

The Effect of Firm Specific Factors on Lessor Financial Performance in Egypt (Panel Data Analysis)

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Received: Sep. 7, 2022 Accepted: Oct. 27, 2022 Published: December 1, 2022

doi:10.5296/ajfa.v14i2.18956 URL: <https://doi.org/10.5296/ajfa.v14i2.18956>

Abstract

This study attempts to identify some of the firm specific factors that might have an impact on lessor financial performance after the application of EAS 49 and the Financial Leasing and Factoring Act (Law 176 of 2018). The study uses Numerical data for five years during 2016-2020 from financial reports obtained from the Egyptian Financial Regulatory Authority (FRA). Study sample comprised 43 observations. The dependent variable is the firm financial performance signified by total debt/total equity, earnings per share EPS, return on equity ROE, asset turn over, return on capital employed ROCE, current ratio, return on assets ROA, and total debt/total assets. The independent variables are sales, financial liabilities, EBIT/operating profit or loss, and financial leased fixed assets. The study used pooled model, fixed effect model, and random effect model. Results indicate the sales, financial liabilities, EBIT/operating profit or loss, and financial leased fixed assets have an effect on lessor financial performance after the application of both IFRS 16 equivalent of EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). The data is accurate and

complete. The length of the study period makes it possible to track progress of lessor firms. This study tries to identify the impact of some firm specific factors on lessor financial performance after application of EAS 49 and Financial Leasing and Factoring Act (Law 176 of 2018). Thus, this study is a modest contribution to better decision making of investors, creditors, lessors, and lessees.

Keywords: firm specific factors, firm performance, lessor, Egypt

1. Introduction

1.1 Introduction

The purpose of issuing IFRS 16 and its corresponding Egyptian Accounting Standard EAS 49 and the Financial Leasing and Factoring Act (Law 176 of 2018) was to increase the number of the lease contracts. In addition, IFRS makes sure that the lessor firms apply the accounting treatments properly to avoid off balance sheet recording. Law number 176 year 2018 regulates financial leasing and factoring activities. It supersedes law number 95 year 1995 related to the financial leasing, as well as, prime minister ruling number 1446 year 2003 related to rules and regulations controlling the activities of the factoring.

During 2018, the Egyptian Financial Regulatory Authority FRA issued the Financial Leasing and Factoring Act (Law 176 of 2018). This law states that Financial Leasing is a financing activity. Financial Leasing grants the lessor the right to possess and use a leased asset to a lessee for a specified period in return for lease payments in accordance with the provisions of a contract. The lessor and the lessee write a contract stating that the lessor transfers ownership of the leased asset to the ownership of the lessee. The intention is to use the leased asset in economic activities, service activities or production activities for a certain period for a specified rent. The Financial Leasing and Factoring Act (Law 176 of 2018), states that the lessor is the entity that is licensed to engage in financial leasing activity. The lessee is the natural or legal person that has the right to possess and use the leased asset in accordance to the financial lease contract.

The firm's financial performance influences the strength of the country economy. Thus, it is worth investigating firm specific factors and identifying those factors that might have an impact specifically on lessor financial performance. This study reviews related literature then presents the hypothesis. The study presents the methodology. The study presents the statistical results. The study presents a discussion. The study wraps up with the conclusion.

1.2 Literature Review

Standard setting bodies, for some time now, have been deliberating on the best method for recording lease transactions to bring the majority of leases on-balance sheet for lessees. The main result of the Financial Accounting Standards Board FASB and the International Accounting Standards Board IASB joint project was the drafting of a discussion paper published on March 19 2009 that included a leasing project for both the lessor and the lessee. On August 2010, the FASB and the IASB delivered an exposure draft suggesting a "right-of-use" model for the realization of lease-related liabilities and assets. Finally, in 2016, the IASB issued IFRS 16 "Leases" effective as of year 2019 to replace International Accounting Standard IAS 17. The provisions of IAS 17 Leases obligated the lessee to differentiate between an operating lease (off balance sheet) and a finance lease (on balance sheet). However, the new accounting model obliges the lessee to identify majority lease contracts on the balance sheet (except for short-range leases and inexpensive assets). The IFRS 16 "Leases" ensures that the business firms record all of the leases and in the same way in the financial statements. This leads to more transparent, accurate and comparable

information. After examining firm cash flow, no change to the value of the company is expected.

The following starts with a presentation of a couple of theories to make management act to benefit the shareholders. These theories are the agency theory and economies of scale. After that, come the selected observations and findings of previous literature related to the subject matter that justify the concepts. The Positive Accounting Theory proposes that management has a vital part in the determination of standards (Watts & Zimmerman, 1978). This theory also states that a purpose of financial reporting is to force management to operate for the benefit of the shareholders (Watts & Zimmerman, 1978). Accordingly, it is extremely important for business firms, especially for large size firms, to apply new and improved accounting standards to help explain common agency theory problems associated with the conflict of interest between shareholders and managers, as well as, the diverse approaches towards risk by the agent and principal. Therefore, it is clear that the accounting standard setters are pressured by the shareholders and the management of business firms especially large size ones with the aim of making the most of personal benefits (Watts & Zimmerman, 1978). In turn, these benefiting parties drive the standard setters to present new standards, specifically for leasing IFRS 16.

Studies prove firm size and firm growth opportunities as significant determinants of leasing. The economy of scale concept confirms that big companies are capable of negotiating with suppliers and customers, generating and withstanding strategic expansion, competing with their counterparts, and retaining better prices than the competitive level. This theory describes how highly influential big companies are over small companies. This implies that the bigger the company the more reliable its public information.

Nasser & Alrashedy (2022) explore the outcomes of the financial performance of the Egyptian Air Arabia after applying IFRS 16. The study investigates financial statements for the fourth quarter ended March 31, 2019. The study compares and changes financial statements elements and related ratios with those of the quarter ended September 30, 2018. Results show a rise in gross profit, revenues, current assets, current liabilities, net income, cash, total equity, and total assets from operations. Results also show a fall in net change of, EPS, total liabilities, and cash. There is an increase in return on equity, current ratio, and return on assets whereas, a decrease in debt ratio and debt to equity ratio.

Maali (2018), analyze the result of implementing the new lease standard on six major airline companies (Emirates Airlines, Royal Jordanian, Air Arabia, Turkish Airlines, Oman Air, and Qatar Airways) financial reports as well as basic financial ratios. Constructive Lease Capitalization Approach is used. The findings show application of the IFRS 16 new Lease standard will considerably influence the Middle East aviation business. There is an increase in the liabilities and assets of these companies with a significant impact on the Debt to Assets and Debt to Equity ratios.

Öztürk & Serçemeli (2016) take a close look at the balance sheet of the lessee firms in Turkey and the influence of the variation in the related ratios after the adoption of the new lease standard. Outcomes show operating leases increases liabilities and assets with a rise in

the debt/asset ratio and a fall in the Return on Asset ROA ratio.

De Faria Olivo et. al. (2022) under take an event study to identify if the application of the new lease standard affected firm value. This study focuses on the evaluation of the mining industry because there is heavy use of movable assets that requires the use of rental and operating lease. The study investigated data from the financial reports of 1002 firms listed on the Toronto, Sydney, and London stock exchanges for year 2016 and year 2019 separately. Results infer abnormal returns variation. This indicates that the adoption of the IFRS 16 affects firm value.

Park & Na (2017) inspects how the firm listing position affects the firm's adoption of lease accounting. The Korean firms record either a capital or an operating lease during the period 2001-2013 equivalent to 7,023 firm-year observations. Findings show private firms select the adoption of operating leases. Private firms have a higher ratio of operating leases than publicly registered firms. Thus, private firms favor using operating leases to escape rising debt levels as well as profiting from off-balance sheet financing, in contrast to publicly registered businesses.

Joubert et. al. (2017) examines the potential impact that the IFRS has on the basic financial ratios of main firms in the aviation and telecommunication segments. The study acquires data from public financial reports of firms registered on the Australian Stock Exchange during 2015-2016. In addition, the study examines the Altman Z score results for the prediction of near future company financial distress. Outcomes reveal inclusion of additional leased items influence return on assets ROA and debt to equity D/E ratios. Altman Z score results imply there is no company heading to a different Z score range.

Zamora-Ramírez & Morales-Díaz (2018) perform an empirical analysis to identify the effect of adopting the IFRS 16 on the financial statements of quoted Spanish companies. Findings reveal that total assets and liabilities, as well as, leverage ratios will increase. However, interest coverage ratio will decrease except for those industries with increased lease volume, for example retail, professional services, media and hotels. The results of the study found no consistent results related to profitability.

Park & Na (2018) inspects the influence of operating lease and capital lease on the cost of debt and credit ratings for 6133 listed and non-listed local firms that recognize leases in Korea. The study collects numerical data from financial statements for a period of 13 years during 2001-2013. Outcomes prove lease choice does not have considerable influence on corporate credit ratings. But, enterprises that implement operating leases spend a smaller amount than firms that employ capital leases. Results also convey there is no difference in credit ratings because of the listing status of the business firm. As for the cost of debt for listed companies, there is no difference due to lease selection. However, unlisted firms that choose operating leases over capital leases experience a drop in their cost of debt.

Magli et. al. (2018) analyses the effect of applying (IFRS 16) Leases, on the firm performance and the financial leverage of different institutions listed in the Italian business environment. Results indicate that in the balance sheet, there is a decrease in equity, and a rise in financial liabilities and lease assets. In the income statement, there is an increase in Earnings Before

Interest Tax Depreciation and Amortization EBITDA and finance costs.

Susanti et. al. (2021) made a case-study to determine the influence of the adoption of the new lease accounting standard IFRS 16 corresponding to PSAK 73 Leases issued by the Indonesian Financial Accounting Standards Board on the financial statements and key financial ratios of an airline company in Indonesia that heavily utilizes lease financing. The results show that the level of profitability represented by return on assets (ROA), solvency, and efficiency in the use of assets drop. However, the liquidity ratio represented by Interest Coverage Ratio ICR and Cash Flow from Operations CFO and the profitability represented by the return on equity (ROE) increase.

Singh (2013) examines the relationship between the lease and debt in a sample of 233 American restaurant and retail firms during the period 2006 – 2008. Both capital leases and operating leases are completely measured. Results show that there is a significant and inverse relation between leasing and debt. This means that \$1.00 of leasing displaced nearly \$0.50 of debt.

Biondi et. al. (2011) discusses the situation of the proposed exposure draft towards lease accounting. The study comments on the definition of a lease, accounting for lessors, measurement and reassessment at fair values, classification of lease accounting elements, impact of lease accounting elements on accounting ratios, impact of lease accounting on recognition and income measurement.

Sliwoski (2017) provides a general discussion on the new lease accounting rules in ASU 2016–02. The study also provides a more focused discussion for how implementation of these rules prohibits lessees from using leases to obtain off-balance sheet financing.

Knubley (2010) distinctly clarifies the justifications behind the proposition of the leasing project and its addition to the IASB and FASB joint project agenda in July 2006 that resulted in the release of the August 2010 exposure draft suggesting a "right-of-use" model. This study also outlines the proposed approach to lessor and lessee accounting. Findings prove that the proposed changes described require by the new lease standard enforce the acknowledgment of the balance sheet liabilities and assets.

Bunea-Bontaş (2017) from Romania discusses the contrast between IAS 17 and IFRS 16 to draw attention to the effects of the new accounting model on a company's financial statements.

Chatfield et. al. (2017) analyzes the off-balance sheet leases by the hospitality industry in the USA. Results indicate that hospitality companies do extensively use operating leases, which amounted to 51% of their assets in 2015.

Gibson (2021) proved that by applying IFRS 16 Leases, there are measurable changes in reported financial data and financial performance metrics that measure firms' profitability, credit risk, resource efficiency, liquidity, and financial leverage. The study results revealed significant changes. Firms with operating leases demonstrated more volatility in financial

performance. Asset efficiency and profitability decrease. Financial leverage increased.

Tóth (2018) discusses the application of IFRS16 (Leases), effective as of 2019, and its impact on listed Hungarian entities. According to the results of the study, expectations are high that the application of IFRS 16 may have significant effect on the lease market.

Secinaro et. al. (2020) investigates the representation of change in the accounting of leases in the financial statements of Italian small and medium enterprises. Results of a case study made confirm the adoption of IFRS 16 has a substantial effect on the balance sheet.

The studies presented above took place in different business environments in Italy, Turkey, USA, Canada, England, Australia, Spain, Korea, Indonesia, Hungary, Emirates, Egypt, Jordan, Oman, and Qatar. Studies are available related to different business sectors such as the aviation, mining, telecommunication, media, retail, hotel, and restaurant sectors that all heavily depend on leasing. The studies above unanimously agree that the adoption of the IFRS 16 (Leases) significantly impact the balance sheet assets and the liabilities, as well as, the financial performance ratios. However, results have to be interpreted carefully taking into consideration if the company is a lessor or a lessee, in addition to, the different business sectors.

This study evaluates the impact of some firm specific factors on lessor financial performance after the application of EAS 49, equivalent of the IFRS 16, and the Financial Leasing and Factoring Act (Law 176 of 2018). The firm specific factors are (sales, financial liabilities, EBIT/operating profit or loss, and financial leased fixed assets). The lessor financial performance represents (total debt/total equity, earnings per share EPS, return on equity ROE, asset turn over, return on capital employed ROCE, current ratio, return on assets ROA, and total debt/total assets)

1.3 Hypothesis

It is evident that the studies made concerning the accounting treatments for the lessor nationally and internationally are rare. According to the results of the above studies, the study on hand proposes the following hypothesis:

H₁ there is a significant impact of firm specific factors on lessor financial performance after the application of both the IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018).

H₀ there is no significant impact of firm specific factors on lessor financial performance after the application of both the IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018).

2. Method

This study uses panel data approach to accommodate inconsistencies in unnoticed distinct country and firm effects. Panel (longitudinal) data is pooling of observations on a cross sectional of firms during several periods (Baltagi, 2013). Panel data approach is able to control for heterogeneity in addition to time invariant variables not probable cross sectional and time series methods (Baltagi, 2008).

The study uses data for 5 years during the period 2016-2020 that signifies before and after the application of the EAS 49 corresponding to the IFRS 16 and the Financial Leasing and Factoring Act (Law 176 of 2018). The study evaluates public numerical data from the financial reports of 10 non-financial institutions listed in the Egyptian Financial Regulatory Authority FRA. The sample of the study is equivalent to 50 firm year observations.

The dependent variable is the firm financial performance. The independent variables are some firm specific factors. The dependent variable is represented by: asset turn over [= sales/total assets], return on assets ROA [= net income/total assets], return on capital employed ROCE [= EBIT/capital employed (net assets = total assets – current liabilities)], earnings per share EPS, current ratio [current assets/current liabilities], total debt/total assets [total liabilities/total assets], return on equity ROE [= net income/equity], and total debt/total equity [total liability/equity]. The independent variables are sales, financial liabilities [total liabilities – current liabilities], EBIT/ operating profit or loss, financial leased fixed assets

The study used the pooled model, the fixed effect model, and the random effect model accompanied by the panel data approach. The foundation is:

$$y_{it} = \alpha_{oi} + \beta_{it} X_{it} + E_{it} \quad (1)$$

y_{it} : dependent variable, accompanied by unit i , over period t

α_{oi} : fixed term for sample i

$\beta_{it} X_{it}$: independent variable and slope

E_{it} : random error

The study follows five steps:

- Pooled Model,
- Fixed Effect Model,
- Comparison of Pooled Model and Fixed Effect Model,
- Random Effect Model,
- Comparison of Random Effects Model and Fixed Effect Model using the Hausman Test

The purpose was to specify which of the Pooled Model, Fixed Effect Model, and Random Effect Model best indicates the effect of the independent variables on the dependent variables after application of EAS 49 and Financial Leasing and Factoring Act (Law 176 of 2018).

The independent variables represent x_1 sales, x_2 financial liabilities, x_3 EBIT/operating profit or loss, x_4 financial leased fixed assets. The dependent variables represent y_1 asset turn over, y_2 return on equity ROE, y_3 return on assets ROA, y_4 earnings per share EPS, y_5 return on capital employed ROCE, y_6 current ratio, y_7 total debt/total assets, and y_8 total debt/total equity.

It is worth noting that the F-Test compares the Pooled Model and the Fixed Effect Model. If

the results show the Pooled Model is the best, then stop. Otherwise, go to step four.

One: when the dependent variable is y_1 and the independent variables are $x_1, x_2, x_3,$ and x_4

Two: when the dependent variable is y_2 and the independent variables are $x_1, x_2, x_3,$ and x_4

Three: when the dependent variable is y_3 and the independent variables are $x_1, x_2, x_3,$ and x_4

Four: when the dependent variable is y_4 and the independent variables are $x_1, x_2, x_3,$ and x_4

Five: when the dependent variable is y_5 and the independent variables are $x_1, x_2, x_3,$ and x_4

Six: when the dependent variable is y_6 and the independent variables are $x_1, x_2, x_3,$ and x_4

Seven: when the dependent variable is y_7 and the independent variables are $x_1, x_2, x_3,$ and x_4

Eight: when the dependent variable is y_8 and the independent variables are $x_1, x_2, x_3,$ and x_4

3. Results

The following is a presentation of the statistical results for the evaluation of the dependent and independent variables.

Table 1. Dependent Variable y_1

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	0.247352	0.000	0.295866	0.000	0.250913	0.000
X1	0.000277	0.000	0.000445	0.000	0.000338	0.000
X2	-0.000087	0.002	-0.000079	0.014	-0.000085	0.001
X3	-0.072486	0.101	-0.184046	0.035	-0.089837	0.085
X4	-0.000001	0.940	-0.000023	0.105	-0.000012	0.345
F	5.906		4.640		7.148	
P-value	0.000		0.000		0.000	
R ²	0.383		0.675		0.429	
F-test & Hausman test	F-test					
	F		P-value			
	2.898		0.014			
	Hausman test					
			χ^2		P-value	
		7.404		0.116		

The study compares the three models using two tests:

F-test: to distinguish between the pooled model and the fixed effects model. The result of this check is significant ($F = 2.898, p < 0.05$), inferring that the fixed effects model is preferred.

Hausman test: to distinguish between the random effect model and fixed effects model. The

result of this check is non-significant ($\chi^2 = 7.404$, $p > 0.05$), indicating the random effects model is better.

Based on the previous e.g. Table 1 results, the appropriate model is the random effects model. The results of this model are as follows:

The overall regression model is significant ($F = 7.148$, $p < 0.05$), and the coefficient of determination (R^2) is 0.429, i.e. the independent variables (x_1 , x_2 , x_3 and x_4) explain 42.9% of the variance in the dependent variable (y_1).

According to the e.g. Table 1 results, only x_1 (0.0000) and x_2 (0.0012) have $p < 0.05$ assumes a significance on y_1 . However, x_3 (0.0851) and x_4 (0.3451) have $p > 0.05$ that indicates an insignificant effect on y_1 .

The coefficient of x_1 has a direct effect and is equal to 0.000338. So, for every increase in the x_1 by EGP 1 y_1 increases, overall, by 0.000338, supposing the x_2 , x_3 , x_4 are fixed. The coefficient of x_2 has an indirect effect and is equal to $-8.57E-05$. Thus, for every increase in the x_2 by EGP 1 y_1 decreases, on average, by $8.57E-05$, assuming the x_1 , x_3 , x_4 are fixed.

Table 2. Dependent Variable y_2

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	0.252716	0.0970	0.522356	0.0679	0.385204	0.0929
X1	0.000334	0.2678	-0.000399	0.3183	-7.49E-05	0.8165
X2	0.000146	0.2097	3.74E-05	0.7456	0.000103	0.3111
X3	-0.055916	0.7634	-0.064813	0.8375	-0.019758	0.9372
X4	-0.000110	0.0772	-3.86E-05	0.4744	-6.66E-05	0.1916
F	1.345630		4.041495		0.898846	
P-value	0.270960		0.000854		0.474257	
R^2	0.124071		0.644344		0.086437	
F-test & Hausman test	F-test					
	F		P-value			
	4.713639		0.0007			
	Hausman test					
			χ^2		P-value	
		2.411391		0.6606		

The study compares the three models using two tests:

F-test: to distinguish between the pooled model and the fixed effects model. The result of this check is significant ($F = 4.713639$, $p < 0.05$), indicating that the fixed effects model is better.

Hausman test: to distinguish between the fixed effects model and the random effects model. The result of this check is non-significant ($\chi^2 = 2.411391$, $p > 0.05$), indicating random effects model is better.

According to e.g. Table 2 above, F-statistics ($p = 0.474257$) $p > 0.05$. Thus, the whole model is non-significant. The R-square equals 0.086437 corresponding to 8.6%. The results of the P-value of the F test for each independent variable are x1 (0.8165), x2 (0.3111), x3 (0.9372), x4 (0.1916) individually.

Based on the previous e.g. Table 2 results, the appropriate model is the random effects model. The results of this model are as follows:

The overall regression model is significant ($F = 0.898846$, $p > 0.05$) non-significant. The coefficient of determination (R^2) equal 8.6%.

Table 3. Dependent Variable y3

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	4.748137	0.3634	9.507359	0.0000	11.89553	0.0290
X1	-0.008819	0.3896	0.001121	0.6533	0.000708	0.7737
X2	-0.004910	0.2204	0.000774	0.2842	0.000674	0.3436
X3	17.34003	0.0105	-2.712163	0.1528	-2.527432	0.1753
X4	0.000219	0.9228	0.000305	0.3716	0.000330	0.3294
F	2.851150		228.5579		1.352764	
P-value	0.039090		0.000000		0.271434	
R^2	0.256834		0.991987		0.140872	
F-test & Hausman test	F-test					
	F		P-value			
	244.663458		0.0000			
	Hausman test					
			χ^2		P-value	
		4.756123		0.3132		

The study compares the three models using two tests:

F-test: compare between pooled model and fixed effects model. Result of this test is significant ($F = 244.663458$, $p < 0.05$), indicating that fixed effects model is better.

Hausman test: distinguishes between random effects model and fixed effects model. Result of this check is non-significant ($\chi^2 = 4.756123$, $p > 0.05$), indicating random effects model is better.

According to e.g. Table 3 above that represent the outcomes of the random effects model, F-statistics ($p = 0.271434$) $p > 0.05$. So, the whole model is non-significant. The R-square equal to 0.140872 subsequent to 14%. The P-value of F test of each independent variable are x1 (0.7737), x2 (0.3436), x3 (0.1753), x4 (0.3294) individually.

Based on the previous e.g. Table 3 results, the appropriate model is the random effects model. The results of this model are as follows:

The overall regression model is significant ($F = 1.352764$, $p > 0.05$) non-significant. The coefficient of determination (R^2) equal 14%.

Table 4. Dependent Variable y_4

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	0.015436	0.0490	0.004025	0.7285	0.011615	0.1820
X1	1.30E-05	0.3963	3.82E-05	0.0269	2.54E-05	0.0542
X2	-2.24E-06	0.7042	5.07E-06	0.2953	1.93E-06	0.6415
X3	0.040054	0.0001	0.045844	0.0015	0.042439	0.0001
X4	-4.64E-07	0.8813	-6.26E-06	0.0086	-4.63E-06	0.0307
F	5.507711		10.79738		5.923396	
P-value	0.001344		0.000000		0.000832	
R^2	0.366992		0.828773		0.384053	
F-test & Hausman test	F-test					
	F		P-value			
	8.689996		0.0000			
	Hausman test					
			χ^2		P-value	
		8.980611		0.0616		

The study compares the three models using two tests:

F-test: to distinguish among pooled model and fixed effects model. Results are of significance ($F = 5.923396$, $p < 0.05$), indicating that fixed effects model is better.

Hausman test: to distinguish between random effects model and fixed effects model. Outcomes show non-significance ($\chi^2 = 8.980611$, $p > 0.05$), indicating random effects model is better.

Based on previous e.g. Table 4 results, the appropriate model is the random effects model. The results of this model are as follows: The overall regression model is significant ($F = 5.923396$, $p < 0.05$), and coefficient of determination (R^2) is 0.384053, i.e. the independent variables (x_1 , x_2 , x_3 and x_4) explain 38.4% of the variance in the dependent variable (y_4).

According to the e.g. Table 4 results, x_1 (0.0542), x_2 (0.6415), x_3 (0.0001), x_4 (0.0307)

x_1 ($p > 0.05$) and x_2 ($p > 0.05$) imply non-significance on y_4 . However, x_3 ($p < 0.05$) and x_4 ($p < 0.05$) show significance on y_4 . The x_3 coefficient has a direct effect and is equal to 0.042439. In turn, when x_3 increases by EGP 1 there is an overall increase in y_4 by 0.042439, assuming the x_1 , x_2 , x_4 are fixed. The coefficient of x_4 has an indirect effect and is equal to -4.63E-06. So, when x_4 increases by EGP 1 y_4 decreases -on average- by 4.63E-06, assuming the x_1 , x_2 , x_3 are fixed.

Table 5. Dependent Variable y5

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	0.573330	0.0022	0.394811	0.3799	0.573330	0.0022
X1	-0.000754	0.0375	-0.000770	0.2332	-0.000754	0.0370
X2	0.000302	0.0314	0.000526	0.0076	0.000302	0.0309
X3	0.421389	0.0597	0.357579	0.4835	0.421389	0.0589
X4	-0.000124	0.0904	-0.000124	0.1585	-0.000124	0.0893
F	4.724803		2.175165		4.724803	
P-value	0.003411		0.040106		0.003411	
R ²	0.332152		0.493690		0.332152	
F-test & Hausman test	F-test					
	F		P-value			
	1.028045		0.4419			
	Hausman test					
			χ^2		P-value	
		7.038992		0.1338		

According to e.g. Table 4 F-test: to distinguish between pooled model and fixed effects model, result of this check is non-significant ($F = 1.028045$, $p > 0.05$), indicating that the pooled model is better. In relation to previous outcomes, the appropriate model is the pooled model.

The results of this model are as follows: The overall regression model is significant ($F = 4.724803$, $p < 0.05$), and the coefficient of determination (R^2) is 0.332152, i.e. the (x1, x2, x3 and x4) independent variables explain 33.2% of the variance in the dependent variable (y5).

According to e.g. Table 5 the F-statistics ($p=0.003411$) so $p<0.05$. Thus, the entire model is significant. The results x1 (0.0375), x2 (0.0314), x3 (0.0597), x4 (0.0904) individually. The independent variables x1 ($p < 0.05$) and x2 ($p < 0.05$) have significance on y5, while x3 ($p > 0.05$) and x4 ($p > 0.05$) have non-significance on y5. The x1 coefficient has indirect effect and is equal to -0.000754. This means for every increase in the x1 by EGP1 the y5 decreases by 0.000754, assuming x2, x3, x4 are fixed. The coefficient of x2 has direct effect and is equal to 0.000302. This explains that whenever x2 increases EGP 1 there is a general increase in y5 by 0.000302, assuming x1, x3, x4 are fixed.

Table 6. Dependent Variable y6

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	0.027153	0.1926	0.007561	0.6133	0.021593	0.4099
X1	3.69E-06	0.9287	1.73E-05	0.4183	1.50E-05	0.4703
X2	-5.12E-06	0.7477	-5.88E-07	0.9243	-1.21E-06	0.8421
X3	0.023770	0.3557	0.038812	0.0285	0.037615	0.0277
X4	-1.90E-06	0.8209	-2.54E-06	0.3828	-2.40E-06	0.4029
F	0.253670		34.87092		1.578192	
P-value	0.905625		0.000000		0.199908	
R ²	0.026008		0.939874		0.142459	
F-test & Hausman test	F-test					
	F		P-value			
	48.975328		0.0000			
	Hausman test					
			χ^2		P-value	
		0.650879		0.9572		

The study compares the three models using two tests:

F-test: to distinguish between pooled model and fixed effects model. Results display significance ($F = 48.975328$, $p < 0.05$), indicating that fixed effects model is better.

Hausman test: to differentiate between random effects model and fixed effects model. Results prove non-significance ($\chi^2 = 0.650879$, $p > 0.05$), indicating that random effects model is better.

Based on previous e.g. Table 6 results, the appropriate model is the fixed effect model.

The coefficient of determination (R^2) is 0.142459, i.e. the independent variables (x1, x2, x3 and x4) explain 14.2% of the variance in the dependent variable (y6).

According to the e.g. Table 6 results, x1 (0.4703), x2 (0.8421), x3 (0.0277), x4 (0.4029) individually. The x1 ($p > 0.05$), x2 ($p > 0.05$), and x4 ($p > 0.05$) independent variables have non-significance on y6, while x3 ($p < 0.05$) has a significance on y6. The x3 coefficient has direct effect and is equal to 0.037615. This shows that whenever x3 increases by EGP1 there is an increase in y6 with an overall value of 0.037615, assuming x1, x2, x4 are fixed.

Table 7. Dependent variable y7

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	0.776028	0.0000	0.840974	0.0000	0.787391	0.0000
X1	-0.000271	0.0026	-9.25E-05	0.5230	-0.000234	0.0126
X2	0.000127	0.0003	0.000122	0.0062	0.000121	0.0006
X3	-0.041746	0.4272	-0.183745	0.1180	-0.058816	0.3370
X4	2.37E-05	0.1722	1.06E-05	0.5902	2.05E-05	0.2298
F	5.232993		2.880056		4.646938	
P-value	0.001855		0.008701		0.003749	
R ²	0.355189		0.563521		0.328477	
F-test & Hausman test	F-test					
	F		P-value			
	1.537970		0.1816			
	Hausman test					
			χ^2		P-value	
		4.092307		0.3937		

According to e.g. Table 7 F-test: to compare pooled model and the fixed effects model, results reveal non-significance ($F = 1.537970$, $p > 0.05$), indicating that the pooled model is better.

The results of this model are as follows: the overall regression model is significant ($F = 5.232993$, $p < 0.05$), and the coefficient of determination (R^2) is 0.355189, i.e. the (x1, x2, x3 and x4) independent variables explain 35.5% of the variance in the dependent variable (y7).

According to e.g. Table 4 the F-statistics ($p = 0.001855$) is less than 0.05. Therefore, there is overall significance. Results present x1 (0.0026), x2 (0.0003), x3 (0.4272), x4 (0.1722) individually. The x1 ($p < 0.05$) and x2 ($p < 0.05$) independent variables have significance on y7, while x3 ($p > 0.05$) and x4 ($p > 0.05$) have non-significant on y7.

The x1 coefficient has indirect effect and is equal to -0.000271. Consequently, when x1 increases EGP1 y7 will decrease by about 0.000271, assuming x2, x3, x4 are fixed. The coefficient of x2 has direct effect and is equal to 0.000127. Accordingly, when x2 increases EGP1 y7 increases by 0.000127, assuming x1, x3, x4 are fixed.

Table 8. Dependent Variable: Y8

Independent variables	Pooled model		Fixed effects model		Random effects model	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Constant	10.36703	0.0348	23.92257	0.0350	11.62339	0.0608
X1	0.009486	0.3233	-0.021265	0.1789	0.003275	0.7537
X2	0.005865	0.1171	-1.34E-05	0.9976	0.005130	0.1617
X3	-5.268782	0.3760	-6.348233	0.6097	-4.291338	0.5642
X4	-0.003982	0.0457	-0.001231	0.5606	-0.003244	0.0891
F	1.734847		2.052958		1.131637	
P-value	0.162479		0.052555		0.356199	
R ²	0.154417		0.479246		0.106441	
F-test & Hausman test	F-test					
	F		P-value			
	2.009915		0.0748			
	Hausman test					
	χ^2		P-value	4.882239		0.2996

According to e.g. Table 8 F-test: to distinguish between pooled model and fixed effects model, outcomes are non-significant ($F = 2.009915$, $p > 0.05$), indicating that the pooled model is better.

According to previous e.g. Table 8 outcomes, the pooled model is the appropriate. The results of this model are as follows: The overall regression model is significant ($F=1.734847$, $p > 0.05$), and the coefficient of determination (R^2) is 0.154417, i.e. the (x_1 , x_2 , x_3 and x_4) independent variables explain 15.4% of the variance in the dependent variable (y_8).

According to table 8 the F-statistics ($p=0.162479$) exceeds 0.05 suggesting overall non-significance.

The e.g. Table 8 results present x_1 (0.3233), x_2 (0.1171), x_3 (0.3760), x_4 (0.0457) individually. Consistent with the result, the independent variables x_4 ($p < 0.05$) has a significance on y_8 , while x_1 ($p > 0.05$), x_2 ($p > 0.05$), and x_3 ($p > 0.05$) have non-significance on y_8 . The x_4 coefficient has indirect effect and is equal to -0.003982. Hence, when x_4 increases by EGP1 y_8 decreases by 0.003982, assuming x_1 , x_2 , x_3 are fixed.

Table 9. Summary

Dependent Variable	Independent Variable	Model	Description
Y1	X1, X2, X3, X4	Random effect	Is effected by x1(direct) and x2(indirect)
Y2		Random effect	No impact
Y3		Random effect	No impact
Y4		Random effect	Is effected by x3(direct) and x4(indirect)
Y5		Pool	Is effected by x1(indirect) and x2(direct)
Y6		Random effect	Is effected by x3(direct)
Y7		Pool	Is effected by x1(indirect), x2(direct)
Y8		Pool	Is effected by x4(indirect)

From the evaluation results e.g. Table 9, the study generally confirms firm specific factors have a significant impact on financial performance of the lessor after the application of both the IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). Thus, the H1 is confirmed. Results also specifically identifies x1 (sales) impacts (y1 asset turn over, y5 ROCE, y7 total debt/total assets) x2 (financial liabilities) impacts (y1 asset turn over, y5 ROCE, y7 total debt/total assets) x3 (EBIT/operating profit or loss) impacts (y4 EPS, y6 current ratio) x4 (financial leased fixed assets) impacts (y4 EPS, y8 total debt/total equity).

4. Discussion

During the period from April to June 2020 and 2021, there was an increase in the number and the value of the financial leasing contracts. From April to June 2020 and April to June 2021 the number of the financial leasing contracts increased from 482 to 942 respectively representing an increase of 95.4%. From April to June 2020 and April to June 2021 the value of the financial leasing contracts increased from 9292.5 million Egyptian pounds to 19180.3 million Egyptian pounds respectively representing an increase of 106.4%.

The top three financial lease contracts sectors are the real estate and land, transportation vehicles, and heavy equipment for April to June 2021 and April to June 2020. From April to June 2021, the real estate and land sector acquired the largest share of the value of financial

leasing contracts worth to about 15,776.7 million Egyptian pounds representing 82.25% of the total value of contracts. From April to June 2020, the real estate and land sector acquired about 7,395.6 million Egyptian pounds representing 79.59% of the total value of contracts. From April to June 2021, the transport vehicles sector acquired about 877.3 million Egyptian pounds representing 4.57% of the total value of contracts. From April to June 2020, the transport vehicles sector acquired about 557.7 million Egyptian pounds representing 6.00% of the total value of contracts. From April to June 2021, the heavy equipment sector acquired about 787.7 million Egyptian pounds representing 4.11% of the total value of contracts. From April to June 2020, the heavy equipment sector acquired about 362.0 million Egyptian pounds representing 3.90% of the total value of contracts.

The total market shares of financial leasing companies for April to June 2021 was 18632.3 million Egyptian pounds. The top three financial leasing companies for April to June 2021 are in first place EFG Hermes Financial Solutions with 3,228.2 Egyptian pounds representing 17.33% of total market shares. In second place, Corpless Leasing - Egypt (Corpless) with 2,936.8 Egyptian pounds representing 15.76% of total market shares. In third place, BM Financial Leasing with 2,036.6 Egyptian pounds representing 10.93%.

Financial leasing companies provided loans worth 35.6 billion Egyptian pounds during the first six months of 2021. This represented an annual increase of 39%. In first place was Corpless Leasing - Egypt (Corpless) with a share of 16.6% of the value of contracts during the period. In second place was BM Financial Leasing Company with a share of 15.1%. In third place was EFG Hermes Financial Solutions with a share of 10.7%.

According to the non-bank financial activities monthly reports issued by the Egyptian Financial Regulatory Authority, EFG Hermes Financial Solutions acquired the highest percentage of shares that reached 21.8% of the financial leasing market in Egypt by the end of June 2021. EFG Hermes Financial Solutions lent 2.2 billion pounds to customers in June, while it lent only 1.1 billion pounds in May. After that came BM Financial Leasing Company with a share of 16.8%, followed by Corpless Leasing - Egypt (Corpless) Financial Leasing Company in third place with a share of 11.9%.

There was an overall increase in the market monthly lending rate in June 2021 by 151.3% representing an annual record of 10.7 billion Egyptian pounds, compared to 4.3 billion Egyptian pounds in 2020.

The total financial leasing contracts reached an amount of 10.1 billion Egyptian pounds for 2021. Financial leasing contracts amounted to 79.8 billion Egyptian pounds in 2021, compared to 58.9 billion Egyptian pounds in 2020. This represents an increase of 35.5% most likely due to the recovery from the consequences of the COVID 19 pandemic.

A report issued by the Egyptian Financial Regulatory Authority revealed that there was an increase in the number of companies operating in the financial leasing during the last 5 years during 2017-2021. There were 46 companies by the end of 2021, while only 27 companies existed in 2017. This report also explained that there was an increase in the number of contracts from 1,759 to 3,516 by the end of the year 2021. This is in addition to the increase

in the value of the contracts from 28.6 billion Egyptian pounds in the year 2017 reaching 79.8 billion Egyptian pounds by the end of 2021. The real estate and land sector had the highest record of 66.741 billion Egyptian pounds worth of contracts for the year end 2021, while only 21.045 billion Egyptian pounds worth of contracts for 2017. After that came the automobile sector that had contracts worth 4.845 billion Egyptian pounds by the end of 2021, while only 2.185 billion Egyptian pounds for the year 2017. The machinery and equipment contracts amounted to 3.122 billion Egyptian pounds for the year-end 2021, while only 1.433 billion Egyptian pounds for the year end 2017

5. Conclusion

This study is an addition to the current literature for a couple of reasons. First, it tracks 10 lessor firms listed in the Egyptian FRA for five years 2016-2020 adequate to identify change. Second, this study focuses on lessors that apply both IFRS 16 equivalent of EAS 49 and Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). Lack of studies on lessor firms adopting IFRS 16 in developing countries is the catalyst of this study. According to the financial statements evaluated in this study, the key observation was the noticeable change in numbers throughout the study period 2016-2020. The aim of this study is to identify the impact of some firm specific factors on lessor financial performance after applying EAS 49 (2019) and the Financial Leasing and Factoring Act (Law 176 of 2018). From the evaluation results and the discussion above, the study generally confirms the firm specific factors actually have a significant impact on lessor financial performance after application of both the IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). Thus, the H1 is confirmed. Results also specifically identifies X1 (sales) impacts (y1 asset turn over, y5 ROCE, y7 total debt/total assets) X2 (financial liabilities) impacts (y1 asset turn over, y5 ROCE, y7 total debt/total assets) X3 (EBIT/operating profit or loss) impacts (y4 EPS, y6 current ratio) X4 (financial leased fixed assets) impact (y4 EPS, y8 total debt/total equity). The available data in this study provided by the Egyptian Financial Regulatory Authority FRA was limited to only 10 nonfinancial institutions without their names for lessors during 5 years (2016-2020) equivalent to 50 firm year observations.

By using the results concluded from this study, managers will be able to make better decisions regarding their financing and better strategies to improve firm performance. A couple of limitations may serve as future studies. First, the study applies to the lessors adopting IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). Secondly, the study analyzes data for only 10 lessor firms adopting IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). Researchers can make more studies for more lessor firms for a better comparison of the before and after application of IFRS 16 equivalent of the EAS 49 and the Egyptian Financial Leasing and Factoring Act (Law 176 of 2018). These limitations discussed above influence the generalization of the results. In addition, researchers can evaluate data from financial institutions instead of nonfinancial institutions. Also, researchers can examine lessee institutions instead of the lessors.

Acknowledgement

The data used in this paper is available and can be accessed directly from Egyptian Financial Regulatory Authority FRA. We appreciate the work of Dr. Sayed Mohamed Bahrawy, Helwan University, on the statistical analysis made. All errors are our own. Both authors worked equally on the paper.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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