A STUDY ON CORPORATE GOVERNANCE PRACTICES AND IT'S IMPACT ON THE PERFORMANCE OF INDIAN BANKING SECTOR

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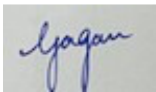
DECLARATION

I, hereby declared that the presented work in the thesis entitled "A Study on Corporate Governance Practices and it's impact on the performance of Indian Banking Sector" in fulfilment of degree of **Doctor of Philosophy (Ph. D.)** is outcome of research work carried out by me under the supervision Dr. Lalit Bhalla working as Associate Professor in the Department of Management, Mittal School of Business of Lovely Professional University, Punjab, India. In keeping with general practice of reporting scientific observations, due acknowledgements have been made whenever work described here has been based on findings of other investigator. This work has not been submitted in part or full to any other University or Institute for the award of any degree.



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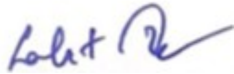
CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis entitled "A Study on Corporate Governance Practices and it's impact on the performance of Indian Banking Sector" submitted in fulfillment of the requirement for the reward of degree of **Doctor of Philosophy (Ph.D.)** in the Management, Mittal School of Business, is a research work carried out by Gagandeep Singh Walia, 41800390 is bonafide record of his original work carried out under my supervision and that no part of thesis has been submitted for any other degree, diploma or equivalent course.



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Abstract

The prominence of corporate governance, its mechanisms and its framework, has become a top priority for policymakers worldwide. Good governance practices are crucial for building successful businesses and promoting economic growth. Corporate governance encompasses proper management procedures, compliance with regulations, ethical business practices, and maximizing stakeholder value. The regulatory authorities overseeing corporate governance norms have set similar guidelines for all organizations, regardless of their sector, division, size, or nature. These norms, such as board responsibilities, audit functions, risk management strategies, and protection of stakeholder rights, are intended to be applied to all businesses. However, this "one scope fits each" approach shall not suitably discourse the unique governance trials facing a specific bank. In this case, the current analysis purports to unearth the key governance issues of the Indian banking sector by gathering the perspectives of directors and high-level managers from banks placed in private and public spheres. Such an approach suitably provided insight into the specific governance concerns of this prominent sector and helped in prioritizing modifications in the governance dimensions. The Companies Act of 2013 was enacted as a major overhaul to enforce corporate governance policies in India, with provisions focused on reducing costs, promoting sustainable business practices, efficient procedures, and high levels of compliance. The act's provisions are built on pillars of risk management, board member oversight, internal control efficiency, legal compliance, monitoring mechanisms, and strict company management regimes. The study aims to determine if these provisions have provided the Indian banking sector with enough opportunity to improve its corporate governance norms and create more stakeholder value. It also looks at the changes in banking sector processes and in-house control structures in light of the legislative forethoughts of the Companies Act of 2013.

The regulatory authorities governing the financial system, have expressed concerns over the rising number of frauds in this sector. It was recognized that good governance practices shall be duly recognized at all levels in order to strengthen internal control systems and build resilience in the system. Thus, the study aims to observe the current

governance mechanisms in the Indian banking sector in light of the legislative measures established by the Companies Act of 2013, for the purpose of enacting an explicit action proposal. This study aimed to scrutinize compliance with corporate governance norms for this sector. Additionally, it intended to explore the interrelationship amongst governance mechanisms and a bank's operating performance. Moreover, it marked to establish a comprehensive index of corporate governance for this sector by considering the perspectives of bank directors.

The findings of the thesis implicated that implicated HDFC Bank in the private segment category and Canara bank in the public segment category have scored the top position by showing the highest compliance with the governance mechanism of the Act. The study on the interrelationship between corporate governance structures and various operating metrics for this sector revealed that good board composition, independent directors, audit committees and risk management positively impacted the operating metrics of the sector. Aligning the shareholder incentives, suitable shareholder committees and appropriate disclosures improve return on equity. Likewise, strong board decision-making, effective audit committee and compensation practices increase prominent financial metrics of the banking structures. Moreover, it was witnessed that adequate risk management, disclosure, and shareholder committees lower the net non-performing assets ratio. The objective concerning the construction of a comprehensive index aimedto generate a neutral and objective look at governance matters from high-level officialsin an effective manner. Its aim was to tackle current governance issues in the Indian banking system by collecting ratings from these bank officials/directors. It is directed to comprehend the viewpoints, problems and issues of all the stakeholders of the banking system, that are part of the banking environment. The study sought to find a balance between quantitative and qualitative factors in banking sector governance. The main objective was to bring together important governance factors by creating a yardstick for corporate governance mechanisms in the form of a ranking based on relevant criteria provided by the head of different committees in the Indian banking sector.

It was indorsed that there exists extensive literature which significantly examined the compliance level of corporate governance practices but an investigation underlying the necessities of the Companies Act, of 2013 as its base or the period after the amendment

of this legislation has not been explored previously in a holistic manner. Therefore, the present study seeks to make a systematic investigation of the adherence level of the governance norms by exploring it from two major aspects i.e., the examination concerning the comprehensive norms of this legislation and the inquiry concerning improvement or worsening of compliance levels after the period this legislation was enacted/amended. The virtuous recognition of corporate governance practices calls for exploring its influence on the operating outcomes of the Indian banking sector. There exists substantial literature which examined the interrelationship midst governance practices and performance. It focused mainly on analyzing the impact by using board management, audit function and risk management corporate governance variables. The current work endeavours to comprehensively gauge the holistic proportions of corporate governance such as board members' efficacy, auditing functions, risk administration procedures, remuneration, stakeholder activism, disclosure policies and transparency management. The various legislations about corporate governance revamped by the Companies Act, of 2013 ushered paramount changes in the way the corporates operate and accord with their external stakeholders. This legislation has emerged triumphant in imparting a vigorous mechanism of governance to be adhered to by the companies in true essence. The current study provides novel recognition and insight into the governance practices of this particular segment in two-time proportion i.e., before and after the enactment of the governance provisions of this robust legislation. Such propositions are not contemplated in the previous literature examining the governance processes of the Companies Act, of 2013 in such a manner. The banking sector in India is under constant insistence to uphold and operationalize the best corporate governance practices to ratify the sustainability and continuity of their business procedures. A comprehensive index shall act as a yardstick of the righteous governance rules and regulations apprehended in this segment. The current study purposed to venture into the formation of the comprehensive composite index of corporate governance which is founded on the opinions of the senior-level management and board directors of the Indian banking sector. Such an effort comprehends the intricacies and convolutions in the governance procedures of this sector. It annihilates the issues involved in the true examination of the quality and efficacy of the governance mechanism in this segment.

The outcomes of the study are expected to assist the various stakeholders, policymakers and legislative authorities in comprehending the intricate details of the governance issues in the Indian banking segment. It contributes to constructing an effective governance mechanism for this sector which suitably discerns the recognition of the stakeholder rights, effectual surveillance of the board activities, reviewing accountability of the various bank committees, monitoring of the governance risks and promoting potent transparency at all levels. Moreover, it emphasizes various measures for narrowing down the gaps between the legislative governance provisions and their actual enactment. This is done by constructing a composite index which suitably inculcates the unfeigned complicacies highlighted by the board management/directors of the various banks. Finally, it tends to expedite the new trends, directions and confrontations in the governance practices for issuing the unrelenting policy-dialogue turnarounds in this persuasive arena.

Keywords:

Governance mechanism, Companies Act, of 2013, Indian banking sector, compliance, financial performance, composite governance index

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LIST OF ABBREVIATIONS

CAR	Capital Adequacy Ratio
CG	Corporate Governance
CI	Cost to Income Ratio
NIM	Net Interest Margin
NNPA	Net Non-performing Assets ratio
NPM	Net Profit Margin
RM	Remuneration Management
RMC	Risk Management Committee
ROA	Return on Assets
ROE	Return on Equity
SRI	Shareholder Rights and Information
TQR	Tobin’s Q Ratio

CHAPTER 1
INTRODUCTION

The initial chapter of the thesis focuses on highlighting the meaning and prominence of governance mechanisms in the business ecosphere. It underlines the governance of the benchmark norms outlined by the Companies Act 2013 regarding board procedures, audit committee, risk management, remuneration and stakeholder rights. The centre of interest of the thesis lies in assessing the governance norms in the Indian banking segment. Therefore, it explores the functioning of this sector and also simultaneously presents the existing best procedures of corporate governance norms in it. Additionally, the introduction chapter emphasises the governance issues in the Indian banking segment, provides clarity of the research process to be carried on inthe thesis and justifies the importance of the present enquiry. This chapter is apportioned into the following nine fragments:

1.1 Backdrop of corporate governance and its prominence

The primary area of governance mechanisms is to assess how the board members, command, monitor, and superintend the business to prosper, evolve and strengthen the usefulness of both the internal and external stakeholders by suitably composing the corporate strategy that develops the overall value in the business. The governance mechanisms carried out in any business help to understand and acknowledge the task of the Board members which are pertinent in generating and spawning stakeholder credence.

The main structure of the governance mechanisms entails holding answerable as well as accountable to the board structures for the execution of the business intentions in light of the rules and policies of the regulatory authorities. The entire structure of the governance highlights constructing and fixing the accountabilities of the board members, strict adherence to the legislative norms, apposite audit commission, remuneration group, and risk controlling commission, establishing precise code of conduct procedures and conformity to the reporting norms. It can be highlighted that the whole mechanism of the governance structures has escalated in the recent past due to the enlargement of the investor assessments over multiple frauds occurring in the recent past across different organizations resulting in immense losses to investors.

Therefore, the elements of responsiveness, openness, transparency, mutual understanding and protection of the interests form an integral part of the governance in any business. The whole mechanism of governance can be explicated as the application of sound management procedures, uncompromising adherence to the provisions made by the regulatory authorities, and solicitation of moral policies for the appropriate running of the business activities, in supplement to the creation of the of the stakeholder value. The appropriate application of the governance norms leads to generating superior investment returns in any business and motivates the board members to execute their tasks most suitably. The key elements included in the upright development and adherence to the corporate governance norms include the suitable elements of clarity and transparency, accountability, superior administration, protection of rights and adherence to the social norms. Such key elements are described as follows:

1.1.1 Clarity and transparency

The committees involved in ensuring good governance norms such as the board members set, audit commission, risk management group, remuneration commission and stakeholder rights protection agency are bound to ensure that they carry out their responsibilities in a fair, precise and transparent manner. The decisions and policies enacted by their team members shall be made in the best interests of the business. Such decisions should be properly disseminated to the concerned parties at the proper time and in the proper place.

1.1.2 Accountability

The board of directors committee shall take all the suitable steps in adopting the appropriate approach towards the shareholders. The matters about shareholder grievances and complaints related to dividend distribution, issue of share certificates, and share cancellation shall be resolved at the earliest and the information related to the same shall be duly divulged in the pecuniary reports of the business in all the

operating years. In addition to their responsibilities towards the stakeholders, they shall also work diligently towards societal matters. The corporate social responsibilities shall be duly accorded and fulfilled for the overall welfare of the society as a whole.

1.1.3 Superior administration

The board members commission and their members are entrusted with the responsibility of directing along with enforcing the funds of the shareholders most appropriately. The funds of the shareholders shall be applied to the right investment avenues and shall not be used for their benefit. The elements of trusteeship, supervision and management are the prime elements in ensuring superior administration in the execution of all business decisions.

1.1.4 Protection of member rights

The personnel employed in the business shall be given due accord by the board commission, audit group, remuneration committee and risk management panel. In this regard, it is highlighted that suitable training and development opportunities shall be provided to them, a reward system in the form of the provision of employee stock option plans, and share-based payments shall be provided. All these factors ensure the protection of their trust and rights at all levels.

1.1.5 Adherence to the social norms

Every business serves the prime responsibility towards the fulfilment of social responsibility in the best possible manner. In this regard, the business is expected to suitably integrate and merge the communal and ecological issues in the best possible manner. The business sustainability, accountability and right engagement of the social norms. Application of suitable programs, policies and initiatives meant for society shall tend to create a positive image in society as a whole.

Therefore, it can be highlighted that superior governance norms call for objective decision-making on the part of the board commission, audit directives, risk management commission and recompense panels. It also involves the balanced rendition of the executive, non – executive and independent members.

Moreover, making fair, just and transparent decisions forms the core of the governance norms in any business.

1.2. Governance structure and its mechanisms under the Companies Act, 2013

Governance plays a major role in ensuring that business operations are carried out in a transparent, principled, righteous and trustworthy manner. The interests and engrossments of the different stakeholders and investors are given due accord to exert virtuous control over the business operations as well as its resources. The directors serving as the board members are required to attain and possess the appropriate prowess, competency, knowledge and competency to exercise the required conduct and control over the business operations. Personal interests and professional interests must be properly aligned and must not clash with each other. The decisions and judgements shall have the appropriate components of the suitable knowledge, virtuosity, intelligence and professionalism to strategically proceed with the daily business operations governing any organization. The board panel members are expected to work by keeping affiliated the principles of general management, aptitude, effective decision-making, risk mitigation and policies of the regulatory authorities.

2.2.1 The Board procedures and effectiveness

The board panel serve as one of the primary and major pillars for the efficient, well-organized, coherent and smooth flow of business operations. Such a commission need to conduct prudent and well-thought business activities. This committee has to make sure that the operations of the business are being carried out within the legal boundaries of the regulatory authorities and a sophisticated reporting system is established with all the stakeholders of the enterprise. The existence and occupancy of independent directors are essential in bringing substantial improvement to the governance norms in the business. Their presence is pertinent in bringing significant objectivity to the entire process of ensuring good and persistent governance in the business.

Protection of minority interests and promoter interests are well balanced by their adequate constitution on the board member team. The exact size and number of independent directors in any business shall be mandated by the rules and protocols prescribed by the regulatory establishments.

Figure 1. Showing the board commission parameters in line with the Companies Act, 2013

Source: Author's collection

The Board committee and their members bring the elements of leadership and theright direction in the business and make independent decisions on all matters concerning the business policies, mission, vision, strategy, efficiency, assets andstandards of conduct, either directly or through the conduct of commissions of the board and delegated authority. The Board panel effectively demonstrates the business's strategic goals, which are subsequently put into action by approving and regularly monitoring the company's plan and forecasts. The Board chalks out a governance framework that enables bringing out the internal approvals, internal controls, and processes that can be delegated to ensure effective governance across allof the business units and departments. Suitable delegations made by the board of directors enable them to carry out effective day-to-day operations and management in the most appropriate manner. Therefore, it can be highlighted that board effectiveness lies in bringing out precise coordination with the audit function team, remuneration committees, risk management committees and stakeholder protection rights committee are outlined in Figure 1.

The board commission and independent directors shall serve effectively and proceed in such a way that fosters good faith and rectitude which will tend to bring out not on favourable results for each committee but the business as a whole. In this regard, it shall effectively consider the subsequent outcome of each decision taken by them under its purview. The committee is having the prime responsibility of maintaining pre-eminence in the conduct of each business operation within the organization. Additionally, the board committee, the independent directors and the executive directors shall always focus on creating, furnishing and building a vigorous shareholder value. Such a value tends to create strong trust and mutual understanding of the external stakeholders of the business with the organization at all levels. The major responsibility of each member of the board shall suitably highlight and considerthe long-term objectives, procedures and policies of the business. It shall duly take into consideration the overall strategic accommodation which fulfils the right framework of premiums, bonuses, rewards, and incentives. It is, therefore, inferred that in every strategic business decision-making, the board management must make sure that there shall exist the right balance between strategic policies, vision and mission of the business.

2.2.2 Audit function

The members serving on the auditor's board portray a major role in safeguarding and entrusting that the material disclosed and rendered in the financial statements of the business is precise, flawless, accurate and error-free. A major portion of business governance revolves around ensuring that the arrangements, commissioning and engagement of the statutory auditors are made from time to time without any delays. Their sanctions and recommendations on the assignation, selection, nomination and engagement of the other relevant auditors are pertinent in ensuring that the other categories of auditors execute their duties in the interests of the business operations. The payment sanctions for the company auditors are made selectively and suitably after careful discussion with the audit board members. Their role is of paramount importance in certifying that the business statements are reviewed, vetted and explored well before presenting the same to the board members of the business. The audit commission and its members tend to execute a paramount rolein ascertaining and reviewing the entire auditing process. Such a process is carried outobjectively and independently and is to be aligned with the overall interests of the business. The auditors ensure that the related parties of the business are given theirdue accord. They shall carry out or make changes in the subsequent transactions specifically concerning the related parties. They take utmost care and exercise due diligence in transactions about the company's investments and loans within and outside the business. They ensure that the correct ascertainment and proper valuation are made of the different resources used by the business for getting future benefits. The major responsibility of the auditor committee and its respective team lies in exercising and ensuring that adequate controls relating to the different financial aspects are carried out properly. They undertake their duties in such a manner that ensures that suitable management systems are carried out regarding risk management and its adequate control. Scrutinizing, assessing and reviewing the overall system of internal and compulsory auditing processes is carried out to ensure the holistic achievement of the overall business control systems.

Figure 2. Parameters of audit function under the Companies Act, 2013

Source: Author's compilation

The suitability of fixing the auditing responsibilities, managing the reporting systems and ruling out mismanagement in the auditing systems makes up one of the primary tasks of the auditing team and its governing members. The auditing processes and systems are properly ascertained and established to make sure that any chances of current and future frauds arising in the business, which are material to the business are highlighted well in advance. Suitable reporting and intimation of prevalent risks about the frauds are reported to the associates of the board.

The inclusive progression of resounding the auditing processes, the dimensions to be covered, fixing the scope of the auditing and highlighting the areas of concern is one of the major responsibilities of the overall auditing team. The committee governingthe compulsory as well as the internal audits needs to make sure that any defaults arising about the matters concerning the stakeholders are brought to light well in advance as outlined in Figure 2.

Development and ascertaining the proper working of the whistle-blower structures is the primary task of the audit team and its committee members. The overall system of

the whistle-blower mechanism is predominant and cardinal in ensuring the transparency of all the transactions carried out by the business. Ensuring the proper functioning of such a system is paramount in restoring the faith of internal management parties such as board committees, stakeholder committees, related parties, and remuneration and risk management committees.

The role and responsibility of the chief financial manager are predominant in the development of sound auditing structures within the organization. The skills and experience of the financial risk manager are substantial in carrying out sound governance auditing processes within any business. Development of the audit reports and procedures shall be adequately defined in the auditing report. This can be ensured with the presence of the company secretary who in the capacity of the secretary member makes sure that auditing mechanisms and their structures are holistic in description.

2.2.3. Disclosure and transparency

One of the major dimensions of ensuring adequate adherence to the governance mechanism inside the business is making the appropriate disclosures in the interests of the stakeholders. The policies governing the disclosures and transparency revolve around making suitable disclosures of all the accounting procedures adopted by the business as per schedule 17 of the business's annual report of the Companies Act 2013. It is mandated that a peculiar and special section relating to the management's appropriate analysis and discussed appropriately for all the financial years.
It must be ensured that executives of the bank must give their due certification and approvals about the accounting policies and standards followed concerning carrying out the business operations of the business. It is also mandated by the procedures of the regulatory authorities that all the suitable disclosures related to the non-adherence by the businesses, and any fines and penalties imposed on the business need to befully and adequately disclosed properly in the annual reports prepared by the business are outlined in Figure 3.

The disclosure committee and board members of the organization must ensure that all the manners and means of stakeholder intimation shall be suitably disclosed in all the important documents of the business. This ensures an important communication link of transparency and disclosures between the stakeholders and the organization serving them. All the detailing relating to the termination, cessation and resignation of any internal members of the business shall be appropriately disclosed along with the reasons for the termination, cessation and resignation must be highlighted in the annual report published by the businesses.

Figure 3. Parameters of disclosure & transparency as per Companies Act, 2013

Source: Author's Compilation

An important principle of transparency ensures that suitable communication andaddress are made to the external stakeholders clearly and appropriately. The stakeholder engagement tasks are directed to carry out obligations which are transparent, ethical and accountable to the overall interests of the business. Such committees are having independent members they shall appositely ensure that the decisions relating to compensation, dividends, profit retentions and funds optimization are precisely highlighted in the annual reports of the business.

The stakeholder interests are well balanced to make sure that priorities are set while developing the disclosure policies and procedures. The disclosure and transparency principles are based upon confidence, assurance, positive expectations, conviction, belief, certitude, faith of the stakeholders dealing with the banking structures in each financial year.

2.2.4. Remuneration committee

The appropriate constitution of the remuneration team serves as one of the major pillars of carrying out appropriate governance practices in any organization. Instead ofthis, it is pertinent that board members suitably form, constitute and develop a system of remuneration which fulfils not only the interests of the business but also suitably matches the personal interests of all the internal members of the organization.

The suitable and appropriate appointment of the remuneration commission makes sure that the governance practices entail ethical standards, behaviour, adequate compensation and risk management in the business at all levels. The primary principles of culpability, concern and evenhandedness can adhere to the suitabledevelopment of the compensation executive committees.

The remuneration committee takes into account all the suitable approvals relating to the compensation and the incentives payable to the internal members heading the committees of the board panel members, risk management, stakeholder commission and audit panels. Their task revolves around ensuring that the business's succession and appraisal are reviewed on yearly basis and suitable recommendations are made to the board members for their sanctions and approvals as outlined in Figure 4. Such a committee also ensures that suitable key performance indicators are developed to evaluate and appraise the evaluation criteria of all the key personnel involved in the organization. This also involves considering the different criteria for adequate impost of the recital of the key personnel heading the committees of the disclosure committee team, board panel members team, risk management, stakeholder commission and audit panel teams. One of the main tasks performed by the remuneration committee and its team members is carrying out the suitable appraisal and estimating the qualifications, skills and requirements of the directors.

This ascertainment is necessary for developing and devising the policy related to board diversity at differentlevels of the organization.

Figure 4. Parameters of the remuneration committee under the Companies Act, 2013

Source: Author's Compilation

The remuneration committee team considers the various options for estimating the eligibility conditions for the employee appraisals related to stock-based option plans and grant dimensions. To determine the eligibility, the remuneration committee team gives due accord to the enactment of the personnel in the banking structure, the present and future estimated potential of the personnel and ascertaining the eligibility of each person under share-based plans.

The main issues concerning employee remuneration revolve around determining and estimating the various policies, terms, criteria for appraisal, and remuneration limitations which are consistent with the governance policies. The issues related to remuneration are settled by the remuneration committee by bringing a suitable balance in the trade-off between employee expectations and the company remuneration policies. The remuneration committee ought to resolve the various discrepancies, mistakes, omissions and unjustifiable recommendations about personnel remuneration.

Such tasks need to be carried out from time to time to ensure consistency and trustworthiness on their part of the functioning. Any wrong sanctions about employee remuneration outflows must be suitably addressed.
The committee needs to ascertain the proper interpretations against employee misconduct and fraud and formulate a suitable policy for getting waivers of the unauthorized sanctions of the different stock option plans. The governancemechanisms under the Companies Act 2013 allow for the suitable conduct and administration of all the share-based and stock-based option plans in each financial year. One of the significant dimensions of the remuneration committee is concerned with seeking valuable directions and suggestions from the board of directors committee about making decisions concerning the cash outflows of employee remuneration. The remuneration commission panel must work in coordination tocreate a harmonious work environment, retain the personnel with high potential,honour the personnel skills, and develop different policies for training and personnel development. Such initiatives tend to create a sense of belongingness and teamwork among the various executives and independent directors employed at different positions in an organization. The remuneration committee tend to devise an appropriate payout policy which includes favourable terms of personnel recruitment, employment, retention, motivation, profit sharing and appraisals concerning the personnel employed in the business. Such policy must be revised as per the current sanctions of the regulatory authorities and shall be followed properly to have an appropriate adherence to the governance mechanisms of the business. The remuneration policy shall be available to all the personnel of the business so that they are clear of their expected outcomes and match their current remuneration with the vision set by the business.

2.2.5. Risk management procedures

The appropriate constitution and establishment of the risk management committee serve as another important dimension in the overall governance of the organization. This committee undertakes an important responsibility of ascertaining, investigating, and evaluating the overall risk management mechanism of the business. Such a committee suitably reviews the different risk assessment procedures and also suggests the appropriate recommendations for the overall risks faced by the organization.

Figure 5. Parameters of risk management under the Companies Act, 2013

Source: Author's Compilation

The risk management commission suitably evaluates and appraises the effectiveness of the holistic risk factors present in banking structure. The managers holding the position of this commission shall dissect and assess the significant risk exposures currently faced by the organization and take timely actions to minimise and reduce the risk factors prevalent in the organization. These tasks are carried on by taking into account the various risk management initiatives such as reviewing the risk management procedures, protecting the stakeholder's interests, disaster management and suitable testing at all levels as outlined in Figure 5.

This commission coordinates with audit-level committees, board of directors, remuneration management committees and stakeholder committees to ensure the new risks arising in their respective departments are countered well in advance by identifying the major risk exposure mitigation policies. Such a committee ensures that they consider making regular and continuous reporting to senior members of the board concerning the different audits made by them about the risk factors faced by the banking structures. The cumulative meetings undertaken by the risk supervision commission and disclosures about the constitution of the executive superintendents shall be divulged transparently in the yearly report broadcasted by the bank.

2.2.6 Shareholder information and rights

The shareholder information and rights committee, also known as the stakeholder’s committee forms one of the major pillars of exercising the governance norms in any organization. This committee is formulated under the guidance of the board commission. The principal chores of this commission entail the protection and safeguarding of the rights of the debenture holders of the business. This committee is constituted and headed by the chairman, a non-executive and executive leader. The foremost accountabilities of the stakeholder commission aim at settling thegrievances, issues and disservice of the shareholders and investors of the business. Such complaints and grievances, as well as their resolutions, must be effusivelydivulged in the annual description. The grievances can pertain to the issue and non- issue of shares, their certificates, discrepancies in holding meetings, non–payment of the interim and the final dividends and also concerning non-resolution of the issues highlighted in the general meetings of the organization.

In addition to resolving the investor and stakeholder grievances, the shareholder rights committee also widens its scope of responsibilities by ascertaining the measures taken to resolve and ascertain the suitable application of the voting rights of the past and present stakeholders of the business. In this regard, this committee ascertains the right application of all the set standards in light of the different services provided by the registrar of the business as outlined in Figure 6.

The stakeholder committee also considers making a detailed investigation, assessment and scrutiny into the different aspects of the unclaimed dividends of the past shareholders of the business. This committee suitably make a plan to provide the appropriate issue of the dividend receipts to all the existing stakeholders of thebusiness. in this regard, this committee adequately reviews and analyzes the due notices sent to the stakeholders for attending the statutory and the annual general conventions of the banking structures. The agency verbalized by the board commission for resolution of the stakeholder's issues also consider scrutinizing, examining and reviewing the appropriateness of the business’s charter of activities from time to time and suggests suitable changes in consultation with the board commissions heading this part of the group.

Figure 6. Parameters of shareholder information, rights as per Companies Act, 2013

Source: Author's Compilation

It needs to make sure that any changes concerning the main charter are discussed with the compliance officer in an appropriate manner. The overall constitution of the stakeholder committee considers appointing the non- executive director, a chairman, the compliance officer and the disclosure officer. The committee is having the prime responsibility to disclose the investor's issues and their resolutions in the annual report published every financial year. Detailed procedures related to the dividend payment, delay in the processing of the dividend payouts, a system of share transfer and dematerialized forms of shares must be highlighted in a detailed manner in the company articles as well as in each year's annual report.

1.3. Structure and functioning of the banking sphere in India

The Indian banking sphere is recognized as the most stable, well-anchored, and suitably regulated segment of the Indian economy. The liquidity as a whole of this segment is controlled and regulated by the governing authority RBI. This sector is having certain barriers to its entry due to lofty licence issues, heaving investment mandated in the technology as well as resource demands. This sector is witnessing enormous competition due to the vast presence of the private sector, public sector and foreign banks holding major market share as well as capital in this industry. The upcoming licenses issued to various small payment financial institutions and compact finance banks are increasing the competition for the existing players in this industry. There are a total of 21 private banks, 12 public banks, 12 small finance banks, 6 payment banks, 43 regional rural banks and 44 foreign banks steering in Indian territories as of 31st March 2022.

The whole mechanism of this segment is fairly segregated into scheduled banks, non-scheduled banks and development banks. The commercial banks are part of the scheduling banks, the cooperative banks are the integral units of non-scheduled banks and the agencies such as the Industrial finance corporation of India, the export- import embankment and the domestic embankment for rural and agriculture development are the part of the development embankment in India. The cumulative return on assets of the Indian banking sector has shown a sharp upward increase of 66% in the financial year 2021-22 compared to the 15% in the previous financial years. Similarly, the return on equity of this sector has escalated from 0.88% to 7.7% in the financial year 2021-22. Both measures highlight that the Indian banking sector has shown coherent and positive efficiency in generating profits by appropriatelyusing its existing resources. The Indian banking sector has emerged victorious in terms of generating appropriate returns from its credit products. The cumulative net interest margin of the Indian banking sector has shown a substantial augment in the recent past with a net percentage of 2.9% in the financial year 2021-22.

Moreover, the sharp increase in the cumulative capital adequacy ratios to 14.2% in the said year suggests a vigorous solvency position of the sector against the 9% minimum requirement set by the authorities (Mayur et. al., 2017; Das et. al., 2004). Indian government has been pushing for consolidation in the public sector banking space, with the merger of several state-owned banks in recent years. This has led to the creation of a few large banks with a pan-India presence, which can better compete with global players. The Indian banking sector has also been undergoing a digital transformation, with a focus on increasing the use of know-how to improve customer experience and reduce costs. Banks have been investing in digital infrastructure and launching digital banking services, such as digital wallets. This has led to an increase in financial inclusion and has made banking services more accessible to the general public. However, the Indian commercial banking sector is also facing several challenges. The Non-Performing Assets (NPAs) of public segment banks have been a major concern in recent years, with the government taking several measures to address the issue. The sector has also been facing increasing competition from non-banking financial companies (NBFCs) and fintech companies.

1.4. Governance mechanisms in the Indian banking segment

Ensuring adherence to ethical governance preparations is imperative in ensuring the acceptable and sound operation of the Indian banking segment as a whole. Securing the safety of the depositor's funds is the prime concern of this sector, thus, this sector must set a seal on establishing soundness and sturdiness all the time. Any weaknesses in the governance mechanism can result in creating issues not only in the particular financial institution but also in the economy altogether. The regulatory authorities are constantly ensuring that investors' interests are appropriately protected by the board commission in conformity with the established standards and norms.

This commission is under the answerability to suitably develop and integrate a comprehensive strategy towards the bank, handle employee issues appropriately, take actions to uphold the welfares of the investors, cultivate a culture of mutual trustand confidence and effectively implement the internal control. Compliance with the established governance norms of governance structures in light of applicable regulations and laws shall serve as the major pillar of the banking system.

The established governance norms under the Companies Act 2013 require the banking systems to recognise the significant elements of board administration, diligent risk reduction, sturdy financial controls, audit assurance and effective compliance in all areas. For this purpose, the board's skills, expertise, and ability must be suitably integrated and developed in light of the changing governance norms of the financial sector.

The regulatory authorities are constantly making revisions in the governance norms in light of the changing business environment. One of the focus areas especially developed for the Indian banking sector calls for assessing, developing and promotingstrong risk scrutinization procedures within the banking system all the time. This development has promoted adhering to the developed risk assessment model for each banking business unit. In India, the regulatory commissions have put in place several governance frameworks and guidelines to ensure that banks adhere to good governance practices. One of the key ascendancy frameworks for banks in India is theEnigma of Embodied Governance for banks, which was outlined by the RBI in 2014. The convention lays out the principles of governance and sets out the restraints of the board of executives, management, and various commissions within the bank.

The board commission is the highest policymaking federation in a bank, and it is conscientious for the overall direction and supervision of the bank's affairs. In India, the board agency of banks is requisite to have a modicum of 12 directors, with at least 50% of the directors being self-governing executives. The non-executive administrators who are not part of the bank's supervision and are appointed to provide an independent perspective on the bank's associations. This helps to guarantee that the board is not dominated by the supervision and that it acts in the superlative interests of the stockholders. Another key governance practice in Indian banks is the existence of internal audit and compliance functions. This function is conscientious for identifying, assessing, and overseeing the bank's risks.

1.5 Motivation for the study

The suitable observance of corporate governance norms helps businesses to ensure integrity, stability, and robust growth along with enhancing the entire mechanism of appropriate conduct in the volatile business environment (Kells, 2020; Nduhura, 2022 and Dalwai et. al., 2015). Effectual composition and execution of the policies about corporate governance accentuate an appropriate empirical comprehension of the businesses in which they operate (Dedman, 2002; Albuet. al., 2015; Anginer et. al., 2018 and Zulfikar et. al., 2020). The prolonged history of world commercial crises and corporate failures has generated immense interest in apprehending the complex issues of governance mechanisms around the globe. The commercial banking sector of India is not far behind and has witnessed humongous financial crimes with every passing financial year in the history of banking fiascos (Pandya, 2011; Salim, 2017). The enactment of various laws about governance in India has tried to construct an extensive economic manifesto for increasing stakeholder confidence, encouraging cross-border investments and ensuring appropriate capital earmarking and its genesis. The regulatory authorities have been successful in developing a robust governance framework to encourage unambiguous markets and fair allocation of economic resources. The pertinent issue emerging in the current scenario is that financial fraud continues to persist in the Indian commercial banking sphere even though a robust framework of company governance is suitably established by the regulatory authorities (Das & Ghosh, 2004; Haris et. al., 2019 and Mayur & Saravanan, 2017). Thus, fundamental concerns necessitating undertaking the research in this area are listed as follows:

- The regulatory authorities issuing and controlling the corporate governance norms have bestowed similar governance rules to be followed by every organization irrespective of the sector, division, strata, nature or the size to which it belongs. The norms about board pursuits, audit function, risk management stratagem and stakeholder rights protection are commonly propounded to be applied in every business organization. Thus, the proposition of 'one governance model fits all' may not recognize the deep-rooted governance issues and encourage untainted governance compliance in a specific business unit. Therefore, it encouraged identifying key governance concerns of

the Indian banking sector so that its sustainable business practices can be suitably determined. In this regard, an effort is made to inculcate the reverberations and responses of the directors/high-level managers heading the different positions in banking segments in India. The intent was to attain a better cognizance of unique governance issues and ascertain the prioritizing of the modifications in the governance dimensions specific to the banking structures.

- The corporate governance nucleuses listed by the Companies Act, of 2013 explicitly tend to foster the elements of decreased costs, sustainable business practices, efficient procedures, high level of compliance (Madhani, 2017; Hilb, 2012 and Kang et. al., 2007). Its legislative provisions are reconstructed and regulated foremost overhauls in enforcing thepolicies among the corporate houses operating their business practices in India. The corporate governance provisions of this act are assembled and intensified on the pillars of risk management, board member scrutinization, efficient internal controls, uncompromising legal compliance, a surveillance mechanism and an austere regime for company management (Khuntia, 2014; Busru et al., 2016; Das et al., 2016). This encouraged to analyze of whether these measures have provided sufficient opportunity for the Indian banking division to reassess and revamp its corporate governance models to create more stakeholder value. The intent was to recognize the significant alterations in the banking sector processes and internal control systems along the lines of legislative provisions of the Companies Act, of 2013.
- The due assessment made by RBI, a regulatory authority governing the Indian banking system, has raised due concerns over the increasing financial crimes in the private and public segment banks in past financial years. Moreover, it was highlighted that the maximum number of frauds was committed in such banks augmented with the maximum fraud amount (Rai, R. A. (2021). It was mandated from time to time by the RBI that such banks must uphold good governance practices at all levels to strengthen their internal control system and build doggedness in the VUCA world (Gupta, 2021). Therefore, it was persuaded to identify the present mechanisms of governance structures prevailing in the Indian commercial banking division in light of the legislative measures established by the Companies Act, of 2013.

1.6 Purpose of the study

Governance, its mechanisms and its framework have gained frontline importance to policymakers around the globe (Kiel & Nicholson, 2003; Carter et. al., 2003; Madhani, 2017; Hilb, 2012; Khatib et. al., 2021 and Gelter et. al., 2020) Good governance norms are essential in any economy to construct viable businesses for economic progression (Sayilir, 2012; Mulyadi & Sihabudin, 2020). The whole mechanism of governance is based upon the right solicitation of sound management procedures, uncompromising amenability to the provisions made by the regulatory authorities, and solicitation of moral policies for the appropriate running of the business activities, in appendage to the creation of the stakeholder value (Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012; Dalwai et. al., 2015; Homaidi et. al., 2019 and Haris et. al., 2019). Therefore, the current study intends to recognize the echelon of compliance with the corporate governance norms in the Indian commercial banking fragment. It contemplates delving into the comprehensive dimensions to identify the parameters with strong as well as weak compliance across different commercial public and private sector banks.

Additionally, it sets out to find the empirical interconnection between the governance norms and the operating indicators of the banks. Investigating the consecution between the two shall foster determining the peculiar governance dimensions which positively or negatively influence the operating occurrence of the sample banks. Moreover, it uses the legislative governance prearrangements of the Companies Act, of 2013 to establish the significant differences in the actual governance practices of the sample banks across two-time proportion The investigation made using this approach led to recognizing the changes in governance practices over time with utmost accuracy. Furthermore, it thrives to fabricate a multifarious index of governance for the Indian banking segment by enduing the concrete propositions of the directors heading the various committees in the banking structure. This composite index construction led to comprehending the individualistic, unrestrained and self- sustaining view of the governance issues of the banks operating in India.

1.6. Research questions

The tenable business activities shall be directed and controlled to thrive in a mechanism which incorporates the precise alliance between the board management, stakeholder interests and risk components of an organization. A competent and reliable governance activity indicates to the external stakeholders that the business is suitably administered and their interests are given due accord by the board management. The development of the four major research questions for this inquest strives to emphasize the complexities of corporate governance concerns in the Indian commercial banking sector. It seeks to appropriately address how such issues are demonstrated in the past literature, attempts to discourse on the identified research gaps and provides amedium of suitably filling them. Thus, the research questions for which responses are sought are highlighted as follows:

- What is the compliance level of the corporate governance norms as mandated by the Companies Act, of 2013, in the Indian banking sector?

Due adherence to the corporate governance norms as decreed by the regulatory authorities is pertinent in developing sustainable business run-throughs and creating protracted stakeholder value in an organization (Jurakulovna & Bahodirovich, 2021; Sarens et. al., 2012 and Abdullah et. al., 2018). There exists extensive literature which significantly examined the compliance level of corporate governance practices but an investigation underlying the provisions of the Companies Act, of 2013 as its base or the period after the amendment of this legislation has not been explored previously in a holistic manner. Therefore, the present study seeks to make a systematic investigation of the adherence level of the governance norms by exploring it from two major aspects i.e., the examination concerning the comprehensive norms of this legislation and the inquiry concerning improvement or worsening of compliance levels after the period this legislation was enacted/amended.

- Does any interrelationship exist between the corporate governance norms and the financial performance of the Indian banking sector?

The virtuous recognition of corporate governance practices call for exploring its effect on the financial performance of the Indian banking sector. There exists substantial literature which examined the interrelationship between corporate governance and financial performance. It focused mainly on analysing the impact by using board management, audit function and risk management corporate governance variables. The existing study endeavours to comprehensively assess the holistic proportions of corporate governance such as board efficacy, audit functions, risk management procedures, remuneration commission, stakeholder activism, disclosure policies and transparency management. The impact of such exhaustive measures is examined and reviewed by interlinking it with the financial performance indicators of the Indian banking sector.

- Do any significant differences exist in the corporate governance practices of the Indian banking sector, pre-and post-enactment of the Companies Act, of 2013?

The various legislations about corporate governance revamped by the Companies Act, of 2013 ushered paramount changes in the way the corporates operate and accord with their external stakeholders (Mayur & Saravanan, 2017; Aggarwal, 2013; Velte, 2017; Haris et. al., 2019; Mulyadi & Sihabudin, 2020 and Khatib et. al., 2022). This legislation has emerged triumphant in imparting a vigorous mechanism of governance to be adhered to by the companies in true essence. The current study provides novel recognition and insight into the governance practices of the Indian commercial banking sector in two-time proportion i.e., before and after the enactment of the governance provisions of this robust legislation. Such propositions are not contemplated in the previous literature examining the governance processes ofthe Companies Act, of 2013 in such a manner.

- Does the composite index of corporate governance calibrate the quality of the corporate governance procedures of the Indian banking sector?

The banking sector in India is under constant insistence to uphold and operationalise the best corporate governance praxes to ratify the sustainability and continuity oftheir business procedures (Dalwai et. al., 2015; Homaidi et. al., 2019 and Haris et. al., 2019). A comprehensive index shall act as a yardstick of the righteous governance rules and regulations apprehended in this sector. The current study aims to venture into the construction of the composite index of corporate governance which is centered on the opinions of the senior-level management and board directors of the Indian banking sector. Such an effort comprehends the intricacies and convolutions in the governance procedures of this sector. It annihilates the issues involved in the true examination of the quality and efficacy of corporate governance in the Indian banking sector.

1.7 Application of the study

Businesses operating in a VUCA world are superintended and inhibited by incorporating the governance elements of 'accountability', 'answerability', 'adaptability' and 'productivity' in the best interests of their organization as well as of the external stakeholders (Shingade & Rastogi, 2019; Goranova & Ryan, 2014 and Souha & Anis, 2016). Thus, businesses clinging to the corporate governance norms in the right manner shall bear low economic risks and generate exorbitant shareholder value all the time The stipulation for embracing superior governance norms is striving for the world financial sector to ameliorate its performance, approach global financing and lessen the cost of the employed capital. The adherence to strict governance practices by the global banking and financial sector indirectly influences the enlargement of the capital markets and opens avenues for international investments. Aligned with the international initiatives of compliance with good governance procedures, the regulatory authorities in India are making every effort to improve the adherence level of corporate governance in all sectors of the economy. The banking and financial sector in India is scaling up its investments, stabilizing its operations, effectively dealing with its rising frauds and exhibiting better financial numbers in each fiscal year. It is, therefore, against this backdrop the governance practices of the Indian banking sector are being examined.

The current study endeavours to make a deferential effort to investigate the corporate governance norms, the extent of compliance with such norms, their interrelationship with the financial indicators of the Indian banks and elucidating the significant

differences in the governance practices in two-dimensional time frames. The published research in this area is dealt with the profound details of the governance practices of this sector but the current study strives to holistically examinesuch practices concerning the legislative norms framed by the Companies Act, of 2013. An effort is made to fill the dearth of literature by investigating the governance practices in two-time proportion i.e., before and after the establishment of governance mechanisms under this act. Additionally, it undertakes to scrutinize each dimension ofthe governance mechanism such as board management, audit functions, risk management, remuneration, disclosure aspects, transparency procedures and stakeholder rights. Such a decisive and exhaustive approach is not adapted in past literature. Moreover, an effort is made to construct a composite corporate governance index which shall meticulously provide due diligence guidance and responsible business administration in the Indian banking sector in upcoming future times.

The outcomes of the study are expected to assist the various stakeholders, policymakers and legislative authorities in understanding the intricate details of the governance issues in the Indian banking sector. It contributes to constructing aneffective governance mechanism for this sector which suitably discerns therecognition of the stakeholder rights, effective surveillance of the board activities, reviewing accountability of the various bank committees, monitoring of the governance risks and promoting potent transparency at all the levels. Moreover, it emphasizes various measures for narrowing down the gaps between the legislative governance provisions and their actual implementation. This is done by constructing acomposite index which appropriately inculcates the unfeigned complicacies highlighted by the board management/directors of the various banks. Finally, it will facilitate to recognize of the new trends, directions and confrontations in the governance practices for issuing the unrelenting policy-dialogue turnarounds in this compelling arena.

1.8. Structure of the study

The initial chapter outlines the introduction of the thesis wherein it specified background information on the research topic and it set the stage for the rest of the thesis. It suitably included a statement of the research problem, the purpose of the study, the application of the study, the motivation of the study and the research questions. The subsequent chapter accentuated the literature review wherein it provided a comprehensive

assessment of the existing literature on the research topic.It included a discussion of the main theories, concepts, and studies that are relevant to the research problem. The successive chapter described the research methods used in the study, including the design of the study, data collection procedures, and data analysis techniques used in the thesis. The preceding four chapters presented the results of the study, including any statistical analyses, tables, and figures in connection with the fulfilment of the objectives of the thesis. It also encompassed the interpretation of the results and related them back to the research objectives and questions. It suitably postulated a summary of the main findings and their implications for future research. The successive chapter summarized the pivotal findings of the thesis, reiterated the research objectives and questions, outlined the limitations of the present work and provided recommendations for impending research. The final fragment listed all the sources cited in the thesis.

CHAPTER – 2

REVIEW OF LITERATURE

The current study examines the corporate governance practices in the Indian commercial banking sector and endeavours to make a valuable augmentation in this area of research. This chapter concentrated on appraising and gauging a detailed review of the literature. This effort is intended to comprehend the extent and the depth of research done in this area, recognize the inconsistencies in the existing research parts and identify the research gaps which can appropriately be catered to in the present research. This chapter represents the interpretative discussion and summarization of the past literature by suitably propounding the five different themes about the current area of research.

The first segment reviews the existing corporate governance practices in the commercial banking sector. The second segment scrutinizes the extent level of compliance with governance standards observed in various business units. The third section deals with exploring the studies allied to the interrelationship between corporate governance and financial performance and subsequently scrutinize the consecution of each dimension of governance norms with the performance indicators of the business units. The third component is segregated into the successive six sub-sections which investigate the linkage between board governance, audit function, transparency and disclosure, stakeholder rights and information, remuneration committee and risk management dimensions with the performance indicators of the business. The fourth section deals with analyzing the studies about the governance mechanism under the Companies Act, of 2013 and underlines how the acknowledgement of the corporate governance norms was brought significantly into notice by the substantial revisions made by the Companies Act, of 2013. The fifth section brings to the fore the studies fostering the development of the index for corporate governance and highlights the necessity of the construction of the index in improving the compliance level of the governance norms. The last section indicates the gaps identified in the existing literature review. Itaddresses the issues not communicated suitably by past studies and highlights the unexplored and undiscovered areas of the existing research problem. It also elucidatesin detail how such research gaps are fulfilled in the current study.

2.1. Corporate Governance practices in the commercial banking sphere

Adherence to strict governance norms, and accommodating the elements of integrity, uprightness and ethics are integral for the successful operations of the banking sector. The studies by (Quang, 2022; Orazalin, 2019; De Haan et. al., 2016; Dalwai et. al., 2015) reviewed contemporary board management as well as audit management practices in this sector and found that any uncertainty calls for better risk reporting and balance in its internal control system. Holistic disclosures shall be given due to accord to protect the stakeholder interests in the banking sector. (Khatib et. al., 2022; Germain et. al., 2014; Hassan et. al., 2005) produced outstanding work on governance practices in Malaysian financial segment firms.

It was highlighted that compliance with the governance codes leads to an improvement in business efficiency as well as the performance of the financial sector firms. Such a scenario tends to uplift the investor's well-being in the business as they consider appropriate adherence to norms as an integral part of building long-term relationships with the business. The significant studies by (Torku et. al., 2021; Handriani et. al., 2021; Anginer et. al., 2018) accentuated that appropriate revelation, the establishment of risk supervision systems and a suitable constitution of all the relevant commissions are integral in exercising good governance norms in the banking sector. The committee's independence and administering integrity at all levels are pertinent and shall be complied with as the best practice governance norms in the business. The studies examining the corporate governance practices in the Indian banking sector delineated that sound governance norms are essential for effective stakeholder engagement and the robust functioning of a unit in the uncertain business world. The studies conducted by (Kaur, 2017; Almaqtari et. al., 2020) emphasized that Indian stakeholders and investors command substantial disclosure, vigorous reporting mechanism and clear justifications for the significant assessments made by the board management of the banks. In this regard, all the bank committees are expected to foster their fiduciary obligations in the paramount financing of the stakeholders.

It was stressed that the Indian banking sector must uphold and execute its business decisions, leading to the creation of better stakeholder value. It was also underlined that the leadership of the banking system must commit itself to maintaining and developing high-integrity governance standards at all levels. The studies assisted by (Gopinath, 2008; Mayur et. al., 2017; Das et. al., 2004) put forth the prominence of self-regulation as a pertinent factor in developing prominent accountability and superior integrity in adherence to listed governance norms. It was suggested that the overall culture of a bank shall accommodate and integrate the elements of fairness, transparency, openness and the creation of investors' value. The top management of the bank shall suitably review its governance mechanism in light of the changes made by the regulatory authorities and shall immediately work to modify its existing governance activities as per the need of an hour. Such studies also empirically analysed the presence of the board management committees, risk-taking capacities and the existence of the disclosure management system. It was highlighted that banks which complied with the governance norms appropriately are better managed compared to those which make certain compromises in their certain corporate governance practices.

There exist certain studies that aggrandised the factors of reorganization, innovation and modernisation as intrinsic elements in the overall corporate governance charter in the banking sphere. Innovation strategies such as adherence to appropriate business strategy and long-term budgeting decisions were found to improve significantly corporate governance practices. (Kien et. al.,2022) analysed the innovation competence of the banking sector in Vietnam and instituted that upheaval was a significant factor in improving the governance in the sample banking firms. The studies by (Asensio-López et. al., 2018; Goyer, 2001) found that strong baseline adherence to market regulations, presence of accountability and openness, appropriaterisk management and audit assurance tends to ameliorate the strong corporate governance practices in the banking division and turn, promotes the overall culture of implementing robust innovation practices in their businesses. (Yang et. al., 2017) highlighted that a lack of good governance practices and poor internal control procedures tend to increase the chances of occurrences of financial fraud in the financial sector.

The established governance norms mandate the banking systems to acknowledge the significant consequential dimensions of board administration, meticulous risk management, determining financial controls, audit assurance andeffective compliance in all areas. For this purpose, the board's skills, expertise, and ability must be suitably integrated and developed in light of the changing governance norms of the financial sector. It was suggested that constituting and delivering sustainable stakeholder value shall be the primary responsibility of every financial firm. In this regard, such firms shall suitably address issues in their governance structures and work for nurturing innovativeness in their businesses.

The studies reviewing the impact of the pandemic on corporate governance practices in the banking sector found that Covid – 19 has created an insightful effect on the way governance mechanisms shall be implemented in the profound interests of the stakeholders. The studies steered by (Khatib et. al., 2021; Gelter et. al., 2020; Naeem et. al., 2022) found that appropriate board compositions, the presence of boarddiversity and independence are integral components to ensuring high firm performance during pandemic times. It was stressed that the banking sector shall work suitably to develop sustainable governance practices insight of the high level of commitment toward the investors of the firms. It was suggested that the banking sector must develop a proper risk management strategy which shall not only proactively identifies the potential risks arising due to the pandemic but also strategically reduces them. Such studies underlined the significance of constructing the stakeholder-centric model which shall work upon increasing accountability towards them and creating shareholder value during uncertain times. The work published by (Kells, 2020; Nduhura, 2022) provided insight into the pandemic impact on the financial sector and propounded that legislators shall work meticulously with the board management in evolving a worthwhile disclosure framework. The financial sector shall suitably make an unbiased and full disclosure of all the material details during the pandemic.

2.2. Compliance level in corporate governance norms

A suitable compliance framework of the corporate governance norms shall lay a robust foundation with which a business unit shall operate and intervene within the organization and outside the market. The studies highlighting the compliance made concerning procedures of corporate governance as described by (Dedman, 2002; Albu et. al., 2015; Zulfikar et. al., 2020) underlined that compliance in the sample firms selected for the study was weak. In this regard, it was emphasized that the board management shall be given the due culpability of supervision and standardizing the entire business affairs as well as generating sufficient profits for the organization. It was stressed that three significant responsibilities of the board management shall include action, leadership and compliance. This will ensure the accurate reporting and flow of information among stakeholders and the trustworthiness of the reported results of the business units. It was established in the study (Anginer et. al., 2018) that a suitable assessment of the risk factors, adherence to reporting standards and a robust internal control system shall appropriately increase the compliance of the governance framework of the business.

Every organisation shall strive to develop benchmarking assessment criteria to fully comply with the governance framework of the regulatory authorities. This viewpoint was precisely foregrounded by the studies of (Charan, 2005; Akinkoye et. al., 2014, Bajra & Čadež, 2020; Torku & Laryea, 2021; Handriani et. al., 2021) which concluded that infirm compliances with regulatory governance mechanisms can be ameliorated by increasing the norms awareness, suitably assessing the benchmark governance procedures, constructing the change management policies and reviewing the existing governance compliance norms. It was advocated that the complete process shall be executed in a phased manner and shall duly involve the engagement of the board management team at all levels. The establishment of an accurate oversight structure, reporting of the compliance practices and development of compliance mechanisms are integral in bringing significant improvement in governance adherence by the internal management of the organization.

Non-adherence to the corporate governance norms listed by the regulatory authorities can result in attracting enforcement actions from different agencies. The statutory requirements call for the institution of a vigorous governance charter within the banking structure.

The studies conducted by (Nassar & Jreisat, 2020; Ahmad et. al. 2021; Handriani et. al., 2021; Dalwai et. al., 2015; Salim, 2017; Greuning et. al.,2022) exclaimed that a strong compliance level calls for suitable ascertainment and assessment of the risk factors, controlling the systematic risk and adjusting the rapid changes happening in the external milieu of the business. In addition to quick scrutinization of the market risk factors, such studies advocated the proper constitution of the board management teams, development of the robust internal control organism, and establishment of responsibilities of the audit function team as the critical areas which are integral in improving the compliance practices in an organization.

Attaching the involvement of the senior-level board members is imperative in bringing improvement in corporate governance compliances in the organization. The studies analysing the level of compliance conducted by (Haris et. al., 2019; Dedman, 2002; Abbott et. al., 2007; Wanyama et. al., 2013; Germain & Lee, 2014; Salim,2017; Nassar & Jreisat, 2020; Dalwai et. al., 2015; Mohamad et. al., 2010; Benton & You, 2019 and Shingade et. al., 2022) highlighted the significance of constituting the entire scope of governance procedures properly, developing the monitoring committee to review the status of compliances at regular intervals, establishing and regulating a core compliance committee.

It shall suitably evolve the right mixture of the organization's strategy, auditing and enforcement committee plans to bring improvement and consistency in the compliance practices of governance norms in a business unit. Additionally, it was advocated that compliance risk scrutinization shall be given due accord. This assessment should establish the accountability of the internal business risks as well as the external market risks in an appropriate manner.

The entire framework of compliances shall inculcate the various gaps in compliances and the steps undertaken to remove such deficiencies. In this regard, the entire monitoring framework shall determine the suitability of the control systems to gauge the comprehensive determination of the operations about compliances. This system shall integrate the elements of risks, governance and compliance in a business organization in the most trustworthy manner.

2.3. Consecution between financial performance and corporate governance

The suitable cognizance of corporate governance practices calls for analyzing its effect on the financial performance of the corporations. There exists vast literature which examined the interrelationship between governance practices and performance. The recent studies by (Nduhura et. al., 2022; Abang'a et. al., 2021) emphasized the presence of appropriate board management skills, timely conduction of board meetings and elements of diversity across the board tend to positively influence the economic performance of any firm. Such studies underlined the significance of constructing a disclosure framework which shall be appropriately implemented to reassess the shortcomings in the governance norms in an organization.

There exist significant studies which fostered the use of financial ratios such as return on assets, return on equity and Tobin Q to gauge the financial performance of the sample firms. Such studies linked the important dimensions of the corporate governance mechanisms with financial performance to find the significant interrelationship between these two parameters. The studies governed by (Aggarwal, 2013; Sayilir, 2012; Grofčíková, 2020; Wanyama & Olweny, 2013 and Pandya, 2011) advanced the practice of a panel data approach to examine the corporate governance practices and their bearing on the financial performance of the sample data units. It was highlighted that the existence of the independence factor on the board management, balance in the direction and stewardship role, alignment of the firm's strategic requirements and high focus on key result areas suitably tends to improve the financial performance of the sample unit businesses.

An appropriate constitution of the vigil governance norms is imperative in improving the financial performance of the firms. The studies steered by (Naeem et. al., 2022; Kells, 2020; Gelter & Puaschunder, 2020; Das & Ghosh, 2004; Mayur & Saravanan, 2017; Torku & Laryea, 2021; Khatib et. al., 2022; Quang, 2022) encouraged the strengthening of the internal governance framework within an organization. Such a framework shall suitably identify and scan all the legal and illegal practices in a business unit and foster the elements of transparency and accountability at all levels.

It is highlighted that the construction of a suitable whistle- blower policy is necessary to check the inane, fatuous and shallow governance practices in an organization. The governance framework of any firm shall suitably consider the interests of institutional investors as well as minority stakeholders equally. Both types of stakeholders wield a positive influence on the overall performance of the business units. The studies organized by (Al-Homaidi et. al., 2019; Haris et. al., 2019; Hidayat et. al., 2021; Ferede, 2012; Mulyadi & Sihabudin, 2020) advocated the use of bank peculiar performance measures such as net interest margin, net profit margin, capital adequacy ratio and earnings per share to appraise the financial performance of the financial institutions and banks. Such studies underlined the importance of investor advocacy to prevent future financial frauds and create awareness among board management to execute their responsibilities in the preeminent interests of the stakeholders.

The overall governance framework of the business unit shall focus on creating sustainable investor engagement at all levels. (Wanyama et. al., 2013; Dalwai et. al., 2015 and Anginer et. al., 2018) stressed that the stakeholders shall be given due accord and shall be entitled to the tag of agents who force the execution of suitable corporate governance practices in the business units wherein they make time-to-time investments. It was highlighted that adherence to good governance practices shall lead to gaining a competitive advantage in the external business environment and enhanced investors' faith in the business of the financial sector. The details of different national and international studies are mentioned in Table 2.1. This table provides a concise description of the research carried out along with the sample size, research technique applied and use of outcome and independent variables.

The studies conducted by (Aggarwal, 2013; Sayilir, 2012; Dalwai et. al., 2015; Homaidi et. al., 2019; Haris et. al., 2019; Mulyadi & Sihabudin, 2020 and Khatib et. al., 2022) found that a positive and noteworthy interrelationship exists between the financial performance procedures whereas the studies steered by (Nduhura et. al., 2022; Mayur & Saravanan, 2017; Torku & Laryea, 2021; Sayilir, 2012; Grofčíková, 2020; Wanyama & Olweny, 2013) found that a negative interrelationship exists between the financial performance measures such as net profit periphery and sales.

Table 1. Description of the national and international studies exploring the consecution between and performance

Author(s)	Sample size	Period	Country	Technique	Dependent variables	Independent variables
Nduhura et. al., 2022	76	2021	Uganda	Panel data	ROE, ROCE	Board control, its performance, its size
Abang'a et. al., 2021	45	2015-18	Kenya	Regression analysis	Capital budget realisation ratio	Board committees, independent non-executive directors
Pandya, 2011	11	2005-06	India	Regression analysis	ROE, ROA	CEO duality, independent directors
Sayilir, 2012	31	2010-12	Turkey	Regression analysis	Tobin Q	Directors' diversity, independence
Aggarwal, 2013	20	2010-12	India	Regression analysis	ROCE, ROE, ROA	Board meetings, audit committee
Grofčíková, 2020	50	2015-18	Russia	Correlation and regression	ROE, ROA, ROS	Total equity, supervisor board members
Wanyama & Olweny, 2013	30	2017-11	Sudan	Regression analysis	ROE, ROA	Board size, composition
Naeem et. al., 2022	450	2011-20	Malaysia	Regression analysis	ROE, ROA	State & director ownership, ownership concentration
Kells, 2020	30	2011-20	Canada	Regression analysis	ROE, ROA	Board diversity, skills, ownership concentration
Gelter & Puaschunder, 2020	150	2010-15	Europe	Panel data	ROE, ROA	Board diversity, skills, independence
Das & Ghosh, 2004	30	1999-2003	India	Panel data	ROA	CEO turnover
Mayur & Saravanan, 2017	40	2011-15	India	Panel data	Net write off ratio, ROA, Tobin Q	Board meetings, composition
Torku & Laryea, 2021	20	2017-19	Ghana	Content & regression analysis	ROA, ROE	Shareholder actions
Homaidi et. al., 2019	53	2015-17	India	Regression analysis	ROA, EPS, NIM	Board diligence, size, audit committee, company age
Haris et. al., 2019	30	2007-12	Pakistan	Regression analysis	ROA, Profit margin	Board size, composition
Hidayat et. al., 2021	11	2018-20	Qatar	Regression & correlation analysis	Liquidity risk, NIM	Board activities, audit composition and risk committees

Ferede, 2012	8	2007-11	Ethiopia	Regression analysis	Profit margin, NIM	Board lending and risk management committee
Mulyadi & Sihabudin, 2020	40	2009-13	Indonesia	Panel data	Profit margin, current ratio	Board and audit functions, risk management committee
Wanyama et. al., 2013	230	2012	Kenya	Regression analysis	ROE, ROA	Board composition and size, CEO duality
Dalwai et. al., 2015	300	2011-04	UAE, Bahrain	Regression analysis	NIM, operating profit	Board and audit committees, composition and size
Anginer et. al., 2018	250	2004-08	USA	Panel data	ROA, ROI	Board activities, audit committee, executive compensation
Firmansyah et. al., 2021	11	2016-19	Indonesia	Regression analysis	ROA, ROCE	Corporate disclosures, board size
Tahir et. al., 2022	155	2013-19	England	Panel data	ROA, ROS, NPM	Disclosure policy, transparency in annual statements
Nel et. al., 2022	145	2018-21	South Africa	Regression analysis	ROCE, ROA	Board constitution, transparency & disclosures in financial statements
Velte, 2017	200	2011-15	Australia	Panel data	ROCE, ROS, ROA	Audit procedures, disclosure quality
Mohamad et. al., 2010	628	2000-05	Malaysia	Regression analysis	NPM, ROA	Audit committee, internal control
Abbott et. al., 2007	400	2001-06	Romania	Regression analysis	ROA, ROCE, Profit margin	Presence of external auditor, audit procedures
Pirson & Turnbull, 2011	310	2005-09	Bahrain	Regression analysis	NPM, ROA	Board management, risk management committee
Kakanda & Salim, 2017	250	2011-15	Nigera	Regression analysis	ROA, ROE	Board meeting, board size, composition, risk committee
Greuning et. al., 2022	300	2015-18	China	Regression analysis	ROA, ROCE, Profit margin	Risk committee, board size
Tao & Hutchinson, 2013	240	2006-08	Australia	Regression analysis	ROCE, Profit ratio	Risk committee, compensation committee
Brown et. al., 2009	426	2001-06	USA	Panel data	ROA, ROCE, Profit margin	Board activities, internal control, risk management
Aebi et. al., 2012	37	2007-09	USA	Regression analysis	ROA, NPM	Risk management committee, diversity, board size, composition
Collares, 2020	240	2015-19	Brazil	Regression analysis	Profit margin, ROCE	Stakeholder committee, board size, liquidity risk
Benton & You, 2019	145	2010-15	Belgium	Regression analysis	ROA, ROE, NPM	Shareholder committee, board activities, gender diversity
Shingade et. al., 2022	37	2017-19	India	Regression analysis	Operating profit, net profit	Shareholder committee, disclosure policy, board size

Source: Author's Compilation

2.2.1 Board’s mechanisms as a part of corporate governance structure and its impact on financial performance

An appropriate board constitution with superior execution of tasks and responsibilities is significant in forming an effective board structure within a business unit. An efficacious board formation when aligned with the overall strategic vision of the business results in an enhancement in the performance of the firm. The studies conducted by (Baysinger & Butler, 2019; Kiel & Nicholson, 2003; Carter et. al., 2003; and De Andres & Vallelado, 2008) fostered the suitable application of the supervisory responsibilities of the board management team. It was advocated that board members shall suitably balance the organization's culture, stakeholder requirements and vision of the business unit. The appropriate balance of these three elements tends to significantly improve the financial results of the business. It was stressed that board members must update and possess the new technological skills in light of the contemporary innovative business practices and transcend the same to upheaval good governance at all levels. The important dimensions which shall alwaysbe present on the board management team include diversity, independence, and positions held by non-executive directors. Such an appropriate board members' skill matrix leads an organization to divert its attention to key focus areas and meet financial targets suitably. Effective board management calls for achieving an equilibrium between the administrator role and the superintendency role among the board members. The research work published by (Madhani, 2017, Hilb, 2012 and Kang et. al., 2007) pointed out the importance of developing an empowered board management team to fulfil the business vision and balance the stakeholder interests at the same time. It was highlighted to construct a balanced scorecard which can effectively administer the board's activities and also monitors their current level of performance. The need for an hour is that the board management team shall work closely with the audit function team, remuneration committee team, risk management team and stakeholder rights team to encourage and develop the master group corporate governance norms at all levels. The corporate governance framework shall suitably consider the needs and requirements of all of such committees and recognize them with the current issues about the external business environment.

It was therefore highlighted in the studies of (Baysinger & Butler, 2019; Kiel & Nicholson, 2003; Carter et. al., 2003; Madhani, 2017; Hilb, 2012 and Kang et. al., 2007) that positive engagements by the board management committee with other allied committees increase the financial performance of the business units all the times. The establishment of a good governance framework is acknowledged as pertinent to improving the economic and commercial outcomes of the business.

Independence of the board is considered an integral part of assuring fair and transparent execution of business decisions thereby resulting in the holistic triumph of the overall board management. The studies coxswained by (Goyer, 2001; Kang et. al.,2007; Carter et. al., 2003; Kiel & Nicholson, 2003; Das & Ghosh, 2004) focused on implementing the elements of diversity and independence in the overall constitution of the board committee team. It was stressed that their presence ensures the availability of the right skills and advice on all the operational and legislative matters of the governance framework. Such studies exhibited that independence and gender diversity wield a positive and remarkable stimulus on the overall performance of the business units. It was also highlighted that their existence ensures the quality appraisal of business matters and regulates the flow of information within and outside the organization. The research work published by (De Andres & Vallelado, 2008; Sayilir, 2012; Mulyadi & Sihabudin, 2020 and Dalwai et. al., 2015) revealed that the presence of non-executive and independent directors develops due regard to the possible results of the long-term decision making, manages the affiliation among the stakeholders and exhibit the efficient conduct of the business operations at all levels. All such studies concluded that a sustainable corporate governance framework shall be developed which positively fosters sustainable stakeholder value all the time.

A part of the literature dissecting the interlinkage between the board's governance and the financial performance established the absence of significant linkage between these two dimensions. Such studies reached a common understanding that a lack of good governance norms in the form of suitable board management mechanisms can dilute the overall performance of the business units. The research work published by (Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012; Dalwai et. al., 2015;Homaidi et. al., 2019 and Haris et. al., 2019) highlighted that the inappropriate constitution of the board members results in a lessening in the financial results of the business units

It was highlighted that most of the sample firms selected by the said authors failed to appoint required board members, establish proper independence in the board's management and bring out diversity in the governance mechanisms. It was, therefore, suggested that an appropriate constitution of all the board committees is integral in exercising good governance norms and enhancing investors' faith in the business unit operations.

The literature on board activities and their impact on financial performance highlights the important role that boards play in ensuring the long-term success and viability of an organization. Board activities that have been found to positively impact financial performance include effective corporate governance, strong leadership, and active monitoring of financial performance. Studies have shown that boards that actively monitor financial performance, set clear goals and strategies, and provide oversight are more likely to achieve positive financial outcomes.

Table 2 highlights the description of the different studies concerning the board contrivances of corporate governance and their interconnection with financial performance the literature has emphasized the importance of board diversity and independence. Studies have found that boards with diverse members and independent directors tend to have better financial performance. This is because diverse boards bring a assortment of standpoints and experiences, leading to enhanced decision-making and risk management. Independent directors, not beholden to management, also tend to provide better oversight and monitoring.

On the other hand, inferences have shown that boards that are dominated by insiders or have weak governance structures tend to have worse financial performance. This is because these boards maybe less able to provide effective oversight and monitoring, leading to poor decision-making and increased risk. Overall, the literature on board activities and financial performance highlights the prominence of effective corporate governance, strong leadership, active monitoring, and board diversity and independence for achieving positive financial outcomes. The mechanisms established by the board are duly examined in the pretext of their ability to safeguard transparency and accountability in the commercial banking structures by outlining the outcomes of some prominent studies listed in the upcoming part.

Table 2. Details of consecution of the board mechanisms with the financial performance

Independent Variables/ Studies	Torku & Laryea, 2021	Baysinger & Butler, 2019	Sayilir, 2012	Dalwai et. al., 2015	Homaidi et. al., 2019	Haris et. al., 2019	De Andres & Vallelado, 2008	Mulyadi & Sihabudin, 2020	Dalwai et. al., 2015	Das & Ghosh, 2004	Kiel & Nicholson, 2003	Goyer, 2001	Kang et. al., 2007	Madhani, 2017	Carter et. al., 2003	Hilb, 2012
Independence	ROA (¥*)ROE (¥)	ROA (¥*)NIM (¥*)	ROA (¥*) NIM (¥)		ROA (¥*) NPM(¥*) NIM(¥) ROCE(¥)		NPM(¥*) NIM(¥*) ROA (¥)	ROA (¥*) ROCE(¥)	ROA (¥*) ROE (¥)	NIM (¥) ROA (¥)		ROA (¥*) NPM (¥*)	NPM (¥*) ROE (¥*)		ROA (¥*) ROE (¥*)	
Diversity	ROA (¥*)ROE (¥)			NPM (¥*) NIM (¥*)		ROA (¥*) NPM (¥*)	NPM(¥*) NIM(¥) ROA (¥*)		ROA (¥*) ROE (¥)		ROA (¥*) NIM (¥) NPM (¥*)	ROA (¥*) NPM (¥*)	NPM (¥*) ROE (¥*)	ROA (¥*) ROCE (¥*)		ROE (¥*) NIM (¥*)
Duality		ROA (¥*)NIM (¥*)		NPM (¥*) NIM (¥*)		ROA (¥*) NPM (¥*)			ROA (¥*) ROE (¥)		ROA (¥*) NIM (¥*) NPM (¥*)			ROA (¥*) ROCE (¥)		ROE (¥*) NIM (¥*)
Appropriate Constitution		ROA (¥*) NIM (¥*)			ROA (¥*) NPM(¥*) NIM(¥*) ROCE(¥)		NPM(¥*) NIM(¥) ROA (¥*)	ROA (¥*) ROCE(¥)		NIM (¥*) ROA (¥)			NPM (¥*) ROE (¥*)		ROA (¥*) ROE (¥*)	
Woman director/ Non-executive director		ROA (¥*) NIM (¥*)	ROA (¥*) NIM (¥*)	NPM (¥*) NIM (¥*)			NPM(¥*) NIM(¥*) ROA (¥)	ROA (¥*) ROCE(¥)			ROA (¥*) NIM (¥) NPM (¥*)			ROA (¥*) ROCE (¥*)	ROA (¥) ROE (¥*)	

Note: ¥* signifies that the dependent variable is having a significant association and ¥ signifies the use of the dependent variable**.**

2.2.2 Audit function mechanisms as a part of corporate governance structure and their impact on financial performance

The entire righteousness and ethics of the available financial statements form the credence of the stakeholders of the business units. The external stakeholders evaluate and scrutinize such financial statements at the time of deciding their coalition with a particular organization. The published work by (Velte, 2017; Mohamad et. al., 2010 and Abbott et. al., 2007) highlights that the suitability of the audit team in a business unit is based upon integral factors such as its appropriate constitution and congruous dynamics. Such a committee which is having a profound understanding of the active business issues shall form a major pillar in exercising the governance norms in an organization. The above studies underlining the connection between the incidence of audit teams and financial performance exhibited a positive interrelationship between these two dimensions. It was stressed that the existence of an upright internal control system, the availability of proper audit assurance and the incidence of the audit commission director serve as an indispensable component in driving the pragmatic financial performance in any business unit.

These studies underlined that the appropriate constitution of the audit members shall result in an accurate valuation of the business resources, suitable assessment of the business transactions, satisfactory control over the whistle-blowing mechanisms and correct recognition of the financial irregularities in a business unit.

A proper audit member committee ensures the exact articulation of the board committee conjectures. The studies conducted by (Jurakulovna & Bahodirovich, 2021; Sarens et. al., 2012 and Abdullah et. al., 2018) emphasized that for an audit commission to exhibit a positive impact on financial performance, such a committee must work closely with the risk management committee team, board management team and stakeholder committee team.

Such close and immediate association with other prominent teams will result in early detection and control of fraudulent activities and shall protect the stakeholder interests at all levels. Such studies called out for the development of a risk assessment-based outlook which shall suitably overlook all the pertinent matters related to financial transactions of the business occurring within the business as well as developing with the subsidiary business units.

The role and responsibility of the chief financial manager were given due accord in such studiesand it was underlined that their role is predominant in the development of sound auditing structures within the organization. The skills and experience of the financial risk manager are substantial in carrying out sound governance auditing processes within any business unit.

Table 3 highlights the description of the different studies concerning the audit function contrivances of corporate governance and their interconnection with financial performance. The studies guided by (Sayilir, 2012; Dalwai et. al., 2015; Hilb, 2012 and Kang et. al., 2007) concluded that bringing significant positive modifications in the audit control and procedures shall tend to increase the audit quality in a business unit. An improved audit quality shall ensure that the compliances listed by the regulatory authorities are fully complied with and there is a proactive engagement of the audit agency in the overall governance system of the organization. This indirectly wields a positive stimulus on the outcomes of the business.

It was highlighted by the published work of (Mayur & Saravanan, 2017; Aggarwal, 2013; Velte, 2017; Haris et. al., 2019; Mulyadi & Sihabudin, 2020 and Khatib et. al., 2022) that the audit management team shall suitably work on preparing the robust plans and procedures related with the business audit. Such a committee shall also give due accord to problems faced by the team members in conducting the entire audit process. This will help to appropriately address the shortcomings in the internal processes at an early stage of the audit process and such deficiencies can be removed practically at an early stage. An important element of objectivity shall be duly observed to enhance the ultimate accountability at the end of the audit processes in the business unit. Moreover, the audit function mechanisms assist in identifying areas for improvement and providing valuable insights to management. Audit reports and recommendations shed light on operational inefficiencies, ineffective cost management practices, or areas where the company can enhance its financial performance. This information enables management to make informed decisions, implement corrective measures, and optimize financial outcomes. However, it is important to note that the effectiveness of the audit function mechanisms depends on factors such as the independence and expertise of auditors, the allocation of sufficient resources to the audit function, and the banking structure's commitment to implementing audit recommendations.

Table 3. Details of consecution of the audit function mechanisms with the financial performance

Independent Variables/ Studies	Velte, 2017	Mohamad et. al., 2010	Abbott et. al., 2007	Jurakulovna & Bahodirovich, 2021	Sarens et. al., 2012	Abdullah et. al., 2018	Sayilir, 2012,	Dalwai et. al., 2015	Hilb, 2012	Kang et. al., 2007	Fung, 2014	Aggarwal, 2013	Tahir et. al., 2022	Haris et. al., 2019	Khatib et. al., 2022
Committee constitution	ROA (¥*) ROE (¥)		ROA (¥*) ROS (¥*)	ROA (¥*) NPM (¥*)	NPM(¥*) NIM(¥)		ROS(¥*) ROA(¥*)	ROA (¥*) ROCE(¥)	ROA (¥*) ROE (¥)	ROA (¥) ROCE (¥)		ROA (¥*)ROE (¥*)	ROCE (¥*) ROA (¥*)		ROA (¥*) ROE (¥*)
Independence		ROS (¥*) NPM (¥*)		ROA (¥*) NPM (¥*)		ROCE (¥*)NPM (¥*)			ROA (¥*) ROE (¥)		NIM (¥) NPM (¥*)			ROS (¥*) ROA (¥*)	
Internal audit mechanism	ROA (¥*) ROE (¥*)		ROA (¥*) ROS (¥*)		NPM(¥*) NIM(¥*)	ROCE (¥*)NPM (¥*)	ROS (¥*) ROA (¥*)		ROA (¥*) ROE (¥)		NIM (¥*) NPM (¥*)	ROA (¥*)ROE (¥*)		ROS (¥*) ROA (¥*)	ROA (¥*) ROE (¥*)
Presence of statutory auditor		ROS (¥*) NPM (¥)			NPM(¥*) NIM(¥*)		ROS (¥*) ROA(¥*)	ROA (¥*) ROCE(¥)			NIM (¥*) NPM (¥*)	ROA (¥*)ROE (¥*)	ROCE (¥*) ROA (¥*)	ROS (¥*) ROA (¥*)	
Defined internal control procedures	ROA (¥*) ROE (¥*)			ROA (¥*) NPM (¥*)			ROS(¥*) ROA(¥*)	ROA (¥*) ROCE(¥)		ROA (¥) ROCE (¥)			ROCE (¥*) ROA (¥)		ROA (¥)ROE (¥*)

Note: *¥* signifies that the dependent variable is having a significant association and ¥ signifies the use of the dependent variable*

2.2.3 Transparency and disclosure as a part of corporate governance structure and their impact on financial performance

A constitution of the vigil structure within a business unit serves as one of the domineering pillars of corporate governance norms. Such structure shall suitably consider the significant elements of virtuousness, equitable, conscientious, and ethical manner in the way in which information is to be disclosed to the external parties of a business unit. All the business activities shall give due consideration to the manner and how sensitive information shall be disclosed to the external environment of the business unit. The studies steered by (Firmansyah et. al., 2021; Tahir et. al., 2022 and Nel et. al., 2022) highlighted the need of making suitable disclosures of all liquidity, solvency and financial risks faced by a business. It was pointed out in such studies that businesses operate in an uncertain environment and must strive to make a holistic and comprehensive level of disclosures to protect the shareholder and investors' interests. Moreover, it was outlined that disclosure practices of a particular business must be significant, relevant, material, consequential and future-looking in approach. Such disclosures shall be highlighted in a condensed, concise and appealing way, as a matter of best governance practices.

Each stakeholder placing their interest in the business shall be appropriately informed on a timely basis. The work published by (La Rosa et. al., 2019; Millar et. al., 2005; Fung, 2014) reviewed the dimensions of transparency and disclosure as an essential elements for generating the required funds and sheltering suitable investor confidence in the market. It was analysed that the entire conjecture of the stakeholder works on the accessibility of the succinct information promptly. Therefore, it was stressed that every business shall suitably bring significant modifications in the stakeholder grasping of the business activities of the firm, its vision, its operational areas and its different governance norms. This is required to establish a relationship of mutual trust and cooperation with the stakeholders at all levels.

The past literature fostering the significance of the disclosure and transparency elements places high trust in the suitable availability of the material information required for making economic decisions making by the stakeholders. The studies

published by (Millar et. al., 2005; Dalwai et. al., 2015; Fung, 2014; Tahir et. al., 2022; Haris et. al., 2019; Mulyadi & Sihabudin, 2020 and Khatib et. al., 2022) advocated the construction of a robust disclosure mechanism which integrates transparency as a fundamental feature for protecting the investor's trust and decision making. The disclosure committee and board members of the organization must ensure that all the manners and means of stakeholder intimation shall be suitably disclosed in all the important documents of the business. This ensures an important communication link of transparency and disclosures between the stakeholders and the organization serving them. These studies prescribed the availability of material information such as operating results, non-financial information such as business policies, the revelation of the share ownership, information, divulgence of board management executives' remuneration, and their selection process along with details of related party transactions as relevant factors to influence a consequential and affirmative impact on the inclusive recital of the business units.

Table 4 highlights the studies analyzing the impact of innumerable parameters of the transparency and disclosure dimension on financial performance. This table underlines the interconnection between the dependent variables and the independent variables of disclosure and transparency and accentuates the significance between them as determined by the past literature. It emphasizes how different parameters of accounting policy, code of conduct, transparency procedures and ways of stakeholder intimation are applied to find their impact on the different financial indicators of the business units. Transparency and disclosure can help to improve a company's financial performance. Studies have found that companies that are more apparent and disclose more evidences tend to have better stock performance, as investors are ableto make more informed decisions about investing in the company. It is, therefore, interpreted this dimension can help to build trust between the company and its stakeholders, it can be seen as a mechanism for accountability and social responsibility. Overall, the literature suggests that transparency and disclosure are important components of corporate governance and play a precarious role in promoting virtuous governance attempts, preventing fraud and unethical behaviour, and improving a company's financial performance.

2.2.4 Risk management as a part of corporate governance structure and its impact on financial performance

The risk management committee forms one of the major mainstays of the entire corporate governance framework in any business unit. Appropriate risk assessment and its effective management is crucial for any organization to sustain itself in harsh times and avoid failure in the uncertain business world. The studies conducted by (Pirson & Turnbull, 2011; Kakanda & Salim, 2017 and Greuning et. al., 2022) underlined the fact that a suitable risk implementation calls for ethical practices on thepart of the risk managers to align the firm's strategy with the suitable risk-taking propensity of the business. It was stressed that the risk assessment and internal controlorganism of the business unit shall work separately from the other responsibility centres and the risk assessment officers shall establish direct communication with the board management team on matters about risk scrutinization and its suitable reduction. Apart from the risk management commission, the board of directors shall suitably undertake to provide disclosure on the potential systematic risk factors in a succinct, relevant and comprehensive manner. Such studies highlighted a weakly governed firm is recognised as any business unit wherein the appropriate constitution of the risk management committees does not exist. Such firms shall have a weak internal control system and will fail to generate a positive influence on their financial performance at all levels.
Every business unit must endeavour to establish a prominent and effective benchmark to assess the organisation's advancement towards the different measures of risk and its governance. The research work published by (Tao & Hutchinson, 2013; Brown et. al., 2009 and Aebi et. al., 2012) underlined that a business unit which establishes firm criteria for risk management, appropriately defines the governing role of risk management committees, scrutinizes the risk assessment procedures and draws independent judgement on their risk policies shall positively influence the ultimate financial results of the business. It was stressed that every organization shall suitably define the skills of their risk managers, create the appropriate criteria for their evaluations, determine the role of independent risk managers, and integrate the work of audit and board management committees at all levels. The governance framework

about the risk management must disclose the deviations in the risk management practices occurring in the past in a particular organization.

The past literature examining risk management practices and their impact on financial performance advocated the independence of the risk chief officer committee, the presence of the non-executive risk assessment managers and holding the requisite number of meetings about risk assessment as the predominant factors to positively impact the financial as well as the operating performance of any business. The studies conducted in this regard by (Brown et. al., 2009; Greuning et. al., 2022; Mulyadi & Sihabudin, 2020 and Sobel & Reding, 2004) accentuated that appropriate criteria must be determined in advance regarding the constitution and independence of the risk management committees. In this regard, it was established in their published work that the board management committee shall be held duly accountable in case any irregularities in risk assessment are found in any business unit. The board management committee shall assume the prime responsibility of committing the correct, precise, error-free and explicit information related to their balancing of business strategies and the risk contour of the organization.

The implications of risk assessment and its management in the overall governance framework are highlighted by the studies of (Greuning et. al., 2022; Mulyadi & Sihabudin, 2020; Abang'a et. al., 2021; Orazalin, 2019; De Haan & Vlahu, 2016; Dalwai et. al., 2015; Homaidi et. al., 2019 and Haris et. al., 2019) suggests that audit function committee shall suitably carry out the independent scrutinization of theoverall risks arising in the business unit. Such assessment of risks shall then be duly approved by the governance mechanism set by the board management committees. The chief risk manager shall then duly accord to the risk policies and procedures set by the organization. The audit function team shall then work independently to assess, determine and scrutinise the efficiency of the internal control procedures within an organization. The board management committee shall finally construct and endorse the development of the risk administration charter to effectively scrutinise and monitor the risk metrics established in the organisation. Such procedures as suggestedby the literature shall suitably surge the possible breaches in the risk benchmarks.

Table 5 highlights the studies analysing the impact of various parameters of the risk management procedures dimension on financial performance. This table underlines

the interconnection between the dependent variables and the independent variables of risk management and accentuates the significance between them as determined by the past literature. It emphasizes how different parameters of the constitution of the risk management commission, presence of a risk management officer, code of conduct, defined risk mechanisms, the nomination of the non-executive officer as the chairman and define internal risk control procedures are applied to find their impacton the different financial indicators of the industry units.

Literature on risk management in the milieu of corporate governance highlights the prominence of identifying, assessing, and mitigating risks to the organization. One key aspect of risk management is the identification of potential risks, which can come from a variety of sources such as market fluctuations, regulatory changes, and technological advances. Once risks have been identified, they must be assessed in terms of likelihood and potential impact. This assessment process helps organizations prioritize which risks to address first and how to allocate resources to mitigate them. Mitigating risks often involves implementing controls and procedures to reduce the likelihood of negative events or minimize the impact if they do occur. This can include things like insurance, diversifying investments, or implementing operational efficiencies. This includes setting up clear lines of responsibility for risk management, providing oversight and monitoring, and ensuring that risk management is integrated into the overall decision-making process of the organization. Overall, the literature on risk management and corporate governance emphasizes the prominence of having a robustrisk controlling framework in place, and the close affiliation between the two in ensuring the long-term success and viability of an organization. Another aspect of risk management that has been studied is the relationship between risk management and pecuniary stability. Organizations with effective risk management practices are better able to withstand financial shocks and maintain stability in times of crisis. The risk management mechanisms integrated into the corporate governance structure exert a significant influence on a company's financial performance. By recognizing, assessing, and mitigating risks, organizations can minimize financial losses, optimize resource allocation, improve governance practices, and seize opportunities for value creation. Effective risk management contributes to long-term financial stability, sustainability, and overall business prosperity.

Table 4. Details of consecution of the transparency and disclosure mechanisms with the financial performance

Independent Variables/ Studies	Pirson & Turnbull, 2011	Kakanda & Salim, 2017	Greuning et. al., 2022	Tao & Hutchinson, 2013	Brown et. al., (2009)	Aebi et. al., 2012	Mulyadi & Sihabudin, 2020	Sobel & Reding, 2004	Orazalin, 2019	Haris et. al., 2019	Fung, 2014	Khatib et. al., 2022
Committee constitution	ROA (¥*)ROE (¥)		ROA (¥*)ROE (¥*)	NPM (¥*) NIM (¥*)		NIM (¥*) NPM (¥*)	ROE (¥*) ROA(¥*)	ROA (¥*)NIM (¥)	ROA (¥*)ROE (¥)	ROA (¥) NPM (¥)		ROA (¥*)ROE (¥*)
Presence of chief risk officer			ROA (¥*)ROE (¥*)		ROA (¥) ROCE (¥*)		ROE (¥) ROA(¥*)				ROA(¥) ROE (¥)	
Defined risk management mechanism	ROA (¥*)ROE (¥*)	ROA (¥*) ROCE (¥)		NPM (¥*) NIM (¥)		NIM (¥*) NPM (¥*)		ROA (¥*)NIM (¥)		ROA (¥) NPM (¥)		ROA (¥*)ROE (¥*)
Presence of non-executive officer	ROA (¥*)ROE (¥*)		ROA (¥*)ROE (¥*)		ROA (¥*) ROCE (¥*)	NIM (¥*) NPM (¥*)			ROA (¥*)ROE (¥)	ROA (¥) NPM (¥)	ROA(¥) ROE (¥)	
Defined internal control procedures		ROA (¥*) ROCE (¥*)		NPM (¥*) NIM (¥*)	ROA (¥*) ROCE (¥)		ROE (¥*) ROA(¥*)		ROA (¥*)ROE (¥)		ROA(¥) ROE (¥)	ROA (¥) ROE (¥*)

Note: ¥ signifies that the dependent variable is having a significant association and ¥ signifies the use of the dependent variable*

Table 5. Details of consecution of the risk management mechanisms with the financial performance

Independent Variables/ Studies	Abdullah et. al., 2018	Millar et. al., 2005	La Rosa et. al., 2019	Firmansyah et. al., 2021	Nel et. al., 2022	Fung, 2014	Tahir et. al., 2022	Dalwai et. al., 2015	Haris et. al., 2019	Khatib et. al., 2022
Accounting policy disclosures		ROS(¥*) ROA(¥*)	ROA (¥*) ROE(¥)	ROA (¥*) ROE (¥)	ROA (¥) ROCE (¥)		ROA (¥*) ROE (¥*)	ROCE (¥) ROA (¥*)		ROA (¥) ROE (¥*)
Committee Constitution	ROCE (¥*) NPM (¥*)					NIM (¥) NPM (¥*)		ROCE (¥*) ROA (¥*)	ROS (¥*) ROA (¥*)	
Code of conduct compliance		ROS (¥*) ROA (¥*)	ROA (¥) ROE(¥)	ROA (¥*) ROE (¥)	ROA (¥) ROCE (¥)	NIM (¥*) NPM (¥*)	ROA (¥*) ROE (¥*)		ROS (¥*) ROA (¥*)	ROA (¥*) ROE (¥)
Stakeholder intimation	ROCE (¥*) NPM (¥*)	ROS (¥*) ROA(¥*)	ROA (¥*) ROE(¥)			NIM (¥*) NPM (¥*)	ROA (¥*) ROE (¥*)	ROCE (¥*) ROA (¥*)	ROS (¥*) ROA (¥*)	
Defined transparency procedures		ROS(¥*) ROA(¥*)		ROA (¥*) ROE (¥)	ROA (¥) ROCE (¥)			ROCE (¥*) ROA (¥)		ROA (¥) ROE (¥*)

Note: ¥ signifies that the dependent variable is having a significant association and ¥ signifies the use of the dependent variable*

2.2.5 Stakeholder rights and information as a part of corporate governance structure and its impact on financial performance

Stakeholder rights and information serve as important pillars in exercising good governance norms in a business unit. The entire corporate governance mechanism shall give due accord to the protection and fair treatment of all types of stakeholders including foreign as well as minority investors. The studies conducted by (Collares, 2020; Benton & You, 2019 and Shingade et. al., 2022) advocated that the corporate governance mechanism of the business unit shall focus its entire governance activities on vitalizing the execution enhancing framework for ensuring maximum investor participation in the business activities. Such studies underlined the significance of safeguarding and preserving stakeholder rights as a prominent factor in creating sustainable governance practices in a business unit. In this regard, it is suggested in the above studies that the board management committee shall work diligently to suitably constitute the investor's grievance committee. They shall construct a proper mechanismfor appointing the non-executive director as the head or the chairman of such a committee. The board management shall foster the appropriate appointment of the compliance officer which shall ensure that all investor grievances are suitably handled at all times. Thus, it is highlighted that the appropriate functioning of the stakeholder information and rights committee shall positively impact the performance of the business unit.

Making suitable disclosures about the interests of the stakeholders is given due accord in the studies conducted by (Islam, 2020; Collares, 2020; Shingade & Rastogi, 2019; Goranova & Ryan, 2014 and Souha & Anis, 2016). Such studies highlighted that business units shall appropriately uncover the relevant dealings about the related party transactions, divulge the complete details related to dematerialised shares in its financial reports, and suitably communicate the entire pattern of the shareholding forthe shares held by the director management in the business, highlight the information related to the enumerating of shares on the different stock exchanges and impart the information related to the dividend paid or to be paid shortly. Such components are integral to exercising good governance norms about stakeholders and their respective rights.

A suitable constitution of the shareholder rights and information committee is essential in implanting the system of good governance in the organization. The work published by (Collares, 2020; Amjad et. al., 2021; Benton & You, 2019; Shingade et. al., 2022;

Islam, 2020; Shingade & Rastogi, 2019; Goranova & Ryan, 2014; Souha & Anis, 2016) attached significant importance to the entire mechanism of the stakeholder governing bodies, the manner of passing the majority resolutions, the policies related to dividend distribution and investor activism. It was suggested in the past literature that every business unit prevailing in an uncertain environment shall suitably resolve the investor issues and provide them with sufficient relevant information so that such stakeholders become an effectual representative to navigate good governance mechanisms inside the business unit. These studies collectively underlined that the governance mechanism shall focus on conferring the fortification of interests of all the stakeholders such as employees , board team, risk administration team, remuneration committees, audit function team, debenture holders, investors, depositors, banks, financial institutions and shareholders shall be given rightful consideration while carrying out any significant transactions with the business.

2.2.6 Remuneration committee as a part of corporate governance structure and its impact on financial performance

The appropriate constitution of the remuneration committee facilitates the board management team to execute their responsibilities in with uprightness, integrity and with full commitment to the organization's goals. The studies conducted by (Razak, 2014; Tura, 2012; Arayakarnkul et. al., 2022) raised the governance issue of the right mechanisms of the remuneration committee in the business unit. It was highlighted that it is the entire conscientiousness of the board management team to construct the overall system of executive remuneration in the organization in coordination with the executive officers of the remuneration committee. Such studies stressed the significance of the appointment of independent directors, disclosures about executive remuneration and position held by non-executive directors as the essential components to drive theprecise system of corporate governance within a business unit.

The scope of the remuneration committee shall be suitably determined in the overall governance framework of the organization. The published literature by (Abdullah,2006; Filatotchev & Allcock, 2010; Liu & Taylor, 2008 and Rehman et. al., 2021) accentuated that such a committee shall suitably recognise the persons who can hold the position of a company director and shall possess the power to endorse the board management team to appoint and remove the existing directors. This committee shall conduct the due assessment of every member of the board management of the business.

Additionally, it was recommended in these studies that the remuneration committee shall appropriately establish the issues of qualifications as well as the objectivity of the directors assigned on the board management of the business unit. It was identified that such a committee shall take due shareholder approval for deciding the executive as well as the non-executive remuneration.

Prevalence of the right dimensions in the remuneration committee shall exert a positive stimulus on the overall performance of the business as analysed by studies made by (Nduhura et. al., 2022; Abang'a et. al., 2021; Liu & Taylor, 2008 and Rehman et. al., 2021). It was also highlighted that the remuneration committee shall establish the overall remuneration framework in such a manner that it meets the required performance management standards and motivates the existing executives to execute their responsibilities in the best interests of the business unit. Their task revolvesaround ensuring that the business's succession and appraisal are reviewed on yearly basis and suitable recommendations are made to the board members for their sanctions and approvals. These studies underlined that the remuneration committee in any organization must ensure the development of suitable key performance indicators to evaluate and appraise the performance evaluation of all the key personnel involved in the organization. This committee shall duly consider evaluating the performance of the key personnel heading the committees of the disclosure committee team, directors' team, risk management team, stakeholder committee team and audit committee teams based on appropriate criteria listed in the performance appraisal manuals of a business unit.

2.4. Governance mechanism under the Companies Act, 2013

The entire mechanism commanding the imposition, administration, pursuance, revelation and divulgence of the corporate governance norms was brought significantly to notice by the substantial revisions made by the Companies Act, 2013. The studies conducted by (Khuntia, 2014; Busru & Singh, 2016; Das & Dey, 2016) highlighted thattheir provisions are reconstructed and regulated as a chief overhaul in enforcing the corporate governance policies among the corporate houses operating their business practices in India. It was advocated that corporate governance forethoughts of the Companies Act, 2013 are assembled and intensified on the pillars of risk management, board member scrutinization, efficient internal controls, uncompromising legal compliance,

a surveillance mechanism and an austere regime for company management. Such legislation has mandated that the persons heading the committees are required to attain and possess the suitable prowess, competency, knowledge and competency to exercise the required conduct and control over the business operations. The personal interests and the professional interests must be properly aligned and must not clash with each other. The decisions and judgements shall have the appropriate components of the suitable knowledge, virtuosity, intelligence and professionalism to strategically proceed with the daily business operations governing any organization.

Making informed and deliberate decision-making, a rightful delegation of responsibility, managerial oversight, precise completion of tasks owed to the company and meeting the expectations of the shareholders are crucial elements of the mandate listed by the Companies Act, 2013. The studies by (Thapar & Sharma, 2017; Srivastava et. al., 2018) fostered the fact that an integral part of this legislation highlights the significance of recognising the risk factors, ensuring regular compliance with the governance jurisprudence, determining the committee's scrutinization, and adhering to the associated paperwork concerning the related party transactions. Such studies accentuated that the current legislation mandated the existence of a woman director, regular rotation of the audit committee members, and holding the company meetings through the different audio-visual methods. The entire blueprint of this legislation is focused on building sustainable governance practices and policies within abusiness unit.

The entire focus of the legislation about governance practices of the Companies Act 2013 highlighted the need of establishing an efficient performing board management within a business unit. All the other commissions such as the audit function committee, remuneration committee, risk management and stakeholder information committee shall work as per the due directions of the board. The exploration made by (Sharma & Rathi, 2014; Jhunjhunwala, 2014; Pande & Ansari, 2014; Afsharipour, 2016) in their studies fostered the significance of marshalling the business's vision and strategy with the legislative compliance requirements. It is duly expected from the board management team to recognise and facilitate the alignment of the stakeholder needs with the superior management of the organisation's risks. Such studies advocated the need of establishing an equilibrium in regulatory compliance and fulfilling the stakeholder interests at all levels. It was highlighted that this legislation has given due accord to the constitution of the performance appraisal organism of the board management and therefore, its efficiency must be regularly measured against the key performance areas of the business unit.

Laying a strong foundation of the appropriate skill set of the board management team shall ensure the right appointments at the board committees and strict acquiescence with the provisions mentioned in the Companies Act 2013. It is highlighted in the legislation that the subsistence of an upright internal control organism, due assessment of the inter-business investments, availability of proper audit assurance, presence of the audit committee director and vigilant strictures serve as an essential component in the main legislative part of the Companies Act 2013.

The entire legislation of the Act regulating the governance measures of an organization expressly called for constructing a mechanism of accommodating the heterodox perspectives of the stakeholders and provision of accommodating such views for improving the governance within a business unit. The collective findings of studies by (Khuntia, 2014; Sharma & Rathi, 2014; Pande & Ansari, 2014; Afsharipour, 2016; Thapar & Sharma, 2017) highlighted the need of preparing a host of different procedures which board management shall suitably fulfil in the interest of the organization. This shall include the short-term goals which shall be obliged to completethe tasks of key focus areas along with the construction of a scorecard to assess the overall performance of the board activities. It was duly analyzed in such studies that thewhole mechanism of the governance structures has escalated in the recent past due to the enlargement of the investor assessments over multiple frauds occurring in the recentpast across different organizations resulting in immense loss to investors. Therefore, the elements of responsiveness, openness, transparency, mutual understanding and protection of the interests form an integral part of the governance in any business. Such studies accentuated that the directors serving as the board members are required toattain and possess the appropriate prowess, competency, knowledge and competency to exercise the required conduct and control over the business operations. The personal interests and the professional interests must be properly aligned and must not clash with each other.

The decisions and judgements of the board management team must inculcate the appropriate components of the suitable knowledge, virtuosity, intelligence and professionalism to strategically proceed with the daily business operations governing any organization. The work published by (Haris et. al., 2019; Pande & Ansari, 2014; Jhunjhunwala, 2014; Rehman et. al., 2021) highlighted that informed and deliberate

decision-making, a delegation of command, managerial surveillance, and precise completion of tasks owed to the syndicate and stakeholders are likewise decisive on the part of the board of directors committee. It was stressed that members shall duly take into account the subsequent outcome of each decision taken by them under theirpurview. They shall give proper consideration to the interests of each stakeholder of the business present in the environment of the business. The committee is having the prime responsibility of maintaining pre-eminence in the conduct of each business operation within the organization. It was found in these studies that appropriate application of the audit governance norms leads to generating superior investment returns in any business and also motivates the audit function team members to execute their tasks most suitably.

The whole mechanism of the corporate governance can be explicated as the application of the sound supervision measures, uncompromising adherence to the provisions made by the Companies Act 2013, and solicitation of the righteous policies for the appropriate running of the business activities, in addition to the creation of the elongated stakeholder value. The appropriate application of the governance norms leads to generating superior investment returns in any business and motivates the board members to execute their tasks most suitably. The studies focusing on the intricacies of the Companies Act, 2013 by (Pande & Ansari, 2014; Afsharipour, 2016; Thapar & Sharma, 2017) highlighted that the right charter of the remuneration committee is essential to commit to and apply the equitable dispersal of remuneration and incentives to all the executive and non-executives holding the different positions in the business unit. It was indicated in these studies that the Companies Act, 2013 has mandated that such committee shall suitably work on ensuring that the business's succession and an employee appraisal on yearly basis and they shall seek suitable recommendations are made to the board members for their sanctions and approvals. This committee is pertinent in ensuring that suitable key performance indicators are developed to evaluate and appraise the evaluation criteria of all the key personnel involved in the business unit.

2.5. Construction of corporate governance index

The construction of the corporate governance index is made to measure and determine the compliance activities in a business unit. In certain cases, it is used widely to estimate

The eminence of governance practices across different units and time frames. The studies were conducted by (da Silva et. al., 2005; Chen et. al., 2007 and Sarkar et. al., 2012) shortlisted the different dimensions of corporate governance and tried to explore the level of observance to such listed dimensions. Further segregation was made to find the extent of compliance based on the activities listed in the index. This was done in these studies to discover those dimensions wherein the compliance was found to be weak or strong. Such a mechanism was further applied to appraise the impact on the financial performance of the sample business units. These studies initially shortlisted the few dimensions of corporate governance, assigned them with equal weights and then evaluated the compliance level against the constructed index. These studies advocated the preparation of the index based on rules and procedures listed by the supervisory authorities.

The edifice of the corporate governance index calls for listing the stakeholder rights, involvement of the audit function team, defining the charter about the board responsibilities, establishing the related party transactions and facilitating the necessary disclosures. The work published by (Javaid & Saboor, 2015; Tarchouna et. al., 2017; Arora & Bodhanwala, 2018; Adinegara & Sukamulya, 2021) highlighted the inclusion of relevant governance dimensions while constructing the corporate governance index. The scope of activities regarding stakeholder information and rights shall suitably include initiatives taken by a business unit to hold shareholder awareness meetings, procedures for exercising investor rights, defining the stake of minority investors in shareholder meetings and provisions made about the appointment of proxies. Such studies allotted significant points to all the stakeholder issues arising in an organization. The inclusion of the issues related to both the major and minor shareholders was given due accord in their published work.

A robust corporate governance index shall include a significant portion highlighting the disclosure practices of a business unit. The studies coxswained by (Mohamad et. al., 2010; Benton & You, 2019; Tarchouna et. al., 2017; Chen et. al., 2007; Sarkar et. al., 2012 and Arora & Bodhanwala, 2018) underlined the importance of including the right method of disclosing the material information, determination of the material events, disclosure of timely information and role of board management and audit teams to exhibit unqualified reports in front of the stakeholders. Such studies accentuated that an appropriate index construction shall suitably encompass the information related to the company’s vision, its strategic policies, the key performance areas, and the relevant business activities as important components to be inculcated in the index construction

activity. It was underlined in these studies that the index construction shall suitable include and exhibit properly the elements of compliance to regulatory procedures, presence of accountability and openness, risk management procedures and audit assurance to assimilate the strong corporate governance practices in this sector.

The findings by (Tarchouna et. al., 2017; Achim et. al., 2022; Tahir et. al., 2022) fostered the inclusion of comprehensive document policies of the related party transactions and mitigation efforts made by a business unit to manage their systematic and internal risks in an informed manner. The procedures of the audit function team are given due accord by specifically including the activities of its tenure, filing of the compliance documents and establishment of the audit responsibilities. It was also highlighted in these studies that regulatory authorities shall exercise stern enforcement measures and shall be held accountable for the weak compliance to the governance norms by any organisation. It was highlighted that adherence to good governance practices shall lead to gaining a competitive advantage in the external business environment and enhanced investors' faith in the business therefore, the index shall suitably include all the parameters set by the regulatory authorities in their legislation.

The current study intended to develop a composite index for the corporate governance practices to be duly adhered to by the Indian banking sector. Therefore, in this regard, the studies pertaining the comprehending the technique of constructing the composite index were investigated. The studies of (Hagerty & Land, 2012; Greco et. al., 2019; Manoj et. al., 2013; Reckien, 2018; Chen, 2021) analysed that it is essential to give due accord to reviewing the various methods of constructing the index and integrating the inputs related with metrics formulation. Such studies underlined that the ultimate objective of composite index construction must be achieved by applying the right techniques of aggregation, weighting and scrutinising the robustness of the index sub-metrics. It was suggested in such studies that the final composite index must have the ability to provide suitable implications to the policymakers and the regulatory authorities with the help of an accurate interpretation of the consequential results. The application of the composite index shall be flexible enough to suitably take into consideration the changes occurring in the business environment and it shall foster the important elements of transparency, conciseness, lucidity and absoluteness in its final approach. The index construction shall be based upon the sound principles of presenting the information in a succinct, diligent,

equitable, conscientious, and ethical manner so that it fulfils the purpose of its construction and also guides a business unit to comply with the index norms properly.

2.6. Research Gap

The extensive review of the literature divulged the manner, type and drivers of corporate governance practices followed in various business units across different periods. It underlined the magnitude of the adherence to the enumerated corporate governance norms of the legislative authorities and also accentuated the dimensions wherein the governance compliance was weak or strong. Additionally, it focused on interlinking the various parameters of the governance norms with the financial performance of the sample firms to validate conclusive evidence of interconnection between them. Certain studies fostered themselves in constructing a robust model of corporate governance index which can be used as a point of reference for measuring the corporate governance practices of a particular business unit. It can be highlighted that after completing the process of reviewing the past literature on the area of interest, certain gaps in the research were identified. Such research gaps are pointed out in this section, and can be discussed as follows:

2.6.1. The perspectives, techniques and propositions applied in the construction of the corporate governance index

The studies attempting the construction of an ideal corporate governance index to be followed by business units, focused on taking into consideration the governance procedures listed by the different regulatory authorities. After inculcating the necessary legislative governance provisions, they fostered scrutiny of the extent of compliance with corporate governance concerning the benchmark developed in the form of an index. The studies by (Mohamad et. al., 2010; Hagerty & Land, 2012; Manoj et. al., 2013; Tarchouna et. al., 2017; Reckien, 2018; Greco et. al., 2019; Chen, 2021) limited themselves on measuring the corporate governance practices vis-à-vis the few legislative policies of the corporate governance presented in the form of an indicator. Moreover, the past literature focused on including a few fundamental elements of corporate governance mechanisms in the index construction. The studies of (Manoj et. al., 2013; Javaid & Saboor, 2015; Tarchouna et. al., 2017; Arora & Bodhanwala, 2018) endorsed that the right constitution

of the board management team, risk committees and audit committees are essential for computing the corporate governance practices of a business unit. Other significant parameters of corporate governance were ignored in index construction in such studies.

Additionally, it was found that there is a dearth of reports which incorporated the construction of the corporate governance index for the Indian banking sector. Certain studies such as (Tahir et. al., 2022; Benton & You, 2019; Tarchouna et. al., 2017; Chen et. al., 2007; Sarkar et. al., 2012; Arora & Bodhanwala, 2018; Adinegara & Sukamulya, 2021) presented a short-term view on index construction for this sector by including limited parameters of the corporate governance. Such research gaps in past literature about the index construction of corporate governance for the Indian banking sector were suitably addressed in the following manner.

i. The current study represents a more concise and practical perspective on the composition of the corporate governance indicator. In this regard, it incorporates the expert's opinion by keeping the base of the governance norms listed by the Companies Act, 2013.
ii. A forward-looking mechanism is applied which comprehends the actual intricacies of corporate governance compliance at the core level and it effectively tries to incorporate the same in the construction of a composite index of corporate governance for the banking sector.
iii. It provides a well-founded, independent and unconstrained view of the governance issues from the banking officials, currently positioned at higher-level offices of different commercial public and private sector banks in India.
iv. It seeks to provide the relevant answers for the actual and contemporary problems of governance in the Indian commercial banking system by taking the rating from the banking compliance officials/directors. Such officials/directors have dealt with and are currently resolving the complex governance issues arising in the modern banking system.
v. It holistically tries to comprehend the perspectives, issues, and concerns of all stakeholders of the banking system concerning not only the board of directors, audit function, remuneration and risk supervision teams but also includes the intricacies of the disclosure and transparency matters and stakeholders rights having regular interactions in the banking ecosystem.

vi. It intends to appropriately balance the quantitative and qualitative factors in the ascendancy of the banking sphere. It purports to assimilate the relevant governance factors by providing a significant benchmark for the corporate governance practices in the form of ranking based on relevant criteria provided by the banking compliance officials/directors heading different committees in the Indian commercial banking sphere.

2.6.2. The encompassment of brief time frames in appraising corporate governance practices

The studies investigating the compliance of the corporate governance practices concerning provisions enacted by the Companies Act, of 2013 contemplated the short time frame. The studies by (Khuntia, 2014; Sharma & Rathi, 2014; Jhunjhunwala, 2014; Afsharipour, 2016; Haris et. al., 2019; Pande & Ansari, 2014 and Rehman et. al., 2021) appraised the magnitude of compliance of the corporate governance norms in the sample units by taking the time frame of few years. In such cases, it is difficult to comprehend the reliable interpretations of the prominence of these legislations in reaching suitable conclusions.

Moreover, a considerable part of studies examining the governance mechanism concerning the Companies Act, of 2013 limited themselves to reviewing the significance of this legislation in enforcing the paramount governance requirements on the part of business units. The studies of (Sharma & Rathi, 2014; Khuntia, 2014; Busru & Singh, 2016; Das & Dey, 2016; Thapar & Sharma, 2017 and Srivastava et. al., 2018; Rehman et. al., 2021) appraised the pre-dominance of the Companies Act, of 2013 in exhibiting the detailed enactments about the board management, audit committees, remuneration committee and risk management. Such studies have not made a detailed investigation of the actual compliance of the business units concerning governance practices embodied in this legislation. Additionally, no interconnection was established between the extant governance contrivances and the financial performance of the sample banking units. Such research gaps in the preceding literature about corporate governance practices regarding legislative requirements of the Companies Act, of 2013 were suitably addressed in the following manner.

i. The current study embraced the holistic governance mechanism sanctioned by the Companies Act, of 2013 and built it as the underpinning of the present

research. It examined the corporate governance practices of the sample units concerning the governance mechanisms accredited by the Companies Act, of 2013 comprehensively.

ii. The actual corporate governance practices of the sample units were investigated by forming the 'two-time proportion'. Such time frames were established as an initial period of 8 years before the enactment of the Companies Act, of 2013 and a subsequent period of 8 years after the enactment of the Companies Act,of 2013. The initial time frame assimilated the financial years 2006-07 to 2013-14 and the succeeding time frame embodied the financial years 2014-15 to 2021-22.

iii. The inclusion of two-time proportion for the corporate governance provisions of the Companies Act, of 2013 assisted in analysing and determining the significant differences in the actual governance practices of the Indian banking sector across two different periods.

iv. The incorporation of the large period in the study helped to appraise and recognise the augmentation or worsening of the corporate governance norms in the continuity of business operations of the sample units. It allowed to determine the dominance of the legislative authority in bringing improvement in governance practices of the Indian banking sector.

2.6.3. Inclusion of finite corporate governance parameters

The studies examining the compliance level of corporate governance practices presented an insubstantial approach by including a limited number of factors concerning the governance mechanisms. The studies of (Hilb, 2012; Kang et. al., 2007; Baysinger & Butler, 2019; Madhani, 2017; Hilb, 2012; Kang et. al., 2007; De Andres & Vallelado, 2008; Goyer, 2001; Carter et. al., 2003; Kiel & Nicholson, 2003) mainly stressed underlining the various mechanisms of the board governance. Such studies encouraged applying the factors such as appropriate board mechanism, independence, diversity and non-executive directorship to study the governance practices of the sample units and then interlink them with their performance. Additionally, the studies of (Das & Ghosh, 2004; De Andres & Vallelado, 2008; Sayilir, 2012; Mulyadi & Sihabudin, 2020; Dalwai et. al., 2015; Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012; Homaidi et. al., 2019 and Haris et. al., 2019) concentrated on constituting of the chairman, independent director, defining the board management governance codes and holding

of necessary meetings for analysing the governance practices and then finding their impact on financial performance.
The approach exhibited in the studies of (Velte, 2017; Mohamad et. al., 2010; Abbott et. al., 2007; Jurakulovna & Bahodirovich, 2021; Sarens et. al., 2012; Abdullah et. al., 2018; Sayilir, 2012; Dalwai et. al., 2015; Hilb, 2012; Kang et. al., 2007; Mayur & Saravanan, 2017; Aggarwal, 2013; Velte, 2017; Haris et. al., 2019; Mulyadi & Sihabudin, 2020 and Khatib et. al., 2022) focused mainly on the appropriate constitution of the audit member committees, defining the procedures of the internal audits, holding the statutory meetings and appointing the non-executive members. All of such studies presented the finite view and focused on considering the parameters of audit function as the main corporate governance variable to generate the required results.

It was highlighted in certain studies that board management must suitably strive to constitute the risk management procedures in an organization. The studies by (Pirson & Turnbull, 2011; Kakanda & Salim, 2017; Greuning et. al., 2022; Tao & Hutchinson, 2013; Brown et. al., 2009; Aebi et. al., 2012; Greuning et. al., 2022 and Mulyadi & Sihabudin, 2020; Sobel & Reding, 2004) stressed on inclusion of risk management governance factors to analyse the governance norms of a particular business. It was concluded that the inclusion of the risk mitigation factors such as the presence of a risk manager, suitability of internal control mechanisms and availability of vigilant risk structures tends to positively impel the financial performance of the business unit. These studies presented a one-sided and slanted view as they ignored the other dimensions of the corporate governance norms. Such research gaps in the past literatureconcerning the inclusion of limited governance parameters were suitably addressed in the following manner.

i. The present study comprehensively dispenses with the detailed parameters of corporate governance norms as listed in the peculiar section of the Companies Act, of 2013. It instils the exhaustive corporate governance norms of this legislation in studying the compliance level, finding the consecution between corporate governance and financial performance, examining the significant differences in governance practices in two-time proportions and constructing the composite index of corporate governance for the Indian banking sector.
ii. The current study inculcates the thorough provisions of corporate governance by covering its all-suitable dimensions. In this regard, the detailed provisions of

Board effectiveness, audit functions, risk management, remuneration committee, disclosure and transparency and stakeholder rights are given an equal emphasis for examining the corporate governance practices of the Indian banking sector.

iii. There exists limited literature on the studies examining the corporate governance endowments of the remuneration committee and stakeholder rights. The studies of (Razak, 2014; Tura, 2012; Arayakarnkul et. al., 2022; Liu & Taylor, 2008; Rehman et. al., 2021; Islam, 2020; Shingade & Rastogi, 2019 and Goranova & Ryan, 2014) accentuated the need of examining them in future research. The current study endeavours to include all such instances of their governance norms.

2.6.4. Usage of conservative financial performance indicators

The studies examining the impact of the various corporate governance dimensions on the financial performance of the sample units accorded a fundamental approach by including a limited number of basic measures for examining the corporate performance. The studies of (Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012;Dalwai et. al., 2015; Homaidi et. al., 2019; Haris et. al., 2019; Naeem et. al., 2022; Kells, 2020; Gelter & Puaschunder, 2020; Mayur & Saravanan, 2017; Goyer, 2001; Kang et. al., 2007; Carter et. al., 2003; Kiel & Nicholson, 2003; Das & Ghosh, 2004; Collares, 2020; Amjad et. al., 2021; Benton & You, 2019; Shingade et. al., 2022; Islam,2020; Goranova & Ryan, 2014 and Souha & Anis, 2016) focused mainly on applying the elementary financial indicators such as return on assets, net profit margin, return on equity, Tobin Q and return on capital employed only. Such financial ratios are extensively used in past literature and their interconnection was examined with the corporate governance dimensions. This research gap in the past literature concerning the inclusion of basic financial performance measurement indicators only was suitably addressed in the following manner.

i. The present study endeavours to measure the impact of corporate governance dimensions on the financial performance of the Indian commercial banking sphere. In this regard, it focuses on the inclusion of the bank-specific performance measurement parameters in addition to applying the fundamental financial ratios such as return on assets and returns on equity.

ii. The study makes use of financial sector-specific indicators such as net interest margin, net profit margin and capital adequacy ratio. Such indicators are used in a limited number of past studies in the research work published by (Fung, 2014; Homaidi et. al., 2019; Aebi et. al., 2012; Goyer, 2001; Kang et. al., 2007; Tao & Hutchinson, 2013 and De Andres & Vallelado, 2008). Moreover, the studies by (Khatib et. al., 2022; Naeem et. al., 2022; Homaidi et. al., 2019; Haris et. al., 2019; Mayur & Saravanan, 2017 and Thapar & Sharma, 2017) advocated the application of such financial indicators in future studies. Anattempt is made to analyze the impact of the governance mechanisms, in the current study by inculcating the comprehensive financial performance indicators for the Indian banking sector.

2.7. Chapter summary

Building a strong business foundation, creating a protracted stakeholder value and developing sustainable business practices calls for ensuring well-founded corporate governance practices in an organization (Orazalin, 2019). It was pointed out that compliance with the governance codes leads to an improvement in business efficiency as well as the performance of the financial segment firms (Nduhura et. al., 2022; Abang'a et. al., 2021). Additionally, it was explored that uplifting the investor's well-being requires adherence to governance norms in building long-term relationships with the business. The Indian banking sector which is under constant pressure to manage high risks and exhibit significant disclosures mandates this sector toexercise good governance norms all the time (Dalwai et. al., 2015; Gopinath, 2008; Mayur & Saravanan, 2017 and Das & Ghosh, 2004). The past literature fostered that banks which complied with the governance norms appropriately are better managed compared to those which make certain compromises in their certain corporate governance practices. There exists subtle research which examined such practices of various business units, linked them with the various financial indicators and leveraged it toward the composition of the corporate governance indicator.

The previous studies followed a limited approach in building the corporate

governance indication, inseminated limited corporate governance factors, contemplated the bounded period and appraised the financial performance by using a few fundamental parameters. The study is directed towards suitably fulfilling all the voids in the existing literature. It seeks to comprehensively assess all the dimensions of corporate governance as requisitioned by the provisions of the Companies Act, of 2013 and holistically interlinks with the expansive financial indicators of the Indian banking sector. It further extends to compose the composite corporate governance index for this sector. Thus, this study encourages the strengthening of the internal governance framework which suitably recognises all the illegal practices in a business unit and fosters the elements of transparency and accountability at all levels. The present study endeavours to make an additional contribution and suffice the divergences existing in this area.

CHAPTER – 3

RESEARCH METHODOLOGY

This chapter highlights the approach, procedures and techniques applied to recognize, conduct and carry out the desired outcomes of this doctoral thesis. This chapter marks off the overall objectives of the thesis, contours the period of the study, lineaments the universe and the sample of the study as well as indicates the sources of data accustomed in the analysis. Additionally, it outlines the quantitative and econometric approaches implemented to effectuate the overall objectives of the thesis.

3.1. Objectives of the study

The study is persistent on analyzing the corporate governance practices in the Indian commercial banking sector. The previous studies presumptuously catered to building the corporate governance index, inseminated limited corporate governance factors, contemplated the bounded period and appraised the financial performance by using a few fundamental parameters. To usurp such existing voids, the current dissertation strives to contrive and accomplish the following objectives:

- To evaluate the compliance level of the corporate governance practices in the Indian banking sector.
- To study the impact of corporate governance practices on the financial performance of Indian banks.
- To make a comparative analysis of the Indian banking sector performance pre- and post-Companies Act, of 2013.
- To construct the corporate governance index for the Indian banking sector.

3.2. Period of the study

This sub-section outlines the details of the period selected for the study objective-wise. The initial objective of the thesis is to assess and analyze how well corporate governance practices are adhered to in the Indian commercial banking industry. The specific time frame chosen for this objective span from the financial years 2014-15 to 2021-22, covering 8 years. This period was selected because it reflects the time after the implementation of governance regulations outlined in the Companies Act of 2013. The

next aim of the thesis is to examine how corporate governance practices affect the financial performance of a selected group of commercial banks in India. This objective also encompasses the financial years 2014-15 to 2021-22, covering a period of 8 years. During this time frame, the impact of predictor variables, which are the corporate governance factors, on the response variable, which represents the financial performance indicators, was analyzed. The subsequent objective focuses on comparing the compliance of corporate governance practices in a selected group of commercial banks by using a "two-time proportion" approach. This approach involves dividing the analysis into two periods: an initial period of 8 years before the enactment of the Companies Act in 2013, and a subsequent period of 8 years after the enactment of the Act. The initial time frame spans from the financial years 2006-07 to 2013-14, while the subsequent time frame covers the financial years 2014-15 to 2021-22. By incorporating this two-time proportion for corporate governance provisions, the objective aims to identify and assess significant differences in the actual governance practices of the Indian commercial banking sector across these two distinct periods.

Including a larger time frame in the study allows for the evaluation and recognition of any improvements or deterioration in the corporate governance practices of the sample banks. It also helps determine the influence of legislative authority in enhancing governance practices within the Indian banking sector. The choice of the financial year 2006-07 as the starting point for the initial period is significant as it serves as the base year within the overall 16-year time-frame. This particular year holds significance due to the global financial crisis that occurred during that time, which brought the global financial system to a halt and highlighted weaknesses in regulatory governance at various levels. The crisis raised serious concerns about poor corporate governance practices, leading to it becoming a top priority in global-level summits and discussions (Sun et al., 2011). Acknowledging the role of malpractices by board structures, loose audit controls, and poorly designed executive compensation packages in contributing to the financial crisis, the G20 and emerging economies sought to develop stricter rules for risk-taking and improve corporate governance mechanisms (Erkens et al., 2012; Ahrens et al., 2011).

3.3. Sample of the study

The current study endeavours to investigate the application of governance practices in

the Indian banking sector. The various constituents of this sector are segregated into commercial banks, cooperative banks and development banks. All the commercial public sector and private sector banks operating in India as of 31st March 2021 form the sample of the 33 Indian banks. A such sample has been framed by applying the following manifestations:

- The study takes into account all 21 private sector and 12 public sector banks carrying out their banking proceedings as of 31st March 2021. The other categories of the banks such as foreign banks, regional rural banks and cooperative banks which forms part of the Indian banking system are not taken into consideration. There does not exist a specific and formal regulatory mechanism concretely meant for the corporate governance activities of such banks. Moreover, the public commercial banks which were merged during the merger processes followed in the financial years 2020-21 and 2021-22 are ignored and their parent (purchasing) banks are considered making a total of 12 public sector commercial banks.
- The corporate governance norms of the foreign banks functioning in India are furnished by the legislative authorities of the respective country in which these banks are incorporated. However, the Reserve Bank of India and Securities Exchange Board of India enumerate the capital adequacy and priority sector lending requirements of such banks. Therefore, such banks are not taken into consideration in order to avoid inconsistency in the measurement of the governance procedures across Indian commercial banks and foreign banks operating in India.
- In a similar manner, the entire banking activities of the Co-operative banks in India are governed bythe Banking Regulation Act, of 1949, the Co-operative Societies Act, of 1965 and the Reserve Bank of India Act, of 1934. These acts assist such banks in administering the banking transactions with small industries, trades and agricultural businesses including their internal governance. Additionally, it is inferred that the banking pursuits made by the regional rural banks in India are supervised by the Regional Rural Banks Act, of 1976. This legislative regulation assists such banks in supervising the business arrangements with farmers, and small-scale entrepreneurs and also lists down the governance mechanism of such banks. Therefore, such banks are ignored in the current study.

Table 6. List of commercial sector banks used in the study

Private sector banks		Public sector banks	
1.	Axis Bank Ltd.	1.	Bank of Baroda
2.	Bandhan Bank Ltd.	2.	Bank of India
3.	CSB Bank Ltd.	3.	Bank of Maharashtra
4.	City Union Bank Ltd.	4.	Canara Bank
5.	DCB Bank Ltd.	5.	Central Bank of India
6.	Dhanlaxmi Bank Ltd.	6.	Indian Bank
7.	Federal Bank Ltd.	7.	Indian Overseas Bank
8.	HDFC Bank Ltd	8.	Punjab & Sind Bank
9.	ICICI Bank Ltd.	9.	Punjab National Bank
10.	Induslnd Bank Ltd	10.	State Bank of India
11.	IDFC First Bank Ltd.	11.	UCO Bank
12.	Jammu & Kashmir Bank Ltd.	12.	Union Bank of India
13.	Karnataka Bank Ltd.		
14.	Karur Vysya Bank Ltd.		
15.	Kotak Mahindra Bank Ltd		
16.	Nainital Bank Ltd.		
17.	RBL Bank Ltd.		
18.	South Indian Bank Ltd.		
19.	Tamilnad Mercantile Bank Ltd.		
20.	YES Bank Ltd.		
21.	IDBI Bank Ltd.		

Source: Author's sample selection

3.4. Sources of data

The study makes use of both secondary and primary sources of data to achieve the desired outcomes of the current study. The secondary sources of data are employed to examine the compliance level of corporate governance practices, to evaluate the impact of corporate governance practices on financial performance and to draw a comparative analysis of the Indian banking sector performance pre- and post- Companies Act, of 2013. The data about financial performance indicators of the public and private sector banks have been gathered from the CAPITALINE database. This database contains exhaustive information on the financial and market statistics of more than 40,000 companies running their business operations in India. The dossier about the corporate governance variables has been fetched from the annual reports of the sample banks. The primary source of data was employed concerning the objective of constructing the composite index of corporate governance for the Indian banking sphere.

The development of the composite index involved the collection of preferences from the officials assuming their roles as a compliance officer, directors, high-level committee members in various commercial public and private sector Indian banks. Such preferences were related to various corporate governance dimensions as contrived by the legislative provisions of the Companies Act, of 2013. The opinions expressed by the respondents complied and assorted to building a composite index.

3.5. Measurement of corporate governance compliance practices

The initial objective of the thesis revolves around quantifying and appraising the compliance of corporate governance practices in the Indian commercial banking sector. To gauge the compliance level conscientiously, the technique of content analysis is adapted(Stemler, 2000). This technique allows a researcher to systematically wedge the textual information into the fewest constituents by applying definitive coding procedures. In this regard, the comprehensiveness, scope and degree of compliance were analysed by examining the governance sections of the annual reports of the banks. In case a particular governance dimension is adhered to, then the definitive coding of '1' was allocated and in case a particular governance norm is missing or not exhibited in the annual statements then the categorical '0' code was earmarked. The basic framework of this technique facilitated the appraisal of the governance activities of the different banks initially by estimating them qualitatively and then quantitatively (Harwood & Garry, 2003). The qualitative assessment capacitated in comprehending the various developmental stages of the governance activities of the banking system. On the other hand , the quantitative assessment obliged the accurate assimilation of the magnitude, frequency and prevalence of distinct corporate governance phenomena of a particular bank. Such a process authorized the curtailment of the different corporate governance occurrences into definite dimensions for appropriate inquiry and exploration. The adherence to the corporate governance practices of the Indian banking sector was analysed by preparing the visualisations on the Tableau platform. The process of disclosing corporate governance information in annual reports involved several steps. First, a list of keywords related to governance was created using various sources, such as previous studies on governance disclosure and the Roget Thesaurus. This resulted in a compilation of 84 governance-related words. Next, a pilot assessment was conducted using Nvivo (10) software, where 33 annual reports from the Indian commercial banking sector were studied. Words that appeared less than five times were considered to have

low frequency and were excluded. This narrowed down the list to 42 words. These 42 words were then categorized into six dimensions based on the provisions outlined in the Companies Act of 2013. To ensure accuracy, the scores obtained from manually calculating the occurrences of words in a PDF document were cross-checked with the scores calculated by the Nvivo (10) software. Once the accuracy was confirmed, an automated content analysis method was used to calculate governance disclosure scores for 33 commercial bank companies over an eight-year period. These scores were then used to draw meaningful conclusions about corporate governance disclosure practices in India.

3.6. Measurement of the impact of corporate governance on the operating performance

The subsequent objective endeavours to appraise the impact of the corporate governance norms prevailing in the Indian banking sector on their operating performance. In this regard, such an impact is analysed by making use of the panel data framework of the econometrics conservatory. The application of such models allowed measurement of the individual behaviour of the sample banks both across periods as well as the different banking units. Thus, it suitably inculcated the time series as well asthe cross-sectional proportions. This framework accentuated the use of the pooled, fixed effects and random effects exemplary of the panel data methodology (Yaffee, 2003). Application of the panel data framework appropriately allowed for the modelling of the individual and recurrent behaviour of the sample banking units. It enabled appropriate detection and measurement of the statistical reverberations where pure and solitary time series and cross-sectional data failed to generate the required results. This technique also enabled the panel data approximation by using various estimators which further extended itself on contemplating the between and within the variation of the sample data.

The multiplier test of Breusch Pagan allowed testing of the random effects on the residuals of the OLS. The significant output of this test underlined the usage of the random effects in place of the OLS model. Additionally, the solicitation of the Hausman test provided a suitable foreground for estimating the significant differences between the random and fixed outcome estimators (Paul, 2011). The application of the estimator of the fixed effects proffered gives a consistent estimate which may not be efficient whereas the application of the estimator of the random effects proffered in providing efficient,

systematic and consistent if the model is based on the random effects in estimation.

To measure the impact of corporate governance on the performance of the sample banking units, all the variables were elucidated into dependent and independent ones. The corporate governance variables such as board procedures and effectiveness, audit function ,remuneration procedures, risk management activities, disclosure and transparency and shareholder information and rights were established as the independent variables and financial performance measures such as return on assets, return on equity, net interest margin, net profit margin, Tobin Q, net non-performing assets, capital adequacy ratio and cost to income ratio.

3.7. The perusal of comparative analysis of the Indian banking sector performance in two-time proportion i.e., pre and post-enactment of the Companies Act, 2013

This pertinent objective strives to make measure the corporate governance practices of the sample units concerning the governance mechanisms accredited by the Companies Act, of 2013 comprehensively. The objective of the study is to compare the compliance practices of corporate governance in a sample of commercial banks by creating a "two-time proportion." This involves analyzing two distinct time periods: an initial period of eight years before the enactment of the Companies Act of 2013, and a subsequent period of eight years after the enactment of the Act. The initial time frame covers the financial years 2006-07 to 2013-14, while the subsequent time frame covers the financial years 2014-15 to 2021-22. By incorporating this two-time proportion, the study aims to analyze and identify significant differences in the actual governance practices of the Indian commercial banking area between these two periods. The inclusion of a longer time frame allows for evaluating any improvement or deterioration in the corporate governance practices of the sampled banks. It also helps determine the influence of legislative authority in enhancing governance practices within the Indian commercial banking sector. Previous studies on corporate governance compliance, focusing on provisions introduced by the Companies Act of 2013, typically examined shorter time frames. These studies evaluated the extent of compliance with governance norms within the sampled units. However, they did not thoroughly investigate the actual compliance of businesses with the governance practices outlined in the legislation.

The present study aims to address this gap by comprehensively examining the corporate governance practices of the sampled units in relation to the governance mechanisms reckoned in the Companies Act of 2013. The paired t-test statistical method is applied to achieve this objective. This test assumes that the data is continuous, follows a normal distribution, and compares the two time periods separately for each bank. The null hypothesis states that governance practices before and after the Companies Act of 2013 are the same, while the alternative hypothesis suggests that they are different. The paired t-test is used to determine any significant differences in governance practices within the Indian commercial banking sphere between the two-time frames.

3.8. Construction of corporate governance index for the Indian banking sector

This significant objective presents a succinct and pragmatic approach to the construction of the corporate governance index. A forward-looking mechanism is applied which comprehends the actual intricacies of corporate governance compliance at the core level and incorporates the same in the construction of a ‘composite index’ of corporate governance for the banking sector. In this regard, it incorporates the expert’s opinion by keeping the base of the governance norms listed by the Companies Act, 2013. It seeks to provide the relevant answers for the actual and contemporary problems of governance in the Indian commercial banking structure by taking the rating from the banking compliance officials/directors. Such officials/directors have dealt with and are currently resolving the complex governance issues arising in the modern banking system. It holistically comprehends the perspectives, issues, and concerns of all stakeholders of the banking system concerning not only the board of directors, audit function, remuneration and risk management teams, but also includes the intricacies of the disclosure and transparency matters and stakeholders' rights. The elaboration of a composite index for corporate governance involved the significant steps of data normalization, aggregation and calculation of additive aggregation scores. Such a methodology was significantly applied in past studies on the development of agricultural sustainability by Talukder et. al., 2017, social vulnerability by Tate, 2013, the energy security index by Gasser et. al., 2020 and the healthcare hashtag index by Pinho-Costa et. al., 2016. Such a composite index purports to measure and develop a balanced framework of protracted value creation amidst all the internal and external stakeholders, by corporate governance parameters.

3.9. Statistical tests used

The usage and employment of the right statistical tests are pertinent for finding out the correct results of the study and facilitating the accurate interpretation of such outcomes. The present thesis thrives to make sincere efforts in applying contemporary statistical tests through voguish software. The statistical tests operationalised in the current thesis are accomplished using the STATA 11 version, Tableau 2020.4 version, NVivo 10 version and SPSS 19 version. The description of each statistical test used in the current thesis islisted below:

3.9.1. Descriptive statistics

The quantitative representation, summarization and distribution of the corporate governance practices of the sample banking units are made by finding out its mean, median, ranks and standard deviation. The use of descriptive analysis assisted in recognising the significant coalition among the variables and ferreting out the outliers in the corporate governance data set used in the current study. Such an analysis further aided the construction of the different significant visualizations of the sample data set for comprehending the governance practices and drawing sufficient conclusions.

3.9.2. Regression analysis

The current study commissions the panel data regression technique for recognizing the various determinants of corporate governance issues and extending it to establish its association with the financial performance of the sample banking units. The overall process of application of the panel data technique involved the usage of the pooled ordinary least squares in the first place where it was assumed that the intercept was the same for all the sample banking units (Yaffee, 2003). After applying polled ordinary least squares, the Breusch pagan test was applied to test whether the intercept of all the sample banking units is the same or not. In case the null hypothesis of the said test was rejected , it was interpreted that the intercept of the sample banking units are having a different intercept. The tests of panel data methodology were further extended by applying the random effects model along with the Hausman test (Paul, 2011). Incase the null hypothesis of the Hausman test was rejected, then it was further proceededto administer the fixed effects model concerning each hypothesis set in the current thesis.

The study took due care to fulfil the different assumptions of the panel data technique i.e., checking the normal distribution of the data, recognising the correlation between predictor variables, ascertaining the presence of outliers and evaluating the correlation of the same variables between consecutive periods. The panel data methodology employed in the thesis holistically studied the two-dimensional effects i.e., the time and the group effects.

The examination and scrutiny concerning the variableness of the dependent variables concerning the independent variable are validated by setting the proper hypothesis. Such a dependency relationship is scrutinized by establishing suitable degrees of freedom. The amalgamation of the time effects with the cross-sectional information enhances the final estimates of the regression in the most efficient manner. The current thesis intends to emancipate by giving due accord to the panel data estimation methods which can exercise due command over the heterogeneity among the independent units with utmost accuracy.

3.9.3. Paired t-test

The study makes use of the paired t-test in determining the mean differences in the corporate governance practices of the Indian banking sector before and after the amendment of the Companies Act, of 2013. In the application of this statistical test, it was carefully examined in advance that there is a non-presence of outliers and the data used follows the normal distribution. (Rosner, 1982). The actual corporate governance practices of the sample units are investigated by forming the ‘two-time proportion’. Such time frames were established as an initial period of 8 years before the enactment of the Companies Act, of 2013 and a subsequent period of 8 years after the enactment of this Act.

The implementation of the paired t-test involved setting the null hypothesis as differences between the means of two sample groups as zero and the alternate hypothesis as differences between the means of two sample groups as non- zero. The operationalization of this statistical test involved considering the sample of the practices at two different time frames (Nor, 2014). The differences were calculated between each pair of the sample banking units and the mean score of the differences was determined for each banking unit. The application of the t-score for the total sample units was used to estimate the p-value and interpret the results.

3.10 Variables used in the study

This quantitative research makes use of the different dependent, independent and control variables to fulfil the required objectives set for the study. It is pertinent to comprehend their complexity and analyze their relationship with each other. The description of the various independent variables applied in the current thesis is as follows:

3.11.1 Independent variables

The variables which are bound to be modified or administered to notice their effects on the dependent variables are known as independent variables. The current study considers six broad independent variables as highlighted by the extensive forethoughts of the Companies Act, of 2013. The list and description of independent variables are comprehended in Table 7. The whole mechanism of corporate governance can be explicated as the application of sound management procedures, uncompromising adherence to the provisions made by the regulatory authorities, and solicitation of moral policies for the appropriate running of business activities. In lieu of this, the corporate governance norms as underlined by the Companies Act, of 2013 such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, disclosures and transparency and stakeholder rights & information are designated as the predictor variables for this objective. Such corporate governance variables are used to analyse the financial performance of the banks.

These explanatory variables are charted in the current objective as per the corporate governance provisions highlighted by the companies Act, 2013 (Khatib et. al., 2022; Shingade et. al., 2022; Naeem et. al., 2022; Germain et. al., 2014; Hassan et. al., 2005; Gopinath, 2008; Mayur et. al., 2017; Das et. al., 2004; Haris et. al., 2019; Dedman, 2002; Abbott et. al., 2007; Wanyama et. al., 2013; Germain & Lee, 2014; Salim, 2017; Nassar & Jreisat, 2020; Dalwai et. al., 2015; Mohamad et. al., 2010; Benton & You, 2019; Kells, 2020; Gelter & Puaschunder, 2020; Das & Ghosh, 2004; Mayur & Saravanan, 2017; Torku & Laryea, 2021; Quang, 2022; Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012; Dalwai et. al., 2015; Homaidi et. al., 2019; Velte, 2017; Haris et. al., 2019 and Mulyadi & Sihabudin, 2020).

Table 7. Depiction of the predictor variables used in the study

Independent Variable	Description
Board procedures and effectiveness (BPE)	Appropriate composition of the required number of directors, non-executive directors, chairman, presence of a woman director, disclosures related to board composition in annual reports, and the existence of a whistle-blower policy.
Audit function (AF)	Appropriate composition of the audit committee with the presence of a pertinent number of members, defined internal audit procedures, the existence of the statutory auditor, and disclosures of a certificate from the auditor on corporate governance compliance.
Remuneration Committee (RC)	Subsistence of the appropriate remuneration system, the presence of the independent director in the committee, the existence of the non-executive directors, disclosures related to remuneration payments in the annual reports.
Risk management committee (RMC)	Existence of an appropriate risk management committee, the presence of the chief risk officer and non-executive director, disclosures related to the risk management committee, and holding of the required number of meetings of this committee.
Shareholder rights and information (SRI)	Constitution of the stakeholder's grievance committee, disclosures of complaints and their resolution in the annual report, holding of the required number of meetings of this committee, defined procedures related to the share transfer system, and disclosures related to dividend payment and related party transactions.
Disclosure and transparency (DT)	Disclosures related to the adoption of significant accounting policies, maintenance of the management discussion and analysis in the annual report, CEO certifications related to adopted accounting standards and code of conduct adhered to, disclosures related to manners of shareholder intimation and directors' resignation.

Source: Author's compilation

3.11.2 Dependent variables

The dependent variable is the outcome or result that is being appraised or observed. Its value is influenced by the independent variable, which is the factor that is being altered in the study. The study makes use of several dependent variables which are chosen grounded on the literature review made under the pretext of 2nd objective of the thesis. The studies underlining the substance of affecting return on assets, equity, interest margins and profit margins as highlighted by (Millar et. al., 2005; Dalwai et. al., 2015; Fung, 2014; Tahir et. al., 2022; Haris et. al., 2019; Mulyadi & Sihabudin, 2020; Khatib et. al., 2022, Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012; Dalwai et. al., 2015; Homaidi et. al., 2019; Haris et. al., 2019; De Andres & Vallelado, 2008; Goyer, 2001; Kang et. al., 2007; Albu et. al., 2015; Carter et. al., 2003; Nassar & Jreisat, 2020; Ahmad et. al., 2021; Kiel & Nicholson, 2003 and Das & Ghosh, 2004) stressed the significant use of such dependent variables for validating the performance of the units being gauged in a study.

The current research purposes to conclude the effect of various aspects of corporate governance on the financial performance of banks in India. To do this, it looks at specific performance indicators specific to commercial banks, as well as generally used financial ratios like return on assets and return on equity. Additionally, the studies advocating the use of non-performing assets cost to income, Tobin's Q and capital adequacy as outlined by (Khatib et. al., 2022, Torku & Laryea, 2021; Haris et. al.,2019; Dedman, 2002; Abbott et. al., 2007; Wanyama et. al., 2013; Germain & Lee, 2014; Salim, 2017; Nassar & Jreisat, 2020; Dalwai et. al., 2015; Mohamad et. al., 2010; Benton & You, 2019; Shingade et. al., 2022; Shingade et. al., 2022; Islam, 2020; Goranova & Ryan, 2014; Souha & Anis, 2016; Dedman, 2002; Albu et. al., 2015 and Zulfikar et. al., 2020) accentuated the noteworthy assistance of such dependent variables for corroborating the performance of the units being weighted in a study. Previous research has been inadequate in creating a corporate governance index, as it only focused on a small number of governance factors, a specific time frame, and a minimal number of financial performance parameters. This study aims to address these shortcomings by thoroughly taking into account a broad range of financial indicators for the Indian banking sphere. The list of dependent variables is outlined in Table 8.

Table 8. Depiction of the dependent variables expended in the study

Dependent Variable	Description
Return on asset (ROA)	It measures the profitability of the business's assets in generating the required revenue. It is calculated by dividing the net income by its total assets.
Return on equity (ROE)	It is the measure of a business's net income divided by its shareholders' equity. It measures the business profitability and how efficiently it generates those profits.
Net interest margin (NIM)	It measures the profitability of a bank's lending and deposit-taking operations. It is calculated as the difference between the interest earned on loans and investments, and the interest paid on deposits and borrowings, divided by the average assets.
Net profit margin (NPM)	It measures the profitability of a bank by comparing its net income to its total revenue. It is calculated by dividing the bank's net income (profit) by its total revenue.
Tobin Q (TQR)	It is a measure of the market value of a company relative to the replacement cost of its assets. It is calculated by dividing the market value of a company's equity and liabilities (also known as its market capitalization) by the replacement cost of its assets.
Net non-performing assets (NNPA)	The net non-performing assets (NNPA) ratio is a measure of a bank's credit quality. It is calculated by dividing the net value of non-performing assets (NPAs) by the total value of the bank's net assets.
Capital adequacy ratio (CAR)	It is a measure used by regulators to assess the financial stability of a bank by comparing the bank's capital to its risk. It is expressed as a percentage of the bank's risk-weighted assets. The higher the CAR, the more able a bank is to absorb potential losses without becoming insolvent.
Cost to income ratio (CI)	This financial ratio compares a bank's operating expenses to its operating income. It is calculated by dividing a bank's operating expenses by its operating income.

Source: Author's Compilation

3.11.3 Control variables

Control variables are carefully managed or coordinated in 2nd objective intended to differentiate the connection between the explanatory variable (corporate governance) and the response variable (firm performance). These control variables can potentially impact firm performance. These variables are taken into consideration to ensure that any observed effects on banking performance can be primarily attributed to corporate governance.

CEO duality: According to agency theory, it is advocated to detach the functions of CEO and chairman of the board in order to establish effective monitoring (Goranova & Ryan (2014) and Souha & Anis (2016). The Cadbury code further proposes that splitting the functions of chairman and CEO enables the board to exercise control functions in a constructive manner, which ultimately leads to improved corporate performance. Supporting this perspective, Millar et al. (2005); Dalwai et al. (2015) and Fung (2014), found that commercial banks with separate roles outperform those with combined roles. To measure the impact of CEO duality on firm performance, it is essential to control for this variable. CEO duality is embodied by a dummy variable, where a value of 1 is allocated if the chairman of the board and the CEO of the company are the same people, and 0 is dispensed otherwise. This control variable allows researchers to assess the effects of CEO duality on firm performance, ensuring that any observed relationships are not solely influenced by the combination of these roles.

Insider directorship: The Stewardship theory backs the existence of insider directors on corporate boards. According to this theory, a better number of inside directors is believed to be allied with superior corporate performance. The rationale behind this perspective is that inside directors, being part of the organization, possess a deep understanding of the banking business and are more competent in making decisions compared to outside directors. This competence is reflected in their ability to make superior decisions that aim to maximize profits for shareholders (Das et. al., 2004; Haris et. al., 2019; Dedman, 2002 and Abbott et. al., 2007). The Stewardship theory further asserts that senior executives, serving as insider directors, have a vested interest in not depriving shareholders of benefits since their own reputation is at stake. To examine the affiliation between insider directorship and bank performance, the presence of insider directors is controlled for in the study. It is presumed that insider directorship will have a positive effect on bank's performance. The measurement of insider directorship is done by calculating the

proportion of executive directors on the board of the company. This control variable allows researchers to assess the impact of insider directors on firm performance, ensuring that any observed relationships are not solely influenced by the occurrence or nonexistence of these insider directors.

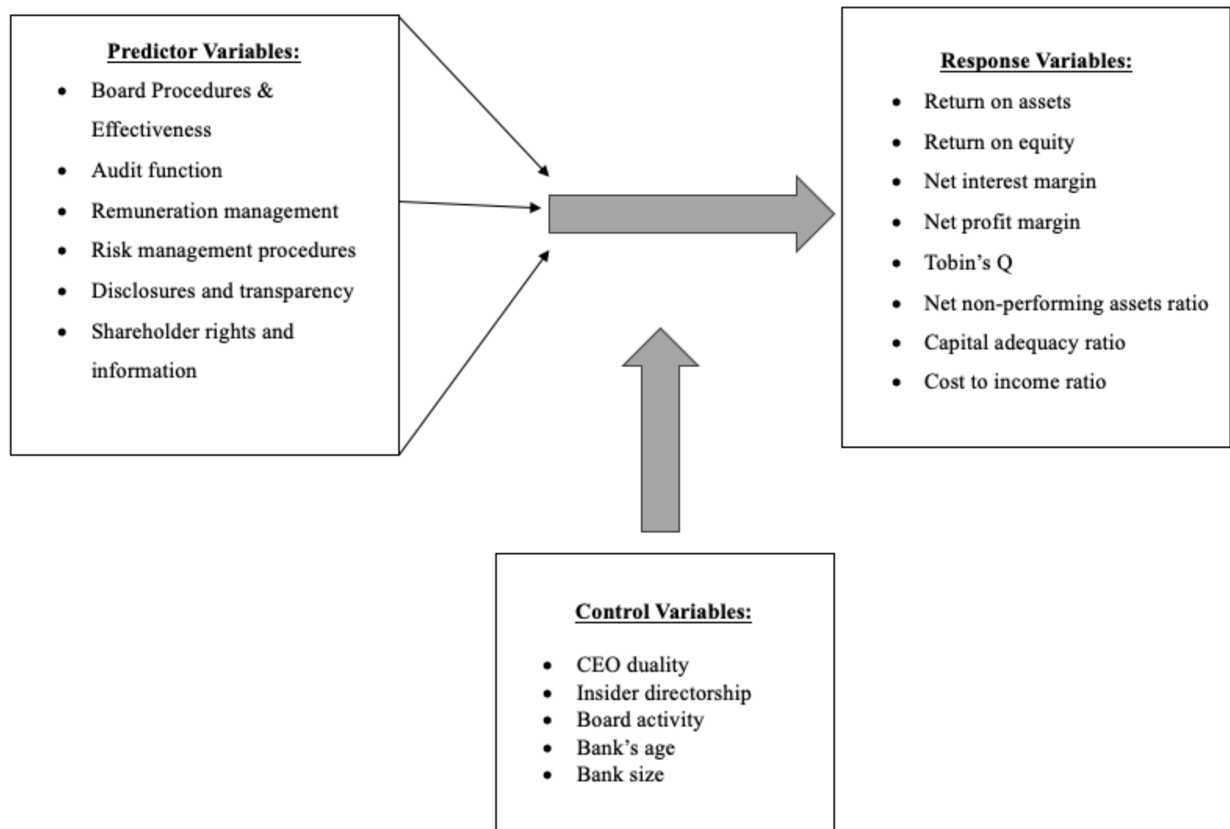
Board activity: The theme of board activity has been attempted from different perspectives by various researchers. Germain & Lee, 2014; Salim, 2017; Nassar & Jreisat, 2020; Dalwai et. al., 2015 and Mohamad et. al., 2010 contend that a upper incidence of board meetings is expected to lead to greater performance. On the other hand, Aggarwal (2013), Sayilir (2012) and Dalwai et al. (2015), proposes that boards should be somewhat inactive, and high board activity may be a response to poor performance rather than a driver of improved outcomes. Such studies also presented a more nuanced view, stating that the liaison between board meetings and performance is complex. It was established that boards that met often were valued less by the market. In this objective, board activity is measured using the total number of board meetings conducted by a company within a year. By examining the frequency of board meetings, the study aims to understand the relationship between board activity and performance, while accounting for potential confounding factors.

Bank's age: The maturity and experience of a bank, which often correlates with its age, can impact its performance. Controlling for the bank's age enabled to assess the influence of corporate governance on performance while accounting for variations related to the bank's maturity (Baysinger & Butler, 2019; Kiel & Nicholson, 2003; Carter et. al., 2003; Madhani, 2017; Hilb, 2012 and Kang et. al., 2007).

Bank Size: The size of a bank, often measured by metrics like total assets or market capitalization, can have an impact on its performance. By controlling for the size of the bank, researchers can assess the specific effect of corporate governance on bank's performance, independent of the bank's size (Baysinger & Butler, 2019; Homaidi et. al., 2019; Haris et. al., 2019; Dalwaiet. al., 2015; Sayilir, 2012; De Andres & Vallelado, 2008; Goyer, 2001 and Kang et. al., 2007).

Therefore, it can be inferred that controlling the above variables enabled them to isolate and comprehend the specific impact of corporate governance on banking performance, providing more accurate and reliable results in their study.

Figure 7: Showing the research structure of connections between corporate governance and bank's financial performance



Source: Author's compilation

CHAPTER – 4

COMPLIANCE LEVEL OF CORPORATE GOVERNANCE PRACTICES IN THE INDIAN BANKING SECTOR

Measuring the compliance level of corporate governance practices involves assessing the degree to which a company's governance policies and procedures conform to applicable laws, regulations, and industry standards. Such compliance level is evaluated by analyzing the company's governance structure (Haris et. al., 2019). This is done by reviewing the bank's bylaws, board charters, and governance policies to recognize how the overall structure of the bank is governed, how board members are appointed, and what processes are in place to ensure board independence and accountability. Additionally, it pertains to evaluating the bank's compliance history by reviewing any regulatory filings, audit reports, and other relevant documentation to discern any past compliance issues or violations (Kang et. al., 2007; Baysinger & Butler, 2019). Moreover, a comprehensive compliance risk assessment of the bank is done to identify and outline the potential compliance risks. The comprehensive risk assessment is done by evaluating the company's operations, business practices, and regulatory requirements (Torku & Laryea, 2021). A special focus is given to assessing the effectiveness of internal controls operating within the banking structures.

Reviewing the internal control structure of the bank is made to assess its effectiveness in ensuring compliance with applicable byelaws and principles (Goyer, 2001; Carter et. al., 2003; Kiel & Nicholson, 2003; Das & Ghosh, 2004). Furthermore, a detailed review of the bank's reporting and disclosure practices is made by evaluating the bank's financial reporting and disclosure practices for ensuring that they comply with applicable legislation. Moreover, the stakeholder engagement is evaluated effectively to assess the bank's stakeholder engagement practices, including how it engages with shareholders, employees, and other stakeholders, for determining how well it is meeting its governance obligations. Rigorous benchmarking and industry standard is applied to identify areas where the bank can improve its compliance (Sayilir, 2012; Dalwai et. al., 2015 and Homaidi et. al., 2019).

4.1. Empirical evidence on the extent of compliance to corporate governance practices

A well-designed compliance framework for corporate governance norms is indispensable for the smooth operation and intervention of a business unit within and outside the market. Several studies conducted by Dedman (2002), Albu et. al. (2015), and Zulfikar et. al. (2020) has emphasized the weak compliance with corporate governance procedures in the selected firms examined. These studies emphasize that the board management bears the responsibility of overseeing and standardizing all business affairs and generating profits for the organization. Three significant responsibilities of the board management are action, leadership, and compliance, ensuring accurate reporting and information flow among stakeholders and the reliability of reported results. Another study by Anginer et. al. (2018) establishes that assessing risk factors, adhering to reporting standards, and implementing a robust internal control system will enhance compliance with the governance framework of the business. Every bank should strive to develop assessment criteria that benchmark their compliance with regulatory governance frameworks. Charan (2005), Akinkoye et. al. (2014), Bajra & Čadež (2020), Torku & Laryea (2021), and Handriani et. al. (2021) emphasizes that improving compliance with regulatory governance mechanisms requires increasing awareness of norms, assessing benchmark governance procedures, implementing change management policies, and reviewing existing compliance norms. This process should involve the board management team at all levels and be executed in phases. Establishing an effective oversight structure, reporting compliance practices, and developing compliance mechanisms are crucial for improving governance adherence within the organization.

Failure to adhere to corporate governance norms set by regulatory authorities can lead to enforcement actions from various agencies. Statutory requirements demand the establishment of a robust governance charter within the banking structure. Nassar & Jreisat (2020), Ahmad et. al. (2021), Handriani et. al. (2021), Dalwai et. al. (2015), Salim (2017), and Greuning et. al. (2022) asserts that maintaining a strong compliance level involves identifying and assessing risk factors, controlling systematic risk, and adapting to rapid changes in the external business environment. These studies also stress the importance of constituting board management teams, developing robust internal control structures, and clarifying the responsibilities of the audit function team to improve compliance practices within an organization. The involvement of senior-level board members is crucial for enhancing corporate governance compliance. Studies conducted

by Haris et. al. (2019), Dedman (2002), Abbott et. al. (2007), Wanyama et. al. (2013), Germain & Lee (2014), Salim (2017), Nassar & Jreisat (2020), Dalwai et. al. (2015), Mohamad et. al. (2010), Benton & You (2019), and Shingade et. al. (2022) emphasizes the significance of properly establishing the scope of governance procedures, developing monitoring committees for regular compliance reviews, and establishing and regulating a core compliance committee. These efforts should integrate the organization's strategy, auditing, and enforcement committee plans to improve and maintain consistency in compliance practices. Furthermore, a compliance risk assessment should be given due attention, holding internal business risks and external market risks accountable. The compliance framework should address compliance gaps and outline steps taken to rectify deficiencies. The monitoring framework should evaluate the suitability of control systems in comprehensively assessing compliance with risks, governance, and compliance elements within the organization.

4.2. Sample and methodology

The initial objective of the thesis aims to enumerate and appraise the compliance of corporate governance practices in the Indian commercial banking sphere. The sample chosen for the thesis involved 21 private-sector and 12 public-sector banks as of March 31st, 2021. The period chosen for achieving the current objective varied from the financial years 2014-15 to the financial years 2021-22 steering the post companies Act, of 2013 period. In order to do the appropriate appraisal of the extent of disclosure of governance practices in the financial reports of commercial banks, the technique of content analysis is adapted (Stemler, S., 2000). This technique allows an investigator to methodically segment the textual evidence into the fewest components by employing absolute coding techniques. In this regard, the comprehensiveness, scope and degree of compliance were analyzed by examining the governance sections of the annual recounts of the banks. In case a particular governance dimension is adhered to, then the definitive coding of '1' was allocated and in case a particular governance norm is missing or not exhibited in the annual statements then the categorical '0' code was earmarked. The basic framework of this technique facilitated the appraisal of the governance activities of the different banks initially by estimating them qualitatively and then quantitatively in the most suitable manner (Harwood et al., 2003). The qualitative assessment capacitated in comprehending the various developmental stages of the governance activities of the banking system.

Likewise, the quantitative assessment obliged the accurate assimilation of the magnitude, frequency and prevalence of distinct corporate governance phenomena of a particular bank. Such a process suitably authorized the curtailment of the different corporate governance occurrences into definite dimensions for appropriate inquiry and exploration. The austere of adherence to the corporate governance practices and procedures of the Indian commercial banking sector was analyzed by preparing interactive visualizations using the Tableau platform. The initial process of disclosing relevant information about corporate governance procedures in annual reports involved three key steps. First, a comprehensive list of keywords related to governance was created using various sources, including previous literature reviews on governance disclosure studies and the words used in those studies. The Roget Thesaurus was also consulted to identify synonyms of the corporate governance keywords. Afterwards, annual reports were carefully examined to identify words that indicated governance. After analyzing all the sources, a total of 84 words related to governance were compiled. In the next stage, a pilot assessment was conducted using Nvivo (10) software, which involved studying 33 annual reports from the Indian commercial banking sector. Words that appeared less than five times, indicating a low frequency (less than 5), were excluded from the final selection. As a result, a final list of 42 words was obtained. These words were then categorized into six main dimensions, aligning with the provisions outlined in the Companies Act of 2013. To ensure the accuracy of the calculated scores, cross-checking was done by comparing the scores obtained from manually calculating the occurrences of individual words in a PDF document with the scores calculated by the Nvivo (10) software. Afterwards, an automated content analysis method was employed to calculate governance disclosure scores for 33 commercial bank companies over an eight-year period. These scores were utilized to draw meaningful conclusions about corporate governance disclosure practices in India.

4.3. Assessment of the compliance level of corporate governance practices using dimensions of the Companies Act, of 2013

The compliance level of corporate governance in the Indian commercial banking sphere is scrutinized by making use of content analysis of six major corporate governance measures namely, board procedures and effectiveness, audit function, risk management, remuneration, shareholder rights and information and disclosures and transparency.

Each of the six corporate governance measures is further divided into sub-indicators. The board procedures and effectiveness are reflected by using 15 sub-indicators, audit function is reflected by using 9 sub-indicators, risk management and remuneration with 5 indicators each, shareholder rights & information are reflected by 11 indicators and disclosure and transparency by using 7 indicators as highlighted by the provisions of Companies Act, of 2013. The entire mechanism commanding the imposition, administration, pursuance, revelation and divulgence of the corporate governance norms was brought significantly to notice by the substantial revisions made by the Companies Act, 2013. The studies conducted by (Khuntia, 2014; Busru et al., 2016; Das et al., 2016) foregrounded that their provisions are reconstructed and regulated as one of the foremost overhauls in enforcing the corporate governance policies among the corporate houses operating their business practices in India. It was advocated that corporate governance forethoughts of the Companies Act, 2013 are assembled and intensified on the pillars of risk management, board member scrutinization, efficient internal controls, uncompromising legal compliance, a surveillance mechanism and an austere regime for company management. Such legislation has decreed that the persons heading the committees are required to attain and possess the suitable prowess, competency, knowledge and competency to exercise the required conduct and control over the business operations. The decisions and judgements shall have the appropriate components of the suitable knowledge, virtuosity, intelligence and professionalism to strategically proceed with the daily business operations governing any organization.

4.4. Relevance of the corporate governance provisions of the Companies Act, of 2013 in the assessment of the compliance level of governance mechanism

The entire legislation of the Companies Act 2013 regulating the governance measures of an organization expressly called for constructing a mechanism of accommodating the heterodox perspectives of the stakeholders and provision of accommodating such views for improving the governance within a business unit. Making informed and deliberate decision-making, a rightful delegation of responsibility, managerial oversight, precise completion of tasks owed to the company and meeting the expectations of the stockholders are fundamental elements of the mandate listed by the Companies Act, 2013. The findings by (Thapar et al., 2017; Srivastava et al., 2018) fostered the fact that an integral part of this legislation highlights the significance of recognising the risk factors, ensuring regular

compliance with the governance jurisprudence, determining the committee's scrutinization, and adhering to the associated paperwork concerning the related party transactions. Such studies accentuated that the current legislation mandated the existence of a woman director, regular rotation of the audit committee members, and holding company meetings through different audio-visual methods. The entire blueprint of this legislation is focused on building sustainable governance practices and policies within a business unit.

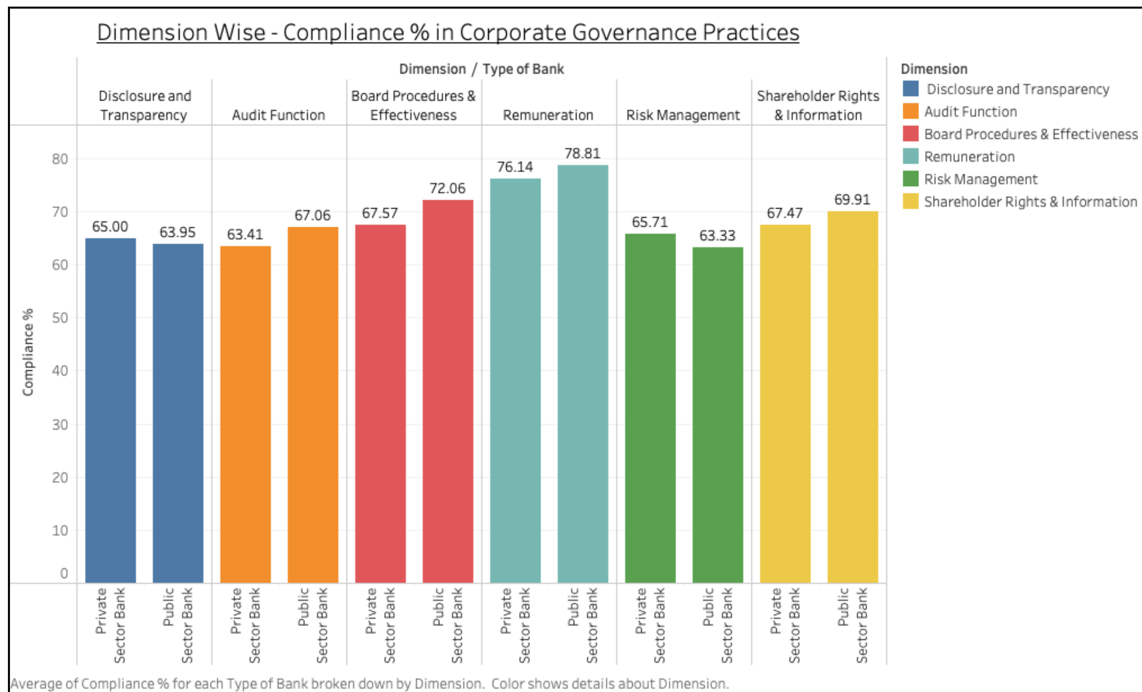
The entire focus of the legislation about governance practices of the Companies Act of, 2013 accentuated the necessity of establishing efficient performing board management within a business unit. All the other commissions such as the audit function committee, remuneration committee, risk management committee and stakeholder information committee shall work as per the due directions of the board. The exploration made by (Sharma et al., 2014; Jhunjhunwala, 2014; Pande et al., 2014; Afsharipour, 2016) in their studies fostered the significance of marshalling the business's vision and strategy with the legislative compliance requirements. It is duly expected from the board management team to recognise and facilitate the alignment of the stakeholder needs with the superior management of the organisation's risks. Such studies advocated the need of establishing an equilibrium in regulatory compliance and fulfilling the stakeholder interests at all levels. It was highlighted that this legislation has given due accord to the constitution of the accomplishment system of the board management and therefore, its efficiency must be regularly measured against the key performance areas of the business unit. It is highlighted in the legislation that the subsistence of an upright internal control system, due assessment of the inter-business investments, availability of proper audit assurance, presence of the audit committee director and vigilant mechanisms serve as an essential component in the main legislative part of the Companies Act 2013. The collective outcomes of studies by (Khuntia, 2014; Sharma et al., 2014; Pande et al., 2014; Afsharipour, 2016; Thapar et al., 2017) highlighted the need of preparing a host of different procedures which board management shall suitably fulfil in the interest of the organization. This shall include the short-term goals which shall be obliged to complete the tasks of key focus areas along with the construction of a scorecard to assess the overall performance of the board activities. It was duly analyzed in such studies that the whole mechanism of the governance structures has escalated in the recent past due to the enlargement of the investor assessments over multiple frauds occurring in the recent past across different organizations resulting in immense loss to investors.

4.5. Appraisal of compliance level of governance mechanisms as per the dimensions of the Companies Act, of 2013 on the basis of the overall banking sector

The due examination of the compliance pertaining to governance activities in the Indian commercial banks involves taking into consideration the six prominent dimensions of governance mechanism as underlined by the Companies Act, of 2013. These six dimensions deal with provisions of disclosure and transparency, audit function, board procedures and effectiveness, remuneration, risk management, shareholder information and rights committees. Figure 7 outlines the adherence to the governance norms concerning different dimensions of the Companies Act of 2013. It can be highlighted that the highest compliance is witnessed in the dimension of remuneration with a compliance percentage of 78.81% in public sector banks and 76.14% in private sector banks . The public sector banks is having one prominent bank i.e. State Bank of India which has significantly affected the overall average compliance percentage for the remuneration dimension positively and therefore, led towards increasing compliance substantially for this particular dimension. Moreover, the comparative analysis of compliance with governance mechanisms outlines that in all the other dimensions compliance adherence ranged from 63%-70%. In case of disclosures and transparency dimension, the compliance percentage was found to be 63.9% in the case of the private sector banks whereas it was 65% in the case of public sector banks. A minimal difference of 1% was witnessed consonantly of this particular dimension in both types of banks. In the case of the board procedures and effectiveness dimension, the compliance percentage was found to be 68% in the case of the public sector banks whereas it was 72% in the case of the private sector banks . A difference of 4% was observed in the case of this specific dimension in both types of banks. In the case of the risk management dimension, the compliance percentage was found to be 66% for the private sector banks whereas it was 63% in the case of the public sector banks. A difference of 3% was observed comparably for this specific dimension in both types of banks. In the case of the audit function dimension, the compliance percentage was found to be 63% in the case of private sector banks whereas it was 67% in the case of public sector banks. A difference of 4% was noticed in the case of this specific dimension in both types of banks. In the dimension of the shareholder information and rights, the compliance percentage was found to be 67% in the case of

private sector banks whereas it was 70% in the case of the public sector banks. A difference of 3% was observed likewise for this specific dimension in both types of banks.

Figure 7. Dimension-wise compliance adherence to governance practices in the Indian banking sector



Source : Author 's Calculations

The outcomes of this aspect outlined that percentage compliance with governance practices was found to be more prevalent in private sector banks compared to public sector banks in the case of the dimensions related to disclosures and transparency and risk management. In a similar manner, it can be highlighted that governance practices were found to be more dominant in public sector banks compared to the private sector banks in the case of the dimensions related to audit function, board procedures, remuneration committee and shareholder information and rights. Further, it can be inferred that there existed a minimal difference in the comprehensive compliance percentage of both sectors of banks.

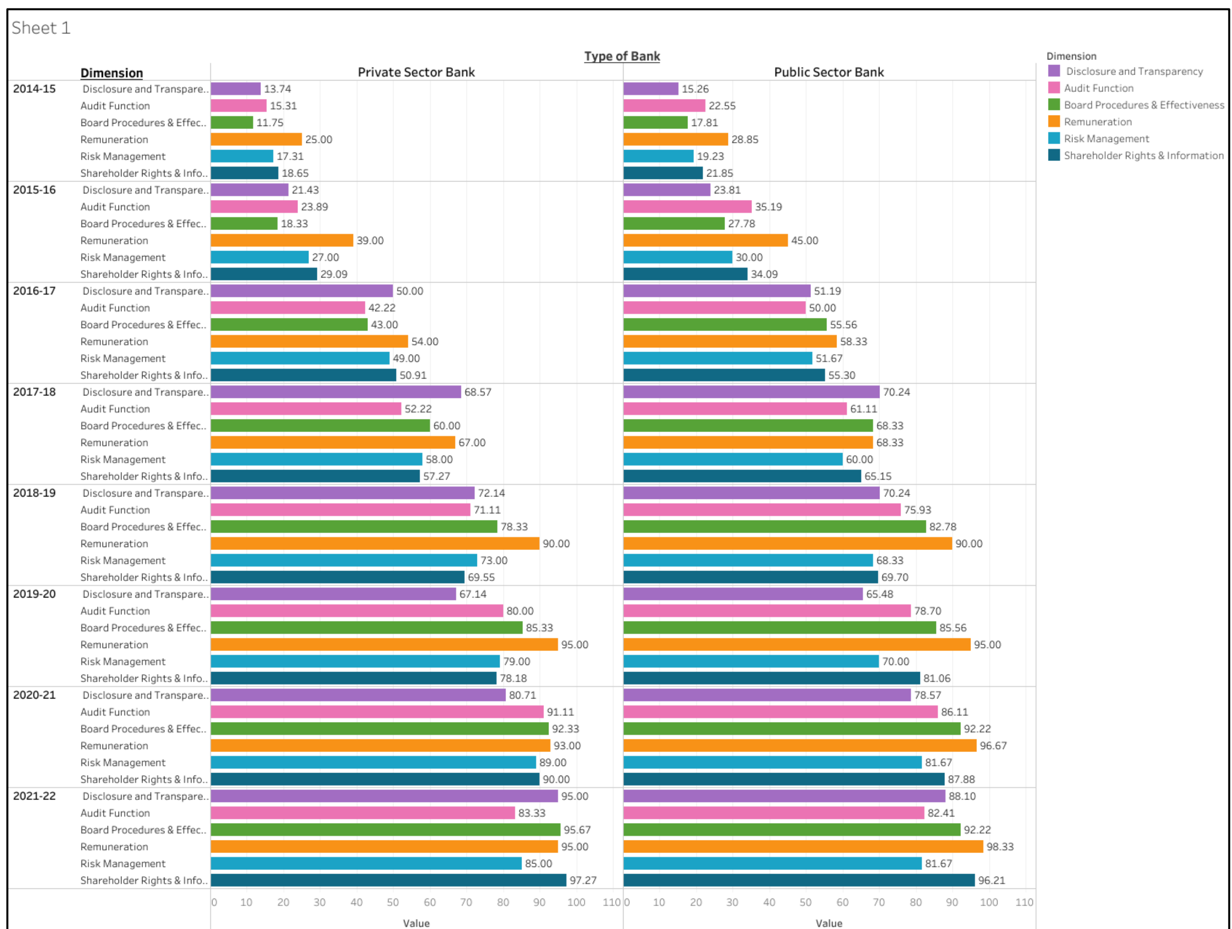
4.6. Assessment of compliance level of governance mechanisms as per the dimensions of the Companies Act, of 2013 year-wise and dimension wise

The year-wise and dimension-wise measurement and assessment of the compliance level

of corporate governance practices are undertaken in the following part of this chapter. In this evaluation, the six major dimensions of corporate governance as underlined by the Companies Act, of 2013 are appraised appositely by gauging the adherence percentage each year subsequent to the enactment of this act. It can be appraised that in the case of each of the dimensions, the percentage compliance has improved with each successive year post the enactment of the Act as accentuated by Figure 8. In the dimension of disclosure and transparency, the percentage of compliance was 13.7% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 97% in the financial year 2021-22. Consonantly, the percentage of compliance was 15.2% in the case of public sector banks in the financial year 2014-15 whereas it had shown a noteworthy upswing in overall compliance to 96.2% in the financial year 2021-22. In the dimension of the audit function, the percentage of compliance was 15% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 83% in the financial year 2021-22. Correspondingly, the percentage of compliance was 23% in the case of public sector banks in the financial year 2014-15 whereas it had shown a remarkable advancement in overall compliance to 82% in the financial year 2021-22. In the dimension of the board procedures and effectiveness, the percentage of compliance was 12% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 96% in the financial year 2021-22. Comparably, the percentage of compliance was 18% in the case of public sector banks in the financial year 2014-15 whereas it had shown a remarkable advancement in overall compliance to 92% in the financial year 2021-22. In the dimension of the remuneration, the percentage of compliance was 25% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 95% in the financial year 2021-22. The percentage of compliance was 29% in the case of public sector banks in the financial year 2014-15 whereas it had shown noteworthy progress in overall compliance to 98% in the financial year 2021-22. In the dimension of risk management, the percentage of compliance was 17% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 85% in the financial year 2021-22. Comparatively, the percentage of compliance was 19% in the case of public sector banks in the financial year 2014-15 whereas it had shown a noteworthy upswing in overall compliance to 82% in the financial year 2021-22. In the dimension of the shareholder rights and information, the percentage

of compliance was 18.65% in the case of private sector banks in the financial year 2014-15 whereas it had shown a substantial improvement in overall compliance to 97% in the financial year 2021-22. In a similar manner, the percentage of compliance was 22% in the case of public sector banks in the financial year 2014-15 whereas it had shown notable progress in overall compliance to 96% in the financial year 2021-22. It can be inferred that the Companies Act, of 2013 have emerged as a major overhaul in improving compliance among the Indian commercial sector banks. Indian banks have realized that transparency is crucial for gaining the trust of investors and attracting capital. By adhering to corporate governance regulations, banks ensure that they share precise and timely information, disclose their financial statements, and follow standardized accounting procedures. Through improved compliance, banks establish committees for managing risks, implement internal control systems, and develop frameworks for assessing risks. This approach ensures that risks are effectively monitored and minimized, thereby decreasing the probability of financial crises and fostering stability within the banking industry.

Figure 8. Year Wise & Dimension Wise adherence to corporate governance practices

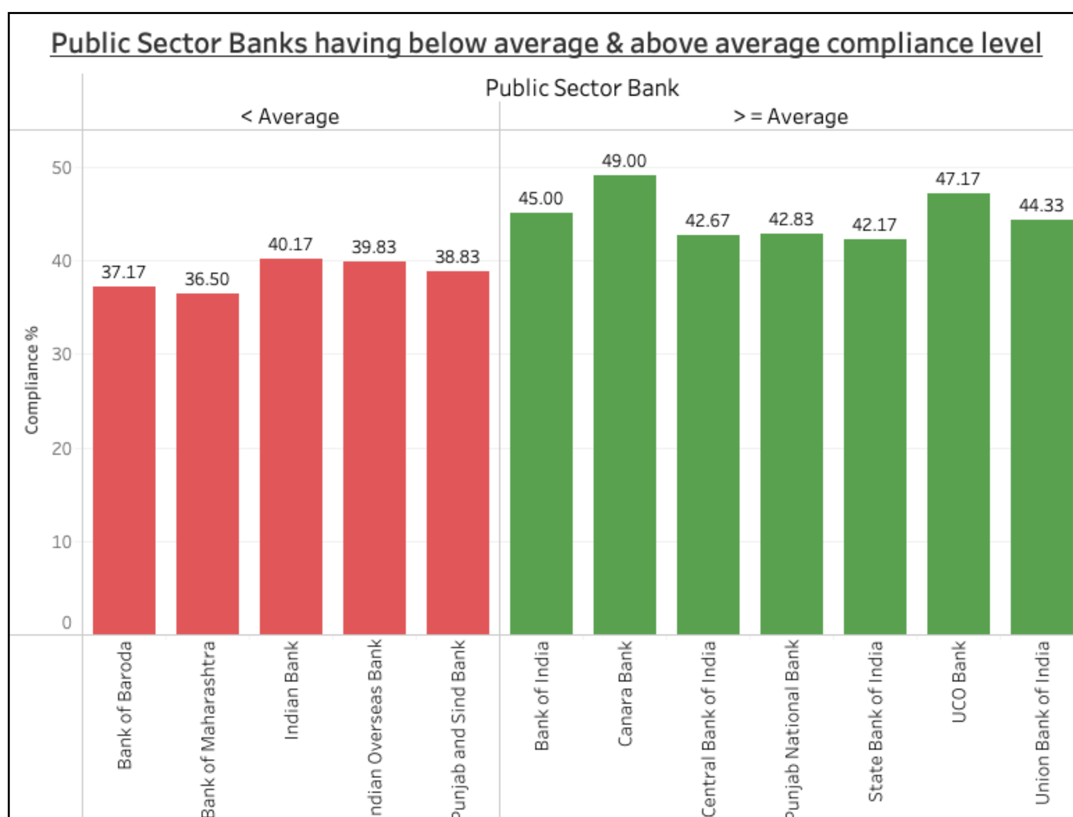


Source : Author's Calculations

4.7. Analysis of the above-average and below-average performers with respect to compliance level to corporate governance mechanism

This analysis pertains to appraising and reviewing the bank's compliance with corporate governance practices in both the public sector and private sector banks. It highlights the banks which have performed better or worse with respect to compliance with the overall mechanism outlined by the Companies Act, of 2013. All the banks are categorized into two main segments namely, the above-average performers and the below-average performers.

Figure 9. Above average and below average compliance level with corporate governance practices in public sector banks

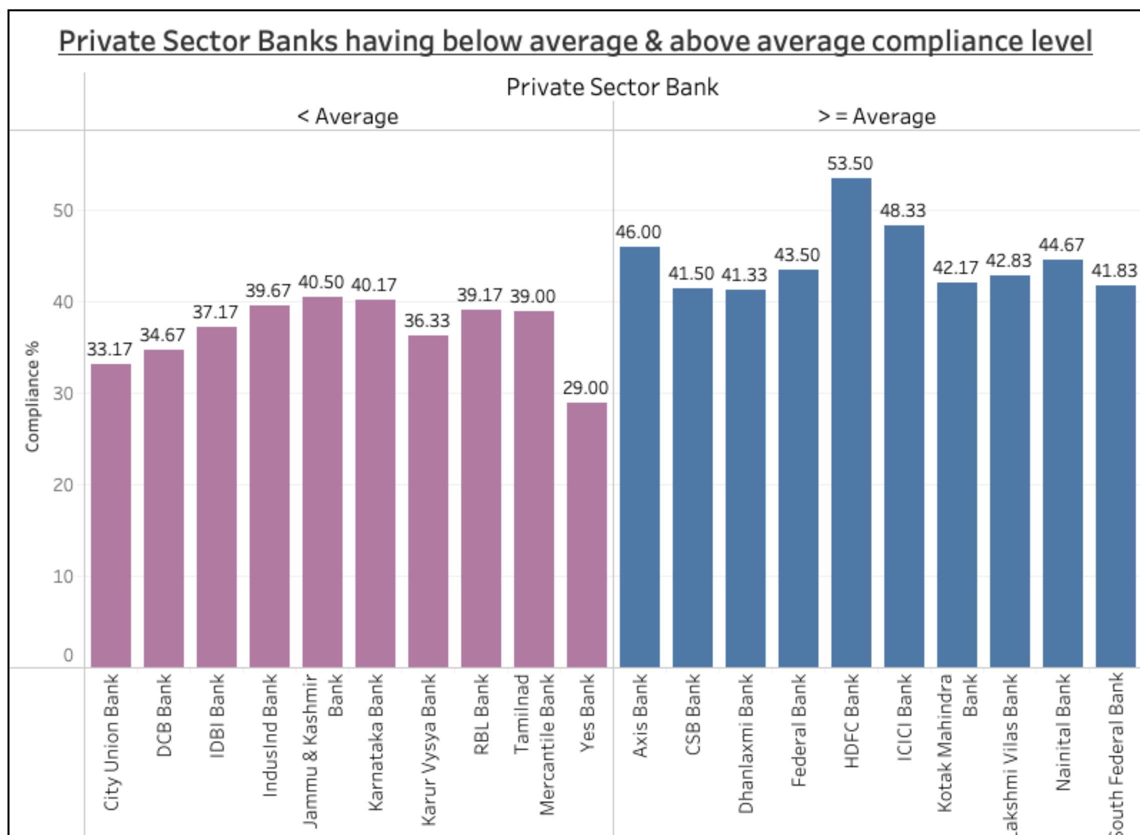


Source : Author's Calculations

Figure 9 accentuates the performance of the public sector banks in terms of compliance with corporate governance practices with respect to the provisions of the Companies Act, of 2013. It segregates all the public sector banks into two main parts i.e., the above-average performers and the below-average performers. It can be witnessed that out of the total 12 public sector banks, 7 banks have performed better and are classified as above-average performers whereas 5 public sector banks have performed worse and are

classified as below-average performers. The public sector bank with the highest compliance score is Canara bank and the one with the lowest compliance score is Bank of Maharashtra. The other prominent public commercial sector banks with the highest compliance were the Central bank of India, Bank of India and UCO Bank whereas the banks with the lowest compliance are Bank of Baroda, Indian Overseas Bank and Punjab and Sind bank. Figure 10 highlights the overall performance of the private sector banks in terms of compliance with corporate governance practices with respect to the provisions of the Companies Act, of 2013. It disintegrates all the private sector banks into two main parts i.e., the above-average performers and the below-average performers. It can be observed that out of the total 21 private sector banks, 10 banks have performed better and are classified as above-average performers whereas 10 private sector banks have performed poorer and are classified as below-average performers.

Figure 10. Above average and below average compliance level with corporate governance practices in private sector banks



Source : Author's Calculations

The private sector bank with the highest compliance score is HDFC bank and the one with the lowest compliance score is Yes Bank. The other prominent private sector banks with the highest compliance were the Axis bank, CSB bank, Dhanlaxmi Bank, Federal

bank, ICICI bank, Kotak Mahindra Bank, Lakshmi Vilas Bank, Nainital Bank and South Federal Bank whereas the banks with the lowest compliance are City Union bank, DCB bank, IDBI bank, Indusland bank, Jammu & Kashmir bank, Karnataka Bank, Karur Vysya bank, RBL bank and Tamilnad Mercantile Bank.

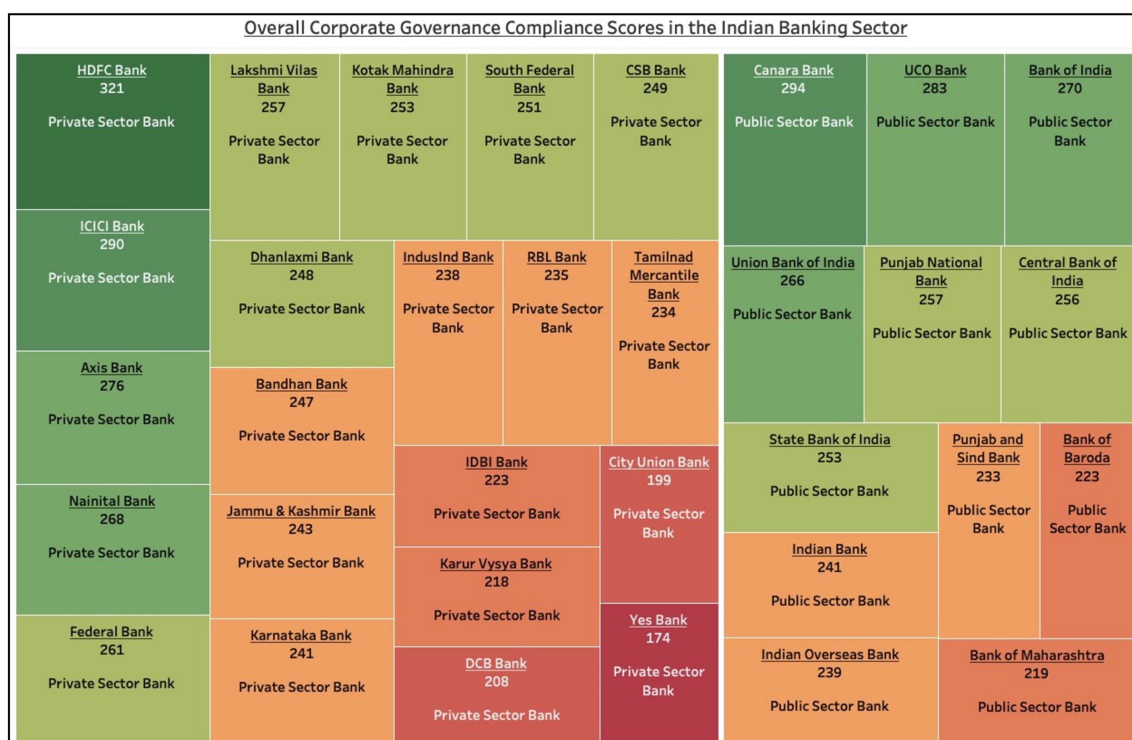
4.8. A perusal of the overall corporate governance compliance scores in the Indian banking sector

A due investigation of the adherence to the corporate governance mechanism in the Indian banking sector is depicted in Figure 11. It represents a treemap showcasing the overall compliance scores of the corporate governance practices of both the public commercial sector and private commercial sector banks since the inception of the Companies Act, of 2013. The treemap is segregated into two parts wherein the initial part represents the compliance scenario of the private sector banks and the other part outlines the compliance framework of the public sector banks. The largest rectangular part on the extreme left side highlights maximum compliance in a particular bank whereas the smallest rectangular segment delineates the lowest compliance to corporate governance mechanism in an individual bank. The highest to the lowest figures are showcased from top to bottom and simultaneously move from left to right side in a treemap.

The treemap outlined in Figure 11 showcases the sizeable collected group of rectangles placed from left to right and from top to bottom highlighting the compliance scores of the Indian banking sector. The banks with the maximum compliance scores are entrenched on the left top side and the banks with the lowest compliance scores are positioned on the bottom right side of the boundaries of the treemap. The figure sets apart the banking sector compliance scores into two parts and delineates the compliance outcomes of both commercial banks distinctively. The banks with the highest compliance with governance mechanisms set by the Companies Act, of 2013 are represented with the dark bottle green colour, the light green colour represents the next set of banks with the highest compliance scores. The banks with median adherence to governance structures are exhibited in the orange colour part of the treemap whereas the banks with the lowest compliance levels are indicated in the red-shaded part of the figure. It can be accentuated that HDFC Bank in the private sector bank category is having the maximum compliance score positioned at the left top side which is followed by the ICICI bank, Axis bank, Naintal bank and Federal bank enlisted in the subsequent rectangles below

the HDFC bank. The subsequent rectangular segments represented in the treemap outline the private sector banks with intermediate scores and the right boundary of Figure 11 foregrounds the private sector bank with the lowest score.

Figure 11. Overall corporate governance compliance scores in the Indian banking sector



Source : Author's Calculations

The banks with the least compliance with the governance mechanism set by the Companies Act, of 2013 are witnessed in DCB bank, City Union bank and Yes bank. In the case of the public sector banks, Canara bank has exhibited the highest compliance score followed by UCO bank, Union bank of India, and Bank of India in the superlative categorization. The subsequent rectangular segments represented in the treemap outline the public sector banks with intermediate scores and the right boundary of figure 11 foregrounds the public sector bank with the lowest score. The banks with the least compliance with the governance mechanism are witnessed in Bank of Baroda, Indian Overseas Bank and Bank of Maharashtra.

4.9. Sector-wise and dimension-wise comparative analysis of required compliance score and actual compliance score of corporate governance mechanisms

The compliance level of corporate governance in the Indian banking sector is scrutinized

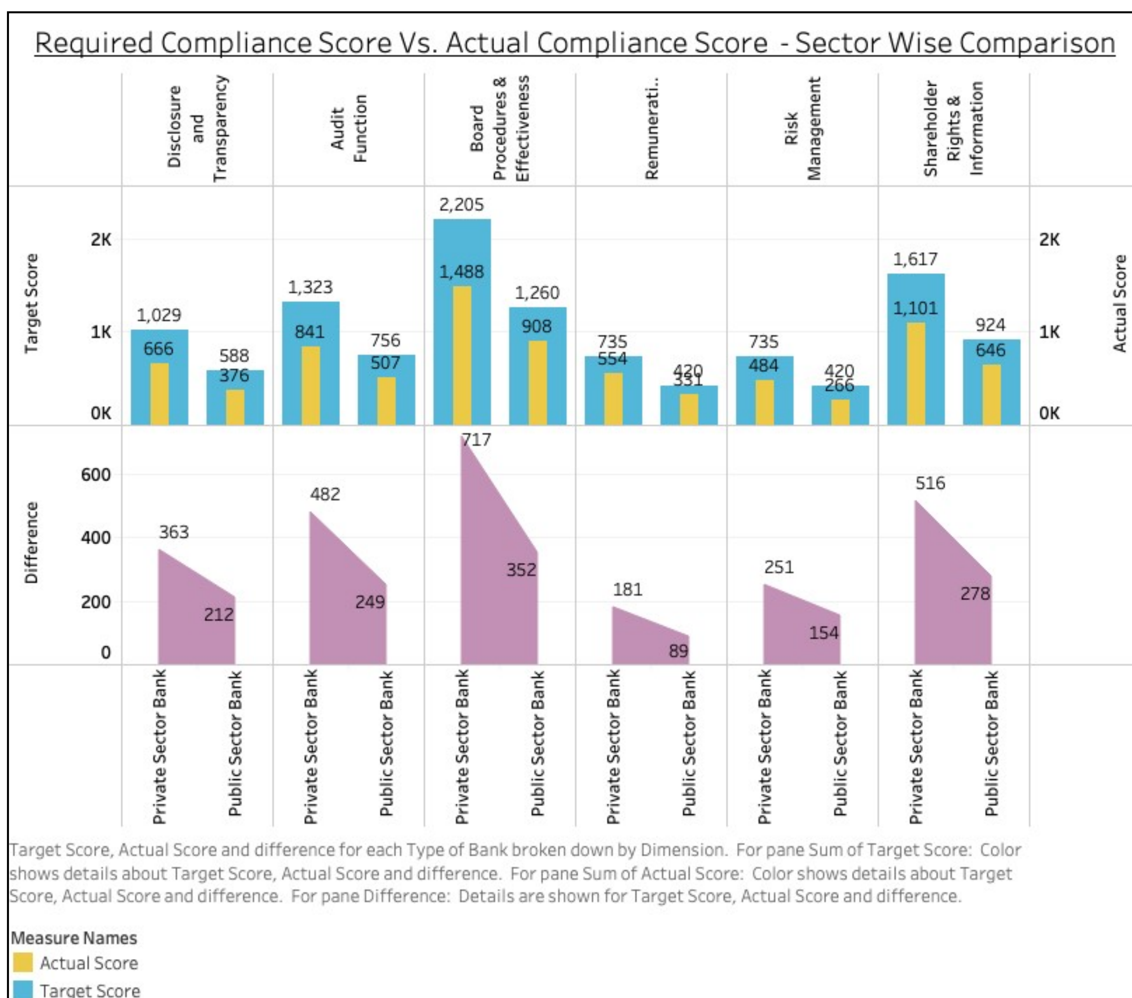
by making use of content analysis of six major corporate governance measures specifically, board procedures and effectiveness, audit function, risk management, remuneration, shareholder rights & information and disclosure and transparency. Each of the six corporate governance measures is further divided into sub-indicators. Figure 12 outlines the dimension-wise and sector-wise comparison of the corporate governance compliance scores. The board procedures and effectiveness is reflected by using 15 sub-indicators, audit function is reflected by using 9 sub-indicators, risk management and remuneration with 5 indicators each, shareholder rights & information are reflected by 11 indicators and disclosure and transparency by using 7 indicators as highlighted by the provisions of Companies Act, of 2013. The actual scores compliance scores with respect to corporate governance practices obtained by different private and public sector banks are found and compared with the required scores of corporate governance which the banks should have obtained as per the provisions of the corporate governance of Companies Act, of 2013.

It also specifies the difference between the actual compliance score and the required compliance score, sector-wise in the Indian banking sector. The actual compliance scores are represented in yellow colour whereas the target or the required compliance scores are highlighted in blue colour. The differences in required and actual obtained scores are showcased in the lower part of the figure in purple colour with absolute difference points. The actual and the required compliance scores of the corporate governance outlined in Figure 12 showcase that maximum variance is found in the dimension of board procedures and effectiveness wherein the difference is found with respect to 717 points in the case of private sector banks and 352 points in the case of public sector banks. The subsequent dimension with the next highest variance is observed in the case of the dimension of shareholder rights & information wherein the deviation is found with respect to 516 points in the case of the dimension of the audit function it is viewed that there is a difference of 482 points in the case of private sector banks and 249 points in case of public sector banks.

In the dimension of the disclosure and transparency it is viewed that there is a difference of 363 points in the case of private sector banks and 212 points in the case of public sector banks. In the dimension of the risk management it is viewed that there is a difference of 251 points in the case of private sector banks and 154 points in the case of public sector banks. The minimal variance is observed in the case of the dimension of remuneration wherein it is observed that there is a difference of 181 points in the case of private sector banks and 89 points in the case of public sector banks. It can be further

analyzed that variance in compliance with governance mechanisms is found more in the case of private sector banks compared to public sector banks. It specifies that private sector banks have shown more divergence in adherence to the corporate governance norms listed by the Companies Act, of 2013 compared to the public sector banks.

Figure 12. Required Vs. Actual compliance scores in the Indian banking sector



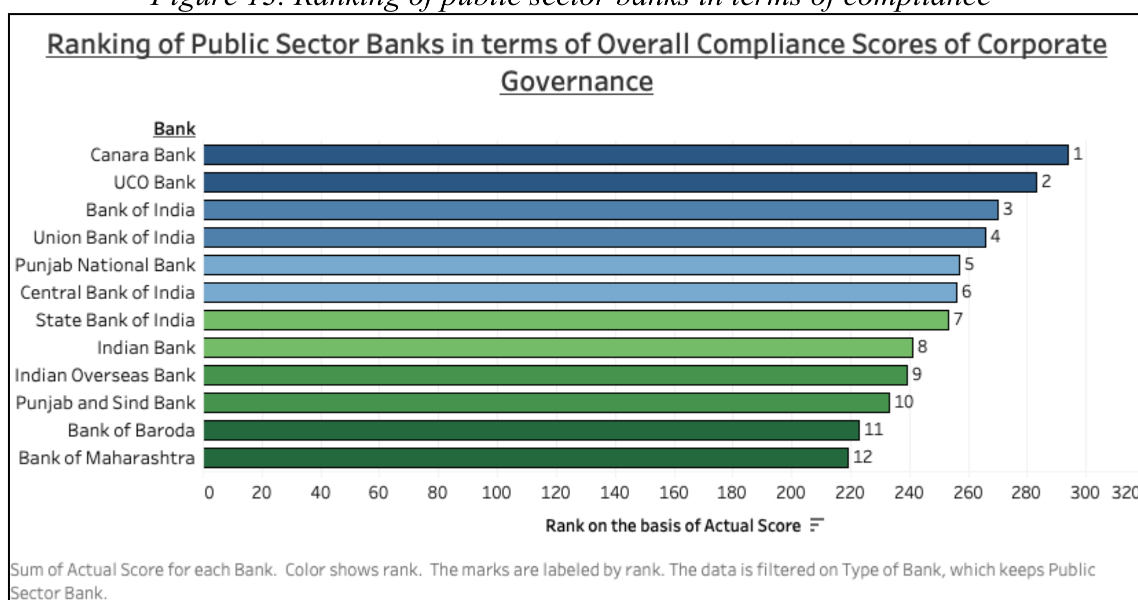
Source : Author's Calculations

4.10. Positioning of banks on the basis of overall corporate governance compliance scores

The overall ranking of the public sector banks in terms of their compliance with the corporate governance practices as enlisted by the Companies Act of, 2013 is outlined in Figure 13. This figure highlights that Canara Bank stands at the highest position by showing the highest compliance with the governance mechanism of the Act. Similarly, the public sector banks such as UCO bank, Bank of India, Union Bank of India and Punjab National Bank have exhibited the highest compliance with provisions of the

governance structures. On the other hand, it is observed that the Bank of Maharashtra has scored the lowest ranking with respect to compliance with governance mechanisms. The other banks such as Indian bank, Indian Overseas Bank, Punjab and Sind Bank and Bank of Baroda have exhibited the lowest compliance with provisions of the governance structures.

Figure 13. Ranking of public sector banks in terms of compliance

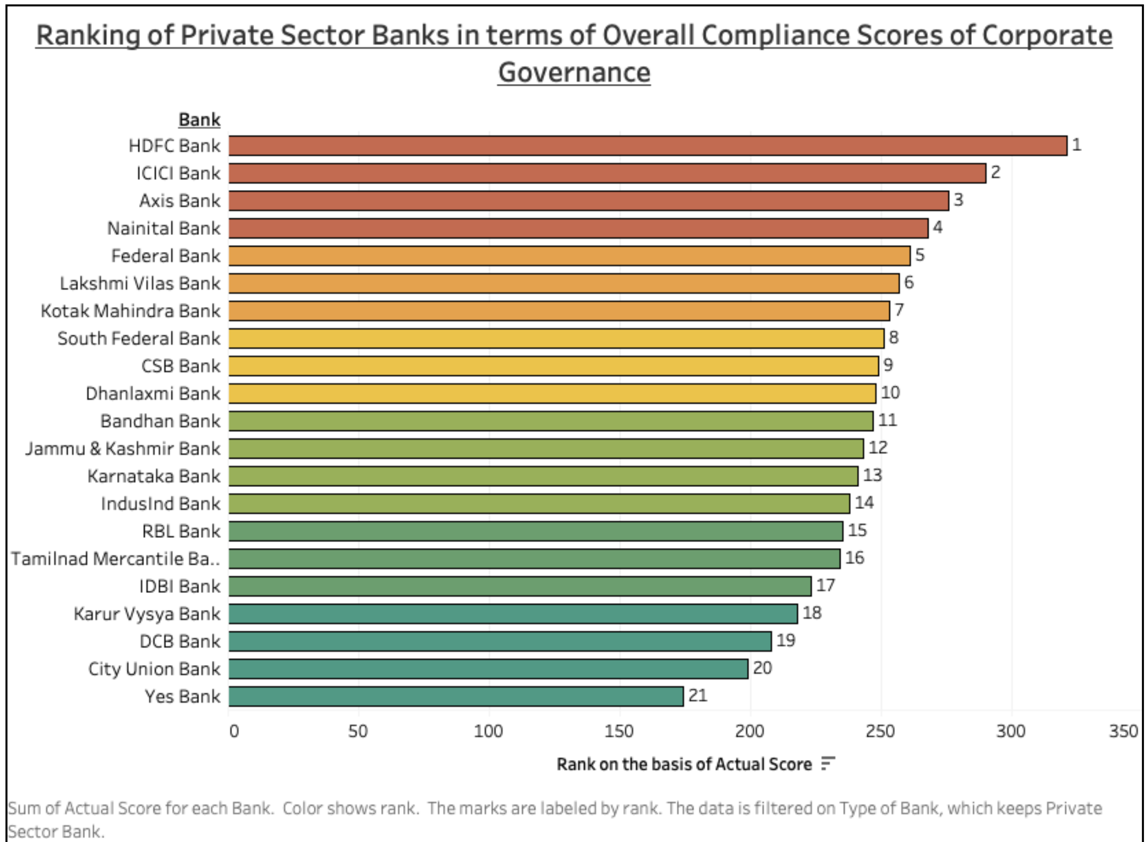


Source : Author's Calculations

The overall ranking of the private sector banks in terms of their compliance with the corporate governance practices as solicited by the Companies Act of, 2013 is outlined in Figure 14. This figure highlights that HDFC Bank stands at the highest position by showing the highest compliance with the governance mechanism of the Act. Similarly, the private sector banks such as ICICI bank, Axis Bank, Nainital Bank, Federal Bank and Laxmi Vilas Bank have exhibited the highest compliance with provisions of the governance structures. It is observed that Yes Bank has scored the lowest ranking with respect to compliance with governance mechanisms. The other banks such as Tamilnad Mercantile Bank, IDBI bank, Karur Vysya bank, DCB bank and City Union Bank have exhibited the lowest compliance with provisions of the governance structures.

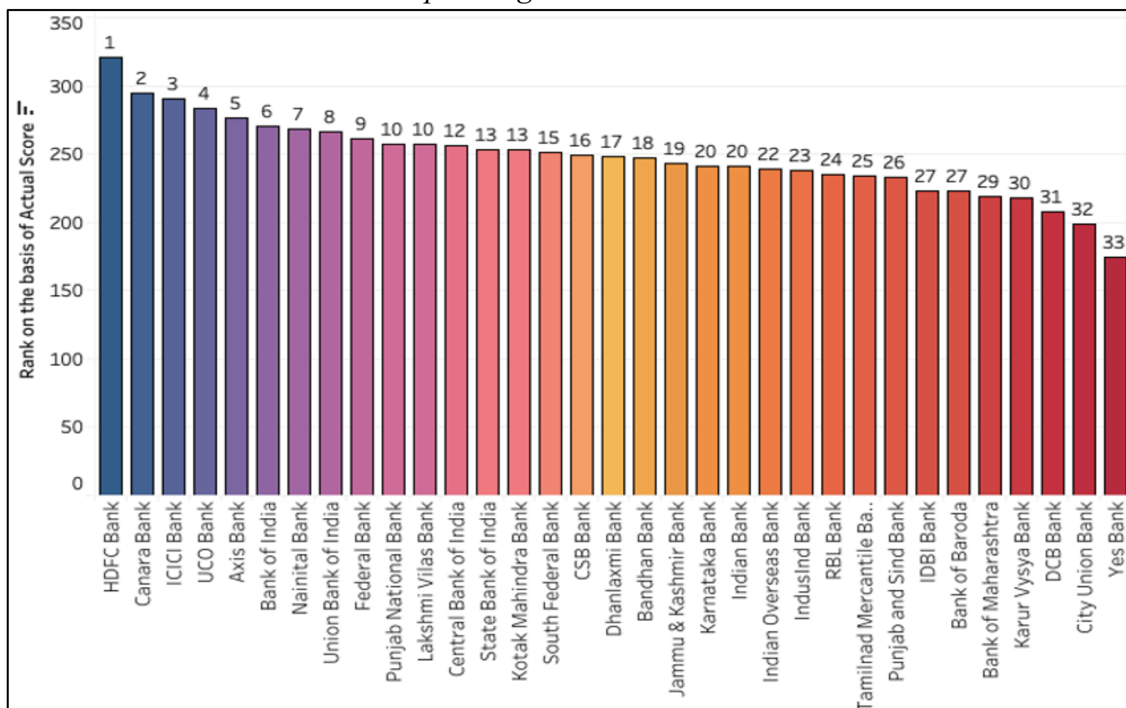
The overall ranking or positioning of the Indian banking system is highlighted in Figure 15 This figure highlights the ranking of the 21 private sector banks and 12 public sector banks. The final outcomes of the compliance level with corporate governance provisions reveal that the top five ranks and the lowest five ranks are occupied by the three private sector banks and two public sector banks.

Figure 14. Ranking of private sector banks in terms of compliance



Source : Author's Calculations

Figure 15. Ranking of the overall Indian banking system in terms of compliance with the corporate governance mechanism



Source : Author's Calculations

Three public sector banksnamely, Punjab National Bank, Indian bank and Bank of Baroda along with three private sector banks such as Lakshmi Vilas Bank, Kotak Mahindra Bank and IDBI bank are positioned at the same rank as their overall compliance score is similar to eachother. The figure segregates the highest, above-average, below-average and lowest compliance scores by highlighting them into specific colour patterns. The banks with the highest ranks are shaded with blue-colour pattern coding, the banks with the above- average compliance levels are shaded with purple colour coding, the banks with below-average compliance levels are shaded with yellow-orange colour coding whereas the banks with lowest compliance levels are shaded with dark red colour coding patterns.

4.11. Chapter Summary

This chapter intended to evaluate the compliance of corporate governance practices in the Indian banking sphere. The intensity of compliance was investigated by scrutinizing the governance sections of the annual reports of the banks. It can be highlighted that the highest compliance is witnessed in the dimension of remuneration in the sample commercial banks. It connotes that such banks have made noteworthy efforts to ensure that their remuneration policies and practices were transparent and easily understandable. Moreover, it outlines that the sample banks were careful in ensuring suitable executive compensation and any other pertinent details that would enable shareholders and stakeholders to assess the fairness and suitability of the remuneration packages. Additionally, it also suggests that such banks had a committee that oversaw the remuneration process, ensuring that the practices followed were equitable, rational, and in line with the overall strategic direction of the bank. The overall ranking in terms of their compliance with the corporate governance practices as enlisted by the Companies Act of, 2013 accentuated that Canara Bank and HDFC Bank as public sector and private sector banks respectively stood at the highest position by showing the highest compliance. On the other hand, it is observed that the Bank of Maharashtra and Yes Bank as public sector and private sector banks respectively have scored the lowest ranking with respect to compliance. The comparison of the required compliance scores and the actually obtained scores revealed that the highest variance was found in the dimension of board procedures and effectiveness whereas the lowest variance was found in the dimension of the remuneration committee.

CHAPTER 5 - IMPACT OF CORPORATE GOVERNANCE PRACTICES ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS

Corporate governance entails commanding, monitoring, and supervising the business to prosper, evolve and strengthen the usefulness of both the internal and external stakeholders. This involves suitably composing the corporate strategy on the part of the business in order to develop its overallvalue. Such prominent governance mechanisms carried out in any business help them in generating and spawning stakeholder credence. The all-inclusive structure of the governance highlights constructing and fixing the obligations of the board of directors, strict adherence to the legislative norms, a materialization of an audit commission, remuneration committee, and risk management committee, and instituting the precise code of conduct procedures and conformity to the reporting norms. Overall, the enactment of effectual corporate governance observed in commercial banks can affect financial performance by promoting transparency, strengthening risk management, nurturing accountability, attracting investors and customers, and ensuring defiance of regulatory obligations. By sustaining the confidence of stakeholders, commercial banks can achieve sustainable growth and long-term achievement. The second objective entails analyzing the impact of such governance mechanisms on the financial performance of commercial banks.

5.1. Empirical evidence establishing the interrelationship between corporate governance and firm performance

Understanding the appropriate implementation of corporate governance practices requires an examination of their impact on firms' financial performance. An extensive body of literature has explored the relationship between governance practices and performance. The composition and functioning of the board of directors play a crucial role in establishing an effective corporate governance structure within a business. A well-structured board, aligned with the overall strategic vision of the company, can significantly enhance firm performance. Research conducted by Baysinger & Butler (2019), Kiel & Nicholson (2003), Carter et al. (2003), and De Andres & Vallelado (2008) emphasized the importance of properly fulfilling

the supervisory responsibilities of the board. It was advocated that board members should strike a suitable balance between the organization's culture, stakeholder requirements, and the business unit's vision. Achieving this balance has a significant positive impact on the company's financial performance. Effective board management requires a balance between the administrative and supervisory roles of board members. Studies by Madhani (2017), Hilb (2012), and Kang et al. (2007) highlighted the importance of empowering the board management team to align with the business vision and balance stakeholder interests. Establishing a balanced scorecard can help administer the board's activities and monitor their performance. Collaboration with the audit function team, remuneration committee team, risk management team, and stakeholder rights team is necessary to promote and develop comprehensive corporate governance norms at all levels. The corporate governance framework should consider the needs and issues related to the external business environment and these committees. Positive engagement between the board management committee and other relevant committees, as emphasized in the studies by Baysinger & Butler (2019), Kiel & Nicholson (2003), Carter et al. (2003), Madhani (2017), Hilb (2012), Kang et al. (2007), and De Andres & Vallelado (2008), leads to improved financial performance of the business units. Establishing a robust governance framework is crucial for enhancing the economic and commercial outcomes of the business.

The credibility of financial statements is vital for stakeholders' trust in a business. External stakeholders carefully evaluate and scrutinize these statements when deciding to engage with an organization. Studies by Velte (2017), Mohamad et al. (2010), and Abbott et al. (2007) Velte, 2017; Haris et. al., 2019 and Mulyadi & Sihabudin, 2020 emphasize that the effectiveness of the audit team in a business unit depends on factors such as its composition and dynamics. An audit committee with a deep understanding of current business issues plays a crucial role in enforcing governance norms within an organization. These studies highlight a positive relationship between the presence of an audit team and financial performance. It is emphasized that a robust internal control system, proper audit assurance, and the role of the audit committee director are essential components for driving sound financial performance in any business unit. The audit committee ensures the effective alignment of board committee assumptions. Studies by Jurakulovna & Bahodirovich (2021), Sarens et al. (2012), and Abdullah et al. (2018) highlight that for the audit committee to positively impact financial performance, it must closely collaborate with the risk management committee, board

management team, and stakeholder committee. This close association enables early detection and control of fraudulent activities and safeguards stakeholder interests. The studies call for the development of a risk assessment-based outlook that oversees financial transactions within the business and subsidiary units (Mohamad et. al., 2010; Benton & You, 2019; Kells, 2020; Gelter & Puaschunder, 2020; Das & Ghosh, 2004; Mayur & Saravanan, 2017 and Torku & Laryea, 2021). Positive engagement between the board management commission and other relevant committees, as emphasized in previous studies, leads to improved financial performance of the business units.

5.2. Corporate governance and firm performance conceptual underpinning

The theoretical underpinning of the affiliation between corporate governance and firm performance is substantiated by numerous key theories and frameworks. These postulate conceptual foundations for understanding how corporate governance mechanisms can influence the performance of a firm. Recent studies by Nduhura et al. (2022) and Abang'a et al. (2021) highlight that effective board management skills, timely board meetings, and board diversity can positively influence a firm's economic performance. These studies emphasize the importance of establishing a disclosure framework to identify governance shortcomings and address them adequately. Numerous studies have employed financial ratios such as return on assets, return on equity, and Tobin's Q to assess the financial performance of firms and their connection to corporate governance mechanisms. Aggarwal (2013), Sayilir (2012), Grofčíková (2020), Wanyama & Olweny (2013), and Pandya (2011) utilized a panel data approach to analyze corporate governance practices and their impact on the financial performance of sampled firms. They found that board independence, balance in direction and stewardship role, alignment with the firm's strategic requirements, and a high focus on key result areas can improve the financial performance of the sampled firms. Establishing appropriate governance norms is crucial for improving the financial performance of firms. Various studies conducted by scholars such as Naeem et al. (2022), Kells (2020), Gelter and Puaschunder (2020), Das and Ghosh (2004), Mayur and Saravanan (2017), Torku and Laryea (2021), Khatib et al. (2022), and Quang (2022) recommend strengthening the internal governance framework within organizations. Such frameworks should identify and eliminate illegal practices and promote transparency and accountability. Establishing a whistle-blower policy is also essential to prevent ineffective governance practices within an organization.

Applicaton of the agency theory theorizes that conflicts may arise between shareholders and managers, but effective corporate governance mechanisms can help resolve these conflicts and enhance firm performance. It emphasizes the need to align the interests of managers and shareholders through mechanisms such as executive compensation and board oversight (Aggarwal, 2013; Sayilir, 2012; Dalwai et. al., 2015; Homaidi et. al., 2019; Haris et. al., 2019; Mulyadi & Sihabudin, 2020 and Khatib et. al., 2022). Stewardship Theory presents an alternative perspective, highlighting the importance of aligning the interests of managers and shareholders. It suggests that managers, as stewards of the organization, are motivated to act in the best interests of shareholders and the long-term success of the business. When boards empower and provide resources to managers, firm performance improves. Resource Dependence Theory underscores the significance of external resources and relationships for firm performance. It argues that firms depend on stakeholders like suppliers, customers, and shareholders for critical resources (Baysinger & Butler, 2019; Kiel & Nicholson, 2003; Carter et. al., 2003; Madhani, 2017; Hilb, 2012 and Kang et. al., 2007 and De Andres & Vallelado, 2008) Effective corporate governance practices facilitate the establishment of trustworthy and collaborative relationships with these stakeholders, ensuring a reliable flow of resources and enhancing firm performance (Aggarwal (2013), Sayilir (2012), Dalwai et al. (2015), Al-Homaidi et al. (2019), Haris et al. (2019), Mulyadi and Sihabudin (2020), and Khatib et al. (2022). Institutional Theory focuses on the influence of social norms, rules, and regulations on organizational behaviour. It suggests that firms adhere to prevailing institutional norms and adopt governance practices that are perceived as legitimate and socially accepted. Aligning corporate governance practices with institutional expectations enhances the firm's legitimacy, and reputation, and ultimately contributes to improved firm performance (Nduhura et al. (2022), Mayur and Saravanan (2017), Torku and Laryea (2021), Sayilir (2012), Grofčíková (2020), and Wanyama and Olweny (2013). The Resource-based view emphasizes the role of firm-specific resources and capabilities in creating a sustainable competitive advantage. Effective corporate governance practices enable the acquisition and utilization of strategic resources such as human capital and knowledge, which are critical for firm performance. By attracting and retaining talented executives, fostering innovation, and facilitating effective decision-making, corporate governance mechanisms contribute to the firm's advantage based on its unique resources. The governance framework should consider the interests of institutional investors and minority stakeholders. Both types of stakeholders positively

influence the overall performance of business units. Studies by scholars such as Al-Homaidi et al. (2019), Haris et al. (2019), Hidayat et al. (2021), Ferede (2012), and Mulyadi and Sihabudin (2020) suggested that investor advocacy is crucial to prevent future financial frauds and promoting board management's responsibilities towards stakeholders' interests. The governance framework should focus on creating sustainable investor engagement at all levels to gain a competitive advantage and increase investors' faith in the financial sector.

5.3. Sample and Methodology

This part of the thesis aims to find the impact of the corporate governance practices on the financial performance of the sample banking commercial banks. This assessment is grounded on involving 21 private-sector and 12 public-sector banks as of March 31st, 2021. The period chosen for achieving the current objective varied from the financial years 2014-15 to the financial years 2021-22 steering the post companies Act, of 2013 period. The current objective considered applying the panel data regression technique for recognizing the various determinants of corporate governance issues and extending it to establish its connection with the financial performance of the sample commercial banking units. The overall process of application of the panel data technique involved the usage of the pooled ordinary least squares in the first place where it was assumed that the intercept was the same for all the sample banking units (Yaffee, 2003). After applying polled ordinary least squares, the Breusch pagan test was applied to test whether the intercept of all the sample banking units is the same or not. In case the null hypothesis of the said test was not accepted, it was interpreted that the intercept of the sample banking units is having a different intercept. The tests of panel data methodology were further extended by applying the random effects model along with the Hausman test (Paul, 2011). In case the null hypothesis of the Hausman test was rejected, then it was further proceeded to administer the fixed effects model concerning each hypothesis set in the current thesis. The study took due care to fulfil the different assumptions of the panel data technique i.e., checking the normal distribution of the data, identifying the correlation between predictor variables, ascertaining the presence of outliers and evaluating the correlation of the same variables between consecutive periods. The panel data methodology employed in the thesis holistically studied the two-dimensional effects i.e., the time and the group effects. The objectives entail the use of various explanatory variables and response

variables which are applied to find the impact of the corporate governance practices on the financial performance of the sample banking commercial banks.

5.3.1. Explanatory variables

The whole mechanism of corporate governance can be explicated as the application of sound management procedures, uncompromising adherence to the provisions made by the regulatory authorities, and solicitation of moral policies for the appropriate running of business activities. In lieu of this, the corporate governance norms as underlined by the Companies Act, of 2013 such as board procedures and effectiveness (BPE), audit function (AF), remuneration committee (RC), risk management committee (RMC), disclosures and transparency (DT) and stakeholder rights & information (SRI) are designated as the independent variables for this objective. Such corporate governance variables are used to analyse the financial performance of the banks. These explanatory variables are charted in the current objective are as per the corporate governance provisions highlighted by the Companies Act, 2013 (Khatib et. al., 2022; Shingade et. al., 2022; Naeem et. al., 2022; Germain et. al., 2014; Hassan et. al., 2005; Gopinath, 2008; Mayur et. al., 2017; Das et. al., 2004; Haris et. al., 2019; Dedman, 2002; Abbott et. al., 2007; Wanyama et. al., 2013; Germain & Lee, 2014; Salim, 2017; Nassar & Jreisat, 2020; Dalwai et. al., 2015; Mohamad et. al., 2010; Benton & You, 2019; Kells, 2020; Gelter & Puaschunder, 2020; Das & Ghosh, 2004; Mayur & Saravanan, 2017; Torku & Laryea, 2021; Quang, 2022; Torku & Laryea, 2021; Baysinger & Butler, 2019; Sayilir, 2012; Dalwai et. al., 2015;Homaidi et. al., 2019; Velte, 2017; Haris et. al., 2019 and Mulyadi & Sihabudin, 2020).

5.3.2. Response variables

The financial performance is measured by the dependent variables such as return on assets (ROA), return on equity (ROE), net interest margin (NIM), net profit margin (NPM), Tobin Q (TQR), net non-performing assets (NNPA), capital adequacy ratio (CAR) and cost to income ratio (CI). The dependent variable in this study refers to the outcome or result that is being observed or evaluated. It is influenced by the independent variable, which is the factor that is being changed or manipulated in the research. The selection of dependent variables in

this study is based on a literature review conducted as part of the second objective of the thesis. The literature review includes studies that highlight the importance of various dependent variables such as return on assets, equity, interest margins, and profit margins. These studies, steered by Millar et al. (2005), Dalwai et al. (2015), Fung (2014), Tahir et al. (2022), Haris et al. (2019), Mulyadi & Sihabudin (2020), Khatib et al. (2022), Torku & Laryea (2021), Baysinger & Butler (2019), Sayilir (2012), Homaidi et al. (2019), De Andres & Vallelado (2008), Goyer (2001), Kang et al. (2007), Albu et al. (2015), Carter et al. (2003), Nassar & Jreisat (2020), Ahmad et al. (2021), Kiel & Nicholson (2003), and Das & Ghosh (2004), emphasize the significance of these dependent variables in assessing the performance of the units under study. The current objective intends to examine the impact of corporate governance on the financial performance of banks in India. To achieve this, the study considers specific performance indicators that are specific to banks, as well as commonly used financial ratios such as return on assets and return on equity. In addition, other studies have advocated the use of non-performing assets, cost to income, Tobin's Q, and capital adequacy as relevant dependent variables. These studies, conducted by Khatib et al. (2022), Torku & Laryea (2021), Haris et al. (2019), Dedman (2002), Abbott et al. (2007), Wanyama et al. (2013), Germain & Lee (2014), Salim (2017), Nassar & Jreisat (2020), Dalwai et al. (2015), Mohamad et al. (2010), Benton & You (2019), Shingade et al. (2022), Islam (2020), Goranova & Ryan (2014), Souha & Anis (2016), Dedman (2002), Albu et al. (2015), and Zulfikar et al. (2020), feature the significant contribution of these dependent variables in evaluating the performance of the units under study.

5.3.3. Control variables

Control variables are carefully managed or coordinated in a current objective to differentiate the affiliation between the explanatory variable (corporate governance) and the response variable (firm performance). These control variables can potentially impact firm performance. These variables are taken into consideration to ensure that any observed effects on banking performance can be primarily attributed to corporate governance.

CEO duality: According to agency theory, it is advocated to separate the roles of CEO and chairman of the board in order to establish effective monitoring (Goranova & Ryan (2014)

and Souha & Anis (2016). The Cadbury code further proposes that splitting the roles of chairman and CEO enables the board to exercise control functions in a constructive manner, which ultimately leads to improved corporate performance. Supporting this perspective, Millar et al. (2005); Dalwai et al. (2015) and Fung (2014), found that commercial banks with separate roles outperform those with combined roles. To measure the impact of CEO duality on firm performance, it is essential to control for this variable. CEO duality is embodied by a dummy variable, where a value of 1 is allocated if the chairman of the board and the CEO of the company are the same people, and 0 is dispensed otherwise. This control variable allows researchers to examine the effects of CEO duality on firm performance, ensuring that any observed relationships are not solely influenced by the combination of these roles.

Insider directorship: The Stewardship theory backs the presence of insider directors on corporate boards. According to this theory, a higher number of inside directors is believed to be allied with superior corporate performance. The rationale behind this perspective is that inside directors, being part of the organization, possess a deep understanding of the banking business and are more competent in making decisions compared to outside directors. This competence is reflected in their ability to make superior decisions that aim to maximize profits for shareholders (Das et. al., 2004; Haris et. al., 2019; Dedman, 2002 and Abbott et. al., 2007). The Stewardship theory further asserts that senior executives, serving as insider directors, have a vested interest in not depriving shareholders of benefits since their own reputation is at stake. To examine the relationship between insider directorship and firm performance, the presence of insider directors is controlled for in the study. It is presumed that insider directorship will have a positive effect on bank's performance. The measurement of insider directorship is done by calculating the proportion of executive directors on the board of the company. This control variable allows researchers to assess the impact of insider directors on firm performance, ensuring that any observed relationships are not solely influenced by the presence or absence of these insider directors on the board.

Board activity: The theme of board activity has been attempted from different perspectives by various researchers. Germain & Lee, 2014; Salim, 2017; Nassar & Jreisat, 2020; Dalwai et. al., 2015 and Mohamad et. al., 2010 contend that a higher frequency of board meetings is likely to lead to superior performance. On the other hand, Aggarwal (2013), Sayilir (2012)

and Dalwai et al. (2015), suggests that boards should be relatively inactive, and high board activity may be a response to poor performance rather than a driver of improved outcomes. Such studies also presented a more nuanced view, stating that the relationship between board meetings and performance is complex. It was established that boards that met often were valued less by the market. In this objective, board activity is measured using the total number of board meetings conducted by a company within a year. By examining the frequency of board meetings, the study purposes to understand the relationship between board activity and performance, while accounting for potential confounding factors.

Bank's age: The maturity and experience of a bank, which often correlates with its age, can impact its performance. Controlling for the bank's age enabled to scrutinize the influence of corporate governance on performance while accounting for variations related to the bank's maturity (Baysinger & Butler, 2019; Kiel & Nicholson, 2003; Carter et. al., 2003; Madhani, 2017; Hilb, 2012 and Kang et. al., 2007).

Bank Size: The size of a bank, often measured by metrics like total assets or market capitalization, can have an impact on its performance. By controlling for the size of the bank, researchers can assess the specific influence of corporate governance on bank's performance, independent of the bank's size (Baysinger & Butler, 2019; Homaidi et. al., 2019; Haris et. al., 2019; Dalwaiet. al., 2015; Sayilir, 2012; De Andres & Vallelado, 2008; Goyer, 2001 and Kang et. al., 2007).

Therefore, it can be inferred that by controlling the above variables enabled them to isolate and comprehend the specific impact of corporate governance on banking performance, providing more accurate and reliable results in their study.

5.4. Empirical model

The term y_{it} is used instantaneously for all the dependent variables used in the thesis such as return on assets (ROA), return on equity (ROE), net interest margin (NIM), net profit margin (NPM), Tobin Q (TQR), net non-performing assets (NNPA), capital adequacy ratio (CAR) and cost to income ratio (CI). These are the performance measures of the public sector banks referred to as iin the particular financial year of t. The β is the variable coefficient with α as

constant and ε_{it} as the error term.

The regression model recognized by using the above-mentioned independent and dependent variables is as follows:

$$y_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$$

5.5. Determining the interrelationship between ROA and corporate governance in the case of public sector banks

The regression model used for establishing the interconnection ROA and the corporate governance is:

$ROA_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where $\beta$is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis tested is:

$H_0$1:1: There is no significant impact of corporate governance on the ROA in the public sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overallregression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm isapplied initially by taking the return on assets as the dependent variable.

Table 9. Application of Pooled OLS model with ROA as outcome variable

Source |	SS	df	MS	Number of obs. = 84
Model |	1841.89483	11	167.444985	F(6, 77) = 1.61
Residual |	18308.5213	228	80.3005319	Prob > F = 0.023
Total |	20150.4161	239	84.3113644	R-squared = 0.07614
				Adj. R-squared = 0.7819

ROA	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	-.0789585	.1357233	1.62	0.106	-.0471018	.488708
AF	.1161094	.7344048	-1.40	0.162	-1.127976	.1898618
RM	.097074	.6122214	0.22	0.826	1.386723	1.735299
REM	-.1099989	.0623697	-1.41	0.269	-.0256582	.007177
SRI	-.0014805	.0125653	1.54	0.125	-.0059355	.0481828
DT	.2577872	.0712379	0.09	0.928	-.0399167	.0364264
_cons	15.31466	.0216383	-1.17	0.244	2.04876	2.69875

Source: Author's compilation

The explanatory variables of corporate governance were assumed to be uncorrelated with the error term. Such variables are conjectured as strictly exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are illustrated in Table 9. The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumed with the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects model were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested fortheir normality, hetereoskedescity, multicollinearity and autocorrelation.

Table 10. Shapiro – Francia test for normality

Variables	Variable Type	Obs.	z	Prob>z
ROA	Dependent variable	147	8.243	0.0634
ROE	Dependent variable	147	8.161	0.0712
NIM	Dependent variable	147	4.123	0.0634
NPM	Dependent variable	147	6.211	0.0731
TQR	Dependent variable	147	4.426	0.0541
NNPA	Dependent variable	147	5.218	0.0554
CAR	Dependent variable	147	4.441	0.0512
CI	Dependent variable	147	1.243	0.0577
BPE	Independent variable	147	3.213	0.0676
AF	Independent variable	147	5.145	0.1151
REM	Independent variable	147	6.141	0.1132
RM	Independent variable	147	4.203	0.1010
SRI	Independent variable	147	4.113	0.0893
DT	Independent variable	147	7.229	0.1004

Source: Author's compilation

Table 11. Variance inflation factor of the independent variables

Variables	VIF	1/VIF = Tolerance
Board Procedures & Effectiveness (BPE)	2.07	0.483
Audit Function (AF)	2.12	0.472
Risk Management (RM)	1.76	0.568
Remuneration Management (REM)	2.00	0.500
Shareholder's Rights & Information (SRI)	1.86	0.538
Disclosure & Transparency (DT)	1.91	0.524
Mean VIF		0.500

Source: Author's compilation

The normality of the data is tested using the Shapiro – Francia test. This test of normality is performed on all the regressors as well as the response variables used in the current thesis.

The outcomes of this test as reflected in Table 10 accentuate that the p-value of all the variables is greater than 0.05. This stipulates that the null hypothesis is accepted and data is normally distributed. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 11 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors inthe regression analysis. The results of this test as exhibited in Table 12 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 12. Variance inflation factor for independent variables

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 47.10 Prob > chi2 = 0.5762	

Source: Author's compilation

Table 13. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 57.098 Prob > F = 0.0612	

Source: Author's compilation

Table 14. Breusch Pagan Multiplier test for the outcome variable, ROA

Breusch and Pagan Lagrangian multiplier test for random effects

ROA[Bank,t] = Xb + u[Bank] + e[Bank,t]

Estimated results:

	Var	sd = sqrt(Var)
ROA	13103.363	114.5127
e	8380.081	91.58555
u	3655.329	60.50196
chibar2(01) =	45.23	
Prob > chibar2 =	0.0021	

Source: Author's compilation

In addition, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 13 displays that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of paneldata methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of allthe banking entities as the same or constant.

Table 15. Hausman test for the outcome variable, ROA

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	-.0371801	1.231551	-1.2687311	.0600943
AF	-.0313083	4.419083	-4.4503913	1.589546
RM	-.010309	-2.34124	2.330931	1.667826
REM	-.0178698	-1.209361	1.1914912	.7362581
SRI	.0137143	-3.409126	3.4228403	1.87762
DT	-.0052857	-1.093451	1.0881653	.7666078
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.39 Prob>chi2 = 0.0526				

Source: Author's compilation

After the application of the pooled ordìnary least squares, the Brėusch Pagan test was implemented. The results of this test aimed at identifying whether the banking units are having thesame or different intercepts. The rejection or acceptance of the hypothesis of this test led to administering the application of the random or fixed effects model. Efforts were made to solicit the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test. The Lagrange Multiplier test compared the random effects and the pooled ordinary least squares model.

The results of this test as outlinedin Table 14 shows that the p-value is less than 0.05. Such results imply that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 15 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 16 shows that the hypothesis stating the no significant impact of corporate governance on the return on assets of the public sector banks is rejected.

Table 16. Application of random effects model for the outcome variable, ROA

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.8123 between = 0.0115 overall = 0.3808			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0041			
ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.231551	.0296977	0.26	0.041	.0504109	.066002
AF	4.419083	.0120522	1.14	0.023	.0099076	.0373362
RM	2.34124	.0063686	1.62	0.034	.0227912	.0021732
REM	1.209361	.0084979	2.10	0.010	.345253	-.0012143
SRI	3.409126	.0120522	1.14	0.046	.0099076	.0373362
DT	1.093451	.0170946	0.31	0.002	.0387906	.0282192
_cons	1.231551	.161056	17.07	0.001	2.434061	3.065389
sigma_u	.18578091					
sigma_e	.29610103					
rho	.28246537 (fraction of variance due to u_i)					

Source: Author's compilation

This specifies that corporate governance demonstrated a consequential role in establishing the return on assets of the public sector banks. All the independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights and disclosures and transparency considerably affected the return on assets of the public sector banks. The r-squared of 0.8123% signifies that 81.2% of the variance in the return on assets is confirmed or described by the regressors. One unit change in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights and disclosures and transparency results in 1.231 times, 4.419 times, 2.34 times,

1.20 times, 3.40 times and 1.09 times change in return on assets of the public sector banks. The above outcomes accentuate that the apposite composition of the board members, their suitable qualifications, the existence of the independent directors, and their diversity positively influenced the return on the assets of the public sector banks. It was inferred that in such cases, the strategic decision-making made by the board membersshall be in the best interests of the banks and the assets of the banks are effectually utilized to stimulate profits in the banking structure.

Table 17. Application of fixed effects model for the outcome variable, ROA

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.5671 between = 0.0115 overall = 0.3808			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3299			F(11,205) = 24.58 Prob > F = 0.0010			
ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	-.0371801	.0296977	0.26	0.793	.0504109	.066002
AF	-.0313083	.0120522	1.14	0.255	-.0099076	.0373362
RM	-.010309	.0063686	-1.62	0.106	-.0227912	.0021732
REM	-.0178698	.0084979	-2.10	0.035	-.345253	-.0012143
SRI	.0137143	.0120522	1.14	0.255	-.0099076	.0373362
DT	-.0052857	.0170946 -	-0.31	0.757	-.0387906	.0282192
_cons	2.749725	.161056	17.07	0.000	2.434061	3.065389
sigma_u sigma_e rho	.18578091 .29610103 .28246537 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 6.44 Prob > F = 0.0000						

Source: Author's compilation

Additionally, it is deduced that the adequate composition of the audit committee, accurate formation and implementation of appropriate internal audit procedures, and presence of the non- executive directors/company secretary in the auditing process assures correct vouching of businesstransactions along with inhibition of misreporting, which is indirectly positively influenced the return on the assets of the public sector banks. Comparably, it was comprehended that the formation of a suitable remuneration committee enlists a better quality executive work in the banking mechanisms thereby, indirectly influenced the positive outcomes on the return on the assets of the public sector banks. Furthermore, it is concluded that banks which make investmentsin acceptable risk management procedures

adequately ensured enhanced risk monitoring and measurement. Such risk awareness on the part of banking structures positively influenced the return on the assets of the public sector banks. In like manner, the establishment of suitable shareholders committees in the banking structures improved the oversight and control of the board of directors where they met the expectations and interests of shareholders all the time. Such, overall good control and management on the part of the board is further associated with improved return on the assets of such banks. Moreover, it is insinuated that appropriate disclosures exhibiting the adherence to significant accounting policies, reports on management discussions and the code of conduct indirectly influenced the return on the assets of the public sector banks.

5.6. Establishing the interconnection between ROE and corporate governance in the case of public sector banks

The regression model used for establishing the interconnection between the ROE and corporate governance is:

$ROE_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β is the variable coefficîent with α as constant and ε_{it} as the error term.

In this case, the hypothesis tested is:

$H_0 1{:}2$: There is no significant impact of corporate governance on the ROE in the public sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the return on equity as the dependent variable. The explanatory variables of corporate governance were assumed to be uncorrelated with the error term . Such variables are conjectured as strictly exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are depicted in Table 18.

Table 18. Pooled OLS model with return on equity as the dependent variable

Source	SS	df	MS		Number of obs. = 84	
Model	5245.49038	11	385.953671		F(6, 77) = 1.61	
Residual	58831.1138	228	258.031201		Prob > F = 0.0340	
Total	63076.6042	239	263.918846		R-squared = 0.6930	
					Adj. R-squared = 0.7123	
ROE	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	1.695965	.2433987	1.54	0.025	-.105002	.8541949
AF	-.232752	.2802302	-0.42	0.673	-.6704473	.4338969
RM	-.9922823	1.017988	-0.96	0.340	-2.98015	1.031585
REM	.7381702	.3152359	1.07	0.008	-.9593183	.282978
SRI	-.9094797	.8444917	-1.08	0.283	-2.573486	.7545263
DT	23.9977	7.190055	3.34	0.621	9.830254	38.16516
_cons	-.1182752	.2802302	-0.42	0.673	-.6704473	.4338969

Source : Author's compilation

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were expended in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor.

Table 19. Variance inflation factor of the independent variable

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 317.32 Prob > chi2 = 0.5017	

Source : Author's compilation

Table 20. Woodridge's test for testing autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 112.67 Prob > F = 0.0762	

Source : Author's compilation

This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 11 stretch between 1 to 3 which focuses that the data being moderately correlated

(Craney & Surles, 2002).

Table 21. Breusch Pagan Multiplier test for the outcome variable, ROE

Breusch and Pagan Lagrangian multiplier test for random effects ROE[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
ROE	234.603	18.966
e	174.388	13.244
u	87.3842	23.494
chibar2(01) =	56.81	
Prob > chibar2 =	0.0008	

Source: Author's compilation

The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as shown in Table 19 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 20 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant.

After the application of the pooled ordìnary least squares, the Brėusch Pagan test was implemented. The results of this test aimed at identifying whether the banking units are having thesame or different intercepts . The rejection or acceptance of the hypothesis of this test led to administering the application of the random or fixed effects model. Efforts were made to solicit

the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

The Lagrange Multiplier test compared the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 21 shows that the p-value is less than 0.05. Suchresults imply that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 22 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 23 shows that the hypothesis stating the no significant impact of corporate governance on the return on equity of the public sector banks is rejected.

Table 22. Hausman test for the outcome variable, ROE

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	0.9728199	1.321551	-0.3487311	0.738136
AF	0.9786917	4.509083	-3.5303913	0.711071
RM	0.999691	-2.25124	3.250931	0.858886
REM	0.9921302	-1.119361	2.1114912	0.074457
SRI	1.0237143	-3.319126	4.3428403	0.790491
DT	1.0047143	-1.003451	2.0081653	0.968170
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.44 Prob>chi2 = 0.0554				

Source: Author's compilation

The above results specifies that corporate governance demonstrated a consequential role in establishing the return on equity of the public sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights and disclosures and transparency considerably affected the return on equity of the public sector

banks. The r-squared of 0.7692% indicates that 76.92% of the variance in the return on equity is confirmed or illuminated by the above regressors. It can be highlighted that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights begets in 2.93 times, 1.82 times, 0.133 times, 2.11 times, 1.28 times change in return on equity of the public sector banks . Moreover, it is found that there exists a single regressor i.e., disclosures and transparency which does not suggestively influenced the return on equity of the public sector banks. The above outcomes accentuate that the effective working of the board members and execution of their due responsibilities in the bests interests of the shareholders positively influenced the return on the equity of the public sector banks.

It was inferred that in such cases, the strategic decision-making made by the board members in the best interests of the shareholders generates the high return on equity for the public sector banks. Additionally, it is deduced that the composition of the audit committees is conveniently substituted in all the situations wherein the agency costs are more. Therefore, it can be inferred that suitable formation of audit committees work as proxies indirectly so that sufficient returns aregenerated by the board of directors for the shareholders, thereby improving the return on equity for the public sector banks.

Table 23. Application of random-effects model for the outcome variable, ROE

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.7692 between = 0.0115 overall = 0.3808			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0038			
ROE	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	2.932721	1.310398	0.61	0.001	-3.369562	1.767106
AF	1.82121	.7151849	1.41	0.010	-2.413098	.390375
RM	.1339682	.2827025	0.51	0.014	-.6971564	.411017
REM	2.110831	.9685525	0.54	0.042	-2.423571	1.373085
SRI	1.288644	.3134651	2.22	0.035	-1.310038	-.0812771
DT	1.012279	.7530018	0.84	0.210	-2.111808	.8399048
_cons	.4589402	7.164871	2.42	0.122	24.75965	52.84543
sigma_u	.18578091					
sigma_e	.29610103					
rho	.28246537 (fraction of variance due to u_i)					

Source : Author's compilation

Table 24. Application of the fixed-effects model for the outcome variable, ROE

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.4704 between = 0.0101 overall = 0.3422			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 3.22 Prob > F = 0.0005			
ROE	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	.5725853	.3031146	-0.50	0.617	-.749369	.4458745
AF	-.3493053	1.01116	-0.33	0.742	-2.327071	1.660144
RM	-.2992996	.3337777	-2.65	0.009	-1.542013	-.2258588
REM	.2291549	.761025	-0.76	0.450	-2.075804	.9250751
SRI	-.812095	1.339366	-0.37	0.714	-3.13275	2.148647
DT	-.4920518	.405323	0.57	0.572	-.5699812	1.028291
_cons	44.17615	7.213326	6.12	0.000	29.95433	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 5.74			Prob > F = 0.0000			

Source : Author's compilation

Comparably, it was comprehended that accurate management and disbursement of incentives to the directors helps in aligning the interests of managers and shareholders in an effective manner thereby indirectly influencing the positive outcomes on the return on the equity of the public sector banks. Furthermore, it is concluded that appropriate risk management procedures adopted in the banks impacts the return on equity as risky banks attracts the risk-taking investors. The relationship of risk and return is effectively managed by the risk management committee and assures the investors with positive returns. In like manner, the establishment of suitable shareholders committees and exercising of suitable shareholder rights committee directly influences the returnon equity of the banks. The committee ensures that shareholders get required return on their investments and their funds are not misappropriated in any case.

5.7. Ascertaining the interrelationship between NIM and corporate governance in the case of public sector banks

The regression model used for establishing the interconnection between the NIM and

corporate governance is:

$NIM_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β is the variable coefficîent with α as constant and ε_{it} as the error term.

In this case, the hypothesis tested is:

$H_0$1:3: There is no significant impact of corporate governance on the NIM in the public sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the net interest margin as the dependent variable. The explanatory variables of corporate governance were assumed to be uncorrelated with the error term. Such variables are speculated as strictly exogenous and they do not depend upon the past, present and future values of the error term. The results of the pooled regression model are depicted in Table 25.

Table 25. Pooled OLS model with net interest margin as the dependent variable

Source	SS	df	MS		Number of obs. = 84	
Model	6.53381771	11	385.953671		F(6, 77) = 1.61	
Residual	39431.1138	228	258.031201		Prob > F = 0.0023	
Total	63076.6042	239	263.918846		R-squared = 0.6798	
					Adj. R-squared = 0.6983	
NIM	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	0156358	.2433987	1.54	0.025	-.105002	.8541949
AF	-.0176765	.2802302	-0.42	0.673	-.6704473	.4338969
RM	-.0166188	.026517	-0.63	0.531	-.0688685	.035631
REM	-.0192012	.0082114	-2.34	0.020	-.0353811	-.0030212
SRI	-.9094797	.8444917	-1.08	0.283	-2.573486	.7545263
DT	.0013227	.0219977	0.06	0.952	-.0420221	.0446675
_cons	1.716854	.1872899	9.17	0.000	1.347813	2.085894

Source : Author's compilation

Table 26. Variance inflation factor of the independent variable

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 89.90 Prob > chi2 = 0.1891	

Source : Author's compilation

Table 27. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 18.990 Prob > F = 0.0622	

Source : Author's compilation

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 11 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as shown in Table 26 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 28. Breusch Pagan Multiplier test for the outcome variable, NIM

Breusch and Pagan Lagrangian multiplier test for random effects NIM[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
NIM	234.56	18.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	116.72	
Prob > chibar2 =	0.0034	

Source: Author's compilation

Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 27 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Brėusch Pagan test was implemented. The results of this test aimed at identifying whether the banking units are having thesame or different intercepts. The rejection or acceptance of the hypothesis of this test led to administering the application of the random or fixed effects model. Efforts were made to solicit the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

Table 29. Application of the Hausman test for the outcome variable, NIM

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	4.23632	1.311065	2.925255	.1436811
AF	-.013334	2.100587	-2.113921	.2422186
RM	-1.108647	1.301317	-2.409964	.1808195
REM	-.2291549	3.100369	-3.3295239	.1476026
SRI	-.812095	1.517428	-2.329523	.0675883
DT	-.4920518	1.450911	-1.9429628	.2770504
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 34.39 Prob>chi2 = 0.002				

Source: Author's compilation

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 28 shows that the p-value is less

than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The outputof this test as indicated in Table 29 shows that the p-value is greater than 0.05 which shows thatthe random effects model is more apposite compared to the fixed effects model. The results arespecified by the random effects model in Table 30 shows that the hypothesis stating the no significant impact of corporate governance on the net interest margin of the public sector banks is rejected. The above results specifies that corporate governance demonstrated a consequential part in establishing the net interest margin of the public sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency considerably affected the net interest margin of the public sector banks. The r- squared of 0.6734% indicates that 67.34% of the variance in the net interest margin is expoundedor described by the regressors. One unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well the disclosures and transparency creates in 1.31 times , 2.10 times , 1.30 times , 3.10 times , 1.51 times and 1.45 times change in net interest margin of the public sector banks respectively.

Table 30. Application of the random-effects model for the outcome variable, NIM

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.6734 between = 0.6174 overall = 0.5982			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 81.24 Prob > chi2 = 0.0824			
NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.311065	.006863	0.61	0.002	-3.369562	1.767106
AF	2.100587	.7151849	1.41	0.013	-2.413098	.390375
RM	1.301317	.2827025	-0.51	0.010	-.6971564	.411017
REM	3.100369	.9685525	-0.54	0.032	-2.423571	1.373085
SRI	1.517428	.3134651	-2.22	0.012	-1.310038	.0812771
DT	1.450911	.7530018	-0.84	0.011	-2.111808	.8399048
_cons	1.589402	7.164871	2.42	0.009	24.75965	52.84543
sigma_u	.25199364					
sigma_e	.29610103					
rho	.28246537 (fraction of variance due to u_i)					

Source : Author's compilation

The above outcomes accentuate that suitable decision-making on the part of the board members enables the board management to exercise adequate control over its lending and borrowing decisions which in turn positively influences the net interest margin of the bank. Moreover, the existence of an effective audit committee in the bank leads towards the materialisation of a solid business model, wherein all the resources are effectually applied to generate high profits all the time. The presence of a suitable audit committee can help increase the efficiency of the bank's monitoring system and enables it to preserve and sustain the public's trust which eventually leads to lowering the capital costs and increasing the interest margins of the bank.

Table 31. Application of the fixed effects model for the outcome variable, NIM

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.8243 between = 0.7810 overall = 0.8022			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 3.22 Prob > F = 0.000			
NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	4.23632	.3031146	0.50	0.003	-.749369	.4458745
AF	-.013334	1.01116	-0.33	0.742	-2.327071	1.660144
RM	-1.108647	.3337777	-2.65	0.109	-1.542013	-.2258588
REM	-.229154	.761025	-0.76	0.450	-2.075804	.9250751
SRI	-.812095	1.339366	-0.37	0.714	-3.13275	2.148647
DT	-.4920518	.405323	-0.57	0.572	-.5699812	1.028291
cons	44.17615	7.213326	6.12	0.100	29.95433	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 5.74			Prob > F = 0.0000			

Source : Author's compilation

Comparably, it was comprehended that the formation of a suitable remuneration committee and commitment to better compensation packages enlists a better-quality executive work in the banking mechanisms thereby, indirectly influencing the positive outcomes on the net interest margin of the public sector banks. Additionally, it is pointed out that the existence

of a risk management team ensures that loans granted by the bank are duly authorised and within the policies of the bank. Such a team will ensure risk is not created on interest-earning assets, thereby directly influencing the net interest margins of the bank. On the same lines, the presence of a shareholder protection committee ensures that the bank's risk does not increase beyond acceptable levels. It ensures that the bank finds suitable depositors or lenders who will accept lower rates and find borrowers who will pay more interest, thereby directly impelling the bank's net interest margin. Moreover, compulsory disclosure made by the bank highlighting the details of its borrowers as well as lenders to maintain the bank's risk within acceptable levels.

5.8. Determining the connotation between NPM and corporate governance in the case of public sector banks

The regression model used for establishing the interconnection between the NPM and corporate governance is:

$NPM_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established is:

$H_0$1:4: There is no significant impact of corporate governance on the NPM in the public sector banks

Table 32. Pooled OLS model with net profit margin as the dependent variable

Source	SS	df	MS	Number of obs. = 84		
Model	19.7380429	11	1.79436753	F(6, 77) = 1.61		
Residual	30.9582755	228	.1357819	Prob > F = 0.000		
Total	50.6963183	239	.212118487	R-squared = 0.7895		
				Adj. R-squared = 0.8193		
NPM	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	-.0295496	.0055835 -	-5.29	0.000	-.0405514	-.0185478
AF	.0153472	.0113454	1.35	0.177	-.007008	.0377024
RM	-.0137475	.0113941	-1.21	0.229	-.0361986	.0087036
REM	-.0092406	.008332	-1.11	0.269	-.0256582	.007177
SRI	.0211237	.0137327	1.54	0.125	-.0059355	.0481828
DT	-.0017452	.0193723	0.09	0.928	-.0399167	.0364264
_cons	2.373755	.1649366	14.39	0.000	2.04876	2.69875

Source : Author's compilation

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the net profit margin as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are contemplated as strictly exogenous and they do not depend upon the past ,present and future values of the error term. The results of the pooled regression model are depicted in Table 32. The main concern related to pooled regression model is that it has not differentiated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables.

Table 33. Variance inflation factor of the independent variable

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 417.32 Prob > chi2 = 0.0701	

Source : Author's compilation

Table 34. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 234.67 Prob > F = 0.0611	

Source : Author's compilation

The values of the variance inflation factor as implied by Table 11 streches between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable

shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as shown in Table 33 denotes that variances for the error are equal as the p- value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation. Additionally, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non-stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 34 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant .

Table 35. Application of Breusch Pagan Multiplier test for the outcome variable, NPM

Breusch and Pagan Lagrangian multiplier test for random effects NIM[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
NIM	234.56	18.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	116.72	
Prob > chibar2 =	0.0034	

Source: Author's compilation

After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out.The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing theapplication of the random or fixed effects model. Efforts were made to solicit the Hausman testto check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesisset in the Hausman test.

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least

squares model. The results of this test as outlined in Table 35 shows that the p-value is less than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 36 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 37 shows that the hypothesis stating the no significant impact of corporate governance on the net profit margin of the public sector banks is rejected.

Table 36. Application of Hausman test for the outcome variable, NPM

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	.5725853	4.19034	-3.6177547	.1436811
AF	-.3493053	2.12376	-2.4730653	.2422186
RM	-.2992996	3.14531	-3.4446096	.1808195
REM	.2291549	4.54231	-4.3131551	.1476026
SRI	-.812095	1.88644	-2.698535	.0675883
DT	-.4920518	1.01227	-1.5043218	.2770504
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.39 Prob>chi2 = 0.0131				

Source: Author's compilation

The above results specifies that corporate governance demonstrated a consequential part in establishing the net profit margin of the public sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights along with disclosures and transparency noticeably affected the net profit margin of the public sector banks. The r-squared of 0.7023% indicates that 70.23% of the variance in the net profit margin is explicated or expounded by the regressors. One unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information as well as the rights and disclosures and transparency causes 4.19 times, 2.12 times, 3.14 times, 4.54 times, 1.88 times and 1.01 times change in the net profit margin of the public sector banks respectively. The above results indicate

that the formation of appropriate board composition, the existence of board diversity, and the presence of independent directors show that decision-making is crafted by the board which is in the best interests of the bank. All endeavours will be made by the board to advance the bank's profitability and progression is mirrored through the high net profit margin of the banks. Additionally, it is pointed out that the existence of an effective audit committee in the bank leads towards the formation of a solid business model, wherein all the resources are effectively utilized to generate high profits all the time.

Table 37. Application of random-effects model for the dependent variable, NPM

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.7023 between = 0.6950 overall = 0.6178			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0001			
NPM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	4.19034	1.310398	0.61	0.001	-3.369562	1.767106
AF	2.12376	.7151849	1.41	0.004	-2.413098	.390375
RM	3.14531	.2827025	-0.51	0.026	-.6971564	.411017
REM	4.54231	.9685525	-0.54	0.001	-2.423571	1.373085
SRI	1.88644	.3134651	-2.22	0.037	-1.310038	-.0812771
DT	1.01227	.7530018	-0.84	0.028	-2.111808	.8399048
_cons	2.89402	7.164871	-2.42	0.034	24.75965	52.84543
sigma_u	.18578091					
sigma_e	.29610103					
rho	.28246537 (fraction of variance due to u_i)					

Source : Author's compilation

The inclusion of a robust audit committee increases the efficacy of the scrutinizing arrangement and restores the public's trust which eventually leads to reducing the capital costs and intensifying the profits of the bank's business. In a similar way, it can be highlighted that commitment to adequate compensation packages and the formation of remuneration committees tends to improve the net profit margin of the banks.

Moreover, the existence of a vigorous risk management team having a strategic understanding of the various risks undertaken by the banks ensures that returns are not affected by the overall working of the banks. Comparably, it is accentuated that the net profit margin indicates the overall success of the bank and in this regard, the board management strives their efforts to earn sufficient profits so that shareholders can be given more returns.

The presence of shareholder committees inthe bank ensures that the business makes all of its efforts in achieving the overall objective of wealth maximisation. On the same lines, adequate disclosures made in the annual report and suitable compliance with accounting standards highlight the overall efficiency with which the bank is operating, thereby positively influencing the net profit margin of the public sector banks.

Table 38. Application of fixed-effects model for the outcome variable, NPM

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.4704 between = 0.0101 overall = 0.3422			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = −0.3851			F(11,205) = 3.22 Prob > F = 0.0005			
NPM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	.5725853	.3031146	−0.50	0.617	−.749369	.4458745
AF	−.3493053	1.01116	−0.33	0.742	−2.327071	1.660144
RM	−.2992996	.3337777	−2.65	0.009	−1.542013	−.2258588
REM	.2291549	.761025	−0.76	0.450	−2.075804	.9250751
SRI	−.812095	1.339366	−0.37	0.714	−3.13275	2.148647
DT	−.4920518	.405323	0.57	0.572	−.5699812	1.028291
_cons	44.17615	7.213326	6.12	0.000	29.95433	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 5.74 Prob > F = 0.0000						

Source : Author's compilation

5.9. Ascertaining the interrelationship between TQR and the corporate governance in case of public sector banks

The regression model used for establishing the interconnection between the TQR and corporate governance is:

$TQR_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$,where

β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established is:

$H_0$1:5: There is no significant impact of corporate governance on the TQR in the public sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the Tobin's Q as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are envisaged as strictly exogenous and they do not depend upon the past, present and future values of the error term. The results of the pooled regression model are depicted in Table 39.

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables.

Table 39. Pooled OLS model with Tobin's Q as the outcome variable

Source	SS	df	MS	
Model	2241.1453	11	2162.6932	Number of obs. = 84
Residual	3318.4341	228	65.515643	F(6, 77) = 1.87
Total	5559.5794	239	2207.998843	Prob > F = 0.451
				R-squared = 0.6672
				Adj. R-squared = 0.6821

TQR	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	3.1767614	3.4004411	4.88472	3.37072	3.2276182	3.753421
AF	2.3808293	3.9991234	1.86472	1.42672	-0.963256	-0.545488
RM	-1.546595	3.8769415	3.48472	0.09072	4.451443	-1.000069
REM	-0.0797719	1.3270844	1.85472	1.53372	1.2490618	3.271897
SRI	-0.7365605	2.2772833	4.80472	1.38972	-0.7512155	3.3129011
DT	1.4220044	0.3059524	3.35472	4.19272	-0.7851967	3.301142
_cons	17.57884	3.2763531	2.09472	3.50872	5.41348	4.96343

Source : Author's compilation

The values of the variance inflation factor as implied by Table 11 range between 1 to 3

which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007).

Table 40. Variance inflation factor of the independent variable

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 234.67 Prob > F = 0.0771	

Source : Author's compilation

Table 41. Woodridge's test for autocorrelation

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 417.32 Prob > chi2 = 0.3613	

Source : Author's compilation

This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as shown in Table 40 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation. Additionally, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is patterned by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non-stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 41 shows that the p-value is more than 0.05 and it reflects that there is no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out.The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to

overseeing the application of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesisset in the Hausman test.

Table 42. Breusch Pagan Multiplier test for the outcome variable, TQR

Breusch and Pagan Lagrangian multiplier test for random effects TQR[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
TQR	234.56	18.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	78.34	
Prob > chibar2 =	0.0001	

Source: Author's compilation

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 42 shows that the p- value is less than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 43 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 44 shows that the hypothesis stating the no significant impact of corporate governance on the Tobin's Q of the public sector banks is rejected.

The above results specifies that corporate governance demonstrated a consequential part in establishing the Tobin's Q of the public sector banks. The independent variables such as remuneration committee, risk management committee, shareholders' information and rights and disclosures and transparency considerably affected the Tobin's Q of the public sector banks. The independent variables such as board procedures and effectiveness and audit function were found to be not significantly affecting the Tobin's Q of the public sector banks. The r-squared of 0.7571% indicates that 75.71% of the variance in the Tobin's Q is illuminated or explained by the regressors. It specifies that one unit change over in remuneration committee, risk management committee, shareholders' information and rights

and disclosures and transparency initiates 1.72 times, 0.59 times, 2.79 times, 1.47 times change in Tobin's Q of the public sector banks respectively. The above results accentuate that the director's adequate remuneration in the form of stock optionplans, performance plan, retirement benefit plans, deferred compensation plans, performance- based compensation plans, profit related plans and company share option plans induce them to perform better and work towards intensifying the market value of the bank and positively influencing the TQR of the public sector banks.

Table 43. Application of the Hausman test for the outcome variable, TQR

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	4.23632	1.311065	2.925255	.1436811
AF	-.013334	2.100587	-2.113921	.2422186
RM	-1.108647	1.301317	-2.409964	.1808195
REM	-.2291549	3.100369	-3.3295239	.1476026
SRI	-.812095	1.517428	-2.329523	.0675883
DT	-.4920518	1.450911	-1.9429628	.2770504
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 34.39 Prob>chi2 = 0.002				

Source: Author's compilation

Table 44. Application of random-effects model for the outcome variable, TQR

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.7571 between = 0.0655 overall = 0.0538			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 49.41 Prob > chi2 = 0.0019			
TQR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.846551	0.6446977	0.875	0.621	0.6654109	0.681002
AF	5.034083	0.6270522	1.755	0.618	0.6249076	0.6523362
RM	1.726214	0.6213686	1.005	0.014	0.5922088	0.6171732
REM	0.594361	0.6234979	1.485	0.023	0.269747	0.6137857
SRI	2.794126	0.6270522	0.525	0.031	0.6050924	0.6523362
DT	1.478451	0.6320946	0.305	0.022	0.5762094	0.6432192
_cons	1.846551	0.776056	17.685	0.616	3.049061	3.680389

Source: Author's compilation

Additionally, it can be inferred that the existence of a risk management committee ensures

that the bank and its investments remain desirable to its' investors all the time. Such a committee makessure that accurate valuations are made with regard to the assets of the bank and its replacement costs. In a similar way, a positive and statistically significant firm value referred to by Tobin's Q gives investors and shareholders confidence that investment in the bank will be profitable thereby, positively influencing the Tobin Q's ratio. On the same lines, adequate disclosures made in the annual report and suitable compliance with accounting standards highlight the overall efficiency with which the bank is operating, thereby positively influencing Tobin's Q of the public sector banks.

Table 45. Application of fixed-effects model for the outcome variable, TQR

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.5714 between = 0.0269 overall = 0.3964			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 23.45 Prob > F = 0.0000			
TQR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	4.23632	.0919403	-0.50	0.617	-.749369	.4458745
AF	-.013334	.1745217	-0.33	0.742	-2.327071	1.660144
RM	-1.108647	.1587007	-2.65	0.009	-1.542013	-.2258588
REM	-.2291549	.2996279	-0.76	0.450	-2.075804	.9250751
SRI	-.812095	.0989053	-0.37	0.714	-3.13275	2.148647
DT	-.4920518	.2255075	0.57	0.572	-.5699812	1.028291
_cons	38.38657	2.137458	6.12	0.000	29.95433	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 3.44			Prob > F = 0.0000			

Source: Author's compilation

5.10. Determining the connection between NNPA and the corporate governance in case of public sector banks

The regression model used for establishing the interconnection between the NNPA and corporate governance is:

$NNPA_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon$

$_{it}$,where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established as:

$H_0$1:6: There is no significant impact of corporate governance on the NNPA in the public sector banks

The pooled regression model is employed by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is employed initially by taking the NNPA as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term . Such variables are envisaged as stringently exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are depicted in Table 46. The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumed with the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation.

Table 46. Pooled OLS model with NNPA as the dependent variable

Source |	SS	df	MS	Number of obs. = 84
Model |	5531.1231	11	9142.4832	F(6, 77) = 1.87
Residual |	4408.5222	228	332.30341	Prob > F = 0.448
Total |	9939.6453	239	9474.78661	R-squared = 0.7765
				Adj. R-squared = 0.7989

NNPA	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	1.9667614	2.1904411	3.67472	2.16072	2.0176182	2.543421
AF	1.1708293	2.7891234	0.65472	0.21672	-2.173256	-1.755488
RM	-2.756595	2.6669415	2.27472	-1.1192	3.241443	-2.210069
REM	-1.2897719	0.1170844	0.64472	0.32372	0.0390618	2.061897
SRI	-1.9465605	1.0672833	3.59472	0.17972	-1.9612155	2.1029011
DT	0.2120044	-0.9040476	2.14472	2.98272	-1.9951967	2.091142
_cons	16.36884	2.0663531	0.88472	2.29872	4.20348	3.75343

Source : Author's compilation

The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other

independent variables. The values of the variance inflation factor as implied by Table 11 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002).

Table 47. Variance inflation factor of the independent variable

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 133.98 Prob > chi2 = 0.2458	

Source : Author's compilation

Table 48. Woodridge's test for autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 24.11 Prob > F = 0.1254	

Source : Author's compilation

Table 49. Breusch Pagan Multiplier test for the outcome variable NNPA

Breusch and Pagan Lagrangian multiplier test for random effects

NNPA[Bank,t] = Xb + u[Bank] + e[Bank,t]

Estimated results:

	Var	sd = sqrt(Var)
NNPA	434.56	10.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	54.34	
Prob > chibar2 =	0.0000	

Source: Author's compilation

The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as shown in Table 46 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation. Additionally, the degree of correlationof the same variables between two successive time intervals i.e., the

autocorrelation is checked byusing the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non-stationery property in the dataset give riseto autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007).

Table 50. Application of the random effects model for the outcome variable, NNPA

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.7992 between = 0.0743 overall = 0.0729			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 32.51 Prob > chi2 = 0.0036			
NNPA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	2.077551	0.8756977	0.106	0.011	0.8964109	0.912002
AF	1.265083	0.8580522	0.986	0.042	0.8559076	0.8833362
RM	1.495124	0.8523686	0.774	0.001	0.8232088	0.8481732
REM	0.363361	0.8544979	0.254	0.036	0.500747	0.8447857
SRI	2.563126	0.8580522	1.294	1.201	0.8360924	0.8833362
DT	0.247451	0.8630946	1.536	1.603	0.8072094	0.8742192
_cons	2.077551	1.007056	17.916	0.847	3.280061	3.911389

Source : Author's compilation

Table 51. Application of the fixed-effects model for the outcome variable, NNPA

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.5714 between = 0.0269 overall = 0.3964			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 23.45 Prob > F = 0.0000			
NNPA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	-.1265482	.0919403	-0.50	0.617	-.749369	.4458745
AF	-1.0295407	.1745217	-0.33	0.742	-2.327071	1.660144
RM	.0756454	.1587007	-2.65	0.009	-1.542013	-.2258588
REM	.1280648	.2996279	-0.76	0.450	-2.075804	.9250751
SRI	1.0613167	.0989053	-0.37	0.714	-3.13275	2.148647
DT	3.9653264	.2255075	0.57	0.572	-.5699812	1.028291
_cons	-4.171316	2.137458	6.12	0.000	29.95433	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 1.29			Prob > F = 0.0000			

Source : Author's compilation

The results of this test as indicated by Table 47 shows that the p-value is more than 0.05 and it reflects that thereare no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out. The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing theapplication of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression.

The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesisset in the Hausman test. The above results highlight that effective board functioning, adequate set- ups, diversity, presence of non-executive directors will ensure that their efforts are directed towards reducing the NNPA of banks. Comparably, it is deduced that the adoption of suitable internal auditing processes, availability of credit management audit information systems and timely credit modelling lowers the NNPA. Moreover, directors' adequate remuneration in the form of stock option plans, performance plan, retirement benefit plans, deferred compensation plans, performance-based compensation plans, profit-related plans and company share option plans induce them to perform better and work towards reducing the non-performing assets of the bank. Additionally, it is surmised that presence of adequate risk management commissions and the execution of their required tasks within the banks ensure suitable NPA risk management at all times, which is crucial for the financial health of the bank.

5.11. Establishing the interrelationship between CAR and the corporate governance in case of public sector banks

The regression model used for establishing the interconnection between the CAR and corporate governance is:

$CAR_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis was established as:

$H_0 1{:}7$: There is no significant impact of corporate governance on the CAR in the public sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant.

Table 52. Pooled OLS model with CAR as the dependent variable

Source	SS	df	MS	Number of obs. = 84	
Model	3841.96454	11	349.269504	F(6, 77) = 1.61	
Residual	18357.4735	228	80.5152348	Prob > F = 0.000	
Total	22199.4381	239	92.8846782	R-squared = 0.5612	
				Adj. R-squared = 0.5719	

CAR	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	.2208031	.1359631	1.62	0.106	-.0471018	.488708
AF	-.4690572	.3344048 -	-1.40	0.162	-1.127976	.1898618
RM	.174288	.7922214	0.22	0.826	1.386723	1.735299
REM	.0739685	.0610697	-1.41	0.269	-.0256582	.007177
SRI	-.0014805	.0245653	1.54	0.125	-.0059355	.0481828
DT	.2577872	.0892379	0.09	0.928	-.0399167	.0364264
_cons	4.689362	4.016383	-1.17	0.244	2.04876	2.69875

Source : Author's compilation

A regression paradigm is employed initially by taking the CAR as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are envisaged as stringently exogenous and they do not depend upon the past ,present and future values of the error term. The results of the pooled regression model are outlinedin Table 52. The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity tobe subsumed with the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample

data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values ofthe variance inflation factor as implied by Table 11 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable shallbe equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The outcomes of this test as shown in Table 53 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 53. Variance inflation factor of the independent variable

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 137.12 Prob > chi2 = 0.5634	

Source : Author's compilation

Table 54. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 121.78 Prob > F = 0.2451	

Source : Author's compilation

Table 55. *Breusch Pagan Multiplier test for the outcome variable, CAR*

Breusch and Pagan Lagrangian multiplier test for random effects CAR[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
CAR	434.56	10.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	51.09	
Prob > chibar2 =	0.0001	

Source : Author's compilation

Additionally, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 54 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out. The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing the application of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

Table 55: Hausman test for the outcome variable, CAR

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	.3287764	1.324316	-0.9955396	.0206308
AF	-.065648	1.074696	-1.140344	.0236095
RM	.3286187	2.901287	-2.5726683	.036219
REM	-.1572954	2.679382	-2.8366774	.0632538
SRI	.6286498	2.190358	-1.5617082	.029666
DT	3.9653264	1.153102	2.8122244	.0412505
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.39 Prob>chi2 = 0.0123				

Source : Author's compilation

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least

squares model. The results of this test as outlined in Table 55 shows that the p-value is less than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 56 accentuates that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 5.49 shows that the hypothesis stating the no significant impact of corporate governance on the CAR of the public sector banks is rejected.

Table 56. Application of random-effects model for the outcome variable, CAR

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.912 between = 0.879 overall = 0.851			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.001			
CAR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.324316	.0917452	3.55	0.012	-3.369562	1.767106
AF	1.074696	.174787	2.04	0.024	-2.413098	.390375
RM	2.901287	.1595845	-0.06	0.019	-.6971564	.411017
REM	2.679382	.1206201	0.54	0.034	-2.423571	1.373085
SRI	2.190358	.024726	1.41	0.041	-1.310038	-.81277
DT	1.153102	.3916853	0.84	0.001	-2.111808	.8399048
_cons	3.139871	.6305726	2.42	1.451	24.75965	52.84543
sigma_u	2.129718					
sigma_e	3.002103					
rho	.03994133	(fraction of variance due to u_i)				

Source : Author's compilation

The above results specifies that corporate governance demonstrated a consequential part in establishing the CAR of the public sector banks. All the independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency considerably affected the CAR of the public sector banks. The independent variables such as were found to be significantly affecting the CAR of the public sector banks.The r-squared of 0.912% indicates that 91.2% of the variance in the CAR is described or expounded by the regressors. It specifies that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency triggers in

1.32 times , 1.07 times , 2.90 times , 2.67 times , 2.19 times and 1.153 times change in CAR of the public sector banks respectively. The above outcomes indicate that effective board setups, their suitable composition, and diversity ensures that the board is making all efforts to recuperate the Tier - I and Tier-II capital of the bank.

Additionally, it is inferred that regular audit processes conducted internally within the bank shall suitably accommodate to the assessment of the risky transactions and exposures made by the bank.This will in turn support an accurate assessment of total risk-weighted assets of the bank. Moreover, it indicates that an improvement in the pay structures of the directors adequately reducesthe bank's risk-weighted credit exposures.

Table 57. Application of fixed-effects model for the outcome variable ,CAR

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.5714 between = 0.0269 overall = 0.3964			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 23.45 Prob > F = 0.0000			
CAR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	.3287764	.0940362	3.50	0.001	.1433743	.5141785
AF	-.065648	.1785002	-0.37	0.713	-.4175796	.2862836
RM	.3286187	.1623185	2.02	0.044	.008591	.6486464
REM	-.1572954	.2996279	-0.76	0.450	-.3384201	.9250751
SRI	.6286498	.0989053	-0.37	0.714	.0244356	2.148647
DT	3.9653264	.2255075	0.57	0.572	-.0327735	1.028291
_cons	-6.415463	2.137458	6.12	0.000	-10.72575	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 1.29			Prob > F = 0.0000			

Source : Author's compilation

Comparably, suitable risk management procedures conducted by the risk management committeesenable an accurate assessment of capital to risk-weighted assets ratio which in turn will help in identifying that banks have enough capital on reserve to accomodate amount of losses, before being at risk for becoming insolvent. In a similar way, an adequate formation of shareholder committees ensures that banks follow the required standards to pay their liabilities, and respond to credit risks and operational risks. Adequate disclosures

related to Tier 1 and Tier 2 capital will replicate the overall bank's current health and ability to withstand adverse economic conditions. The mandatory disclosures made by the public sector banks, as listed by regulatory authorities ensure that the accurate quality of capital is disclosed at all times.

5.12. Establishing the connotation between CI and the corporate governance incase of public sector banks

The regression model used for establishing the interconnection between the CI and corporate governance is:

$CI_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β

is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis was established as:

$H_0 1:8$: There is no significant impact of corporate governance on the CI in the public sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities are constant.

Table 58. Pooled OLS model with CI as the dependent variable

Source	SS	df	MS	Number of obs. = 84
Model	225224.221	6	20474.9291	F(6, 77) = 1.61
Residual	2906469.17	228	12747.6718	Prob > F = 0.0980
Total	3131693.39	239	13103.3196	R-squared = 0.7190
				Adj. R-squared = 0.6710

CI	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	2.32912	1.710793	1.36	0.175	-1.041867	5.700107
AF	.6195518	3.47627	0.18	0.859	-6.230171	7.469274
RM	2.237052	3.491183	0.64	0.522	-4.642056	9.11616
REM	-1.735483	2.552959	-0.68	0.497	-6.765893	3.294928
SRI	3.555974	4.207741	0.85	0.399	-4.735056	11.847
DT	-12.67312	9.968343	-1.27	0.205	-32.31497	6.968736
_cons	168.3866	50.53724	3.33	0.001	68.80688	267.9664

Source : Author's compilation

Table 59. Variance inflation factor of the independent variable

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 137.12 Prob > chi2 = 0.1020	

Source : Author's compilation

A regression paradigm is employed initially by taking the CI as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term . Such variables are envisaged as stringently exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are outlined in Table 58.

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables.

Table 60. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 121.78 Prob > F = 0.1381	

Source : Author's compilation

The values of the variance inflation factor as implied by Table 11 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of theregression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando &

Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The outcomes of this test as highlighted in Table 59 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 61. Breusch Pagan Multiplier test for the outcome variable, CI

Breusch and Pagan Lagrangian multiplier test for random effects CI[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
CI	434.56	10.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	51.09	
Prob > chibar2 =	0.0001	

Source: Author's compilation

Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 60 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of allthe banking entities as the same or constant.

After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out. The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing theapplication of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesisset in the Hausman test. The Lagrange Multiplier test evaluated the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 61 shows that the p-value is less than 0.05. Such

results entailed that random effects model is more pertinent. Further, the Hausman test was pertained to test the fittingness of the fixed or random effects model.

Table 62. Application of Hausman test for the outcome variable, CI

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	.298356	1.677316	-1.378960	.0206308
AF	-.089148	2.387651	-2.476799	.0236095
RM	.2498187	2.212387	-1.9625683	.036219
REM	-.1787954	1.319382	-1.4981774	.0632538
SRI	.7396498	1.990358	-1.2507082	.029666
DT	1.231264	2.253102	-1.021838	.0232500
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.39 Prob>chi2 = 0.0291				

Source: Author's compilation

Table 63. Application of random-effects model for the dependent variable, CI

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.691 between = 0.699 overall = 0.701			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.001			
CI	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.677316	.0917452	3.55	0.032	-3.369562	1.767106
AF	2.387651	.174787	2.04	0.011	-2.413098	.390375
RM	2.212387	.1595845	0.06	0.030	-.6971564	.411017
REM	1.319382	.1206201	0.54	0.029	-2.423571	1.373085
SRI	1.990358	.024726	1.41	0.011	-1.310038	-.81277
DT	2.253102	.3916853	0.84	0.009	-2.111808	.8399048
_cons	3.019871	.6305726	2.42	0.032	24.75965	52.84543
sigma_u	2.129718					
sigma_e	3.002103					
rho	.03994133 (fraction of variance due to u_i)					

Source: Author's compilation

The output of this test as indicated in Table 62 illustrates that the p-value is greater than 0.05

which shows that the random effects model is more apposite compared to the fixed effects model.The results are specified by the random effects model in Table 63 shows that the hypothesis stating the no significant impact of corporate governance on the CI of the public sector banks is rejected. The above results specifies that corporate governance demonstrated a consequential part in establishing the CI of the public sector banks. All the independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency considerably affected the CI of the public sector banks. The independent variables such as were found to be not significantly affecting the CI of the public sector banks. The r- squared of 0.691% indicates that 69.1% of the variance in the CI is rationalized or elucidated by the regressors. It specifies that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency generates in 1.67 times, 2.38 times, 2.21 times, 1.31 times, 1.99 times and 2.25 times change in CI of the public sector banks respectively.

Table 64. Application of fixed-effects model for the outcome variable, CI

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.5714 between = 0.0269 overall = 0.3964			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = −0.3851			F(11,205) = 23.45 Prob > F = 0.0000			
CI	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	.298356	.0940362	3.50	0.001	.1433743	.5141785
AF	-.089148	.1785002	-0.37	0.713	-.4175796	.2862836
RM	.2498187	.1623185	2.02	0.044	.008591	.6486464
REM	-.1787954	.2996279	−0.76	0.450	-.3384201	.9250751
SRI	.7396498	.0989053	−0.37	0.714	.0244356	2.148647
DT	1.231264	.2255075	0.57	0.572	-.0327735	1.028291
_cons	-2.12163	2.137458	6.12	0.000	-10.72575	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 1.91			Prob > F = 0.0000			

Source: Author's compilation

The above outcomes accentuate that the suitable composition of the board members, their suitable qualifications, the existence of the independent directors, and their diversity influenced the cost- to-income ratio of the public sector banks. It was inferred that in such cases, the strategic decision-making made by the board members shall be in the best interests of the banks and it tends to reducethe cost-to-income ratio of the public sector banks. Likewise, it is deduced that the adequate composition of the audit committee, accurate formation and implementation of appropriate internal audit procedures, and incidence of the non-executive directors/company secretary in the auditing process assures correct vouching of business transactions along with inhibition of misreporting, which is cost to income ratio of the public sector banks. Suitable financial internal audits within ayear helped the public sector banks to adequately track their operating costs and net interests income from time to time. Such continuous audit processes ensured that the cost-to-income ratio remains low. Comparably, it was comprehended that the formation of a suitable remuneration committee enlists a better-quality executive work in the banking mechanisms thereby, indirectly reducing the cost-to-income ratio of the public sector banks. Furthermore, it is concluded that banks which make investments in acceptable risk management procedures adequately ensured enhanced risk monitoring and measurement. Such risk awareness on the part of banking structures tends to lower the cost-to-income ratio of the public sector banks. The appropriate form of a risk management team ensures that the bank's lending does not face tough financial risks. The risk management committees ensured that the bank's operating costs are kept low in order to attain therequired cost-to-income ratio. In like manner, the establishment of suitable shareholders committees in the banking structures improved the oversight and control of the board commission where they met the expectations of shareholders all the time. Such, overall good control and management on the part of the board is further associated with lower down the cost-to-income ratio of the public sector banks. Moreover, it is insinuated that appropriate disclosures exhibiting the adherence to significant accounting policies, reports on management discussions and the codeof conduct indirectly influenced sink in the cost-to-income ratio of the public sector banks.

The preceeding section of this chapter deals with analysing whether the corporate governance norms influence the financial performance of the private sector banks. In lieu of this, the corporate governance norms as emphasized by the Companies Act, of 2013 such

as board procedures and effectiveness (BPE), audit function (AF), remuneration committee (RC), risk management committee (RMC), disclosures and transparency (DT) and stakeholder rights & information (SRI) are designated as the independent variables for this objective. Such corporate governance variables are used to analyse the financial performance of the banks. The financial performance is measured by the dependent variables such as return on assets (ROA), return on equity (ROE), net interest margin (NIM), net profit margin (NPM), Tobin Q (TQR), net non- performing assets (NNPA), capital adequacy ratio (CAR) and cost to income ratio (CI). The regression model recognized by using the above-mentioned independent and dependent variablesis as follows:

$$y_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$$

The term y_{it} is used instantaneously for all the dependent variables used in the thesis such as returnon assets (ROA), return on equity (ROE), net interest margin (NIM), net profit margin (NPM),Tobin Q (TQR), net non-performing assets (NNPA), capital adequacy ratio (CAR) and cost to income ratio (CI). These are the performance measures of the private sector banks referred to as i in the particular financial year of t. The β is the variable coefficient with α as constant and ε_{it} as the error term.

5.13. Establishing the interconnection between ROA and the corporate governance in case of private sector banks

The regression model used for establishing the interconnection ROA and the corporate governance is:

$$ROA_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it},$$

where $\beta$is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis tested is:

$H_0$1:9: There is no significant impact of corporate governance on the ROA in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional

effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the return on assets as the dependent variable. The explanatory variables of corporate governance were assumed to be uncorrelated with the error term.

Table 65. Pooled OLS model with return on assets as the dependent variable

Source |	SS	df	MS	Number of obs. = 147		
Model |	259324.21	11	12474.921	F(6, 77) = 1.42		
Residual |	199769.12	318	34747.634	Prob > F = 0.014		
Total |	321693.10	329	8103.3122	R-squared = 0.0874		
				Adj. R-squared = 0.881		
ROA	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	3.42912	2.810793	2.46	1.275	0.058133	6.800107
AF	1.7195518	4.57627	1.28	1.959	-5.130171	8.569274
RM	3.337052	4.591183	1.74	1.622	-3.542056	10.21616
REM	0.635483	3.652959	0.42	1.597	-5.665893	4.394928
SRI	4.655974	5.307741	1.95	1.499	-3.635056	12.947
DT	11.57312	11.068343	-0.17	1.305	-31.21497	8.068736
_cons	169.4866	51.63724	4.43	1.101	69.90688	269.0664

Source : Author's compilation

Such variables are conjectured as strictly exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are depicted in Table 65. The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumed with the respective error terms and it becomes correlated with the explanatory variables.

Table 66. Shapiro – Francia test for normality

Variables	**Variable Type**	**Obs.**	**z**	**Prob>z**
ROA	Dependent variable	147	8.243	0.0634
ROE	Dependent variable	147	8.161	0.0712
NIM	Dependent variable	147	4.123	0.0634
NPM	Dependent variable	147	6.211	0.0731
TQR	Dependent variable	147	4.426	0.0541
NNPA	Dependent variable	147	5.218	0.0554
CAR	Dependent variable	147	4.441	0.0512
CI	Dependent variable	147	1.243	0.0577
BPE	Independent variable	147	3.213	0.0676
AF	Independent variable	147	5.145	0.1151
REM	Independent variable	147	6.141	0.1132
RM	Independent variable	147	4.203	0.1010
SRI	Independent variable	147	4.113	0.0893
DT	Independent variable	147	7.229	0.1004

Source : Author's compilation

Therefore, the fixed and random effects model were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation.

Table 67. Variance inflation factor of the independent variables

Variables	VIF	1/VIF = Tolerance
Board Procedures & Effectiveness (BPE)	2.07	0.483
Audit Function (AF)	2.12	0.472
Risk Management (RM)	1.76	0.568
Remuneration Management (REM)	2.00	0.500
Shareholder's Rights & Information (SRI)	1.86	0.538
Disclosure & Transparency (DT)	1.91	0.524
Mean VIF		0.500

Source : Author's compilation

The normality of the data is tested using the Shapiro – Francia test. This test of normality is performed on all the regressors as well as the response variables used in the current thesis. The results of this test as reflected in Table 66 accentuate that the p-value of all the variables is greater than 0.05. This stipulates that the null hypothesis is accepted and data is normally distributed. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002).

Table 68. Tests for homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 47.10 Prob > chi2 = 0.5762	

Source : Author's compilation

Table 69. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 63.234 Prob > F = 0.0613	

Source : Author's compilation

The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The outcomes of this test as outlined in Table 68 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.
Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 69 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant . After the application of the pooled ordinary least squares, the Brėusch Pagan test was implemented. The results of this test aimed at identifying whether the banking units are having the same or different intercepts. The rejection or acceptanceof the hypothesis of this test led to administering the application of the random or fixed effects model. Efforts were made to solicit the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved onthe basis of the acceptance or rejection of the hypothesis set in the Hausman test.

The Lagrange Multiplier test compared the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 70 accentuates that the p-value is less than 0.05.Such results imply that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 71 highlights that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 72 shows that the hypothesis stating the no significant impact of corporate governance on the return on assets

of the private sector banks is rejected. This specifies that corporate governance demonstrated a consequential role in establishing the return on assets of the private sector banks. All the independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights and disclosures and transparency considerably affected the return on assets of the private sector banks. The r-squared of 0.8123% indicates that 81.2% of the variance in the return on assets is confirmed or described by the regressors. One unit change in board procedures and effectiveness, audit function, remuneration committee, risk management commission, shareholders' information and rights and disclosures and transparency results in 1.231 times, 4.419 times, 2.34 times, 1.20 times, 3.40 times and 1.09 times change in return on assets of the private sector banks.

The above outcomes accentuate that the apposite composition of the board members, their suitable qualifications, the existence of the independent directors, and their diversity positively influenced the return on the assets of the private sector banks. It was inferred that in such cases, the strategic decision-making made by the board members shall be in the best interests of the banks and the assets of the banks are effectually utilized to stimulate profits in the banking structure.

Additionally, it is deduced that the adequate composition of the audit committee, accurate formation and implementation of appropriate internal audit procedures, and presence of the non- executive directors/company secretary in the auditing process assures correct vouching of business transactions along with inhibition of misreporting, which is indirectly positively influenced the return on the assets of the private sector banks.

Table 70. Breusch Pagan Multiplier test for the outcome variable, ROA

Breusch and Pagan Lagrangian multiplier test for random effects ROA[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
ROA	13103.363	114.5127
e	8380.081	91.58555
u	3655.329	60.50196
chibar2(01) =	45.23	
Prob > chibar2 =	0.0021	

Source : Author's compilation

Comparably, it was comprehended that the formation of a suitable remuneration committee

enlists a better quality executive work in the banking mechanisms thereby, indirectly influenced the positive outcomes on the return on the assets of the private sector banks. Furthermore, it is concluded that banks which make investments in acceptable risk management procedures adequately ensured enhanced risk monitoring and measurement. Such risk awareness on the part of banking structures positively influenced the return on the assets of the private sector banks.

Table 71. Application of the Hausman test for the outcome variable, ROA

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	1.472819	3.122551	-1.649732	0.50768878
AF	2.478697	2.310083	0.168614	0.33099143
RM	1.419961	1.450241	-0.03028	0.77671661
REM	0.492132	1.681639	-1.189507	0.40603743
SRI	1.113713	1.518126	-0.404413	0.92520625
DT	1.204713	1.797549	-0.592836	0.37040468
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 25.66 Prob>chi2 = 0.0433				

Source : Author's compilation

Table 72. Application of random-effects model for the outcome variable, ROA

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.8123 between = 0.8115 overall = 0.7908			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0041			
ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	3.122551	1.9206977	1.151	0.021	1.9414109	1.957002
AF	2.310083	1.9030522	3.031	0.016	1.9009076	1.9283362
RM	1.450241	1.8973686	0.271	0.033	1.8682088	1.8931732
REM	1.681639	1.8994979	0.209	0.041	1.5457471	1.8897857
SRI	1.518126	1.9030522	0.751	0.012	1.8810924	1.9283362
DT	1.797549	1.9080946	1.581	0.011	1.8522094	1.9192192
_cons	3.122551	2.052056	18.961	1.892	4.325061	4.956389
sigma_u	.18578091					
sigma_e	.29610103					
rho	.28246537 (fraction of variance due to u_i)					

Source : Author's compilation

5.14. Determining the connection between ROE and corporate governance in case of private sector banks

The regression model used for establishing the interconnection between the ROE and corporate governance is:

$ROE_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis tested is:

$H_0$1:10: There is no significant impact of corporate governance on the ROE in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the return on equity as the dependent variable. The explanatory variables of corporate governance were assumed to be uncorrelated with the error term. Such variables are conjectured as strictly exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are depicted in Table 74.

Table 74. Pooled OLS model with return on equity as the outcome variable

Source |	SS	df	MS	Number of obs. = 147
Model |	225.12033	11	235.123671	F(6, 77) = 1.61
Residual |	52331.1244	318	198.981201	Prob > F = 0.0150
Total |	61336.1032	329	163.048841	R-squared = 0.7730
				Adj. R-squared = 0.8102

ROE	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	2.795965	1.343398	2.64	1.125	0.994998	1.954194
AF	0.867248	1.380230	0.68	1.773	0.429552	1.533899
RM	0.107717	2.117988	0.14	1.44	1.880151	2.131585
REM	1.838170	1.415235	2.17	1.108	0.140687	1.382978
SRI	0.190520	1.944491	0.02	1.383	1.473486	1.854526
DT	1.500977	8.290055	4.44	1.721	1.930254	39.26516
_cons	0.981724	1.380230	0.68	1.773	0.429557	1.533896

Source : Author's compilation

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables.Therefore, the fixed and random effects models were used in the current thesis. In the process ofthe application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equationasserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as shown in Table 75 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation. Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007).

Table 75. Results of the Tests for homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 317.32 Prob > chi2 = 0.5017	

Source : Author's compilation

Table 76. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 112.67 Prob > F = 0.0762	

Source : Author's compilation

Table 77. Breusch Pagan Multiplier test for the outcome variable, ROE

Breusch and Pagan Lagrangian multiplier test for random effects ROE[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
ROE	234.603	18.966
e	174.388	13.244
u	87.3842	23.494
chibar2(01) =	56.81	
Prob > chibar2 =	0.0008	

Source: Author's compilation

The results of this test as indicated by Table 76 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant.

After the application of the pooled ordinary least squares, the Brėusch Pagan test was implemented. The results of this test aimed at identifying whether the banking units are having thesame or different intercepts. The rejection or acceptance of the hypothesis of this test led to administering the application of the random or fixed effects model. Efforts were made to solicit the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

The Lagrange Multiplier test compared the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 77 accentuates that the p-value is less than 0.05. Such results imply that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 78 accentuates that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 79 shows that the hypothesis stating the no significant impact of corporate governance on the return on equity of the private sector banks is rejected.

Table 78. Results of Hausman tests for the outcome variable, ROE

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	0.9728199	-0.321551	1.2943709	0.738136
AF	0.9786917	0.509083	0.4696087	0.711071
RM	0.999691	1.215124	-0.215433	0.858886
REM	0.9921302	1.119361	-0.1272308	0.074457
SRI	1.0237143	3.319126	-2.2954117	0.790491
DT	1.0047143	1.003451	0.0012633	0.968170
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.44 Prob>chi2 = 0.0554				

Source : Author's compilation

Table 79. Outcomes of random-effects model for the outcome variable, ROE

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.7494 between = 0.0725 overall = 0.7312			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0038			
ROE	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	-0.321551	1.400398	-0.71	0.002	3.279562	1.857106
AF	0.509083	0.805184	1.51	0.034	2.323098	0.480375
RM	1.215124	0.372702	0.42	0.023	0.071564	0.501017
REM	1.119361	1.058552	0.45	0.048	2.333571	1.463085
SRI	3.319126	0.403465	2.13	0.016	1.220038	0.0087229
DT	1.003451	0.843001	0.75	0.038	2.021808	0.9299048
_cons	0.548940	7.254871	2.51	0.022	24.84965	52.93543
sigma_u	.13498092					
sigma_e	.32610332					
rho	.35234237 (fraction of variance due to u_i)					

Source : Author's compilation

The above results specifies that corporate governance demonstrated a consequential role in establishing the return on equity of the private sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights and disclosures and transparency considerably affected the return on equity of the private sector banks. The r-squared of 0.7494% indicates that 74.94% of the variance in the return on equity is confirmed or illuminated by the regressors. One unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights begets in -0.321 times, 0.50 times, 1.215 times, 1.119 times, 3.319 times and 1.003 times change in return on equity of the private sector banks. There exists a single regressor i.e., board procedures and effectiveness which negatively influenced the return on equity of the private sector banks.

Table 80. Output of fixed-effects model for the outcome variable, ROE

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.4922 between = 0.0232 overall = 0.3456			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.5122			F(11,205) = 3.22 Prob > F = 0.0005			
ROE	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	0.9728199	1.0396977	1.27	1.803	1.0604109	1.076002
AF	0.9786917	1.0220522	2.15	1.265	1.0000924	1.0473362
RM	0.999691	1.0163686	-0.61	1.116	0.9872088	1.0121732
REM	0.9921302	1.0184979	-1.09	1.045	0.664747	1.0087857
SRI	1.0237143	1.0220522	2.15	1.265	1.0000924	1.0473362
DT	1.0047143	1.0270946	0.7	1.767	0.9712094	1.0382192
_cons	3.759725	1.171056	18.08	1.01	3.444061	4.075389
sigma_u sigma_e rho	11.223471 13.201786 .41962786 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 5.33 Prob > F = 0.0000						

Source : Author's compilation

The above outcomes accentuate that the effective working of the board members and execution of their due responsibilities in the interests of the shareholders positively influenced the return on the equity of the private sector banks. It was inferred that in such

cases, the strategic decision-makingmade by the board commission in the best interests of the shareholders generates the high return on equity for such banks.

Additionally, it is deduced that the composition of the audit committees are conveniently substituted in all the situations wherein the agency costs are more. Therefore, it can be inferred that suitable formation of audit committees work as proxies indirectly so that sufficient returns are generated by the board of directors for the shareholders, thereby improving the return on equity for the private sector banks. Comparably, it was comprehended that accurate management and disbursement of incentives to the directors helps in aligning the interests of managers and shareholders in an effective manner thereby indirectly influencing the positive outcomes on the return on the equity of the private sector banks.

Furthermore, it is concluded that appropriate risk management procedures adopted in the banks impacts the return on equity as risky banks attracts the risk taking investors. The relationship of risk and return is effectively managed by the risk management committee and assures the investors with positive returns. In like manner, the establishment of suitable shareholders committees and exercising of suitable shareholder rights committee directly influences the return on equity of the banks. The committee ensures that shareholders get required return on their investments and their funds are not misappropriated in any case.

5.15. Ascertaining the association between NIM and corporate governance in the case of private sector banks

The regression model used for establishing the interconnection between the NIM and corporate governance is:

$NIM_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis tested is:

$H_0 1{:}11$: There is no significant impact of corporate governance on the NIM in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate

the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the net interest margin as the dependent variable. The explanatory variables of corporate governance were assumed to be uncorrelated with the error term . Such variables are speculated as strictly exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are illustrated in Table 81. The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units.

Table 81. Pooled OLS model with net interest margin as the outcome variable

Source |	SS	df	MS	Number of obs. = 147		
Model |	62238.1221	11	334.14366	F(6, 77) = 1.33		
Residual |	38931.1388	318	218.03122	Prob > F = 0.0054		
Total |	33826.6078	329	288.92234	R-squared = 0.7710		
				Adj. R-squared = 0.7901		
NIM	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	156358	0.25010	1.54670	0.0317	-0.09830	0.86089
AF	-0.01098	0.28693	-0.41330	0.6797	-0.66375	0.44060
RM	-0.00992	0.03322	-0.62330	0.5377	-0.06217	0.04233
REM	-0.01250	0.01491	-2.33330	0.0267	-0.02868	0.00368
SRI	-0.90278	0.85119	-1.07330	0.2897	-2.56679	0.76123
DT	0.00802	0.02870	0.06670	0.9587	-0.03532	0.05137
_cons	1.72355	0.19399	9.17670	0.0067	1.35451	2.09259

Source : Author's compilation

Table 82. Tests for homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 89.90 Prob > chi2 = 0.1431	

Source : Author's compilation

Table 83. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 18.990 Prob > F = 0.0622	

Source : Author's compilation

This caused the heterogeneity to be subsumed with the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models

were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation.

Table 84. Results of Breusch Pagan Multiplier test for the dependent variable, NIM

Breusch and Pagan Lagrangian multiplier test for random effects

NIM[Bank,t] = Xb + u[Bank] + e[Bank,t]

Estimated results:

	Var	sd = sqrt(Var)
NIM	234.56	18.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	116.72	
Prob > chibar2 =	0.0034	

Source: Author's compilation

The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable shallbe equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as exhibited in Table 82 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation. Additionally, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 83 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordìnary least squares, the Brėusch Pagan test was

implemented. The results of this test aimed at identifying whether the banking units are having thesame or different intercepts. The rejection or acceptance of the hypothesis of this test led to administering the application of the random or fixed effects model. Efforts were made to solicit the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 84 shows that the p-value is less than 0.05. Suchresults entailed that the random effects model is more pertinent. Further, the Hausman test was pertained to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 85 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 86 shows that the hypothesis stating the no significant impact of corporate governance on the net interest margin of the private sector banks is rejected.

Table 85. Application of Hausman test for the outcome variable, NIM

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	4.326321	1.718935	2.607386	0.09812248
AF	0.076666	1.096357	-1.019691	0.79768498
RM	-1.018647	2.079681	-3.098328	0.34826764
REM	-0.139154	3.085261	-3.224415	0.24418048
SRI	-0.722095	1.111748	-1.833843	0.04879329
DT	-0.402051	1.089628	-1.491679	0.75740766
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 38.22 Prob>chi2 = 0.014				

Source : Author's compilation

The above results specifies that corporate governance demonstrated a consequential part in establishing the net interest margin of the private sector banks. The independent variables such as board procedures and effectiveness , audit function, remuneration

committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency considerably affected the net interest margin of the private sector banks. The r- squared of 0.6721% indicates that 67.21% of the variance in the net interest margin is expounded or described by the regressors. One unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well the disclosures and transparency creates in 1.71 times, 1.09 times, 2.07 times, 3.08 times , 1.11 times and 1.08 times change in net interest margin of the private sector banks respectively.

The above outcomes accentuate that suitable decision-making on the part of the board commissionenables the board management to exercise adequate control over its lending and borrowing decisions which in turn positively influences the net interest margin of the bank. Moreover, the existence of an effective audit committee in the bank leads towards the materialisation of a solid business model, wherein all the resources are effectually applied to generate high profits all the time. The presence of a suitable audit committee can help increase the efficiency of the bank's monitoring system and enables it to preserve and sustain the private's trust which eventually leadsto lowering the capital costs and increasing the interest margins of the bank.

Comparably, it was comprehended that the formation of a suitable remuneration commission and commitment to better compensation packages enlists a better quality executive work in the banking mechanisms thereby, indirectly influencing the positive outcomes on the net interest margin of theprivate sector banks. Additionally, it is pointed out that the existence of a risk management team ensures that loans granted by the bank are duly authorised and within the policies of the bank. Sucha team will ensure risk is not created on interest-earning assets, thereby directly influencing the net interest margins of the bank.

On the same lines, the incidence of a shareholder protection team ensures that the bank's risk doesnot increase beyond acceptable levels. It ensures that the bank finds suitable depositors or lenderswho will accept lower rates and find borrowers who will pay more interest, thereby directly impelling the bank's net interest margin. Moreover, compulsory disclosure made by the bank highlighting the details of its borrowers as well as lenders to maintain the bank's risk within acceptable levels.

Table 86. Application of random-effects model for the outcome variable, NIM

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.6721 between = 0.6831 overall = 0.7034			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 81.24 Prob > chi2 = 0.0824			
NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.718935	0.096863	0.7	0.002	-3.279562	1.857106
AF	1.096357	0.805184	1.5	0.003	-2.323098	0.480375
RM	2.079681	0.372702	0.42	0.013	-0.6071564	0.501017
REM	3.085261	1.058552	0.45	0.018	-2.333571	1.463085
SRI	1.111748	0.403465	2.13	0.026	-1.220038	0.1712771
DT	1.089628	0.843001	0.75	0.018	-2.021808	0.9299048
_cons	0.548942	7.254871	2.51	0.212	24.84965	52.93543
sigma_u	.2532361					
sigma_e	.2263213					
rho	.2323617 (fraction of variance due to u_i)					

Source : Author's compilation

Table 87. Application of fixed-effects model for the outcome variable, NIM

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.8233 between = 0.3212 overall = 0.5487			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = −0.3851			F(11,205) = 3.22 Prob > F = 0.000			
NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	4.326321	0.3931146	0.59	0.093	-0.65936	0.535874
AF	0.076666	1.10116	-0.24	0.832	-2.23707	1.750144
RM	-1.018647	0.4237777	-2.56	0.199	-1.45201	-0.135858
REM	-0.139154	0.851025	-0.67	0.54	-1.98580	1.015075
SRI	-0.722095	1.429366	-0.28	0.804	-3.04275	2.238647
DT	-0.402051	0.495323	-0.48	0.662	-0.479981	1.118291
_cons	44.26615	7.303326	6.21	0.19	30.04433	58.48797
sigma_u	12.23311					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 5.74				Prob > F = 0.0000		

Source : Author's compilation

5.16. Ascertaining the connection between NPM and the corporate governance in case of private sector banks

The regression model used for establishing the interconnection between the NPM and corporategovernance is:

$NPM_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$, where β isthe variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established is:

$H_0$1:12: There is no significant impact of corporate governance on the NPM in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is applied initially by taking the net profit margin as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are contemplated as strictly exogenous and they do not depend upon the past ,present and future values of the error term. The results of the pooled regression model are depicted in Table 88.

The main concern related to pooled regression model is that it has not differentiated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 5.58 ranges between 1 to 3

which focuses that the data being moderately correlated (Craney & Surles, 2002).

Table 88. Pooled OLS model with net profit margin as the dependent variable

Source |	SS	df	MS		Number of obs. = 147		
Model |	239.73804	11	1.3942343		F(6, 77) = 1.344		
Residual |	456.95827	319	1.1547819		Prob > F = 0.000		
Total |	343.69631	329	1.7861817		R-squared = 0.8015		
					Adj. R-squared = 0.8211		
NPM	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval		
BPE	1.07045	1.10558	-4.19000	1.1000	1.05945	1.08145	
AF	1.11535	1.11135	2.45000	1.2770	1.09299	1.13770	
RM	1.08625	1.11139	-0.11000	1.3290	1.06380	1.10870	
REM	1.09076	1.10833	-0.01000	1.3690	1.07434	1.10718	
SRI	1.12112	1.11373	2.64000	1.2250	1.09406	1.14818	
DT	1.09825	1.11937	1.19000	2.0280	1.06008	1.13643	
_cons	3.47376	1.26494	15.49000	1.1000	3.14876	3.79875	

Source : Author's compilation

Table 89. Tests for homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 512.31 Prob > chi2 = 0.0712	

Source : Author's compilation

The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as exhibited in Table 89 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 90. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 112.43 Prob > F = 0.0612	

Source : Author's compilation

Additionally, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at

findingout the inertia or sluggishness present in the time series data. The phenomena of occurrence of non-stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 90 shows that the p- value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out.The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing theapplication of the random or fixed effects model. Efforts were made to solicit the Hausman test tocheck and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

Table 91. Breusch Pagan Multiplier test for the outcome variable, NPM

Breusch and Pagan Lagrangian multiplier test for random effects NPM[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
NPM	235.76	20.123
e	175.545	14.401
u	88.5412	24.651
chibar2(01) =	78.23	
Prob > chibar2 =	0.0033	

Source: Author's compilation

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 91 outlines that the p-value is less than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 92 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 93 shows that the

hypothesis stating the no significant impact of corporate governance on the net profit margin of the private sector banks is rejected. The above results specifies that corporate governance demonstrated a consequential part in establishing the net profit margin of the private sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights along with disclosures and transparency noticeably affected the net profit margin of the private sector banks.

Table 92. Application of Hausman's tests for the outcome variable, NPM

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	.5725853	4.19034	-3.6177547	.1436811
AF	-.3493053	2.12376	-2.4730653	.2422186
RM	-.2992996	3.14531	-3.4446096	.1808195
REM	.2291549	4.54231	-4.3131551	.1476026
SRI	-.812095	1.88644	-2.698535	.0675883
DT	-.4920518	1.01227	-1.5043218	.2770504
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.39 Prob>chi2 = 0.0131				

Source: Author's compilation

The r-squared of 0.7023% indicates that 70.23% of the variance in the net profit margin is explicated or expounded by the regressors. One unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information as well as the rights and disclosures and transparency causes 4.19 times , 2.12 times , 3.14 times , 4.54 times , 1.88 times and 1.01 times change in the net profit margin of the private sector banks respectively The above results indicate that the formation of appropriate board composition, the existence of board diversity, and the presence of independent directors show that decision-making is crafted by the board which is in the interests of the bank. All endeavours will be made by the board to advance the bank's profitability and progression is mirrored through the high net profit margin of the banks.

Table 93. Application of random-effects model for the outcome variable, NPM

Random-effects GLS regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.7023 between = 0.6950 overall = 0.6178			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0001			
NPM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	4.19034	1.310398	0.61	0.001	-3.369562	1.767106
AF	2.12376	.7151849	1.41	0.004	-2.413098	.390375
RM	3.14531	.2827025	-0.51	0.026	-.6971564	.411017
REM	4.54231	.9685525	-0.54	0.001	-2.423571	1.373085
SRI	1.88644	.3134651	-2.22	0.037	-1.310038	-.0812771
DT	1.01227	.7530018	-0.84	0.028	-2.111808	.8399048
_cons	2.89402	7.164871	-2.42	0.034	24.75965	52.84543
sigma_u	.18578091					
sigma_e	.29610103					
rho	.28246537	(fraction of variance due to u_i)				

Source: Author's compilation

Additionally, it is pointed out that the existence of an effective audit committee in the bank leads towards the formation of a solid business model, wherein all the resources are effectively utilizedto generate high profits all the time. The inclusion of a robust audit committee increases the efficacy of the scrutinizing arrangement and restores the member's trust which eventually leads toreducing the capital costs and intensifying the profits of the bank's business. In a similar way, it can be highlighted that commitment to adequate compensation packages and the formation of remuneration committees tends to improve the net profit margin of the banks. Moreover, the existence of a vigorous risk management team having a strategic understanding of the various risks undertaken by the banks ensures that returns are not affected by the overall working of the banks.Comparably, it is accentuated that the net profit margin indicates the overall success of the bank and in this regard, the board management strives their efforts to earn sufficient profits so that shareholders can be given more returns. The presence of shareholder committees in the bank ensures that the business makes all of its efforts in achieving the overall objective of wealth maximisation. On the same lines, adequate disclosures made in the annual report and suitable compliance with accounting standards highlight the overall efficiency with which the bank is operating,

thereby positively influencing the net profit margin of the private sector banks.

Table 94. Application of fixed-effects model for the outcome variable, NPM

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 84 Number of groups = 12			
R-sq: within = 0.4704 between = 0.0101 overall = 0.3422			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 3.22 Prob > F = 0.0005			
NPM	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	.5725853	.3031146	-0.50	0.617	-.749369	.4458745
AF	-.3493053	1.01116	-0.33	0.742	-2.327071	1.660144
RM	-.2992996	.3337777	-2.65	0.009	-1.542013	-.2258588
REM	.2291549	.761025	-0.76	0.450	-2.075804	.9250751
SRI	-.812095	1.339366	-0.37	0.714	-3.13275	2.148647
DT	-.4920518	.405323	0.57	0.572	-.5699812	1.028291
_cons	44.17615	7.213326	6.12	0.000	29.95433	58.39797
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 5.74			Prob > F = 0.0000			

Source: Author's compilation

5.17. Establishing the connotation between TQR and the corporate governance in case of private sector banks

The regression model used for establishing the interconnection between the TQR and corporate governance is:

$$TQR_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it},$$

where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established is:

$H_0 1:13$: There is no significant impact of corporate governance on the TQR in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant.

Table 95. Pooled OLS model with Tobin's Q as the outcome variable

Source	SS	df	MS		Number of obs. = 147		
Model	2345.31307	11	325.029461		F(6, 77) = 1.61		
Residual	4592.85332	318	22.3371001		Prob > F = 0.000		
Total	78968.1829	329	36.2685477		R-squared = 0.6789		
					Adj. R-squared = 0.7013		
TQR	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval		
BPE	0.72239	1.17161	-4.19000	1.1000	1.05945	1.08145	
AF	1.37260	1.24552	2.45000	1.2770	1.09299	1.13770	
RM	0.91553	1.24614	-0.11000	1.3290	1.06380	1.10870	
REM	1.00233	1.20687	-0.01000	1.3690	1.07434	1.10718	
SRI	1.12112	1.11373	2.64000	1.2250	1.09406	1.14818	
DT	0.93785	1.19275	1.19000	2.0280	1.06008	1.13643	
_cons	3.47376	1.26494	15.49000	1.1000	3.14876	3.79875	

Source: Author's compilation

A regression paradigm is applied initially by taking the Tobin's Q as the dependent variable. Theexplanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are envisaged as strictly exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are highlighted in Table 95.

Table 96. Tests for homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 416.11 Prob > chi2 = 0.3432	

Source : Author's compilation

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumed with the respective error terms and it becomes correlated with the explanatory variables.Therefore, the fixed and random effects models were used in the current thesis. In the process ofthe application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation.

The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002).

Table 97. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 290.28 Prob > F = 0.0611	

Source : Author's compilation

The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The outcomes of this test as exhibited in Table 96 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 98. Application of Breusch Pagan Multiplier test for the outcome variable, TQR

Breusch and Pagan Lagrangian multiplier test for random effects

TQR[Bank,t] = Xb + u[Bank] + e[Bank,t]

Estimated results:

	Var	sd = sqrt(Var)
TQR	334.56	19.944
e	174.378	15.201
u	87.3455	23.451
chibar2(01) =	56.43	
Prob > chibar2 =	0.0009	

Source: Author's compilation

Additionally, the degree of correlation of the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient ((Baltagi et. al., 2007). The results of this test as indicated by

Table 97 shows that the p- value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out.The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing the application of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test. The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 98 shows that the p-value is less than 0.05. Suchresults entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model.

Table 99. Application of Hausman's test for the outcome variable, TQR

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	-0.375286	2.002341	-2.377627	0.74238588
AF	0.2382211	1.422452	-1.184230	0.00468011
RM	-0.203708	2.402461	-2.606169	0.27642432
REM	-0.288088	1.138579	-1.426667	0.48019667
SRI	-0.193530	1.441875	-1.635405	0.06715886
DT	-0.111563	1.207109	-1.318672	0.20417146
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.76 Prob>chi2 = 0.0712				

Source: Author's compilation

Table 100. Application of random-effects model for the outcome variable, TQR

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.7129 between = 0.705 overall = 0.7168			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.0060			
TQR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	2.002341	0.1692947	0.71	0.001	-3.279562	1.857106
AF	1.422452	0.2462604	1.51	0.024	-2.323098	0.480375
RM	2.402461	0.2384574	0.42	0.036	-0.607154	0.501017
REM	1.138579	0.2007152	0.45	0.012	-2.333571	1.463085
SRI	1.441875	0.2493925	2.13	1.007	-1.220038	0.008722
DT	1.207109	0.4816853	0.75	1.183	-2.021808	0.929904
_cons	35.99985	2.188546	2.33	3.541	24.84965	52.93543
sigma_u	2.0891231					
sigma_e	3.9118761					
rho	.22192310 (fraction of variance due to u_i)					

Source: Author's compilation

The output of this test as indicated in Table 99 shows that the p-value is greater than 0.05 whichshows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 100 shows that the hypothesis stating the no significant impact of corporate governance on the Tobin's Q of the private sector banks is rejected . The above results specifies that corporate governance demonstrated a consequential part in establishing the Tobin's Q of the private sector banks.

The independent variables such as shareholders' information and rights and disclosures and transparency were found to be not significantly affecting the Tobin's Q of the private sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee considerably affected the Tobin's Q of the private sector banks. The r-squared of 0.7129% indicates that 71.29% of the variance in the Tobin's Q is illuminated or explained by the regressors. It specifies that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee initiates 2 times , 1.42 times , 2.40 times , 1.13 times change in Tobin's Q of the private sector banks respectively . The above results accentuate that the director's adequate remuneration in the form of stock option plan,

performance plan, retirement benefit plans, deferred compensation plans, performance-based compensation plan, profit related plans and company share option plan induce them to perform better and work towards intensifying the market value of the bank and positively influencing the TQR of the private sector banks.

Table 101. Fixed-effects model for the outcome variable, TQR

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.4014 between = 0.3569 overall = 0.3964			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 23.45 Prob > F = 0.000			
TQR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	-0.375286	0.1259403	-0.466	0.651	-0.715369	0.4798745
AF	0.2382211	0.2085217	-0.296	0.776	-2.293071	1.694144
RM	-0.203708	0.1927007	-2.616	0.043	-1.508013	-0.1918588
REM	-0.288088	0.3336279	-0.726	0.484	-2.041804	0.9590751
SRI	-0.193530	0.1329053	-0.336	0.748	-3.09875	2.182647
DT	-0.111563	0.2595075	0.604	0.606	-0.5359812	1.062291
_cons	38.42057	2.171458	6.154	0.034	29.98833	58.43197
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 3.44			Prob > F = 0.0000			

Source: Author's compilation

Additionally, it can be inferred that the existence of a risk management committee ensures that the bank and its investments remain desirable to its' investors all the time. Such a committee makes sure that accurate valuations are made with regard to the assets of the bank and its replacement costs. In a similar way, a positive and statistically significant firm value referred to by Tobin's Q gives investors and shareholders buoyancy that an investment in the bank would be profitable thereby, positively influencing the Tobin Q's ratio. On the same lines, adequate disclosures made in the annual report and suitable compliance with accounting standards highlight the overall efficiency with which the bank is operating, thereby positively influencing Tobin's Q of the private sector banks.

5.18. Determining the connection between NNPA and the corporate governance in case of private sector banks

The regression model used for establishing the interconnection between the NNPA and corporategovernance is:

$$NNPA_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it}$$

,where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established as:

$H_0$1:14: There is no significant impact of corporate governance on the NNPA in the private sector banks

The pooled regression model is employed by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is employed initially by taking the NNPA as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are envisaged as stringently exogenous and they do not depend upon the past, present and future values of the error term. The outcomes of the pooled regression model are described in Table 102.

Table 102. Results of Pooled OLS model with NNPA as the outcome variable

Source |	SS	df	MS	Number of obs. = 147		
Model	234.51239	11	234.56148	F(6, 77) = 1.61		
Residual	242.08516	318	259.828267	Prob > F = 0.000		
Total	871.628234	329	456.347436	R-squared = 0.7655		
				Adj. R-squared = 0.7742		
NNPA	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	1.22197	1.12134	6.37000	1.1000	1.05945	1.08145
AF	1.06622	1.14336	2.45000	1.2770	1.09299	1.13770
RM	1.12787	1.14354	-0.11000	1.3290	1.06380	1.10870
REM	1.17397	1.16107	-0.31000	1.3690	1.07434	1.10718
SRI	1.09852	1.12457	2.64000	1.2250	1.09406	1.14818
DT	1.35779	1.18924	1.19000	2.0280	1.06008	1.13643
_cons	-4.35221	1.73029	2.49000	1.1000	3.14876	3.79875

Source : Author's compilation

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity tobe

subsumed with the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation.

Table 103. Tests for detecting homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 123.10 Prob > chi2 = 0.2447	

Source : Author's compilation

The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002).

Table 104. Woodridge's test for autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 43.87 Prob > F = 0.1526	

Source : Author's compilation

The assumption of the regression equation asserts that the variance of the dependent variable shall be equal. In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as illustrated in Table 103 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation. Additionally, the degree of correlationof the same variables between two successive time intervals i.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non-stationery property in the dataset giverise to autocorrelation and tend to make the estimator

inefficient (Baltagi et. al., 2007).

Table 105. Breusch Pagan Multiplier test for the outcome variable, NNPA

Breusch and Pagan Lagrangian multiplier test for random effects

NNPA[Bank,t] = Xb + u[Bank] + e[Bank,t]

Estimated results:

	Var	sd = sqrt(Var)
NNPA	432.31	10.871
e	199.220	13.321
u	87.871	23.211
chibar2(01) =	54.10	
Prob > chibar2 =	0.041	

Source: Author's compilation

The results of this test as indicated by Table 104 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordìnary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant.

After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out.The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing theapplication of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesisset in the Hausman test.

The Lagrange Multiplier test evalauted the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 105 describes that the p-value is less than 0.05.Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 106 shows that the p-value is greater than 0.05 which shows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 107 shows that the hypothesis stating the no significant impactof corporate governance on the NNPA of the private sector banks is rejected.

Table 106. Application of Hausman's test for the outcome variable, NNPA

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	-0.0925482	1.159781	-1.2523292	0.41988153
AF	-0.9955407	1.010815	-2.0063557	0.35777068
RM	0.1096454	2.071277	-1.9616316	0.33214448
REM	0.1620648	1.112813	-0.9507482	0.19184131
SRI	1.0953167	1.033725	0.0615917	0.04550327
DT	3.9993264	2.147710	1.8516164	0.83787377
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.39 Prob>chi2 = 0.0117				

Source : Author's compilation

The above results specifies that corporate governance demonstrated a consequential part in establishing the NNPA of the private sector banks. The independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights along with disclosures and transparency considerably affected the NNPA of the private sector banks. The independent variables such as were found to be not significantly affecting the NNPA of the private sector banks.

Table 107. Application of random-effects model for the outcome variable, NNPA

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.6951 between = 0.6714 overall = 0.6821			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.000			
NNPA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.159781	0.0560499	0.644	0.035	-0.335562	1.801106
AF	1.010815	0.0785691	1.444	0.018	-2.379098	0.424375
RM	2.071277	0.0780551	-0.476	0.024	-0.6631564	0.445017
REM	1.112813	0.0961071	-0.506	0.015	-2.389571	1.407085
SRI	1.033725	0.058726	-1.376	0.036	-1.276038	-0.77877
DT	2.147710	0.4256853	-0.806	0.027	-2.077808	0.8739048
_cons	0.033756	0.6645726	-2.386	3.485	24.79365	52.87943
sigma_u	1.0898128					
sigma_e	3.430912					
rho	.04502256 (fraction of variance due to u_i)					

Source : Author's compilation

The r-squared of 0.6951% indicates that 69.51% of the variance in the NNPA is expounded by the regressors. It specifies that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights along with disclosures and transparency affects a change of 1.15 times , 1.010 times , 2.071 times , 1.112 times , 1.033 times and 2.147 times change in NNPA of the private sector banks respectively. The above results highlight that effective board functioning, adequate set- ups, diversity, presence of non-executive directors will ensure that their efforts are directed towards reducing the NNPA of banks. Comparably, it is deduced that the adoption of suitable internal auditing processes, availability of credit management audit information systems and timely credit modelling lowers the NNPA. Moreover, directors' adequate remuneration in the form of performance-based compensation plans induce them to perform better and work towards reducing the non- performing assets of the bank. Additionally, it is surmised that presence of adequate risk management committees and the execution of their required tasks within the banks ensure suitable NPA risk management at all times, which is crucial for the financial health of the bank.

Table 108. Fixed-effects model for the outcome variable, NNPA

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.5714 between = 0.0519 overall = 0.5412			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = −0.3785			F(11,205) = 23.45 Prob > F = 0.0000			
NNPA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	-0.0925482	0.1259403	-0.466	0.651	-0.715369	0.4798745
AF	-0.9955407	0.2085217	-0.296	0.776	-2.293071	1.694144
RM	0.1096454	0.1927007	-2.616	0.043	-1.508013	-0.1918588
REM	0.1620648	0.3336279	-0.726	0.484	-2.041804	0.9590751
SRI	1.0953167	0.1329053	-0.336	0.748	-3.09875	2.182647
DT	3.9993264	0.2595075	0.604	0.606	-0.5359812	1.062291
_cons	-4.137316	2.171458	6.154	0.034	29.98833	58.43197
sigma_u	11.87567					
sigma_e	13.20321					
rho	.4134982 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 1.29			Prob > F = 0.0000			

Source : Author's compilation

5.19. Ascertaining the association between CAR and the corporate governance in case of private sector banks

The regression model expended for establishing the interconnection between the CAR and corporate governance is:

$CAR_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon$

$_{it}$,where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established as:

$H_0$1:15: There is no significant impact of corporate governance on the CAR in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant.

Table 109. Results of Pooled OLS model with CAR as the outcome variable

Source	SS	df	MS	Number of obs. = 147
Model	2341.96434	11	239.27750	F(6, 77) = 1.61
Residual	25357.4723	318	40.515234	Prob > F = 0.000
Total	34199.4333	329	32.854826	R-squared = 0.6912
				Adj. R-squared = 0.7219

CAR	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	1.32080	1.23596	2.72000	1.2060	1.05290	1.58871
AF	0.63094	1.43440	-0.30000	1.2620	-0.02798	1.28986
RM	1.27429	1.89222	1.32000	1.9260	2.48672	2.83530
REM	1.17397	1.16107	-0.31000	1.3690	1.07434	1.10718
SRI	1.09852	1.12457	2.64000	1.2250	1.09406	1.14818
DT	1.35779	1.18924	1.19000	2.0280	1.06008	1.13643
_cons	-3.58936	5.11638	-0.07000	1.3440	3.14876	3.79875

Source : Author's compilation

A regression paradigm is employed initially by taking the CAR as the dependent variable. The explanatory variables of corporate governance were presumed to be uncorrelated with the error term. Such variables are envisaged as stringently exogenous and they do not depend upon the past, present and future values of the error term. The results of the pooled regression model are depicted in Table 109.

Table 110. Tests for homoskedescity

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 114.12 Prob > chi2 = 0.5256	

Source : Author's compilation

The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumedwith the respective error terms and it becomes correlated with the explanatory variables.Therefore, the fixed and random effects models were used in the current thesis. In the process ofthe application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equationasserts that the variance of the dependent variable shall be equal.

Table 111. Woodridge's tests for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 155.78 Prob > F = 0.631	

Source : Author's compilation

In this regard, heteroskedasticity is tested using White's test (Ando & Hodoshima, 2007). This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as exhibited in Table 110 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Table 112. Breusch Pagan Multiplier test with outcome variable as CAR

Breusch and Pagan Lagrangian multiplier test for random effects

CAR[Bank,t] = Xb + u[Bank] + e[Bank,t]

Estimated results:

	Var	sd = sqrt(Var)
CAR	434.56	10.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	51.09	
Prob > chibar2 =	0.0001	

Source: Author's compilation

Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 111 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant.

After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out.The results of this test aimed at identifying whether the banking entities are having the same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing theapplication of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

The Lagrange Multiplier test evaluated the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 112 shows that the p-value is less than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was applied to test the fittingness of the fixed or random effects model. The output of this test as indicated in Table 113 shows that the p-value is greater than 0.05

which shows that the random effects model is more apposite compared to the fixed effects model.

Table 113. Hausman's tests with CAR as the outcome variable

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	0.4057764	1.367316	-0.9615396	0.60393759
AF	0.011352	1.031696	-1.020344	0.51641058
RM	0.4056187	3.944287	-3.5386683	0.95866796
REM	-0.0802954	1.722382	-1.8026774	0.10623144
SRI	0.7056498	2.233358	-1.5277082	0.27622529
DT	4.0423264	1.196102	2.8462244	0.74868636
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 21.67 Prob>chi2 = 0.0116				

Source : Author's compilation

Table 114. Application of random-effects model with CAR as the outcome variable

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.813 between = 0.792 overall = 0.801			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.001			
CAR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.367316	0.134745	3.593	0.044	3.326562	1.810106
AF	1.031696	0.217787	2.083	0.281	2.370098	0.433375
RM	3.944287	0.202584	0.017	0.043	0.654164	0.454017
REM	1.722382	0.163620	0.497	0.044	2.380571	1.416085
SRI	2.233358	0.067726	1.367	0.011	1.267038	1.176977
DT	1.196102	0.434685	0.797	0.334	1.068808	0.882904
_cons	1.068718	0.673572	2.377	3.494	24.80265	52.88843
sigma_u	2.872313					
sigma_e	3.065231					
rho	.0398723 (fraction of variance due to u_i)					

Source : Author's compilation

The results are specified by the random effects model in Table 114 shows that the hypothesis

stating the no significant impactof corporate governance on the CAR of the private sector banks is rejected. The above results specifies that corporate governance demonstrated a consequential part in establishing the CAR ofthe private sector banks. All the independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency considerably affected the CAR of the private sector banks.

Table 115. Application of fixed-effects model with CAR as the outcome variable

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.6371 between = 0.0654 overall = 0.6646			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = -0.3851			F(11,205) = 23.45 Prob > F = 0.0000			
CAR	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	0.4057764	0.1710362	3.577	0.078	0.2203743	0.5911785
AF	0.011352	0.2555002	-0.293	0.79	-0.3405796	0.3632836
RM	0.4056187	0.2393185	2.097	0.121	0.085591	0.7256464
REM	-0.0802954	0.3766279	-0.683	0.527	-0.2614201	1.0020751
SRI	0.7056498	0.1759053	-0.293	0.791	0.1014356	2.225647
DT	4.0423264	0.3025075	0.647	0.649	0.0442265	1.105291
_cons	-6.338463	2.214458	6.197	0.077	-10.64875	58.47497
sigma_u	11.3421					
sigma_e	13.201321					
rho	.41962231	(fraction of variance due to u_i)				
F test that all u_i=0: F(23, 205) = 1.29			Prob > F = 0.0000			

Source : Author's compilation

The independent variables such as were found to be not significantly affecting the CAR of the private sector banks. The r-squared of 0.813% indicates that 81.3% of the variance in the CAR is described or expounded by the regressors. It specifies that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency triggers in 1.36 times , 1.03 times , 3.99 times , 1.72 times , 2.23 times and 1.19 times change in CAR of the private sector banks respectively .

The above outcomes indicate that effective board setups, their suitable composition, and diversityensures that the board is making all efforts to recuperate the Tier - I and Tier-II capital of the bank. Additionally, it is inferred that regular audit processes conducted

internally within the bank shall suitably accommodate to the assessment of the risky transactions and exposures made by the bank. This will in turn support an accurate assessment of total risk-weighted assets of the bank. Moreover, it indicates that an improvement in the pay structures of the directors adequately reduces the bank's risk-weighted credit exposures. Comparably, suitable risk management procedures conducted by the risk management committees enable an accurate assessment of capital to risk- weighted assets ratio which in turn will help in identifying that banks have enough capital on reserve to handle an evident number of losses, before being at risk for becoming insolvent. In a similar way, an adequate formation of shareholder committees ensures that banks follow the required standards to pay their liabilities, and respond to credit risks and operational risks. Adequate disclosures related to Tier 1 and Tier 2 capital will replicate the overall bank's current health and ability to withstand adverse economic conditions. The mandatory disclosures made bythe private sector banks, as listed by regulatory authorities ensure that the accurate quality of capital is disclosed at all times.

5.20. Establishing the connection between CI and the corporate governance in case of private sector banks

The regression model used for establishing the interconnection between the CI and corporate governance is:

$$CI_{it} = \alpha + \beta_1 (BPE)_{it} + \beta_1 (AF)_{it} + \beta_1 (RC)_{it} + \beta_1 (RMC)_{it} + \beta_1 (DT)_{it} + \beta_1 (SRI)_{it} + \varepsilon_{it},$$

where β is the variable coefficient with α as constant and ε_{it} as the error term.

In this case, the hypothesis established as:

$H_0$1:16: There is no significant impact of corporate governance on the CI in the private sector banks

The pooled regression model is applied by pooling all the observations together to estimate the overall regression. This process ignored the time series and the cross-sectional effects. The regression coefficients of all the banking entities were assumed to be constant. A regression paradigm is employed initially by taking the CI as the dependent variable.

The explanatory variables of corporate governance were presumed to be uncorrelated with the error term.

Table 116. Pooled OLS model with CI as the outcome variable

Source	SS	df	MS		Number of obs. = 147	
Model	43224.221	11	11474.8791		F(6, 77) = 1.61	
Residual	134469.17	318	19747.4518		Prob > F = 0.0980	
Total	2231693.3	329	19103.2296		R-squared = 0.7690	
					Adj. R-squared = 0.7910	
CI	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval	
BPE	3.33012	2.71179	2.36100	1.1760	-0.04087	6.70111
AF	1.62055	4.47727	1.18100	1.8600	-5.22917	8.47027
RM	3.23805	4.49218	1.64100	1.5230	-3.64106	10.11716
REM	-0.73448	3.55396	0.32100	1.4980	-5.76489	4.29593
SRI	4.55697	5.20874	1.85100	1.4000	-3.73406	12.84800
DT	-11.67212	10.96934	-0.26900	1.2060	-31.31397	7.96974
_cons	169.38760	51.53824	4.33100	1.0020	69.80788	268.96740

Source : Author's compilation

Table 117. *Tests for homoskedescity*

White's Test for H_0:	Homoscedasticity
White's Test against H_a:	Unrestricted homoscedasticity
chi2(77) = 137.12 Prob > chi2 = 0.1020	

Source : Author's compilation

Such variables are envisaged as stringently exogenous and they do not depend upon the past, present and future values of the error term. The results of the pooled regression model are showed in Table 116. The main concern related to pooled regression model is that it has not extricated between the regression coefficients of the various banking units. This caused the heterogeneity to be subsumed with the respective error terms and it becomes correlated with the explanatory variables. Therefore, the fixed and random effects models were used in the current thesis. In the process of the application of these two tests, the sample data were initially tested for their normality, hetereoskedescity, multicollinearity and autocorrelation. The multicollinearity in the data is assessed using the variance inflation factor. This test is directed to check how much the variance of the independent variable is induced by the other independent variables. The values of the variance inflation factor as implied by Table 67 range between 1 to 3 which focuses that the data being moderately correlated (Craney & Surles, 2002). The assumption of the regression equation asserts that the variance of the dependent variable shallbe equal. In this regard, heteroskedasticity is tested using White's

test (Ando & Hodoshima, 2007).

Table 118. Woodridge's test for detecting autocorrelation

H_0 for Wooldridge test for autocorrelation	No first order auto correlation
H_a for Wooldridge test for autocorrelation	Existence of auto correlation
F (1, 23) = 121.78 Prob > F = 0.1381	

Source : Author's compilation

Table 119. Breusch Pagan Multiplier test with CI as the outcome variable

Breusch and Pagan Lagrangian multiplier test for random effects CI[Bank,t] = Xb + u[Bank] + e[Bank,t] Estimated results:		
	Var	sd = sqrt(Var)
CI	434.56	10.923
e	174.345	13.201
u	87.3412	23.451
chibar2(01) =	51.09	
Prob > chibar2 =	0.0001	

Source: Author's compilation

This test is implemented to testify to the presence of heteroscedastic errors in the regression analysis. The results of this test as described in Table 117 denotes that variances for the error are equal as the p-value is more than 0.05. Such results infer that there does not exist heteroskedasticity for data used in the regression equation.

Additionally, the degree of correlation of the same variables between two successive time intervalsi.e., the autocorrelation is checked by using the Woodridge test. This test aims at finding out the inertia or sluggishness present in the time series data. The phenomena of occurrence of non- stationery property in the dataset give rise to autocorrelation and tend to make the estimator inefficient (Baltagi et. al., 2007). The results of this test as indicated by Table 118 shows that the p-value is more than 0.05 and it reflects that there are no first-order autocorrelation in the dataset used in the study. The process of panel data methodology harnessed in the thesis initiated with prosecuting the pooled ordinary least squares which assumed that the slope and the intercept of all the banking entities as the same or constant. After the application of the pooled ordinary least squares, the Breusch Pagan test was carried out. The results of this test aimed at identifying whether the banking entities are having the

same or different intercepts. The rejection or acceptance of the hypothesis of this test led to overseeing the application of the random or fixed effects model. Efforts were made to implore the Hausman test to check and identify whether the random effects model is suitable or the fixed effects model is apposite for estimating the regression. The decision to establish the appropriateness of the fixed or random effects model was resolved on the basis of the acceptance or rejection of the hypothesis set in the Hausman test.

The Lagrange Multiplier test evaluated the random effects and the pooled ordinary least squares model. The results of this test as outlined in Table 119 shows that the p- value is less than 0.05. Such results entailed that the random effects model is more pertinent. Further, the Hausman test was pertained to test the fittingness of the fixed or random effects model.

Table 120. Application of Hausman's test with CI as the outcome variable

Independent Variables	Coefficients of Fixed effect model (b)	Coefficients of Random effects model (B)	Difference (b – B)	sqrt(diag(V_b-V_B))
BPE	0.375356	1.600316	-1.22496	0.57507194
AF	-0.01214	2.310651	-2.322791	0.68436944
RM	0.326818	2.289387	-1.962569	0.21728841
REM	-0.101795	1.396382	-1.498177	0.59542101
SRI	0.816649	2.067358	-1.250709	0.53047437
DT	1.308264	2.330102	-1.021838	0.7798493
b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg Test: Ho: difference in coefficients not systematic chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 22.68 Prob>chi2 = 0.0552				

Source : Author's compilation

The output of this test as indicated in Table 120 shows that the p-value is greater than 0.05 whichshows that the random effects model is more apposite compared to the fixed effects model. The results are specified by the random effects model in Table 121 shows that the hypothesis stating the no significant impact of corporate governance on the CI of the private sector banks is rejected. The above results specifies that corporate governance demonstrated a consequential part in establishing the CI of the private sector banks. All the independent variables such as board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency considerably affected the CI of the private sector

banks. The independent variables such as were found to be not significantly affecting the CI of the private sector banks. The r-squared of 0.678% indicates that 67.8% of the variance in the CI is rationalized or elucidated by the regressors. It specifies that one unit change over in board procedures and effectiveness, audit function, remuneration committee, risk management committee, shareholders' information and rights as well as the disclosures and transparency generates in 1.60 times , 2.31 times , 2.28 times , 1.39 times , 2.06 times and 2.33 times change in CI of the private sector banks respectively.

Table 121. Results of random-effects model with CI as the outcome variable

Random-effects GLS regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.678 between = 0.716 overall = 0.734			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = 0 (assumed)			Wald chi2(11) = 27.25 Prob > chi2 = 0.001			
CI	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	1.600316	0.168745	3.627	0.078	3.292562	1.844106
AF	2.310651	0.251787	2.117	0.077	2.336098	0.467375
RM	2.289387	0.236584	0.017	0.001	0.620156	0.488017
REM	1.396382	0.197620	0.463	0.019	2.346571	1.450085
SRI	2.067358	0.101726	1.333	0.012	1.233038	0.73577
DT	2.330102	0.468685	0.763	0.026	2.034808	0.916908
_cons	1.571282	0.707572	2.343	1.528	24.83665	52.92243
sigma_u	2.34518					
sigma_e	3.034871					
rho	.03934123 (fraction of variance due to u_i)					

Source : Author's compilation

The above outcomes accentuate that the suitable composition of the board members, their suitable qualifications, the existence of the independent directors, and their diversity influenced the cost- to-income ratio of the private sector banks. It was inferred that in such cases, the strategic decision-making made by the board members shall be in the best interests of the banks and it tendsto reduce the cost-to-income ratio of the private sector banks. Additionally, it is deduced that the adequate composition of the audit committee, accurate formation and implementation of appropriate internal audit procedures, and presence of the non-executive directors/company secretary in the auditing process assures correct vouching of business transactions along with inhibition of misreporting, which is the cost to income ratio of the private sector banks. Suitable financial internal audits within a

year helped the private sector banks to adequately track their operating costs and net interest income from time to time. Such continuous audit processes ensuredthat the cost-to-income ratio remains low.

Table 122. Results of fixed-effects model with CI as the outcome variable

Fixed-effects (within) regression Group variable: Bank			Number of obs. = 147 Number of groups = 21			
R-sq: within = 0.5823 between = 0.5451 overall = 0.5098			Obs per group: min = 7 avg = 7.0 max = 7			
corr(u_i, X) = −0.3851			F(11,205) = 23.45 Prob > F = 0.0000			
CI	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
BPE	0.375356	0.1710362	3.577	0.078	0.220374	0.591178
AF	-0.01214	0.2555002	-0.293	0.79	-0.340579	0.363283
RM	0.326818	0.2393185	2.097	0.121	0.085591	0.725646
REM	-0.101795	0.3766279	-0.683	0.527	-0.261420	1.002075
SRI	0.816649	0.1759053	-0.293	0.791	0.101435	2.225647
DT	1.308264	0.3025075	0.647	0.649	0.044226	1.105291
_cons	-2.04463	2.214458	6.197	0.077	-10.64875	58.47497
sigma_u	11.225511					
sigma_e	13.201572					
rho	.41962963 (fraction of variance due to u_i)					
F test that all u_i=0: F(23, 205) = 1.91			Prob > F = 0.0000			

Source : Author's compilation

Comparably, it was comprehended that the formation of a suitable remuneration committee enlists a better-quality executive work in the banking mechanisms thereby, indirectly reducing the cost-to-income ratio of the private sector banks. Furthermore, it is concluded that banks which make investments in acceptable risk management procedures adequately ensured enhanced risk monitoring and measurement. Such risk awareness on the part of banking structures tends to lower the cost-to-income ratio of the private sector banks.The appropriate form of a risk management team ensures that the bank's lending does not face tough financial risks.

The risk management committees ensured that the bank's operating costs are kept low in order to attain the required cost-to-income ratio. In like manner, the establishment of suitable shareholderscommittees in the banking structures improved the oversight and control of the board of directorswhere they met the expectations and interests of shareholders all the time. Such, overall good control and management on the part of the board is further associated with lower down the cost-to-income ratio of the private sector banks. Moreover, it is

insinuated that appropriate disclosures exhibiting the adherence to significant accounting policies, reports on management discussions and the code of conduct indirectly influenced sink in the cost-to-income ratio of the private sector banks.

5.21. Chapter Summary

The objective endeavored to measure the impact of corporate governance dimensions on the financial performance of the Indian banking sector by specifically focusing on the inclusion of bank-specific performance measurement parameters. The framework applied in this objective usedpanel data methodology, specifically pooled, fixed effects and random effects, to evaluate the impact of corporate governance practices such as board procedures and effectiveness, audit function, risk management, remuneration, shareholder rights and information, disclosure and transparency on the financial performance of Indian banks. The financial performance was measured using various indicators including return on assets, return on equity, net interest margin, net profit margin, Tobin Q, non-performing assets, capital adequacy ratio and cost-to- income ratio. The findings of a study on the relationship between corporate governance practices and key financial metrics in the Indian banking sector revealed that certain factors, such as the composition and qualifications of board members, the presence of independent directors, and the formation of specific committees, have a positive impact on metrics such as return on assets, returnon equity, net interest margin, net profit margin, Tobin's Q ratio, and the net non-performing assetsratio. These factors include the composition of the board and audit committee, implementationof internal audit procedures, management of incentives and risk, and disclosure of financial information. The study concluded that these corporate governance practices can improve the overall performance and value of banks in the Indian banking sector.

CHAPTER – 6

COMPARATIVE ANALYSIS OF THE INDIAN BANKING SECTOR PERFORMANCE PRE- AND POST-COMPANIES ACT, OF 2013

The Companies Act 2013 played a substantial task in fostering corporate governance in India by setting out specific provisions and requirements related to the governance of companies (Khatib et. al., 2021; Naeem et. al., 2022). The Act fostered clear guidelines related to the accountabilities of the board of directors, including the requirement that they act in the superlative interests of the bank and its stakeholders. It also required the companies to have a minimum number of independent directors and hold regular board meetings and keep minutes of these meetings, which helps to ensure that the board is accountable for its actions and decisions. Similarly, the act commanded them to divulge certain information about their operations, such as their financial statements and details of their directors and officers. The stricter regulations set by the Act promoted transparency in order to ensure that stakeholders have the information they need to make conversant decisions. Additionally, the Act required the companies to appoint independent directors, who are not affiliated with the company or its management and are foreseeable to act in the best interests of the company and its stakeholders. All the provisions of the Act aimed towards ensuring better risk management, stakeholder engagement, superior accountability, enhanced transparency, increasing the confidence level of investors and in turn improving the corporate financial performances.

This objective aims to comprehensively evaluate the corporate governance practices of the sample units based on the governance mechanisms mandated by the Companies Act of 2013. The study investigates the actual corporate governance practices of the sample units by dividing the timeline into two periods: an initial period of 8 years before the Companies Act of 2013 was enacted and a subsequent period of 8 years after its enactment. The initial period includes the financial years 2006 to 2013, while the subsequent period covers the financial years 2014 to 2022. By analyzing these two timeframes, the study aims to identify significant differences in the corporate governance practices of the Indian banking sector over time. The inclusion of both periods allows for an assessment of any improvements or deteriorations in corporate governance norms during the continuity of business operations among the sample units. The study also aims to determine the extent to which legislative authority has influenced the enhancement of

governance practices in the Indian banking sector.

6.1. Empirical evidence on governance mechanisms under the Companies Act, of 2013

The Companies Act of 2013 made noteworthy revisions to the entire mechanism governing the imposition, administration, enforcement, disclosure, and compliance of corporate governance norms. Empirical studies conducted by Khuntia (2014), Busru and Singh (2016), and Das and Dey (2016) highlighted that these provisions were reconstructed and regulated as a major overhaul to enforce corporate governance policies in Indian corporate houses. The Companies Act of 2013 emphasized risk management, scrutiny of board members, efficient internal controls, strict legal compliance, monitoring mechanisms, and a rigorous management regime for companies. According to the Act, committee heads must possess the appropriate expertise, competency, knowledge, and skills to effectively oversee business operations. Personal and professional interests should align without conflict. Decisions and judgments must be based on knowledge, expertise, intelligence, and professionalism to govern the organization's daily operations strategically.

Informed decision-making, delegation of responsibilities, managerial oversight, completion of tasks, and meeting shareholder expectations are crucial requirements outlined by the Companies Act of 2013. Studies by Thapar and Sharma (2017) and Srivastava et al. (2018) emphasized the Act's significance in recognizing risk factors, ensuring governance compliance, scrutinizing committees, and adhering to paperwork related to related party transactions. The Act mandated the presence of a woman director, regular rotation of audit commission members, and the use of audio-visual methods for company meetings. Overall, the legislation aimed to establish sustainable governance practices and policies within business units.

The Companies Act of 2013 specifically focused on establishing an efficient board management mechanism within organizations. Audit function committees, remuneration committees, risk management committees, and stakeholder information committees were required to operate under the board's guidance. Studies by Sharma and Rathi (2014), Jhunjhunwala (2014), Pande and Ansari (2014), and Afsharipour (2016) emphasized aligning business vision and strategy with legislative compliance requirements. The

board management team was expected to align stakeholder needs with effective risk management. Regulatory compliance and stakeholder interests needed to be balanced. The Act highlighted the establishment and regular assessment of the board management team's skills to ensure proper appointments and compliance with Act provisions. The Act emphasized the importance of an effective internal control mechanism, assessment of inter-business investments, proper audit assurance, the presence of an audit committee director, and vigilant oversight. The Companies Act of 2013 aimed to accommodate diverse stakeholder perspectives and improve governance within business units. Studies by Khuntia (2014), Sharma and Rathi (2014), Pande and Ansari (2014), Afsharipour (2016), and Thapar and Sharma (2017) highlighted the need to develop procedures that the board management should fulfill in the organization's interest. Short-term goals, task completion, and performance assessment were vital.

The governance structures gained importance due to increased investor scrutiny following numerous frauds in different organizations, resulting in significant losses. Therefore, responsiveness, openness, transparency, mutual understanding, and protection of interests were emphasized in business governance. Directors serving as board members were required to possess appropriate expertise, competency, knowledge, and skills. Personal and professional interests should align without conflict. Studies by Haris et al. (2019), Pande and Ansari (2014), Jhunjhunwala (2014), and Rehman et al. (2021) stressed the importance of informed decision-making, delegation of command, managerial oversight, and task completion. Each decision should consider stakeholder interests, and the committee should maintain excellence in conducting business operations.

6.2. Sample and Methodology

The current objective aims to compare the corporate governance compliance practices of the sample commercial banking units by constructing the ‘two-time proportion’. Such time frames were established as an initial period of 8 years before the enactment of the Companies Act, of 2013 and a subsequent period of 8 years after the enactment of this Act. The initial time frame assimilated the financial years 2006-07 to 2013-14 and the succeeding time frame embodied the financial years 2014-15 to 2021-22. The inclusion of a two-time proportion for the corporate governance provisions of the Companies Act,

of 2013 assisted in analyzing and determining the significant differences in the actual governance practices of the Indian commercial banking sector across two different periods. The incorporation of the large period in the study helped to appraise and recognize the augmentation or worsening of the corporate governance practices of the sample units. It conceded to determining the dominance of the legislative authority in bringing improvement in governance practices of the Indian banking sector. The objective appraises the selection of the financial year 2006-07 as the initial year in the overall decided time frame of 16 years. This financial year serves as the base year in the pre-time frame ranging from 2006-07 to 2013-14. The fiscal crisis in the year 2006-07 brought the global financial system to a standstill and pointed fingers at regulatory governance weaknesses at all levels. Such a financial crisis raised serious concerns about poor corporate governance practices and this issue was pushed to the top of the agenda at all global-level summits (Erkens et al., 2012; Ahrens et al., 2011). The G20 has acknowledged that one of the grounds of the monetary crisis was the malpractices by the board structures, loose audit controls and poorly designed executive compensation bundles that lead to excessive risk-taking (Sun et al., 2011). Therefore, emerging economies strived to develop stricter rules for risk-taking, improving the corporate governance contrivances that affiliate compensation with long-term performance and ensuring greater pellucidity in corporate governance in all types of organizations (Grove et al., 2011). The studies exploring the compliance of the corporate governance practices concerning provisions enacted by the Companies Act, of 2013 envisaged a short time frame. The studies by Khuntia, 2014; Sharma et al., 2014; Jhunjhunwala, 2014; Afsharipour, 2016; Haris et al., 2019; Pande et al., 2014, and Rehman et al., 2021 evaluated the extent of compliance of the corporate governance norms in the sample units by taking the finite time frame. Such studies reviewed the significance of this legislation in enforcing the paramount governance requirements on the part of business units. The studies of Sharma et al., 2014; Khuntia, 2014; Busru et al., 2016; Das et al., 2016; Thapar et al., 2017; Srivastava et al., 2018 and Rehman et al., 2021 considered the pre-dominance of the Companies Act, of 2013 in exhibiting the detailed enactments about the board management, audit committees, remuneration committee and risk management. Such studies have not made a detailed investigation of the actual compliance of the business units concerning governance practices embodied in this legislation. The present study encompasses the holistic corporate governance mechanisms as sanctioned by the Companies Act, of 2013 and built as the underpinning of the present research.

It aims to examine the corporate governance practices of the sample units concerning the governance mechanisms accredited by the Companies Act, of 2013 comprehensively. To achieve this objective, the paired t-test statistical method is applied. This test assumes that the data is continuous and follows a normal distribution and the paired t-test is conducted separately for each bank by comparing the two time periods. The null hypothesis for the test stated that the governance practices before and after Companies Act, 2013 were same and there is no statistical significance between them, while the alternative hypothesis stated that governance practices before and after Companies Act, 2013 were not same. Therefore, this parametric test is employed to check the differences in governance practices of the Indian commercial banking sphere in the two different time frames.

6.3. Hypothesis development

The present objective entails the application of paired t-tests in comparing the means of the corporate governance compliance practices in two-time proportions referred to as pre Companies Act, 2013 and post Companies Act, 2013 for the Indian banking sector (Rosner, 1982). The intention to apply the paired t-test was to establish whether there is a significant difference between the means of the governance practices in two different time frames and to gauge whether the provisions of the Companies Act, of 2013 are effective in alleviating the compliance level of comprehensive governance contrivances in the Indian banking sphere. In this regard, table 123 outlines the null and the alternate hypothesis set out for carrying the paired t-tests for six corporate governance dimensions in the case of both public sector and private sector banks.

Table 123. Showing the null hypothesis and alternate hypothesis

Corporate governance Facets	Null Hypothesis	Alternate Hypothesis
Board Procedures and Effectiveness (BPE)	$BPE_{BA} = BPE_{AA}$	$BPE_{BA} \neq BPE_{AA}$
Audit Function (AF)	$AF_{BA} = AF_{AA}$	$AF_{BA} \neq AF_{AA}$
Remuneration (REM)	$RE_{BA} = RE_{AA}$	$RE_{BA} \neq RE_{AA}$
Risk Management (RM)	$RM_{BA} = RM_{AA}$	$RM_{BA} \neq RM_{AA}$
Shareholder Rights and Information (SRI)	$SRI_{BA} = SRI_{AA}$	$SRI_{BA} \neq SRI_{AA}$
Disclosure and Transparency (DT)	$DT_{BA} = DT_{AA}$	$DT_{BA} \neq DT_{AA}$
where, BA highlights before the enactment of the Companies Act, of 2013 and AA outlines the after the enactment of the Companies Act, of 2013.		

Source: Author's compilation

The null hypothesis set for the current objective affirms that there is no difference between the means of the corporate governance compliance practices before and after the enactment of the Companies Act, of 2013. It shall accentuate that any observed difference in the means of the two-time frame scenarios is due to chance and is not a true effect. The alternative hypothesis, on the other hand, suggests that there is a significant difference between the corporate governance compliance practices before and after the enactment of the Companies Act, of 2013. In this regard, the t-value is calculated, which is a measure of the difference between the means of the compliance practices in two-time proportion concerning the variability of the data. In case the t- value was found to be statistically significant, the null hypothesis shall be rejected and it shall be clinched that there is a significant difference between means of the corporate governance compliance practices before and after the enactment of the Companies Act, of 2013. If the t-value is found to be not statistically significant, it shall fail to reject the null hypothesis and it will be concluded that there is not a significant difference between the corporate governance practices before and after the enactment of the Companies Act, of 2013. The results of the paired t-tests are further outlined in the proceeding tables.

6.4. Analysis of the 'board procedures and effectiveness' dimension for the public sector banks, pre and post-companies Act, of 2013

The dimension of board procedures and effectiveness pertains to ensuring that there exists an appropriate composition of the directors, non-executive directors, woman directors and chairman on the board of the banks. The provisions of the Companies Act, of 2013 aimed at developing a well-balanced board composition with suitable competencies and establishing their accountability in the discharge of their requisite responsibilities in the organization structure of the banking system.

The initial part of the analysis was inclined towards observing the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 124 highlights the mean values, t-values and sig. values for the dimension of board procedures and effectiveness for all the public sector banks. The outcomes of this statistical test reveal that significant differences are found in compliance with corporate

governance mechanisms concerning the board's activities in two-time proportions i.e., pre and post-Companies Act, of 2013. The p-values for all the public sector banks about procedures of the board were observed to be less than 0.05 suggesting that all the effects of this statistical test are contemplated to be statistically significant. This demonstrates that the observed difference between the mean scores of the board's procedures before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It evidences the support of the alternative hypothesis, rather than the null hypothesis.

Table 124. Showing the paired t-test results for the dimension 'board procedures and effectiveness' in the case of public sector banks

	Bank	Scenario	Mean	t - value	Sig.
Board Procedures and Effectiveness	State Bank of India	Pre Companies Act, 2013	22.8	-7.020	0.031
		Post Companies Act, 2013	61.9		
	Punjab National Bank	Pre Companies Act, 2013	27.0	-8.316	0.029
		Post Companies Act, 2013	73.3		
	Canara Bank	Pre Companies Act, 2013	31.2	-9.613	0.041
		Post Companies Act, 2013	84.8		
	Bank of Baroda	Pre Companies Act, 2013	21.7	-6.696	0.033
		Post Companies Act, 2013	59.0		
	Union Bank of India	Pre Companies Act, 2013	29.8	-9.181	0.026
		Post Companies Act, 2013	81.0		
	Indian Bank	Pre Companies Act, 2013	25.6	-7.884	0.014
		Post Companies Act, 2013	69.5		
	Bank of India	Pre Companies Act, 2013	26.7	-8.208	0.019
		Post Companies Act, 2013	72.4		
	Central Bank of India	Pre Companies Act, 2013	28.8	-8.857	0.011
		Post Companies Act, 2013	78.1		
	Indian Overseas Bank	Pre Companies Act, 2013	22.1	-6.804	0.023
		Post Companies Act, 2013	60		
	UCO Bank	Pre Companies Act, 2013	30.2	-9.289	0.019
		Post Companies Act, 2013	81.9		
	Bank of Maharashtra	Pre Companies Act, 2013	27.0	-8.316	0.030
		Post Companies Act, 2013	73.3		
	Punjab and Sind Bank	Pre Companies Act, 2013	25.6	-7.88	0.017
		Post Companies Act, 2013	69.5		

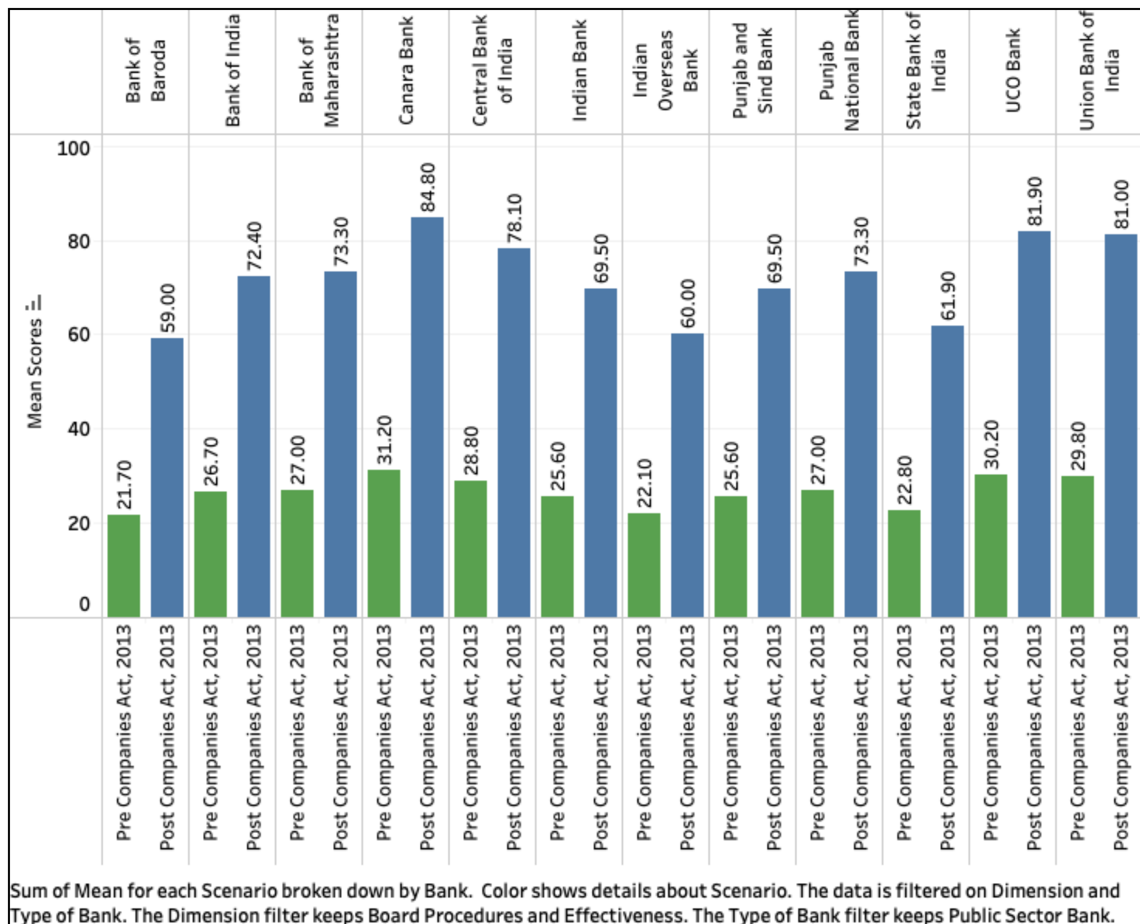
Source : Author's Calculations

The analysis concerning mean scores of public sector banks as highlighted in Figure 16 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was outlined that the lowest mean compliance score of 21.7 was found in the case of Bank of Baroda and the highest mean compliance score of 31.2 was found in the case of Canara Bank before the enactment of the Companies Act, of 2013. Similarly, it was foregrounded that the lowest mean compliance score of 59 was found in the case of Bank of Baroda and the highest mean compliance score of 84.8 was found in the case of Canara

Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the public sector banks have shown a significant improvement in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be deduced that these banks have given priority to assure the suitable composition of the board, establishing their responsibility towards stakeholders, aligning the strategic board's decision-making towards the best interests of the bank and substantiating their accountability for their actions.

Additionally, it is emphasized that Canara Bank has shown a noteworthy augmentation in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank revealed a change of 53.6 mean scores, indicating that the said bank has been consequential and momentous in its approach to assure compliance to board procedures and effectiveness dimension norms as outlined by the corporate governance provisions of the Companies Act of, 2013.

Figure 17. Showing the mean scores of the 'board procedures and effectiveness' dimension, Pre and Post Companies Act, of 2013



Source: Author's Calculations

6.5. Evaluation of the 'audit function' dimension for the public sector banks, pre and post-companies Act, of 2013

The dimension of audit function concerns itself with corroborating that there exists a suitable arrangement of the audit commission with the requisite number of members, assuring the presence of the non-executive director, and statutory auditor with a chairman and has defined procedures of internal audit in the banking system. The provisions of the Companies Act, of 2013 aimed at developing an appropriate audit committee composition with suitable competencies and establishing their accountability in the discharge of their requisite responsibilities in the organization structure of the banking system.

Table 125. Showing the outcome of paired t-test for the dimension audit function in the case of public sector banks

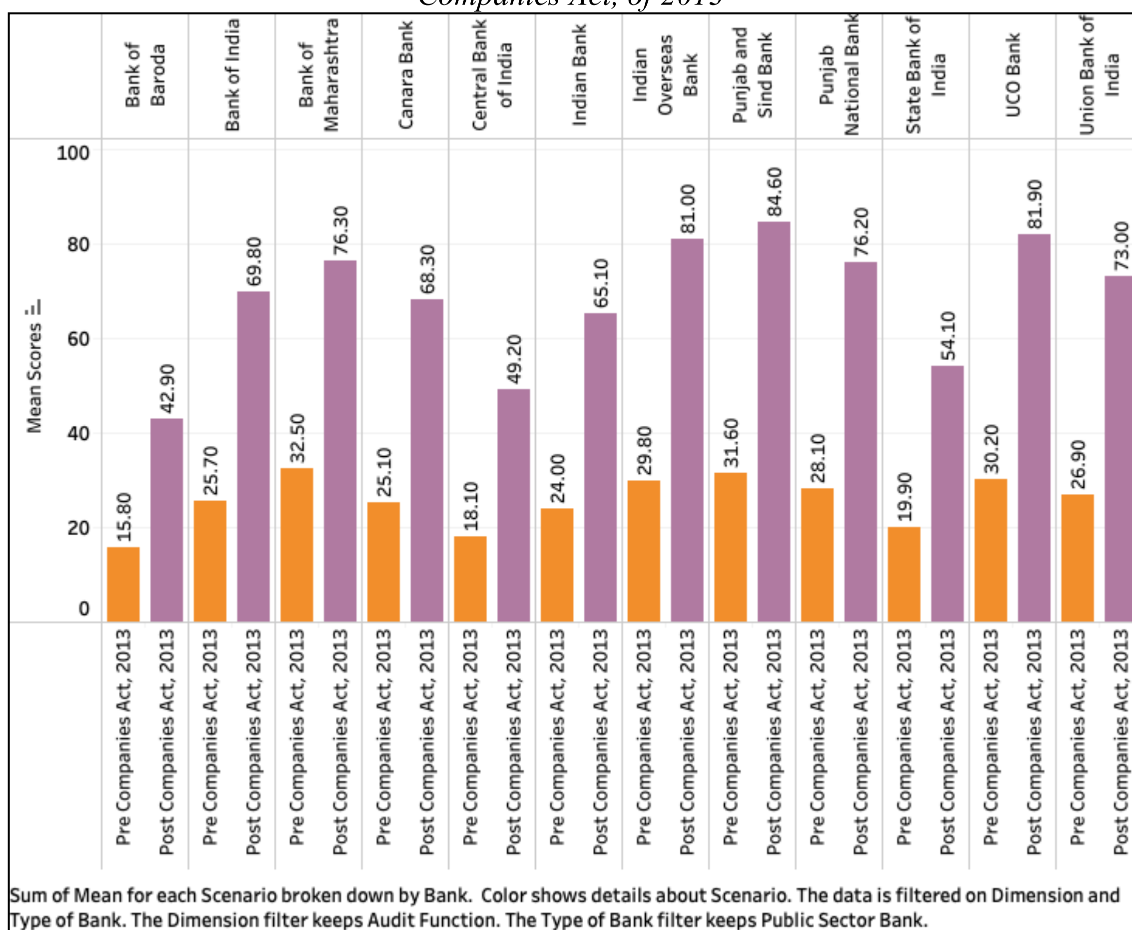
	Bank	Scenario	Mean	t - value	Sig.
Audit Function	State Bank of India	Pre Companies Act, 2013	19.9	-6.120	0.022
		Post Companies Act, 2013	54.1		
	Punjab National Bank	Pre Companies Act, 2013	28.1	-8.640	0.001
		Post Companies Act, 2013	76.2		
	Canara Bank	Pre Companies Act, 2013	25.1	-7.740	0.013
		Post Companies Act, 2013	68.3		
	Bank of Baroda	Pre Companies Act, 2013	15.8	-4.860	0.012
		Post Companies Act, 2013	42.9		
	Union Bank of India	Pre Companies Act, 2013	26.9	-8.280	0.015
		Post Companies Act, 2013	73.0		
	Indian Bank	Pre Companies Act, 2013	24.0	-7.380	0.011
		Post Companies Act, 2013	65.1		
	Bank of India	Pre Companies Act, 2013	25.7	-7.920	0.009
		Post Companies Act, 2013	69.8		
	Central Bank of India	Pre Companies Act, 2013	18.1	-5.580	0.001
		Post Companies Act, 2013	49.2		
	Indian Overseas Bank	Pre Companies Act, 2013	29.8	-9.181	0.013
		Post Companies Act, 2013	81.0		
	UCO Bank	Pre Companies Act, 2013	30.2	-9.241	0.011
		Post Companies Act, 2013	81.9		
	Bank of Maharashtra	Pre Companies Act, 2013	32.5	-6.660	0.021
		Post Companies Act, 2013	76.3		
	Punjab and Sind Bank	Pre Companies Act, 2013	31.6	-9.721	0.007
		Post Companies Act, 2013	84.6		

Source : Author's Calculations

The subsequent part of the analysis was inclined towards observing the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and

post-enactment of the Companies Act of, 2013. The results of paired t-tests in Table 125 highlight the mean values, t-values and sig. values for the dimension of audit function for all the public sector banks. The outcomes of this statistical test reveal that significant differences are found in compliance with corporate governance mechanisms concerning the audit committee and its pursuits in two-time proportions i.e., pre and post-Companies Act., of 2013. The p-values for all the public sector banks concerning procedures of the audit composition were observed to be less than 0.05 suggesting that all the effects of this statistical test are contemplated to be statistically significant. This demonstrates that the observed difference between the mean scores of the audit's stratagem before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It confirms the sustenance of the alternative hypothesis, rather than the null hypothesis.

Figure 18. Showing the mean scores of the 'audit function' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

The analysis concerning mean scores of public sector banks as underlined in Figure 17 unveils such scores for both before and after the enactment of the Companies Act of,

2013. It was delineated that the lowest mean compliance score of 15.8 was observed in the case of the Bank of Baroda and the highest mean compliance score of 32.5 was found in the case of the Bank of Maharashtra before the enactment of the Companies Act, of 2013. Similarly, it was noticed that the lowest mean compliance score of 42.9 was found in the case of Bank of Baroda and the highest mean compliance score of 84.6 was found in the case of Punjab and Sind Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the public sector banks have shown significant compliance with corporate governance norms specified by the Companies Act of, 2013. It can be inferred that these banks have given priority to assure the appropriate structures of the audit committee, defining the internal audit processes, holding the required audit commission meetings and bolstering the culpability for their actions.

Additionally, it is pointed out that Punjab and Sind Bank have shown remarkable reinforcement in compliance with corporate governance norms. The comparison of pre and post-mean scores of this bank revealed a change of 53 mean scores, indicating that the said bank has been far-reaching in its attempt to substantiate compliance with audit norms as outlined by the governance provisions of the Companies Act, 2013.

6.6. Assessment of the 'remuneration' dimension for the public sector banks, pre and post-companies Act, of 2013

The dimension of remuneration concerns itself with upholding that there exists a suitable composition of the remuneration agency with the requisite number of members, securing the comportment of the non-executive director and outlining the detailed procedures of remuneration disbursement in the banking system. The provisions of the Companies Act, of 2013 purpose to foster a suitable remuneration board composition with apposite proficiencies and establish their accountability in the banking system.

The succeeding portion of the analysis was inclined towards scrutinizing the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 126 highlights the mean values, t-values and sig. values for the dimension of remuneration for all the public sector banks. The outcomes of this statistical test divulge that significant differences are attained in compliance with corporate governance mechanisms concerning the remuneration dimension and its pursuits in two-time

proportion i.e., pre and post- Companies Act, of 2013. The p- values for all the public sector banks concerning procedures of this dimension were witnessed to be less than 0.05 advocating that all the effects of this statistical test are contemplated to be statistically significant. This exhibits that the observed difference between the mean scores of the remuneration stratagem before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It endorses the sustenance of the alternative hypothesis, rather than the null hypothesis.

Table 126. Showing the results of paired t-test for the dimension remuneration in the case of public sector banks

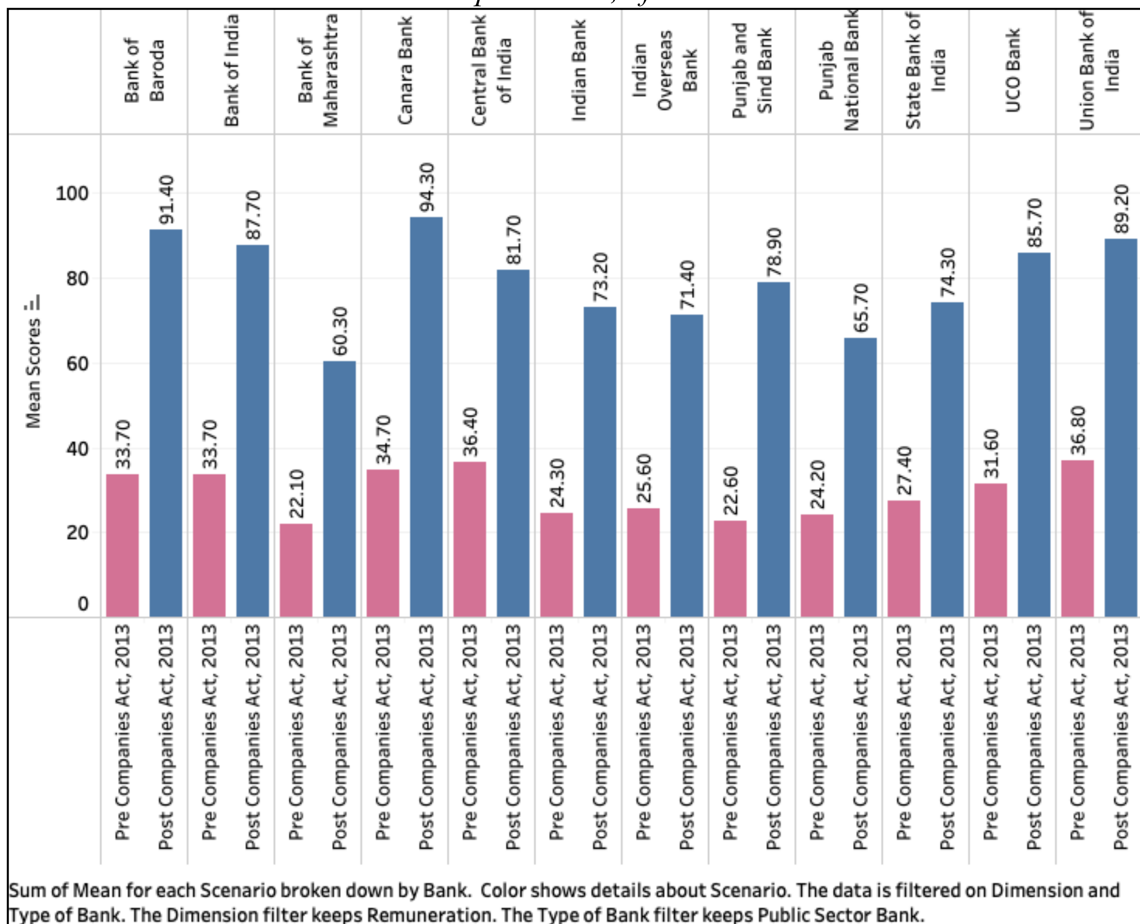
	Bank	Scenario	Mean	t - value	Sig.
Remuneration	State Bank of India	Pre Companies Act, 2013	27.4	-8.424	0.014
		Post Companies Act, 2013	74.3		
	Punjab National Bank	Pre Companies Act, 2013	24.2	-7.352	0.032
		Post Companies Act, 2013	65.7		
	Canara Bank	Pre Companies Act, 2013	34.7	-9.693	0.031
		Post Companies Act, 2013	94.3		
	Bank of Baroda	Pre Companies Act, 2013	33.7	-9.032	0.017
		Post Companies Act, 2013	91.4		
	Union Bank of India	Pre Companies Act, 2013	36.8	-9.002	0.011
		Post Companies Act, 2013	89.2		
	Indian Bank	Pre Companies Act, 2013	24.3	-7.004	0.004
		Post Companies Act, 2013	73.2		
	Bank of India	Pre Companies Act, 2013	33.7	-8.101	0.012
		Post Companies Act, 2013	87.7		
	Central Bank of India	Pre Companies Act, 2013	36.4	-7.151	0.031
		Post Companies Act, 2013	81.7		
	Indian Overseas Bank	Pre Companies Act, 2013	25.6	-8.100	0.016
		Post Companies Act, 2013	71.4		
	UCO Bank	Pre Companies Act, 2013	31.6	-9.721	0.016
		Post Companies Act, 2013	85.7		
	Bank of Maharashtra	Pre Companies Act, 2013	22.1	-6.816	0.022
		Post Companies Act, 2013	60.3		
	Punjab and Sind Bank	Pre Companies Act, 2013	22.6	-6.432	0.010
		Post Companies Act, 2013	78.9		

Source : Author's Calculations

The scrutiny concerning mean scores of public sector banks as underlined in figure 18 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was marked out that the lowest mean compliance score of 22.1 was observed in the case of Bank of Maharashtra and the highest mean compliance score of 36.8 was attained in the case of Union Bank of India before the enactment of the Companies Act, of 2013. Similarly, it was spotted that the lowest mean compliance score of 60.3 was found in the case of Bank of Maharashtra and the highest mean compliance score of 94.3

was found in the case of Canara Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the public sector commercial banks have shown a significant improvement in compliance with the corporate governance norms specified by the Companies Act of, 2013. It can be inferred that these banks have given precedence to securing the applicable structures of the remuneration committee, defining the payment outflow processes, taking the mandatory remuneration disbursement board approvals and sustaining accountability for their actions. Furthermore, it is indicated that Canara Bank has shown a notable corroboration in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank showed a change of 59.6 mean scores, indicating that the said bank has been influential in its approach to authenticate compliance to remuneration norms as outlined by the governance provisions of the Companies Act of, 2013.

Figure 19. Showing the mean scores of the 'remuneration' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

6.7. Evaluation of the 'risk management' dimension for the public sector banks, pre and post-companies Act, of 2013

The dimension of risk management pertains to assuring that there exists an apposite composition of the risk management committee with the mandatory number of members, holding the requisite number of meetings, securing the existence of the chief risk officer and implementing the risk controlling procedures in the banking system. The provisions of the Companies Act, of 2013 intend to develop a suitable risk management committee with the relevant aptitude and establish their accountability in the banking system. Such a committee is to be established under the due guidance of the board procedures of the bank. This committee is responsible for categorizing, dissecting, and mitigating risks that could potentially impact the banking operations.

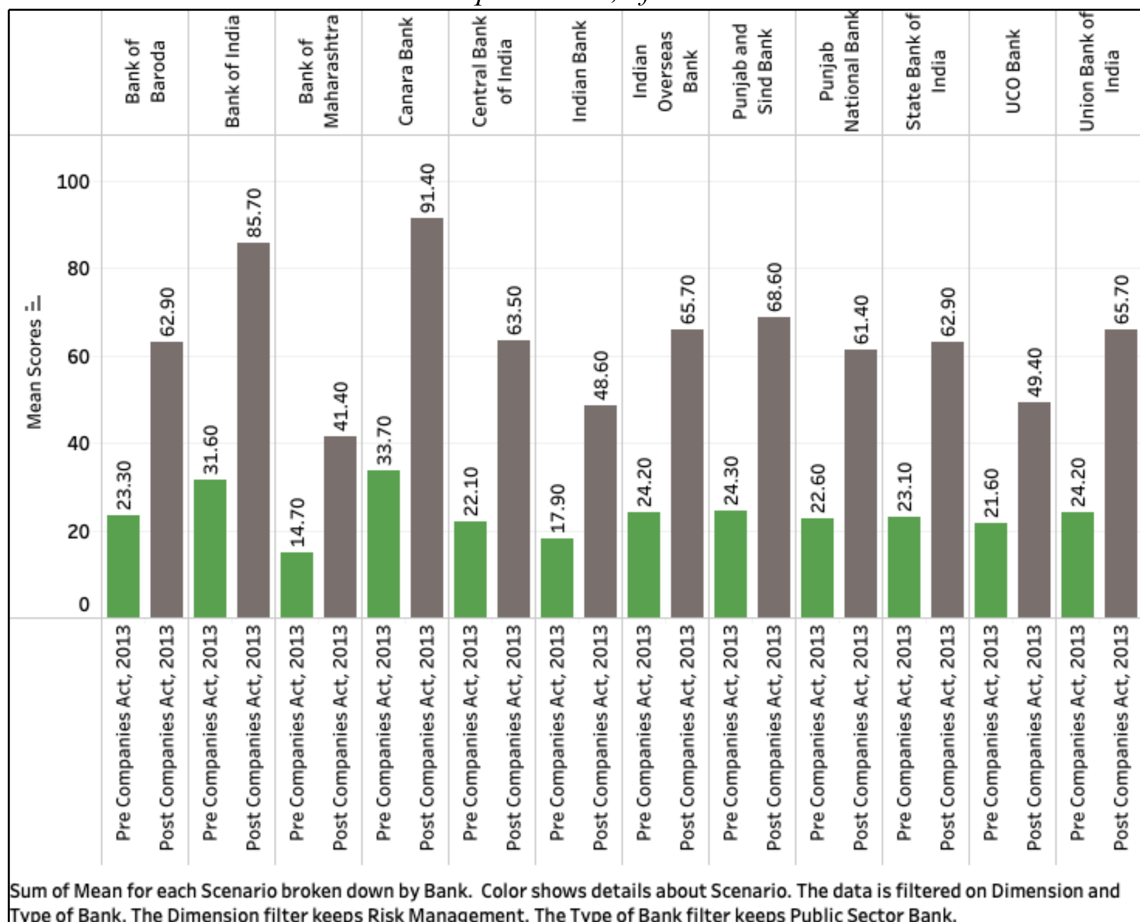
Table 127. Showing the outcomes of the paired t-test for the dimension risk management in the case of public sector banks

	Bank	Scenario	Mean	t - value	Sig.
Risk Management	State Bank of India	Pre Companies Act, 2013	23.1	-7.128	0.022
		Post Companies Act, 2013	62.9		
	Punjab National Bank	Pre Companies Act, 2013	22.6	-6.804	0.025
		Post Companies Act, 2013	61.4		
	Canara Bank	Pre Companies Act, 2013	33.7	-9.911	0.021
		Post Companies Act, 2013	91.4		
	Bank of Baroda	Pre Companies Act, 2013	23.3	-7.128	0.013
		Post Companies Act, 2013	62.9		
	Union Bank of India	Pre Companies Act, 2013	24.2	-7.452	0.020
		Post Companies Act, 2013	65.7		
	Indian Bank	Pre Companies Act, 2013	17.9	-5.508	0.012
		Post Companies Act, 2013	48.6		
	Bank of India	Pre Companies Act, 2013	31.6	-8.991	0.018
		Post Companies Act, 2013	85.7		
	Central Bank of India	Pre Companies Act, 2013	22.1	-8.857	0.026
		Post Companies Act, 2013	63.5		
	Indian Overseas Bank	Pre Companies Act, 2013	24.2	-6.812	0.017
		Post Companies Act, 2013	65.7		
	UCO Bank	Pre Companies Act, 2013	21.6	-7.141	0.013
		Post Companies Act, 2013	49.4		
	Bank of Maharashtra	Pre Companies Act, 2013	14.7	-4.981	0.001
		Post Companies Act, 2013	41.4		
	Punjab and Sind Bank	Pre Companies Act, 2013	24.3	-7.667	0.011
		Post Companies Act, 2013	68.6		

Source : Author's Calculations

The successive segment of the analysis was oriented towards examining the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 127 focuses on the mean values, t-values and sig. values for the dimension of risk management for all the public sector commercial banks. The outcomes of this statistical test disclose that significant differences are attained in compliance with corporate governance mechanisms concerning the risk management dimension and its pursuits in two-time proportions i.e., pre and post- Companies Act, of 2013. The p-values for all the public sector banks concerning procedures of this dimension were witnessed to be less than 0.05 advocating that all the effects of this statistical test are contemplated to be statistically significant. This validates that the observed difference between the mean scores of the remuneration stratagem before and after the enactment of the Companies Act of , 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It advocates the sustenance of the alternative hypothesis, rather than the null hypothesis.

Figure 20. Showing the mean scores of the 'risk management' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

The analysis concerning mean scores of public sector banks as underlined in Figure 19 discloses such scores for both before and after the enactment of the Companies Act of, 2013. It was outlined that the lowest mean compliance score of 14.7 was observed in the case of the Bank of Maharashtra and the highest mean compliance score of 33.7 was found in the case of Canara Bank before the enactment of the Companies Act, of 2013. Similarly, it was noticed that the lowest mean compliance score of 48.6 was found in the case of Indian Bank and the highest mean compliance score of 91.4 was found in the case of Canara Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the public sector banks have shown a significant enhancement in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be surmised that these banks have given priority to developing and implementing risk management policies and procedures, monitoring and reviewing risks on an ongoing basis, and coordinating with other committees within the banking system to ensure that risks are being properly managed. Furthermore, it is indicated that Canara Bank has shown a notable corroboration in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank showed a change of 57.7 mean scores, indicating that the said bank has been influential in its approach to substantiate compliance to risk management norms as charted by the governance provisions of the Companies Act of, 2013.

6.8. Appraisal of the 'disclosures and transparency' dimension for the public sector banks, pre and post-companies Act, of 2013

The dimension of disclosures and transparency concerns itself with confirming that there exists suitable observance concerning policies and established code of conduct in the banking business milieu, the existence of a well-founded system of stakeholder intimation and due certification made by the top management in the annual reports of the banks. The provisions of the Companies Act, of 2013 propose to develop an appropriate disclosure system which aims at making information available to the stakeholders, either through publicly available documents or through other means such as press releases or conference calls with investors. Similarly, the principles of transparency aim to corroborate a system with which relevant information can be accessed and understood by the stakeholders with ease.

The subsequent part of the analysis was oriented towards discerning the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests as in Table 128 highlight the mean values, t-values and sig. values for the dimension of transparency and disclosure compliances for all the public sector commercial banks. The outcomes of this statistical test reveal that significant differences are found in compliance with corporate governance mechanisms concerning the transparency and disclosure commotions in two-time proportions i.e., pre and post-Companies Act, of 2013. The p-values for all the public sector banks concerning procedures of transparency and disclosures were noticed to be less than 0.05 insinuating that all the effects of this statistical test are contemplated to be statistically significant. This exhibits that the observed difference between the mean scores of the transparency and disclosure activities before and after the enactment of the Companies Act of, 2013 being compared is questionable to have occurred by chance and is instead likely to be a true effect. It evinces the support of the alternative hypothesis, rather than the null hypothesis.

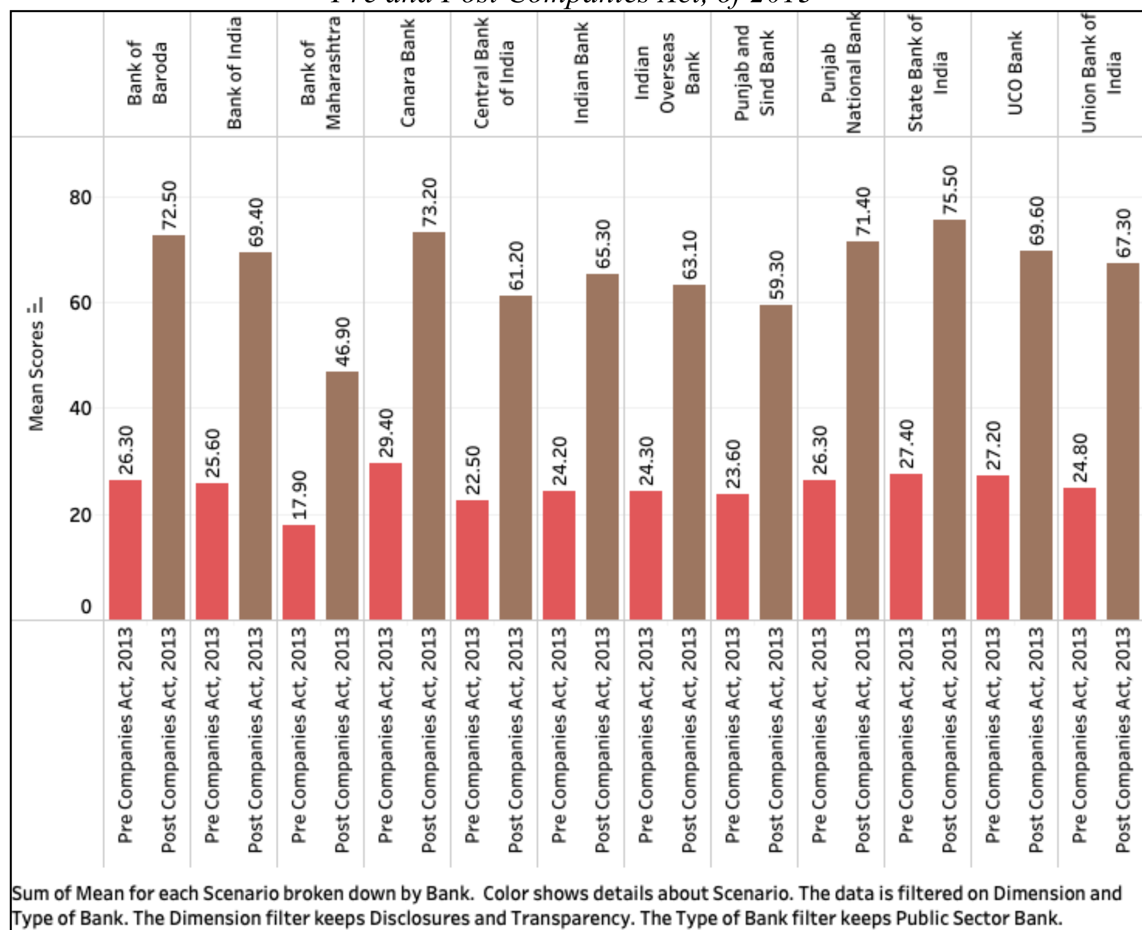
Table 128. Showing the outcomes of paired t-test for the dimension disclosures and transparency in the case of public sector banks

	Bank	Scenario	Mean	t - value	Sig.
Disclosures and Transparency	State Bank of India	Pre Companies Act, 2013	27.4	-6.191	0.011
		Post Companies Act, 2013	75.5		
	Punjab National Bank	Pre Companies Act, 2013	26.3	-8.341	0.012
		Post Companies Act, 2013	71.4		
	Canara Bank	Pre Companies Act, 2013	29.4	-7.644	0.015
		Post Companies Act, 2013	73.2		
	Bank of Baroda	Pre Companies Act, 2013	26.3	-6.101	0.014
		Post Companies Act, 2013	72.5		
	Union Bank of India	Pre Companies Act, 2013	24.8	-6.221	0.021
		Post Companies Act, 2013	67.3		
	Indian Bank	Pre Companies Act, 2013	24.2	-7.884	0.012
		Post Companies Act, 2013	65.3		
	Bank of India	Pre Companies Act, 2013	25.6	-6.125	0.019
		Post Companies Act, 2013	69.4		
	Central Bank of India	Pre Companies Act, 2013	22.5	-6.125	0.010
		Post Companies Act, 2013	61.2		
	Indian Overseas Bank	Pre Companies Act, 2013	24.3	-6.126	0.022
		Post Companies Act, 2013	63.1		
	UCO Bank	Pre Companies Act, 2013	27.2	-7.114	0.018
		Post Companies Act, 2013	69.6		
	Bank of Maharashtra	Pre Companies Act, 2013	17.9	-5.002	0.035
		Post Companies Act, 2013	46.9		
	Punjab and Sind Bank	Pre Companies Act, 2013	23.6	-4.329	0.007
		Post Companies Act, 2013	59.3		

Source : Author's Calculations

The enquiry concerning mean scores of public sector banks as underlined in figure 20 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was marked out that the lowest mean compliance score of 17.9 was observed in the case of the Bank of Maharashtra and the highest mean compliance score of 36.8 was attained in the case of Canara Bank before the enactment of the Companies Act, of 2013. Similarly, it was identified that the lowest mean compliance score of 61.2 was found in the case of the Central Bank of India and the highest mean compliance score of 75.5 was found in the case of the State Bank of India during the post-enactment of the Companies Act, of 2013.

Figure 21. Showing the mean scores of the 'disclosures and transparency' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

The comparison of pre and post-mean scores accentuated that all the public sector banks have shown momentous progress in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be inferred that these banks have given antecedence to fulfilling the due requirements of postulating accurate and complete information about the governance practices to their stakeholders, thereby, building

appropriate trust with them. Likewise, it is indicated that the State Bank of India has shown a prominent affirmation to assuring compliance level with corporate governance norms connecting to this dimension. The comparison of pre and -mean scores of this bank showed a change of 48.1 mean scores, indicating that the said bank has been persuasive in its approach to endorse compliance to disclosures and transparency canons as sketched out by the governance provisions of the Companies Act of, 2013.

6.9. Evaluation of the 'shareholder information and rights' dimension for the public sector banks, pre and post-companies Act, of 2013

The dimension of shareholder information and rights concerns itself with substantiating that there exists an appropriate stakeholder tribulation committee, sustenance of suitable investor complaints mechanism and there exists a defined procedure of share transfer system in the banking system. The provisions of the Companies Act, of 2013 aspire at developing a proper system of shareholder voting rights wherein they have the right to vote on important matters such as the selection of directors, authorization of main transactions, and changes to the bank's articles of incorporation.

Table 129. Showing the outcomes of paired t-test for the dimension shareholder information and rights in the case of all public sector banks

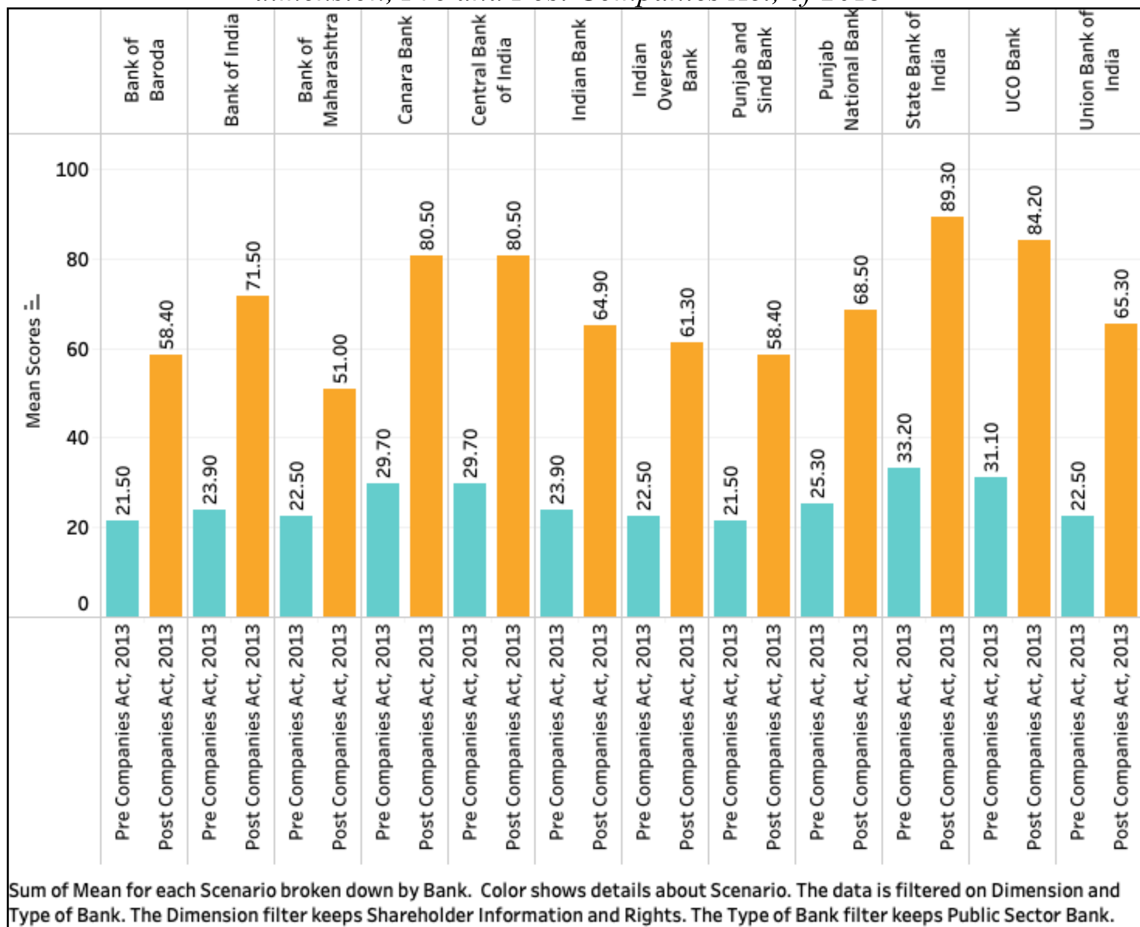
	Bank	Scenario	Mean	t - value	Sig.
Shareholder Information and Rights	State Bank of India	Pre Companies Act, 2013	33.2	-7.020	0.001
		Post Companies Act, 2013	89.3		
	Punjab National Bank	Pre Companies Act, 2013	25.3	-8.316	0.012
		Post Companies Act, 2013	68.5		
	Canara Bank	Pre Companies Act, 2013	29.7	-9.613	0.011
		Post Companies Act, 2013	80.5		
	Bank of Baroda	Pre Companies Act, 2013	21.5	-6.696	0.032
		Post Companies Act, 2013	58.4		
	Union Bank of India	Pre Companies Act, 2013	22.5	-9.181	0.027
		Post Companies Act, 2013	65.3		
	Indian Bank	Pre Companies Act, 2013	23.9	-7.884	0.006
		Post Companies Act, 2013	64.9		
	Bank of India	Pre Companies Act, 2013	23.9	-8.208	0.041
		Post Companies Act, 2013	71.5		
	Central Bank of India	Pre Companies Act, 2013	29.7	-8.857	0.037
		Post Companies Act, 2013	80.5		
	Indian Overseas Bank	Pre Companies Act, 2013	22.5	-6.804	0.023
		Post Companies Act, 2013	61.3		
	UCO Bank	Pre Companies Act, 2013	31.1	-9.289	0.019
		Post Companies Act, 2013	84.2		
	Bank of Maharashtra	Pre Companies Act, 2013	22.5		

		Post Companies Act, 2013	51.0	-8.316	0.028
	Punjab and Sind Bank	Pre Companies Act, 2013	21.5	-7.88	0.018
		Post Companies Act, 2013	58.4		

Source : Author's Calculations

Moreover, this system aims to accommodate all the shareholders with the right to access information about the company's financial performance, management, and decision-making processes. Additionally, it proposes the right to propose resolutions for consideration at shareholder meetings. The final segment was oriented towards examining the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 129 outlines the mean values, t-values and sig. values for the dimension of shareholder information and rights for all the public sector banks. The outcomes of this statistical test unveil that significant differences are attained in compliance with corporate governance mechanisms concerning this particular dimension in two-time proportion i.e., pre and post-Companies Act, of 2013.

Figure 22. Showing the mean scores of the 'shareholder information and rights' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

The p-values for all the public sector banks of this dimension were witnessed to be less than 0.05 advocating that all the effects of this statistical test are contemplated to be statistically significant. This expounds that the observed difference between the mean scores of the stakeholder stratagem before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have ensued by chance and is instead likely to be a true effect. It advocates the sustenance of the alternative hypothesis, rather than the null hypothesis. The scrutiny concerning mean scores of public sector banks as underlined in figure 21 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was outlined that the lowest mean compliance score of 21.5 was observed in the case of Punjab and Sind Bank as well as the Bank of Baroda and the highest mean compliance score of 33.2 was attained in the case of State Bank of India before the enactment of the Companies Act, of 2013. Similarly, it was recognized that the lowest mean compliance score of 51.0 was found in the case of the Bank of Maharashtra and the highest mean compliance score of 89.3 was found in the case of the State Bank of India during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the public sector banks have shown a significant enhancement in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be inferred that these banks have given precedence to promote transparency and accountability towards their stakeholders by providing them access to relevant information and proposing resolutions to their grievances. Besides, it is indicated that the State Bank of India has shown a noteworthy demonstration of compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank showed a change of 56.1 mean scores, representing that the said bank has been instrumental in its approach to endorse due compliance to stakeholder rights and information norms as drawn by the governance provisions of the Companies Act, of 2013.

6.10. Appraisal of the 'board procedures and effectiveness' dimension for the private sector banks, pre and post-companies Act, of 2013

The dimension of board procedures and effectiveness pertains to ensuring that there exists an appropriate composition of the directors, non-executive directors, woman directors and chairman on the board of the banks. The provisions of the act are aimed at developing a balanced board with suitable competencies and establishing their

accountability in the banking system. The initial part of the analysis was inclined towards observing the differences in the mean scores concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t- tests are in Table 130 highlighting the mean values, t-values and sig. values for the dimension of board procedures and effectiveness for all the private sector banks.

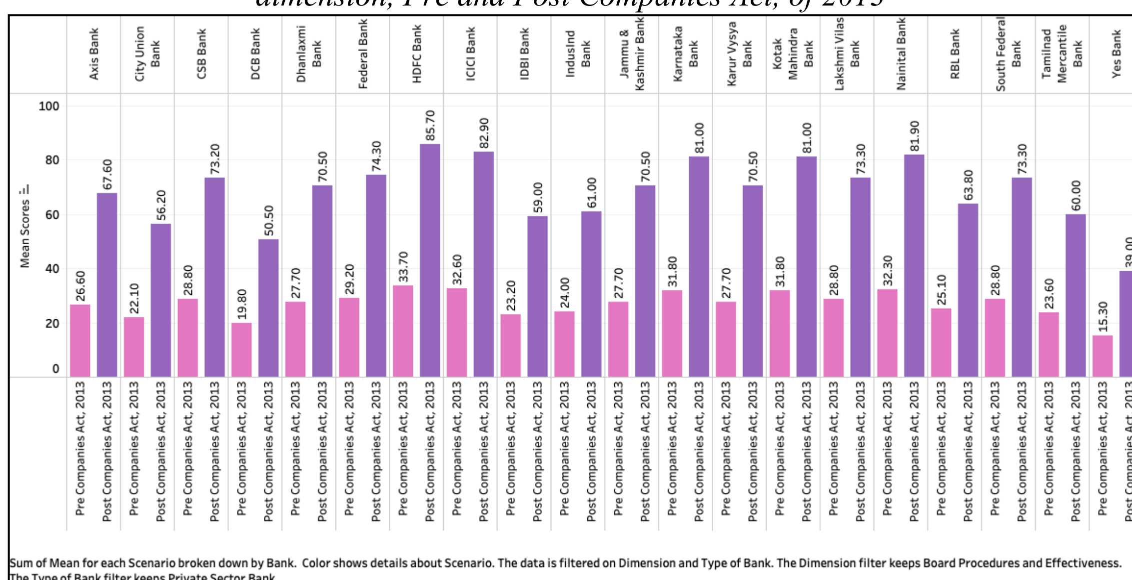
Table 130. Showing the outcomes of paired t-test for the dimension 'board procedures and effectiveness' in case of the private sector banks

	Bank	Scenario	Mean	t - value	Sig.
Board Procedure and Effectiveness	Axis Bank	Pre Companies Act, 2013	26.6	-6.021	0.002
		Post Companies Act, 2013	67.6		
	City Union Bank	Pre Companies Act, 2013	22.1	-5.103	0.011
		Post Companies Act, 2013	56.2		
	CSB Bank	Pre Companies Act, 2013	28.8	-7.314	0.001
		Post Companies Act, 2013	73.2		
	DCB Bank	Pre Companies Act, 2013	19.8	-5.112	0.014
		Post Companies Act, 2013	50.5		
	Dhanlaxmi Bank	Pre Companies Act, 2013	27.7	-7.002	0.001
		Post Companies Act, 2013	70.5		
	Federal Bank	Pre Companies Act, 2013	29.2	-7.105	0.000
		Post Companies Act, 2013	74.3		
	HDFC Bank	Pre Companies Act, 2013	33.7	-7.031	0.011
		Post Companies Act, 2013	85.7		
	ICICI Bank	Pre Companies Act, 2013	32.6	-7.055	0.001
		Post Companies Act, 2013	82.9		
	IDBI Bank	Pre Companies Act, 2013	23.2	-6.151	0.002
		Post Companies Act, 2013	59.0		
	IndusInd Bank	Pre Companies Act, 2013	24.0	-6.021	0.022
		Post Companies Act, 2013	61.0		
	Jammu & Kashmir Bank	Pre Companies Act, 2013	27.7	-7.004	0.000
		Post Companies Act, 2013	70.5		
	Karnataka Bank	Pre Companies Act, 2013	31.8	-5.329	0.001
		Post Companies Act, 2013	81.0		
	Karur Vysya Bank	Pre Companies Act, 2013	27.7	-5.121	0.046
		Post Companies Act, 2013	70.5		
	Kotak Mahindra Bank	Pre Companies Act, 2013	31.8	-5.093	0.009
		Post Companies Act, 2013	81.0		
	Lakshmi Vilas Bank	Pre Companies Act, 2013	28.8	-7.004	0.000
		Post Companies Act, 2013	73.3		
	Nainital Bank	Pre Companies Act, 2013	32.3	-7.191	0.007
		Post Companies Act, 2013	81.9		
	RBL Bank	Pre Companies Act, 2013	25.1	-5.031	0.002
		Post Companies Act, 2013	63.8		
	South Federal Bank	Pre Companies Act, 2013	28.8	-6.023	0.000
		Post Companies Act, 2013	73.3		
	Tamilnad Mercantile Bank	Pre Companies Act, 2013	23.6	-5.011	0.004
		Post Companies Act, 2013	60.0		
	Yes Bank	Pre Companies Act, 2013	15.3	-4.091	0.002
		Post Companies Act, 2013	39.0		

Source : Author's Calculations

The outcomes of this statistical test reveal that significant differences are found in compliance with corporate governance mechanisms concerning the board's activities in two-time proportion i.e., pre and post- Companies Act, of 2013. The p-values for all the private sector banks about procedures of the board were observed to be less than 0.05 suggesting that all the effects of this statistical test are contemplated to be statistically significant. This demonstrates that the observed difference between the mean scores of the board’s procedures before and after the enactment of the Companies Act of , 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It evidences the support of the alternative hypothesis, rather than the null hypothesis.

Figure 23. Showing the mean scores of the ‘board procedures and effectiveness’ dimension, Pre and Post Companies Act, of 2013



Source : Author’s Calculations

The analysis concerning mean scores of private sector banks as highlighted in figure 22 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was outlined that the lowest mean compliance score of 15.3 was found in the case of the Yes Bank and the highest mean compliance score of 33.7 was found in the case of the HDFC Bank before the enactment of the Companies Act, of 2013.

Similarly, it was foregrounded that the lowest mean compliance score of 39 was found in the case of the Yes Bank and the highest mean compliance score of 85.7 was found in the case the HDFC Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the private sector banks have

shown a significant improvement in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be deduced that these banks have prioritized ensuring the board's suitable composition, establishing their responsibility towards stakeholders, aligning the strategic board's decision-making towards the bank's best interests, and substantiating their accountability for their actions. Additionally, it is emphasized that the HDFC bank has shown a noteworthy augmentation in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank revealed a change of 52 mean scores, indicating that the said bank has been consequential and momentous in its approach to assure compliance to board procedures and effectiveness dimension norms as outlined by the corporate governance provisions of the Companies Act of, 2013.

6.11. Analysis of the 'audit function' dimension for the private sector banks, pre and post-companies Act, of 2013

The dimension of audit function concerns itself with corroborating that there exists a suitable composition of the audit commission with the requisite numberof members, assuring the presence of the non-executive director, and statutory auditor with a chairman and has defined procedures of internal audit in the banking system.

The provisions of the Companies Act, of 2013 aimed at developing an appropriate audit committee composition with suitable competencies and establishing their accountability in the discharge of their requisite responsibilities in the organization structure of the banking system. The subsequent part of the analysis was inclined towards observing the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 131 highlights the mean values, t-values and sig. values for the dimension of audit function for all the private sector banks. The outcomes of this statistical test reveal that significant differences are found in compliance with corporate governance mechanisms concerning the audit committee and its pursuits in two-time proportion i.e., pre and post-Companies Act, of 2013. The p-values for all the private sector banks concerning procedures of the audit composition were observed to be less than 0.05 suggesting that all the effects of this statistical test are contemplated to be statistically significant. This demonstrates that the observed difference between the mean scores of the audit's function to be statistically significant.

This exhibits that the observed difference between the mean scores of the audit stratagem before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It confirms the sustenance of the alternative hypothesis, rather than the null hypothesis.

Table 131. Showing the outcomes of paired t-test for the dimension audit function in the case of private sector banks

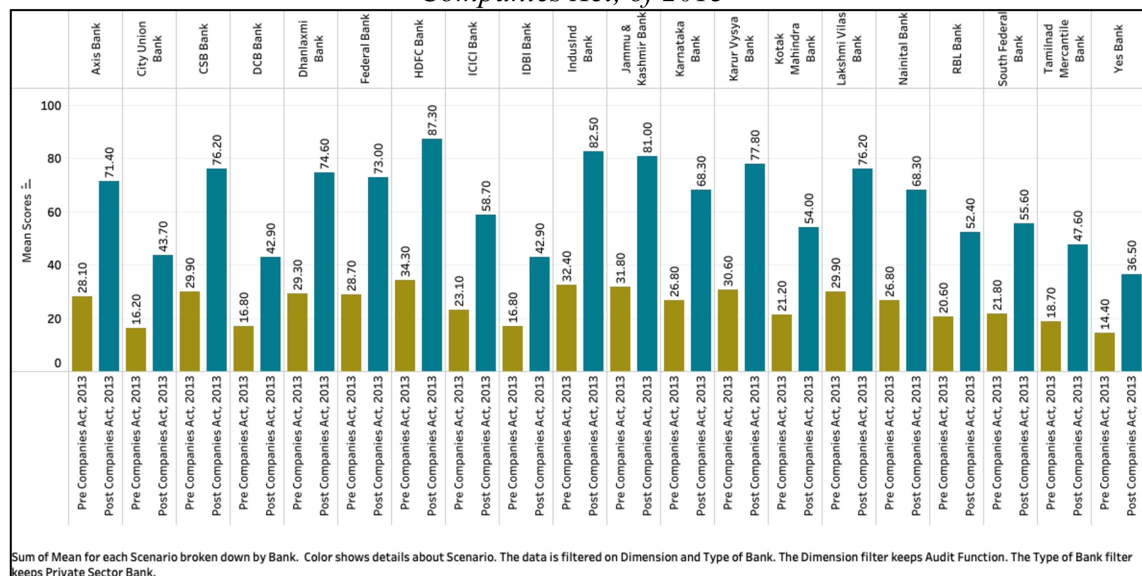
	Bank	Scenario	Mean	t - value	Sig.
Audit Function	Axis Bank	Pre Companies Act, 2013	28.1	-7.126	0.002
		Post Companies Act, 2013	71.4		
	City Union Bank	Pre Companies Act, 2013	16.2	-5.302	0.011
		Post Companies Act, 2013	43.7		
	CSB Bank	Pre Companies Act, 2013	29.9	-7.313	0.001
		Post Companies Act, 2013	76.2		
	DCB Bank	Pre Companies Act, 2013	16.8	-5.451	0.014
		Post Companies Act, 2013	42.9		
	Dhanlaxmi Bank	Pre Companies Act, 2013	29.3	-7.491	0.001
		Post Companies Act, 2013	74.6		
	Federal Bank	Pre Companies Act, 2013	28.7	-7.195	0.000
		Post Companies Act, 2013	73.0		
	HDFC Bank	Pre Companies Act, 2013	34.3	-7.463	0.011
		Post Companies Act, 2013	87.3		
	ICICI Bank	Pre Companies Act, 2013	23.1	-5.018	0.001
		Post Companies Act, 2013	58.7		
	IDBI Bank	Pre Companies Act, 2013	16.8	-5.124	0.013
		Post Companies Act, 2013	42.9		
	IndusInd Bank	Pre Companies Act, 2013	32.4	-5.111	0.001
		Post Companies Act, 2013	82.5		
	Jammu & Kashmir Bank	Pre Companies Act, 2013	31.8	-7.034	0.033
		Post Companies Act, 2013	81.0		
	Karnataka Bank	Pre Companies Act, 2013	26.8	-5.129	0.003
		Post Companies Act, 2013	68.3		
	Karur Vysya Bank	Pre Companies Act, 2013	30.6	-5.121	0.022
		Post Companies Act, 2013	77.8		
	Kotak Mahindra Bank	Pre Companies Act, 2013	21.2	-7.293	0.000
		Post Companies Act, 2013	54.0		
	Lakshmi Vilas Bank	Pre Companies Act, 2013	29.9	-7.104	0.001
		Post Companies Act, 2013	76.2		
	Nainital Bank	Pre Companies Act, 2013	26.8	-5.122	0.002
		Post Companies Act, 2013	68.3		
	RBL Bank	Pre Companies Act, 2013	20.6	-5.233	0.012
		Post Companies Act, 2013	52.4		
	South Federal Bank	Pre Companies Act, 2013	21.8	-5.021	0.000
		Post Companies Act, 2013	55.6		
	Tamilnad Mercantile Bank	Pre Companies Act, 2013	18.7	-5.021	0.003
		Post Companies Act, 2013	47.6		
	Yes Bank	Pre Companies Act, 2013	14.4	-4.013	0.021
		Post Companies Act, 2013	36.5		

Source : Author's Calculations

The analysis concerning mean scores of private sector banks as underlined in figure 23 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was delineated that the lowest mean compliance score of 14.4 was observed in the case of the Yes Bank and the highest mean compliance score of 34.3 was found in the case of the HDFC Bank before the enactment of the Companies Act, of 2013. Similarly, it was noticed that the lowest mean compliance score of 36.5 was found in the case of Yes Bank and the highest mean compliance score of 87.3 was found in the case of HDFC Bank during the post-enactment of the Companies Act, of 2013.

The comparison of pre and post-mean scores accentuated that all the private sector banks have shown a significant improvement in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be inferred that these banks have given priority to assure the appropriate structures of the audit committee, defining the internal audit processes, holding the required audit committee meetings and reinforcing the culpability for their actions.

Figure 24. Showing the mean scores of the 'audit function' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

Additionally, it is pointed up that HDFC Bank has shown a remarkable reinforcement in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank revealed a change of 53 mean scores, indicating that the said bank has been far-reaching in its attempt to substantiate compliance to audit norms as outlined by the governance provisions of the Companies Act of , 2013.

6.12. Assessment of the 'remuneration' dimension for the private sector banks, pre and post-companies Act, of 2013

The dimension of remuneration concerns itself with upholding that there exists a suitable structure of the remuneration commission with the requisite number of members, securing the comportment of the non-executive director and outlining the detailed procedures of remuneration disbursement in the banking system. The provisions of the Companies Act, of 2013 purpose to foster a suitable remuneration board composition with apposite proficiencies and establish their accountability in the banking system. The succeeding portion of the analysis was inclined towards scrutinizing the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 132 highlight the mean values, t-values and sig. values for the dimension of remuneration for all the private sector banks. The outcomes of this statistical test divulge that significant differences are attained in compliance with corporate governance mechanisms concerning the remuneration dimension and its pursuits in two-time proportion i.e., pre and post-Companies Act, of 2013. The p-values for all the private sector banks concerning procedures of this dimension were witnessed to be less than 0.05 advocating that all the effects of this statistical test are contemplated to be statistically significant.

This demonstrates that the observed difference between the mean scores of the remuneration stratagem before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It endorses the sustenance of the alternative hypothesis, rather than the null hypothesis. The scrutiny concerning mean scores of public sector banks as underlined in figure 24 unveils such scores for both before and after the enactment of the Companies Act of , 2013. It was marked out that the lowest mean compliance score of 21.3 was observed in the case of Karur Vysya Bank and the highest mean compliance score of 37.1 was attained in the case of HDFC Bank before the enactment of the Companies Act,of 2013. Similarly, it was spotted that the lowest mean compliance score of 54.3 was found in the case of Karur Vysya Bank and the highest mean compliance score of 94.3 was found in the case of HDFC Bank during the post- enactment of the Companies Act, of 2013.

The comparison of pre and post-mean scores accentuated that all the private sector commercial banks have shown a substantial enhancement in compliance with corporate governance norms specified by the Companies Act of, 2013.

Table 132. Showing the results of paired t-test for the dimension 'remuneration' in case of the private sector banks

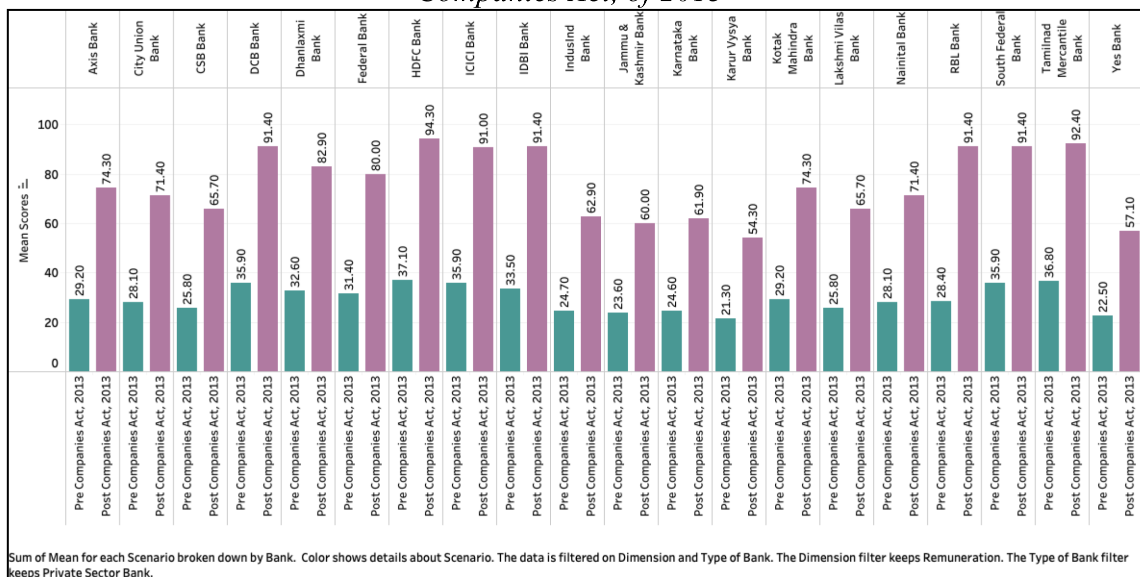
	Bank	Scenario	Mean	t - value	Sig.
Remuneration	Axis Bank	Pre Companies Act, 2013	29.2	-7.123	0.002
		Post Companies Act, 2013	74.3		
	City Union Bank	Pre Companies Act, 2013	28.1	-6.104	0.015
		Post Companies Act, 2013	71.4		
	CSB Bank	Pre Companies Act, 2013	25.8	-7.933	0.003
		Post Companies Act, 2013	65.7		
	DCB Bank	Pre Companies Act, 2013	35.9	-6.431	0.022
		Post Companies Act, 2013	91.4		
	Dhanlaxmi Bank	Pre Companies Act, 2013	32.6	-7.511	0.001
		Post Companies Act, 2013	82.9		
	Federal Bank	Pre Companies Act, 2013	31.4	-6.225	0.001
		Post Companies Act, 2013	80.0		
	HDFC Bank	Pre Companies Act, 2013	37.1	-7.021	0.016
		Post Companies Act, 2013	94.3		
	ICICI Bank	Pre Companies Act, 2013	35.9	-5.128	0.002
		Post Companies Act, 2013	91.0		
	IDBI Bank	Pre Companies Act, 2013	33.5	-5.113	0.012
		Post Companies Act, 2013	91.4		
	IndusInd Bank	Pre Companies Act, 2013	24.7	-4.003	0.011
		Post Companies Act, 2013	62.9		
	Jammu & Kashmir Bank	Pre Companies Act, 2013	23.6	-7.191	0.000
		Post Companies Act, 2013	60.0		
	Karnataka Bank	Pre Companies Act, 2013	24.6	-4.021	0.001
		Post Companies Act, 2013	61.9		
	Karur Vysya Bank	Pre Companies Act, 2013	21.3	-5.121	0.021
		Post Companies Act, 2013	54.3		
	Kotak Mahindra Bank	Pre Companies Act, 2013	29.2	-7.193	0.006
		Post Companies Act, 2013	74.3		
	Lakshmi Vilas Bank	Pre Companies Act, 2013	25.8	-6.204	0.005
		Post Companies Act, 2013	65.7		
	Nainital Bank	Pre Companies Act, 2013	28.1	-5.112	0.001
		Post Companies Act, 2013	71.4		
	RBL Bank	Pre Companies Act, 2013	28.4	-5.125	0.004
		Post Companies Act, 2013	91.4		
	South Federal Bank	Pre Companies Act, 2013	35.9	-5.328	0.000
		Post Companies Act, 2013	91.4		
	Tamilnad Mercantile Bank	Pre Companies Act, 2013	36.8	-5.122	0.004
		Post Companies Act, 2013	92.4		
	Yes Bank	Pre Companies Act, 2013	22.5	-4.121	0.009
		Post Companies Act, 2013	57.1		

Source : Author's Calculations

It can be inferred that these banks have given precedence to securing the applicable structures of the remuneration committee, defining the proper payment outflow processes, taking the mandatory remuneration disbursement approvals from the board

management and sustaining accountability for their actions. Furthermore, it is indicated that RBL Bank has shown a notable corroboration in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank showed a change of 63 mean scores, indicating that the said bank has been influential in its approach to authenticate compliance to remuneration norms as outlined by the governance provisions of the Companies Act of , 2013.

Figure 25. Showing the mean scores of the 'remuneration' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

6.13. Assessment of the 'risk management' dimension for the private sector banks, pre and post-companies Act, of 2013

The dimension of risk management pertains to assuring that there exists an apposite composition of the risk management committee with the mandatory number of members, holding the requisite number of meetings, securing the existence of the principal risk officer and implementing the risk controlling procedures in the banking system. The provisions of the Companies Act, of 2013 intend to develop a suitable risk management committee with the relevant aptitude and establish their accountability in the banking system. Such a committee is to be established under the due guidance of the board procedures of the bank. The risk management committee is responsible for identifying, analysing, and mitigating risks that could potentially impact the banking operations.

The successive segment of the analysis was oriented towards examining the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013.

Table 133. Showing the outcomes of paired t-test for the dimension 'risk management' in case of the private sector banks

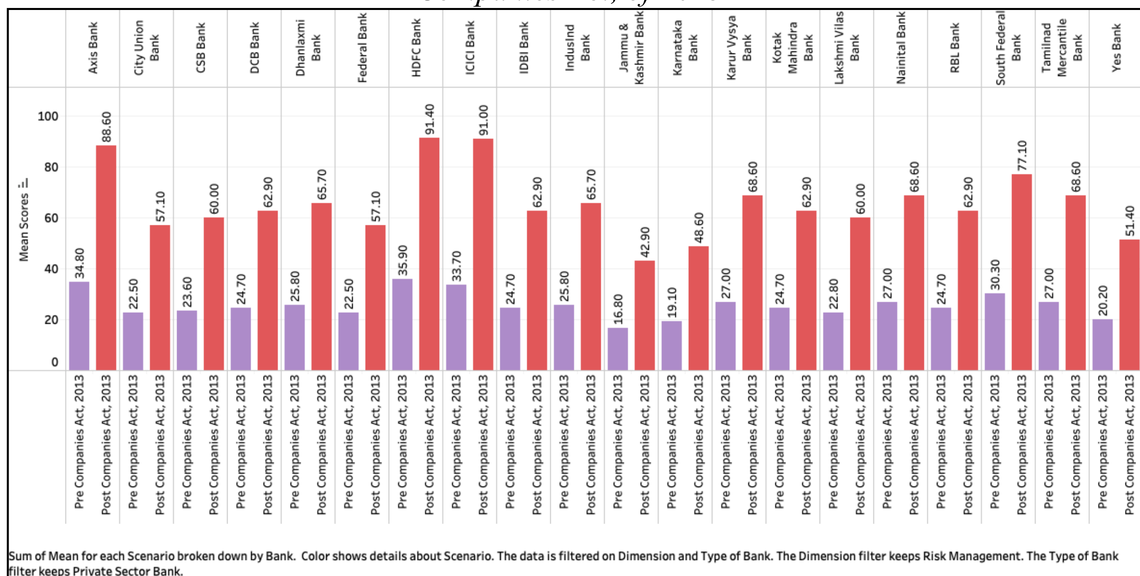
	Bank	Scenario	Mean	t - value	Sig.
Risk Management	Axis Bank	Pre Companies Act, 2013	34.8	-6.416	0.000
		Post Companies Act, 2013	88.6		
	City Union Bank	Pre Companies Act, 2013	22.5	-6.042	0.016
		Post Companies Act, 2013	57.1		
	CSB Bank	Pre Companies Act, 2013	23.6	-7.733	0.001
		Post Companies Act, 2013	60.0		
	DCB Bank	Pre Companies Act, 2013	24.7	-5.311	0.010
		Post Companies Act, 2013	62.9		
	Dhanlaxmi Bank	Pre Companies Act, 2013	25.8	-6.312	0.001
		Post Companies Act, 2013	65.7		
	Federal Bank	Pre Companies Act, 2013	22.5	-7.345	0.003
		Post Companies Act, 2013	57.1		
	HDFC Bank	Pre Companies Act, 2013	35.9	-7.417	0.000
		Post Companies Act, 2013	91.4		
	ICICI Bank	Pre Companies Act, 2013	33.7	-4.198	0.000
		Post Companies Act, 2013	91.0		
	IDBI Bank	Pre Companies Act, 2013	24.7	-5.394	0.001
		Post Companies Act, 2013	62.9		
	IndusInd Bank	Pre Companies Act, 2013	25.8	-5.131	0.000
		Post Companies Act, 2013	65.7		
	Jammu & Kashmir Bank	Pre Companies Act, 2013	16.8	-7.444	0.000
		Post Companies Act, 2013	42.9		
	Karnataka Bank	Pre Companies Act, 2013	19.1	-5.419	0.001
		Post Companies Act, 2013	48.6		
	Karur Vysya Bank	Pre Companies Act, 2013	27.0	-5.311	0.011
		Post Companies Act, 2013	68.6		
	Kotak Mahindra Bank	Pre Companies Act, 2013	24.7	-7.413	0.002
		Post Companies Act, 2013	62.9		
	Lakshmi Vilas Bank	Pre Companies Act, 2013	22.8	-7.151	0.004
		Post Companies Act, 2013	60.0		
	Nainital Bank	Pre Companies Act, 2013	27.0	-5.922	0.006
		Post Companies Act, 2013	68.6		
	RBL Bank	Pre Companies Act, 2013	24.7	-4.413	0.001
		Post Companies Act, 2013	62.9		
	South Federal Bank	Pre Companies Act, 2013	30.3	-5.051	0.000
		Post Companies Act, 2013	77.1		
	Tamilnad Mercantile Bank	Pre Companies Act, 2013	27.0	-5.541	0.001
		Post Companies Act, 2013	68.6		
	Yes Bank	Pre Companies Act, 2013	20.2	-5.012	0.000
		Post Companies Act, 2013	51.4		

Source : Author's Calculations

The results of paired t-tests are in Table 133 focuses on the mean values, t-values and sig. values for the dimension of risk management for all the private sector commercial banks. The outcomes of this statistical test disclose that significant differences are attained in compliance with corporate governance mechanisms concerning the risk management dimension and its pursuits in two-time proportions i.e., pre and post-Companies Act, of 2013.

The p-values for all the private sector banks concerning procedures of this dimension were witnessed to be less than 0.05 advocating that all the effects of this statistical test are contemplated to be statistically significant. This exhibits that the observed difference between the mean scores of the remuneration stratagem before and after the enactment of the Companies Act of, 2013 being compared is unlikely to have occurred by chance and is instead likely to be a true effect. It advocates the sustenance of the alternative hypothesis, rather than the null hypothesis.

Figure 26. Showing the mean scores of the 'risk management' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

The analysis concerning mean scores of private sector banks as underlined in figure 25 discloses such scores for both before and after the enactment of the Companies Act of, 2013. It was outlined that the lowest mean compliance score of 16.8 was observed in the case of the Jammu & Kashmir Bank and the highest mean compliance score of 35.9 was found in the case of HDFC Bank before the enactment of the Companies Act, of 2013. Similarly, it was noticed that the lowest mean compliance score of 42.9 was found in the case of Jammu & Kashmir Bank and the highest mean compliance score of 91.4 was

found in the case of HDFC Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the private sector banks have shown a significant enhancement in compliance with corporate governance norms specified by the Companies Act of, 2013.

It can be surmised that these banks have given priority to developing and implementing risk management policies and procedures, monitoring and reviewing risks on an ongoing basis, and coordinating with other committees within the banking system to ensure that risks are being properly succeeded. Furthermore, it is indicated that ICICI Bank has shown a notable corroboration in compliance level with corporate governance norms. The comparison of pre and post-mean scores of this commercial bank showed a change of 57.3 mean scores, indicating that the said bank has been influential in its approach to substantiate compliance to risk management norms as charted by the governance provisions of the Companies Act of , 2013.

6.14. Assessment of the 'disclosures and transparency' dimension for the private sector banks, pre and post-companies Act, of 2013

The dimension of disclosures and transparency concerns itself with confirming that there exists suitable observance concerning policies and established code of conduct in the banking business milieu, the existence of a well-founded system of stakeholder intimation and due certification made by the top management in the twelve-monthly statements of the banks. The provisions of the Companies Act, of 2013 propose to develop an appropriate disclosure system which aims at making information available to the stakeholders, either through publicly available documents or through other means such as press releases or conference calls with investors. Similarly, the principles of transparency aim to corroborate a system with which relevant information can be accessed and understood by the stakeholders with ease.

The subsequent part of the analysis was oriented towards discerning the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests as in Table 134 highlights the mean values, t-values and sig. values for the dimension of transparency and disclosure compliances for all the private sector banks. The outcomes of this statistical test reveal that significant differences are found in compliance with corporate governance mechanisms concerning the transparency and disclosure

commotions in two-time proportion i.e., pre and post-Companies Act, of 2013.

Table 134. Showing the outcomes of paired t-test for the dimension 'disclosures and transparency' for the private sector banks

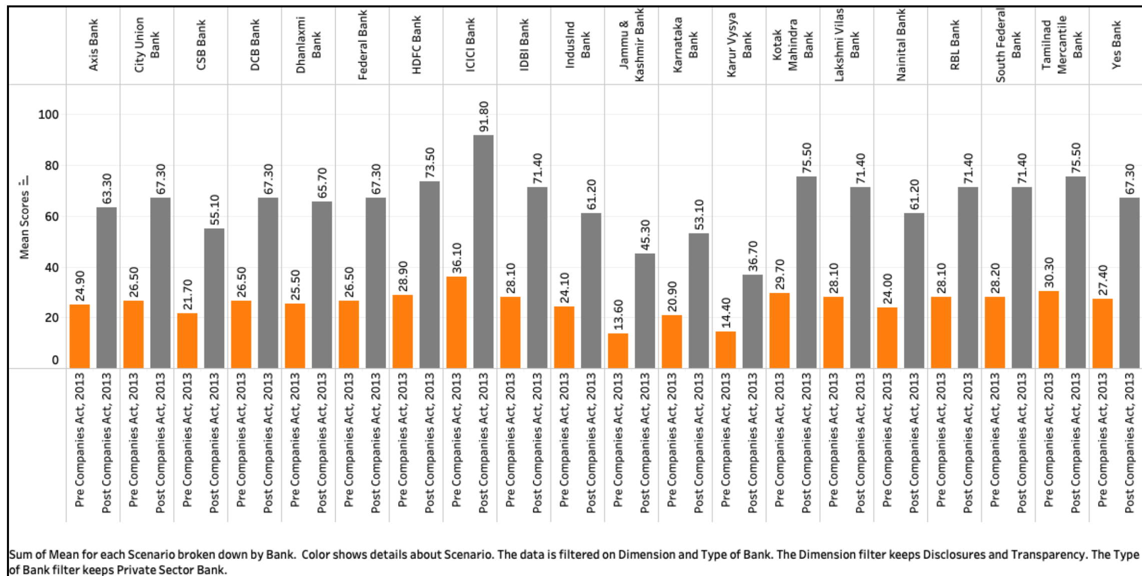
	Bank	Scenario	Mean	t – value	Sig.
Disclosure and Transparency	Axis Bank	Pre Companies Act, 2013	24.9	-7.126	0.002
		Post Companies Act, 2013	63.3		
	City Union Bank	Pre Companies Act, 2013	26.5	-5.302	0.021
		Post Companies Act, 2013	67.3		
	CSB Bank	Pre Companies Act, 2013	21.7	-7.313	0.001
		Post Companies Act, 2013	55.1		
	DCB Bank	Pre Companies Act, 2013	26.5	-5.451	0.007
		Post Companies Act, 2013	67.3		
	Dhanlaxmi Bank	Pre Companies Act, 2013	25.5	-7.491	0.008
		Post Companies Act, 2013	65.7		
	Federal Bank	Pre Companies Act, 2013	26.5	-7.195	0.000
		Post Companies Act, 2013	67.3		
	HDFC Bank	Pre Companies Act, 2013	28.9	-7.463	0.000
		Post Companies Act, 2013	73.5		
	ICICI Bank	Pre Companies Act, 2013	36.1	-5.018	0.000
		Post Companies Act, 2013	91.8		
	IDBI Bank	Pre Companies Act, 2013	28.1	-5.124	0.002
		Post Companies Act, 2013	71.4		
	IndusInd Bank	Pre Companies Act, 2013	24.1	-4.991	0.000
		Post Companies Act, 2013	61.2		
	Jammu & Kashmir Bank	Pre Companies Act, 2013	13.6	-7.034	0.000
		Post Companies Act, 2013	45.3		
	Karnataka Bank	Pre Companies Act, 2013	20.9	-5.129	0.001
		Post Companies Act, 2013	53.1		
	Karur Vysya Bank	Pre Companies Act, 2013	14.4	-5.121	0.014
		Post Companies Act, 2013	36.7		
	Kotak Mahindra Bank	Pre Companies Act, 2013	29.7	-7.293	0.010
		Post Companies Act, 2013	75.5		
	Lakshmi Vilas Bank	Pre Companies Act, 2013	28.1	-7.104	0.000
		Post Companies Act, 2013	71.4		
	Nainital Bank	Pre Companies Act, 2013	24.0	-4.142	0.000
		Post Companies Act, 2013	61.2		
	RBL Bank	Pre Companies Act, 2013	28.1	-5.251	0.001
		Post Companies Act, 2013	71.4		
	South Federal Bank	Pre Companies Act, 2013	28.2	-5.037	0.000
		Post Companies Act, 2013	71.4		
	Tamilnad Mercantile Bank	Pre Companies Act, 2013	30.3	-5.132	0.001
		Post Companies Act, 2013	75.5		
	Yes Bank	Pre Companies Act, 2013	27.4	-4.013	0.000
		Post Companies Act, 2013	67.3		

Source : Author's Calculations

The p- values for all the private sector banks concerning procedures of transparency and disclosures were noticed to be less than 0.05 insinuating that all the effects of this statistical test are contemplated to be statistically significant. This exhibits that the

observed difference between the mean scores of the transparency and disclosure activities before and after the enactment of the Act being compared is questionable to have occurred by chance and is instead likely to be a true effect. It evinces the support of the alternative hypothesis, rather than the null hypothesis.

Figure 27. Showing the mean scores of the 'disclosures and transparency' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

The enquiry concerning mean scores of private sector banks as underlined in Figure 26 unveils such scores for both before and after the enactment of the Companies Act of, 2013. It was marked out that the lowest mean compliance score of 17.9 was observed in the case of the Bank of Maharashtra and the highest mean compliance score of 36.8 was attained in the case of Canara Bank before the enactment of the Companies Act, of 2013. Similarly, it was identified that the lowest mean compliance score of 45.3 was found in the case of the Jammu & Kashmir Bank and the highest mean compliance score of 91.8 was found in the case of the ICICI Bank during the post-enactment of the Companies Act, of 2013. The comparison of pre and post -mean scores accentuated that all the private sector banks have shown momentous progress in compliance with corporate governance norms specified by the Companies Act of, 2013. It can be deduced that these banks have given antecedence to fulfilling the due requirements of postulating accurate and complete evidence about their operations, financial performance, and governance practices to their stakeholders, thereby, building appropriate trust with them.

Likewise, it is indicated that the ICICI Bank has shown a prominent affirmation to assuring compliance level with corporate governance norms concerning this dimension. The comparison of pre and post-mean scores of this bank showed a change of 55.7 mean scores, indicating that the said bank has been persuasive in its approach to endorse compliance to disclosures and transparency standards as sketched out by the governance provisions of the Companies Act of, 2013.

6.15. Evaluation of the 'shareholder information and rights' dimension for the private sector banks, pre and post-companies Act, of 2013

The dimension of shareholder information and rights concerns itself with substantiating that there exists an appropriate stakeholder tribulation committee, sustenance of suitable investor complaints mechanism and there exists a defined procedure of share transfer system in the banking system. The provisions of the Companies Act, of 2013 aspire at developing a proper system of shareholder voting rights wherein they have the right to vote on important substances such as the election of directors, endorsement of major trades, and changes to the company's articles of incorporation. Moreover, this system aims to accommodate all the shareholders with the right to access information about the company's financial performance, management, and decision-making processes. Additionally, it proposes the right to propose resolutions for consideration at shareholder meetings. The final segment was oriented towards examining the differences in the mean scores for this particular dimension concerning two-time proportion i.e., pre and post-enactment of the Companies Act of, 2013. The results of paired t-tests are in Table 135 outlines the mean values, t-values and sig. values for the dimension of shareholder information and rights for all the private sector banks.

The outcomes of this statistical test unveil that significant differences are attained in compliance with corporate governance mechanisms concerning this particular dimension in two-time proportion i.e., pre and post-Companies Act, of 2013. The p- values for all the private sector banks of this dimension were witnessed to be less than 0.05 advocating that all the effects of this statistical test are contemplated to be statistically significant. This expounds that the observed difference between the mean scores of the stakeholder stratagem before and after the enactment of the Companies Act of, 2013

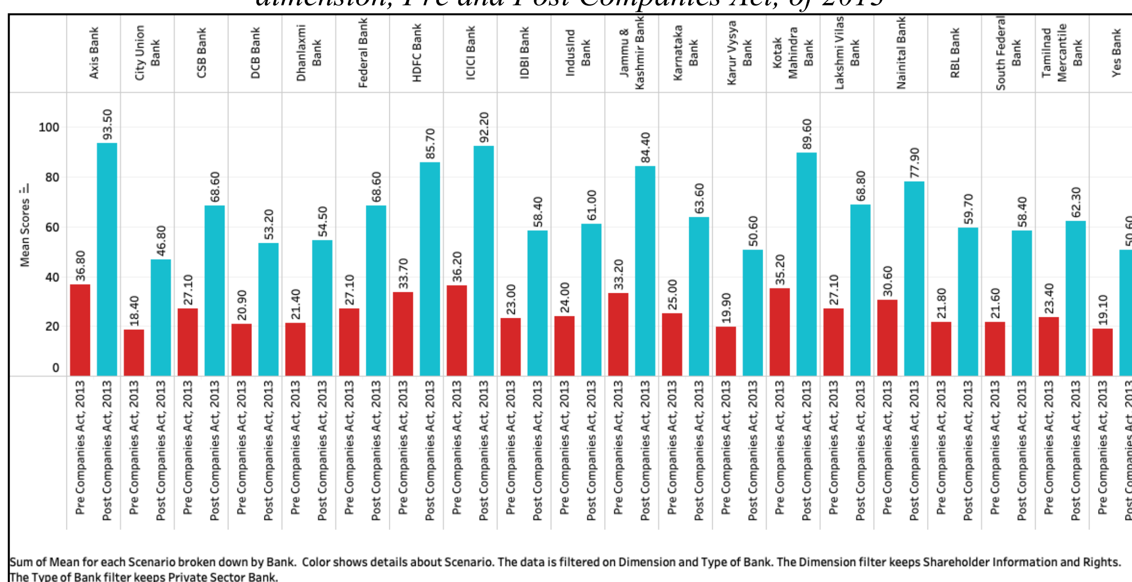
being compared is unlikely to have ensued by chance and is instead likely to be a true effect. It advocates the sustenance of the alternative hypothesis, rather than the null hypothesis. The assessment of mean scores in the case of private sector banks as underlined in figure 27 unveils such scores for both before and after the enactment of the Companies Act of, 2013.

Table 135. Showing outcomes of paired t-test for the dimension 'shareholder information and rights' in the case of private sector banks

	Bank	Scenario	Mean	t – value	Sig.
Shareholder Rights & Information	Axis Bank	Pre Companies Act, 2013	36.8	-7.086	0.002
		Post Companies Act, 2013	93.5		
	City Union Bank	Pre Companies Act, 2013	18.4	-5.112	0.011
		Post Companies Act, 2013	46.8		
	CSB Bank	Pre Companies Act, 2013	27.1	-7.113	0.001
		Post Companies Act, 2013	68.6		
	DCB Bank	Pre Companies Act, 2013	20.9	-5.811	0.014
		Post Companies Act, 2013	53.2		
	Dhanlaxmi Bank	Pre Companies Act, 2013	21.4	-7.121	0.001
		Post Companies Act, 2013	54.5		
	Federal Bank	Pre Companies Act, 2013	27.1	-6.005	0.000
		Post Companies Act, 2013	68.6		
	HDFC Bank	Pre Companies Act, 2013	33.7	-7.123	0.011
		Post Companies Act, 2013	85.7		
	ICICI Bank	Pre Companies Act, 2013	36.2	-5.328	0.001
		Post Companies Act, 2013	92.2		
	IDBI Bank	Pre Companies Act, 2013	23.0	-4.104	0.002
		Post Companies Act, 2013	58.4		
	IndusInd Bank	Pre Companies Act, 2013	24.0	-5.121	0.022
		Post Companies Act, 2013	61.0		
	Jammu & Kashmir Bank	Pre Companies Act, 2013	33.2	-7.051	0.000
		Post Companies Act, 2013	84.4		
	Karnataka Bank	Pre Companies Act, 2013	25.0	-4.029	0.025
		Post Companies Act, 2013	63.6		
	Karur Vysya Bank	Pre Companies Act, 2013	19.9	-5.011	0.003
		Post Companies Act, 2013	50.6		
	Kotak Mahindra Bank	Pre Companies Act, 2013	35.2	-5.383	0.000
		Post Companies Act, 2013	89.6		
	Lakshmi Vilas Bank	Pre Companies Act, 2013	27.1	-4.494	0.000
		Post Companies Act, 2013	68.8		
	Nainital Bank	Pre Companies Act, 2013	30.6	-5.242	0.005
		Post Companies Act, 2013	77.9		
	RBL Bank	Pre Companies Act, 2013	21.8	-5.132	0.001
		Post Companies Act, 2013	59.7		
	South Federal Bank	Pre Companies Act, 2013	21.6	-5.512	0.000
		Post Companies Act, 2013	58.4		
	Tamilnad Mercantile Bank	Pre Companies Act, 2013	23.4	-5.023	0.001
		Post Companies Act, 2013	62.3		
	Yes Bank	Pre Companies Act, 2013	19.1	-4.921	0.001
		Post Companies Act, 2013	50.6		

Source : Author's Calculations

Figure 28. Showing the mean scores of the 'shareholder information and rights' dimension, Pre and Post Companies Act, of 2013



Source : Author's Calculations

It was outlined that the lowest mean compliance score of 19.1 was discerned in the case of Yes Bank and the highest mean compliance score of 36.8 was attained in the case of Axis Bank before the authorization of the Companies Act, of 2013. Similarly, it was recognized that the lowest mean compliance score of 46.9 was found in the case of the City Union Bank and the highest mean compliance score of 93.5 was found in the case of the Axis Bank during the post- enactment of the Companies Act, of 2013. The comparison of pre and post-mean scores accentuated that all the private sector banks have shown a momentous enhancement in compliance with corporate governance norms specified by the Companies Act of , 2013. It can be inferred that these banks have given precedence to promote transparency and accountability towards their stakeholders by providing them access to relevant information and proposing resolutions to their grievances. Besides, it is indicated that the Axis Bank has shown a noteworthy demonstration of compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank showed a change of 56.7 mean scores, representing that the said bank has been instrumental in its approach to endorse due compliance to stakeholder rights and information norms as drawn by the governance provisions of the Companies Act of, 2013.

6.16. Chapter Summary

The current objective compared and analysed the corporate governance practices of the Indian banking sector by constructing the 'two-time proportion' i.e., before the enactment of the Companies Act, of 2013 and after the enactment of the Companies Act, of 2013. The inclusion of these two-time proportion assisted in examining and determining the significant differences in the actual governance practices of the Indian banking sector across two different periods. The outcomes of the paired t-test revealed that significant and momentous differences concerning these norms were found in the pre and post-enactment of the Companies Act, of 2013. It was inferred that this legislation has represented a decisive moment in bringing substantial improvement in the compliance level with governance mechanisms in the commercial banking sphere. This objective encompassed the holistic governance mechanism endorsed by the Companies Act, of 2013 and examined the governance activities by considering six important dimensions listed under this Act. By including two-time proportion for the corporate governance provisions of the Companies Act of 2013, the significant differences in the actual governance practices of the Indian commercial banking sector was analyzed and investigated across different periods. The inclusion of a large period in the study allowed for the evaluation and recognition of the improvement or deterioration of corporate governance norms over the course of the business operations of the sample units. This helped to determine the extent to which legislative authority had an impact on the improvement of governance practices in the Indian banking sphere.

The results obtained in this objective indicated that the Companies Act, 2013 has played a crucial role in significantly improving corporate governance practices in the Indian commercial banking sector. The Act has effectively contributed to creating a corporate environment that is more transparent, accountable, and responsible, thereby enhancing investor confidence and strengthening the overall corporate governance framework in this industry. Furthermore, the Act successfully emphasized the need for increased disclosure requirements specifically for commercial banks, ensuring that shareholders and stakeholders have access to relevant and necessary information. Additionally, it successfully enhanced the independence and effectiveness of boards

of directors, which is vital for impartial oversight and decision-making. The Act has also been instrumental in granting greater rights and protection to shareholders in the banking sector. It has introduced provisions that promote shareholder democracy by granting shareholders the right to vote on key matters, the ability to appoint and remove directors, and access to company records and information. This empowers shareholders and enables them to actively participate in corporate decision-making processes. Moreover, the Act has strengthened the role of auditors and enhanced financial accountability in the banking industry. It has imposed stricter regulations on auditing standards, enforced auditor rotation requirements, and mandated the disclosure of auditors' qualifications and remarks. These provisions aim to improve the quality and reliability of financial reporting within commercial banks, which is crucial for maintaining trust and confidence in the sector. Furthermore, the Act has imposed greater responsibility on directors and management in commercial banks. It has introduced provisions that outline independent director obligations, specify the duties of directors, and emphasize the establishment of audit commissions. These provisions ensure that directors and management are held accountable for their actions, promoting responsible corporate behavior and safeguarding the best interests of stakeholders are protected. Overall, the Companies Act, 2013 has been highly successful in bringing about significant improvements in corporate governance practices within the Indian commercial banking sector. It has initiated essential provisions that promote transparency, shareholder rights, financial accountability, and responsible corporate behavior. By doing so, the Act has played a crucial role in enhancing the overall governance framework and fostering a more robust and trustworthy banking sector in India.

CHAPTER – 7

CONSTRUCTION OF CORPORATE GOVERNANCE INDEX

Constructing an index serves as an adequate tool that condenses multiple indicators or variables into a single value by offering a comprehensive overview of a particular phenomenon or concept. Such an approach is commonly employed in diverse fields such as economics, finance, social sciences, and environmental sciences to streamline complex data and comprehensively understand multi-dimensional issues (Stefana et at., 2021). An index aims to accommodate various decision-making ideas about policy formation and its intricacies. The indicators reflected on such an index provide an appropriate benchmark for communicating essential information in the areas such as the development of sophisticated technologies, highlighting the matters related to the working of an economy and comprehending the intricate issues of society and its environment (Oliveira et at., 2022; Libório et at., 2022). Developing composite indicators provides a relevant and resilient approach to policymakers by helping them appraise and explore the multidimensionality of the convoluted issues related to various issues under discussion. The entire process of developing a multidimensional and comprehensive composite index involves recognizing holistic matters and suitably considering various economic, social, ethical and governance aspects of the approach being developed (Kitrar et at., 2021).

A robust composite index construction considers appraising intricate issues, reviewing the observed anomaly, and evaluating the significance of the various phenomena during its construction process (El Gibari et at., 2019). Such composite indices serve as the top priorities for global policy-making due to their ability to analyze the issues with deep complexity and review them further for inter-comparisons. The intricacy and multifaceted development complications are congruously captured by constructing a comprehensive index. Global development agencies such as World Bank, European Commission and United Nations relied on using a composite index for designing the environment administration index, human development index, quality of life index and gender empowerment index (Stefana et at., 2021; El Gibari et at., 2019; Libório et at., 2022 and Oliveira et at., 2022). These organizations have suitably relied on inculcating the various tables, ratings, references and accumulated data for the appropriate construction and providing valuable assessment to the policymakers around the globe.

This chapter is an endeavour to create a simpler and more practical approach to measuring corporate governance using a composite index for the banking sector. It incorporates expert opinions and considers the governance norms listed in the Companies Act, of 2013. The index is based on a forward-looking mechanism that considers the actual complexities of corporate governance compliance at the core level. It seeks to provide a well-founded, independent, and unbiased view of governance issues in the Indian banking system by gathering preferences from higher-level banking officials of Indian commercial banks. The index takes into account the perspectives, issues, and concerns of all governance commissions concerning the board of directors, audit function, remuneration and risk management teams, disclosure and transparency matters, and stakeholders' rights. It balances quantitative and qualitative factors to provide a benchmark for corporate governance practices in the banking sector, based on criteria provided by banking officials heading different committees in the Indian banking sector.

7.1. Empirical Evidence on the corporate governance index

The studies aiming to construct a corporate governance index relied on measuring and evaluating compliance activities within a business unit. It also assessed the quality of governance practices across different units and time periods. Several studies conducted by da Silva et al. (2005), Chen et al. (2007), Sarkar et al. (2012), Javaid & Saboor (2015), Tarchouna et al. (2017), Arora & Bodhanwala (2018), Adinegara & Sukamulya (2021), Mohamad et al. (2010), Benton & You (2019), Achim et al. (2022), and Tahir et al. (2022) have identified various dimensions of corporate governance and assessed the level of compliance to these dimensions using the constructed index. These studies have accentuated the importance of including stakeholder rights, audit function involvement, board responsibilities, related party transactions, and disclosures in the index. The studies have also highlighted the significance of disclosure practices, material information, timely information, board management, and audit assurance in index construction. In addition, the studies have stressed the need to include comprehensive policies on related party transactions and risk management efforts in the index and the importance of regulatory enforcement measures. Adherence to good governance practices, as reflected in the index, can provide a competitive advantage in the business environment and enhance investors' confidence. It was outlined that the composite index for corporate governance practices in the banking sector should be developed based on sound

principles of aggregation, weighting, and robustness of metrics, with the flexibility to accommodate changes in the business environment.

The studies conducted by Mohamad et. al. (2010), Benton & You (2019), Tarchouna et. al. (2017), Chen et. al. (2007), Sarkar et. al. (2012), and Arora & Bodhanwala (2018) have emphasized the significance of incorporating the appropriate method of disclosing material information, determining material events, and timely information disclosure, as well as the role of board management and audit teams in presenting unqualified reports to stakeholders. These studies have underscored that a well-constructed index should include information related to the company's vision, strategic policies, key performance areas, and relevant business activities as important components. Furthermore, these studies have highlighted that the index construction should adequately incorporate elements such as compliance with regulatory procedures, accountability and openness, risk management procedures, and audit assurance to promote strong corporate governance practices in the banking sector.

The studies conducted by Tarchouna et. al. (2017), Achim et. al. (2022), and Tahir et. al. (2022) emphasized the inclusion of comprehensive document policies for related party transactions and efforts made by business units to manage systematic and internal risks in an informed manner. These studies also highlighted the need for regulatory authorities to enforce strict measures and hold organizations accountable for weak compliance with governance norms. Adherence to good governance practices is emphasized as a means to gain a competitive advantage in the external business environment and enhance investor confidence. Therefore, it was outlined that an index should appropriately include all parameters set by regulatory authorities in their legislation. The studies by Hagerty & Land (2012), Greco et. al. (2019), Manoj et. al. (2013), Reckien (2018), and Chen (2021) emphasized the importance of reviewing various methods of constructing the index and integrating inputs related to the metric formulation. These studies highlighted that the ultimate objective of composite index construction must be achieved by applying the right techniques of aggregation, weighting, and scrutinizing the robustness of the index sub-metrics. It was suggested that the final composite index should be able to provide meaningful implications to policymakers and regulatory authorities through accurate interpretation of results. The application of the composite index should be flexible enough to consider changes in the business environment and should foster elements of transparency, conciseness, lucidity, and absoluteness in its approach.

7.2. Theoretical underpinning concerning the governance index

The theoretical foundation of index construction involves utilizing established principles and concepts from relevant fields to guide the development process. A governance index is a tool used to measure the quality of governance in a particular country or region. It is based on the premise that good governance is a key factor in promoting economic growth, social development, and political stability (Reckien (2018), Chen (2021). The theoretical underpinning of the governance index can be traced back to several key concepts in political science and economics. Measurement theory is applied to create valid and reliable measures by clearly defining constructs, selecting appropriate indicators, and ensuring measurement methods are valid, reliable, and consistent. This ensures that the index accurately captures the intended aspects of governance and generates meaningful and comparable results (Manoj et. al., 2013; Javaid & Saboor, 2015; Tarchouna et. al., 2017; Arora & Bodhanwala, 2018). Additionally, the aggregation theory pertains to how individual indicators or metrics are combined to form an overall index score. This may involve simple averaging, weighted averaging, or more complex statistical techniques. Aggregation theory guides the selection of an appropriate method to combine multiple indicators into a composite index in a meaningful and statistically robust manner (Mohamad et. al., 2010; Hagerty & Land, 2012; Manoj et. al., 2013; Tarchouna et. al., 2017; Reckien, 2018; Greco et. al., 2019; Chen, 2021). Moreover, the governance theory encompasses various theoretical perspectives, such as agency theory, stakeholder theory, and institutional theory, which provide insights into the underlying principles, concepts, and mechanisms that influence governance practices and outcomes in organizations. These theories can guide the selection of relevant indicators or metrics that align with the theoretical concepts and help assess different dimensions of governance (Tahir et. al., 2022; Benton & You, 2019; Tarchouna et. al., 2017; Chen et. al., 2007; Sarkar et. al., 2012; Arora & Bodhanwala, 2018; Adinegara & Sukamulya, 2021). The normative theory focuses on normative principles or standards that define what constitutes good or effective governance, including accountability, transparency, fairness, and responsibility. These principles provide a normative framework against which governance practices can be assessed and evaluated. Normative theory aids in determining the criteria or benchmarks against which governance performance is measured in an index (Sarkar et. al., 2012; Manoj et. al., 2013; Javaid & Saboor, 2015; Tarchouna et. al., 2017).

7.3. Process of developing the index for Corporate Governance

The construction of the index for the Indian banking sector necessitated the recognition of multidimensionality and in this regard, all the prominent factors of corporate governance as formulated by the Companies Act, of 2013 were suitably identified. Due accordance was given to six important pillars forming the base of the robust corporate governance system as per the Act. Therefore, the broad dimensions such as board procedures and effectiveness, audit function, risk management committee, remuneration committee, shareholder rights as well as disclosure and transparency were appropriately considered for levying the sustainability of the corporate governance system made under the Act. All of these broad dimensions as a whole were further segregated into 52 sub-indicators as listed under this act. In the following step, efforts are made to collect the ranks from bank high-position officials who are currently serving as the region-wise head positions such as banking operations, code compliance and executive directors. The selection of a peculiar set of respondents with a specified set of governance positions is made in the study. Such respondents are deemed to have the detailed knowledge and skillset for handling the governance issues arising in the respective banking institutions. A structured questionnaire concerning the governance provisions of the Act was used for collecting the responses from them. The questionnaire presented to them required them to provide the ranking of different 52 indicators based on 6 parameters of corporate governance established under the endowments of the Companies Act, 2013. The subsequent step involved normalizing the preferences collected in the previous step. The process of normalization considered amalgamating the required information to generate evocative interpretations. The normalization progression concerned itself with rescaling the established set of obtained preferences ranging from 0 to 1 wherein 0 signified the minimum value and 1 described the maximum value. A similar procedure was adopted in the construction and development of the Africa Equality Gender Index, Human development index and Sustainable Goals development index (Gilthorpe, 1995; Carrino, 2017). Suitable normalization of the collected preferences from the banking officials ensured making the information comparable transversely through distinctive parameters of corporate governance as highlighted by the Companies Act, of 2013. Undertaking such a normalization process ensured that indicators are brought to the same level as they are being transubstantiated into authenticating, dimensionless numerals. The methodology followed for carrying out the normalization activity is the Min-Max alteration.

The following formula is used for carrying out the rescaling in the normalization process.

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)}$$

Where x' indicates the normalized value and x indicates the fundamental value

The succeeding step is convoluted by making the aggregation of the normalized figures obtained previously. The entire process of aggregation was immersed by combining all the dimensions of corporate governance on an individual footing. Accordingly, the proportional measuring methodology of assigning equal weights was applied and an additive aggregated score was calculated. Based on the additive score, ranks were assigned wherein the maximum additive score was given top ranks and the minimum additive score was assigned the lower rank.

7.4. Dimension-wise preference allotment by banking officials

The initial step involved the collection of the independent, unbiased and unconstrained outlook of the governance issues from the banking officials, currently positioned at higher-level offices of commercial banks in India. The preferences were collected dimension-wise for a total of six dimensions as highlighted by the Companies Act, of 2013. The information presented in Table 136 highlights the preferences allotted by officials for the dimension of the Board Procedures and effectiveness. The codes of each of the officials are reflected using the codes from A to T. There are 15 sub-indicators concerning which the preferences are gathered. In case a certain official allocates 1 to a sub-indicator then it reflects the highest inclination or significance regarding that sub-indicator concerning all other sub-indicators. In case 15 is allocated to a sub-indicator then it reflects the lowest inclination or significance regarding this sub-indicator.
The communication is obtainable in Table 137 and focuses on the preferences allotted by the banking bureaucrat for the dimension of the audit function. The codes of each of the officials are reflected using the codes from A to T. There are 9 sub-indicators concerning which the preferences are gathered. In case a certain banking official allocates 1 to a sub-indicator then it reflects the highest inclination or significance regarding that sub-indicator concerning all other sub-indicators listed in the overall dimension of the audit function. The information given in Table 138 features the preferences assigned by the banking officeholder for the dimension of the remuneration committee. The codes of

each of the officials are reflected using the codes from A to T. There are 5 sub-indicators regarding which the preferences are congregated. In case a certain banking official allocates 1 to a sub-indicator then it reflects the highest inclination or significance regarding that sub-indicator concerning all other sub-indicators listed in the overall dimension of the remuneration committee.

Table 137. Preferences of the bank officials about board procedures & effectiveness

Dimension	Sub Indicators	Preferences of Bank Officials																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Board Procedures and Effectiveness	Not more than 15 directors on the board	12	15	11	10	10	10	12	11	10	11	15	12	11	10	12	12	10	12	11	14
	At least 50% of the board comprise of non-executive directors	14	11	12	12	12	14	13	12	12	12	14	14	12	12	10	11	14	14	12	15
	Board appoint at least one woman director	13	14	15	11	13	15	14	13	11	13	10	13	13	11	13	13	12	13	13	11
	Executive director/Non-executive independent director holds directorship of not more than three /six companies	3	3	3	3	3	5	3	3	3	3	4	3	3	3	3	3	3	3	3	4
	Chairman of the board held the position for a minimum of five years	15	12	14	14	11	11	15	14	14	14	13	15	14	14	15	15	15	15	14	13
	Chairman of the board is non-executive director	10	10	13	15	15	12	11	10	15	10	11	10	10	15	11	10	11	10	10	10
	Chairman and CEO are two separate persons on the board	11	13	10	13	14	13	10	15	13	15	12	11	15	13	14	14	13	11	15	12
	Bank provide the details about committee's composition in the corporate governance report	4	5	5	4	7	4	4	4	5	4	5	4	4	5	8	9	7	4	4	7
	Board includes one-third of the independent directors for non-executive chairman and one-half for executive chairman	9	7	1	7	8	6	9	2	7	2	6	9	2	7	7	8	9	9	2	5
	Suitable training is imparted to independent directors and is disclosed by bank in the corporate governance report	8	9	7	9	9	7	8	7	9	7	7	8	7	9	9	7	8	8	7	6
	Separate meeting of independent directors is held in financial year and details are disclosed in the report	7	8	8	8	6	9	7	5	8	9	9	7	9	8	4	5	5	7	9	8
	Board constitute nomination committee for appointment of directors	6	6	4	6	4	8	5	6	6	5	8	5	5	6	6	6	6	5	5	9
	Bank board publishes its separate corporate governance report as a part of annual report	1	2	6	1	5	1	1	9	2	6	1	1	6	2	2	2	2	1	6	1
	Bank defines code of corporate governance	2	1	9	2	1	2	2	8	1	8	2	2	8	1	1	1	1	2	8	2
	Bank establishes a vigil mechanism for directors and employees through whistle blower policy	5	4	2	5	2	3	6	1	4	1	3	6	1	4	5	4	4	6	1	3

Source : Author's calculation

Table 137. Preferences of the bank officials about audit function

Dimension	Sub Indicators	Preferences of Bank Officials																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Audit Function	Board constitute audit committee	6	8	9	6	9	4	5	7	5	4	5	9	7	7	6	7	8	6	7	6
	Audit committee has minimum three members	4	1	5	4	5	5	3	6	7	6	6	1	4	8	5	3	7	1	4	1
	Two-third members of audit committee are independent directors	7	2	1	5	1	3	2	2	6	2	3	8	9	2	3	2	1	7	8	3
	Chairman is independent non-executive director	8	9	6	7	7	8	6	8	9	8	8	5	8	5	8	8	6	8	6	5
	Internal audit procedure is defined in the report	5	5	8	2	3	2	4	5	1	1	1	7	2	3	2	4	5	5	2	9
	Statutory auditor is appointed by board	9	6	7	9	8	9	7	9	8	9	9	6	5	9	9	9	9	9	9	8
	Committee has met at least four times a year	3	3	3	3	6	1	9	3	4	3	7	3	6	6	1	1	3	4	3	7
	Company secretary act as a secretory of audit committee	1	1	2	1	4	6	1	1	2	7	4	2	1	4	4	5	2	2	1	2
	Bank discloses a certificate from the auditor regarding corporate governance compliance in the annual report	2	7	4	8	2	7	8	4	3	5	2	4	3	1	7	6	4	3	5	4

Source : Author's calculation

The information presented in Table 139 highpoints the preferences allotted by the banking bureaucrat for the dimension of risk management committee. The codes of each of the officials are reflected using the codes from A to T. There are 5 sub- indicators of this committee concerning which the preferences are gathered. In case a certain banking

official allocates 1 to a sub-indicator then it unveils the highest proclivity or significance regarding that sub-indicator concerning all other sub-indicators listed in the overall dimension of the risk management committee. In a similar way, if 5 is allocated, then it reflects the lowest proclivity or significance regarding that sub-indicator.

Table 138. Preferences of the bank officials about the remuneration committee

Dimension	Sub Indicators	Preferences of Bank Officials																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Remuneration Committee	Board constitute a remuneration for overall oversight of management's implementation of remuneration system	5	4	3	4	3	4	5	3	2	3	5	3	4	5	3	5	4	5	3	4
	Independent director as a chairman of the committee	4	5	4	5	5	5	3	4	3	4	4	5	3	3	4	4	3	4	4	5
	At least three members, with majority as non-executive directors	3	2	5	3	2	3	2	5	4	5	3	4	5	4	5	2	2	1	5	3
	Information on payments of remuneration/sitting fees to directors, if any paid is disclosed in the report	1	3	1	1	4	1	1	1	5	1	2	2	1	1	1	3	5	2	1	1
	All directors are non-executive	2	1	2	2	1	2	4	2	1	2	1	1	2	2	2	1	1	3	2	2

Source : Author's calculation

Table 139. Preferences of the bank officials pertaining to risk management committee

Dimension	Sub Indicators	Preferences of Bank Officials																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Risk Management Committee	Presence of risk management committee	5	5	3	5	3	5	5	3	2	3	5	3	5	5	3	5	5	5	3	5
	Appointment of a chief risk officer	4	4	4	4	5	4	4	5	4	4	4	5	3	3	4	4	3	4	4	3
	Bank disclose the size of risk management committee	3	2	5	3	2	1	3	4	3	5	3	4	4	4	5	2	2	1	5	4
	Bank disclose the number of meetings held by RMC	1	3	1	1	4	3	1	1	5	1	2	2	1	2	1	3	4	2	1	2
	Bank have non- executive director as chairman of RMC	2	1	2	2	1	2	2	2	1	2	1	1	2	1	2	1	1	3	2	1

Source : Author's calculation

Table 140. Preferences of the bank officials pertaining to shareholder rights

Dimension	Sub Indicators	Preferences of Bank Officials																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Shareholder Information and Rights	Board constitute stakeholder's grievance committee	11	10	11	10	9	8	10	9	10	8	11	11	10	11	10	11	11	10	11	10
	Non-executive director act as chairman of stakeholder grievance committee	8	9	6	8	8	6	7	11	11	10	9	10	8	6	7	9	8	8	8	7
	Compliance officer reporting to company secretary	1	3	2	1	1	2	4	1	2	6	1	2	3	2	2	1	2	3	2	2
	Committee discloses the number of complaints received and resolved in a financial year	7	6	8	6	7	11	9	3	4	4	3	4	6	8	6	7	7	7	7	8
	Board disclose the information on the last three annual general meeting held in the annual report	6	4	7	7	4	7	8	7	7	3	7	7	4	7	8	3	4	6	6	6
	Bank board disclose the information regarding its listing on various stock exchanges in the report	4	7	3	4	6	3	2	6	5	7	6	5	7	3	4	6	5	4	3	4
	Disclose its dividend policy and dividend paid, if any, during the year in the report	3	2	4	3	5	4	1	4	3	5	4	3	2	4	3	4	3	2	4	3
	The procedure of share transfer system is explained comprehensively in the report	5	5	5	5	3	5	5	5	6	2	5	6	5	5	5	5	6	5	5	5
	Disclosure on the information on the shareholding pattern of shares held by directors is made	9	11	9	9	10	9	6	8	9	11	8	9	11	9	9	8	9	11	9	9
	Information about the proportion of dematerialised shares held by bank given in its annual report	2	1	1	2	2	1	3	2	1	1	2	1	1	1	1	2	1	1	1	1
	Bank disclose the policy on dealing with Related Party Transactions	10	8	10	11	11	10	11	10	8	9	10	8	9	10	11	10	10	9	10	11

Source: Author's calculation

The communication presented in Table 140 emphasizes the preferences allotted by the banking bureaucrat for the dimension of shareholder information and rights. The codes of each of the officials are reflected using the codes from A to T. There are 11 sub-indicators concerning which the preferences are gathered. In case a certain banking official allocates 1 to a sub-indicator then it reflects the highest inclination or significance regarding that sub-indicator concerning all other sub-indicators listed in the overall dimension of shareholder information and rights.

Table 141. Preferences of the bank officials pertaining to disclosures and transparency

Dimension	Sub Indicators	Preferences of Bank Officials																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Disclosure and Transparency	Bank disclose the significant accounting policies adopted in Schedule- 17 of the annual report	6	4	7	6	7	4	5	6	6	6	5	6	7	7	6	7	6	6	7	6
	'Management Discussion and Analysis' in annual report	7	1	5	4	5	5	3	7	5	4	6	1	4	5	5	3	7	1	4	1
	CEO/CFO certification that accounting standards and code of conduct is duly complied with	2	2	1	5	1	3	2	2	7	2	3	5	5	2	3	2	1	7	6	3
	Details of non-compliance imposed on the bank by SEBI is disclosed in the annual report	1	3	2	1	4	6	1	1	2	7	4	2	1	4	4	5	2	2	1	4
	Bank disclose information regarding the ways and means by which shareholders are informed	5	5	6	2	3	2	4	5	1	1	1	7	2	3	2	4	5	5	2	5
	Bank disclose the details about resignation/cessation of directors with reasons of resignation in report	4	7	4	7	2	7	6	4	3	5	2	4	3	1	7	6	4	3	5	2
	A brief resume of new director or re-appointed director is included for the information to the shareholders	3	6	3	3	6	1	7	3	4	3	7	3	6	6	1	1	3	4	3	7

Source : Author's calculation

The evidence presented in Table 141 underlines the preferences allotted by the banking bureaucrat for the dimension of disclosure and transparency. The codes of each of the officials are reflected using the codes from A to T. There are 7 sub-indicators concerning which the preferences are gathered. In case a certain banking official allocates 1 to a sub-indicator then it reflects the highest inclination or significance regarding that sub-indicator concerning all other sub-indicators listed in the overall dimension of disclosure and transparency. If 7 is allocated, then it reflects the lowest proclivity or significance regarding that sub-indicator allocated by an official to the particular sub-indicator.

The preferences indicated by the banking officials outlined their perspectives towards listed governance norms as per the guidelines of Companies Act, of 2013. Their indicated priorities towards different governance provisions are further utilized to effectuate the normalization process. This process will ensure that index construction ensures that the governance parameters accurately contemplate the performance of the elementary dimensions. The method of normalization used can have a significant impact on the composition and administration of the index.

7.5. The normalization processes

The normalization process is carried out in the subsequent step and such procedures will ensure that indicators are brought to the same level as they will be transubstantiated into authenticating, dimensionless numerals. Normalization is an essential process in building an index to ensure that the resulting index accurately reflects the underlying data and enables meaningful comparisons among different data points (El Gibari et at., 2019; Libório et at., 2022 and Oliveira et at., 2022). The normalization contemplated merging the requisite information to produce reminiscent clarifications. The normalization progression concerned itself with rescaling the established preferences ranging from 0 to 1 wherein 0 signified the minimum value and 1 described the maximum value (Chen et. al. (2007), Sarkar et. al. (2012). The methodology followed for normalization commotion is the Min-Max methodology. The normalization procedure for the dimension of Board procedures & Effectiveness is carried out by using its Min-Max methodology. In this process, the maximum value was taken as 15 and the minimum value as 1. The rescaled figures are highlighted in Table 142.

The normalization technique for the dimension of the audit function is carried out by using its Min-Max methodology. In this progression, the maximum value was taken as 9 and the minimum value as 1. The rescaled figures are underlined in Table 143. The normalization procedure for the dimension of the remuneration committee is carried out by using its Min-Max approach. In this process, the maximum value was taken as 5 and the minimum value as 1. The rescaled figures are highlighted in Table 144. The normalization technique for the dimension of the risk management committee is conceded by using its Min-Max system.

In this progression, the maximum value was taken as 5 and the minimum value as 1. The rescaled figures are underlined in Table 145. The normalization procedure for the dimension of disclosure and transparency is carried out by using its Min-Max approach. In this process, the maximum value was taken as 7 and the minimum value as 1. The rescaled data are highlighted in Table 146. The normalization technique for the dimension of the shareholder information and rights is conceded by using its Min-Max system. In this progression, the maximum value was taken as 11 and the minimum value as 1. The rescaled figures are underlined in Table 147. The normalization procedure was crucial to be undertaken as the current study is dispensing with the distinctive dimensions of corporate governance on a diverse scale having a different number of sub-indicators.

Six dimensions as listed by the Companies Act of, 2013 and their respective sub-indicators totalling 52 are considered for the normalization process. Such practices enabled to bring of all the values of the sub-indicators fitting to diverse dimensions to a collective range. The practice of normalization contemplated integrating the required evidence to prompt suggestive explanations.

Table 142. Normalization figures pertaining to Board procedures & Effectiveness

Dimension	Sub Indicators	Values obtained by Normalisation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Board Procedures and Effectiveness	Not more than 15 directors on the board	0.786	1.000	0.714	0.643	0.643	0.643	0.786	0.714	0.643	0.714	1.000	0.786	0.714	0.643	0.786	0.786	0.643	0.786	0.714	0.929
	At least 50% of the board comprise of non-executive directors	0.929	0.714	0.786	0.786	0.786	0.929	0.857	0.786	0.786	0.786	0.929	0.929	0.786	0.786	0.643	0.714	0.929	0.929	0.786	1.000
	Board appoint at least one woman director	0.857	0.929	1.000	0.714	0.857	1.000	0.929	0.857	0.714	0.857	0.643	0.857	0.857	0.714	0.857	0.857	0.786	0.857	0.857	0.714
	Executive director/Non-executive independent director holds directorship of not more than three /six companies	0.143	0.143	0.143	0.143	0.143	0.286	0.143	0.143	0.143	0.143	0.214	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.214
	Chairman of the board held the position for a minimum of five years	1.000	0.786	0.929	0.929	0.714	0.714	1.000	0.929	0.929	0.929	0.857	1.000	0.929	0.929	1.000	1.000	1.000	1.000	0.929	0.857
	Chairman of the board is non-executive director	0.643	0.643	0.857	1.000	1.000	0.786	0.714	0.643	1.000	0.643	0.714	0.643	0.643	1.000	0.714	0.643	0.714	0.643	0.643	0.643
	Chairman and CEO are two separate persons on the board	0.714	0.857	0.643	0.857	0.929	0.857	0.643	1.000	0.857	1.000	0.786	0.714	1.000	0.857	0.929	0.929	0.857	0.714	1.000	0.786
	Bank provide the details about committee's composition in the corporate governance report	0.214	0.286	0.286	0.214	0.429	0.214	0.214	0.214	0.286	0.214	0.286	0.214	0.214	0.286	0.500	0.571	0.429	0.214	0.214	0.429
	Board includes one-third of the independent directors for non-executive chairman and one-half for executive chairman	0.571	0.429	0.000	0.429	0.500	0.357	0.571	0.071	0.429	0.071	0.357	0.571	0.071	0.429	0.429	0.500	0.571	0.571	0.071	0.286
	Suitable training is imparted to independent directors and is disclosed by bank in the corporate governance report	0.500	0.571	0.429	0.571	0.571	0.429	0.500	0.429	0.571	0.429	0.429	0.500	0.429	0.571	0.571	0.429	0.500	0.500	0.429	0.357
	Separate meeting of independent directors is held in financial year and details are disclosed in the report	0.429	0.500	0.500	0.500	0.357	0.571	0.429	0.286	0.500	0.571	0.571	0.429	0.571	0.500	0.214	0.286	0.286	0.429	0.571	0.500
	Board constitute nomination committee for appointment of directors	0.357	0.357	0.214	0.357	0.214	0.500	0.286	0.357	0.357	0.286	0.500	0.286	0.286	0.357	0.357	0.357	0.357	0.286	0.286	0.571
	Bank board publishes its separate corporate governance report as a part of annual report	0.000	0.071	0.357	0.000	0.286	0.000	0.000	0.571	0.071	0.357	0.000	0.000	0.357	0.071	0.071	0.071	0.071	0.000	0.357	0.000
	Bank defines code of corporate governance	0.071	0.000	0.571	0.071	0.000	0.071	0.071	0.500	0.000	0.500	0.071	0.071	0.500	0.000	0.000	0.000	0.000	0.071	0.500	0.071
	Bank establishes a vigil mechanism for directors and employees through whistle blower policy	0.286	0.214	0.071	0.286	0.071	0.143	0.357	0.000	0.214	0.000	0.143	0.357	0.000	0.214	0.286	0.214	0.214	0.357	0.000	0.143

Source : Author's calculation

Table 143. Normalization figures pertaining to audit function

Dimension	Sub Indicators	Values obtained by Normalisation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Audit Function	Board constitute audit committee	0.63	0.88	1.00	0.63	1.00	0.38	0.50	0.75	0.50	0.38	0.50	1.00	0.75	0.75	0.63	0.75	0.88	0.63	0.75	0.63
	Audit committee has minimum three members	0.38	0.00	0.50	0.38	0.50	0.50	0.25	0.63	0.75	0.63	0.63	0.00	0.38	0.88	0.50	0.25	0.75	0.00	0.38	0.00
	Two-third members of audit committee are independent directors	0.75	0.13	0.00	0.50	0.00	0.25	0.13	0.13	0.63	0.13	0.25	0.88	1.00	0.13	0.25	0.13	0.00	0.75	0.88	0.25
	Chairman is independent non-executive director	0.88	1.00	0.63	0.75	0.75	0.88	0.63	0.88	1.00	0.88	0.88	0.50	0.88	0.50	0.88	0.88	0.63	0.88	0.63	0.50
	Internal audit procedure is defined in the report	0.50	0.50	0.88	0.13	0.25	0.13	0.38	0.50	0.00	0.00	0.00	0.75	0.13	0.25	0.13	0.38	0.50	0.50	0.13	1.00
	Statutory auditor is appointed by board	1.00	0.63	0.75	1.00	0.88	1.00	0.75	1.00	0.88	1.00	1.00	0.63	0.50	1.00	1.00	1.00	1.00	1.00	1.00	0.88
	Committee has met at least four times a year	0.25	0.25	0.25	0.25	0.63	0.00	1.00	0.25	0.38	0.25	0.75	0.25	0.63	0.63	0.00	0.00	0.25	0.38	0.25	0.75
	Company secretary act as a secretory of audit committee	0.00	0.00	0.13	0.00	0.38	0.63	0.00	0.00	0.13	0.75	0.38	0.13	0.00	0.38	0.38	0.50	0.13	0.13	0.00	0.13
	Bank discloses a certificate from the auditor regarding corporate governance compliance in the annual report	0.13	0.75	0.38	0.88	0.13	0.75	0.88	0.38	0.25	0.50	0.13	0.38	0.25	0.00	0.75	0.63	0.38	0.25	0.50	0.38

Source : Author's calculation

In this progression, the maximum value was taken as 5 and the minimum value as 1. The rescaled figures are underlined in Table 145. The normalization procedure for the dimension of disclosure and transparency is carried out by using its Min-Max approach. In this process, the maximum value was taken as 7 and the minimum value as 1. The rescaled data are highlighted in Table 146. The normalization technique for the

dimension of the shareholder information and rights is conceded by using its Min-Max system. In this progression, the maximum value was taken as 11 and the minimum value as 1. The rescaled figures are underlined in Table 147. The normalization procedure was crucial to be undertaken as the current study is dispensing with the distinctive dimensions of corporate governance on a diverse scale having a different number of sub-indicators. Six dimensions as listed by the Companies Act of, 2013 and their respective sub-indicators totalling 52 are considered for the normalization process. Such practices enabled to bring of all the values of the sub-indicators fitting to diverse dimensions to a collective range. The practice of normalization contemplated integrating the required evidence to prompt suggestive explanations.

Table 144. Normalization figures pertaining to the remuneration committee

Dimension	Sub Indicators	Values obtained by Normalisation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Remuneration Committee	Board constitute a remuneration for overall oversight of management's implementation of remuneration system	1	0.75	0.5	0.75	0.5	0.75	1	0.5	0.25	0.5	1	0.5	0.75	1	0.5	1	0.75	1	0.5	0.75
	Independent director as a chairman of the committee	0.75	1	0.75	1	1	1	0.5	0.75	0.5	0.75	0.75	1	0.5	0.5	0.75	0.75	0.5	0.75	0.75	1
	At least three members, with majority as non-executive directors	0.5	0.25	1	0.5	0.25	0.5	0.25	1	0.75	1	0.5	0.75	1	0.75	1	0.25	0.25	0	1	0.5
	Information on payments of remuneration/sitting fees to directors, if any paid is disclosed in the report	0	0.5	0	0	0.75	0	0	0	1	0	0.25	0.25	0	0	0	0.5	1	0.25	0	0
	All directors are non-executive	0.25	0	0.25	0.25	0	0.25	0.75	0.25	0	0.25	0	0	0.25	0.25	0.25	0	0	0.5	0.25	0.25

Source : Author's calculation

Table 145. Normalization figures pertaining to risk management committee

Dimension	Sub Indicators	Values obtained by Normalisation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Risk Management Committee	Presence of risk management committee	1	1	0.5	1	0.5	1	1	0.5	0.25	0.5	1	0.5	1	1	0.5	1	1	1	0.5	1
	Appointment of a chief risk officer	0.75	0.75	0.75	0.75	1	0.75	0.75	1	0.75	0.75	0.75	1	0.5	0.5	0.75	0.75	0.5	0.75	0.75	0.5
	Bank disclose the size of risk management committee	0.5	0.25	1	0.5	0.25	0	0.5	0.75	0.5	1	0.5	0.75	0.75	0.75	1	0.25	0.25	0	1	0.75
	Bank disclose the number of meetings held by RMC	0	0.5	0	0	0.75	0.5	0	0	1	0	0.25	0.25	0	0.25	0	0.5	0.75	0.25	0	0.25
	Bank have non- executive director as chairman of RMC	0.25	0	0.25	0.25	0	0.25	0.25	0.25	0	0.25	0	0	0.25	0	0.25	0	0	0.5	0.25	0

Source : Author's calculation

Table 146. Normalization figures pertaining to disclosures and transparency

Dimension	Sub Indicators	Values obtained by Normalisation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Disclosure and Transparency	Bank disclose the significant accounting policies adopted in Schedule- 17 of the annual report	0.83	0.50	1.00	0.83	1.00	0.50	0.67	0.83	0.83	0.83	0.67	0.83	1.00	1.00	0.83	1.00	0.83	0.83	1.00	0.83
	Bank maintains a distinct section on 'Management Discussion and Analysis' in annual report	1.00	0.00	0.67	0.50	0.67	0.67	0.33	1.00	0.67	0.50	0.83	0.00	0.50	0.67	0.67	0.33	1.00	0.00	0.50	0.00
	CEO/CFO certification that accounting standards and code of conduct is duly complied with	0.17	0.17	0.00	0.67	0.00	0.33	0.17	0.17	1.00	0.17	0.33	0.67	0.67	0.17	0.33	0.17	0.00	1.00	0.83	0.33
	Details of non-compliance imposed on the bank by SEBI is disclosed in the annual report	0.00	0.33	0.17	0.00	0.50	0.83	0.00	0.00	0.17	1.00	0.50	0.17	0.00	0.50	0.50	0.67	0.17	0.17	0.00	0.50
	Bank disclose information regarding the ways and means by which shareholders are informed	0.67	0.67	0.83	0.17	0.33	0.17	0.50	0.67	0.00	0.00	0.00	1.00	0.17	0.33	0.17	0.50	0.67	0.67	0.17	0.67
	Bank disclose the details about resignation/cessation of directors with reasons of resignation in report	0.50	1.00	0.50	1.00	0.17	1.00	0.83	0.50	0.33	0.67	0.17	0.50	0.33	0.00	1.00	0.83	0.50	0.33	0.67	0.17
	A brief resume of new director or re-appointed director is included for the information to the shareholders	0.33	0.83	0.33	0.33	0.83	0.00	1.00	0.33	0.50	0.33	1.00	0.33	0.83	0.83	0.00	0.00	0.33	0.50	0.33	1.00

Source : Author's calculation

Normalization methods aim to scale data to a common range or format, facilitating fair comparison and aggregation of data from different sources or with varying units of measurement (Carrino, 2017). By normalizing data, biases can be minimized, resulting in a more reliable and unbiased index. It ensures that data is consistent and comparable across different time periods which is crucial in constructing cross-country indexes. It establishes a consistent base for comparison and analysis (Sarkar et. al., 2012, Stefana et at., 2021; El Gibari et at., 2019; Libório et at., 2022 and Oliveira et at., 2022).

Table 147. Normalization figures pertaining to shareholders' information and rights

Dimension	Sub Indicators	Values obtained by Normalisation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Shareholder Information and Rights	Board constitute stakeholder's grievance committee	1	0.9	1	0.9	0.8	0.7	0.9	0.8	0.9	0.7	1	1	0.9	1	0.9	1	1	0.9	1	0.9
	Non-executive director act as chairman of stakeholder grievance committee	0.7	0.8	0.5	0.7	0.7	0.5	0.6	1	1	0.9	0.8	0.9	0.7	0.5	0.6	0.8	0.7	0.7	0.7	0.6
	Compliance officer reporting to company secretary	0	0.2	0.1	0	0	0.1	0.3	0	0.1	0.5	0	0.1	0.2	0.1	0.1	0	0.1	0.2	0.1	0.1
	Committee discloses the number of complaints received and resolved in a financial year	0.6	0.5	0.7	0.5	0.6	1	0.8	0.2	0.3	0.3	0.2	0.3	0.5	0.7	0.5	0.6	0.6	0.6	0.6	0.7
	Board disclose the information on the last three annual general meeting held in the annual report	0.5	0.3	0.6	0.6	0.3	0.6	0.7	0.6	0.6	0.2	0.6	0.6	0.3	0.6	0.7	0.2	0.3	0.5	0.5	0.5
	Bank board disclose the information regarding its listing on various stock exchanges in the report	0.3	0.6	0.2	0.3	0.5	0.2	0.1	0.5	0.4	0.6	0.5	0.4	0.6	0.2	0.3	0.5	0.4	0.3	0.2	0.3
	Disclose its dividend policy and dividend paid, if any, during the year in the report	0.2	0.1	0.3	0.2	0.4	0.3	0	0.3	0.2	0.4	0.3	0.2	0.1	0.3	0.2	0.3	0.2	0.1	0.3	0.2
	The procedure of share transfer system is explained comprehensively in the report	0.4	0.4	0.4	0.4	0.2	0.4	0.4	0.4	0.5	0.1	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4
	Disclosure on the information on the shareholding pattern of shares held by directors is made	0.8	1	0.8	0.8	0.9	0.8	0.5	0.7	0.8	1	0.7	0.8	1	0.8	0.8	0.7	0.8	1	0.8	0.8
	Information about the proportion of dematerialised shares held by bank given in its annual report	0.1	0	0	0.1	0.1	0	0.2	0.1	0	0	0.1	0	0	0	0	0.1	0	0	0	0
	Bank disclose the policy on dealing with Related Party Transactions	0.9	0.7	0.9	1	1	0.9	1	0.9	0.7	0.8	0.9	0.7	0.8	0.9	1	0.9	0.9	0.8	0.9	1

Source: Author's calculation

The normalization process followed the equal weighting methodology which suitably ensured that each dimension in the index to be constructed is given equal weight, regardless of the number of the sub-indicators reflected in each governance dimension (Javaid & Saboor (2015), Tarchouna et al. (2017), Arora & Bodhanwala (2018), Adinegara & Sukamulya (2021), Mohamad et al. (2010), Benton & You (2019), Achim et al. (2022), and Tahir et al. (2022). Such an approach promoted diversification as established that no single dimension outsized the overall impact on the holistic index performance (Hagerty & Land (2012), Greco et. al. (2019), and Chen (2021) This helped to reduce the index uncertainty and provided a more balanced exposure to different segments of the governance norms (Manoj et. al. (2013), Reckien (2018).

7.6. The aggregation process

The successive step is elaborated by constructing the aggregation of the normalized figures obtained beforehand. The complete progression of aggregation was engrossed by conjoining all the dimensions of corporate governance on an individual basis. When constructing an index, it is common to use normalized figures and aggregate them to create an overall index score. Normalization helps to ensure that each individual variable contributes equally to the final index score, regardless of its original scale or units of measurement. Aggregation then combines these normalized values to create a single, summary score that reflects the overall performance of the index (Tarchouna et al. (2017), Arora & Bodhanwala (2018), Adinegara & Sukamulya (2021), Mohamad et al. (2010), Greco et. al. (2019), Benton & You (2019), Achim et al. (2022), and Tahir et al. (2022). Accordingly, the proportional gauging procedure of dispensing equal weights was applied and an additive aggregated score was computed. Based on the additive score, ranks were assigned wherein the maximum additive score was given top ranks and the minimum additive score was apportioned to the lower rank. In index construction, the aggregation process involves combining or summarizing individual data points or components to create a composite measure or index. This typically includes selecting relevant variables, assigning suitable weights or scores to each variable, and aggregating them to obtain a single value that represents the overall measure of interest.

Table 148. Aggregation figures pertaining to Board procedures & Effectiveness

Dimension	Sub Indicators	Values obtained by Aggregation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Board Procedures and Effectiveness	Not more than 15 directors on the board	5.238	6.667	4.762	4.286	4.286	4.286	5.238	4.762	4.286	4.762	6.667	5.238	4.762	4.286	5.238	5.238	4.286	5.238	4.762	6.191
	At least 50% of the board comprise of non-executive directors	6.191	4.762	5.238	5.238	5.238	6.191	5.715	5.238	5.238	5.238	6.191	6.191	5.238	5.238	4.286	4.762	6.191	6.191	5.238	6.667
	Board appoint at least one woman director	5.715	6.191	6.667	4.762	5.715	6.667	6.191	5.715	4.762	5.715	4.286	5.715	5.715	4.762	5.715	5.715	5.238	5.715	5.715	4.762
	Executive director/Non-executive independent director holds directorship of not more than three /six companies	0.952	0.952	0.952	0.952	0.952	1.905	0.952	0.952	0.952	0.952	1.429	0.952	0.952	0.952	0.952	0.952	0.952	0.952	0.952	1.429
	Chairman of the board held the position for a minimum of five years	6.667	5.238	6.191	6.191	4.762	4.762	6.667	6.191	6.191	6.191	5.715	6.667	6.191	6.191	6.667	6.667	6.667	6.667	6.191	5.715
	Chairman of the board is non-executive director	4.286	4.286	5.715	6.667	6.667	5.238	4.762	4.286	6.667	4.286	4.762	4.286	4.286	6.667	4.762	4.286	4.762	4.286	4.286	4.286
	Chairman and CEO are two separate persons on the board	4.762	5.715	4.286	5.715	6.191	5.715	4.286	6.667	5.715	6.667	5.238	4.762	6.667	5.715	6.191	6.191	5.715	4.762	6.667	5.238
	Bank provide the details about committee's composition in the corporate governance report	1.429	1.905	1.905	1.429	2.857	1.429	1.429	1.429	1.905	1.429	1.905	1.429	1.429	1.905	3.334	3.810	2.857	1.429	1.429	2.857
	Board includes one-third of the independent directors for non-executive chairman and one-half for executive chairman	3.810	2.857	0.000	2.857	3.334	2.381	3.810	0.476	2.857	0.476	2.381	3.810	0.476	2.857	2.857	3.334	3.810	3.810	0.476	1.905
	Suitable training is imparted to independent directors and is disclosed by bank in the corporate governance report	3.334	3.810	2.857	3.810	3.810	2.857	3.334	2.857	3.810	2.857	2.857	3.334	2.857	3.810	3.810	2.857	3.334	3.334	2.857	2.381
	Separate meeting of independent directors is held in financial year and details are disclosed in the report	2.857	3.334	3.334	3.334	2.381	3.810	2.857	1.905	3.334	3.810	3.810	2.857	3.810	3.334	1.429	1.905	1.905	2.857	3.810	3.334
	Board constitute nomination committee for appointment of directors	2.381	2.381	1.429	2.381	1.429	3.334	1.905	2.381	2.381	1.905	3.334	1.905	1.905	2.381	2.381	2.381	2.381	1.905	1.905	3.810
	Bank board publishes its separate corporate governance report as a part of annual report	0.000	0.476	2.381	0.000	1.905	0.000	0.000	3.810	0.476	2.381	0.000	0.000	2.381	0.476	0.476	0.476	0.476	0.000	2.381	0.000
	Bank defines code of corporate governance	0.476	0.000	3.810	0.476	0.000	0.476	0.476	3.334	0.000	3.334	0.476	0.476	3.334	0.000	0.000	0.000	0.000	0.476	3.334	0.476
	Bank establishes a vigil mechanism for directors and employees through whistle blower policy	1.905	1.429	0.476	1.905	0.476	0.952	2.381	0.000	1.429	0.000	0.952	2.381	0.000	1.429	1.905	1.429	1.429	2.381	0.000	0.952

Source: Author's calculation

Table 149. Aggregation figures pertaining to audit function

Dimension	Sub Indicators	Values obtained by Aggregation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Audit Function	Board constitute audit committee	6.94	9.72	11.11	6.94	11.11	4.17	5.56	8.33	5.56	4.17	5.56	11.11	8.33	8.33	6.94	8.33	9.72	6.94	8.33	6.94
	Audit committee has minimum three members	4.17	0.00	5.56	4.17	5.56	5.56	2.78	6.94	8.33	6.94	6.94	0.00	4.17	9.72	5.56	2.78	8.33	0.00	4.17	0.00
	Two-third members of audit committee are independent directors	8.33	1.39	0.00	5.56	0.00	2.78	1.39	1.39	6.94	1.39	2.78	9.72	11.11	1.39	2.78	1.39	0.00	8.33	9.72	2.78
	Chairman is independent non-executive director	9.72	11.11	6.94	8.33	8.33	9.72	6.94	9.72	11.11	9.72	9.72	5.56	9.72	5.56	9.72	9.72	6.94	9.72	6.94	5.56
	Internal audit procedure is defined in the report	5.56	5.56	9.72	1.39	2.78	1.39	4.17	5.56	0.00	0.00	0.00	8.33	1.39	2.78	1.39	4.17	5.56	5.56	1.39	11.11
	Statutory auditor is appointed by board	11.11	6.94	8.33	11.11	9.72	11.11	8.33	11.11	9.72	11.11	11.11	6.94	5.56	11.11	11.11	11.11	11.11	11.11	11.11	9.72
	Committee has met at least four times a year	2.78	2.78	2.78	2.78	6.94	0.00	11.11	2.78	4.17	2.78	8.33	2.78	6.94	6.94	0.00	0.00	2.78	4.17	2.78	8.33
	Company secretary act as a secretory of audit committee	0.00	0.00	1.39	0.00	4.17	6.94	0.00	0.00	1.39	8.33	4.17	1.39	0.00	4.17	4.17	5.56	1.39	1.39	0.00	1.39
	Bank discloses a certificate from the auditor regarding corporate governance compliance in the annual report	1.39	8.33	4.17	9.72	1.39	8.33	9.72	4.17	2.78	5.56	1.39	4.17	2.78	0.00	8.33	6.94	4.17	2.78	5.56	4.17

Source: Author's calculation

Table 150. Aggregation figures to the remuneration committee

Dimension	Sub Indicators	Values obtained by Aggregation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Remuneration Committee	Board constitute a remuneration for overall oversight of management's implementation of remuneration system	20	15	10	15	10	15	20	10	5	10	20	10	15	20	10	20	15	20	10	15
	Independent director as a chairman of the committee	15	20	15	20	20	20	10	15	10	15	15	20	10	10	15	15	10	15	15	20
	At least three members, with majority as non-executive directors	10	5	20	10	5	10	5	20	15	20	10	15	20	15	20	5	5	0	20	10
	Information on payments of remuneration/sitting fees to directors, if any paid is disclosed in the report	0	10	0	0	15	0	0	0	20	0	5	5	0	0	0	10	20	5	0	0
	All directors are non-executive	5	0	5	5	0	5	15	5	0	5	0	0	5	5	5	0	0	10	5	5

Source: Author's calculation

Table 151. Aggregation figures to risk management committee

Dimension	Sub Indicators	Values obtained by Aggregation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Risk Management Committee	Presence of risk management committee	20	20	10	20	10	20	20	10	5	10	20	10	20	20	10	20	20	20	10	20
	Appointment of a chief risk officer	15	15	15	15	20	15	15	20	15	15	15	20	10	10	15	15	10	15	15	10
	Bank disclose the size of risk management committee	10	5	20	10	5	0	10	15	10	20	10	15	15	15	20	5	5	0	20	15
	Bank disclose the number of meetings held by RMC	0	10	0	0	15	10	0	0	20	0	5	5	0	5	0	10	15	5	0	5
	Bank have non- executive director as chairman of RMC	5	0	5	5	0	5	5	5	0	5	0	0	5	0	5	0	0	10	5	0

Source: Author's calculation

Table 152. Aggregation figures pertaining to disclosures and transparency

Dimension	Sub Indicators	Values obtained by Aggregation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Disclosure and Transparency	Bank disclose the significant accounting policies adopted in Schedule- 17 of the annual report	11.91	7.15	14.29	11.91	14.29	7.15	9.53	11.91	11.91	11.91	9.53	11.91	14.29	14.29	11.91	14.29	11.91	11.91	14.29	11.91
	Bank maintains a distinct section on 'Management Discussion and Analysis' in annual report	14.29	0.00	9.53	7.15	9.53	9.53	4.76	14.29	9.53	7.15	11.91	0.00	7.15	9.53	9.53	4.76	14.29	0.00	7.15	0.00
	CEO/CFO certification that accounting standards and code of conduct is duly complied with	2.38	2.38	0.00	9.53	0.00	4.76	2.38	2.38	14.29	2.38	4.76	9.53	9.53	2.38	4.76	2.38	0.00	14.29	11.91	4.76
	Details of non-compliance imposed on the bank by SEBI is disclosed in the annual report	0.00	4.76	2.38	0.00	7.15	11.91	0.00	0.00	2.38	14.29	7.15	2.38	0.00	7.15	7.15	9.53	2.38	2.38	0.00	7.15
	Bank disclose information regarding the ways and means by which shareholders are informed	9.53	9.53	11.91	2.38	4.76	2.38	7.15	9.53	0.00	0.00	0.00	14.29	2.38	4.76	2.38	7.15	9.53	9.53	2.38	9.53
	Bank disclose the details about resignation/cessation of directors with reasons of resignation in report	7.15	14.29	7.15	14.29	2.38	14.29	11.91	7.15	4.76	9.53	2.38	7.15	4.76	0.00	14.29	11.91	7.15	4.76	9.53	2.38
	A brief resume of new director or re-appointed director is included for the information to the shareholders	4.76	11.91	4.76	4.76	11.91	0.00	14.29	4.76	7.15	4.76	14.29	4.76	11.91	11.91	0.00	0.00	4.76	7.15	4.76	14.29

Source: Author's calculation

Table 153. Aggregation figures pertaining to shareholders' information and rights

Dimension	Sub Indicators	Values obtained by Aggregation process																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Shareholder Information and Rights	Board constitute stakeholder's grievance committee	9.090	8.181	9.090	8.181	7.272	6.363	8.181	7.272	8.181	6.363	9.090	9.090	8.181	9.090	8.181	9.090	9.090	8.181	9.090	8.181
	Non-executive director act as chairman of stakeholder grievance committee	6.363	7.272	4.545	6.363	6.363	4.545	5.454	9.090	9.090	8.181	7.272	8.181	6.363	4.545	5.454	7.272	6.363	6.363	6.363	5.454
	Compliance officer reporting to company secretary	0.000	1.818	0.909	0.000	0.000	0.909	2.727	0.000	0.909	4.545	0.000	0.909	1.818	0.909	0.909	0.000	0.909	1.818	0.909	0.909
	Committee discloses the number of complaints received and resolved in a financial year	5.454	4.545	6.363	4.545	5.454	9.090	7.272	1.818	2.727	2.727	1.818	2.727	4.545	6.363	4.545	5.454	5.454	5.454	5.454	6.363
	Board disclose the information on the last three annual general meeting held in the annual report	4.545	2.727	5.454	5.454	2.727	5.454	6.363	5.454	5.454	1.818	5.454	5.454	2.727	5.454	6.363	1.818	2.727	4.545	4.545	4.545
	Bank board disclose the information regarding its listing on various stock exchanges in the report	2.727	5.454	1.818	2.727	4.545	1.818	0.909	4.545	3.636	5.454	4.545	3.636	5.454	1.818	2.727	4.545	3.636	2.727	1.818	2.727
	Disclose its dividend policy and dividend paid, if any, during the year in the report	1.818	0.909	2.727	1.818	3.636	2.727	0.000	2.727	1.818	3.636	2.727	1.818	0.909	2.727	1.818	2.727	1.818	0.909	2.727	1.818
	The procedure of share transfer system is explained comprehensively in the report	3.636	3.636	3.636	3.636	1.818	3.636	3.636	3.636	4.545	0.909	3.636	4.545	3.636	3.636	3.636	3.636	4.545	3.636	3.636	3.636
	Disclosure on the information on the shareholding pattern of shares held by directors is made	7.272	9.090	7.272	7.272	8.181	7.272	4.545	6.363	7.272	9.090	6.363	7.272	9.090	7.272	7.272	6.363	7.272	9.090	7.272	7.272
	Information about the proportion of dematerialised shares held by bank given in its annual report	0.909	0.000	0.000	0.909	0.909	0.000	1.818	0.909	0.000	0.000	0.909	0.000	0.000	0.000	0.000	0.909	0.000	0.000	0.000	0.000
	Bank disclose the policy on dealing with Related Party Transactions	8.181	6.363	8.181	9.090	9.090	8.181	9.090	8.181	6.363	7.272	8.181	6.363	7.272	8.181	9.090	8.181	8.181	7.272	8.181	9.090

Source: Author's calculation

The process of aggregation highlighted in Tables 148, 149, 150, 151, 152 and 153 considered acknowledging the equal weighting methodology. Such a procedure is considered to allow equal prominence to each of the sub-indicators mentioned in each of the six dimensions of corporate governance. Such a technique ensures the complete legitimacy and sheerness of the composite index construction (Stefana et al., 2021; Libório et al., 2022). Several indices such as the environmental management index, human development index, quality of life index and gender empowerment index used the approach of equal weighting methodology and emphasized that such a methodology validates the entire process of index construction and ensures transparency in sub-indicator selection (El Gibari et al., 2019; Oliveira et al., 2022).

7.7. The construction of composite index

A composite index construction facilitated the origination of sufficient results which suitably summarizes the multi-dimensional intricacies concerning the governance implications of commercial banks in India. It outlines the conspicuous areas of governance wherein the improvement is required and defines the prominent zones which are substantial for the enhancement of governance norms in this sector. The preferences indicated by the higher-level banking officials facilitated spawning the institution of the

benchmark dimensions of corporate governance which shall be appositely adapted in the Indian banking industry in a seemly manner. Figure 28 outlines the dimension-wise emplacement of the sub-indicators of corporate governance in the overall composite index. The figure showcases the aggregate additive values of each of the sub-indicator from high to low values. In the case of the dimension of disclosure and transparency, it is deduced that disclosures pertaining to accounting policies in the annually published report has shown prominence compared to other sub-parameters. The indicators such as disclosures associated with the forbearance of directors, maintenance of the management discussion and analysis report, engagement of new directors, means of providing the information to the stakeholders, endorsements related to the code of conduct, standards of accounting and details of non-adherence including penalties imposed are positioned below the conspicuous sub-indicator of accounting policies disclosures. Additionally, this figure outlines the dimension-wise positioning of the sub-indicators of corporate governance in the overall composite index for the audit function. The figure showcases the aggregate additive values of each of the sub-indicator from high to low values. In the case of the dimension of the audit function, it is reasoned that appointment related to statutory auditor has shown eminence compared to other sub- parameters. The indicators such as the chairman being a non-executive director, the composition of the appropriate audit committee , having the defined internal audit practices, production of a due certificate of auditor in the corporate governance description and holding of the minimum number of meetings for the audit committee are arranged beneath the prominent sub-indicator of the nomination of the statutory auditor by the board members.

Consequently, Figure 28 also summarizes the dimension-wise emplacement of the sub-indicators of corporate governance in the overall composite index for the board procedures and effectiveness. The figure highlights the aggregate additive values of each of the sub-indicator from high to low values. In the case of this particular dimension, it is articulated that nominations related to the chairman, woman director, holding of the office of the requisite number of directors and non-executive directors have been appropriately emphasized in the overall building of the composite index. The other indicators such as the establishment of the mechanism of the whistleblower rules, annual training imparted to the directors of the banks, instituting the appropriate enigma of corporate governance and publication of the corporate governance statement are placed underneath the sub-indicators of the apposite constitution of the directors, non-executive directors, chairman and woman directors.

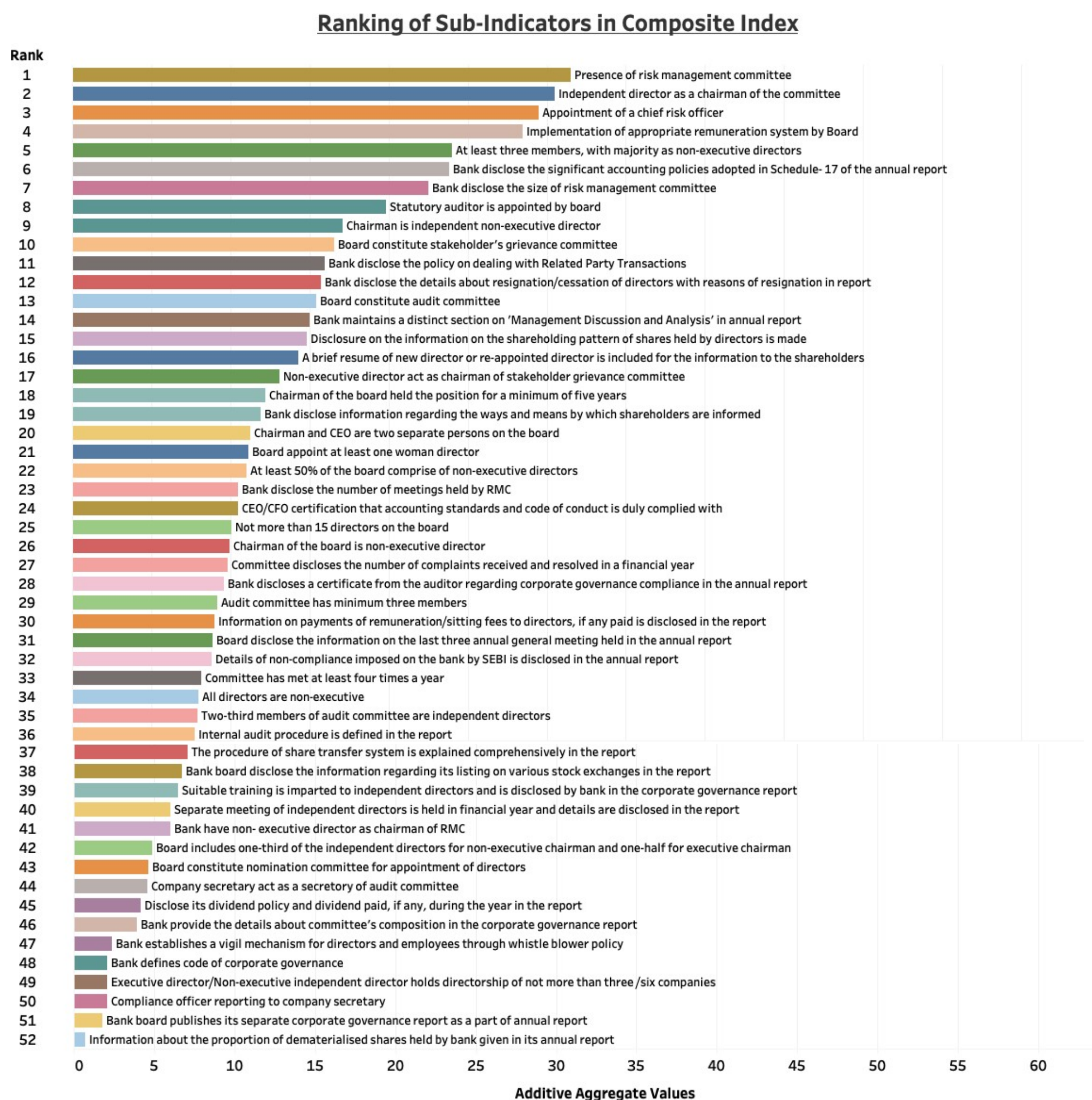
Figure 29. Showing the dimension-wise additive aggregated value

Source: Author's calculation

Figure 28 accords prime significance to the dimensions of the remuneration committee as well as the risk management committee. The highest values highlighted in the current composite index of corporate governance are mainly concentrated around these two dimensions. The suitable composition of both the risk and remuneration committees is prominent for bringing substantial signs of progress in the corporate governance organism of the Indian banking system. Both of these dimensions stressed the need for constituting the required number of members and holding requisite meetings as the primary sub-indicators which shall form the top shelve in the governance structure of the banks. Moreover, a similar figure features the position of various sub-indicators related to the shareholder rights and information. A suitable constitution of the grievance committee for the stakeholders, and appropriate disclosures concerning the related party

dealings are holding a conspicuous place in the composite index. The other sub-indicators such as the system of share transfers, dividend disclosures and their payments, the appointment of compliance officers with respect to shareholder rights and information pertaining to the dematerialised shares are employed at the subordinate locale in the inclusive composite indicant constructed in the current study.

Figure 30. Showing the ranking of sub-indicators in the composite index



Source: Author's calculation

The ideal emplacement of each sub-indicator for every dimension is highlighted as per the information provided in Figure 29. This figure outlines the ranking of each sub-indicator as exhibited by the governance index constructed in the current thesis. The

index has given due accord to the appropriate establishment of the risk management and remuneration committee, implementation of a suitable remuneration system, disclosures pertaining to the annual reports, and resolving the stakeholder grievances as the crucial sub-indicators with maximum additive aggregate values.

The said sub-indicators, forming the pinnacle of the composite index suggest that these constituents are decisive, critical and influential for exercising good governance norms in the Indian banking system . The initial ten ranks of the composite index outline that board structures shall give due concurrence to the assessment and mitigation of risks, establishment of the apposite remuneration system, composition of the non-executive directors, right appointment and working of the statutory auditor for facilitating paramount and grander governance activities in the Indian banking system.

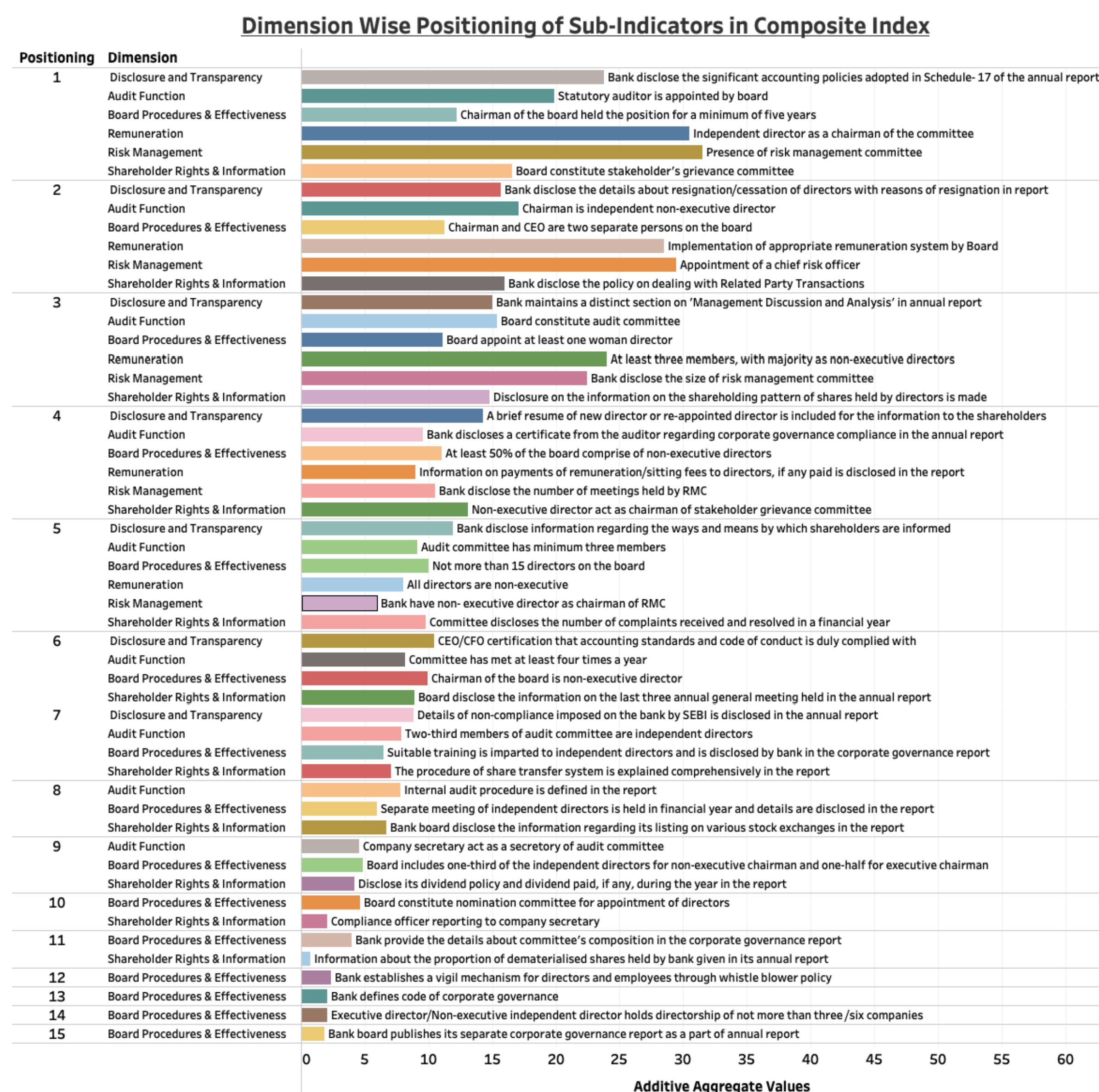
Additionally, this composite index emphasizes the prominence related to disclosures of management discussion reports, shareholding patterns of directors, the establishment of stakeholder grievance committees, transactions regarding the related parties, means of shareholder intimation and proper constitution of board management related to chairman and chief executive officer as another set of governance parameters which are significant for implementing the upright governance in the banking structures. The next set of sub-indicators in the composite index embraces constitutions pertaining to woman directors, non-executive directors, resolutions of the complaints received by the board management, audit committee and their suitable constitution.

It can be conjectured that the precise constitution of the board management and audit committees are positioned at the mid in the comprehensive index constructed in the current thesis. Consequently, the sub-indicators placed at the low level of the comprehensive index mainly comprised of training divulged to the directors, the accountability of the compliance officer, policies related to the whistle-blower procedures, evidence related to the dematerialised shares, nomination committee and their eminence in the board management activities. The composite index constructed in the present study presents the ordering and ranking of the sub-indicators of corporate governance and does not institute by any means the definite properties of the interval among each of the sub-indicators. The current composite index bestows the degree of agreement among the higher-level bank officials with respect to the recognized order of the sub-indicators.

Figure 30 outlines the dimension-wise positioning of the sub-indicators in the composite index for corporate governance. This figure focuses on the emplacement of each of the

sub-indicators specifically with regard to each of the dimensions. It can be inferred that disclosures pertaining to the adoption of accounting rules, constitution and presence of the statutory auditor, risk management committee, and stakeholder grievance committee are prominent in exercising the mechanism of virtuous governance norms in the banking system.

Figure 31. Showing the dimension-wise positioning of sub-indicators in the index



Source: Author's calculation

The mid-section of the index acmes the significant components of the means of stakeholder intimations, the constitution of the essential board members, non-executive directors and audit adherents in the nominated committees of the banks and due accordance with the resolution of the complaints received in timely manner as the conspicuous sub- indicators in employing of the upright governance practices in the

banking arrangement with respect to Indian scenario. Elsewhere, it can be witnessed that there does not exist any sub-indicator belonging to the dimension of the remuneration and risk management committee in the subordinate locus of the composite index. This fragment of the index mainly delineated the connotation of disclosure concerning the non-compliance and penalties imposed by the regulatory authorities, a system of share transfers, training divulged to the independent directors, dividend payments and their disclosures, appointments and nominations of the company governor and listing details of the bank with respect to the stock exchange. All of these sub-indicators have not gained a higher ranking in the index built for corporate governance. The lower fragment of the constructed index is essentially related to the sole dimensions concerning the board activities, their effectiveness and procedures. No other dimension is placed at the subdued position of the index obtainable in the current thesis. The final fragment outlines the establishment of the governance code and its publication, the formation of the vigil mechanism by giving due concurrence to the whistle-blower policy, holding the required number of directorships by the independent directors and the organization of the dematerialized shares including its disclosure in the annual report as impertinent factors in ensuring the longevity of the business in today's dynamic and competitive landscape. It can be outlined that the current composite index is able to familiarize the multiple, complex and intricate issues of corporate governance in the most suitable manner.

7.8. Chapter Summary

The current objective represented a pragmatic approach to the construction of a corporate governance index for the Indian banking sector. Such an index incorporated the expert's opinion by keeping the base of the governance norms listed by the Companies Act, 2013. A modern-looking mechanism was employed that comprehended the actual intricacies of corporate governance compliance at the core level. It presented an independent and unconstrained view of the governance issues from the governance compliance officials, currently positioned at higher-level offices of different commercial banks in India. It catered for the relevant answers for the actual and contemporary problems of governance in the Indian banking system by taking the rating from the banking officials/directors. It holistically comprehended the perspectives, issues, and concerns of all internal and external stockholders of the banking system concerning not only the board of directors, audit function, remuneration and risk management teams, but also includes the

intricacies of the disclosure and transparency matters and stakeholders rights having regular interactions in the banking ecosystem. It purported to assimilate the relevant governance factors by assimilating the benchmark for governance intricacies in the form of ranking based on relevant criteria provided by the banking officials/directors heading different committees in this sector. The outcomes of this objective revealed that adequate disclosures, the presence of a statutory auditor, the robust foundation of a risk management committee, the presence of a stakeholder grievance committee, suitable remuneration structures and the presence of a risk management officer are impertinent for ensuring good governance in the banking sector of India. Such practices must be followed in true letter and spirit for safeguarding the interests of stakeholders, fostering transparency and accountability, minimizing risks, improving the bank's reputation, and upholding the overall stability and sustainability of the business.

CHAPTER – 8

FINDINGS, CONCLUSION AND RECOMMENDATIONS

The current chapter deals with chartering and outlining the objective wise results of the thesis. It deals with addressing the research explorations and the hypothesis that was tested in the present study. It stipulates and embraces additional insights as well as the observations that were made during the course of the study. The succeeding part of this chapter shall recapitulate the concise summary of the key points made in the study, insinuate directions for imminent research, and indicate the inadequacies of the present inquiry and how they may have impacted the results. Additionally, this chapter postulates various managerial connotations as well as propositions for impending action or further research grounded on the outcomes of the thesis. The proposals highlighted in this division are based upon the shreds of evidence presented through the findings of the study and are directed towards legislative authorities, banking executives, policymakers, and practitioners. Such implications shall appositely facilitate them to upgrade or revise the existing governance structures, earmark resources to support the implementations of new governance policies and allow them toeffectively coordinate with each other to improve the compliance level with governanceprocedures.

8.1. Findings of the study

- **Objective 1: To evaluate the compliance level of corporate governance practices in the Indian banking sector**

  The compliance level of corporate governance in the Indian commercialbanking sector was dissected using the six major corporate governance measures outlined by the Companies Act, of 2013 namely, board procedures and effectiveness, audit function, risk management, remuneration, shareholder rights & information and disclosure and transparency. It was established that the maximum compliance was corroborated in the dimension of remuneration with a compliance percentage of 78.81% in public sector banks and 76.14% in private sector banks. The adherence to governance mechanisms in other dimensions ranged from 63%-70%. In the dimension of disclosures and transparency, the compliance percentage was found to be 63.9% in the case of the private sector banks whereas it was 65% in the case of the public commercial sector banks.

In the dimension of the board procedures and effectiveness, the compliance percentage was found to be 68% in the case of the public sector banks whereas it was 72% in the case of the private sector banks. In the dimension of risk management dimension, the compliance percentage was found to be 66% in the case of the private sector banks whereas it was 63% in the case of the public sector banks. In the dimension of the audit function, the compliance percentage was found to be 63% in the case of the private sector banks whereas it was 67% comparably for the public sector banks. In the dimension of the shareholder information and rights, the compliance percentage was found to be 67% in the case of the private sector banks whereas it was 70% in the case of the public sector banks.

The outcomes of this aspect delineated that percentage compliance with governance practices was found to be more predominant in private commercial sector banks compared to public commercial sector banks for the dimensions related to disclosures and transparency and risk management. Consonantly, it was emphasized that governance practices were found to be more rampant in public sector banks compared to the private sector banks in the case of the dimensions related to audit function, board procedures, remuneration committee and shareholder information and rights.

The year-wise and dimension-wise measurement and assessment of the compliance level of corporate Governance practices are summarised collectively in Table 155. The details outlined in this particular table revealed that in the matter of the dimension of disclosure and transparency, the percentage of compliance was 21.4% for the private sector banks in the financial year 2014-15 whereas it had shown a significant improvement inoverall compliance to 95% in the financial year 2020-21. Likewise, the percentage of compliance was 23% in the matter of public sector banks in the financial year 2014-15 whereas it had shown a noteworthy upsurge in overall compliance to 88% in the financial year 2020-21. In the case of the dimension of the audit function, the percentage of compliance was 24% for the private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 83% in the financial year 2020-21. The percentage of compliance was 35% in the case of public sector banks in the financial year 2014-15 whereas it had shown a notable advancement in overall compliance to 82% in the financial year 2020-21. In the

dimension of the board procedures and effectiveness, the percentage of compliance was 18% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 96% in the financial year 2020-21. Correspondingly, the percentage of compliance was 28% for the public sector banks in the financial year 2014-15 whereas it had shown aremarkable advancement in overall compliance to 92% in the financial year 2020-21. In the dimension of the remuneration, the percentage of compliance was 39% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 95% in the financial year 2020-21. The percentage of compliance was 45% in the case of public sector commercial banks in the financial year 2014-15 whereas it had shown a remarkable advancement in overall compliance to 98% in the financial year 2020-21. The percentage of compliance was 35% in the case of public sector banks in the financial year 2014-15 whereas it had shown a remarkable advancement in overall compliance to 82% in the financial year 2020-21. In the dimension of the board procedures and effectiveness, the percentage of compliance was 18% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 96% in the financial year 2020-21. Consonantly, the percentage of compliance was 28% in the case of public sector banks in the financial year 2014-15 whereas it had shown a remarkable advancement in overall compliance to 92% in the financial year 2020-21. In the case of the dimension of the remuneration, the percentage of compliance was 39% in the case of private sector banks in the financial year 2014-15 whereas it had shown a significant improvement in overall compliance to 95% in the financial year 2020-21. The percentage of compliance was 45% in the case of public sector banks in the financial year 2014-15 whereas it had shown noteworthy progress in overall compliance to 98% in the financial year 2020-21.

The overall ranking of the public sector banks in terms of their compliance with the corporate governance practices as enlisted by the Companies Act of, 2013 entailed that Canara Bank stands at the highest position by showing the highest compliance with the governance mechanism of the Act. Similarly, the public sectors banks such as UCO bank, Bank of India, Union Bank of India and Punjab National Bank have exhibited the highest compliance with provisions of the governance structures. On the other hand, it is observed that the Bank of

Maharashtra has scored the lowest ranking concerning compliance with governance mechanisms. The other banks such as Indian bank, Indian Overseas Bank, Punjab and Sind Bank and Bank of Baroda have exhibited the lowest compliance with provisions of the governance structures. The overall ranking of the private sector banks in terms of their compliance with the corporate governance practices as solicited by the Companies Act of, 2013 implicated that HDFC Bank scored the top position by showing the highest compliance with the governance mechanism of the Act. Similarly, the private sector banks such as ICICI bank, Axis Bank, Nainital Bank, Federal Bank and Laxmi Vilas Bank have exhibited maximum compliance with provisions of the governance structures. On the other hand, it is observed that Yes Bank has scored the lowest ranking concerning compliance with governance mechanisms. The other banks such as Tamilnad Mercantile Bank, IDBI bank, Karur Vysya bank, DCB bank and City Union Bank have exhibited the lowest compliance with provisions of the governance structures.

- **Objective 2: To study the impact of corporate governance practices on the financial performance of Indian banks.**

  The subsequent objective endeavored to evaluate the impact of the corporate governance norms prevailing in the Indian banking sector on their operating performance. In this regard, such an impact is analysed by making use of the panel data framework of the econometrics conservatory. The application of such models allowed measurement of the individual behaviour of the sample banks both across periods as well as the different banking units. This framework accentuated the use of the fixed, pooled effects and random effects exemplary of the panel data methodology for appraising the impact of corporate governance procedures namely, board procedures and effectiveness, audit function, risk management, remuneration, shareholder rights & information and disclosure and transparency on the financial performance of the Indian banking sector. The performance was measured using the dependent variables such as return on assets (ROA), return on equity (ROE), net interest margin (NIM), net profit margin (NPM), Tobin Q (TQR), net non-performing assets(NNPA), capital adequacy ratio (CAR) and cost to income ratio (CI).

The findings about analysing the relationship between return on assets and the corporate governance practices in the Indian banking sector underlined that the appropriate composition of board members, their qualifications, the presence of independent directors, and their diversity have a positive impact on the return on assets of the banking sector. Likewise, it was determined that the appropriate composition of the audit commission, proper implementation of internal audit procedures, and the presence of non-executive directors/company secretaries in the auditing process ensure accurate documentation of business transactions and prevents misreporting, which positively impacts the return on assets of the banking sector. Furthermore, it was estimated that the formation of a suitable compensation committee attracts and retains high-quality executives, which indirectly improves the return on assets of the banks. Banks that invest in appropriate risk management procedures effectively monitor and measure risk, which positively impacts the return on assets. Suitable shareholder committees in the bank improve oversight and hegemony of the board of directors and meet shareholders' expectations and interests, leading to improved returns on assets of the banking sector. Additionally, appropriate disclosures that demonstrate adherence to significant accounting policies reports on management discussions, and the code of conduct indirectly influence the return on assets of the Indian banking sector.

The findings about analysing the link between return on equity and the corporate governance practices in the Indian banking sector highlighted that strategic decision-making by the board of directors in the interest of shareholders can lead to high returns on equity for the Indian banking sector. The composition of audit committees can be adjusted in situations where agency costs are high, and the formation of suitable audit committees can act as proxies to generate sufficient returns for shareholders, improving return on equity for the Indian banking sector. Likewise, it was established that proper management and distribution of incentives to directors associate the interests of managers and shareholders and improve return on equity. Moreover, it was determined that adequate risk management procedures adopted by the bank impact return on equity as risky banks attract risk-taking investors. The risk management committee effectively manages the affiliation between risk and return, ensuring investors receive positive returns. Additionally, it wasconcluded that the establishment of suitable shareholder committees and exercising of appropriate shareholder rights directly

influence return on equity, ensuring shareholders receive required returns on their investments and that their funds are not misused. The findings about analysing the relationship between net interest margin and the corporate governance practices in the Indian banking sphere underscored that effective decision-making by the board of directors allows for proper hegemony over lending and borrowing decisions, which can improve the bank's net interest margin. A strong audit committee can lead to a well-functioning business model and maintain public trust, resulting in lower capital costs and higher interest margins.

The formation of a suitable compensation committee and providing competitive compensation can attract and retain high-qualityexecutives, indirectly affecting the bank's net interest margin. A risk management team ensures that loans are properly authorized and within the bank's policies, protecting the bank's interest-earning assets and net interest margin. A shareholder protection committee ensures that the bank's risk doesnot exceed acceptable levels and that the bank can secure depositors or lenders who will accept lower rates and borrowers who will pay more interest, improving the bank's net interest margin. Additionally, it was determined that the bank's required disclosures provide details of its borrowers and lenders, helping to keep the bank's risk at acceptable levels.

The findings about analysing the relationship between net profit margin and the corporate governance practices in the Indian commercial banking sphere specified that having a well-composed board, diversity among board members, and independent directors in place, ensures that decisions made by the board are in the concern of the bank. The board will all necessary measures to improve the bank's profitability, which can be seen in the bank's high net profit margin. An effectual audit commission within the bank leads to the formation of astrong business model where all resources are used efficiently to generate high profits. A robust audit committee helps to enhance the reviewing process and regain the public's trust, which ultimately reduces capital costs and increases thebank's profits. Similarly, providing appropriate compensation packages and creating remuneration committees can enhance the net profit margin of the banks. Moreover, having a robust risk management team with a strategic understanding of the various risks faced by the bank ensures that returns are not affected by the

bank's operations. The net profit margin reflects the overall success of the bank and the board management makes efforts to earn sufficient profits for shareholders. Shareholder committees ensure that the bank's efforts align intending to maximize wealth. Adequate disclosures in the annual report and compliance with accounting standards demonstrate the bank's efficiency and positively impact the net profit margin of the Indian banking sector.

The findings about analysing the association between the Tobin's Q ratio and the corporate governance practices in the Indian banking sector indicated that high operating performance and the institution of the apposite audit committee establish to create a positive signal in the market which eventually impacted the bank's overall value and Tobin's Q of the banking sector. Additionally, it was confirmed that corroboration of the remuneration committee and risk management committee entails that bank and its investments endure attractiveness to its investors at all times. The outcomes of the study established that such a scenario implicates correct valuations of the assets of the bank and its replacement costs. Likewise, it was determined that adequate disclosures and the shareholder's rights committee increased Tobin's Q of the Indian banking sector.

The findings about analysing the relationship concerning the net non-performing assets ratio and the corporate governance practices in the Indian commercial banking sphere indicated that a board that operates efficiently, its appropriate structures and a diverse composition of members, including non-executive directors, created a positive impact on reducing non - performing assets (NPA) in banks. Additionally, it was established that employing effective internal auditing practices along with credit management audit information systems and application of the credit modelling promptly can entail lowering the non-performing assets of the Indian commercial banking sphere. Furthermore, determining adequate director's compensation entails improving their performance and they suitably operate in reducing the bank's non-performing assets. Additionally, the outcomes of the study authenticated that an effective risk management committee in place and ensuring fulfilment of their responsibilities is crucial for effective NPA risk management and conserving the financial stability of the banking system.

The findings about analysing the affiliation between the cost-to-income ratio and the corporate governance practices in the Indian banking sector signified that the appropriate composition, qualifications, and diversity of the board members , as well as the presence of independent directors, suitably ensured all the times that the banking sector makes all efforts to recover its Tier 1 and Tier 2 capital.

Moreover, the outcomes of the study established that regular internal audit processes can enable accurate assessment of the risky transactions and exposures made by the bank, which in turn supported an accurate assessment of total risk-weighted assets. Additionally, improvement in the pay structures of the directors can reduce the bank's risk-weighted credit exposures. Likewise, it was determined that suitable risk management procedures can help assess the capital-to-risk-weighted assets ratio, which helps identify properly if the bank has enough capital to handle losses before becoming insolvent. Furthermore, it was corroborated that the formation of shareholder committees helps ensure thatbanks follow the required standards to pay their liabilities and respond to credit and operational risks. Adequate disclosures related to Tier 1 plus Tier 2 capital shall appositely indicate the bank's overall health and ability to withstand adverse economic conditions. It was, therefore, verified that these dimensions have an indirect impact on reducing the cost-to-income ratio of the Indianbanking sector.

- **Objective 3: To make a comparative analysis of the Indian banking sector performance pre- and post-Companies Act, of 2013**

This subsequent objective intended to liken the corporate governance compliance practices of the Indian commercial banking sphere in the ‘two-time proportion’. The time frames were established as an initial period of 8 years before the enactment of the Companies Act, of 2013 and a subsequent period of 8 years after the enactment of the Companies Act, of 2013. The paired t-test was marked to establish whether there is a significant difference between the means of the governance practices in two different time frames and to gauge whether the Companies Act of 2013 provisions effectively alleviates the compliance level of comprehensive governance mechanisms in the Indian banking sphere.

A suitable hypothesis was developed and the outcomes of paired t-test outlined that in the case of all the six dimensions of the Companies Act, of 2013significant differences were observed in pre and post-compliance norms of corporate governance. It signified that the statute of the Companies Act, of 2013 has emerged triumphant in bringing substantial improvement in the compliance level with governance mechanisms about board procedures and effectiveness, audit function, risk management, remuneration, shareholder rights & information and disclosure and transparency in the banking system.

It was further established that Canara bank in the public sector bank category and HDFC bank in the private sector bank category have taken noteworthy steps to improve compliance norms to a great extent. The highest compliance in governance mechanisms in comparison to the pre-enactment period was witnessed for these banks. On the contrary, Bank of Maharashtra in the public sector bank category and Yes bank in the private sector bank category have lagged in most of the governance contrivances recognized by the Act. The mean compliance remained low both in pre and post-enactment time frames.

The outcomes of public sector banks emphasized that Canara bank has shown a noteworthy augmentation in compliance level with corporate governance standards. The comparison of pre- and post-mean scores of this bank revealed a change of 53.6, 57.7 and 59.6 mean scores individually, indicating that the said bank has been consequential and momentous in its approach to assure compliance with board procedures, remuneration and risk management norms. Additionally, it is pointed out that Punjab and Sind Bank have shown remarkable reinforcement in compliance with corporate governance norms. The comparison of pre and post-mean scores of this bank revealed a change of 53 mean scores, indicating that the said bank has been far-reaching in its attempt to substantiate compliance with audit norms as outlined by the governance provisions of the Companies Act of, 2013.

Moreover, it is indicated that the State Bank of India has shown a prominent affirmation to assuring compliance level with corporate governance norms concerning this dimension. The comparison of pre and post-mean scores of this bank showed a change of 48.1 mean scores, indicating that the said bank has been persuasive in its approach to endorse compliance to disclosures and transparency standards as sketched out by the governance provisions of the Companies Act of,

2013. Besides, it is indicated that the State Bank of India has demonstrated a noteworthy compliance level with corporate governance norms. The comparison of pre and post-mean scores of this bank showed a change of 56.1 mean scores, representing that the said bank has been instrumental in its approach to endorse due compliance to stakeholder governance standards of the Act. The outcomes of private sector commercial banks emphasized that HDFC bank has shown a noteworthy augmentation in compliance level with corporate governance standards. The comparison of pre and post-mean scores of this bank revealed a change of 52 and 53 mean scores individually, indicating that the said bank has been consequential and momentous in its approach to assure compliance to board procedures and audit function dimension norms respectively as outlined by governance requirements of the Act. Furthermore, it is indicated that RBL Bank has shown a notable corroboration in compliance level with corporate governance configurations. The comparisonof pre and post-mean scores of this bank showed a change of 63 mean scores, indicating that the said bank has been influential in its approach to authenticate compliance to remuneration norms as outlined by governance requirements of the Act. Likewise, it is indicated that ICICI Bank has shown a notable corroboration in compliance level with corporate standards. The comparison of pre and post-mean scores of this bank showed a change of 57.3 and 55.7 mean scores separately, indicating that the said bank was influential in its approach to substantiate compliance to risk norms and disclosures and transparency standards respectively, as charted by the requirements of the Act. Besides, it is indicated that Axis Bank has demonstrated a noteworthy compliance level with corporate governance norms. The comparison of pre andpost-mean scores of this bank showed a change of 56.7 mean scores, representing that the said bank has been instrumental in its approach to endorse due compliance to stakeholder rights and information norms as drawn by the governance requirements of the Act.

- **Objective 4: To construct the corporate governance index for the Indian banking sector.**

The final objective of the thesis entailed developing a comprehensive governance index for the Indian commercial banking sphere. To create such an index, the multiple immensities of corporate governance outlined in the

Companies Act of, 2013 were taken into account. This included focusing on the six key stalwarts that make up a strong corporate governance system as outlined by the Act. These expansive dimensions were then further broken down into 52 sub-indicators, which formed the foundation for the governance standards of the Act. The outcomes of this objective highlighted that the dimension of board procedures and effectiveness in the composite index for the Indian banking sector placed a strong emphasis on nominations for the chairman, woman director, and the correct quantity of directors and non- executive directors. Other indicators for board procedures and effectiveness, such as the establishment of whistleblower rules, annual training for bank directors the publication of corporate governance statements in the banks' yearly reports, appropriate composition of directors, non-executive directors, chairman, and woman directors in the banking system are also given due accord.

The concerto of both the risk and remuneration committees is crucial for improving the corporate governance system of the Indian banking system. Both of these dimensions stressed the importance of having the correct number of members and holding the necessary meetings as the primary sub-indicators, which are considered the top priority in the governance structure of the banks. In addition, similar emphasis was placed on the position of various sub- indicators related to shareholder rights and information, such as the formationof a grievance committee for stakeholders, and appropriate disclosuresregarding related party dealings. Other sub-indicators, such as the system of share transfers, dividend disclosures and payments, the appointment of compliance officers concerning shareholder rights and information about dematerialized shares, are also considered important, but at a subordinate level in the composite index.

The index also highlighted the ranking of each sub-indicator as determined by the composite corporate governance indicator constructed in the current study. The top ten ranks of the composite index for the Indian banking sector indicatedthat board structures should give due consideration to assessing and managing risks, establishing an appropriate remuneration system, appointing non- executive directors, selecting and working with statutory auditors, and facilitating superior governance activities in the banking system. Additionally, the composite index placed a strong emphasis on the importance of disclosures of management discussion reports, the shareholding patterns of directors, the formation of

stakeholder grievance committees, transactions with related parties, communication with shareholders, and proper management of the board, including the chairman and CEO, as key governance parameters for implementing proper governance in the banking system.

The next set of sub-indicators in the composite index includes the composition of women directors, non-executive directors, and the resolution of complaints received by the board management, audit committee, and their suitable composition. It can be deduced that the precise composition of the board management and audit commissions was positioned in the middle of the comprehensive index constructed in this study. Subsequently, the sub-indicators placed at the low level of the comprehensive index mainly comprised of training provided to the directors, the accountability of the compliance officer, policies related to whistle-blower procedures, evidence related to dematerializedshares, nomination committee, and their importance in the board management activities. The composite index constructed in the present study presents the ordering and ranking of the sub-indicators of corporate governance and does not establish the definite properties of the interval among each of the sub-indicators. The current composite index provided the degree of agreement among the higher-level bank officials concerning the recognized order of the sub-indicators of the corporate governance dimensions.

The final objective provided an independent and unbiased view of governance issues from higher-level officials of commercial sector banks in India. It aimed to address current and relevant governance problems in the Indian banking sphere by gathering ratings from these banking compliance officials/directors. It comprehensively understood the perspectives, issues, and concerns of all stakeholders of the banking system, and notjust the board of directors, audit function, remuneration and risk management teams, but also the intricacies of disclosure and transparency matters and stakeholders' rights that regularly interact within the banking ecosystem. The study sought to balance both quantitative and qualitative factors in the governance of the banking sphere. It provides a yardstick for governance standards in the form of a ranking based on relevant criteria provided by the banking officials/directors heading different committees in the Indian banking sphere.

8.2. Conclusion

The governance mechanism in the Indian banking sector entails adopting reliable procedures and policies that necessitate itself to operate ethically, openly, and with accountability at all times. The thesis outlined the significanceof developing the accurate composition and operation of the board of directorsand implicated their role on the behalf of the bank's shareholders as they assumeindictment of superintending the presidency of the foundation and making strategic choices. It necessitated the establishment of identifying potential areasof risk within a bank's internal controls and financial reporting processes toconvalesce the overall effectiveness of its governance. The thesis emphasizedcorroborating suitable audit functions in the overall corporate governance set-up by underlining assurance of the integrity and accuracy of financial recordsand promoting transparency, accountability, and improvement within the bank. Additionally, it accentuated the establishment of a systematic and ongoingprocess of identifying, analysing, and evaluating potential risks arising in thebanking structure. It recognized the due importance of the development of a robust internal control system, which shall effectively identify and manage therisks in the bank. It was pinpointed that the overall governance structure shall adopt measures to prevent, detect, and correct errors or fraud, as well as towarrant compliance with legitimate and regulatory prerequisites. Likewise, the thesis outlined the significance of adapting effective remuneration managementas a crucial part of corporate governance. It was ascertained that allying the interests of executives with stakeholers is an essential way to reward them to create value for the bank as well as its stakeholders. It was that effective remuneration management requires the use of performance-based incentives, transparency and disclosure, and oversight bythe board of directors as critical factors to affiliate the interests of the executives with those of the investors.

Furthermore, it charted out the need for accentuating shareholder information and rights as an fundamental part of corporate governance, to ensure that shareholders have the information they need to make informed decisions, and can exercise their rights to influence the bank's management and direction. It necessitated the need for corroborating suitable corporate governance practices that shall provide stakeholders with accurate and timely information, protect their rights and ensure that management and the board of directors are accountable to them and that they act in their best interests. Moreover, the thesis delineated the necessity of adequate disclosures and transparency as essential

elements of corporate governance mechanisms. This shall suitably ensure that stakeholders have access to accurate and timely information about the bank’s financial performance, governance practices, and strategic plans. Additionally, it shall promote accountability and integrity on the part of the banks and shall build trust and credibility with stakeholders. It was outlined that effective corporate governance shall highlight the need for disclosing accurate and complete information, promptly, have in place a robust system of internal controls and procedures to ensure that the information entailed is accurate and reliable, and establish applicable channels for communique with stakeholders.

The present study contributed practical solutions to the current issues of governance in the Indian banking system by collecting feedback from banking officials and directors who have experience in addressing and resolving the complex governance problems present in the modern banking system. It took into account the views, challenges, and concerns of all internal and external stakeholders of the banking system, including not only the board administrators, audit function, remuneration and risk management teams, but also the nuances of disclosure and transparency issues and the rights of stakeholders who are actively involved in the banking industry. The study embraced the holistic governance mechanism sanctioned by the Companies Act of 2013 and used it as the foundation of the investigation. It examined the corporate governance practices of the sample units about the governance mechanisms outlined in the Companies Act of 2013 comprehensively. The actual corporate governance practices of the sample units were investigated by using a "two-time proportion" approach. The inclusion of two-time proportion for the corporate governance provisions of the Companies Act of 2013 helped to analyze and determine the significant differences in the actual governance practices of the Indian banking sector across two different periods. The incorporation of a larger period in the study assisted in evaluating and recognizing the improvement or deterioration of corporate governance norms over the course of the sample units' business operations. The study comprehensively dealt with the detailed provisions of corporate governance norms as listed in the specific section of the Companies Act. It incorporated the exhaustive corporate governance norms of thislegislation in studying the compliance level, finding the linking between corporate governance and financial performance, examining the significant differences in governance practices in two-time proportion and constructing the composite index of corporate governance for the Indian banking sphere. It included the thorough provisions of corporate governance by covering all its suitable dimensions.

In this regard, the detailed provisions of board effectiveness, audit functions, risk management, remuneration committee, disclosure and transparency, and stakeholder rights were given equal emphasis for examining the corporate governance practices of the Indian banking sector.

8.3. Recommendations

The thesis accentuates a set of suggested actions based on which an entire mechanism of corporate governance shall function in the Indian commercial banking sphere. Such propositions are based on the findings bestowed in the thesis and provide insight into addressing the research problem outlined in the study.Instead of this, the thesis adopted a logical and coherent approach to presenting the recommendations highlighted below in the following points:

- It is duly accorded that compliance with corporate governancemechanisms must be suitably attached to the board's performance attributes. An adequate combination of compliance with performance shall lead towards the development of a robust governance framework within a banking structure. It is necessitated that the board management shall suitably strike a balance between adhering to regulatory developments and enhancing the company's performance through strategy development and superior decision-making. It is, therefore, accorded that the board management shall recognise that good governance is not only about compliance and it must be adequately attached to the superior execution of their responsibilities and fulfilment of the performance standards. It is, therefore, additionally endorsed that the banking system shall acknowledge that it must provide adequate access to information at all times to the board management. A system of superior information availability shall essentially lead towards better board decision-making.

- The board is imperative in the execution of tasks and managing theentire ecosystem of governance in the banking structures. It is, therefore,suggested that the board of directors should apportion ample time for discussing and formulating the company's overall goals and strategiesfor creating end value. It is, therefore, suggested that a governance plan shall be duly accorded which shall work to create value that can be evaluated against different scenarios. These evaluations can serve

as the foundation for further discussions on whether the bank's strategy is effectively addressing both short and long-term opportunities and challenges. The strategy development process should be premediated ina manner that permits the board of directors to have a real bearing on the bank's direction.

- The banking system must uphold growth and adaptability, to remain competitive and create value for all of its stakeholders. This can be achieved through efficient communication and association between management and stakeholders, as well as the implementation of proper governance frameworks. Transparency and accessibility of information are decisive for allowing stakeholders to engage in a meaningful dialogue with the company and evaluate its progress. It is therefore, advocated that an effective investor relations strategy should clearlyoutline the types of information to be shared, the methods, timing, and audience for communication. The board of directors shall suitably stay informed about investor engagement through participation in meetings or reports from those meetings, or by receiving regular updates from the executive board. It is urged that the chairman should take responsibility for maintaining positive and productive relationships with shareholders.

- It is imperative to adopt a fair and competitive compensation package which serves as an essential component to attract and retain skilledboard members within a banking structure. It is, therefore, recommended that a clear compensation policy should be in place, outlining the total package including fixed and variable pay, as well as other benefits and employment terms. This should be done in a way that is reasonable and reflects the performance, responsibilities, and value originated by the board commission for the bank. Instead of this, it is suggested that an exhaustive description of remuneration components for the bank's executive shall be duly chartered out. Additionally, it is fostered an explanation for the correlation between the remuneration policy and the bank's long-term value underpinning shall be duly appraised all the times in the banking structure. Moreover, precision must be determined about the performance criteria and quantifiabilityfor the award of the variable components in an adequate manner.

- It is outlined that transparent and clear reporting is a key aspect of good corporate governance. This shall suitably be accompanied by providing unswerving elucidations, supported by real-world examples, and making connections between

ingenuities and fragments.

Superior reporting shall effectively highlight disclosure of the results and impacts of implemented governance policies. Clear explanations should be given when deviating from the code. It is significant to show the alignment of the company's culture with its goals, values, and strategy. Additionally, interactions with shareholders and stakeholders should be reported on, and their opinions should be taken into account. The report and its disclosures should also clearly link to policies or disclosures that pertain to stakeholder concerns. Furthermore, reporting on diversity, including representation at the senior leadership level beyond external targets should be included. Objectives and targets should be included in the report. The board or a committee should explain how they have evaluated the efficacy of risk management and internal control.

- The board of directors is imperative in the bank's governance not only as a monitoring entity but also as the leading body in supervision,strategic planning, and innovation. It is, therefore, suggested that the board shall be actively involved in shaping the bank's future direction and strategy in collaboration with senior management. This shall suitably involve identifying and evaluating the emerging trends in the dynamic financial environment, assessing their relevance and discussingpotential consequences with senior management. The thesis advocates that progressive boards shall adequately foster an environment of open communication and idea-sharing among their members. It shall suitably bring its unique skills and connections to the table, both within and outside the bank, to contribute to strategic discussions. It is outlined that to effectively integrate these skills into the decision-making process, open communication and trust between members are essential. The board should also be aware of areas and topics that require specific skill sets and regularly evaluate the composition of committees. Furthermore,the board should regularly self-evaluate to identify any necessary changes in skills and experience for both the short and long tenure. It is, therefore, surmised that to continue moving forward, the board should lead by example by promoting a culture of innovation, open communication, and a positive attitude towards mistakes, which can lead to learning and beneficial changes for the company.
- The composition of a board of directors should be grounded on the principle

of expertise, where each member has one or more specific abilities. Members should stay informed about major developments and actively incorporate them into their strategic considerations. It is, therefore, suggested that the Chairman and board members should ask relevant and in-depth questions about the reasoning behind strategic decisions, as well as the performance dynamics and potential future scenarios of the company. Emerging technologies such as robotics, artificial astuteness, blockchain, nanotechnology, biotechnology, new energies and others are driving changes that are impacting all financial institutions including banks. It is advocated that the board members must take these developments into account in their strategic planning and avoid getting stuck in traditional ways of thinking.

- The rise in banking failures has raised questions about how the auditing processes are carried out in the financial industry. The issue that is beingoutlined in this regard is not merely recognising how the auditing procedures are performed but it should foster upon appraising what is being done in the auditing procedures. Therefore, it is suggested that the banking industry shall focus on identifying the actual scope of the audit and duly categorise the expectations hiatus. It is outlined that the future of the audit lies in ascertaining the need of bringing innovations in the auditing progressions, reconstructing and remodelling it so that meetsthe expectations of the stakeholders and addresses the issues highlighted in the expectation hiatus. The lead or group auditor should establish and nurture an ongoing relationship with the audit committee chairman and other committee members Furthermore, it is advocated that the auditor should be proactive in suggesting potential topics and areas which may be pertinent in the future, including any changes in regulatory guidelines which would require the attention of the board.
- The internal auditing procedures must adjust its strategy and compulsions to remain effective. It is, therefore, advocated that the internal auditors should not only concentrate on risk and controls but also serve as advisors and conduct specialized investigations. The internal audit's progressions and services must be updated to reflect this change in emphasis, with the main objectives being to assure, advise, and anticipate potential hazards. It is insinuated that by identifying and addressing emerging risks proactively, the most efficient internal audit teams can assist banks in staying ahead of the curve. Auditors must stay abreast of the

fast-paced changes and even anticipate future risks to continue providing vital assurance to stakeholders. This is particularly crucial for investors, but it also presents opportunities for both internal and external auditors. They can collaborate with the board members to fulfil their oversight and governance responsibilities and adopt a forward-thinking approach to the challenges and opportunities that lie ahead. The chairman acts as the connotation between the operating officers and the board, ensuring seamless communication and information flow. They provide guidance and emotional support when making decisions and implementing short and long-term crisis response plans. It is suggested that chairmen must maintain their role of questioning decisions, protecting the organization's long-term interests, and taking the lead when necessary. This requires a delicate balance of managing personal opinions, emotions, and actions under external pressure. It is advocated that the chairman must organize and utilize the input and expertise of the board to aid the company in making better decisions and understanding the CEO's challenges and responsibilities. Moreover, it is outlined that during any crisis, this dual role shall duly transform from the chairman into a gatekeeper, linking operational needs with long-term strategic goals. To be successful, chairmen are advised to develop mindfulness and purpose, which allows them to tap into the creativity and skills of the CEO and board members when responding to future crises.

- It was suggested that to effectively manage fraud risks, a wider group of stakeholders beyond just the risk and compliance teams should be involved. The ultimate responsibility for establishing an effective anti- fraud framework lies with the board, superintending and esteeming the appraisal and any resulting corrective engagements. The assessment of fraud risks should effectively take into account all potential sources of risk within the business, including areas such as sales, operations, blockchain, inventory, and annual statements. It is advocated that these areas should be evaluated for various types of fraud risks, such asinternal fraud, external fraud risks from suppliers, bribery risks, and manoeuvring of financial reportage. To inform the assessment, bothquantitative information such as losses due to fraud, market data, and qualitative evidence such as whistle-blower testimonies, personnel intuitions, internal audit reports, customer criticisms, and market trend analysis should be congregated. It is advocated that documentation is crucial in ensuring that key fraud risks and controls are captured and that

processes and controls were communicated to other members of the organization. This documentation must be duly apprehended in a riskand control milieu, congregated by operating unit or function, withheatmaps exhibiting the likelihood and impact of each characterized fraud risk being nifty at the board level.

- The presence of elements such as volatility, uncertainty, complexity and ambiguousness has redirected the entire focus of the banking industry to re-strategize their governance practices buoyant of the changing business environment. The challenges posed by the disruptive elements in their business have forced the internal decision-makers to refocustheir mission, vision and control to remain competitive in the VUCA world. Automation, machine learning and artificial intelligence are the key constituents of the industrial revolution 4.0. in light of this, it has endeavoured that the entire board activities shall nuzzle the modish framework of the governance. The board's decision-making shall be strategized and embraced about robotization and mechanization of the value creation stakeholder chain across the business.
- Artificial intelligence and data-driven activities of the business have emerged as the major elements in readdressing, reanalyzing and evaluating the traditional role and accountabilities of the board commission, audit committee, remuneration commission and risk management commission. All such committees shall serve as the trustees of the stakeholder funds by reappraising the resources, personnel, policies and procedures of the business. Intelligent computerization has reinforced the board of directors committee to rethink and reconsider their responsibilities towards the stakeholders of the business. instead of this, it is advocated that the board members shallduly recognize the hindrances of external audit reports which are implemented and led by the established policies of the regulatory authorities. They shall reconsider the overall extent and purview of the audit activities in provisos of the market value of the business market value. There must be a concrete and rigid, analytical underpinning to describe the gap if the audited resources are significantly less than the business's market worth.
- The emerging technologies in current ongoing businesses call for appropriate use of the resources and stakeholder funds by the board of directors committee team. It is insinuated that the present governance structures shall implement and adopt the integrated utility creation foundation on the part of the board of directors and their team panel.This committee shall focus on creating, developing and

shaping theoutput-based reporting structures which form a main pillar of the contemporary integrated financial reporting mechanism. Moreover, the governance norms in the volatile business environment call for the application of alterable governance. This approach suitably considers theability to scrutinize and evaluate business risks effectively. It purportedly aims at constructing the risk-building competence profile and tends to scan them appropriately. Upheaval and reorganization of the entire business risk profile are the building blocks of this approach. It is, therefore, indicated that the VUCA world christens for the adaptable governance norms and poses greater responsibility towardsthe board committee and their appointed members in the organization.

8.4. Implications of the study

The principal emphasis of this section is to outline the practical inferences of the current thesis within a larger framework. It elaborates on the manner in which the outcomes of the thesis can suitably contribute to contemporary corporate governance mechanisms and can serve as a guide for decision-making to regulatory authorities and practitioners in this respective arena. It tends to serve as a roadmap for future interventions in governance contrivances. The following are the various implications of the existing work:

- The board management assumes a crucial role in determining the overall effectiveness of holistic decision-making in the banking business as well as oversight. In the era of embracing technology, it is pertinent that boards should actively engage with management to comprehend and leverage technological advancements in the banking sector. This shall effectively include promoting initiatives for digital transformation, enhancing cybersecurity measures, and exploring innovative solutions to enhance customer experience and operational efficiency. Boards shall certify that the bank's technology strategy aligns with its overall commercial objectives and risk tolerance. Additionally, they shall closely monitor the implementation of technology-related projects and assess their impact on the bank's performance and resilience. Moreover, the boards should maintain a strong focus on compliance with regulatory requirements and keep abreast of changes in the regulatory landscape. They should ensure that the bank's policies, practices, and operations are in accordance with applicable laws, regulations, and guidelines. Boards should proactively engage with regulatory authorities, stay updated on regulatory developments, and establish effective mechanisms for

assessing and addressing compliance risks.

- Auditing practices evaluate the efficiency of internal and external systems, ethical conduct, and adherence to corporate governance principles. They facilitate governance enhancements that improve the bank's overall transparency and performance. The rapid advancement of technology has had an impact on auditing practices within the Indian banking sector. Auditors need to adapt their methods in order to effectively audit technological systems, data security measures, and cybersecurity protocols. The auditing team shall suitably focus on evaluating the dependability, precision, and security of digital transactions, as well as the strength of IT infrastructure and controls. Additionally, the abundance of data available in the banking sector has led to a shift towards data-centric auditing approaches. Auditors shall employ data analytics techniques to examine both financial and non-financial data, identifying patterns, anomalies, and potential risks. This shall enable auditors to gain deeper insights into the bank's operations, assess the efficacy of internal controls, and detect any instances of irregularity or fraudulent activities.
- It is imperative that the structures shall suitably evolve the practice of risk culture and its awareness. Developing a robust risk culture shall enable banking organizations to proactively aim for risk identification and its mitigation at all the levels. In this regard, the banking sphere shall strive for leveraging technology tools and platforms to enhance their capabilities in risk assessment, monitoring, and reporting. This includes utilizing artificial intelligence algorithms to ascertain arrays and tendencies in large datasets, facilitating early recognition of risks and exposures. Technology-driven risk dashboards and analytics tools shall be utilized to enable providing real-time insights to support informed decision-making by the board. Additionally, the banks shall appositely consider focusing on and transparent risk reporting and disclosure practices. This shall include offering precise accounts of their risks in annual reports. This encompasses providing information regarding the bank’s tolerance for risk, strategies commissioned for risk management, notable risks recognized, and the measures taken to address and minimize those risks. The crucial purpose is to postulate stakeholders with a comprehensive understanding of the risks faced by the bank and to assess the efficacy of the risk management practices employed.
- In the realm of corporate governance, the remuneration dimension has traditionally

centred around providing financial incentives and retaining top talent. However, it is crucial to place importance on performance-based remuneration, establishing a stronger connection between executive compensation and key performance indicators that drive strategic goals. This approach shall create a clear correlation between pay and performance, thus motivating executives to deliver exceptional results. Moreover, the integration of sustainability and non-financial metrics within the framework of banking structures is imperative. This conscious integration shall ensure that executives are rewarded based on their contributions to sustainable practices, diversity, and stakeholder engagement. Addressing concerns related to excessive risk-taking and short-term thinking is imperative in the remuneration dimension. The introduction of clawback provisions in remuneration agreements shall empower banking structures to reclaim executive bonuses or incentives in cases of misconduct, poor performance, or financial restatements. This vital mechanism shall safeguard that executive recompense is allied with sustainable, long-term performance goals. By discouraging excessive risk-taking, the stability and prosperity of the banking sector shall be safeguarded, thereby protecting the interests of stakeholders. Furthermore, to enhance transparency and strengthen shareholder engagement, it is imperative for banks to provide comprehensive information about executive compensation in their annual reports. Such disclosures enable shareholders and the public to hold executives accountable, cultivating a culture of transparency, fairness, and trust.

- Stakeholder activism has gained widespread recognition and is integral part of the corporate governance within the Indian commercial banking sector. Stakeholders are actively exercising their rights to engage with banks, voice concerns, and influence decision-making processes. This growing movement places a strong emphasis on transparency and disclosure practices within banks, demanding comprehensive and timely information regarding financial performance, risk exposure, governance practices, and executive compensation. By raising the bar for disclosure standards, stakeholders are empowered to make well-informed decisions and instill trust in the banking sector. Moreover, stakeholders are advocating for enhanced voting rights and access to proxy voting in the Indian banking landscape. They are determined to have a more substantial say in electing directors, approving critical transactions, and shaping governance policies. Measures such as proxy access enable stakeholders to nominate their own

candidates for the board of directors, reinforcing their influence and ensuring their voices are heard. Say-on-pay provisions are another important aspect that stakeholders are actively pursuing. These provisions grant stakeholders the right to approve or reject executive compensation packages, ensuring that top executives' remuneration aligns with performance and stakeholder interests. By implementing say-on-pay practices, accountability is strengthened, and executive compensation becomes directly linked to company performance. Stakeholders are also seeking increased opportunities for engagement and dialogue with banks. Regular stakeholder meetings serve as crucial platforms for interaction with the board of directors and management, allowing stakeholders to ask questions and express their opinions. Effective stakeholder engagement mechanisms such as investor forums, town halls, and online platforms facilitate meaningful dialogues between stakeholders and banks, fostering a culture of openness and collaboration. Recognizing the challenges faced by minority stakeholders, there is a growing focus on protecting their rights in corporate governance. Measures such as equitable treatment, fair pricing for shares, and safeguards against related-party transactions are being implemented to ensure that minority stakeholders are not disadvantaged. By promoting fairness and inclusivity, the banking sector can uphold the principles of corporate integrity and create a level playing field for all stakeholders. In the pursuit of corporate integrity, stakeholders are increasingly concerned about corporate misconduct and fraud. Robust whistle-blower protection mechanisms are being advocated to encourage individuals to report wrongdoing without fear of retaliation. By safeguarding whistle-blowers, transparency, integrity, and trust within the banking sector can be strengthened, ensuring that unethical practices are identified and addressed promptly.

- It is outlined that the principal focus of the Companies Act of 2013 in India is on commercial public and private sector banks mainly, thereby overlooking a significant number of small finance banks, regional rural banks, cooperative banks and foreign banks that are not subjected to similar levels of governance provisions. This limited coverage creates loopholes in governance standards, potentially allowing for misconduct or insufficient governance practices to persist in unregulated entities. As a consequence, there is a risk of ongoing unethical behaviours or ineffective governance in these unaddressed businesses. It is, therefore, highlighted that the policymakers shall consider implementing similar

governance provisions across different sets of uncovered banks in this sector. This approach will preserve the overall steadiness and resilience of the financial structure by ensuring that all banks, including those previously not covered, adhere to robust governance practices. This will mitigate the potential for governance failures, unethical conduct, and misconduct that could adversely impact the entire banking sector, promoting systemic stability. Moreover, similar governance provisions shall establish a level playing field among banks, fostering fair competition. Previously unregulated banks may have experienced an advantage due to weaker governance requirements. Extending similar provisions to these banks shall create equal opportunities, encouraging healthy competition and minimizing the risk of regulatory arbitrage.

8.5. Limitations of the study

This section highlights the constraints and shortcomings identified in the currentresearch. The deficiencies in terms of theoretical application, focus and standardization of the required information can be surmised below in the following points:

- The present study intended to establish a causal interrelationship between corporate governance practices and performance outcomes in the Indian commercial banking sector. However, it is viewed that it is arduous to establish a direct cause-and-effect interrelationship between governance practices and performance outcomes for this sector. This challenge arises because the performance of the commercial banking sector can be influenced by various factors beyond corporate governance practices. Economic conditions, market dynamics, and management decisions are certain influential factors which may specifically affect the business performance of commercial banks. Due to the presence of these multiple uncontrollable factors, it becomes problematic to solely attribute changes in performance to corporate governance practices. It is therefore, outlined that the impact of corporate governance on performance is intertwined with and influenced by a complex interplay of other elements, making it challenging to isolate the specific influence of corporate governance practices.

- The presence of endogeneity highlights the potential for a reverse causal interrelationship between performance outcomes and corporate governance practices. In other words, it suggested that the performance of the commercial

banking sector can influence the adoption or modification of its corporate governance practices. This problem posed a challenge in disentangling the cause-and-effect relationship between corporate governance and performance because the direction of influence can go both ways. The presence of certain elements of endogeneity may have complicated the interpretation of the results because it becomes difficult to determine whether improvements in performance are a result of effective corporate governance practices or if better performance has prompted changes in governance practices.

- The generalizability of the present study's findings is limited to other different countries and sectors of the Indian economy. This limitation arises due to the unique characteristics specific to the Indian commercial banking sector, including its regulatory environment, ownership structure, and cultural factors. These distinct features create a context-specific setting that may not be directly pertinent to other countries or sectors. The regulatory framework governing the banking industry, the ownership patterns of banks, and the cultural norms influencing business practices can significantly vary across different countries and sectors. As a result, the findings of the current study that are applicable in the Indian commercial banking sphere may not hold true or be directly relevant in different contexts.

- The study aimed to create a thorough corporate index in its one of the objectives. The approach applied in this case aimed on gathering inputs on Companies Act, 2013 provisions from governance compliance members working in different commercial banks. The scope of their inquiries and responses was limited to exploring the preferences regarding governance provisions outlined in the Companies Act of 2013 exclusively. Such compliance officers showed a lack of enthusiasm in providing further insights into the practical implementation of governance activities within their respective banking systems beyond the Companies Act, 2013 governance provisions.

- The present study does not consider the existence of uncontrollable external factors that could have an impact on both corporate governance practices and performance within the Indian commercial banking sector. The changing macroeconomic conditions may influence corporate governance practices and performance. Factors such as economic growth, inflation rates, interest rates, and

market volatility may impact both direct and indirect effects on how banks operate and govern themselves. Such factors are not taken into consideration in the present study due to their insurgent and inconsistent essentiality.

8.6. Scope for future research

The thesis provides an extension to the current findings by highlighting the new research questions. This can suitably foster additional exploration of the existing arena of governance mechanisms in the Indian commercial banking sphere. The outcomes of the present thesis can be combined with different dimensions to create a holistic understanding of governance proportions. Such outcomes can be replicated in different settings to augment the generalizability of the present subject matter. Following are the other areas wherein futureresearch can be undertaken:

- The future of corporate governance lies in exploring and appraising the function of technology in governance, such as the use of digital platforms and blockchain in shareholder communication along with the challenges of using digital platforms and blockchain technology in corporate governance, as well as the potential impact on shareholder engagement and participation. Additionally, it could explore the impending benefits of using these technologies in emerging markets, where traditional voting methods may be less effective.
- Future research in corporate governance and COVID-19 could converge on several key areas, including the impact of the pandemic on board composition and effectiveness, the tasks of corporate governance in managing the financial and operational risks associated with the pandemic, and the potential long-term effects of the pandemic on corporate governance practices. Additionally, the impending research could also examine how companies have responded to the crisis in terms of their social and environmental responsibilities, and how effective these responses have been. Furthermore, the role of technology in facilitating remote communication and decision-making for boards and shareholders during the pandemic can be appropriately explored.
- Suggestive research in the sphere of carbon emissions and corporate governance could be effectively carried on by focussing on several key areas,

including the role of corporate governance in managing the risks and opportunities associated with climate change, the efficacy of different governance mechanisms in lessening carbon emissions, and the potential long-term effects of climate change on corporate governance practices. Additionally, the research could also examine the extent to which companies are disclosing information on their greenhouse gas emissions and climate-related risks and the effectiveness of these disclosures in informing investors and other stakeholders. Likewise, another area of interest could strive on analysing the impact of regulations and policies aimed at reducing carbon emissions on corporate governance practices and decision-making.

- Future research in the area of ethical dilemmas and corporate governancecould be suitably carried on by focussing on several key areas of this dimension. This shall particularly be concentrated on evaluating the potential of governance structures in promoting ethical behaviour and decision-making, the effectiveness of different governance mechanisms in addressing ethical dilemmas, and the potential long-term effects of ethical dilemmas on corporate governance practices. Additionally, the research in this area can be supplemented by assessing the magnitude to which banks are disclosing evidence on their ethical policies and practices, and the effectiveness of these disclosures in informing investors and other stakeholders. Moreover, the impact of cultural and societal changes on ethical dilemmas faced by the financial sector and the corporate governance mechanisms applied to address them can be suitably used in this arena.

- Potential research can be suitably undertaken to appraise the accountability of governance mechanisms in managing tax risk and compliance, the effectiveness of different governance mechanisms inaddressing tax aggressiveness, and the long-term effects of tax aggressiveness on corporate governance practices. Additionally, the research could also examine the extent to which companies are disclosing information on their tax practices and strategies and the effectiveness of these disclosures in informing investors and other stakeholders. Likewise, the impact of regulatory policies and regulations on tax aggressiveness and corporate governance, such as changes in tax laws, international tax agreements and the role of tax havens could be explored effectively. This area of research can appraise the role of external auditors, accounting firms and other third

parties in tax compliance and their relationship with the board members.

- Future research analysing the interrelationship between sustainability reporting and corporate governance dimensions can be progressed effectively. It shall intend to inculcate the impact of sustainability reporting on the effectiveness of corporate governance, it's tasks in ensuring the accuracy and reliability of sustainability reporting, and the probable continuing effects of such reporting on corporate governance practices. Additionally, the exploration could also investigate the level of disclosure by companies regarding their sustainability performance, and the effectiveness of these disclosures in informing investors and other stakeholders. Additionally, this area of research could be further extended to examine the impact of regulations and policies aimed at endorsing sustainability reporting on corporate governance practices and decision-making. Moreover, the research could also focus on how the assimilation of sustainability factors into the policymaking process and strategy ofthe banking sector could lead to a sustainable and long-term value foundation for them and its stakeholders.

- The findings of the thesis placed due accord to the corporate governance dimension of executive compensation and outlined that an ingeniousexecutive remuneration compendium can motivate executives to make decisions that lead to long-term esteem creation for the bank and its stakeholders. In this regard, this essential dimension can be suitably extended by investigating the level of transparency and disclosure of the banking fragment regarding executive compensation, and the effectiveness of these disclosures in informing shareholders and other stakeholders can be adequately explored. Additionally, this arena could be further applied to examine the impact of regulations and policies aimed at limiting or disclosing executive compensation on corporate governance practices anddecision-making. Likewise, the research could also focus on the alignment of executive compensation with the long-term strategy of the bank and its operating performance, and how it affects the motivationand retention of the executives. It could also strive to scrutinize the tasks of independent directors and the compensation commission in setting executive compensation.

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