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Investigating the Relationship between Corporate Governance Model and Its Performance in Iranian Banks

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Establishing an efficient corporate governance system in the banking sector and evaluating and ranking them require a comprehensive model that encompasses all mechanisms affecting corporate governance and localized indicators relevant international principles and finally explain the relationships between them. In this research, a model developed in the framework of a systematic thinking is used to examine corporate governance in the Iranian banks. The main objectives of this study are to evaluate the compliance status of 27 banks with the indicators of the corporate governance model and their efficiency and effectiveness, as well as to investigate the relationships between the components of the system. According to obtained results, 47.8 percent of qualitative indicators covered in the current situation of the banks, but there is a gap between full compliance with the model. Based on the results in the performance dimension, private banks scored the highest and state banks scored the lowest. The results show that there is a positive and significant relationship between the dimensions of inputs and processes with the goals, results and performance of banks. Accordingly, by improving the status of input and process indicators, the status of target indicators, results and performance of banks will also improve.

Keywords: Corporate Governance Model, Systemic Thinking, Banks Performance.
JEL Classification*:* C83, G20, G34.

1 Introduction

Establishment of an efficient corporate governance system is recognized as a fundamental strategy for increasing the efficiency of businesses and protecting the interests of stakeholders at the international level. In this regard, various principles, standards, and guidelines have been developed and presented.

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Among the economic sectors, the banking system is of particular importance. Banks as the beating heart of the economy, play a vital role in the financing and flowing funds in the economic body of society. So according to this, any volatility and instability in the banking system can have adverse effects on other economic sectors and consequently on the social and political aspects of society. So, the establishment of proper corporate governance system in the banking sector is of great importance and can play a significant role in ensuring its health and stability.

Stakeholders, investors, legislative bodies, and other stakeholders are looking for information about the status of corporate governance compliance in framework of corporate governance ratings by particular agencies and organizations. Investors have more confidence and willingness to invest in companies with good corporate governance, and as a result, the value of such companies increases in the capital market. Therefore, assessing corporate governance compliance and ranking them is one of the essential tools for implementing corporate governance system; so that active companies in the capital market voluntarily adhere to corporate governance principles, and they go to the relevant rating agencies for an evaluation their ratings, at their own expense (Hassas Yeganeh and Salimi, 2011). It is also the case in the banking system; in addition to the fact that most of the banks' resources are provided by depositors, therefore assessing the status of corporate governance indicators of banks can be extremely important in gaining the trust of customers to safeguard their interests. Banks that are good at corporate governance are more likely to invest in less trusted sources of money and are more profitable in terms of investor confidence.

At the macroeconomic level, banks also play a vital role in the stability and prosperity of the economy, and the slightest uncertainty among depositors about the bank's financial and operating status is attributed to their sudden rush to withdraw their deposits and ultimately to bank bankruptcy and crisis that spread to other banks. The emergence of any crisis in the banking system is spreading rapidly to other sectors of the economy and can also lead to social and political crises. Accordingly, the assessment of compliance with corporate governance indicators in banks and their public information can help build and maintain public confidence and create a transparent environment in the country's economic context. In such an open environment, banks are voluntarily trying to compete for establishing and observing the indicators of corporate governance and achieving their goals and outcomes.

Adequate supervision on banks is one of the essential requirements for ensuring the proper functioning of the country's economic system. The primary purpose of banking supervision is to maintain the stability of the financial system and increase its confidence by reducing risk for depositors and other stakeholders. Various methods and tools are used to monitor and evaluate banks, but the further limitation of these methods is that banks are only assessed from a particular standpoint and therefore cannot draw conclusions about the overall status of the bank. Comprehensive corporate governance model indicators can be used as an appropriate tool for assessing the situation and performance of banks by supervisory institutions.

In recent years, the legal requirements and demands of stakeholders and the general public lead to propose establishing corporate governance in banks. Also, the boards and CEOs of banks and regulators of the banking system are aware of the importance and functions of the corporate governance system; Corporate governance in the banking system is mostly confined to theoretical discussions or some superficial structural changes due to the lack of a holistic model as well as differences in interests, perceptions, and views. Accordingly, determination of a comprehensive model, tailored to the specific characteristics of the banking industry and the country's indigenous and environmental conditions, requires the establishment of a decent and efficient corporate governance system in the banking sector. In the current situation, despite the central bank's requirements for corporate governance, the lack of a comprehensive and appropriate corporate governance model in Iranian banks and the uncertainty of its components and indicators have led to the limited performance of each bank. From the corporate governance point of view, it is limited to one-dimensional and mostly structural measures, and the consequences of such situations are the inefficiencies of banks' performance and the failure to achieve corporate governance system objectives in the banking system. Evaluation of corporate governance indices based on a comprehensive and unified model can lead to the establishment of a model at the banks level.

Correct decision-making by depositors, supervisors, and other stakeholders of banks requires their knowledge of the status of banks in several qualitative and quantitative indicators of different dimensions. In this regard, by evaluating the banks 'current state and their compliance with the corporate governance model indicators, the banks' strengths and weaknesses regarding corporate governance are identified, and their public standing and rating can serve as a prerequisite for establishment and performance guarantee. The corporate governance system in banks should function properly. In other words, given the conflict of interest among banks' stakeholders and their managers will voluntarily take steps to establish the corporate governance system and implement it properly if there are mechanisms to assess the status of corporate governance indicators in their managed banks. The impact of this mechanism is far more significant than the mechanisms required to establish and maintain a corporate governance system and can have a significant impact on achieving the goals and outcomes of the corporate governance system.

In Iran, the evaluation of banks and financial institutions has not yet taken a serious form, and only in some researches and reports have been limited the review of banks and no comprehensive benchmark has been provided. Accordingly, the authors of this study in another study used Corporate Governance Principles for Banks that published by BCBS[1] (2015), Corporate Governance Principles of OECD[2] (2015), and Corporate Governance Guidelines for IFSB[3] (2006). And within the framework of systematic thinking, they have developed a model for corporate governance in Iranian banks. Since the analysis of the gap and evaluation of the current status of corporate governance system indicators in the banks based on the presented model is one of the necessary prerequisites for implementation, deployment, and support of the system, the primary purpose of this study has been investigated. In this regard, the following questions arise: to what extent does the status of the banks of the country comply with the indicators of corporate governance model? How is the relationship between the dimensions of the corporate governance model?

This article is generally composed of five sections. After the introductory chapter, the theoretical framework of the study is discussed. This section covers corporate governance issues in banks, corporate governance modeling in the framework of systematic thinking, corporate governance assessment in banks, and a review of the research background. The research methodology section summarizes the essential methods used in the research. In the fourth section, considering the results of data analysis on the status of existing corporate governance systematic indicators of banks will be analyzed the relationship between the dimensions of inputs and the model process with its goals and outcomes and banks' performance. Finally, a summary and suggestions are provided

[1] Basel Committee on Banking Supervision
[2] Organization for Economic Cooperation and Development
[3] The Islamic Financial Services Board

2 Theoretical Foundations and Research Background

Evaluating and ranking companies in different industries can be shown the status of each company compared to its competitors and identify internal strengths and weaknesses as well as opportunities of external companies (Madani Mohammadi, 2006). Given the critical impact of the optimal functioning of the banking industry on the economic growth and development of the country, efficiency, effectiveness, health, and stability of the banking system have always been considered by the central bank and other stakeholders. Oztorul (2009) evaluated the performance of the five largest Turkish banks basis on multiple financial and non-financial indicators by Analytical Hierarchy Process (AHP) and TOPSIS analytical processes. The results of his research indicate that in a competitive environment, both financial and non-financial aspects of banks' performance should be taken into account. In this regard, creating the necessary conditions for the qualitative and quantitative improvement of the performance of banks in the shadow of a healthy competitive environment can play a significant role in achieving their goals (Wu, 2009), accordingly, evaluation and rating is considered as one of the essential tools in indirect supervision on banks activities.

The banks are monitored and evaluated in various ways by central banks or rating agencies to ensure the proper condition of the banks. Essential goals of monitoring and assessing banks include accurate and continuous evaluation of banks' financial health and performance, evaluation of banks' capacity to safe-conduct, high-productivity operations, regularization of practical activities to improve banks' status, etc.

Different criteria and methods are used to evaluate the function of banks. But in most of them, the status and performance of banks are limited. Extensive efforts have been made to achieve a set of quantitative and qualitative criteria to assess the health and stability of banks and financial institutions around the world.

One of the most important criterions that have been proposed by international authorities in the field of health and banking stability over the last two decades is corporate governance. Numerous standards and principles regarding corporate governance have been published by international organizations and institutions, including the OECD, BCBS, and the IFSB, etc. Given that there is no single model of corporate governance that can work well in all countries, therefore, each country, and even any entity must design a model that meets its specific needs and goals (IFSB, 2006). Accordingly, most states have developed and implemented corporate governance principles and standards based on their internal and external environmental conditions.

Implementation of these guidelines and policies in most countries is not mandatory, and most of them are guidelines and recommendations, so boards of directors voluntarily oblige themselves to establish and use well-known corporate governance models and methods and adhere to their principles and standards. They are assessing their status and performance of corporate governance by paying the rating agencies and welcoming the dissemination of its results to the public. The reason for this is declaring the beneficiaries, their health, fitness and proper financial and operating conditions so that they will be able to obtain the financial resources necessary in a tightly competitive market easier and less expensive. On this basis, ratings can be considered as a guarantee of the establishment and compliance with corporate governance principles.

According to the review, there are no principles of corporate governance for Iranian banks, and following the Central Bank, each bank has taken steps in this regard according to its view about corporate governance. But due to the lack of a comprehensive and unified model, no comprehensive assessment of corporate governance has been conducted in banks.

2.1 Research Background

Here are some studies on the relationship between corporate governance and performance of economics foundations:

Qhasemi Aliabadi and Nasiri Aghdam (2019), in their research based on a survey of 22 bank managers and experts have proposed a model for measuring corporate governance indices in the banking system and ranking banks. The three main criteria of the model are based on the four principles of corporate governance (responsibility, accountability, transparency, and fairness), and it has 17 components and 153 indicators. To evaluate the performance of the proposed model, the indices of each selected bank are calculated and, given their importance, the size of the corporate governance index for each bank is obtained. The bank's acquisition of a full 50% of the score has been cited as indicative of many failures in implementing corporate governance.

Mahdavi Parsa and Nourahmadi (2018) in their research, rated Iranian banks in terms of corporate governance based on the bank's upstream documents, the content of these documents including the outlook, mission, goals, ethical charter and fundamental values of the 36 banks and credit institutions. Conventional and Islamic concepts have been analyzed by content analysis method. According to the results, the level of attention to corporate governance and its various concepts has been relatively low in the upstream documents of Iranian banks. It reflects the low-level focus of bankers to corporate governance.

Taghavi and et al. (2013) examined the impact of banks' ownership structure (as a measure of corporate governance) on banking stability indices in 40 selected developing countries during the period 2000-2011. In this study, panel data random effects method was used to test the hypothesis. The results indicate that state-owned banks have a more significant effect on increasing deferred claims on private and foreign ownership, but foreign ownership performs better on bank profitability ratios than other types of ownership.

Rahimian et al. (2013) have empirically examined the impact of three categories of corporate governance mechanisms (ownership structure, board structure, and audit) on the performance of Iranian banks. Findings from a survey of 78-year-old company data from 2006 to 2011 by the panel data model and random effects indicate that corporate governance mechanisms are generally effective on banks performance. Also, ownership percentage of major shareholders has a positive and significant relationship with bank performance. On the other hand, the results show that there is no meaningful relationship between bank size and percentage of non-executive members of bank.

Hassas Yeganeh and Salimi (2013) in their study have presented a model for ranking corporate governance in listed companies. The final model was extracted from the opinion of 19 experts by AHP and TOPSIS methods to analyze the results. The model consists of four dimensions of ownership effects, shareholder rights, transparency, and board effectiveness, and each of these dimensions has 3 or 4 components and a total of 93 indicators. According to the results of the study, the aspects of transparency, board effectiveness, shareholder rights, and ownership effects had the highest impact on corporate governance, respectively.

Hassas Yeganeh et al. (2009) measured the rank of sample member companies by a questionnaire consisting of 25 criteria of corporate governance in three categories: information transparency, board structure, and ownership structure. According to the research results, there was no significant relationship between corporate governance quality and firm performance.

Saghafi and Seif (2005) in their research have tested the relationship between 68 financial ratios in terms of 7 essential factors in assessing banks health and stability. These factors included capital adequacy, quality of assets, and financial structure of banks, management stability, profitability, liquidity, operation sensitivity to market risk and other critical criteria. According to the results, these seven factors have been effective in assessing the health and stability of Iranian banks, but their rankings have differed with developed countries.

In their study, Shah et al. (2015) compared the financial performance of commercial banks in Pakistan over the period 2011-2014. In this study, commercial banks were ranked based on the CAMEL model by bank size indices, return on assets, and return on equity, spread ratio and dividend per share. The findings of this study show that private banks perform better than the government. Also, Aspal and Dhawan (2014) evaluated and ranked the performance of Indian banks by the CAMELS index. They found that more than half of the surveyed banks had poor financial performance.

Wang et al. (2012), in their study, examined the relationship between corporate governance implementation in the banking sector and their performance in US. This study utilizes Data Envelopment Analysis (DEA) to integrate five Cumulative Rating Indexes (capital adequacy, asset quality, management, profit, and liquidity) to evaluate the performance of the banking system. In the study classified 68 companies. Besides, regression evaluation approach was used to assess the impact of corporate governance on the performance of banks and was evaluated the impact of corporate governance indices (8 indices) on system performance (Cumulative index). The results of this study show a two-way relationship between CAMELS model and corporate governance indices. The results also show that corporate governance is essential to improve the performance of the banking sector.

In a study, Ali et al. (2011) examined the performance of Pakistani banks from the perspective of corporate governance and concluded that there was a meaningful and positive relationship between economic growth, capital and some indicators of corporate governance.

Art Durnev and E. Han Kim (2005) examined governance and transparency of data across 27 countries and found that firms with higher governance ratings and transparency were more likely to be considered in the stock market.

Kohani (2013) in the study "Corporate Governance of Saudi Arabia from a Legal Perspective," examined the legality of corporate governance in Saudi Arabia. According to the results, Saudi Arabia's most significant achievement in corporate governance has been Shari'a, and corporate governance in that country is in line with internationally accepted corporate governance principles.

Chapra & Ahmed (2002), in their research, examined the activities of Islamic financial institutions and measured the most important aspects of corporate governance from the perspective of different stakeholders. The study examines corporate governance issues at three levels of Legislators, Islamic banks, and depositors of 30 countries. A survey of Legislators, financial institutions, and depositors shows that corporate governance is different in different countries and their share of compliance and performance vary according to corporate governance principles.

2.2 The Model of Corporate Governance in the Framework of Systematic Thinking

The subject of corporate governance has been studied in various disciplines, and according to the relevant scientific context, different theoretical frameworks have been proposed for its analysis. Agency Theory, transaction costs, stewardship, and stakeholders are limited models of reality, and each theory looks at the subject with a different lens and each view has its limitations. For example, representation theory from a financial and economic point of view, transaction cost theory from an economic point of view, legal theory of stewardship, and stakeholder theory from a social point of view examine corporate governance, but so far there are no theories that involve all actors, their roles and relationships that cover different dimensions. Some scholars have gone beyond systems theory as an appropriate analogy and have used systems analysis techniques to comprehensively analyze corporate governance processes (Tricker, 2015).

According to this notion, corporate governance as a system consists of subsystems that interact with one another, interact with the corporate governance system as an upstream system. Therefore, these subsystems affect each other at the same time. Also, only if the components of each system are considered as part of the whole and their role and function are examined in the whole, their main characteristics will be understood (Babajani, quoted by Ranjbar & Musharraf, 2012). Thus, the functioning of the corporate governance system depends on the performance of its components and how they interact.

To implement and establish a proper corporate governance system in banks must be fully specified the structure, relationships, characteristics and requirements of indicators, roles and relationships for the implementation of the system. Also, all components of the corporate governance system are appropriately positioned and selected according to their defined and selected features. Finally, the inputs of the corporate governance system, within the defined tasks, relationships, and processes, present their roles and functions correctly. In such situation, corporate governance goals and outcomes can be achieved, and perhaps because of the lack or failure of some elements or indicators of the corporate governance system is not achieved, the desired and expected outcome.

The authors of this study, in addition to studying the theoretical foundations of principles and standards and internal and external research, have identified the dimensions, components, and indicators that influence corporate governance and formulate and present a corporate governance model for banks within the framework of systematic thinking. The model described in Fig. (1) has four dimensions including environmental factors, inputs, process and goals, and results, consisting 19 components and 153 indicators, which will then give an overview of the indicators related to each dimension of the mentioned model.

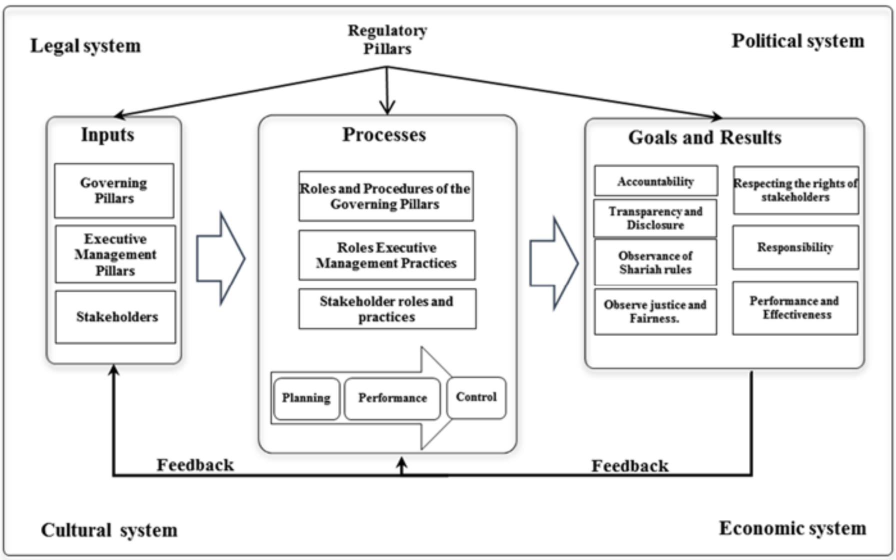

Figure 1. Corporate Governance Model in Banks. *Source:* Research Findings.

2.2.1 Environmental Dimensions of Corporate Governance Model in Banks

Corporate governance system is affected by internal and external factors and variables. The environmental factors of the corporate governance system, including political, cultural, and economic indirectly influence the establishment and functioning of banks' corporate governance systems through their interactions with each other. In the model considered in this study, environmental factors, including five components of the cultural, legal, political, economic and regulatory elements, have 22 indicators in total which are listed in Table (1). Since environmental factors are outside the control of banks and have the same effect on them, this study excludes the study of these indicators.

Table 1
Components and Indicators of Environmental Dimension, The Final Model of Corporate Governance in Iranian banks

Components	**Indicators**
Cultural system	1- Ethical values 2- Law and regulations 3- Honesty & Transparency 4- Responsibility & Accountability 5- Developing and publishing the Code of Ethics and Code of Professional Conduct in the Bank 6- Partnership, Cooperation, and Collective Agreement
Legal system	1- Comprehensive corporate governance guidelines for banks 2- Corporate governance requirements are applicable for all banks 3- Modification of corporate governance laws and regulations 4- Considering the interests of other stakeholders in the legal requirements 5- Uniform regulatory law on all banks
Political system	1- Democracy and the observance of social freedom 2- Political relations worldwide and internationally
Economic system	1- Financing system of the country's economic sectors 2- Efficiency of the country's capital market 3- Role and position of the government in the economy 4- Functioning of the banking system in the economy
Regulatory pillars	1- Central Bank of Iran 2- The Audit Organization 3- Central Bank Independence from Government 4- Evaluate Corporate Governance in Banks and Fully Supervise the Implementation of Corporate Governance Policy5- Their competence and determination of management failures, policies and the need for improvement

Source: Research Findings.

2.2.2 Dimensions of Inputs of Corporate Governance Model in Banks

Model inputs as inputs of the corporate governance system include structural components and their associated features. Structural components include boards of directors, executive management, and stakeholders (The authors of this study, 2019). In the corporate governance literature, these three components are referred to as the corporate governance charter or triangle (Hassanzadeh and Mohammad Alizadeh, 2011). In this study, the status of the three components of this dimension is examined, including 60 indices in the form of 11 leading indices as described in Table (2).

Table 2
Components and Indicators of Dimensions of input of Corporate Governance Final Model in Banks

Components	Main Indicators	Index description
1- Governing Pillars	1-Board of Directors	1- Separating Governing Bodies from Executive Bodies 2- Dual Board of Directors 3- Appropriate Composition of Board Members in Knowledge and Experience 4- Non-Duty and Independence of Most Board Members 5- Appropriate Number of Board Members 6- Selecting Board Members for assigned Periods 7- Having and maintaining the necessary qualifications for membership of the board directors. 8- Non-conflict of interest and independence of the vote. 9. Effective communication of the board directors.
	2-Head of the Board Directors	1- Separating the position of the Chairman from the CEO 2- Independence and Non-Duty 3- Having the necessary attributes, abilities, and qualifications
	3-Audit chairman Committees	1- Establishing an Independent Audit Committee 2- Independent and Non-Duty of the Committee Audit Chairman 3- Appropriate Number of Audit Committee Members 4- Sufficient Experience and Knowledge of Audit Committee Members 5- Establishing an Independent Risk Committee 6- Independence and Non-Executive of Committee Members Risk 7- Independent and non-performing of Risk Committee 8- Effective communication of Risk Committee with Audit Committee 9- Sufficient experience and knowledge of Risk Committee members 10- Establishment of Independent Committee 11- Selecting members of Committee 12- Establishing Service Compensation Committee 13- Relationship of Effective Service Compensation Committee with Audit Committee 14- Establish a Management Candidates Committee
2- Executive Management Pillars	4-CEO	1-Supervised and Accountable by the Board Directors and Accountable 2- Bank's Executive Board 3- Required Qualification and Competence 4- Appointment and Dismissal by the Bank Board of Directors
	5-Senior Management	1- Formation of the Senior Management including the CEO, Vice-President, and Deputy Managers 2- Duty and full time in the Bank 3- Management structure for delegation of duties 4- Holding and maintaining the necessary qualifications

	6-Chief Risk Officer	1- Appointment and dismissal by Board of Directors or Risk Committee 2- Overall authority and responsibility regarding Risk Management Department 3- Ensuring independence, credibility, adequate resources 4- Position, seniority, credibility and necessary skills 5 - Independent and separate from other bank executive departments
	7- Risk Management Unit	1- Establishing Risk Management Unit independently of other departments 2- Having with sufficient structure, independence, resources and access to the board 3- Having a sufficiently skilled human resource 4- Having secure communication at all organizational levels
	8- Chief Executive of Implementation	1- Appointment and dismissal by Board of Directors 2- Full responsibility of managing the Implementation Unit and having the necessary resources 3- Having the skills needed to oversee the activities of the Implementing Unit 4- Independence and appropriate job position
	9- Compliance Management	1 - Establishing a Compliance Management Unit independent of other departments 2- Having Independence, Appropriate Organizational Position, Sufficient Credit and Financial Resources 3- Having a direct relationship with the Executive Board and the Implementation Committee
	10- Internal Audit	1- Establishing Internal Audit Management Unit independently 2- Having sufficient background, knowledge and skills of Internal Audit Unit staff 3- Appointment and dismissal of Head of Internal Audit Unit by the Audit Board or Audit Committee 4- Direct communication with the Management Board and Audit Committee 5- Responsibility of the Board of Directors and the first layer of reporting to it 6- Having independence, proper organizational position, sufficient credit and financial resources 7- Full and unconditional access to all information
3- Stakeholders		1- Bank depositors as bank beneficiaries 2- Employees and managers as bank beneficiaries 3- Society and Government as bank beneficiaries

Source: Research Findings.

2.3.3 Process dimensions of Corporate Governance Model in Banks

The processes of corporate governance in banks include the roles and functions of its components. It should be noted that merely by defining the structure and characteristics of each of the components and relationships between the components of the corporate governance system, it will not be possible to achieve its goals and outcomes, and it is necessary to fully integrate all the components of the corporate governance system, the roles, and functions assigned to them. The indices related to the dimension of model processes were qualitative and analyzed in 56 indices in the form of 4 components. The list of these indicators is listed in Table (3).

Table 3

Components and Indicators of Process Dimensions of Corporate Governance, Final Model in Banks

Components	Index Description
1- Roles and Procedures of board	1 - Establish appropriate governance framework in subsidiaries and monitor the effectiveness of its procedures 2) Determine strategic strategies and objectives and monitor their implementation and ensure proper board decision making 3) Appoint senior management, senior executives, supervisors. And their accountability 4- Periodically review the structure, size, composition, and competence of the Board and establish and supervise the appropriate organizational structure of the Bank 5. Promote a culture of professional and ethical values and a culture of risk-taking 6-Adopt policies and oversee the implementation of compliance and interior control requirements of Bank and implementing And Managing the Compliance and Assurance Management Unit to Adhere to the Rules and Regulations 7. Adherence to and Ensure Adherence to Shari'a Laws and Operations and Contracts of Bank 8. Safeguarding, Loyalty and Alignment and Care of the Long-Term Benefits of Banks and Stakeholders of IT Governance According to the COBIT, ITIL and ... Standards to Transparent Banking Activities 10- Implementing and Supervising Risk Management 11-Establishing and Supervising the Employee Services Compensation and Rewarding System for Long-Term Banking Managers and Senior Managers 12- Management of board candidates and assurance of senior management succession and assurance
2- Roles and Procedures of Chairman	1- Responsibility for the Governance, Function, and Effectiveness of the Board of Directors 2- Managing Board Meetings and Organizing Minutes 3. Forming and chairing the Bank General Meetings, Inviting Shareholders to the Annual General Meeting of the Bank, Extraordinary General Meeting
3- Functions of Risk Committee	1-Appointment and dismissal of the senior risk manager in coordination with the Board of Directors 2-Reporting of the status of strategy and culture of risk-taking and consulting to the Board of Directors in promoting risk-taking approach and culture
4-Role and Procedures of the Audit Committee	.1. Determining Internal Audit Policy, Accounting, and Financial Reporting Procedures 2. Supervising the Financial and Health Reporting Process of Financial Statements and Internal Audit of the Bank 3. Receiving Important Audit Reports and Assuring Senior Management Corrections 4. Overseeing On the competence, independence, and performance of the Independent Auditor and Internal Auditors of the Bank and the proposal for the appointment, dismissal, assignment of the rights and benefits of the external and internal auditors to the Board of Directors or the General Assembly
5- Roles and Procedures of the Implementation Committee	1- Ensuring that appropriate measures are taken to make the best decision and comply with internal laws and regulations and guidelines.

Components	Index Description
6- Roles and Procedures of the Compensation Committee	1- Overseeing the Implementation of the Compensation System for the Bank as a whole 2- Approving the rights and benefits of senior executives including Chief Executive Officer, Chief Risk Officer and Chief Auditor with the Board of Directors
7- Roles and Procedures of the Management Nominations Committee	1- Proposing to the Board of Directors the Characteristics and Composition of Board Members and Senior Managers 2- Ensuring the Impartiality and Independence of Board Members for Their Appropriate Selection 3- Monitoring Board Replacement, Identifying and Introducing Board Candidates and Ensure Formal and Transparent Board Election Process
8- Roles and Procedures of Senior Management	1- Governing, managing the Bank's executive departments and overseeing all their current activities within the framework of the Board's rules, regulations and strategies 2- Establishing the necessary management structure to improve accountability and transparency across the bank 3. Establishing specialized committees Board 4- Periodic and regular report of bank's strategies and financial performance to the board and preparation and presentation of information requested by the board and information on important events and events in the bank's current and operational affairs 5-Delegating staff and guiding them in executing good corporate governance
9- Role and procedures of senior risk management	1-Continuous improvement of the system, processes, and policies of risk management 2-Monitoring the performance and assurance of the risk management efficiency in the bank 3-Consultation with the administration in risk management
10- Functions of Risk Management Unit	1- Disclosure of Risk Statement and Risk Management Strategies 2 - Monitoring and Control of Bank Risk Framework and Risk Accountability 3 - Risk Reporting at Individual and Total Bank Levels 4 - Implementing Approved Risk Management Framework including Risk Culture and Risk Management 5-Timely Report Resources at risk.
11- Role and procedures of the Chief Compliance Officer	1- Overall responsibility for coordinating the identification and risk management of non-compliance at all levels of the Bank 2- Ensuring consistent and consistent monitoring of the Bank's rules and regulations
12 -Roles and Procedures of the Compliance Management Unit	1- Evaluate compliance requirements and report to Board of Directors and assure compliance with the requirements, rules, regulations, standards, and policies adopted at all levels of the Bank 2- Guidance and accountability to staff regarding compliance
13-The Role and Procedures of the Internal Audit Unit	1- Assist the Board of Directors and Senior Management in Improving the Effective Governance and Credit Governance Processes 2- The Periodic Evaluation of the General Framework of Risk Management and the Effectiveness of Risk Management and Reporting And sovereign processes
14- Role and Procedures of Shareholders	1- Validating the decisions of the general assemblies by a half majority + one vote present at the meeting 2- Electing members of the board with a relative majority 3- Number of votes per shareholder equal to the number of shares multiplied by the number of members elected and the possibility of allocating these votes between A candidate or division

Components	Index Description
15- The Role and Procedures of the Forensic Inspector	1- The mission of auditing the accounts and commenting on the accuracy and fairness of the statement of financial position and the performance statement and the profit and loss account and balance sheet prepared by the management for presentation at the meeting 2- The mission of informing the shareholders and in the event of litigation when viewing specific cases 3 - Legal oversight specific oversight missions, including those related to the management of collateral stocks.
16. The Role and Procedures of the Independent Auditor	1. Reviewing and commenting on the accuracy of the Bank's financial statements for compliance with the requirements of Iranian Accounting Standards and Related Regulations and Regulations

Source: Research Findings.

2.3.4 Dimensions of Goals and Results of Corporate Governance Model in Banks

It is not merely a matter of achieving a corporate governance system. Instead, it is a tool for demonstrating business integrity and building confidence in market. Especially for companies that need access to capital for long-term investment. The primary function of the corporate governance system is to protect the interests of the stakeholders. At the macro level, economic efficiency, sustained growth, and financial stability are essential effects of establishing a corporate governance system through the right incentives for shareholders, board members and executives as well as financial intermediaries and service providers to exercise their role and control frameworks (OECD, 2015).

Within the framework of systematic thinking, the output part of the corporate governance system is the dimension of its goals and outcomes. Many corporate governance reviews and evaluations have focused on the status of some of these outputs, regardless of the structural and process sectors. It should be noted that the stability and sustainability of the corporate governance system and its outcomes require attention to all its dimensions. In this research, the status quo in terms of goals and outcomes of the model including 15 indicators in the form of 7 components that are evaluated as described in Table (4).

Table 4
Components and Indicators, Dimensions of Goals and Results of Corporate Governance of Final Model in banks

Components	Description Indicators
1- Accountability	1. Accountability of the Board Directors and Senior Management to Shareholders and Other Bank Stakeholders
2- Transparency and disclosure	1- Financial, non-financial and bank operations information and reports 2- Corporate governance framework and policy 3- Ownership and capital structure and voting of institutional and major shareholders 4- Bank organizational structure and board, charter of committees and their performance, Selection and Qualification, Background and Composition of Board Members 5- Policy, Characteristics and Functions of the Board of Directors and Remuneration Services and Senior Managers 6- Risk Statement and Predictable Factors and Resources at Risk 8. Stakeholders' access to adequate information (Regular and timely)
3- Observance of the Shari'a Laws and Rules	1. Observance of the Shari'a Laws and Rules in All Banking Processes, Services and Products
4- Respect for fairness and justice	1. Equal treatment of all stakeholders, especially shareholders, both micro and major.
5- Respect for the rights of the stakeholders	1. Equal treatment of all stakeholders, especially shareholders, both micro and major, 2- Ability to defend the beneficiaries if their rights are violated
6- Responsibility	1. Identify the tasks of each component in the corporate governance system and perform these tasks correctly
7- Efficiency and Effectiveness	1- Improvement of bank financial ratios

Source: Research Findings.

3 Research methodology

The present study is descriptive in terms of purpose-based segmentation. Since the results of this study can be used in practice, it is an applied research and is qualitative and quantitative research in terms of the data type. This research was done with Mixed Research.

In this research, first, the status of the corporate governance system and its various dimensions (indicators of the aspects of the input and the process of a corporate governance model and their detailed results and performance) have been studied in Iranian banks. Since all the inputs and process dimensions are qualitative and the goals and outputs are both quantitative and qualitative, therefore, a mixed approach is used to evaluate the model indices. Based on this approach, data collection and analysis for each quantitative and qualitative indices is performed independently. However, in the interpretation and conclusion phase, the results of both quantitative and qualitative approaches are considered together. Accordingly, data on qualitative indicators were collected through observation and feedback from senior executives and experts working in the banking sector, and quantitative data were used financial statements published by banks and Codal site.

To collect data on qualitative indicators, a checklist consisting of 177 questions was provided and sent to 72 senior executives and experts working in the banking sector who are fully aware of the status of the bank's processes and structures. Finally, 66 completed checklists were received; for analyzing the collected data, the response to each of the indices was set to zero and one based on the status of each index and the amount of each bank's total indices per dimension and model calculated and expressed as a percentage. In this research, to evaluate the performance of banks in terms of the efficiency and effectiveness component related to the goals and outcomes of the corporate governance model, the relevant financial ratios that have quantitative nature must be calculated.

Different models have been proposed, considering the multiplicity of financial ratios used to evaluate banks' efficiency and effectiveness. One of the most well-known ratios in the banking industry is the CAMEL Ratios Collection, which was recommended in 1988 by the National Bureau of Credit Supervision of the United States of America (NCUA) and approved by BCBS. The World Bank, the US Central Bank, credit analysts of banks, and most rating agencies use this index to measure the activity of banks and financial institutions. In most of the internal and external studies, CAMELS model indices have been used to evaluate the efficiency and effectiveness of banks' performance. In this model, the critical elements of a bank's financial condition that affect in credit value are examined in five areas: Capital adequacy (C), Asset quality (A), Management Capability (M), Earnings (E) and Liquidity (L).

In this study, to evaluate the status of the quantitative component of efficiency and effectiveness have been using the above-mentioned model indices. These indices were categorized into five areas, including capital adequacy, asset quality, management, earnings and liquidity, as described in Table 5 in the form of an accepted and common CAMEL model, and by referring to the Banks site, Codal site. The audited financial statements of the year 2016 and the performance data published by the banks, the required data and the values of the indices were calculated and extracted.

It is worth noting that given the multiplicity of disagreements as well as the uncertainties in calculating market risk sensitivity index in the CAMEL model, this study did not consider this index.

Table 5

Performance and Effectiveness Component Indicators Related to Objectives and Model Results in the Camel Model

Index	Financial Ratio	Index	Financial Ratio
Capital (C)	Capital Adequacy ratio	Earnings (E)	Total Earnings
	Return on Assets (ROA) ratio		Cost to Income ratio
Asset Quality (A)	Impaired loans to total loans		Return on Equity (ROE) ratio
	Debt-to-Equity (D/E) ratio		Administrative and personnel costs to total debt ratio
	Assets-to-Equity ratio		The interest on deposits is the income of the facility
	Fixed Assets to Total Assets		
	Return on Equity (ROE) ratio		
Management Capability (M)	Deposit per employee	Liquidity (L)	Loan(gross) to Deposit
	Deposits per branch		Liquid Assets to Total Assets (Liquid Asset ratio)
	Profit per employee		
	Net profit per branch		

Source: Research Findings.

In this study, we use Simple Additive Weighting (SAW) to summarize the results of evaluating the status of CAMEL model indicators which show the efficiency and effectiveness of banks' performance. In the light of the explanations given in the preceding section on the CAMEL model, the following is a summary of the simple summing method. The simple weighted sum method is one of the most straightforward multi-criteria decisions making (MADM) methods and is done in 5 steps as follows:

Step 1- At this stage, the decision matrix or table is formed.

Step 2 At this point, the matrix table is formed by following normalized relationships and the normalized table.

For earnings-related indicators:

$$r_{ij} = \frac{\mathrm{x}_{ij}}{X_{ij}^{max}} \qquad i = 1 \tag{1}$$

$$r_{ij} = \frac{X_{ij}^{min}}{\mathrm{x}_{ij}} \qquad i = 1 \tag{2}$$

Step 3- By multiplying the normalized decision matrix using the weight vector of the indices obtained the weighted normalized decision matrix.

Step 4- By summing the weighted normalized decision matrix column, each of the options becomes desirable.

Step 5 - Options are ranked by the utility. Steps 3, 4 and 5 can be illustrated in the following equation (Azar and Rajabzadeh, 2008).

$$\mathrm{A}^* = A_i + \mathrm{Max}_i \frac{\sum_{j=1}^{n} W_{j=1} X_{ij}}{\sum_{j=1}^{n} W_j} + \cdots \tag{3}$$

According to the simple weighted sum method, the importance of each option is calculated, and the obtained maximum value is chosen as the best option. The weight of these indicators in different countries may vary depending on their conditions and characteristics. In this study, according to the study of Saghafi and Seif (2005), capital adequacy index weight is 71.52%, asset quality is 73.48%, manageability is 73.48%, earnings are 69.54%, and liquidity is 70.45%.

In the second part of this research, in order to evaluate the correlations between the components of the corporate governance system (inputs, process, goals, outcomes and model performance), first, by Kolmogorov-Smirnov test, the normality of the data distribution is determined and then by parametric statistical methods examined the relationship between model components. According to the results of this test, to examine the correlation, if the data are normally distributed, we use a parametric test (Pearson test). Otherwise, we use nonparametric test (Spearman test). Therefore, descriptive statistical methods are used to describe the research variables. Then, the correlation coefficient between the model components was analyzed by SPSS software, and data normality was analyzed by Kolmogorov-Smirnov test.

4 Data Analysis and Results

The data analysis and research results are presented in two parts. In the first part examined the degree of compliance of the status of Iranian banks with the corporate governance model and formulated their performance. In the second part, the relationship between the components of the corporate governance model in the banks, including banks' inputs, processes, goals, results, and performance are discussed. The results of the research are presented below:

4.1 Results of the Compliance Rate of the Status of Iranian Banks with the Indicators of Corporate Governance Model

As mentioned, the corporate governance system model, like any other system, consists of three dimensions of inputs, processes, and outputs, including goals, outcomes, and performance of banks. According to the objectives of the present study, to investigate the degree of compliance of the status of banks with the corporate governance model, all indicators related to the dimensions of inputs and process have been evaluated by qualitative indicators (based on the answers, 0 and 1 in the questionnaire). It should be noted that the input dimension has 3 components and 60 indicators, the process dimension has 7 components and 56 indicators, and the goals and results dimension has 7 components and 15 indicators. Also, in order to improve the quality of evaluation and taking into account different aspects of the status of banks, the goals and outcomes of the model (including goals and outcomes including accountability, transparency, and disclosure, observance of Shari'a laws, fairness, accountability, responsibility). Efficiency and effectiveness were also assessed through two groups of qualitative indicators (130 indices) and quantitative indices (18 indices in the form of banks' financial ratios for assessing efficiency and effectiveness). The model's qualitative indices were collected by the percentage method, and quantitative indices were obtained through the CAMEL model indices. As mentioned earlier, since environmental indicators are outside the control of banks, the environmental factors indices are not considered in this study. The results of the overall data analysis are presented in Table 7.

Table 6

Rate of Compliance of State banks with Corporate Governance Model Indicators (in %)

Type of banks	Dimensions of inputs	Dimensions of the process	Dimensions of goals and outcomes	whole dimension
Private	53.1	59.9	44.0	53.7
Sate	37.8	37.9	25.7	35.5
Private-state	45.5	52.7	57.1	50.4
Total banks	47.4	52. 3	40.5	47.8

Source: Research Findings.

According to Table 6, the results of the qualitative data analysis about the corporate governance model in the banks are studied as follows:

The current situation of the banks in the country covers about 47.8% of the indicators of corporate governance model, but there is a significant gap about 52.2% from full compliance with the model indicators.

- In the current situation of the banks are covered about 47.4% of the dimension indicators of inputs, 52.3% of process dimension indicators, and 40.5% of the dimension indicators of goals and results. The highest degree of conformity was related to process dimension indices and after that indices dimension of input had higher coverage percentage.
- To compare the situation of state-owned, private-state-owned banks, the results also show that state-owned banks have 35.5%, private banks 53.7% and private-state owned banks 50.4% of the model indicators. Private Banks have a relatively favorable position compared to the two groups mentioned above, with public-private and state-owned banks ranked next.

Then, to evaluate the quantitative components of efficiency and effectiveness of the banks under study, by CAMEL's indices, quantitative data on 18 indices were collected and analyzed in 5 groups. The results of the analysis of these data in the banks studied are listed in Table 7. According to this:

Table 7

Evaluation of existing Situation of Banks' efficiency and Effectiveness by CAMEL Model Indicators

Bank Type	C	A	M	E	L	Total Indicators Score by SAW
Private	0.7741	0.1687	0.3371	0.2016	0.4064	135.18
State	0.1957	-0.0028	0.0436	0.0078	0.0414	20.45
Private-state	0.2230	0.0206	0.0788	0.0992	0.1922	43.69

Source: Research Findings.

As the results of Table 7 show, private banks have the highest score in terms of efficiency and effectiveness, and the state-owned banks have the lowest score. It can be attributed to the high cost of workforce and fixed assets relative to the volume of absorbed deposits, concessional facilities, and so on. State-owned banks are also in third place, reflecting their lower performance than the other two groups of banks.

Overall, the results of the review of the status of banks in the corporate governance system show that private banks have higher ratings and inputs in terms of inputs, processes, and performance, and private-state owned banks have higher scores in terms of goals and outcomes of corporate governance model.

4.2 Examining the Relationship between the Components of Corporate Governance and the Performance of Banks

To investigate the correlation between the components of the corporate governance system, first, the distribution of observations is examined. The results of the normality test (Kolmogorov -Smirnoff test) are presented in Table 8:

Table 8

Kolmogorov -Smirnov Test Results

Component of system	statistic	probability	test result
Inputs	0 .152	0. 112	distribution of observations are normal
process	0.111	0.2	distribution of observations are normal
Inputs and Process	0.077	0.2	distribution of observations are normal
Aims and results	0.132	0.2	distribution of observations are normal
The efficiency and effectiveness of the performance	0.101	0.2	distribution of observations are normal

Source: Research Findings.

The results of the Kolmogorov-Smirnov test show that the variables have a normal distribution and the Pearson correlation test is used for this test. The results of the Pearson correlation test are presented in Table 9:

Table 9
The results of investigating the relationship between the components of the corporate governance system

System Components	Dimension of Inputs	Process Dimension	Inputs and Process Dimensions
goals and results dimension	0.501	0.601	0. 589
Efficacy and effectiveness	0.571	0.542	0. 588

Source: Research Findings.

Based on the results of SPSS software, the dimensions of system inputs and process are positively and significantly associated with goals and outcomes as well as efficiency and effectiveness. The results show that the input dimension is more correlated with bank performance and the process dimension with the goals and outcomes of the corporate governance model. In sum, based on the results, it can be said that the inputs and processes of the corporate governance system are related to the goals and outcomes of this model as well as to the efficiency and effectiveness of banks and that these dimensions will have a positive impact on the goals, results, and performance. It is necessary to explain the relationships between variables at a 99% confidence level.

5 Summary and Suggestions

In this research, the status of corporate governance model indicators and the degree of compliance of banks with them have been evaluated by a mixed approach. To this end, the model developed in the framework of systematic general thinking and corporate governance principles for banks, published by BCBS (2015), Corporate Governance Principles of OECD (2015) and Corporate Governance Guidelines of IFSB (2006). The examined indicators of corporate governance model in this study include three dimensions: inputs, processes, and outputs.

Based on the results of the survey of corporate governance model indicators by a simple summing scorecard method, there is a significant gap between the current status of banks in the country and model indicators. Private Banks had the highest percentages, and state banks had the lowest percentages. The highest degree of conformity was related to process dimension indices. In summary, as mentioned, in most banks, corporate governance indices are limited and scattered, and the results are significantly different from the desired goals and outcomes, and serious steps must be taken to establish the corporate governance system ultimately.

Also, in analyzing the efficiency and effectiveness component of the model under study, the performance of banks was categorized in the framework of CAMEL's indices and the form of 5 criteria. The results show that in this group of indicators, private banks have the highest score, and state banks have the lowest score. Given the status quo of the total of quantitative and qualitative indicators, the corporate governance model in private banks is relatively higher than in private-state owned -owned banks and state banks. In this study, the relationship between components of corporate governance system also showed a positive correlation with the coefficient of 0.58 at 99% confidence level. Accordingly, it can be concluded that improving the status of input and process indicators of corporate governance model, achievement of goals and results will improve the efficiency and effectiveness of banks. Accordingly, it can be said that private banks are more in line with inputs and processes in terms of model indicators and consequently, in terms of goals, results, and performance. They are in better position than private-state and state-owned banks. Also, the correlation between the components of corporate governance model and the performance of banks can be considered as a confirmation of the model developed in the framework of systematic thinking.

Here are some suggestions:

- To improve the performance and achieve the expected goals and results of corporate governance in banks, appropriate structure according to the proposed model is defined and created, the relationships between system components and their properties are determined.
- To assess the corporate governance status of banks by their stakeholders, the methodology of this study can be used because of its comprehensiveness.
- To implement an efficient corporate governance system in banks, all the proposed model indicators should be taken into consideration comprehensively by banks.
- To improve corporate governance in banks according to the proposed method, assessing of the current status of indicators of corporate governance in the banks must be done by central bank and banks' performance on this issue should be periodically determined and be notified.

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