AN ANALYSIS OF RETURN ON CAPITAL EMPLOYED (ROCE) AND ENHANCED RETURN ON CAPITAL EMPLOYED (EROCE) AS A TOOL FOR APPRAISAL OF FINANCIAL PERFORMANCE OF PHARMACEUTICAL COMPANIES IN INDIA

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ABSTRACT

BACKGROUND

The evaluation of monetary execution recognises the money related qualities and shortcomings of the firm by legitimately setting up connections between the things of the asset report and benefit and misfortune account. The utilisation of the Return On improved Capital Employed (EROCE) as an execution marker is addressed in this paper. An assessment of money related proclamations of real 8 firms recorded on the National Stock Exchange in India uncover that EROCE as at present characterised presents misshaped and deceiving budgetary proportion which bears no association with the genuine capital utilisation of a firm. It likewise uncovered that a genuine measure of productivity in the utilisation of capital assets should be possible utilising capital utilised as characterised in an organisation's accounting report. In any case, it was contended in some examination articles that on the grounds that ROCE is the static measure of capital utilised at a date and not for the whole timeframe it cannot be taken as a pointer for the execution estimation of the organisations. However, in this investigation it was discovered that the utilisation of ROCE as opposed to EROCE as the execution measure will build the viability of the outcomes. It was confirmed by utilising the Pearson's relationship coefficient recipe. The examination prescribes the ROCE is the proportion which expands viability in evaluation of budgetary execution.

KEYWORDS

ROCE, EROCE, Financial Performance, Pharmaceutical Companies.

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BACKGROUND

The main goal of money related detailing is to give data that is helpful to present and potential speculators, banks, and different clients of a company's monetary articulation in making objective venture, credit and other essential business choices (Ezeagba, 2001). This is the motivation behind why the utilisation and translation of a company's monetary outcomes must be finished with most extreme care and alluring proficient mastery.

The second goal is, maybe and most clearly, to give a premise to surveying the inside and outside exhibitions of the firm. The inner execution as to productivity, liquidity and expandability might be effortlessly gotten with the utilisation of near examination of past to introduce period execution as proportion investigation, while the outside execution as to showcase valuation might be acquired similarly through relative examination of the association's execution with its modern standard, peer association and market staying of its offers.

While the inner execution investigation is required for controlling the administration towards expanding the investors value (Lucey, 2003), the outer execution examination then again is required by speculators and other outsiders to indicate how far the administration has possessed the capacity to do only that. With due regard to the position and discoveries of creators who may suspect something, this paper keeps up that a company's interior execution decides its outer position in the stock trade notwithstanding the monetary powers of interest and supply of its stocks, which perpetually is affected by the association's execution.

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Execution sign must be significant to the client in the event that it bears a genuine impression of the relationship that it was proposed to test. This is the motivation behind why a basic audit of the current monetary investigation and interpretational apparatuses especially the proportion which measures administration productivity and viability in the utilisation of accessible assets must be made. In this manner, this paper will take a gander at the arrival on capital utilised (ROCE) and other suitability showing proportions from the point of view of adequacy/rightness both in content and being used. The point being to build up whether the equation, shows understanding and use made of the Return On Capital Employed as right now characterised and the end product Return On Investment (ROI) relates to the outcomes acquired from observational investigation of money related proclamations of 16 chosen cited organisations on the Nigerian Stock Exchange.

As right now characterised, the arrival on capital utilised (ROCE) is a measure of effectiveness of administration in the application or utilisation of the association's assets or assets in a given budgetary period. It is measured by looking at the benefits made by the firm with the capital utilised as a part of making the benefit and set as a rate or portion (Egungwu, 2005). All things considered, we have no squabble with that definition; be that as it may, for the definition to be completely satisfactory, we should discover answers to the accompanying inquiries-

1. What does profits made or net profit mean?
2. What constitutes capital used or capital employed?

Returns and Capital

In attempting to answer the first question above, opinions differ on what should be termed "net profit" as applicable in the determination of the Return on Capital Employed. Whilst some posited that Earnings Before Interest and Tax (EBIT) is more suitable, others argue that Earnings After Interest but Before Tax (EBT) should be more appropriate, still some insist that Earnings After Tax (EAT) or Profit After Tax (PAT) should be the most preferred. Well, a critical look at each position will clarify the reasons for this study.

Earnings before Interest and Tax (EBIT) – Not all organisations borrow to finance their operations. But for those that engages in borrowing, the interest element is the cost of using the borrowed fund. Therefore, the interest on such borrowing is a part and parcel of the firm's operating costs for the financial period. If the fund were not borrowed, the increase in activities level attributable to the borrowed fund would not have been possible as existing finances couldn't have carried the activities level beyond its own scope. Moreover, the borrowed fund becomes an integral part of the firm's total capital employed for the purpose of achieving the period's results. Hence, the exclusion of interest from the determination of the financial performance of a firm is inaccurate and therefore unacceptable.

Earnings before Tax (EBT) also Profit before Tax (PBT) – The profit before tax after interest has been charged is the true return on investment or capital employed for the financial period. The reason for this is obvious. To start with, tax is an appropriation of profit no matter how one looks at it. Secondly, tax assessment and payment decisions are outside the jurisdiction and prerogative of management as these are the exclusive preserve of the state through the various tax authorities. The least management could do is to take cosmetic decisions aimed mostly at reducing the effects of taxation in the form of tax incentives and relief such as capital allowances and deferred payments. Thus, if tax is seen as an appropriation of profit (which it is), then the true net profit is reached once the interest element has been deducted. This is the position of this paper.

Profit After Tax – Profit after tax is at best a measure of available profits for distribution and expansion after adjusting for government's share. Yes, government as a regulator and protector of all citizens, corporate and human, has a share in the income of all as defined by the various tax legislations. Since an appropriation has already been made before arriving at profit after tax, this automatically disqualifies the latter as a true measure of performance.

Consequent to the above clarifications, any performance measure which failed to take all costs (Expended or expendable) and all earned revenue into consideration cannot be suitably employed as a performance indicator.

To answer the second question as to what constitutes "capital employed", we need to look at the definitions of the various components of capital and liabilities of a firm. The various components of the capital of a firm that was defined in Enyi (2005) as the amount set aside for the establishment and running of a business organisation, include-

a) Owners' Capital.
b) Borrowed Capital.
c) Working Capital.

Owners' Capital

Owners' capital can aptly be referred to as shareholders' funds in the balance sheet of all incorporated companies. It is made up as follows:

- Paid up capital in the form of fully paid up ordinary stock (share); and
- Reserves, which may comprise general, capital redemption, share premium, revenue and assets revaluation and many other unfamiliar reserves that can be created by a firm within the ambit of the laws establishing it.

Borrowed Capital

Borrowed capital as a means of financing operations or supplementing the existing owner's capital is a popular and very widely used type of funding for enterprise operational activities. There are various laws regulating the issuance and use of borrowed capital in all the countries of the world, with each country differing in accordance with its own internal peculiarities such as religion and culture.

Borrowed capital may take the form of debenture stock, bonds, term loans or simply bank advances (Overdrafts). Whichever type is in use in a firm, the common feature amongst them is the existence of a costing the form of interest payment.

Debenture stocks and bonds are usually issued in defined units; may have maturity periods and may also be transferable or discounted. Term loans on the other hand may be mortgaged to a particular project but may not be transferable or discounted, while short term advances in the form of bank overdrafts are usually procured to augment working capital mainly on revolving basis. Another classification of borrowed fund may include preferred stocks (Preference shares). It is considered as borrowed capital due to the mode of its issue, remuneration and redemption.

Working Capital

The American Accounting Research Bulletin No. 43 in Osisioma (1997) defined working capital as a margin or buffer for meeting obligations within the ordinary operating cycle of the business.

A careful analysis into the components of working capital which include current assets such as cash and bank balances, stocks, debtors and receivables, discountable bills and prepaid expenses as well as current liabilities like creditors and all accruals will reveal that it is a veritable source of short term capital. It is, however, interesting to note that though working capital is so called, it is in fact not a capital but an asset especially when it has a positive value; it only becomes a capital when it has a negative value.

This is because credit givers through their credit gesture have lent some valuable funds, though without a cost in most instances, to the firm during the financial period and it will only be equitable if such funds are included as part of the capital employed for that period.

Capital Employed

To calculate capital employed in a period, we must take cognizance of the components of capital as discussed above.

Thus the true make-up of capital employed in a business for a financial period will include-

- All forms of ownership capital.
- All forms of borrowed capital.
- The period's current liabilities.

Measuring the Return on Capital Employed

To measure the return on capital employed (ROCE), we simply divide the profit before tax (and not profit after tax for the reasons already given) by the computed value of capital employed for the period, and multiply the result by 100 to give it a per centum presentation. The interpretation of the result will show the period's performance (Supposedly) as a percentage of the capital employed (i.e. resource used in making the profit).

The main objective of this research is to show that the use of the EROCE as a performance indicator is though desirable but nonetheless spurious and capable of giving misleading information.

Problems of using the Return on Capital Employed as a Performance Indicator

To start with, the true measurement of efficiency in the use of capital resources cannot be done using capital employed as defined in a company's balance sheet. This is because the balance sheet capital employed is a static measure of capital employed at a date and not for the entire period. Hence, the result to be obtained from such measurement would invariably be influenced by the static nature of the value of capital employed as at that date.

More so, such a measure will produce a larger than life result as the capital employed at balance sheet date will always tend towards producing an average rather than the total resources employed. Also, when a firm has negative net worth, the ROCE produced will be totally distorted and basically meaningless.

A Better Measurement as given by some researchers:

While the inner execution investigation is required for controlling the administration towards expanding the investors value (Lucey, 2003), the outer execution examination then again is required by speculators and other outsiders to indicate how far the administration hasTo be more precise, the true representation of the value of the resources employed in the operations of a firm in a given period can be found in the value of total operating costs for that period.

To calculate the value of total operating costs for a period, we simply deduct the profit before tax (PBT) from the total turnover.

Any result obtained from the measurement based on this new definition of resources (capital) employed will be known as the Enhanced Return on Capital Employed (EROCE). Thus, the formula for obtaining the Enhanced Return on Capital Employed is:

- EROCE = Profit Before Tax / Total Operating Costs.
- i.e. EROCE = PBT / (Turnover – PBT).
- Where, PBT = Profit before Tax (Earnings before Tax).

Significance

The enhanced return on capital employed measures the return or profit on each Rupee of expended by the firm for the financial period. This is the true measurement of the return on capital employed because the true capital employed by the business for the period is the amount expended on the period's operations excluding capital expenditure.

Objectives of the Study

1. To evaluate ROCE and EROCE as Financial performance indicators for selected Pharmaceutical companies in India and to establish the relationship between these two indicators.
2. To analyse the use of the EROCE or ROCE as a performance indicator is suitable for pharmaceutical companies in India.

Empirical Evidence

The following data were extracted from the financial reports of 8 listed companies for the financial period ended 31st March 2010:

Company Name	Aurobindo Pharma Ltd.	Cipla Ltd.	Dr.Reddy'S Laboratories Ltd.	GlaxoSmithKline Pharmaceuticals Ltd.	Jubilant Life Sciences Ltd.	Lupin Ltd.	Ranbaxy Laboratories Ltd.	Sun Pharmaceutical Inds. Ltd.
PBT	709.85	1324.9	1087.2	765.88	459.27	708.6	1060.83	949.16
Total Income	3440.42	5860.4	5087	2116.08	2676.01	3752.9	5547.87	2681.32
ROCE	14.38	19.26	13.67	30.94	8.85	22.54	7.66	16.46
EROCE	25.99	29.21	27.18	56.72	20.71	23.27	23.64	54.79

Table 1. Summary of 8 Companies Results

Comments

Looking at the ROCE and EROCE we can see how misleading the results produced by EROCE can be. While the ROCE showed a performance of 14.38%, 19.26%, 13.67%, 30.94%, 8.85%, 22.54%, 7.66% and 16.46% for Aurobindo, Cipla, Dr. Reddy's Lab, GlaxoSmithKline, Jubilant, Lupin, Ranbaxy and Sun pharmaceutical companies respectively, the EROCE showed 25.99%, 29.21%, 27.18%, 56.72%, 20.21%, 23.27%, 23.64% and 54.79% for the respective firms as well. However, a closer look at the EROCE figures will show how unreliable they are.

To show the level of consistency and suitability of the present method of measuring the return on capital employed (ROCE) and enhanced return on capital employed (EROCE) as a performance indicator as well as the capital turnover rates, we considered the following data extracted from a study of financial statements of 8 selected major pharmaceutical companies listed on the NSE for the period ended 2010:

With the above table, we shall proceed to make further analysis and correlation tests.

Here researcher has considered Capital employed as independent variable and calculated both ROCE and EROCE as dependent variables.

Correlations Descriptive Statistics			
	Mean	**Std. Deviation**	**N**
Capital Employed	4864.31	1872.23	8
ROCE	16.72	7.57	8
EROCE	32.69	14.47	8
Test of Correlation between Capital Employed and ROCE			

Correlations

		Capital Employed	**ROCE**	**EROCE**
Capital Employed	Pearson Correlation	1	-0.714*	-0.333
	Sig. (2-tailed)		.047	.421
	N	8	8	8
ROCE	Pearson Correlation		1	.627
	Sig. (2-tailed)			.096
	N		8	8
EROCE	Pearson Correlation			1
	Sig. (2-tailed)			
	N			8
*. Correlation is significant at the 0.05 level (2-tailed).				

From above it can be seen that there is negative correlation between Capital employed and the ROCE, which is significant at 0.05 level of significance.

In the case of EROCE and capital employed, there is negative correlation and which is not significant.

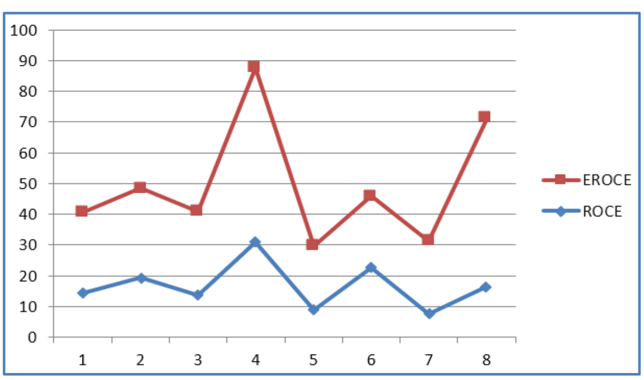

Figure I. ROCE and EROCE

DISCUSSION

From the line graph in Figure 1, we can see the inconsistent nature of the EROCE as it varies meaninglessly, moving up and down. But a look at the ROCE will reveal a smooth moving curve showing that none of the companies studied varies more than 20%.

Findings

Two tests of correlation coefficient revealed that while ROCE has a strong negative correlation of -0.714 with the capital employed at the year end, the EROCE on the other hand has a negative correlation of –0.33 with the capital employed of the business at the same time, thus, proving that the Return On Capital Employed (ROCE) as the measure of performance a more suitable performance measurement tool than that of EROCE in the case of selected pharmaceutical companies in India.

CONCLUSION

Financial statements should be interpreted in a manner that leaves no doubt in the minds of the users. A misguided interpretation of the firm's financial results especially as related to the efficiency/efficacy of management decisions is capable of having undesired effects on both the internal and external fortunes of the company.

The evidence adduced so far on the deficiencies of the EROCE as emphasised by some authors currently measured is too overwhelming to be attributable to mere errors. The evidences may be differing from industry to industry.

Therefore, it is the considered opinion of this paper that the use of ROCE as a measure of performance is the better measure in case of pharmaceutical companies in India.

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