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The Effect of Applying the New IFRS 16 "Leases" on Financial Statements: An Empirical Analysis on the Airline Industry in the Middle East

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Abstract: In 2016, the International Accounting Standards Board issued IFRS "Leases" to replace IAS 17 starting from year 2019. The new standard was mainly issued to overcome the problem of off-balance sheet financing resulting from the use of operating leases. IFRS 16 requires the lessee to capitalize almost all lease contracts by recognizing a "right of use" asset and a "lease liability" in its statement of financial position. The airline industry will be one of the most affected industries because of the significant dependence on operating leases. This paper seeks to analyse the effect of implementing the new standard on the financial statements and basic financial ratio of six major airline companies in the Middle East by using the Constructive Lease Capitalization Approach. The findings of this study reveal that the airline industry in the Middle East will significantly affected by the application of the new standard. The findings of the analysis show a significant increase in the assets and liabilities of these companies. The combined statement of financial position for the six companies will add more than 17 billion US dollar in liabilities. The assets of these companies would increase by 24% and their liabilities will increase by 51%. OF course, this largely affects different financial ratios, especially Debt to Assets and Debt to Equity.

Keywords: *Leases, IFRS 16, Airline Industry.*

Introduction

In 2016, the International Accounting Standards Board (IASB) issued IFRS "Leases" to replace IAS 17 starting from year 2019. This standard represents a major overhaul for lease accounting for over 35 years (Grant Thornton, 2016, p.2). The current IAS 17 "leases" requires the classification of leases into operating lease and finance lease. Under IAS 17, the lease is capitalized (finance lease) if the contract transfers substantially all risks and rewards incidental to the ownership of the asset, in this case, the lessee recognizes both an asset and a liability related to the lease contract, other than that, the lease is considered as an operating lease. In operating leases, the lessee does not recognize the lease liability, and recognizes lease payments as operating expense in the income statement.

Standard setters, practitioners, and researchers have long criticized the distinction between capital and operating lease, and argued that this has resulted in much restructuring and off-balance sheet financing (Fülbier et al. 2008; Kostolansky and Stanko, 201; Tai, 2013). This is because, in the operating lease the lessee has the liability during the contract period, but such liability is not recognized in the balance sheet. Many companies have the incentive to engage in operating, rather than capital lease or borrowing to finance the purchase of new assets under the treatments required by IAS 17.

The IASB response to this problem was by issuing IFRS 16. In this new standard, the lessee is required to capitalize all lease contracts (except those with low value and contracts for less than 12 months). The distinction between operating leases and finance leases will no longer exist. Under the new standard, all leases will be “on-balance sheet.” Lessee will recognize, for all lease contracts (except low value and contracts for less than 12 months), a “right of use” asset and a “lease liability” in its balance sheet.

The new standards, when applied in 2019, will have a huge effect on the financial statements of the firms that depends materially on operating leases. In 2014, the “Effects Analysis Consultative Group”, which is related to IASB, had prepared a study on the sectors that will be affected by the new standards. It found that almost half of the world's’ firms will be materially affected by the new standards. It also found that the airline industry would be one of the most affected industries because of the fact that many airlines rent their aircrafts based on operating leases.

David Tweedie, who was the chair of the International Accounting Standards Board, once commented on a congressional hearing that his life-long ambition was to fly in an aircraft that actually existed on an airline’s balance sheet (Henderson Et. al 2013, p. 262). According to an initial study by PwC on the expected impact of lease capitalization, the airline industry will be the second most impacted sector after the retail industry with an expected increase in on-balance debt of about 47%. (PwC. 2016). This is because airline companies depend largely on leasing aircrafts, airport facilities, and offices worldwide.

This paper will seek to predict the effect of implementing the new IFRS 16 on the financial statements, and the key financial ratios for major airline companies operating in Middle East. This is done through the utilization of the Constructive Lease Capitalization Approach (Imhoff et al. 1991 and 1993).

The reminder of this paper is structured as follows: Section 2 discusses the expected effect of applying IFRS 16 on the financial statements, and discuss the related literature. Section 3 discusses the research methodology. The analysis of results is discussed in section 4. The paper concludes in section 5.

The potential effect of applying the new IFRS 16

The new standards, when applied in 2019, will have a significant effect on the financial statements of firms that depends materially on operating leases. For initial measurement at the inception date of the contract, the new standard requires the measurement of lease liability at the present value of future lease payments. The right-of use asset is measured by the amount of lease liability adjusted for any prepaid lease payment and the initial costs incurred. In subsequent periods, the right-of-use asset is accounted for similarly to a purchased asset (depreciated over the contract period). The lease liability is accounted for similarly to a financial liability. Accordingly, the lease liability is accounted for under the effective interest method. Lease payments are apportioned between interest expense and a reduction of the lease obligation using the effective interest method.

This, is expected, to have a fundamental change to the structure of financial statements, and hence the key financial ratios, especially for those firms that depends heavily on operating leases. This might lead to many effects on the companies, especially affecting the debt capacity and cost of borrowing.

When applying the new standards, the financial statements, and the related financial ratios, will be materially affected. For the Statement of Financial Position, the capitalization of operating leases will increase both the assets and liabilities, which leads to decrease in the percentage of owners' equity and would affect Debt to Asset (D/A) ratio and Debt to Equity (D/E) ratio. For the Income Statement, the rent expense, which is an operating expense, will almost disappear and replaced by depreciation expense for the "right of use" and interest expense on the lease liability. The depreciation expense for the "right-of-use" will be lower than the rent expense under current IAS 17. This will lead to decrease in the operating expenses and hence increasing income before interest and tax. At the same time, it will increase interest expense for the firm as a result of recognition on interest expense on the lease liability. The above effects on the statement of financial position and income statement would affect both Return on Assets (ROA) and Return on Equity (ROE).

The above effects on financial statements increase the transparency of financial statements, as all leases will be "in- balance sheet". However, it might have a negative impact on some firms. This because the inclusion of the lease liability and the adverse effect on many key ratio such as D/A, D/E, and ROA will most likely affects the firm's borrowing capacity, lead some firms to violate debt covenants, and increase the borrowing costs.

Although IFRS 16 has not been applied yet, but the calls for inclusion the off-balance liabilities resulted from leases has been discussed since the issuance of IAS 17. Researchers have long tested the general effect of lease capitalization on the financial statements and related key financial ratios. One of the earliest studies on this area is Imhoff et al. (1991) in which they examined on the impact of lease capitalization on the financial ratios. They have developed the Constructive Lease Capitalization Method. The study found that liabilities and the D/E ratio increased significantly. Beattie et al. (1998), examined the effect of lease capitalization on industrial and commercial companies listed in U.K. Their study adopted the constructive lease capitalization method suggested in Imhoff et al. (1991). The results of their study suggested a significant increase in both unrecorded lease assets and unrecorded lease liabilities of approximately 6% and 39% to the total assets and long-term liabilities respectively. The study also tested the effect of lease capitalization on financial ratios including gearing ratios. All of the selected gearing ratios have shown significant increase, particularly D/E, which increased by 49%.

The methodology of Imhoff et al. (1991) was applied in other studies on different countries; Fülbier et al. (2008) studied the effect of lease capitalization on the financial ratios of German listed companies and found material effect of the financial ratios. Kostolansky and Stanko (2011) analysed the leasing arrangements of the Standard and Poor's 100 (S&P 100) companies and found a material impact on specific firms and on specific industries. Double digit increases and decreases in firm specific financial ratios could occur as a result of lease capitalization. Tai (2013) selected two Hong Kong-based fast food restaurant chains. His research results indicate that the two major fast-food restaurant chains will experience significant adverse effect resulting from the decrease in the ROA and D/A ratios when their long-term leases are capitalized.

Lee et al. (2014) use publicly available data ranging from 1990 to 2011 to explore the effects of capitalizing operating leases on the immediacy to debt covenant violations of U.S. companies. They used eight financial ratios that are included in debt covenants, such as solvency, liquidity, and interest coverage ratios. Their results indicated that the capitalization of leases would not always cause deterioration of financial ratios. As expected, for some firms, capitalization significantly deteriorates firms' financial ratios. Furthermore, some firms cross the initial covenant threshold and violate their debt covenants because of the negative effect of capitalization of operating leases on their financial ratios. Öztürk, and Serçemeli (2016) studied the impacts possible to occur in the financial position of one airline company (Pegasus) in Turkey as a result of the application IFRS 16. The results of their study show that the application of the new standard will cause to significant increases in the assets and liabilities and a significant increase in the D/A ratio and a significant decrease in the ROA.

However, with exception to Öztürk, and Serçemeli (2016) study, which was confined to one company, all the above empirical studies were conducted before the issuance of IFRS 16 "Leases"; although the standard requires the capitalization of operating lease contracts (which similar in concept to was done in the studies above), but it has special requirements. In addition, none of previous literature has tackled the issue of lease capitalization in airline industry for many companies in Middle East.

Research Methodology

The study examines the effect of the lease capitalization on financial statements and financial ratios of major airline companies. The study applies the constructive lease capitalization method developed by Imhoff et al (1991). This method is widely accepted and used in prior studies that examined the effect of lease capitalization (e.g. Beattie et al., 1998; Bennet and Bradbury, 2003; Duke et al. 2009, Lee et al.,2014).

The population of the study first included all major airline companies operating in the Middle East, however, the published financial statements were only available to six companies, namely; Emirates Airlines, Air Arabia, Royal Jordanian, Oman Air; Turkish Airlines, and Qatar Airways.

The audited annual financial statements and relevant footnotes for the year 2016 for the above companies are used. As these companies operate in different countries, the historical exchange rate as of December 31, 2016 is used to translate the numbers in the financial statements to US dollar.

To measure the lease liability and the corresponding right-of-use asset for the current operating lease contracts, the present value of lease payments is calculated using the long-term borrowing rate for each company as mentioned in the annual report for 2016. These financial statements are prepared applying IAS 17, which requires the disclosure of future operating lease payments that are payable within one year, from 2 to 5 years, and above 5 years. As the disclosed operating lease payments are disclosed in aggregate amount in these three categories, the analysis assumed equal payment per year for the category of future operating lease payments that are payable from 2 to 5 years. As the information regarding the number of years in the category of "above 5 years" is missing, the amount of future operating lease commitments for the category of future operating lease payments that are payable after 5 years is divided on the result of the previous step to extract an approximate period of lease term. Table (1) bellow shows the capitalized lease liability, the total assets and total liabilities before capitalization, and new total assets and liabilities after capitalizing the operating leases for 2016:

To study the effect on net profit, the current net income (under IAS 17) is modified to take into account the requirements of IFRS 16 by using the following equation:

Modified income = *Net Income + Rent Expense - Interest expense on incremental lease liability – Depreciation expense on the new right-of-use*

Table (1)

		Before the Capitalization		After Capitalization	
Company	**Capitalized Operating Leases (US $ '000)**	**Total Assets (US $ '000)**	**Total Liabilities (US $ '000)**	**Total Assets (US $ '000)**	**Total Liabilities (US $ '000)**
Royal Jordanian	559,558	805,079	699,142	1,364,637	1,258,701
Qatar airways	3,294,267	25,754,914	9,961,498	29,049,181	13,255,765
Emirates Airlines	11,472,805	22,951,117	6,240,453	34,423,921	17,713,258
Oman Air	668,900	1,946,060	1,987,243	2,614,960	2,656,143
Air Arabia	18,753	2,409,656	1,352,869	2,428,409	1,371,622
Turkish Airlines	1,170,677	18,491,000	13,404,000	19,661,677	14,574,677
Total	17,184,961	72,357,825	33,645,205	89,542,786	50,830,166

In the above equation, the reported net income for 2016 is modified by adding rent expense as such expenses will not be recognized if operating lease contracts are capitalized. In this case, instead of rent expense, entities will recognize interest expense on the lease liability and depreciation expense for the right of use. Effective interest rate is used to calculate interest expense using the long-term borrowing rate for each company as mentioned in the annual report for 2016. It is assumed that the companies use the straight-line method of depreciation over the lease period, which is calculated as discussed above. The effect of income tax is ignored as many of the sample company operate in the countries that do not impose tax, while other companies achieved losses in 2016. Table (2) shows the net income as reported in the financial statements for 2016, and the modified income:

Table (2)

Company	Net Income (US $ '000)	Modified Income (US $ '000)
Royal Jordanian	-34,655	4,016
Qatar airways	445,469	347,727
Emirates Airlines	1,409,277	1,335,848
Oman Air	-337,633	-310,435
Air Arabia	97,977	97,022
Turkish Airlines	-77,000	-61,009
Total	**1,503,435**	**1,413,168**

Results of Analysis

As for the effect of applying IFRS 16 on the balance sheet, Table (3) bellow shows that the total assets and liabilities have significantly increased, where the total assets of the sample company increased by 24%, and their aggregate liabilities increased by 51%. The most affected companies are Royal Jordanian Airlines and Emirates Airline, which depend largely on operating leases. We also notice a material increase in the D/A ratio for all companies except to Oman Air (as the liabilities of the company exceed the assets, noting that it is a state-owned company). This would largely affect the borrowing capacity and perhaps the cost of borrowing for almost all the sample companies.

Table (3)

Company	% of Change in Assets	% of Change in Liabilities	Debt to Assets Ratio	
			IAS 17 (current)	IFRS 17
Royal Jordanian	69.50%	80.03%	86.84%	92.24%
Qatar airways	12.79%	33.07%	38.68%	45.63%
Emirates Airlines	49.99%	183.85%	27.19%	51.46%
Oman Air	34.37%	33.66%	102.12%	101.57%
Air Arabia	0.78%	1.39%	56.14%	56.48%
Turkish Airlines	6.33%	8.73%	72.49%	74.13%
Total	**23.75%**	**51.08%**	**46.50%**	**56.77%**

Although the effect on capital structure for the sample companies is clear and in one direction, the effect on profitability is less clear. As explained earlier, the net income number is modified by the current period rent, interest expense on the new lease liability, and the depreciation of the new right-of use asset. However, the direction of change in income number would differ from a company to another depending on the borrowing rate and the terms of the outstanding operating lease portfolio. As explained by Fito et al (2013), the impact of lease capitalization on net income is rather small. It can noticed from table 2 above that net income for positive income would decrease, while for negative income companies will increase.

Table (4) shows the effect of applying IFRS 16 on ROA and ROE:

Table (4)

Company	ROA Applying IAS 17	ROA Applying IFRS 16	ROE Applying IAS 17	ROE Applying IFRS 16
Royal Jordanian	-4.30%	0.29%	-32.71%	3.79%
Qatar airways	1.73%	1.20%	2.82%	2.20%
Emirates Airlines	6.14%	3.88%	8.43%	7.99%
Oman Air	-17.35%	-11.87%	N/A	N/A
Air Arabia	4.07%	4.00%	9.27%	9.18%
Turkish Airlines	-0.42%	-0.31%	-1.51%	-1.20%
Total	**2.08%**	**1.58%**	**3.88%**	**3.65%**

We notice from the above table that the results of effect on ROA and ROE differ from a company to another. Literature on lease capitalization (e.g. Graham and King, 2011; Duke et al., 2012; Wong and Joshi, 2015) gave mixed results on ROE, and ROA. This is because the

Discussion and Conclusions

The new IFRS 16 "Leases", which requires the capitalization of almost all leases, will have a significant effect on the capital structure, income statement numbers, and the basic financial ratios when applied in 2019. Because of the significant dependence on leasing aircrafts, airport operations, and offices worldwide, the airline industry is expected to be largely affected by the application of IFRS 16. Applying the constructive lease capitalization method developed by Imhoff et al (1991 and 1993), this study analyzed the possible effect of applying IFRS 16 on the major airline companies in the Middle East. The method was applied to the financial statements of six major airline companies operating in the Middle East.

The findings of the analysis show a significant increase in the assets and liabilities of these companies. The combined statement of financial position for the six companies will add more than 17 billion US dollar in liabilities. The assets of these companies would increase by 24% and their liabilities will increase by 51%. OF course, this largely affects different financial ratios, especially D/A and D/E, which significantly increased when capitalizing the operating leases. This is consistent with literature on lease capitalization (e.g. mhoff et al., 1991; Beattie et al., 1998 and 2004 and 2006; Duke et al., 2009; Wong and Joshi, 2015). Such change in the capital structure would affect the borrowing capacity of these companies, and might affect the borrowing costs. Lee et al. (2014) argued that for some firms, the capitalization deteriorates their financial ratios significantly and to the extent that firms will likely violate their debt covenants after such capitalization.

The analysis of the effect of applying the new standard on net income gave mixed results, for some companies, the application of the new standard will enhance net income, while for other companies it will have a diverse effect. The Effect Analysis Effects Analysis Consultative Group (IASB, 2014) expected such result, it argued: "Companies typically hold a portfolio of leases at any one time, and the size of the effect of adopting IFRS 16 on the income statement will depend on the terms and conditions of the leases and how far those leases are into their respective lease terms" (IASB 2014, p.45).

The findings of this study reveal that the airline industry in the Middle East will be significantly affected by the application of IFRS 16 in 2019. The financial performance of many of companies operating in this sector is already poor. Perhaps being state-owned or state-supported has escalated such poor performance. The new standard will raise new challenges for the industry, mainly the borrowing capacity, borrowing cost, and the possible violation of debt covenants. The application of the new standards may also affect the leasing market in the Middle East, as all lease contracts will be on-balance sheet, a company might decide to buy assets by borrowing rather than to lease them. Airline companies, lenders, and regulators shall start studying the results of applying the new IFRS 16 because of the significant consequences.

References

Bennett, B.K., and Bradbury, M.E., 2003, "Capitalizing Non-Cancelable Operating Leases", Journal of International Finance Management and Accounting, vol.14, no.2, pp. 101-114.

Beattie, V., Edwards, K., and Goodacre, A., 1998, "The Impact of Constructive Operating Lease Capitalization on Key Accounting Ratios", *Accounting and Business Research*, vol.28, no.4, pp. 233-254.

Duke, J.C., Hsieh, S.J., and Su, Y., 2009, "Operating and Synthetic Leases: Exploiting Financial Benefits in the Post-Enron Era", *Advances in Accounting, Incorporating Advances in International Accounting*, vol.25, no.1, pp. 28-39.

Fülbier, R.U., Silva, J.L., and Pferdehirt, M.H., 2008, "Impact of Lease Capitalization on Financial Ratios of Listed German Companies", *Schmalenbach Business Review*, vol. 60, pp. 122-144.

Kostolansky, J., and Stanko, B., 2011, "The Joint FASB/IASB Lease Projects: Discussion and Industry Implications", *Journal of Business & Economics*, vol.9, no.9, pp. 29-35.

Fitó, M.À., Moya, S. and Orgaz, N., 2013, "Considering the Effects of Operating Lease Capitalization on Key Financial Ratios", *Spanish Journal of Finance and Accounting. Vol.*42, pp.341-369.

Graham, R. C., and R. D. King, 2016, "The Relevance of Operating Lease Capitalization to Current and Future Return on Assets." *Working paper*, Oregon State University.

Grant Thornton, 2016, "Major Reform to Global Lease Accounting", Grant Thornton LTD , available online: https://www.grantthornton.ca/resources/insights/accounting_standards_developments/ifrs-news-special-edition-on-leases.pdf, date accessed: 20/2/2017.

Henderson, S., Peirson, G., Herbohn, K. and Howieson, B., 2013. Issues in financial accounting. Pearson Higher Education AU.

IASB, 2014 " Effects Analysis Consultative Group Report to the Trustees of the IFRS Foundation on Leases", International Accounting Standard Board, London, UK.

IASB, 2016. *IFRS 16 Leases*, International Accounting Standard Board, London, UK.

Imhoff, E., Lipe, R., and Wright, D., 1991, "Operating Leases: Impact of Constructive Capitalization", *Accounting Horizons*, vol.5, no.1, pp. 51-63.

Imhoff, E., Lipe, R., and Wright, D., 1993, "The Effects of Recognition Versus Disclosure on Shareholder Risk and Executive Compensation", *Journal of Accounting, Auditing and Finance*, vol.8, no.4, pp. 51-63.

Lee, B., Paik, D.G., and Yoon, S.W., 2014, "The Effect of Capitalizing Operating Leases On the Immediacy to Debt Covenant Violations", *Journal of Accounting and Finance*, vol.14, no.6, pp. 44-70.

Maali, B., '*Financial Accounting and Reporting in Islamic Banks: The Case of Jordan*', PhD thesis, University of Southampton, 2005.

Öztürk, M. and 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", Business and Economics Research Journal, vol.7, no. 4, p.143-157.

PwC 2016 , "IFRS 16 – A new Era of Lease Accounting: PwC In depth INT2016-01", PwC, UK.

Singh, A., 2010, "Proposed Lease Accounting Changes: Implications for the Restaurant and Retail Industries", *Journal of Hospitality & Tourism Research*, vol.36, no.3, pp. 335-365.

Tai, B.Y., 2013, "Constructive Capitalization of Operating Leases in the Hong Kong Fast-Food Industry", *International Journal of Accounting and Financial Reporting*, vol. 3, no. 1, pp. 128-142.

Wong, Karen and Joshi, Mahesh, 2015, "The Impact of Lease Capitalization on Financial Statements and Key Ratios: Evidence from Australia", *Australasian Accounting, Business and Finance Journal,* vol.9, no.3, pp.27-44.