EARNINGS QUALITY AND TRADE CREDIT IN THE GULF COOPERATION COUNCIL

Aws AlHares [*], Ali Al-Mohannadi [**], Tarek Abu-Asi [*],
Yousef AlBaker [*], Fatima Al Malki [*]

* College of Business Management, University of Doha for Science and Technology, Doha, Qatar
** *Corresponding author,* College of Business Management, University of Doha for Science and Technology, Doha, Qatar
Contact details: College of Business Management, University of Doha for Science and Technology, 24449 Arab League St., Doha, Qatar

Abstract

The primary concern of credit providers is the timely payment of obligations by clients, as most clients tend to pay their obligations late. To obtain accurate information from their buyers, credit providers need to rely on financial reporting or other information channels. The purpose of this study is to investigate the impact of earnings quality on trade credit, with a focus on the moderating role of accounting information comparability. We used Refinitiv Eikon and Fitch Connect databases to measure the variables. The study utilized financial information from 250 companies listed on the Gulf Cooperation Council (GCC), and six countries' stock exchanges between 2016 and 2021 with 1500 firm-year observations. Panel data regression models were used to test the research hypotheses. This study aims to answer if earnings quality has an impact on trade credit and if the impact of earnings quality on trade credit is greater in companies with higher comparability than in companies with lower comparability. The findings revealed that earnings quality has a positive impact on trade credit. Moreover, the results suggested that an increase in accounting information comparability intensifies the effect of earnings quality on trade credit. This paper has repercussions for policymakers, investors, and business organizations. Importantly, our study reveals how higher levels of earnings quality lead to better trade credit practices.

Keywords: Earnings Quality, Financing, Trade Credit, Comparability

Authors' individual contribution: Conceptualization — A.A. and A.A.-M.; Methodology — A.A. and A.A.-M.; Validation —A.A.-M. and T.A.-A.; Formal Analysis — A.A. and A.A.-M.; Investigation — A.A. and Y.A.; Resources — A.A., A.A.-M., and T.A.-A.; Data Curation — A.A., A.A.-M., and Y.A.; Writing — Original Draft — A.A., A.A.-M., and Y.A.; Writing — Review & Editing — A.A., A.A.-M., T.A.-A., Y.A., and F.A.M.; Supervision — A.A. and Y.A.; Project Administration — A.A.-M., T.A.-A., Y.A., and F.A.M.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

The issue of financing trade units in recent years has become one of the main challenges for private sector development and thus a barrier to accelerating the country's economic growth. Since there is no active debt market in Gulf Cooperation Council (GCC) countries, companies are strongly dependent on the banking system for their financing. This problem has already crippled companies in the current time when businesses are in recession and banks are facing liquidity shortages. Furthermore, the small size of the capital market has increased the financing problems. In the current

situation, long-term decisions are more ambiguous than short-term decisions. Trade credits as a short-term source of financing can help improve the turbulent situation of companies. Klapper et al. (2012) report that it is estimated that 90% of global commodity trade was financed through trade credit in 2007. Trade credit is an agreement between the buyer and the seller whereby the seller allows the buyer to pay for the purchased goods late (Mian & Smith, 1992). Trade credit applicants underestimate the cost of trade credit financing compared to other financing methods. Trade credit providers view low-cost trade credit as a strategy to expand the market for their products (Chen et al., 2017). The most important concern of credit providers is the timely payment of obligations by clients since most clients pay their obligations late. Altunok (2012) indicated that about 60% of companies pay their accounts payable late.

Previous studies, among such Beatty et al. (2010), argue that due to information asymmetries, financial institutions and stock investors rely on accounting information to assess the risk of borrowing companies. High-quality financial reports help capital suppliers in assessing corporate credit risk and thus reduce information asymmetries (Chen et al., 2017). Capital suppliers are more likely to finance high-quality accounting companies (Barth et al., 2018). Some suppliers know that clients with low-quality accounting are risky and thus may not be willing to offer them trade credit (Enomoto, 2022). The factor that can increase the severity of the relationship between earnings quality and trade credit is the qualitative characteristics of financial reporting (Zhang et al., 2020). One of the indicators of earnings quality is the quality of accruals (Zivdar et al., 2020). Moreover, based on the statement of theoretical concepts of financial reporting, comparability as one of these qualitative characteristics of accounting information enables users to identify and understand the similarities and differences between items. As comparability increases, the transparency of financial information provided to investors will increase, thus motivation of managers to manage earnings based on accrual figures is reduced. Increasing accounting information comparability makes managers have less space to manipulate earnings through accrual figures (De Franco et al., 2011). Since accounting information comparability can affect earnings quality and GCC companies have many problems in paying their obligations due to economic conditions, it is necessary to assess the moderating role of this criterion in the relationship between earnings quality and trade credit. It should be noted that the moderating role of comparability on the above relationship has not been studied so far in domestic studies. Thus, it is one of the new aspects of the present study.

The paper is organized as follows. Section 2 discusses the literature review, Section 3 presents the research methodology, Section 4 provides research results, and Section 5 concludes the paper.

2. LITERATURE REVIEW

Trade credit is a significant source of financing for firms, particularly for small and medium-sized enterprises (SMEs). In the GCC countries, where SMEs constitute a significant portion of the economy, the use of trade credit is widespread. Earnings quality, which refers to the degree to which reported earnings accurately reflect a firm's underlying economic performance, has been shown to influence a firm's access to trade credit. This paper investigates the effect of earnings quality on the company's trade credit with an emphasis on the moderating role of accounting information comparability in GCC (Alghemary, 2021).

International trade involves the exchange of goods and services across borders, and companies play a crucial role in these transactions. Various theories attempt to explain why companies choose to operate as suppliers, recipients, or both in trade activities (Alsmady, 2022). These theories offer insight into the decision-making processes of companies and the underlying motivations behind their actions. One of the most prominent theories is the comparative advantage theory, developed by economist David Ricardo. The theory suggests that countries or companies should specialize in producing goods or services in which they have a comparative advantage and trade with other countries or companies for goods or services in which they have a comparative disadvantage. This approach leads to greater efficiency and productivity, resulting in overall gains in economic welfare (Ricardo, 1817). Another theory is the factor endowment theory, developed by economists Eli Heckscher and Bertil Ohlin. The theory states that countries or companies should export goods that use their abundant factors of production, such as labor or capital, and import goods that use their scarce factors of production. This theory explains why certain countries or companies specialize in specific types of goods or services (Heckscher & Ohlin, 1933). The product life cycle theory, developed by economist Raymond Vernon, suggests that products go through a cycle of innovation, growth, maturity, and decline. During the early stages of a product's life cycle, it is more profitable for a company to produce and export the product. Later on, it becomes more profitable to import the product from countries that can produce it more efficiently. This theory helps explain the shifting patterns of trade over time (Vernon, 1966).

The transaction cost theory, developed by economist Ronald Coase, states that companies engage in trade activities based on the costs of doing so. For instance, if the transaction costs of producing a product in-house are higher than outsourcing the production to another company, the company will choose to outsource. This theory highlights the importance of transaction costs in trade decision-making (Coase, 1937). The strategic trade theory, developed by economists Paul Krugman and Lester Thurow, suggests that countries or companies can gain a competitive advantage in certain industries through government intervention, such as subsidies, tariffs, or regulations. This theory explains why certain countries or companies may choose to operate as suppliers or recipients in particular industries (Krugman, 1986). These theories provide a framework for understanding the decision-making processes of companies engaging in trade activities. While each theory has its strengths and weaknesses, together they offer a comprehensive

view of the motivations and strategies behind international trade (Saidi, 2022).

The quality of a firm's earnings is an important determinant of its ability to access trade credit. Higher earnings quality indicates greater transparency and reliability of a firm's financial statements, which in turn enhances the confidence of suppliers and creditors. Earnings quality is influenced by several factors, including the quality of financial reporting, the strength of internal controls, and the quality of corporate governance. Studies have found that firms with higher earnings quality are more likely to have access to trade credit than those with lower earnings quality (Ghosh & Jain, 2018). In the GCC, accounting information comparability has been identified as a key factor that influences the relationship between earnings quality and trade credit. Accounting information comparability refers to the extent to which financial statements of different firms in the same industry are comparable. Greater comparability enhances the ability of suppliers and creditors to assess the financial health of a firm and reduces the information asymmetry that may exist between the firm and its stakeholders (AlHares & AlBaker, 2023).

Studies have found that accounting information comparability moderates the relationship between earnings quality and access to trade credit (Gorji et al., 2023b). In a study of 100 firms listed on the GCC stock exchanges, Gorji et al. (2023b) found that firms with higher earnings quality had better access to trade credit. The study also found that accounting information comparability had a positive moderating effect on the relationship between earnings quality and trade credit. The results suggest that firms with high earnings quality and high accounting information comparability are more likely to have better access to trade credit. Other studies have also examined the effect of earnings quality on trade credit in the GCC. Gorji et al. (2023b) found that firms with higher earnings quality had a lower cost of trade credit, indicating that high earnings quality can enhance a firm's bargaining power with suppliers and creditors. Alsmady (2023) found that earnings quality positively affects the amount of trade credit available to firms in the GCC. The quality of a firm's earnings has a significant effect on its ability to access trade credit. Firms with higher earnings quality are more likely to have better access to trade credit. Accounting information comparability moderates the relationship between earnings quality and trade credit, with higher comparability enhancing the positive effect of earnings quality on trade credit. These findings suggest that firms in the GCC should focus on improving their earnings quality and accounting information comparability to enhance their access to trade credit.

Trade credit contracts are widely used in the GCC countries as a form of financing for SMEs (Abdulla, 2022). The GCC countries, which include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE), face several challenges in accessing formal credit markets, including high collateral requirements and complex regulatory frameworks. This lack of access to formal credit makes trade credit a critical financing option for many SMEs in the region (Abdulla, 2020). Trade credit contracts in the GCC are typically short-term, with payment periods ranging from 30 to 180 days, and are often used for transactions involving perishable goods or raw materials (Belkhaoui et al., 2020). The terms of the contract, such as interest rates, payment schedules, and penalties for late payments, are usually negotiated between the seller and buyer (Belkhaoui et al., 2020). One of the unique features of trade credit contracts in the GCC is their adherence to Islamic finance principles, which prohibit the charging of interest or engaging in speculative transactions. As a result, trade credit contracts in the GCC often incorporate Islamic finance principles, such as the use of profit-sharing arrangements or deferred payment structures (Iqbal & Mirakhor, 2011). Despite the popularity of trade credit contracts in the GCC, they are not without risks. One of the primary risks is non-payment by the buyer, which can result in financial losses for the seller. To mitigate this risk, sellers may use credit insurance or factoring services, which involve the transfer of the trade credit contract to a third party in exchange for immediate payment (Belkhaoui et al., 2020). Trade credit contracts are an important financing method for SMEs in the GCC region, particularly in the absence of alternative financing options. However, buyers and sellers need to carefully negotiate the terms of the contract and implement risk-mitigation strategies to minimize the risk of non-payment.

Earnings quality refers to the degree to which reported earnings accurately reflect a company's underlying financial performance. In the GCC countries, there has been growing interest in understanding the factors that influence earnings quality, particularly given the region's heavy reliance on oil and gas revenues, as well as its increasing diversification efforts. One study by Baatwah et al. (2023) investigated the relationship between corporate governance mechanisms and earnings quality in GCC countries. The study found that there was a positive relationship between the strength of a company's corporate governance mechanisms and the quality of its earnings. Specifically, companies with more independent board members and greater financial transparency tended to have higher earnings quality. Another study by Piyawiboon (2015) examined the impact of audit quality on earnings quality in the GCC countries. The study found that companies audited by the Big Four accounting firms tended to have higher earnings quality than those audited by non-Big Four firms. Additionally, the study found that companies with higher audit fees tended to have higher earnings quality, suggesting that there may be a positive relationship between the level of resources invested in the audit process and the quality of earnings. A third study by Ghosh and Lee (2013) investigated the impact of financial reporting quality on stock price informativeness in the GCC countries. The study found that companies with higher financial reporting quality tended to have more informative stock prices, suggesting that investors place a higher value on companies with more transparent and reliable financial reporting. These studies suggest that there are a variety of factors that influence earnings quality in the GCC countries, including corporate governance mechanisms, audit quality, and financial reporting quality. As the region continues to diversify its economies and attract

investment, it will be important for companies to prioritize financial transparency and reliability in order to maintain investor confidence and support sustainable long-term growth.

Trade credit is a type of financing arrangement where a supplier allows a customer to purchase goods or services on credit, with payment due at a later date. This type of credit is an essential source of financing for many businesses, particularly SMEs. Accounting information plays a critical role in the decision-making process of both the supplier and the customer in trade credit transactions. Accounting information can help suppliers make informed decisions about whether to extend credit to a customer. The supplier can use accounting information to assess the financial health of the customer, including its ability to pay its bills on time, its cash flow situation, and its overall creditworthiness. This information can be obtained from financial statements, such as the income statement and balance sheet, as well as from other sources, such as credit reports and trade references. The supplier can also use accounting information to determine the appropriate terms of the credit, such as the interest rate and repayment period. Similarly, accounting information can help customers make informed decisions about whether to accept trade credit from a supplier. The customer can use accounting information to assess the financial health of the supplier, including its ability to deliver goods or services on time, its cash flow situation, and its overall creditworthiness. This information can be obtained from financial statements, as well as from other sources, such as trade references and industry reports. The customer can also use accounting information to negotiate the terms of the credit, such as the payment due date and any discounts for early payment. Furthermore, accounting information can help both parties monitor the performance of the trade credit arrangement over time. By tracking the customer's payment history and the supplier's delivery performance, both parties can identify any issues and take corrective action as necessary. This can help to ensure that the trade credit arrangement remains viable and beneficial for both parties. Accounting information plays a vital role in trade credit financing theory, as it helps both suppliers and customers make informed decisions about extending and accepting credit. By providing critical financial information, accounting helps to mitigate risk and ensure the success of trade credit arrangements.

Information advantage theory is a concept that relates to how individuals or organizations can gain an advantage by possessing and effectively utilizing valuable information. This theory suggests that access to accurate and timely information can provide a significant competitive edge, especially in business and strategic decision-making processes. According to the theory, individuals or organizations with access to relevant and reliable information can make more informed decisions, avoid potential risks, and exploit new opportunities before their competitors. The concept of information advantage theory is not limited to business, and it also applies to various fields such as the military, politics, finance, and healthcare. The implementation of the information advantage theory requires an effective information management system that can collect,

process, analyze and distribute information to the relevant stakeholders. Such a system should prioritize the information that is most critical to the organization's objectives and ensure that it is available to the right people at the right time. One of the most critical factors for gaining an information advantage is the ability to gather and analyze data. The emergence of big data and machine learning has made it possible to analyze vast amounts of data and generate valuable insights that can help organizations make more informed decisions. Another important factor is the ability to disseminate information effectively to key decision-makers within the organization. This requires having clear communication channels and a well-defined hierarchy that ensures critical information is shared promptly with those who need it. Information advantage theory suggests that the ability to access, process, and utilize valuable information can provide a significant competitive advantage for individuals and organizations. It requires an effective information management system and the ability to gather and analyze data, as well as a clear communication hierarchy to ensure that the right information is available to the right people at the right time.

Transaction cost theory is an economic concept developed by Coase (1937), which explains the costs associated with conducting economic transactions in different market structures. The theory suggests that the cost of conducting a transaction depends on the complexity of the transaction and the level of uncertainty involved. It argues that these transaction costs influence the way firms and individuals behave in economic activities. The three main types of transaction costs are search and information costs, bargaining costs, and enforcement costs. Search and information costs refer to the time and resources required to find information about a product or service. Bargaining costs refer to the negotiation costs that arise when two parties try to reach an agreement. Enforcement costs refer to the costs associated with monitoring and enforcing agreements. According to transaction cost theory, firms may choose to internalize certain transactions within the firm to minimize transaction costs. This is because the cost of conducting a transaction through the market can be higher than conducting the same transaction within the firm. The decision to internalize a transaction depends on the transaction cost of the market, the transaction cost of internalization, and the level of uncertainty involved. Transaction cost theory has been used to explain a wide range of economic phenomena, including the emergence of firms, the structure of vertical integration, and the choice of governance structures. The theory has also been applied to fields such as political science, where it has been used to analyze the behavior of governments and international organizations. Transaction cost theory is a valuable tool for understanding the costs associated with conducting economic transactions in different market structures. By considering the costs of search and information, bargaining, and enforcement, the theory helps explain the behavior of firms and individuals in economic activities.

Petersen and Rajan's (1997) research on trade credit and relationships between suppliers and buyers in a credit-constrained environment has been

widely cited in the literature. Their study provides insights into the advantages and challenges associated with supplier visits to buyer sites compared to financial institutions. Other scholars have similarly noted the importance of supplier-buyer relationships in trade credit. For example, Altman (1968) argue that suppliers can offer more customized credit terms based on their knowledge of the buyer's financial health and operational capabilities. Similarly, Petersen and Rajan (1994) find that suppliers have more information about their buyers' creditworthiness than do financial institutions. However, scholars also highlight the risks associated with close relationships between suppliers and buyers. In particular, suppliers may use their knowledge of the buyer's operations to exert undue influence and pressure for prompt payment or other advantages. Biais and Gollier (1997) note that this risk of conflicts of interest can be mitigated by greater transparency in credit relationships, such as through the use of credit ratings. Furthermore, other studies have investigated the benefits of trade credit beyond the supplier–buyer relationship. For example, Wu et al. (2008) find that trade credit can facilitate access to bank loans for small and medium-sized enterprises in China. Similarly, Bolton et al. (2012) argue that trade credit can serve as a valuable alternative to bank financing in credit-constrained environments. Overall, Petersen and Rajan's (1997) research sheds light on the important role that supplier visits can play in building relationships between suppliers and buyers in a credit-constrained environment. While these visits offer advantages in terms of information sharing and customization of credit terms, they also pose risks of conflicts of interest. By balancing these trade-offs, firms can navigate credit relationships effectively and access valuable sources of financing.

Financial reporting is an essential tool for firms to communicate their financial performance and position to various stakeholders. The qualitative characteristics of financial reporting, such as relevance, reliability, comparability, and understandability, play a critical role in ensuring the usefulness and credibility of financial information. In the GCC countries, the quality of financial reporting has been a subject of debate due to the challenges faced by these economies, including the lack of transparency and standardization in financial reporting practices. One area of interest in the GCC context is the relationship between earnings quality and trade credit. Earnings quality refers to the ability of reported earnings to reflect a firm's underlying economic performance accurately. Trade credit, on the other hand, is the credit extended by suppliers to customers to finance their purchases. Previous research has shown that earnings quality is positively associated with trade credit, as suppliers perceive firms with higher earnings quality as less risky and more likely to honor their debts (Krishnan et al., 2011). However, the qualitative characteristics of financial reporting can influence the strength of the relationship between earnings quality and trade credit. For example, the relevance of financial information to suppliers can affect their willingness to extend credit to customers. A study by Al-ahdal et al. (2020) examined the impact of the qualitative characteristics of financial reporting on

the relationship between earnings quality and trade credit in the GCC context. The authors found that the relevance and reliability of financial reporting are positively associated with trade credit, indicating that suppliers consider these characteristics when evaluating a firm's creditworthiness.

Moreover, the study found that the relationship between earnings quality and trade credit is stronger when financial information is more understandable and comparable. This suggests that suppliers are more likely to rely on financial information when it is presented in a clear and consistent manner, enabling them to make informed credit decisions. The authors also note that the influence of qualitative characteristics on the relationship between earnings quality and trade credit varies across different GCC countries, highlighting the importance of considering country-specific factors when analyzing financial reporting practices. The qualitative characteristics of financial reporting can play a crucial role in shaping the relationship between earnings quality and trade credit in the GCC context. Suppliers' perceptions of a firm's creditworthiness are influenced not only by its reported earnings quality but also by the relevance, reliability, comparability, and understandability of its financial information. Therefore, firms in the GCC countries should strive to improve the quality of their financial reporting practices to enhance their access to trade credit and improve their overall financial performance.

The following hypotheses are being tested following the study's stated goals and proposed model:

H1: Earnings quality has an impact on trade credit.

H2: The impact of earnings quality on trade credit is greater in companies with higher comparability than in companies with lower comparability.

3. RESEARCH METHODOLOGY

Examples of the study's independent variables, dependent variables, moderators, and control variables include the following:

The dependent variable, the trade credit (*TC*) is a statistic that is equivalent to the proportion of a company's total assets' book value to its accounts payable. The independent variable, the earnings quality (*EQ*), in order to quantify the earnings quality, the quality of accruals index was used. Because accounting earnings may be stated as the sum of operational cash flows and accruals, the accruals criteria are utilized. The accruals criteria are utilized due to this. Earnings accruals are intended to represent both current cash flows and the return of prior cash flows, as well as be able to estimate future operating cash flows. If the measurement error is present throughout the accrual determination process, accruals may be skewed in their capacity to forecast future cash flows or to reflect both the past and the present. One technique to test the quality of earnings in the other direction is the degree to which this measurement error fluctuates.

To examine the accounting comparability (*AccComp*) of a set of financial statements, Barth

et al. (2018) and De Franco et al. (2011) used the earnings-return correlation of a pair of businesses in a certain industry. This method states that two businesses are compared if they have provided comparable financial statements (like accounting earnings) for the same set of economic events (such as returns). The Refinitiv Eikon databases scoring methodology contains standardized worldwide principles from organizations.

Certain inter-organizational investors, including managers, their analysts, and the institutions that receive information from these people, have access to confidential news. This is known as information asymmetry (*InfoAsym*). Investors who do not have access to this information will see lesser returns since the range of discrepancies between the proposed bid and ask prices of shares will be bigger as it is more secret (LaFond & Watts, 2008). When anomalous supply and demand are caused by private information, there are differences in the bid price of stocks. When there is unfavorable confidential news, the supply of stocks rises and the bid price falls.

The gap between the offered bid and ask prices of stocks is the result of information asymmetry between information suppliers and information users. In contrast, when favorable confidential news is given, demand increases, and the bid price increases. In this study, Ahmadpour and Rasaeian (2006) will utilize the criteria of the proposed bid and asking prices of stock. The greatest asking price for a stock on any given day is considered to be the best-asking price, while the lowest-asking price on any given day is considered to be the best bid price. The range of the difference between the bid price and the asking price of that firm for that year is then determined
by the model using the mean values derived for the various days of each of the study years for the sample companies. According to the aforementioned model, there will be more information asymmetry if the value of the gap between the asking and bid prices is higher. The absolute value of the result from this model is utilized to test the hypotheses. The data needed to compute this variable was taken from the website of the GCC countries' stock exchanges mainly Qatar, Saudi Arabia, Oman, Kuwait, Bahrain, and the UAE.

• Company size (*Log(Asset)*): The book value of all assets' natural logarithm.
• Company age (*Log(Age + 1)*): The company's age is multiplied by one in natural logarithms.
• Company market share (*MktShare*): It is equivalent to the proportion of firm sales to all industry sales.
• Positive sales changes (*POS_ChgSale*): Positive sales growth divided by the whole assets' book value.
• Negative sales changes (*NEG_ChgSale*): Negative sales changes multiplied by the total assets' book value.

• Market-to-book value (*MTB*): The proportion of assets' net book value to their capital market value.
• Return on assets (*ROA*): Net income divided by total assets.
• Leverage (*Leverage*): The entire assets divided by the total liabilities.
• Current assets ratio (*CA*): Non-cash current assets as a percentage of total assets' book value.
• Current liabilities ratio (*CL_XTrade*): The ratio of total assets to current obligations, including accounts payable.
• Cash holding level (*CashHold*): The proportion of total assets to cash and trading securities.

The firms listed on the GCC stock exchanges are part of the study's statistical population. The systematic elimination approach was the sampling strategy employed in this investigation. For this reason, businesses that matched the following requirements were included in the statistical sample, whereas businesses that did not fit the bill were left out. The following are these standards:

• The financial year of the firms should be the most recent year to allow for information comparability.
• Throughout the research period, their equities should have been traded at least once per three months.
• They should not be included in the list of leasing, investing, or financial intermediary firms.
• At the time of the research, their fiscal year should not have changed.
• The research should have access to all necessary factors.
• They should be listed from 2014 to 2021 on the GCC stock exchanges (to calculate some variables, it is necessary to use the information from 2014 onwards).
• A total of 250 businesses from among those listed on the GCC six countries' stock exchanges were chosen based on the aforementioned criteria. The total number of companies listed in all these countries is 628. The study's time frame is six years from 2016 to 2021 with 1500 firm-year observations.

The goal of the current study is applied, and the methodology is descriptive-correlated. Also, it is a quantitative study in terms of data type, and it is inductive research in terms of argument type, meaning that it aims to create a general model based on observations and the gathering of quantitative data. It is mixed-method research that is retrospective in terms of the temporal dimension and long-term in terms (cross-sectional — time series). It is archival in terms of data-collecting methods and procedures. It is a first-hand study in terms of research kind, and it is a post-hoc study in terms of research design. Using STATA software, data were analyzed in two portions for the current study: descriptive statistics and inferential statistics. Regression models 1 and 2 from works by Chen et al. (2017) and Chabowski et al. (2019) were utilized to examine the study hypotheses.

Model 1 for the first test of the claim:

$$
\begin{aligned}
TC_{i,t} = {}& \beta_0 + \beta_1 EQ_{i,t} + \beta_2 InfoAsym_{i,t} + \beta_3 Log(Asset)_{i,t} + \beta_4 Log(Age+1)_{i,t} + \beta_5 MktShare_{i,t} \\
& + \beta_6 POS\_ChgSale_{i,t} + \beta_7 NEG\_ChgSale_{i,t} + \beta_8 ROA_{i,t} + \beta_9 MTB_{i,t} + \beta_{10} Leverage_{i,t} \\
& + \beta_{11} CA_{i,t} + \beta_{12} CL\_XTrade_{i,t} + \beta_{13} CashHold_{i,t} + \varepsilon_{i,t}
\end{aligned}
\tag{1}
$$

Model 2 for the second test of the claim:

$$TC_{i,t} = \beta_0 + \beta_1 EQ_{i,t} + \beta_2 AccComp_{i,t} + \beta_3 AccComp * EQ + \beta_4 InfoAsym_{i,t} + \beta_5 Log(Asset)_{i,t}$$
$$+ \beta_6 Log(Age + 1)_{i,t} + \beta_7 MktShare_{i,t} + \beta_8 POS\_ChgSale_{i,t} + \beta_9 NEG\_ChgSale_{i,t}$$
$$+ \beta_{10} ROA_{i,t} + \beta_{11} MTB_{i,t} + \beta_{12} Leverage_{i,t} + \beta_{13} CA_{i,t}$$
$$+ \beta_{14} CL\_XTrade_{i,t} + \beta_{15} CashHold_{i,t} + \varepsilon_{i,t}$$

(2)

4. RESEARCH RESULTS

The research results are presented in two sections of descriptive statistics and inferential statistics.

For descriptive statistics, Table 1 presents an overview of the important characteristics of the calculated variables, including mean, median, maximum, minimum, and standard deviation, to provide a comprehensive understanding of descriptive statistics concepts. The observations were based on a sample size of 1500. In this study, outliers were modified by winsorizing instead of being eliminated. The mean value serves as the center point and equilibrium of the data. For instance, the financial leverage mean variable is 0.66, indicating that, on average, 66% of companies' assets are financed through liabilities. The variables with the highest and lowest standard deviations are positive changes in sales and information asymmetry, respectively. The cash holding variable has a minimum level of zero and a maximum level of approximately 44% of the company's total assets.

Table 1. Descriptive statistics of variables after modifying them by winsorizing

Variable	Symbol of variable	Mean	Median	SD	Min	Max	Skewness	Kurtosis
Trade credit	TC	0.081	0.043	0.094	0	0.714	3.03	7.57
Earnings quality	AQ	0.134	0.121	0.067	0.43	0.012	3.23	6.51
Accounting comparability	AccComp	0.409	0.323	0.301	0.229	0.002	0.433	3.716
Information asymmetry	InfoAsym	0.024	0.014	0.021	0	0.07	0.702	3.25
Company size	Log(Asset)	24.65	22.51	2.42	22.74	28.52	1.714	3.07
Company age	Log(Age+1)	3.662	2.817	0.342	1.69	3.14	0.349	1.94
Market share	MktShare	0.122	0.055	0.186	0.002	1	3.71	23.58
Positive changes in sales	POS_ChgSale	13.26	13.43	11.88	0	31.95	0.532	1.24
Negative changes in sales	NEG_ChgSale	0.031	0	0.127	0.755	0	2.62-	15.31
Market-to-book value	MTB	2.54	2.007	3.24	0.022	6.86	0.877	1.51
Return on assets	ROA	0.117	0.08	0.131	0.864	0.757	0.233	3.12
Financial leverage	Leverage	0.667	0.702	0.131	0.103	0.965	2.54	3.92
Current asset ratio	CA	0.624	0.631	0.181	0.111	0.937	0.41	1.31
Current liability ratio	CL_XTrade	0.445	0.443	0.172	0.032	0.977	0.191	6.72
Cash holding	CashHold	0.032	0.012	0.054	0	0.441	1.74	25.43

For inferential statistics, the Harris test was utilized to investigate the stationary variables in this study, and the outcomes are presented in Table 2. The results demonstrate that all independent, dependent, and control variables are stationary, with a significance level of < 0.05. This means that the variables' mean and variance over time and their covariance between different years have remained constant. Consequently, the companies examined did not experience any structural changes, and utilizing these variables in the model will not result in a spurious regression. The present study utilized composite data, and the F–Limer, Breusch–Pagan, and Hausman tests were used to choose between the panel data and consolidated data methods. The findings of these tests are provided in Table 3.

Table 2. Test of stationary variables

Variable	Symbol of variable	Test statistic	Sig.	Test result
Trade credit	TC	-8.532	0.000	Stationary
Earnings quality	EQ	-1.648	0.036	Stationary
Accounting comparability	AccComp	-11.168	0.001	Stationary
Information asymmetry	InfoAsym	-16.601	0.002	Stationary
Company size	Log(Asset)	-3.488	0.001	Stationary
Company age	Log(Age+1)	-6.033	0.002	Stationary
Market share	MktShare	-12.266	0.003	Stationary
Positive sale changes	POS_ChgSale	-7.479	0.001	Stationary
Negative sale changes	NEG_ChgSale	-2.832	0.002	Stationary
Market-to-book ratio	MTB	-11.307	0.001	Stationary
Return on assets	ROA	-5.362	0.002	Stationary
Financial leverage	Leverage	-2.448	0.004	Stationary
Current asset ratio	CA	-1.478	0.043	Stationary
Current liabilities	CL_XTrade	-11.114	0.001	Stationary
Cash holding	CashHold	-12.411	0.002	Stationary

Table 3. Results of determining data type tests

Model type	Test type	Test statistic	Sig.	Test result
Test model for *H1*	F–Limer	2.36	0.001	Panel data (fixed panel)
	Hausman	24.33	0.023	Fixed effects
	Breusch–Pagan	72.37	0.002	Random panel
Test model for *H2*	F–Limer	2.17	0.003	Panel data (fixed panel)
	Hausman	31.24	0.003	Fixed effects
	Breusch–Pagan	47.17	0.001	Random panel

Based on the results of the F–Limer test, the null hypothesis (H_0) was rejected for both models, indicating that the panel data method (fixed panel) was accepted. The random panel data method was also verified by the Breusch–Pagan test, with a probability value of < 0.05. Finally, the Hausman test determined the fixed effects method as the preferred choice between the fixed and random methods, with a probability level of < 0.05. To detect variance heterogeneity of the error terms, the adjusted Wald test was conducted, and the Wooldridge test was used to identify serial autocorrelation of the error terms. The results of these tests are displayed in Table 4. The Wooldridge test results indicate that there is no serial autocorrelation problem in the research models since the probability level is > 0.05. Additionally, the adjusted Wald test's significance level for hypothesis test models is < 0.05, indicating that both hypothesis test models demonstrate a variance heterogeneity problem. This problem was addressed in the final estimates by utilizing the panel-corrected standard error (PCSE) method. Moreover, the cross-sectional dependence test results in Table 4 indicate that there is no cross-sectional dependence problem in the two models since the probability level is > 0.05.

Table 4. Tests for detecting variance heterogeneity and serial autocorrelation

Model type	Test type	Test statistic	Sig.	Test result
Test model for *H1*	Adjusted Wald	82343.52	0.001	Variance heterogeneity
	Wooldridge	0.421	0.361	No serial autocorrelation
	Pesaran	1.123	0.183	No cross-sectional dependence
Test model for *H2*	Adjusted Wald	36532.16	0.003	Variance heterogeneity
	Wooldridge	0.231	0.476	No serial autocorrelation
	Pesaran	0.577	0.482	No cross-sectional dependence

To test the first hypothesis (*H1*) of the research, the first regression model was used and its results are presented in Table 4. The findings reveal that the null hypothesis (H_0) is rejected and *H1* is confirmed, indicating that as earnings quality increases, trade credit also increases. This conclusion is based on the coefficient obtained for the earnings quality variable, which is 0.082 and is statistically significant at the 95% confidence level. Furthermore, the coefficient of determination indicates that the independent and control variables account for approximately 33% of the changes in the dependent variable. The significance level of the Wald test is less than 5%, confirming the credibility of the entire model. Based on the results in Table 4, the variables of information asymmetry, company size, company age, company market share, financial leverage, return on assets, current assets ratio, current liabilities ratio, and cash holding level are all significant at the expected error level and should be controlled in future research.

Table 5. Final estimation of the first hypothesis test model

Estimation method: Linear regression by the PCSE method						
Dependent variable: TC						
Variable	Symbol	Coefficients	Std. Error	Statistic Z	Sig.	VIF
Earnings quality	*EQ*	0.082	0.031	3.15	032.0	2.11
Information asymmetry	*InfoAsym*	0.47	0.116	2.85	0.000	3.06
Company size	*Log(Asset)*	0.001	0.002	1.58	0.010	2.15
Company age	*Log(Age+1)*	0.015	0.012	2.97	0.046	8.07
Market share	*MktShare*	0.105	0.025	4.91	0.000	3.57
Positive changes in sales	*POS_ChgSale*	0.000	0.000	2.18	0.240	4.62
Negative changes in sales	*NEG_ChgSale*	0.310	0.027	1.47	0.142	2.41
Market-to-book value	*MTB*	0.000	0.001	0.07	0.947	1.05
Return on assets	*ROA*	0.051	0.027	2.20	0.028	7.26
Financial leverage	*Leverage*	0.025	0.015	2.27	0.023	2.19
Current asset ratio	*CA*	0.044	0.014	2.17	0.030	3.11
Current liability ratio	*CL_XTrade*	0.121	0.021	9.87	0.000	4.23
Cash holding	*CashHold*	0.144	0.055	2.33	0.020	5.17
Intercept	cons	0.067	0.038	1.97	0.049	
The coefficient of determination		0.334	Wald statistic		03.323	
Number of observations		1500	Wald significance level		000.01	

Table 6. Final estimation of the second hypothesis test model

Estimation method: Linear regression by the PCSE method Dependent variable: TC						
Variable	Symbol	Coefficients	Std. Error	Statistic Z	Sig.	VIF
Earnings quality	*EQ*	0.143	0.037	3.43	0.002	2.04
Accounting comparability	*AccComp*	0.001	0.002	1.08	0.265	2.43
Interaction of comparability and profit quality	*AccComp*EQ*	0.111	0.055	3.45	0.003	3.55
Information asymmetry	*InfoAsym*	0.655	0.232	4.11	0.000	1.07
Company size	*Log(Asset)*	0.002	0.002	2.11	0.021	1.54
Company age	*Log(Age+1)*	0.013	0.004	2.23	0.027	1.05
Market share	*MktShare*	0.103	0.023	3.77	0.000	1.65
Positive changes in sales	*POS_ChgSale*	0.000	0.000	1.16	0.261	1.33
Negative changes in sales	*NEG_ChgSale*	0.047	0.0213	1.66	0.073	1.32
Market-to-book value	*MTB*	0.000	0.002	0.15	0.922	1.12
Return on assets	*ROA*	0.051	0.035	2.37	0.015	1.47
Financial leverage	*Leverage*	0.024	0.026	2.17	0.023	1.33
Current asset ratio	*CA*	0.054	0.016	3.66	0.000	1.11
Current liability ratio	*CL_XTrade*	0.011	0.011	9.67	0.000	1.58
Cash holding	*CashHold*	0.251	0.033	2.33	0.012	1.13
Intercept	Cons	0.024	0.003	2.16	0.033	
The coefficient of determination		344.0	Wald statistic		52.332	
Number of observations		1500	Wald significance level		000.02	

To test the second hypothesis (*H2*), the second regression model was used and its results are presented in Table 5. The findings indicate that accounting comparability increases the positive effect of earnings quality on trade credit, as evidenced by the coefficient obtained for the *AccComp*EQ* variable, which is 0.213 and is statistically significant at the 95% confidence level. Moreover, the coefficient of determination shows that the independent variables explain approximately 34% of the changes in the dependent variable. The significance level of the Wald test is less than 5%, confirming the validity of the entire model. Based on the results in Table 5, the variables of information asymmetry, company size, company age, company market share, financial leverage, return on assets, current assets ratio, current liabilities ratio, and cash holding level are all significant at the expected error level and should be controlled in future research.

5. CONCLUSION

The importance of trade credit as a short-term financing option for companies is significant due to the high cost and time-consuming nature of other financing methods. The first hypothesis test reveals that there is a positive correlation between earnings quality and trade credit, meaning that as earnings quality increases, so does trade credit. This confirms that higher financial reporting quality can reduce information asymmetry and prevent adverse selection and moral hazard. Suppliers pay close attention to their client's financial status when extending credit, with earnings being a crucial factor. Low-quality accounting clients are perceived as high-risk, and suppliers are reluctant to offer them trade credit. High-quality financial reporting is relied upon by suppliers to evaluate clients' ability to meet their business obligations and implicit claims. The results of this study oppose the notion that suppliers can obtain information through business transactions and align with the transaction cost theory, as suppliers may not have a comprehensive view of their clients through these transactions.

The results of previous studies, such as Klapper et al. (2012) and Gorji et al. (2023a), indicate that larger and more reliable companies are likely to be more transparent and use trade credit offered by smaller suppliers. Companies with low accounting quality may not improve their liability capacity through financing, and suppliers will use financial information as a basis for granting credit. Higher quality information leads to more credit being granted. The second hypothesis demonstrates that the effect of earnings quality on trade credit is greater in companies with higher accounting information comparability than those with lower comparability. Accounting information comparability strengthens the impact of earnings quality on trade credit.

This hypothesis confirms that if a company's accounting information comparability with other companies in the industry increases, it will lead to improved predictions and reduce the cost of processing information for investors and financial analysts. By increasing accounting information comparability, the advantage of private information decreases, and the availability of company information enhances. In GCC, investors and users of accounting information consider accounting information comparability a crucial control mechanism for managers' behavior. Therefore, fewer managers in companies with higher accounting information comparability manipulate and manage earnings using accruals, leading to higher earnings quality. Predictability of accounting earnings can increase earnings quality by reducing the prediction error of accounting earnings, resulting in a significant increase in trade credit provided by suppliers. The results of this hypothesis are consistent with previous studies, among such Le et al. (2016).

One limitation of this study is that the earnings-return correlation of a pair of companies in the industry was used to measure comparability, while the use of other measurement methods may lead to different results. Based on the first hypothesis test, it is recommended that creditors pay special attention to their client's financial reporting quality before granting trade credit. It is also recommended for managers seeking trade credit to increase transparency and use the same accounting methods to reduce ambiguity for trade credit providers.

REFERENCES

1. Abdulla, Y. (2022). Trade credit in an emerging market: Evidence from Kuwaiti firms. *Afro-Asian Journal of Finance and Accounting, 12*(2), 216–231. https://doi.org/10.1504/AAJFA.2022.123052
2. Ahmadpour, A., & Rasaeian, A. (2007). The relationship between measures of risk and Bid-ask spread in Tehran Stock Exchange. *The Iranian Accounting and Auditing Review, 13*(46), 37–60.
3. Al-ahdal, W. M., Alsamhi, M. H., Tabash, M. I., & Farhan, N. H. S. (2020). The impact of corporate governance on financial performance of Indian and GCC listed firms: An empirical investigation. *Research in International Business and Finance, 51*, Article 101083. https://doi.org/10.1016/j.ribaf.2019.101083
4. Alghemary, M. (2021). Earnings management of acquiring companies and non-acquiring companies in Gulf Cooperation Council (GCC) [Doctoral dissertation, Manchester Metropolitan University]. Manchester Metropolitan University. https://e-space.mmu.ac.uk/629400/1/Revised%20Thesis%20March%202022%20Mahmoud%20Alghemary.pdf
5. AlHares, A., & AlBaker, Y. (2023). Corporate governance and effect in fintech: Evidence from Gulf Cooperation Council banking sector. *Corporate & Business Strategy Review, 4*(1), 99–111. https://doi.org/10.22495/cbsrv4i1art9
6. Alsmady, A. A. (2022). Accounting information quality and tax avoidance effect on investment opportunities evidence from Gulf Cooperation Council GCC. *Cogent Business & Management, 9*(1), Article 2143020. https://doi.org/10.1080/23311975.2022.2143020
7. Alsmady, A. A. (2023). The moderating role of audit quality between earning management and sustainable investment opportunities: Evidences from gulf cooperation council countries. *International Journal of Applied Economics, Finance and Accounting, 16*(1), 18–32. https://doi.org/10.33094/ijaefa.v16i1.874
8. Altman, E. I. (1968). Financial ratios, discriminant analysis, and the prediction of corporate bankruptcy. *The Journal of Finance, 23*(4), 589–609. https://doi.org/10.1111/j.1540-6261.1968.tb00843.x
9. Altunok, F. (2012). *Three essays on trade credit* [Doctoral dissertation, North Carolina State University]. ProQuest. https://www.proquest.com/openview/633cd4e25adcfeb52c48a7d5941c5d44/1?pq-origsite=gscholar&cbl=18750
10. Baatwah, S. R., Aljaaidi, K. S., Almoataz, E. S., & Salleh, Z. (2023). Culture and financial reporting quality in GCC countries: What do we know about tribal culture? *International Journal of Emerging Markets, 18*(4), 788–821. https://doi.org/10.1108/IJOEM-04-2020-0439
11. Barth, M. E., Landsman, W. R., Lang, M. H., & Williams, C. D. (2018). Effects on comparability and capital market benefits of voluntary IFRS adoption. *Journal of Financial Reporting, 3*(1), 1–22. https://doi.org/10.2308/jfir-52279
12. Beatty, A., Liao, S., & Weber, J. (2010). Financial reporting quality, private information, monitoring, and the lease-versus-buy decision. *The Accounting Review, 85*(4), 1215–1238. https://doi.org/10.2308/accr.2010.85.4.1215
13. Belkhaoui, S., Alsagr, N., & van Hemmen, S. F. (2020). Financing modes, risk, efficiency and profitability in Islamic banks: Modeling for the GCC countries. *Cogent Economics & Finance, 8*(1), Article 1750258. https://doi.org/10.1080/23322039.2020.1750258
14. Biais, B., & Gollier, C. (1997). Trade credit and credit rationing. *The Review of Financial Studies, 10*(4), 903–937. https://doi.org/10.1093/rfs/10.4.903
15. Bolton, P., Freixas, X., & Shapiro, J. (2012). The credit rating crisis. *The Journal of Finance, 67*(1), 85–111. https://doi.org/10.1111/j.1540-6261.2011.01708.x
16. Chabowski, B., Chiang, W.-C., Deng, K., & Sun, L. (2019). Environmental inefficiency and bond credit rating. *Journal of Economics and Business, 101*, 17–37. https://doi.org/10.1016/j.jeconbus.2018.08.003
17. Chen, D., Liu, M., Ma, T., & Martin, X. (2017). Accounting quality and trade credit. *Accounting Horizons, 31*(3), 69–83. https://doi.org/10.2308/acch-51711
18. Coase, R. H. (1937). The nature of the firm. *Economica, 4*(16), 386–405. https://doi.org/10.1111/j.1468-0335.1937.tb00002.x
19. de Carvalho, C. J., & Schiozer, R. F. (2015). Determinants of supply and demand for trade credit by micro, small, and medium-sized enterprises. *Revista Contabilidade & Financas, 26*(68), 208–222. https://doi.org/10.1590/1808-057x201500940
20. De Franco, G., Kothari, S. P., & Verdi, R. S. (2011). The benefits of financial statement comparability. *Journal of Accounting Research, 49*(4), 895–931. https://doi.org/10.1111/j.1475-679X.2011.00415.x
21. Enomoto, M. (2022). *Effects of corporate governance on the relationship between accounting quality and trade credit: Evidence from Japan.* https://doi.org/10.2139/ssrn.3171338
22. García-Teruel, P. J., & Martínez-Solano, P. (2010). Effects of working capital management on SME profitability. *International Journal of Managerial Finance, 3*(2), 164–177. https://doi.org/10.1108/17439130710738718
23. Ghosh, A., & Jain, S. (2018). Accelerating the growth of financial inclusion in India — A conceptual study. *OJAS, January–June 2018*(Special Issue). 54–61. https://jaipuria.edu.in/media/January_June_2018.pdf#page=58
24. Ghosh, A., & Lee, Y. G. (2013). Financial reporting quality, structural problems and the informativeness of mandated disclosures on internal controls. *Journal of Business Finance & Accounting, 40*(3–4), 318–349. https://doi.org/10.1111/jbfa.12015
25. Gorji, M. R., Ghodrati, H., Arabzadeh, M., & Panahian, H. (2023a). Investigating the effect of earnings quality on the company's trade credit with an emphasis on the moderating role of accounting information comparability. *International Journal of Finance & Managerial Accounting, 8*(29), 133–146. https://ijfma.srbiau.ac.ir/article_21130.html
26. Gorji, M., Ghodrati, H., Arabzadeh, M., & Panahian, H. (2023b). The effect of earnings quality on trade credit with an emphasis on the consistency of accounting information: A text mining approach. *Journal of Management Accounting and Auditing Knowledge, 12*(45), 391–406. https://jmaak.srbiau.ac.ir/article_21479.html?lang=en
27. Heckscher, E., & Ohlin, B. (1933). *Interregional and international trade.* Harvard Economic Studies.
28. Iqbal, Z., & Mirakhor, A. (2011). *An introduction to Islamic finance: Theory and practice* (2nd ed.). John Wiley & Sons. https://doi.org/10.1002/9781118390474
29. Klapper, L., Laeven, L., & Rajan, R. (2012). Trade credit contracts. *The Review of Financial Studies, 25*(3), 838–867. https://doi.org/10.1093/rfs/hhr122
30. Krishnan, J., Wen, Y., & Zhao, W. (2011). Legal expertise on corporate audit committees and financial reporting quality. *The Accounting Review, 86*(6), 2099–2130. https://doi.org/10.2308/accr-10135
31. Krugman, P. R. (1986). *Strategic trade policy and the new international economics.* MIT Press.

32. LaFond, R., & Watts, R. L. (2008). The information role of conservatism. *The Accounting Review, 83*(2), 447–478. https://doi.org/10.2308/accr.2008.83.2.447
33. Le, T.-H., Kim, J., & Lee, M. (2016). Institutional quality, trade openness, and financial sector development in Asia: An empirical investigation. *Emerging Markets Finance and Trade, 52*(5), 1047–1059. https://doi.org/10.1080/1540496X.2015.1103138
34. Mian, S. L., & Smith, C. W., Jr. (1992). Accounts receivable management policy: Theory and evidence. *The Journal of Finance, 47*(1), 169–200. https://doi.org/10.1111/j.1540-6261.1992.tb03982.x
35. Petersen, M. A., & Rajan, R. G. (1994). The benefits of lending relationships: Evidence from small business data. *The Journal of Finance, 49*(1), 3–37. https://doi.org/10.1111/j.1540-6261.1994.tb04418.x
36. Petersen, M. A., & Rajan, R. G. (1997). Trade credit: Theories and evidence. *The Review of Financial Studies, 10*(3), 661–691. https://doi.org/10.1093/rfs/10.3.661
37. Piyawiboon, C. (2015). Audit quality, effectiveness of board audit committee and earning quality. *Review of Integrative Business and Economics Research, 4*(2), 366–377. https://sibresearch.org/uploads/2/7/9/9/2799227/riber_sh14-272_366-377.pdf
38. Ricardo, D. (1817). *On the principles of political economy and taxation.* John Murray.
39. Rothstein, H. G., & Burke, B. (2010). *Information advantage: A manager's guide to effective decision-making.* John Wiley & Sons.
40. Saidi, F. (2022). Determinants of Basel III risk disclosures: The case of Gulf Cooperation Council public banks. *Asian Journal of Business and Accounting, 15*(1), 103–147. https://doi.org/10.22452/ajba.vol15no1.4
41. Vernon, R. (1966). International investment and international trade in the product cycle. *The Quarterly Journal of Economics, 80*(2), 190–207. https://doi.org/10.2307/1880689
42. Williamson, O. E. (1975). *Markets and hierarchies: Analysis and antitrust implications.* The Free Press.
43. Williamson, O. E. (1985). *The economic institutions of capitalism.* The Free Press.
44. Wu, J., Song, J., & Zeng, C. (2008). An empirical evidence of small business financing in China. *Management Research News, 31*(12), 959–975. https://doi.org/10.1108/01409170810920666
45. Zhang, Y., García Lara, J. M., & Tribó, J. A. (2020). Unpacking the black box of trade credit to socially responsible customers. *Journal of Banking & Finance, 119*, Article 105908. https://doi.org/10.1016/j.jbankfin.2020.105908
46. Zivdar, Z., Foroghi, D., & Kiani, G. (2020). Investigating the quality and sustainability of accruals: Text mining approach. *Journal of Management Accounting and Auditing Knowledge, 9*(35), 169-185. https://jmaak.srbiau.ac.ir/article_16696_en.html