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Investigating the Relationship between Audit Quality and Commercial Credit by Considering the Role of Owner's Internal Controls

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Abstract

Objectives: The present study aimed to investigate the relationship between audit quality and business credibility while considering the role of internal control by the employer.

Design/methodology/approach: To achieve the research objectives, a sample of 140 firms listed on the stock exchange was selected using a systematic exclusion pattern, and data was collected over 8 years from 2015 to 2022. A linear multivariate regression model was used to test the research hypotheses.

Results: The results of testing the research hypotheses indicated that the quality of audits enhances the business reputation of firms. Additionally, the quality of internal controls can impact the relationship between audit quality and commercial credit.

Innovation: This research provides evidence that improving the quality of auditing can increase access to business credit, and that internal controls play a significant role in this process.

Keywords: Business Credit, Audit Quality, internal Controls.

1. Introduction

Commercial credit is an important source of financing for firms (Lou, 2022). Financial managers are responsible for deciding how much commercial credit to use in various economic situations. Commercial credit, as a source of financing (as opposed to bank financing or equity issuance), is the most widely used in the market but has been largely neglected to date, despite being one of the most important sources of financing for small and medium-sized enterprises, as well as large commercial enterprises (Asif and Nisar, 2022). Previous literature shows that commercial credit accounts for almost a quarter of a firm's total assets and about half of its short-term liabilities in two different examples of medium-sized British and small-sized American firms. It can be used to convey information to banks to reduce information asymmetry and during corporate validation (Silaghi, Moraux, 2019). Additionally, commercial credit is the most crucial source of short-term financing, playing an essential role in the business activities of every firm and indicating the level of trust suppliers and creditors have in the firms (Ablations et al., 2021). Firms with high commercial credit receive goods and services from suppliers without immediate payment. Banks and other creditors also provide facilities by assessing the firm's commercial credit (Izedinia and Taheri, 2016). Previous research, such as that by Petersen and Rajan (1997), has shown that corporate managers choose commercial credit based on the firm's characteristics and capabilities. However, various factors can affect the level of commercial credit a firm receives, and the perceived level often differs from the optimal level. In these situations, firms may not fully utilize their capabilities. Managers strive to achieve the target commercial validity more quickly (Lou, 2022).

Previous studies indicate that the structure of financial statements can impact the acquisition, evaluation, and measurement of their informational content. Poor-quality financial statements make it challenging for investors to extract the necessary information (Dadashi & Nowrouzi, 2020). Investors tend to favor firms with clear, legible, and accurate financial statements (Seifzadeh et al., 2021). If financial statements are of poor quality, investors may struggle to evaluate them, relying on other information instead. This may decrease their sensitivity to the firm's accounting information, potentially affecting their decision-making process (Bagheri Azghandi et al., 2018). Therefore, investors may rely more on non-accounting information in such circumstances, with the effect of other environmental information on their judgment being significant (Lou, 2022). In a study titled "The Effect of Readability of Financial Reports on Commercial Credit Considering the Role of Managers' Ability," Mahdavi et al. (2022) found that report readability is crucial for effective communication with users of firm information. Firms with higher-quality financial reports tend to receive more commercial credit from suppliers, as they provide valuable information about the firm's financial performance.

Internal control is a dynamic system that addresses various risks and deviations from policies and procedures. By establishing a representative relationship, conflicts of interest can arise between managers, shareholders, and other stakeholders, potentially leading to actions that benefit managers rather than shareholders and stakeholders. Strong internal control within a firm can help mitigate management opportunistic behaviors, conflicts of interest, and moral risks, thereby earning investors' trust in the firm. Internal control is a vital aspect of an organization's governance system, essential for achieving organizational goals and enhancing stakeholder value (Abedini et al., 2019). Given the above, the question arises: Does the quality of internal controls impact the relationship between audit quality and corporate credibility? The structure of the research will first expand on the theoretical foundations, hypotheses, and empirical bases, followed by the methodology and operational definitions of the research variables, and finally, the findings and conclusions will be presented.

Theoretical, empirical, and hypotheses

Business credit is an essential source of financing for firms of all sizes globally. Firms require financial resources to take advantage of investment opportunities, so it is crucial to determine financial resources and their utilization in a way that allows the firm to progress towards development and profitability (Kamyabi & Gorjian, 2016). Commercial credit involves an agreement between buyers and sellers, where sellers allow buyers to defer payment for goods and services purchased. This deferred payment period is set by the sellers (Aflatooni & Nowrouzi, 2020). The benefit of commercial credit is that customers can acquire goods without immediate cash payment, instead recording a debit or payable account on their balance sheet for future payment. This makes accounts receivable act as a substitute for cash, making commercial credit a short-term investment tool (Silaghi & Moraux, 2019).

Firms with high business credit levels can obtain goods and services without upfront cash payments. Creditors assess a firm's business credit to determine the level of risk involved. If a firm's ability to repay debt is low, creditors may demand higher interest rates. Therefore, firms strive to improve their business credit ratings continuously (Ma et al., 2022). Creditors are also concerned about potential financial crises faced by debtors, as credit decisions impact a firm's future financial flexibility (Moradi & Karami, 2019). Discussion of a firm's credit status is crucial not only for the firms themselves but also for stakeholders such as creditors and investors. Suppliers consider the long-term financial stability of customers when establishing relationships, as many firms rely on commercial credit for financing both purchases and supplies (Aflatooni & Nemati, 2018). Studies have explored the demand and supply of commercial credit, emphasizing the importance of customers' long-term financial health for suppliers (Abuhammous, 2021).

Lou (2022) suggests that firms set business credit receivable and payable targets and actively work towards achieving them. Financial reports are vital information for decision-makers in the capital market, including shareholders, analysts, and financial creditors. Therefore, these reports should be easily comprehensible (Salehi et al., 2020; Mahdavi et al., 2022). Information asymmetry in business credit decisions has been identified as a significant factor, with the quality of financial reports and disclosures influencing business credit levels (Pike et al., 2005; Chen et al., 2017; Aflatooni & Nemati, 2018). Enhancing the overall quality of disclosure and reducing information asymmetry through high-quality financial reports directly impacts commercial credibility (Mahdavi et al., 2022).

The quality of financial statements is influenced by the quality of a firm's audit. Given the increasing investment in stock markets and the importance of firm information, audit firms play a crucial role in ensuring the reliability of financial statements and preventing fraud (Doolabi, 2019). With globalization and the demand for transparency, the quality of financial reporting has become a key aspect of corporate strategy, aiding informed decision-making by investors and optimal resource allocation (Chen et al., 2012). Auditors play a critical role in reducing errors in financial statements, ensuring the reliability of corporate information for creditors and investors. Therefore, the first hypothesis of this research is as follows:

Hypothesis 1: There is a significant relationship between audit quality and the credibility of a business.

In order to achieve short-term and long-term goals, fulfill missions and visions, maintain financial stability and profitability, deal with unexpected events, and respond to demands from investors, governments, and other stakeholders, a firm must have a reliable internal control system that is free from weaknesses and is effective. Internal control is not a specific situation, but a series of sequential and pervasive measures that permeate and extend to all activities of the organization. These actions occur continuously within the organization's operations and exist comprehensively and inseparably in alignment with the organization's management (Taherinia et al., 2022).

Managers of organizations and institutions place great importance on internal controls because they understand that weaknesses in internal controls can prevent the firm from achieving its main goals and deviate it from its intended path. An effective internal control system, without weaknesses, will increase trust in financial figures and information in financial statements, enabling effective decision-making and ultimately contributing to the achievement of the firm's goals. Following the 2008 scandal and the enactment of the Sarbanes-Oxley Act, internal controls have garnered significant attention. It is crucial for auditors to meticulously identify and address all weaknesses in internal controls, which may be specific to certain units or more general and prevalent across all units.

The proper design and implementation of an effective internal control system in economic units is paramount for its success. An effective internal control system promotes financial accountability and transparency, ensures compliance with laws and regulations, and helps prevent fraud and financial abuse. Internal control is a vital component of organizational management, encompassing the programs, methods, and procedures utilized to achieve the organization's mission and overarching goals. Failure to adhere to these regulations will be recognized as weaknesses in internal control, hindering firms from reaching their objectives.

The primary objective of an organization's internal control system is to provide reasonable assurance to executive management that the specified goals for operations and programs are attainable (Hajiha et al., 2017). Wang et al. (2023) conducted a study on supply chain transparency, suppliers, and business credit, suggesting that while previous studies have explored the financial benefits of enhancing supply chain disclosure transparency, many firms are still concealing information in this regard. Their research findings indicate that firms with lower supply chain transparency tend to receive more commercial credit. Lou (2022) examined the impact of COVID-19 on the adjustment of commercial credit rates, revealing that COVID-19 significantly accelerated the convergence of U.S. firms towards target business credit rates, particularly for firms facing higher operational risks.

Koo and Chung (2022) investigated the influence of managerial ability on business credit and found that firms with higher managerial ability were linked to increased business credit receivables. The impact of managerial ability on accounts payable was more pronounced for firms with lower credit quality or greater financial constraints. Dao et al. (2022) conducted a study titled "Effective Internal Controls and Business Credibility," presenting evidence that firms with stronger internal controls demonstrate greater effectiveness and expedite their business credit agreements. They also noted that firms with ineffective internal controls tend to have a higher demand for commercial credit. Therefore, the second hypothesis of the research is as follows:

Hypothesis 2: Internal controls affect the relationship between audit quality and business credibility.

Research Methodology

The present research is applied, and from a methodological perspective, correlation is considered causal (post-event). The statistical population studied in this research includes all the firms listed on the Tehran Stock Exchange, with the period under study being 2015–2022. Firms listed on the Tehran Stock Exchange that meet the following criteria have been selected as a sample: end of financial year of firms, which is the end of March. Throughout the 8-year period, the financial period for the review has remained consistent. Information regarding the variables selected for this study is available. The selected firms are not banks, insurance firms, or investment firms. Ultimately, 140 firms were chosen as the final sample for the research. Data analysis was conducted using a mixed data method and panel data approach, utilizing Eviews 12 software and the standard error tool for testing hypotheses.

Regression model

$$\begin{aligned}TC_{it} = \beta_0 + \beta_1 AS_{it} + \beta_2\, SOX_{it} + \beta_3 AS \times SOX_{it} \\ + \beta_4 ROA_{it} + \beta_5 Growth_{it} \\ + \beta_6\, LEV_{it} + \beta_7\, Age_{it} + \beta_8\, Cash_{it} \\ + \beta_9\, SIZE_{it} + \varepsilon_{it}\end{aligned}$$

Operational Definitions of Research Variables

Research Dependent Variable: Business Credit (TC)

Commercial credit is calculated as the ratio of accounts payable (AP) to the cost of goods sold (COGS). Since COGS represents the average cost of purchases, this measure indicates the proportion of total purchases financed by commercial credit (Zhang, 2019). This metric has been widely used in previous literature (Garcia Appendini and Montrebro-Garriga) (Aflatooni, 2021).

Independent Variable: Quality of Audit (AS)

According to previous researchers such as Young et al. (2016), Dulabi (2019), and Osmani and Hosseini (2016), this variable is a binary artificial variable (0 and 1). In this context, if the audit is conducted by a major audit firm, the value is 1; if not, the value is 0. In this study, the audit organization is considered equivalent to a major audit firm. If the audit is performed by the audit organization (representing a major audit firm), the value is 1. If the audit is conducted by a different firm (representing a smaller audit firm), the value is 0.

Moderator Variable: Internal Controls (SOX)

It is a two-valued variable (0 and 1) used to measure the strength of internal control. Weaknesses in internal control are identified based on research conducted by Hajiha et al. (2017) and Abedini et al. (2019), focusing on important weaknesses obtained from independent auditors' reports. Since 2012, internal controls approved by the Securities and Exchange Organization have required firm auditors to review and disclose any non-compliance or lack of proper implementation of internal controls in their audit reports. This research focuses on the legal responsibilities outlined in audit reports of firms. If a firm has at least one weakness in its internal control system, a score of 1 is assigned, otherwise a score of 0 is given, with the inverse criterion used to measure internal control quality (Hajiha et al., 2017).

Control variables for research

Building on the research of previous scholars like Abedini et al. (2019) and others in this field, various control factors have been employed to manage potential adverse effects that could impact the pace of adjustment of corporate credit. These control factors include:

ROA: The ratio of net profit to total assets.

Growth: Sales revenue minus previous sales divided by previous period sales.

LEV: The ratio of total liabilities to total assets.

Age: The natural logarithm of the year of establishment of the firm from the desired year.

Cash: The ratio of operating cash at the end of the period to the total assets.

SIZE: Natural logarithm of total assets.

Research Findings

Table 1 displays the descriptive statistics for the research variables. Descriptive statistics provide insight into the dispersion of data, with the mean and standard deviation being key factors. From the table, we can see that the average leverage is 0.54 percent, indicating that most of the data is clustered around this value. The highest standard deviation was for firm size at 1.72, while liquidity had the lowest at 0.13.

According to the results obtained in Table 2, it is observed that the significance level of variables in the stability test was less than 5%, indicating the stability of the variables.

According to the results obtained in Table 3, it is observed that the F-Limer test with a significance level of less than 5% (0.0000) has confirmed the panel data pattern. This is further supported by observing the coefficient of the Hausman test, which also has a significance level below 5% (0.0000), confirming the presence of fixed effects in the model. Additionally, statistical analysis of variance and serial autocorrelation showed significance levels of less than 5%.

In the model of variance and serial autocorrelation, the final estimate was adjusted using the standard error tool in Eviews software, eliminating the need for further measures (Platouni, 2018).

The results from Table 4 indicate that audit quality, with a positive coefficient of 3.42 and a significance level below 5% (0.001), has a direct and significant impact on the business credibility of firms. Therefore, the first hypothesis of the research is supported at a 5% error level. Additionally, the interaction between internal control and audit quality, with a positive coefficient of 0.18 and a significance level below 5% (0.001), also influences business credit. As a result, the second hypothesis is also supported at a 5% error level. Control variables such as liquidity, firm age, size, and sales growth impact the dependent variable at error levels of 5% and 10%. The coefficient of determination is 0.37, indicating that 37% of the dependent variable's variation is explained by the independent and control variables in the model. Watson's coefficient is 1.57, falling within the range of 1.50 to 2.50, suggesting no strong correlation in the autocorrelation model. Collinearity statistics show no strong correlation among the research variables. The test statistics (F) with a significance level below 5% suggest that the research model fits well.

Table 1, Descriptive statistics of research variables

Variable	Mean	Max	Min.	S. dev.
TC	0.35	3.77	0.0000	0.52
AS	0.10	1.00	0.000	0.30
SOX	0.68	1.00	0.000	0.16
SIZE	14.75	19.92	10.49	1.72
ROA	0.14	0.57	-0.22	0.15
LEV	0.54	0.98	0.10	0.20
growth	0.34	1.67	-0.47	0.44
CASH	0.12	0.49	-0.19	0.13
Age	3.60	4.24	2.30	0.37

Table 2. Stability Test of Research Variables

Variable	Test Statistics	Sig	Results
TC	-57.5835	0.0000	Stationary
AS	-21.2154	0.0000	Stationary
SOX	-20.4657	0.0000	Stationary
SIZE	-6.19341	0.0000	Stationary
ROA	-8.54376	0.0000	Stationary
LEV	-14.1411	0.0006	Stationary
growth	-4.51451	0.0000	Stationary
CASH	-3.58050	0.0000	Stationary
Age	-3.20723	0.0000	Stationary

Table 3, Classical Regression Assumption Tests

Test	Test Statistics	Sig
F-Limer Test	4.077	0.0000
Hausman Tests	266.8	0.0000
White	190.32	0.0000
Brush pagan	61.55	0.0000

Table 4, Test Results of Research Hypotheses

Variable	Coefficients	Standard Error	Statistic t	Sig	VIF
AS	3.42	1.05	3.26	0.001	1.00
SOX	0.013	0.004	2.64	0.008	1.11
AS × SOX	0.18	0.058	3.23	0.001	1.00
SIZE	0.002	0.0007	3.08	0.002	1.20
ROA	-0.019	0.033	-0.59	0.55	1.07
LEV	0.021	0.015	1.42	0.15	1.10
growth	0.20	0.015	1.77	0.076	1.33
CASH	-1.50	0.67	-2.22	0.026	1.07
Age	0.042	0.069	2.21	0.026	1.11
C	4.61	2.07	2.21	0.026	-
Coef determination			0.37		
Watson Durbin			1.57		
F			5.0164		
Sig			0.0000		

Discussion and conclusion of the research

Decision-making regarding the use of business credit is one of the most crucial tasks for managers of organizations and firms. Commercial credit is defined as a mutual agreement between the supplier and the requester in previous literature. Essentially, business credit is utilized when there is a delay in payment or receipt after a purchase or sale is made. In today's economic climate, with financing firms facing challenges such as high capital costs, foreign financing, and the risk of failing to meet obligations on time, business credit appears to be a more viable option than debt financing.

Given the difficulties in obtaining external financing and credit, firms should explore alternative fiscal policies, particularly in the short term. Business credit has gained widespread acceptance globally in recent years. To achieve an optimal level of business credit, firms must implement a series of actions and measures in conjunction with their primary operations.

Research and financial literature have highlighted the importance of financial statements in decision-making processes for capital market participants, including creditors. When financial statements are clear, understandable, and transparent, creditors are more likely to extend credit to the firm, facilitating access to financing. Internal controls play a significant role in achieving this ideal mode of disclosure and can enhance the quality of financial information.

The findings of studies like those conducted by Mahdavi et al. (2022) and Lu (2022) support the notion that improving the quality of financial services can reduce information asymmetry and maximize the use of information by users. Therefore, it is recommended that firm managers focus on enhancing the commercial validity of financial reports to benefit both the firm and its stakeholders.

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