**FASB’s Accounting Standards Update on Leasing – A Statistical Analysis of its Impact on Financial Statements**

**Abstract**

FASB issued a new guidance in 2016 to improve financial reporting and increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The new accounting standards update requires that virtually all leases to be reported on the balance sheet. This paper examines the possible impact of the new lease standards by examining specific financial ratios that are commonly used to evaluate financial performance and solvency. We believe our study is important to investors, lenders and companies. The results provide insight into the likely impact that FASB’s new guidance on leasing will have on financial statements. This may be critical to understanding a company’s valuation as well as determining its ability to meet specific debt covenants.

**INTRODUCTION**

Leasing is a very important financial activity and is utilized by many entities. Leasing can allow a firm to conserve assets, to avoid some risks of owning those assets, and to obtain favorable tax benefits. Also, leasing sometimes is used as a means of off-balance-sheet financing. Users of financial statements need to have a complete and understandable picture of an entity’s leasing activities to analyze current and future performance as well as financial solvency.

Previous leasing accounting was criticized for failing to meet the needs of users of financial statements because it did not always provide a faithful representation of leasing transactions. (FASB, 2013) The two basic types of leases are accounted for differently. Capital leases are required to be recognized on the balance sheet whereas operating leases are not. However, some fixed assets that are in substance purchased and financed by debt have been classified as operating leases. As a result, certain assets and liabilities have not been reflected on the balance sheet, and the dollar amounts involved have been substantial. In order to improve transparency, there have been long-standing requests from many users of financial statements to change the accounting requirements so that entities are required to recognize operating leasing assets and liabilities on their balance sheets. (FASB, 2016)

In response and after almost seven years of deliberation, FASB issued a new guidance in 2016 to improve financial reporting and increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The new accounting standards update (ASU) requires that virtually all leases to be reported on the balance sheet. To meet the objective, FASB is amending its Accounting Standards Codification and creating Topic 842, Leases. The current ASU, along with IFRS 16 issued in January 2016, are the results of the FASB’s and the International Accounting Standards Board’s (IASB’s) efforts to meet that objective and improve financial reporting transparency. The FASB, together with the IASB, initiated a joint project to improve the financial reporting of leasing activities both under GAAP and IFRS to deal with the criticisms of previous leasing accounting that does not fully meet the needs of financial statements users. (FASB, 2013, p. 1)

The ASU states the following:

“Under the new guidance, a lessee will be required to recognize assets and liabilities for leases with lease terms of more than 12 months. Consistent with current Generally Accepted Accounting Principles (GAAP), the recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease. However, unlike current GAAP—which requires only capital leases to be recognized on the balance sheet—the new ASU will require both types of leases to be recognized on the balance sheet.

The ASU also will require disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. These disclosures include qualitative and quantitative requirements, providing additional information about the amounts recorded in the financial statements.

The accounting by organizations that own the assets leased by the lessee—also known as lessor accounting—will remain largely unchanged from current GAAP. However, the ASU contains some targeted improvements that are intended to align, where necessary, lessor accounting with the lessee accounting model and with the updated revenue recognition guidance issued in 2014.” (FASB, 2016, p.1)

The ASU will become effective for public business companies beginning after December 15, 2018, including interim reporting periods within those fiscal years. For all other entities, the amendments will be effective for fiscal years beginning after December 15, 2019, and for interim reporting periods beginning after December 15, 2020. In addition, FASB decided to allow early application of the new guidance. (FASB, 2016)

**Review of the Literature**

Although the new standard is not yet effective for public companies, studies already have been conducted to examine the possible impact of the implementation of the new ASU on financial statements. Major concerns have focused on EBITDA (earnings before interest, taxes, depreciation, and amortization), debt covenants, and financial ratios related to assets and debt.

One of the most common metrics used in business valuation is the EBITDA. The new standard will not only require recognition of the lease liabilities and right-of-use assets on balance sheets, but also change how rent expense is recorded for finance leases. This new standard will have a direct effect on EBITDA. Companies that lease a large dollar amount of equipment and/or facility will see a dramatic swing in EBITDA as the amortization expenses and interest expenses lower from year to year. (O’Dell, 2016, p. 4) Many people are concerned that once the new leases standard is adopted, the historic EBITDA will no longer be meaningful for valuation purposes and valuation analysts will have to “un-capitalize” finance leases in order to use the historic EBITDA. (O’Dell, 2016, p. 5) EBITDA multiples based on historic sale data may not be a reliable indicator of value. Business valuation analysts may place more reliance on the income approach since cash flow may not be greatly changed as a result of the new standard update.

Some analysts believe that FASB and IASB should recognize the possible consequences of the new leasing updates. They include the changing of many long-held financial ratios and the possible violations of bank loan covenants. (Churyk, Reinsten and Lander, 2015, p. 1) The updated FASB lease accounting standard may significantly change the financial ratios used in debt covenants, credit ratings, and investor’s perceptions of firms. As the new standard is implemented, entities with large operating lease portfolios will see major asset and liability increases – resulting in lower return on investment (ROI) and turnover ratios and higher leverage and debt-to-equity ratios. (Churyk, Reinsten and Lander, 2015, p. 10) Therefore, concerns are arising about whether companies and creditors will need to re-write many loan covenants in light of these changes or if they will face covenant violations.

However, a group of scholars did a research study regarding the current relation between off-balance-sheet (OBS) leases and the financial ratios used in debt covenants. Their study indicated that the new accounting standard might not result in firms violating debt covenants. In their study, they considered the impact of these changes on firms’ debt covenants by examining the frequency of income-statement-based vs. balance-sheet-based accounting ratios used in debt covenants by firms both in high and low OBS lease industries. Based on debt contracts from 1996–2009, their results provided evidence that lenders focus on balance sheet ratios in designing debt covenants for borrowers in low OBS lease industries and income statement ratios in high OBS lease industries. (Paik, et. al., 2015, p. 1) Further, the use of income-statement-based covenants rises faster, and consequently, the use of balance-sheet-based covenants falls faster, in high OBS lease industries as the use of OBS leasing increases. These results suggest that the proposed capitalization of OBS leases may not necessarily result in firms violating loan covenants since high leasing industries tend to use more income-statement-based ratios rather than balance-sheet-based ratios. The income statement will not be changed greatly by the new accounting standard.

Any proposed change in accounting rules is usually followed by some controversy, with opponents claiming that its costs outweigh the benefits. There were a lot of firms sending comment letters to FASB voicing concerns about the change. Of the 1,454 comment letters that were investigated, the vast majority of comment letters submitted to FASB and IASB were either opposed to the proposed rule changes or highlighted major concerns regarding the changes. (Comiran, Graham, 2016, p. 9) According to Comiran and Graham (2016), there were at least three distinct motivations for a company to lobby against the new accounting standard: a high perceived cost of implementation/operation, a belief that the changes will increase the cost of capital, and a desire on the part of management to avoid any administrative burdens associated with the changes. Their study also indicated that companies that will be negatively affected by the proposed change were the most actively lobbying companies. For example, firms subjected to debt covenants, and especially those subjected to the tightest debt covenants, had the highest likelihood of lobbying. (Comiran, Graham, 2016, p. 9)

**Research Design**

The purpose of our paper is to study the impact of FASB’s new leasing standards update on financial statements. We applied financial ratio analysis to analyze the changes of financial statements when operating leases were converted to capital leases for a three-year period, 2013 to 2015. The specific ratios we used were total asset turnover, debt to equity, return on assets and times interest earned. We chose those specific ratios because they related to utilization of assets, solvency and interest coverage.

The ratios we used were calculated by the website, Stock-Analysis-on.net. (Dybek and Young, 2016) Our sample was 85 of the largest U.S. corporations. We compared the ratios from the website as originally reported to the ratios the website adjusted when operating leases were converted to capital leases. We used t-tests to determine if the original and adjusted ratios were significantly different. The t-tests first were applied to the entire sample. Then, our research compared the originally reported to the adjusted ratios of companies in specific industries: retail, service, transportation and public utilities and manufacturing. Our expectation was that the new leasing standard update would impact companies from different industries differently.

**Findings**

Table 1 below presents descriptive statistics and paired t-test results for the four ratios from 2013 to 2015. Panel A of Table 1 shows the averages for each ratio in 2015. We see lower Asset Turnover, Return on Assets and Interest Coverage ratios, but a higher Debt to Equity ratio. P values for paired t-test are significant for all the ratios. Year 2014 in Panels B and Year 2013 in Panel C of Table 1 repeat the same pattern for both the averages and t-tests for all ratios and industries. We see a significant increase in the Debt to Equity ratio, but significant decreases in Asset Turnover, Return on Assets and Interest Coverage ratios.

**Table 1: Ratio Comparisons for All Industries**

**Panel A: Year 2015, *n=85***

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported**  | **Adjusted** | **Paired T test** |
| Total Asset Turnover |  0.82  |  0.77  |  0.00014  |
| Debt to Equity |  1.11  |  1.29  | 2.62471E-07 |
| Return on Assets |  0.080  |  0.076  |  0.00071  |
| Interest Coverage |  27.44  |  18.21  |  0.00473  |

**Panel B: Year 2014, *n=85***

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported**  | **Adjusted** | **Paired T test** |
| Total Asset Turnover |  0.82  |  0.77  |  0.00014  |
| Debt to Equity |  1.11  |  1.29  | 2.62471E-07 |
| Return on Assets |  0.080  |  0.076  |  0.00071  |
| Interest Coverage |  27.44  |  18.21  |  0.00473  |

**Panel C: Year 2013, *n=85***

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported**  | **Adjusted** | **Paired T test** |
| Total Asset Turnover |  0.88  |  0.82  |  0.00026  |
| Debt to Equity |  0.70  |  0.86  | 5.53609E-07 |
| Return on Assets |  0.092  |  0.088  | 5.34861E-05 |
| Interest Coverage n=84\* |  34.32  |  26.49  | 0.0137 |

*\* Removed one outlier--Exxon Mobil 2013 Interest Coverage of 6413.33.*

Next, we conducted an industry analysis for those that have enough observations when pooled across the three years. Table 2 below presents average ratios and paired t-tests for Retail, Service, Transportation and Public Utilities, and Manufacturing industries. In Panels A through D, Asset Turnover, Return on Assets and Interest Coverage ratios decreased, while the Debt to Equity ratio increased. Paired t-tests are all significant.

Although paired t-tests are significant for all four industries, we observe that the Service industry has the least significance, which may be explained by a relatively smaller investment in fixed assets. In addition, the t-tests results show the most significance for companies in the Manufacturing industry. This is perhaps due to a relatively larger investment in fixed assets as compared with the companies in the other three industries. This confirms our expectation that the new leasing guidance may affect companies in different industries differently.

**Table 2: Paired T test on Pooled Three-year Observations for Each Industry**

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported** | **Adjusted**  | **Paired T test** |
| **Panel A: Retail, *n=30*** |
| Total Asset Turnover | 1.910 | 1.586 | 3.11E-06 |
| Debt to Equity | 0.777 | 1.396 | 1.9E-07 |
| Return on Assets | 0.092 | 0.071 | 0.000113 |
| Interest Coverage | 21.342 | 7.578 | 0.000428 |
|  |  |  |  |
| **Panel B: Service, *n=30*** |
| Total Asset Turnover | 0.615 | 0.580 | 0.0018875 |
| Debt to Equity | 0.324 | 0.449 | 0.0002546 |
| Return on Assets | 0.084 | 0.081 | 0.012807 |
| Interest Coverage | 77.254 | 53.437 | 0.019325 |
| **Panel C: Transportation and Public Utilities, *n=36*** |
| Total Asset Turnover | 0.638 | 0.585 | 0.0015708 |
| Debt to Equity | 1.759 | 2.055 | 1.182E-06 |
| Return on Assets | 0.066 | 0.062 | 1.133E-05 |
| Interest Coverage | 11.264 | 7.098 | 0.0008844 |
| **Panel D: Manufacturing, *n=135*** |
| Total Asset Turnover | 0.709 | 0.692 | 8.835E-13 |
| Debt to Equity | 1.064 | 1.147 | 8.001E-12 |
| Return on Assets | 0.094 | 0.092 | 1.357E-10 |
| Interest Coverage | 37.108 | 32.335 | 3.008E-02 |

Given the expected impact of the new leasing guidance on the Manufacturing industry, we conducted a separate annual analysis for this industry, and the results are summarized in Table 3. We see that for all three years, there is a significant decrease in the Total Asset Turnover, Return on Assets, and Interest Coverage ratios, but a significant increase in the Debt to Equity ratio.

**Table 3: Ratio Comparisons for Manufacturing Industry Only**

**Panel A: Year 2015, *n=45***

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported**  | **Adjusted** | **Paired T test** |
| Total Asset Turnover | 0.653 | 0.637 | 0.000234 |
| Debt to Equity | 1.129 | 1.201 | 7.27E-06 |
| Return on Assets | 0.086 | 0.085 | 0.017505 |
| Interest Coverage | 20.772 | 16.328 | 0.000234 |

**Panel B: Year 2014, *n=45***

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported**  | **Adjusted** | **Paired T test** |
| Total Asset Turnover | 0.746 | 0.727 | 0.0000157 |
| Debt to Equity | 1.305 | 1.415 | 0.000195 |
| Return on Assets | 0.097 | 0.095 | 1.19054E-05 |
| Interest Coverage | 61.289 | 57.613 | 1.56917E-05 |

**Panel C: Year 2013, *n=45***

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Reported**  | **Adjusted** | **Paired T test** |
| Total Asset Turnover | 0.729 | 0.711 | 0.000021 |
| Debt to Equity | 0.757 | 0.823 | 3.12836E-06 |
| Return on Assets | 0.099 | 0.096 | 1.52864E-06 |
| Interest Coverage | 29.263 | 23.066 | 2.09664E-05 |

**Conclusions**

We examined the impact of FASB’s new guidance on leasing on financial statements. We applied financial ratio analysis to the entire sample and to specific industries to analyze the changes of financial statements when operating leases were converted to capital leases for a three-year period, 2013 to 2015. The specific ratios we used were Asset Turnover, Return on Assets, Debt to Equity and Interest Coverage. We found that the Asset Turnover, Return on Assets and Interest Coverage ratios were significantly lower and the Debt to Equity ratio was significantly higher for the entire sample. We found similar results for the individual industries: Retail, Service, Transportation and Public Utilities, and Manufacturing. However, the results were more significant for companies in the Manufacturing industry and less significant for companies in the Service industry. We concluded that companies in different industries were impacted differently by FASB’s new accounting standards update on leasing.

We believe our study is important to investors, lenders and companies. The results provide insight into the likely impact that FASB’s new accounting standards update on leasing will have on financial ratios used to measure financial performance and solvency. This may be critical to understanding a company’s valuation as well as determining its ability to meet specific debt covenants.

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