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LIQUIDITY, ASSET UTILIZATION, DEBT RATIO AND FIRM PERFORMANCE: EVIDENCE FROM EGYPT

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Abstract *How well firms handle liquidity and asset utilization determines their development, performance, and survival. Different liquidity and asset utilization methods impact firms' bottom lines. While most studies have studied the influence of liquidity and asset utilization on performance independently, this research tests both factors using debt ratio as a mediating variable. The investigation used secondary data from 50 Egyptian listed firms' annual reports from 2019-2021. Data were analyzed using descriptive statistics, correlation, and regression. The study indicated that using tangible assets and current assets (liquidity) affected corporate performance. The debt ratio does not affect asset utilization, liquidity, and company performance. This study may assist management and financial experts in examining the company's growth characteristics, liquidity and asset utilization, business risk, and financial performance to anticipate its future worth.*

Keywords:-
Liquidity, Asset utilization, Debt ratio, Firm performance, Quick ratio, Total asset turnover, and Return on equity (ROE).

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Introduction:

Liquidity refers to the availability of cash or its equivalents in an organization to meet its operating needs and financial obligations in the short term. Also, besides the liquidity organization need to utilize their usage for assets in a good way. As asset utilization assesses how much each asset can generate and how much it produces. Assets dis-utilization, on the other hand, refers to income that is lost because of the inefficient use of assets as a percentage of total investment. Patin (2021) noted that the disutilization of assets may result in higher agency costs since managers do not operate in the best interests of their employers. Moreover, Mustafa et al. (2019), stated that good asset utilization may increase the firm performance which that will lead to an increase in the profit of the organization by increasing the number of investors. Which will lead to a decrease in the debts of the organization as it will have more liquidity to pay its obligation. Moreover, organizations need to decrease their debts as it may lead to an increase in liquidity but decrease the firm performance and asset utilization. The debt level of companies can be measured through the debt ratio. Debt ratio is a term used to measure the amount of an organization's debt. So, to discover the relationship between liquidity, asset utilization, debt ratio and firm performance the research aims to understand the impact of liquidity and asset utilization on firm performance considering debt ratio as a mediating variable.

On one hand, bad asset utilization may affect the liquidity of the organizations so which will affect the debt ratio which that may affect the firm performance. On the other hand, bad asset utilization may lead to a decrease in the liquidity of the organization which will lead to an increase in the debt ratio and the increase in debt ratio will decrease the firm performance and make the organization face financial distress or declare bankruptcy.

Liquidity demonstrates a firm's ability to repay its short-term liabilities without taking a loan also, Liquid assets are not limited to cash, and they could be in the form of treasury bills, notes, and securities including stocks and bonds, in addition to any other asset that could be sold quickly without affecting its market value. As stated by Mustafa et al. (2019), liquidity ratios are used as an indicator to show the conversion of assets into cash. In this study, we measure the effect of liquidity by calculating the current ratio of the selected sample. Additionally, Asset utilization means the firm ability to maximize the use, manage, and leverages its assets to produce ultimate revenue.

By practising assets utilization, a firm is efficient with its assets. On the other side of a coin, when a firm doesn't make the maximum benefits form assets, it's considered to have poor asset management. It's highly preferred that assets utilization rate increases which may increase the firm performance. Moreover, debt ratio is calculated by dividing total liabilities of firm over total asset. Also, it is the ratio of total debt to total asset which it shows the amount of asset that is obtained by using financed debts. Additionally, if the ratio is greater than 1 then that means that the organization have liabilities more than assets. Furthermore, when the ratio increases the risk of organization also increase. Perhaps, this is because the amount of liability is more than the asset which means the organization interest rate will increase by a huge way and it may face financial distress. Furthermore, Firm performance is defined as how the organization will use its limited resources and opportunities to achieve its goals without increasing its cost. Furthermore, in the beginning of twenty first century the concept of firm performance began to focus on the ability and capability of the companies to use its available resource s in an efficient way in order to achieve its goals and objectives. Also, the firm performance measured increased by a huge way, but research focus on return on asset (ROA), return on equity (ROE) and net profit margin most of the time (Taouab & Issor, 2019).

This study contributes to the literature in at least two ways about the relationship between company liquidity, asset utilization and debt ratio. First, it concentrates on Egyptian companies, about which only a few studies have been undertaken recently. This study verifies the conclusions of earlier researchers by examining the impact of the moderating role of debt ratio in the relationship between corporate liquidity and firm performance across the sample firms.

Literature review

Liquidity:

Financial analysis is used to assess a company's financial standing. Financial ratios are one of the primary instruments of financial analysis; they are valuable indicators of a company's performance and financial status. Several studies (Chiaramonte and Casu, 2016) concurred those financial measures, particularly liquidity ratios, may be used as an indication of a business's financial situation and to anticipate any potential corporate failures and ensuing bankruptcy. Analysts frequently use liquidity ratios to evaluate a company's financial health.

And whether a company is able to continue operating as a going concern. And to act as an indicator of probable financial trouble. This increased emphasis on the company's liquidity status is due to its relevance to all parties involved. Each has a stake in the liquidity situation of a corporation. In this context, Kim-soon et al. (2013) and Delen et al. (2013) found a significant positive link between liquidity ratios and the financial health of businesses. The stronger the firm's financial position, the higher the liquidity ratio. Which indicates the ability of liquidity measurements to predict a company's demise.

Liquidity Current, fast, and cash ratios are typically used to evaluate a company's short-term financial status or solvency. This collection of financial liquidity measures that are routinely used to gauge financial performance El Deeb & Ramadan (2020) has the capacity to forecast bankruptcy, whether employed individually or in various ratio combinations.

In general, the higher the ratio's value, the higher the company's short-term loan coverage margin of safety. If the current ratio is more than or equal to one, a corporation is said to have sufficient liquidity (Kim-soon et al.,2013). This demonstrates that current assets should be enough to cover short-term liabilities, and a current ratio below one may indicate that the organization is experiencing liquidity issues.

The quick ratio is a far superior indicator of liquidity. This is due to the fact that current assets such as inventory and prepaid costs, which are more difficult to convert to cash, are excluded from the ratio calculation. This indicates that the greater the quick ratio, the more liquid the company is, allowing it to determine or predict any business slump (El Deeb & Ramadan, 2020).

The liquidity ratio demonstrates the company's capacity to pay down its short-term loans as they mature. As its value increases, so does the company's ability to pay its short-term obligations. Otom, (2014) mentioned that a lower liquidity ratio is indicative of a company's financial difficulty. Previous studies concurred that liquidity ratios are one of the most significant categories used to identify firms in financial distress Alifiah (2014); Otom (2014) as they are widely used by investors to measure the risk of their investment Kim-Soon et al. (2013) by screening financially sound companies listed on the stock market. The ratios of liquidity are sometimes known as ratios of short-term solvency.

Maskami et al. (2022) examined the impact of liquidity and solvency on profitability of organization that listed on the Indonesia stock exchange. Moreover, the researchers have chosen a sample of plantation subsector from period 2017 to 2020. Also, they have chosen

their sample using purposive sampling method. Furthermore, they measured the liquidity using current ratio. Also, they measured the solvency using debt ratio. Also, the researchers used multiple regression analysis to know the relation between the variables. Which they found that there is a huge positive relation between liquidity and profitability of organizations. Also, there is a positive relation between solvency and profitability of organizations.

In addition, to return on assets as an intervening variable, Suhendry et al. (2021) examined the impact of the debt-to-equity ratio (DER) and the current ratio (CR) on firm value. The researchers applied their findings to industrial consumer products businesses listed on the Indonesian stock exchange. The research methodology employed is quantitative. Using the approach of purposive sampling, they selected 20 companies as their sample between 2015 and 2018. Lastly, they discovered that both DER and CR have a considerable beneficial impact on ROA but have no impact on firm value. However, ROA has a favourable effect on the value of a company.

In addition, other researchers, such as Pandansari & Khasanah (2020), analyzed the influence of liquidity indicators, profitability ratios, leverage ratios, and operational cash flow in predicting financial crisis in firms. The liquidity ratio, profitability ratio, leverage ratio, and operational cash flow are employed as independent factors, whereas financial hardship is used as a dependent variable. In addition, the researcher selected 105 industrial businesses listed on the Indonesia Stock Exchange as a sample (2015-2018). In this study, data were analysed via logistic regression. In addition, the analysis revealed that the liquidity and operational cash flow ratios had little influence on predicting financial hardship, however, the profitability and leverage ratios had a substantial effect.

Gagnier (2022) investigated the effect of debt restructuring using debt to equity swap policy on the financial performance. The researchers used multiple regression model to analyze the data. Their sample was PT XYZ Company; they tested it during the period from 2012 till 2018. Eventually, they found that debt to equity swap has a significant positive effect on profit margins, total assets turnover, inventory turnover, return on asset, and profit margins. However, it has no significant effect on current ratio and quick ratio.

Al-Homaidi et al. (2020), examined the influence of Indian listed businesses' liquidity on their market value. The purpose of this study is

to present an empirical examination of the factors affecting the liquidity of Indian listed firms. The ratio of liquid assets to total assets quantifies the liquidity of Indian companies. Moreover, a total of 2154 companies were picked at random from among India's 5129 publicly traded organizations. They use (linear regression with pooling, fixed, and random) effect models on a sample of Indian listed enterprises from 2010 to 2016. The researchers discovered that the ratio of return on equity is inversely correlated with liquidity.

The purpose of this study was to determine the significance of liquidity and solvency risk variables on variances in efficiency indicators of domestic and commercial banks in the United States. The researcher utilized the stochastic cost model with genuine random effect to estimate the relevance of solvency and liquidity risk components. He employed the exponential stochastic cost function and included other variables, such as bank size, crisis as an indicator for financial crises, and the Dodd-Frank Act and Basel II pact as regulatory dummies. From 2005 to 2017, he examined the financial institutions. In conclusion, the researcher discovered that the solvency and liquidity risk variables had a favourable impact on the variance of cost inefficiency metrics. Additionally, it has a detrimental impact on cost-effectiveness measurements (Sakouvogui ,2020).

According to Hongli, et al. (2019), they investigated that liquidity and financial leverage have a great impact on the firm's overall performance. Firm performance is measured by ROA and ROE for indicating the extent of increasing the firm's overall profitability as well as using two methods such as fixed effect model and random effect model for modelling. They used "Ghana Stock Exchange" as their sample from six different sectors from the year 2007 to 2015.Finally; they found that liquidity, as determined by current assets to current liabilities, has a direct positive effect on return on equity.

Asset utilization:

According to Adebayo (2022) asset utilization assesses the difference between what an asset can generate and what it actually produces. In contrast, asset underutilization signifies revenue losses related to the inefficient exploitation of assets. Fleming et al. (2005) noted that asset underutilization may raise agency costs if managers do not operate in the owners' best interests.

A study on Investment in fixed assets and corporate profitability by (Okwo, 2012). The association was shown to be positive, however the conclusion was not statistically significant. Xu and Xu (2013) conducted a study on the best allocation of assets structure and company performance, and their findings demonstrated a statistically significant correlation between assets Structure and business success. In addition, Akinleye & Dadepo (2019); Ogunode & Adegbie (2020) and Waseem & Qamar (2021) found that asset utilization has a substantial impact on the financial success of a company.

The study by Chauhan, (2021) examined probable misallocations of working capital among academics, as well as the link between enterprises' working capital and productivity as shown by their valuations. The researcher used a multivariate approach to derive conclusions from the minor effect of working capital and its aspects on company value while accounting for asset utilization. He also stressed out on the importance of asset utilization for organization's profitability and increasing profit. Also, he used a sample of 25 firms from the year 2012 to 2019. found out that despite of accounting for asset utilization, the impact of working capital on firm's value is weak and poor. This research had many limitations so it was suggested that managers should determine working capital allocations in relation to a firm's other assets rather than its sales.

According to Junaid & ali (2020), the purpose of this study is to understand the relation between asset utilization and profitability of textile industry in Pakistan. The sample of 10% of population which consist of 40 firms from Pakistan. They taste date using questionnaire by random sampling technique. Moreover, fixed asset turnover ratio and financing costs are used in order to measure the asset utilization. Moreover, they used the sales of organization in order to measure the profitability. The researcher used central tendency test for the arithmetic mean in order to understand the relation between asset utilization and profitability of textile organizations. They found that there is significant positive impact between financing cost and industry profitability. However, there is a negative relation between fixed asset turnover and industry profitability.

Another study investigates the relationship between liquidity and cash turnover, accounts receivable turnover, and inventory turnover. In addition, the researchers selected a population of real estate, property, and construction companies. In addition, they employed the technique

of purposive sampling to choose their samples. The sample consisted of companies listed on the Indonesian stock market between 2013 and 2018. In addition, a multiple regression model was utilised to examine the relationship between the variables. They discovered a negative relationship between cash turnover and liquidity, as assessed by the cash ratio. While there is a favourable correlation between accounts receivable turnover and an organization's liquidity. Furthermore, inventory turnover and liquidity are positively correlated (Sarpingah, 2020).

According to Juliana (2020), the researcher investigated the influence of ownership structure on organizations' asset use. He employed econometric techniques, such as unit root tests and ordinary least square (OLS), to examine the influence of independent factors on the dependent variable. The sample was based on secondary data from six companies that were collected between 2014 and 2019. According to the data, ordinary share, retained profits, the short-term debt ratio, and the long-term debt ratio have a substantial positive influence on return on assets, therefore the ownership structure has a favorable impact on asset utilisation for enterprises during that era.

According to Akinleye and Dadepo, (2019). The aim of this study was to investigate the impact of asset utilization the performance of a sample of Nigerian manufacturing firms. To examine the performance of the selected manufacturing companies, this study applied correlation and regression analysis. Secondary data was obtained from the annual reports and accounts of 10 selected publicly traded companies throughout a five-year period ranging from 2012 to 2016. Moreover, the study showed that asset utilization has a significantly positive impact on the performance of Nigerian manufacturing firms.

This study examined the influence of corporate financial performance on corporate growth and asset usage on corporate market value, as defined by Rahayu (2019). This research is an explanation that utilises secondary data to measure many factors. In addition to the structural equation model, he analysed reports using purposive sampling and saturation sampling. The sample consisted of 348 Indonesian companies operating between 2011 and 2016. The results indicate that business expansion positively influences market value. It has been demonstrated that asset utilization has a direct positive influence on

financial success. Finally, financial success favorably increases the market value of a company.

Firm performance:

According to Agbata et al., (2021), the purpose of this research is to examine the influence of financial ratios on the performance of listed breweries in Nigeria. The sample for this study consists of thirteen brewers listed on the Nigerian stock market from 2010 to 2018. Moreover, the financial ratio calculated using dividend per share and ROE In addition, they evaluated business success based on market valuation. This study relies on secondary data acquired from the selected brewers' financial statements and annual reports. In addition, the pertinent data were examined statistically utilising correlation coefficient, Pearson correlation, and regression analysis. According to the primary findings of this study, there is a negative relationship between current ratio and company performance. There is also a favorable correlation between financial ratios and the success of Nigerian breweries.

According to Susanti et al., the leverage ratio enhances a company's success. The scientists also identified a positive correlation between leverage and business performance, which might turn negative if the ideal amount of leverage is surpassed. Therefore, the move from positive to negative suggests that debt has a dual effect on a company's performance. Using the concept of tradeoffs and the cost principle of agencies, this study investigated the relationship between leverage and corporate performance in Malaysia. Between 2005 and 2016, their sample comprised of 528 non-financial firms registered on the Bursa Malaysia Stock Exchange.

Mennawi (2020) evaluated the effect of liquidity, credit, and financial leverage risks on the financial performance of Islamic banks in Sudan. The study was mostly based on secondary data sources, and the researcher employed panel datasets from 2008 to 2018. Researchers sampled 13 Islamic banks in Sudan out of a total population of 37 Islamic institutions. He utilised quantitative methodology with a longitudinal study design and a balanced panel data estimate. Credit risk and financial leverage have a considerable beneficial impact on the financial performance of Islamic banks in Sudan, however liquidity risk is minor. Although the liquidity risks associated with the ratio of liquid assets to total assets have a substantial favourable impact on financial

performance. This study had some limitations, including a small sample size (13 institutions out of a total population of 37 banks), the use of historical data, and factors that did not cover all forms of hazards that may harm Islamic banks.

According to Fitrianingsih and Huda (2021), the purpose of this study is to evaluate and analyse the effectiveness of the current ratio, the quick ratio, and the cash ratio in measuring financial success. In addition, the type of research employed is descriptive research using quantitative methodologies, and the population in this study consists of financial report data for five years (2015-2019) and a sample size of five years. Finally, they discovered a favourable correlation between the cash ratio and the success of financial firms.

According to Kengatharan (2019), this study investigated the link between intellectual capital, company performance, and productivity. Using a self-reported questionnaire, 232 business managers from varied industries, including banking, insurance, telecommunications, and hotels, provided information. The article revealed a significant correlation between intellectual capital and productivity. In addition, the studies revealed a correlation between productivity and firm performance. It was also emphasized that there is a connection between specific components of intellectual capital and productivity-based company success.

According to Fajaria and Isnalita (2018), the purpose of this study is to quantify the impact of profitability, liquidity, leverage, and business growth on the firm's value using debt policy as a moderator. The research analysed 146 companies that were listed on the Indonesian stock exchange between 2014 and 2016. In addition, the sample consists of 108 organisations in 2013, 160 organisations in 2014, 94 organisations in 2015 and 2016, respectively. The sample was obtained with the assistance of judgement sample technotes. In addition, Tobins q and market value equity are employed to determine the firm's worth. In addition, profitability was assessed by return on assets (ROA), liquidity by current ratio, leverage by debt-to-equity ratio, and dividend policy by dividend policy ratio. The study discovered a positive correlation between profitability and business valuation. However, leverage and liquidity had a detrimental impact on the value of the company.

Waswa et al. (2018) evaluated the effect of liquidity management on the performance of businesses. Using a cross-sectional retrospective study approach, they analysed the effect of liquidity on the financial performance of the Kenyan sugar sector. Using a random effect regression model, the researchers examined the association between liquidity management and company performance. They selected five Kenyan sugar companies as their sample for a period of twelve years, from 2005 to 2016. The independent variable (liquidity) is assessed by financing liquidity (current liability coverage ratio), whereas the dependent variable (return on assets ratio) is measured by the current liability coverage ratio. They discovered that liquidity, the current liability coverage ratio, and company performance had a negative correlation.

Hypotheses development

Liquidity and performance:

According to Dimyati et al. (2021), there is a negative relation between quick ratio and firm performance. While there is a strong positive relation between current ratio and firm performance. Also, return on asset have positive relation with firm performance. While return on equity have negative relation on the firm performance. The study examined the effect of profitability and liquidity ratio on financial performance at UNILEVER in Indonesia. Moreover, they measured the quick ratio, current ratio, return on equity and return on asset of the financial performance at UNILEVER Indonesia by collecting this data as a secondary data from the financial statements of the firm. Also, they processed the data using multiple liner regression analysis method in order to understand the relationship between the variables.

Furthermore, Mustafa et al. (2019), found that there is a negative relationship between current ratio and profitability of automobile companies in Pakistan, while there is a positive relationship between profitability and quick ratio. The study aimed to investigate the impact of liquidity on profitability of automobile companies listed in Pakistan stock market. They used random effect model and fixed effect model for the sake of empirical investigation, also the applied Hausman test to choose the appropriate model among random and fixed effect model. They used 12 automobile companies listed in Pakistan stock market as their sample. They used panel data of a period of 5 years from 2013 till 2017.

Finally, they agreeing to Adusei (2022), this research aimed to measure the financial performance of profitability and liquidity of financial firms. AS, profitability ratio reflects the organization ability to generate profit. While the liquidity ratio used to measure the organization ability to pay their debts on time and cover certain liabilities. And working capital considered as the capital needed by the company for operation. Moreover, the researchers used quantitative approach and secondary data in order to choose their sample. As, they choose to focus on construction, developing and trading companies. Furthermore, they measured the liquidity ratio by calculating current ration, quick ratio, and cash ratio in addition to that, they measure the profitability ratio by calculating the gross profit margin, net profit margin, and rerun on asset and return on equity. Also, the working capital were measured using the working investment method. The research depends on purposive sample technique as they choose construction companies based on the highest number of assets in the Indonesian stock exchange. While the trading and developing companies selected based on the largest revenue from sales and started to be arranged according to the largest number of assets the researchers found that developer companies have better liquidity ratio that construction and trading companies. After calculating working capital, it shows that construction companies need less working capital than other companies.

Other research examined the link between company liquidity and profitability. The liquidity ratio, investment ratio, and capital ratio were used to assess the firm's liquidity, while the return on assets (ROA) and net profit margin were used to measure the firm's profitability. This research uses inferential statistics to quantitatively define the important elements of a data set, while correlation and linear regression analysis were employed to examine the data. They utilised a sample of fourteen Nepalese commercial banks between 2008 and 2017. The results demonstrated a positive correlation between liquidity ratio and ROA and a negative correlation between capital ratio and investment ratio. Moreover, the link between net profit margin and capital ratio is negative. In conclusion, it is established that liquidity is not a significant indication of a company's profitability (Bhatt & Verghese, 2018).

According to Ehiedu (2014), this study aims to determine the relationship between the liquidity and profitability. Also, it measures the relationship between the quick ratio and profitability. The sample consist of listed but public companies that produce industrial/ domestic

product they used sample current ratio and profitability there is also a technique called “nonprobability” using four selected companies they measured liquidity ratio by current ratio and quick ratio also they measured the firm performance using ROA and ROE ratios this research used qualitative research design also they depend on using They used correlation analysis. Secondary data in the firm of account and annual reports. The main result of this research there is a significant and positive relationship between current ratio and profitability. There is no correlation between quick ratio and profitability.

Previous research revealed a significant association between a firm’s liquidity and performance. There is a considerable association between a firm's liquidity levels and the financial performance of listed companies. This conclusion necessitates more investigation to test this association on Egyptian Stock Exchange-listed enterprises, particularly in the context of the Egyptian capital market's high level of uncertainty. Following is how the research hypothesis may be derived.

H1: There is a significant association between liquidity and firm performance

Relation between Asset utilization and firm performance:

According to Zaman (2021), the purpose of the study was to determine the relationship between the current ratio, total asset turnover, and debt-to-total asset turnover ratio and the return on assets. In addition, the researchers selected a sample of mining companies listed on the Indonesian stock exchange between 2008 and 2017. In addition, they gathered secondary data from the financial statements of these organizations. In addition, panel data and EViews software were applied to the financial statement processing. In addition, regression analysis and a feasibility test were utilized to examine the relationship between the variables. In conclusion, they discovered a favorable relationship between the independent and dependent variables.

This research aims to understand the relation between asset utilization and company performance. The researchers studied the relation by taking a sample of 130 organization from different sector in Indonesia. Also, they used quantitative method in order to study the relation between the variables which they collected secondary data that consist of different financial statements and ratios. In order to know the relation between asset utilization and organization performance. They

measured asset utilization by asset utilization ratio and measured organization performance by Tobins Q, return on asset and return on invested capital. Also, they used three stage least square technique in the simultaneous equation model. They found that there is a huge positive relation between asset utilization and organization performance (Herdinata, 2019).

The goal of this study, according to Akinleye and Dadepo (2019), was to investigate the effect of asset utilisation on the performance of a sample of Nigerian manufacturing firms. They analysed the collected data using descriptive statistics, correlation, and regression analysis. From 2012 to 2016, secondary data were collected from the annual reports and financial statements of ten publicly listed corporations. Results demonstrated that asset turnover and current asset ratios positively impact return on assets.

According to Utami (2017), the purpose of this study is to investigate the effect of current ratio, debt asset ratio, total asset turnover, and return on asset on price earnings ratio on the profitability of businesses. In addition, their sample was comprised of firms that were included in the LQ45 index from 2013 to 2016. In addition, they selected the sample using the approach of purposive sampling. In addition, the researchers utilised multiple regression analysis to comprehend the relationship between the variables. Lastly, they discovered that the current ratio, debt asset ratio, total asset turnover, return and price earnings ratio, and profitability are all positively correlated.

Asset utilization is the ratio of a company's total revenues to its total assets. Past research has demonstrated that asset usage positively affects the performance of a company. Companies with a high asset utilization ratio prefer to enhance their present performance to satisfy future market demand. This study contends that successful asset usage increases firm performance, but ineffective asset utilization decreases firm value. Hence, the second hypothesis is presented as follows:

H2. There is a significant association between asset utilization and firm performance

Debt ratio:

According to LE & phan (2017), the research aims to understand the impact of leverage on quick ratio of organizations in Nigeria. Moreover, the researchers picked 6 listed Nigerian organization from the period 2003 to 2020 as their sample. Also, they collected secondary data from annual accounts and reports of the organization and analyzed

it by using ordinary least square regression analysis and person collection. The researchers found that there is a huge negative effect between leverage and quick ratio in Nigerian organizations that are listed in the Nigerian stock exchange.

According to Ibrahim & Isiaka (2020), the research aims to understand the relation between financial leverage and firm value. Also, they used a sample of 18 organization firm Nigerian stock exchange from 2014 to 2018. Additionally, they used long term debt in order to measure the financial leverage and, used Tobins Q in order to measure firm value. Also, there are 4 control variables which consists of age of firm, size of firm and return on asset. They used regression model by using fixed effect panel model, random effect panel and pooled ordinary least squares technique in order to understand the relation between financial leverage and firm value. The researchers found that there is a huge negative effect between firm value and financial leverage using regression model.

According to Forte & Tavares (2019), this study examined the connection between debt and company performance by focusing on the role of institutional structure and macroeconomics in gauging performance. They assessed performance using return on assets (ROA) and return on equity (ROE) (ROE). In addition, they concentrated on the Legal Structure and Security of Property Rights index and the index of credit market regulation. From 2008 to 2013, they utilised a huge sample of 48,840 manufacturing enterprises from nine nations. The study demonstrated a favourable correlation between debt and business performance; but, if the debt is long-term, the correlation might become negative. Consequently, the degree of debt shows the nature of the relationship.

Multiple studies have examined the link between leverage and business performance, demonstrating the influence of a third variable, the firm's size. Total debt to asset ratio, long-term debt to asset ratio, and short-term debt to asset ratio were used to assess leverage, while return on asset and return on equity market performance measure (Tobin's Q) was used to analyze company performance. In addition, they utilized the firm's size, tax return, and age as additional considerations. Using descriptive statistics on a sample of 101 listed firms in Nigeria from 2003 to 2007, it was discovered that the negative impact of leverage on company performance is most pronounced and significant for small- to medium-sized enterprises, and that evidence of a negative effect

declines as a firm improves, eventually disappearing when firm size exceeds its estimated threshold. Consequently, depending on the size of the business, there exists a positive correlation between leverage and firm performance (Ibhagui & Olokoyo, 2018; Adnan & Kamran, 2019).

The objective of Vieira's (2017) research is to comprehend the connection between family business debt policy and performance. Moreover, it also focusses on the possibility of asymmetric debt policy and its effect on performance between the period of stability and economic advert. To determine the nature of this link, a panel data regression model was used to a sample of chosen listed businesses from 1999 to 2014 that were deemed to be protégés. The debt ratio policy was evaluated using the short-term debt ratio, the long-term debt ratio, and the overall debt ratio. In addition, the performance of the company family was examined by ROA, ROE, and market-to-book ratio. In conclusion, they discovered a negative link between debt policy and company performance. Moreover, the primary weakness of the research is the sample itself, as the bulk of the sample utilized is comprised of small-sized organizations.

A company with a greater Debt ratio will be subject to heightened creditor and financial oversight. To be able to pay debt instalments and accrued interest, the firm must be managed profitably. In other words, organizations with high debt ratio are highly motivated and diligent, which contribute to the enhancement of corporate performance and value. Therefore, the third and fourth hypotheses are presented as follows:

H3. Debt ratio has a significant mediating impact on the association between liquidity and firm performance.

H4. Debt ratio has a significant mediating impact on the association between asset utilization and firm performance.

Empirical study:

The aim of this section is to empirically examine the impact of liquidity and asset utilization on firm performance considering debt ratio as a mediating variable. The chapter begin with understanding the research method including the data collection, sample and table of measurements and variables. Finally, it shows the statistical analysis of the hypotheses.

Research method:

The study used secondary data collected from organizations financial statements. To test the research hypotheses descriptive analysis; Pearson's correlation and multiple regression analysis have been used through the Statistical Package for Social Science (SPSS) Program to test the relation between liquidity, asset utilization and debt ratio on firm performance.

Sample and data collection:

The sample consists of 50 Egyptian organization that are listed in the EGX100 from period (2019-2021). Moreover, the total number of observations are 150 which collected so we can understand the relationship between liquidity, asset utilization, debt ratio and firm performance. Also, all the annual reports were downloaded from the official websites of the organization and Mubashir.

Variables measurement:

Table (1) variables and measurements

variables		Measurements
Independent variable		
Asset utilization	Total asset turnover	$\frac{\text{net sales}}{\text{average total saels}}$
Liquidity	Quick ratio	$= \frac{current\ assets - inventory}{current\ liability}$
Mediating variable		
Debt ratio	Debt ratio	$= \frac{current\ liablities}{total\ assets}$
Dependent variable		
Firm performance	Return on equity	$= \frac{net\ income}{total\ equity}$

As stated in table (1) independent variable is asset utilization which is measured by total asset turnover and liquidity is measured by quick ratio. Moreover, the research mediating variable is debt ratio which can be measured by current liabilities over total asset. Finally, the dependent variable is firm performance which is measured by FIRM PERFORMANCE which can be calculated net income total equity.

Descriptive analysis:

With the use of inference statistics, the descriptive analysis may be used to describe data. It offers a summary of the sample information. Therefore, it assists us in understanding what our data means by displaying the minimum, maximum, mean, and standard deviation of the sample data set.

Table (2) Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Liquidity	50	.1521	16.4501	1.875877	2.6937227
Asset utilization	150	.0028	5.7818	.507050	.7109716
Debt ratio	150	.0138	9.3911	.599492	1.1922953
Firm performance	150	-.3462	5.6915	.114594	.4903372
Valid N (listwise)	150				

The mean of the Liquidity of the observations is 1.875877which means that the average Liquidity among the observations is 1.875877. Moreover, if organization have a Liquidity less than 1 then it may not be able to fully pay its short-term obligations. So, since the mean of Liquidity is 1.875877 then most of the organization can pay its short-term obligation and does not face financial distress.

Also, the mean of total asset turns over which means the average number of total assets turnover among the observations is .507050 and Asset utilization is sued to test how efficient the organization is using its asset to generate revenue. Moreover, the average debt ratio (mean) is .599492. It is used to measure how much of the assets of organization are bought using debts so, that means most of the organization in the sample had bought more than have of its assets using debts. Finally, the mean of return on equity is .114594. Moreover, high firm performance means that the organization can increase its profit generation without needing much capital.

Furthermore, the standard deviation of Liquidity is 2.6937227 and this is considered as a small variation since the minimum number of Liquidity is .1521 and the maximum number is 16.4501. Moreover, the

standard deviation of Asset utilization is .7109716 which it also considered as a small variance since the minimum number of Asset utilization is .0028 and the maximum number is 5.7818. Also, the standard deviation of debt ratio is 1.1922953 which it considered as a small variance since the minimum of debt ratio is .0138 and the maximum is 9.3911. Finally, the standard deviation of return on equity is .4903372 which it considered as a moderate variance as the minimum number of FIRM PERFORMANCE is -.3462 and the maximum number is 5.6915.

Pearson's Correlation:

Pearson Correlation is used to examine or test the relationship and direction between variables. As shown in Table (3), the correlation between Liquidity and Asset utilization is -0.133, indicating that there is no association between these variables. While the correlation between Liquidity and Debt Ratio is -0.249, indicating a significant association between the two variables. Also, when the Liquidity increases, the debt ratio will fall, since when the organization's liquidity increases, it will be able to pay more of its loans, resulting in a decrease in the debt ratio. The association between Liquidity and Firm performance is -0.36, which is statistically significant.

In addition, the correlation between Asset utilization and Firm performance is 0.25, indicating a significant association. In addition, the connection between Firm performance and Debt Ratio is -0.027, which is not statistically significant. Lastly, the correlation between Debt Ratio and Asset utilization is 0.439, indicating a positive and statistically significant association. Thus, when asset utilization increases, the debt ratio would likewise rise. Perhaps this is due to the fact that when a company effectively utilizes its assets, the number of operations will expand, necessitating the borrowing of additional loans, hence increasing the debt-to-assets ratio.

Testing Hypotheses:
Hypothesis one:

Table (4) Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	.517	.048		10.820	.000	
Liquidity	-.036	.015	-.249	-3.131	.002	
R square						0.32

a. Dependent Variable: Firm performance b.

The results from table (4) indicate that liquidity has a negative impact on the performance of the firm. These results are in consistent with the results reached by (Gill & Mathur, 2011; Yameen et al., 2019; Arif & Batool, 2022). The justification for these results that corporate liquidity increases the profitability of firms. This can occur when firms maintain an ideal degree of company liquidity (e.g., holding liquid assets such as cash and cash equivalents). On the other hand, greater liquidity may have a detrimental effect on the firm performance.

Table (3) Pearson Correlations for the study variables

	Liquidity	Asset utilization	Debt ratio	Firm performance
Liquidity	1			
Asset utilization	-.133	1		
Debt ratio	-.249**	.439**	1	
Firm performance	-.036*	.025*	-.027	1

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

As shown in table (4) that the Liquidity can explain 3.2 % of the changes that happen in debt ratio and show why does it changes. When the Liquidity increases by 1 % the firm performance decreases by 0.36 %. Perhaps, this is because the negative correlation between Liquidity and firm performance. As, when the liquidity of the organization increases the ability to pay its debts will increase so the debt ratio will decrease. This led the researchers to accept the first hypothesis where the regression analysis results showed a negative significant impact on the firm performance.

Hypothesis two:

As shown in table (5) Asset utilization has a significant impact on firm performance at significance level less than 0.05.

Table (5) Coefficients[a]

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.		
(Constant)	.106	.049		2.144	.034		
Asset utilization	.017	.057	.025	.303	.763		
R square							0.064

a. Dependent Variable: return on equity

As shown in table (5) that the asset utilization can explain 6.4% of the changes in firm performance. The coefficient of total assets turnover ratio (asset utilization) is 0.17, meaning that the return on assets (Firm performance) improves by 0.17 percent. This can be explained that when asset utilization is correctly managed, it will impact the success of the organization, and this will improve the performance of the organization. According to the results above, hypothesis two is accepted that asset utilization has a significant positive impact on the firm performance.

Hypothesis three and four:

Hypotheses 3 and 4 are examining the moderating role of the debt ratio in the relationship between liquidity and asset utilization on one hand and the firm performance on the other hand. Table(6) shows the ANOVA analysis results.

Table (6) ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.097	2	.048	.200	.819b
Residual	35.727	147	.243		
Total	35.824	149			

R2=0.003

a. Dependent Variable: return on equity

a. Predictors: (Constant), Liquidity , debt ratio= current liabilities / total assets

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.087	2	.043	.179	.836b
Residual	35.737	147	.243		
Total	35.824	149			

R2=0.0049

a. Dependent Variable: return on equity

b. Predictors: (Constant), Asset utilization , debt ratio= current liabilities / total assets

As shown in table (6) there is insignificant mediating impact of debt ratio on the relationship between both liquidity and asset utilization and firm performance. This is apparent from the low significant level 0.819 and 0.836 that are greater than 0.05. As shown in table (6) that the Liquidity while considering debt as mediating can explain only 0.003 of the changes that happen in return on equity which is used to measure firm performance. Meanwhile, the asset utilization while considering debt as mediating can explain 0.0049 of the changes that happen in return on equity which is used to measure firm performance. According to these results the researchers are rejecting hypotheses number 3 and 4.

Results and discussion

Table (7) is summarizing the main results of testing the research hypotheses. The tale included the acceptance and rejection of the hypotheses along with sample of the supporting literature review.

Table (7): summary of the research hypotheses testing results

Hypothesis	Results	Acceptation or rejection of the hypothesis	Supporting article
H1: There is a significant association between liquidity and firm performance	The results showed that there is a correlation between the quick ratio and firm performance. As, negative relation because when the company possess excessive liquidity the company performance may decrease	**Accepted**	*Eljelly* (2004)

H2: There is a significant association between asset utilization and firm performance	The results showed that there is a positive significant association between total asset turnover and firm performance.	**Accepted**	Nafi'ah et al., (2022))
H3. Debt ratio has a significant mediating impact on the association between liquidity and firm performance.	The results showed that there is no correlation between liquidity and firm performance considering debt ratio as mediating	**Rejected**	Dimyati et al. (2021),
H4. Debt ratio has a significant mediating impact on the association between asset utilization and firm performance.	The results showed that there is no correlation between asset utilization and firm performance considering debt ratio as mediating variable	**Rejected**	Junaid & ali (2020),

As table (7) shows that the first and second hypotheses are accepted that there is a negative significant association between liquidity and firm performance. Which means that when the Liquidity increases the firm performance may deteriorate if the liquidity exceeded the safe levels and became idle in the company and not generating return to the company. On the other hand, hypothesis two is also, accepted where there is a significant positive association between asset utilization and firm performance. Also, it shows that the correlation is positive which it means that when the Asset utilization increases the operation of the organization will increase and the organization will achieve more revenue so the performance of the company will increase.

Regarding third and fourth hypotheses**, both are rejected** when considering debt ratio as a mediating variable. Perhaps, this is because if the company has excessive liquidity and high asset utilization it would not e in a need for borrowing and it can finance its own operations through the available resources.

Conclusion, limitation, and recommendations

The paper tries to examine the association between liquidity and firm performance in addition to testing the mediating role of debt ratio on this association. The data analyzed was secondary collected through companies' financial statements. The sample consisted of 50 Egyptian listed companies that have been selected out of the EGX 100 index after excluding all the financial institutions due to their special nature. The data were analyzed using descriptive analysis, regression and ANOVA techniques. The results showed the acceptance of the first and second hypotheses and the rejection of the third and fourth hypotheses. The main theme here is that liquidity and asset utilization are among the key factors for enhancing the firm performance. In this study, the results showed a negative significant association between liquidity and firm performance ad that was accepted because if the company has excessive cash this led to lower profitability to the company as it is not used in the right investment. Likewise, the liquidity can increase by increasing the asset utilization in the originations which that will increase the profit of company. The second hypotheses stated that there is a significant association between asset utilization and firm performance which also was accepted because since asset utilization is high the operations of the business will expand and will enhance the firm performance. Asset utilization can be enhanced through many techniques for example, increasing the inventory turnover or enhancing the sales turnover so the firm will achieve higher revenue.

The third and fourth hypotheses have been rejected. There is a insignificant mediating role for the det ration on the association between liquidity and asset utilization and firm performance. So, Asset utilization does not affect firm performance while considering debt ratio as mediating variable. Perhaps, this is because when the liquidity within the acceptable level and asset utilization increases the debt will not be an impacting factor as the company have its resources to finance its operations and increase its profitability.

In addition, most researchers, such as Bahti et al. (2019), discovered a favourable relationship between liquidity and company performance after conducting a literature study. Nevertheless, Dimyati et al. (2021) and Mustafa et al. (2019) discovered a negative relationship between liquidity and company performance. On the other hand, Chauhan and Juliana (2020) discovered that asset usage positively correlates with company performance. In contrast, Sarpingah (2020) and Junaid and Ali (2020) discovered that asset usage negatively correlates with company performance. In addition, Forte & Tavares (2019) found

a favorable correlation between debt ratio and business performance. While Le & phan (2017) found a negative relationship between firm leverage, as measured by debt ratio, and company performance, we find the opposite.

This study is impeded by a lack of information regarding asset utilization metrics and the relationship between the debt ratio and enterprise performance. Also, the research was limited to a three-year period beginning in 2019 and ending in 2021, which was seen as a constraint because a longer time period may have shown different results, and there was a shortage of data for several factors. In addition, the research focuses on only a few particular metrics for variables such as ROE for assessing firm performance and Asset utilization for determining asset utilization. Lastly, the research concentrated exclusively on major corporations in Egypt and ignored small and medium-sized enterprises (SMEs) in Egypt.

Recommendations for future research:

The research's main goal is to focus on the impact of liquidity and asset utilization on firm performance while considering debt ratio as mediating variables. So, it is recommended for future research to investigate and collect data on wider range of years which is more than 3 years. In order to get more accurate results and test the relation between the variables. Moreover, it is recommended to use different mediating variable other than debt ratio and find more mediating variables that may affect the firm performance. Furthermore, future researches can use different measurements to measure the variables such as current ratio for liquidity, inventory turnover which is used to measure asset utilization and return on asset to measure the firm performance. Also, future research needs to study different types of origination such as small medium size enterprises and small organization. So, they can test the effect of independent variable on the dependent variable more accurately.

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