

The Effect of Internal Growth Rate and Cash Holding on the Sustainability of Owners' Wealth Growth: Applied Study of a Sample of Companies Listed on the Iraq Stock Exchange

Arshed Fouad Majeed Altameemi¹

¹Al Buraimi University College, Sultanate of Oman

Abstract

The sustainability of owners' wealth growth is essential for measuring the management performance, and also improves the continuum and the survival of the firm. In this study, the researcher will investigate the effects of the Internal Growth Rate and Cash Holding Ratio to the sustainable growth rate (proxy of owners' wealth growth), based on the data from the companies listed on the Iraqi Stock Exchange in the period ranging between 2008 and 2018. The study also determined the best combine effect of the variables which would help in the interpretation of the variance of the sustainable growth rate (SGR). Hence, for achieving this objective, the researcher made three hypotheses for exploring the explanatory power of the different variables of the sustainable growth rate. The study observed a linear relationship between the Internal Growth Rate (IGR), Cash liquidity Ratio and the ratio between the firm size and firm SGR. The internal firm growth and the firm size showed a good linear relationship. However, the relationship between the firm size and SGR showed the best linear model. The researcher made a vital conclusion that despite the variations in the Iraqi economic condition, the companies tested could manage their assets, as their assets were based on the internal resources, particularly, the retained earnings.

Keywords: Sustainable Growth Rate (SGR), Cash Holding Ratio, Internal Growth Rate (IGR), Size, Iraqi Stock Exchange, Corporation (Firm, Company), Tough and Troubled Economy

1. Introduction

The Sustainable Growth Rate of owners' wealth (SGR) is a significant matter of concern to the corporate managers since it is directly related to the owner's wealth and earnings. Furthermore, the SGR helps the financial markets players assess their future earnings and avoid all types of abnormal actions and "noises." Any corporate manager plans activities to improve the company's growth and sustains business continuum and survival. Hence, any successful manager aims to improve his target without issuing new stock and attempts to maintain its existing capital structure. However, if the company's financial management policies remain unchanged, the stockholder's wealth growth rate depends on its capability to sustain its growth rate. Thus, the SGR implementation is vital to the management and other people

working in the stock exchange to assess and review if the corporate growth plans are dependent on the financial policies and the company's performance.

Studies showed that SGR provides a big picture of corporate performance and provides investors and management with insights into corporate growth factors (Pandit and Tejanni 2011, 38-44).

Higgins (1977; 1981) proposed and developed the SGR concept. He assumed that the firm was funding a new asset by new debt and retained earnings without the issuance of new equities (change in equity divided by the beginning-of-equity). He stated that the company wishes to preserve its capital structure and implement a target dividend policy. Here, the SGR was the maximum rate at which the firm sales increase without any depletes in the financial resources. Furthermore, he explained that the companies' growth-related objectives are based on their financial policies, and SGR helps maintain and set appropriate and compatible growth objectives and policies (Moeinfar and Mousavi, 2011, 250).

On the other hand, the sustainable growth rate refers to the rate at which the company assets and sales increase if it cannot sell any new equities and maintains its capital structure. As per the SGR concept, an increase in the retained earnings can generate additional equities, and the firm can borrow adequate funds for maintaining the capital structure. This policy increases its Sustainable Growth Rate. All the models showed that the Sustainable Growth Rate of the company was dependent on the increase in the rational debt utilization and retained earning rate. Thus, the financial Sustainable Growth Rate represents substantial company growth based on firm resources (Huang and Liu 2009, 200-205).

1.2 Statement of Problem

Though the company management wishes to increase its growth, many problems prevent the growth rate's sustenance due to a competitive and rapidly-changing business environment. These problems become more complicated and exciting in the troubled Iraqi economic conditions, especially in the Iraqi Stock Exchange companies. These company managers have to face exciting but significant challenges while maintaining sustainable growth in the troubled Iraqi economic conditions and profitable opportunities. So this research tries to explore the ability of Iraqi companies to sustain the growth under the current condition of the Iraqi economy without deleted resources, as well as a study tries to find the explanatory power of the combined effect of Internal Growth Rate (IGR) and Cash holding Ratio (CHR) for the Sustainable Growth Rate. Due to the particular problems affecting the Iraqi companies, in this study, the researcher tries to study if the Internal Growth Rate (IGR), Cash holding Ratio (CHR), and the Firm Size (as a control variable) are contributing towards SGR. He also addressed the following research question: which combination of independent variables showed the best relationship that defines the changes in the Sustainable Growth Rate (SGR)?

The Sustainable growth rate will be regressed as the dependent variable, and independent variables will be Internal Growth Rate (IGR), Cash holding Ratio (CHR). In contrast, the firm's size has been included as a controlling factor to hold its impact fixed. The study used the multiple regression model, based on the firms listed on the Iraqi Stock Exchange in the period ranging from 2008 to 2018. It used the annual data published during the profit period. Here, the study presented a literature review that describes the SGR, the research methodology used, i.e., hypothesis and research procedures, displayed the test hypotheses' results, and finally presented the study's conclusions.

2. Literature Review

Over the past several years, many different SGR models were utilized by various researchers in a different dimension. Robert C. Higgins 1977 presented his research paper titled (How Much Growth can a Firm afford); he proposed a general SGR formula (equation 1)for the discrete-time frameworks (Higgins, 1977,

7-16) and in 1981, he extended his concept for continuous-time frameworks (equation 2) (Higgins, 1981, 36-40):-

$$SGR = [p(1-d)(1+L)] / t - [p(1-d)(1+L)] \dots\dots\dots (1)$$

$$SGR = [p(1-d)(1+L)] / T \dots\dots\dots (2)$$

Where (p) represents net profit margin, d target dividend ratio, L (D/E) target total debt to equity ratio, and (T) the ratio of a total asset to sales (new and existing).

According to Higgins's model and assumed fixed all these variables, the concept of Sustainable Growth Rate represents the maximum rate at which a firm can expand its sales or revenues without depleting its financial resources (Hartono and Utami, 2017, 69). In other words, the Sustainable Growth Rate (SGR) is the rate of growth that allows the company to grow without having above or below idle cash.

Higgins mentioned that managing growth depends on the relationship between actual growth in sales (g) and SGR. Unless g and SGR equal, one or some combination of variables (p, d, L & t) must change. In case the firm is unable to maintain its financial policy. The company tries to increase equity by selling new common stock, creating a problem if the company cannot sell enough new equity to finance the growth target. Otherwise, if the actual growth in sales less than SGR, it means that the firm has a surplus to meet its investment needs, and in this case, it preferred to use the surplus to reduce the debt, increase dividend ratio, or an increment in the liquid asset. Although Higgins modified the SGR concept in 2001, 2007, some researchers criticized his assumptions with a constant debt ratio. They claimed that the model becomes limited in the case of these variables unstable.

While Ulrik & Arlow (1980) also stated in their research paper titled (The Financial Implications of Growth) that the SGR is a function of operating Features and financial policies, they ignore the opening and closing period of assets equity. They showed in their model the effect of operating features and financial policies on SGR by the following formula: -

$$G = \{(NI/S) (S/TA) (1 - p)\} \times (1 + D/E) \dots\dots\dots (3)$$

They built their model assuming that the profit margin {(NI/S) and asset turnover (S/TA) remain unchanged and the firm wishes to maintain debt ratio and retention rate constant to maintain long-term growth in its sales, net income, and assets at this level without any new stock. They mentioned that assets turnover's maximum capacity is directly connected with sales and the debt/equity ratio.

Van Horne (1987, 19-26) defined the Sustainable Growth Rate (SGR) is the maximum growth ratio in company sales that may happen according to the target ratios of operating, debt, and retention earnings. His model also assumes that the SGR depend on changes in the asset, undistributed profit, and debt as follows: -

$$SDR = [b(NPBT/TO)(1+D/E)] / A/S - [b(NPBT/TO)(1+D/E)] \dots\dots\dots (4)$$

Wherein (NPBT) net income before interest and tax, (TO) turnover ratio, (D/E) debt ratio. According to his quantitative description of the SGR, the company management can determine whether the sales growth is consistent with the functional features and financial objectives.

Platt et al. (1995, 147-151) derived a new formula of SGR of the firm in financial distress. The formula describes how rapidly a firm can grow without depleting fund resources when unconditionally shut out of both the equity and debt markets. According to their suppositions that the managers of distresses firm are unlikely to make dividend payment and reduce the cash holding, the formula of SGR as follows: -

$$SGR_{FD, ND} = M(S/A) \dots\dots\dots (5)$$

Equation (5) explains that the SGR of the distressed firm depends on the net profit margin and the ability of management to use the asset efficiently. It provides a more precise assessment of SGR for the distressed company. It represents an accurate control tool of growth rates, especially for firms unable to access financial management. Though his model needs a shorter procedure than Higgins to calculate SGR, Platt et al. 's results were inconsistent with Higgins 1977.

Ashta (2008, 207-214) was refined the measure of SGR by slight modification. He suggested using the financial leverage ratio and the asset turnover based on opening balance sheet values rather than comparing assets and equity with two different years and connecting sales with closing assets. He justified his modification that the sales increase will increase the profit, which increases equity, which increases debt, which then increases total assets

$$g^* = \text{SGR} = (\text{RER}) \times \text{PM} \times A' \times T' \dots\dots\dots (6)$$

RER represents retained earnings rate, PM profit margin, (A') asset turnover, and T' leverage ratio. Ashta stated that his model's objective was to suggest a more reasonable SGR formula for all users from its sustainable growth rate analysis.

Huang and Liu (2009) investigated the two types of leverage mechanisms and showed that the SGR model was based on its leverage effect. They stated that the SGR affected by Return on investment (EBIT/S) and degree of financial and operating leverage (DFL & DOL) as follows: -

$$\text{SGR} = [(\text{EBIT}/S) \times (1/\text{DFL}) \times (1-T)] \times [(C/A) \times (F/A) \times (1/\text{DOL})] \times (A/\text{Eq.}) \times (1 - \text{Div.}/E) \dots\dots (7)$$

Wherein [(EBIT/S) operating profit margin (C&F) represents a variable and fixed cost, respectively. The authors showed that the debt interest and the fixed costs affected the degree of total leverage and affected the main rule of corporate growth in the subsequent period. They finally concluded that the SGR was positively related to the two leverage coefficients (DOL & DFL).

Thus, the SGR was seen to be affected by the firm's capital structural changes, which take place (Jagadish, 2011). Their model included disadvantages of regard to unable to keep the fixed cost and debt funding unchanged.

Ross et al. (2010) proposed a different formula for measuring the SGR. He mentioned that the firm tries to avoid new equity sales due to high cost; also, the current stockholders may be undesirable to attract new shareholders. For these reasons, he stated that the SGR functions to return on equity (ROE) and undistributed income ratio (b) with maintaining a fixed debt-equity ratio. His SGR formula explains as follows (Kijewska, 2016, 139-142):

$$\text{SGR} = (\text{ROE} \times b) / \{1 - (\text{ROE} \times b)\} \dots\dots\dots (8)$$

In equation (8), Ross assumed that during the assessment period: (1) the firm will increase its sales at the rate based on the market conditions; (2) the company management is not willing to sell any newer equities; and (3) the firm can maintain its current dividend policy and capital structure. Since the company growth requires a corresponding increase in the supporting assets, without the issuance of new equities, any such increase in the assets has to be funded by the additional liabilities and undistributed earnings (Pandit and Tejanni 2011).

As shown in equation (5), the retained earnings ratio is an essential factor that indicates the vital role of the Return on Equity (ROE) in increasing the SGR. Return on equity is a result of three ratios (profit margin PM, asset turnover AT, Equity Multiplier EM) as which are explained in the following equation:

$$\text{ROE} = \text{PM} \times \text{AT} \times \text{EM} \dots\dots\dots (9)$$

Whereas profit margin and asset turnover ($PM \times AT$) produce the Return on assets (ROA), so we can rearrange the equation (6) to get the following formula:

$$SGR = \{ROA \times EM \times b\} / 1 - \{ROA \times EM \times b\} \dots \dots \dots (10)$$

It can be seen from formula (9 & 10) that an increase in the company's SGR is based on the factors described below (Ross et al., 2010, 105):-

- 1- An increase in the net profit margin is seen to increase the company's capability to generate the funds internally and thus increase the SGR.
- 2- Increase in the retention ratio increases the internally generated equities and increases the SGR.
- 3- Increase in the debt-equity ratio helps in generating additional debt finances and increase SGR.
- 4- An increase in the asset turnover is seen to improve the sales generated for every dollar invested in the assets. Thus, it improves asset utilization efficiency, which further improves the SGR.

Manaf et al. (2018) developed Zakon's SGR model $\{D/E. (ROA - \text{interest rate}). P + ROA. p\}$ which fits with the Shariah compliance as follows: -

$$iSGR = \{ROE. (ROA - Pr). P\} + R. P \dots \dots \dots (11)$$

Wherein (Pr) is the profit rate after tax. The model determines the standards and business prosperity for strengthening the Shariah Securities Compliance Firms, as per the requirements for the Shariah compliance. This new model showed that the value of the (iSGR) is based on the Return On Equity (ROE), Return On Asset (ROA), retention rate (p), and the Profit rate (Pr) (1-taxation rate), instead of the interest after taxes.

Chen et al. (2013) presented a new profile of the SGR model. They incorporate Higgins (1977) and Lee et al. (2011) model for developing the Ross formula as follows (Brick et al., 216, 373)

$$\text{Generalized SGR} = [(b \times ROE) / 1 - [(b \times ROE)] + [(\lambda \times \Delta n \times P/E) / 1 - [(b \times ROE)] \dots \dots \dots (12)$$

Equation (12) supposes that firms need to use external funding (Debt & Equity). Where (λ) represents the degree of market imperfection, Δn new stock issued, P market price per new share, and E total equity. They stated if the company no need to increase its asset, the estimated distributed profit is measured with error. They finally show that the covariance among profitability and the growth rate determines the dividend ratio and provide an alternative interpretation of disappearing dividends.

Reviewing the literature above shows that when the firm maintains its financial policies (debt ratio and dividend ratio), it ensures internal consistency between fund needs and growth. Therefore, the company's management should plan to sustain growth based on strategic growth and cash holding policies and explore the credit market condition.

3.Theoretical Relationship between IGR, Cash Holding, and SGR

Cash holding is receiving much interest in the financial theory because it benefits the firm to meet the needs arising from normal operational activities and take advantage of profitable future investment opportunities and meet unexpected situations transactional and precautionary motives (Sola et al., 2013, 161).

There are huge papers focus on cash holding importance, some interesting with determinants of cash ratio and other with marginal value of cash holding {Kim et al. (1998), Opler et al. (1999), Ferreira and Vilela (2004), Ozkan and Ozkan (2004), Faulkender and Wang (2006), Pinkowitz and Williamson (2007), Bates et al. (2009), Hafoord (2008), Lozano (2012), Adjei (2013), Mieand Srinivasan (2015), Nida (2016)

and Roa and Thaker (2018). However, the researchers did not find papers studying the impact of the cash holding on a sustainable growth rate.

The studies investigating the relationship between cash holding and SGR from the financial literature pay the researcher to explore this relationship. Hence, this study will test the combined effect of the cash holding ratio and IGR on SGR, taking into account the firm's size as a controlling factor. This study also tries to fill the research gap in a geographical sense, especially when select listed Iraqi companies as a sample. Besides, the study tries to search the applicability of the SGR model, although Iraq's economics are troubled and not robust.

The relationship between the cash holding policies and the sustainable growth rate depends mainly on the operational activities to make money from internal (increase retention earnings ratio) to enhance the company's ability to increase sales or assets without the company's dependence on the costly external funding (Gleason et al., 2017, 423-443). When the management strives to sustain the growth rates, it must make the best investment decisions (Risk-Return Trade-off). This decision needs adequate financial flexibility (liquid cash) to cover needs and maintain its ability to track profitable investment opportunities, increasing revenue and profits. Therefore, cash holding will support the management efforts to sustain the growth, and hence it is a relevant factor to take into account due to the direct effect SGR. Otherwise, Cash holding can create an agency problem among managers and owners due to wasted cash on inactive opportunities, which may negatively affect the SGR.

On the side of Internal Growth, the company can fund its growth without external financing (debt or equity), and the fund that holds to enforce growth must create from retention income. Therefore, the internal growth rate (IGR) is the maximum growth rate that can be achieved without any external financing (Brick et al. 2016, 371), and it functions to asset utilization efficiency (asset turnover ratio), operating efficiency (net profit margin) and retention ratio, as explained in the following formula: -

$$\text{IGR} = (\text{PM} \times \text{AT}) b / 1 - (\text{PM} \times \text{AT} \times b) \dots\dots\dots (12)$$

Wherein Return on Asset (ROA) as a result of net income margin and asset turnover (PM × AT) in this case equation (12) can be written as follows (Ross et al., 2010 103):-

$$\text{IGR} = (\text{ROA} \times b) / 1 - (\text{ROA} \times b) \dots\dots\dots (13)$$

Based on equation (13), the required increase in assets is exactly equal to the addition to retained earnings (Ross et al., 2010, 103). Therefore, the Return on assets (ROA) and retention rates increase the internal growth rate without any new external equity or debt issuance.

In other words, ROA will increase due to increasing productivity per Iraqi dinar invested (asset turnover) or/and increase operating efficiency (net profit margin), which maximizes the IGR. As long as ROA influences the SGR model, the IGR is a relevant factor contributing to maximizing the sustainable growth rate.

Regarding the firm's size, different papers tested the relationship between firm size and growth. Some studies found a negative relationship, and others found no or positive relationship (Kouser et al., 2012, 415). Therefore, to avoid the controversy of the size effect, the research will use its size as a controlling variable.

4. Previous Studies

Many researchers previously applied the SGR model to evaluate the relationship between the SGR and several other variables. In one study, Burger and Haman (1999) tested the relationship between accounting SGR and cash flow SGR. They found that SGR based on cash flow is affected by non-cash

components and any working capital variances, whereas the SGR based on accounting is not. However, both rates are influenced by the firm's profitability, and both rates have implications for a company's growth and cash position. Whether the CFSGR will be above or below, the firm's balance sheet components and profitability will determine the accounting SGR. In another study, Ikhtiar (2008) proposed a novel formula for estimating the SGR, which includes the external financing source's liability, to examine the effect of the D/E ratio on the SGR and maintain an SGR-D/E ratio continuum. He stated that an increase in the D/E ratio increases the SGR. Furthermore, at one value of the D/E ratio, a maximal value of SGR is observed, and beyond that value of the D/E ratio, a negative value of SGR is seen.

Moeinfar and Mousavi (2011) investigated the relationship between the SGR and the liquidity for determining the firm performance by used the Ross model (2010) to calculate the SGR gap (AGR-SGR). They observed that the deviation in the company's growth rate based on the SGR was related to the Return's ratio on an asset and the Price to Book values. However, no correlation was observed between the deviation in the growth rate based on the SGR and the current and quick ratio. Fonseka et al. (2012) investigated the significant differences between the Higgins and Van Horne models. When implemented as the continuous and dichotomous variables, they observed that the Higgins model's SGR was affected by the variations in the financial characteristics compared to the Van Horne model. Despite these differences, both models were preferable, from the researchers' and managers' perspective.

In their study, Kouser et al. (2012) stated a strong positive correlation between SGR and profitability indicators (ROA and ROE). Though the firm's size has a negative influence on profitability but not in a significant impact. In the same sense, firm size also has a negative relation with the SGR. Radasanu (2015) observed that the internally-generated funds must finance the company growth, and the internal funding size was regulated by the company's capability to generate funds from its operative activities. Hence, the SGR is affected by the asset turnover ratio, profitability ratio, total debt, and retention rate. Thus, an increase in the ratio increases the SGR. Alin stated that if the company wishes to implement the SGR using additional funds, the investors and managers must determine if their revenue increasing plans are credible and based on its financial and operational performance.

In another area, Ataunal and Gurboz (2016) presented their paper titled (Shareholder Value Creation at Excessive Growth Levels) to test whether value creation is affected by the growth gap (AGR-SGR). They aimed to determine how value creation changes at growth levels beyond SGR. Their empirical evidence shows that excessive growth may reduce the value of common stock and then be unable to create value for the shareholders.

Sahin and Ergun (2018) tested the growth gap (AGR-SGR difference) on the profitability ratios for the 69 manufacturing companies in Turkey. They concluded that the relationship between profitability ratios (ROA & ROE) and the growth gap were negative and statistically significant. This result indicates that the over-growing firms have lower profitability, while the under-growing firms have high profitability.

Mobeen and Hanif (2017) study the SGR in the micro-econometric evidence framework using 27 non-financial firms listed in the KSE 100 Index taken by sampling subjected to a set of research criteria. They used a set of independent variables (Liquidity, Size, and operating cash flow) and controlling factors (Earning per share, asset turnover) to test these variables' effect on the SGR and IGR. The econometric model, liquidity, and cash creation play a vital role in interpreting IGR stronger than SGR. However, the result of the size factor cannot be generalized for all samples. They suggested that for the company's long-term growth sustainability in Pakistan, the focal point must be leverage.

5. Research Procedures:

5.1 Research Hypothesis:

- a) The IGR and the size of the firm show no significant effect on the SGR.
- b) The CHR and the size of the firm show no significant effect on the SGR.
- c) The IGR, CHR, and the size of the firm show no significant effect on the SGR.

5.2 Research Population and Sample selection:

Here, the research is applied in nature and has been done through a sample of the industrial firms listed on the Iraqi Stock Exchange. The companies were selected based on the following criteria:

- 1- The firms must show a profit.
- 2- No new stock issuance was carried out during the research period ranging from 2008 to 2018.
- 3- They must possess an annual financial statement published by the Iraqi Stock Exchange for the research period ranging from 2008 to 2018.
- 4- None of the companies must be merged during the assessment period between 2008 and 2018.
- 5- Based on these terms, a total of 6 firms out of 25 were selected, and the sample represents $\approx 24\%$ of all the industrial firms listed on the Iraqi Stock Exchange.

5.3 Research Limitations:

One significant drawback faced by the researchers is the low number of firms listed on the Iraqi Stock Exchange, particularly those belonging to the industrial sector (i.e., 25 Firms) up to 2018. Furthermore, many of the firms did not satisfy the research sample's criteria, specifically, if they showed a profit during the assessment period. Also, some of the companies did not possess any financial statements for the period under investigation.

5.4 Research Models:

The researcher used the linear regression model for addressing the research questions. For testing their research hypotheses, they used the complete data sample for increasing the sample size, the number of observations (i.e., 66), and the degree of freedom.

Here, the researcher collected the data using all the financial statements of the companies who had published their data in the database of the Iraqi Stock Exchange for calculating the various research variables. Based on the research hypotheses, the models for the linear equations were as below:

- 1) The 1st linear regression model combined the IGR and the firm size (i.e., controlling variable):-

$$SGR_{it} = \alpha + \beta_1 IGR_{it} + \beta_2 \text{ firms' Size}_{it} + \epsilon_{it}$$

- 2) The 2nd linear regression model combined the CLR and firm size (i.e., controlling variable):

$$SGR_{it} = \alpha + \beta_1 CLR_{it} + \beta_2 \text{ firms' Size}_{it} + \epsilon_{it}$$

- 3) The 3rd linear regression model combined the IGR, CLR, and firm size (controlling variable):

$$SGR_{it} = \alpha + \beta_1 IGR_{it} + \beta_2 CLR_{it} + \beta_3 \text{ firms' Size}_{it} + \epsilon_{it}$$

5.5 Operative Definitions and Measurements:

1- Dependent Variables:

- a) The SGR: - equation (8) presented by Ross et al. was relevant to estimate the Iraqi firms' SGR. The reason is to eliminate the instability of the variables supposed at Higgins model (1977) to be stable (Ataunal & Gurbuz, 2016, 15). This formula also needs to calculate Return on equity (ROE) and

retained earnings ratio (b), and it sufficed to implement for estimating the Sustainable Growth Rate for the Iraqi firms.

2- Independent Variables:

b) Internal Growth Rate (IGR) is defined as the maximum growth rate achieved by a company without any external funds (Brealey et al., 2011, 748). For research purposes, formula (13) was used to calculate the IGR, and it is relevant for the Iraqi firm's conditions.

c) Cash holding (CHR) is measured as the cash and the cash equivalent (marketable securities), which is accessible to the company for various purposes, as follows (Saeed et al., 2014, 818) (Jamshidinavid et al., 2015) (Chung et al., 2015, 1348) calculate cash holding as follows: -

$$\text{CHR} = \text{Cash \& cash equivalent} \div \text{Total Asset} \dots\dots (14)$$

d) The Firm size represents firm characteristics and is similar to the total sales logarithm ($\text{Size}_{it} = \text{Log Sales}$). This variable refers to the controlling variable in regression analysis.

6. Results and discussion of a test hypothesis:

6.1 Descriptive statistics and VIF Analysis:

In Table (1), the researchers have presented the mean, standard deviation, and Variance Inflation Factor (VIF) for all the variables. The mean values for SGR, IGR, CLR, and firm size are 8.24%, 5.1%, 35.3%, and 24.32%. For ensuring the fitness of all the research models with a Multicollinearity problem between the independent variables, the researchers calculated the VIF coefficient. The VIF values showed that the independent variables were restricted to values below 5, indicating that these research models did not have a Multicollinearity problem

Table (6.1): Mean, Standard Deviation and VIF values for all the Variables

Variables	SGR	IGR	CHR	Size
Statistical Measures	y%	X ₁ %	X ₂ %	X ₃ %
Mean	8.24	5.1	35.3	24.32
Standard Deviation (σ)	10.83	5.17	24.76	58.64
Variance Inflation Factor (VIF)	-	1.020	1.204	1.183

6.2 First Hypothesis:

In Table (2), the researchers have presented the Autocorrelation test and multiple regression results for the 1st hypothesis. The Durbin-Watson value (2.074) shows that no autocorrelation exists amongst the regression equation's errors, and the values are within acceptable limits of 0-4. Hence, the F-test results show the rejection of the null hypothesis, H_{01} , and the acceptance of the alternative hypothesis H_{11} . Also, it can be seen that the IGR and the firm size significantly affect the SGR values, as the estimated F-values are significant, with a *p-value* lesser than 5%. The model also possesses an explanatory power for SGR, with an R^2 coefficient value of 0.254. This result indicates that the mean values of IGR and the firm size can explain 25.4% of the SGR variation.

Table (6.2): Test Results for the first hypothesis

Dependent Variable (SGR)			
Model $y = \alpha + \beta_1 X_1 + \beta_3 X_3$			
Independent Variables	Beta	T-TEST	Sig.

Internal Growth Rate (X_1)	0.492	4.517	0.000
Size of Firm (X_3)	0.131	1.203	0.233
R	R ²	Durbin-Watson	F Calculated
0.506	0.254	2.074	10.701
			Sig.
			0.000

6.3 Second Hypothesis:

In Table (3), the researchers have presented the Autocorrelation test and multiple regression results for the 2nd hypothesis. The Durbin-Watson value (1.689) shows that no autocorrelation exists amongst the regression equation's errors, and the values are within acceptable limits of 0-4. However, the F-test results show the acceptance of the null hypothesis, H_{02} . Also, it can be seen that the CHR and the firm size do not significantly affect the SGR values, as the estimated F-values are non-significant with a *p-value* higher than 5%. The model also possesses no explanatory power for SGR, with a weak R^2 coefficient value of $R^2 = 0.01$

Table (6.3): Results for the second Hypothesis test

Dependent Variable (SGR)				
Model $y = \alpha + \beta_2 X_2 + \beta_3 X_3$				
Independent Variables		Beta	T-TEST	Sig.
Cash Holding Ratio (X_2)		- 0.034	- 0.250	0.804
Size of Firm (X_3)		0.095	0.701	0.486
R	R ²	Durbin-Watson	F Calculated	Sig.
0.113	0.013	1.689	0.409	0.666

6.4 Third Hypothesis:

In Table (4), the researchers have presented the autocorrelation test and multiple regression results for the 3rd hypothesis. The Durbin-Watson value (2.056) shows that no autocorrelation exists amongst the regression equation's errors, and the values are within acceptable limits of 0-4. Hence, the F-test results show the rejection of the null hypothesis, H_{03} , and the acceptance of the alternative hypothesis H_{13} . Also, it can be seen that the IGR, CHR, and the firm size significantly affect the SGR values, as the estimated F-values are significant with a *p-value* lesser than 5%. The model also possesses an explanatory power for SGR, with an R^2 coefficient value of 0.263. The mentioned result indicates that the mean values of IGR and the firm size can explain 26.3% of SGR variation.

Table (6.4): Results for the third Hypothesis test

Dependent Variable (SGR)				
Model: $y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$				
Independent Variables		Beta	T-TEST	Sig.
Actual of Growth Rate (X_1)		0.505	4.588	0.000
Cash Holding Ratio (X_2)		- 0.107	- 0.894	0.375
Size of Firm (X_3)		0.090	0.756	0.452
R	R ²	Durbin-Watson	F Calculated	Sig.
0.513	0.263	2.056	7.377	0.000

7. Concluding Remarks and recommendation:

1. Based on the descriptive statistics, the researcher concluded that the SGR value for the companies was 8.24% (on average), which was higher than the IGR value of 5.1%, by 3.14% and that it means the Iraqi firms' managers (research sample) were capable of exploiting the internal resources to sustain the growth rate despite the troubled Iraqi economic conditions. Hence, the SGR model can be work

in these similar conditions and possesses the best tools for controlling and analyzing the firm's performance and capability for survival.

2. These results could also alter the investors' risk estimation of the Iraqi companies and eliminate their financial distress and risks.
3. Based on the 1st hypothesis results, the researcher determined the linear model's validity, showing that all the tested companies were interested in increasing their existing efficient asset utilization and wished to maximize the ROA rate using external funds (Debts or/and Equity). The 3rd hypothesis supported these results, wherein the R² coefficient values for the 1st linear model was 25.4%, while it was 26.3% in the 3rd model. This result indicated that the company could grow if it utilizes its actual abilities.
4. The 2nd hypothesis results showed that the available funds alone are not sufficient to increase the SGR value. Hence, this hypothesis fails to determine the SGR variance.
5. In conclusion, despite the economic conditions in Iraq, in this study, the researcher showed that the companies could manage their assets based on their internal resources, precisely their retained earnings. Other researchers drew a similar conclusion. However, the companies working during the troubled and challenging Iraqi economy are an exception to this rule. This issue indicates a considerable challenge to sustain or increase the SGR values in the current and existing economic conditions.
6. The result of this study recommends the Iraqi companies take into account cash holding as well as the internal growth rate (IGR) when the plan for the long-term sustainability of the growth, due to the benefits of cash holding and its role in enforcing the operational activities and that may have avoided the financial distress and mitigate the financial risk and cost of borrow. In this sense must be a trade-off between the cost and benefit of cash holding.

8. References

- Ashta, Arvind. (2008). Sustainable Growth Rates: Refining a Measure. *Strategic Change*, Vol. 17, Issue 5-6, October (Pp. 207-214).
- Ataunal, Levent and Gurbuz, Ali Osman (2016) Shareholder Value Creation at Excessive Growth Levels; Empirical Evidence from Turkey, *Maliye Finances Yazilari*, Vol. 30, Issue 106, (Pp. 9-28).
- Brealey R. A., Myers S. C., Allen F. (2011) *Principles of Corporate Finance*. 10th ed McGraw-Hill Irwin.
- Brick, Ivan E., Chen, Hong- Yi, Hsieh, Chia- Hsum and Lee, Cheng-Few (2016), A comparison of alternatives for estimating firm's growth rate, *Review of Quantitative Finance and Accounting*, vol. 47, Issue 2, August, (Pp. 369-393).
- Burger, J.H. and Hamman, W.D., (1999) the relationship between the accounting sustainable growth rate and cash flow sustainable growth rate, *Journal of Business Management*, Vol. 30, Issue 4, (Pp. 101-109)
- Chung, Kee H., Kim, Jang-cahul, Kim, Young Sang and Zhang, HAO, (2015) Information Asymmetry and Corporate Cash Holding, *Journal of Business Finance & Accounting*, Vol. 42, No. 9 & 10, November/December, (Pp. 1341-1377)
- Fonseka, M. M., Ramos, Constantino and Tain, Gao-Liang (2012) The Most Appropriate Sustainable Growth Rate Model for Managers and Researchers, *The Journal of Applied Business Researchers*, Vol. 28, Num. 3, (Pp. 481-500).
- Gleason, Kimberly C., Greiner, Adam J. and Kannan, Yezen H. (2017), Auditor Pricing of Excess Cash Holdings, *Journal of Accounting, Auditing and Finance*, Vol. 32, No. 3, (Pp. 423-443)

- Hartono, Giri Cahyo and Utami, Siti Rahmi, (2016), The Comparison of Sustainable Growth Rate, Firms Performance and Value, *International Journal of Advanced Research in Management and Social Sciences*, Vol. 5, No. 5, May, (Pp. 68-81)
- Huag, Rui and Liu, Guiying (2009), Study on the Enterprise Sustainable Growth and the Leverage Mechanism, *International Journal of Business and Management*, Vol. 4, No. 3, March (Pp. 200-205).
- Ikhtiar, Alam (2008), Sustainable Growth Rate and Optimal Capital Structure, *Journal of Business and Economics*, Vol. 3, No. 2, December (Pp1-2).
- Jagadish, R. R. (2011) Performance Analysis with Sustainable Growth Rate, *International Journal of Research in Commerce, Economics and Management*, Vol. 1, N. 1, (Pp. 2231-4245).
- Jamshidinaid, Babak, Abasi, Mohammad, and Saeed Parvizi (2015) the Relationship between Financial Flexibility and Financial Performance, *MAGNT Research Report*, Vol.3, No.2, (Pp. (1736-1746).
- Kijawska, A. (2016) Conditions for Sustainable Growth Rate for Companies, *Metalurgija Journal*, Vol. 55, No. 1, (139-142).
- Kouser, Rehana, Bano, Tahira, Azeem, Muhammed, and Haeen, Massod (2012) Inter-Relationship between Profitability, Growth, and Size: A Case of Non-Financial Companies from Pakistan, *Pakistan Journal of Commerce & Social Sciences*. Vol. 6, Issue 2, (Pp 405-419).
- Moeinfar, Zahra and Mousavi, Zahra (2011), Sustainable Growth Rate and Firm Performance, *International Journal of Business and Social Science*, Vol. 2, No. 23, December (Pp. 249-255).
- Mubeen, Muhammed and Hanif, Muhammed Nadim (2017) Sustainable Growth Rate of Non-financial Firms, Micro econometric Evidence From Pakistan, *Pakistan Business Review*, Vol. 19, No. 3, October, Pp. 630-648.
- Normaisarah, Binit Abdul Manaf (2018), Noriza, Binit Mohd Saad, and nor, Eid Azher Binit Mohamad, Determinants of Sustainable Growth Rate by using Zakons Model, *International Journal of Industrial Management*, Vol. 4, Jun 61-69.
- Platt, Harlan D., Platt, Marjorie, B. and Chen, Guangli (1995) Sustainable Growth Rate of Firms in Financial Distress, *Journal of Economics and Finance*, Vol. 19, No. 2, Summer (Pp. 147-151).
- Pandit, Nirali, and Tejani, Rachana (2011), Sustainable Growth Rate of Textile and Apparel Segment of the Indian Retail Sector, *Global Journal of Management and Business Research*, Vol. 11, Issue 6, Version 1, May, (Pp 38-44).
- Radasanu, Alin Constantin (2015) Cash-Flow Sustainable Growth Rate Models, *Journal of Public Administration, Finance and Law*, Issue 7, (Pp. 62-70).
- Ross, Stephen A, Westfield, Randolph W, and Jordan, Bradford D. (2010). *Fundamentals of Corporate Finance*. 6th Standard Edition. The McGraw-Hill, N.Y. (pp.112-113).
- Saeed, Abubaker, Belghitar, Yacine and Clark, Ephraim (2014) Theoretical motives of corporate cash holding and political connection, *International Review of Applied Economics*, Vol. 28, No. 6, Pp. 813-831.
- Sahan, Arzu and Ergun, Bahadir (2018) Financial Sustainable growth rate and Financial Ratios, *Journal of Business Research- Turk*, Vol. 10, No. 1, Pp. 172-197.
- Sola, Cristina Martinez, Teruel, Pedro j. and Solano, Pedroo Martinez (2013) Corporate Cash Holding and Firm Value, *Applied Economics*, Vol. 45, Issue 2, January, Pp. 161-170.
- Ulrich, Tomas A., and Alrow, Peter (1980), The Financial Implications of Growth, *Journal of Small Business Management*, Vol. 18, No. 4, (Pp. 28-33).
- Van Horne, James (1987), Sustainable Growth Rate Modelling, *Journal of Corporate Finance*, Vol. 2, No. 3, (Pp. 19-26).