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Impact of Working Capital and Liquidity on Accounting Profitability of Insurance Companies Listed on the Iraqi Stock Exchange (ISX) In 2018-2022

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ABSTRACT: The objective of this study is to assess the impact of working capital and liquidity on the accounting profitability of insurance companies listed on the Iraqi Stock Exchange (ISX) for the years 2018-2022. This study uses the variables of working capital and liquidity ratio as the two independent variables. In contrast, accounting profitability is the dependent variable measured by return on asset ROA. The data are based on the financial statements of insurance companies after being audited and published on the Iraqi Stock Exchange for five years. Moreover, to analyze the research data, a quantitative approach of linear regression and research hypothesis testing is used to compare the findings using EViews software version 22. The research findings show that the liquidity ratio has a significant positive effect on accounting profitability measured by return on asset ROA. At the same time, working capital results have a relatively weak negative impact on accounting profitability measured by return on assets (ROA). These results add to our understanding of financial practices in developing countries and provide insightful information for strategic financial management in the insurance industry in Iraq. The study aims to add meaningful knowledge to strategic decision-making and further the discourse of financial management techniques in developing economies. It is recommended that insurance companies work on ensuring adequate liquidity ratios to restructure working capital. At the same time, maintain adequate cash flow. Regular forecasting, planning, robust cash flow management practices, and investing in state-of-the-art tools can improve financial decision-making. A culture of continuous improvement and frequent updates based on market conditions and past experiences can further enhance liquidity levels.

Keywords: Liquidity, Accounting Profitability, Working Capital, Insurance Sector, Return on Assets.

1 INTRODUCTION

There are very few insurance companies operating in Iraq. The question arises: will this small number of insurance companies meet the demand of the Iraqi population and companies? On the other hand, a significant portion of the Iraqi population and its companies may be unaware of the importance of insurance. However, the study does not work on the assessment of insurance companies to determine to what extent they can meet the market demand for insurance. However, what is important in the study is the extent to which working capital structure and liquidity ratio affect accounting profitability, for example, in insurance companies listed on the Iraqi Stock Exchange (ISX) for the year (2018-2022). Because it can be shown that the growth of insurance companies is a good opportunity to help identify ways to succeed and plan better. As such, insurance is used for its growth, corporate performance evaluation, and individual welfare [1].

The relationship between liquidity and profitability has gotten more complex, particularly in Iraq's financial landscape, where insurance companies play an important role. Understanding this relationship is critical to ensuring the financial health and sustainability of these organizations. Liquidity and profitability are critical indicators of an organization's financial well-being since they influence shareholder returns, risk, and customer happiness. To sustain long-term viability, Iraq's insurance industry must strike a balance between maintaining acceptable liquidity levels and boosting profitability. Working capital management is equally critical in the insurance industry, as it is required to drive profitability and sustainability. However, there is a scarcity of detailed research on the impact of working capital management on business performance in the Iraqi insurance sector. This study seeks to close this gap by investigating

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the impact of liquidity and working capital management on the profitability and firm value of Iraqi insurance companies. By using sector data, it strives to provide significant insights for strategic decision-making and contribute to the larger conversation on financial management practices in emerging markets. [2] On the other hand, working capital management is critical for the Iraqi insurance business since it influences operational efficiency, profitability, and long-term viability. It entails finding a balance between liquidity and profitability, which is critical in the country's changing economic landscape. However, achieving this equilibrium presents unique difficulties due to economic volatility and regulatory dynamics [3]. Effective working capital management increases liquidity, reduces operational risks, and capitalizes on growth prospects. It also affects operational efficiency and customer happiness, allowing insurers to adjust to market changes and preserve a competitive advantage. This study seeks to investigate the factors, drivers, and repercussions of working capital management practices among Iraqi insurers, giving actionable insights to enhance strategic decision-making processes, create operational resilience, and support sustainable growth. [4] This study gives a complete review of the importance of working capital and liquidity in the Iraqi insurance business, focusing on their implications for operational efficiency, financial performance, and strategic resilience.

The research problem deals with the impact of working capital and liquidity on accounting profitability for insurance companies listed on the Iraqi Stock Exchange (ISX) in 2018–2022. Assessing working capital and liquidity becomes a very important business due to reviewing insurance companies in the meantime. The existence of the National Insurance Institution is important for assessing working capital and liquidity in insurance companies in Iraq. Therefore, insurance institutions make an active contribution to the development of countries that follow better financial systems, according to theoretical studies and empirical evidence. In the absence of a financial system that can provide the means to transform technical innovation into broad implementation, technological progress will not have a significant impact on economic development and growth. Therefore, research on the relationship between working capital and liquidity is not conclusive, especially in insurance companies, and more empirical evidence is needed to establish the sources of insurance liquidity and identify the strategies adopted by insurance companies in cash management. This paper attempts to empirically contribute to this gap in the literature.

Studying the relationship between working capital, liquidity, and accounting profitability is crucial for several reasons:

- Financial Management: Understanding how working capital and liquidity affect profitability allows managers to make more educated decisions about managing their company's finances. It allows them to optimize working capital levels to maximize profitability while keeping enough liquidity.
- Risk Management: Proper working capital and liquidity management can lower a company's chances of financial crisis or bankruptcy. Maintaining adequate cash allows a corporation to weather economic downturns and unanticipated expenses better. Investor Confidence:
- Investors and creditors frequently consider liquidity and working capital management when assessing a company's financial health and investment prospects. A study in this field can reveal insights that boost investor confidence and attract capital.
- Industry Comparisons Comparative research across industries can provide best practices for working capital management and liquidity solutions. This can help with benchmarking performance and identifying areas for improvement. Overall, research on the relationship between working capital, liquidity, and profitability adds to a greater knowledge of financial management concepts and assists organizations in improving their economic performance and resilience.

The main objective of this paper is to help measure accounting profitability more accurately. This paper is focused on restructuring the working capital and liquidity structure of insurance companies listed on the Iraqi Stock Exchange from 2018 to 2022. This is to understand how differences in working capital levels and liquidity measures affect profitability and identify strategies to optimize financial management practices to increase profitability and reduce financial risks. This study aims to fill the gap identified in previous studies.

The research topic for a study on the influence of working capital and liquidity on accounting profitability may be formulated as follows:

Queets le lien entre gestion du capital de travail, liquidate et rentability computable dans (industry specified our industry)?

How do fluctuations in working capital levels and liquidity metrics impact profitability, and what are the best strategies for managing working capital and liquidity to maximize profitability and minimize financial risks?

2 Literature Review

2.1 Theoretical Framework

2.1.1 Working Capital

A company's working capital serves as a gauge for its liquidity and overall effectiveness. By deducting current obligations from current assets, it is computed. A corporation with positive working capital is able to meet short-term obligations since it has more current assets than liabilities. A negative working capital indicates that the company's current assets may not be sufficient to cover its short-term liabilities. It's an essential indicator of a business's financial stability and capacity to continue operating on a daily basis [5].

Capital Ratio: A basic financial measure called the working capital ratio, or current ratio, is used to evaluate a company's short-term liquidity and capacity to pay its debts on time. It is computed by dividing the current assets by the current liabilities of an organization [6].

Working capital management is essential to maintaining the company's financial stability during normal commercial operations. Financing for working capital management must be short-term. Working capital is the only investment a business makes without expecting a specific return. To keep the firm running, money needs to be invested [7] .
as opposed to producing something independently. Many companies have overinvested in working capital as a result, which has led to problems with cash flow and a drop in shareholder value. The working capital components are often the largest items on the balance sheet for many firms. In spite of this, they are usually not seen as issues that need to be given high importance or strategic thought [8].

2.1.2 Liquidity Ratio

A ratio called liquidity is used to assess a company's capacity to pay short-term debt. It is possible to argue that liquidity influences the capital structure since a company with high liquidity can pay off its short-term debt, which tends to reduce total debt and result in a smaller capital structure. According to the Pecking Order Theory, management would rather use retained earnings for financing in the first place, followed by debt, and then the sale of new shares Research by [9] corroborates this. According to the signal hypothesis, the stock market reacts favourably to a firm’s ability to meet its short-term obligations, leading to an increase in firm value, proving that liquidity affects firm value. The studies [10] and [11] support this.

Liquidity refers to the capacity of a company to effectively and promptly fulfil its immediate financial responsibilities using current assets that can be readily converted to cash, such as cash, accounts receivable, and inventory. It evaluates the company's capability to meet short-term financial obligations within a year. To meet these obligations, management needs to ensure that assets can be quickly and sufficiently transformed into cash [12].

2.1.3 Accounting Profitability

A key metric for analysing a company's financial success is accounting profitability, which gauges how profitable its operations can be. It functions as a crucial metric for assessing how well resources are managed to meet financial objectives. Numerous facets of accounting profitability have been the subject of recent research, which has investigated its causes and effects in diverse settings[13].

The relationship between capital structure and accounting profitability is one important factor that has been researched. [14] A study examined the impact of capital structure on accounting profitability within the framework of Chinese enterprises. Their findings provide insight into how financing choices and debt-to-equity ratios affect a company's bottom line. The impact of operational efficiency on accounting profitability is a significant area of research. [15] looked at the connection between accounting profitability and operational performance in the manufacturing industry. Their study shed light on how crucial operational effectiveness is to sustaining growth and profitability.

2.1.4 Return On Assets:

One financial measurement used to assess a company's capacity to make money off of its assets is return on assets (ROA). It is determined as a percentage by dividing net income by total assets [16]. [17] recent study delves into the elements that influence profitability and asset management effectiveness by examining the origins and consequences of return on assets (ROA) within the manufacturing industry.

A key indicator of accounting success, return on assets, assesses how well a business uses its resources to create a profit. Net income is divided by total assets to arrive at this figure. Better asset utilization and profitability are indicated by a greater ROA [18]. One important statistic for assessing accounting performance is the return on assets. It assesses how well the business can turn a profit on its assets. Net income is divided by total assets to get ROA [19]. Better asset utilization and profitability are indicated by a greater ROA. In a study of Chinese manufacturing companies. [20] discovered a strong positive correlation between ROA and accounting profitability. According to the results, companies that have a higher ROA also typically have better accounting profitability [21].

2.2 Empirical Review

Liquidity and working capital are essential to a company's profitability and financial performance. Liquidity is the capacity to swiftly turn assets into cash, whereas working capital is the difference between current assets and liabilities. Profitability is increased, expenses are reduced, and cash flow is strengthened by effective management. The relationship between these parameters has been studied recently in a variety of industries and geographical areas.

According to the study [22], titled Working Capital Management and Profitability: Evidence from an Emergent Economy. This paper investigates the impact of working capital management on the profitability of Argentine manufacturing firms using a fixed-effects regression model. The study found a positive relationship between working capital components and profitability, with increased variables improving performance in terms of ROA and ROE. Conversely, a negative relationship was found with leverage, suggesting increased debt negatively impacts firm performance. According to the [23] study, which assesses the analysis of the insurance activities of Iraqi insurance companies listed on the Iraqi Stock Exchange from 2010 to 2021, focusing on their profit margins. The study uses three indicators: rate of return on assets, return on equity, and profit margin ratio. The data are collected from the annual report of the Iraqi Stock Exchange. The findings show that total premiums written significantly impact all profitability ratios, including asset return ratio, return on equity, and profit margin ratio. According to the study [24], the impact of working capital management practices on firm profitability the primary objective of the research is to examine the impact of working capital management practices on the profitability of Turkish chemical, petroleum, and plastic manufacturing companies that are listed on the Istanbul Stock Exchange (ISE) over five years (2012–2016). The study explores the impact of working capital management on profitability in Turkish chemical, petrol, and plastic manufacturing firms, finding a positive correlation. Recommendations include shortening CCC and APP variables and improving departmental communication.

According to the results of the study [25], this study aimed to identify the main factors that affect the profitability of insurance companies in Ethiopia. It examined endogenous variables such as size, capital adequacy, leverage ratio, liquidity ratio, and loss ratio, as well as exogenous variables such as market share, GDP growth rate, and inflation rate. The results showed that insurance volume, capital adequacy, liquidity ratio, and GDP growth rate have a significant effect on profitability. The study [26], Impact of working capital management on profitability: evidence from listed companies in Qatar the purpose of this study was to determine whether the profitability of manufacturing companies listed on the Qatar Stock Exchange is impacted by working capital management policies. The authors used a multiple regression analysis methodology for all manufacturing companies listed on the Qatar Stock Exchange between 2015 and 2019 to evaluate the association between working capital management and profitability. Using average payment periods, average collection periods, average inventory turnover, and cash conversion cycles, the study investigates the relationship between working capital management and profitability. The study revealed that businesses with shorter cash conversion cycles and receivables collection times also tend to be more profitable than those with longer inventory turnover and accounts payable payment durations. Despite Qatar's advancements in the industrial sector, this study is the first to use all four criteria together to determine profitability. According to the study [27], Working Capital Management and Profitability: Evidence from the Manufacturing Sector in Malaysia. Examining how working capital management affects a firm's profitability is the aim of this research. Based on 164 manufacturing companies listed on Bursa Malaysia's Main Board over a five-year period from 2007 to 2011, the study. The study tests hypotheses using discriminatory panel regression and Pearson correlation, and it finds that there is an inverse relationship between debt ratio and firm stability and a significant positive relationship between exogenous variables, average collection period, inventory conversion period, and firm size. According to the study [28], Capital, liquidity, and profitability in European banks. The study looks at how capital requirements and high levels of liquidity affected European banks' post-crisis profitability. Using data from 2010 to 2018, it looks at the biggest banks across 28 EU member states. The findings indicate a positive correlation between bank performance and liquidity levels. Despite its significance for attaining banking stability, the study finds that the Basel III framework has little effect on bank profitability.

According to the study [29], The effect of working capital management on profitability: evidence from southeast Europe. The study looks into how working capital management affects the profitability of the food business in Southeast Europe between 2010 and 2014. The probability regression technique is used to measure factors such as current liquidity, assets-to-liabilities ratio, financial leverage, and company size in this study, which includes 9883 active companies. The study also looks at the relationship between good working capital management and the expansion and value of businesses.

According to the study [18], Impact of Working Capital Policy on Firms's Profitability: A Case of the Pakistan Cement Industry. The working capital policy and business profitability in Pakistan's cement industry are examined in this study. It makes use of control factors like capital size, debt, growth, and firm size. The study, which used 20 cement businesses between 2006 and 2011, discovered a substantial inverse link between corporate profitability and working capital regulations. To test the hypothesis, the study used the ordinary least squares regression approach. According to the study [8], The Effect of Working Capital, Liquidity, and Leverage on Profitability between 2013 and 2018 Companies involved in property, real estate, and building construction that are listed on the Indonesia Stock Exchange (IDX) and comprised in the Kompas 100 index comprise the population of this study. Three main objectives guided the conduct of this study: to examine the impact of working capital turnover, liquidity, and leverage on profitability, as well as the effects of each on profitability. The study highlights how working capital management and liquidity affect accounting performance in a range of business sectors. The profitability of the company is increased by efficient management, which maximizes cash flow cycles and maintains appropriate liquidity levels. In order to attain sustained profitability and improve financial performance, firms must use tailored strategies and responsible liquidity management methods.

2.3 Hypotheses Development

H1: Working Capital has a significant and positive effect on accounting Profitability.
H2: Liquidity Ratio has a significant and positive effect on accounting Profitability.

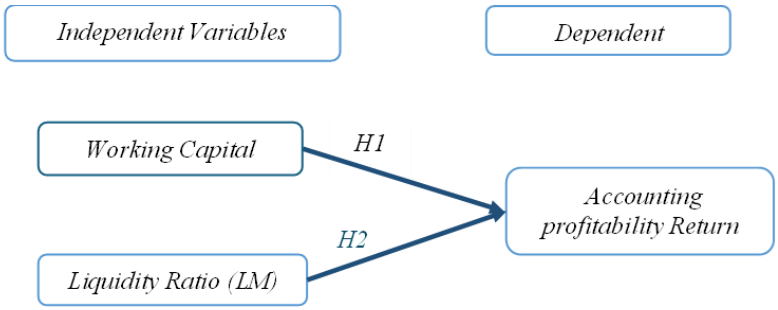

Figure 1. Relations among variables

3 Research Design and Methodology

3.1 Number of companies and sample size

The primary data used is for the insurance company Out of the companies list on the Iraqi Stock Exchange, we selected 5 companies as the sample of our research data. Financial statements for the years 2018–2022 that were posted on the Iraqi Stock Exchange (ISX) for five years (www.isx-iq.net) were based on their audited financial statement.

Table 1. Names of companies

NO	NAME COMPANY	INTERNATIONAL NUMBERING CODE
1	Dar Al- Salam lns. Co.	IQ000A0M9C48
2	GULF INSURANCE	IQ000A0NJ4K1
3	AL-AMEEN INSURANCE CO	IQ000A0M7TH1
4	Hamraa Insurance	IQ000A0M7TG3
5	AL-AHLIA INSURANCE COMPANY	IQ000A0M7TF5

Source: Retrieved from the researcher of the Iraqi Stock Exchange.

3.2 Method of Data Collection

The study's methodology, which examines the effects of working capital and liquidity on accounting profitability, includes a number of essential phases that guarantee correct interpretation and analysis of the data. Descriptive statistics are used to thoroughly analyze the supplied data while preserving the intended generalizability of the conclusions. The Iraqi Stock Exchange (ISX), which provides audited financial reports of five insurance companies for the years 2018–2022, serves as the study's main data source. The stock market in Iraq is represented by this five-year sample. Using panel data regression techniques, quantitative descriptive methods, and purposive sample methods, the authors evaluate the significance of correlations between dependent and independent variables prior to completing the

study. Furthermore, steps are made to guarantee the robustness of the study by evaluating the dataset's fitness to the normal distribution and the normality of the underlying random variables. EViews version 22 software is used for data analysis because of its advanced panel data processing and regression analysis features. However, it is crucial to remember that many businesses in this industry might not regularly reveal their management and financial standing in their yearly financial reports, which are only seldom made public.
In the context of the Iraqi stock market, this methodology seeks to offer a thorough and exacting examination of the relationship between working capital, liquidity, and accounting profitability.

3.3 Research Variables

Variables and how they are used in the study.

3.3.1 Independent Variable

3.3.1.1 Working capital:

The definition of working capital can vary depending on the source. Cash, inventory, and receivables are all included in the category of working capital; the only thing missing is whether or not a business has short-term debt. Working capital is determined using the balance sheet directly, and it is frequently [30] & [31].
Formula: -[32].

$$Working\ Capital\ Ratio = \frac{Current\ Assets}{Current\ Liabilities} \quad (1)$$

3.3.1.2 Liquidity Ratio:

Financial measurements called liquidity ratios are used to evaluate a company's capacity to pay short-term debt with its liquid assets. These statistics shed light on the financial standing and capacity of an organization to control short-term liquidity issues. Various liquidity ratios are frequently employed by analysts, creditors, and investors [33]. The following are a few of the most popular liquidity ratios:

3.3.1.2.1 Cash Ratio:

A measure of a company's liquidity is the cash ratio. It particularly determines the ratio between the overall cash and cash equivalents and the current liabilities of the business. The measure assesses the capacity of the business to pay off its short-term debt with cash or almost cash resources, like easily tradable assets. Creditors can utilize this information to determine how much, if any, money they are willing to lend a business. Formula [34].

$$Cash\ Ratio = \frac{Cash\ and\ equivalent}{Current\ Liabilities} \quad (2)$$

3.3.2 Dependent Variable

3.3.2.1 Accounting Profitability:

When evaluating the performance and financial health of a firm, accounting profitability is a critical component. Research has indicated that companies with greater profitability typically have lower debt levels, invest in sustainable practices, and have better market valuations. These results highlight how crucial accounting profitability is for assessing a company's worth, sustainability initiatives, and capital structure choices. Therefore, a company's success depends on its ability to comprehend its consequences [35].

3.3.2.1.1 Return on Assets:

The ability of a business to turn a profit from its assets is measured by a financial term called return on assets, or ROA. A company's return on assets (ROA) reveals how well it uses its resources to turn a profit. It is computed by dividing net income by average total assets over a given time period for the company [36]. This is the formula for ROA [19]:

$$ROA = \frac{Net\ Incom}{Total\ Assets} \quad (3)$$

3.4 Data Analysis

In the study, the data were examined for both descriptive analysis and hypothesis testing using multiple linear regression analysis and classical hypothesis testing. According to study, one can use multiple regression analysis to determine the extent to which an independent variable affects a dependent variable more than the latter. The following equation was used to perform multiple regressions in the investigation: [37]

$$ROA = a + \beta 1WCR + \beta 2CR + e \quad (4)$$

Description:
ROA: Return on Assets (Dependent variables).
WCR: Working Capital Ratio (Independent variables).
CR: Cash Ratio (Independent variables).
a: Constants.
β1, β2: Partial Coefficient Regression

4 Results and Discussion

Statistics, Descriptive: The data is analysed using descriptive statistics, focusing on measures of central tendency and variability. The mean (average) is calculated by summing all values and dividing by the total number of observations. The mean for ROA is approximately 1.86, while for WC it is around 11.05. For CR, it is around 2.14. The median (middle value) represents the middle value when data is arranged in ascending or descending order. The maximum and minimum values are the highest observed values, with the maximum value being approximately 6.83 and the minimum value being around -8.62. The maximum value for ROA is approximately 6.83, while the minimum value is around 67.05. The median provides insight into the middle value, less affected by extreme values. The ROA median aligns closely with the mean, while the WC median is significantly lower than the mean, indicating some variability. The CR median is also lower than the mean, suggesting variability in liquidity. The maximum and minimum values highlight the data range, with extreme ROA values warranting further investigation. The wide range in WC indicates diverse working capital levels, and the CR spans from 0.16 to 8.06, emphasizing variability in short-term solvency.

Table 2. Statistic Descriptive

	ROA	WC	CR
Mean	1.858455	11.04963	2.139074
Median	1.815060	6.255000	0.799162
Maximum	6.825220	67.05440	8.060382
Minimum	-8.621060	1.369000	0.163426
Probability	0.004064	0.000000	0.043601
Observations	25	25	25

Source: Data processed with EViews Vers 22.

A normality test: Based on the probability value outcome of 0.2169 and the Jarque-Bera value of more than 0.05 (3.0564), the results of the normality test indicate that the data in the study is distributed normally. A graphic illustration of these results may be found in Figure 2.

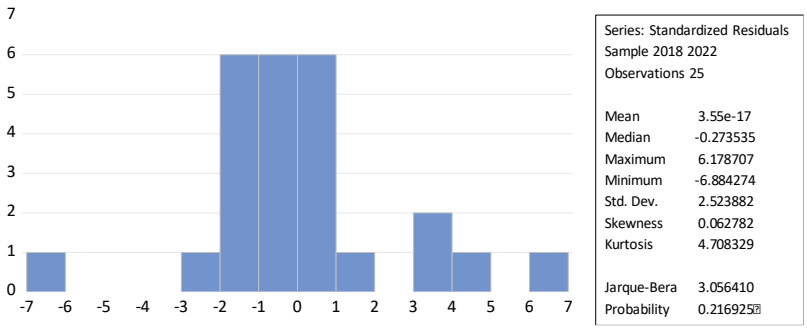

Figure 1: Test of (Jarque- Bera) Normality

4.1 Results of Correlation

With a correlation coefficient of -0.0121, the study finds a weakly negative relationship between working capital and accounting profitability. This implies that accounting profitability falls as working capital rises. The near-zero connection, however, indicates that working capital and accounting profitability do not necessarily follow a linear path. This shows that variations in working capital levels and variations in accounting profitability are not highly correlated. The study indicates that there may not be a clear correlation between the two variables or that other factor may have a greater impact on accounting profitability. With a correlation coefficient of 0.210, the study discovered a favorable relationship between accounting profitability and the current ratio. This implies that accounting profitability rises in tandem with the current ratio. Stronger liquidity is indicated by a larger current ratio, which may lead to higher accounting.

Table 3. Analysis of correlations

Covariance Analysis: Ordinary			
Date: 03/06/24 Time: 21:41			
Sample: 2018 2022			
Included observations: 25			
Correlation			
t-Statistic			
Probability			
	ROA	**WC**	**CR**
ROA	1.000000		

WC	-0.012113	1.000000	
	-0.058095	-----	
	0.0042	-----	
CR	0.210596	0.122636	1.000000
	1.033154	0.592613	-----
	0.0123	0.0092	-----

Source: Data processed with EViews Vers 22.

4.2 Results of Regression:

According to Table 4, The panel least squares regression analysis for the dependent variable Return on Assets (ROA) revealed that the intercept term has a coefficient of approximately 1.71, representing the expected value of ROA when all other independent variables are zero. The coefficient for working capital is approximately -0.0061, suggesting that an increase in working capital is associated with a slight decrease in ROA. The current ratio has a coefficient of approximately 0.1022, suggesting that a higher current ratio is associated with a slightly higher ROA. The t-statistic measures the standard errors the coefficient estimate is away from zero. The R-squared value (0.43) indicates that approximately 43% of the variation in ROA can be explained by the independent variables in the model. The Adjusted R-squared (0.24) accounts for the number of predictors and penalizes overfitting, suggesting that the model explains a moderate portion of the variability. The Root Mean Square Error (RMSE) (2.47) represents the average deviation of actual ROA values from the predicted values. The Durbin-Watson statistic (1.42) checks for autocorrelation, with a value close to 2 indicating no significant autocorrelation. The overall significance of the model is tested using the Prob(F-statistic) (0.000356).

Table 4. Data from Fixed Effect Panels

Dependent Variable: ROA				
Method: Panel Least Squares				
Sample: 2018 2022				
Periods included: 5				
Cross-sections included: 5				
Total panel (balanced) observations: 25				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	1.706787	1.105940	1.543291	0.0002
WC	-0.006062	0.060082	-0.100904	0.0207
CR	0.102220	0.356203	0.286971	0.7774
Root MSE	2.472889	R-squared		0.433410

Mean dependent var	1.858455	Adjusted R-squared	0.244547
S.D. dependent var	3.353008	S.E. of regression	2.914327
Durbin-Watson stat	1.416214	Prob(F-statistic)	0.000356

Source: Data processed with EViews Vers 22.

$$ROA = 1.70678693533 - 0.00606248258271*WC + 0.102220146961*CR$$

In the dependent variable in the preceding equation is ROA, and the independent variables are WC and CR. The influence of every independent variable on the dependent variable is shown by the coefficients. The estimated ROA when both are zero is represented by the constant term (1.7068). The WC and CR coefficients show that the ROA increases by 0.1022 units and lowers by 0.0061 units for every unit increase in WC.

4.3 Method test:

The null hypothesis (H0) states that all population means are equal, whereas the alternative hypothesis (H0) states that at least one population mean differs from the others. Table 5 illustrates how the ANOVA (Analysis of Variance) process tests these two hypotheses. Here, the means of various groups or treatments are compared using the ANOVA F-test to see if there is a significant difference. With a low p-value of 0.0002, the F-test provides compelling evidence to refute the null hypothesis. When sample sizes or variances differ between groups, the Welch F-test can be used instead of the conventional ANOVA F-test. With a low p-value of 0.0090, the Welch F-test favors the alternative hypothesis over the null hypothesis.

Table 5. Anova Test

Test for Equality of Means Between Series			
Sample: 2018 2022			
Included observations: 25			
hypothesis Method	**d.f.**	**Value**	**Probability**
Anova F-test	(2, 72)	9.965903	0.0002
Welch F-test*	(2, 42.5302)	5.272931	0.0090

Source: Data processed with EViews Vers 22.

Table 6. Effects Test

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	3.078400	(4,18)	0.0427
Cross-section Chi-square	13.030617	4	0.0111

Source: Data processed with EViews Vers 22.

To test the hypothesis that all fixed effects are redundant, table 6 employed the cross-section F-test and cross-section Chi-square test. 3.0784 was the F-statistic, with degrees of freedom being 4, 18, and 18. Less below the typical significance level ($\alpha = 0.05$), the p-value was 0.0427. 13.0306 was the chi-square statistic, which had four degrees of freedom. There was a 0.0111 p-value. Rejecting the null hypothesis and accepting the alternative, which states that there is at least one substantial fixed effect.

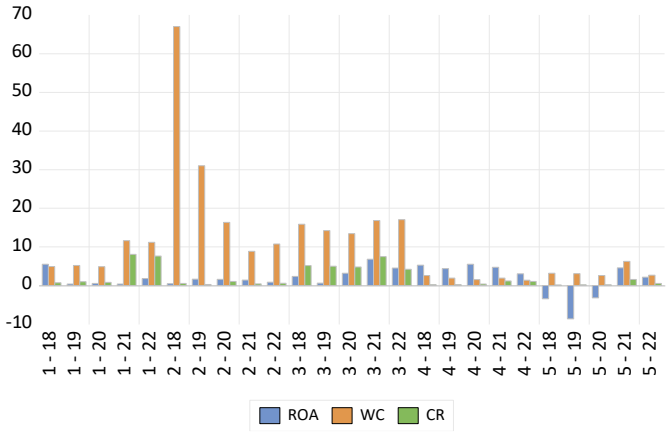

Figure 2: Graph Variance

Source: Data processed with EViews Vers 22.

5 Conclusion and Recommendation

5.1 Conclusion

The relationship between working capital, liquidity, and accounting profitability in the insurance sector of Iraq is examined in this paper. It emphasizes how crucial sound financial management techniques are to a company's long-term viability, profitability, and operational effectiveness. The study questions the notion that these variables are causally related, but it also seeks to comprehend how they interact and pinpoint methods for improving financial management. The study discovered a marginally negative correlation between accounting profitability and working capital, indicating that a rise in working capital may result in a decline in profitability. Nonetheless, a significant correlation was discovered between the current ratio and accounting profitability, indicating that increased liquidity could result in increased profitability.

5.2 Recommendation

Based on the findings of the study, here are some recommendations:

1. Optimize Working Capital Management: Businesses should strive to efficiently manage their working capital by minimizing excess inventory, reducing accounts receivable collection periods, and optimizing accounts payable terms. This can help free up cash and minimize financing costs, ultimately improving profitability.

2. Maintain Adequate Liquidity: While it's important to optimize working capital, businesses should also ensure they maintain sufficient liquidity to meet short-term obligations and withstand unexpected cash flow disruptions. Regular cash flow forecasting and contingency planning can help ensure adequate liquidity levels.

3. Implement Effective Cash Flow Management Practices: Businesses should implement robust cash flow management practices to monitor and control cash inflows and outflows effectively. This includes actively managing cash conversion cycles, maintaining a cash reserve for emergencies, and prioritizing investments that generate positive cash flows.

4. Invest in Financial Management Tools: Investing in advanced financial management tools and technologies can streamline working capital management processes, enhance liquidity forecasting capabilities, and improve overall financial decision-making.

5. Continuous Improvement: Finally, businesses should embrace a culture of continuous improvement in working capital management and liquidity practices. Regularly review and update strategies based on changing market conditions, emerging trends, and lessons learned from past experiences.

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