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Using DuPont Analysis to Measure the Financial Performance of Three Listed Companies in the Sewing Sector in Iraq: A Case Study

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Abstract
This research work explores the application of DuPont analysis as a powerful tool for evaluating the financial performance of companies. DuPont analysis deconstructs return on equity (ROI) into its constituent parts, namely, profitability, efficiency, and leverage, providing a comprehensive understanding of what drives a company's performance. By dissecting ROI, investors and analysts can identify strengths, weaknesses, and areas for improvement within a company's financial structure and operations. The objective of this research is to examine the methodology of DuPont analysis, its significance in financial analysis, and practical applications in assessing the performance of three listed companies in the sewing industry. A case study approach was implemented in this work, and data were acquired from the financial sheets of the companies studied for seven years (2016-2022). The data were analyzed using financial ratios embedded in DuPont approach and by descriptive statistical methods. The financial analysis revealed that ICFC company generated the highest ROI compared to the other companies studied.

1. Introduction

The evaluation of the financial performance of a company is crucial for investors, stakeholders, and management alike. One of the broadly embraced techniques for breaking down and understanding financial performance is the DuPont analysis which is an expository system that dismembers return on equity (ROE) into its essential components, giving experiences into the drivers of profitability and efficiency. This research aims to apply DuPont approach to evaluate the financial performance of three sewing companies recorded within the Iraqi Stock Exchange Market Showcase (ISEM): the Modern Sewing Company (MSC), the Ready Made Clothes (RMC), and the Iraqi Carpet and Furniture Company (ICFC).

By employing the DuPont approach, the authors attempt to unravel the underlying factors contributing to each company's ROI and identify areas of strength and weakness within its financial operations. Furthermore, through a comprehensive examination of each company's financial statements, the authors seek to provide actionable insights for management decision-making and strategic planning. The research will begin with an overview of DuPont analysis literature which shall involve scholarly articles and other academic sources, and to provide insights into the theoretical and future research directions with respect to DuPont analysis. Subsequently, the research will delve into the concept, types, and objectives of the financial analysis. Later we present the concept, objectives, metrics, elements, advantages, and drawbacks of DuPont approach. Then, the authors turn to analyzing the data extracted from the financial data of each company such as profitability, asset turnover, and leverage will be dissected to uncover their individual contributions to the company's ROI. Moreover, the research will explore the implications of the findings within the context of each company by benchmarking the company's financial performance against each other, we aim to provide a comparative perspective and identify areas of relative strength or weakness. Ultimately, this research endeavors to offer valuable insights into the financial health and performance of each company, leveraging the analytical power of DuPont analysis. Through this analysis we aim to empower stakeholders with the knowledge needed to make informed investment decisions and support strategic initiatives for sustainable growth and profitability.

2. Literature Review

Doorasamy (2016) conducted a research with an endeavor to assess the monetary execution of the nourishment industry taking the best three JSE recorded companies. To realize the targets of the inquiry about, the author utilized distinctive proportions such as ROE, ROA through applying the DuPont analysis. The financial analysis conducted here of all three companies utilizing the DuPont framework uncovered that contributing in Tiger Brands would create a better return to shareholders than Pioneer Nourishments or RCI. Mohanasundari et al. (2020), claim that budgetary articulation examination utilizing financial ratios has been one of the foremost commonly utilized essential models of evaluating business execution. It is one of the essential models of appraisal of a firm's execution over a long time and as well as comparing it to the rest of the players within the industry. The authors performed a literature review which uncovered that numerous researchers were focused on product and market examination, however, only few investigations were embraced from the financial angle within the plastic industry. The study proposed progressing profits and efficiency, to make strides liquidity and to make strides ROI to the players in the industry. Ibrahim (2019) endeavored to assess the money related performance of ALFAPIPE GHARDAIA company between 2014-2018. The researcher employed the DuPont analysis to demonstrate the degree of the return on equity (ROE) at the considered company. The study concluded that the company was repulsive in the return on equity, in 2018, the financial rate of return fell below zero by 18.41% while the average financial rate of return was 100.11%. This decrease was due to the impact of lower profit margin and asset turnover, although the ratio of debt to assets increased slightly. Farisa et al. (2020) conducted an inquiry in an endeavor to assess the company's financial performance utilizing ratio investigation embedded in the DuPont Framework at PT. Teluk Lamong Surabaya Terminal between 2016 to 2018. The researcher claim that DuPont Framework can recognize the cause of the wastefulness of a company based on its financial related articulations. The reason of this financial ration examination is to view and to judge the company's now and future monetary condition. In his investigation, Jbar (2020), considered the shared relationship between return and risk utilizing the DUPONT Framework from 2008 to 2017 in a set of Qatari insurance companies. The aim of the research was to utilize the DUPONT Framework to assess the financial conduct of companies within the same industry to anticipate future changes by including another measurement to the assessment of Qatari insurance companies for ideal venture based on sound execution assessment. The author investigated four hypothesis to explore the critical contrast of ROE, EM, ROA, and PM among Qatari insurance companies. The stuy uncovered that companies that take adopt cost leadership policy may accomplish a lower return than that which adopt the differentiation policy. The inquiry about hypothesis were subjected to the ANOVA investigation. In his study Bouibaoune (2021) sought to address the importance of implementing the DuPont System, which is widely used in many famous world companies. The objective was to examine and analyze the studied company financial balance as opposed to the other systems which are not without their drawbacks, especially in the ability of the company to earn profits on the one hand, and to predict the degree of financial failure. The results indicate that the DuPont System, contrary to the established and traditional systems, proved highly effective in the analysis of financial situation of the company and prediction of its financial balance, most notably in the area of profitability, assets turnover and Cost-effectiveness. These advantages made it possible for companies to enact the necessary procedures for enhancing its operations. German (2021) performed a study that deals with the subject of performance evaluation in economic institutions and the problem of its evaluation. The study focused on the indicators of the DuPont model for return on equity, the study was applied on the laban EL KAHINA – OUM EL BOUAGHI. The author concluded that the DuPont model is important in evaluating the performance of institutions, the analysis revealed that the financial performance of the studied company was somewhat weak which indicated the inefficiency of the company management in handling its financial resources. German pinpointed to a set of proposals, the foremost vital of which is the dependence on money related models to judge the effectiveness of administration. Fadila and Siskawati (2022) conducted a research at the Companies and Families Necessities recorded on the IDX between 2017-2021. The reason for the study was to examine the financial performance of Cosmetic Companies and Household Users utilizing Du Pont Framework examination. The results obtained uncovered that the financial conduct of Makeup and Family Supplies companies for 5 years which was calculated utilizing the Du Pont Framework investigation was not great sufficient, with ROA values that diminished each year but for one company. The decline of the ROA was due to a diminish within the realm of NPM and TATO which was influenced by a diminish in profit due to high total costs and moderate turnover of assets to improve sales. Francisca, Cruz and Sukoco (2022) conducted a research to assess the financial performance of companies within the listed nourishment division on the Indonesia Stock Trade (IDX) from 2016 to 2020. The research assessed the monetary conduct utilizing the outcomes of the Du Pont framework investigation: ROE, NPM, TATO, TATE and other related metrics. The writers depended on auxiliary data with collection procedures utilizing information accessible on the internet. The outcomes of calculations utilizing the Du Pont framework examination strategy at PT. Indofood Sukses Makmur Tbk reflect great financial conduct on a few monetary metrics whereas destitute on other metrics. Jariah and Pratiwi (2023) utilized the Du Pont examination to conduct a financial related investigation to survey the financial conduct of PT. Sumber Alfaria Trijaya Tbk. The research was based on the distributed information from 2012 to 2021. The outcomes of the examination uncovered that Net Benefit Margin (NPM) was underneath industry benchmarks, whereas Total Asset Turnover (TATO) appears to be over industry standard. Return On Investment (ROI) and Equity Multiplier (EM) were seen to be underneath industry benchmarks, whereas Du Pont's Return On Equity (ROE) reflects fabulous conduct. The writers conducted factual tests to approve these discoveries, appearing that NPM, ROI, and EM are underneath standard, whereas Du Pont's TATO and ROE are at a great level. The creators concluded that the examined organization has high efficiency with respect to assets urilization, but has to make strides net profit margin, venture administration and equit administration to guarantee higher profitability.

Although not exhaustive, the above literature review demonstrates that the Du Pont approach had a great chance of widespread applications in different countries and business sectors, and it will continue to be a valuable tool for assessing a company's financial performance and understanding the drivers of ROE. While it has its limitations, its simplicity and effectiveness make it a widely used technique in financial analysis

3. Research Methodology

3.1. Research Problem

Most business companies seek to maximize its profits and to maximize the company's value and hence the wealth of the shareholders. Therefore the research problem addressed in this work is expressed by the following questions:

1.Examining the adequacy of DuPont investigation in surveying the financial conduct and the proficiency of the companies examined in this investigation.

2.Identification of the extent to which ROI, TATO, NPM can reflect the financial performance of the studied companies.

3.2. Research Significance

This investigation is critical since the outcomes obtained will increment our mindfulness of the issue of measuring the financial performance of companies in common, and the companies considered in this investigation in specific. More over, this work is noteworthy because it gives the company and financial specialists with data that makes a difference in making speculation choices within the considered companies.

3.3. Research Method

A case method framework was utilized based on auxiliary information obtained from the investigated companies' financial statements, descriptive statistics were utilized to realize the research targets.

3.4. Research Sample

The study sample consisted of three sewing companies whose data were listed in the ISE. The companies are: Ready Made Clothes (RMC), Modern Sewing Company (MSC), and the Iraqi Carpet and Furniture Company(ICFC).Financial data were collected for the period of2016-2022

3.5. Research Objectives

The objectives of this research are:

1. Ascertain the role of financial statements on investment decision analysis.
2. Present the concept of DuPont analysis.
3. Measure and compare the ROE, ROA, EM, and PM for the studied companies, and draw conclusions about them.
4. Identify the drivers of ROI and the key factors driving Return on Equity (ROE) by breaking it down into its components (profitability, efficiency, and leverage).
5. Compare each company's financial performance with its peers to assess relative strengths and weaknesses.
6. Assess the viability of the company's financial conduct in producing returns for shareholders.

4.Theoretical Background

4.1. The Concept of Financial Analysis

Financial examination is the method of assessing the financial wellbeing and execution of a trade or person. It includes looking at balance sheets and income statements, and cash stream explanations, to evaluate different perspectives of the entity's financial position, profits, liquidity, and dissolvability. The essential objective of financial investigation is to pick up experiences from the past, the present, and future budgetary condition of the company and make educated choices based on these experiences.

The key concepts and techniques involved in financial analysis include::

1. Ratio Analysis: This includes calculating and translating different ratios, such as liquidity ratios (e.g., current ratio, acid ratio), profitability ratio (e.g., net profit margin, gorse profit), proficiency ratios (e.g., stock turnover, accounts receivable turnover), and leverage ratios (e.g., debt-to-equity ratio, interest coverage ratio). ratios offer assistance in understanding the relationship between distinctive financial factors and evaluating the organization's performance and financial wellbeing.

2. Trend Analysis: Trend investigation includes looking at financial related information over numerous periods to recognize patterns, and changes the financial metrics. This makes a difference in surveying the heading in which financial factors are moving and assessing the consistency of execution over time.

3.Comparative Analysis: Comparative analysis involves comparing the financial performance of the entity with that of its competitors, industry benchmarks, or historical data. This helps in benchmarking the entity's performance against industry standards and identifying areas of strength or weakness relative to peers.

4.Cash Flow Analysis: Cash flow analysis involves examining the inflows and outflows of cash within an entity to assess its ability to generate cash, meet its financial obligations, and support its operations. Cash flow statements provide insights into the sources and uses of cash and help in evaluating liquidity and solvency.

5.Risk Analysis: Risk analysis involves assessing the financial risks faced by the entity, such as market risk, credit risk, liquidity risk, and operational risk. This involves evaluating the potential impact of various risks on the entity's financial performance and stability.

6.Forecasting and Projection: Financial analysis also involves forecasting future financial performance based on historical data, market trends, and other relevant factors. Forecasting helps in planning and decision-making, such as budgeting, investment analysis, and strategic planning

Ravender and Anitha (2012), state that financial examination is the assessment of trade companies, ventures, budgets, and estimates from a budgetary point of view by analyzing the information from financial statements with the objective of measuring the viability and proficiency of capital contributed in its operations and within the financing exercises of the firm. Financial examination illustrates a critical part in decision making related to investing and financing practices. The method of financial investigation includes money related ratio investigation and money related practices, specifically the balance sheet and the income sheet. In common, financial analysis plays a vital part in assisting difference financial specialists such as, bankers, directors, lending managers, and other stakeholders make informed decisions regarding investment, lending, operational planning, and risk management. It provides valuable insights into the financial health, performance, and prospects of an entity, enabling stakeholders to assess its strengths, weaknesses, opportunities, and threats.

4.2.Objectives of Financial Analysis

Aldabbas (2022) and Al-Showishin (2021) specified that financial analysis has numerous targets that change with respect to the differences and the reason of conducting the investigation. The foremost critical of these targets are:

1.Decide the real budgetary position of the organization and the degree of its monetary productivity.

2.Highlight the financial problems and negative practices that need to be corrected.

3. Providing the necessary information to prepare future plans in the short and long terms.

4.Supply the company with clear indicators of the success of its operations.

5.Distinguish strengths within the company, and identify shortcomings to maintain a strategic distance from them.

6. Find speculation openings accessible within the market.

7. Survey the financial conduct of the company vis-à-vis competitors.

4.3. Who Benefits from Financial Analysis:

Bunia (2019) indicate that different parties are interested in the results of financial analysis such as:

1. Top Management

Financial analysis is considered one of the most important means by which business results are analyzed and presented to the owners of the firm This analysis shows the extent of management's efficiency in performing its function, as financial analysis is considered a tool for top management's knowledge of the efficiency of executive departments in performing their jobs.

2. Creditors:

Long term creditors focus primarily on the firm's profitability, capital structure, main sources of funds and their uses in the present, and expectations about these matters in the near and distant future, in order to ensure the firm's long-term ability to carry out the burdens of its fixed obligations, including interest and repayment of installments, because short-term creditors are primarily concerned with the firm's cash flow and focus on analysis using financial ratios.

3. Shareholders

Shareholders benefit from the results of financial analysis in providing the degree of reward for their contributions and the risk of loss that they are exposed to, and therefore their attention is usually directed to the company ability to create profits now and in the future, in addition to the degree of its growth from year to year.

4. Suppliers

Suppliers are interested in the results of the financial analysis in terms of ensuring the soundness of the organization's financial position and the development of the degree of indebtedness according to the results reached, the supplier can decide to continue its transactions with the company, reduce it, or cancel it completely, so before giving the payment deadline, the supplier performs an analysis oriented towards short-term suitability.

5. Customers

Customers are interested in the results of the financial analysis to ensure that the firm is able to respect the contracts concluded with its suppliers. If The company was in an unstable financial situation, causing difficulties for its customers due to its failure to deliver orders on time, in addition to the fact that it is in the firm's interest as a client to follow up on the centers of its suppliers, especially the main supplier, to ensure continuing supply of raw materials, and the possibility of reducing their cost.

6. Tax Authority

Tax authorities are concerned with determining the proper tax to be imposed on the firm after detecting the difference between the accounting result and the taxable result.

7. Chambers of Commerce and Industry:

It is concerned with financial analysis in order to and to publish data on single-sector projects, and to extract ratios and indicators that can be considered averages and standards that are relied upon in further financial analysis.

4.5. Forms of Financial Analysis

Ibrahim (2019) and German (2021) state that financial analysis could take different forms such as: vertical and horizontal analysis, short term, or long term, internal financial analysis or external financial analysis, could be based on financial ratios, Altman's z-score and z-3 score, and finally DuPont method.

We shall next direct our attention to the DuPont model which is the analysis tool employed in this work.

5.Du Pont System

5.1. Definition and Concept

The DuPont approach was developed in 1912 by Donaldson Brown who worked for the DuPont Corporation, Delaware, USA. Brown proposed this model in his report on the financial efficiency. Since that time investors, managers, and financial experts use this model to analyze the return on equity for better understanding the capital structure of a company and the variables that contribute in maximizing the wealth of the stockholders.

Dwiningsih et al. (2018) characterize the Du Pont model as an approach that combines profitability ratios and activity ratios and can be utilized to assess the degree of viability of a company in overseeing its capital and creating benefits. Qamariah & Fatimah (2017) characterize the Du Pont Framework as a monetary execution estimation apparatus that places more accentuation on calculating the components contained within the company's balance sheet and income statement. Somewhere else Saleh and Fadhil (2012) characterize the Du Pont model as an approach that combines the Return on Equity (ROE) with the Return on Investment (ROI) to assess the monetary performance in its exertion to realize most noteworthy conceivable profits. Hargrave (2023) states that the DuPont analysis is a framework for analyzing fundamental performance popularized by the DuPont Corporation. Further, he mentions that the Du Pont system is a useful technique used to decompose the different drivers of return on equity (ROE). Said & Benmouffeki (2021) mention that the DuPont framework is an approach that's based on ratio examination which permits it to rapidly decide whether a company is utilizing all the sourcds at its hands to realize its monetary objective. They add that the decomposition of ROE allows investors to focus on the key metrics of financial performance individually to identify the company strengths and weaknesses. The DuPont framework relies on ratio investigation which permits speculators and directors to rapidly decide whether a company is utilizing all its resources to attain its monetary goals among which is the maximization to the shareholders' value..

The maximization of the shareholders' wealth may be accomplished through: maximization of operations return, managing assets with maximum efficiency, and by optimal use of leverage.

The basic DuPont model consists of three variables that measure the ROE which is represented by the following formula:

ROE= Net Profit Margin x Assets Turnover x Equity Multiplier … (1)

The above formula could be broken down into three ratios as in the following equation:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assests}}{\text{Shareholders'Equity}} \ldots.(2)$$

The primary ratio refers to the net profit margin (NPM) which may be a degree of profit (after tax and interest) made by the company compared to its sales, subsequently it measures the company's proficiency in creating returns from sales. When the profit edge of a company increments, each sale will bring more cash to a company's foot line, which comes about in higher total return on equity. Saputri et al. (2022) states that the NPM industry standard is 3.92%. The higher the proportion, better is the operation of the company.

The second ratio is the Total Asset Turnover (TATO) which measures the turnover of all company resources. This ratio is an marker of the company's effectiveness within the utilization of all resources within the company, and is calculated by dividing sales by total assets to assess the return from each dollar contributed in resources. When total asset turnover increments, a company will create more sales per resource possessed, which comes about in a better by and large return on equity. Concurring to Saputri et al. (2022) the industry TATO normal is 2 times, in the event that it is more than 2 it is said to be great, if less than 2, at that point it is destitute.

The third ratio is the equity multiplier (EM) or the financial leverage which refers to the company's ability to increase shareholders equity. In other words this ratio represents the share of the company's this will lead to an increment in return on equity, since dividend installments are not tax deductible, in this way keeping up a high return of equity in a company's capital structure leads to a better return on equity, but a higher multiplier signifies greater dependence on debt financing.According to Prastiti and Sulistiyo (2022) the industry EM standard is 1 time.

The Return On Investment (ROI), which is a ratio of profitability is used to measure how much profit is obtained from all the investments made by the company. ROI is also defined as a rate of return on all the assets owned by the company. The ROI provides a good view of a company's effectiveness in using its assets to create income (Fadila ,2023). According to Sapurti et al. (2022) the industry ROI is 5.08%. A positive ROI indicates that the invested capital in all assets in the company's operations generates profit, while a negative ROI indicates that the company's operations do not generate sufficient profits (Sudana, 2015). The Du Pont ROI is obtained by applying the next formula:

ROI DuPont = NPM x TATO ………….. (3)

or

$$\text{ROI DuPont} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \ \ldots\ldots..(4)$$

Net profit margin NPM is calculated using the following equation:

$$NPM = \frac{\text{Net Income}}{\text{Sales}} \dots\dots\dots\dots\dots \quad (5)$$

Figure (1) is a representation of the DuPont Model

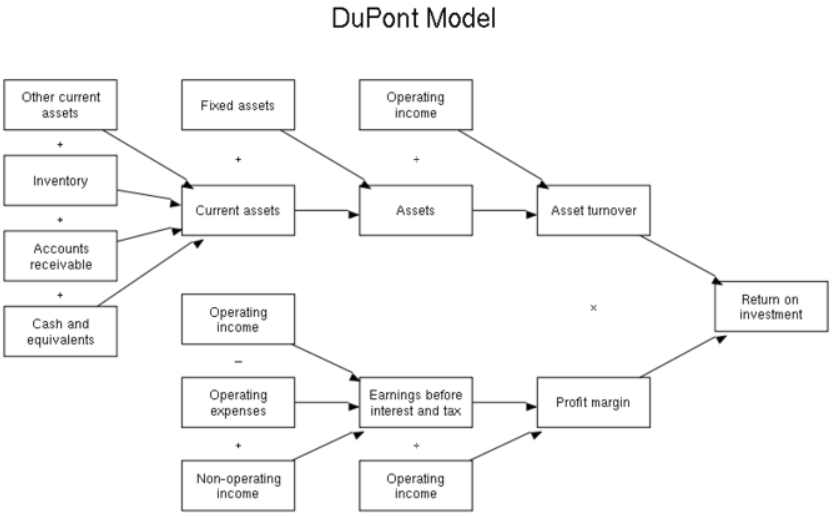

Figure (1): DuPont Model Flowchart

Source: https://learn.saylor.org/mod/book/view.php?id=53675

5.2. DuPont Advantages

1. It is considered as a good instrument that can be used investors to make a sound decisions with respect to their equity.
2. It assists investors and administrators with a complete picture of a company's financial wellbeing and performance vis-à-vis other financial analysis tools.
3.It builds on three important factors to measure financial performance which are: Profitability which is reflected by net profit margin, operational efficiency which is expressed by TATO, and the financial leverage realized by the equity multiplier.
4.It provides a visible assessment of the variations in the company's ROE which reflects the areas of weaknesses or strengths and what should be done about that.

5.3. DuPont Drawbacks

1. The primary drawback of the DuPont analysis is that it relies mainly on accounting information from the balance sheet and the income statement which may not be accurate always.
2. The problem of determining the relative values of ratios, since financial ratios are best evaluated vis-à-vis industry standards.
3. In addition, when the increased equity returns grows due to increased financial leverage and not a result of additional profits, then the company is exposing itself to financial risks.

6. **Data Presentation and Analysis**

As it was mentioned earlier in this work, only three listed companies were chosen for this study which are: RMC, MSC, and ICFC. The data collected from these companies were only the data relevant to the DuPont analysis. We shall explain now.

6.1. **RMC Company**

Net Profit Margin

Table (1) and Figure (2) presents the net profit, sales and the NPM computed using equation (5) for RMC for the years 2016-2021. It is evident that NPM showed ups and downs during this period. The highest NPM was in 2016 and the lowest was 2021. The mean NPM was 16% with standard deviation of 6%. The NPM reflects not preferred positions for the company's conduct between the years 2019, 2020, and 2021. Although the sales increased but the NPM decreased which indicates that the company could not reduce costs. Higher net profit margin is conceived better for the company, since it means a good ability of the organization to augment profits significantly.

Table (1): Net Profit, Sales, NPM for RMC Company 2016-2021 (in Million IQD)

Year	Net Profit	Sales	NPM
2016	530	2058	25.7%
2017	1240	6580	18.8%
2018	1610	7154	22.5%
2019	1905	17320	11%
2020	2083	17362	12%
2021	1610	18815	6%
		Mean	16%
		STDEV	0.06

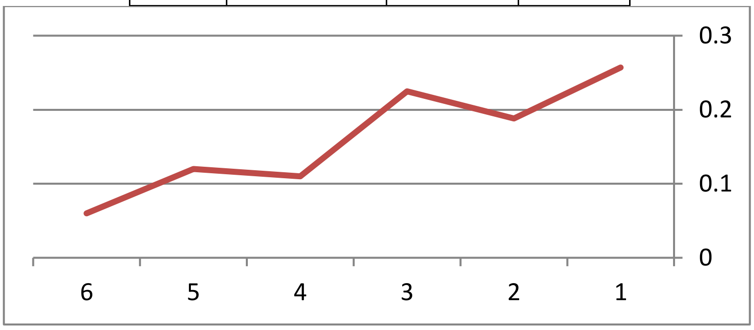

Figure (2): NPM fluctuations for RMC

Total Assets Turnover

Table (2) and Figure (3) present the fluctuation of sales, total assets, and TATO. The TATO is computed by dividing total assets by sales. By observing table (2) and figure (3) it could be noticed that (TATO) accomplished by RMC company from 2016 to 2021 has fluctuated between 0.96 times to 5.17 times, with an average of 2.52 and 1.42 standard deviation. This indicates that the company was able to generate sales from its assets. When the turnover of assets is fast it means that the company is utilizing its assets effectively, and by contrast if the TATO is slow, then it means that the assets at the disposal of the company is bigger than the ability of the company to create sales.

Table (2): Sales, Total Assets, TATO For RMC Company (2016-2021)

(in Million IQD)

Year	Sales	Total Assets	TATO
2016	2058	2137	0.96 times
2017	6580	2363	2.78 times
2018	7154	3467	2.06 times
2019	17320	8490	2.04 times
2020	17362	8200	2.11 times
2021	18815	3637	5.17 times
		Mean	2.52
		STDEV	1.42

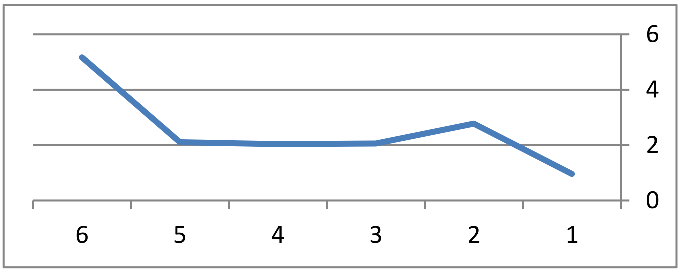

Figure (3): TATO fluctuations for RMC Company

Return on Investment DuPont (ROI)

By applying equation (4) the return on investment for RMC was calculated for the years 2016-2021. Table (3) and Figure (4) depicts the results of the calculations. The highest ROI was experienced in 2017 while this ROI was lowest in 2019. The average ROI value was 33.7% with a standard deviation equals to 12.6. The company generated good ROI in 2017 and 2018, but ROI declined after that which may be due to the economic problems caused by COVID in 2019 and later. This also means a slow down in the organization's financial conduct, since the company was not capable to administer its assets to create profits. When this ratio is small it reflects unfavorable condition, and vice versa. However, the ROI increased slowly in 2020 and 2021.

Table (3): Return on Investment (ROI Du Pont) for RMC for 2016-2021(in Million IQD)

Year	NPM	TATO	ROI
2016	25.7%	0.96%	24.7
2017	18.8%	2.78%	52.3
2018	22.5%	2.06%	46.4
2019	11%	2.04%	22.4
2020	12%	2.11%	25.32
2021	6%	5.17%	31.02
		Mean	33.7
		STDEV	12.6

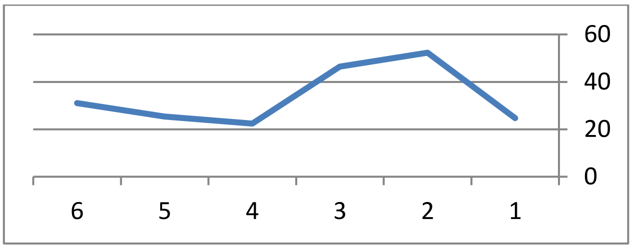

Figure (4): ROI fluctuations for RMC

6.2. MSC Company

Net Profit Margin

Using the same procedure above, the NPM for MSC was calculated by dividing net profit by sales as shown in Table (4). From this table and Figure (5), it can be seen the company achieved increasing NPM from 2016 until 2018, then its NPM decreased in 2019, and then up and down in later years. The highest profit margin was achieved in 2018 while the lowest was in 2016, but in all years, the NPM was positive. A positive NPM indicates that the company was capable to create profits from its sales because the company was able to cut down costs. The higher the NPM is, the better the financial performance of the company is.

Table (4): Net Profit, Sales, NPM for MSC Company 2016-2021(in Million IQD)

Year	Net Profit	Sales	NPM
2016	48	130	37%
2017	346	218	159%
2018	478	115	464%
2019	315	118	267%
2020	311	110	283%
2021	202	130	155%
		Mean	228%
		STDEV	146%

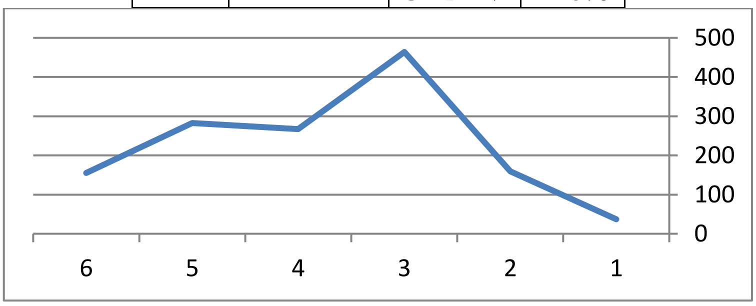

Figure (5): fluctuation of NPM for MSC

<u>Total Assets Turnover (TATO)</u>

Table (5) and Figure (6) present the fluctuation of sales, total assets, and TATO. The TATO is computed by dividing total assets by sales. With respect to the data and graph underneath we can presume that the (TATO) accomplished by RMC between 2016 to 2021 was less than one time, the mean was 0.06 times and 0.03 STV. This indicates that the company was unable effectively in making sales from the assets at its disposal. If the turnover of assets is fast, then it means the company is more effective in using its assets to create sales , and vice versa.

Table (5): Sales, Total Assets, TATO For MSC Company (2016-2021) (in Million IQD)

Year	Sales	Total Assets	TATO
2016	130	1637	0.08 times
2017	218	1880	0.12 times
2018	115	2797	0.04 times
2019	118	2732	0.04 times
2020	110	3122	0.04 time
2021	130	4000	0.03 times
		Mean	0.06 times
		STDEV	0.03

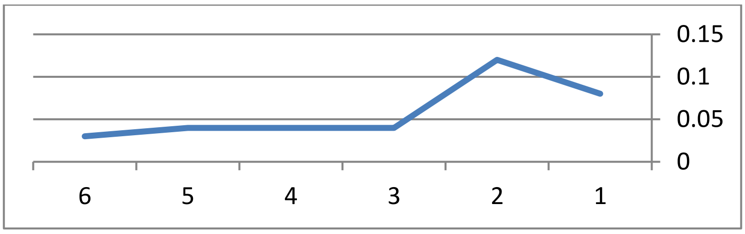

Figure (6): TATO for MSC

<u>Return on Investment DuPont (ROI)</u>

Similarly, by applying equation (4) the return on investment for MSC was calculated for the years 2016-2021. Table (6) and Figure (7) depict the results of the calculations. The highest ROI was experienced in 2017 while this ROI was lowest in 2021. The average ROI value was 11.2% with a standard deviation equals to 6.74. The company ROI fluctuated throughout the period studied. This also refers to a slowdown in the company's financial conduct, because the company was unable to administer its assets to create profits. When this ratio is small it does not reflect a good financial performance, and vice versa. However, the ROI decreased slowly after 2017.

Table (6): ROI DuPont for MSC for 2016-2021(in Million IQD)

Year	NPM	TATO	ROI
2016	37%	0.08 times	2.96%
2017	159%	0.12 times	19.08%
2018	464%	0.04 times	18.56%
2019	267%	0.04 times	10.68%
2020	283%	0.04 time	11.32%
2021	155%	0.03 times	4.65%
		Mean	11.2%
		STDEV	6.74

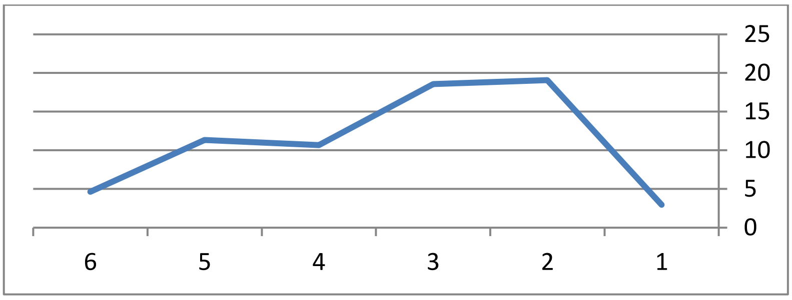

Figure (7): ROI for MSC

6.3. ICFC Company

Net Profit Margin

Applying the same procedure for the previous companies we observe that the NPM for ICFC which was calculated by dividing net profit by sales as shown in Table (7). From this table and Figure (8), it can be seen the company did not suffer losses, however the NPM fluctuated positively from 2016 until 2018, with a mean of 165% and a standard deviation of 80%. The highest net profit margin was achieved in 2018 while the lowest was in 2016, but in all years, the NPM was positive. A positive NPM means that the company was capable of creating profits from its sales because of its ability to cut down costs. The higher the NPM is, the better the financial performance of the company is.

Table (7): Net Profit, Sales, NPM for ICFC Company 2016-2021(in Million IQD)

Year	Net Profit	Sales	NPM
2016	184	300	61%
2017	238	183	130%
2018	299	110	272%
2019	477	195	245%
2020	618	370	167%
2021	476	420	113%
		Mean	165%
		STDEV	80%

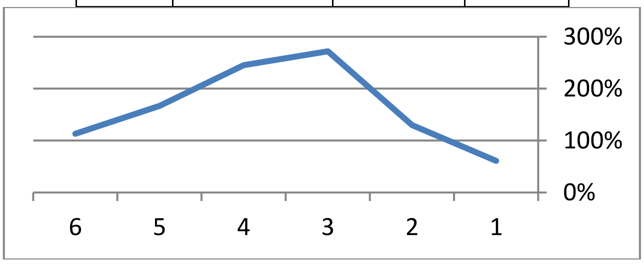

Figure (8): NPM fluctuation for ICFC

Total Assets Turnover (TATO)

Table (8) and Figure (9) present the fluctuation of sales, total assets, and TATO. The TATO is computed by dividing total assets by sales. With respect to the data and graph hereunder, we may say that the TATO accomplished by ICFC from 2016 to 2021 was below one time, the mean was equal to 0.1 times with 0.05 STD. This indicates that the company was ineffective in making sales from the assets at its disposal. When the turnover of assets is fast, then it means that the company was good in using its assets to create sales , and vice versa.

Table (8): Sales, Total Assets, TATO For ICFC Company (2016-2021)(in Million IQD)

Year	Sales	Total Assets	TATO
2016	300	1637	0.18 times
2017	183	1880	0.10 times
2018	110	2797	0.04 times
2019	195	2732	0.07 times
2020	370	3122	0.12 times
2021	420	4000	0.11 times
		Mean	0.1 times
		STDEV	0.05

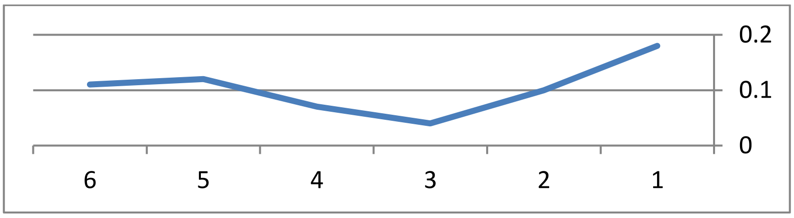

Figure (9):TATO for ICFC

Return on Investment DuPont (ROI)

By applying equation (4) the return on investment for ICFC was calculated for the years 2016-2021. Table (9) and Figure (10) depict the results of the calculations. The ROI for this company increased gradually from 2016 to 2020, but in 2021 it decreased to 17%.

The highest ROI was experienced in 2018 while this ROI was lowest in 2016. The average ROI value was 18.5% with a standard deviation equals to 8.7%. The company ROI fluctuated throughout the period studied. This also indicates to an improvement in the firm's financial conduct, since the company was capable to administer its assets to make profits. When this ratio is small, it refers to a decline in ROI, and vice versa. However, the ROI decreased slowly after 2021.

Table (9): Return on Assets (ROI Du Pont) for ICFC for 2016-2021(in Million IQD)

Year	NPM	TATO	ROI
2016	37%	0.18 times	7%
2017	159%	0.10 times	15.9%
2018	464%	0.04 times	18.56%
2019	267%	0.07 times	18.7%
2020	283%	0.12 times	34%
2021	155%	0.11 times	17%
		Mean	18.5%
		STDEV	8.7%

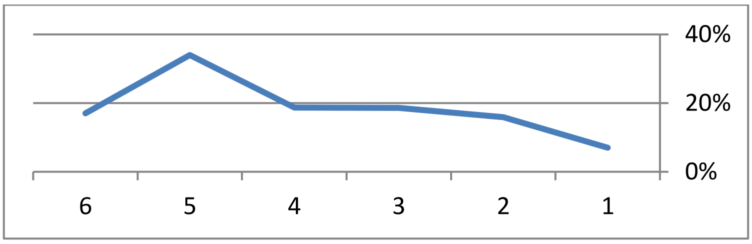

Figure (10): ROI DuPont for ICFC

From the previous analysis and figures 11, 12, and 13 we can show a comparison between the three companies. With respect to the NPM (Figure 11), shows that the MSC company was the best company, followed by ICFC, then RMC. This may lead us to conclude that MSC is using its sales effectively to generate profits.

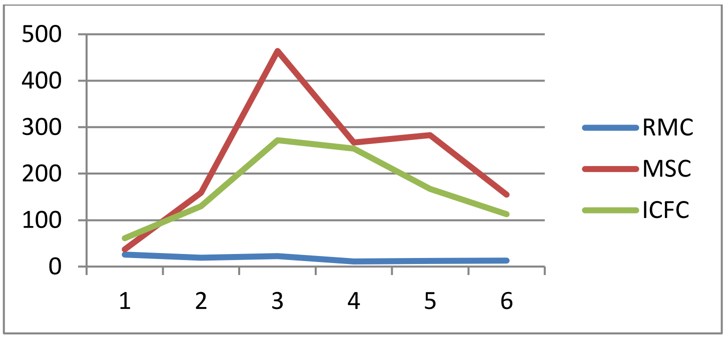

Figure (11): A Comparison of NPM for the studied Companies For 2016-2021

As for the TATO, we notice from figure (12) that the best TATO was achieved by RMC, while MSC and ICFC generated lower TATO compared to RMC, which means that RMC is effective in using its assets to generate profits.

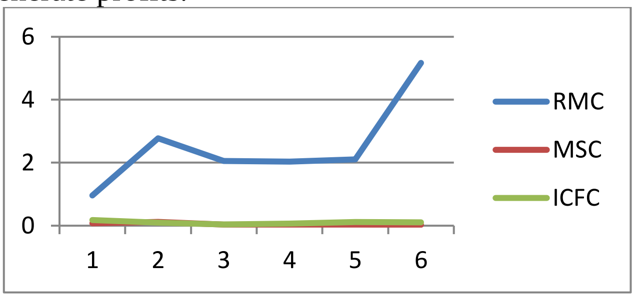

Figure (12): A Comparison of TATO for the studied Companies For 2016-2021

Finally, Figure (13) presents a comparison between the three companies studied with respect to ROI. From this figure we can conclude that ICFC generated the highest ROI compared to the other companies studied. The higher the ROI is, the better the financial performance of the company is.

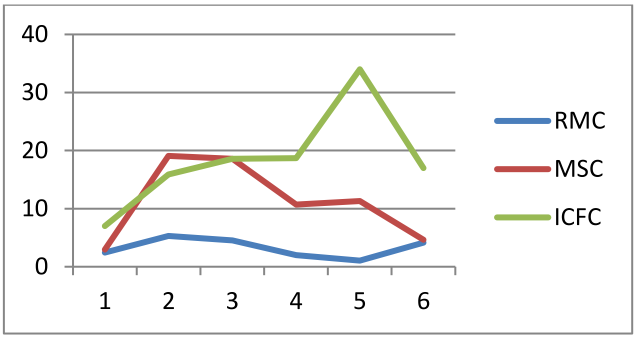

Figure (13): A Comparison of ROI for the studied Companies For 2016-2021

Conclusions

Through the consideration of this research results, and analysis conducted in the previous sections, we may conclude the following:

1. The Financial performance at ICFC measured by DuPont analysis during the period 2016 – 2021 was seen to be favorable. This is due to the increase in ROI obtained by the company during 2016 – 2021 compared to its peers studied in this research. This augmentation in ROI was accomplished because of the increase in the Net Profit and TATO. This situation indicate that the company was good in administering its investment to generate make profits
2. Net Profit Margin (NPM) in ICFC ranked second compared to MSC this is due to MSC's ability to raise profits faster than ICFC.
3. with respect to TATO, RMC ranked first while the other two companies generated lower TATO compared to RMC, which means that RMC is effective in using its assets to generate profits.

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