Journal of Finance - Marketing Research; Vol. 3, Issue 3; 2025
e-ISSN: 3030-430X
DOI: https://doi.org/10.52932/jfmr.v3i3e

Journal of Finance - Marketing Research
http://jfm.ufm.edu.vn

ECONOMIC PERFORMANCE OF BANKS: A LITERATURE REVIEW

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ARTICLE INFO

DOI:
10.52932/jfmr.v3i3ene.721

Received:
January 07, 2025
Accepted:
June 02, 2025
Published:
July 25, 2025

Keywords:
Bank performance,
Data Envelopment Analysis,
Literature review,
Stochastic Frontier Analysis.

JEL codes:
G01, G15, G21

ABSTRACT

This literature review provides an updated and comprehensive perspective on bank performance, which has been extensively explored for several decades but has gained even more attention in the wake of the global financial crisis. This paper builds on previous studies by including a more diverse set of countries and periods, which provides a fresh insight into changing patterns of bank performance in various contexts. Although profitability, efficiency, and stability are the three most important aspects of bank performance, empirical studies tend to focus only on the first two. In terms of methodologies, financial ratios, and frontier analysis continue to be widely used to assess bank performance. While financial ratios are mostly employed to assess bank profitability, frontier analysis is utilized for cost and profit efficiency calculations. Regarding frontier analysis, the Stochastic Frontier Approach is the most widely applied parametric method while Data Envelopment Analysis is acknowledged as the most common non-parametric method. There are similar and contrasting findings on factors determining bank performance, including bank-specific, industry-specific, macroeconomic and environmental, social, and governance factors. Overall bank performance and bank performance under economic crises also received a range of similarities and differences. It is argued that the rationale for this heterogeneity lies in the methodology used, chosen timeframes, and observed regions.

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1. Introduction

Banks play an important role in maintaining stability and promoting the growth of both the financial system and the global economy. The disastrous effects of the 2008 financial crisis highlighted the failure of banks and financial institutions. Therefore, evaluating bank performance, especially in times of uncertainty, has become an important area of research. Recent studies have identified new methods to reduce financial risk and improve efficiency and productivity. It has also adapted to rapid globalization and technological developments.

There are many factors affecting bank performance, including bank-specific, industry-specific, macroeconomic, and environmental, social, and governance factors. Moreover, profitability, efficiency, and stability are the most important aspects when looking into bank performance. Although all three aspects are important, the first two tend to receive more attention in empirical research.

Firstly, profitability indicates how well a bank can use its capabilities to generate financial profits. Higher interest rates help banks attract more investors and create wealth growth strategies, including accumulating reserves to cope with changes in liquidity. Two common measures are return on assets and return on equity. Secondly, efficiency assesses a bank's performance in terms of how well it operates relative to its optimal performance. This includes technical performance, cost minimization, and profit efficiency. These aspects are frequently analyzed using frontier analysis methods. Finally, stability, which represents the resilience of a bank to failure, is often linked to factors such as profitability, leverage, and return volatility. While stability is an important aspect of bank performance, it is not the primary focus of many empirical studies.

The remainder of this paper is organized into four sessions as follows. Session 2 discusses the two types of literature reviews and methods to reduce biases among the empirical studies. Session 3 describes the research methodologies used in assessing bank performance. Session 4 discusses the findings among empirical studies. Section 5 concludes the paper and suggests areas for future studies.

2. Literature review

The literature review offers valuable insights into key trends, prominent debates, and important empirical findings from diverse studies on bank performance. It can generally be divided into two categories: traditional literature review and systematic literature review, with each differing in scope and methodology for selecting studies.

Traditional literature review is characterized by its flexible approach, where studies are chosen based on the author's subjective judgment to compare, evaluate, and synthesize concepts and perspectives. This review adopts a traditional approach, selecting references that align with the research objectives. Traditional review of banking performance often centers on the methodologies used to measure efficiency. For example, Berger (2007) analyzed global and country-specific efficiency frontiers in international banking. In addition, Sharma et al. (2013) and Jia (2016) have explored both parametric and non-parametric methods, while Paradi and Zhu (2013) specifically highlighted the use of Data Envelopment Analysis (DEA), a popular non-parametric approach.

On the other hand, the systematic literature review adopts a more structured approach, which relies on clearly-defined selection criteria and analytical frameworks (Kitchenham et al., 2009). For example, Ahmad et al. (2020), examined 100 papers identified through targeted keyword searches and analyzed

citation metrics to identify trends. It was noted that "Banking & Finance" is a leading journal in the field and Allen Berger was acknowledged as a significant contributor. However, Abreu et al. (2019) found no strong influence from particular authors or institutions and observed generally low levels of efficiency across the banking sector. Furthermore, regarding research themes, Ahmad et al. (2020) identified five core themes which are ownership, financial crises, methodology, scale economies, and determinants. Bhatia et al. (2018) then redefined eleven key themes, especially including environment, regulations, risk, and stock performance.

The implementation of meta-regression analysis provides a robust approach to avoid biases typically found in the paper selection step of conventional literature reviews, leading to a more reliable synthesis of the empirical results. Through statistically summarizing and combining results measured in a shared metric, meta-regression analyses enable researchers to draw conclusions across a large number of empirical studies that investigate similar problems. This methodology not only integrates heterogeneous results but also allows the evaluation of the relative effects of particular aspects of the studies included on the associated results. For example, while Iršová and Havránek (2010) utilized data from only one country and time period up to 1998, Aiello and Bonanno (2018) expanded the scope to include more countries and methodologies over a wider time period to investigate the drivers of efficiency heterogeneity. Their results point out that efficiency measures are strongly affected by the number of studies, observations, and variables included, indicating a systematic relationship between study characteristics and efficiency scores. In addition, Iršová and Havránek (2010) also observed that an increase in the number of observations corresponds to a higher average of the estimated efficiency.

3. Methodology

Research on measuring bank performance has advanced over decades and encompassed a variety of methodologies that fall into two main types, which are financial ratio analysis and frontier analysis. Ahmad et al. (2020) surveyed 100 of the most cited publications and found that 26% of the articles employed financial ratio analysis, as opposed to 74% that utilized frontier analysis.

Bhatia et al. (2018) also thoroughly characterized the types of methods used in these experiments and described that 89% of the experiments utilized parametric and non-parametric methods, of which 40% were parametric and 49% were non-parametric. This is also supported by Fethi and Pasiouras (2010) who stated that 181 out of 196 studies extensively employed DEA-like methods for the measurement of bank performance, indicating that the non-parametric character of DEA-like methods is widely popular.

3.1. Financial Ratio Analysis

Bank performance is usually evaluated using accounting calculations, with return on assets (ROA) and return on equity (ROE) most widely used as profitability indicators. According to Horen (2007), ROA indicates how efficiently the bank is in using its assets to generate profits by the ratio of net income to total assets. On the other hand, ROE, the ratio of net income to the shareholders' equity, assesses the profitability based on the capital contributed by the bank's owners.

According to Athanasoglou et al. (2008), ROA is often considered a more constant measure than ROE, as ROE is not robust to the effect of financial leverage that tends to distort profitability comparisons between banks with different capital structures. Extending on this, Olson and Zoubi (2011) compared traditional financial ratio methods, such as ROA and

ROE, to parametric frontier methods, such as the distribution-free one, demonstrating the advantages and disadvantages of each for the evaluation of bank performance.

Besides ROA and ROE, another key indicator widely employed to assess the profitability of banks is net interest margin (NIM). This gives the ratio of investment income to the interest expense, in the context of the average earning assets of the bank. NIM is most useful to characterize a bank's main source of income when interest rate environments are not static.

Furthermore, research practice generally utilizes financial ratios combined with more advanced methods to get a comprehensive picture of bank performance. For example, Chortareas et al. (2012) assessed bank performance across 22 European Union (EU) countries using a combination of financial ratio analysis and DEA and truncated regression. This approach allowed for a thorough examination of how profitability, efficiency, and external factors influence overall performance. In addition, to assess a bank's stability, Mirzaei (2013) applied the Z-score, which is a common indicator of financial stability. Bank stability is negatively related to the likelihood of a negative shock producing the necessary forces to force banks to default.

3.2. Frontier Analysis

Frontier analysis methods are widely used to assess bank performance, particularly efficiency. Both parametric and non-parametric methods in frontier analysis estimate efficiency as the deviation from optimal frontiers formed by best-practice banks. However, Kumar and Gulati (2014) and Aiello and Bonanno (2018) claimed that parametric methods tend to have lower efficiency scores than non-parametric ones.

3.2.1. Parametric methods

There are three key parametric methods, which are Stochastic Frontier Analysis (SFA), Thick Frontier Approach (TFA), and Distribution Free Approach (DFA) (Coelli et al., 2005). However, according to Bonin et al. (2005), Asaftei and Kumbhakar (2008), and Belke et al. (2016), SFA is the most widely used method for estimating cost and profit efficiency. In SFA, the efficiency frontier is derived from data of best-practice banks to reflect either minimum costs or maximum profits under comparable conditions. SFA was originally proposed by Aigner et al. (1977) to obtain cost efficiency and later expanded by Berger et al. (1993) for profit efficiency. In addition, Xiang et al. (2015) applied SFA to estimate technical, cost, and profit efficiency at the country level and analyze the impacts of some bank-specific factors on efficiency. Berger (2007) also proposed that differences in efficiency among countries might also reflect the influence of unobserved environmental factors.

A second major extension of SFA is the one-step model proposed by Battese and Coelli (1995) in which the environmental factors are taken into account. This has been utilized by many studies afterwards. Mirzaei (2013) selected the one-step SFA method for measuring the cost efficiency of banks by taking the cost of deposits, labour, and physical capital as inputs and considering the total assets as outputs. In addition, to assess the profitability and stability of banks, Andrieș and Ursu (2016) took labor, fixed assets, and total borrowed funds as inputs and considered loans and other securities and off-balance sheet items as outputs.

Moreover, unique features of countries are widely considered as being the only environmental variables and thus explain the global variation of bank efficiency as a whole. Furthermore, Delis et al. (2017) expanded SFA with a vector autoregression framework, linking efficiency and risk through lagged variables to model dynamic interactions.

Moreover, parametric methods establish specific shapes of functions, such as Fourier-flexible or Transcendental logarithmic. Iršová and Havránek (2010) have shown that when combining Fourier-flexible parametric methods with non-parametric approaches, a heterogeneity in results can be achieved.

3.2.2. Non-parametric methods

Among the non-parametric methods, Data Envelopment Analysis (DEA), which was introduced by Charnes et al. (1978), is the most widely used one for evaluating bank performance, particularly efficiency (Maradin et al., 2018). DEA measures efficiency by comparing performance against the best observations, rather than the average performance as in SFA. Unlike parametric methods, DEA does not require price data or pre-defined functional forms for production. Thus, it is widely used to estimate technical efficiency rather than allocative efficiency (Kumar & Gulati, 2014). Since DEA does not account for random variation or errors in the data, it is sensitive to stochastic variations or random noise. Hence, Berger and Mester (1997) suggested that parametric approaches such as SFA and DFA are likely to yield more robust estimates because they are assumed to be under economic optimization, whereas DEA is assumed to be based on technical considerations. However, conventional DEA has been employed to analyze the efficiency of many nations, as indicated in Casu and Girardone (2006), Sufian (2010), Chortareas et al. (2011), and Alzubaidi and Bougheas (2012).

The paradigm of DEA has always been relentlessly refining itself towards the solution of the performance assessment complexity. Among these developments, Wang et al. (1997), and Seiford and Zhu (1999) previously proposed the two-stage network DEA. During the first stage, the cost efficiency is determined by using the annual administrative or personnel costs. In the second stage, productive efficiency is quantified by outputs like equity and long-term assets, whereas the cost from the first stage acts as input. In order to achieve the robustness of the results, DEA is usually used together with other methods. The first common method is the bootstrap-based method, which leads to a more precise estimate of the efficiency by overcoming the statistical biases that are present in common DEA models (Christopoulos et al., 2020; Brissimis et al., 2008). Another common method applied with DEA is the Malmquist productivity index (MPI), which calculates productivity change over time and has been used to record bank performance patterns (Tortosa-Ausina et al., 2008; Chen, 2005). Under MPI, productivity growth consists of two components, which are efficiency change or catch-up effect, and technological change or frontier shift.

Besides DEA, Free Disposal Hull (FDH) is another commonly used non-parametric method. According to Berger and Humphrey (1997), FDH is better for heterogeneous banks as it does not assume all banks follow a concrete benchmark, which makes it suitable for diverse banking systems. Moreover, Tulkens (1993) insisted that while DEA often underestimates efficiency by assuming convexity, FDH can achieve higher efficiency scores as it does not take into account convexity. Furthermore, while convexity in DEA can smooth out data irregularities and handle noise better in large samples (Simar & Wilson, 1998), FDH brings more robustness to small samples, for example niche banks or some regional studies (Agrell & Tind, 2001).

4. Result

This section presents the findings about bank performance, highlighting the similarities and differences of empirical studies. The first part goes through the factors determining bank performance, while the second and third

parts look at overall bank performance and the impacts of financial crises on bank performance respectively.

4.1. Factors determining bank performance

There are many factors influencing bank performance that have been discovered throughout the years. They can be categorized into bank-specific, industry-specific, and macroeconomic factors. While most studies focused on examining how the factors affect efficiency or profitability separately, this paper aims to analyze their impacts on both efficiency and profitability as a whole.

Bank-specific factors

The performance of banks is considerably affected by a variety of internal factors, referred to as bank-specific drivers. They encompass financial risk management, asset structure, capitalization, operational efficiency, and size, all of which have different impacts on each other in the determination of a bank's profitability, efficiency, and stability. Although these factors are generally recognized, the effects can vary considerably between different banking systems and economic conditions.

One of the most critical elements is the management of financial risks, which directly affects a bank's ability to maintain profitability, particularly in unpredictable markets. Athanasoglou et al. (2008) highlighted the importance of minimizing financial risks as a cornerstone of sustained success. In the same way, the portfolio construction in a bank's assets is also of paramount importance in assessing the risk exposure in a bank and its potential for revenue generation. Neves et al. (2020) and Trujillo-Ponce (2013) highlighted the role of capitalization and its importance in providing a shield from possible losses and maintaining superior financial stability during economic recessions. In addition, research on China (García-Herrero et al., 2009) and Europe and North America (Gugler & Peev, 2018) showed that good capital ratios have a positive relationship with profitability and long-term stability.

Operational efficiency is another critical driver of bank performance. García-Herrero et al. (2009) claimed a positive functional relationship between operating efficiency and profitability. Furthermore, Assaf et al. (2019) used data from almost 16,000 banks over 20 years and concluded that banks with superior cost efficiency in stable periods were more resilient in sustaining profitability and reducing risk in financial crises. This highlights the continuous return of operational efficiency as a base from which to build success over time.

On the other hand, the relationship between bank size and bank performance is still a debate. Caporale et al. (2017) and Bikker and Vervliet (2018) found that size has no significant effect on profitability. In addition, Athanasoglou et al. (2008) carried out an analysis of Greek banks from 1985 to 2001 and found that while factors such as capitalization, asset quality, and efficiency could influence profitability significantly, bank size did not. However, other studies found both positive and negative relationships between bank size and bank performance. A survey of Vietnamese commercial banks by Stewart et al. (2016) found that larger banks tend to have higher levels of efficiency and profitability. This is also confirmed by Gržeta et al. (2023) and Goddard et al. (2004), who carried out research on European banks. In addition, Alnabulsi et al. (2023) investigated 74 Middle Eastern and North African banks over the period of 2005-2020 and came to the same conclusion. This positive size effect may be due to economies of scale that allow large institutions to spread costs across resources and invest in advanced technology. Chortareas et al. (2011) and Andrieș and Ursu (2016) observed that in less saturated and more mature markets, large

E.U. commercial banks exhibit higher profit and cost efficiency. These results indicate that size advantages are not general, and market structure, regulatory regime, and economic growth all have a significant effect. In addition, in Australia, medium-sized banks were found to be scale-efficient, while smaller banks could benefit from increasing inputs or merging (Moradi-Motlagh & Babacan, 2015). Gemar et al. (2019) also contended that with the expansion of bank size, their credit risk liability may actually become beneficial for improving their profitability up to a point. However, Xiang et al. (2015) showed that bank size is associated with inefficiency, and Neves et al. (2020) found that size inversely correlates with profitability, largely due to higher salary expenses reducing operational profitability.

Industry-specific factors

Industry-specific factors such as market concentration and ownership have important impacts on bank performance (Athanasoglou et al., 2008). Market concentration is usually quantified by the Herfindahl-Hirschman Index. Mirzaei (2013) asserted that, after the control of other variables, larger market concentration has negative effects on the profitability and stability of banks. On the other hand, in the case of Europe (Goddard et al., 2004), empirical evidence supports a positive relationship between market concentration and profitability. Furthermore, the separation between state-owned, privately-owned, domestic, foreign, and Islamic banking systems offers a fine-grained understanding of what impact the ownership structure has on operational and financial results.

With respect to state-owned and private banks, evidence again and again demonstrates the comparative inefficiencies of state-owned banks relative to private ones. For instance, Stewart et al. (2016) found that non-state-owned banks in Vietnam outperformed state-owned ones in terms of operational efficiency. In addition, García-Herrero et al. (2009) and Gökgöz et al. (2024) also reported similar results for Chinese banks and Turkish banks respectively. Such results are commonly explained by bureaucratic waste, weaker mechanisms for profit maximization, and increased vulnerability to politics in state-owned institutions. In India, Chaluvadi et al. (2018) demonstrated that private banks surpassed public banks in productivity, reflecting the advantages of streamlined decision-making processes and stronger competitive pressures in the private sector. However, the relationship between private ownership and profitability is not inevitably good. Athanasoglou et al. (2008), as it applied to Greek banks, revealed no association of private ownership with profitability, with suggested mediating influences of market structure, regulatory environment, and economic constraints relevant to book consequences of ownership category on performance. The effect of the economic crisis on the performance of banks also depends on the ownership. Gulati and Kumar (2016) observed that new private banks in India faced the most severe setbacks during financial crises, possibly due to their limited experience, smaller customer bases, and higher exposure to market volatility compared to established public sector banks.

Next, in regard to domestic and foreign ownership, the question of the relative performance of domestic and foreign banks is an important part of the ownership structure. Foreign banks are often regarded as technology leaders, introducing advanced banking practices and innovations to host countries. Gulati and Kumar (2016) pointed out that foreign banks, especially those from developed economies, performed better during financial crises by gaining from the parent bank's stability and lagging profitability. However, foreign banks also face unique challenges. Bouzgarrou et al. (2018) highlighted that while foreign banks

outperform domestic ones in profitability during crises, they are less responsive to local economic growth dynamics, such as GDP growth, which positively correlates with domestic bank performance (Caporale et al., 2017). This can limit the contribution of foreign banks to economic recovery in host nations. Berger (2007) integrated results from more than 100 studies comparing the efficiency of domestic and foreign banks in many countries and demonstrated that foreign banks are considerably inefficient in developed countries. These drawbacks are typically ascribed to cultural and operational differences, regulatory constraints, and lack of local market knowledge. In addition, Mariappan (2024) had the same findings when looking into the banking sector in India as a typical example of developing countries.

Furthermore, the performance of Islamic banks with respect to that of conventional banks has been a subject of keen interest, especially taking into account the special principles on which Islamic finance is based. Beck et al. (2013) reported that although Islamic banks are less efficient for the complexity inherent in the Sharia-compliant operations, they have multiple other strengths. These include better capitalization, superior stock performance during financial crises, higher intermediation ratios, and better asset quality. These characteristics contribute to the resilience of Islamic financial institutions in adverse financial circumstances. Olson and Zoubi (2011) added evidence for these findings, highlighting the stability and good quality of Islamic bank assets even if they have relatively low cost efficiency. The focus on risk-transfer, moral investment, and the prohibition of speculative activities results in an Islamic bank having a more stable operating framework in times of financial crisis.

Macroeconomic factors

Macroeconomic factors have a huge impact on the economic performance of banks by influencing the risk profile of the bank and its revenue generation potential, as well as its overall resilience. Key variables such as cyclical output, business cycles, economic growth, interest rates, and inflation have been widely studied to understand their roles in banking performance.

The link between cyclical output and bank profitability is always rather indirect and often contextual to the wider macroeconomic scene. Athanasoglou et al. (2008) showed that for Greek banks, the effect of cyclical output in terms of profitability was not significant when output was below the medium trend, thereby indicating a weakly performing economy. However, if output went beyond the trend, its impact on profitability nearly doubled, revealing the procyclicality of bank performance. In times of economic expansions, lending acceleration and a stronger asset quality generate increased revenues, while in times of economic contractions, credit risk increases, and loan defaults occur. Bolt et al. (2012) also emphasized this procyclicality, as according to empirical studies, during deep recessions, loan losses became the main reason behind decreasing bank profitability. Nevertheless, under the best economic conditions, long-run interest rates ceased to be the controlling factor, since they are a result of an exceptional macroeconomic framework rendering sustained financial performance.

Secondly, economic growth is a fundamental pillar of banking profit, since it impacts credit demand, asset composition, and customers' solvency. A steady expanding economy helps minimize the formation of the non-performing loans, it increases the number of credits issued, and it helps the banks to produce interest income in a better way. A study of Central and Eastern European Banks by Ruxho and Beha (2024) confirmed a significant positive relationship between bank performance and

economic growth. In emerging and developing economies, where financial systems are often more vulnerable to external shocks, economic growth serves as a critical stabilizing factor for banking institutions.

Moreover, interest rates also have a strong and direct impact on bank profitability through their influence on net interest margin, which is one of the major revenue streams of banks. Trujillo-Ponce (2013) pointed out that the amount and consistency of interest rate levels directly influence the differential between lending and deposit rates and, therefore, influence bank profitability. In low or negative interest rate environments, lending institutions operate with compressed net interest margins that may erode net income unless compensated by higher volumes of loans or non-interest revenue. This interaction between interest rates and other macroeconomic variables introduces an additional layer of complexity. Bolt et al. (2012) noted that during periods of normal economic activity, correctly set long-term interest rates have a positive effect on banks' profitability by providing the necessary drive for continuing lending and investing.

Lastly, inflation has direct and indirect effects on banking profitability. Athanasoglou et al. (2008) also reported that expected inflation can have a positive effect on profitability as long as interest rates are calibrated accordingly. This is due to inflation causing nominal income to grow, and so ultimately creating conditions under which debtors are in a better position to pay back loans. Nevertheless, rapidly increasing inflation can have undesirable effects in that it knocks out the real purchasing power of debt and deposits and also challenges financial stability. The implications of inflation differ from country to country and region to region. Tran et al. (2020) used data from 31 high, 35 middle, and 40 low-income countries and demonstrated that although country-specific factors such as inflation play a substantial role in bank efficiency, bank-specific factors, especially risk-taking tendency, are the most important predictors of performance.

Therefore, a consistent macroeconomic environment is necessary for improving bank performance and avoiding credit risk. Gemar et al. (2019) highlighted the role of economic stability in mitigating risks and thus in reducing the probability of unwanted loan defaults and credit quality deterioration. Regularity allows banks to maximize their operation, to make optimal use of their resources, and to keep safe risk management practices.

Environmental, Social, and Governance factors

Besides the three main factors discussed above, environmental, social, and governance (ESG) factors critically affect bank performance in all three aspects of profitability, efficiency, and stability.

Firstly, environmental factors leading to climate-related physical risks and transition risks can significantly influence bank performance. With the degradation of the environment and climate-related issues, banks can face higher credit risks due to an increase in non-performing loans from borrowers in vulnerable sectors like agriculture. Le et al. (2023) studied more than 6,000 commercial banks across 109 countries during the period 2005-2019 and found robust evidence that the increase in climate risk decreases bank stability, especially among small and low-capital banks. It was also emphasized by Battiston et al. (2017) that if banks fail to adjust their lending portfolios in a timely manner, a systemic financial crisis may occur. Regarding the climate-related transition risks, Li and Pan (2022) confirmed an inhibitory effect of these risks on bank performance. Garcia-Villegas and Martorell (2024) further investigated this issue and signified the extreme importance of

fast and intense climate policy interventions and the need to set bank capital requirements to deal with these transition risks. However, when stricter environmental regulations come into effect, there will be an increase in operational costs for banks, and hence, bank efficiency will be reduced. Barth et al. (2013) looked into 180 countries during the period 1999-2011 and figured out that well-designed environmental regulations can improve bank stability, while poorly designed ones can decrease bank efficiency.

Regarding the social factors, financial inclusion and market expansion play a crucial role in affecting bank performance. Beck et al. (2007) pointed out that with higher financial inclusion, the customer base could be expanded and hence, bank profitability would be improved. This was also supported by Kumar et al. (2022), who investigated 122 Japanese banks from 2004 to 2018 and signified the importance of financial inclusion on bank performance even in a developed economy. However, it was noted by Kumar et al. (2022) that while some elements of financial inclusion have a positive effect on bank profitability, a few elements, like automated teller machines (ATMs) and the number of loan accounts, do not affect bank performance. In addition, regarding the developing countries, Jajah et al. (2020) looked into Sub-Saharan African countries during the period from 1990 to 2017 and concluded that financial inclusion is a crucial driver of bank performance in terms of profitability and that policy design and implementation should aim to expand the number of ATMs and bank branches. Apart from bank profitability, financial inclusion also has a close relationship with bank efficiency and stability. By investigating 1,740 banks in 86 countries over the period 2004-2015, Ahamed et al. (2021) concluded that financial inclusion affects bank efficiency positively, which is stronger in countries with stricter banking restrictions. Regarding bank stability, by looking into a wide variety of economies all over the world during the period 2004-2012, specifically 2635 banks in 86 countries, Ahamed and Mallick (2019) found strong evidence of a positive effect of financial inclusion on bank stability and emphasized that financial inclusion must be made a priority in policy design and implementation. This finding is also supported by Wang and Luo (2022) who studied the effect in emerging economies, and Hakimi et al. (2021) who looked into the MENA region. In addition, Nguyen and Du (2022) investigated 102 banks in 6 ASEAN countries over the period 2008-2019 and claimed that higher levels of financial inclusion led to higher levels of bank stability as banks are able to attract more stable customer deposits and increase safer loans.

Lastly, the governance factors play a crucial role in shaping bank performance. Strong governance can help improve risk assessment, and hence, operational losses and inefficiencies can be reduced (Ellul & Yerramilli, 2013). Empirical evidence suggested that banks with robust governance frameworks demonstrated greater resilience during periods of financial crises. Beltratti and Stulz (2012) claimed that banks with stronger governance structures performed better during the 2008 financial crisis, as they were better equipped to tackle systemic risks and maintain stability. However, Aebi et al. (2012), who also studied the performance of U.S. banks during the crisis, pointed out that standard corporate governance does not improve bank performance during a crisis and suggested the need for a more holistic governance approach. Berger et al. (2016) also looked into the crisis and claimed that the failures of the banks were strongly influenced by the ownership structure, particularly the shareholdings of lower-level managers and non-CEO higher-level managers. Moreover, Laeven and Levine (2009) added to the discussion by arguing that banks

with shareholder-friendly governance tend to take higher risks, while those with balanced stakeholder governance are more stable. All in all, empirical studies suggested that while strong governance generally enhances bank performance, its effectiveness depends on the specific governance mechanisms, ownership structures, and the broader regulatory and economic environment. Thus, policymakers together with bank executives must carefully design governance systems that mitigate excessive risk-taking while promoting stability and long-term growth.

4.2. Overall bank performance

As findings from empirical studies regarding bank performance tend to be highly heterogeneous and not comparable among countries and time periods, the scope to which countries and time periods are included in empirical research is highly significant. The aim of this section is to synthesize the findings of different empirical studies among different countries and regions over a wide span of time periods to achieve a broad understanding of the overall bank performance globally.

Tran et al. (2020) made an empirical evaluation of a ranking of the leading banks in 31 developed, 35 emerging, and 40 developing countries. Regional performance differences were identified and were strongest in the European Union and the Middle East. It is also claimed by Tran et al. (2020) that the efficiency of banks in the Asia-Pacific and Latin American regions from 2000 to 2014 presented a relatively low average efficiency score of 0.78, which signaled operational inefficiencies in these regions.

In Europe, bank efficiency is characterized by considerable heterogeneity. Christopoulos et al. (2020) highlighted low efficiency levels in the PIIGS nations (Portugal, Ireland, Italy, Greece, and Spain) during the 2009-2015 period. Moreover, in nine Central and Eastern European countries, banks operated with low efficiency between 2004 and 2015 (Degl'Innocenti et al., 2017). Another study focusing on 400 commercial banks in senior E.U. nations reported a declining trend in efficiency between 2005 and 2012 (Matousek et al., 2015). When comparing the broader EU to the Eurozone, less differentiation in efficiency levels was observed within the Eurozone, although Greece and Slovakia recorded disproportionately low efficiency during the 2000-2014 period (Tran et al., 2020). Historical data on Greek banks from 1985 to 2001 further indicated moderate persistence in profitability levels (Athanasoglou et al., 2008). In the meantime, commercial banks in the United Kingdom would not manage to arrive at satisfactory technical and scale efficiencies between 1987 and 2015 (Ouenniche & Carrales, 2018). The results support that capital charges, designed to help improve efficiency, may resolve the issue of financial distress and reduce agency problems.

In the Middle East and North Africa (MENA) region, banks generally exhibit lower cost efficiency than their European counterparts and are equal to those in other developing nations (Olson & Zoubi, 2011). However, the profit efficiency of MENA banks is deemed to be satisfactory when compared with the international benchmarks. Data from 83 banks in the area between 2000 and 2008 indicate that profitability and profit efficiency are issues that need to be considered more carefully because the extent to which cost efficiency matters in this regard is low (Olson & Zoubi, 2011). On the other hand, other studies claim that cost efficiency is a more stable metric for assessing the quality of management. Assaf et al. (2019) analyzed data from 15,993 banks between 1986 and 2009, and claimed that profit efficiency provides limited advantages since capital gains derived from risky decisions tend to be temporarily inflated under normal conditions.

4.3. Bank performance during economic crises

Effects of financial disruptions on bank performance have become a major research field that has uncovered greatly heterogeneous results with respect to countries and regions. This section presents an ordered review of these effects, with an emphasis on the effects of the 2008 global financial crisis, which is arguably one of the most destructive events in modern banking.

Interdisciplinary research over several decades provides informative evidence in regard to the lasting impacts of financial shocks. For instance, Bolt et al. (2012) studied bank performance from 1979 to 2007, an era with many macroeconomic shocks in the form of economic recessions. Their results showed the strong procyclicality of profits and growth of output during deep recessions (which were more significant than during stable macroeconomic conditions). In the same sense, Gugler and Peev (2018) also noted consistent long-term profits of all the studied countries over the observation periods prior to the major crises, which signifies a procyclical behavior of bank performance.

The 1997 Asian financial crisis interrupted the efficiency of banks in affected areas very badly. Park and Weber (2006) observed inefficiencies in Korean banks long before the crisis, and Sufian (2010) observed escalating inefficiencies in Malaysian and Thai banks in the wake of the crisis. Chen (2005) reported a similar trend in Taiwan. However, some economies demonstrated impressive robustness. For example, Hong Kong bank branches were very lightly affected, as mentioned by Drake et al. (2006). These findings illustrate the heterogeneous levels of fragility in banking systems in response to local financial turmoil.

The global financial crisis of 2008-2010 marked a turning point for the global banking sector, with performance patterns varying significantly across regions. Gugler and Peev (2018) studied data spanning from 1993 to 2014 from 885 banks and found considerable regional variation in the severity of the crisis. In the U.S., banking institutions suffered severe financial setbacks following the crisis; however, they recovered more quickly than their European counterparts, regained profitability by 2014, and established sustainable profitability. By contrast, Andrieș and Ursu (2016) showed that the European banks were hit with considerable efficiency losses, which were not fully restored, even after the crisis. Cost and profit efficiency were more adversely affected in these regions compared to E.U. banks as a whole.

Financial crisis resilience differed across countries, as pointed out by Xiang et al. (2015). British and Canadian banks displayed better efficiency during the 2008 crisis, attributed to factors such as proximity to major financial markets and robust regulatory frameworks. Australian finance firms also featured extraordinary robustness in terms of technical, cost, and profit efficiency, as a consequence of stable per capita income growth and sound capital adequacy ratios. This resilience permeated past crises, including the Asian financial crisis, which served to underpin the structural robustness of Australia's banking sector. Caporale et al. (2017) noted that older banks in the MENA region fared better during crises than younger banks and concluded that institutional maturity increased robustness.

Although Alzubaidi and Bougheas (2012) and Moradi-Motlagh and Babacan (2015) reported the minimal impact of the 2008 financial crisis on bank performance in certain regions, especially Europe and Australia, many other empirical studies reported more pronounced disruptions. The 2008 crisis, widely regarded as the most severe banking disruption since the Great Depression, caused significant declines

in bank efficiency across various countries. For example, Gulati and Kumar (2016) documented a slight fall in profit efficiency among Indian banks, which rebounded quickly. This indicates a robust recovery mechanism. However, Chen et al. (2018) claimed that Chinese banks faced poor overall efficiency during this period due to the combined pressures of the global financial crisis and structural issues, such as unfavorable ownership models and cost structures.

5. Conclusion

This literature review examines prior empirical studies on the economic performance of banks, focusing on both methodologies and findings. There are three key areas when assessing bank performance, which are profitability, efficiency, and stability.

Bank profitability and stability are primarily measured using financial ratios, while bank efficiency is measured by frontier analysis methods. Stochastic Frontier Approach and Data Envelopment Analysis are the key methods for parametric and non-parametric approaches, respectively. Regarding factors determining bank performance, there are four main ones, which are bank-specific, industry-specific, macroeconomic and environmental, social, and governance factors.

Empirical research often gives consistent and divergent results at the same time, which are mainly due to variations in methodologies and, most importantly, the data used. Furthermore, the empirical findings of the overall bank reveal substantial heterogeneity across regions and time periods. Developed economies such as the E.U. exhibit a trend of declining efficiency, while developing regions like MENA and Latin America reflect unique efficiency challenges and opportunities. Similarly, the effect of financial crises on bank performance also varies significantly across different regions and time periods. This signifies a strong need for tailored policy interventions as well as risk management strategies to enhance the efficiency and stability of banks in adverse financial circumstances.

Although this area of research has been extensively explored for a long time, this literature review provides a more updated and comprehensive perspective, encompassing a wider range of countries and time periods and integrating existing findings to offer a clearer understanding of the topic. In addition to empirical studies, future analyses should incorporate more theoretical perspectives to achieve a balanced understanding of bank performance. Moreover, as the majority of studies put more focus on bank profitability and efficiency, one notable gap in the existing empirical research is related to bank stability. Thus, bank stability continues to be an exciting area for future research.

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