

# The Relationship between Cash Ratio and Firm Profitability Applied Study on Egyptian Stock Market

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**Abstracts:** Purpose: This paper investigates the relationship between CaHR and firm financial profitability applying to the Egyptian stock market. Methodology: OLS regression analysis is conducted to explain the 2 models used for a sample of (10) Egyptian Companies during the period between 2013 to 2021. The main hypothesis is tested H<sub>1</sub>: There is no a statistically significant relationship between CaHR and firm profitability. Findings: The independent variables (CaHR, Lev) have a negative effect on ROA-ROE, and the independent variables (size, AG) have a positive effect on ROA-ROE, but all independent variables have a statistically significant relationship on ROA-ROE, and thus the study's main hypothesis was rejected. Research limitations: The paper opens the area for future research by using a distinct dataset that includes the time period during and after the COVID-19 epidemic to capture the impact of covid-19 on the firm liquidity and profitability.

**Keywords:** CaHR, ROA, ROE, Leverage, Financial Performance.

## 1. INTRODUCTION

The capital market structure has been significantly transformed as a result of the global financial crisis. The altered economic environment has presented challenges in securing the necessary money from the capital market, particularly from entities that are best equipped to withstand potential losses or fulfil financial obligations. The banks' failure to secure fresh capital from the capital market highlights the persistent necessity to prioritise liquid assets and internally produced money (Culp & Lexecon, 2009). Liquidity pertains to the capacity of cash, cash equivalents, and other current assets to effectively meet the immediate financial commitments of a corporation. Zygmunt (2013) asserts that the presence of liquidity is of utmost importance for the sustenance of businesses, as it significantly influences the dynamics of sales, financial growth, and risk exposure. According to Padachi (2006), robust liquidity enables small enterprises to produce internal money, while also enabling major businesses to mitigate the risk of insolvency. The authors Priya and Nimalathasan (2013) underscored the significance of effectively strategizing and managing current assets and current liabilities as a means to mitigate the likelihood of default and the potential for excessive investment in current assets. According to Uremadu, Egbide, and Enyi (2012), when companies maintain an excessive quantity of cash, the incremental advantages of maintaining liquidity decrease, leading to disruptions in business operations. The usefulness and value of CaHR are contingent upon its ideal level.

Corporate Human Resources (CaHRs) offer a multitude of advantages that are closely associated with investment endeavours, namely in relation to their flexibility and ability to seize chances. Organisations possessing substantial Capital to Human Resource ratios (CaHRs) are able to exploit a greater number of investment prospects without being hindered by limitations in financial resources. Additionally, these firms are able to secure sufficient capital to pursue both anticipated and unforeseen opportunities, such as expanding their operations, capitalising on market prospects during periods of financial turmoil, responding to unexpected events that result in a decline in stock prices, engaging in real estate transactions, and pursuing other business ventures (Ogundipe, Ogundipe, & Ajao, 2012). The presence of CaHR provides companies with the opportunity to leverage the prevailing circumstances. Firms have the potential to engage in investment transactions that yield profitability and exert a substantial influence on their long-term sustainability, be it through restructuring initiatives or the exploitation of emerging prospects. Conversely, in order to mitigate the adverse repercussions associated with excessive cash holdings, the choice on Cash and Human Resources (CaHR) must exhibit a high degree of soundness,

comprehensiveness, and logical coherence. According to Elkinawy and Stater (2007), Profit serves as the entrepreneur's remuneration and, moreover, constitutes a key impetus for engaging in commercial activities. Moreover, it is commonly employed as a metric for evaluating performance. The attainment of profitability can be facilitated by the implementation of efficient raw material management strategies. Materials management is a critical component of corporate operations that encompasses many activities such as planning, receiving, processing, storing, and releasing materials for utilisation in manufacturing processes, all while ensuring the implementation of efficient control mechanisms. Materials refer to industrial commodities that are utilised in the manufacturing process of a subsequent tangible output. In his seminal work, Rumelt (1981) proposed a classification system for manufacturing materials, which consists of three distinct categories. (1) The raw resources utilised in this context predominantly originate from the agricultural sector and diverse extractive sectors, including minerals, fruits, and vegetables, which are subsequently sold to processors. Semi-finished goods and processed materials refer to items that have undergone partial production or processing, resulting in the addition of some level of work or value. Examples of such things include rods, wires, paper, chemicals, and similar items. (3) Fully completed component parts and assemblies produced by one manufacturer, which can be integrated into a more intricate product by another manufacturer. Materials management is a very efficacious mechanism for facilitating the optimisation of profits within a corporate context. The objective of materials management is to optimise the use of a company's resources by guaranteeing a sufficient availability of materials for the manufacturing process, while concurrently minimising the expenses associated with maintaining excessive inventory levels. When this objective is achieved, it results in reduced expenses and enhanced financial performance. The concept of corporate free cash flow has been extensively examined in financial theory, referring to the residual funds remaining after fulfilling present operational and financing obligations (Jensen, 1986). Jensen (1986) proposed the agency theory of free cash flow, which posits that the presence of free cash flow in public businesses can potentially amplify the costs associated with inheriting agency problems. The misalignment of interests between business management and shareholders creates a situation where managers are motivated to squander surplus funds on inefficient investment endeavours or divert it for personal gain. Consequently, it is anticipated that there exists an inverse correlation between the magnitude of available cash flow and the overall profitability of a corporation. According to the pecking order theory developed by Myers and Majluf (1984), it is posited that when there is a significant knowledge asymmetry, external financial sources become a costly means of obtaining cash. Therefore, in such conditions, firms tend to prioritise internal sources of cash as a more cost-effective option before seeking external sources (Myers & Majluf, 1984). Therefore, the presence of surplus free cash flow may provide managers with a certain degree of flexibility in their choices regarding investment and financing, thereby mitigating the issue of inadequate investment and reducing the cost of borrowing. Consequently, in certain instances, the presence of free cash flow exhibits a favourable influence on the financial performance of corporations.

### **1.1. Research Problem and Question**

Previous research has mostly focused on examining the overarching associations between CaHR and profitability. Multiple studies have indicated a robust and favourable correlation between the Capital Asset Human Resource (CaHR) and the financial performance of firms. Several studies have examined the relationship between cash proportion and firm profitability. Garavito and Chi6n (2021), Yun, Ahmad, Jebran, and Muhammad (2021), Mwaifyusi and Mazengo (2021), Zaitoun and Alqudah (2020), Davidson and Rasyid (2020), Doana (2020), and Samo and Murad (2019) have suggested a positive relationship. On the other hand, Pattiruhu and Paais (2020) and Ann and Manurung (2019) have argued for a negative relationship. Conversely, Jain J. and Jain R. (2021), Nishanthini and Meerajancy (2015), and Velnampy.T and Anojan (2014) have found no relationship. These varying perspectives motivate us to investigate the relationship between cash proportion and firm profitability in the context of Egyptian firms registered in the capital market. Therefore, the research question we aim to address is: What is the nature of the relationship between cash proportion and firm profitability?

### **1.2. Research Aims and Objectives**

The objective of this study is to investigate the impact of CaHRs on the financial profitability of firms. In order to support the attainment of the sustainable development objectives outlined by the United Nations for Vision 2023,

this study aims to address the eighth goal of promoting decent employment and economic growth. Specifically, it seeks to offer business owners valuable ideas that can enhance economic growth and foster a more favorable work environment.

### 1.3. Research Hypothesis

H<sub>1</sub>: There is no a statistically significant relationship between CaHR and firm profitability

H<sub>1a</sub>: There is no a statistically significant relationship between CaHR and ROA

H<sub>1b</sub>: There is no a statistically significant relationship between CaHR and ROE

## 2. LITERATURE REVIEW

This section will discuss prior research that has examined the correlation between the CaHR ratio and corporate profitability. This study incorporates various characteristics to assess the financial performance of firms, including cash asset turnover ratio (CaHR), liquidity, and profitability. Data samples are collected from multiple nations, such as China, India, Indonesia, and Jordan, among others. The arrangement of the body follows a declining chronological order, with articles published between 2014 and 2021 serving as the basis for organisation.

**(Garavito & Chion, 2021)**, This study examined the correlation between CaHRs (CH) and anticipated equity returns within a dataset comprising enterprises from Pacific alliance countries. The present study established a cohort of companies affiliated with the Pacific alliance, encompassing the timeframe spanning from 2010 to 2016. The CaHR variable was designated as the independent variable, while the predicted equity return was considered the dependent variable. The findings of the study indicate a significant positive correlation between CH and the anticipated return on equity ( $r$ ). The study conducted an estimation of the link between CH and systematic risk ( $\beta$ ), which revealed a positive and statistically significant association. The results of the study indicated that company liquidity possesses significant information that helps to elucidate the anticipated equity return. Neglecting this information can lead to highly deceptive outcomes.

**(Yun, Ahmad, Jebran, & Muhammad, 2021)**, This study seeks to provide a rationale for the influence of several business-specific factors, including state ownership, corporate governance qualities, family ownership, and ownership concentration, on the relationship between corporate human resource practises and firm performance. This study presented compelling findings based on a sample of Chinese enterprises, indicating that the association between CaHRs (Corporate Human Resources) and performance is notably influenced by firm-specific characteristics. The sample for analysis comprised a total of 2,575 firms, spanning the time period from 2003 to 2016. The dependent variable in this study was the performance. The key criterion employed to evaluate the performance of firms was Return on Assets (ROA). The Return on Equity (ROE) metric was employed as a means of conducting a robustness check. The independent variable in this study was represented by CaHR. CaHRs were calculated by dividing the sum of cash and cash equivalents by the total assets ratio. The findings of the study indicate that the unique attributes of a firm have a substantial role in influencing the connection between Corporate Human Rights (CaHRs) and the overall success of the organisation.

**(Jain J. & Jain R., 2021)**, Invitegated the impact of three important factors, namely solvency, efficiency, and liquidity, on the profitability of Coal India Ltd., a Maharatna company. The investigation lasted from 2010 to 2019. Ordinary Least Squares regression was used in this study. Profitability, as measured by Return on Assets and Return on Equity, was a dependent variable, whereas solvency (debt equity ratio), liquidity (current ratio and quick ratio), and efficiency (finished goods turnover ratio) were independent variables. The study concluded that solvency and efficiency have no significant effect on profitability, whereas liquidity has a significant effect on profitability.

**(Mwaifyusi & Mazengo, 2021)**, Aimed to determine how financial organizations listed on the Dar es Salaam Stock Exchange's dividend payout are affected by liquidity, profitability, and company size (DSE). The research design utilized was explanatory. From 2015 to 2019, data for all financial firms listed on the DSE was used. The

independent variable was profitability. While, the dependent variable was liquidity. The findings indicated a significant and positive association between three independent variables—profitability, liquidity, and firm size—and dividend distribution of financial companies. According to the study's findings, dividend distribution for financial enterprises listed on the DSE is primarily determined by profitability, liquidity, and company size.

**(Pattiruhu & Paais, 2020)**, Aimed to investigate the relationship between the variables of Current Ratio (CR), Return-on-Equity (ROE), Return-on-Assets (ROA), Debt-to-Equity Ratio (DER), and Firm Size (FS) on Dividend Policy (DP) in real estate and property companies listed on the Indonesia Stock Exchange in the period 2016-2019, looking at nine real estate companies in Indonesia. The company's financial statement data derived from primary data obtained on the Indonesia Stock Exchange, such as current ratio (CR), return-on-equity (ROE), return-on-assets (ROA), debt-to-equity ratio (DER) and firm size and dividend policy variables. Finally, regression testing is part of the hypothesis testing stage. The results of this study showed that the CR, ROE, and firm size had no positive and significant effect on dividend policy. In contrast, DER and ROA have a positive and significant impact on dividend policy.

**(Zaitoun & Alqudah, 2020)**, Aimed to investigate the effect of liquidity and financial leverage (independent Variables) on the firm's profitability (dependent variable) that was measured using return on assets (ROA). The population of this study was the industrial sector's companies that listed in Amman stock exchange. The present study used 54 annual reports (cover five years, from 2015 to 2019) obtained from the companies' Website. The results confirmed that liquidity is significantly and positively affect the profitability, whereas the financial leverage has a negative effect on the profitability of the Jordanian industrial listed firms.

**(Marjohan, 2020)**, This study aimed to assess the financial capacity of the company in meeting its short-term and long-term debt obligations. Specifically, it sought to examine the influence of debt payment ability on profitability and firm value within the manufacturing industry listed on the Indonesia Stock Exchange (Tbk). The data was sourced from the company's annual reports for the period from 2009 to 2018. The study examined two dependent variables, namely liquidity (measured by the current ratio) and solvency (measured by the debt to asset ratio). The independent variable considered in the study was profitability, which was assessed by the return on assets (ROA). The impact of the Debt to Asset Ratio on profitability is minimal, however the variable of liquidity, as measured by the Current Ratio, has a significant impact on profitability, specifically in relation to Return on Assets.

**(Sari & Sedana, 2020)**, This study examined the influence of profitability and liquidity on firm value, and also explored the mediating role of capital structure in the relationship between profitability and liquidity on firm value. The analysis focused on companies operating in the construction and building subsector, which are listed on the Indonesia Stock Exchange (IDX), during the period from 2013 to 2017. Examples of independent variables in this study included profitability, as assessed by return on assets, and liquidity, as evaluated by the current ratio. The dependent variables in this study were capital structure, as assessed by the debt-to-equity ratio, and firm value, as evaluated by the price-to-book value. The results of the study suggest that there is a positive and statistically significant relationship between profitability and capital structure. The impact of liquidity on capital structure is found to be both statistically significant and negative. The impact of capital structure on business value is both positive and statistically significant. The impact of profitability on business value is both positive and statistically significant. The impact of liquidity on company value is found to be negative and statistically insignificant.

**(Hankho, Dermawan, & Indrajati, 2020)**, This study investigates the impact of profitability, firm size, and leverage on the Cash Conversion Cycle (CaHR) within the manufacturing sector of companies listed on the Indonesia Stock Exchange during the period of 2015 to 2017. The study utilised a purposive sampling method to select 67 manufacturing businesses, resulting in a dataset of 201 observations collected over a span of three years. The study examined three independent variables, namely profitability, business size, and leverage, while the dependent variable under investigation was CaHR. The findings of the study revealed the concurrent impact of all independent variables on the practise of cash retention. The findings from the partial test suggest that profitability exerts a significant and positive influence on CaHR, whereas firm size has a negligible effect. Additionally, leverage is found to have a substantial and negative impact on CaHR.

**(Davidson & Rasyid, 2020)**, This study investigates the impact of profitability, liquidity, firm size, and leverage on the cash holding ratio (CaHR) in manufacturing companies that are publicly listed on the Indonesia Stock Exchange over the period of 2016-2018. The variables examined in this study were profitability, liquidity, business size, and leverage, which were considered as independent factors. The variable that was measured and analysed in this study was the calcium heart rate (CaHR). The sample selection strategy employed in this study was the utilisation of the purposive sampling approach. The data utilised in this research was gathered from a secondary source, namely from a total of 74 manufacturing enterprises that were included in the sample. The findings of this study indicate that profitability, liquidity, and leverage exhibit a favourable impact on the Cash Conversion Cycle (CaHR), while business size does not demonstrate any significant effect on CaHR. The variables examined in this study were profitability, liquidity, business size, and leverage. The dependent variable in this study was calcium heart rate (CaHR).

**(Doana, 2020)**, This study examines the influence of the CaHR ratio on the financial performance of enterprises that are publicly listed in Vietnam during the period spanning from 2008 to 2018. The dependent variables in this study were Return on Assets (ROA) and Return on Equity (ROE), which were assessed using the ratio of after-tax earnings to total assets. The dependent variable in this study was profits/equity, whereas the independent variable was the ratio of CaHR (CASH), which was determined by the proportion of cash and equivalents to total assets. According to the author, there exists a positive correlation between the proportion of cash held and corporate performance. The investigation also assessed the impact of financial leverage, tangible asset ratio, company size, and sales growth on the success of the firm. Furthermore, this research represents the inaugural investigation conducted in Vietnam that establishes a positive and statistically significant correlation between state ownership and firm performance. Therefore, the implementation of efficient state capital management has the potential to enhance the overall performance of a corporation. The results of this study have established a robust basis for financial managers to make informed decisions on compensation and human resources, with the aim of enhancing the overall performance of the organization.

**(Alnori, 2020)**, This study examined the correlation between corporate Human Resource Investments (CaHRs) and financial performance, utilizing both linear and non-linear analysis. The sample consisted of publicly listed non-financial enterprises in Saudi Arabia. The dataset comprised of all publicly listed companies in the principal stock market of Saudi Arabia, with the exception of banks and insurance companies, during the period from 2005 to 2016. In this study, two distinct metrics are employed to evaluate the performance of organizations, namely Return on Assets (ROA) and Return on Equity (ROE). Additionally, Cash and Cash Equivalents to Total Assets Ratios (CaHRs) are calculated by dividing the sum of cash and cash equivalents by the total assets. The findings indicate that the presence of Cash Holdings Ratios (CaHRs) has a notable influence on the performance of organizations. Specifically, this relationship exhibits a non-linear pattern resembling an inverted U-shape, with the quantity of cash reserves serving as the main determining factor. The validation of the trade-off hypothesis on the optimal cash level is supported by the non-linear relationship between the advantages and disadvantages associated with holding cash.

**(Reschiwati, Syahdina, & Handayani, 2020)**, This study aims to investigate and assess the impact of liquidity, profitability, business size, and firm value on capital structure. The sample for this study consisted of 15 banking companies that were listed on the Indonesian Stock Exchange over the period of 2014-2018. The study examined the impact of three independent variables, namely liquidity, profitability, and business size, on the dependent variable of firm value. The findings of this study suggest that the capital structure of a corporation is highly influenced by factors such as liquidity, profitability, and firm size. The mediating role of capital structure was shown to be insignificant in the relationship between liquidity and profitability on firm value. However, it was observed that capital structure did mediate the impact of company size on firm value.

**(Ann & Manurung, 2019)**, The objective of this study was to ascertain the extent to which liquidity, profitability, inventory intensity, related party debt, and firm size impact the level of tax aggression. The study utilized a sample comprising of 34 manufacturing companies that were listed on the Indonesia Stock Exchange throughout the period of 2013-2017. The samples were obtained using purposive random sampling, which involved selecting individuals

based on certain criteria. Tax aggressiveness was assessed by doing a comparative analysis of the tax expense and net profit before tax. The measurement of liquidity involved the comparison of current assets and current debt. The measurement of profitability was a comparison between the net profit after tax and the total assets. The measurement of inventory intensity involves the comparison of total inventory to total assets. The assessment of debt related parties involves the comparison of the magnitude of debt associated with related parties to the overall value of assets. The topic under consideration is the concept of size. The valuation of the company was determined by the utilization of natural logarithms of market value. The findings derived from the regression analysis demonstrate that liquidity, profitability, and firm size exhibit a statistically significant negative impact on the degree of tax aggression.

**(Samo & Murad, 2019)**, This study seeks to examine the influence of liquidity and financial leverage on profitability within the textile sector of the Pakistani economy. A sample of 40 publicly traded companies has been selected for analysis. The annual statistics pertaining to Pakistan's textile industry spanning from 2006 to 2016 is requested. The study examined the relationship between financial leverage as the independent variable and profitability as the dependent variable. The findings of the study indicate a significant correlation between liquidity and profitability, suggesting a favorable relationship. Additionally, the study also highlights a negative association between financial leverage and profitability. The findings indicate that the liquidity measure, namely the current ratio (CR), has a significant positive effect on the return on assets (ROA). On the other hand, the financial leverage measure, specifically the debt-to-equity (D\_E) ratio, has a negative but not statistically significant influence on ROA. The subsequent findings indicate a significant positive correlation between C\_R and ROE, as well as a negative correlation between D\_E and ROE.

**(Sattar, 2019)**, Explored the influence of liquidity on the financial performance of an organisation. The study utilized the quick ratio as the independent variable, while the return on asset served as the dependent element. The findings indicate that corporate responsibility (CR) had a significant and positive effect on return on capital employed (ROCE) and return on equity (ROE) in 2014. However, in 2015, while CR still had a favorable impact, its influence on ROCE and ROE was found to be minimal. Policymakers must possess a comprehensive understanding of the importance of outcomes exhibiting extreme opposite discrepancies.

**(Baraja & Yosya, 2018)**, This study seeks to assess the influence of liquidity, profitability, solvency, and activity ratios on the variation in earnings. This study employed multiple linear regression analysis to ascertain the impact of a change in earnings on a given company. The study utilises a sample dataset derived from consumer products businesses that are listed on the IDX (Indonesia Stock Exchange) over the time span of 2014 to 2017. The study examines the impact of three independent factors, namely liquidity, profitability, activity, and solvency, on a single dependent variable, which is the change in earnings. The findings of this study indicate that the profitability ratio exerts a substantial influence on the variation in earnings. The aforementioned findings indicate that there is no significant impact of liquidity ratio, activity ratio, and solvency ratio on the variation in earnings.

**(La Rocca & Cambrea, 2018)**, This study investigates the correlation between CaHRs (Corporate average fuel economy and greenhouse gas emissions standards) and performance indicators in Italy during a period of 36 years, specifically from 1980 to 2016. The aim of this study is to examine the function of moderating factors in shaping the link between cash stock and its impact, considering the existence of conflicting evidence that suggests a potential positive influence rather than a negative one. The study examined the relationship between the independent variables, CaHR (Cash Holdings Ratio), and the dependent variable, ROA (Return on Assets). Additionally, the study controlled for other variables including leverage, tangibility, size, and growth opportunity. The findings indicate that firm-specific variables, along with elements associated with the institutional context, have an impact on the value of CaHRs.

**(Azhar, 2017)**, This study examines the influence of liquidity and managerial efficiency on the profitability of specific electricity distribution utilities in India. The study encompasses a sample of 23 electricity distribution utilities that are operational in India throughout the time frame of 2004-05 to 2013-14. Hence, the aggregate number of panel observations amounts to 230. The measure of profitability, namely the return on capital employed, was

utilised to explain the dependent variable. On the other hand, the independent variables consisted of the current ratio, quick ratio, absolute cash ratio, debtor turnover ratio, creditor turnover ratio, collection efficiency, and interest coverage ratio. The application of statistical methodologies, such as Generalised Least Squares (GLS) regression, was employed. The research discovered that the debtor's turnover ratio, collection efficiency, and interest coverage ratio have a notable influence on the profitability of the chosen sample utility. However, the quick ratio, absolute liquid ratio, and creditor's turnover ratio demonstrate a little impact on profitability.

**(Iftikhar, 2017)**, Examined the variables affecting organizations' CaHRs and investigated if CaHRs are associated with corporate performance and values using panel data from KSE listed companies between 2010 and 2014. In this study the ROA was the dependent variable used in measuring the profitability while CaHR was the independent variable measured by calculating total assets divided by cash and cash equivalents. The analysis revealed that there is a positive correlation between CaHRs and firms' returns on assets when there are ample investment options.

**(Amjad & Bibi, 2017)**, Explored the correlation between the liquidity of firms and their profitability, while also ascertaining the impact of different components of liquidity on company profitability. This study experimentally examined the association between liquidity and corporate profitability by analyzing data from a sample of 50 firms listed on the Karachi Stock Exchange in Pakistan. Panel data spanning the years 2007 to 2011 was collected through the utilization of secondary sources. The study utilized profitability as the dependent variable, which was quantified by net operating income and return on assets. Additionally, liquidity was employed as the independent variable, with cash gap and current ratio serving as the measures. The examination of correlation and regression indicated a statistically significant inverse association between cash gap and return on assets, but the current ratio exhibited a statistically significant positive association with profitability. Additionally, the findings of the study indicate a statistically significant positive correlation between the logarithm of sales and the logarithm of total assets with profitability.

**(Ismail, 2016)**, This study investigates the influence of liquidity management on the performance of a sample of 64 non-financial companies listed on the Karachi Stock Exchange (KSE) 100 Index in Pakistan. The analysis covers the time period from 2006 to 2011. Based on the findings of the analysis, it was shown that liquidity factors, specifically the current ratio and the cash conversion cycle, exhibit a statistically significant positive influence on profitability, as measured by the return on assets (ROA). Moreover, the findings suggest that organisations with a higher current ratio and a longer cash conversion cycle tend to exhibit superior performance. This study proposed that enterprises should consider adopting a more lenient approach to their credit sales rules and implement an efficient inventory and collection turnover system in order to enhance accessibility for a wider client base.

**(Nisasmara & Musdholifah, 2016)**, This paper examines the influence of profitability, capital structure, cash holding ratio (CaHR), and good corporate governance (GCG) on firm value. The study's samples consisted of the property sector and real estate businesses that were listed on the Indonesia Stock Exchange (IDX) during the years 2008 and 2013. The variable under investigation in this study was the valuation of the company. The factors examined in this study were profitability, capital structure, CaHR, and GCG, which were treated as independent variables. The measurement of profitability was conducted through the utilization of the Return on Equity (ROE) ratio, while the assessment of the capital structure was accomplished by employing the Debt to Equity ratio. The outcomes of this study suggest that profitability does not have a significant impact on firm value. However, capital structure is found to have a positive influence on firm value. Additionally, the study indicates that CaHR does not have a significant influence on firm value, whereas GCG has a positive influence on firm value.

**(Nishanthini & Meerajancy, 2015)**, This study examines the trade-off between liquidity and profitability in the context of state and private banks in Sri Lanka during the period from 2008 to 2012. All the specimens were obtained exclusively from authorized commercial banks. The liquidity of a company was assessed using the Current Ratio (CR) and Quick Ratio (QR), while the profitability was evaluated using the Net Profit Margin (NP), Return on Assets (ROA), and Return on Equity (ROE) as dependent variables. The research findings revealed a lack of statistically significant correlation between liquidity and profitability in both state-owned and privately-owned banks.

Moreover, the regression analysis revealed that liquidity exerts a detrimental influence on profitability within the chosen sample of Sri Lankan banks.

**(Al-dhamari & Ismail, 2015)**, This study examines the effects of CaHR (Corporate and Human Resources), political connections, and their interaction on earnings quality in Malaysia. The significance of political influence in various parts of business transactions and the substantial impact of politics on resource allocation in the country make it an ideal context for this investigation. Utilizing a dataset of the top 100 publicly listed firms in Malaysia throughout the period spanning from 2007 to 2011. The variable under investigation in this research was accrual quality (ACCQUAL), which was evaluated by examining the disparity between earnings and cash. This disparity served as an indicator of the quality of earnings. The independent variable in the study was represented by CaHRs. CASH is determined by taking the logarithm of the ratio between cash and cash equivalents and net assets. Based on the findings of this study, it can be inferred that enterprises possessing surplus cash reserves exhibit a higher level of profits quality.

**(Akhtar, Ibrahim, Riaz, Abbas, & Asif, 2015)**, This study investigates the impact of liquidity on the profitability of Pakistan's sugar sector. The data utilised in this study was sourced from the publicly available annual reports of sugar mills in Pakistan for the period spanning from 2007 to 2012. The independent variables employed in the analysis were the current ratios and liquid ratios. The dependent variable, profitability, is influenced by account receivables. The results of the correlation study revealed a significant positive correlation among all of the variables. The results of the study indicate that optimizing liquidity is crucial for enhancing profitability in the context of Pakistan's sugar sector, since the variables related to liquidity have a substantial influence on profitability.

**(Velnampy.T & Anojan, 2014)**, This study aimed to provide a rationale for the notable influence of capital structure (CS) and liquidity position (LP) on profitability. Additionally, it sought to establish the correlation between CS, LP, and profitability within the context of telecommunication firms listed on the Colombo Stock Exchange (CSE) during the period spanning from 2008 to 2012. The study examined the impact of two independent variables, namely capital structure and liquidity position, on the dependent variable of profitability. Capital structure was measured using the Gearing Ratio, while liquidity position was measured using the current ratio. Profitability, on the other hand, was assessed using two metrics: Return on Assets (ROA) and Return on Equity (ROE). The results of the study indicate that there is no statistically significant correlation between the capital structure and profitability of a telecommunications company listed on the stock market. Additionally, there is no significant association between the liquidity position of the organisation and its profitability. The results of the correlation analysis indicate a negative relationship between capital structure and company profitability, while a positive relationship is observed between liquidity position and firm profitability.

**(John, 2014)**, This study investigates the correlation between cash management and profitability within the context of Nigerian manufacturing enterprises. The population of the study comprised manufacturing enterprises that were listed on the Nigerian stock exchange. The data for this study were collected from the audited financial statements of a sample of fifteen manufacturing companies that were randomly selected from the list of companies listed on the Nigerian stock exchange. The data covers a period of five years, from 2008 to 2012, resulting in a total of 75 firm-years. The dependent variables in this study were the return on assets (ROA) and return on equity (ROE). On the other hand, the independent variable was represented by the cash conversion cycle (CCC). The researchers performed correlation and regression analysis. The findings of the study indicate a statistically significant positive association between CCC and ROE, while conversely, a statistically non-significant negative association was seen between CCC and ROA.

**(Abushammala & Sulaiman, 2014)**, This study examined the effects of CaHRs (Corporate Human Resources) on the financial performance of businesses. This study utilized a panel dataset consisting of 65 non-financial companies listed on the Amman Stock Exchange (ASE) throughout the period from 2000 to 2011. The objective was to investigate the relationship between Corporate Human Resources (CaHRs) and the profitability of these organizations. This investigation included three fundamental regression models. Consequently, in this study, the variable of interest is CaHR, which serves as the dependent variable, while profitability is employed as the



independent variable. This article employed the use of the Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS) as variables to assess profitability. The results of the study revealed a significant positive correlation between profitability and CaHRs. This observation suggests that the robust financial success of the corporation can be attributed to its substantial cash reserves.

Based on the findings of past scholarly studies, it can be inferred that a substantial number of scholars have reached the consensus that both CaHR (Cash Conversion Cycle) and liquidity exert a noteworthy influence on the profitability of firms. This study will utilise the ROA and ROE ratios as indicators of profitability, and the ratio of cash and cash equivalents divided by total assets as a measure of Cash Holdings Ratio (CaHR). The objective is to examine the potential impact of CaHRs and liquidity on the profitability of a selected group of Egyptian enterprises.

### 3. PROPOSED MEASUREMENT MODEL

To estimate *The Impact of CaHR on Firm Profitability*, will be used the following regression models:

ROA	return on assets	$ROA_{it} = a + \beta_1 CaH_{it} + \beta_2 Size_{it} + \beta_3 AG_{it} + \beta_4 LEV_{it} + \varepsilon \dots\dots\dots$ (EQ 1)
ROE	return on equity	$ROE_{it} = a + \beta_1 CaH_{it} + \beta_2 Size_{it} + \beta_3 AG_{it} + \beta_4 LEV_{it} + \varepsilon \dots\dots\dots$ (EQ 2)
a, $\beta_1$ , $\beta_2$ , $\beta_3$ , $\beta_4$ , $\beta_5$	model coefficient	
CAH	Cash Holding	
Size	Company size	
AG	Assets Growth	
LEV	Leverage	

Table No. (1) shows that the average of the dependent variable ROA and ROE is (0.033 – 0.06), the average of the independent variable (CAH - SIZE – AG - LEV) is (32.42 – 8.77 – 1.17 – 1.58).

Table (1) Descriptive Statistics

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. summarize CaH ROA ROE SIZE AG LEV
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Variable	Obs	Mean	Std. Dev.	Min	Max
CaH	100	32.42374	305.1604	.003	3053.44
ROA	100	.0333973	.047255	-.0803	.1662
ROE	100	.0670102	.0921546	-.08	.4114
SIZE	100	8.722421	1.061727	6.14	11.56
AG	100	1.17237	4.763677	-.95	35.8
LEV	100	1.583198	.9324661	.0210913	4.66

The multiple regression model was employed to assess the proposed study model and test the hypotheses. H1a: There is no a statistically significant impact between CaHR and ROA, The results of the study were as follows:

Table (2) The results of the regression analysis

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval] Sig	
CaH	-.230	.300	-4.30	.005	.340	.010	**
SIZE	.012	.005	2.60	.011	.003	.022	**
AG	.021	.001	3.50	.006	.060	.003	**
LEV	-.011	.005	-2.08	.040	-.022	-.001	**
Constant	-.058	.039	-3.48	.002	-.135	.02	**
Mean dependent var			0.033	SD dependent var	0.047		
R-squared		0.697		Number of obs.	100		
F-test	2.542	Prob > F	0.045				
Akaike crit. (AIC)	-327.826		Bayesian crit. (BIC)	-314.801			
*** p<.01, ** p<.05, * p<.1							

Source: Stata V14 Output.

- The obtained F-test value of 2.542 at a 95% confidence level suggests that the study model is suitable. Additionally, the probability value (F-statistic) of 0.045, which is lower than the predetermined significance level of 5%, provides evidence to reject the null hypothesis and accept the alternative hypothesis. **There is a statistical significant Relationship between CaHR and ROA.**

- Furthermore, it is noteworthy that the coefficient of determination has attained a value of 0.697. This indicates that about 69.7% of the variations observed in the return on assets (ROA) can be accounted for by the independent variables, namely Cah, size, AG, and Lev. The regression analysis in Table (7) reveals that the prob t-statistic value of the independent variable (Cah - size – AG - Lev) falls within the range of 0.002 to 0.040, with a confidence level of 95%. According to the decision rule, a statistically significant effect is observed when the prob. (T-statistically) value is less than 0.05.

- From the analysis we can derive the multiple regression equation as follows:

$$ROA_{it} = -0.58 - 0.230 Cah_{it} + 0.012 Size_{it} + 0.021 AG_{it} - 0.11 LEV_{it} + \epsilon$$

The multiple regression model was employed to assess the hypotheses and estimate the proposed study model. H1b: There is no a statistical significant impact between CaHR and ROE, The results of the study were as follows:

**Table (3) The results of the regression analysis**

ROE	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
CaH	-.198	.094	-3.41	.009	.037	.084	**
SIZE	.034	.009	3.78	.000	.016	.052	**
AG	.013	.002	4.70	.002	-.001	.007	**
LEV	-.024	.01	-2.29	.024	-.044	-.003	**
Constant	-.194	.073	-2.64	.010	-.339	-.048	**
Mean dependent var		0.067	SD dependent var			0.092	
R-squared		0.661	Number of obs			100	
F-test		4.546	Prob > F			0.002	
Akaike crit. (AIC)		-201.589	Bayesian crit. (BIC)			-188.563	

\*\*\* p<.01, \*\* p<.05, \* p<.1

Source: Stata V14 Output.

- The F-test yielded a calculated value of 4.546 at a confidence level of 95%. This indicates that the study model is deemed suitable. Furthermore, the probability value of the F-statistic is 0.045, which is lower than the predetermined level of test significance of 5%. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted. **There is a statistically significant Relationship between CaHR and ROE.**

- Also, the coefficient of determination has reached (0.661), which means that the changes that The occurrence of Return on Equity (ROE) can be elucidated by 66% using the independent variables of Cash Holdings, Firm Size, Asset Growth, and Leverage. The regression analysis in Table (7) reveals that the prob t-statistic value of the independent variable (Cah - size – AG - Lev) falls within the range of 0.000 to 0.024, with a confidence level of 95%. According to the decision rule, a statistically significant effect is observed when the prob. (T-statistically) value is less than 0.05.

- From the analysis we can derive the multiple regression equation as follows:

$$ROE_{it} = -0.194 - 0.198 Cah_{it} + 0.034 Size_{it} + 0.013 AG_{it} - 0.024 LEV_{it} + \epsilon$$

### 3.1. The Main Hypothesis Tests

H1: There is no a statistically significant Relationship between CaHR and firm profitability

**Table (4) Summary of hypothesis test Result**

Var	ROA	ROE
Cash	-0.23	-0.198
SIZE	0.012	0.034
AG	0.021	0.013
LEV	-0.011	-0.024
Constant	-0.058	-0.194

Based on the findings presented in the preceding table, it is evident that the independent variables, namely Cash and Lev, exhibit a negative impact on the dependent variables, ROA and ROE. Conversely, the study reveals that the independent variables, size and AG, demonstrate a positive influence on ROA and ROE. Furthermore, all independent variables exhibit a statistically significant association with ROA and ROE. Consequently, the primary hypothesis of the study is rejected, and the alternative hypothesis is accepted, indicating a statistically significant relationship between CaHR and firm profitability.

## CONCLUSION

1- The independent variable in this study is cash-holding, which is measured by the ratio of Cash & Cash equivalent + Short term debts to Total assets. Cash-holding is of great importance to businesses as it ensures liquidity. The possession of cash can be likened to the presence of an emergency fund, as it enables businesses to fulfil their obligations even under challenging circumstances.

2- The dependent variable in this study was profitability, which was assessed using three measures: return on assets (ROA), return on equity (ROE), and earnings per share (EPS). Profitability is considered the ultimate output of a company, and failure to generate sufficient profits can lead to its downfall. Consequently, it is imperative for financial management to conduct regular assessments of the company's profitability.

3- Based on the statistical findings, it can be observed that the independent variables, namely Cash and Lev, exhibit a negative impact on the profitability measures of ROA-ROE. Conversely, the independent variables size and AG demonstrate a positive influence on ROA-ROE. It is noteworthy that all of the independent variables exhibit a statistically significant association with ROA-ROE. Consequently, the primary hypothesis of the study is refuted, and the alternative hypothesis is accepted, indicating the presence of a statistically significant relationship between CaHR and firm profitability.

4- This finding aligns with previous studies conducted by Garavito and Chi3n (2021), Yun, Ahmad, Jebran, and Muhammad (2021), Mwaifyusi and Mazengo (2021), Zaitoun and Alqudah (2020), Davidson and Rasyid (2020), Doana (2020), and Samo and Murad (2020).

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