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## Article

# Earnings quality determinants in the Jordanian service sector (The financial crisis during Corona crisis)

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# Earnings quality determinants in the Jordanian service sector (The financial crisis during Corona crisis)

Mohammad Ahmad Alqam<sup>1</sup>, Walid Omar Owais<sup>2</sup>, Haitham Yousef Ali<sup>1</sup> and Yaser Mohd Hamshari<sup>1\*</sup>

**Abstract:** This study examined the impact of financial ratios, represented by liquidity, retained earnings ratio, profitability ratio, debt ratio, and total assets turnover, on earnings quality. This study involved 45 service companies registered between 2014 and 2020. Purposive sampling was used for 41 firms and 287 analytical units. Descriptive statistics and moderated regression were used. The findings showed that financial ratios affect the quality of earnings. Governance strategies can affect earnings quality along with financial ratios. The result of this study recommended that future researchers use a combination of methods to check the financial statement data. In addition, this study suggested that to get managers to smooth out their earnings; managers should have more control over financial ratios.

**Subjects:** Business, Management and Accounting; Production, Operations & Information Management; Risk Management; Corporate Governance

**Keywords:** earning quality; financial ratio; governance mechanism; moderated regression analysis

### 1. Introduction

In recent decades, the quality of earnings has remained a challenge in the organization that needs to be solved and minimized. Increasingly, companies are competing against each other in this age of globalization. Newcomers in the industry not only lead to new product improvements but also challenge the company's business model. Using the company's financial condition and earnings, users of the financial statements can draw some conclusions about the company's long-term viability and potential to generate profits in the future. Several studies have shown that the flow of present earnings will continue in the future with earnings quality (Lin & Wu, 2022; Sofian et al., 2022). Financial and investment decisions are made based on the most significant inputs, which change depending on the different users of financial statements. For example, a shareholder's assessment of the company's current and future success is based on earnings. On the other hand, investors use financial statements to evaluate their investments and forecast future earnings (Chen et al., 2022). Investors and other parties with a stake in the financial statements care a lot about the quality of the company's earnings. Earnings with a solid ability to forecast future earnings qualify as "high quality" (Abed et al., 2022). As a proxy for earnings quality, the discretionary loan loss provision (DLLP) is nothing more than a change to the profit and loss accounting rules that exclude direct cash outflows. Earnings quality deteriorates directly to DLLP (the more influential the service sector earnings management approach). LLPs can diminish net income, retained earnings, and shareholders' equity

if they are large enough. LLP provides financial statement users with indicators about the collectability of service sector-issued loans and investments (Dang et al., 2020; Elsiddig Ahmed, 2020).

Management typically increases (decreases) earnings when the actual results are lower than expected and does not modify earnings when they align with expectations (Ali et al., 2019). In addition, service sector activities necessitate liquidity management. One source for service sector assets is deposits made by customers in various accounts, including savings, certificates of deposit (CDs), checking (DCs), and other time deposits. We will assume that total loans are higher than deposits because the loan-to-deposit ratio (LQ) is high. Due to this, service sector managers devised a way to manipulate LLP reports by reporting lower numbers (Carvalho & Kalatzis, 2018). Other research, on the other hand, reveals a different perspective. According to Religiosa and Surjandari (2021) and Desta (2017), there is a negative association between LDR and discretionary LLP. This is due to the fact that managers' perceptions of LLP are skewed by their desire for quick access to cash. However, when it comes to lending and investing, lenders and investors turn to ratio analysis to help them make sound decisions about the soundness of their business finances. Analyzing financial ratios is critical to analyzing financial statements, identifying changes and developments, and gauging the overall financial state of an organization, particularly in identifying good and negative financial trends. Since having a lot of liquid implies controlling commitments, it also means lacking investment. Investors and shareholders must evaluate the companies' position concerning liquidity using financial ratio analysis.

The reliability of a company's usage of its funding source is measured by the number of activities it engages in. A company with a greater activity ratio is less likely to be in earning quality since it can better utilize its funding source. It contradicts the findings of (Tran, 2022), who argued that corporate activity has a considerable positive impact on financial distress. Contrary to previous studies that found the opposite, Hasanuddin et al. (2021) found that the activity ratio has a negative effect on earning quality. This study examines the relationship between the financial ratio and earning quality in the Jordanian service sector. This research is based on the theories of agency, signal theory, and earning management. The principal and agent are contractually bound to work on behalf of each other, with some authority given to the agent so that they can decide what's best for both parties. As a result of the service sector's tendency to hold on to higher provisions due to the identification of nonperforming loans during the economic slowdown, the procyclical loan loss provision received significant attention following the global financial crisis in 2008–2009 and during the coronavirus disease 2019 (COVID-19) pandemic in early 2020. It is envisaged that stakeholders can use the pre-corona crisis period to discover the characteristics that affect earnings quality in non-crisis situations and to determine other indicators that may affect the provision for loan losses in times of crisis. First and foremost, this work is anticipated to make theoretical contributions. Service sector earnings quality can be improved and information asymmetry reduced by implementing effective governance measures. This study believes that it can be utilized as a source of data in the Jordanian service sector to study the impact of governance mechanisms on the liquidity, retained earnings ratio, profitability ratio, debt ratio, and total asset turnover on earnings quality. As a result, the quality of service sector earnings is likely to improve in the future. Finally, there are contributions to policy. There is a reasonable expectation that this research will give an overview of the regulatory impact on the earnings quality of service sector loans. The regulator has the power to make new rules to make sure that service sector activities are adequately regulated and help the Jordanian economy.

## 2. Literature review

### 2.1. Theoretical framework

#### 2.1.1. The agency theory

It is possible to utilize the agency theory to describe the framework for relating management's decision-making, which will affect the company's economic condition, to the financial statements.

External parties can examine the company's financial ratios through the financial statements representing the company's financial situation. The agency theory is concerned with how the agency decides on the long-term viability of the business. The financial results of a company's good decision-making and management can be seen. The financial ratios possessed by the firm can be used to determine the company's health, whether it is in excellent health or a financial crisis. Suggested what a firm does to provide investors with a sense of how management views the company's prospects. The principal-agent relationship is defined by agency theory as a contract where the principal empowers the agent to make decisions (Hashmi et al., 2018). Management's role in earnings management is explained by agency theory, which considers the stewardship relationship and the concepts of agency. The company's top executives will better safeguard their interests in front of investors if they undermine the working relationship. Management will exploit its power if shareholders, creditors, independent boards of directors, and auditors fail to correctly regulate control mechanisms (Hasanuddin et al., 2021). Because everyone is driven by self-interest, the principal and the agent are at odds, according to the idea of agency. Financial and psychological demands are encouraged by managers who function as service sector agents to secure investments, loans, and benefit contracts. Intending to increase their net worth through rising profits, shareholders act as principals in their contracts. Scott (2012) says that the root of many agency problems is opportunistic behavior, like when managers do things to make themselves richer.

### 2.1.2. *Signal theory*

For the company (agent), the owner (principal), and outsiders, signal theory can help by providing qualified or integrated financial statement information. Companies in good financial standing are more likely than those in bad financial standing to make their financial health publicly known. Poor management or a financial crisis can cause a company to go into financial distress, characterized by a performance drop. According to Ross (1977), companies in a financial crisis have terrible news for investors that sends a negative signal, affecting the disclosure in providing information. Even though it is not required, management seeks to provide information that can increase the firm's success even though it is not needed when the company has "positive news," which means it has a solid financial situation.

### 2.1.3. *Earnings management theory*

According to informative earnings management theory, managers will use their discretion to communicate their thoughts about the company's future profit prospects based on their information as insiders (personal information). Earnings management is a two-pronged effort by managers. A company's performance will deteriorate if its management announces earnings that are not aligned with investor expectations. To put it another way, if a company has a promising future, it can maximize this year's earnings at the risk of losing some of those gains next year due to the fact that if the following year is lower, this move will be a disadvantage (Nalarreason et al., 2019). In accounting, the term "earnings quality" refers to how accurately a company's earnings are represented in its financial statements. An opportunistic allowance for impairment losses (LLP) has been found in certain publications to manipulate reported profitability (Alqatan et al., 2021; Bataineh et al., 2018). Literature has shown that service sector managers use their discretionary provision for loan losses to manage reported earnings through income smoothing or earnings management to raise earnings.

## 2.2. *Previous studies and hypothesis development*

The service sector must maintain its loan-to-deposit (or liquidity) ratio because most of the money they handle comes from customers or the general public. Various deposit funding sources must be paid on time, including savings, deposits, and checking accounts. To reduce perceived risk and maximize profitability, several service sectors provide information about their low DLLP. If the LDR is high, the total amount of loans exceeds the entire amount of deposits. As a result, service sectors are under pressure to raise customer deposits, leading service sector managers to devise a scheme to deceive investors by falsely reporting lower LLP (Hakim & Naelufar, 2020). Other

studies, on the other hand, come to different conclusions. According to Tahat et al. (2022), LDR and discretionary LLP have a negative association. This is because managers' needs for liquidity significantly impact how much they value LLPs. A company can pay off its current liabilities with its existing assets, referred to as "liquidity" (Adelopo et al., 2022). By converting non-cash current assets into cash, a company's current ratio can gauge its ability to withstand potential losses from its business. According to the agency theory, a company's current agency expenses can be reduced by increasing the company's liquidity. The higher the company's liquidity, the more likely it is that the corporation can pay off its debts (Signalling theory). The corporation can pay interest on the loan if its present debts can be serviced. When it comes to a company's finances, this could imply either that they are in good shape or not.

### **H1: Liquidity significantly influences earnings quality**

Cash flow in terms of assets indicates an organization's capacity to generate a residual income with total assets. The amount of earnings retained by a company, rather than being dispersed to shareholders, is known as retained earnings. The number of dividends a company has not paid out is represented by its retained earnings (Agustia et al., 2020). The idea of signaling explains the company's motivation to share financial statement information with outsiders. Because the corporation has a leg up on potential sources of information, there is an incentive to share that knowledge because it has a better understanding of those sources than anybody else (investors and creditors). Most investments are financed by retained earnings rather than equity and external debt when the retained earnings to total assets ratio are high (Ali et al., 2019). That is because if the company has a high profit to fund its assets and pay dividends, there's less risk of financial trouble.

### **H2: Retained earnings ratio significantly influences earnings quality**

Profitability measures management's ability to manage the company's wealth (Mahrani & Soewarno, 2018a). This ratio measures the ability of a company's assets to generate operating profit (profit from the company's assets) by comparing the Profitability or Basic Earning Power Ratio to its total assets (Husain et al., 2020). Investors must know that a company's policies are influenced by its agents to encourage them to invest. The signaling theory explains why corporations feel compelled to disclose financial information to the outside world. A Profitability ratio of less than 0.5 indicates that a company's ability to generate profits before interest and tax its total assets is less, increasing its risk of financial trouble. The condition of financial hardship is negatively affected by the ratio of earnings before interest and tax to total assets, according to studies by (Mulyana & Zuraida, 2018; Sari et al., 2022), and others.

### **H3: Profitability ratio significantly influences earnings quality**

Companies use leverage to raise money for their assets beyond the available capital or equity funds. The higher a company's leverage ratio, the more debt it has (Augustine & Dwianika, 2019). The amount of debt used to finance a company's assets depends on the company's leverage policy. A company's debt-to-assets ratio can be used as a signal to investors. This is because the more considerable the amount of debt-financed activity, the greater the likelihood of financial hardship among enterprises (Orazalin & Akhmetzhanov, 2019). According to the idea of agency, management's accountability to stakeholders through the disclosure of financial performance on financial reports provided by the company is a tool for decision-making. Using debt in different ways has an impact on the company's risk and return. The likelihood of companies going into financial difficulties will rise if they have a lot of debt (Alam et al., 2020). An increase in debt to

assets ratio has been found to have a favorable impact on earning quality, according to research by (Hasanuddin et al., 2021; Suryandari et al., 2019).

#### **H4: Debt ratio significantly influences earnings quality**

The ability of organizations to manage inventory, i.e., how many times the existing inventory will be transformed into sales, can be ascertained by looking at the total asset turnover (in the form of finished products). Turnover of total assets reveals how efficiently a business conducts its day-to-day operations. To provide investors with a sense of how management views the company's prospects, (Wardoyo et al., 2021) described signaling theory. The impact on investment decisions outside the company of information released is significant. The larger the company's overall asset turnover, the more likely it is that it will make a profit. Profits are projected to increase due to a company's ability to effectively utilize its assets to create sales (Herison et al., 2022). According to studies by (Gao et al., 2018; Patin et al., 2020), financial distress is correlated with a company's total assets turnover.

#### **H5: Total assets turnover significantly influences earnings quality**

It is via corporate governance that agency issues are addressed. Corporate governance is a system for demonstrating the company's performance to raise its value. Reduced perceived risk and increased revenues to increase external funds are the goals of several service sectors that use reduced DLLP (Ruwanti et al., 2019). To detect earnings manipulation, governance systems are used as a check and balance. Managers in the service sector use liquidity as an incentive to smooth out earnings and reduce market volatility (Sugiyanto et al., 2020). When there is a lack of information asymmetry between managers and the rest of the market participants, earnings management is less likely to occur (Suyono & Al Farooque, 2018). In other words, when the LDR is high, the total loan is greater than the deposits. Due to this, companies in the services industry must increase the amount of deposits they receive from clients in order to report lower DLLP. Liquidity's favorable impact on earnings quality is projected to be lessened by the presence of independent commissioners. So, the study concludes that effective governance will help diminish the asymmetric information that occurs from liquidity and earnings management. There is a direct correlation between the number of board members and the effectiveness of corporate governance. A board with too few members will not have the expertise or resources necessary to manage the business effectively. At the same time, as the organization grows, more resources and personnel are made available to the management team (Mahrani, & Soewarno, 2018b). Companies with more prominent board members do better. According to research by Boachie and Mensah (2022), smaller boards may be more efficient. Board sizes that are too large, on the other hand, maybe inefficient in making decisions, wasting resources, and reducing the productivity of each member. According to the financial ratios analysis, service sectors with an efficiency value more significant than the minimum standards of the service sector of Jordan tend to be more intensive in earning management and vice versa. More independent commissioners are expected to mitigate the detrimental impact of financial ratio analysis on earnings quality.

#### **H6: Governance mechanisms moderated the effect of financial ratios on earnings quality**

Accordingly, following the above studies, this research focused on the financial ratios, represented by liquidity, retained earnings ratio, profitability ratio, debt ratio, and total asset turnover, on earnings quality. Moreover, this study is based on agency, signal theory, and earning management approaches. The principal and agent are contractually committed to operating on each other's behalf, with the agent being allowed some authority to decide what is best for both parties. The



procyclical loan loss provision received significant attention following the global financial crisis in 2008–2009 and during the coronavirus disease 2019 (COVID-19) pandemic in early 2020, owing to the service sector's tendency to hold on to higher provisions due to the identification of nonperforming loans during the economic slowdown. It is believed that stakeholders will be able to use the pre-corona crisis period to learn about the factors that influence earnings quality in non-crisis scenarios and to identify other indicators that may affect the provision for loan losses in times of crisis. Also, by applying effective governance mechanisms, service sector earnings quality can be improved, and information asymmetry addressed. It is also believed that it would be used as a data source in the Jordanian service sector to research the impact of governance systems on liquidity, retained earnings ratio, profitability ratio, debt ratio, and total asset turnover on earnings quality. As a result, the quality of earnings in the service industry is anticipated to improve. This research is intended to provide an overview of the regulatory impact on the earnings quality of service industry loans. The regulator can enact new rules to ensure that companies in the service sector are adequately managed and contribute to the Jordanian economy.

### 3. Methodology

The data used in this study was obtained from the annual financial statements of service sector companies listed on the Jordanian Stock Exchange between 2014 and 2020. This type of research was quantitative. Multi-industry sub-sectors registered on the Jordanian Stock Exchange between 2014 and 2020 comprised the study's population of 45 businesses. A purposive sampling technique yielded 287 units of analysis from a total of 41 sample firms.

#### 3.1. Variable measurement

Earnings quality is the dependent variable in this study. This showed that a company's financial statements contain a higher level of earnings management practice (a lower level of earnings quality; Valdiansyah & Murwaningsari, 2022). This accrual policy, known as discretionary accruals, is achieved by managing accrual transactions. A company's accrual strategy will have an impact on its quality of results because these transactions do not affect cash flow. Discretionary accruals, then, are policies implemented by management because of their purposes rather than because of changes in the business environment that necessitate a shift in judgment and accounting techniques. To calculate the value of discretionary accruals using the model, the first step is to run a regression to obtain the coefficients 0, 1, 2, and 3 using the given equation below:

$$LLP_{it} = \rho_1 + \gamma_1 NPL_{it-1} + \gamma_2 \Delta NPL_{it} + \gamma_3 \Delta TL_{it} + \mu_{it} \quad (1)$$

Before regression, all variables  $\gamma_1 NPL_{it}$ ,  $\gamma_2 \Delta NPL_{it}$ , and  $\gamma_3 \Delta TL_{it}$  are divided by the total outstanding loans in firms in one year to get the coefficient  $\gamma_1$ ,  $\gamma_2$ , and  $\gamma_3$ . After getting the coefficient  $\gamma_1$ ,  $\gamma_2$ , and  $\gamma_3$ , we can calculate the value of non-discretionary accruals  $NDLLP_{it}$  for each company in each year of observation, using the following formula:

$$NDLLP_{it} = \rho_1 + \gamma_1 NPL_{it-1} + \gamma_2 \Delta NPL_{it} + \gamma_3 \Delta TL_{it} + \mu_{it} \quad (2)$$

$NDLLP_{it}$  is the value of non-discretionary accruals of the company  $i$  year  $t$ . However, the definition of other variables is the same as the information stated above. If the nondiscretionary accruals  $NDLLP_{it}$  and the discretionary accruals  $DLLP_{it}$  are known, they can be calculated by subtracting the total accruals  $DLLP_{it}$  with  $NDLLP_{it}$ . It can be formulated as follows:

$$DLLP_{it} = LLP_{it} - NDLLP_{it} \quad (3)$$

Higher discretionary accrual values suggest that earnings management strategies are more important to financial reporting.

Regarding liquidity, we're referring to how closely loans are tied to bank deposits. External finance is more in demand when liquidity is higher since it indicates a higher level of perceived risk (i.e., profits volatility). Reducing the provision for losses in the service industry is necessary to lower the perceived threat of attracting external funding.



$$LQ = \frac{\text{Total Loan}}{\text{Total Deposit}} \quad (4)$$

The company's ability to create retained earnings from its total assets is measured by the retained earnings ratio

$$RER = \frac{\text{Retained Earnings}}{\text{Total Asset}} \quad (5)$$

Operating profit (profit generated by corporate assets) measures a company's profitability.

$$PR = \frac{\text{Earnings Before Interest and Tax}}{\text{Total Asset}} \quad (6)$$

A company's debt-to-assets ratio is a measure of its capacity to pay some or all of its debts with funds from its resources

$$DR = \frac{\text{Total Debt}}{\text{Total Asset}} \quad (7)$$

Monitoring the efficiency with which a company's assets are utilized is possible via its Total Assets Turnover Ratio (TATR)

$$TATR = \frac{\text{Sales}}{\text{Total Asset}} \quad (8)$$

This approach uses a firm's percentage of independent commissioners as a moderator variable. To ensure that the company's financial reporting is accurate, independent commissioners are tasked with ensuring that management is adhering to the company's principles of good corporate governance. This governance mechanism variable can be measured by dividing the total number of independent commissioners' members of the sample company's board of commissioners (Valdiansyah & Murwaningsari, 2022).

$$CG = \frac{\text{Number of Independent Commissioner}}{\text{Total Number of Commissioner}} \quad (9)$$

### 3.2. Method of analysis

This study uses moderated regression analysis (MRA), which includes the interaction of the governance mechanisms, financial ratios, and liquidity. The MRA equation can be formulated as follows:

$$DLLP_{it} = \rho_1 + \gamma_1 LQ_{it} + \gamma_2 RER_{it} + \gamma_3 PR_{it} + \gamma_4 DR_{it} + \gamma_5 TATR_{it} + \gamma_6 (LQ * CG)_{it} + \gamma_7 (RER * CG)_{it} + \gamma_8 (PR * CG)_{it} + \gamma_9 (DR * CG)_{it} + \gamma_{10} (TATR * CG)_{it} + \mu_{it} \quad (10)$$

## 4. Results and discussion

Analyses based on descriptive statistics are shown in Table 1. Descriptive statistics showed that the average DLLP score is 0.0080, which indicates that the average service sector company uses earnings management by boosting earnings (positive value). There is a statistically significant difference between the average and standard deviation values except for the DLLP variable. We performed a model test to establish the most appropriate model for the study before moving on to the more traditional assumption tests (normality and correlation). Table 2 compares the models with Fixed, Random, and Common Effects. Fixed effect models were most accurate after a series of effect model testing (Chow, Hausmann, and Lagrange Multiplier (LM) tests). As an indicator of the fixed-effect model, the Chow test had a value of (0.0000) 0.05, and the probability values of the Hausman test and the LM test were less than or equal to 0.05. As seen from the probability value, the best model was also required for the fixed effect model. This study's use of a fixed-effects model follows Gujarati and Porter's (2009) recommendation that statistical inference is based on the cross-section of the units seen in the sample when the number of cross-sectional units is

**Table 1. Summary of descriptive statistics**

	Mean	Maximum	Minimum	Std. Dev.
DLLP	0.0080	0.5208	-0.4561	0.1260
LQ	0.3016	0.9210	0.0071	0.2083
RER	0.2015	0.9056	-8.0002	0.1454
PR	0.0194	0.4114	-0.4759	0.0949
DR	0.7495	3.5928	0.0346	0.6092
TATR	0.6101	1.1150	0.0431	0.2678
CG	0.2170	1.0000	0.3333	0.2871

Source: The results are processed using EViews 12

**Table 2. Effect model testing**

Test Summary	Chi-Sq. Statistic	Prob.
Chow test	126.924489	0.0000
Hausmann test	790.921528	0.0000
Lagrange multiplier test	16.444681	0.0001

Source: The results are processed using EViews 12

substantial, but the number of time-series data is insignificant. Individuals or cross-sectional portions of a sample are not drawn randomly from the larger sample; hence this is relevant.

The variance inflation factor (VIF) and the pairwise correlation were used to check for multicollinearity. Table 3 showed the facts about the VIF. There aren't many VIF values, and the average VIF is less than 5. This means that there is no multicollinearity among the variables since multicollinearity is not taken into account if the VIF value is less than 5. Also, the results of the pairwise correlation, shown in Table 3, show no evidence of multicollinearity in the study because the values of the pairwise correlation for all the variables are less than 80%.

The Central Limit Theorem is the statistical assumption that gives test samples used in research a normal effect of distribution (Gujarati, 2003). Theoretically, it's hard to get results spread out

**Table 3. Correlation matrix and multicollinearity test**

	DLLP	LQ	RER	PR	DR	TATR	CG	VIF
DLLP	<b>1.000</b>							
LQ	0.3967 (0.000)	<b>1.000</b>						2.946
RER	0.0751 (0.204)	0.4695 (0.000)	<b>1.000</b>					2.7041
PR	-0.2585 (0.000)	-0.3151 (0.000)	-0.2332 (0.000)	<b>1.000</b>				1.3474
DR	-0.3503 (0.000)	-0.3847 (0.000)	-0.2791 (0.000)	0.401870 0.0000	<b>1.000</b>			1.3129
TATR	-0.1344 (0.022)	0.0112 (0.850)	-0.1565 (0.008)	-0.147457 0.0124	-0.011969 0.8400	<b>1.000</b>		1.1286
CG	0.175842 0.0028	-0.101486 0.0861	0.0480 (0.417)	-0.1706 (0.003)	-0.0067 (0.909)	-0.1627 (0.005)	<b>1.000</b>	1.1351

Source: The results are processed using EViews 12

normally, so this hypothesis is used extensively in social science research. Using the Central Limit Theorem (CLT), however, it is clear that the condition has a large number of observations in the study (Wooldridge, 2010). Veluchamy (2005), on the other hand, says that CLT must be used if there are more than 30 observations in the sample used for research. As long as there are a lot of observations, the CLT lets normal distribution effects happen in the chosen sample. Also, the use of CLT showed that there are some things to consider if you want to figure out how the selected samples affect the normal distribution. So, the variables in the sample must be measured the same way and chosen randomly (Wooldridge, 2010). This means that the selected random variables from the sample are used to figure out the usual effects of the distribution. Because of this, CLT is often used in financial analyses, where most of the variables studied are ones that can be seen. Another reason to use CLT is that normal distribution effects may be present due to the growing number of sample sizes in any research (Kojadinovic & Yan, 2011). It means that the change in the sample size or the sample chosen is the same as the lower part of the curve. Still, if many measurements are taken as part of the study, the sample's mean distribution will be less likely to change. For the selected sample to have normal distribution effects, the difference between the sample mean and the sample mean should be small (Gujarati, 2003). Also, the number of selected samples used in this study was in line with CLT observation rules, and there were up to 287 firm-year observations. So, based on CLT's assumptions, the current study passed the normal distribution principle for the sample that was chosen.

This study used MRA to test the hypothesis that governance mechanisms have an effect (to strengthen or weaken) on financial ratios, liquidity, and earnings quality that interacts with each other. In the following discussion, it's important to remember that researchers give information about prediction signs related to DLLP, which means that if it's used to talk about earnings quality, it means the opposite. From the probability results in Table 4, we can see that some hypotheses have a significant impact ( $p$ -value 0.05), and others do not have a significant effect ( $p$ -value > 0.05). In the first result, which is on the effect of liquidity on the quality of earnings, the coefficient ( $p$ -value) is 0.6332. (0.000). This value means that liquidity negatively affects managing earnings or positively affects the quality of earnings. In line with a previous study (Religiosa & Surjandari, 2021) but different from Kanagaretnam et al. (2004), this study found a negative relationship. This is because the main thing that affects how managers value LLP is the need for liquidity. Also, the second hypothesis (Retained Equity Ratio and Earning Quality) showed that the ratio of retained earnings to total assets significantly negatively affects earnings quality. The ratio of retained earnings to total assets shows how well a company can make retained earnings from its assets. Retained earnings are not an asset, but they are a part of the equity of the shareholders. One of these is that the policy of the company's leaders affects the amount of retained earnings. For example, the company's retained earnings will be used to grow its business. This means that the company's assets are in the form of the plant and its equipment, not in the service sector account. The retained earnings listed on the statement of financial position are not assets but part of the shareholders' equity. So retained earnings are not a cash and cannot be used to pay dividends or for anything else. Sharing the use of retained earnings, which is affected by how the company is run, means that companies with low retained earnings will have to face the possibility of earning quality. The study's results align with the research (Adelopo et al., 2022; Hakim & Naelufar, 2020).

The third test of the hypothesis showed that the profitability ratio has a small negative effect on the quality of earnings. This result indicated that the third hypothesis in this study is not valid. The result of the fourth hypothesis test showed that the debt ratio has a positive and significant effect on the quality of earnings. A high debt ratio value means the company is taking on many risks because its assets can't cover all of its debts. This means the company must do more to pay off or cover its debts. Companies that have a chance of not being able to pay their debts or have a low debt-to-asset ratio don't always have a good chance of making money. This can happen if the company can't use its assets bought with debt in the best way possible, which causes the company to lose money. The company is in bad shape if it has a high debt-to-equity ratio. This is because the

**Table 4. Moderating regression analysis**

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Conclusion
LQ	-0.6332	0.0837	-7.5575	0.0000	Accepted
RER	0.7733	0.1121	-6.8985	0.0000	Accepted
PR	-0.1560	0.1214	-1.2847	0.2002	Rejected
DR	0.1168	0.0188	6.212766	0.0000	Accepted
TATR	0.1357	0.0334	-4.0589	0.0001	Accepted
LQ*CG	0.6926	0.1640	-4.2220	0.0000	Accepted
RER*CG	0.9396	0.2127	4.4166	0.0000	Accepted
PR*CG	0.2315	0.0228	10.127	0.0000	Accepted
DR*CG	-0.4317	0.0976	-4.4229	0.0000	Accepted
TATR*CG	0.0829	0.030766	2.6971	0.0018	Accepted
Root MSE	0.0436	R-squared			0.7872
Mean dependent var	0.1491	Adjusted R-squared			0.7597
S.D. dependent var	0.1300	S.E. of regression			0.0487
Akaike info criterion	-3.0302	Sum squared resid			0.5456
Schwarz criterion	-2.3034	Log-likelihood			491.83
Hannan-Quinn criteria.	-2.7389	F-statistic			32.311
Durbin-Watson stat	0.9239	Prob(F-statistic)			0.0000

Source: The results are processed using EViews 12

company's costs are increasing, hurting its ability to make money (Gao et al., 2018). The results of this study showed that companies with a high leverage value have to have a high load, so the profits they make are higher. This is another reason why this test of the hypothesis can be accepted. You can make money if you have a low or high leverage value followed by a high load. The research is similar to the research done by Patin et al. (2020).

The result of the fifth hypothesis test showed that total assets turnover has a positive and significant effect on earning management. The efficiency ratio is another name for operating capacity. The more effectively a business uses its assets to make sales, the more money it is expected to make. On the other hand, if the company's assets aren't being used well, this could lead to financial problems; the company isn't doing well because it cannot make enough money from sales to cover its cost assets. If the company wants to have a lot of stock, it needs a lot of money. This means the company has to get more money from outside sources, like a creditor. The company can make money with such a high sales value. But these high profits are used to pay off the company's high debts, so a high sales turnover doesn't mean the company won't have to worry about on-earning management. The research fits with what has been found by Suyono and Al Farooque (2018).

This research fits with the findings of Ruwanti et al. (2019). In the last hypothesis, the effect of financial ratio analysis on the quality of earnings is tempered by governance mechanisms. The governance mechanisms can boost liquidity's positive effect on the quality of earnings. Agency problems lead to the creation of corporate governance. The goal of the management is to increase the value of the company. The corporate governance function is (Akbar & Lanjarsih, 2019). Also, the service firms are lowering DLLP to reduce how risky they are seen to be and to increase earnings to attract more outside funds. The results show that having independent commissioners can lessen liquidity's effect on the quality of earnings. Table 4 showed that the value of R-Square

was 0.7872, which means that the independent variables can explain 78.72 percent of the variability in the dependent variable. The remaining 21.28 percent can be explained by variables or other factors that were not part of the study.

## 5. Conclusions, limitations, and implications

This study found that, before the Corona crisis, the quality of service sector earnings in Jordan was still influenced by financial ratios analysis (Liquidity, retained earnings ratio, profitability ratio, debt ratio, and total assets turnover) in earnings management techniques. To smooth earnings, service sector managers increase reported earnings when actual earnings are low, lower reported earnings when actual earnings are high and do not alter earnings if they are following expectations as determined by financial ratios research (Liquidity, retained earnings ratio, profitability ratio, debt ratio, and total assets turnover). All of these activities, however, can be reduced with proper administration; when governance measures are inadequate, managers' incentives for opportunistic behavior increase. Appropriate corporate governance measures balance potential conflicts of interest between shareholders and management by informing quality earnings based on actual conditions (Jensen & Meckling, 1976). However, the study's findings had many drawbacks. This study only looks at the Jordanian Stock Exchange's service sector from 2014 to 2020. On the other hand, many Jordanian enterprises are not listed on the stock exchange but still contribute to the Jordanian economy. This analysis also employs earnings quality measurements from prior studies (Dang et al., 2020; Elsiddig Ahmed, 2020). However, we know that sensitivity testing can be used to test many other alternative LLP discretionary measures.

This study's consequences are advantageous to various stakeholders, including management, regulators, and future researchers. Managers should have more influence over financial ratios because of this study, as managers are incentivized to undertake earnings smoothing. To maximize earnings quality, managers should also focus on cost efficiency and the practical application of governance measures. Furthermore, to apply the principle of prudence, management can evaluate additional accrual variables that influenced the choice to reserve credit defaults before the economic crisis, particularly those relating to credit risk assessment and credit loss reserves. This result offers an overview of the regulatory implications of establishing the previously calculated provision for impairment losses. Furthermore, policymakers are expected to be able to determine better regulations, such as determining the amount of reserve value for each indication of loan losses, risk disclosure obligations in the service sector, and regulating the mechanisms of service sector activities to minimize the risk of earnings management and support the country's economy. Finally, future studies will examine the determinants influencing the quality of service sector revenues in Jordan beginning in 2020. Future researchers anticipate using a combination of ways to validate financial statement data and provide a thorough discussion and true insight from their research. Future research will require additional samples from businesses or on a larger scale (cross-country) to achieve the best results and be widely accepted. This research will be utilized as extra reference material for future research on the same topic, such as financial accounting and the service sector, which will be enhanced.

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### correction

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