

Measure the Effectiveness of the Rate of Return on Investment in the Evaluation of the Performance of the Commercial Companies - Case Study Fawaz Alhokair and Its Partners

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Abstract

This study examined the effectiveness of measuring the performance evaluation using the return on investment. There are many problems that are related to the return on investment. We can clarification that by the main question: what the impact of these problems on the return on investment as a tool to evaluate the performance?. The study aims to review the possible solutions of the accounting literature that dealt with the subject, on the other hand try to use accounting data in the process of assessing the performance of companies. The researcher found many of the most important results; you can use the return on investment in the evaluation of the performance of commercial companies that deal in more than a commodity, also the return on investment includes two parts, each part has a different explanation for the other part, which requires accuracy when used as a tool to evaluate the performance.

Key words: Working capital, Assets turnover, Profitability indicator, activity indicator, Net profit, Owners equity

1. The Methodological Framework of the Study

1.1 Introduction

The process of assessing the performance of companies is a complex process, it is one of the biggest management problems facing the administration because of the multiplicity of methods of performance evaluation, in addition to the overlapping of quantitative and qualitative aspects of the performance evaluation process. This research seeks to make an attempt to take advantage of accounting information when assessing the performance of the quantitative aspects. The process of performance evaluation is an imperative necessity for companies of whatever kind and its field, it is the company which recognize the extent of progress towards achieving its objectives in accordance with the general strategy of the company, on the other hand recognize the effectiveness of departments and subsections in achieving the goals their expected, and then remuneration these departments and sub-departments, also, these companies take advantage of the performance appraisal process by directing the allocation of resources to profit centers.

Given the multiplicity of ways of assessing performance (quantitative and descriptive methods), we'll be dealt this study using quantitative methods of accounting information when using the return on investment. The return on investment is one of the rates used widely in the process of financial analysis, though problems faced by its use, The study attempts to identify and define these problems associated with its application and try to develop effective solutions have to be basically can be relied upon when assessing performance.

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1-2 Problem of the study

The problem with the study is mainly in that there are many problems that are related to the return on investment. We can express that the main question: What is the impact of these problems on the rate of return on investment as a tool to evaluate the performance?

And can be expressed components of these problems the following sub-questions:

1. What is meant by the concept of net profit when you use a rate of return on investment?
2. What is meant by capital investor who is one of the components of the rate of return on investment?
3. How is the treatment of fixed assets within the capital invested?

1-3 Importance of the study

The importance of the study of being the dealing with performance evaluation, and try to evaluate the performance using accounting data through the rate of return on investment. In addition to the importance of the subject originates from importance of the performance appraisal process

1-4 Objectives of the study

The research aims in general to make an attempt to measure performance based on accounting data, and through the use of the rate of return on investment. In addition to the achievement of the following sub-goals:

1. help the company in the use of accounting data in the performance appraisal process quantitatively.
2. Develop a framework that can serve as a guide for evaluating the performance of companies when using the rate of return on investment.
3. help the company to overcome the problems associated with the rate of return on investment when it is used as a tool to evaluate the performance.

1-5 Hypotheses of the study

The rate of return on investment contributes to the provision of indicators help evaluate the performance of the company effectively.

1-6 Methodology of the study

The researcher follow inductive, deductive and a case study approach, which has been relying on the first approach when formulating the research problem, and use deductive approach in the formulation of the hypothesis of the research, while the use of a case study approach when dealing with the case applied to the study, through the use of the rate of return on investment in process evaluate the performance of the company under study.

1-7 The limits of the study

Spatial limits: Saudi Arabia - Fawaz Alhokair and its partners

Time limits: 2009 to 2013

2. Review of Previous Literature

Will be addressed through:

- 2.1 The evolution of the rate of return on investment
- 2.2 Analysis of the rate of return on investment

2.1 The evolution of the rate of return on investment:

The rate of return on investment of indicators and wide application in practice to measure the profitability taking into consideration the capital invested. Where he did not show the idea of the link between profits and capital invested only in the early years of the twentieth century at the beginning of the use of a measure of return on investment as a basis for evaluating performance (Kaplan, Robert and Atkinson 1997), where performance is assessed as before this stage by the ratio of net profit to revenue from sales or the costs of operations, in the sense that the basis for performance evaluation is the net profit, in other words there was no linkage between the net profit and the capital invested and used to achieve these profits.

Beginning in 1903(Kaplan, Robert and Atkinson 1997) formed a new company (Du Pont) of a group of companies that were operating in different activities and managed completely independently before joining, and the beginning of this history faced the senior management of this company is the problem of a new regulatory not faced by any company during the nineteenth century, it is a problem of coordination between the activities of these sub-units and the problem of the allocation of funds available for investment on these units; therefore the company's applied general principle when making decisions to allocate funds available for investment on the sub-units is the lack of allocation of investment funds for the unity of certain if the money could be used to achieve the objectives of the best in another unit in the same company. The company's management found that the commodity sold at a higher price than the cost by only 10% do not require expensive equipment can achieve a better return on investment than other commodity sold at twice the cost but require expensive equipment.

It should be noted that the rate of return on investment initially used for the purposes of the allocation of funds available for investment units and subdivisions. In 1920 the Company (Du Pont) and General Motors Corporation has implemented decentralization widely, so that companies have become multi-divisional, since that date, were starting to use the rate of return on investment for the purposes of evaluating the performance of departments and sub-units, and successively follow the other companies of the philosophy of decentralization and especially after World War II, so that the investment centers in general, and the rate of return on investment in particular is the most widely used in practice(Kaplan, Robert and Atkinson 1997).

From the above, we find that the rate of return on investment is a way to evaluate the performance of managers, as well as departments and branches that follow them. This requires not necessarily provide the powers and responsibilities each department - follow the system of decentralization - so that we can evaluate the performance of managers. It is noted that the rate of return on investment was found acceptance and widespread in practice, where the study was conducted on 3525 companies in the United States, and the results showed that 92.4% of companies with investment centers use the rate of return on investment as a measure of performance(Mauriel and Antheony 1966). Also conducted a study of some British companies (Tomkins 1973) and that resulted in 38 companies (by 82.6% of the study sample) using the rate of return on investment as an indicator of performance evaluation. Some believe (Horngern 1978) that the most appropriate way to assess the performance of investment centers is the rate of return on investment.

2.2 Analysis of the rate of return on investment:

Measuring the rate of return on investment is in accordance with the following equation:
 Return on investment =
$$\frac{\text{Net profit}}{\text{Capital invested}} \dots\dots\dots (1)$$

Can be more in-depth analysis of this equation into two phases (Solomons 1977)as follows:

Phase I: the margin of profit to sales (profitability indicator)

Phase II: Turnover of invested capital (activity indicator)

In view of the equation (1) can say that the rate of return on investment measures the ability of the money invested in achieving return. By combining the two phases resulting the equation (1), and can be illustrated as follows:

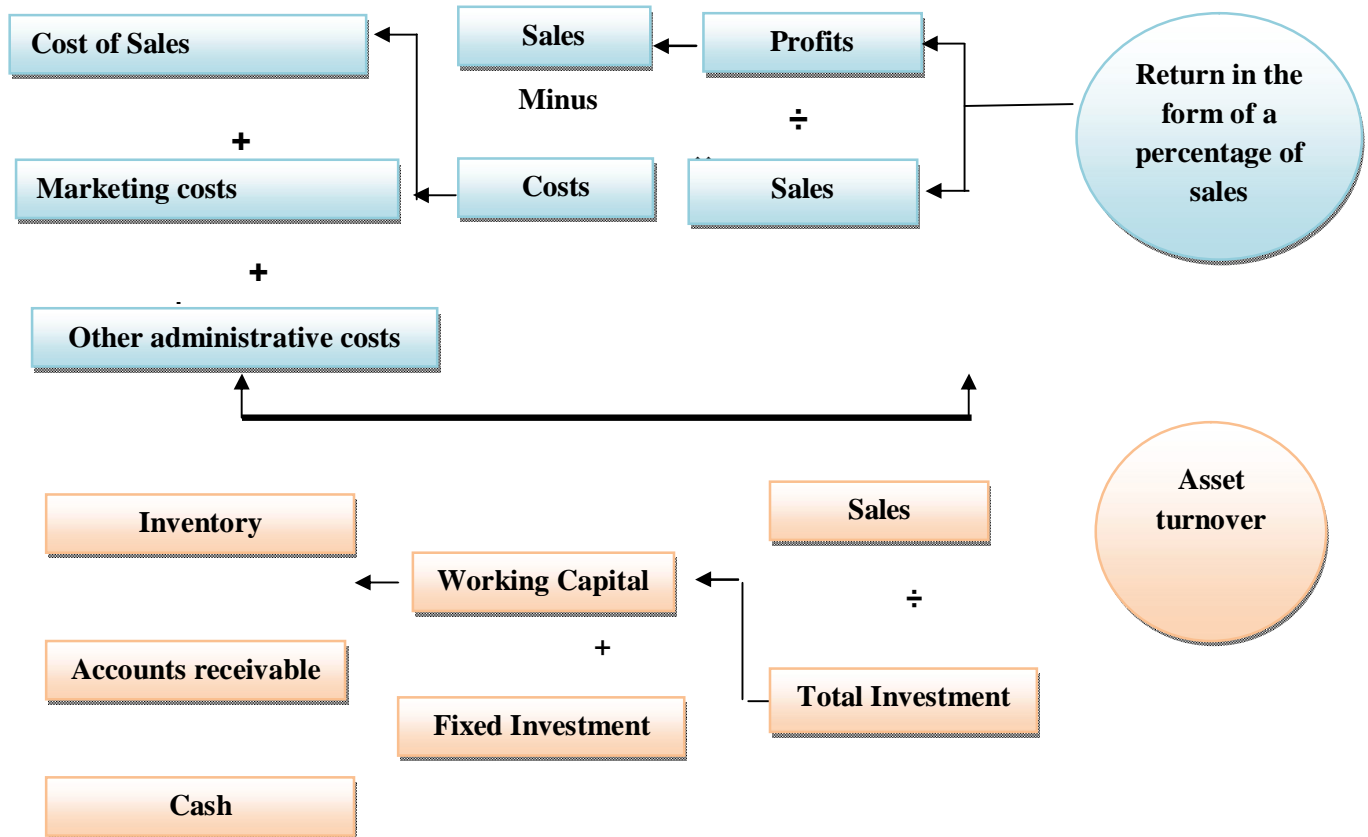
$$\text{Return on investment} = \frac{\text{Net profit}}{\text{Sales}} \times \frac{\text{sales}}{\text{Total of invested capital}} \dots\dots\dots (2)$$

From equation (2), the total investment represent in the working capital plus fixed investment (long-term), and can detail more in that, as in Figure (1), and read the equation with Figure (1) through this rate you can determining the strengths and weaknesses of the company, which contributes to develop a plan for addressing weaknesses and improving strengths, based on:

1. compared with the company's indications of similar companies
2. or industry standards,
3. or indicators of the same company for a number of years, or previous periods (time series
4. analysis).

It should also be noted that access to this assessment are better through the use of equation (2). As can be seen from Figure (1) that the use of the rate of return on investment, which includes all of the items that have a financial relationship directly or indirectly to achieve profits. The first part of the equation (2) measure the extent of management efficiency in making profits from the operational activity (meaning that the profitability indicator). The second part of this equation measures the ability of the entity to use the funds available (meaning that activity indicator).

Figure (1): Elements calculate the rate of return on investment



From the above, the first part of the rate of return on investment as equation (2) assist senior management in (Bierman 1990):

1. compared to the proportion of the investment center from year to year to determine whether his ratio was stable or increasing or decreasing.
2. comparing this ratio with ratios achieved by the investment centers in other companies competing in the same field.

The second part of the equation, it gives indications of potential problems or indications of future performance appraisal (Calvin 1987) for example:

- a- May indicate the continuing decrease in asset turnover on the presence of non-essential assets in the Investment Center, or to the length of the collection of debts owed by customers, or the presence of antiquated inventory, or a shortage of sales revenue, leading to a lower rate of return on investment.
- b- The continuous increase in the turnover rate indicates an increase in the efficiency of the use of the funds invested. On the other hand increase is due to reasons other than to increase efficiency, such as obsolescence of operating assets (ie, low book value), or that the assets used leased from third parties and thus does not appear cost within the operating assets.

From the above we conclude the following:

1. Return on investment equation mindful of operational activity, and that with respect to the measurement of the first part of the equation. They are also interested in side the money invested, and that with respect to the second part of it. It is noted from Figure 1 that the calculation of this rate includes all of the items associated with the income statement and is also associated with the statement of financial position.
2. Measuring performance in previous periods was focused on making profits without regard to the relationship with the profits from money invested. We note through the equation (2) it is working to address the aspect which was neglected in the past, that any of the reasons that support the use of the rate of return on investment is to highlight the relationship between profits and the money invested.
3. Measuring performance according to the equation of the return on investment is accompanied by the objectivity, and easy of measurement. So as to link the components of the equation accounting information system that provides objective and accurate information to the components of the equation. That is, we rely on the data recorded in accordance with the values have been recognized and recorded in the books of the reality of documents can be verified, and it is available along with objectivity in the measurement, and the other side, the existence of accounting records help easy extract financial data required to calculate this rate.
4. The industrial, commercial and service companies require directing resources to use that achieves profits of the funds available for investment, and it is only through the proper allocation of limited resources in the areas to achieve the company's profits expected, add for that this rate works to encourage managers to efficiency and effectiveness in performance.
5. In the case of multiple centers of investment in the company, the comparison of the absolute profits achieved to these centers may not give a good indicator to judge the success or failure of the center position of the comparison. But it can be through the rate of return on the investment made such comparisons between different centers.

3 - How to apply the rate of return on investment:

Will be addressed through:

3-1 problems and solutions associated with the application rate of return on investment.

3.2 Case Study

3-1 Problems and solutions associated with the application rate of return on investment:

Can be classified application problems associated with using the rate of return on investment, as a tool to evaluate the performance are as follows:

1 - Technical problems associated with the components of the equation of the rate of return on investment, and this can be identified:

- a. Problem associated with the concept of profit used in the equation.
- b. Problem associated with the concept of the invested capital.
- c. Problem associated with the treatment of fixed assets within the capital invested.

2- Non-technical problems are associated with the following:

- a. May lead to investment decisions irrational due to its reliance on past data.
- b. The rate of return on investment measure of performance in the short term.
- c. External factors may affect the calculation the rate of return on investment, such as government intervention in setting prices.
- d. The rate of return on investment ignores the time value of money.

We will focus in this study on the technical problems the explanation and clarification of the efforts made to solve these problems, and it is as follows:

a - The problem associated with the concept of net profit:

The accounting literature (Hendriksen 1982) describes the multiplicity of concepts associated with the net profit, which represents one of the basic components of the equation of the rate of return on investment, which positively or negatively affect the outcome of this equation, this is based on the concept that different net profit inevitably leads to differences in the calculation of the rate of return on investment, according to a figure Net Profit user. Of the broad concepts of the net profit that depends on finding the difference between revenues and costs while ignoring the market value and the changes in price levels - that is, relying on the principle of historical cost - (Solomons 1986), may also meant adjusted net income in accordance with the general level of prices. The researcher believes that the use of the net accounting profit after tax, calculated on the basis of historical cost basis is optimized for the application in order to be considered that it is consistent with generally accepted accounting principles and generally accepted and which have been derived from the historical cost basis, particularly with respect to disclosure and objectivity, where the application of the concept of accounting profit calculated on the basis of historical cost basis supports objectivity.

b - The problem associated with the concept of invested capital:

The focus of the problem here is also different views regarding the concept of invested capital, and this problem is also linked to the return on investment equation. We find that invested capital may take one of the following concepts(1989 العطار):

1. Total assets available; based on the invested capital is the total assets of the project regardless of the uses and sources of funding, and justifies the proponents of this concept is that the functions of management is in operating and financing; and performance measures for the operation (acquisition and operation of assets) should not be affected decisions of funding (sources of funding for the long-term assets).
2. Total assets used; This concept differs from the previous concept in that it focuses only on the assets used in the operation and not total assets. On this basis, the assets are not used in operating assets such as unemployed and surplus assets, as well as projects in Progress are excluded from total assets because they do not achieve any return. This can be considered an appropriate and logical concept to calculate the rate of return on investment in the case of evaluating management performance in terms of operating, as the managers responsible for the optimal use of the assets entrusted to them operated.

3. Owners equity; based on the invested capital is in capital paid, reserves and retained earnings. The supporters of this view justify their view that the return on equity is a measure of the overall performance of senior management, including senior management skill in the use of external financing.
4. Owners equity plus long-term liabilities; Some believe (Horngern 1977) that money is invested in total assets available after excluding current liabilities, that any invested capital, according to this view is the owners equity plus long-term liabilities, It can justify the use of this concept when calculating the return on investment on the basis that the administration could affect the short-term credit. Thus the manager can get the maximum short-term credit provided they do not endanger the interests of the owners risk.

Researcher believes the use of the first concept (Total assets available) for purposes of calculating the return on investment, because it includes operating and financing side, in addition, consistent with the concept of economic unity and see which non-discrimination between the amounts borrowed and that the possession of the company because both represent an obligation on the assets. The field studies conducted on this concept refers to the total assets available basis represents the most widely used in practice when calculating the return on investment (Solomons 1977).

c. Problem associated with the treatment of fixed assets within the capital invested:

This problem represent in how to insert fixed assets within the invested capital, in other words, you are processed in accordance with the historical cost without deducting accumulated depreciation, or are processed with net book value?. This means that the summary of this problem is to determine the value that included their fixed assets within the invested capital, you are adding the initial cost, or net book value? (زايد،حجاج 2001) and each team justifications and arguments to support his opinion, the following explanation for this:

Supporters of the first trend: Proponents of this view, the inclusion of fixed assets according to the total value, and explain their reasons as follows:

1. they exclude the age of fixed assets and depreciation methods as factors when calculating the return on investment.
2. it allows the director to renew and replace the old fixed assets less the opposite effect of the return on investment.

Criticizes this opinion because it does not agree with the preparation of the income statement and balance sheet, in terms of the disregard for the value of depreciation, they also include duplication of the account value of the original asset plus recoverable amount of the original value of the assets (through the process of depreciation), both of which appear within the operating assets.

Supporters of the second trend: Supporters of the second trend: Proponents of this opinion that fixed assets are added to the invested capital net book value, after excluding any depreciation, and explain their reasons as follows:

1. consistent with the preparation of the report on fixed assets in the balance sheet.
2. consistent with calculation net operating income, which includes depreciation expense operational.

Criticizes this opinion for the following reasons:

- a. leads to an increase in the value of the rate of return on investment with over time, because of the fixed assets depreciates as a result of the carrying element of depreciation.
- b. do not encourage replacement new assets.

The Researcher believes that the second opinion, which calls for the inclusion of fixed assets within the invested capital net book value is more appropriate, because it is consistent with the basis of preparation of final accounts and balance sheet.

3.2 Case Study

Was obtained financial information described in Table (1) of the financial statements published Hukair company and its partners for the periods of 2009 to 2013. It can illustrate how to use ROI in the performance appraisal process through the use of such data.

Table No. (1) Published financial information for the company and its partners Hukair (All amounts in Saudi Riyals)

Years	Sales	Net profit	Total Investment
2009	1899112	202358	1589855
2010	2074389	231500	1887269
2011	2574608	315472	2169352
2012	3202666	447381	2575416
2013	4658532	619692	4070283

Al Jazeera news paper(2013),The Financial statements published by the Hukair company and its partners, June 17, No. 1487

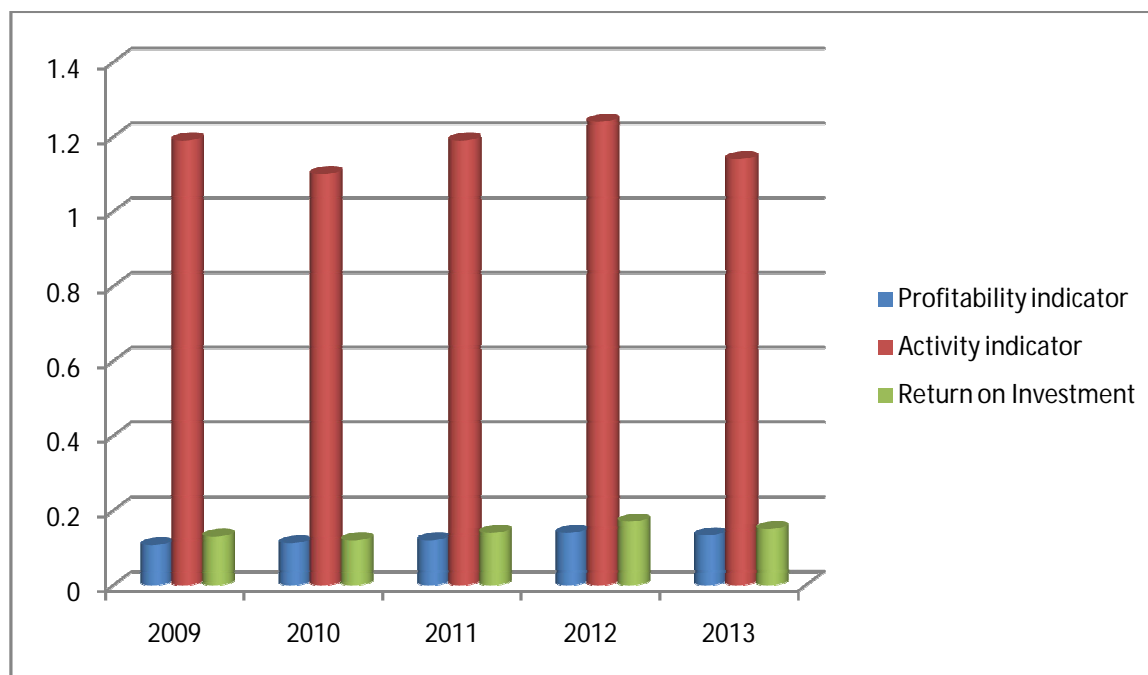
And Table (2) shows the rate of return on investment for the periods from 2009 to 2013

**Table No.(2)
Return On Investment(ROI)**

Year	profitability indicator	Activity indicator	ROI
2009	0.107	1.19	0.13
2010	0.112	1.1	0.12
2011	0.12	1.19	0.14
2012	0.14	1.24	0.17
2013	0.133	1.14	0.15

And Figure (2) illustrates a summary of the Table (2)

Figure No(2)
Components of the rate of return on investment



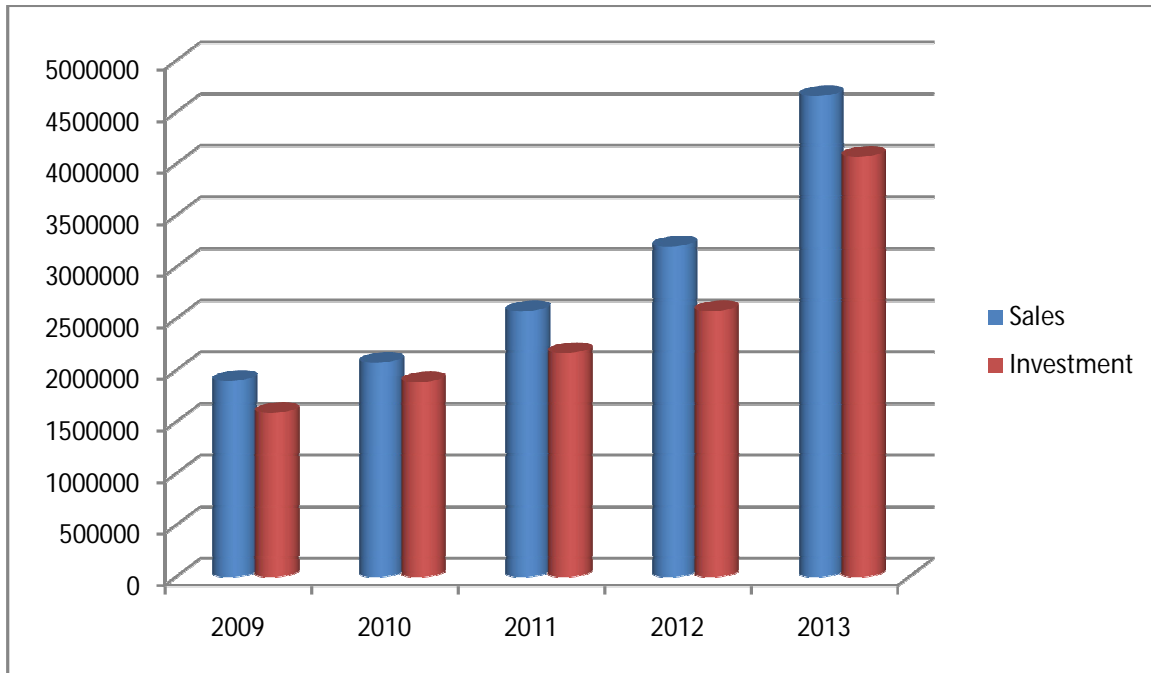
From Table (2) and Figure (2) noted that there is a positive trend in the rate of return on investment for the years 2009 to 2012, followed by a positive indicator of profitability, while we find that there is a fluctuation in the activity indicator. Table (3) interpreted fluctuation in the rate of turnover of the sales (activity indicator).

Table No(3)
Interpretation of fluctuation in the rate of sales turnover

Year	Activity indicator	Sales	Investments(Rs)
2009	1.19	1899112	1589855
2010	1.1	2074389	1887269
2011	1.19	2574608	2169352
2012	1.24	3202666	2575416
2013	1.14	4658532	4070283

And Figure (3) shows the relationship between sales and investments, as clear from the table fluctuation of indicator from year to year, and the reason for this as is clear from the table is not low or fluctuating sales, but the reason to the high investments as illustrated in Figure (3) Although that there is a rise in sales, but that the activity indicator fluctuating between high and low from year to year.

Figure No(3)
The relationship between sales and investments for the Hukair's company

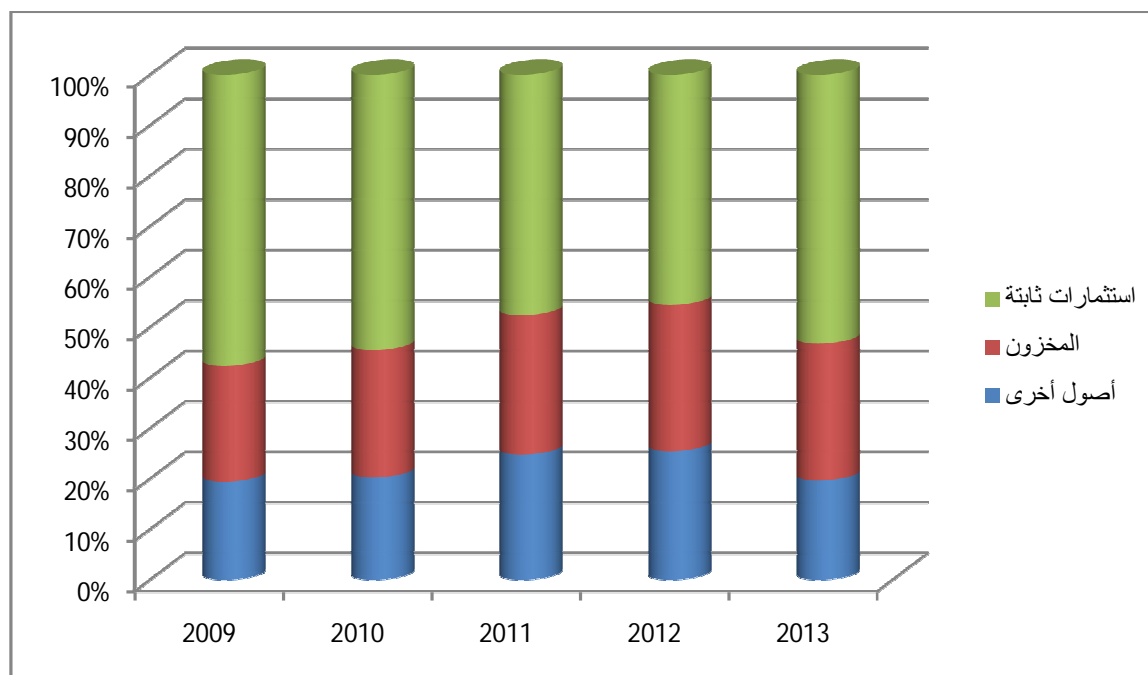


We must search for the reason behind the rise in the value of investments from year to year, because this element includes all assets, including fixed assets and current assets. The table No. (4) and Figure (4) illustrate that the responsible for high investment is mainly stock, and this may mean the presence of a stagnant stock or slow moving (decrease turnover).

Table No.(4)
Interpretation of the rise in investments

Year	Fixed Assets	Inventory	Other Assets	Investments(Rs)
2009	916409	364843	308603	1589855
2010	1028840	476129	382299	1887269
2011	1033373	598552	537427	2169352
2012	1174319	745960	655137	2575416
2013	2167631	1103490	799162	4070283

Figure No(4)
The proportion of items from the formation of the total investments



Is clear from Figure (4) that there is relative stability in fixed assets and other assets, while we find that there are significant changes to some extent in stock, so it is responsible for the high total investment significantly. The same method of analyzing activity indicator, interpretative analysis can be conducted to find out why the contribution margin rose from 10.7% in 2009 to 14% in 2012.

From the above, it can be said that the rate of return on investment is a good indicator to evaluate the performance of the quantitative side and based on accounting data. Because it allows for many interpretations on the level of the indicators that make up the equation, or at the level of quantitative data as illustrated by the previous tables. Meaning that does not stop at giving the figure, but interpreted that figure. It is noted that by going process analysis to the statement of financial position to know the reasons for the fluctuation of the rate turnover (activity indicator), as well as the transition process analysis to the income statement to know the reasons for the high indicator profitability, it should be noted not forgetting the qualitative aspects when the performance appraisal process.

Results and Recommendations

First: The results

1. The concept of the profits which have been relied upon in calculating the rate of return on investment, is the net profit after tax, because this concept is consistent with the concept of determination of the profit in accordance with generally accepted accounting principles. It represents the final product of corporate activity generally. Therefore, the performance appraisal process should proceed from the ends, as it represents the profit available for distribution.
2. The concept of invested capital most appropriate the application to calculate the rate of return on investment, that represent in the net book value assets available to the Company to using (means current assets + fixed assets minus depreciation), which was measured at historical cost. Because that is consistent with generally accepted accounting principles, as it is available where much of the objectivity and reliability.

3. Use the rate of return on investment helps in assessing the performance of businesses that buy and sell more than a commodity, in spite of the problems raised about the concepts it contains. It helps the company's management in assessing the performance in general, and the general trend of the performance of the company as a whole and the various administrative sections.
4. the rate of return on investment includes two parts, each part has a different interpretation for the other part, which requires accuracy when used as a tool to evaluate the performance, where we find the part cares about profitability, and the other part cares about activity.
5. The study showed that the problems of the application of the rate of return on investment(ROI) is predominantly in the concepts used in the calculation of ROI, and can control these problems through: that the Company's management determines accurate concepts you wish to use, the light of the purpose it seeks from the performance appraisal process .
6. From the case study became clear the researcher; that the element responsible for the rise in investments in Hukair company and its partners represent in a stock.

Second: Recommendations

1. The company's management when determining the constituent concepts of return on investment equation, constancy them when conducting the evaluation process from one year to another, because it makes it easier to compare the results from one year to another, and between departments.
2. In case the company decides to rely on the equation of return on investment as a way to evaluate performance, comply with the following:
 - choose variable or variables that represent the financial goals for senior management, for example, the use of operating profit or net profit adjusted after taking into account price fluctuations.
 - Identify the concept of the basic elements that make up the equation of return on investment, for example, the intended investment and net profit.
 - Choose measurements of the key elements that make up the equation; example, fixed assets are measured at historical cost or current value.
 - Determine the standard for the target rate of return, it compares actual performance. Meaning that is relying on the philosophy of planning a return on investment; be a basis for comparison when calculating the actual return on investment, as well as comparison with other sections or previous years.
3. The need for a proper accounting system and accurate, because all the data used to calculate the rate of return on investment depend primarily on the accuracy of accounting information.
4. We recommend that the company's management; not to rely only on quantitative methods when assessing performance, they must use descriptive methods side by side quantitative methods.

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