Educational Administration: Theory and Practice
2022, 28(3), 519-529
ISSN: 2148-2403
https://kuey.net/

Research Article

Ifrs 16 (Leases) And Financial Ratios: Evidence From Indian Industries - An Empirical Panel Data Analysis

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Citation: CMA Satish G. Dhokare (2022). Ifrs 16 (Leases) And Financial Ratios: Evidence From Indian Industries - An Empirical Panel Data Analysis, *Educational Administration: Theory and Practice*, 28(3) 519-529
Doi: 10.53555/kuey.v28i03.11102

ARTICLE INFO

ABSTRACT

The introduction of IFRS 16 (implemented in India as Ind AS 116) in 2019 transformed lease accounting by requiring companies to capitalise most leases on the balance sheet, replacing the previous operating/finance lease distinction. This has material implications for financial statement presentation, comparability, and performance evaluation. This study provides a comprehensive empirical investigation of the financial ratio effects of IFRS 16 on Indian non-financial firms across ten industries using panel data from FY 2016–17 to FY 2021–22. A sample of 156 NIFTY-500 companies is analysed across three years pre-adoption and three years post-adoption. The study employs descriptive statistics, paired sample t-tests, and advanced panel regression models including Fixed Effects (FE), Random Effects (RE), and robust regressions controlling for firm size, profitability, capital intensity, and industry effects.

The results show that IFRS 16 significantly increases leverage ratios (Debt-to-Equity, Liabilities-to-Assets), decreases asset turnover, and lowers Return on Assets (ROA). EBITDA margins improve substantially due to the reclassification of lease expenses into depreciation and interest. Industries with high lease dependence—aviation, retail, logistics, telecom, and hospitality—exhibit the strongest effects. Regression findings confirm that the presence of lease-intensive industries moderates the impact of IFRS 16, and robustness checks (including alternative specifications and winsorization) validate the stability of the effects. The study contributes to Indian accounting literature by providing cross-industry, multi-year evidence using advanced econometric techniques and highlights implications for valuation, lending contracts, and regulatory oversight.

Keywords – IFRS 16; Ind AS 116; Lease Capitalisation; Financial Ratios; Panel Regression; Indian Corporates; EBITDA; Leverage; Asset Turnover; Right-of-Use Assets.

1. INTRODUCTION

1.1 Background and Context

Accounting standards significantly influence how firms communicate economic reality to stakeholders. Lease accounting has long been criticised for allowing off-balance-sheet financing through operating leases under IAS 17/AS 19, enabling companies to hide substantial liabilities while maintaining favourable leverage ratios. To address this lack of transparency, the International Accounting Standards Board (IASB) introduced IFRS 16 (Leases), effective globally from 1 January 2019. India implemented the standard as Ind AS 116, mandating the recognition of Right-of-Use (ROU) assets and corresponding lease liabilities for most leases, fundamentally changing financial reporting.

Indian industries such as aviation, retail, telecom, logistics, and hospitality are particularly lease-dependent, making the Indian corporate environment an ideal setting to study the effects of IFRS 16. Prior to IFRS 16, these industries used long-term operating lease structures for aircraft, retail outlets, warehouses, telecom towers, and vehicles—amounts that were disclosed only in footnotes but not reflected on the balance sheet. IFRS 16 forces capitalization of these commitments, significantly altering the financial position and performance indicators.

1.2 Motivation for the Study

While several international studies have examined the consequences of IFRS 16 adoption, empirical evidence from India remains limited, fragmented, or industry-specific. Most existing studies focus on sample descriptive changes or single-year comparisons without using advanced econometric methods. Furthermore, there is limited research capturing:

- Multi-year pre- and post-adoption effects
- Cross-industry variation in IFRS 16 impact
- Panel regression models examining structural shifts
- The moderating role of lease intensity
- Statistical significance of ratio changes at a market-wide level

This study fills these gaps through a comprehensive quantitative assessment of 156 Indian listed companies, representing ten industries, using a combination of descriptive analysis and panel regression models.

1.3 IFRS 16 and Its Implications for Financial Analysis

Under IFRS 16, lessees must recognize:

- Right-of-use (ROU) asset
- Lease liability
- Depreciation on ROU assets
- Interest expense on lease liability

This shifts lease expenses from operating costs to a mix of depreciation + interest, flattening EBITDA and altering earnings patterns across the lease life cycle. Such changes create structural breaks in key financial ratios widely used by investors, analysts, bankers, credit-rating agencies, and regulators.

Expected impacts include:

Area	Expected Change	Reason
Balance Sheet	Increases	Capitalization of ROU assets & lease liabilities
Income Statement	EBITDA increases	Lease expenses removed
Leverage	Increases	New liabilities recognized
ROA	Decreases	Asset base expands
Asset Turnover	Decreases	Higher denominator (assets)
Profitability	Mixed	Depends on lease structure

These structural shifts necessitate revisiting financial models and lending covenants.

1.4 Objectives of the Study

This paper aims to:

1.Quantify the effect of IFRS 16 on financial ratios of Indian corporates.
2. Identify cross-industry differences, especially among lease-intensive sectors.
3. Test statistically whether financial ratios change significantly after IFRS 16 adoption.
4. Apply advanced empirical models to examine the determinants of IFRS 16 impact.
5. Provide policy and managerial implications for financial reporting, credit analysis, and valuation.

1.5 Contribution of the Study

This study contributes to academic research and practice by:

- Providing the largest multi-industry panel dataset on IFRS 16 in India.
- Applying Fixed Effects, Random Effects, and robust regressions to isolate IFRS 16 impact.
- Measuring industry-moderated effects using interaction terms.
- Offering insights for Scopus-indexed accounting, finance, and management journals.

2. LITERATURE REVIEW

This section synthesizes global and Indian scholarly work on lease accounting, off-balance-sheet financing, IFRS 16 impacts, and financial ratio distortions. It also identifies gaps that motivate the present study.

2.1 Theoretical Background: Lease Capitalization and Information Asymmetry

Lease accounting has historically been a debated domain due to the distinction between finance leases—capitalized—and operating leases—expensed annually. Prior standards (IAS 17/AS 19) enabled firms to structure leases as operating leases to avoid balance-sheet recognition of liabilities, resulting in information asymmetry between firms and users of financial statements (Imhoff, Lipe, & Wright, 1991).

By forcing recognition of Right-of-Use (ROU) assets and lease liabilities, IFRS 16 directly addresses the agency problem, increasing transparency and reducing managers' discretion in classifying leases.
Three theoretical lenses are relevant:
1.**Agency Theory** - Managers may avoid disclosing leverage to protect compensation or covenant compliance. IFRS 16 restricts such behaviour.
2. **Signaling Theory** - When firms voluntarily disclosed lease commitments earlier, it served as a positive signal. Mandatory capitalization shifts signalling from voluntary to enforced.
Capital Structure Theory - Recognizing lease liabilities alters the measured cost of capital, bankruptcy risk, and debt capacity (Modigliani & Miller, 1958; Myers, 1977).

2.2 Global Empirical Evidence on Lease Capitalization

Most studies before IFRS 16 simulated the effects by capitalizing operating leases using constructive obligations.
2.2.1 Leverage Ratios - Beattie et al. (1998), Fülbier et al. (2008), and Durocher (2008) consistently found significant increases in liabilities-to-assets and debt-to-equity ratios, particularly in retail, aviation, and logistics sectors.
2.2.2 Profitability Ratios - Fitó, Moya, & Orgaz (2013) documented a sharp rise in EBITDA and EBIT margins but reported reduced ROA due to asset expansion.
2.2.3 Asset Turnover & Efficiency - Branswijck & Everaert (2012) found efficiency ratios declining across industries.
2.2.4 Industry-Specific Effects - Aviation, shipping, telecom, and retail show the greatest distortions due to dependency on long-term operating leases (Giner & Pardo, 2018).
IFRS 16 Post-Implementation Studies
Recent studies examining real post-2019 data show:
- EBITDA increases by 10–40% (EBP, 2020)
- Liabilities rise by 20–80% (IASB, 2021 report)
- ROA declines significantly for retail and aviation (Morales et al., 2021)

Global findings agree on the direction of effects but vary in magnitude across industries.

2.3 Indian Empirical Literature

Research in the Indian context is comparatively limited, primarily due to:
- Short post-implementation time window
- Limited disclosure uniformity
- Lack of industry-wide datasets

Aviation Industry
Kumar & Saha (2020) found debt-equity ratios increasing by 200–300% for IndiGo and SpiceJet immediately after Ind AS 116 adoption.
Retail & Telecom Sectors
Roy & Debnath (2021) show EBITDA improvements of 15–25% and leverage increases of 30–60% in retail firms such as Trent and ABFRL.
Telecom operators, who lease towers, fiber cables, and infrastructure, report major increases in lease liabilities (Bharti Airtel Annual Report, 2020).

Manufacturing & Pharmaceuticals

Manufacturing firms demonstrate smaller effects since many assets are owned.

Gaps in Indian Research

Existing studies suffer from:
- Limited sample sizes
- Lack of panel regression modeling
- Single-industry focus
- Short pre/post comparison windows
- Absence of cross-industry moderation analysis

The present study addresses these deficiencies by using a large multi-industry sample across six years with advanced empirical modelling.

2.4 IFRS 16 and Financial Ratios: Dimensions of Impact

The literature identifies five core areas of financial ratio distortion.
2.4.1 Leverage Ratios - Recognizing lease liabilities increases both short-term and long-term debt. Result: Higher leverage and higher financial risk.
2.4.2 Profitability Ratios - Operating lease expense disappears → increases operating profit. Result: EBITDA rises, but net profit may initially decline due to front-loaded interest expense.

2.4.3 Liquidity Ratios - Generally unaffected because lease liabilities include a current portion, but some firms classify lease payments inconsistently.
2.4.4 Asset Turnover Ratios - Total assets rise due to ROU assets, reducing efficiency measures.
2.4.5 Return on Assets - With assets increasing disproportionately to operating profit, ROA declines.
2.5 Industry Influence on IFRS 16 Effects - The magnitude of IFRS 16 effects varies by industry due to different lease structures.

Industry	Lease Intensity	Expected IFRS 16 Impact
Aviation	Very High	Extremely large ratio distortions
Retail	High	Strong EBITDA & leverage changes
Telecom	High	High lease liabilities, lower ICR
Logistics	Moderate to High	Increased assets & liabilities
Hospitality	High	Leased buildings → major effects
Manufacturing	Low	Minimal changes

Industry moderation is therefore essential in any empirical model.

2.6 Research Gap
Despite global literature richness, Indian research lacks:
1.Large-scale, multi-industry datasets
2. Longitudinal (panel) models testing structural changes
3. Industry-moderated regression analysis
4. Robust statistical testing with fixed effects
This study fills these scholarly gaps.

3. HYPOTHESIS DEVELOPMENT

Based on theory and literature, the following hypotheses are proposed.

3.1 Leverage Hypotheses
H1: *IFRS 16 adoption leads to a significant increase in leverage ratios (Debt-to-Equity and Liabilities-to-Assets) for Indian listed firms.*
Rationale: Capitalisation of lease liabilities directly inflates total liabilities.

3.2 Profitability Hypotheses
H2: *IFRS 16 adoption significantly increases EBITDA margin for Indian listed companies.*
Rationale: Operating lease expenses are replaced by depreciation and interest, raising EBITDA.
H3: *IFRS 16 adoption significantly decreases Return on Assets (ROA) for Indian listed companies.*
Rationale: Total assets increase more than operating profit.

3.3 Efficiency Hypothesis
H4: *Asset turnover declines significantly after IFRS 16 adoption.*
Because the denominator (assets) expands due to ROU assets.

3.4 Interest Coverage Hypothesis
H5: *IFRS 16 adoption lowers interest coverage ratios due to increased finance costs.*

3.5 Industry Moderation Hypothesis
H6: *The impact of IFRS 16 on financial ratios is significantly greater for lease-intensive industries than for non-lease-intensive industries.*
This hypothesis will be tested through **interaction terms** and sub-sample regressions.

4. RESEARCH METHODOLOGY

4.1 Research Design
The study adopts a quantitative panel-data design covering six financial years:
• Pre-IFRS 16: FY 2016–17 to 2018–19
• Post-IFRS 16: FY 2019–20 to 2021–22
This structure captures both cross-sectional and time-series effects of IFRS 16 adoption, enabling comparison of ratios before and after the accounting change.

4.2 Sample and Data Sources

The sample includes **156 non-financial NIFTY 500 companies**, selected based on availability of full six-year data and adequate lease disclosures. Financial institutions were excluded due to different regulatory frameworks.
Data were collected from:
- Annual reports
- CMIE Prowess
- NSE/BSE filings
- Ind AS 116 disclosures (ROU assets & lease liabilities)

Industries represented include aviation, retail, telecom, logistics, hospitality, real estate, manufacturing, pharmaceuticals, and IT.

4.3 Variables

Dependent Variables (Financial Ratios)

1. Debt-to-Equity (DE)
2. Liabilities-to-Assets (LTA)
3. EBITDA Margin (EBITDA_M)
4. Return on Assets (ROA)
5. Asset Turnover (ATO)
6. Interest Coverage Ratio (ICR)

Key Independent Variable

- **IFRS16** dummy:
  - 0 = pre-IFRS 16
  - 1 = post-IFRS 16

Moderating Variables

- **Lease Intensity (LI)** = ROU Assets / Total Assets
- **Industry Lease Dummy (IND_LEASE)** = 1 for lease-heavy sectors (aviation, retail, telecom, logistics, hospitality)

Control Variables

SIZE (ln assets), CAPINT (PPE/Assets), GROWTH (% revenue growth), PROF (ROE), AGE (ln firm age). These control for firm characteristics that may influence financial ratios.

4.4 Statistical Methods

The analysis consists of three steps:

1. Descriptive Analysis

Summaries for all variables across firms and years.

2. Pre–Post Difference Testing

Paired sample **t-tests** to assess mean changes in financial ratios before vs. after IFRS 16.

3. Panel Regression Analysis

To estimate the structural effect of IFRS 16, the following **Fixed Effects (FE)** model is used:

$$Y_{it} = \beta_0 + \beta_1 IFRS16_t + Controls_{it} + \alpha_i + \epsilon_{it}$$

A **Hausman test** confirmed FE as the appropriate estimator.

Moderation Models

Lease Intensity Interaction

$$Y_{it} = \beta_0 + \beta_1 IFRS16_t + \beta_2 LI_{it} + \beta_3 (IFRS16_t \times LI_{it}) + Controls + \alpha_i + \epsilon_{it}$$

Industry Interaction

$$Y_{it} = \beta_0 + \beta_1 IFRS16_t + \beta_2 IND\_LEASE_i + \beta_3 (IFRS16_t \times IND\_LEASE_i) + Controls + \alpha_i + \epsilon_{it}$$

These models test whether IFRS 16 effects differ by lease-intensive industries.

4.5 Robustness Checks

To ensure stability of results, the study includes:

- **Winsorization** (1%–99% to reduce outliers)
- **Alternative lease intensity measure** (Lease Liabilities / Total Liabilities)
- **Time fixed effects** to control for economic shocks (e.g., COVID-19)
- **Sub-sample regressions** by industry and firm size
- **Cluster-robust standard errors** to correct heteroskedasticity/autocorrelation

Results remained directionally consistent across all specifications.

5. RESULTS AND ANALYSIS

This section presents the findings from descriptive statistics, paired sample t-tests, and panel regression models. It also includes industry-wise effects and robustness checks. The results collectively evaluate how IFRS 16 adoption impacted financial ratios across Indian industries.

5.1 Descriptive Statistics

Table 1 reports descriptive statistics for all firms over the full sample period (N = 936 firm-year observations).

Table 1: Descriptive Statistics (2016–2022)

Variable	Mean	Median	SD	Min	Max
Debt-to-Equity (DE)	1.41	1.08	1.22	0.02	7.94
Liabilities-to-Assets (LTA)	0.56	0.53	0.17	0.19	0.91
EBITDA Margin (%)	18.32	15.28	10.47	-12.14	51.77
Return on Assets (ROA)	6.41	5.22	5.88	-18.21	23.11
Asset Turnover (ATO)	1.04	0.91	0.59	0.12	3.71
Interest Coverage Ratio (ICR)	6.98	5.89	7.11	-3.22	41.87
Lease Intensity (LI)	0.12	0.08	0.11	0.01	0.55

These values provide insight into average firm performance and balance sheet structure.
Key observations:

- High variability in leverage (DE), reflecting diverse capital structures.
- EBITDA margin ranges widely due to industry differences.

Lease intensity varies from extremely low (manufacturing) to high (aviation, retail, telecom).

5.2 Pre–Post IFRS 16 Comparison (Paired Sample t-Test)

A paired t-test compares the mean of each financial ratio before and after IFRS 16 adoption.

Table 2: Paired Sample t-Test Results (Pre vs Post IFRS 16)

Ratio	Pre-IFRS Mean	Post-IFRS Mean	Mean Diff.	t-value	p-value	Result
DE	1.12	1.49	+0.37	5.22	<0.01	Significant ↑
LTA	0.49	0.62	+0.13	6.91	<0.01	Significant ↑
EBITDA_M	15.45%	20.88%	+5.43%	6.14	<0.01	Significant ↑
ROA	7.48%	5.13%	-2.35%	-4.83	<0.01	Significant ↓
ATO	1.18	0.88	-0.30	-3.91	<0.01	Significant ↓
ICR	8.41	6.29	-2.12	-2.76	<0.05	Significant ↓

Interpretation

- **Leverage ratios** increased sharply, confirming lease liability recognition.
- **EBITDA margin** increased due to removal of operating lease expense.
- **ROA and ATO** decreased, reflecting asset expansion.
- **ICR** declined due to higher finance costs under IFRS 16.

These findings are consistent with global research and theoretical expectations.

5.3 Panel Regression Results

The primary empirical analysis uses Fixed Effects models (chosen via Hausman tests).

5.3.1 Effect on Leverage Ratios

Model: Debt-to-Equity (DE)

$$DE_{it} = \beta_0 + \beta_1 IFRS16_t + Controls + \alpha_i + \epsilon_{it}$$

Table 3: FE Regression (Dependent Variable: DE)

Variable	Coefficient	Std. Error	t-stat	Sig.
IFRS16	**+0.298**	0.081	3.67	***
SIZE	+0.072	0.014	5.11	***
CAPINT	-0.211	0.071	-2.97	**
GROWTH	-0.002	0.001	-1.91	*
PROF	-0.018	0.008	-2.25	**
Constant	0.413	0.149	2.77	**

Interpretation:

IFRS 16 adoption increases DE by **0.298**, confirming **H1**.

5.3.2 Effect on Profitability Ratios

Model: EBITDA Margin (EBITDA_M)

$EBITDA\_Mit=\beta o+\beta 1IFRS16t+Controls+\alpha i+\epsilon it$

Table 4: FE Regression (Dependent Variable: EBITDA_M)

Variable	Coefficient	Std. Error	t-stat	Sig.
IFRS16	+0.054	0.012	4.50	***
SIZE	+0.008	0.002	4.00	***
CAPINT	-0.031	0.014	-2.21	**
PROF	+0.004	0.001	3.00	***

Interpretation:
EBITDA margin increases significantly after IFRS 16 adoption, supporting **H2**.

5.3.3 Effect on Return on Assets (ROA)

Model: ROA

$ROAit=\beta o+\beta 1IFRS16t+Controls+\alpha i+\epsilon it$

Table 5: FE Regression (Dependent Variable: ROA)

Variable	Coefficient	Std. Error	t-stat	Sig.
IFRS16	**-0.021**	0.008	-2.63	**
SIZE	-0.009	0.003	-3.00	***
CAPINT	-0.014	0.006	-2.33	**
GROWTH	+0.002	0.001	1.88	*

Interpretation:
ROA decreases significantly, confirming **H3**.

5.3.4 Effect on Asset Turnover (ATO)

Model: ATO

$ATOit=\beta o+\beta 1IFRS16t+Controls+\alpha i+\epsilon it$

Table 6: FE Regression (Dependent Variable: ATO)

Variable	Coefficient	Std. Error	t-stat	Sig.
IFRS16	**-0.119**	0.031	-3.84	***
SIZE	-0.047	0.009	-5.22	***
CAPINT	-0.033	0.014	-2.35	**

Interpretation:
ATO declines after IFRS 16, confirming **H4**.

5.3.5 Effect on Interest Coverage Ratio (ICR)

Model: ICR

$ICRit=\beta o+\beta 1IFRS16t+Controls+\alpha i+\epsilon it$

Table 7: FE Regression (Dependent Variable: ICR)

Variable	Coefficient	Std. Error	t-stat	Sig.
IFRS16	**-0.712**	0.281	-2.53	**
SIZE	-0.183	0.055	-3.32	***
CAPINT	+0.214	0.089	2.40	**

Interpretation:
ICR decreases significantly, confirming **H5**.

5.4 Industry Moderation Effects

Industry-moderated regression tests **H6**.
Model:

$Y=\beta o+\beta 1IFRS16+\beta 2IND\_LEASE+\beta 3(IFRS16\times IND\_LEASE)+Controls$

Table 8: Interaction Results (IFRS16 × Lease-Intensive Industries)

Dependent Variable	Interaction Coefficient (β3)	Significance	Interpretation
DE	+0.412	***	Higher leverage increase in lease-heavy industries
LTA	+0.153	***	Liabilities rise more strongly

EBITDA_M	+0.076	***	EBITDA boost significantly larger
ROA	-0.019	**	ROA declines more sharply
ATO	-0.081	**	Efficiency drop greater
ICR	-1.112	***	Coverage ratios worsen more

Interpretation:
Lease-intensive industries experience significantly greater IFRS 16 impacts across all metrics. This strongly supports **H6**.

5.5 Industry-Specific Findings

Aviation
- Leverage doubled in some years due to aircraft lease capitalization.
- EBITDA margin increased by up to **18 percentage points**.
- ROA dropped because ROU assets dominate the balance sheet.

Retail
- Heavy store leases → strong EBITDA boost.
- Asset turnover declined notably.

Telecom
- Tower and fiber leases → large lease liabilities.
- Interest coverage deteriorated substantially.

Logistics & Transport
- Fleet leases → higher liabilities and depreciated ROU assets.

Manufacturing
- Limited impact; most assets are owned.

These findings align with global research.

5.6 Robustness Tests

Robustness tests ensure the empirical findings are stable across alternative specifications.

5.6.1 Alternative Lease Intensity Variable

Using LI2 (lease liabilities / total liabilities):
- All coefficients for IFRS16 remained significant.

Moderation effects increased for leverage and ICR.

5.6.2 Winsorization

Data winsorized at 1% and 99% to reduce influence of extreme values.
- Results unchanged in direction.

Significance levels preserved.

5.6.3 Sub-Sample Regressions

The sample was split by:
- Large vs small firms
- High vs low capital intensity
- Pre-COVID vs COVID/post-COVID years

Findings:
- Larger firms have stronger IFRS 16 effects due to larger lease portfolios.

COVID-19 years saw even stronger leverage effects (as firms renewed leases).

5.6.4 Time Fixed Effects

Including λt (macro shocks):
- IFRS16 remained significant.

COVID-19 did not eliminate IFRS 16's structural impact.

5.6.5 Pooled OLS vs FE vs RE

- FE consistently outperformed RE (confirmed by Hausman test).

Pooled OLS overestimated effects → omitted variable bias.

5.7 Summary of Empirical Findings

The empirical analysis provides strong evidence that:
1. **IFRS 16 significantly increases leverage ratios.**
2. **EBITDA margin rises**, sometimes giving a misleading impression of improved performance.
3. **ROA and asset turnover decline** due to asset base expansion.
4. **Interest coverage ratios fall** due to higher interest expenses.
5. **Lease-intensive industries experience far stronger effects.**

6. **Results are highly robust** across multiple econometric tests.
These findings support all six hypotheses (H1–H6).

6. DISCUSSION

The results from descriptive analysis, t-tests, panel regressions, and robustness checks reveal significant and systematic changes in financial ratios after IFRS 16 adoption in Indian industries. This section synthesizes the findings in light of existing literature and theoretical expectations.

6.1 Interpretation of Key Findings

6.1.1 Leverage Ratios Increased Substantially

The study finds strong evidence that IFRS 16 materially increased:

- **Debt-to-Equity (DE)**
- **Liabilities-to-Assets (LTA)**

This outcome is consistent with prior literature (Beattie et al., 1998; Giner & Pardo, 2018), as previously off-balance-sheet lease commitments are now recognized as lease liabilities. Indian companies, historically reliant on operating leases, now reflect stronger leverage positions, potentially altering risk perceptions among investors, lenders, and rating agencies.

6.1.2 EBITDA Margin Increased Due to Classification Effects

EBITDA margins rose significantly in the post-IFRS 16 period. This aligns with global studies (Fitó et al., 2013; Morales et al., 2021). The removal of operating lease expenses increases operating profit even though there is **no real change in cash flows** or firm productivity.
This EBITDA boost is **accounting-driven**, not performance-driven, which could mislead superficial financial analysis.

6.1.3 ROA and Asset Turnover Declined

The results confirm that IFRS 16 reduces ROA and ATO due to:

- Higher total asset base (ROU assets)
- Added depreciation charges
- Lack of equivalent increase in revenues

This effect is particularly strong in industries with long-term leased assets (aviation, retail, telecom).

6.1.4 Interest Coverage Ratios Worsen

As expected, IFRS 16 increases interest charges on lease liabilities. The decline in ICR implies:

- Lower ability to meet interest obligations
- Potential stress on debt covenants
- Need for renegotiation with lenders

6.1.5 Industry Moderation Confirms Differential Effects

Lease-intensive sectors—aviation, retail, telecom, logistics, hospitality—experience **significantly amplified effects**. The moderation model (IFRS16 × IND_LEASE) showed:

- Higher leverage increases
- Larger declines in ROA and ATO
- Stronger EBITDA uplift

This indicates IFRS 16's impact is **not uniform** and depends heavily on business models.

6.2 Comparison with Existing Literature

The findings confirm and extend global research:

Finding	Global Evidence	Indian Evidence (This Study)
Leverage ↑	Supported widely	Stronger in India due to high lease dependence
EBITDA ↑	Supported	Stronger due to extensive retail/aviation leases
ROA ↓	Supported	Sharply lower due to large ROU assets
ATO ↓	Supported	Similar, but larger effect in aviation/logistics
ICR ↓	Less studied	New Indian-specific empirical evidence
Industry effects	Recognised	More pronounced in Indian context

This study provides **one of the most comprehensive Indian datasets** covering IFRS 16 effects.

6.3 Managerial Implications

The findings have meaningful implications for corporate managers.

6.3.1 Financial Reporting Strategy
Managers must understand how IFRS 16 affects:
- Key performance indicators (KPIs)
- Leverage covenants
- Budgeting and forecasting

They may need to redesign KPIs to ensure comparability with pre-IFRS metrics.

6.3.2 Lease-vs-Buy Decisions
Firms may reconsider whether to:
- Lease assets
- Purchase assets
- Use hybrid financing

IFRS 16 reduces the traditional advantage of leasing as "off-balance-sheet" financing.

6.3.3 Communication with Investors
Managers should proactively explain:
- Why EBITDA is rising
- Why leverage appears higher
- Why ROA is declining

This can reduce misinterpretation by investors and analysts.

6.4 Implications for Investors and Analysts
6.4.1 Adjusted Financial Models
Analysts must revise models that rely heavily on:
- EBITDA
- Leverage
- ROA
- Asset turnover

Valuation multiples (EV/EBITDA, ROA, leverage ratios) may require normalization to maintain comparability with pre-IFRS 16 periods.

6.4.2 Credit Risk Analysis
Higher leverage may not necessarily reflect worsening solvency—it may simply reflect improved transparency.

6.4.3 Ratio Comparability
Comparing firms across countries becomes easier under IFRS 16.

6.5 Implications for Banks and Lenders
Lenders need to adjust:
- Debt covenants
- Risk classification models
- Credit appraisal templates

IFRS 16 adjustments may result in **artificial covenant breaches**, not real increases in risk.
Banks should consider:
- Adjusted leverage ratios (excluding lease liabilities)

Pro forma ratios consistent with past agreements

6.6 Regulatory and Policy Implications
Regulators (MCA, ICAI, SEBI) may use these insights to:
- Strengthen corporate disclosure norms
- Standardize lease intensity reporting
- Improve transparency in annual reports
- Encourage firms to break down ROU asset components

IFRS 16 increases visibility of long-term commitments, improving capital market efficiency.

7. CONCLUSION

This study provides comprehensive empirical evidence on the impact of IFRS 16 on Indian listed companies using a rigorous quantitative approach. Based on a six-year panel dataset of 156 firms across ten industries, the study demonstrates that IFRS 16 has significantly altered several key financial ratios.
Key conclusions:

1.Leverage ratios increased significantly, reflecting lease liability capitalization.
2. EBITDA margins increased, but for accounting reasons.
3. Profitability metrics (ROA) decreased, due to higher total assets.
4. Efficiency ratios declined, reflecting operational distortions.
5. Interest coverage ratios worsened due to interest on lease liabilities.
6. Lease-intensive industries experienced amplified effects, confirming industry moderation.
7. Results remained **robust** across multiple econometric models and sensitivity tests.

The study finally concludes that IFRS 16 enhances transparency but introduces interpretational complexity, necessitating recalibration of financial analysis methods.

8. LIMITATIONS OF THE STUDY

Despite strong methodology, the study has limitations:
1.Limited to listed Indian firms - Findings may not generalize to SMEs.
2. Industry classification is broad - Sub-industry differences may exist.
3. COVID-19 overlapped with IFRS 16 adoption - Isolating both effects is challenging.
4. Disclosure quality varies - Inconsistent Ind AS 116 reporting affects measurement.
5. Financial ratios affected by external shocks - Inflation, commodity prices, etc.

Future research is recommended to address these gaps.

9. SCOPE FOR FUTURE RESEARCH

Future studies may explore:
- Long-term impact of IFRS 16 on valuation, stock performance, and market reactions
- Impact on cost of debt and credit ratings
- Behavioural responses to IFRS 16 in lease contract design
- Cross-country comparative analyses within Asia
- Case studies on industries like aviation and retail

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