Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.6, No.20, 2015

The upcoming lease accounting standard and its impacts on lessee's financial statements, and financial ratios "a practical simulation test".

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Abstract
A simulator is employed to explore the actual impacts of the upcoming lease accounting standard on the financial statements item, financial risk, and performance ratios, we apply its regulations to the Royal Jordanian Airlines (RJ) financial statements. Capitalization of 30 real operation lease contracts commencing in (2002-2014) reveal with a magnitude change in assets, lease liabilities, and owners' equity. Since we use real RJ data and depreciate the capitalized asset in a straight line method over lease term , Change in lease liabilities exceeds change on assets over time , thus resulted in a magnitude negative impact on owners' equity over 13 years. Results report a negative impact on four leverage ratios (TD/TA, TD/E, LTD/CE, IC) only NCA/ TA shows a positive change over time. We find aease material negative impact on two profitability ratios (NPM and ROE). EBIT margin and ROCE shows a positive change owing to the fact that we adjust the EBIT by the unrecorded lease interest and adjust the CE by the recorded short term operation lease liabilities, Capitalization shows a negative impact on ROA for the period 200-2007 and a positive impact for the period 2008-2014, since the ROA change depend on the Adjusted EBIT and the Adjusted total asset, TA , also the Adj. EBIT show a magnitude positive change over the period 2008-2014 resulting from the unrecorded liabilities interest , since the operation lease contracts number dramatically increased . Liquidity ratio (CR) current ratio shows a positive change, as no change in current asset with a decrease in current liabilities adjusted by the recorded short term lease asset. In view of the considerable increase in total assets Results reveal with a negative change in asset turn over AT. The significant shift in key financial risk ratios, and the negative change in major financial performance ratios suggest that interested parties "economic decisions" could be affected, therefore the upcoming lease accounting regulation could negatively affect the financial position of the airfreight firms that heavily depend on operation lease in aircraft acquirement.
Keywords: simulation, capitalization, financial risk ratios, performance ratios, lease accounting standards

1. Introduction

Over the last six decades lease accounting has been exposed to different point of views .On 19th of July 2006, The International Accounting Standards Board (IASB) and its American counterpart the Financial Accounting Standards Board (FASB) added a joint project on leasing to their agenda, according to the standard setting committee work plan and after around ten years of discussions, a new lease accounting standards is expected within three months' time (www.ifrs.org).
Currently There is two existing lease accounting standards, GAAP 13 and IFRS 17 (both standards are initiated on ownership base, ownership is the ultimate determinant factor in lease recognition, and they so far called the ownership model, leases can be reported on balance sheet capital leases if certain tests are met otherwise it is operational lease and just exposed in off-balance sheet notes (Callaghan, 2013).
The Boards in their amended exposure draft number (842/2013) concluded that lessees obtains a right to use and control the underlying asset for a period of time, therefore and in consistent with the accounting information respective Conceptual Frameworks they should recognize a Right of Use (ROU) asset and a lease liability for all more the 12 month lease agreements. The primary purpose of the convergence project is to bring U.S. GAAP and IFRS closer to together, and to ultimately develop a global lease- accounting standard. The most striking change is the elimination of the between capital and operating lease, all lease agreements to become in one form of financial lease. The proposed Right of Use Model (ROU) would increase assets and liabilities reported on balance sheets, and fundamentally alter the pattern in which lease-related expenses are reported in income statements of companies that depend heavily on lease arrangements.

The conflict around the upcoming standard started when standards setters adopted a faithful representation approach instead of economical approach, since the new upcoming standard will be enacted nevertheless of any economic consequences. For example Jordanian Commercial airfreight companies are capital intensive companies and in order to meet seasonal escalating demand, competition, and technological obsolesce, they resort to long term operation lease agreements, 90% of its fleet is under operational lease. Jordanian airfreight sector employ around seven thousand personal, and it generates a 1.6 billion US$ of revenues ,75% generated

from non-domestic airfreight activities, taking into consideration that Jordan is one of ninety countries that have fully conformed with the (IFRS).

This research paper is an extension of prior work in four ways. First, it Contributes to the ongoing international debate concerning the upcoming proposed lease accounting model and its consequences, Secondly, to our knowledge, no studies have empirically documented evidence of lease accounting reform impacts on Jordan airfreight sector or any other sector, third, no previous study has imperially simulated real operational lease contracts capitalization on lease-by-lease bases, Imhoff 1993 and other researcher adopted constructive capitalization models ,their computations was based on assumed interest rates and lease term ,which is vital in results and conclusions, Four; existing study methodology is recommended by several previous studies, it examined real lease contracts capitalization on lease-by-lease bases, no assumptions related to lease term, lease return (interest), and operation lease periodic payments. Furthermore, the question is asked "how could operational lease capitalization affect firms assets, liabilities, owners' equity, firms credibility measurement financial ratios (financial risk ratios, profitability ratios)? The remainder of the paper is organized as follows: Section 2 is a prior research review. Section 3 discusses data and methodology. Empirical analysis and results in section 4.conclusion in section 5.

2 Literature review

For the purpose of operational lease capitalization, researchers use four Capitalization empirical methods: the analysis of archival accounting data; market-based studies; experimental studies and surveys. Specifically in archival method, researcher compares the accounting numbers pre- and post- accounting rules change (an ex-post study), or constructs the pro-forma accounting statements based on proposed rule-changes, and then compares these with the statements under extant rules (an ex-ante study) (Beattie, Goodacre, & Thomson, 2006). Most of previous ex-*ante* and *ex-post* academic studies focus on operation lease capitalization and its impact on firms' financial items (assets, liabilities, and equity), and on key financial performance and leverage ratios. The pilot *ex-post* study of Abdel-khalik (1981, as cited in ILW, 1991) found that the companies' management responded to the introduction of FAS 13 in 1976 by structuring new lease contracts, and renegotiating existing lease contracts, to avoid leases capitalization. Apart from that, there were evidences that more assets were bought, or constructed, instead of being leased, and there were also evidences of changes in capital structure.

More *ex-ante* studies had been conducted by (Beattie, Edwards, & Goodacre, 1998; Bostwick, Fahnestock, & O'Keefe, 2013; Branswijck, Longueville, & Everaert, 2011; de Villiers & Middelberg, 2013; J. C. Duke, Hsieh, & Su, 2009; Ely, 1995; FÃ¼lbier, Silva, & Pferdehirt, 2008; Grossman & Grossman, 2010; Imhoff, Lipe, & Wright, 1991; Kilpatrick & Wilburn, 2011; Lückerath-Rovers, 2007; Nelson, 1963; Riley & Shortridge, 2013) and they generally agree that operating lease capitalization will result in significant impact on total assets and liabilities.

Further,(Jennings & Marques, 2013) reviewed previous studies on operating lease capitalization and they also found that "a number of studies provide evidence on the materiality of capitalizing operating leases for financial statement analysis."

Capitalization impact on financial ratios in general has also been examined by (Ashton, 1985; Beattie et al., 1998; Bostwick et al., 2013; Branswijck et al., 2011; de Villiers & Middelberg, 2013; J. C. Duke et al., 2009; Ely, 1995; Fitó, Moya, & Orgaz, 2013; Grossman & Grossman, 2010; Imhoff et al., 1991; Kilpatrick & Wilburn, 2011; Lückerath-Rovers & Eindhoven, 2007; Nelson, 1963), and most of them found that capitalizing of long-term operating leases will have (at different rates) effect on the key financial ratios that stakeholders, investors, lenders and analysts may use.

(Beattie et al., 1998) extended Imhoff, Lipe, & Wright, 1991 work by using the constructive capitalization method similar to the one used by ILW but with two differences: they expanded the sample of UK companies and developed a special way to estimate the company's specific discount rate and lease life term. Results of their study indicated that the estimated present value of operating leases amounted to 39 percent of total debt, and on average, the unrecorded asset associated with operating leases amounted to 6 percent of total assets. They also examined nine different performance and balance sheet ratios and found that six of the nine ratios (including profit margin, return on assets, asset turnover, and three measures of gearing) were significantly affected by capitalization of operating leases. These effects were most obvious for the service industry but were least pronounced for the mineral extraction industry.

The significant changes in the key accounting ratios, and the major shift in company performance rankings suggest that interested parties' economic decisions could be affected. In relation to this, (Goodacre, 2001) assessed the capitalization potential on economic consequences by examining the magnitude of change in nine key financial ratios. In the study, the researcher performed the constructive capitalization based on 8.5% discount rate, on the UK retail sector (mainly land and buildings lease) over the period of 1994-1999, they

computed the ratios that are used in decision making and financial contracts (PM, ROA, ROE, gearing (long term debt/ capital employed),(total debt/equity).(total borrowing –(cash & equivalent)/ equity),ROCE, AT, Interest cover).

The results of Goodacre's study indicate that lease capitalization has a significant impact on all the nine ratios that the companies' managers use in decision making and financial contracts. It should be noted that, using the credit-risk adjusted discount rates would slightly lessen the impact of capitalization. Also, in the same line of research (Lückerath-Rovers, 2007) used lease disclosures of 119 Dutch listed companies, during the period of 2000-2004 and a capitalization approach similar to ILW (1991).Based on her study results and the results of previous studies, Rovers found that the key financial ratios are indeed significantly affected, and also, the ranking of the companies' changed after operational lease capitalization. This again stresses that operating leases should be taken into account in any comparison of companies.

(LÃ¼ckerath-Rovers & de Bos, 2009) continued this line of research; they performed an extensive comparison between capitalization approaches and results conclude that the information required by the current accounting standards is not complete, while the financial statement analysis is sensitive to assumptions with regard to discount rates, total and remaining life. Furthermore, different capitalization approaches lead to significantly different capitalization results.

Later on, (Bostwick et al., 2013) extended the study of Lackerth-Rovers (2009). Here, they examined the effect of selected lease capitalization techniques (ILW91, ILW91*, ILW93, ILW97, ILW97*, FK-01, EMFZH-09) for five companies from different industries. They examined the financial statement elements (assets, liabilities, equity and net income) and key performance measures. Applying the changes across all seven methods, the results were averaged to fairly accurate a consent effect on the assets, total liabilities, total equity, and net income) and financial ratios (D/A, D/E, LTD/E, ROA, and ROE). (Bostwick et al., 2013) found that capitalization approaches are limited to the their original authors' assumptions and these assumptions may or may not be consistent with an up-to-date understanding of accounting theory, and also limited to the application of such theory, or the capitalization computation methods in general. However, regardless of the assumptions use, lease capitalization techniques are inherent estimates of the various performance measurements, and this will continue to be true so long as companies are not enforced to disclose the actual information that must be used to constructively capitalize operating leases

Furthermore, (Kilpatrick & Wilburn, 2011) examined the impact of operating lease capitalization on three pairs of USA and UK companies: British Airways and United Airlines, Tesco and Kroger Food & Drug, and Marks & Spencer and Kohl's corporation. In this study, Kilpatrick and Wilburn used a capitalization approach that is similar to Imhoff (1991). Specifically, their approach is based on six assumptions. 1) 9% discount rate for the future minimum payments, 2) operating leases with average remaining life of 15 years, 3) end of year cash flows, 4) effect on the current period's net income is zero, 5) unrecorded assets is equal 70% of the underlying obligation, and 6) effective tax rate of USA is 40% while in UK, 30%.

Comparison of companies from the same economic sector shows very different results. As an example, for airlines, the ratio of operation lease versus financial lease for the US Company is 4.4 times, where it is 1.3 times for the UK Company. Meanwhile, the retail food and drug companies reveal opposite results; 45.0 times for Tesco the UK Company, and 14.7 times for Kroger, the US Company. As for Marks & Spencer and Kohl's Corporation, they show significantly high ratios of 39.8 and 45.0 respectively.

Capitalization results in negative impacts for all companies on two key ratios: increase in D/A, and decrease in ROA. Impacts vary among and within industry, and companies that depend heavily on operational lease would have a greater impact on D/A, and ROA ratios.

However, Kilpatrick's study has three limitations. One limitation is that, the reported results is company specific, while the second limitation is that, the results obtained are limited to the assumptions made, and finally, the impact would be ultimately affected by further amendments made by the boards in their revised exposure draft in May 2013.

In addition, (Branswijck et al., 2011) examined the boards' ED 2010/9 impact on Belgium and Netherlands 2008's listed companies. In their study, the lease capitalization approach similar to ILW (1991) was used and three financial ratios (CR, ROA, and D/E) were investigated. From their findings, the debt to equity ratio increased from 2.03 to 2.20, while the current ratio dropped from 1.44 to 1.39. On average, the ROA remained before and after capitalization which is at 0.09. The average increase in total liabilities caused by capitalization of operating leases is 5.80% whereas the average increase of mean lease asset is only at 3.00% on the pre-capitalization assets.

Financial ratios are indicators that are normally applied by investors and lenders in interpreting a company's performance, liquidity, and credibility, in order to investigate capitalization impacts of the key financial ratios that stakeholders use to interpret a company's financial performance. Corresponding with this notion, the study

of (de Villiers & Middelberg, 2013) focused on the impact of the improved accounting standard on the financial statements and the resulting financial ratios of the South Africa's JSE top 40 companies of which, operating leases are accounted for as on-balance-sheet debt (capitalized). de Villiers and Middelberg (2013) study was conducted in light of the comparison between the boards Exposure draft (ED/2010/9) and the current IAS 17. The study also revealed significant effect on the key financial ratios that stakeholders use to interpret a company's financial performance. The authors admitted that the assumptions made in calculating the present value of operation lease payment lacks accuracy.

3. Data and Methodology

We examine the operation lease capitalization impact on the financial statements and financial ratios in an (*ex–anti-method*) , we capitalize thirty real aircrafts operational lease contracts of the Royal Jordanian Airlines (RJ) over the period 2002-2026. We initiate an operation lease capitalization simulator starting from the commencing date of every single lease contract starting from June 2002 to August 2014. The simulator is based on two types of axioms: 1) the exposure drafts; measurement, recognition, and transition requirements as it is, and the practical case of study data with no assumptions.

3.1 Simulation Axioms

Operation lease capitalization is according to the new upcoming rules of lessee accounting:

1) A lease liability to make lease payment is measured at present value of the lease payments, discounted using the lessee's incremental borrowing rate. 2) Lessee should recognize interest expense on liability. 3) Recognize any changes in the liability to make lease payments resulting from reassessment of the expected amount of contingent rentals or expected payments under term option penalties and residual value guarantees.4) A lessee shall present liabilities to make lease payments separately from other financial liabilities. 5) An ROU is an asset at the amount of the liability to make lease payments, plus any initial direct costs incurred by the lessee. 6) A lessee shall present right-of-use assets as if they were tangible assets within property, plant and equipment separately from assets that the lessee does not lease. 7) A lessee shall amortize the right-of-use asset on a systematic basis from the date of commencement of the lease to the end of the lease term or over the useful life of the underlying asset if shorter.

Table 1: Aircraft operation lease data

	A/C type	qty	commencing date	end-date	L.Term	Monthly. rent	Yearly rent	total rent	pv of future p
1	A-340-212	1	2002-07-18	2014-12-31	150	270,000	3240000	40380164	30383546
2	A-340-212	1	2002-08-09	2014-12-31	149	270,000	3240000	40184877	30049311
3	A-340-212	1	2003-05-29	2014-12-31	139	244,242	2930904	33998486	25837738
4	A-340-212	1	2003-07-29	2014-12-31	137	244,240	2930880	33508390	25561740
5	A-319-132	1	2008-03-13	2018-03-13	9335	184,310	2211720	1720596970	17449097
6	A-319-132	1	2008-10-30	2018-10-30	120	324,175	3890100	38922316	30690416
7	A-319-132	1	2009-02-20	2019-02-20	120	354,846	4258152	42604852	33594178
8	A-319-132	1	2009-03-14	2019-03-14	120	359,490	4313880	43162438	34033827
9	A320-232	1	2006-11-17	2018-11-17	144	209,233	2510796	30150189	22716255
10	A320-232	1	2011-04-29	2019-04-29	96	230,513	2766156	22144405	18283704
11	A320-232	1	2011-09-21	2017-09-21	72	283,088	283,088	20400944	17591280
12	A320-232	1	2011-10-19	2019-10-19	96	232,000	2784000	22287255	18399886
13	A320-232	1	2012-05-24	2018-05-24	72	284050	3408600	20460939	17746451
14	A320-232	1	2012-11-20	2018-11-20	72	288,700	3464400	20795892	18041551
15	A321-231	1	2008-04-09	2014-04-09	72	479,781	5757372	34560006	29914729
16	A321-231	1	2008-05-20	2014-05-20	72	482,940	5795280	34787557	30796624
17	A321-231	1	2012-04-16	2020-04-16	96	364850	4378200	35049590	30076718
18	A321-231	1	2012-06-15	2020-06-15	96	365690	4388280	35130285	29005230
19	EMJ195	1	2006-11-30	2014-11-30	96	230122	2761464	22106843	18387901
20	EMJ195	1	2007-02-03	2015-02-03	96	281409.5	3376914	27033816	22288196
21	EMJ195	1	2007-07-01	2015-07-01	96	240820	2889840	23134555	19242725
22	EMJ175	1	2010-11-11	2018-11-11	96	231700	2780400	22258435	18514298
23	A330-223	1	2010-05-21	2014-12-31	55	601466	7217592	33319569	29760179
24	A330-223	1	2010-05-21	2015-01-31	56	601570	7218840	33938437	30248391
25	A330-223	1	2011-08-01	2017-01-31	66	663,072	7956858	43817218	38549055
26	B787-BAA	1	2014-08-27	2026-08-26	144	837,380	10048560	120637781	90913697
27	B787-BAB	1	2014-09-30	2026-09-30	144	954,500	11454000	137542142	103629391
28	B787-BAF	1	2014-10-01	2026-10-01	144	954,500	11454000	137542142	103629391
29	B787-BAC	1	2014-11-19	2026-11-19	144	991,368	11896410	142854699	107631779
30	B787-BAE	1	2014-11-20	2026-11-20	144	973,430	11681160	140269930	105684672

3.2 The Practical Case Axioms

a. Leases capitalization is based on lease-by-lease from commencing date for all 30 lease contracts.

b. Real operational lease term which it is ranging between (76-159) months starting from June 2002, and real lease contract interest rate which ranging between (4% -5%) annually.
c. Lease liability at commencing date is the present value of monthly lease payments calculated based on lessee incremental rate, and lease term, lease payment due monthly at the beginning of the each month.
d. Lease liability amortization and asset depreciation are computed according to the lease accounting exposure draft requirements.
e. Lease liability at financial year end is the balance after deducting monthly amortization and adding monthly interest expense.
f. Lease asset (ROU) is the leased asset balance after deducting the depreciation expense which it's computed on monthly bases.

3.3 Unrecorded Lease Liability, asset, Owners equity, and Tax savings.

Capitalization is the process of computing the unrecorded values; we calculate Lease liability at commencing date. it is the present value of monthly lease payments calculated based on lessee incremental rate, and lease term, lease payment due monthly at the beginning of the each month. We use Microsoft excel function application to calculate the present value of an ***ordinary monthly due.***

=-PV (mi;t;ole;;1) .where: mi is the monthly interest =annual interest/ 12.

T: is the lease contract term in months. OLE: is the monthly lease rental. 1: refer to payment timing (payment at the beginning of each month).

Operational lease capitalization would alter the accounting equation components namely the assets, liabilities, and owners' equity. In calculating these items, we follow Duke derivation method (Joanne C. Duke, Franz, & Hsieh, 2012). As follow:

$Assets = liabilities + owners\ Equity$ .... (1) $\Delta\ assets - \Delta\ liabilities = \Delta\ equity$..... (2)

$URAt - URLt = UROEt$..... … (3)

We deduct the recorded operation lease values from the computed capitalized values. Table 1 shows the adjusted resulting unrecorded (capitalized) assets URA, liabilities URL, and owners' equity UROE by the operation lease liabilities amounts that they already recorded it according to the existing lease accounting standard IFRS17).

as a short term liabilities for the existing financial year which its ranges between (1% - 30%) of the present value of operation lease future obligations

Duke (2012) uses these equations to derivate: (1) The change in income (ΔIN), (2) the change in retained earnings ΔRE, (3) the cumulative total savings (CTSAV) or deferred tax savings (DEFAT), and (4) the change in net income from year (t-1) to year t. Where TR is the Tax Rate.

$\Delta IN = \Delta REt - \Delta REt - 1$..... (4) $CTSAVt = DEFATt = TRt * \Delta REt$..... (5)

$NetDREt = \Delta DREt - CTSAVt$....(6) $NetURLt = URLt - DEFTAXt$.....(7)

$TSAVt\ or\ TCOST = TRt * \Delta INt$..... (8 $\Delta Net\ INt = \Delta INt - (TSAVt\ or\ TCOSTt)$..... (9)

Capitalized lease expenses (CLE) consist of ROU asset depreciation expense and lease liability interest while operating lease expense is just the lease periodic payment (OLE).

CLE=DE+ I..... (1) Where, OLE is the operation lease periodic payment .DP is the ROU asset depreciation expense, I is the Lease liability interest expense.

Given the balance sheet equation**:** $Assets = liabilities + owners\ Equity$..... **(3)**

$unrecorded\ asset(URA) = unrecorded\ liability(URL) - (UROE) unrecorded\ owners\ equity$ .....(4)

$URA - URL = (DE + I - PP)$... (5)

Equation 5 show that the change in owners' equity (**OE**) results from exactly the deference between the new expenses and the old expense as follow: $URA - URL = CLE - OLE$..... **(6)**

4. Results

4.1 Operation lease capitalization impact on financial statements items and taxable income

Table 1 provides a summary of real aircraft operation leases descriptive unpublished data. Table 2 shows the recorded total balances of assets, liabilities, owner's equity and operation lease current liabilities, it's recorded according to the existing lease international lease accounting standard IFRS 17, Table 2 also shows the results of applying the upcoming lease accounting standard to the operation lease contracts commencing in different dates starting from June 2002 until October 2014. Capitalization of thirty real operation lease contracts over 24 years ,resulted in an uneven significant unrecorded assets and liabilities balances, this result is consistant with (Bostwick et al., 2013;(Branswijck et al., 2011). Increase in assets and liabilities are much more significant in our case than Branswijickt result, our results is a company specific as Bostwick mentioned. Furthermore, our study result is much more consistent with (Kilpatrick & Wilburn, 2011), results shows that operation lease capitalization duplicated the long term obligations. Table 2 shows that unrecorded liabilities to total recorded assets is between 26% in 2002- 183% in 2014, this is because of the increasing demand on operational lease to acquire Aircrafts. Dependant on operational lease increased from two contracts in 2002 to 25 contract in 2012.

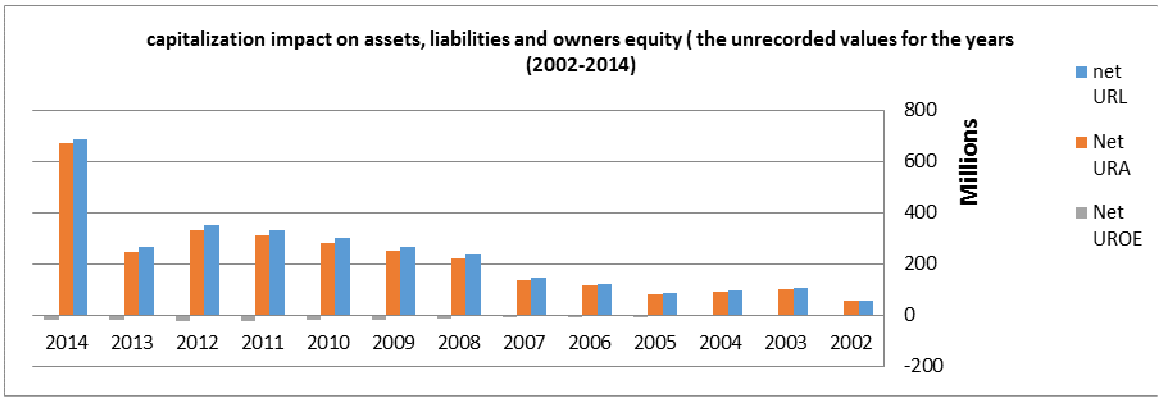


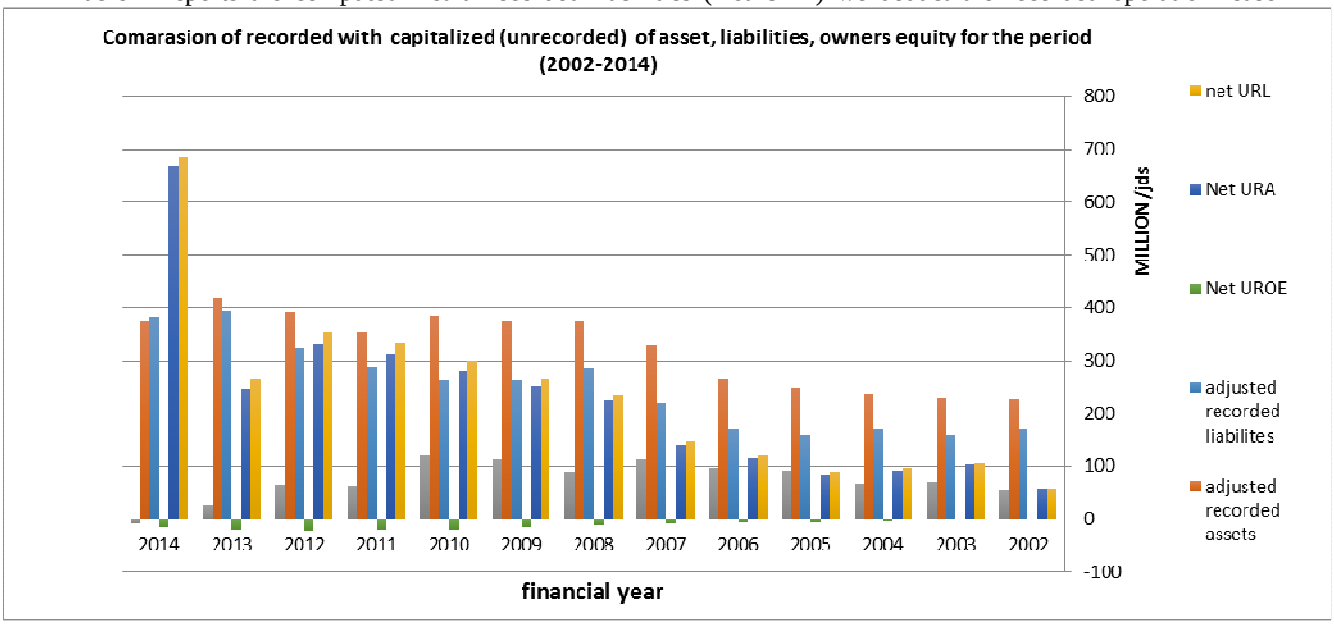
Figure 1: unrecorded assets, liabilities and owners' equity

Change in capitalized liabilities mostly is less than the change in capitalized lease assets since capitalized assets decrease over time by strait line depreciation expense while capitalized liabilities decrease by lease repayment amount and increase by lease interest, this reflects an increasing negative impact in owner's equity. Figure 2 shows a comparison between adjusted recorded and net unrecorded assets, liabilities, and owner's equity balances in million JDs. Table 3 shows change in owners' equity resulting from the change in assets and liabilities, this change represents the resulting change in income because of the change in expenses formula. Results shows that operation lease capitalization have a material impact on income, this result is consistent with (Duke, 2009) result, but existing real case of study shows mostly a material negative impact, because unrecorded liabilities exceeds unrecorded assets most of time, only the financial years 2013 and 2014 shows a positive impact on the change in income owing the fact that change in unrecorded assets exceeds the change in unrecorded liability.

Results either reveal with tax savings because capitalization has negative impact on income .table 2 shows tax savings and the change in income after deducting the yearly tax savings

Figure 2: comparison of recorded and unrecorded assets, liabilities and owners' equity.

Table 4 reports the computed Net unrecorded liabilities (Net URL) we deduct the recorded operation lease



liabilities from the unrecorded lease liabilities URL , results show that recorded operation lease liabilities to URL decreased over decreased from 30% in 2002 to 2% in 2014, this indicate the escalating dependant on operation lease. Table 4 shows an escalating dependant on operation lease as source of finance, net URL/ ATL (adjusted total liabilities) increased from 25% in 2002 to 64% in 2014, and Net URL/ ARL adjusted recorded liabilities increased from 34% in 2002 to 179% in 2014 .Net unrecorded asset URA/ ATA (adjusted total asset) increased from 20% in 2002 to 64% in 2014, net URA/ ARA (adjusted recorded asset) increased from 26% in 2002 to 179% in 2014. Operation lease capitalization shows negative impact on owner's equity, Net UROE/ AOETB adjusted owners' equity total balance increased from (-1% in 2002 to – 343% in 2013) , Net UROE/ AROE (adjusted recorded owners' equity) increased from(-1% in 2002 to -183%) .

4.2 *Capitalization impact on leverage ratios*

We calculate leverage ratios before and after capitalization of 30 aircrafts real operation leases. After capitalization we adjust EBIT by the unrecorded lease liability interest and by tax savings, also we adjust the CE capital employed by short term operation lease liabilities, LTD (long term debt also adjusted by the unrecorded lease liabilities values, NCA noncurrent asset either adjusted by the unrecorded lease assets and by the recorded short term lease liabilities. Results show that Capitalization has a magnificent negative impact on five leverage ratios (long term debt to capital employed, total debt to total asset, total debt to equity, noncurrent asset to total asset, this results is consistent with Bostwick, 2013 results with regard to (D/A, D/E, LTD/E) and either with Branswijeck 2011 with regard to D/E ratio. Table 4 shows a comparison between the existing leases accounting model (IFRS17) with the upcoming model for the period (2002-2014). Results indicate that there is a positive relation between the increasing demand on operation lease and the negative impact on leverage ratios .LTD/CE changed by312% on average, TD/TA 92%, TD/E 282%. we adjust interest by a new added interest amounts on capitalized operation lease (interest on unrecorded liabilities) , therefore Interest coverage dropped by 60% in average , Noncurrent asset to total asset NCA/TA increased by 14% in average . Results indicate that treatment of financial lease as conventional debt (according to the upcoming lease accounting model) will extremely harm the financial risk ratios and consequently increase the cost of capital. Operation lease is a significant variable and offers the RJ flexibility in capacity management where they can return the aircrafts to the lessors during low seasons. Therefore the upcoming lease accounting regulations will have a negative impact on airfreight firms that depend heavily on operational lease.

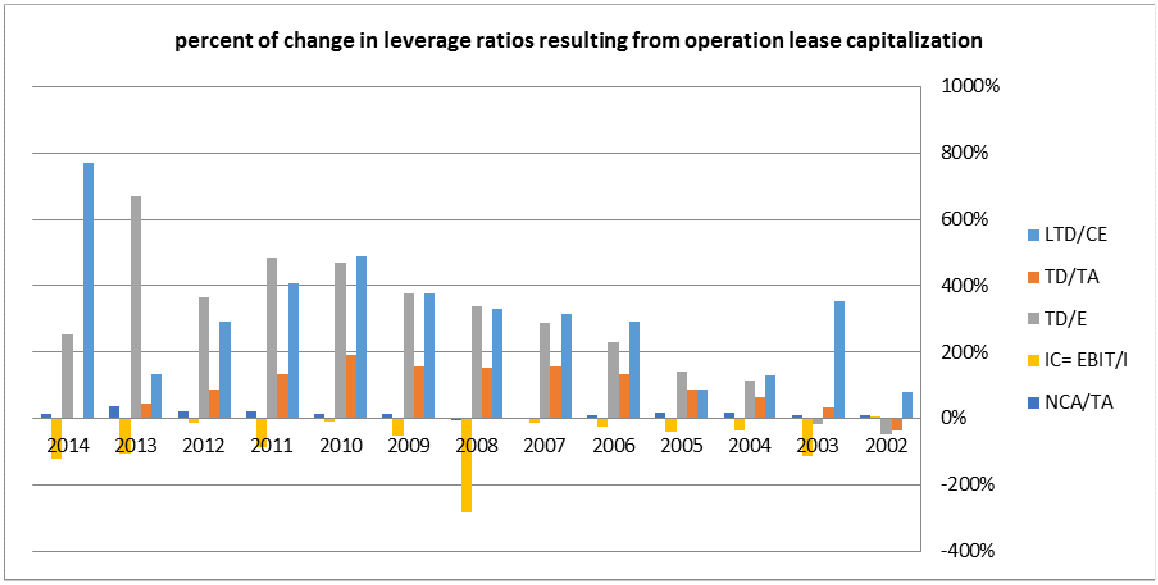


Figure 3: percentage of leverage ratios change after operation leases capitalization

4.3 Capitalization impact on financial performance ratios

We calculate five profitability ratios (NPM, ROE, ROA, EBIT margin, ROCE) before and after operation lease capitalization. Table 6 reports compared results, operation lease capitalization shows negative impact over 13 financial years on two profitability ratios; (NPM, ROE), this is refer to the negative change in income and owners' equity. Adjustment of EBIT by unrecorded lease liability interest and by cumulative tax savings results in positive change in ROA in some years. In terms of ROA this result seems inconsistent with (Branswijck et al., 2011) and (Kilpatrick & Wilburn, 2011) which result in negative change in ROA. We notice that Change in ROA after operation lease capitalization depends on the margin of change in two new added items; the URA unrecorded asset and the unrecorded liabilities interest expense, a considerable amounts of "unrecorded lease" interest, therefore it indicates a positive change in EBIT margin, and ROCE; positive change in ROCE is also because we adjusted the capital employed values by the recorded short term lease liabilities. In terms of liquidity ratio (CR) current ratio, results over 13 years indicate a positive change, results came from no change in current asset and a decrease in current liabilities adjusted by the recorded short term lease asset. Results also reveal with a negative change in asset turn over which refer to the considerable increase in total assets, Table 3 shows that for the period (2002- 2014) unrecorded assets to ATA adjusted total assets is (20%-64%).

Results in general is consistent with (Goodacre, 2001) and (Lückerath-Rovers, 2007) results .The significant shift in the key financial risk ratios, and the negative change in major financial performance ratios suggest that interested parties "economic decisions" could be affected. Therefore the upcoming lease accounting regulation

could negatively affect the financial position of the airfreight firms that depend on operation lease in aircraft acquirement.

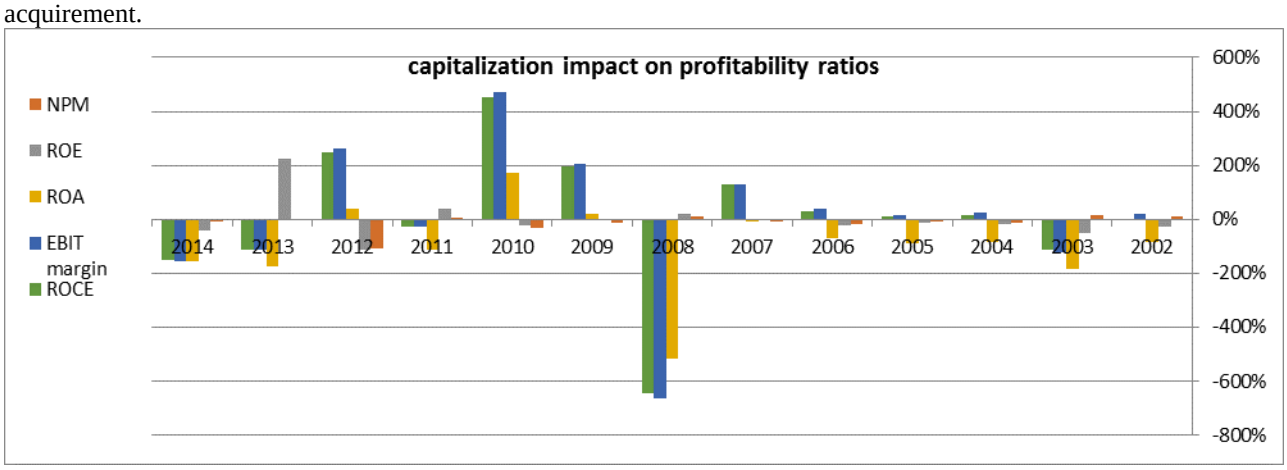


Figure 4: capitalization impact on profitability ratios

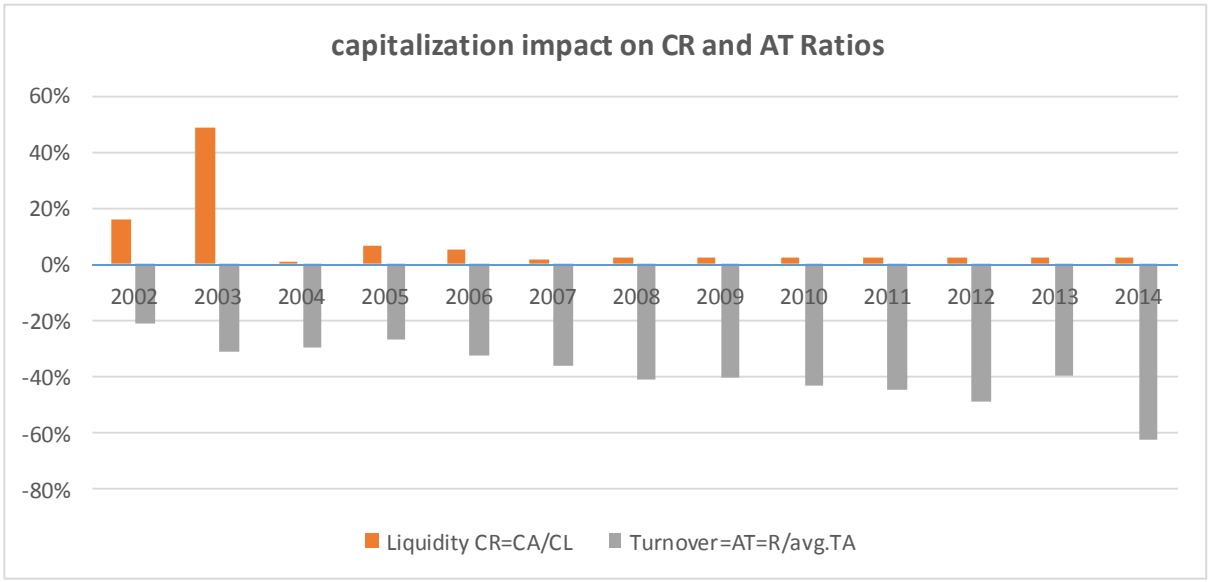


Figure 5: capitalization impact on liquidity and asset turnover ratios

5. Conclusion

Owing to the fact that our results is a company specific , it indicates that operation lease is a vital for Airfreight sourcing; therefore, applying the new lease accounting standard to the financial statements of Airfreight firms that depends heavily on operation lease will add a surplus large portion of liabilities and also it would damage its expansion projects. Either it has a material negative impact on owner's equity. Results concludes that Operation lease capitalization has a negative impact financial risk/ leverage and on performance ratios, on consequence it may has a negative impact on investors and lenders decision.

Table2: Unrecorded balances and change of unrecorded balances from year(t to t-1)

year	# cont	URL	URA	UROE	ΔURA	ΔURL	ΔUROE	adjusted recorded liabilities	adjusted recorded assets	adjusted recorded owners' equity	Recorded operation lease liability	% of Recorded OL / URL	Adj recorded. long term liabilities
0	2	60432857	60432857	0	0	0	0				18681000	0.319050685	54024000
2002	2	58531825	58200992	-330833	58200992	58531825	-330833						
2003	4	104233803	102312639	-1923164	44111647	45683977	-1572331	172318000	226431000	54113000	40738000	0.390823407	15492000
2004	4	96883982	92975990	-3909992	-9336649	-7349821	-1986828	158924000	229284000	70360000	8168000	0.084305282	64269000
2005	4	88988075	83435425	-5552650	-9540565	-7897907	-1642658	170929000	237989000	67060000	8457000	0.095033206	33208000
2006	6	121238736	114504331	-6734404	31068906	32270661	-1201755	158737000	249794000	91057000	8142000	0.067145678	10715000
2007	8	147615433	138750569	-8864863	24246238	26356697	-2110459	170493000	267370000	96877000	2385000	0.016156847	49301000
2008	12	234199943	223115731	-11084212	84365162	86584511	-2219348	218774000	330257000	111483000	4818000	0.020572166	66725000
2009	14	266298221	251380002	-14918219	28264271	32098278	-3834007	283807000	374361000	90554000	5131000	0.019267872	67045000
2010	17	298970207	280992522	-17977685	29612520	32671986	-3059466	264160000	375882000	111722000	5464000	0.018276069	60014000
2011	20	332204911	311925629	-20279282	30933107	33234704	-2301597	263337000	385047000	121710000	5819000	0.017516297	74114000
2012	25	352329389	331026278	-21503110	19100649	20324477	-1223828	289472000	353415000	63943000	6190000	0.01755882	1010730000
2013	25	267874085	247446073	-20428012	-83580206	-84655304	1075098	325078000	390692000	65614000	6545000	0.024433121	1310030000
2014	22	686164099	669313061	-16851038	421866988	418290014	3576974	393460000	419571000	26111000	7028000	0.010242448	77142000
2015	19	607004441	581053778	-25950664	-88259284	-79159658	-9099626						
2016	19	525747525	494268329	-31479197	-86785449	-81256916	-5528533						
2017	17	449504235	415386170	-34118065	-78882159	-76243290	-2638868						
2018	11	379323089	344683627	-34639463	-70702543	-70181145	-521398						
2019	7	327867724	291530769	-36336956	-53152858	-51455365	-1697493						
2020	5	281499779	244587471	-36912308	-46943298	-46367945	-575353						
2021	5	238055053	201963394	-36091659	-42624078	-43444727	820649						
2022	5	192387430	159339316	-33048113	-42624078	-45667623	3043546						
2023	5	144383173	116715239	-27667934	-42624078	-48004257	5380179						
2024	5	93922727	74091161	-19831566	-42624078	-50460446	7836369						
2025	5	40880417	31467084	-9413333	-42624078	-53042310	10418232						
2026	0	0	0	0	-31467084	-40880417	9413333						

Table 3 : Adjusted Balance , change in income and Cumulative Tax savings

year	adj. current liabilities	URL. Interest	adjusted recorded liabilities	adjusted recorded assets	adjusted recorded owners' equity	the new balances (recorded +unrecorded) Total liability	asset total	total owners' equity	unrecorded liabilities/ long term rec. liab	unrecorded liabilities/ recorded total asset	Δ UROE=Δ IN EXPENSES= Δ IN INCOME	CTSVt=TR Δ OE
2002	118294000	1088968.5	172318000	226431000	54113000	230869825	284631992	53762167	1.09	0.26	-350833	-701
2003	143432000	3939719.9	158924000	229284000	70360000	263159803	331596639	68436836	6.75	0.46	-1572331	-3144
2004	106660000	4991962.9	170929000	237989000	67060000	267814982	330964990	63150008	1.51	0.41	-1986828	-3973
2005	125529000	4611777.4	158737000	249794000	91057000	247725075	333229425	85504350	2.69	0.36	-1642658	-3285
2006	159778000	4387015.3	170493000	267370000	96877000	291751736	381874331	90122596	11.34	0.45	-1201755	-2403
2007	169473000	6980245	218774000	330257000	111483000	366389433	469007569	102618137	3.00	0.45	-2110459	-4220
2008	217082000	8439716.8	283807000	374361000	90554000	518006943	597476731	79469788	3.52	0.63	-2219348	-4438
2009	197115000	13300387	264160000	375882000	111722000	530458221	627262002	96803781	3.98	0.71	-3834007	-7668
2010	203323000	13742538	263337000	385047000	121710000	562307207	666039522	103732315	4.99	0.78	-3059466	-6118
2011	215358000	14953240	289472000	353415000	63943000	621676911	665340629	43663718	4.49	0.94	-2301597	-4603
2012	224005000	16185721	325078000	390692000	65614000	677607389	721718278	44110890	3.49	0.90	-1223828	-2447
2013	262457000	15211779	393460000	419571000	26111000	661334085	667017073	5682988	2.04	0.64	1075098	2150
2014	305560000	15556543	382702000	373875000	-8827000	1068866099	1043188061	-25678038	8.89	1.83	3576974	7153

Table 4: net unrecorded balances, new total balances, and % of change (in financial statements items) to recorded balances and the new adjusted balances

year	net URL	Net URA	Net UROE	ALB	AAB	AOEB	% NET URL/ ATL	% NET URA /ATA	% NET UROE /AOEB	% NETURL/ARL	% NETURA/ARA	% of NET UROE/AROE
2002	58621992	58200992	-421000	230939992	284631992	53692000	0.25	0.20	-0.01	0.34	0.26	-0.01
2003	104550269	102312639	-2237630	263474269	331596639	68122370	0.40	0.31	-0.03	0.66	0.45	-0.03
2004	97283347	92975990	-4307357	268212347	330964990	62752643	0.36	0.28	-0.07	0.57	0.39	-0.06
2005	89316606	83435425	-5881181	248053606	333229425	85175819	0.36	0.25	-0.07	0.56	0.33	-0.06
2006	121499086	114504331	-6994755	291992086	381874331	89882245	0.42	0.30	-0.08	0.71	0.43	-0.07
2007	148037524	138750569	-9286955	366811524	469007569	102196045	0.40	0.30	-0.09	0.68	0.42	-0.08
2008	234643813	223115731	-11528081	518450813	597476731	79025919	0.45	0.37	-0.15	0.83	0.60	-0.13
2009	267065022	251380002	-15685020	531225022	627262002	96036980	0.50	0.40	-0.16	1.01	0.67	-0.14
2010	299582100	280992522	-18589578	562919100	666039522	103120422	0.53	0.42	-0.18	1.14	0.73	-0.15
2011	332665231	311925629	-20739601	622137231	665340629	43203399	0.53	0.47	-0.48	1.15	0.88	-0.32
2012	352774154	331026278	-21747876	677852154	721718278	43866124	0.52	0.46	-0.50	1.09	0.85	-0.33
2013	267659065	247446073	-20212992	661119065	667017073	5898008	0.40	0.37	-3.43	0.68	0.59	-0.77
2014	685448704	669313061	-16135643	1068150704	1043188061	-24962643	0.64	0.64	-0.65	1.79	1.79	-1.83

Table 5 : Debit Ratios or Leverage ratios used by credit rating agencies, financial analysts to examine financial risk

befor capitalization	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
LTD/CE	55%	40%	49%	59%	41%	30%	42%	37%	33%	54%	62%	86%	124%
TD/TA	40%	31%	29%	23%	18%	17%	20%	21%	19%	28%	36%	47%	40%
TD/E	257%	236%	118%	71%	55%	51%	88%	75%	63%	168%	240%	1013%	-934%
IC= EBIT/I	63%	-45%	394%	564%	231%	189%	-12%	389%	110%	-1481%	122%	-261%	-185%
NCA/TA	69%	60%	64%	59%	62%	67%	74%	72%	70%	68%	63%	57%	58%
after capitalization													
Adj.LTD/adj.CE	100%	180%	112%	112%	159%	123%	181%	177%	192%	277%	241%	202%	1076%
adj.TD/adj.TA	25%	40%	48%	44%	42%	43%	51%	54%	55%	64%	68%	69%	40%
adj.TD/E	135%	196%	253%	170%	180%	197%	386%	356%	356%	982%	1115%	7788%	-3311%
adj.IC= EBIT/I	67%	6%	248%	327%	172%	162%	23%	186%	99%	-215%	104%	14%	39%
Adj.NCA/adj.TA	75%	66%	74%	69%	67%	67%	73%	81%	80%	83%	76%	77%	67%
change													
TD/CE	45%	140%	63%	52%	118%	93%	139%	140%	159%	222%	179%	116%	952%
TD/TA	-15%	10%	19%	20%	24%	26%	31%	33%	36%	36%	31%	22%	0%
TD/E	-122%	-40%	135%	99%	125%	146%	298%	281%	293%	814%	875%	6775%	-2377%
IC= EBIT/I	4%	50%	-146%	-237%	-59%	-27%	35%	-203%	-10%	1267%	-18%	275%	224%
NCA/TA	6%	5%	10%	10%	5%	1%	-1%	9%	10%	15%	13%	20%	9%
% of change													
LTD/CE	80%	353%	130%	88%	290%	317%	330%	376%	487%	408%	290%	135%	769%
TD/TA	-37%	32%	64%	86%	133%	155%	154%	157%	191%	131%	86%	46%	0%
TD/E	-48%	-17%	114%	140%	228%	286%	339%	376%	468%	486%	365%	669%	254%
IC= EBIT/I	6%	-113%	-37%	-42%	-25%	-14%	-285%	-52%	-9%	-85%	-15%	-105%	-121%
NCA/TA	9%	8%	16%	17%	8%	1%	-1%	13%	14%	22%	21%	35%	15%

Table 6: impact of operation lease capitalization on financial performance ratios

Profit. Ratio before capitalization	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NPM	-1.3%	-3.6%	4.2%	5.0%	1.4%	3.7%	-3.3%	4.8%	1.4%	-7.9%	0.1%	-5.2%	-4.7%
ROE	-8.6%	-32.9%	26.0%	24.8%	6.9%	18.7%	-27.2%	26.8%	8.3%	-99.7%	1.9%	-203.9%	-223.3%
ROA	2.3%	-1.3%	8.7%	10.1%	4.3%	2.4%	-0.1%	2.6%	0.7%	-15.4%	1.6%	-5.2%	-4.4%
EBIT margin	2.2%	-1.1%	5.7%	6.1%	2.6%	1.4%	-0.1%	1.6%	0.4%	-7.4%	0.8%	-2.9%	-2.2%
ROCE	5.9%	-6.7%	16.8%	21.7%	11.7%	4.9%	-0.3%	5.6%	1.6%	-41.1%	3.8%	-14.5%	-27.1%
Profit. Ratio after capitalization	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NPM=net income/sales reveue	-1%	-4%	4%	5%	1%	3%	-4%	4%	1%	-8%	0%	-5%	-4%
ROE= net income/OE	-6%	-17%	21%	22%	5%	18%	-32%	26%	6%	-139%	0%	-658%	-127%
ROA=adj.EBIT/ adj.TA	0.4%	1.1%	1.4%	1.3%	1.2%	2.2%	0.6%	3.1%	2.0%	2.2%	2.2%	3.8%	2.5%
EBIT margin	3%	0%	7%	7%	4%	3%	0%	5%	2%	-5%	3%	0%	1%
ROCE= (Adj.EBIT) / adj.Capital Em	6%	1%	19%	24%	15%	11%	2%	16%	9%	-29%	13%	2%	14%
change	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NPM=net income/sales revenue	-0.1%	-0.6%	-0.5%	-0.4%	-0.3%	-0.4%	-0.3%	-0.6%	-0.4%	-0.3%	-0.2%	0.1%	0.5%
ROE= net income/OE	2.3%	16.3%	-4.8%	-2.7%	-1.4%	-0.8%	-5.1%	-1.0%	-1.9%	-39.8%	-2.1%	-454.2%	95.8%
ROA	-2.0%	2.4%	-7.3%	-8.7%	-3.1%	-0.2%	0.7%	0.6%	1.3%	17.6%	0.6%	9.0%	6.9%
EBIT margin	0.4%	1.3%	1.3%	1.1%	1.0%	1.9%	0.5%	3.3%	2.0%	2.0%	2.0%	3.3%	3.4%
ROCE= (EBIT) /CE	-0.1%	7.4%	2.5%	2.1%	3.4%	6.3%	2.1%	10.9%	7.3%	12.2%	9.4%	16.6%	41.0%
% of change	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NPM=net income/sales revenue	12%	16%	-13%	-8%	-20%	-10%	9%	-13%	-32%	4%	-110%	-3%	-10%
ROE= net income/OE	-26%	-50%	-18%	-11%	-21%	-4%	19%	-4%	-23%	40%	-113%	223%	-43%
ROA	-85%	-183%	-84%	-87%	-72%	-7%	-516%	22%	171%	-114%	41%	-172%	-156%
EBIT margin	19%	-120%	23%	18%	39%	131%	-664%	204%	470%	-26%	261%	-115%	-158%
ROCE= (EBIT) /CE	-1%	-111%	15%	10%	29%	128%	-647%	195%	452%	-30%	248%	-114%	-152%
F. Ratio Before capitalization	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Liquidity/CR=CA/CL	51%	43%	79%	76%	61%	64%	44%	53%	55%	52%	63%	67%	50%
Turnover=AT=Reveue /avg.TA	106%	119%	155%	169%	173%	182%	199%	159%	180%	199%	216%	188%	191%
F. Ratio aftere capitalization	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Liquidity	60%	63%	80%	81%	64%	65%	45%	54%	57%	53%	65%	69%	51%
Turnover	84%	82%	110%	124%	117%	116%	118%	95%	103%	111%	111%	114%	73%
change	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Liquidity/CR=CA/CL	8%	21%	1%	5%	3%	1%	1%	1%	1%	1%	2%	2%	1%
Turnover=AT=R/avg.TA	-22%	-37%	-46%	-45%	-56%	-66%	-82%	-64%	-77%	-89%	-104%	-74%	-118%
% OF CHANGE	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Liquidity/CR=CA/CL	16%	49%	1%	7%	5%	1%	2%	3%	3%	3%	3%	2%	2%
Turnover=AT=R/avg.TA	-21%	-31%	-29%	-27%	-32%	-36%	-41%	-40%	-43%	-45%	-48%	-39%	-62%

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