

Importance-Performance Analysis to Prioritize and Analyze the Comprehensive Pattern of the Drivers of Internal Audit Effectiveness in Iranian Commercial Banks

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ARTICLE INFO

ABSTRACT

Received: 18 Sep 2024

Accepted: 24 Dec 2024

Subject

In this study, the factors affecting the effectiveness of internal controls in Iranian commercial banks were identified and prioritized based on the Importance-performance analysis matrix.

Research Method

The method of this qualitative research is "grounded theory"; for this purpose, focus groups were first used before the research and conducting background interviews. Therefore, fifteen internal audit managers with relevant experience were invited, then the insights gained from the focus group interviews were used to develop and improve the interview guide. The research sample in the qualitative section was provided to 10 professors and experts in the field of accounting and auditing and internal auditors and supervisors of banks, and resulted in the preparation of a questionnaire for interviews. The face and content validity of this tool was approved by experts and its reliability was calculated to be 70 percent, and the data were analyzed using the exploratory factor analysis method. Then, the themes were prioritized based on the importance-performance analysis method.

Discussion plan

In this study, an attempt was made to determine the subjective meanings of the studied stakeholders of the effectiveness of internal auditing in Iranian commercial banks and the effective determination of the effectiveness of auditing in Iranian commercial banks, based on the perspective of the studied stakeholders, and the consequences of the effectiveness of internal auditing in Iranian commercial banks, based on the perspective of the studied stakeholders. The results showed that the subjective meanings and factors affecting the effectiveness of auditing are obtained and can be classified based on five categories as follows:

Human resources and competencies, organizational structure and independence, audit processes and quality improvement, management and organizational support, facilities and legal frameworks.

Conclusion

Based on the results of this study, commercial banks can focus on identifying factors affecting the effectiveness of internal audit in the form of issues such as staff, internal audit system, management and organizational facilities, accepting stakeholders' opinions, and trying to use reliable and quality information from the accounting system.

Keywords: Internal audit - Internal audit effectiveness - Importance - Performance matrix - Iranian commercial banks

Introduction

The importance of the internal audit unit and its ability to contribute to the quality of corporate governance through the monitoring role of internal audit, improvement in control and control systems and the potential to reduce fraud risk (Su and Martino, 2011). Other reasons for the importance of internal audit in corporate governance include its relationship with the internal control risk management system, improving organizational efficiency and effectiveness by providing constructive criticism and advice on the state of the organization, reducing information asymmetry during decision-making, and finally, the fact that internal audit is a vital internal assurance system in the company and the financial reporting process (Hailemariam, 2014).

In recent years, the role of internal audit in corporate governance has faced an increasing trend, considering its relationship with the internal control risk of the system, and auditors have used this to expand their areas such as participation in risk management, control and governance processes.

The effectiveness of internal audit depends on the ability of internal auditors to achieve the established goal in the organization. In fact, it is necessary to clearly state the goals and provide the means to achieve these goals (Dittenhofer, 2001). Organizations with an effective internal audit unit are more likely to detect fraud in their organization than organizations without such a unit (Badra and Saidin, 2013).

Effective internal audit can be a great asset to improve public confidence in financial reporting and corporate governance if it includes the following elements: organizational independence, formal mandate, unlimited access, adequate budget, competent staff, the existence of an audit committee, stakeholder support, professional auditing standards, and unlimited scope. In this regard, the organization must ensure that internal audit is effective in achieving organizational goals (Badra and Saidin, 2013).

Importance of Conducting Research

One of the most important mechanisms that has been invented in the field of guiding the effectiveness and efficiency of organizations, especially banks and financial institutions, is the concept of internal controls. This concept can be considered a product of the development of organizational thinking and the complexity of the organization's structure, which itself is a product of the evolution of human societies and the deepening of the concepts of commercial and industrial relations in them.

Therefore, the internal control system is established to ensure the following:

- 1 - Implementation of the organization's policies and guidelines
- 2 - Identification and recognition of the organization's principles and values
- 3 - Strict compliance with laws and regulations and the reliability of financial statements and other published information
- 4 - Efficient and effective management of human resources and other resources (Hosseinpour, 2007).

The Code of Professional Conduct of the Association of Internal Auditors and the International Standards on Internal Auditing emphasize the great importance of independence and impartiality in the internal audit process. Independence in internal auditing is related to the position of the internal auditor in the organizational chart and, of course, its accountability and reporting authorities in the organization (Mashayekhi, Mehrani, 2016).

Based on the proposal of the Ball Committee, the following principles are known as the "Principles of Internal Control System Evaluation" and the banks' management is required to comply with them: management supervision and control culture, risk recognition and assessment, control activities and segregation of duties, information and communication, supervisory activities and correction of deficiencies, evaluation of the internal control system by supervisory authorities (Ball Committee Publications, translated by Arjomand Nejad, August 2006). Within this framework, the duty of the internal audit unit of the country's banking complex is to expand its scope of work so that it can perform financial audit, asset audit, value for money audit and self-assessment control.

There has been no comprehensive research on evaluating the effectiveness of internal audit in Iranian banks and formulating its prioritization, and research has been conducted in the form of case studies examining sub-sectors of each bank or institution. Credit.

Research Objective

The present study will identify the subjective meanings of stakeholders in the effectiveness of internal audit and then help stakeholders identify the factors affecting effectiveness, how each factor affects audit effectiveness, and identify the consequences and relationships between factors.

The purpose of the present study is to improve the level of internal audit in Iranian commercial banks; and in general, the purpose is to identify and prioritize the factors affecting the effectiveness of internal audit in Iranian commercial banks.

History

Review of the research background

Internal research:

Mahdavi and Namazi (2016), in a study called "Ranking the effective measures on the duties and status of the internal audit unit in executive agencies" state: Understanding the duties, understanding the status of this unit, and also examining the priority of each of the measures effective on its function are of particular importance. Given that the general duties of the internal audit unit in companies and executive agencies are very similar to each other and that the internal audit unit in executive agencies has not been provided with a charter of activities and has not been notified for implementation, the duties of the internal audit unit have been identified using the charter of activities of the internal audit unit of the Tehran Stock Exchange and the research mentioned in the theoretical foundations and background of the research.

Using the identified measures and duties, a questionnaire was developed in the form of three criteria including the general conditions of the internal audit unit, the implementation of operations, and the management of the executive agency unit in a paired comparison.

The results of the study showed that the measure of "having scientific and professional qualifications of the internal audit unit manager" from the criterion of "general conditions of the internal audit unit", with a closeness index, is the most important measure of the internal audit unit. The measures of "job security of the internal audit unit" and "granting executive power to the internal audit unit by the management of the department" from the criterion of "executive department management" are in second and third place. Also, there is no significant difference between the criteria of the internal audit unit's duties. The most important criterion is "general conditions of the internal audit unit", but there is no significant difference in their rank with other criteria of "operations of the internal audit unit" and "executive department management".

Soleimani Amiri and Taheri (2018) in a study called "Ranking Factors Affecting the Quality of Internal Audit Activities: Analytic Network Model (ANP)" with the aim of extracting factors affecting the quality of internal audit activities, prioritized effective criteria under four main criteria with sub-criteria of each using the analytic network model. In their study, the highest importance coefficient of the sub-criteria was related to management's support for the internal auditor in performing his duties, followed by documentation and inspection of internal audit operations, which is far from the first priority, in the second place. Among them, the sub-criteria of auditing all activities and appropriate employment and continuous training of internal auditors are in the next place. Other sub-criteria include appropriate documentation and clarity of the nature of internal audit activities, which again have an appropriate correlation with high-priority criteria. The results of the study show that managers' support for internal auditors, Adequate training and experience of internal auditors lead to high quality internal audits that are effective in terms of cost and time.

Rostami, Vadiee, and Bagherpour (2019) in a study called “Developing a Competency Model for Internal Audit Managers” collected information through interviews with internal audit stakeholders, including members of the audit committee and managers of the audit unit of listed and over-the-counter issuers, partners of audit firms, and faculty members of universities during 2018. The results of their research indicate that internal audit managers need a set of personal, technical, managerial, and environmental competencies in order to achieve the desired level of effectiveness, and they suggest that by giving importance to the dimensions of internal audit managers’ competencies, these factors should be considered in developing policies, programs, and guidelines, both at the macro and organizational levels.

They conclude that internal audit managers need a set of personal, technical, managerial, and environmental competencies to achieve the desired level of effectiveness. The internal audit manager must have:

- 1- Technical competencies: including the categories of general knowledge and specialized knowledge,
- 2- Environmental competencies: including the categories of communication and interaction competencies,
- 3- Management competencies: including the categories of human resource management, leadership management, and proper administration of the unit, and
- 4- Personal competencies: including the categories of attitudinal competencies, personality competencies, cognitive competencies, behavioral competencies, and spiritual competencies.

Zivari Kamran and Fakhari (2019) in a study called “Explanation of an Effective Internal Audit Model from the Perspective of Stakeholders” seek to explain and present a model of effective internal audit and identify its components. The statistical population in this study is 16 people from the expert group of managers of listed companies, members of audit committees and managers of audit firms. The context of this study includes Iranian companies (accepted in the Securities and Exchange Organization) that, based on the organization’s regulations, all of them have formed an audit committee – as one of the specialized committees of the board of directors – and have designated an individual as the internal audit manager. The aforementioned regulations have led to all companies taking action regarding the use of the services of the audit unit, such that a number of them have changed their organizational structure and created a separate unit, and some others have used the services of audit firms in this area. In this regard, the members of the statistical sample of this study are classified into two parts: internal and external stakeholders. Internal stakeholders include managers of listed companies and audit committees, and external stakeholders include auditors of audit firms.

The results obtained from their research in the input section confirm that in order to achieve an effective internal audit system in the organization, the existence of some prerequisites is essential. These prerequisites are related to both the characteristics of the internal audit unit and the characteristics of the organization. The main categories of the input section include access to sufficient resources and facilities, the independence of the internal audit unit, the transparency of the organization's information system, the existence of a documented management system, the competence and professional qualifications of employees and human resources policies, and the effectiveness of implementing internal audit operations or processes, including risk management, performance evaluation, control strategies, improving the skills of internal auditors, the efficiency of organizational communications, and keeping pace with new developments.

Khorramabadi et al., (2019) in a study titled "Explanation and prioritization of factors affecting the effective evaluation of internal controls in companies listed on the Tehran Stock Exchange with a fuzzy approach" have assessed the importance of factors affecting the effective evaluation of internal controls in companies listed on the Tehran Stock Exchange during the period 2018-2019.

The results indicate that among the main criteria, the characteristics of the internal auditor are the most important factor in evaluating the effectiveness of internal controls. In addition, in prioritizing secondary codes (indices), the sub-criterion of scientific, professional and expertise qualifications of the internal audit unit staff, the independence of the internal audit unit and the sub-criterion of transparency of its accountability and reporting authorities are of

the highest importance in evaluating the effectiveness of internal controls. Higher technical competencies of internal auditors improve the effectiveness of the internal audit unit and provide a basis for the efficient implementation of internal controls.

Other findings of the study show that after the internal auditor, the structure of the board of directors and the independent auditor are the main factors in the implementation of internal controls, which are the second and third most important factors in the assessment of the effectiveness of internal controls, respectively, and their characteristics have a significant impact on the effective implementation of internal controls. In prioritizing the sub-criteria, the variable of the independent auditor specializing in the industry, the internal auditors' continuous awareness of changes and developments in the profession, especially developments in information technology, the technical competence, competence and sufficient knowledge of the members of the board of directors of the activities of the business unit and the allocation of appropriate time to complete the supervisory responsibility, the internal audit unit having ethical values and professional behavior, and the activation of audit committees are in the next levels of importance.

Paksaz and Abdoli (1400) in a study called "Presenting a Model of Internal Consequences of Internal Audit Effectiveness Based on the Analysis of the "Comprehensive Interpretive Model" attempted to identify intra-company consequences with the participation of elites through meta-analysis due to the existence of an effective internal audit, in the form of a qualitative target community.

Based on this study, it was determined that increasing the return on assets as one of the indicators of the effectiveness of financial processes is the most important consequence due to the existence of the effectiveness of internal audit within companies. This means that by strengthening the infrastructure of internal controls and in the context of developing effective internal audit within the boundaries of a company, it can be expected that the level of return on assets as one of the ratios indicating the company's ability can lead to an increase in the level of confidence and trust in investment.

Barkhordar et al. (1400), in a study called "Investigating the factors affecting the effectiveness of internal audit and evaluating the role of internal audit in risk management and internal controls of Keshavarzi Bank" examined these factors in the bank Agriculture. The independent variables of this study are: management support for the internal auditor, internal auditor competence, internal audit independence, internal audit size, relationship between internal and independent auditors, and internal audit effectiveness. According to theories related to internal audit effectiveness, five components were considered for it, for which it plays the role of a dependent variable. On the other hand, the internal audit effectiveness variable plays the role of an independent variable for the two dependent variables of improving risk management and improving internal controls.

The findings of this study showed that management support for internal auditors has a positive and significant effect on the effectiveness of internal audit. It can be concluded from this finding that management support for internal audit will allow them to have more independent access to the aspects required for review and be able to prevent waste of resources through effective and timely review and increase the efficiency and effectiveness of the organization's activities. The competence of internal auditors has a positive and significant effect on the effectiveness of internal audit. This finding is influenced by the fact that the use of auditors with professional qualifications increases the effectiveness of internal audit. In this regard, educational qualifications, professional qualifications, work experience in the field of internal audit, continuous development and average annual training hours increase the effectiveness of internal audit, and the independence of internal auditors has a positive and significant effect on the effectiveness of internal audit. The main factor for the capability of internal audit is its independence. The size of internal audit has a positive and significant effect on the effectiveness of internal audit.

The presence of sufficient staff and resources in the internal audit unit enables internal audit staff to successfully carry out their responsibilities. The relationship between internal and independent auditors has a positive and significant impact on the effectiveness of internal audit. During the audit planning process, the independent auditor should make a preliminary assessment of the work of the internal audit unit in specific areas that are apparently related to the independent audit of financial statements. The effectiveness of internal audit does not have a significant

impact on improving risk management in Keshavarzi Bank. It should be noted that because the activities of banks and their role in the money and capital markets have exposed them to certain hazards and risks that are important for the continuation of the bank's activities. For this purpose, it is necessary to identify, assess and control various risks in banking areas. The internal audit unit in the bank should evaluate risk management processes because this issue has been neglected in Keshavarzi Bank's internal audit activities.

The results of the last hypothesis test showed that the effectiveness of internal audit has a positive and significant effect on improving internal controls in Keshavarzi Bank. Organizations that have an effective internal audit unit have a better assessment of the risks of their business environment, processes, and business systems, and therefore implement appropriate corrective measures to continuously improve their business environment.

Mohammadreza Mohagheghi and Gholamreza Karami et al. (1401), in a study titled "Identification and Ranking of Factors Affecting the Effectiveness of Internal Control Systems in Government Institutions and Organizations", identified and ranked the factors affecting the effectiveness of internal control systems in government institutions and organizations.

The results of this study showed that it is possible to identify the factors affecting the effectiveness of the internal control systems of government institutions and organizations based on the knowledge domain analysis and content analysis model, and to refine the more effective factors with a combination of persuasive survey and fuzzy Delphi approach. Accordingly, government institutions and organizations can multi-dimensionalize their evaluation and, relying on identified and refined factors in individual, performance, legal, managerial, environmental, and organizational dimensions, measure the internal control of the institutions and organizations under review. In this case, based on the views of experts and scientific foundations, more accurate assessments and more comprehensive decision-making will be made.

Khosrow Faghani Makrani et al. (1402) conducted a study titled "Identifying and ranking factors affecting internal audit quality" with the aim of identifying factors affecting audit quality and examined 99 companies on the Tehran Stock Exchange.

Based on the findings of this study, it was determined that the variables of board size, number of board meetings held, audit committee diligence, competition in the industry, ratio of foreign sales to total sales, board independence, audit committee size, audit report type, periodic rotations of internal auditors and company size, ethics, continuous audit and stress in the estimated model had a positive and significant effect on the dependent variable, namely the quality of audit performance. In the ranking stage, company size, audit committee size, audit report type, board independence, ratio of foreign sales to total sales, number of board meetings and number of audit committee meetings are respectively in the high ranks of influencing the quality of internal audit performance.

Gholamreza Kordestani and Seyyed Mohsen Mohammadi Nasab (2013) studied the effectiveness of internal controls on risk disclosure in financial reports in a study titled "The Effect of Internal Controls on Risk Disclosure in Financial Reports." They analyzed data from 114 companies listed on the Tehran Stock Exchange. Based on the findings, it can be concluded that auditors' attention to the weakness of internal controls and strengthening the company's internal control structure can improve risk disclosure. Nader Rezaei and Saeed Khodadad (2013) studied the factors affecting internal controls from the perspective of internal audit experts and experts. According to the results of the study, the most effective factors are the characteristics of the independent auditor, the structure of the board of directors, the characteristics of the internal auditor, the developers of laws and standards, the ownership structure, the characteristics of the industry, and the characteristics of the company, which are classified into 51 propositions.

Foreign research:

Zigifis (2000) in a study called "Evaluating the Performance of Internal Auditors" where internal audit chiefs were the target of the research survey, introduced the top 20 components of audit quality as follows.

Table 1: Top component of audit quality according to Zigifis

The audit committee's focus on risk	Employee experience
The number of complaints about the internal audit unit	Audit committee oversight of internal audit
The performance of internal audit from the perspective of audited units	Management expectations of internal audit
Number of management requests	Internal audit recommendation implementation rate
Number of employees with professional certificates	Internal auditor training levels
Rate of operational improvement	Auditor satisfaction survey
Development of quality control techniques	Importance of audit topics
CEO's private meetings with the audit committee	Training hours per person
IT audits	Audit committee satisfaction survey
Years of experience of internal auditors	CAE reporting lines and structure

Pravitt, Smith, and Wood (2009) examined professional experience and certification, training, reporting communications, and financial focus in their research to measure the three criteria stated in the auditing standards, respectively, and stated the relative investment made in the internal audit unit as an important factor in the success of the internal audit unit.

De Sai, Roberts, and Sreistava (2010) examined professional experience and certification, training, planning and supervision - reporting communications, depth of audit scope, implementation of recommendations - efforts, implementation of the plan, completeness, and quality of the report in their research as factors in measuring the three criteria of competence and expertise, objectivity, and nature and scope of work, stated in the auditing standards. Schneider (2010), in a study called "Analysis of Professional Standards and Research Findings to Guide Decision Making to Rely on Internal Auditing", analyzed professional standards and identified factors through which internal audit helps independent auditors using 270 questionnaires in the United States. The results of his study showed that standards related to audit independence and performance of operations are also applicable to internal audit. Compliance with these standards causes stakeholders to rely more on the work of internal auditors.

Barua et al. (2010), in a study called "Characteristics of the Audit Committee and Investment in Internal Auditing", examined the characteristics of the audit committee and investment in the internal audit unit for 181 companies listed on the US Stock Exchange. The results of their study showed that there is a negative and significant relationship between the budget of the internal audit unit and the number of audit committee members. This shows that the audit committee has a direct impact on the internal audit unit. Badara and Saidin (2013) conducted a literature review of 30 research articles on the subject of audit effectiveness. The most important components that they extracted from the total research conducted on the effectiveness or factors affecting the effectiveness of internal audit are as follows.

Table 2: Factors affecting the effectiveness of internal audit according to Badara and Saidin

Senior management support	How to perform internal audit operations	Qualified and experienced staff
Client satisfaction	Communication	Professional ethics
Auditor knowledge	Organizational culture	Stakeholder acceptance of internal auditing
Internal audit resources	Independence	Effective internal control system

Internal auditor expertise and competence	Proper planning	Organizational position of internal auditing
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Dalia Abbas (2013), in a study titled "Internal Auditor Characteristics and Their Effect on Independent Audit Fees", shows that a range of personal characteristics of the auditor, the professional performance of the internal auditor, completion of specialized and professional courses, and continuous training are important characteristics that affect the quality of internal audit work and, consequently, the reduction of the cost and time of independent auditing. The results show that managers' support for internal auditors, adequate training, and the experience of the internal auditor at the time of hiring are factors that affect the reduction of the cost and time of independent auditing of financial statements. Also, reducing independent audit costs is directly related to monitoring the work of the internal auditor and ensuring the accuracy and quality of collecting internal audit evidence. Badara and Saidin (2013) in a study called "The Relationship Between Experience and Effectiveness of Internal Audit in Public Sector Organizations" in relation to the experience and work expertise of the internal auditor shows that the quality of the audit process is important for auditing. Work experience usually increases quality and based on that, the findings and decisions of the internal auditor have a higher value. In addition, the high experience of the internal auditor gives him empirical knowledge that helps a lot in detecting errors, mistakes and fraud in work processes. Therefore, the experience of the internal auditor is generally very significant in the structure of empirical knowledge that is given to the internal auditor. In addition, they make better decisions in complex conditions or the type of decisions they make in other conditions is different and distinctive. Lenz and Hahn (2015) in their article titled "An Empirical Review of the Internal Audit Effectiveness Literature with a Focus on New Opportunities" state that internal audit effectiveness is a result of micro factors, 1- internal audit resources, 2- internal audit process, 3- internal audit communications, and 4- organization, and macro factors include, 1- coercive forces such as laws and regulations, 2- normative forces such as professional performance standards, 3- forces related to imitation and assimilation with other organizations and institutions, and 4- other macro forces.

In their study, "Internal Audit Work and Financial Reporting: Results of an Empirical Study in German Companies," Gress et al. (2016) used the German regulatory framework, which is characterized by a two-tier board system of corporate governance and different prerequisites for the problem of serving two experts. This may weaken the ability of the internal audit function to monitor processes related to financial reporting. For their analysis, they used survey data to measure the quality of internal audit performance in a German organizational setting and used multiple regressions to examine the relationship between a number of internal audit performance quality attributes and the internal audit performance quality score with financial reporting quality and audit efficiency. Their results showed that in a two-tier system, a high-quality internal audit function can contribute to both financial reporting quality and audit efficiency. Their findings support the notion that the internal audit function is an essential element of effective corporate governance and plays an important role in financial reporting. Gross and Koch (2017), in their study on the factor of internal auditors' competence, concluded that external certifications of the internal audit unit and certifications of internal audit staff are important factors in examining the competence of this unit in the organization. Gamayuni (2018), in a study, examined the effect of the effectiveness of internal audit performance and the implementation of commitment-based government accounting standards on the quality of financial reporting. The implementation of new government accounting standards in Indonesia was implemented on a commitment basis in 2015, which necessitated the study of its weaknesses and advantages, as well as its effect on improving the quality of financial reporting. The purpose of the study was to obtain empirical evidence and examine 1) the effectiveness of internal audit performance on the quality of financial reporting and 2) the effect of implementing commitment-based government accounting standards on the quality of financial reporting. The results of this study provide evidence that the effectiveness of internal audit performance has a significant effect on the quality of financial reporting, but the implementation of commitment-based government accounting standards did not have a significant effect on the quality of financial reporting. Xu et al. (2018) conducted a study entitled Improving the Internal Control Quality Model through Corporate Governance Integrity. In this study, 2536 observations based on "company-year" were created in relation to companies active in the Chinese stock exchange. To improve the internal control quality model, inspired by the COSO model, criteria such as accountability; risk assessment; creating competitive advantage and supervisory mechanisms were used. To measure governance integrity, criteria such as CEO duality, board

independence and board size were used. The results showed that governance integrity has a positive and direct effect on improving the internal control quality of companies. It was also found that governance integrity has a positive and stronger effect on risk assessment and supervisory mechanisms as components of the internal control quality improvement model. Ossi and Taktak (2018) conducted a study titled "The Impact of Internal Audit Task Characteristics on Internal Audit Quality" to investigate the impact of internal audit task characteristics. In this study, 59 internal audit managers of listed companies in Tunisia participated, and the research tool was a questionnaire. The results showed that the quality of internal controls is significantly affected by the specialized knowledge of the audit committees of companies. This is because audit committees are more sensitive than other companies in selecting internal auditors of companies based on specialized capabilities and technical knowledge. Chang et al. (2019) conducted a study titled "The Impact of Internal Audit Attitude on Internal Control Effectiveness". In this study, 182 internal auditors of Taiwanese state-owned companies participated through a questionnaire. A questionnaire was used to collect information, and partial least squares was used to test the research hypotheses. In this study, auditors' attitudes towards performing job duties with commitment were measured, and the effectiveness of internal control was measured through the quality of financial reporting, reduction of financial constraints, and investment opportunities. The results showed that the auditor's attitude in the form of performing internal audit tasks plays an influential role as a criterion for facilitating management supervision and the effectiveness of internal controls in the dimensions of financial reporting, reduction of financial constraints, and investment opportunities. Strakova et al. (2021), in a study titled "Sustainable Economic Development of Economic Enterprises in the Service Sector Based on Effective Management of Value Streams", state that management participation and support are among the most important factors in improving effectiveness in internal auditing. Strong management support for the work of internal auditors as well as the stages of internal auditing are factors for success in internal audit tasks. It is also stated that some studies indicate special attention to the issue of financial budget and time budgeting during internal audit stages with the aim of improving audit effectiveness. Toti (2021) considers investing in the development of organizational reporting in internal audit and improving the web-based reporting system as an effective step in transmitting important information and preventing deviations in the internal control system, as well as improving the quality and assurance of information and the effectiveness of the internal control system.

Abed et al. (2022), in a study titled "The Moderating Effect of the Audit Committee on Determining Creative Accounting and Financial Reporting Quality in Iraqi Commercial Banks", used modern methods in controlling the internal audit system, analyzed the strengths and weaknesses of the internal control structure, considered the management and organization of ethical principles and the capacities for its improvement, and considered the commonalities of internal audit, the audit committee, and organizational management in order to ensure the optimal design and usability of the internal control system. Yousef et al. (2022) consider advanced computer systems with the ability to store a lot of information as the vital heart of the organization in terms of effectiveness, and due to their lack, hardware and software problems are reflected in the effectiveness of the internal control system, as Bozdak (2022) stated by providing evidence that the lack of an advanced hardware system disrupts the improvement and development of the effectiveness of the internal audit control system.

Theoretical Framework

Theoretical Foundations:

In this section, we first define the research components:

1- Internal Audit:

Internal Audit is an independent, impartial, assurance and consulting activity designed and implemented to create added value and improve the performance of an organization. Internal Audit helps the organization achieve its goals by establishing a systematic and systematic approach to evaluate and improve the effectiveness of risk management, control and governance processes.

2- Internal Audit Effectiveness:

According to the definition of the Audit Organization's Operational Audit Committee, effectiveness is the "degree of achievement of goals". There are other definitions in various books, publications and articles, some examples of which are mentioned below:

* Effectiveness or usefulness is the degree and extent of achieving the set goals. In other words, it means to what extent the desired and predetermined results and goals have been achieved as a result of the efforts made. In fact, effectiveness is directly related to the determined and predicted goal and providing human satisfaction from the efforts made;

* Effectiveness means whether the results obtained or outputs are consistent with the expected goals or not? The increase or decrease and in general the difference between the output and the desired goals may have many reasons and the effect of each data is also different and leads to an increase or decrease in output;

* Effectiveness means doing competent or appropriate work. Effectiveness is related to the selection of appropriate goals. A manager who chooses an inappropriate goal, for example, where there is a demand for small cars, starts producing large cars, is an ineffective manager.

3- Qualification, technical training and competence

The internal auditor must have a university education in the field of accounting and auditing and also have professional experience in the industry in question. The concept of competence includes the ability to perform an activity that consists of the sum of knowledge (codified applied knowledge and technical knowledge based on experience), skills (technical and cognitive) and perceptual ability. This ability is a persistent habit, task-related, observable and measurable, knowledge-based, and context-dependent, and is considered a core component of the job. The difference between an auditor's qualifications and his or her competence is that competence, in addition to training and skills, includes characteristics that cause them to perform beyond expectations. For example, having problem-solving skills, systems thinking, communication, creativity, and self-management are considered part of the competency set.

4- Commercial banks of Iran:

Commercial banks accept various types of deposits from the public, especially customers, including savings accounts, term deposits, and fixed deposits. These deposits can be withdrawn after a certain period of time. Commercial banks provide loans and facilities in various forms, including overdraft facilities, cash credit, discounting of commercial papers and bonds, and various other services. They also provide loans against appropriate collateral according to the demand and conditions of customers. Specifically, commercial banks of Iran include Melli Iran, Sepah, Post Bank of Iran, Tejarat, Mellat, Saderat Iran, Refah Kargan, Eghtesad Novin, Parsian, Karafarin, Saman, Pasargad, Sarmeh, Sina, Shahr, Tesfaye, Iran Zamin, Merekh, Ayandeh, and Dey.

The definition of the Institute of Internal Auditors states: "Internal auditing" is an independent and impartial assurance and consulting activity that aims to add value and improve the operations of the organization (IIA, 2010). This definition implies that internal auditing has undergone a paradigm shift from an emphasis on accountability in the past to improving future outcomes, to help the client do things more effectively and efficiently (Mehrt and Isma, 2010). Modern internal auditing is based on the three principles of effectiveness, efficiency, and cost-effectiveness. Effectiveness means doing the right thing, efficiency means doing it well, and cost-effectiveness means doing things cheaply and economically. But effectiveness is the most important of the three principles. If auditing becomes ineffective, it is ultimately useless and useless; and without effective work, efficiency and cost-effectiveness are meaningless (Lens and Hahn, 2015).

Early studies focused on examining the impact of internal audit quality on independent auditors' evaluation of their work and reliance on the work of internal auditors (Brown, 1983; Brown and Karan, 1986; Egg and Fairley, 1991; Meiser and Schneider, 1988). These studies focused on three main factors considered by independent auditors, including "competence, objectivity, and operational performance." The main findings of these studies consider

competence and optimal operational performance and place objectivity in second priority, and Brown (1983) showed that for independent auditors, the objectivity of internal audit is much more important than his professional competence. In subsequent studies, most researchers have emphasized measuring internal audit quality based on the criteria emphasized in independent auditing standards. Independent auditing standards have considered three criteria for independent auditing based on the work of the internal auditor (AICPA, 1990, PCAOB, 2007, and IFAC, 2009). According to these standards, the independent auditor should use his professional judgment in assessing the quality of the internal audit unit, including assessing "competence and expertise", "objectivity", and "nature and scope of internal audit work" related to financial reporting and auditing financial statements. Kaplan and Schulz (1983) have considered the concepts of professional certification, objectivity, and scope of work in their research, and have also considered the volume of investment made in the internal audit unit as an important factor in the quality of internal audit.

Data analysis methods and tools:

1- Research method:

In this study, the qualitative research method of "grounded theory" was used. The most important reasons for choosing the grounded theory method are as follows:

When there is little known about the area under study.

When there is no grounded theory to explain the relevance of a specific psychological structure to the behaviors under study.

When the researcher is interested in challenging existing theories.

When the researcher needs to understand the perceptions and experiences of participants in a specific case.

When the researcher's goal is to develop a new theory.

A review of the research literature revealed that studies based on the positive paradigm have provided limited insight into the dimensions of internal audit effectiveness, and the cases raised indicate that a model for internal audit effectiveness has not been considered. On the other hand, considering the stated objectives, this research aims to provide a proper understanding and awareness of the perceptions and insights of internal audit stakeholders regarding the effectiveness of internal audit in the form of a model by using grounded theory.

This research, in terms of the dominant research paradigms, namely "affirmative", "interpretive" and "critical", and considering its specific nature, namely that the phenomenon of "internal audit" and "internal audit effectiveness" is fundamentally created by the human mind and is classified in the interpretive paradigm group; therefore, in terms of methodology, it is in the category of qualitative research.

In this type of research, instead of trying to explain the mere cause-and-effect relationships, it interprets events and phenomena in natural environments to clearly clarify the complexities of those events and events. Therefore, the phenomenon of internal audit effectiveness in its natural environment (Iranian commercial banks) was studied through a qualitative approach and with the help of grounded theory through a study of its stakeholders who have experience and are most involved in the subject under study. The stages of conducting research using the grounded theory method include developing research questionnaires, collecting data, open coding, axial coding, selective coding, writing analytical notes, recording thoughts and interpreting the data, and writing and formulating the theory.

2 - Research Scope

Subject Scope:

The subject scope of the present study is the analysis of importance-performance to prioritize and analyze the comprehensive pattern of the drivers of internal audit effectiveness in Iranian commercial banks.

Spatial Scope:

The spatial scope of the present study is the main stakeholders (users and providers of audit services) of internal audit, namely board members, managing directors, senior executive directors, members of the audit committee, internal audit managers of Iranian commercial banks, managers and board members of the Audit Organization, the Stock Exchange Organization, the Society of Certified Public Accountants and the Iranian Internal Audit Association, and banking supervisors of the Central Bank of the Islamic Republic of Iran, as professional institutions of this study.

Time Scope:

The time scope of the present study is from 1400 to 1404.

3- Data collection method:

Interviews are an appropriate method for collecting data in grounded theory, because interviews are based on daily experiences and conversations (live experiences) and provide in-depth data.

In this study, focus groups were used before conducting the research and conducting the background interviews. For this purpose, nine experienced internal audit managers were invited and asked the main research questions, especially the factors affecting the effectiveness of internal audit. The insights gained from the focus group interviews were used to develop and improve the interview guide to ensure the following:

Uniformity and coverage of the research questions (research topics)

Reducing researcher biases towards preconceived issues

Ask key questions to explore the opinions and experiences of the participants

The interview guides were provided to several university professors and their opinions were obtained and final amendments were made. Finally, research questions were extracted from these amendments and provided to the target groups through a questionnaire, and their opinions were obtained for analysis and conclusions. The most important goal discussed in the interview was the ability of the interviewees to judge the effectiveness of internal audit and its components. Therefore, exploring their minds regarding the high or low effectiveness of internal audit, which they are related to, was considered one of the most important questions. The open-ended question, which is asked at the beginning of the interview, provided the interviewees with the opportunity to delve deeply into the subject under study.

4- Population and statistical sample:

In this study, the sample includes the main stakeholders (users and providers of audit services), members of the audit committee, internal audit managers of Iranian commercial banks, and the Iranian Internal Audit Association, as professional institutions of this study. It is important to note that the participants mainly have experience in the various positions mentioned or have experienced this position during their professional activities. Also, participants who have active internal audit experience (as providers or users) were selected using the available method.

The research sample in the qualitative section was 15 professors and experts in the field of accounting and auditing and supervisors and internal auditors of banks, who were selected using the available method. The sampling process continued until theoretical saturation was achieved. In grounded theory, data saturation is a state in which the researcher subjectively comes to the conclusion that new data, new information, or more knowledge than the development of categories does not provide. Interviews and questionnaires were used to collect data. The face and content validity of this tool was approved by experts and its reliability was calculated to be 70%. The data were analyzed using exploratory factor analysis.

Software system

According to Azar (2002), one of the strongest and most appropriate analysis methods in behavioral and social science research is multivariate analysis because such issues are multivariate and cannot be solved with the bivariate

method (where one independent variable is considered with one dependent variable each time). "Analysis of covariance structures" or "structural equation modeling" is one of the main methods for analyzing the structure of complex data and one of the new methods for examining cause-and-effect relationships. It means analyzing various variables that, in a theory-based structure, show the simultaneous effects of variables. Through this method, the acceptability of theoretical models in specific societies can be tested using correlational, non-experimental, and experimental data.

Research findings

By examining the results of expert opinions and reviewing the research background, it was determined that the factors affecting the effectiveness of internal auditing in Iranian commercial banks can be separated into six components as shown in the following diagram and table, and each has its own themes.

Overarching themes

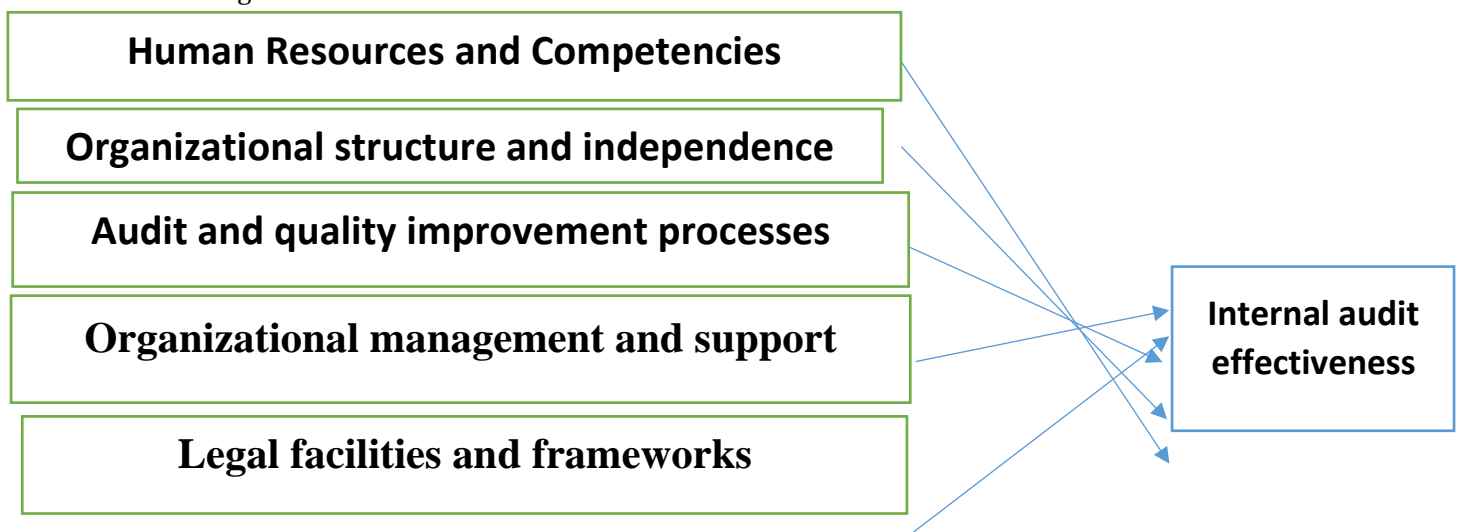


Fig 1: Overarching themes influencing internal audit effectiveness

Table 3: Overarching, organizing, and underlying themes influencing internal audit effectiveness

Basic content	Organizing Theme	Overarching Theme
Professionally qualified and experienced staff	Qualifications and Experience	Human Resources and Competencies
Internal auditor expertise and competence		
Professional certificates of the head of internal audit	Training and Development	
Professional competence and continuing education		
Updated knowledge and skills of auditors	Ethics and Organizational Culture	
Internal audit acceptance by stakeholders		
Adherence to professional ethics during and after	Independence and Organizational Status	Organizational Structure and Independence
Organizational culture including spontaneous		
Having an independent internal audit system	Access and Size	
Organizational position of the internal audit unit		
Independence	Acceptance of internal audit by stakeholders	
Access of the internal audit unit to internal		
Size of the internal audit unit		
Acceptance of internal audit by stakeholders		

Reputation of the internal audit unit in the	Acceptance and	Auditing and Quality Improvement Processes
Design of an effective internal control system	Internal controls and planning	
How to implement internal audit operations		
Proper and targeted planning		
Utilizing a risk-based approach	Quality improvement and monitoring	
Up-to-date measurement and evaluation criteria		
Existence of a quality assurance and improvement		
Careful and continuous monitoring of system	Monitoring and evaluation	
Continuous assessment of the internal audit unit's		
The role of the audit committee in internal audit		
Support and accompaniment of senior management	Management support	Management and Organizational Support
Continuous review of policies and procedures by		
Communications		
Size of the company	Communication and satisfaction	
Ensuring client satisfaction		
Risk management		
Supreme Risk Management Committee in the	Risk control structures	
Communication between internal and independent		
Up-to-date hardware and software facilities		
Reliability	Facilities and technology	Legal Facilities and Frameworks
Up-to-date standards used		
Timely communication of standards, procedures,		
Quick access to the latest accepted and local	Standards and guidelines	
Applying a comprehensive approach to developing		
Providing transparent guidelines from governing		
	Legal frameworks	

Prioritization of the model’s overarching themes

Given the nature of the multi-criteria decision-making (OPA) method, which requires the use of a limited number of experts, the opinions of ten experts participating in the interview were used in this section.

Table (4) shows the prioritization of experts based on experience, educational qualifications, and organizational position:

Table 4- Characteristics of experts participating in prioritization

Name	Education	Work Experience	Organizational Position
Person 1	PhD	More than 20 years	Central Bank Governor
Person 2	Master's Degree	More than 20 years	Central Bank Governor
Person 3	PhD	10 to 20 years	Director General
Person 4	Master's Degree	More than 20 years	Central Bank Governor
Person 5	PhD	More than 20 years	Director

Name	Education	Work Experience	Organizational Position
Person 6	Master's Degree	More than 20 years	Director General
Person 7	PhD	10 to 20 years	Director
Person 8	Master's Degree	10 to 20 years	Central Bank Governor
Person 9	PhD	10 to 20 years	Central Bank Governor
Person 10	Master's Degree	More than 20 years	Deputy (Deputy Director General)

The following three indicators are used to determine the level of expertise of each expert. Each indicator is divided into several categories and points are assigned based on them.

The occupational specialty index has a maximum of 35 points and points are assigned based on the level of responsibility and expertise of each job position. The Central Bank Supervisor receives the highest score (35 points) due to his sensitive and specialized role in supervising banks and the financial system. In the next rank, the General Manager receives 30 points. The Deputy General Manager, as a person who has a strategic role and direct support to the General Manager, receives 25 points. Finally, managers who have practical and specialized responsibilities receive 25 points in this index.

The educational degree index has a maximum of 30 points. A PhD receives the highest score (30 points) in this index. A Master's degree receives 20 points.

The work experience index has a maximum of 35 points. This index assigns points based on the chronological classification of individuals' work experience. Individuals with more than 20 years of work experience receive the highest score (35 points). Individuals with between 16 and 20 years of work experience receive 30 points in this index. Finally, individuals with between 10 and 15 years of work experience receive 25 points.

Table 5 shows the points assigned to experts:

Table 5: Determining the rank of experts based on educational qualifications, service experience, and organizational position

Expert	Organizational Position	Education	Work history	Organizational post score	Education score	Work experience points	Total points
1	Central Bank Supervisor	PhD	17	35	30	30	95
2	Central Bank Supervisor	PhD	16	35	30	30	95
3	Director General	Masters	20	30	20	30	80
4	Central Bank Supervisor	Masters	17	35	20	30	85
5	Director	PhD	22	20	30	35	85
6	Director General	PhD	25	30	30	35	95
7	Director	PhD	13	20	30	25	75
8	Central Bank Supervisor	PhD	15	35	30	25	90
9	Central Bank Supervisor	PhD	14	35	20	25	80

Expert	Organizational Position	Education	Work history	Organizational post score	Education score	Work experience points	Total points
10	Deputy (Deputy Director General)	PhD	18	25	30	30	85

Table 6 shows the degree of expertise of the experts:

Table 6: Determining the degree of expertise of the experts

Expert	Organizational Position	Education	Work history	Total points	Expertise Level
1	Central Bank Governor	PhD	17	95	Level 1
2	Central Bank Governor	PhD	16	95	Level 1
3	Director General	Master's Degree	20	80	Level 2
4	Central Bank Governor	Master's Degree	17	85	Level 2
5	Director	PhD	22	85	Level 2
6	Director General	PhD	25	95	Level 1
7	Director	PhD	13	75	Level 2
8	Central Bank Governor	PhD	15	90	Level 1
9	Central Bank Governor	PhD	14	80	Level 2
10	Deputy (Deputy Director General)	Master's Degree	18	85	Level 2

After calculating the total scores of each expert based on three indicators (job specialization, educational degree, and work experience), the average score of all experts was 88. Experts with scores above the average are assigned expertise level 1, and experts with scores below the average are assigned expertise level 2.

Table 7: Shows the experts' assigned rank to the comprehensive themes:

Table 7: Experts assigned rank to the comprehensive themes

Expert	Human Resources and Competencies (A)	Communication and Management Support (B)	Audit and quality improvement processes (C)	Structural and organizational factors (D)	Legal facilities and frameworks (E)
1	1	2	4	3	5
2	2	1	3	4	5
3	1	3	2	4	5
4	2	1	3	4	5
5	1	2	3	4	5
6	1	3	2	4	5
7	2	1	4	3	5
8	1	2	4	3	5
9	3	1	2	4	5
10	1	2	4	3	5

The final weight of the overarching themes is as follows in Table 8:

Table 8: Final weight ranking of overarching themes

Weight	Overarching theme	Rank
0/378	Human resources and competencies (A)	1
0/292	Management communications and support (B)	2
0/171	Audit processes and quality improvement (C)	3
0/119	Structural and organizational factors (D)	4
0/040	Legal facilities and frameworks (E)	5

According to Table 8, the overarching themes of "human resources and competencies, communication and management support, audit processes and quality improvement, structural and organizational factors, facilities and legal frameworks" have been assigned the first to fifth place, respectively.

Importance-performance matrix of the overarching themes of the internal audit effectiveness drivers model

Table 9 shows the results of the analysis of the importance-performance matrix of the overarching themes of the internal audit effectiveness drivers model:

Table 9: Importance-performance analysis

Area	Performance threshold value	Significance threshold value	Performance	Importance	Overarching themes
Focus Here	0	0	3/49	3/44	Human resources and competencies
Low Priority	1	1	3/70	3/86	Management communication and support
Keep Up the Good Work	0	1	3/35	3/84	Audit processes and quality improvement
Keep Up the Good Work	0	1	3/42	3/92	Structural and organizational factors
Focus Here	1	1	3/55	3/82	Legal facilities and frameworks
			3/50	3/78	Threshold value

The four areas in the importance-performance organizing themes of the internal audit effectiveness drivers model are as shown in Figure 2:

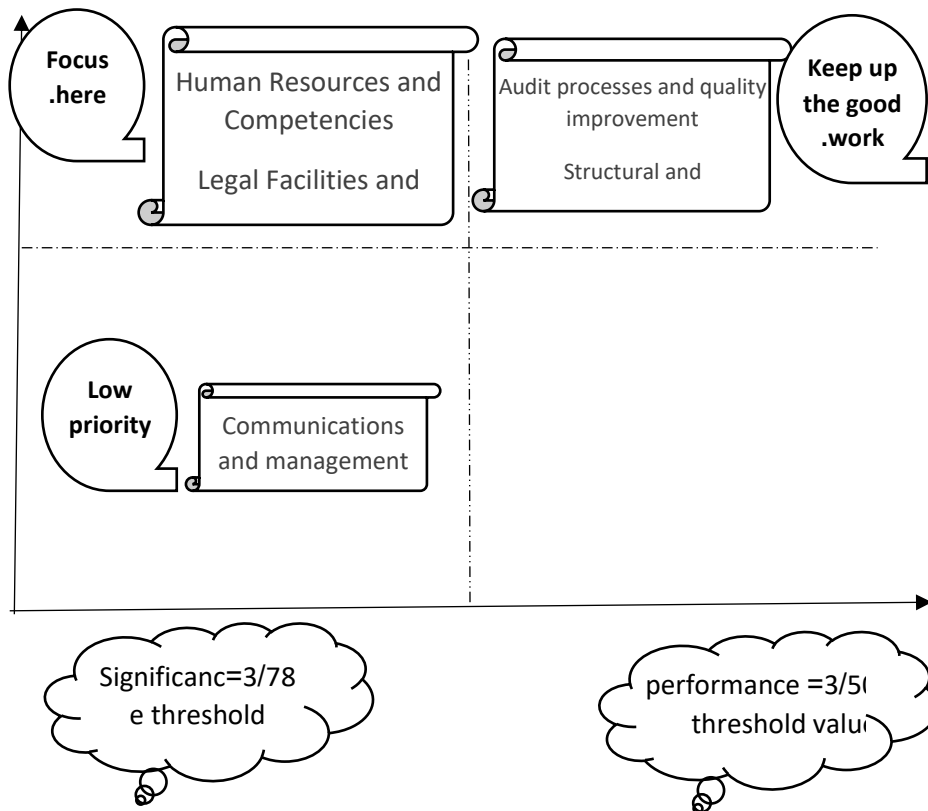


Fig 2: Four Areas of Importance – Performance of Organizing Themes

The weight and priority of organizing themes of the internal audit effectiveness drivers model are as follows in Table 10:

Table 10: Weight and priority of indicators

Priority	Normalized weight	Weight not normalized	Index
5	0/03	0/17	Human Resources and Competencies
4	0/11	0/62	Communications and Management Support
2	0/332	1/88	Audit Processes and Quality Improvement
1	0/346	1/96	Structural and Organizational Factors
3	0/182	1/03	Legal Facilities and Frameworks
		5/66	Total

Based on the results of the importance-performance analysis of the comprehensive themes of the internal audit effectiveness drivers model, it can be said:

The indicators of "Audit processes and quality improvement, structural and organizational factors" are in the "focus here" area. In other words, these components are of high importance from the experts' point of view, but the performance in them is low. Therefore, they should be focused on. Based on the weight calculated for each indicator, improvements should be made in the following order of priority:

1- Structural and organizational factors

2- Audit processes and quality improvement

The indicators of "Communications and management support, facilities and legal frameworks" are in the "keep up the good work" area, in other words, the performance in these indicators is desirable; therefore, this desirable performance should be maintained;

The indicator of human resources and competencies is in the "low priority" area; in fact, this indicator is of little importance from the experts' point of view, and the organization's performance in it is also low. The reason for this issue could also be that this concept has been sufficiently addressed and no problem is felt in this regard.

Conclusion

Summary of the problem and purpose of the study

The effectiveness of internal audit depends on the ability of internal auditors to achieve the established goal in the organization. In recent years, the role of internal audit in corporate governance has faced an increasing trend, considering its relationship with the internal control risk of the system, and auditors have used this to expand their areas such as participation in risk management, control and governance processes. Effective internal audit can be a great asset for improving public confidence in financial reporting and corporate governance if it includes the following elements: organizational independence, formal mandate, unlimited access, adequate budget, competent staff, the existence of an audit committee, stakeholder support, professional auditing standards and unlimited scope. The present study comprehensively identified the subjective meanings of stakeholders in the effectiveness of internal audit and then categorized the overarching themes and prioritized them based on expert opinion.

The aim of this research is to improve the level of internal auditing in Iranian commercial banks; and in general, the aim is to identify the factors affecting the effectiveness of internal auditing in Iranian commercial banks.

References

Internal sources

- [1] Mahdavi Gholamhossein and Namazi Navidreza, (2016), Ranking of effective indicators on the duties and status of the internal audit unit in executive bodies, *Health Accounting*, Year 5, Issue 2, Serial 16, Fall and Winter 2016, pp. 91-111.
- [2] Soleimani Amiri Gholamreza, Taheri Mandana, (2018), Ranking of effective factors on the quality of internal audit activity: Analytic Network Model (ANP), *Auditing Knowledge*, Year 18, Issue 71, Summer 2018.
- [3] Zivari Kamran, Mohammad Jafar. Fakhari, Hossein, (2019), Explaining the effective internal audit model from the perspective of stakeholders, *Quarterly Journal of Financial Accounting-Experimental Studies*, Year 16, Issue 64.
- [4] Rostami Amin, Vadie Mohammad Hossein, Bagherpour Valashani Mohammad Ali, (2019), Developing a Competency Model for Internal Audit Managers, *Financial Accounting Quarterly*, Vol. 11, Issue 41, Spring 2019, pp. 70-102.
- [5] Khorramabadi Mehdi, Hasas Yeganeh, Yahya, Barzideh Farrokh, Salehi Sedqiani Jamshid, (2010), Explaining and prioritizing factors affecting the effective assessment of internal controls in companies listed on the Tehran Stock Exchange with a fuzzy approach, *Financial Accounting Research*, Spring 2010, Vol. 12, Issue 1, Serial 43.

- [6] Paksaz Mohammad Hossein, Abdoli Mohammad Reza, (2019), Presenting a model of internal consequences of internal audit effectiveness based on the analysis of a comprehensive interpretative model, *Auditing Knowledge*, Vol. 21, Issue 82.
- [7] Bahrood Leila et al., (1400), Study of factors affecting the effectiveness of internal audit and evaluation of the role of internal audit in risk management and internal controls of the Agricultural Bank, *Audit Research*, No. 2, Spring 1400.
- [8] Mohagheghi Mohammad Reza and Karami Gholam Reza, (1401), Identification and ranking of factors affecting the effectiveness of the internal control system in government institutions and organizations, *Government Accounting Quarterly*, Year 9, No. 17, Fall and Winter 1401.
- [9] Kordestani Gholam Reza et al., (1402), The effect of internal control effectiveness on risk disclosure in the text of financial reports, *Accounting and Audit Research*, Volume 15, No. 1, Spring 1402.
- [10] Rezaei Nader et al., (1402), Explanation and prioritization of factors affecting the effective assessment of internal controls, *Accounting and Management Perspective Quarterly*, Volume 6, No. 83, Summer 1402, Volume 3.
- [11] Faghani Makrani Khosrow et al., (1402), Identification and ranking of factors affecting the quality of internal audit, *Quarterly Scientific-Research Journal of Accounting and Management Auditing Knowledge*, Volume 12, Number 3, Fall 1402.