# Use analysis of internal growth rate and sustainable growth rate and its relation to performance

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# Abstract

The study aims to study the relationship between the rate of sustainable growth and internal growth rate and the improvement of the performance of the company and the degree of relationship between these variables. For this purpose, a sample of the listed companies was used in the Iraqi Stock Exchange for 22 companies for the period 2010-2017 through use of the financial statements of the sample companies. The research focused on the data related to the internal rate of return (EGR), sustainable rate of return (SGR) General revenue using analytical statistical methods and methods such as the Mann-Whitney U and Spearman correlation tests and using the SPSS statistical program. V22. Linear regression analysis was used to examine the correlation between the deviation of the actual growth rate from the sustainable growth rate, return on assets (ROA), price to book value (P / B), community ratios and rapid rate. The study showed that there is a correlation between ROA and IGR and SGR and is not significant with the general rate of return. The results also showed a relationship and impact between most operational efficiency indicators, IGR and SGR.

Key Words: sustainable growth, internal growth, performance

### Introduction:

In the last few years, organizations have faced significant challenges that may be concerned about financial failure as a result of changing economic environments such as a decline in aggregate demand, increased borrowing costs and changes in government regulation, which could lead to several consequences, including bankruptcy (Bhunia & Sarkar, 2011). This requires the use of distinctive analysis techniques, including internal growth rate and sustainable growth rate, which ensures revenue growth and its impact on the overall viability of the company when growth is sustainable. The revenue growth rate is the percentage increase in revenue and the sustainable growth rate that the company can support based on a combination of external financing (debt) and internally generated funds such as undistributed profits (Palenu & Healy, 2008).

The analysis was used to determine the financial health of companies by determining the financial ratios that are relationships between the financial statement data. (June, 2012). The most common financial statements used in the ratio analysis are the balance sheet and income statement. Other quantitative data may also be taken into account in ratios in order to highlight any underlying problem that may not be apparent by analyzing the note only. Financial statements include lease payments and related terms, contingent liabilities such as past and pending claims, retirement obligations and prior settlement of claims (Loughran & McDonald, 2011). While financial ratios provide a good general overview of overall corporate performance, they may not provide a complete picture of an impending financial ratios and trend analysis for financial validation and performance. The financial statements may not reflect a clear picture of performance under changing circumstances and this reflects the importance of dealing with distinctive analytical techniques.

When the company can grow at an unsustainable rate, it can face financial hardship because its available resources may not support growth rate (Ashta, 2008). One of the company's objectives is to develop the company in order to increase the company's present value or market value. Therefore, growth must be sustainable so that

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companies can benefit from it strategically (Raisch & von Krogh, 2007). The sustainable growth rate (SGR) is the percentage that a firm can support based on a combination of external factors (debt) and internally generated funds such as undistributed profits.

#### Purpose of the research

The purpose of this research is to investigate the effectiveness of the company's use of the internal growth rate and the sustainable growth rate to determine the financial health and improve the performance and what is the degree of relationship between these variables.

To achieve this purpose, a sample of the listed companies was used in the Iraqi Stock Exchange through the use of financial statements of the sample companies. The research focused on the data related to the internal rate of return (EGR), the sustainable rate of return (SGR) and the growth rate of general revenues using analytical statistical methods and methods Mann-Whitney U and Spearman correlation tests using SPSS. V22

# **Research** problem

The problem of research is to answer the following question: Does the analysis of internal growth rate and sustainable growth rate relate to financial health and improve performance through the rate of growth of public revenue.

#### **Research** assumes

In order to reach the purpose of the research and answer its questions, two hypotheses were put in place:

The first hypothesis: There is no significant correlation between the internal growth rate and the performance of the sample companies.

The second hypothesis: There is no significant correlation between the sustainable growth rate and performance of the sample study companies.

# Research importance

The importance of research is to help companies improve their performance through strategic financial plans, as well as to contribute to a general understanding of sustainability, so that the best growth rate is consistent with the revenue growth rate in order to avoid potential financial problems.

# **Definition of variables**

### **Retention rate**:

This is the net profit measure maintained by the company after payment of all distributions to shareholders (Comettm 2012, et al.,). Retention rate equals the residual income after payment of all dividends paid by companies by net income. It retains profits for future investments such as buying new assets and expanding existing businesses and the retention rate plays a role in calculating the sustainable growth rate.

# Return on Assets (ROA)

The ROA is a quantitative measure of the profits earned by each unit invested in assets. ROA is calculated by net income divided by total assets. The company will be more efficient in cost control, higher profit. High profits also result in a high return on assets (Cornett et al., 2012).

#### **Return on equity (ROE)**

A return on equity is a quantitative measure that refers to the return or returns on their investments. The return on equity is calculated as the net income divided by total equity. The measure of return measures the rate of return per unit of cash in equities.

# **Retained earnings:**

Retained earnings are part of the Company's net income that is invested in the Company. The degree to which the company holds its profits is a function of the rate of payment on its profits (Bhunia & Sarkar, 2011). The higher the rate of dividend distribution, the less net income will be retained as it measures the overall profitability of the company over time.

#### Solvency:

Solvency is the ability of a company to pay its debt obligations in order to continue operating as a going concern. When a company is unable to maintain its operations financially, it will face financial distress that may result in a formal reorganization of the liquidation (Gibson, 2011).

# Sustainable Growth Rate (SGR)

Sustainable growth is a standard variable which is a measure of the level of proportion calculated using financial statement data. The sustainable growth rate is the percentage that the company can support based on the external financing group (debt) and internally generated funds such as undistributed profits (Palenu & Healy, 2008). The quantitative measure of sustainable growth rate (SGR) varies according to the actual size of each variable used in the calculation.

# **Revenue growth rate:**

The rate of revenue is a standard variable used to measure changes in sales (revenues) from one period to another. The variable is the measurement of the level of proportion calculated using the financial statement data. This can be defined as the percentage of increase in revenue from one period to another. The reported revenue growth rate is a relative measure and can be calculated using the concept of the time value ratio of financial concepts (Gardner, et al., 2011)

# External finance and growth

That the necessary external financing and growth are clearly linked. If other things remain the same, the higher the rate of growth in sales or assets, the greater the need for external financing. Through the relationship between fiscal policy and the company's ability to finance new investments and thus growth. Again, we focus on growth not because growth is the right target, but growth is simply an appropriate way to study the interactions between investment and financing decisions. In fact, we assume that the use of growth as a basis for planning is merely a reworking of the high level of aggregation used in the planning process (Ross, A. 2013: 105)

#### **Internal growth rate**

The first revenue growth rate is the maximum growth rate that can be achieved without financing from any type of external financing. This is the internal growth rate because this is the rate that a company can maintain through internal financing only. In Figure 1.1, the internal growth rate represents the point at which the two lines intersect. At this point, the required increase in assets is exactly equal to the addition to retained earnings and external financing requirements (EFNs) are therefore zero. That happens when the growth rate is just under 10 percent as in Fig.

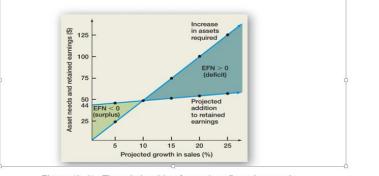


Figure (1-1): The relationship of growth to financing needs Source: Ross .et .al ,2013 , Fundamentals of Corporate Finance

We can determine this growth rate more precisely:

Internal growth rate = 
$$\frac{\text{ROA} \times b}{1 - \text{ROA} \times b}$$
 (1-1)

The proper financial growth rate that the company faces when there is no external financing required (EFN), meaning we only use internal funds to grow. Assume also that the company has doubled its sales without the need (Levin, 2005)

To double the size of its assets to a large extent, which is known as the increase of standard returns. so far As opposed to a unique or individual hypothesis, which is the typical laboratory of the function. **Sustainable growth rate** 

However, growth must be sustainable in order for companies to benefit strategically from their growth (Raisch & von Krogh, 2007). The sustainable growth rate is the percentage that the company can support based on the combination Between external financing (debt) and internally generated funds such as undistributed revenue (Palenu & Healy, 2008) The sustainable growth rate (SGR) is based on the return on equity (ROE)

# [(SGR - [(ROE x retention rate) / (1- (ROE x retention rate

The Return on Assets (ROA) and Return on Equity (ROE) are two measures used to determine the success of managers in maximizing the total assets used and the market value of shares (Gomes & Schmid, 2010). Funds for investment or expansion (Cornett, et al., 2012). Funds can be generated either internally or using a combination of internal and external sources. The capacity to generate funds internally can be measured quantitatively using the internal growth rate so that the internal growth rate is equal to

# (ROA x retention ratio) / (1) ROA x retention rate [(Ashta, 2008)

Internally generated funds are the company's savings. The ability to generate funds using a range of internal and external sources can be measured quantitatively using a sustainable growth rate. At present, the use of sustainable growth is limited to internal planning for the purpose of determining the sustainability of overall growth in sales or .assets

While the sustainable growth rate provides a comprehensive measure of the growth rate that the company can support, an important dimension is the internal growth rate. The internal growth rate is the growth rate that a firm can maintain using internally generated cash only from current or future investments (Ross, et al., 2011). The internal growth rate is designed to help the company determine its growth limits based on internally generated money. Internally the funds are generally based on retained earnings of the company, part of the internal growth rate of return on assets (ROA). The ROA is a combination of profit margin and book value of total assets such as ROA = net profit / total assets. The yield per dollar of assets is measured on the balance sheet of the Company in a given period (Gardner, et al., 2011). The higher the net profit, the higher the ROA. The higher the net income and retained earnings, the higher the internal growth rate. This will indicate that the company is less likely to rely on external financing for expansion or investment (Phillips, et al., 2010)

To support current or future growth or investment as a planning tool, SGR is used to manage overall the growth in sales or total assets. Proper SGR application can help management to increase the company's total value (Ashta, 2008). In this regard, one of the factors that may affect the rate of sustainable growth is general economic conditions. Which could affect the growth of the company include consumer demand, interest rate, inflation, monetary policy and macroeconomic issues around the world such as the price of oil and debt crisis (Korol & Korodi, 2010). The greater the negative impact of these factors for the company's revenue, the lower the profit. A decrease in profit affects the return on equity which in turn affects the SGR. In addition to the general economic conditions that can affect the SGR, there are specific quantitative factors that can affect the SGR's efficiency and types of funding, profit distribution policy (sunny, 2014)

DuPont analysis of ROE is determined by profit margin, asset turnover, and financial leverage (Kasilingam & Jayabal, 2012). On the basis of these functional relationships, DIBONT calculates the IRR analysis as follows: Return on Profit = Profit Margin  $\times$  Total Assets  $\times$  Equity multiplier. Where profit margin = net income / sales, total asset turnover = sales / total assets, and equity multiplier = total assets / equity. A change in any of the variables changes the ROE. Change in profit margin, total asset value, equity multiplier affects SGR, analysis indicates that the profit margin and total asset turnover measure the company's operating efficiency. In addition, Kasilingam and Jayabal (2012) concluded that the lack of operational efficiency results in lower operating revenues and profits. Equity multiplier On the other hand, the measures raise or use debt to finance daily or long-term investments. Increased debt

utilization increases debt service expenses that in turn reduce profits and reduce return on equity based on empirical studies. The sustainable growth rate is an important work of strategy for many types of business.

The study of sustainable growth is not only important in profit organizations but also applies to non-profit organizations. Jegers (2003) points out that the growth of nonprofit activity is constrained by its efficiency, profitability and capital structure. However, a sustainable growth concept can be applied to other non-profit organizations. That community organizations should use the sustainable growth rate model better to understand their overall performance and planned growth in order to avoid financial distress and bankruptcy.

If the company wants to grow faster than 9.65 percent a year, as in the figure, for example, external financing should be arranged. By focusing on the second growth rate, the maximum rate of growth the company can achieve, with no external financing for equities while maintaining the ratio of debt to equity. This rate is usually called sustainable growth rate because it is the maximum growth rate that a company can maintain without increasing its financial capacity. There are many reasons why a company may want to avoid selling stocks. For example, new stock sales can be expensive. In addition, the current MAC may not want to bring in new owners or contribute to additional ownership rights. (Ross, et al., 2016)

Sustainable growth rate = $\frac{1}{1}$	$ROE \times b$	(1-2)
Sustainable growin rate –	$-\operatorname{ROE} \times b$	(1-2)

# **Determinants of growth**

The ability to maintain growth is determined by profit margin, profit distribution policy, and capital structure Or financial policy and efficiency in the use of assets according to the measure of the total turnover of assets (Ross, et al., 2013). The capital structure of the company is determined by combining the use of debt and equity so that the value of the company can be determined as follows: Vt = debt + value of the stock, where Vt is the market value of the company at a specific time, debt is based on the book value of short- and long- Rights depend on the current market value of the preferred and preferred ordinary share.

That ROE, ROE, can be decomposed into its various components using the DuPont analysis. Because return on equity appears to be prominent in determining sustainable growth, this is illustrated by the important factors in determining return on equity are also important determinants of growth. And that ROE can be written as the product of three factors:

# ROE = Profit margin X Total asset turnover X Equity multiplier

If we look at the expression of sustainable growth, we see that anything that increases return on equity will increase the rate of sustainable growth by making it larger or slightly smaller. Increasing the currency recovery rate will have the same effect. The company's ability to sustain growth explicitly depends on the following four factors: (Ross A. At. 2016:105)

1 .Profit margin: The increase in margin will increase the company's ability to generate funds internally and thus increase its sustainable growth.

2 .Profit Distribution Policy: The decrease in the percentage of net income paid as profit will increase the retention ratio. This increases internal property rights and thus increases sustainable growth.

3 .Financial Policy: The increase in the ratio of debt to capital increases the positive impact on the financial value of the company. Because this makes additional debt available, it increases the rate of sustainable growth.

4. Total asset turnover: The increase in total asset turnover increases the sales generated per dollar in assets. This reduces the need for new assets to grow sales and thus increase the sustainable growth rate. Note that the increase in total asset turnover is the same with lower capital intensity.

The sustainable growth rate is a very useful planning figure. What is evident is a clear relationship between the four main areas of concern: operating efficiency as measured by profit margin, and asset utilization efficiency according to the measure of total asset turnover, retention ratio policy, and financial policy as measured by ratio of debt to equity. Given the values of all these four elements, there is only one growth rate that can be achieved. This is an important point, so it must be emphasized that:

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# If the company does not want to sell new shares and its profit margin, dividend policy, financial policy and turnover of total assets (or capital density) are all fixed, here there is only one growth rate possible.

One of the fundamental benefits of financial planning is that it ensures internal consistency between the different objectives of the company. The concept of sustainable growth reflects this element beautifully. Also, now see how financial planning can use a model to test the feasibility of a planned growth rate. If sales grow at a higher rate than sustainable growth.

The financial leverage reflects the capital structure of the company and is controlled by a board of directors. Growth can be fueled by adding more capital or leverage. Adding debt to the fund Additional investments are a way to promote SGR. However, the reduction of debt capital withdraws to the SGR drop due to the reduction of available capital to fund growth. Profit margin is the key to any cooperative performance necessary for the SGR account. It is somewhat self-evident to promote growth by increasing profits. When profits are lower, growth is lower. However, the company's ability to pull this "lever" to drive SGR is limited. For example, increasing margins requires either raising revenue or reducing costs, and in any competitive environment, it is difficult to do. The operating efficiency is the final part of the SGR equation. This "lever" especially shows how efficiently the company's assets are used to generate sales. Therefore, if the company decides to expand assets, meet the sales increase dramatically in order for there to be gains.(Nathan, 2016)

Operating efficiency and SGR height. Conversely, if assets are subsequently reduced, sales should remain at current levels or only slightly lower to maintain higher operating efficiencies and SGRs. The results of the SGR model are further simplified in two formatting points. The return on equity can double the retained earnings to determine the SGR. A return on equity is the measure of gains earned on equity, while retention of profits determines the amount of retained earnings in respect of net income. These measures measure the extent to which a company can generate profits for capital accumulation, which drives sustainable growth. The main objective of the SGR model of the Board of Directors is that the growth of the company is not an independent decision, but depends on each other decision based on acceptable financial and operating ratios. When SGR is compared to actual growth rates. (Higgins, 2008)

According to Higgins, SGR relies on the change in shareholders' equity in the financial year divided by issued shares without any additional ownership rights made during the year. Such a change is possible only by keeping it. Thus, the money generated through retained earnings increases the net worth of the company and with it an increase in net worth, the company can borrow more funds that will enable the company to increase its asset base. The increase in assets leads to an increase in operating costs, resulting in an increase in profits and thus an increase in retained earnings (Raiyani.2011): As in Figure (2-1)

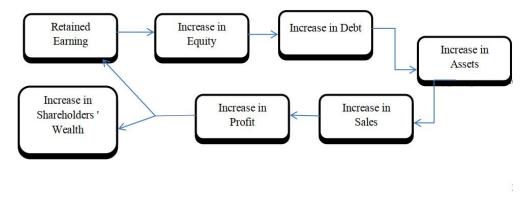


Figure 2.1: Specific variables for sustainable growth Source: Higgins R. C., 2008, Analysis for financial management, 9th ed. (McGraw-Hill, Inc,New York, NY). The third topic

# Applied side

To identify the relationship between the variables and to test the hypotheses of the research, the companies of the listed companies in the Iraqi Stock Exchange of about 110 companies have been selected for research. A sample of 22 companies has been identified according to the economic sectors, accounting for about 20% of the research community. Industrial, services, investment and hotels during the period of research determined from2010 -2017 Data were obtained from the Iraq Stock Exchange website and Excel was used for data analysis

# First: the internal growth rate

Table (1) shows the independent performance variables through performance indicators (G Return, ROA, ROE) and operational efficiency indicators (NWC / TA ratio and fixed assets turnover Rev / FA and the turnover ratio of the total assets (Rev / TA) and the adopted variable of the internal rate of return (EGR) and confirm that the figures shown in the table are rates for eight years from 2010-2017. The general rate of return was 0.21491 at the sample level. The standard deviation was 0.236597. The highest value in the Islamic Bank was 0.940122 while the lowest was 0.03079 in Al-Zawra Investment Company. The other values ranged between these two levels, the performance.

As for ROA, there was an average of 0.050653 and a standard deviation of 0.045515. The highest value was achieved in Al-Karkh City 0.14606, while the lowest value was in Baghdad Packaging Materials Company at 0,01047. The other values ranged between these two dimensions, ROA in the sample search companies.

In addition, the first indicator of the operational efficiency of the sample was NWC / TA at 0.5360 and the standard deviation was 0.2835 and the highest in Commercial Bank was 0.9965, while the lowest value was in Asia Telecom for 0.13349 - The rest of the values ranged between these two levels, reflecting Contrast in this indicator in the sample research companies.

				1	1
Company Name	G Return	ROA	ROE	NWC/TA	Rev/FA
National Bank of Iraq	0.330437	0.022664	0.051576	0.478323	3.404539
Comercial Bank	0.327026	0.013785	0.039435	0.996528	13.54186
IslamicBank	0.940122	0.032506	0.06714	0.487194	3.811832
Ishur Bank	0.069521	0.048586	0.080753	0.557283	2.08925
Investment Bank	0.060077	0.060077 0.034469 0.08099		0.394932	2.559693
Bank of Baghdadt	0.064335	0.018912	0.111795	0.11972	1.748211
Altaif Money Tranfe	0.296751	0.008994	0.010303	0.753709	0.767726
Al-Nibal for Money					
Tranfer	0.231152	0.004342	0.004351	0.991699	5.678191
Asia sell comm	0.734441	0.105207	0.153186	-0.13349	0.647636
com for Meay& field					
Grops	0.287745	0.026272	0.037966	0.406857	0.244094
Karbala Hotels	0.395869	0.018468	0.019314	0.647253	0.391172
National for Torism Invest	0.030759	0.111724	0.119927	0.656321	0.728077
Baghdad for Sofet Drink	0.084833	0.10618	0.110058	0.401269	2.178089
Baghdad for baking					
Material	0.13914	-0.01047	-0.006	0.362043	0.317617
raqi Date processing	0.275086	0.046339	0.056139	0.510707	1.369075
Al-Mansour					
Phormaceuticals	0.124623	0.037597	0.042757	0.694573	2.120602
Iraqi for Tufted & carpets	-0.01267	0.064867	0.100096	0.611323	6.863598
Baghad for public					
transports	0.29342	0.145352	0.273096	0.236256	1.95178
Kharkh Tour Amuzement	6.5E-05	0.146058	0.163388	0.326388	3.242303
Al-Wiaam for investment	0.329699	-0.00025	-0.00532	0.821735	22.98514
Al-zawraa for Investment	-0.03079	0.007739	0.005096	0.92909	214.1405
Dar-Al-salam for					
insurance	-0.01598	0.060177	0.064165	0.945509	55.40291
G-mean	0.21491	0.050653	0.07446	0.536018	16.46188
S.D	0.236597	0.045515	0.065081	0.283515	44.89213
Multiple R	0.390841	0.966201	0.936193	0.44592	0.115548
R Square	0.152757	0.933544	0.876458	0.198845	0.013351
Adjusted R Square	0.105138	0.885925	0.828839	0.151226	-0.03427

Table (1) Analysis of internal growth rate

F	3.786271	294.9992	148.9829	5.21215	0.284172
Significance F	0.065864	1.93E-13	1.01E-10	0.033505	0.599854
X Variable 1	0.80753	0.059878	0.000203	0.191389	0.000203
t Stat	1.945834	17.17554	12.20586	2.283013	0.533077
<i>P-value</i>	0.065181	7.69E-14	5.32E-11	0.032952	0.599577

#### Source: researcher's preparation

As shown in the table is the turnover rate of fixed assets Rev / FA which reached 16.46188 and with a standard deviation of 44.89213. The highest ratio was recorded in Dar Al Salam Insurance Company 55,40291, while the lowest percentage in the meat production and packing company was 0.2440. The other values ranged between these two levels, Indicator in the companies sample search.

As for the turnover of total assets Rev / TA was an average of 0.232397 and a standard deviation of 0.2531, and the highest value achieved in the Baghdad Company for soft drinks 0.24409 compared to the lowest percentage in the hotel Karbala 0.00187 - The rest of the values ranged between these two levels, Indicator in the companies sample search.

Table (1) shows the average internal growth rate (IGR) in terms of the adopted variable. The general average of this rate is 0.0529268 and a standard deviation of 0.062658. The highest percentage was in Baghdad Transport Company (0.24027). However, this rate was positive for all companies of the research sample, although they were different according to their standard deviation.

As for the relation between the independent variables and the variable IGR, it was found that the correlation relationship was positive and strong. As for its correlation with the rate of general returns, the correlation coefficient was R 0.390841 and the coefficient of  $R^2$  was 0.152757. This means that 15% of the change in IGR Was caused by the change in the variables observed. The value of F was 3.786271 and this indicates that the relationship is not significant at the level of 5%. The value of T 1.945834 was also insignificant. On this basis, research hypotheses can be proved that there is no relationship between the two variables.

The correlations between the ROA and the internal growth rate (IGR) were the correlation coefficient R 0.966201, which is a strong positive correlation. The coefficient of  $R^2$  was 0.933544. This means that 93% of the approved variable was caused by independent variable ROA and F The value of T17.17554 and the significance of 1%. This leads to rejecting the null hypothesis and proving the alternative hypothesis of the relationship of correlation and effect between the two variables.

In addition, the correlation between ROE and internal growth rate (IGR) was 0.936193 R, which is a strong positive correlation. The coefficient of  $R^2$  was 0.876458, which means that 88% of the variable adopted was due to independent variable change ROE The value of F was 148.9829 with a significant significance of 1% and the value of T was 12.20586 with a significant significance of 1%. This leads to rejecting the null hypothesis and proving the alternative hypothesis of the correlation between the two variables. The correlation between the indicators of profitability and the variable IGR was found to be significant.

As for operational efficiency indicators, the correlation coefficient R was between NWC / TA and the internal growth rate (IGR 0.536018). The coefficient of  $R^2$  was 0.44592. This indicates that 44% of the adopted variable was caused by independent variable variance NWC / TA, 5.21215 F with a significant significance of 5% and the value of 12.20586 T with a significant significance of 5%. This leads to rejecting the null hypothesis and proving the alternative hypothesis of the correlation between the two variables.

The correlation coefficient R was between Rev / FA and the internal growth rate (IGR 0.115548). The coefficient of  $R^2$  was 0.013351. This indicates that 1% of the dependent variable was caused by the independent variable variant NWC / TA and 0.033505 F with insignificant significance The value of T 2.283013 and a significant 5% also. This leads to the acceptance of the hypothesis of the lack of correlation and influence between the two .variables

The correlation coefficient R was between the Rev / TA ratio and the internal growth rate (IGR) 0.761396. The coefficient of  $R^2$  was 0.579724. This indicates that 58% of the dependent variable was caused by independent variable Rev / TA. The value of F was 28.967161 with a significant significance of 1% The value of T 5.382115 was also

significant 1%. This leads to rejecting the null hypothesis and proving the alternative hypothesis of the relationship of correlation and effect between the two variables. The relationship between the operational efficiency indicators and the variable IGR has been established.

# Second: sustainable growth rate

Table (2) shows the independent performance and profitability variables (G Return, Return on Assets, Return on Equity (ROE) and Operational Efficiency Indicators), Working Capital Net to Total Assets (NWC / TA), Rev / (Rev. TA) and the adopted variable of the internal rate of return (SGR). The sustainable growth rate was 0.0954. The standard deviation was 0.1206. The highest value was in Baghdad Public Transport Company 0.57934 while the lowest value was 0.00367 for the financial transfer company. All values were positive and ranged Between these two wiles Note the variance of the values of this rate.

As for the correlation between the independent variables and the variable adopted SGR, it was found that the correlation relationship was positive and strong. As for its correlation with the G return rate, the correlation coefficient was 0.1642 R and the coefficient of  $R^2$  was 0.1642, which means that 16% In SGR was caused by change in independent variables. The value of F was 4.1254 which indicates that the relationship is significant at 5%. The value of T 2.0311 is also significant at 5%. On this basis, research hypotheses that show no correlation between the two variables can be rejected. And prove the hypothesis of a relationship

As for the correlation between ROA and SGR, it was found to be positive and strong. The correlation coefficient R was 0.8645, and the coefficient of  $R^2$  was 0.7474. This means that 75% of the change in SGR was due to the change in independent variables. The value of F was 62.1240 and this indicates that the relationship is significant at 1%. The value of T 7.8819 is also significant and is also 1%. On this basis, research hypotheses that show no correlation between the two variables can be rejected. And prove the hypothesis of a relationship.

The correlation between ROE and the SGR was found to be positive and strong. The correlation coefficient R was 0.9383, and the  $_{R2}8080$  was  $_{R}^{2}$ . This means that 88% of the change in SGR was due to the change in independent variables. The value of F was 154.5148 and this indicates that the relationship is significant at 1%. The value of T 12.4304 is also significant level of 1%. On this basis, research hypotheses that show no correlation between the two variables can be rejected. And prove the hypothesis of a relationship.

The correlation coefficient between NWC / TA and the SGR variable was positive. The correlation coefficient R was 0.3613. The coefficient of  $R^2$  was 0.1306. This means that 13% of the change in SGR was caused by the change In the independent variables. The value of F was 3.1534 and this indicates that the relationship is not significant at 5%. The value of T 1.7758 was also insignificant at 5%. On this basis, research hypotheses can be proved that there is no relationship between the two variables.

The coefficient of correlation between Rev / FA and the variable SGR was found to be positive. The correlation coefficient was R 0.0807, and the coefficient of  $R^2$  was 0.0065. This means that 60.0% of the change in SGR was due to the change in independent variables. The value of F was 0.1376 and this indicates that the relationship is not significant at 5%. The value of T 0.3709 was also insignificant at 5%. On this basis, research .hypotheses can be proved that there is no relationship between the two variables

The coefficient of correlation between Rev / TA and the variable SGR was found to be positive. The coefficient of correlation was R 0.6297, and the  $R^2$  was 0.3965. This means that 40% of the change in SGR was due to the change in independent variables. The value of F was 13.7969 and this indicates that the relationship is significant at 1%. The value of T 3.7144 is also significant at the level of 1%. On this basis, research hypotheses that show no .correlation between the two variables can be rejected. And to prove the alternative hypothesis

On this basis, accept the premise of the absence of the relationship and the impact of operational efficiency indicators only one indicator is the rate of cycles total assets Rev / TA has been to prove the relationship and influence between the variables.

Table (2) Analysis of sustainable growth rate

	G						
Company Name	Return	ROA	ROE	NWC/TA	Rev/FA	Rev/TA	SGR
National Bank of Iraq	0.3304	0.0227	0.0516	0.4783	3.4045	0.0692	0.0478

Comercial Bank	0.3270	0.0138	0.0394	0.9965	13.5419	0.0286	0.0357
IslamicBank	0.9401	0.0325	0.0671	0.4872	3.8118	0.0590	0.0635
Ishur Bank	0.0695	0.0486	0.0808	0.5573	2.0893	0.0886	0.0713
Investment Bank	0.0601	0.0345	0.0810	0.3949	2.5597	0.0747	0.0742
Bank of Baghdadt	0.0643	0.0189	0.1118	0.1197	1.7482	0.0507	0.1173
Altaif Money Tranfe	0.2968	0.0090	0.0103	0.7537	0.7677	0.0729	0.0090
Al-Nibal for Money Tranfer	0.2312	0.0043	0.0044	0.9917	5.6782	0.0198	0.0037
Asia sell comm	0.7344	0.1052	0.1532	0.1335-	0.6476	0.4994	0.1432
com for Meay& field Grops	0.2877	0.0263	0.0380	0.4069	0.2441	0.0704	0.0343
Karbala Hotels	0.3959	0.0185	0.0193	0.6473	0.3912	0.0019-	0.0185
National for Torism Invest	0.0308	0.1117	0.1199	0.6563	0.7281	0.2023	0.1224
Baghdad for Sofet Drink	0.0848	0.1062	0.1101	0.4013	2.1781	1.1430	0.1106
Baghdad for baking Material	0.1391	0.0105-	0.0060-	0.3620	0.3176	0.1808	0.0120
raqi Date processing	0.2751	0.0463	0.0561	0.5107	1.3691	0.2733	0.0567
Al-Mansour Phormaceuticals	0.1246	0.0376	0.0428	0.6946	2.1206	0.4179	0.0405
Iraqi for Tufted & carpets	0.0127-	0.0649	0.1001	0.6113	6.8636	0.2342	0.0973
Baghad for public transports	0.2934	0.1454	0.2731	0.2363	1.9518	0.4376	0.5793
Kharkh Tour Amuzement	0.0001	0.1461	0.1634	0.3264	3.2423	0.4531	0.2541
Al-Wiaam for investment	0.3297	0.0002-	0.0053-	0.8217	22.9851	0.0623	0.0198
Al-zawraa for Investment	0.0308-	0.0077	0.0051	0.9291	24.1405	0.0661	0.0200
Dar-Al-salam for insurance	0.0160-	0.0602	0.0642	0.9455	55.4029	0.2437	0.0597
G-mean	0.2149	0.0507	0.0745	0.5360	16.4619	0.2324	0.0954
S.D	0.2366	0.0455	0.0651	0.2835	44.8921	0.2532	0.1206
Multiple R	0.4052	0.8645	0.9383	0.3613	0.0807	0.6297	4
R Square	0.1642	0.7474	0.8804	0.1306	0.0065	0.3965	4
Adjusted R Square	0.1166	0.6997	0.8327	0.0829	0.0411-	0.3489	-
F	4.1254	62.1240	154.5148	3.1534	0.1376	13.7969	

	Significance F	0.0557	0.0000	0.0000	0.0910	0.7146	0.0014
	X Variable 1	0.1871	1.9773	1.4598	0.0875	0.0003	0.2855
	t Stat	2.0311	7.8819	12.4304	1.7758	0.3709	3.7144
-	P-value	0.0551	0.0000	0.0000	0.0903	0.7144	0.0013

Source : the researcher's preparation

### Conclusions

1The results show that growth management requires careful balancing of the company's sales objectives, operational efficiency and financial resources.

2 .It emerged from the analysis that the Islamic Bank achieved the highest rate of return of the general rest of the companies in the sample

3 .The results showed that the city of Al-Karkh was more than ROA. The highest ROE rate was in Baghdad Public Transport Company.

4 .As regards operational efficiency indicators, Commercialbank achieved the highest percentage of net working capital / total assets (NWC / TA). As for the turnover of fixed assets, Dar es Salaam achieved the highest percentage, and the Baghdad Beverages Company has achieved the highest turnover of total assets. Thus, companies differ in their excellence in these indicators.

5 .The analysis showed a correlation between ROA and IGR and SGR and not significant with the general rate of return.

6 .The results showed a relationship and impact between most operational efficiency indicators, IGR and SGR

7 .The null hypothesis and the acceptance of alternative hypotheses that confirm the existence of relationship and the impact of the performance variables of profitability, operational efficiency and dependent variables, the internal growth rate (IGR) and the sustainable growth rate (SGR(

# Recommendations

1. The need to achieve a balance between the sales objectives of the company and its operational efficiency and financial resources. Thereby maintaining sustainable growth in returns.

2 .The sample companies should review their strategies and programs to overcome the weaknesses and the obvious in some indicators of performance.

3 -the need to follow the companies sample research scientific methods in the analysis and evaluation and continuously to test the efficiency and ability to achieve its objectives.

4 -To work on laying the scientific foundations for determining the optimum liquidity and transferring resources exceeding this limit to investment to increase the growth and continuity of revenues.

5 -Activate the use of strategic measures to determine the performance to overcome the problems and obstacles facing the process of continuous improvement of activities and events.

.6Follow-up and evaluation of operational efficiency through a variety of indicators, reflecting the increase in sales, returns and competitive advantage.

7 .The need to analyze and follow up the relationships between variables and determine their direction and impact on the final outcomes of operations and the promotion of resources supporting and sustaining growth.

# References

Aktas, Z., Kaya, N. Ozlale, U. (2010). Coordination between monetary policy and fiscalpolicy for an inflation targeting emerging market. Retrieved from https./' /ideas.repec.org/a/eee/jimfin/v29y2010i1p123-138.html.

ancial%20 Management%2010 th%20 Edition%20 (2011).pdf

Ashla, A. (2008). Sustainable growth rates: refining a measure. Strategic Change, 17(5/6), 207-214. doi:10.1002/jsc.827.

Bhunia, A., & Sarkar, R. (2011). A study of financial distress based on MDA. Journal of Management Research, 3(2), 1-11. doi:10.5296/jmr.v3i2.549.

Comett, M. M., Adair, T. A, & Nofsinger, J. (2012). Finance.' Application & Theory. New York, NY: McGraw-Hill.

Gardner, John C.; McGowan Jr., Carl B.; Moeller, Susan E. (2011). Using accounting information for financial planning and forecasting: An application of the sustainable growth model using Coca-Cola. Journal of Business Case Studies, 7(5).

Gibson, C. H. (2011). Financial Reporting & Analysis: Using Financial Accounting Information. Mason, NJ: South-Western.

Higgins R. C., 2008, Analysis for financial management, 9th ed. (McGraw-Hill, Inc, New York, NY).

Higgins, R. C. (2011). Analysis for Financial Management 10th Edition (10th ed.). Retrieve from

http://dspace.elib.ntt.edu.vn/dspace/bitstream/123456789/7693/1/Analysis%20for%20Fi

Jegers, M. (2003). The sustainable growth rate of Non-profit organizations: The effect of efficiency, profitability and capital structure. Financial Accountability & Management, 19(4), 309. doi:10.1111/1468-0408.00176.

June, L. (2012). Prediction of corporate bankruptcy from 2008 through 2011. Journal of Accounting & Finance (2158-3625), 12(1), 31-41.

Kasilingam, R. R., & Jayabal, G. G. (2012). Profitability and solvency analysis of a manufacturing company using Dupont and Altman models. BVIMR Management Edge, 5(2), 53-64.

Korol, T., & Korodi, A. (2010). Predicting bankruptcy with the use of macroeconomic variables. Economic Computation & Economic Cybernetics Studies & Research, 44(1), 201-219.

Levin, Ross, Chapter 12: (2005) "Finance and Growth: Theory and Evidence," in Handbook of Economic Growth, Vol. 1A by Philippe Aghion and Steven N Durlauf, Elsevier, 866-934.

Loughran, T., & McDonald, B. (2011). When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. Journal of Finance, 66(1), 35-65.

Nasrollah Amouzesh,(2011)" Sustainable Growth Rate and Firm Performance : Evidence From Iran Stock Exchange' International Journal of Business and Social Science Vol. 2 No. 23 [Special Issue – December 2011.

Nathan Smart , (2016) ,Examining Cooperative Sustainable Growth Rates: Who Is Growing Brok, Master A THESIS B.S., Kansas State University.43-54.

Palenu, K. G. and Healy, P. M. (2008). Business analysis & valuation.' Using Financial Statements. Mason, HO: Thomson/South-Westem.

Phillips, M., Anderson, S. J., & Volker, J. (2010). Understanding small private retail firm growth using the sustainable growth model. Journal of Finance and Accountancy, 3, 1.

Raisch, S, & von Krogh, G. (2007). Navigating a path to smart growth. M/T Sloan Management Review, 48(3), 65. doi: 1250414251.

Raiyani, Jagadish R.(2011).Performance analysis with sustainable growth rate:A case study international Journal of Research in Commerce, Economics and Management.No,1,Issue1,pp .118-123

Ross A. Stephen, Westerfield W. Randolph, Jordan D. Bradford, (2011) FUNDAMENTALS OF corporate finance, the mcgraw-hill/irwin.

Ross A. Stephen, Westerfield W. Randolph, Jordan D. Bradford, (2013) FUNDAMENTALS OF corporate finance, the mcgraw-hill/irwin.

Ross A. Stephen, Westerfield W. Randolph, Jordan D. Bradford, (2016) FUNDAMENTALS OF corporate finance, the mcgraw-hill/irwin

Sehoon, K., & Sang Buhm, H. (2010). Duration analysis of corporate bankruptcy in th Presence of competing risks. Applied Economics Letters, 17(15), 1513-1516

Sormunen, N., & Laitinen, T. (2012), Late financial, distress process stages and financial ratios : Evidence for auditors going concern evaluation. Liiketaloudellinen Aikakauuskirja (1), 41- 69.

Sunny Onyiri, (2014), Predicting Financial Distress using Altman Z- score and the sustainable growth rate, dissertation Doctor business management, northcentral university.