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**An Investigation into the Impact of Profitability on Annual Growth  
Rate among the Listed Manufacturing Companies on the Iraqi Stock  
Exchange**

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**Abstract:** The basic objective of this study is to evaluate the effects of Net Profit Ratio (NPM), Gross Profit Ratio (GPM), and return on Assets (ROA) on the compound annual growth rate (CAGR) Growth Rate of the Iraqi Industrial Sector for the companies listed on the stock exchange (ISX). Among the companies listed on the Iraqi stock market, only 10 in the industrial sector were accepted for their accurate annual reports. Application of sampling techniques for the period 2011-2020. The study used Sample panel data of regression data and quantitative descriptive methodology, using SPSS-26 to process the data. The results of the study have clarified that the growth rate of the compound annual growth rate (CAGR) is positively influenced by Net Profit Margin (NPM), but significantly. The growth rate of compound annual growth rate (CAGR) has no significant impact due to the Gross Profit Margin (GPM). The compound annual growth rate (CAGR) is significantly affected by the return on assets (ROA). In the industrial sector listed on the Iraqi Stock Exchange (ISX) for the period (2011 to 2020). 30.6% of the independent variables influence the Compound Annual Growth Rate (CAGR) growth rate of the dependent variable.

## دراسة تأثير الربحية على معدل النمو السنوي لدى الشركات الصناعية المدرجة في سوق الأوراق المالية العراقية

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### المستخلص

الهدف الأساسي لهذه الدراسة هو تقييم تأثير نسبة الربح الصافي (NPM)، ونسبة الربح الإجمالي (GPM)، وعائد الأصول (ROA) على معدل النمو السنوي المركب (CAGR) لقطاع الصناعة العراقي بالنسبة للشركات المدرجة في بورصة العراق (ISX). ومن بين الشركات المدرجة في سوق الأسهم العراقية تم اختيار 10 شركات فقط في قطاع الصناعة بسبب تقاريرها السنوية الدقيقة وتم تطبيق تقنيات العينة للفترة من 2011 إلى 2020، واستخدم الباحثين بيانات لوحة العينة ومنهجية الوصف الكمي، باستخدام برنامج SPSS-26 لمعالجة البيانات. أظهرت نتائج التي توصل لها الباحثين الى أن معدل نمو معدل النمو السنوي المركب (CAGR) يتأثر إيجاباً بنسبة الربح الصافي (NPM) بشكل ملحوظ، بينما لا يوجد أي تأثير لنسبة الربح الإجمالي (GPM) على معدل نمو معدل النمو السنوي المركب (CAGR)، ويتأثر معدل نمو معدل النمو السنوي المركب (CAGR) بشكل كبير بعائد الأصول (ROA) في القطاع الصناعي المدرج في بورصة العراق (ISX) للفترة من (2011 إلى 2020)، وتؤثر 30.6% من المتغيرات المستقلة على معدل نمو معدل النمو السنوي المركب (CAGR) للمتغير التابع.

**الكلمات المفتاحية:** الربحية، هامش الربح الصافي، هامش الربح الإجمالي، العائد على الأصول، معدل النمو، معدل النمو السنوي المركب، (ISX).

### Introduction

Profit has taken a significant role in everyday personal life and the companies because it is earned as a result of work. Because people are facing a financial crisis without a source of income, we see that people are constantly taking risks to earn a profit (Wali & Akkar, 2021: 231). The profitability of each sector is important to determine the financial stability of that sector and the development of its growth rate in the future (Waleed et al., 2016: 4) & (Shella Mae Saimin, 2018: 3). Therefore, the criteria by which profitability is measured are important (Alarussi & Alhaderi, 2018: 360). In all sectors, there are many factors that affect the profitability and value of companies. These factors may be of more than one type: economic and non-economic, where the company's capital is one of the economic factors that can play a major role in determining the financial and administrative performance of the company and trying to improve it (Fatima & Mohiuddin, 2020: 48). That is why we see that parties such as the government, investors,

competitors, employees, banks, and lenders are interested in knowing about the profitability of the company (Mojidra & Shah, 2022: 67). The company's performance is measured by the profit margin, which shows how much the company can reduce production costs in exchange for increasing sales capacity (Reddy et al., 2019: 112). Here, resource management plays an important role in determining profitability (Do et al., 2020: 374). So, some of the ratios by which profitability is measured It is the ratios (ROA, GPM, and NPM) measured (Saktian Laksito & Saputra, 2022: 412).

The net profit margin shows how much profit it makes for every penny it earns. So, the net profit margin is the best indicator of the company's profitability (Hammood, 2020: 169). This is achieved when the summary of income is greater than the total sales, and the summary of income increases when the management of the company can reduce unnecessary costs in order to increase revenue (B. A. Prabhakar & Research, 2023: 137). This gross profit ratio explains how much profit you are likely to make from each penny of sales (Raharjo & Widarti, 2021: 51). Competitors and investors audit and compare current and past financial statements in order to evaluate the financial performance of companies (Salih & Majeed, 2022). Because only comparing financial statements can show the healthy side of companies (Dr. S.Saravanan & K.Janani, 2015: 45). In this study (Rezina et al., 2020: 8), return on total assets is used as a measure of profitability. The higher the return on total assets, the better because it indicates that the company is making a good profit, which will attract the attention of investors and stakeholders (Gusti et al., 2020: 171).

Compound Annual Growth Rate (CAGR) Growth rates are a fundamental factor in the investment process, which helps in reshaping strategic decisions (Gusti et al., 2020: 173). Because the compound annual growth rate is considered one of the biggest economic determinants (Jegadeeshwaran & Basuvaraj, 2019: 33).

According to the results obtained from previous studies, there is a mixed relationship between growth rate (compound annual growth rate) and profitability. According to the results of research (Rezina et al., 2020), there is a significant effective relationship between profits (return on assets) and growth rate. This has led to profits growing at a compound annual growth rate of 11.5% in Bangladesh's cement sector. The same is true of the results of the (Saranya & Usha, 2022: 6933) & (Kaur & Kaur, 2022: 49) study.

However, the results of study (Dr. S.Saravanan & K.Janani, 2015: 44) show that there is a negative relationship between profitability (gross profit margin and net profit margin) and compound annual growth rate. In addition, annual growth rates and profits affect market value (Cho & Pucik, 2005: 555).

This research has numerous objectives, one of which was to identify, find, and evaluate the relationship between profitability and the compound annual growth rate of companies in the Iraqi industrial sector. The ratios (ROA, GPM, and NPM) were worked on as profitability components to create this relationship. Furthermore, it was investigated whether there is a statistically significant relationship between profitability and firms' compound growth rates. By improving production and marketing procedures and reducing costs in the Iraqi industrial sector. Iraq is a country that is moving from the war phase to the development phase, which was the reason for conducting this study.

The study consists of five parts. The first part is an introduction to the study. The literature review of the studies is described in Section 2. The third section describes the research methodology. The fourth section describes the results and discussion of the research. The fifth and final section discusses the conclusions and recommendations.

### **Literature Review**

**Profitability:** Profitability is considered one of the criteria used to determine and measure the efficiency of a company (Al-Noa'imee & Al-Houri, 2021: 212). Determining the profitability of the company relative to its size in terms of size and smallness is considered a good factor for the success or failure of the company (Alarussi & Alhaderi, 2018: 456). Therefore, the profit margin can tell external stakeholders whether the company can survive, sustain, and grow in the labor market, so it depends on how profitable the company can be (Fatima & Mohiuddin, 2020: 48). The share prices of industrial companies and their profits are affected by many factors. Firm profitability is affected by capital structures (Cho & Pucik, 2005: 555) & (Fatima & Mohiuddin, 2020: 55).

Therefore, profit depends not only on the amount of revenue but also on the amount of costs (Saranya & Usha, 2022) & (Saber & Qader, 2022: 473). Thus, when a company makes a profit when its costs are less than its revenues, this is a measure used by economic researchers and analysts to better understand the situation of companies and recommend companies and

institutions to always zero unnecessary costs to provide better revenues (Sahni & Kulkarni, 2018: 60). According to the study (Waleed et al., 2016) the difference between income and expenditure is called profit provided it does not exceed a certain period of time, which is a fiscal year.

The sub-measures of profitability are net profit margin (NPM), gross profit margin (GPM), and return on assets (ROA), which help researchers evaluate how much they affect the growth rate.

According to the study (Yuvaraaj & Kathirvel, 2016: 35), The leadership and management performance of an institution is measured by achieving a satisfactory amount of profit on invested capital, obtained from financial listings. A good profit amount creates a healthy financial position for the institution, so profit stability reduces concerns about the institution in the market. According to (Alarussi & Alhaderi, 2018), the result of the study of factors affecting profitability in Malaysia shows that between the debt-equity ratio and profitability, on the one hand, there is a negative relationship. However, there is no relationship between liquidity and profit. Researchers (Raharjo & Widarti, 2021: 51) have argued that profitability ratios can be used to calculate profitability by comparing different elements of financial reports, especially income and loss statements, and balance sheets. Multiple periods of operation can be measured. The objective is to monitor the growth of the company over a predetermined period of time, either decreasing or increasing, while trying to determine the cause of the change.

According to (B. Prabhakar & Japee, 2023: 136) Financial ratios highlight the advantages and disadvantages of companies and provide a quite detailed analysis of their financial statements in addition to other factors such as the competitive environment and market conditions. Indian Cement Companies It shows that the net profit margin ratio and the EBIT margin ratio for the cement company exhibit significantly high rates of variation, indicating that these ratios are exposed to more variance than other ratios. Study (Aulová et al., 2019) the analysis of selected profitability ratios in the agricultural sector conducted in the Czech Republic for the period 2011-2015, the results show that profitability sub-indicators both affect the above and also affect the variables in different proportions. That's why profit growth can't be calculated equally for all businesses. However, according to the results of the study (Ajmera Tushar Rameshbhai, 2023), it shows that the



higher the profit, the higher the compound annual growth rate, i.e., there is a strong positive relationship between profit and CAGR in the automotive industry in India. It forecasts a compound annual growth rate of 3.05%. The results of his study (Parveen kumar et al., 2020) & (Kaur & Kaur, 2022), show the same positive results.

**Net Profit Margin (NPM):** Showing a good profit margin in the financial statements indicates that the management performance of the institution is in a successful direction in increasing the net profit margin, which gives investors the impression that the institution is on a successful path in the near future. Good on the company's shares, which causes the share price to rise in the market. study (Alvian & Munandar, 2022), net profit margins have had a significant positive impact on company value. This result was obtained in their study entitled "Effect of Debt-to-Equity Ratio, Net Profit Ratio, and Cash Ratio on Firm Value," which was done in Indonesia. Study (Gitman & Zutter, 2013), net profit in companies is measured as total sales after deducting total expenses and costs, such as interest on debt, taxes, and shareholder dividends. So, if a company has a high net profit, it is considered a sign that the company is in good condition in terms of profit margin. A significant profit margin shows that a company can effectively control its costs to generate a sizable profit (Fatima & Mohiuddin, 2020).

According to the results of the study (Sultana et al., 2020) conducted in the banking and industrial sectors in India for the periods 2014–2015 and 2018-2019, there is a strong correlation between profit margin and average annual growth per share. From the result of the study (Dr. S.Saravanan & K.Janani, 2015), it shows that the net profit ratio denotes negatively the compound annual growth rate.

The formula for the net profit margin is (B. Prabhakar & Japee, 2023: 137):

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Total Sales}}$$

**Gross Profit Margin (GPM):** The gross profit margin is part of the profitability ratio, which shows the inverse relationship between gross profit and net sales income in companies. That's why every company operates for profit, so the higher the profit, the better the company's performance. One of the reasons for the success of the company is its high level of profitability. That is why, in this paper, the profitability ratio is measured as GPM (gross profit margin).

According to (Kulshreshtha, 2014: 5) Gross profit is measured by the difference between revenue from goods sold and the cost of goods sold. Gross profit consists of administrative, financial, marketing, tax, and fee costs and the return on capital used.

Gross profit margin, according to (Gitman & Zutter, 2013: 43) & (Binsaddig et al., 2022: 294), is the portion of each dinar in sales that remains after the business has paid for the items. A higher gross profit margin, or a lower relative price of products sold, is preferable.

According to this study (Alam & Rahman, 2012) conducted in Dhaka in order to investigate the effect of profit growth rate on customer relationship management (CRM), measured by compound annual growth rate in service organizations, which led to a significant positive relationship. However, according to source (Dr. S.Saravanan & K.Janani, 2015), it shows that the compound annual growth rate is negatively represented by the gross profit rate. This is how the gross income ratio is calculated (Mao, 2023: 2).

$$\text{Gross profit margin} = \frac{(\text{Sales} - \text{Cost of goods sold})}{\text{Sales Revenue}}$$

$$= \frac{\text{Gross profits}}{\text{Sales Revenue}}$$

**Return on Assets (ROA):** The profitability ratio can be calculated using the Return on Assets ratio, which is used to measure the rate of return of all assets after interest and taxes (Novyarni & Permana, 2020: 43). The ability to utilize the company's assets to generate profit shows that the company is successfully managing its operations, which can be measured by ROA (Fatima & Mohiuddin, 2020: 56) & (Hong & Najmi, 2020: 3) & (Dahham & Dahham, 2023: 387). The financial ratio, also known as "Return on Assets (ROA)," is utilized as a gauge to determine how well an organization can utilize its assets in order to produce earnings over a given time period (Magoro, 2009: 8). In other words, it calculates the profitability of the organization's assets that are available.

The results of the study (Cho & Pucik, 2005) show a positive relationship between growth rate and ROA. However, according to the research results of (Magoro, 2009), there is a negative relationship between return on assets and compound annual growth rate.

By dividing the company's profits before interest and taxes (EBIT) by its average total assets, one may calculate the return on total assets. In mathematics, it is denoted as (Ahmed, 2022: 149).

$$\text{Return on Assets} = \frac{\text{Operating Profit (EBIT)}}{\text{Average Total Assets}}$$

**Compound Annual Growth Rate (CAGR) Growth Rate:** The compound annual growth rate (CAGR) is used to compare the performance of a company or investment because it is a change that indicates that a certain change has occurred over a period of time, which can be positive or negative. Increase the annual profit margin because it is used by analysts, investors, and owners to evaluate the annual or seasonal growth of the company to predict the future performance of the company.

The rate of return of a partner or bond is measured by the compound annual growth rate (CAGR) for five or ten years. CAGR measures growth by means such as growing at a constant rate on a compounded annual basis, hence the name "soft" rate of return (Zhang, 2021).

The formula for calculating CAGR is (Sultana et al., 2020: 168) & (Gangu Naidu, 2012: 88):

$$CAGR = \left( \frac{EV}{BV} \right)^{\frac{1}{n}} - 1 *$$

**Information:**

EV= Ending value.

BV= Beginning value.

n= Number of years.

In this study, the following hypothesis was made in light of a review of existing research and literature:

**H1:** Net Profit Margin has a positive effect on Compound Annual Growth Rate.

**H2:** Gross Profit Margin has a positive effect on Compound Annual Growth Rate.

**H3:** Return on Total Assets has a positive effect on Compound Annual Growth Rate.

**Research Methodology:** A descriptive study is a type of research that examines nature and the connections among the occurrences being studied (Nariswari & Nugraha, 2020: 88). For the purpose of the data analysis, descriptive statistics have been used to discuss the available information collected without the generality of the results being intended. The data used is Collected from the audited financial reports of manufacturing companies for the period 2011-2020 obtained from the Iraqi Stock Exchange (ISX).



The industrial sector in Iraq is one of the sectors where a large number of companies operate, but of the large number of such companies, only 28 are listed on the Iraqi Stock Exchange (ISX) as joint stock companies. The Iraqi stock market is drawn from a targeted sample of 10 years, which is the period 2011-2020 used in the study. In order to estimate the effect of relationships between dependent and independent variables, the authors of this paper use panel data regression techniques, quantitative descriptive methods, and purposive sampling methods before applying them. How well a data set fits the normal distribution and how likely it is that the random variables underlying the data are normal Methods The study makes use of SPSS version 22 software for data analysis. Many companies operating in this sector do not publish their annual financial reports regularly in order to disclose the financial position and management of the companies.

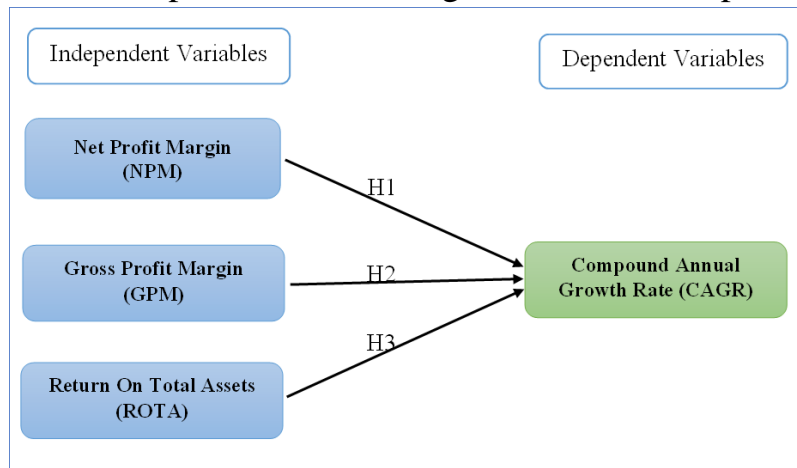


Figure (خطأ! لا يوجد نص من النمط المعين في المستند): Relations among variables  
Source prepared by researchers.

**Data Collection:** The primary data for manufacturing companies utilized in the study of this article was derived from the financial reports for the years 2011–2020 issued on the Iraqi Stock Exchange (ISX) following their audit for a period of 10 years.

Table (1): Research samples

No.	Name of Company	International numbering code
1	Modern Sewing Company	IQ000A0M7T66
2	Al -HiLal Industries Company	IQ000A0MT90
3	Ready Made Clothes Company	IQ000A0M9C89
4	AL- Kindi of Veterinary Vaccines Drugs	IQ000A0M7T41
5	Baghdad for Packing Materials Company	IQ000A0M7TW0

No.	Name of Company	International numbering code
6	Baghdad Soft Drinks Company	IQ000A0M7TT6
7	Iraqi For Tufted Carpets Company	IQ000A0M7T33
8	Al-Mansour Pharmaceuticals Industries	IQ000A0M7TZ3
9	Iraqi Date Processing and Marketing	IQ000A0Q21D9
10	National Chemical & Plastic Industries	IQ000A0M7T09

Source: Prepared by researchers based on the results of the statistical program

**Research variables:** As explained in the previous sections, a company's profit margin is one of the tools that can be used to assess the company's competitiveness in the market. Capture profitability performance, it is then measured by three alternative financial indicators. The first measure, net profit margin (NPM), also called the sales return ratio, is a profitability tool used in determining the extent of the financial stability of companies. It consists of net profit after deducting all administrative, marketing, and production expenses, depreciation, interest, and taxes, divided by total revenue. This measure has the advantage of indicating the profit margin, which encourages investors to invest more in this sector because their success is clear, which affects the price of shares in the stock market and leads to increased demand for shares. The second measure is gross profit margin (GPM), where two factors work on gross profit margin: revenue and cost of goods sold (COGS), which is the cost the company spends to produce a product. The third measure, Return on Assets (ROA), is less measured when it is obtained by dividing the earnings after deducting the amount of taxes by the company's total assets.

**Data Analysis:** A number of multiple regression analyses serve as the foundation for path analysis, which also makes the additional assumption that both the dependent and independent variables are causally related. Any percentage of correlation between two variables, or an overall or broad indicator of scientific relationship, can be broken down into a number of parts according to the main principle of path evaluation. These elements are discrete effect paths that pass through chronologically intermediate variables that are connected to all three correlated variables. To determine the effect of independent variables on dependent variables directly or indirectly on the dependent variable for some of the Iraqi industrial companies listed on the Iraqi Stock Exchange (ISX) for the period (2011 to 2020).

**Results and Discussion:** To analyze the data received from the Iraqi Stock Exchange for industrial companies for ten years from 2011 to 2020, statistical software tools are used to analyze the data, obtain results, and present recommendations and comments based on the results of the study (SPSS), as evidenced by the experiments in this paper that follow.

**Analysis Detailed:** Annual Reports of Industrial Companies Listed on the Iraqi Stock Exchange (ISX) for NPM, GPM, ROA, and CAGR statistics of ten companies for the years 2011-2020 Descriptive data analysis is used in order to determine the description of variables in this study: NPM (X1), GPM (X2), ROA (X3), and CAGR (Y). The results of the descriptive statistical analysis are shown in Table 2.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

**information:**

Y= Compound Annual Growth Rate (CAGR)

a= Constants

$\beta_1, \beta_2, \beta_3$  = Partial Coefficient Regression

X<sub>1</sub>= Net Profit Margin (NPM)

X<sub>2</sub>= Gross Profit Margin (GPM)

X<sub>3</sub>= Return on Assets (ROA)

e= Error

Table (2): Analysis Detailed

Variables	Mean	Std. Deviation	N
(CAGR)	.021972619	.0812847803	100
(NPM)	.003176188	.3353430106	100
(GPM)	.016470746	.0342715764	100
(ROA)	.009544659	.1403027437	100

A. Dependent Variable: (CAGR) Growth Rate.

Source: compiled by the researcher using SPSS outputs.

According to the table (2) Compound Annual Growth Rate (CAGR) per annum measures the average annual growth rate of an investment over a specified period. In this case, the mean annual CAGR is about 2.20%, with a standard deviation of about 8.13%. Net Profit Ratio: Refers to the percentage of net profit that a company earns for each penny of revenue. The mean net profit margin is about 0.32%, with a standard deviation of about 33.53%. Gross Profit Ratio: Measures the percentage of gross profit that a company retains from its revenue after deducting the cost of goods sold. The

mean gross profit margin is about 1.65%, with a standard deviation of about 3.43%. Return on Total Assets: Return on Assets (ROA) shows the efficiency of a company in earning profit from its total assets. The mean ROA is about 0.95%, with a standard deviation of about 14.03%.

Table (3): Analysis-related variables. coefficients of correlation

	(CAGR) Growth Rate	net profit margin	gross profit margin	return on assets
(CAGR) Growth Rate	1.000			
net profit margin	.509**	1.000		
gross profit margin	.334**	.491**	1.000	
return on assets	.486**	.633**	.461**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: compiled by the researcher using SPSS outputs.

**Coefficients of correlation:** According to Table 3, the correlation coefficient between the net profit ratio and growth rate is about 0.509. This indicates a moderately positive relationship between these two variables and their effectiveness. Gross profit margin: The correlation coefficient between gross profit margin and growth rate is about 0.334. This is also a moderately positive correlation, but nevertheless, there is no effect. Return on Total Assets: The correlation coefficient between return on total assets and growth rate is about 0.486. This indicates a moderately positive relationship with its effect, suggesting that as the gross profit rate increases and higher returns on total assets are associated with a tendency, the growth rate increases. excluding the net profit margin.

The result is the same as that of (Tsvetkova et al., 2021) and (Anjom & Karim, 2016). While a strong positive relationship can be found among the three independent variables, Net Profit Ratio (NPM), Gross Profit Ratio (GPM), and Return on Assets (ROA), This shows that the three independent variables influence each other partially positively, as the results of research by (Fatima & Mohiuddin, 2020) and (Shella Mae Saimin, 2018) show.

Table (4): R Square Value

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553 <sup>a</sup>	.306	.285	.0687506747

a. Predictors: (Constant), return on total assets, gross profit margin, net profit margin.

b. Dependent Variable: (CAGR) Growth Rate.

Source: compiled by the researcher using SPSS outputs.

The independent variables (NPM), (GPM), and (ROA) statistics of R<sup>2</sup> are .306, corresponding to 30.6%. This result shows that the dependent variable CAGR falls under the influence of the independent variables (NPM, and ROA) by 30.6 percent, except (GPM). While variables other than the independent variables of the study have a 69.4% impact on the Compound Annual Growth Rate (CAGR) growth rate of the dependent variable, companies in the industrial sector are listed on the Iraqi Stock Exchange.

#### Multi-collinearity Tests:

Table (5): Multi-collinearity Tests Summary

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	net profit margin	.549	1.820
	gross profit margin	.721	1.386
	return on assets	.570	1.755

a. Dependent Variable: (CAGR) Growth Rate.

Source: compiled by the researcher using SPSS outputs.

According to the findings in Table 5, the largest VIF value is (1.820), and the smallest tolerance value is (.549). A multilinear analysis test was performed, and the tolerance level of all three independent variables was greater than 0.10 and their VIF value was less than 10. This shows that there is no multicollinear weight indicator in the three variables (Gusti et al., 2020) & (Ahmed et al., 2023).

Table (6): ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.200	3	.067	14.129	.000 <sup>b</sup>
	Residual	.454	96	.005		
	Total	.654	99			

a. Dependent Variable: (CAGR) Growth Rate

b. Predictors: (Constant), return on total assets, gross profit margin, net profit margin.

Source: compiled by the researcher using SPSS outputs.

Table 6 shows the results of the ANOVA analysis to test the significance of regression, the results show that the (Sig) value is (0.000). Which is less than (0.01), and therefore we reject the null hypothesis and accept the alternative hypothesis, which is that regression is significant, and therefore there is an effect of the independent variables on the dependent variable and we can predict the dependent variable with these independent variables.

**Discussion:**

Table (7): A study of the relationship that exists (NPM), (GPM), (ROTA), and (CAGR) Growth Rate.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.018	.008		2.291	.024
	net profit margin	.077	.028	.317	2.762	.007
	gross profit margin	.141	.237	.059	.594	.554
	return on assets	.149	.065	.258	2.290	.024

Source: compiled by the researcher using SPSS outputs.

$$Y = 0.317X_1 + 0.059X_2 + 0.258X_3 + e$$

According to Table 7 The regression equation makes it obvious that this study's fixed value of 0.018 was attained. When the independent variables (GPM, NPM, and ROA) are zero, this represents a firm value of 1%. The worth of the company rises by 0.077 when the NPM variable increases by 1%. The NPM regression coefficient is shown here. Since the GPM variable's coefficient is 0.141, an increase in the GPM variable of 1% leads to a rise in firm value of 0.141 percent. The ROA variable's regression coefficient is 0.149, which means that if the ROA variable rises by 1%, the company's value rises to 0.149.

**H1:** Net Profit Margin has a positive effect on Compound Annual Growth Rate.

The correlation between NPM and CAGR has a coefficient of 0.509 and a Sig value of less than .05, which indicates that the independent variable (NPM) has a statistically significant positive relationship with the dependent variable (CAGR). Thus, the higher the net profit margin, the higher the compound annual growth rate (CAGR) in the Iraqi industrial sector listed on the Iraqi Stock Exchange (ISX) for the period 2011–2020. Then that can be said. where H1 is accepted and H0 is rejected. According to the same study (B. A. Prabhakar & Research, 2023) & (Kiran Kumar & . Raji Reddy, 2019). According to previous research (Alvian & Munandar, 2022), the net profit margin has a positive and significant effect on the growth rate of firms.

**H2:** Gross Profit Margin has a positive effect on Compound Annual Growth Rate.

Statistical coefficient for correlation (GPM) with CAGR (.334) and sig value for the same correlation is bigger than 0.05. This result that (sig) is



greater than (.05) indicates that the independent variable (GPM) does not have a significant effect on the dependent variable (CAGR). Thus, the higher the gross profit margin, the unchanged Compound Annual Growth Rate (CAGR) of the Iraqi industrial sector for the Iraqi industrial sector listed on the Iraqi Stock Exchange (ISX) for the period 2011-2020. Then that can be said. where H2 is rejected and H0 is accepted. This result is opposite to the result of the study. (Kiran Kumar & . Raji Reddy, 2019), while the same result of the study (Haider et al., 2018).

**H3:** Return on Total Assets has a positive effect on Compound Annual Growth Rate.

The statistical results of hypothesis testing on the effect of return on assets (ROA) on compound annual growth rate (CAGR) growth rate show that the relationship between ROA and CAGR has a correlation coefficient value of 0.486 and a sig value of less than 0.05, indicating that it is variable. The independent variable (ROA) has a statistically significant positive relationship with the dependent variable (CAGR). Thus, the higher the return on total assets, the higher the compound annual growth rate (CAGR) in the Iraqi industrial sector listed on the Iraqi Stock Exchange (ISX) for the period 2011–2020. Then it can be stated that H3 is accepted and H0 is rejected. This result shows that contrary to the results of the studies, (Haider et al., 2018) & (Tsvetkova et al., 2021), there is a negative relationship between growth rate and return on assets (ROA).

**Conclusion:** The researchers of this study concluded that the effect of Net Profit Ratio (NPM), Gross Profit Ratio (GPM), and Total Return on Assets (ROA) on the Compound Annual Growth Rate (CAGR) of an industry sector listed on the Iraqi Stock Exchange (ISX). Net profit margin (NPM), gross profit margin (GPM), and total return on assets (ROA) affected the dependent variable of compound annual growth rate (CAGR) by 30.6%. 69.4 % of the other factors affect the dependent variable, the compound annual growth rate (CAGR), which the researchers used in this study. Little research has been done on determining the impact of the compound annual growth rate (CAGR) in Iraq. Out of the 28 industrial companies listed on the stock exchange for the period 2011–2020, only 10 companies have been selected for the ten years for which they have submitted their financial statements without interruption. Due to the ISIS war and the outbreak of COVID-19, many companies have not submitted their financial listings to the stock

exchange. Net profit margin (NPM), gross profit margin (GPM), and return on assets (ROA), based on compound annual growth rate (CAGR) growth rate, were used to find the relationship between independent and dependent variables through analysis. Multiple linear regression, descriptive, and correlational analysis

1. The compound annual growth rate is positively affected by the net profit margin, but significantly so. Therefore, for the period 2011-2020, the compound annual growth rate (CAGR) of the stock-listed industrial sector will increase. The higher the net profit margin (CAGR), the higher the growth rate.
2. The compound annual growth rate is not significantly affected by the gross profit rate. Therefore, during the years 2011 to 2020, the Compound Annual Growth Rate (CAGR) of the industrial sector listed on the Iraqi Stock Exchange (ISX) It does not vary in direct proportion to the gross profit margin.
3. The compound annual growth rate is significantly impacted by the return on total assets. Thus, over the period of 2011 to 2020, the compound annual growth rate (CAGR) of the Iraqi industrial sector listed on the Iraqi Stock Exchange (ISX) will increase in direct proportion to the return on assets (ROA).

**Limitations:** Future research is needed to address the shortcomings of this study and many others. A drawback of the study is that not all coefficients were included in the model. Not all sectors of the Iraqi economic sector were used, so the results of this study cannot be generalized as they sampled only one sector, the Iraqi industrial sector. Future research is therefore advised to expand the focus of the study by including more than one sector in the study sample. More financial rates should also be used in future studies to fully explore the relationship between financial rates and compound annual growth rate (CAGR) growth rates.

**Recommendation:** As a result of the findings of this study, the following recommendations are made: Of the independent variables Net Profit Ratio (NPM), Gross Profit Ratio (GPM), and Return on Assets (ROA), more variables should be used that may affect the compound annual growth rate (CAGR), such as sales rates, debt ratios, investment volumes, tax rates, or cost ratios. Future research is recommended in other sectors, not just the industrial sector listed on the Iraqi Stock Exchange (ISX).

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