



TECHNIUM
SOCIAL SCIENCES JOURNAL

www.techniumscience.com



Vol. 70/2025

A New Decade for Social Changes

PLUS
COMMUNICATION **P**



International
Communication & PR

Assessing the Efficacy of Internal Control and its Influence on Financial Performance: Evidence from Iraqi Telecommunications Corporation

Murtadha Hasan Khlaif¹, Raghad Mounir Farhan², Asaad Mohammed Ali Wahhab³

Accounting Department, University of Kerbala, Iraq^{1,2,3}

murtadha.h@uokerbala.edu.iq¹, raghad.m@uokerbala.edu.iq²,
asaad.m@uokerbala.edu.iq³

Abstract. Effective internal control serves as a safeguard for global firm projects. It safeguards their assets from depletion and mismanagement while ensuring the enduring sustainability of enterprises through prudent strategic choices. This study seeks to evaluate the impact of adequate internal controls on the financial performance of Iraqi telecommunications companies. The survey includes three telecommunications companies: Zain Iraq, Asia Cell, and Korek. Due to Korek's closure in 2024, the study sample was picked from Zain Iraq and Asiacell. To achieve the study's objectives and answer its questions, we gathered data on the financial performance of the companies investigated from financial statements issued on the Iraq Stock Exchange for 2018-2023. Data on the most frequently utilized performance indicators in the strategic decision-making process were examined. Audited financial statements for the years 2018-2023 were analysed using the most prevalent financial analysis ratios to assess the efficacy of internal control. The study found that financial analysis indicators reflect the effectiveness of internal control in Iraqi telecommunications businesses in 2023. However, it failed frequently between 2019 and 2021, which might be attributed to the COVID-19 epidemic and the following economic impact on all enterprises in other countries worldwide.

Keywords. internal control, Telecommunications Firms, Iraq

1. Introduction

The telecommunications sector is one of the world's most active and developed sectors, notably Iraq. Rapid advancements in the telecommunications sector have brought about substantial alterations at the economic and social levels since 2004. This situation is mainly linked to the rising internet usage and cell phones. Communications and technology have become important to the country's social and economic growth. This sector has expanded to include diverse capabilities that have changed how consumers interact regarding searching for goods and making purchases, opening their doors to investment projects, and keeping pace with the global innovation movement and the development of modern technologies. To ensure their quality and sustainability, telecommunications companies must. .

Internal control is one of the key management functions; without it, it is impossible to

manage an economic entity effectively. It enables companies to develop and implement solutions for efficiently using resources. The management system of any company is closely linked to accounting and control systems. Accounting and control in a company are explained by the need to produce information related to each fact, which allows for increased efficiency in the financial and economic activity of the economic entity (Po'latov & F Larionov, 2023). Effective internal control systems are important not only for the financial performance of companies but also for their social and ethical responsibilities towards owners and enhancing public confidence in companies (Alzoubi, 2025). Since financial performance control reflects the various activities of the company over specific periods, the importance of the financial function in these companies has increased as a result of the development of capital markets and economic globalization, in addition to the accompanying complexity and expansion of this financial function, which has led to the study and analysis of the content of these companies' financial reports (Länsiluoto, 2016). The boards of directors of companies bear the ultimate responsibility for the effectiveness of internal control, as management is responsible for designing and implementing it and maintaining sound internal control systems. The company's control system should include internal auditors who can implement adequate controls that achieve the objectives for which they were established. If the company does not have adequate internal control, the company's financial statements may contain weak financial performance (Fourie & Ackermann, 2013).

Investors seeking to invest in equity securities must analyze company factors affecting revenue. Financial ratios assist investors in comprehending a company's intrinsic value. Financial analysis encompasses assessing performance and evaluating future cash flow, firm assets, organizational structure, technology, and human resources. It encompasses management's financial policy over that period, highlighting its strengths and addressing efforts to rectify flaws. This enhances the complexities of developing strategic financial or investment decisions, bolstering the company's ability to survive, flourish, and succeed in a highly competitive market over time.

This study's findings will assist Iraq's telecom companies in recognizing the need for efficient performance monitoring to formulate long-term strategies. Consequently, the company's market viability will be enhanced, and management's objectives will be achieved. Telecommunications operators in other countries may also utilize the findings.

2. Literature review

2.1 Effective Internal Control is a Guarantee of Business Success

Control activities, information and communication systems, and internal control (ICS) components are critical to business success. This has important implications for politicians and regulators attempting to increase the efficacy of internal control systems in supporting economic growth in nations. The expanding importance of sustainability across economic sectors involves recognizing the relationship between compliance with internal control systems and financial sustainability, which is critical for guaranteeing long-term business continuation. (Hamed, 2023). The internal control system is a risk management framework that helps organizations seize opportunities and augment stakeholder value. It is a coordinated and interconnected framework essential to corporate governance requirements. (Harasheh & Provasi, 2022). Internal controls are a significant mechanism for mitigating fraud, influencing its approach and reduction (Irwansyah & Zega, 2023). Companies must enhance the effectiveness of internal control and conserve resources to achieve their objectives by implementing a routine method to

assess and improve risk management, control, and governance processes (Handoyo & Bayunitri, 2021).

Practical internal control activities are essential for minimizing risks and achieving organizational objectives. Numerous studies indicate that management must regularly assess control activities to ascertain their relevance and implement necessary modifications (Otoo et al., 2023). A practical ICS enhances operational efficiency. It strengthens the company's strategy by recreating a vital role in risk prevention across all organizational levels and mitigating risks that could adversely affect financial performance (Boulhaga et al., 2023). Effective internal control guarantees the accuracy of financial reports, identifies fraud, evaluates risks, safeguards assets, and ensures adherence to regulations and laws. These activities enhance confidence in the efficacy of corporate control environments and may identify opportunities for improving financial performance (Abdullah, 2023).

2.2 A Conceptual Approach to Financial Performance Analysis

Performance evaluation is part of the control process. It measures the organization's results using a set of efficiency and effectiveness indicators and compares them to pre-determined standards. It thus provides a comprehensive picture of the organization's activities, including evaluating the efficiency of allocation and use (Oqbi, 2017). Ratio analysis helps evaluate the financial position and performance of the organization over time by comparing the ratios of one period with those of another, identifying strong and weak areas (if any), and taking the necessary corrective actions (Porter, 2015). In the financial analysis process, the financial analyst uses absolute, historical, target, or industry standards to ensure the soundness of the company's financial performance. It studies the relationship between the various financial factors in the business through one set of data with another set in the same year or previous years or industry standards (Bondu & Sangiseti, 2020). The profitability index, return on assets, and return on equity are used as measures of financial performance. At the same time, ESG ratings play a significant role in enhancing financial performance (Sandberg et al., 2023) through a fair presentation of financial data, thereby increasing stakeholder confidence in financial statements (Bilal et al., 2018). Liquidity risk is a significant challenge as it occurs when a company cannot meet short-term obligations, and liquidity ratios help measure its ability to pay its debts when due (Maulana et al., 2024).

Current assets include cash, marketable securities, receivables, and inventory. Current obligations include accounts payable, accruing wages and taxes, and short-term bank notes due within a year (Saoud, 2011). Working capital is an important financial indicator that reveals how much operating liquidity a corporation has available. Operating capital, which includes fixed assets such as plants and equipment, is calculated by deducting liabilities from current assets (Nour, 2001: 382). Activity ratios assess the effectiveness of an organization's performance at many operational levels, such as inventory management, accounts receivable, and fixed assets, clarifying the operating ratios.

The considerable association between current and fixed assets and sales can be determined. As a result, an organization's effective and efficient use of these assets is expected to increase sales volume and rates, as demonstrated by its profitability and liquidity (Sarngadharan, 2011). The debt ratio measures the proportion of total liabilities to total assets. This ratio is important since it determines the margin of safety for lenders and shows how much the project relies on external money for asset finance (Sharan, 2009). Profitability ratios are critical for determining profit from the relevant income statement or balance sheet. Numerous

profitability ratios, including margin ratios, are commonly represented in percentages (Kenton, 2024).

3. Research Method

3.1 Study Tool Description

The study population consists of three telecommunications providers operating in Iraq. Two firms, Asiacell and Zain Iraq, were chosen as samples for the study since the third company (Korek) was involved in a legal dispute with the government for failure to pay its dues. As a result, the sample accounts for 67% of the total research population. To meet the study objectives, the approved financial statements for 2018-2023 were analysed using liquidity, debt, activity, and profitability ratios. The data were analysed using Excel to extract the ratios of the research sample companies during the study years and investigate the reasons for their increase and decline and their link to internal control efficacy.

3.2 Study Aim and Objectives

The current study seeks to assess internal control by analysing the financial performance of a sample of Iraqi telecommunications businesses to identify how it influences profits, sustainability, and the achievement of strategic goals.

3.3 Problems and hypotheses of the study

Financial analysis is essential for assessing a company's performance over time and estimating its financial condition. The organisation's success is contingent upon the policies and objectives it formulates and the degree of compliance by its board of directors and subordinate management levels. This illustrates either the inadequacy or effectiveness of internal control systems. This study uses financial performance analysis to assess the efficacy of internal control within a sample of Iraqi telecoms firms. The research poses the subsequent enquiries:

(Does effective internal control, assessed by financial performance analysis, facilitate the attainment of long-term financial success in Iraq's telecommunications sector?)

Based on the research questions, the study hypothesizes that adequate internal control enhances the financial performance of Iraqi telecommunications firms, as delineated by their objectives.

4. Results

To achieve the study objectives, Asia Cell's financial analysis will use indicators, liquidity ratios, debt ratios, activity ratios, and profitability ratios to evaluate the effectiveness of the company's internal control system. The final accounts for the financial period (2018-2023) will be relied upon.

4.1 Financial Performance Analysis of Asiacell

Table 1: Financial performance analysis of Asiacell Telecommunications Company

Year	Turnover ratio	working capital	Debt ratio	Liabilities to equity ratio	Asset turnover rate	inventory turnover ratio	Accounts receivable turnover ratio	Return to assets	Return to Equity
2018	0.795	-293,483	0.5	1.003	0.474	85.96	5.414	0.05	0.099
2019	0.965	-532,263	0.528	1.117	5.07	88.807	5.075	0.059	0.125
2020	0.850	-317,395	0.621	1.636	0.431	81.208	3.399	0.071	0.188
2021	0.787	-243,169	0.467	0.876	0.489	117.987	3.974	0.126	0.237
2022	0.771	-184,635	0.397	0.752	0.609	146.371	7.578	0.117	0.194
2023	0.946	35,047	0.359	0.561	0.744	145.164	3.152	0.16	0.249

1- Liquidity ratios

The above results show that the current ratio was less than (1) in 2018, 0.795 and rose in 2019 to 0.965. This indicates the company's weak liquidity and lack of financial position due to the decline in current assets compared to current liabilities. We note the decline in liquidity for the years 2020, 2021, and 2022. We believe that the reason for the decline is due to the coronavirus pandemic and its economic effects and has nothing to do with the effectiveness of internal control; the findings suggest that working capital exhibited a negative value from 2018 to 2022, indicating that current assets were insufficient to meet current liabilities. This reflects the company's financial distress and failure to fulfil current obligations, suggesting inadequate internal control mechanisms. The liquidity ratio rose by 0.946 in 2023, which is close to (1), indicating the effectiveness of internal control. We note that the value of working capital increased during 2023, indicating that the company has implemented effective internal control systems and addressed deficiencies in previous years.

2- Debt ratios

Asiacell's debt ratio rose in 2019 and 2020 but fell dramatically between 2021 and 2023, hitting 0.467, 0.397, and 0.359, respectively. This means reducing the company's reliance on external financing sources to fund its assets and strengthening its financial position. The liabilities ratio rose in 2019 and 2020 but fell in the subsequent three years, hitting 0.561 in 2023, the lowest level since 2018. This demonstrates the company's reliance on internal funding and shareholder funds to support its operations, paving the way for an optimistic future.

3- Activity rates

We note that the asset turnover ratio earned its lowest level of 0.431 in 2020, while the company's highest level was conducted in 2019 at 5.05. The inventory turnover ratio indicates a continuous increase, except in 2020, when it dropped to 81.208 due to the COVID-19 pandemic. It has also grown over the past three years, leading to increased sales and, consequently, increased profitability. We note that the accounts receivable turnover ratio has steadily declined from 2019 to 2021, indicating that the administration's debt pack approach was not cruising well during this period. However, this ratio increased in 2022 by 7.578,

showing management's efficiency in collecting customer debts, which raised the company's profitability.

4- Profitability ratios

The data presented indicates an upward trend in the return on assets ratio throughout the study period, with a minimum of 0.05 recorded in 2018 and a maximum of 0.16 in 2023. This indicates the efficiency and effectiveness of the company's management in utilising its assets to generate profits. In 2022, this ratio experienced a decline, indicating a decrease in the efficiency of the company's management in utilising assets to generate profits. The return on equity ratio has shown a consistent upward trend throughout the study period, with a minimum of 0.099 in 2018 and a maximum of 0.249 in 2023. This indicates the management's effectiveness in utilising shareholders' funds to generate increased profits, encouraging investor participation during this period. This also reflects the efficacy of the company's control system.

4.2 Financial Performance Analysis of Zain Iraq

To achieve the study objectives, the financial analysis of Zain Iraq will be conducted using indicators, liquidity ratios, debt ratios, activity ratios, and profitability ratios to evaluate the effectiveness of the company's internal control system. The final accounts for the financial period (2018-2023) will be relied upon.

Year	Turnover ratio	working capital	Debt ratio	Liabilities to equity ratio	Asset turnover rate	inventory turnover ratio	Accounts receivable	Return to assets	Return to Equity
2018	0.722	(202,538,346)	0.36	0.563	0.267	57.205	2.131	0.018	0.027
2019	0.683	(323,304)	0.452	0.827	0.246	46.133	2.016	0.022	0.04
2020	0.777	(272,647)	0.477	0.912	0.187	37.282	1.659	0.022	0.042
2021	0.635	(429,666)	0.476	0.907	0.165	30.113	1.282	0.013	0.026
2022	0.574	(516,565)	0.474	0.866	0.172	22.703	1.378	0.005	0.009
2023	0.859	(112,348)	0.404	0.678	0.114	11.479	3.651	0.031	0.051

1- Liquidity ratios

The above results show that the current ratio was less than (1) throughout the study years, with its lowest ratio being 0.574 in 2022 and its highest ratio being 0.859 in 2023. This indicates the company's weak liquidity and that it is not in a good financial position due to the decline in current assets compared to current liabilities, which indicates weak internal control. The effects further reveal that working capital has a negative value for 2018-2023, indicating the inadequacy of current assets to meet current liabilities. This means the company's financial difficulty and incapacity to fulfil its current responsibilities, highlighting the ineffectiveness of internal controls.

2- Debt ratios

Throughout the years of study, Zain Iraq's debt percentage stayed the same. However, in 2023, it fell to 0.404, which means the company's financial situation improved as it became

less dependent on external financing sources to fund its assets. The COVID-19 pandemic caused the liabilities-to-equity ratio to rise in 2019, 2020, and 2021, although it fell by 0.866 in 2022 and 0.678 in 2023. Because of the efficiency of internal control, the firm can support its operations entirely from internal sources, including shareholder cash.

3- Activity rates

The asset turnover ratio has steadily reduced since 2020, plugging a high of 0.267 in 2018 and a low of 0.114 in 2023, according to the overhead data. This is a manifestation of inadequate internal control as it indicates that management is not using the company's assets agreeably, reducing sales and impacting liquidity. Since the inventory turnover ratio peaked in 2018 at 57.205 and bottomed out in 2023 at 11.479, it shows a steady fall. A decline in sales and, by stretching, the company's bottom line directly results from management's incompetence in stock management and sales. Additionally, it shows that the inventory management's internal control tools are lacking. We also note that the accounts receivable turnover ratio has been continuously declining from 2020 to 2023, at rates of 1.659, 1.282, and 1.378, respectively, while it rose in 2023 to 3.651. This indicates that the management's policy for collecting its debts from customers is not going well, which indicates the management's efficiency in collecting them, which may lead to a decrease in the company's profitability. It is also a negative indicator of weak internal control in the company.

4- Profitability ratios

From Table No. (2) above, we note that the return on assets ratio was at varying rates during the study years, with the lowest rate being 0.005 in 2022 and the highest rate being 0.031 in 2023, which is a positive indicator of efficiency in the final year of the study. It also indicates the effectiveness of Zain Iraq's direction in using its assets to generate profits. The return on equity ratio jumped from 0.027 in 2018 to 0.04 in 2019 and 0.042 in 2020. Investors were inspired to invest their money in the company during this period since management effectively invested shareholder money to achieve higher profits. The ratio hit a low of 0.009 in 2022, suggesting that the Zain Iraq management was ineffective at investing shareholder funds, which casts doubt on its track record when handling its money. In 2023, it earned the highest rate of 0.051, which indicates that the corporation conducted Improvements to its policies, an indication of its efforts to enhance the effectiveness of internal control.

5. Conclusion

The country's highly developed and dynamic telecom sector is integral to Iraq's economy. It has grown substantially in the past several years, mainly due to FDI in mobile and internet tech. This is because of a newly formed regulatory agency and a reopened door to international investment. The construction of regional wired and wireless communication networks ranks high among Iraq's most noteworthy telecom achievements. Traditional landline and broadband internet services can be provided to users via Iraqi telecommunications networks without extending cables across the country. Success in this area results from a legally mandated cooperative effort between Iraq's public and commercial sectors. The country's preeminent operator is the business-sector-affiliated General Company for Communications and Informatics. The Iraqi Communications and Media Commission oversees three major telephone operators: Zain, Asiacell, and Korek.

By analysing the financial performance of telecommunications companies, we can see how important internal controls are for these businesses. This is because adequate internal

controls ensure that assets are balanced so the company can run efficiently and liabilities are balanced so investors pay the least amount possible. The positions of assets and liabilities are balanced, so the company stays in the black. With all this information, managers can make knowledgeable financial decisions based on the company's policies, both now and in the end. As an essential component of the governance committee's policies and procedures, effective internal control ensures that all corporate departments adhere to them.

Financial performance analysis helps monitor a company's activity by evaluating its financial position over a specific period to obtain information that helps make sound decisions. It is also the tool through which the analyst can direct attention to sensitive points that require study and making the necessary decisions to improve the financial position, which is supposed to be efficient and effective so that it can survive and continue by relying on financial analysis tools, which are of great importance in revealing the problems that the company may face, as they help to know the liquidity that the institution enjoys and its financial balance.

The results indicate that Asiacell and Zain Iraq have continuously improved since 2022 in achieving their goals by generating profits and developing their capabilities. This indicates the effectiveness of internal control at Asiacell and Zain Iraq. The telecoms sector was among many that felt the effects of the coronavirus pandemic in Iraq in 2020 and 2021, which had more of an effect on the country's economy than on any lack of internal control. Throughout the research period, it became clear that adequate internal control over administrative expenses and sales substantially affected net profit. Improving processes and implementing policies that align with the necessary standards are necessary to increase the efficacy of internal control in this area.

6. References

- [1] Abu-Odeh, H. S., (2017) The ability of financial ratios to improve the quality of information in service companies listed in Palestine exchange: master thesis; The Islamic University, Gaza, pp. 1-83, <https://search.emarefa.net/ar/detail/BIM-733871>
- [2] Alabdullah, T. T. Y. (2023). HOW DO SUSTAINABILITY ASSURANCE, INTERNAL CONTROL, AUDIT FAILURES INFLUENCE AUDITING PRACTICES?. JOURNAL OF MANAGEMENT, ACCOUNTING, GENERAL FINANCE AND INTERNATIONAL ECONOMIC ISSUES, 2(3), 671–688. <https://doi.org/10.55047/marginal.v2i3.705>
- [3] Alzoubi, A.B. (2025), "Maximizing internal control effectiveness: the synergy between forensic accounting and corporate governance", Journal of Financial Reporting and Accounting, Vol. 23 No. 1, pp. 404-416. <https://doi.org/10.1108/JFRA-03-2023-0140>
- [4] Bilal, Z. O., Twafik, O. I., & Bakhit, A. K. (2018). The Influence of Internal Auditing on [5] Effective Corporate Governance in the Banking Sector in Oman. European Scientific Journal, ESJ, 14(7), 257. <https://doi.org/10.19044/esj.2018.v14n7p257>
- [6] Bondu, Avinash and Sangiseti, Manoj, (2020). "Financial Statement Analysis: Measurement of Financial Position", International Journal of Research in Engineering & Advanced Technology, Vol. 8(2), pp. 1-19, <http://www.ijreat.org/Issue44.html>
- [7] Boulhaga, M., Bouri, A., Elamer, Ahmed A. and Ibrahim, B. A., (2023), "Environmental, social and governance ratings and firm performance: The moderating role of internal control quality", Corporate Social Responsibility and Environmental Management, Vol. 30(1), pp. 134-145, <https://doi.org/10.1002/csr.2343>
- [8] Fourie, Houdini and Ackermann, Christo, (2013), "The impact of COSO control components on internal control effectiveness: an internal audit perspective", Journal of

Economic and Financial Sciences, Vol. 6(2), pp. 495-518,
<https://hdl.handle.net/10520/EJC142871>

[9] Hamed, R. (2023). The Role of Internal Control Systems in Ensuring Financial Performance Sustainability. *Sustainability*, 15(13), 10206. <https://doi.org/10.3390/su151310206>

[10] Handoyo, B. R. Madolidi and Bayunitri, B. Indah, (2021). The Influence of Internal Audit and Internal Control Toward Fraud Prevention, *International Journal of Financial, Accounting, and Management*, Vol. 3(1), pp. 45-64, <https://doi.org/10.35912/ijfam.v3i1.181>

[11] Harasheh M. & Provasi R. (2022). A need for assurance: Do internal control systems integrate environmental, social, and governance factors?, *Corporate Social Responsibility and Environmental Management*, Vol. 30(1), pp. 384-401, <https://doi.org/10.1002/csr.2361>

[12] Irwansyah, Irwansyah & Zega, Wilensi, (2023). The Influence of Good Corporate Governance, The Role of Internal Audit, The Effectiveness of Internal Controls and The Appropriate of Compensation on Fraud Trends, *International Business and Accounting Research Journal*, Vol. 7(1), pp. 37-51, <http://dx.doi.org/10.35474/ibarj.v7i1.148>

[13] Kenton, W., (2024). Financial Statement Analysis: How It's Done, by Statement Type, Investopedia, <https://www.investopedia.com/terms/f/financial-statement-analysis.asp#toc-types-of-financial-statements>

[14] Länsiluoto, A., Jokipii, A. and Eklund, T. (2016), "Internal control effectiveness – a clustering approach", *Managerial Auditing Journal*, Vol. 31 No. 1, pp. 5-34. <https://doi.org/10.1108/MAJ-08-2013-0910>

[15] Mangasih, Edwin T., Pinasti, Margani and Bawono, Icu R., (2020), "THE EFFECT OF QUALITY OF INTERNAL AUDIT AND EFFECTIVENESS OF INTERNAL CONTROL SYSTEMS ON GOOD CORPORATE GOVERNANCE IN FINANCE COMPANIES", *Journal of Accounting and Business*, Vol. 5(1). Pp. 56 – 82, <http://dx.doi.org/10.20884/1.sar.2020.5.1.2723>

[16] Maulana, A., Dwita, M., Fitriyani, M., Sunaryo, D., & Adiyanto, Y. (2024). Risk Management As A Determinant Of Indonesian Banking Financial Performance: A Systematic Literature Approach. *Indo-Fintech Intellectuals: Journal of Economics and Business*, 4(5), 2523–2537. <https://doi.org/10.54373/iffjeb.v4i5.2120>

[17] Otoo, F.N.K., Kaur, M. and Rather, N.A. (2023), "Evaluating the impact of internal control systems on organizational effectiveness", *LBS Journal of Management & Research*, Vol. 21 No. 1, pp. 135–154. <https://doi.org/10.1108/LBSJMR-11-2022-0078>

[18] Po'latov, Sherzodbek and Farmonov, Ilhomjon, (2023). "The Role and Significance of Internal Audit as an Effective System of Internal Control in Business Entities, *Yashil Iqtisodiyot VA Taraqqiyot*, Vol. 11(12), pp. 1163–1167, <https://yashil-iqtisodiyot-taraqqiyot.uz/>

[19] RASHID, Chnar Abdullah, (2021), "THE EFFICIENCY OF FINANCIAL RATIOS ANALYSIS TO EVALUATE COMPANY'S PROFITABILITY", *Journal of Global Economics and Business*, Vol. 2(4), pp. 119-132, <https://www.researchgate.net/publication/348686551>

[20] Sandberg, Helene, Alnoor, Alhamzah and Tiberius, Victor, (2023). "Environmental, social, and governance ratings and financial performance: Evidence from the European food industry", *Business Strategy and the Environment*, Vol. 32(4), pp. 2471–2489, <https://doi.org/10.1002/bse.3259>

[21] Sarngadharan, M. (2011). *Financial analysis for management decisions*, PHI Learning Private Limited, second edition, ISBN: 9788120346604, New Delhi, pp. 1–635,

[22] Sharan, V. (2009). *Fundamentals of Financial Management*, Dorling Kindersley (India) PVT. Ltd.