asset indebtedness, equity indebtedness, and leverage, as well as metrics related to liquidity, asset turnover, EBITDA, and EBIT, among others.

In this context, the traditional method of accounting for operating leases is no longer applied. Instead, lessees are required to recognize a right-of-use asset and a lease liability, treating these leases as if they were financing arrangements. Consequently, the expense reported in the Statement of Income comprises the depreciation or amortization of the right-of-use asset and the associated financial expenses—both explicit and implicit—which diminish as the lease term progresses.

The analysis of the companies reveals that their total assets amounted to \$8,993 million in fiscal year 2020, of which only 4.42% corresponds to right-of-use assets. The current liquidity ratio experienced a significant decline of 1.54 points (-49.7%), while the acid-test ratio decreased by 1.29 points (-52.9%). These reductions are attributed to the recognition of the current portion of lease liabilities, which increases current liabilities.

Additionally, the debt-to-assets ratio increased by 0.04 points (6%), the debt-to-equity ratio rose by 3.97 points (106.2%), and the leverage ratio climbed by 3.98 points (85.3%). The financial burden impact ratio decreased by 0.01 points (-13.5%). Return on Assets (ROA) decreased by 0.02 points (-78%) and Return on Equity (ROE) fell by 0.25 points (-302.4%). In contrast, the operational margin increased by 0.80 points (117.3%).

During the first three years, discrepancies were identified between the accounting and tax bases, amounting to an accumulated value of \$9.9 million. This difference is classified as a non-deductible expense. Given Ecuador's corporate income tax rate of 25%, this results in a tax payment of \$2.4 million. However, this suggests that in the future, all or part of the tax paid could be recovered. From the fourth year until the termination of the contract, a negative discrepancy between the accounting and tax bases is observed. This difference could be recognized as an adjustment in the tax reconciliation, reducing the tax paid in prior periods. As a result, the income tax liability would be offset, leading to a reversal of the deferred tax assets.

Finally, because the implementation of IFRS 16 impacts numerous financial indicators like liquidity, indebtedness, and profitability, it is critical to constantly monitor these indicators to manage potential swings in financial ratios. Companies

should change their internal procedures to minimize negative consequences on key indicators, particularly in the first few years after adopting the standard. Furthermore, lease responsibilities must be managed efficiently. Prioritizing short-term lease payments or renegotiating contracts could be one option for reducing exposure to financial liabilities that have a detrimental impact on solvency. However, despite drops in indices such as ROA and ROE, the increase in operating margin shows improved operating efficiency. Companies should continue to analyze and change their operating strategies to improve profitability, capitalizing on opportunities to increase operating margins over time.

For future research, it is suggested that the investigation's scope be expanded to include a longer period to assess the long-term implications of IFRS 16, as well as that the sample of organizations be diversified to achieve results that are more typical of other industries and areas. Finally, external factors such as macroeconomic shifts or fiscal policies are indicated as potential influences on the outcomes.

REFERENCES

- [1] Jose, M. D., & Constancio, Z. R. (2018). IFRS 16 (leases) implementation: Impact of entities' decisions on financial statements 60AESTIMATIO. THE IEB INTERNATIONAL JOURNAL OF FINANCE, 17, D01.
- [2] Gonçalves, A. L., Sales, G. A. W., & Grecco, M. C. P. (2021). Potenciales impactos de la adopción de la NIIF 16 en los indicadores financieros de empresas brasileñas. Teuken Bidikay: Revista Latinoamericana de Investigación en Organizaciones, Ambiente y Sociedad, 12(19), 123-140.
- [3] Wiley. J & Sons. (2019). Wiley Interpretation and Application of IFRS Standards. PKF International Ltd.
- [4] Öztürk, M., & Serçemeli, M. (2016). Impact of New Standard IFRS 16 Leases on Statement of Financial Position and Key Ratios A Case Study on an Airline Company in Turkey.
- [5] Tănase Alin-Eliodor, Traian Ovidiu Calotă, Florin Razvan Oncioiu. (2018). The Impact of IFRS 16 on the Companies' Key Performance Indicators: Limits, Advantages and Drawbacks. Academic Journal of Economic Studies. pp. 54-59.
- [6] Stancheva-Todorova, Eleonora, and Velinova-Sokolova, Nadya, (2019), IFRS 16 Leases and Its Impact on Company's Financial Reporting, Financial Ratios and Performance Metrics, Economic Alternatives, issue 1, p. 44-62.
- [7] Heywood, C. (2020). Australian corporate real estate lease reporting ahead of IFRS 16. Pacific Rim Property Research Journal, 26, 131 - 148.
- [8] Manyá, M (2022). Efectos de la aplicación de la NIIF 16 Arrendamientos en el sector inmobiliario. Estudio de caso. XX Encuentro Internacional AECA. Oporto-Portugal, 22 y 23 de septiembre de 2022
- [9] Aguirre, F., Ayabaca, F., Bermeo, J., Rodriguez, B. (2021). Estudio de la adopción de la NIIF 16, implicación contable, tributaria y financiera considerando efecto COVID-19 en Ecuador. Boletín de Coyuntura, N° 30; julio - septiembre 2021; e-ISSN 2600 - 5727 / p-ISSN 2528 – 7931; UTA-Ecuador; pp 25 – 32.
- [10] Azanza, A. y Montero, L. (2020). Propuesta metodológica para la aplicación de la NIIF 16 en administradoras de fondos y fideicomisos del canton Guayaquil. Universidad Católica Santiago de Guayaquil, 2 de marzo de 2020.
- [11] Nubia, F. (2022). Modificaciones de la NIC 12 para el registro de impuestos diferidos derivados de contratos de arrendamiento.
- [12] Sandström, M. (2022). The effects of adoption of IFRS 16 on financial reports, financial measures and taxation. Evidence from the Swedish retail industry. University of Gothenburg.