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UTILISING WARRANTY AND INDEMNITY INSURANCE TO ADDRESS ASYMMETRIC INFORMATION

FATİH BUĞRA ERDEM - MEVA ÖZTÜRK

THE SIGNIFICANT CONTRIBUTION OF BANGLADESHI COMMERCIAL BANKS' LIQUIDITY POSITION, BANK SIZE, AND INTERNAL CAPITAL GENERATING ABILITY TO INCREASE PROFITABILITY

RANA AL MOSHARRAFA

THE SIGNIFICANCE AND USE OF TAKAFUL INSURANCE IN THE ISLAMIC FINANCE SYSTEM

İREM NUR ÇELİK - ÖZGÜR AKPINAR

PRESENTATION OF RISK AND RISK PERCEPTION IN INSURANCE ADVERTISEMENTS IN TURKEY: THE CASE OF 1963 HAYAT MAGAZINE

SEFER DARICI - SİHAM EL OUAHABI

ESG ACTIVITIES AND FINANCIAL PERFORMANCE IN BANKING INDUSTRY

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EDITORIAL PREFACE

Dear readers of the International Journal of Insurance and Finance

It gives us great pleasure to welcome you in the fourth issue of our new journal in the field of insurance and finance. As indicated in the earlier issues, the journal was aimed to contribute the fields of insurance and finance. This journal presents papers intended to advance scientific knowledge of the insurance industry and finance sector as well as to stimulate dialogue between scientists and practioners in both two sectors.

Using a double blind reviewing process, IJIF will continue to publish original scientific papers. Scientists and practitioners in the field of insurance and finance are encouraged to submit their papers to our new journal online via the link https://www.ijif.net

IJIF has started its publication life since 2021 as peer-reviewed journal to publish articles written in English with this concept, and still continues to maintain this feature for now. We strongly believe that all actors of these fields, such as researchers, professionals, students and politicians, will continue to benefit from IJIF articles published. Starting from the second issues, IJIF are still being indexed or abstracted by Crossref, IZOR, ISI, DOAJ, Euro Pub, ASOS and Ideal Online databases.

We would like to thank the leading companies of the finance and insurance sector operating in the national and international arena, for their trust in IJIF, after the first issue of our journal was published. In addition, we are pleased to have valuable number of submitting articles by scientists and practitioners to our journal as the recognition of our journal becomes more widespread.

Finally, we would like to thank to our authors, the advisory and referee boards who contributed to the sixth issue; Türk Reasürans, AXA Insurance, Quick Insurance Companies as well as TARSİM, Insurance Thought Center (ITC), Sivas Soft and Ziraat Bank for their support to publication of this issue. As the journal editors we will be honored to welcome to all national and international valuable scientists and practitioners who will submit and publish the articles of in the seventh issue.

Kind Regards,

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Table of Contents

ARTICLES

Utilising Warranty and Indemnity Insurance to Address Asymmetric Information
FATİH BUĞRA ERDEM - MEVA ÖZTÜRK / 1

The Significant Contribution of Bangladeshi Commercial Banks' Liquidity Position, Bank Size, And Internal Capital Generating Ability to Increase Profitability
RANA AL MOSHARRAFA / 11

The Significance and use of Takaful Insurance in the Islamic Finance System
İREM NUR ÇELİK - ÖZGÜR AKPINAR / 21

Presentation of Risk and Risk Perception in Insurance Advertisements in Turkey: The Case of 1963 Hayat Magazine
SEFER DARICI - SİHAM EL OUAHABI / 33

Esg Activities and Financial Performance in Banking Industry
ÖZCAN IŞIK / 43

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ORIGINAL ARTICLE

UTILISING WARRANTY AND INDEMNITY INSURANCE TO ADDRESS ASYMMETRIC INFORMATION

Fatih Buğra ERDEM
Meva ÖZTÜRK

Abstract
Although effective due diligence has been made in acquisitions, many legal problems arise due to the fact that there are inaccuracies and misrepresentations in the statements made by the seller after the closing due to asymmetric information. The paper mainly analyzes the importance of the spread of declaration and guarantee insurance as a solution to these problems. Merger and acquisition initiatives are gaining more and more intensity at the national and international level. Compensation responsibilities arising from the violation of declarations and warranties, which are frequently encountered in this process, are among the issues that buyers and sellers fear most. In this context, it is thought that the dissemination of declaration and guarantee insurance is one of the most effective ways to neutralize this risk. Declaration and guarantee insurance acts as a bridge between the protection demands of the buyers and the aims of the sellers to provide a clean exit. Especially in the case of mergers and acquisitions, it helps the contracting parties to minimize their risks by indemnifying the financial losses that may arise due to the declarations and warranties presented regarding the relevant share and the target company by the insurer. With the transfer of the indemnity responsibility arising from the declaration and warranty violations of the seller after the closing to the insurance company, the parties have placed the sales process on a more secure basis. While the buyer has access to the assurance of indemnifying the financial losses arising from the violation of the declarations and commitments presented to him about the share subject to the sale and the target company from the insurance company, the seller will have the opportunity to transfer his portfolio risk-free by transferring his post-sale responsibilities to the insurer. For this reason, declaration and guarantee insurance are frequently preferred by strategic investors, especially hedge funds.

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Profitability, Liquidity, Internal Capital Generation Rate, Bank size, and Inflation

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1. INTRODUCTION

It is of great importance that the seller present statements and warranties regarding the transferred share and the target company when it comes to the transfer of joint stock companies by sale of shares. The selling price of the shares is determined on the basis of these commitments at first sight. Therefore, in this context, when the buyers find the statements and warranties presented to them insufficient, they refrain from paying the price requested for the shares subject to the sale, thus completing the purchase. (Meyer-Sparenberg & Jäckle, 2022). In some cases, the statements and warranties presented about the relevant share and target company may not provide sufficient information to reflect the real situation for the buyer. In this context, although it is possible for the buyer to reflect (recourse) the material damages that may arise from the incomplete or incorrect transfer of the matters declared by the seller to the seller within the framework of the contractual responsibility, the buyers may generally not want to pay the share price without additional assurances to be offered to them (Meven, 2020, p. 1; Meyer -Sparenberg & Jackle, 2022). In this respect, the risks arising from the lack, nonfulfillment or unreality of the statements and commitments presented in the share sale agreement can be eliminated by the declaration and guarantee insurances taken by the buyer or the seller (Elliers, Koffka, Mackensen & Paul, 2018).

By starting the due diligence process carried out by the buyer, it is aimed to reduce the asymmetric information distribution between the buyer and the target company to a large extent. The fact that the buyer has a SWOT (strengths-weaknesses-opportunities-threats) analysis of the company before the negotiation phase enables future problems with the target company to be foreseen and the price offer is made closer to the real value of the company in addition to the compulsory merger report as per Article 147 of the Turkish Commercial Code (TCC) numbered 6012. With the creation of the buyer due diligence report, the buyer also decides on the declarations and commitments to be demanded from the seller at the points where he hesitates in the light of the relevant report (DePamphilis, 2011, p. 179; Mäntysaari, 2010, p. 429).

Today, warranties and indemnities (W&I) insurance has become a standard tool in civil and common law systems to protect against risks related to breaches of representations and warranties given in the process of mergers and acquisitions. In this context, although the declaration and guarantee insurance, which is the subject of the study, is not common in Turkey, especially in the Anglo-Saxon legal systems and although it has started to be cored late, in legal transactions such as share sale contracts in certain Continental European countries, especially Germany, the buyer is offered by the insurer. and implemented as a financial security instrument provided to the seller. This type of insurance, which is widely used in share sale agreements in both common law and civil law systems, acts as a ‘catalyst’ in the successful completion of mergers and acquisitions.

Although effective due diligence has been made in Mergers and Acquisitions, many legal problems arise due to the fact that there are inaccuracies and misrepresentations in the statements made by the seller after the closing due to asymmetric information. However, in acquisition and merger transactions, the asymmetric information between the parties is reduced by the declarations and commitments made by the target company to the acquiring company. In this context, if the statements do not reflect the truth, the provisions regarding the compensation payment of the seller (or the shareholder who sold his share) are added to the sales contract. It is also possible to envisage provisions regarding the transfer of this price to the seller under certain conditions after the sale price is paid to a third party (a trustee) (Erdem, 2023, pp. 175-176). Therefore, the vast majority of strategic investors especially care about the continuity of company management (management rollover) in the sales made by the managing partners. In this regard, the buyers can maintain the stability of the managers without having to initiate a legal proceeding against the company management, as they will cover the possible losses that may arise after the closing due to the explanations made to them thanks to the W&I insurance. As a result, if strategic investors want to continue their business relations with the vendors who are also

the managers of the target company, one of the most effective methods is to purchase this insurance policies. In this way, the desired long-term business relations between investors (buyers) and sellers will not be eroded by legal disputes (Erdem, 2023, p. 15).

It is important to ensure these risks more comprehensively, especially in mergers and acquisitions, since the liabilities arising from representations and warranties cannot be effectively protected with current insurance products. In the final analysis, this study provides a detailed examination and discussion on the insurability of risks that may arise from mergers and acquisitions through share sales, and potential disputes that may arise from closing updates, within the framework of the legal nature, scope and applicability of the W&I insurance. In particular, the legal consequences of the risk that may arise due to the W&I insurance and the declarations and warranties offered by the seller are undertaken by the insurer instead of the insured. The insurer, on the other hand, secures itself by determining the premium according to the amount of asymmetric information between it and the insured. The issue that poses the most intense risk for the parties in merger and acquisition transactions is the completeness and accuracy of the declarations and warranties. From this point of view, by delegating this risk to the insurer, the parties have the opportunity to finalize the sale transaction more flexibly and without hesitation during the negotiation phase of the contracts.

2. THE CONCEPT AND LEGAL NATURE OF W&I INSURANCE

W&I insurance is a type of insurance in which the insurer is responsible for compensation for the risks that may arise from the seller's declarations and warranties in the acquisition of companies through the sale of shares. For this type of insurance, the terms 'Warranties and Indemnity Insurance' are generally used in the international literature and 'Representations and Warranties Insurance' in the USA. When the terminological origin of the concept is examined, the statement of the term 'representation' regarding the company, company assets and liabilities; It can be said that the term 'warranty' refers to other contractual guarantees. In this type of insurance, the Anglo-Saxon literature is so dominant that the use of the term 'W&I-Versicherung' has become widespread in the policies provided by German insurance companies, instead of the term 'Gewährleistungsversicherung', which is the direct equivalent of declaration and guarantee insurance.

In terms of Turkish insurance law, in the share sale agreement, the buyer determines a purchase price in the light of the seller's explanations regarding the target company. The dominant factor/variable in determining this price is the seller's declarations and warranties. For this reason, the buyer may purchase a declaration and guarantee insurance policy to secure the declared and warranted matters. Thanks to this insurance coverage, the buyer will be able to claim directly from the insurer the material damage that arises due to the fact that the seller intentionally or unintentionally made false statements (for example, if the seller knowingly conceals defects). However, the possibility of recourse to the seller by the insurer for the relevant damage is reserved within the framework of the subrogation provisions regulated within the framework of Articles 1472 and 1481 of the TCC. However, on the other hand, the seller may apply to the declaration and guarantee insurance in order to compensate the damages incurred by the buyer due to the declarations he has given on matters that he is not aware of.

The legal consequences of the risk that may arise due to the W&I insurance and the declarations and warranties offered by the seller are undertaken by the insurer instead of the insured. The insurer, on the other hand, secures itself by determining the premium according to the amount of asymmetric information between it and the insured. The issue that poses the most intense risk for the parties in merger and acquisition transactions is the completeness and accuracy of the declarations and warranties. From this point of view, by delegating this risk to the insurer, the parties have the opportunity to finalize the sale transaction more flexibly and without hesitation during the negotiation phase of the contracts. It will help the conclusion of the contract. In this context, it is accepted that the contracting party buyer and seller have declaration obligations one another on fundamental issues that will affect

the basis of the contract (Şenocak, 2007, p. 299; Özdamar, 2010, p. 321; Gezder, 2009, p. 10).

3. AN EMPIRICAL ANALYSIS OF W&I INSURANCE

The number of companies entering the liquidation process in 2020 has increased considerably, but on the other hand, mergers and acquisitions initiatives have shown a very low rate in international economic field compared to previous years. However, despite all this negative trend, merger and acquisition transactions have gained intensity again as of the first quarter of 2021. This intensity is expected to increase further in the coming years (Flanagan, Koenigsknecht & Thies, 2022; Beisel & Klumpp, 2016). Indeed, considering the international data, it can be observed that the interest in the declaration and guarantee insurance has increased intensely since the third quarter of 2020. This interest has intensified so much in the first half of 2021 that many insurance companies have reached their sales targets for 2021 in the first half of the year. Thus, the applications for W&I insurance in 2021 were 50 percent higher than those made in 2020. Regarding the sale of W&I insurance, it is seen that there is a demand in 2022 even more than in 2021. This confirms the freshness of M&A practitioners' interest in this type of insurance (Maier, Dunaevsky & Freeburg, 2022; AON Versicherungsmakler Deutschland GmbH, 2019). According to a study, the reasons for dispute after the completion (closure) of the merger and acquisition transactions are the valuation of the target company and the determination of the contract price (38 percent), the declarations and warranties presented in the share sale/transfer agreement (38 percent), tax responsibilities (15 percent), post-closing cooperation (7 percent), pre-contractual non-disclosure/fraudulent misrepresentation (7 percent) and closing irregularities (2 percent) (Esin, 2021, p. 380.) The most important result of this empirical finding is that the existence of declaration and guarantee insurance is much more important in company takeovers through large-volume share sales. (Erdem, 2023, p. 21)

4. A BRIEF ANALYSIS OF W&I INSURANCE

During the formation of the share sale agreement, the stages that require the greatest time and effort are the negotiation and research processes involved in determining the declarations and warranties, as well as reaching an agreement between the parties involved (Freund, 1975). The representations and warranties inform the buyer about the material aspects of the target company, reveal which issues need to be examined in more detail, and shed light on the estimated cost of verification and sale. However, an effective declaration and guarantee process helps to reduce the asymmetric information between the seller and the buyer in share transfer agreements in three ways; It (i) imposes a disclosure burden on the target company, (ii) determines the scope of required disclosures, and (iii) provides a reliable basis, reducing the cost of verification (Gilson, 1984, pp. 271-287; Griffith, 2020, p. 1853).

W&I insurance gains importance when the share price of companies in financial distress (distress sale) is significantly below the real value of the company. The buyer takes over the target company, which has difficulties, mostly by assuming its debts (debt deal). The seller, on the other hand, may want to avoid the declarations and warranties requested from him in order not to take on additional responsibility, considering that the sales price of the target company is already kept low. In the light of the above-mentioned issues, it can be stated that W&I insurance provides a significant comfort zone for both the buyer and the seller (Przybytniowski, Borkowski, Pawlik & Garasyim, 2022, p. 100; Demirel, 2022, p. 687; McCann, 2018, p. 258). When the declarations and warranties requested from the seller regarding the risk of not being aware of or not notified during the preparation of the share sale agreement do not affect the sales price, these risks will have a minimal impact on the pricing/valuation of the target company when they are also secured by insurance. Therefore, it is very advantageous for both the buyer and the seller to cover the possible losses that may arise with the completion of the share sale/transfer transactions by the insurer (Akkor, 2018; Borselli, 2022, p. 201).

Target companies are typically companies that are in growing industries or have high potential to

become profitable again after restructuring. However, as in every acquisition transaction, the presence of asymmetric information makes the acquisition of the company by selling shares risky. Since the source of information about the target company consists of the explanations and documents provided by the seller, it is a fact that the seller is always the more knowledgeable party. Since acquiring and making meaningful information is a very costly process, usually the seller provides the buyer with cursory information. The declarations and warranties in the contracts serve as an important tool in order to make the level of knowledge between the parties more symmetrical. The importance of declarations and warranties arises from the fact that the seller is not responsible for the information disclosed. However, as a result of the seller's declarations and warranties, the seller undertakes to the buyer the existence and accuracy of all information other than the explanations included in the subject of the contract.

The academic literature on W&I insurances related to mergers and acquisitions through share sales is not sufficiently developed in our country, and it cannot be said that there has been sufficient examination and discussion on this issue outside our country. In our opinion, the main reason for this is that the declaration and guarantee policies are not made available to the public. Although W&I insurance is, by its nature, an insurance product used to cover the difference between the limit of liability accepted by the seller in the contract and the limit demanded by the buyer, in practice, it is regulated in order to guarantee the entire indemnity liability arising from the statements and warranties of the seller.

It is possible for Turkish insurance companies to offer W&I insurance products within the scope of the principle of freedom of contract. However, the fact that this type of insurance is not defined in the insurance legislation causes it to be described as throwing a stone into a bottomless pit (investing in a product for which there is no legislation), so to speak, for insurance companies. This is due to the fact that Turkish insurance companies have to obtain a separate license in the relevant field for each insurance policy they want to issue. The branches in which the insurance company can issue policies are listed in accordance with the Communiqué on Insurance Branches (2007/1) published in the Official Gazette (RG) dated 11 July 2007 and numbered 26579. Although the declaration and guarantee insurance are not included in the relevant Communiqué, it seems possible to evaluate this type of insurance in the 'general liability' (B-VI-13) or 'financial losses' (I-A-13) branch. In addition to the above-mentioned idea of evaluating W&I insurance as a type of insurance in the 'general liability' (B-VI-13) or 'financial losses', it can also be interpreted as a 'surety' (I-A-15) defined in the same Communiqué. However, the insurance company may offer new insurance policies in the presence of certain conditions: These conditions are that the relevant policies are within the scope of one of the branches listed in the Communiqué and that the T.R. This is the approval of the Undersecretariat of Treasury of the Ministry of Treasury and Finance for this new insurance product. The listed branches are limited and it is possible for insurance companies to carry out insurance activities for a non-Communiqué branch (Erdem, 2023, p. 208; Akkor, 2017, p. 86).

5. THE ASYMMETRIC INFORMATION PROBLEM AND W&I INSURANCE AS THE SOLUTION

Merger and acquisition agreements are agreements where asymmetric information and disclosure create legal problems. In particular, the buyer's need to have incorrect or incomplete information on fundamental issues such as the target company's turnover, expenses, customers, and employees prevents the determination of the sales price, and this situation is the beginning of legal problems between the parties. In this context, the existence of W&I insurance, which has become very popular in recent years, provides a very effective negotiation opportunity for both the buyer and the seller. Because the parties provide an assurance through the insurance company regarding the compensation of material damages that may arise in case of breach of declarations and warranties (Choi & Triantis, 2010, p. 856).

It is certain that there is an informational injustice between the buyer and the seller in the purcha-

sing process. It is certain that the buyer, who has less information about the product compared to the seller, is the disadvantaged party in the sales contract (except for sales under pressure). In this case, the probability of the buyer completing the agreement without being sufficiently informed is very low. The reason for this is that the buyer sees every element that he does not know about the product as a deficiency and makes low pricing accordingly. When an evaluation is made on the axis of mergers and acquisitions, it can be said that the acquiring and target companies have opposing interests. While the transferee company aims to make the valuation of the target company over the lowest possible price and to complete the closing over this amount; the target company will try to show the company value (reputation, value of its affiliates, financial reports, receivables, insurance policies, etc.) as high as possible. This situation usually occurs when the target company sells its shares under pressure at a lower price than their value (distress sales). In this context, many companies prefer declaration and guarantee insurance, which is a type of 'transactional insurance' that can eliminate the risks arising from mergers and acquisitions. The parties establish their economic security by securing their economic interests by transferring their legal responsibilities that may arise due to the statements they have made in the context of the share sale agreement to the insurer; they eliminate the adverse selection and moral hazard problems to some extent (Erdem, 2023, pp. 39-40; Borselli, 2022, pp. 199-200). W&I insurance presents a moral problem in the merger and acquisition process. Namely, since the seller is the one who has direct information about the target company and can access it, it is possible that a kind of 'credibility problem' may arise when insurance is made. The seller, who delegates his responsibilities regarding representations and commitments to the insurer, may refrain from exercising due diligence while providing the relevant information. Therefore, adverse selection and moral hazard problems will arise. This problem will arise more for types of companies that are not open to the public and therefore do not have a public disclosure obligation If the target company is already a publicly traded company, the due diligence has likely been conducted based on publicly available information. Consequently, it becomes challenging for the buyer to identify shareholders who may seek compensation for any losses resulting from this information.

Adverse selection means that the insurer's risk pool is constantly filled with high-risk insurances; This is due to the fact that the policyholder is more advantageous than the insurer because he has more information (Baker, 2006). For this reason, the policyholder will only want to have declaration and guarantee insurance for high-risk mergers and acquisitions. However, as a result of due diligence reports prepared for mergers and acquisitions and statements and warranties submitted by the seller, information inequality (information asymmetry) is minimized and insurers can determine the amount of premiums based on the risks they have determined and calculated. In the light of all these discussions, W&I insurance can also be compared to directors and officers (D&O) insurance (Baker & Griffith, 2007, p. 1808). There is asymmetric information in executive liability insurance, but there are not only high-risk but also low-risk policies in the insurance pool (Korkmaz, 2016).

To address the issue of adverse selection, each party involved in the contract might request a declaration and guarantee insurance. The seller may choose to take out insurance instead of undertaking the specified amount of indemnity, and the buyer may choose to take out insurance for a purchase that may be quite risky for him in the light of the information he has, instead of taking the risk himself. In these cases, the contracting parties can profit from this trade by placing themselves under insurance protection, as they have more information than the insurer. The insurer, on the other hand, will try to determine the insurance premium as high as possible, taking these possibilities into account. In this case, the declaration and guarantee insurances to be demanded by buyers and sellers for non-risky mergers and acquisitions will become quite expensive. If the insured has more precise information about the risk, it may be possible to turn this into an advantage and take out insurance. However, it can be said that the W&I insurance policies reduce the risk of adverse selection in a way. That is, insurance does not cover risks that are already known or learned but not disclosed in the due diligence process. This insurance will only cover 'unknown unknowns' (Griffith, 2020, p. 1911).

In fact, it is the lack of information that determines the amount of insurance protection that buyers

need. The more asymmetric information, the more insurance will be needed to complete the purchase by undertaking these risks (Siegelman, 2004, p. 1223). In the case of adverse selection, since the risk is considered to be higher than the average (ordinary) risk, the contracts will be insured with higher insurance policy prices. In this context, the insurance company will create an insurance pool where the risk cannot be determined exactly. Some of these risks are below average and some are above average. However, an average policy price will be offered to those with below-average risk. In this scheme, over time, policyholders will cease to take out insurance, thinking that they are funding high-risk policies, and will instead take risks to purchase cheaper products without insurance protection (Romano, 1989, 27-29; Griffith, 2020, p. 1873; Rothschild & Stiglitz, 1976, p. 629).

Purchasing W&I insurance is a manifestation of risk aversion. However, mergers and acquisitions are inherently risky. Likewise, considering that the purchasing companies are generally equity companies, it is certain that these companies make a natural effort to avoid risk. According to the opposing view in the doctrine, it is very difficult to explain the declaration and guarantee insurances as an output of the risk aversion motive. The reason for this is that capital companies are used to this risk as they distribute the risk to their shareholders and it is thought that earnings will increase with the increase in the risk (Goldberg, 1990, p. 216; Goldberg, 2009, p. 541).

Insurance companies are institutions that price the risks and pay the losses incurred with the premiums they collect in return for the risk they undertake. In this respect, as the number of transactions they have made increases, they can make more precise actuarial calculations and moreover, they gain experience on how to minimize the losses that may arise. It also guides policyholders in line with their experience and shares methods of avoiding loss through risk management (Yin, Kunreuther & White, 2011; Bake & Swedloff, 2013, pp. 1421-1422; Griffith, 2020, p. 1890; Ben-Sharar & Logue, 2012, pp. 210-212). In fact, the risk is classified technically and rationally in accordance with the actuarial, statistical and, in more general terms, the law of large quantities, and a kind of loss-prevention or mitigation service is provided by the insurance company.

There is an asymmetric information problem for the insurer of the W&I insurance. However, it also carries some idiosyncratic risks. This is because the policy is based on the buyer's statements and there is no clarity about the accuracy or completeness of the relevant statements. Although insurers have the opportunity to conduct their own research and initiate a detailed due diligence process, they instead seek to compensate for the disadvantageous situation that may arise from asymmetric disclosure by providing damage prevention and mitigation services. It should also be noted that the W&I insurance is purchased before the sales contract is signed. In this process, insurers generally do not comment on the sales contract and do not propose draft work. They evaluate only the possibilities of recourse that may occur later, by examining the issues such as the definition of 'deception' in the relevant contract and determining the issues that should be excluded from the insurance coverage in the parts that they deem problematic in the due diligence report. In this respect, it can also be claimed that the insurer pursues its own interests rather than preventing the damage.

As insurers with loss insurers face similar claims many times, they gain experience in meeting the relevant claims effectively. They can avoid additional costs by choosing the most advantageous option of paying the damage or filing a lawsuit. In the axis of declaration and guarantee insurance, that is, in this type of insurance where the indemnity responsibility of the seller is undertaken by the insurer, the insurer pays or refuses to pay the amount for which it is responsible, following the policyholder's request for the payment of the relevant compensation. In cases of rejection, the parties will resort to litigation (Silver, 2015, p. 138; Mayers & Smith, 1987, pp. 45-54). Contracting parties may be compelled to take out representations and warranties due to pressure from creditors (lenders) and other contracting parties. In this context, W&I insurance will especially encourage the creditors of the target company and other persons and companies with which they have business relations to have a positive attitude towards the purchase since the insurance to be made provides an important guarantee for the stable continuation of the activities of the target company (Erdem, 2023, p. 48).

6. CONCLUSION

Since the parties of the share sale contract try to minimize their responsibilities and get the maximum benefit from the contract while preparing the contract, their interests are positioned in opposition to each other. This controversial situation causes the negotiation stages to be very arduous. However, the majority of disputes experienced by the parties after the transfer of shares (closure) are based on disagreements regarding the scope and accuracy of statements and commitments. The parties may also be confronted with the implementation of these provisions in cases where the price is adapted, kept in a trust account or partially paid, or if there are special provisions such as non-compete in the contract. In this study, W&I insurance contracts, which are implemented in many jurisdictions, but are quite uncommon in Turkey, in order to protect against the risks that may arise from joint stock company transfer transactions (in the context of mergers and acquisitions) through the sale of shares are evaluated in the context of TCC. W&I insurance, which is a common practice in Anglo-Saxon legal systems, is a foreign concept to the Turkish insurance and legal system. This study includes preliminary legal discussions on this type of insurance, showing the need for insurability of statements and warranties.

W&I insurance is used to greatly reduce the risks arising from mergers and acquisitions. In this context, while private equity funds attract great attention by venture capitalists and other investors, nowadays they are purchased for mergers and acquisitions of almost all kinds of commercial enterprises, including publicly traded companies (McCann, 2018, p. 19; Erdem, 2023, p. 205) In mergers and acquisitions, the parties must decide as soon as possible whether to purchase a declaration and guarantee insurance policy. The decision to take out insurance, especially at the beginning of the sale process, creates a wider comfort zone for the parties in negotiations. In addition, the insurance process can be started simultaneously with the beginning of the share sale agreement negotiations. W&I insurance is the transfer of the seller's responsibilities arising from the statements and commitments presented in the share transfer agreements (possible liabilities that may arise in the future) to the insurance company in return for an insurance premium. Although this type of insurance has a long history, it has only started to gain popularity in the last few years (Marsh, 2022; Gingold, 2018). Unfortunately, it is quite late for the development and implementation of W&I insurance in Turkey, which is evident among the rapidly developing economies. Although there are many mergers and acquisitions in Turkey, the clearest data on this subject can be evaluated in the '2022 Merger and Acquisition Outlook Report', which presents the numerical analysis of large-scale transactions that require permission from the Competition Board (Competition Authority, 2023). Accordingly, within the framework of the Communiqué No. 2010/4, only 82 out of a total of 245 permit requests examined during 2022 in order to prevent permanent anti-competitive changes in the control structures of undertakings are domestic undertakings established in accordance with Turkish laws.

The total value of these reported transactions is 72,2 billion Turkish Liras. The remaining permit requests are related to the mergers and acquisitions carried out by foreigners abroad, with a total cost around of 5,7 trillion Turkish Liras. In addition, while the average of the transactions examined for the last ten years is 219 per year, 310 and 245 transactions were examined in 2021 and 2022. From this point of view, it will be to the advantage of domestic insurance companies to operate in such a market, especially considering the size and intensity of the transaction volume. Moreover, in cases where the buyer company is foreign, it is normal for companies to give up on purchasing due to regulatory risks and domestic dynamics. In this context, effective implementation of declaration and commitment insurance will pave the way for foreign capital to invest in Turkish companies and company shares. W&I insurance, which has become one of the most common tools in mergers and acquisitions, is a very useful type of insurance for the order of commercial life, as it can compensate the parties' losses in a very short time in case of violation of the information disclosed and committed in the share sale agreement. In the light of deep-rooted British and American practices, it has been observed that German and French insurers have also tried to integrate declaration and guarantee insurance into commercial life in recent years. In the context of Turkish insurance law, declaration and guarantee

insurance, which has not yet been adequately addressed in terms of both academia and practice, is likely to gain popularity in the near future. The fact that trade gains have a cross-border dimension and especially company takeovers take place internationally will require the Turkish insurance market to prepare itself for W&I insurance.

Legal regulations regarding W&I insurance, which is a fairly new type of insurance for the Turkish insurance market, do not exist yet. In this context, the parties to the transaction should apply to foreign insurance companies in cases where they want to make such an insurance. Moreover, since such a market has not yet developed in our country and there is no local competitive pressure in this area, foreign insurance companies demand high premiums in return for the services they provide. Considering this situation, it is necessary to provide the legal infrastructure for this type of insurance, which will facilitate cross-border M&A transactions between Turkish companies, as soon as possible. As a matter of fact, there is no special regulation in the Turkish Commercial Code regarding the liability arising from the seller's declarations and warranties in the context of share sale agreements. In case of disputes that may arise in this regard, the provisions regarding the seller's liability of guarantee against the basic defect regulated by the Turkish Code of Obligations (TCO) No. 6098 may be applicable to the extent that they are appropriate. It is known that there are fundamental differences between the prioritized objectives of the TCC and the TCO. In this context, it is important to enact the declaration and guarantee insurance specifically.

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ORIGINAL ARTICLE

THE SIGNIFICANT CONTRIBUTION OF BANGLADESHI COMMERCIAL BANKS' LIQUIDITY POSITION, BANK SIZE, AND INTERNAL CAPITAL GENERATING ABILITY TO INCREASE PROFITABILITY

Rana Al Mosharrafa

Abstract
The banking system is the lifeblood of an economy. This study aims to inspect the extent of the impact of banks' managerial issues in terms of liquidity position, bank size and internal capital-generating capacity on the profit-making ability of commercial banks in Bangladesh during the period of 2007 to 2018. To examine data, a static panel model is constructed by considering 57 commercial banks. Indicators of a bank's profitability include return on assets, return on equity, and net interest margin. The Fixed Effect model and the Random Effect models are considered as the baseline estimations and the Ordinary Least Square estimation was performed to inspect the robustness of the data. The study suggests that the liquidity position and internal capital generation rate have a highly positive and significant impact on bank profitability. But bank size is significantly negatively correlated with banking profit. The rivalry, as assessed by the Herfindahl-Hirschman Index, has a strong beneficial impact on the profitability of banks, supporting the impact of industry-specific variables. Inflation and spread are two macroeconomic factors that have a detrimental but minor effect on bank profitability. The findings might increase management's awareness of the banking sector in Bangladesh as well as provide a proposition to policymakers.

Keywords
Profitability, Liquidity, Internal Capital Generation Rate, Bank size, and Inflation

JEL Classification
G21, C23, H12.

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1. INTRODUCTION

The progressive banking system contributes significantly to the transformation of the economy as an important institutional and functional vehicle. Modern economics' primary propeller and pillar for boosting economic expansion is this industry. However, in contrast to advanced economies, the banking sector is less stable in developing nations (Tran et al .2022). Due to worries about financial stability in the banking sector, panic withdrawals of money have risen (Mosharrafa, 2023). Bangladesh has a unique context for analyzing how operational challenges affect bank profitability due to a number of institutional and economic factors.

A company's ability to make a profit is referred to as profitability. It is the main objective of all commercial endeavors. Determining current and historical profitability as well as predicting future profitability is crucial in the banking industry. A robust banking industry serves as a foundation for the financial system's stabilization, enabling revenues for emerging economies. While some commercial banks are very well-known for their profitability, others are less known. This raises questions about certain factors that bank management will use to assess the financial health of a bank. Concurrently, it must be aware of how widespread the factors that affect bank profitability are in Bangladesh. A reliable and capable banking system can generate significant profit, offer clients good service, and amass sufficient funds to issue loans to borrowers. Bank profitability is a crucial factor for the growth of an economy, both at the micro and macro levels. A bank provides agricultural credit to accelerate agricultural output, which in turn speed up economic growth of a country (Patwary et al., 2023). Banks strive to create enough money on a micro level to survive in an era of escalating financial market competition. At the macro level, there must be enough profit to resist any unfavorable shocks and preserve the stability of the currency. The Basel Committee on Bank Supervision (BCBS, 2006) states that any bank's risk associated with operations can result in system vulnerability to external events, internal process failure, and human error. The criteria for gaining a competitive advantage in today's firms, however, are skillful behavior and sustained performance. The important managerial challenges and macroeconomic factors that have the biggest impact on bank profitability must be identified in order to preserve financial stability and protect against any negative shocks. Bank profitability in Bangladesh's banking industry may be impacted by a number of variables, including ineffective cost management, liquidity position, bank size, controlling of overhead costs, capital adequacy, the status of non-performing loans, the function of banks as intermediaries, market concentration and macroeconomic indicators such as, inflation, and growth in the economy. The primary goals of this study are to illustrate the significance of liquidity management, bank size and inner capital generating capability to promote banks' profitability in Bangladesh. Therefore, the goal of this study effort is to assess the influence of some specific managerial variables on banking profit by considering the existing competition in the banking industry in Bangladesh. The majority of earlier studies in this area looked into the impact of a variety of bank-specific variables on a specific profit-driven entity. But in this study, the researcher attempted to determine how three profitability indicators are affected by same selected bank-specific variables using the Fixed effect and Random effect model. The robustness of the data is checked by the Ordinary Lease Square method for the same variables. This study makes an effort to pinpoint the disparities in managerial considerations of bank size, inward capital generating competencies, and liquidity condition, as well as their effects on banks' profitability, using some empirical data from the banking sector of Bangladesh.

2. REVIEW OF LITERATURE

Banks are attempting to increase customer fulfillment, much like other service organizations, by offering improved service quality, delivering better endorsements, and fostering client loyalty. The

banking sector has seen significant change as a result of the financial market's quick liberalization, the introduction of new technology, fierce rivalry, globalization, and fluctuating consumer demand. Although implementing financial sector reform initiatives brought about some positive changes, the corporate health and performance of privately and publicly governed commercial banks have significantly suffered.

Profitability serves as a benchmark for assessing the health of a nation's banking industry, financial system, and overall economy. Numerous researchers from various countries have looked into how internal and external banking issues affect bank profitability.

Numerous studies shed light on factors influencing bank performance across different regions. In Pakistan, Alim et al. (2021) found that liquidity positively affects ROA but not ROE. In Turkey, Caliskan & Lecuna (2020) highlighted that bank size, deposit conversion ratio, liquidity, efficiency, and inflation enhance profitability, while interest rates have a negative impact. In Saudi Arabia, Alshebmi et al. (2020) reported a negative correlation between nonperforming loans and ROA, but a positive relationship with GDP growth, bank liquidity, credit risk, and capital adequacy rate. In Indonesia, Purwasih & Wibowo (2021) observed short-term effects on ROA, with factors like exchange rates, operational costs, and income not affecting the long run. Parvin et al. (2019) in Bangladesh found a positive link between bank size and loan-to-asset ratio with ROA but a negative effect from the deposit-to-asset ratio. In Nigeria, Fanen et al. (2020) identified capital and operational efficiency, credit risk, and bank size as significant determinants of bank performance (ROA). In Bangladesh, Rahman et al. (2017) noted that deposits and bank size negatively impacted ROA, while equity had a favorable effect. Jigeer & Koroleva (2023) in China found that bank size, capital adequacy, credit quality, and operating efficiency influenced profitability, with liquidity having no significant effect. Additionally, Othmani (2022) in Tunisia discovered a positive relationship between foreign ownership and bank performance. Isik & Ersoy (2022) in China highlighted a positive link between bank age and profitability for listed banks, while unlisted banks exhibited a quadratic relationship. Hunjra et al. (2022) studied South Asian banks and found significant impacts of credit risk, liquidity risk, and operational risk. Siddique et al. (2021) noted negative associations between nonperforming loans, cost-efficiency ratio, and liquidity ratio with ROA and ROE but positive connections for capital adequacy ratio and average lending rate. In Gulf Cooperation Council (GCC) countries, Alfadli & Rjoub (2020) reported negative impacts of efficiency, credit risk, diversification, and concentration ratio on bank performance, with a positive effect from the capital adequacy ratio and macroeconomic indicators. Szegedi et al. (2020) in Pakistan emphasized the positive impact of disclosing Corporate Social Responsibility activities on financial performance. Isik (2017) in Turkey observed positive influences of income diversification, deposit level, bank scale, and bank stability on ROA, alongside negative impacts from credit risk, lending level, operating expenses, and capital adequacy. Djalilov & Piesse (2016) found varying effects of credit risk on bank profitability in Central and Eastern Europe and the former USSR, with government spending and monetary freedom having negative effects and better-capitalized banks performing well in early transition countries. Fungacova et al. (2009) highlighted variations in market structure, credit risk, liquidity risk, and bank size among state-controlled, domestic-private, and foreign-owned banks in the Russian banking sector, while operational costs and bank risk aversion remained consistent across ownership types. Following a thorough analysis of the available literature, it becomes clear that the banks' operational profits are constituted by Return on Equity (ROE), Return on Asset (ROA), and Net Interest Margin (NIM) The literature review of a few recent empirical investigations is summarized in Table 1.

Table 1

Review of Some Recent Literature on Bank Profitability

Studies	Country	Time period	Dependent variable	Independent variables	Estimation technique	Empirical findings
Alim et al. (2021)	Pakistan	2006 to 2019	ROA and ROE	NPL to total advances, liquid assets, and liquid assets to total deposit ratio.	Ordinary Least Square	Liquidity is advantageous for ROA, but not for ROE.
Caliskan & Lecuna (2020)	Turkey	Yearly data 1980 to 2017	ROA and ROE	Bank size, deposit conversion ratio, liquidity, Efficiency, inflation, Interest rate, exchange rate	Multivariate regression model	Bank sizes, deposit conversion ratio, liquidity, Efficiency, inflation rate, exchange rate have positive impact and Interest rate has negative impact on profitability.
Alshebmi at el. 2020.	Kingdom of Saudi Arabia	2009 to 2018	Non-performing Loans to Total Loans and Advances. (NPL)	Ratio of Return on Assets, GDP growth rate, liquid assets to total assets ratio, loans and advances to deposits, bank size, and inflation.	Multiple regression analysis.	A negative correlation exists between the nonperforming loan and the return on assets, but positive relation with GDP growth, bank liquidity, credit risk and capital adequacy rate.
Purwasih & Wibowo (2021)	Indonesia	2006-2019	ROA	Industrial production index, inflation, interest rate, capital adequacy ratio, nonperforming loan.	ARDL	In the short run Exchange Rates, Operational Costs, and Operational Income and Non-Performing Financing affect ROA but not in the long run.
Parvin et al. (2019)	Bangladesh	2011-2015	ROA	Loan to asset ratio and bank size and Liquidity	Regression and Correlation analysis	Bank size and the loan-to-asset ratio had a favorable relationship with ROA. The deposit-to-asset ratio has a detrimental effect on ROA.
Fanen et al. (2020).	Nigeria	2012 to 2018	Return on Assets (ROA)	Credit risk, Bank capital efficiency, Bank Size, Liquidity Risk, Operational Efficiency, GDP and Inflation.	Fixed effect and Random effect Model	capital efficiency, operational efficiency, credit risk, and bank size significantly determine the financial Performance of banks.

Rahman et al. (2017)	Bangladesh	2009-2013	ROA	Profitability, Size, Equity, Deposit, Loan, Operating Expenses.	linear multiple regression	Deposits and bank size significantly lower the return on assets (ROA). Equity is found to have a favorable, considerable impact. The handling of loans and expenses is determined to have little impact on the banks' profitability.
Jigeer & Koroleva (2023)	China	2008-2020	ROE, ROA	Log of assets, Deposit to assets, Capital adequacy, Non-performing loan, operating expenses to operating income, liquidity ratio. GDP and Inflation.	Pooled OLS model	Bank size, capital adequacy, credit quality, and operating efficiency have a significant impact on bank profitability. But liquidity has no significant effect on the bank's profitability
Othmani, (2022)	Tunisia	2005 - 2020	Tobin's Q and ROE	Foreign Ownership,	GMM technique. Fixed effect and Random effect Model	Positive relationship between foreign ownership and bank performance. By transferring technology and development of products and services bank with higher level of foreign ownership tend to perform better.
Isik & Ersoy (2022)	China	2006 - 2019	ROA, ROE and NIM	Bank age, Size, Efficiency, credit risk, bank stability, capitalization, growth, financial inclusion, stock market, banking sector development, concentration ratio, CRISIS	Panel Corrected Standard Errors (PCSE) technique is used	For listed banks, there is a positive and linear relationship between bank age and profitability indicators, specifically ROA and ROE. For unlisted banks, there is a quadratic (inverted U-shaped) impact of bank age on financial performance across all profitability models
Hunjra et al. (2022)	Pakistan, India, Bangladesh and Sri Lanka	2009 to 2018	ROA & ROE	Credit risk Non-Performing Loan ratio, Liquidity risk	Generalized Method of Moments (GMM)	Credit risk, liquidity risk, and operational risk have a significant impact on the financial performance of

				Current Ratio, Loan to Deposit ratio. Operational risk, Firm age, Firm growth		commercial banks in South Asia. Nonperforming loans ratio and loan-to-deposit (LTD) ratio have a negative impact on the financial performance of banks. Current ratio and Operational risk haves a positive effect on financial performance of commercial banks in South Asia.
Siddique et al. (2021)	Pakistan and India	2009 to 2918	ROE and ROA	Non-performing loan, Capital adequacy ratio, Cost efficiency ratio, Average lending rate, Liquidity ratio, Bank size Inflation Age	Generalized Method of Moments (GMM) technique. Fixed effect model	Nonperforming Loans, Cost-Efficiency Ratio, and Liquidity Ratio are significantly negatively related to ROA and ROE of South Asian commercial banks. Capital Adequacy Ratio and Average Lending Rate are significantly positively related to the ROA and ROE .
Alfadli & Rjoub (2020)	Gulf Cooperation Council (GCC) countries i.e. include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.	2011 to 2017	Return on Average Assets, Return on Average Equity, Net Interest Margin and Profit	Bank size, Effeciency, Capital adequacy, Liquidity ratio, Credit risk, diversification, concentration ratio, inflation and oil price.	PCSE (Panel-Corrected Standard Errors) Technique and Regression Analysis.	Efficiency, credit risk, diversification, and concentration ratio have a significant negative impact on all the performance measures of the commercial banks. The capital adequacy ratio positively affects all the bank performance measures. macroeconomic indicators influence the financial performance measures of the banks
Szegedi et al. (2020)	Pakistan	2008 to 2018	Return on Asset (ROA) and Return on Equity (ROE) and Tobin's Q	Corporate Social Responsibility Discloser, Size, Age, Capital ratio, overhead expenses	Dichotomous and unweighted disclosure index method was	Banks have been more transparent in disclosing their CSR activities over the study period. Proper disclosure of these

			Tobin's Q	expenses	method was used to construct CSR disclosure index. Regression analysis.	disclosure of these activities has a positive impact on their financial performance, as measured by ROE and ROA.
Isik, (2017)	Turkey	2009 to 2016	ROA and ROE	Income diversification, Deposit level, Bank scale, Bank stability, Credit risk, Lending level, Operating expenses, Capital adequacy	Fixed and random effects panel data estimation technique.	ROA is positively influenced by income diversification, deposit level, bank scale, and bank stability. Bank profitability is negatively affected by credit risk, lending level, operating expenses, and capital adequacy. The impact of internal determinants on bank profitability may vary depending on the ownership structure of the banks in Turkey.
Djalilov & Piesse (2016)	Central and Eastern Europe and the former USSR	2000 to 2013	Return On Assets (ROA)	Capital, Credit risk, cost, size, HHI, GDP growth Inflation, Government spending, Fiscal freedom, monetary freedom.	Generalized Method of Moments (GMM) technique in panel data model.	Credit risk has a positive impact on bank profitability in early transition countries but a negative impact in late transition countries. Government spending and monetary freedom negatively influence bank profitability. Better-capitalized banks are more profitable in early transition countries
Fungacova et al. (2009)	Russia	1999 to 2007	Net Interest Margin	Herfindal Index, Personal cost, Capitalization, Non-performing loan, size, liquidity ratio.	Fixed effects panel data estimation technique.	Market structure, credit risk, liquidity risk, and the size of operations, differ among state-controlled, domestic-private, and foreign-owned banks in the Russian banking sector.

						Operational costs and bank risk aversion are consistent and homogeneous across the different ownerships of the banks.

The table clearly shows that the results of earlier research on the influence of management elements and company to set on bank profitability were mixed and ambiguous. The nations selected, the models utilized, the data sample, the data formats (panel vs. time series), the frequency of the data (annual, quarterly, monthly), the estimation techniques, etc. are some of the factors that contribute to these inconsistent outcomes. Additionally, studies have used a number of proxies to investigate the impact of managerial concerns on bank profitability.

Deposits are seen as liabilities in the banking industry, while issuing debt securities is regarded as an asset. The banking industry is undergoing advancements in both technology and the way services are delivered. With the revolution of technological advancement and strict regulation, traditional banking operations have changed completely. Even though empirical research yields conflicting findings, the management concern pass-through effect has a stronger impact on bank profitability. Only a little amount of research is accessible, as shown in the table, for South Asian nations. Consequently, there is plenty of room for investigation into these concerns.

3. METHODOLOGY OF THE STUDY

Most of the data used in this research work is secondary because of the nature of the investigation. For the analysis of panel data, the models of Pooled Ordinary Least Square (POLS), Fixed Effect (FE), and Random Effect (RE) are frequently used. According to Gangl (2010), the researcher chose to employ the Fixed-effect (FE) model and the Random-effect (RE) model to estimate the causal inference in this work. The model 1 has also been identified using the Hausman test. The test's results validate that the FE model is appropriate for the research variables[1].

3.1. Empirical Approach and Analytical Framework

For the analysis of the study, the annual bank-level unbalanced data set from 57 commercial banks that functioned in Bangladesh from 2007 to 2018 was used. In this study, a panel regression has been performed using the measures of profitability by ROE, ROA, and NIM and workout the competitive power of the degree of concentration. As a result, ROE, ROA, and NIM are considered as the dependent variables, and collections of data particular to banks, industries, and the macroeconomic environment are included as independent variables.

3.1.1. Model Specification

The following linear form will be used as the econometric approach to estimate the model:

$$\pi_{it} = a_0 + \sum_{j=0}^{j} \beta_j \, X^{j}{}_{it} + \sum_{l=0}^{l} \beta_l \, X^{l}{}_{it} + . \sum_{m=0}^{m} \beta_m \, X^{m}{}_{it} + \varepsilon_{it} \quad \text{--------Equation -1}$$

$$\text{Where, } \varepsilon_{it} = v_i + \mu_{it}$$

[1] The chi-square statistics of the pertinent Hausman test is $\chi 2$ (3) = 40.01 with a p-value of 0.0000.

Here, π_{it} is the profitability of bank i at time t; where i = 1, 2, 3….N; t=1, 2,3…T and α is a constant. In contrast, the descriptive variables for bank-specific, industry-specific, and macroeconomic factors are represented by j_{it}, l_{it}, and m_{it} of X_{it}, respectively. The disturbance is represented by ε_{it} with the unobserved bank-specific effect by υ_i and the idiosyncratic error by μ_{it}.

3.2. Data Sources and Sample Description

In the research of impact analysis of managerial factors like liquidity management, the size of the bank and the internal capital generating capability as well as supply side issues such as inflation and bank spread on commercial banks' profitability in Bangladesh. Data were collected from different sources. Data for the dependent variables and bank-specific explanatory factors were gathered from the annual reports of the various banks operating in Bangladesh as well as the Bangladesh Bureau of Statistics were used to compile macroeconomic variables. The description of the variables employed in the study and their expected effect on bank profitability are represented in Table 2.

Table 2
Description of the Variables and Their Expected Impact on Banking Profit

Variables	Notation	Explation	Anticipated Effect
Dependent variables to estimate profitability:			
Return on Asset	ROA	Net Profit to Total Assets ratio	
Return on Equity	ROE	Net Profit to Shareholders Equity ratio	
Net Interest Margin	NIM	net Interest Income to Interest earning assets ratio	
Independent Variables			
a) Bank-Specific Managerial Variables			
i. Cost Efficiency	TE/TR	Total expense to total revenue ratio	-
ii. Liquidity position	LA/TA	Liquid asset to total asset ratio	+
iii. Bank Size	In (TA)	Natural logarithm of total asset of a bank	+/-
iv. Internal capital generation rate	ICGR	(1/Capital ratio) x ROA x earnings retention ratio	+
v. Non-performing loan to total loan ratio	NPL/TL	Non-performing loan over total loan (%)	-
b) Industry- Specific Variables			
vi..Herfindahl-Hirschman Index (HHI)	HHI	Sum of square of market share is a proxy to measure market concentration	+/-
c) Supply side macroeconomic variables			
vii. Inflation rate	(% Inf)	Annual Rate of Inflation (%)	-
viii. Bank Spread	SR	Difference between banks' average lending rates and deposit rates	+

Table 3 provides a summary of the dependent and independent variable statistics for Bangladeshi commercial banks from 2007 to 2018.

Table 3
Descriptive Statistics of the Variables of Banks Operating in Bangladesh from 2007-2018

Variables	No. of Observation	Mean	Std. Dev	Min	Max
Dependent Variable					
Return on Asset (ROA)	579	0.0087	0.0196	-0.1400	0.1260
Return on Equity (ROE)	535	0.3280	0.7560	-8.8140	7.5850
Net Interest Margin (NIM)	581	0.0224	0.0205	-0.0478	0.3400
Independent Variables					
a) Bank-Specific Managerial Variables					
i. Cost Efficiency (TE/TR)	581	1.11e-07	3.19e-07	0	5.93e-06
ii. Liquidity position (LA/TA)	531	0.1870	0.3300	0.0013	5.1860
iii. Bank Size (In TA)	581	25.2100	1.1690	20.9300	27.9000
iv,Internal capital generation rate (ICGR)	508	0.3820	1.1090	-6.8300	15.3000
v. Non-performing loan to total loan ratio (NPL/TL)	543	0.1410	0.4040	0.0000	7.5000
b) Industry- Specific Variables					
vi..Herfindahl-Hirschman Index (HHI)	684	0.0430	0.0064	0.0372	0.0592
c) Supply side macroeconomic variables					
vii. Inflation rate (% Inf)	684	7.3470	1.5710	5.3500	10.6200
viii. Bank Spread (SR)	570	5.1530	0.4020	4.4400	5.9400

According to Table 3, Bangladeshi banks generated average ROA, ROE, and NIM of 0.87%, 32.80%, and 2.24%, respectively, during the period of 2007 to 2018. The corresponding standard deviations of ROA, ROE, and NIM are 0.0196, 0.7560, and 0.0205. These demonstrate significant fluctuations in the profit growth of Bangladeshi banks, which have minimum values of -0.1400, -8.8140, -0.0478 and maximum values of 0.126, 7.5850, and 0.340 for ROA, ROE, and NIM, respectively. This indicates that Bangladeshi banks' profitability has significantly deviated throughout this period. Conversely, among bank-specific variables, the average bank size is 25.21 and standard deviation is 1.1690 with a minimum value of 20.93 and maximum value of 27.90 which indicate poor capacity to survive. Average values for bank-specific factors for the ratios of TE/TR, LA/TA, ICGR, and NPL/TL are 0%, 24.9%, 3.82%, and 14.10%, respectively, with standard deviations of 0%, 147.20%, 116.9%, 110.9%, and 40.40%. The minimal inflation rate and bank spread, in a supply-side macroeconomic framework, are 5.35 and 4.44, respectively, while the highest rates are 10.62 and 5.94, respectively, with a mean of 7.35 and 5.15. For industry-specific factors, HHI has an average value of 4.30% and a standard deviation of 0.64%. (Min. = 3.72%, Max. = 5.92%).

Table 4 demonstrates the correlation matrix and the degree of correlation between the predicted variable and the explanatory variables employed in the regression analysis. The matrix shows that there is a minor relationship between the independent variables. These STATA pair-wise correlation matrixes are abbreviated versions of Table 2.

Table 4

Pair Wise Correlation Matrix

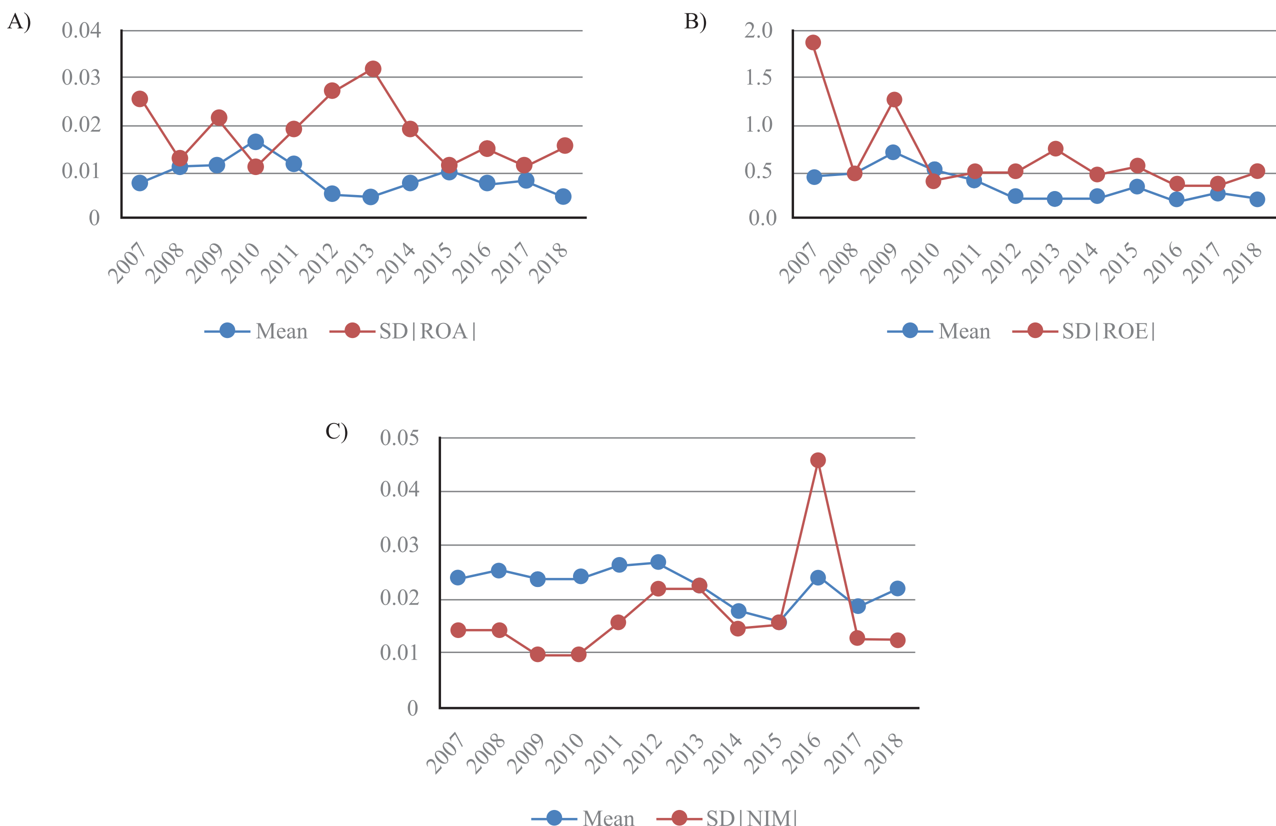
Variables	(roa)	(cost efficiency)	(liquidity)	(log_ta)	(NPL_TL)	(icgr)	(hhi)	(inflation)	(spread)
roa	1.000								
cost_efficiency	-0.032	1.000							
liquidity	0.967***	0.027	1.000						
log_ta	-0.135***	-0.492***	-0.170***	1.000					
NPL_TL	0.004	0.055	0.041	0.034	1.000				
icgr	0.040	-0.114**	-0.021	0.124***	-0.087*	1.000			
hhi	0.008	0.020	-0.007	-0.252***	-0.050	0.123***	1.000		
inflation	-0.047	-0.016	-0.060	-0.137***	-0.067	-0.023	0.278***	1.000	
spread	0.085*	-0.035	0.114**	-0.051	0.053	0.063	0.640***	0.314***	1.000

**** p<0.01, ** p<0.05, * p<0.1*

Figure 1 demonstrates that, across the study period (2007–2018), ROA and ROE both significantly deviated from the mean in 2013, whereas NIM greatly deviated from the mean in 2016. The three profitability numbers show varied degrees of variation from the mean over the period of the study.

Figure 1

The Movement of Average and Standard Deviation of the ROA, ROE, and NIM of Bangladesh's Commercial Banks from 2007 to 2018



3.3. Diagnostic Test

To identify any issues with multicollinearity among the explanatory variables in the investigation, the VIF test is provided in Table 5. The test's findings indicate that the average is less than 2 and that each independent variable's VIF is less than 10 (the VIF cutoff value). Each variable must have a value that is less than 10. As a result, the study's model avoids the multicollinearity issue.

Table 5
Test of Multicollinearity

Variables	VIF	1/VIF
i. Cost Efficiency (TE/TR)	1.87	0.5350
ii. Liquidity position (LA/TA)	1.17	0.8577
Internal capital generation rate (ICGR)	1.10	0.9121
v. Bank Size (In TA)	1.96	0.5097
vii. Non-performing loan to total loan ratio (NPL/TL)	1.08	0.9240
HHI	2.06	0.4850
Spread	2.67	0.3745
inflation	1.62	0.6182
Mean VIF	1.69	

4. ANALYSIS AND EMPIRICAL RESULT

In this research, panel data from 57 commercial banks in Bangladesh for a period of 2007 to 2018 was taken into consideration. To understand the effects of specific features of each group on bank profitability as measured by ROA, ROE, and NIM, fixed effect and random effect models are executed. The output results of the equation-1 consistent regression from the study's empirical model were first displayed. The model's ordinary least squares estimation result was then shown to test the data's robustness. In every context, the researcher approved individual heterogeneity and employed a robust standard error.[2]

In order to support the adoption of fixed effect estimator, Hausman test is performed. Table 6 shows the baseline estimation results for the fixed effect model and an alternative estimation for the random effect model of ROA, which is a proxy variable used to assess the profitability of Bangladesh's commercial banks. The sample data in the study gives significant evidence for the model's best fit because the p-values for the F-test and Wald $\chi 2$ tests are less than the significance level at 1%, 5%, and 10%, respectively.

[2] Confirmed by LM Heteroskedasticity test, along with the corresponding test results (P-Value), are provided in the relevant tables.

Table 6

Outcome of the Fixed-Effect (FE) Model and Random Effect (RE) Model Estimation to Assess the Significance of Some Bank Specific Management Variables that Accelerate Bank Profitability proxied by ROA in the Commercial Banks of Bangladesh during 2007 to 2018

Variables Dependent Variable: Return on Asset (ROA)	**Fixed Effect (FE) Estimation** Coefficient (β)	**Random Effect (RE) Estimation** Coefficient (β)
Independent Variables :		
Bank Specific Variables :		
Cost Efficiency	-15221.7	-23088.1
	(9504.9)	(16259.2)
Liquidity position	0.080***	0.081***
	(0.0022)	(0.0025)
Bank Size	-0.026***	-0.015**
	(0.0051)	(0.0049)
Non-performing loan to total loan ratio	0.0059	0.0012
	(0.0045)	(0.0036)
Internal capital generation rate	0.0073***	0.0080***
	(0.0021)	(0.0021)
Industry Specific Variable :		
.Herfindahl-Hirschman Index	-2.70**	-1.19
	(0.86)	(0.75)
Supply Side Economic variable:		
Inflation rate	-0.0015*	-0.00044
	(0.0010)	(0.0010)
Bank Spread	0.0037	-0.0021
	(0.0067)	(0.0069)
Constant	0.75***	0.44**
	(0.16)	(0.16)
Number of observations	388	388
F-State (P-Value), Wald χ^2,	F(8,325) = 24.96	
	(0.0000)	
R^2	0.9440	
Hausman Test, χ^2 (3)	41.01	
(P-value)	(0.0000)	
LM Heteroskedasticity Test, $\chi2(55)$	3.6e+32	
(p-value)	(0.0000)	

Note: The above table depicts the regression output for the baseline estimate of ROA determinants from the fixed effect model and the alternative estimator of ROA determinants from the random effect model. At the 0.01, 0.05, and 0.10 level, coefficients that are significantly different from zero are shown with ***, **, and *, respectively. The Wald test was used to evaluate the model's goodness of fit, and the Hausman test supported the use of a fixed effect estimator. The LM heteroskedasticity test validates the model's use of robust standard error.

Table 6 shows the baseline estimation results of the fixed effect model and the alternative estimation results of the random effect model for ROA, a proxy variable used to assess the profitability of Bangladeshi commercial banks. The p-value of the F-test and Wald $\chi2$ test in the model is less than the significance level at 1%, 5% and 10% which means that the sample data in this study gives significant evidence regarding the best fit of the model. According to the study expectations and Quoc et al. (2022), the empirical study suggests the profitability of the bank is significantly influenced by its

liquidity status, as indicated by the ratio of liquid assets to total assets. This finding signifies that1% increase in liquid assets enhances profitability by 8.1 %. Banks that hold more liquid assets require less capital to mitigate risk during instability and can generate more profit by providing the availability of loanable funds.

Because of the strong and unfavorable correlation between bank size and ROA, profitability will decline as assets grow. This result is similar to the research work performed by Mosharrafa and Islam (2021). This is due to the fact that smaller banks are easier to manage than larger ones, resulting in larger banks having lower efficiency and higher administrative costs. This result is consistent with research that has been done by Rahman et al. (2017), Zheng et al. (2017), Alim et al. (2021), Iaik (2017) and Caliskan & Lecuna, (2020). It is observed that the internal capital generation rate (ICGR) is significantly positive with ROA. It says that every 1% increase in internal capital generation rate would increase the profitability of the bank by 0.73%. This finding agrees with the findings of Grzeta et al. (2023), Thanh & Thu (2020) and Islam and Mosharrafa (2021). It suggests that higher ICGR will have an impact on the expansion of the bank's asset base, which would result in higher profitability. This strong correlation proves that a larger capital requirement is necessary to increase internally generated profit rather than borrowing money from outside sources. The Basel III agreement recommends using ICGR as a beneficial instrument to maintain an acceptable level of buffer capital. It emphasizes the value of capital when determining management's profit rates, growth rates, and dividend policies (Gup & Kolary, 2005).

HHI on bank profitability employed to determine the deterministic power of the market structure, and it became clear that there had been a negative and significant impact on banking profit. This indicates that competition in Bangladesh's banking industry has a detrimental influence on profitability which is consistent with the studies of Fungacova et al. (2009) and Alim et al. (2021). In terms of macroeconomic variables, inflation and ROA are inversely related, meaning that as inflation rises, profitability will fall. This implies that if inflation rises, fund costs will also rise, ultimately lowering bank profitability. According to Mosharrafa (2015), credit rate of commercial bank has a significant positive impact on the performance of banks. So, bank spreads promote favorable bank profitability. In order to increase bank spread, which eventually boosts bank profitability, banks must demand higher interest rates on loans while paying lower rates on deposits. According to the loanable fund hypothesis, if demand for loanable funds exceeds supply, the bank spread will be high, which means that banks will have higher lending rates as a result of the excess demand for loanable funds. This indicates that banks will seek to increase net interest margins by raising interest income in order to generate more profit (Rahman et al., 2023).

Table 7 shows the baseline estimation results for the fixed effect model and the alternative estimation results for the random effect model of ROE, which is a proxy variable used to measure the profitability of Bangladeshi commercial banks. The sample data used in the study serve as sufficient proof that the model provides the best fit because the p-values for the Wald $\chi 2$ test and F-tests in the model are less than the significance level at 1%, 5%, and 10%, respectively.

Table 7

Outcome of the Fixed-Effect (FE) Model and Random Effect (RE) Model Estimation to Assess the Significance of Some Bank Specific Management Variables which Accelerate Bank Profitability Proxied by ROE in Bangladeshi Commercial Banks from 2007 to 2018.

Variables	**Fixed Effect (FE) Estimation**	**Random Effect (RE) Estimation**
Dependent Variable: Return on Equity (ROE)	Coefficient (β)	Coefficient (β)
Independent Variables:		
Bank Specific Variables:		
Cost Efficiency	93755.5	-221809.8
	(593622.7)	(403728.0)
Liquidity position	0.0010	0.0044
	(0.012)	(0.012)
Bank Size	-0.026	0.0036
	(0.088)	(0.076)
Non-performing loan to total loan ratio	0.12	0.096
	(0.11)	(0.092)
Internal capital generation rate	0.39*	0.39*
	(0.19)	(0.18)
Industry Specific Variable :		
Herfindahl-Hirschman Index	29.0	36.8**
	(17.6)	(14.1)
Supply Side Economic variable:		
Inflation rate	0.0020	0.0042
	(0.027)	(0.022)
Bank Spread	-0.099	-0.13+
	(0.10)	(0.079)
Constant	0.17	-0.71
	(2.65)	(2.21)
Number of observations	389	389
F-State (P-Value), Wald χ^2,	F(8,326) = 19.77	
	(0.0000)	
R^2	0.3104	
Hausman Test, χ^2 (3)	41.01	
(P-value)	(0.0000)	
LM Heteroskedasticity Test, χ2(55)	4.4e+06	
(p-value)	(0.0000)	

Note: The aforementioned table revealed the regression output from the fixed effect model as the baseline estimator and random effect model as an alternate estimator of the determinants of ROE. Coefficients which are significantly different from zero at 0.01, 0.05 and 0.10 level are marked with ***, **, * respectively. To test the goodness of fit of the model, Wald test was performed while Hausman test confirms the justification of employing fixed effect estimator. LM heteroskedasticity test confirms the use of robust standard error in the model.

Even though ROE is used as a proxy for measuring bank profitability, both in fixed effect and random effect models, the internal capital generation rate beta coefficient showed the anticipated positive sign. Based on the results of the regression, a 1% increase in the internal capital generation rate would boost bank profitability by 39 basis points.

According to HHI's assessment, the market structure has a deterministic impact on bank profitability that is beneficial and statistically significant with ROE. It implies that competition in Bangladesh's banking industry has a big impact on raising its profitability.

In Table 8, fixed effect and random effect models are executed by considering NIM for measuring the profitability of banks. The cost of financial intermediation is revealed by NIM. The majority of the findings line up with those listed in Table 6 in most cases. To be more precise, liquidity position is found to be highly significant and positively correlated with NIM which is similar to the findings of Alim et al., (2021) and Caliskan & Lecuna, (2020). This ratio reflects the efficiency of the bank. Efficiency in liquidity management will lead to enhanced profitability.

Table 8

Outcome of the Fixed-Effect (FE) Model and Random Effect (RE) Model Estimation to Assess the Significance of Some Bank Specific Management Variables that Accelerate Bank Profitability Proxied by NIM in Commercial Banks of Bangladesh from 2007 to 2018.

Variables	**Fixed Effect (FE) Estimation**	**Random Effect (RE) Estimation**
Dependent Variable: Net Interest Margin (NIM)	Coefficient (β)	Coefficient (β)
Independent Variables :		
Bank Specific Variables :		
Cost Efficiency	-133827.8*	-130820.1*
	(71804.0)	(66380.4)
Liquidity position	0.22***	0.22***
	(0.0067)	(0.0079)
Bank Size	-0.056**	-0.040*
	(0.016)	(0.018)
Non-performing loan to total loan ratio	0.019*	0.017*
	(0.0077)	(0.0075)
Internal capital generation rate	-0.00034	-0.00025
	(0.0022)	(0.0022)
Industry Specific Variable :		
.Herfindahl-Hirschman Index	-6.08*	-3.70*
	(2.45)	(2.09)
Supply Side Economic variable:		
Inflation rate	-0.0038*	-0.0025
	(0.0018)	(0.0017)
Bank Spread	0.020	0.012
	(0.013)	(0.011)
Constant	1.58**	1.09*
	(0.49)	(0.52)
Number of observations	390	390
F-State (P-Value), Wald χ^2,	F(8,327) = 12.21	
	(0.0000)	
R^2	0.9431	
Hausman Test, χ^2 (3)	41.01	
(P-value)	(0.0000)	
LM Heteroskedasticity Test, $\chi 2(55)$	4.6e+31	
(p-value)	(0.0000)	

Note: The above table discloses the regression output from the fixed effect model as the baseline estimator and random effect model as the alternative estimator of the determinants of NIM. Coefficients which are substantially different from zero at 0.01, 0.05 and 0.10 level are marked with ***, **, *

respectively. To test the goodness of fit of the model, Wald test was performed while Hausman test confirms the justification of employing fixed effect estimator. LM heteroskedasticity test confirms the use of robust standard error in the model.

Robustness Check: Robustness checks can be performed in a variety of ways, such as changing the dependent variable's measure, changing the regression analysis's methodology, changing the control variable, etc. To test the reliability of estimation outputs, the regression of equation 1 was carried out in this study utilizing the Ordinary Least Square (OLS) estimation method (Table 9). The basic results of the study's findings are identical. The estimation results are consistent with the earlier findings, namely that liquidity position, bank size and internal capital generation rate, all significantly affect bank profitability as shown in Tables 6, 7, and 8. It is absolutely the case that the baseline estimation output is reliable.

Table 9

Outcome of the Ordinary Least Square (OLS) Model Estimation to Assess the Significance of Some Bank Specific Management Variables that Accelerate Bank Profitability Proxied by ROA, ROE and NIM in Bangladeshi Commercial Banks from 2007 to 2018 (Robustness Check)

Variables	**Return On Assets (ROA)**	**Return On Equity (ROE)**	**Net Interest Margin (NIM)**
	Coefficient (β) (Robust Standard Error, σ)	Coefficient (β) (Robust Standard Error, σ)	Coefficient (β) (Robust Standard Error, σ)
Independent Variables :			
Bank Specific Variables :			
Cost Efficiency	-23088.1	-221809.8	-130820.1*
	(16259.2)	(403728.0)	(66380.4)
Liquidity position	0.0808***	0.00435	0.224***
	(0.00245)	(0.0123)	(0.00794)
Bank Size	-0.0154**	0.00358	-0.0396*
	(0.00487)	(0.0761)	(0.0177)
Non-performing loan to total loan ratio	0.00124	0.0956	0.0167*
	(0.00363)	(0.0917)	(0.00747)
Internal capital generation rate	0.00799***	0.389*	-0.000246
	(0.00214)	(0.179)	(0.00217)
Industry Specific Variable :			
Herfindahl-Hirschman Index	-1.194	36.78**	-3.702+
	(0.753)	(14.05)	(2.085)
Supply Side Economic variable:			
Inflation rate	-0.000440	0.00416	-0.00253
	(0.00103)	(0.0223)	(0.00173)
Bank Spread	-0.00211	-0.133+	0.0116
	(0.00690)	(0.0793)	(0.0105)
Constant	0.442**	-0.708	1.088*
	(0.157)	(2.210)	(0.525)
Number of observations	388	389	390
F-State (P-Value), Wald χ^2*,*	F(54, 325) = 7.50 Prob > F = 0.0000	F(54, 326) = 2.65 Prob > F = 0.0000	F(54, 327) = 9.18 Prob > F = 0.0000
R^2	**0.9220**	**0.3104**	**0.9431**

5. CONCLUSION

This research study provides an in-depth, alternative viewpoint on some managerial issues that are responsible for increasing the earning potential of Bangladeshi banks. The research study provides empirical findings from 388 observations for 12 years period from 2017 to 2018. It demonstrates the impact of some definite bank management variables such as, liquidity management, bank size and in-

ternal capital generating ability on the profit generating capacity of commercial banks in Bangladesh.

With a few exceptions, this research study's conclusions and the direction of the correlation of predictor variable with the response variable are consistent with those of other studies. The findings of the study showed that the effects of the factors varied while using various profitability proxies. The study's conclusions showed that each component of the investigation was pertinent. The panel data analysis results of the study can be summarized as follows: (i) encourage banks to maintain a healthy liquidity position to manage risks and support lending during economic instability. (ii) monitor bank growth to ensure efficiency, as larger banks can face lower efficiency and higher costs. (iii) promote strategies to increase the internal capital generation rate (icgr), which positively affects profitability. (iv) align regulations with international standards like Basel iii to maintain buffer capital levels. (v) encourage banks to manage capital strategically in line with profit, growth, and dividend objectives. These measures can enhance banking sector stability and profitability, benefiting the broader economy.

This study exclusively centers on the Bangladeshi commercial banking sector. Nonetheless, it's worth exploring if our findings apply to other emerging economies. Comparative analysis across countries could offer insights into internal capital generation and performance. Additionally, studying the influence of bank size and liquidity in different financial systems could yield compelling findings. The findings of the study revealed that prolonged time adjustments are recommended in the variables to raise bank profitability and that the study is highly pertinent to legislation. Coordination between the management, relevant stakeholders, and policymakers can boost the effectiveness and profitability of the banks, ensuring Bangladesh's sustained growth.

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ORIGINAL ARTICLE

THE SIGNIFICANCE AND USE OF TAKAFUL INSURANCE IN THE ISLAMIC FINANCE SYSTEM*

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Özgür AKPINAR

Abstract
In recent years, there has been a significant and swift advancement of the Islamic financial system, also known as interest-free finance. While the Islamic finance system is growing and developing so rapidly, the place and importance of takaful insurance, which is the cornerstone of the system, in the Islamic finance system are increasing day by day. The transactions carried out in the Islamic finance system, which operates in accordance with Islamic procedures and rules, can be carried out smoothly thanks to the financial protection and trust offered by takaful. Therefore, this article sheds light on how important and necessary takaful, one of the most important financing methods of the Islamic finance sector, is for the Islamic finance system.

Keywords
Financial System, Islamic Financial System, Takaful Insurance.

JEL Classification
F30, F65, M21.

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1. INTRODUCTION

From past to present, individuals have endeavoured to eliminate or minimise the risks they face throughout their lives. However, as a result of the differentiating and developing world life and the aggravation of living conditions over time, individuals have come to the point where they cannot undertake the risks they face alone, especially financially. Large organisations were needed in order to cover these increasing risks that could no longer be undertaken by individuals, and thus the idea of insurance emerged. With industrialisation, the areas that can be insured have increased and the need and interest of legal entities in insurance has come to light. In this direction, the first applications of the insurance system started to be implemented primarily in western societies. Over time, these applications have developed and differentiated.

This insurance system, which was developed, could not find the opportunity to develop in Muslim countries because it contains interest, which is prohibited by Islam, and contains uncertainty. Because the people in Muslim countries have stayed away from insurance due to interest sensitivity. However, the fact that the Muslim population also wanted to benefit from insurance services without being involved in interest brought about the search for a new insurance model. As a result of this search, the application called "takaful", which is planned to be an alternative to traditional insurance, was put into practice. Takaful insurance was first introduced and developed in Islamic countries. Looking at the world in general, although the desired level of prevalence and recognition has not yet been reached, interest in the takaful insurance system has increased significantly, especially in Western countries where Muslims live in large numbers. Increasing its application areas and insurance rates day by day in Western countries, takaful insurance is a decisive actor for the Islamic finance system to reach the place it deserves worldwide.

In this article, firstly, a general definition of the classical finance system is made and the functioning of the classical finance system is examined superficially. Then, a detailed description of the Islamic finance system is made, the structural features and basic principles of the Islamic finance system are explained, and the development processes in the world and in our country are explained. The reasons for the preference of the Islamic finance system have been emphasised and the importance of the Islamic finance system in the development of economies has been emphasised. It is thought that Islamic finance, which has its own application areas and methods, will be an alternative or complementary to the classical finance system. In this direction, Islamic financing methods are also mentioned in our study. The main purpose of this study is to explain the place and importance of takaful insurance, which is one of the most important Islamic financing methods based on solidarity and solidarity, in the Islamic finance system. In the study, the effects of takaful insurance on the development of the Islamic finance system are emphasised. It is concluded that takaful has an increasing importance in the Islamic finance sector and its share is gradually increasing.

The contribution and importance of this study to the literature can be explained as follows: There are almost no studies in the literature that explain the place of takaful insurance in the Islamic finance system and emphasise the importance of takaful insurance in the development of the Islamic financial system. This study aims to fill this gap in the literature.

2. LITERATURE REVIEW

Since the number of studies explaining the place and importance of takaful insurance in the Islamic finance system is very small in the literature, during the literature review, we came across more studies explaining the Islamic finance system, examining the place of Islamic finance in the global economy, examining the development for Islamic finance, and mentioning the increasing importance of takaful insurance. Some of these studies are explained in chronological order below.

In his related book, Ibrahim Warde (2000) analysed the place of Islamic finance in the global economy and found that Islamic finance is suitable for the global economy in many respects. Warde

stated that Islamic finance is not an income-based financial system and that Islamic finance has a wider development area with the globalisation of the financial system.

Alsadek H. Gait & Andrew C. Worthington (2007) emphasised the definition, characteristics, general structure and basic principles of the Islamic finance system in their article. The sources and methods used by the Islamic finance system are explained in detail in the related article. The aim of this study is to explain the Islamic finance system in its main lines.

Heiko Hesse, Andreas Jobst & Juan Sole (2008) stated in their article that the Islamic finance system has spread throughout the world as well as Muslim countries and thus gained a serious growth momentum. They stated that the Islamic finance system, which has achieved such a growth rate on a global scale, harbours a much greater potential. In addition, the problems experienced by the Islamic finance system were also discussed and analysed in the related study.

Bala Shanmugam & Zaha Rina Zahari (2009), after explaining Islamic finance in general, explained the legal aspect of Islamic finance. Subsequently, they explained Islamic banking, Islamic capital market and takaful (Islamic insurance) one by one in detail. In addition, in the related study, the difficulties faced by the Islamic finance system were expressed and the future of Islamic finance was discussed.

Ajmal Bhatty (2010) emphasised the increasing importance of takaful insurance in his study. Bhatty stated that takaful insurance has added great value to the classical insurance on a global scale and that takaful insurance has a high potential to be successful in many sectors where the classical insurance sector does not dare to enter. He determined that the Islamic finance system and takaful have a continuously growing structure and contribute positively to the world economy.

In his article, Ahmad M. Mashal (2012) emphasised the existence of the Islamic finance system within the global financial system. Mentioning the growth potential of the Islamic finance sector and thus takaful in different sectors, Mashal also included solution suggestions for the development of the Islamic finance system in the future.

In his book, Tarıq Alrifai (2015) provides a brief and comprehensible summary of the past financial crises in the world and then explains the Islamic financing instruments and the functioning of Islamic finance. In his book, Tarıq Alrifai argued that Islamic finance can protect the world from future financial crises.

In the article published by Dr. Sabri Öz & Mehmet Ali Işık (2019), the application areas of takaful insurance, which has an important role in the development of Islamic finance, in Turkey and the UK were compared. In the related study, which is a literature review, the idea of cooperation between the two countries for takaful insurance, which will trigger the development of Islamic finance, was brought to the agenda.

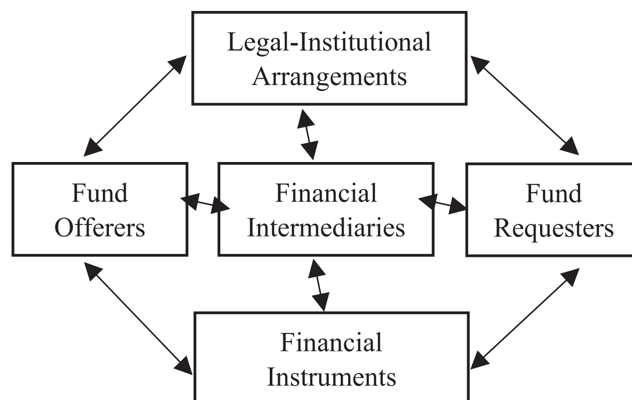
3. FINANCIAL SYSTEM AND ITS FUNCTIONING

The financial system is a holistic system that emerges when more than one intermediary institution, market or organisation comes together to use various financial instruments (money, stocks, bonds, etc.). All savings in the economy can be transformed into investments thanks to a sound financial system. In addition, all performances of an economy at micro and macro levels are shaped by the financial system. The main determinants of the financial system are categorised in four main groups. On one side of the system, there are savers whose incomes are higher than their expenses and who offer their savings to those who demand funds in return for a certain profit share. On the other side of the system, there are those who seek financing support for their investments whose expenses are higher than their incomes and who demand funds from the system. Here, there are intermediary institutions that bring together fund demanders and fund suppliers with the least cost and result in the most efficient fund transfer. These intermediary institutions facilitate the transfer of funds. Legal and administrative institutions that ensure the proper functioning of the system are indispensable elements of the financial system. Therefore, when we look at the functioning of the financial system, savers

who are in the position of fund providers transfer their savings to fund demanders in an environment of trust created by legal and administrative institutions with the support of intermediary institutions (Afşar, 2007).

Figure 1

Structure of the Financial System



Source: Aslı AFŞAR, "The Relationship between Financial Development and Economic Growth", Journal of Accounting and Finance, Issue 36, 2007, p.189.

3.1. Definition of Islamic Finance

The Islamic finance system is the system that ensures that financial activities are carried out in accordance with Islamic sensitivities. This system was born as an alternative to the classical finance system in a way that does not contain interest within its structure due to the prohibition of interest by the Islamic religion. The main purpose of the Islamic finance system, which is thought to have emerged as a kind of reaction to the classical finance system, is to ensure that the Islamic finance system can be integrated into the existing (interest-bearing) finance system as a complementary (Çelik, 2016).

3.2. Structural Characteristics and Basic Principles of Islamic Finance System

3.2.1. Structural Properties

• Islamic Finance is Still in the Developmental Stage

The history of the Islamic finance system is approximately 50 years old worldwide. The history of the concepts and terms used in the Islamic financial system dates back to the beginning of the fourteen hundred year old Islamic religion. The full use of these concepts and terms within the existing financial system and their fusion with the existing financial system is an event that will take place over time. Therefore, we can say that the growth and development of the Islamic finance system will continue for many more years.

• Islamic Finance is Growing Fast but Developing Slowly

The Islamic finance system has developed and grown rapidly in 50 years. Various Islamic finance products have been developed and the amount of funds accumulated in the Islamic finance system has increased rapidly. However, it takes considerable time for the Islamic finance system to adapt to the classical finance system and to work in full harmony with the classical finance system. Due to this slow adaptation process, the rate of development of the Islamic finance system also slows down. When we look at it, many concepts such as inflation and globalisation, which are indispensable ele-

ments of the classical finance system, have only recently started to be used in the Islamic finance system. This is one of the main indicators of slow development. This problem, which slows down the development of the Islamic finance system in the coming years, will need to be resolved.

• Islamic Finance is a Human Based System

The Islamic finance system also has a humanitarian aspect. When the very foundation of the system is analysed, it is understood that it is based on the human being, who is defined by Islam as "a person with good morals". The Islamic finance system can only work in accordance with the rules of Islam thanks to people with good morals. At every point where the system fails, it is seen that there are people who make wrong choices.

• Islamic Finance is Based on Islamic Law

Islamic finance system is a system shaped by the rules of Islamic law. Islamic law is the determinant of the functioning of the Islamic finance system. Therefore, Islamic law is the most fundamental element of the Islamic finance system. Understanding whether the transactions carried out within the system are in accordance with the requirements of the Islamic religion, the rules of Islamic law, and whether the system is functioning correctly requires an important determination process. In Islamic financial institutions (participation banks, takaful insurance companies, etc.), "sharia advisory boards" have been established within the institutions in order to make this determination and control.

When we look at the organisational structure of Islamic financial institutions, we see advisory boards different from the organisational structure of conventional financial institutions. In our country, Sharīʼah advisory boards are only named as "advisory boards" without the word "Sharīʼah" for various reasons. The Sharia advisory board established in 1976 within the Faisal Islamic Bank of Egypt is the first Sharia advisory board. These first advisory boards were established at the request of Islamic financial institutions. Over the years, the need for these boards has increased and the number of these boards has also increased. Today, Islamic financial institutions are obliged to establish advisory boards within their organisations. Advisory boards are the most important reason for the customers of the Islamic finance system. Because the existence of these boards significantly increases the reliability and preferability of the institutions. The task of determining the suitability of each new product developed for the financial system to the Islamic finance system also belongs to the advisory boards (Yanpar, 2021).

3.2.2. Basic Principles

• Principle of Prohibition of Interest (Riba)

Islamic law labels interest as "riba". However, the concept of riba is a more comprehensive and broad concept than interest. Ribâ has many meanings such as "increase, multiplication, multiplication of the money lent, surplus value that has no equivalent". Islam has also prohibited interest (ribâ) and interest-bearing transactions. Therefore, the prohibition of interest (ribâ) is accepted as the main principle of the Islamic finance system. When a debt relationship is analysed, ribā here refers to the excess that the lender creditor gains over the principal amount lent in the event that the lender creditor repays the debt with interest. In other words, it means the unjust enrichment of the lender creditor and the impoverishment of the borrower. However, Islam supports lending to those in need (without expecting a return such as interest) as a favour. For this reason, interest (ribâ) is prohibited in principle in the Islamic finance system because it is contrary to the requirements of Islam. Parties in the Islamic finance system cannot engage in activities involving interest. The products in the Islamic finance system must not contain interest.

• Principle of Prohibition of Speculation and Garar (Uncertainty)

According to Islamic law, gharar is used in various meanings such as “excessive uncertainty, risk and danger”. Therefore, the uncertainty of the maturity or delivery date in sales transactions and trade is undesirable in terms of Islamic law. Because in financial transactions where uncertainty is dominant, one of the parties faces the danger of being exposed to all kinds of risks. This uncertainty is considered speculation under Islamic law and is prohibited. Uncertainty is a serious problem in the classical finance system. The Islamic finance system aims to avoid this problem. The absence of the concept of uncertainty in the Islamic finance system makes the system more reliable, more transparent and of higher quality. Disputes that may arise between the parties due to uncertainty will be minimised.

• Profit and Loss Sharing Principle

According to this principle, profit and loss are shared among the parties of the Islamic finance system. It is known that the Islamic finance system attaches importance to sharing and partnership. For this reason, the parties of the Islamic finance system share both profit and loss in proportion to their shares and bear responsibility towards each other.

• Principle of Avoiding Haram Goods and Activities

With this principle, many activities such as armament, alcohol, tobacco and drug trade, sale of pork, black marketeering, interest-bearing transactions, games of chance and gambling (maisir), which pose a serious problem for the classical financial system and damage the classical financial system, are not included in the Islamic financial system because they are considered unethical. Islamic law considers gambling and games of chance as games where one party wins and the other party loses. Since the main purpose of all financial transactions is for both parties to win, gambling is prohibited in the Islamic finance system. Therefore, all speculative transactions are prohibited.

3.2.3. Reasons for Preference of Islamic Finance

In recent years, interest in the Islamic finance system has increased significantly. The basis of this increased interest lies in the rapid growth of the Islamic finance system in the last few years. In addition to its rapid growth, the Islamic finance system is on its way to becoming an alternative to the classical finance system as a system with a high moral dimension in the coming years. Because in the most difficult times, during the most serious financial crises, the Islamic finance system has proved that it can be stronger, more robust and more ethical than the classical finance system. During periods of global financial crisis, the Islamic financial system has been less affected by the crisis than the classical financial system and has been able to protect itself. Another main reason for the increasing interest is the realisation that the Islamic financial system can be an alternative to the classical financial system in the process of greed control. It is seen that the most important motivation source of individuals in capitalism is “greed”. In fact, although ambition is considered to be positive and necessary for individuals to improve themselves and for economies to develop, it is an undeniable fact that excessive ambition is harmful. Since the classical financial system is also under the influence of capitalism, it incorporates the greed factor to a significant extent. For this reason, it is subject to criticism. In addition, it is seen that all financial crises are caused by uncontrollable greed and have severe consequences. At this point, the Islamic finance system has been put into use as an alternative system in order to control the greed factor. The most important and necessary reason for the emergence of the Islamic finance system is the financing of the development of the Islamic world. When we look at the world in general, since most of the Islamic countries are unfortunately developing or undeveloped countries, the Islamic finance system has been established in order to ensure the development of these

countries and their access to the status of developed countries. Because the classical finance system did not play an active role in financing these countries (Yanpar, 2021).

3.3. Historical Development of Islamic Finance System

3.3.1. Islamic Finance in the World

When we look at the world in general, we see that the Islamic finance system started to develop and spread in the 1970s. The 2000s were the years when the Islamic finance system was fully integrated with the classical finance system. Especially countries such as the Gulf countries, Malaysia and Egypt have undertaken serious responsibilities and made serious breakthroughs in order to support the growth and development of the Islamic finance system. In fact, the need to finance the funds of these countries, which were already oil exporters and had a large amount of surplus funds, triggered the emergence of the Islamic finance system (TKBB, https://tkbb.org.tr/Documents/arastirma-ve-raporlar-102/Islami_Finans.pdf, 2023).

Islamic countries have been exploited by western countries for centuries. Unfortunately, Islamic countries could not develop and become economically independent countries due to the effect of exploitation. In recent years, Muslim people have started to rebel against this situation and to seek their rights more loudly in order to regain their freedoms, especially economic freedoms. The fact that the people are now acting consciously has been a source of hope. The most important event that raised these voices and disturbed the Muslims was that the financing of the construction of the Suez Canal was carried out by a British bank and an interest-bearing financing was preferred. Over the years, Arab and Indian religious scholars have searched for a way to incorporate the rules and principles of Islam into the financial system. In 1963, the “Pilgrim Savings Company” known as “Tabung Haii”, which was established in Malaysia for the purpose of saving the savings of Muslims for pilgrimage, was the first company to use the Islamic finance system. If we look at the development stages of Islamic finance historically; the first Islamic bank was established in Egypt in 1963. In 1971, the first state-sponsored, interest-free bank, “Nasser Social Bank” was established in Egypt. In 1975, the first privately supported, interest-free bank was established in the UAE. In the same year, the “Islamic Development Bank (IDB)” was established in Saudi Arabia (Jeddah) to enable oil-rich countries to finance their savings without interest. In 1976, the “1st International Conference on Islamic Economics”, the first academic meeting on the future of Islamic economy, was held in Mecca. In 1979, the first takaful insurance company was established in Sudan. These rapid developments in Islamic countries have also mobilised Western countries. One of the most important developments in the West was the establishment of the “Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)” in 1991 (Güçlü, 2020).

3.3.2. Islamic Finance in Turkey

In our country, Islamic finance first started to develop in the field of banking. The Islamic finance system started to take shape with the establishment of Turkey’s first interest-free banks known as “Special Financial Institutions (SFCs)”. In 1985, “Albaraka Türk and Faysal Finans”, the first SPFI, were established. In the following years, Kuveyt Türk was established in 1989, Anadolu Finans in 1991, İhlas Finans in 1995 and Asya Finans in 1996. The establishment of SLFIs also facilitated the spread of Islamic banking. In 2005, the “Banking Law” numbered 5411 was enacted and the name of the SLFs was changed to “participation banks”. In 2009, “Neova Insurance”, the first takaful insurance company, was established. In 2010, Kuveyt Türk Participation Bank became the first bank to issue sukuk. On 1 April 2010, the CMB issued the “Communiqué on Principles Regarding Lease Certificates and Asset Leasing Companies”. In the related communiqué, sukuk is defined as lease certificates. In 2012, the first interest-free pension company “Bereket Emeklilik” was established. On 30 October

2013, the "World Bank Global Islamic Finance Centre" was opened in Istanbul. On 21-23 December 2013, the BRSA and the Participation Banks Association of Turkey (TKBB) organised the first "Interest-Free Finance and Participation Banking Workshop". In 2015, the first public participation bank "Ziraat Participation" was established. Also in 2015, the "Interest-Free Finance Coordination Board" was established. In 2016, another participation bank, "Vakıf Participation" was established (Özdemir & Aslan, 2017).

3.4. Islamic Financing Methods

3.4.1. Mudaraba (Profit Sharing)

The meaning of the word mudaraba is "labour-capital" partnership with the shortest definition. In this method, the owner of labour (entrepreneur) is called mudârib and the owner of capital (property) is called rabb al mal. Mudarabah (Profit Sharing) Model is the most widely used model in takaful insurance. According to this model, the capital owner is the participants who participate in the system by making teberru (donation) payments, and the labour owner is the takaful insurance companies that participate in the system by putting their experience, knowledge, expertise and time into the system. In this method, profit sharing principles are applied. In case a profit is obtained from the system, the profit is shared between the parties in proportion to their shares. In case of financial loss, this loss belongs entirely to the participants who own capital. On the other hand, the loss of takaful insurance companies, which are in the position of mudarib, occurs in the form of loss of time and labour in the system. Therefore, the takaful insurance company is a partner in profit but not in loss (Öner, 2021). Participation banks also operate participation accounts with the mudaraba method. Participation banks can be a partner in this partnership as mudarib or capital owner.

3.4.2. Musharakah (Profit and Loss Partnership)

In this method, the parties are involved in the system as both capital and labour providers during the establishment of the partnership. In fact, unlike the mudarabah model, both parties put their labour and capital into the system at the same time. In participation banking, some of the capital required is provided by the participation bank and some by the customer. In the Musharakah method, the parties share in the profit and loss obtained from the system in proportion to their shares. This is the main feature of this method. The parties who share in the profit are also partners in the loss (Yılmaz & Bağış, 2021). When we look at it, we come across the cooperative model as the model in which the "profit-loss partnership" method works best in takaful insurance. Since the main purpose of takaful insurance companies established as cooperatives is not to make profit, profit and loss are shared among the participants in proportion to their shares (Üstün, 2014).

3.4.3. Murabaha (Profitable Sale on Order)

It is the most widely used Islamic financing method by participation banks. Murabaha, which literally means "increase, profitable sale", is defined as "sale with profit declaration" on the official website of the Participation Banks Association of Turkey (2022). It is the process of buying a commodity in cash from the first seller by the participation bank and selling it to the customer on a deferred basis by adding a certain amount of profit to it upon the customer's instruction or promise to purchase (TKBB, 2022). Since it is a very practical method, it draws attention as the most preferred fund utilisation method (Serçek & Yıldız, 2022).

3.4.4. Financial Leasing/Leasing (Lease Ending with Transfer of Ownership)

Leasing is defined in the Interest-Free Finance Glossary published on the official website of the Participation Banks Association of Turkey (2022) as "a financing method that provides the transfer of the right of use of a good to the lessee in return for a rental fee while the ownership of the property remains with the financial institution and the transfer of the ownership to the lessee at the end of the specified period, usually at a symbolic price". Financial leasing transaction must be based on a financial leasing agreement. The lessor financial institution (e.g. participation banks) must transfer the ownership of the goods to the lessee at the end of the lease period in order to provide financing. In this case, the lease period should be long enough to cover more than 80% of the economic life of the relevant good. At the end of the lease term, the lessee is granted the right to purchase (Yılmaz, Atalay, Aksoy & Aslantaş, 2015).

3.4.5. Exception

It is a financing method in which the payment can be made in cash, in instalments or in advance by first selling a good that has not yet been produced and then producing and delivering it within a certain period. The exception method is a method frequently used by participation banks, especially in shipbuilding and all kinds of construction projects. For the relevant construction project, the customer first applies to the participation bank. The participation bank also contacts the construction company (Yılmaz & Bağış, 2021).

3.4.6. Selem (Advance Sale)

Selem is defined in the Interest-Free Finance Dictionary published on the official website of the Participation Banks Association of Turkey (2022) as "the contract made by the buyer to sell the goods purchased by the selem contract to a third party before the goods are delivered" (TKBB, 2022). The process of selling goods with a certain quality and maturity in advance is called selem. Selem is mostly seen in the form of farmers selling their products to tradesmen in advance in order to meet their financing needs before harvest time (Alkış, 2018).

3.4.7. Tawarruq (Commodity Murabahasi)

Tawarruq is a transaction in which individuals in need of cash buy a commodity on a deferred basis and then sell it to a third party in cash. The Tawarruq method applied by Islamic financial institutions (participation banks) is referred to as "organised Tawarruq". It is not recommended to use the Tawarruq method except in cases of necessity. The subject of Tawarruq contracts cannot be money, gold or silver (Sancar, 2019).

3.4.8. Sukuk

Sukuk can be defined as "bonds in accordance with the rules of the Islamic religion". In fact, sukuk is to own an asset or to obtain the right to benefit from that asset. The sukuk right gives rise to both cash flow and ownership rights at the same time. In our country, sukuk is generally referred to as "lease certificate". When we look at it, there should be no interest rate relationship in sukuk, sukuk should be based on an asset, and it should offer the right to use the asset (Selçuk, 2014).

3.4.9. Takaful

Takaful, which is the most important of Islamic financing methods, was born as an alternative to tra-

ditional insurance due to the fact that traditional insurance is not in accordance with the rules of Islam and contains interest. Traditional insurance is a risk management tool that is formed by entities and organisations (insurance companies) that undertake this business as a profession and as a commercial activity against a number of risks that are similar or identical to each other, by paying a certain provision (premium), within the term agreed between the parties, in order to eliminate the loss arising in the event of the occurrence of the risks covered. (Demirbilek, 2022). Takaful, on the other hand, is based on the principle that individuals bearing the same risks come together and share the risk among themselves. Takaful, which embodies the elements of solidarity is also an indispensable element of the Islamic finance system. In this system, individuals who bear the same risks come together and form a group, and a fund is created with the contributions called "teberru" collected from the participants. If one of the individuals in the group suffers a loss, the loss of the individual is covered from the relevant participation fund. If the system generates a profit after the loss payments are completed, this profit is shared among the participants. In fact, the participants share the losses in case the system incurs a loss. Therefore, takaful insurance is called "profit-loss partnership". The funds collected from the participants in the takaful insurance system are managed by takaful insurance companies in accordance with Islamic procedures and principles, thus creating resources for the Islamic finance system (Öz, 2020).

4. THE PLACE AND IMPORTANCE OF TAKAFUL IN THE ISLAMIC FINANCE SYSTEM

Takaful insurance, which offers assurance to individuals at the point of eliminating or minimising all risks that individuals in the Islamic finance system may face, has proven to be the most important tool of the Islamic finance system with the assurance it offers to individuals. Islamic countries today face serious geopolitical, social, political and economic risks. At this point, takaful insurance comes into play in order to protect Islamic countries against these risks, to meet their trust needs and to minimise the severe consequences of these risks. Thanks to this assurance, takaful insurance actually offers the interest-sensitive segment the opportunity to transfer its risk to the takaful insurance company. The most important application that consolidates the place of takaful insurance within the Islamic finance system is the takaful PPS application. With this application, individuals can be included in an individual pension system and have the opportunity to save for their future in accordance with Islamic principles. Takaful insurance, which is an assurance provider for the Islamic finance system, also comes to the rescue when participation banks are in search of assurance. Real or legal entity customers who use funds from participation banks or deposit funds in participation banks enjoy the comfort of carrying out their transactions under insurance assurance thanks to takaful insurance. If we explain this situation with an example, in a transaction where a construction crane is leased to a customer through the financial leasing (leasing) method, the insurance obligor of the construction crane is the participation bank and it applies to the takaful insurance company for insurance supply. Contributions collected from participants through the takaful insurance system are utilised in interest-free financial instruments. Therefore, by utilising the funds obtained from takaful insurance, the place of the Islamic finance system in the economy and the classical finance system is strengthened and its share increases. Takaful insurance continuously feeds and supports the Islamic banking and Islamic capital market sectors and is complementary to these sectors (Yıldırım, 2021).

Takaful is one of the most preferred Islamic financing methods. In recent years, the application areas, volume and capacity of Islamic finance have been rapidly expanding and growing worldwide. The most important share in this expansion and growth undoubtedly belongs to takaful insurance. Both in our country and around the world, there is a significant segment of people who are not included in the classical finance system due to interest sensitivity and who abstain from this issue. Appealing to this segment, takaful has become an indispensable financing tool for those who have difficulty in investing, borrowing and purchasing insurance assurance. As a result of this need, it is seen that takaful has strengthened its place in the Islamic finance system and increased its share. (Islamic Eco-

nomics, https://islamiktisadi.net/2021/01/20/bir-islami-finans-enstrumani-tekaful/, 2023)

In order to emphasise the place and importance of takaful insurance in the Islamic finance system, it is useful to convey an important detail. Takaful insurance is still at a very early stage. However, it is clear that it will catch up with the growth and progress rate achieved by participation banking (Sezal, 2017). For example, takaful insurance, which started in 2009 in our country, has doubled its production volume and fund collection capacity (Kumcu & Akıncı, 2017). Again, if we give an example from our country, it is an undeniable fact that participation banking has grown and developed rapidly in our country as well as in the world. Nevertheless, while the share of participation banks, which have been providing services for more than 35 years, is still around 6% in the sector, takaful insurance companies have succeeded in reaching a 5% sector share in just 15 years. For this reason, takaful insurance is a promising sector for the coming years (İlke, https://ilke.org.tr/tekaful-uygulamalari-genisliyor, 2023).

5. CONCLUSION

The Islamic finance system, in which financial transactions are carried out in accordance with Islamic principles and procedures in an interest-free manner, has been a very good alternative to the classical finance system. When we look at it, the existence of a strong financial system based on solid foundations is essential for economic growth and stability. However, since the classical financial system contains many uncertainties (garar), it is struggling with serious problems in terms of growth and stability. Especially when we look at the periods of major financial and economic crises around the world, it is seen that the classical financial system has suffered very serious losses and destabilised. However, it has been observed that the Islamic finance system has been less affected by the crises. Especially after these crisis periods, interest in the Islamic finance system has increased in Muslim countries and around the world. The fact that the Islamic finance system does not contain uncertainties and does not have a debt-based functioning makes this system more stable than the classical finance system and allows it to have a more advantageous position. We can say that the Islamic finance system is a must for sustainable economic growth. Therefore, it is clearly seen that the Islamic finance system has a structure that supports and complements the classical finance system.

When we look at the structure of the Islamic finance system, which emerged as a result of the inability of the conventional finance system to cope with the problems it faced, we see that it is formed by blending Islamic banking, Islamic capital market and Islamic insurance (takaful). It is loudly expressed throughout the world that takaful is an indispensable financing tool for the development and growth of the Islamic finance system, which provides the system with a sense of trust and enables more courageous behaviour during risky transactions thanks to insurance assurance. The development and growth of takaful, which is still in the development stage, will also develop and grow the Islamic finance system. For example, increasing product diversity in takaful insurance and developing products that offer investors the opportunity to enter different and niche areas will increase the funds collected in takaful insurance. Therefore, the input of the Islamic finance system will increase. Thus, financial mobility and vitality in the system will increase. In conclusion, the place of takaful in the Islamic finance system is quite solid and the existence of takaful is extremely important for the development of the Islamic finance system.

Finally, if we give an example from our country, the takaful insurance products (housing, dask, life and personal accident, individual pension, workplace, engineering, agriculture, etc. products) offered to customers especially during loan disbursement in participation banks that carry out the agency of takaful insurance companies enable takaful insurance to reach a wider masses and enable the public to benefit from takaful insurance services in daily life. The fact that an increasing number of participation insurance companies can reach their customers with mobile applications, artificial intelligence and technological innovations also expands the application areas of takaful insurance in the public base. At this point, the expansion of the application areas of takaful insurance will expand the application

areas of the Islamic finance system.

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ORIGINAL ARTICLE

PRESENTATION OF RISK AND RISK PERCEPTION IN INSURANCE ADVERTISEMENTS IN TURKEY: THE CASE OF 1963 HAYAT MAGAZINE

Sefer DARICI
Siham EL OUAHABI

Abstract
In parallel with the development of the insurance sector in Turkey, there has been an increase in the number of print advertisements. This increase has been reflected in the content of advertisements in direct proportion to the development of both the insurance sector and the advertising sector. It is possible to see the traces of this development, especially in the presentation of risk and risk perception in advertisements. This study aims to reveal how insurance advertisements presented risk and risk perception to the public in the past. Insurance advertisements published in Hayat Magazine in 1963 were selected through convenience sampling. Then, common codes were extracted from the advertisements through content analysis conducted independently by two researchers. The advertisements emphasizing risk and risk perception presented with any visuals were determined by criterion sampling from purposive sampling methods and 3 advertisements meeting these criteria were analyzed by both content analysis and visual semiotics analysis methods. Within the framework of its limitations, the research highlights two main themes in the presentation of risk and risk perception in insurance advertisements: 1- Risk and risk perception are presented to society with content based on fear of the future. 2- The contents mostly emphasize socio-cultural elements and life practices.

Keywords
Insurance, advertising, Turkey, risk, fear.

JEL Classification
M30, M31, M37, M39.

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1. INTRODUCTION

Throughout history, people have felt the need to feel safe and, therefore, protect themselves from risks. This is also due to the difficulty and uncertainty of predicting the future. Although making the future predictable and eliminating risks is a desirable goal, people have realized the impossibility of achieving this in an increasingly complex world. They want to be prepared and reduce possible losses. The insurance industry is directly related to risk. However, uncertainty will always exist in human life; as Masci (2011) notes, "while risk can be covered by insurance, uncertainty normally is not."

Just as risk is defined differently in different disciplines, there are also differences in the perception of risk. There is a significant difference between the factors that the first humans perceived as risks in the environment and today's perception of risk factors. As the environment grows more diverse and intricate, uncertainties escalate, and in direct correlation with this uncertainty, variations arise in the perception of risk.

Due to human nature, the perception and degree of risk increase in accordance with events and situations that are physically close to them, that they think will occur soon in time, or that have just occurred around them. Moreover, in these events, people may want to feel safe and insure themselves, even if they have not suffered any losses. The surge in insurance uptake following an earthquake might be attributed to the availability bias, wherein individuals may alter their financial choices and acquire insurance coverage even in the absence of any personal losses (Lin, 2020).

How risk has been perceived in different periods since the first human being is the subject of a very comprehensive study, but its periodical analysis can give us different clues. The way risk is explained to the public by insurance companies can provide clues about how risk and risk perception are presented by the media and how the public perceives them. Therefore, advertisements are the best sources for analyzing such a situation.

Based on this characteristic of advertisements, this study investigates how the insurance sector presents risk and risk perception to society in Turkey through advertisements. The 1960s were a period of accelerated developments in both the advertising and insurance sectors in Turkey. The sample of the study consists of print advertisements published in Hayat Magazine, one of the popular magazines of the period, in 1963, which includes risk and risk perception.

2. LITERATURE

The insurance sector, which has undergone different stages in various geographies worldwide, can be divided into two periods in terms of its historical development in Turkey: the pre-Republican and post-Republican periods. Historically, practices resembling insurance can be found both in the Seljuk and Ottoman periods. The number of companies in the insurance sector, which has developed and progressed over time, approached 40 in 1932. Engin and Karakuş (2020) state that these companies were affiliated with the Ministry of Trade in 1939, but they were not established with private capital. "In 1942, Doğan Insurance Company, the first insurance company with private capital, was established. The transition from single-party rule to multi-party rule in 1950 facilitated the opening of private insurance companies." (Engin & Karakuş, 2020)

Especially with the establishment of different advertising agencies and the increasing number of companies, it can be said that advertising turned into a large sector after the 1960s (Aslaner & Aslaner, 2020). The same years witnessed an increase in private investments in Turkey and the beginning

of the planned development period after the 1961 Constitution (Engin & Karakuş, 2020). Additionally, the Press Advertisement Agency was established in 1961, and the "Regulation on Insurance Adjusters" was published in 1965. All these developments can be characterized as positive and accelerating developments for both the advertising and insurance sectors.

It is true that economic and social progress influenced this development in the insurance industry, and in the same years, there was a parallel development in advertising. The change in the economic structure stimulated the number of companies, which, in turn, stimulated the advertising sector and, in parallel, the insurance sector. It is also known that advertising has an impact on the sales volume in the insurance sector and contributes to the formation of a positive image in the public. Moreover, although the degree of advertising intensity increases demand, it does not depend on the type of customer targeted by insurance companies (Fier, 2016). Even if advertising is targeted at a specific type of customer by the insurance company, it can generally lead to an increase in demand in the entire sector.

The choice of advertising medium, message content, and format are critical components for the success of insurance advertising (Aduloju, 2009). The media medium changes and differentiates depending on the media tools of the period in which the advertisement is published. While new media tools and digital media platforms are popularly used as advertising media today, it is seen that popular magazines and newspapers, and partially television, were chosen as the medium when television had not yet entered Turkey and was just becoming widespread. In terms of content, it can be said that the unique characteristics and socio-political and economic developments of each period are reflected in the content of advertisements. In this respect, it can be stated that the fact that the message content carries the social, political, economic, and cultural characteristics of the relevant period is directly proportional to the desired effect on the target audience.

'Risks are defined as the probabilities of physical harm due to given technological or other processes. Hence, technical experts are given the pole position to define agendas and impose bounding premises a priori on risk discourses'' (Beck, 1992). In the global risk society, no one now knows or can precisely calculate the extent of the risks we face due to our collective technologies and innovations (Jarvis, 2007). "Risk inherently contains the concept of control. Pre-modern dangers were attributed to nature, gods and demons. Risk is a modern concept. It presumes decision-making. As soon as we speak in terms of 'risk', we are talking about calculating the incalculable, colonizing the future" (Beck, 2002). In terms of insurance advertising, it can be said that the use of risky situations to attract the attention of the target audience is common. Risky situations are also given an emotional context within the message to create the desired effect. Emotional responses to risky situations are often different from cognitive responses to the same risks. When such differences occur, emotional reactions often guide behavior. Emotional reactions to risk can affect decisions and behaviors (Loewenstein et.al., 2001).

The elements of fear and shock advertising, which are particularly prevalent in insurance advertisements, can serve as examples of these emotional responses. "It is desired to arouse strong emotions in the target audience with shock advertisements that try to attract the attention of the target audience suddenly with an unexpected approach in a routine life flow" (Darıcı & Çetinkaya, 2021). Risk inherently embodies uncertainty, anxiety, and fear about the future. Even a future projection of the losses to be experienced after the occurrence of the risk may cause an emotional reaction. An expectation or confidence that this loss can be covered is an example of the effect that advertising can have on people. In addition, the compensation paid by the insurance company when the loss occurs can be perceived as a symbol of consolation by people (Hsee, 2000). Symbolically, there may be elements in advertisements that can trigger such emotional responses.

For these reasons, the way the content is presented in advertisements and the periodic characteristics contain clues about both society and the sector. Analyzing these contents and studying their perceptual responses can shed light on the relevant period and provide information about the sector and its development.

3. RESEARCH

This research was conducted using a qualitative model. The study is limited to insurance advertisements published in Hayat Magazine in Turkey in 1963, which were selected by the convenience sampling method. There are only 10 insurance company advertisements in the issues of Hayat Magazine for the relevant year. All of these advertisements belong to Doğan Insurance Company.

The advertisements were independently analyzed by two researchers using content analysis, and common codes were extracted. Content analysis is a research method that can be applied for various purposes across different disciplines (Öğülmüş, 1991: 213-228) and serves as an observation technique in social or sociological research. Content analysis involves a systematic examination of written or visual materials, enabling the derivation of repeatable and valuable inferences from the data within a message.

In the independent coding of 10 advertisements by two researchers, a total of 34 codes were extracted. Subsequently, these codes were compared, leading to the identification of 6 common codes. These codes are as follows: tradition, daily life, risk, culture, fear, and competition.

Following this, three of these common codes, selected as criteria, namely "containing risk and risk perception" and "presented with visuals," were chosen using the criterion sampling method. Subsequently, both content analysis and the visual semiotics analysis method were applied to identify the indication, signifier, and signified and to analyze these codes in the advertisements.

Semiotics, in this respect, "when used for visual tools, deals with the way of understanding the design in front of us. In other words, it tries to find and reveal the codes of the messages that the design directly and indirectly conveys to us in order to make sense of the design" (Özdemir, 2007: 38). Visual contents related to risk and risk perception presented by advertisements to society were made meaningful with this method, and the messages they conveyed were coded. Then, all the findings were interpreted by the researchers, and the results of the research were presented.

3.1. Content Analysis

Picture 1
Doğan Insurance Ads

These advertisements appear in the third, eighth, and fourteenth issues of Hayat Magazine, published in 1963. All three advertisements are positioned on the right edge of the page, from top to bottom. The advertisements are 5 cm wide and 30 cm long.

It is observed that all of the advertisements belong to Doğan Insurance. It is difficult to say that there was a clear strategy regarding the content and message of the advertisements during this period. In insurance advertisements, the emphasis on competition is sometimes on the fact that policies are similar but not the same, and sometimes on trust. There are also quotes from daily life, proverbs, and traditional discourses.

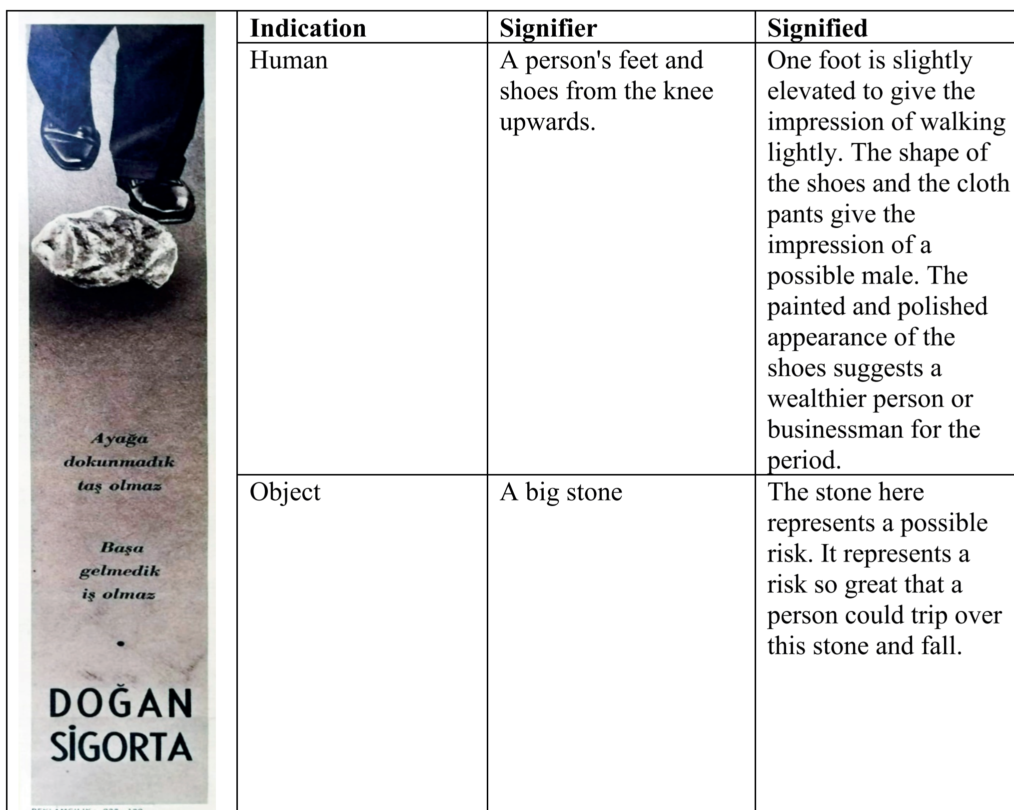
Risk and risk perception are generally presented through elements of fear about the future. To reinforce this, it is seen that they are supported with commonly used proverbs. The advertisement, which includes the Turkish proverb "Ayağa dokunmadık taş olmaz, başa gelmedik iş olmaz" (a proverb explaining that people can face obstacles and risks that they are not aware of and that these can create various problems and troubles for that person), is also supported with a visual drawing.

Another advertisement features the slogan, "You are safe in the protective shadow of the insurer." It is seen that the advertisement features a drawing of a character in an overcoat and a hat, which were frequently featured in detective, detective, detective, and inspector-themed comics of the period. The slogan takes place in the shadow, while the drawing of following feet and the darkness trigger the perception of the presence of a protective character following you from behind against risks.

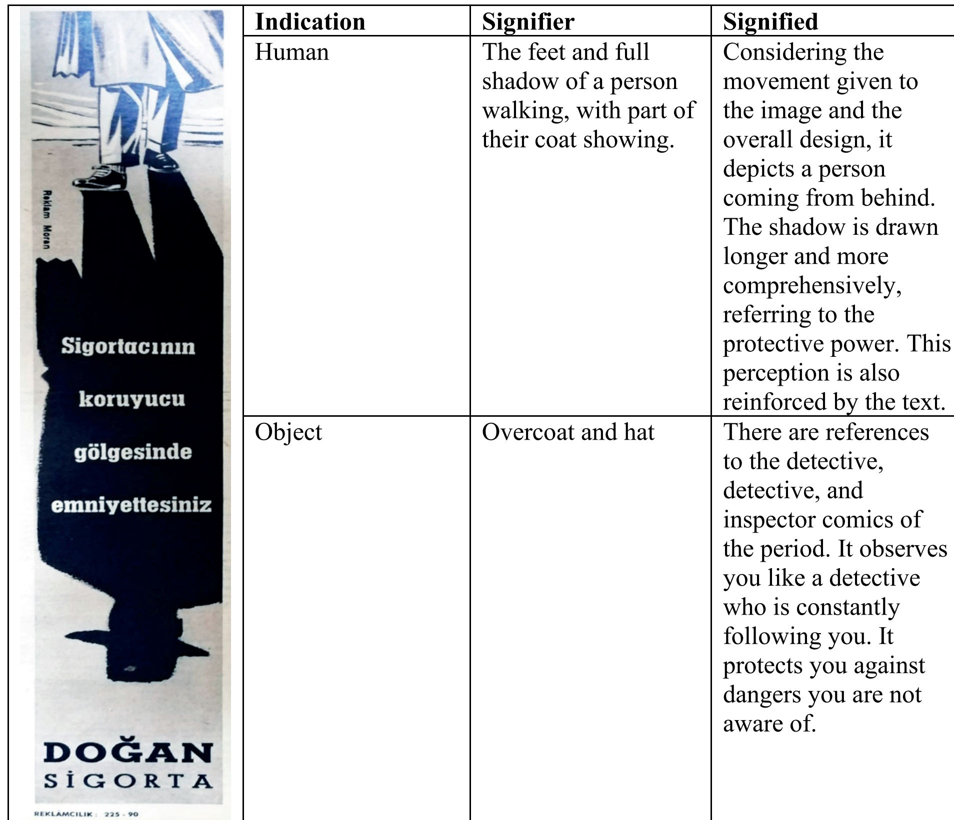
In the other advertisement, a chain concept was used. In the broken part of the chain, the logo of Doğan Insurance Company is placed instead of a link, emphasizing the company's protective role and guarantee against risks. This is reinforced at the bottom of the advertisement by stating that "every office, agency, and producer throughout the country is a link in this chain of security."

In the advertisements analyzed in general, it is seen that risk and risk perception are supported by references to cultural and sociological elements and life practices as well as drawings and visuals. In addition, risk is conveyed by using the element of fear, especially through the uncertainty of the future.

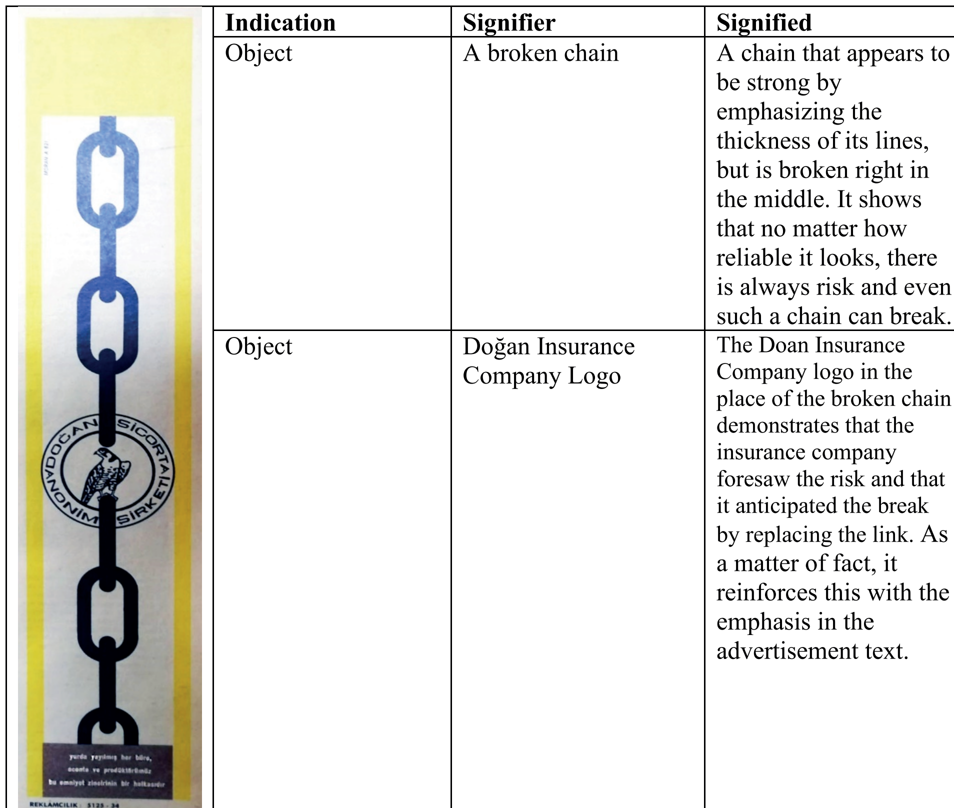
3.2. Visual Semiotic Analysis



Indication	Signifier	Signified
Human	A person's feet and shoes from the knee upwards.	One foot is slightly elevated to give the impression of walking lightly. The shape of the shoes and the cloth pants give the impression of a possible male. The painted and polished appearance of the shoes suggests a wealthier person or businessman for the period.
Object	A big stone	The stone here represents a possible risk. It represents a risk so great that a person could trip over this stone and fall.



Indication	Signifier	Signified
Human	The feet and full shadow of a person walking, with part of their coat showing.	Considering the movement given to the image and the overall design, it depicts a person coming from behind. The shadow is drawn longer and more comprehensively, referring to the protective power. This perception is also reinforced by the text.
Object	Overcoat and hat	There are references to the detective, detective, and inspector comics of the period. It observes you like a detective who is constantly following you. It protects you against dangers you are not aware of.



Indication	Signifier	Signified
Object	A broken chain	A chain that appears to be strong by emphasizing the thickness of its lines, but is broken right in the middle. It shows that no matter how reliable it looks, there is always risk and even such a chain can break.
Object	Doğan Insurance Company Logo	The Doan Insurance Company logo in the place of the broken chain demonstrates that the insurance company foresaw the risk and that it anticipated the break by replacing the link. As a matter of fact, it reinforces this with the emphasis in the advertisement text.

4. CONCLUSION

The research focuses on two primary issues about the portrayal of risk and risk perception in insurance commercials, taking into account its own limitations and parameters: 1- Risk and risk perception are presented to the public through content based on fear of the future. 2- The content mostly emphasizes socio-cultural elements and life practices.

The findings indicate that, on one hand, the insurance sector was developing, while on the other hand, insurance advertising was also progressing. During that time period, insurance commercials predominantly featured content related to services and goods, lacking a strategic approach due to the absence of an established insurance culture. Discussing the existence of a strategy in terms of advertisement design and message content proves challenging.

It is seen that the message contents related to risk and risk perception are built based on "fear" and that they refer to uncertainty about the future. It can also be said that elements of the socio-cultural structure and life practices of the relevant period are included in the advertisements, and generally proverbs and expressions commonly used among the people find a place in the advertisements.

Compared to other advertisements in the relevant period, it can be said that insurance advertisements are quite weak in terms of content due to reasons such as the fact that sectoral development has not yet fully formed. It can also be stated that the drawings used in the analyzed advertisements are consistent with the slogan and advertisement content in their own context. However, despite this consistency within each advertisement, the presence of a strategic deficiency in general is also noticeable. It can also be said that there is a certain degree of competition, but this is presented in a very limited way in the advertisements.

A periodic analysis of insurance advertisements can reveal much unexplored data from the relevant period. Looking at advertisements as a tool reflecting the period may also allow us to discover data on different sectors and social structures. In this respect, insurance advertisements can provide valuable information on both the development of the sector periodically and what kind of advertising strategy should be followed in the future. It is hoped that this research will both guide academics and provide insights and guidance to practitioners in the future.

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ORIGINAL ARTICLE

ESG ACTIVITIES AND FINANCIAL PERFORMANCE IN BANKING INDUSTRY

Özcan IŞIK

Abstract
This study aims to provide empirical evidence regarding how ESG practices have impacted financial performance in the banking sector. To investigate this relationship, we use an annual dataset of an unbalanced panel of 58 commercial banks from 6 countries (i.e., Canada, the UK, Australia, Japan, Spain, and Türkiye) for the period 2012-2020. Our empirical findings reveal that there exists an inverted U-shaped non-linear association between ESG scores and financial performance of Canadian, UK and Japanese banks, which supports the idea of the "too-much-of-a-good thing" impact. However, a positive linear association exists for Australian and Spanish banks. Moreover, changes in ESG activities have no influence on profitability of Turkish banks. The findings demonstrate that bank managers should consider the diversity of linkages between ESG activities and financial performance in the banking sector when identifying an appropriate strategy to effectively manage ESG activities.

Keywords
Corporate Social Responsibility, ESG Activities, Financial Performance, Banking Industry

JEL Classification
G20, G30.

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1. INTRODUCTION

Banks, which play a crucial role as fundamental financial institutions within the financial system, exert a substantial influence on the financial, social and economic development of both bank-oriented and stock market-oriented economies (Bihari and Pradhan, 2011; Zahid et al., 2021; Shabir et al., 2021).

Corporate Social Responsibility (CSR)/Environmental, Social and Governance (ESG) factors, broadly known as non-financial performance indicators, have attracted great interest from both regulators and practitioners in the global context (Atif et al., 2022). Despite the fact that CSR and ESG differ in various aspects, both concepts are commonly utilized in the corporate world as a measure of corporate sustainability. Corporations that develop a CSR or ESG model try to demonstrate that they have a long-term vision to create value by sharing their sustainability efforts with their investors and other stakeholders.

Sustainability disclosures reflect the association between a firm and its internal and external stakeholders by documenting organizational actions and their consequences concerning corporate social responsibility (D'Adamo, 2022). The valuable and crucial information shared with internal and external stakeholders regarding corporate sustainability performance can play a significant role in improving organizational procedures, refining existing visions and strategies, and attaining a competitive advantage (Cardoni et al., 2022).

Sustainability is vital not only for corporations in economic sectors but also for banks, which create economic, social, and environmental influences through their lending and investment decisions and other financial products and services (Ahmed et al. 2018; Bătae et al. 2020). Sustainability in banking is of utmost importance due to the influential position of banks in the global financial network and their close connections with the non-financial sectors of the economy.

Environmental concerns, stakeholder pressures, the pursuit of competitive advantage, and legal regulations have compelled banks, one of the most pivotal actors in the financial services sector, to reassess the environmental, social, and economic impacts they generate and to optimize their sustainable business processes.

Banks have increasingly shifted their focus to sustainability disclosures and Environmental, Social and Governance (ESG) practices in the context of the United Nations 2030 Agenda for Sustainable Development through sustainability reports (Aras et al., 2020; Galletta et al., 2022). Unlike financial reports, in these reports, banks present social and environmental information regarding their operations systematically to both internal and external stakeholders (Aras et al., 2018a; D'Adamo, 2022). Because sustainable banking does not only focus on company profitability but also takes social and environmental improvements into consideration (Aras et al., 2018b). As a result, it can be said that banks tend to adopt a sustainable business model by incorporating sustainability indicators regarding ESG activities into their activities and decision-making mechanisms to create more value for all stakeholders in the long term.

Nowadays, the social responsibility behaviors of banks are heavily considered not only by key stakeholders in the banking sector but also by society as a whole, regardless of the potential positive or negative impact of ESG practices on business performance (Miralles-Quirós et al., 2019). Some researchers have tried to investigate the impact of banks' sustainability (ESG) performance on financial performance (FP). When looking at this topic, different researchers have said that ESG has a positive or negative impact on bank performance (Abou Fayad et al., 2017; Buallay, 2019; Buallay et al., 2021; Çetenak et al., 2022); however, others have said that this impact is not linear (El Khoury et al., 2023; Ersoy et al., 2022; Azmi et al., 2021). In addition to these findings, However, few studies reported a neutral ESG-performance nexus, which indicates that ESG does not influence FP because positive impacts offset negative impacts. In conclusion, the empirical evidence on the association between ESG activities and FP is considerably inconsistent.

This study explores the influence of ESG activities on FP for commercial banks in six countries from 2012 to 2020. The existing paper makes two contributions to the banking literature. First, to the best of our knowledge, it is the first study to analyze the nexus between ESG activities and FP in six market- and bank-based economies. Second, the independent variables are lagged one period to remove any possibility of endogeneity due to potential reverse causality. Additionally, a panel Driscoll-Kraay fixed effect estimation model is employed to cope with potential problems of heteroskedasticity, autocorrelation and cross-sectional dependence.

This article is presented as follows: Section 2 reviews the empirical literature and presents hypothesis development. Section 3 describes the data, variables, as well as the empirical model and estimation procedure. Section 4 presents the results and Section 5 presents the conclusion.

2. RELATED LITERATURE AND HYPOTHESIS DEVELOPMENT

While there is a growing body of literature on ESG practices in non-financial sector, the number of studies exploring this relation in the banking industry is quite limited. Table 1 below briefly summarizes some of the recent studies focusing on the impact of ESG on the banking sector.

Table 1.
Studies focusing on the impact of ESG on the banking industry

Authors(s)/Year	Techniques used	Target industry	Sample period	Main result
Abdelsalam et al. (2023)	Dynamic panel regression analysis	277 listed global banks	2012–2019	Banks that engage in ESG activities provide more loans.
Liu et al. (2023)	Static panel regression analysis	U.S. commercial banks	2002-2021	Banks with high ESG scores have lower credit risk.
Andrieș and Sprincean (2023)	Static panel regression analysis	493 banks in 39 advanced and emerging economies	2003–2020	Incorporating ESG practices into their financial decisions reduces banks' funding costs.
Galletta and Mazzù (2023)	Dynamic panel regression analysis	Listed banks operating in 41 countries	2011-2021	Banks with fewer ESG controversies take less risk.
El Khoury et al. (2023)	Static panel regression analysis	46 listed banks from 10 countries	2007–2019	There is an inversed U-shape ESG–performance association.
Galletta et al. (2023)	Dynamic panel regression analysis	Global banks operating in 35 countries	2011-2020	Higher ESG scores lower banks' operational risk.
Menicucci and Paolucci (2023)	Static panel regression analysis	105 Italian banks	2016–2020	Bank performance is negatively impacted by ESG dimensions.
Mohamed Buallay et al. (2023)	Static panel regression analysis	Banks from 60 different countries	2008–2017	ESG disclosures adversely impact performance of banks.
Yuen et al. (2022)	Dynamic panel regression analysis	487 banks from 51 countries	2006-2021	There exists a U-shaped correlation between bank profitability and ESG.
Chiaramonte et al. (2022)	Dynamic panel regression analysis	European banks operating in 21 countries	2005–2017	ESG activities tend to mitigate banks' vulnerability during periods of financial distress.
Ersoy et al. (2022)	Static panel regression analysis	151 US commercial banks	2016-2020	There is an inverted U-shaped linkage between ESG and market value.

Çetenak et al. (2022)	Static panel regression analysis	6 Turkish commercial banks	2010-2020	Higher ESG scores improve banks' performance.
Azmi et al. (2021)	Dynamic panel regression analysis	251 banks from 44 emerging markets	2011–2017	An inverted U-shaped non-linear nexus between ESG and bank performance was observed.
Liu et al. (2021)	Dynamic panel regression analysis	28 Chinese banks	2009-2018	A non-linear U-shaped linkage was reported between ESG and bank profitability.
Buallay (2020)	Static panel regression analysis	Banks from 80 different countries	2008–2017	ESG has a negative impact on bank performance.
Di Tommaso and Thornton (2020)	Dynamic panel regression analysis	81 banks from 19 European countries	2007-2018	A high ESG score is associated with low non-performing loans and poor market performance.
Buallay (2019)	Static panel regression analysis	European banking sector	2007-2016	ESG positively impacts bank performance.
Shakil et al. (2019)	Dynamic panel regression analysis	93 emerging market banks	2015-2018	There appears to be a positive association between banks' FP and their environmental and social performance.
Buallay et al. (2021)	Dynamic panel regression analysis	882 banks from developed and developing countries	2009-2019	ESG activities improves banks' performance in developed countries.
Miralles-Quirós et al. (2019)	Static panel regression analysis	166 banks from 31 countries	2010–2015	Banks' performance tends to be positively impacted by corporate governance and environmental performance but negatively impacted by social performance.
Maqbool and Zameer (2018)	Static panel regression analysis	28 Indian commercial banks	2007–2016	There is a positive relation between CSR and FP.
Abou Fayad et al. (2017)	Static panel regression analysis	7 Lebanese banks	2012-2015	A positive link between CSR and FP has been reported.
Tóth et al. (2021)	Static panel regression analysis	243 European Banks	2002-2018	A higher ESG score lowers credit risk.

There exist a variety of theories in the ESG literature that address the ESG-performance nexus. However, the stakeholder theory (Freeman, 1984) and the trade-off theory (Friedman, 1970) are recognized as the two main approaches that attempt to explain the linkage between ESG and FP (Buallay et al., 2021; Azmi et al., 2021)

Stakeholder theory argues that the ESG-FP relationship is positive. According to this theory, the resources allocated for ESG activities are not a cost element; on the contrary, investments in ESG practices can provide the bank with opportunities such as competitive advantage, corporate image and innovation (Behl et al., 2021). As a result, a firm must consider the impact of the results of its operations on all stakeholders (i.e. government agencies, creditors, suppliers, customers, employees, etc.) and aim to create value for them by protecting their interests (Andrieș and Sprincean, 2023). Besides, the positive impact of sustainability disclosure predicted by stakeholder theory is also supported by resource-based view and stewardship theory (Azmi et al., 2021).

Trade-off hypothesis argues that this relationship is negative. Based on this theory, which is also supported by agency theory, it is argued that allocating more resources to ESG activities leads to increased opportunity costs for the bank (Azmi et al., 2021). More precisely, due to agency problems,

sustainability reporting may cause banks to face extra costs, which supports that the effect of ESG on performance may be negative (Teng et al., 2022; Kumar et al., 2022). Given conflicting empirical findings and two competing theories based on different assumptions, the nonlinear ESG-FP nexus can be expected, as allocating more resources to ESG activities will increase opportunity costs (Azmi et al., 2021; Teng et al., 2022).

3. METHODOLOGY

3.1. Data and Variables

This study seeks to establish the correlation between ESG practices and profitability within the banking business. To examine the relationship between environmental, social, and governance (ESG) factors and profitability, a sample of 8 Canadian banks, 7 UK banks, 6 Australian banks, 26 Japanese banks, 5 Spanish banks, and 6 Turkish banks was chosen for the period of 2012-2020. Eikon Refinitiv database was utilised to identify banks reporting ESG data. The variables representing economic growth and stock market development were obtained from the World Bank's World Development Indicator (WDI) and Global Financial Development (GFD) databases, respectively. Also, all bank-level variables were winsorised at the 1% and 99% levels to eliminate outliers. Detailed explanations for all variables in the regression model are presented in Table 2.

Table 2
Variable definition

Variable	Symbol	Definition	Expected Sign	Data Sources
Bank profitability				
Profitability	ROAA	Return on average assets		Refinitiv
ESG activity				
ESG combined score	ESG	ESG index which combines the environmental, social and governance scores	+/-	Refinitiv
Control variables				
Bank size	SIZE	The natural logarithm of total assets	+/-	Refinitiv
Liquidity	LIQ	The ratio of cash & cash equivalents to total assets	+	Refinitiv
Capitalization	CAR	The ratio of shareholders' equity over total asset	+/-	Refinitiv
Operational expenses	OE	The ratio of operational expenses to total assets	-	Refinitiv
GDP growth rate	GDP	Percentage change in GDP	+/-	WDI
Stock market development	SMD	The ratio of market capitalization of listed companies over GDP	+	GFD
COVID-19	C-19	A dummy variable that takes the value of 1 for the year 2020	-	

3.2. Empirical Model

In this study, the following quadratic model is employed to analyze the impact of ESG on bank profitability:

$$(\mathrm{FP})_{\mathrm{ijt}} = \beta_0 + \beta_1(\mathrm{ESG})_{\mathrm{ijt}-1} + \beta_2(\mathrm{ESG})^2_{\mathrm{ijt}-1} + \beta_{3-6}\sum(\mathrm{BLCV})_{\mathrm{ijt}} + \beta_7(\mathrm{GDP})_{\mathrm{jt}} + \beta_8(\mathrm{SMD})_{\mathrm{jt}} + \beta_8(\mathrm{C}-19)_{\mathrm{t}} + \varepsilon_{\mathrm{ijt}} \quad (1)$$

In these model specification, subscripts *i, j* and *t* denote commercial bank, country and time period, respectively. The dependent variable of the above model is financial performance (FP). This variable is measured by return on average assets (i.e., ROAA). We have used ESG

activities (ESG) and square of ESG activities $(ESG)^2$ as independent variables. In order to obtain unbiased results, a set of control variables, whose impacts have been identified in prior studies, are also added to the model shown in Eq. (1). The bank-level control variables (BLCV) added to the profitability model are bank size, liquidity, capitalization, and operational expenses, respectively. (GDP) and (SMD) represent the country-level and industry-level control variables, respectively. In addition, a dummy variable is added to the profitability model to control for the influence of the COVID-19 pandemic on banks' financial performance. $\varepsilon_{ijt} = \partial_i + \delta_j + \theta_{ijt}$, ∂_i and δ_j are the unobserved bank-specific and country-specific fixed effects, respectively. θ_{ijt} is an i.i.d. random term with $E(\theta_{ijt}) = 0$ and $Var(\theta_{ijt}) = \sigma^2$. Lastly, ESG indicators and bank-level control variables are lagged one year to eliminate the possibility of any endogeneity that can arise owing to the potential reverse causality.

3.3. Estimation Procedure

The Hausman test is employed to determine the appropriate choice between fixed effects (FEs) and random effects (REs) panel estimators. Given the substantial Hausman test statistics in both the entire sample and sub-samples, we reject the null hypothesis (REs) and conclude that the optimal panel data estimator is the FEs estimator. Nevertheless, to address potential issues related to autocorrelation, heteroskedasticity, and cross-section dependence, we employ the Driscoll-Kraay standard errors method to investigate the influence of ESG initiatives on the profitability of banks.

4.1. Descriptive Statistics and Pairwise Correlations

The mean and standard deviation values of each variable for both the whole sample and sub-samples are given in Table 3. On average, Turkish commercial banks appear to have the highest ROAA compared to their counterparts in other countries over the sample period. When the ESG scores of commercial banks are analyzed, it is concluded that Spanish banks have the highest ESG value. In terms of ESG disclosures, Spanish banks are followed by Australian banks, Canadian banks, UK banks, Turkish banks and Japanese banks, respectively. When the standard deviation values calculated for ESG scores are examined, it is observed that the sample with the highest standard deviation value belonged to Japanese banks. This finding suggests that ESG reporting among Japanese banks exhibits significant variability. According to the findings presented in Table 3, banks in Japan have the highest liquidity level, while banks in the UK have the highest capital level. Moreover, the operational expenses of Turkish banks are higher than their counterparts in Canada, the UK, Australia, Japan and Spain.

Table 3

Mean and standard deviation values for the all variables

	Full Sample		Canada		UK		Australia		Japan		Spain		Türkiye	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
ROAA	0.618	0.588	0.793	0.199	0.467	0.928	0.714	0.248	0.449	0.485	0.398	0.259	1.433	0.398
ESG	53.01	26.245	68.309	14.084	64.469	20.762	76.081	13.325	31.661	21.467	77.95	9.433	59.205	13.619
SIZE	25.953	1.494	26.273	1.433	26.216	2.23	26.341	1.28	25.688	1.347	26.728	1.044	25.11	0.191
LIQ	9.808	9.923	1.829	2.09	11.454	5.564	3.489	2.071	14.03	12.782	6.036	3.68	10.834	1.947
CAR	15.172	5.058	14.348	1.375	18.25	2.414	13.452	1.56	14.99	7.278	14.459	1.403	15.205	1.766
OE	1.778	1.056	1.697	0.165	2.393	1.385	1.261	0.172	1.394	1.087	2.203	0.506	2.823	0.67
GDP	1.088	2.879	1.232	2.43	0.742	3.75	2.363	0.988	0.323	1.913	0.042	4.423	4.352	2.403
SMD	95.727	34.286	125.632	17.841	125.583	11.245	99.522	14.462	104.317	22.228	65.337	9.653	24.679	5.37

The pairwise correlation matrix for the variables utilized in Eq. (1) is presented in Table 4. A significantly positive correlation between ESG and ROAA indicates that banks with higher ESG scores tend to be more profitable.

Table 4
Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) ROAA	1.000							
(2) ESG	0.151*	1.000						
(3) SIZE	-0.300*	0.607*	1.000					
(4) LIQ	0.227*	-0.113	-0.125*	1.000				
(5) CAR	0.285*	0.153*	0.018	0.676*	1.000			
(6) OE	0.534*	0.136*	-0.380*	0.392*	0.464*	1.000		
(7) GDP	0.322*	0.054	-0.065	-0.168*	-0.068	0.114*	1.000	
(8) SMD	-0.357*	-0.097	0.133*	0.068	0.013	-0.322*	-0.424*	1.000

* p<0.01, ** p<0.05, *** p<0.1

4.2. Empirical Findings

The empirical results of the estimation of Eq. (1) for the full sample, which covers all banks are presented in Table 5. The estimated coefficients of ESG and the squared term of ESG are positive and negative, respectively. This finding demonstrates an inverted U-shaped (concave) association between ESG practices and profitability does exist.

To test whether the non-linear relationship detected in the full sample, which included all banks, is valid for sub-bank samples, the model specified in Eq. (1) is re-estimated separately for each banking industry. The obtained findings are shown in Table 6.

Table 5
Estimation result for the full sample

	Coefficient	Drisc/Kraay Std. Err.	*t*-statistic	Probability
L.(ESG)	0.0133**	0.0048	2.77	0.024
L.(ESG x ESG)	-0.00015**	0.00006	-2.50	0.037
L.(SIZE)	-0.4251**	0.1777	-2.39	0.048
L.(LIQ)	0.0020	0.0026	0.78	0.463
L.(CAR)	-0.0041	0.0062	-0.67	0.526
L.(OE)	-0.0742	0.0795	-0.93	0.381
GDP	0.0284**	0.0087	3.28	0.014
SMD	-0.0032**	0.0010	-3.54	0.010
C-19	-0.0726**	0.0293	-2.48	0.042
_cons	9.1289	6.9241	1.32	0.229
Hausman test	32.09***			
N	382			
Number of banks	58			
F-stat	42.31***			
within R^2	0.2563			

This table reports regression results based on Driscoll-Kraay standard errors.

Method used is FEs regression.

Time effects are included in the regression model, but the estimated coefficients of these variables are not reported.

*** p<0.01, ** p<0.05, * p<0.1.

As seen in columns 1, 2 and 4 of Table 6, the empirical results reveal that ESG-profitability nexus is a nonlinear for Canadian, UK and Japanese banks. More specifically, there is an inverted U-shaped link between ESG reporting and profitability, suggesting that there exists an optimal level of ESG practices in the banking industries of these three countries. The results of the present article are supported by the findings reported by El Khoury et al. (2023), Ersoy et al. (2022), and Azmi et al. (2021). However, as reported in columns 3 and 5 of Table 6, a positive linear association exists for Australian

and Spanish banks, which means that banks engaged in ESG activities are more profitable. This result is also consistent with several prior studies of Abou Fayad et al. (2017), Maqbool and Zameer (2018), Shakil et al. (2019), Buallay (2019), Buallay et al. (2021), and Çetenak et al. (2022). Moreover, changes in ESG activities have no influence on profitability of Turkish banks.

As for the control variables included in the models, negative and significant relationships were observed between bank size and profitability in the banking industries of all six countries, indicating that larger banks are less profitable. Kanapiyanova et al. (2023), El Khoury et al. (2023), Işık (2022), and Miralles-Quirós et al. (2019) have reported similar findings regarding the connection between bank size and profitability. Moreover, liquidity, measured by cash and cash equivalents, has no significant effect on bank profitability. We also identify that the capital adequacy ratio is significant only for Australian and Japanese banks, indicating that banks with a strong capital structure are less profitable. This result is similar to the findings reported in the studies of Yüksel et al. (2018) and Işık and Ersoy (2022). Despite the fact that the estimated coefficient of the operating expenses variable is negative in all sub-samples, it is significant only for banks in three countries (i.e., UK, Australia and Türkiye). This finding reveals that there is an inverse correlation between operating expenses and profitability. Besides, the estimated coefficients of the economic growth for the Canadian and Japanese banks subsamples are negative and significant. Whereas, the estimated coefficients pertaining to this variable are positive and significant in the subsamples of Australian and Turkish banks. The impact of stock market development on bank profitability is found to be positive in all sub-bank samples. However, this effect is significant for banks in Canada, Australia, Japan and Türkiye. Finally, the results reported in Table 6 show that the dummy variable representing the Covid-19 pandemic is significantly negatively associated with bank profitability in four countries (Canada, the United Kingdom, Australia and Spain). The finding is consistent with the results reported by Xiazi and Shabir (2022), Yuen et al. (2022), and Shabir et al. (2023).

Lastly, to check the robustness of the findings presented in Table 6, we utilized an alternative variable related to bank profitability. More precisely, we re-estimated Eq. (1) by replacing ROAA with ROAE. We found that, except for Turkish banks, the results obtained from the ROAE equation are almost similar to those obtained from the ROAA equation. For Turkish banks, a positive and significant relationship was found between ESG and ROAE at the 5% significance level.

Table 6
Estimation result for sub-samples

	(1)	(2)	(3)	(4)	(5)	(6)
	Market-based financial system			Bank-based financial system		
	Canada	UK	Australia	Japan	Spain	Türkiye
L.ESG)	0.0219**	0.0416**	0.0066*	0.0082***	0.0682*	0.0290
	(0.0088)	(0.0089)	(0.0031)	(0.0021)	(0.0322)	(0.0207)
L.(ESG) x (ESG)	-0.0002**	-0.0003*	0.0004	-0.00013**	-0.0004	-0.0002
	(0.0001)	(0.00008)	(0.0002)	(0.00005)	(0.00022)	(0.00018)
L.(SIZE)	-0.394*	-2.3680**	-0.6370***	-0.473*	-1.1170*	-2.544***
	(0.1320)	(0.4760)	(0.1100)	(0.1860)	(0.5570)	(0.6450)
L.(LIQ)	0.0132	0.0206	0.0082	0.0039	0.0161	-0.0211
	(0.00792)	(0.0421)	(0.0089)	(0.0046)	(0.0318)	(0.0345)
L.(CAR)	0.00428	0.0111	-0.0469***	-0.0040*	-0.0508	0.0197
	(0.00739)	(0.00603)	(0.0194)	(0.0018)	(0.0281)	(0.0513)
L.(OE)	-0.130	-0.1570*	-0.2240***	-0.0324	-0.0789	-0.195**
	(0.0927)	(0.0467)	(0.0213)	(0.0626)	(0.135)	(0.0623)
GDP	-0.1642**	1.8064	2.010***	-0.2660*	-0.4180	3.1959**
	(0.0701)	(1.6888)	(0.2970)	(0.1175)	(0.2945)	(1.0502)
SMD	0.0740*	0.0786	0.1341***	0.1731**	0.1804	0.7634**
	(0.0361)	(0.0751)	(0.0201)	(0.0577)	(0.1274)	(0.2486)
C-19	-0.2265***	-0.3519 ***	-0.4079***	-0.0641	-0.5412***	-0.1230
	(0.0313)	(0.0520)	(0.0030)	(0.0489)	(0.0910)	(0.1177)
_cons	-0.0469	-0.4212	-5.4656	1.0057*	-0.4966	3.8984*
	(0.7502)	(0.4000)	(3.1588)	(0.4450)	(7.2960)	(1.3765)
Hausman test	29.67***	21.89***	22.63***	71.15***	11.08**	17.34***
N	63	18	45	175	39	42
Number of banks	8	7	6	26	5	6
F-stat	419.18***	20.26***	46421.03***	3107.94***	3246.09***	470.89***
within R^2	0.6440	0.6293	0.8925	0.1934	0.6743	0.7119

This table reports regression results based on Driscoll-Kraay standard errors.
Method used is FEs regression.
Time effects are included in the regression model, but the estimated coefficients of these variables are not reported.
Standard errors are in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.

5. CONCLUSION

The banking industry, which plays an essential role in supporting sustainable development, provides critical contributions to the sustainability of the financial and economic system by incorporating ESG risks into business processes pertaining to credit and investment decisions.

This study aims to investigate empirically the impact of banks' ESG activities on FP. For this purpose, a sample consisting of Canadian, UK, Australian, Japanese, Spanish, and Turkish banks was formed to analyze the ESG-profitability nexus. As it is known, Canada, the UK, and Australia are capital market-oriented economies, whereas Japan, Spain, and Turkey are bank-based economies. Thus, the present article attempts to determine whether there is a significant difference in the ESG activities-bank profitability relationship in stock market and bank-based economies.

Our study, which is based on an unbalanced panel of 58 commercial banks in 6 countries, reveals a non-linear (inverted U-shaped) linkage between ESG and profitability. Specifically, investments in ESG activities can contribute to improving FP up to a certain point. However, beyond this point, increasing ESG investments may harm FP. This finding suggests that banks need to determine an optimal ESG value that balances the benefits and costs of ESG to support stakeholder engagement and sustainable development.

When the findings are evaluated in terms of stock-based economies, the inverted U-shaped non-linear relationship is valid for Canadian and UK banks. In contrast, a positive linear correlation between ESG and profitability has been identified for Australian banks. When the ESG-profitability link is examined in terms of bank-based economies, three different results are identified. First, the inverted U-shaped nonlinear relationship exists for Japanese banks. In addition, the relationship between ESG and profitability for Spanish banks is positive and linear. This finding suggests that the ESG-performance relationship follows neither a U-shaped nor an inverted U-shaped model. Moreover, it has been determined that ESG activities are unrelated to profitability for Turkish banks. In conclusion, it can be said that the impact of ESG practices on FP varies from economy to economy. This result can be attributed to the legal regulations, competition conditions, stakeholders' expectations, and unique characteristics of the banking industries in each economy.

Consequently, banks are exposed to various risks such as operational risk, liquidity risk and credit risk on account of their business operations. For the banking industry, ESG risks are a new type of risk stemming from ESG factors. Hence, the development of a risk management approach that takes ESG risks into account by banks can help increase the sector's lending power, capital adequacy and investor confidence. Additionally, this practice may also assist in minimizing the existing risks.

Like other studies, this study also has some limitations. Due to ESG data, the time period determined in this study can be considered as the first limitation of the study. Another limitation of the study is related to the banks included in the banking sample. In future studies, more comprehensive analyzes on the ESG-profitability relationship can be carried out by using samples that include more banks and alternative performance indicators. Additionally, future studies may focus on the interaction effect of ESG. As a result, increasing the number of studies on ESG activities in the banking industry can help policy makers, regulatory authorities and bank management to make healthier and more reliable decisions regarding ESG practices and determine a road map.

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