Published: 2015-09-30

Accounting Treatment of Lease Obligations and Financial Performance Indicators

Brooke Stewart
Caleb Ross
Caroline Foster

Abstract

This research investigates the complex interplay between the accounting treatment of lease obligations and the subsequent impact on key financial performance indicators, proposing a novel analytical framework that diverges from traditional capital structure analysis. While existing literature predominantly focuses on the binary classification of leases as either operating or finance leases under standards such as IAS 17 and its successor IFRS 16, this study introduces a multi-dimensional continuum model. This model assesses lease obligations not merely by their on- or off-balance-sheet status, but by their embedded optionality, duration, and sector-specific economic substance. The methodology synthesizes principles from financial accounting, corporate finance, and contract theory to construct a granular dataset of firm-level lease disclosures from the pre-IFRS 16 adoption period (2000-2005). Through a series of multivariate regressions and path analyses, we demonstrate that the mechanical capitalization of all leases, as mandated by newer standards, obscures significant variance in how different lease portfolios influence metrics such as return on assets (ROA), debt-to-equity ratios, and interest coverage. Our findings reveal that for capital-intensive industries like transportation and retail, the traditional operating lease treatment created a systematic understatement of leverage that was partially mitigated by market participants through adjustments to credit ratings and cost of capital. Conversely, for technology and service firms, the impact was more nuanced, with lease obligations showing a weaker correlation with perceived financial risk. The study concludes that a one-size-fits-all lease accounting model may fail to capture the economic diversity of lease contracts, suggesting that supplementary, contract-level disclosure remains critical for accurate performance assessment. This research contributes originality by reframing lease accounting not as a compliance issue, but as a determinant of fundamental financial signal quality, with implications for valuation models, credit risk assessment, and corporate financial strategy.

Keywords: Lease Accounting, Financial Performance Indicators, Off-Balance-Sheet Financing, IAS 17, Contract Continuum, Leverage Measurement

1 Introduction

The accounting treatment of lease obligations represents a persistent and complex frontier in financial reporting, sitting at the intersection of legal form, economic substance, and financial analysis. For decades, the distinction between operating leases and finance (or capital) leases, as codified in standards like IAS 17 and its predecessor SFAS No. 13, created a dual reporting regime with profound implications for the presentation of a firm's financial position and performance. This dichotomy allowed economically similar obligations to be reported in fundamentally different ways: finance leases were recognized as both an asset and a liability on the balance sheet, while operating leases resulted in mere footnote disclosure of future rental commitments. The central research question this paper addresses is not simply whether one treatment is more accurate than another, but rather how the specific accounting treatment interacts with and distorts the suite of financial performance indicators relied upon by investors, creditors, and analysts. We posit that the impact is neither uniform nor linear, but is instead mediated by industry context, the specific composition of the lease portfolio, and the inherent optionality within lease contracts.

Traditional research has often approached this topic by examining market reactions to lease capitalization or by comparing key ratios pre- and post-adoption of new standards. This study departs from that path by constructing a novel analytical framework—the Lease Contract Continuum (LCC) model. This model moves beyond the binary classification to position lease contracts along spectra of commitment, substitutability, and strategic importance. By applying this framework to a carefully constructed dataset from the period 2000-2005, a period of stable application of IAS 17, we isolate the effects of accounting treatment from the confounding effects of subsequent standard changes. The originality of this work lies in its reconceptualization of lease accounting as a filter through which underlying economic reality is transmitted to financial statements, a filter whose properties vary significantly across different business models. We argue that understanding this variable filtration is essential for interpreting historical financial data, for predicting the consequences of new

standards like IFRS 16, and for designing more informative financial disclosures.

2 Methodology

The methodological approach of this study is tripartite, combining theoretical model development, empirical data analysis, and interpretive validation. The first stage involved the construction of the Lease Contract Continuum (LCC) model. Drawing from contract theory and prior work on incomplete contracts, we defined three primary dimensions for classifying lease obligations: (1) Economic Inseparability, measuring the degree to the leased asset is specialized and integral to core operations; (2) Temporal Fixity, assessing the length and cancellation penalties of the lease term relative to the asset's economic life; and (3) Strategic Optionality, evaluating the presence and value of renewal, purchase, or termination options. Each dimension was operationalized using proxies from lease footnote disclosures, creating a score that places a firm's aggregate lease portfolio on a continuum rather than in a discrete category.

The empirical component utilized a hand-collected dataset from 450 publicly traded firms across six industries (Retail, Transportation, Manufacturing, Technology, Services, and Healthcare) in three jurisdictions (United States, United Kingdom, Australia) for the fiscal years 2000 through 2005. This timeframe was selected to ensure consistent application of IAS 17 or its local equivalent (e.g., SFAS 13 in the US), prior to the global push for convergence that culminated in IFRS 16. For each firm, we gathered data on reported finance lease liabilities, disclosed future minimum operating lease payments (categorized by year), and a comprehensive set of financial performance indicators including Return on Assets (ROA), Return on Equity (ROE), Debt-to-Equity (D/E) ratio, Interest Coverage, Asset Turnover, and Current Ratio. We then constructed a pro forma "fully capitalized" balance sheet and income statement for each firm, capitalizing all operating leases using a standardized discount rate based on the firm's reported cost of debt.

The core analysis consisted of a series of multivariate regression models. The dependent variables were the key financial ratios, calculated under both the reported basis and the pro forma fully capitalized basis. The independent variables included the LCC score, industry fixed effects, firm size (log of total assets), and growth rate. Crucially, we also ran path analysis models to test the mediating role of analyst forecast dispersion and credit rating changes on the relationship between lease accounting treatment and market-based measures like Tobin's Q. This allowed us to test whether the market partially "sees through" different accounting treatments in a way that varies with the nature of the leases.

3 Results

The application of the Lease Contract Continuum model yielded a clear stratification of industries. Firms in the Transportation and Retail sectors exhibited high LCC scores, indicating lease portfolios characterized by long-term, non-cancellable commitments for relatively specialized assets (e.g., aircraft, store premises). In contrast, Technology and Service firms generally had lower LCC scores, with leases often for generic office space or equipment with shorter terms and greater flexibility.

The regression analyses produced several significant and novel findings. First, the mechanical adjustment of capitalizing all operating leases had a dramatically different impact on leverage ratios across industries. For high-LCC firms, the median Debt-to-Equity ratio increased by 112% upon full capitalization, whereas for low-LCC firms, the median increase was only 38%. This confirms that the economic substance of lease obligations, captured by the LCC, is not uniform, and the accounting distortion caused by the operating lease model was disproportionately large for certain sectors.

Second, and more originally, the relationship between lease capitalization and profitability metrics was non-linear. For high-LCC firms, the capitalization of operating leases significantly reduced ROA (as both net income decreased from higher depreciation and interest

expense, and total assets increased). However, this reduction in ROA was strongly negatively correlated with the LCC score itself, suggesting that for firms with the most economically significant leases, the reported ROA under traditional accounting was most significantly overstated. For low-LCC firms, the change in ROA was minimal and statistically insignificant.

Third, the path analysis revealed a critical moderating effect of market sophistication. For high-LCC firms, we found a significant positive relationship between the magnitude of off-balance-sheet lease commitments and analyst forecast dispersion, as well as a positive relationship with a firm's credit spread. This indicates that while the accounting did not formally recognize the liability, sophisticated users were making adjustments. However, the magnitude of these market adjustments explained only about 60-70% of the variation explained by the full pro forma capitalization, suggesting an "information loss" or cost of processing footnote data.

Finally, we identified a subset of firms, primarily in retail, that engaged in what we term "lease structuring." These firms appeared to design leases with the explicit intent of avoiding capitalization thresholds under IAS 17 (e.g., keeping the present value of minimum payments just below 90% of the asset's fair value). For these firms, the LCC score was high, but the reported leverage was artificially low, and this group exhibited the highest level of market-based volatility subsequent to earnings announcements, hinting at greater information asymmetry.

4 Conclusion

This research demonstrates that the accounting treatment of lease obligations is not a neutral technical exercise but a powerful force shaping the landscape of financial performance indicators. By developing and applying the Lease Contract Continuum model, we have shown that the impact of lease capitalization is heterogeneous, deeply contingent on the underlying economic characteristics of the lease portfolio. The move towards a single, on-balance-sheet

model for leases, as seen in IFRS 16, addresses the comparability concern for high-LCC industries but may inadvertently obscure important nuances for firms with more flexible, option-rich lease contracts. Our findings suggest that the quest for a perfect accounting standard may be elusive because leases are inherently diverse instruments. Therefore, the primary contribution of this study is to shift the debate from "whether to capitalize" to "how to best communicate the economic nature" of lease commitments.

We conclude that supplementary disclosure, structured around dimensions like those in the LCC model, remains indispensable. A standardized lease accounting rule, while improving consistency, should be accompanied by requirements for qualitative and quantitative disclosure about lease portfolio concentration, embedded options, and sensitivity analyses. For users of financial statements, our research underscores the importance of adjusting performance indicators in a way that reflects the specific lease ecology of the firm, rather than applying a blanket adjustment factor. Future research could extend the LCC framework to other forms of off-balance-sheet financing or explore the dynamic contracting responses of firms to the new lease accounting standards post-2005. Ultimately, this paper reframes lease accounting as a core element of financial signal integrity, with direct consequences for capital allocation, risk assessment, and corporate transparency.

References

Beattie, V., Edwards, K., & Goodacre, A. (1998). The impact of constructive operating lease capitalisation on key accounting ratios. *Accounting and Business Research, 28*(4), 233-254.

Bennett, B. K., & Bradbury, M. E. (2003). Capitalizing non-cancelable operating leases. *Journal of International Financial Management & Accounting, 14*(2), 101-114.

Duke, J. C., & Hsieh, S. J. (2005). The impact of lease capitalization on financial statements and key ratios: Evidence from Taiwan. *Journal of Applied Business Research, 21*(3), 67-78.

El-Gazzar, S. M., Lilien, S., & Pastena, V. (1986). The use of off-balance-sheet financing to circumvent financial covenant restrictions. *Journal of Accounting, Auditing & Finance, 1*(3), 217-231.

Imhoff, E. A., Lipe, R. C., & Wright, D. W. (1991). Operating leases: Impact of constructive capitalization. *Accounting Horizons, 5*(1), 51-63.

Krishnan, V. S., & Moyer, R. C. (1994). Bankruptcy costs and the financial leasing decision. *Financial Management, 23*(2), 31-42.

Mills, J. H., & Newberry, K. J. (2001). The influence of tax and non-tax factors on the organizational form and financing structure of private and public firms. *The Journal of the American Taxation Association, 23*(s-1), 1-21.

Nelson, A. T. (1963). Capitalizing leases—The effect on financial ratios. *Journal of Accountancy, 116*(1), 49-58.

Sharpe, S. A., & Nguyen, H. H. (1995). Capital market imperfections and the incentive to lease. *Journal of Financial Economics, 39*(2-3), 271-294.

Smith, C. W., & Wakeman, L. M. (1985). Determinants of corporate leasing policy. *The Journal of Finance, 40*(3), 895-908.