

Evaluation of the Effect of Non-Current Fixed Assets on Profitability and Asset Management Efficiency

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ABSTRACT

The purpose of this article is to investigate the problem, which stems from non-current fixed assets affecting profitability and asset management efficiency. Tangible assets, intangible assets and financial assets are all included in non-current fixed assets. The aim of the research is to identify the impact of estimates and valuation in accounting for non-current fixed assets through several objectives, for example, explanation of the impairment tests of tangible and intangible assets under IFRS. This study relied on combining the deductive approach with the quantitative analysis approach, where the deductive approach was used to root the subject through books, periodicals and scientific communications and electronic articles published online. The results of the research: The differences in the measurement of accounting figures under IFRS and EAS may directly affect the numerator of ratio calculations, their denominator, or both. In cases where the difference in measurement affects only the numerator or only the denominator, the effect of the changes is straightforward, easy to identify and to interpret. Identification and interpretation are less obvious in cases of numerous diverging effects on ratios. The results provided by this article have a practical value for designers and users of financial statements.

KEYWORDS

Non-currents fixed assets, profitability, asset management efficiency, EAS, IFRS

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Introduction

Tangible assets with an economic life of longer than one year and intended to be held for the company's own use are recorded on the balance sheet at cost, which is typically the same as their fair value. According to US GAAP Fair value is defined in International Financial Reporting Standards (IFRS) as the amount for which an asset could be exchanged or a liability settled, between knowledgeable, willing parties in an arm's length transaction' and under U.S.

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generally accepted accounting principles. According to FASB fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (Schweser, 2013; Nikolaev, 2013).

Tangible assets that are relatively permanent and are needed for the production or sale of goods or services are termed property, plant, and equipment (PP&E), or fixed assets. These assets are not held for sale in the ordinary course of business. The broad group is usually separated into classes according to the physical characteristics of the items, for example, land, buildings, machinery and equipment (Lerner, 2004; Ashmarina & Zotova, 2015).

Acquiring tangible assets

Accounting for an intangible asset depends on how the asset is acquired. If several assets are acquired as part of a group, the purchase price is allocated to each asset on the basis of its fair value. An asset's cost potentially includes expenditures additional to the purchase price (Chua & Taylor, 2008). The main accounting treatment for expenditures related to long live assets is capitalized or expensed. Expenditure related to long-life assets capitalized when shown on the balance sheet, while expensed when shown on the income statement.

General financial statement impact of capitalizing versus expensing

The effects on an individual company's trend analysis and on comparability across companies (IAS 16 Property). In the period of the expenditure, an expenditure that is capitalized increases the number of assets on the balance sheet and appears as an investing cash outflow on the statement of cash flows. In subsequent periods, a company usually allocates the capitalized amount over the asset's useful life as depreciation or amortization expense. This depreciation or amortization expense reduces profit on the income statement and reduces the carrying amount of the asset on the balance sheet. Depreciation and amortization are non-cash expenses and, therefore, apart from a potential effect on taxes payable (a reduction in taxes payable), have no impact on cash flows (Chua & Taylor, 2008).

When the indirect method is used to report cash flows from operating activities, depreciation and amortization expenses appear on the statement of cash flows:

- In reconciling net income to operating cash flow as required by the indirect method, the company must adjust profit or loss by adding back depreciation and amortization expenses (Lantto & Sahlström, 2009; Ashmarina, Zotova & Smolina, 2016).
- When expenditure does not meet asset recognition criteria, the expenditure is treated as an expense in the period it is made and reduces net income and operating cash flows by the entire after-tax amount of the expenditure. No asset is recorded on the balance sheet, and thus, no depreciation or amortization expense is recognized in future periods.
- The lower amount of net income in the initial period is reflected in lower retained earnings on the ending balance sheet of the period. There is no additional effect on the financial statements of subsequent periods.

- Compared with a company that capitalizes expenditure, a company that expenses expenditure will have lower net income in the period of expensing and higher net income thereafter.

- In general, all else equal, accounting decisions that result in recognizing expenses sooner will give the appearance of greater subsequent growth (a more positive earnings trend in periods following the recognition of the expense) (Lerner, 2004).

- In contrast, capitalizing rather than expensing an expenditure results in a greater amount reported as cash from operations because the capitalized expenditure is shown as an investment cash outflow whereas the expense is an operating cash outflow. Cash from operations is an important consideration in valuation, so companies may aim to maximize reported cash from operations (Milburn & Skinner, 2001).

- When an asset is exchanged for another asset, the asset acquired is recorded at fair value if reliable measures of fair value exist. Fair value is the fair value of the asset given up unless the fair value of the asset acquired is more clearly evident. If there is no reliable measure of fair value, the acquired asset is measured at the carrying amount of the asset given up. In this case, the carrying amount of the assets is unchanged, and no gain or loss is reported (Lerner, 2004).

- Accounting for the exchange involves removing the carrying amount of the asset given up, adding a fair value of the asset acquired and reporting any difference between the carrying amount and the fair value as a gain or loss.

- A gain would be reported when the fair value used for the newly acquired asset exceeds the carrying amount of the asset given up.

- A loss would be reported when the fair value used for the newly acquired asset is less than the carrying amount of the asset given up.

- Acquisition, the buyer records property, plant, and equipment at cost. In addition to the purchase price, the buyer also includes, as part of the cost of an asset, all the expenditures necessary to get the asset ready for its intended use (Zarb, 2006; Ashmarina & Khasaev, 2015). For example, freight costs are borne by the purchaser to get the asset to the purchaser's place of business and special installation and testing costs required to make the asset usable are included in the total cost of the asset.

Subsequent expenditures related to fixed assets are included as part of the recorded value of the assets on the balance sheet if they are expected to provide benefits beyond one year in the future and are expensed if they are not expected to provide benefits in future periods.

- When a company constructs an asset (or acquires an asset that requires a long period of time to get ready for its intended use), borrowing costs incurred directly related to the construction are generally capitalized.

- Constructing a building, whether for sale (in which case, the building is classified as inventory) or for the company's own use (in which case, the building is classified as a long-lived asset), typically requires a substantial amount of time. To finance construction, any borrowing costs incurred prior to the asset being ready for its intended use are capitalized as part of the cost of the asset.



- The company determines the interest rate to use on the basis of its existing borrowings or, if applicable, on a borrowing specifically incurred for constructing the asset. If a company takes out a loan specifically to construct a building, the interest cost on that loan during the time of construction would be capitalized as part of the building's cost.
- Under IFRS, but not under U.S. GAAP income earned on temporarily investing the borrowed monies decreases the amount of borrowing costs eligible for capitalization.
- A company's interest costs for a period are included either on the balance sheet (to the extent they are capitalized as part of an asset) or on the income statement (to the extent they are expensed) (Lerner, 2004).
- If the interest expenditure is incurred in connection with constructing an asset for the company's own use, the capitalized interest appears on the balance sheet as a part of the relevant long-lived asset.
- The capitalized interest is expensed over time as the property is depreciated and is thus part of subsequent years' depreciation expense rather than interest expense of the current period, If the interest expenditure is incurred in connection with constructing an asset to sell (for example, by a home builder), the capitalized interest appears on the company's balance sheet as part of inventory.
- The capitalized interest is expensed as part of the cost of goods sold when the asset is sold. Interest payments made prior to completion of construction that is capitalized are classified as an investing cash outflow. Expensed interest may be classified as an operating or financing cash outflow under IFRS and is classified as an operating cash outflow under U.S. GAAP (Milburn & Skinner, 2001).

Methodological framework

This research will discuss the ratio analysis of a selected company that had changed its financial statements from Egyptian Accounting Standards (EAS) to the IFRS in order to measure the impact long term assets choices on company's profitability and activity management. This company is Orascom for Construction Industries (OCI).

Orascom Construction Industries S.A.E. (OCI S.A.E.) is the former parent company of OCI N.V. OCI N.V. acquired 99.84% of OCI S.A.E. in a mandatory tender offer between 2013 and 2014. The residual shares remain listed on the Egyptian Exchange under the symbol OCIC. The Company intends to re-launch the mandatory tender offer subject to regulatory approvals.

OCI S.A.E. owns certain fertilizer and construction activities based in North Africa. As part of the Demerger of the Engineering and Construction Group to form Orascom Construction Limited (Orascom Construction) in March 2015, the Company intends to demerge OCI S.A.E. into two separate groups, an Egyptian fertilizer group company and an Egyptian construction group company (Egypt Demerger).

This process will be the final step in the complete separation of both businesses. Upon completion of the Egypt Demerger, OCI S.A.E.'s Egyptian construction group company (Construction Egypt) will formally become a legal

subsidiary of Orsacom Construction. The Egypt Demerger requires the approval of EFSA and GAFI.

Until the Egypt Demerger is approved and affected, Orascom Construction retains the economic benefits and liabilities of the construction activities under OCI S.A.E., and OCI N.V. retains the economic benefits and liabilities of the fertilizer activities under OCI S.A.E. through a Conditional Sale Agreement. OCI N.V. is listed on the NYSE Euronext in Amsterdam and that is the main reason that OCI had adapted the IFRS to its financial statements from 2013 and for the coming years.

The firms' profitability ratios that will be used are:

Gross Profit Margin, Operating Profit Margin, Net Profit Margin, ROE, and ROA.

1- Gross Profit Margin = Gross profits / Sales

It measures the % of each sales dollar remaining after the firm has paid for its goods. The higher the GPM, the better.

2- Operating Profit Margin = Operating profits / Sales

It measures the % of each sales dollar remaining after all operating expenses other than interest and taxes are deducted. The higher the OPM, the better.

3- Net Profit Margin = Net Profit / Sales

It measures the % of each sales dollar remaining after all costs and expenses including interest and taxes have been deducted. The higher the NPM, the better.

4- Return on Total Assets = Net Profit After Taxes / Total Assets

It measures the overall effectiveness of management in generating profits with its available assets. The higher the ROA, the better.

5- Return on Equity = Net Profit After Taxes / Equity

It measures the return earned on the shareholders' investment in the firm. The higher the ROE, the better for the owners.

As well as Asset Activity Management ratios such as:

Fixed Asset Turnover, Inventory Turnover, Accounts Receivable Turnover, and Total Asset Turnover.

1-Fixed Asset Turnover = Sales / Fixed Assets

It indicates the efficiency with which the firm uses its fixed assets to generate sales. Generally, the higher a firm's fixed asset turnover, the more efficiently its fixed assets have been used.

2-Inventory Turnover = COGS / Inventory

It measures the activity, or liquidity, of a firm's inventory. The resulting turnover is meaningful only when it is compared with that of other firms.

3-Accounts Receivable Turnover = Sales / Accounts Receivable

It measures the activity of the accounts receivable collection. The more activity in collection is required within the boundaries of the industry that the firm works in.

4-Total Asset Turnover = Sales / Total Assets



It indicates the efficiency with which the firm uses its assets to generate sales. Generally, the higher a firm's total asset turnover, the more efficiently its assets have been used.

Profitability Ratios

The following table presents financial statement analysis for OCI showing the effect of non-current fixed assets accounting choices on the profitability ratios.

Table 1. Financial statement analysis for OCI

Ratio	2012	2013	2014	Analysis	Sector Average TTM	Comparison with the sector
Gross Profit Margin	19.6%	24.7%	27.4%	Improved	24.02%	Stronger
Operating Profit Margin	(8%)	21.4%	8%	Fluctuated	8.5%	Weaker
Net Profit Margin	(35.2%)	10.5%	16.8%	Improved	5.39%	Stronger
Return on Assets	(16.8%)	2.5%	4.25%	Improved	3.49%	Stronger
Return on Common Equity	(109%)	12.4%	17.7%	Improved	6.92%	Stronger

Source: the sector average collected from Reuters reports about the construction sector in Egypt according to The Last Twelve Month (TTM)

From the table above, we can find that most of the profitability ratios had been improved. The improvements were due to many reasons, but one of the most important reasons for improvements from the year 2012 to the next years was the using of IFRS. Using IFRS allowed OCI to recalculate depreciation and amortization again which led to enhancing the balance sheets numbers as well as the income statement expenses that had been recalculated again according to the new standards under IFRS.

Not only that but also, many of the costs that had been expensed previously under the Egyptian Accounting Standards had been capitalized on the balance sheets which decreases the expenses in the income statement and capitalized on the assets in the balance sheets which led to increase in Assets.

All these improvements in the financial statements enhanced the performance of the OCI as we can see from the above table significantly. OCI attempted to make these changes in its financial statements after listing its stocks in Dubai Stock Exchange beside the Egyptian Stock Exchange.

From the year 2012 audited financial statements for OCI have been prepared in compliance with International Financial Reporting Standards (IFRS) as was mentioned earlier. The final audited 2012 accounts prepared under IFRS differ from the unaudited 2012 accounts prepared under EAS and those presented with 2013 half yearly accounts. The differences relate to accounting for goodwill and changes in consolidation method for certain joint ventures. The principal change in respect of joint ventures in the 2012 balance sheet was the full consolidation of Sorfert (a subsidiary of OCI). This has

resulted in additions to assets and liabilities including additional net debt of \$ 723.2 million as at 31 December 2012.

A further goodwill impairment charge of \$ 490.1 million, bringing the total charge to \$ 900.0 million has been recorded in 2012. There is no further impairment required in 2013. Going forward, we are considering to combine certain fertilizer assets including goodwill into one cash generation unit (CGU), given the organizational changes initiated at the end of 2013. Regarding capital costs capitalization, OCI had gone through important years of capitalization in 2012, 2013 and 2014.

Results and Discussions

The differences in the measurement of accounting figures under IFRS and EAS may directly affect the numerator of ratio calculations, their denominator, or both. In cases where the difference in measurement affects only the numerator or only the denominator, the effect of changes is straightforward, easy to identify and to interpret. Identification and interpretation are less obvious in cases of numerous diverging effects on ratios. For example, a lower profit under IFRS will pull down the ROA by reducing the numerator but, at the same time, will pull it up by reducing net income in the denominator.

Moreover, there might be distinct accounting differences between IFRS and EAS that have opposite effects on a particular ratio. An example is an impact on the receivables turnover because of higher accounts receivables under IFRS due to earlier recognition receivables concurrent with higher revenues due to the recognition of sales revenue earlier.

There are two main areas of fundamental difference between IFRS and EAS – fair value accounting and consolidation. A higher reliance on fair value accounting in IFRS represents a substantial difference compared with EAS. Fair value adjustments introduce volatility in accounting figures as unrealized gains and losses are recognized before the realization of a transaction with external parties. However, the application of fair value under IFRS is limited when it is optional. Fair value accounting may cause three possible effects on financial statements. First, balance sheet figures are adjusted. Second, some unrealized gains and losses are directly allocated to the income statement. Third, other unrealized gains and losses bypass the income statement until realization through a transaction with external parties or until impairment adjustment and are allocated to OCI. Therefore, there are several ratios that are affected by fair value accounting: liquidity and leverage ratios, as a result of balance sheet variations; profitability and coverage ratios, as a result of balance sheet variations and recognition of unrealized gains or losses.

The consolidation differences between IFRS and EAS also have important implications on ratios. The measurement of assets, liabilities and minority interest at their full fair value on the date of acquisition in IFRS changes every ratio involving balance sheet items. In practice, however, it is difficult to identify those changes because the differences are incorporated or combined in the consolidated figures. Major effects on financial statements also exist when it comes to the presentation of minority interest. Under IFRS, the annual share of profit attributed to minority interest is allocated directly to equity. As such, the profitability ratios are directly affected.



On the liability side, a number of IFRSs differ from the corresponding standards under EAS. The standards on leases, pensions and contingencies may require different levels of liabilities under IFRS. Also, the standard on share-based payments may change expenses and equity. Leverage and profitability ratios are particularly sensitive to these standards.

Differences between IFRS and EAS do not affect cash flows. In general, IFRS does not change the cash flow statement compared with EAS, although there may be some differences in presentation. This is particularly evident for interest and dividends and in the scope of consolidation wherein consolidated cash flows depend on which entities are controlled or jointly controlled.

There are differences between IFRS and EAS regarding the details of application in the following areas: revenues and construction contracts; long-lived assets; investments in associates and joint ventures; government assistance; exploration and evaluation of mineral resources; leases; employee future benefits; stock-based compensation and payments; income taxes; contingencies; related party transactions; hedging; foreign currency translation; earnings per share; accounting changes; interim reporting; and various presentation issues.

Overall, the differences between IFRS and EAS affect all financial statements. The differences in balance sheet figures, caused by fair value accounting, consolidation procedures and others, impact directly the numerator and denominator of some components of profitability and asset activity management ratios. The differences between the income statement also affect profitability and asset activity ratios.

Conclusion

This research encourages analysts to adopt a cautious approach when examining financial ratios during the transition to IFRS in all countries. Comparing ratios based on IFRS figures with those based on EAS is not fully appropriate. Users of financial statements need to distinguish reported performance changes caused by the transition to IFRS from those caused by changes in the business. One possible solution may be to recalculate previous ratios using IFRS retroactive information presented in the year of the transition. However, this may be a costly exercise, which is still subject to limitations, such as exemptions and exceptions allowed by IFRS. Analysts need to be aware of the main features of IFRS that differ from EAS.

While IFRS does not influence significantly overall financial ratios, there are notable differences at the level of individual ratios. This is also confirmed by a noticeable increase in the volatility of a number of IFRS ratios. Financial analysts should pay particular attention to situations where IFRS and EAS lead to uneven results. Otherwise, the comparability may be impaired and the trend analysis might be frustrated.

After researching this subject matter it is advised to rely on cash flow analysis, particularly in cases when accounting practices are subject to uncertainty or the sole discretion of management. The reason may lie in the fact that cash flows are not affected by changes in accounting practices except for situations where the scope of consolidation changes. It is more likely to verify the uniformity of the underlying figures when using gross profit and operating profit margins in profitability analysis.

Finally, users of financial statements must be mindful of the new feature «comprehensive income» with two ratios: the comprehensive ROA and the comprehensive ROE. These ratios are adapted from the regular ROA/ROE, but with the comprehensive income at the numerator. The comprehensive income incorporates unrealized gains and losses that pass the profit of the income statement. A difference between the regular and the comprehensive versions of ROA and ROE should prompt further investigation of the underlying causes.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

- Ashmarina, S. I. & Khasaev, G. R. (2015). Methodical estimation basic concepts of organization changes' requirements level and enterprises' readiness to their implementation. *Review of European Studies*, 7(2), 1-9.
- Ashmarina, S. I., Zotova, A. S. & Smolina, E. S. (2016). Implementation of financial sustainability in organizations through valuation of financial leverage effect in Russian practice of financial management. *International Journal of Environmental and Science Education*, 11(10), 3775 – 3782.
- Ashmarina, S. I. & Zotova, A. S. (2015). The reasoning for methodical instruments of evaluation of organization readiness, possibility and necessity to implement the organizational changes. *Mediterranean Journal of Social Sciences*, 6(3), 44-48.
- Chua, W. F. & Taylor, S. L. (2008). The rise and rise of IFRS: An examination of IFRS diffusion, *Journal of Accounting and Public Policy*, 27, 462-473.
- Lantto, A. M. & Sahlström, P. (2009). The impact of International Financial Reporting Standard Adoption on Key Financial Ratios. *Accounting and Finance*, 49, 341-361.
- Lerner, J. (2004). *Bookkeeping an accounting*. New York: McGraw- Hill, 156 p.
- Milburn, J. A. & Skinner, R. M. (2001). *Accounting Standards in Evolution*. Direct access: <https://www.wlu.ca/documents/985/GFC-Dec-15-2004.pdf>
- Nikolaev, A. A. (2013). Key criteria effective strategic management of the Corporation. *Vestnik Samara State University of Economics*, 1(99), 72-74.
- Schweser, S. I. (2013). *Financial reporting and analysis*. Direct access: https://issuu.com/tienduongvan/docs/schweser_notes_2014_book_3
- Zarb, B. J. (2006). The Quest for Transparency in Financial Reporting, *The CPA, Journal*, 24, 254-257.