Antecedents and Consequences of Earnings Management: A Systematic Review of the Banking Sector in Developed and Developing Countries

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Abstract

The accuracy and utility of financial information are critical, but the prevalent issue of earnings management (EM) casts a shade on this goal. With a growing corpus of EM literature, a comprehensive review is essential for distilling insights and guiding future research. The paper systematically reviews 182 EM studies through the distinctive lens of developing and developed country banking institutions. With an emphasis on accrual-EM, the current study thoroughly examines and synthesizes the antecedents and consequences of bank EM. Notably, certain themes (such as corporate governance, international financial reporting standards, ownership structure and liquidity) emerge as universally relevant, bridging the gap between developed and developing markets. Conversely, themes like bank efficiency, social capital, funding structure and institutional quality, among others, tend to be context-specific. Further, the study developed a conceptual framework of antecedents and consequences of bank EM by segregating them into developed, developing, and cross-country contexts. The study is unique in its developed and developing context of appraising EM literature. The results provide a better understanding of pertinent elements in diverse institutional settings that can aid regulators and policymakers in making decisions by identifying facilitators, mitigators and consequences in developed and developing economies.

Keywords: Earnings management, Bank, Literature review, Antecedents, Consequences.

JEL: G3, G21, M41, M42 **SDG:** SDG8, Target 8.10

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1. Introduction

Corporate accounting scandals continue to occur despite many regulatory and supervisory measures imposed by capital market regulators and financial regulators worldwide. There is a massive impact of such scams on society. Investors lose their money, people lose their jobs and many a time, the whole economy is affected. Earnings management (EM) practices are one of the causes of such scandals, as in the past, like Enron, WorldCom and Satyam Computers, among others. These are the major accounting scandals in the past, which have made the world take notice and have resulted in waning public confidence in financial reports published by companies. EM can be defined as the practice of manipulating the reported earnings to achieve some predetermined targets.

> Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that rely on reported accounting numbers (Healy & Wahlen, 1999, p. 368).

The management of organizations engages in EM practices for various reasons, including compensation, increased valuation, meeting or exceeding market targets and debt covenants (Graham et al., 2005).

Although EM prevails in every industry, research suggests that the banking and financial service industry is more susceptible to such practices (Biswas, Bhattacharya, Sadarangani, et al., 2022; Bouvatier et al., 2014; Wu et al., 2016). This is primarily due to the need for management to make subjective decisions about anticipated reserves for probable losses. For example, in the banking industry, this entails dealing with defaulted and nonperforming loans, whereas in the insurance industry, it deals with property and casualty claims. Over the years, the literature on bank EM has expanded significantly. The collapse of banks in Europe and America (e.g., Lehman Brothers, Bear Sterns, Royal Bank of Scotland and others) during the global financial crisis of 2008 has invited considerable debate on banks' governance and financial reporting quality. The chance of EM becomes severe in banks because of the higher information asymmetry in the banking business compared to other firms (Levine, 2004; Lobo, 2017). The bank's complicated and obscure structure makes them highly opaque (Grougiou et al., 2014; Morgan, 2002; Wu et al., 2016). EM severely affects loan quality, bank market valuation, and stability (Bushman & Williams, 2012; Jin et al., 2018). The banking sector forms a crucial part of many economies, especially developing economies and tempering its economic status can mislead stakeholders and jeopardize financial stability. From Lehman Brothers in the USA (using complex accounting techniques to hide leverage) to Yes Bank in India (underreporting non-performing loans to reach balance sheet goals) implies that the likelihood of bank failures increases when bank managers use EM techniques that impact the stability of the entire economy (Biswas, Bhattacharya, Bhattacharya, et al., 2022).

Given the importance and contribution of the banking industry to the economy and the detrimental effects of EM, it is critical to have a thorough understanding of the enablers/drivers and mitigators of EM in banks to facilitate transparent financial reporting, sound decisions, and financial stability. Furthermore, understanding EM behavior in banks is vital for regulators, standard-setters, and policymakers so they may benefit from it and take the appropriate corrective action to lessen the problem. There are many studies on EM in banks. However, the literature is unorganized, with contradictory findings without attempts at the synthesis of the findings. Previous reviews have not investigated the literature extensively on bank EM. One exception is Mangala and Singla (2021a) systematically reviewing EM in the banking industry. Their study has identified the determinants, approaches, mitigators and consequences of EM

in banks. We extend the work of Mangala and Singla (2021a) by expanding the keyword search, including more relevant articles and providing a theoretical base of the literature. We focused on accrual-based EM, identifying its drivers and mitigators and how these vary between developed and developing nations. Accrual-based EM occurs "when managers choose accounting policies from a set of generally accepted policies to achieve earnings objectives" (Braam et al., 2015, p. 114). The segregation of studies between developed and developing countries will help the standard setters and policymakers identify the factors that need greater attention in developing economies, and it will help future researchers focus on the factors that need to be investigated further in developing and developed countries.

We narrowed down our focus on accrual-based EM for three main reasons. First, banking literature is rich with accrual-based EM compared to real EM. In our review, more than 80% of the final included articles directly or indirectly deal with accruals. In the banking industry, the provision for loan loss or loan loss provision (LLP) is a major discretionary item in the bank managers' hands for manipulating earnings. Banking literature commonly concentrates on this single specific accrual. According to Mangala and Singla (2021a), more than 65% of the studies have used specific accrual-based EM showing the popularity of this specific accrual approach. Second, the power of tests relating to discretionary accounting decisions is increased because LLP has a more consistent accrual-generating process that can be more precisely divided into its nondiscretionary and discretionary components (Lobo, 2017). Third, analyzing accruals enables researchers to give standard-setters concrete evidence about which standards are effective and where there may be room for improvement (Healy & Wahlen, 1999).

This paper aims to study research on accrual-based EM in banks while addressing three main questions under the context of developing and developed economies.

RQ1. What are the current research trends in EM in banks in terms of time, sample country, authors, journals and theories?
RQ2. What are the antecedents (enablers and mitigators) and consequences of EM in banks?
RQ3. What are the research gaps in EM and the potential areas for further study?

Our study highlights the important enablers, mitigators and consequences of accrual-based EM in banks. For developed nations, executive compensation, audit committee size, incoming CEO, wholesale funding, diversification, liquidity, job security, organizational culture, economic policy and political uncertainty are the important enablers of bank EM. In contrast, board gender diversity, expertise in the audit committee, type of auditors, board size, IFRS, retail-based funding, social capital and financial literacy are important mitigators of bank EM. For developing nations, some of the enablers (e.g., executive compensation and liquidity) and mitigators (e.g., IFRS, board size and Big 4 auditor) remain the same as in developed nations. In addition, board independence, audit committee size, independence, board committees, foreign directors and joint audit have been found as mitigators and CEO duality, board gender diversity, concentrated ownership, and state ownership are additional enablers of bank EM in developing nations. Some antecedents, such as efficiency, institutional, managerial, and family ownership, show mixed evidence.

Regarding the consequences, the literature remains very limited and mainly in the context of developed countries. Bank EM significantly impacts bank stability, performance, cost of borrowing, liquidity and corporate social responsibility. Our study further highlights the notable author (Peterson K Ozili), journal (Journal of Banking and Finance) and country (USA) in terms of the number of articles contributed in this field. The current study can help accounting standard setters, banking regulators, and policymakers frame appropriate policies

and guidelines or revisit existing guidelines to curb or minimize EM. They can identify the factors that need greater attention in developed and developing economies. Our study has identified several gaps in the existing research and provides avenues for future research.

The rest of the paper is organized as follows: Section 2 covers review methodology, section 3 deals with results and descriptive analysis, and section 4 presents the important theories. Content analysis and conceptual framework are presented in sections 5 and 6. Section 7 presents the research gaps and future research agenda, and section 8 concludes the paper.

2. Review Methodology

The traditional literature review is more subjective than systematic literature reviews (SLR). SLR is conducted using well-defined search techniques, research questions, and data presentations (Kitchenham et al., 2009). Systematic reviews are a significant step forward in the evolution of a subject of study. They allow us to take a step back and look at the collective intelligence gathered from a diverse body of literature utilizing various samples, methodologies, and ideas (Hanafizadeh et al., 2014).

To conduct the study, we have used the two largest databases of indexed articles: Web of Science and Scopus. It is widely accepted that the two aforementioned multidisciplinary databases offer comprehensive results and efficient search capabilities (Goyal et al., 2021; Rebouças & Soares, 2021). The search was conducted in February 2023. We avoided limiting the search to a specific period to retrieve all relevant papers to date. A thorough, lengthy string of acceptable search phrases was utilized to conduct the title, abstract, and keyword searches to avoid omitting any important publications for consideration in this study. **Table 1** shows the search string used for data retrieval. **Fig. 1** shows the details related to the identification, screening, eligibility and inclusion of articles in the study. The final corpus for review consists of 171 papers that align with the enablers, mitigators and consequences of accrual-based EM in banks. Further, the references of the full papers were also scanned, and 11 relevant records were identified, which were added manually to the list after reading the abstracts. The complementary search is helpful in identifying the studies that might have been missed in the primary database search (Harari et al., 2020). Finally, 182 papers corresponded to the scope of the review and were included for analysis.

Table 1: Database and Search String

Database	**Search String**
Scopus and Web of Science	"earnings management" OR "income smoothing" OR "discretionary loan loss provision" OR "earnings manipulation" OR "accruals quality" OR "earnings quality" OR "financial reporting quality" OR "creative accounting" OR "accounting quality" OR "accounting manipulation” AND "bank*"

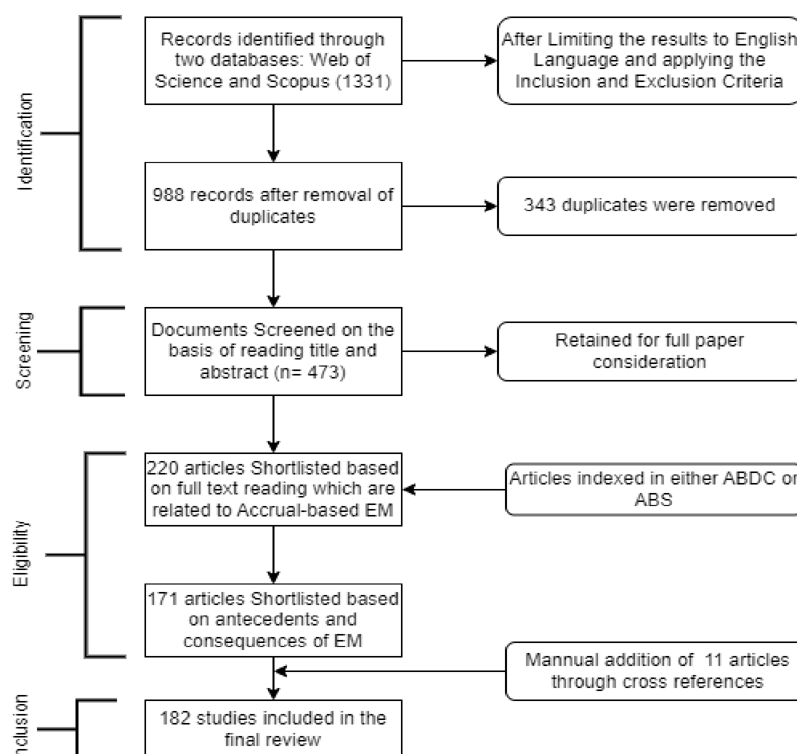

Fig.1: Retrieval and Selection of Articles

3. Descriptive Results

Fig. 2 shows that the publication number has increased consistently over the years, indicating the topic's popularity. The significant break happens after the financial crisis of 2008-09. Before the crisis, the total number of articles published was only 12 (an average of one article per year). After the crisis, the total publication reached 169 articles (around 11 articles on average). In 2008, only one study related to the current theme of the review was published. The rise in the number of articles after the financial crisis is due to the increased attention on bank financial reporting quality and governance triggered by the fall of major banks during the crisis.

Table 2 shows the notable journals publishing work on bank EM. The Journal of Banking and Finance topped the rank with 14 published articles, followed by the Review of Quantitative Finance and Accounting with six articles. Although the Journal of Financial Reporting and Accounting is relatively new compared to Accounting Review and Accounting and Finance, it has gained popularity over the period, and six bank EM studies have been published in this journal. Table 3 shows the prominent articles based on citations. The paper titled "Earnings Management to Avoid Earnings Declines Across Publicly and Privately Held Banks" authored by Beatty et al. (2002), published in the Accounting Review, has received the highest citation, followed by the paper titled "Corporate Governance and Earnings Management At Large Us Bank Holding Companies" authored by Cornett et al. (2009) published in the Journal of Corporate Finance.

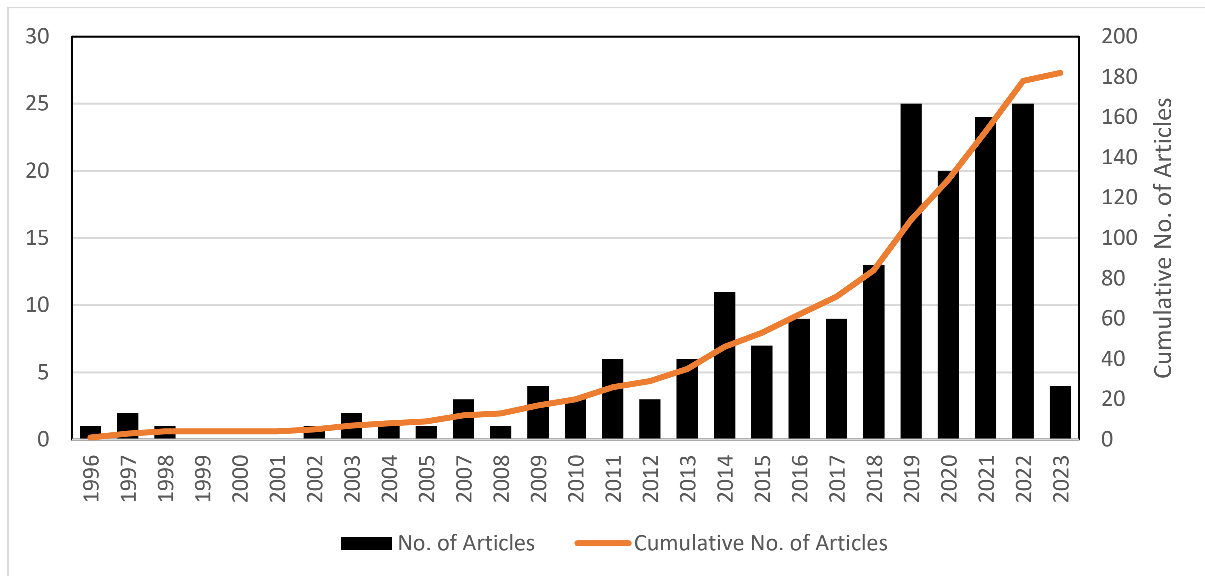

Fig. 2: Distribution of articles

Table 2: Prominent Journal (At least four articles)

Journal	No of Articles	Developed (D)/Emerging (E)/Cross-country (C)*
1. Journal of Banking and Finance	14	9D, 0E, 4C
2. Review of Quantitative Finance and Accounting	6	6D, 0E, 0C
3. Journal of Financial Reporting and Accounting	6	0D, 2E, 4C
4. International Review of Economics and Finance	5	4D, 1E, 0C
5. Research in International Business and Finance	5	0D, 1E, 4C
6. Accounting Review	4	4D, 0E, 0C
7. Accounting and Finance	4	2D, 0E, 2C
8. Journal of Islamic Accounting and Business Research	4	0D, 0E, 4C
9. Managerial Finance	4	0D, 3E, 1C
10. International Review of Financial Analysis	4	2D, 1E, 1C

*Note: D/E/C shows the number of journal articles published in the context of developed, emerging and cross-country studies. We have considered only those studies in the cross-country category where the advanced or emerging market status cannot be decided because such studies contain a mix of developed and emerging market nations.

Table 3: Prominent Articles (At least 100 citations)

Article	Year	TC	D/E/C
1. Earnings Management to Avoid Earnings Declines across Publicly and Privately Held Banks	2002	391	D
2. Corporate Governance and Earnings Management at Large US Bank Holding Companies	2009	262	D
3. How Does Internal Control Regulation Affect Financial Reporting	2010	186	D
4. Cross-country Determinants of Bank Income Smoothing by Managing Loan Loss Provisions	2008	183	C
5. Effects of National Culture on Earnings Quality of Banks	2011	152	C
6. An Empirical Analysis of Auditor Independence in the Banking Industry	2010	134	D
7. Auditor Reputation and Earnings Management International Evidence from the Banking Industry	2010	119	C
8. Mandatory IFRS Adoption and Accounting Quality of European Banks	2011	118	C
9. Differential Valuation Implications of Loan Loss Provisions across Banks and Fiscal Quarters	1997	111	D
10. Loan Loss Provisions, Earnings Management and Capital Management Under IFRS the Case of EU Commercial Banks	2011	100	C

Note: TC indicates the Total citation count. D/E/C indicates the status of the countries in which articles are based.

Table 4: Prominent Authors (At least four publications)

Authors	No. of Articles	Current Affiliation	Developed (D)/Emerging (E)/ Cross-country (C)
Ozili P	12	Central Bank of Nigeria	3D, 2E, 7C
Kanagaretnam K	12	Schulich School of Business, York University, Canada	7D, 0E, 5C
Tran D	5	Banking University Ho Chi Minh City, Vietnam	5D, 0E, 0C
Lim C	5	Nanyang Technological University, Singapore	1D, 0E, 4C
Elnahass M	4	Newcastle University Business School, England	0D, 1E, 3C
Jin J	4	Degroote School of Business, McMaster University, Canada	3D, 1E, 0C
Quttainah M	4	College of Business Administration, Kuwait University	0D, 0E, 4C
Leventis S	4	International Hellenic University, Greece	2D, 0E, 2C

Note: D/E/C indicates the number of articles published by the authors in the context of developed, emerging/developing countries and cross-country.

Table 4 shows the notable authors who contributed the maximum in the field of bank EM. Peterson K Ozili from the Central Bank of Nigeria and Kiridaran Kanagaretnam, Professor of Accounting at Schulich School of Business, York University, Canada, shared the top position regarding the number of documents published.

Fig. 3 displays the word cloud of the article keywords. We can assess the focus of the articles using word cloud and get an idea of the probable themes. The word cloud displays the most important and most frequent words, such as earnings management, loan loss provisions, ownership structure, corporate governance, and banks. Income smoothing is a type of EM and is a prevalent practice in banks. As we focus on accrual-based EM, we can see that most articles used loan loss provisions. Some of these words, like corporate governance, ownership structure and Islamic banks, are part of our central themes.

Fig. 3: Word Cloud (Authors' Keywords)

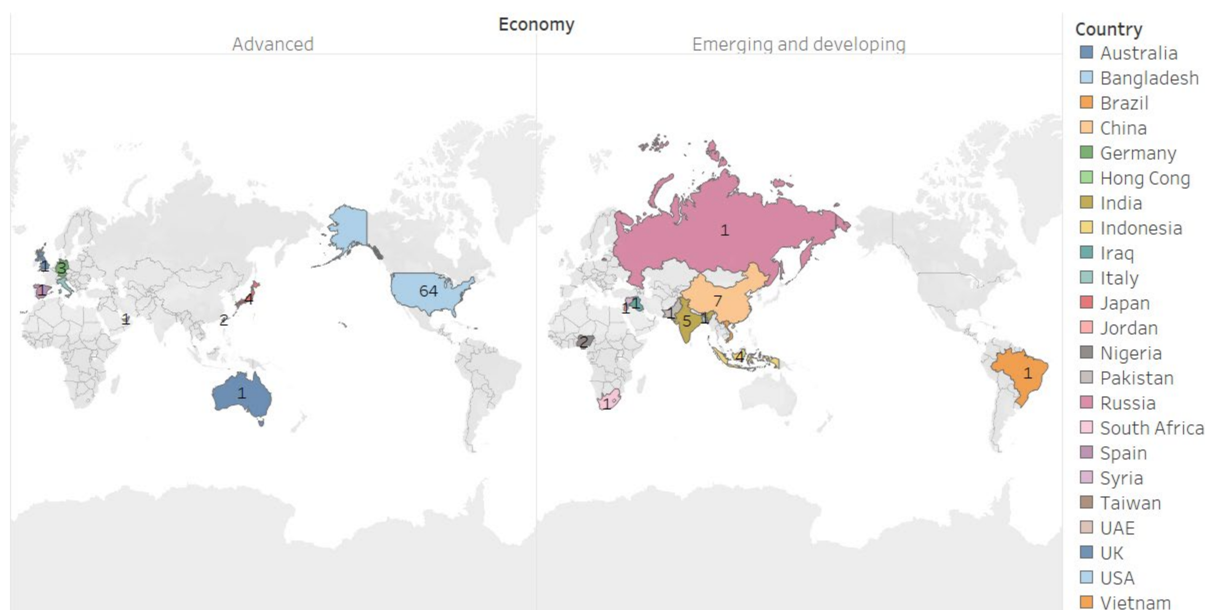

Fig. 4: Concentration of research

Fig.4 shows the world map where we segregated the studies based on developed and developing countries. Out of 182 studies, 83 studies (46%) are focused on developed economies, 33 studies (18%) are focused on developing countries, and 66 studies (36%) are from other cross-country samples. Among studies in developed countries, more than 75% of studies are only from the USA. This indicates that the research on bank EM is highly concentrated in developed countries, especially the USA. Among the developing countries, China has seven studies, followed by India, which has five studies. These two are the largest developing economies. Cross-country studies are mainly concentrated in Europe, Africa and the MENA region.

4. Important Theories

Our systematic review identified two significant theories researchers have employed in bank EM studies- Agency theory and Positive accounting theory. The agency theory by Jensen and Meckling (1976) continues to dominate the bank EM literature. The agency theory highlights the separation between management and ownership, resulting in agency relationships. An agency relationship is defined as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent" (Jensen & Meckling, 1976, p. 308). Conflicts of interest and information asymmetry are possibilities in this principal-agent interaction. Conflict of interest arises when the agents use this knowledge asymmetry to further their interests at the expense of the principal's welfare by virtue of their position within the organization. EM can occur because of shortcomings in the agency relationship. The management (agents) of publicly traded firms are participating in its activities. However, the reports that the management submits to the shareholders (principals) are what shareholders rely on (e.g., annual reports). A strand of studies have used agency theory to empirically investigate bank EM (e.g., Alam et al., 2020; AlQudah et al., 2020; Chaity & Islam, 2022; Fan et al., 2019; Galdi et al., 2021; Khalil, 2022; Mardnly et al., 2021; Sadaa et al., 2023; Shira, 2022; Uygur, 2013; Valdiansyah & Murwaningsari, 2022).

The second most relevant theory we identified in bank EM studies is the positive accounting theory by Watts and Zimmerman (1978). There are three hypotheses of positive accounting theory. According to positive accounting theory, a manager's disclosure decision can be motivated by the political cost hypothesis (a firm under regulatory scrutiny), bonus plan hypothesis and debt-equity hypothesis. Under the bonus plan hypothesis, the managers would always try to report higher profits by selecting the appropriate accounting methods. Under the debt-equity hypothesis, a firm's managers disclose higher profits to hide the excessive leverage in the firm's capital structure. Under the political cost hypothesis, a firm that undergoes regulatory or political scrutiny tends to use accounting methods that decrease earnings. This is done with the motivation to avoid political cost pressures or taxes. A strand of literature has used this theory to explain EM behavior in banks (Abdul Adzis et al., 2016; Amidu & Issahaku, 2019; Kwak, Lee, & Mande, 2009; Lassoued et al., 2017, 2018; Ozili, 2019a; Ozili & Outa, 2018; Peterson & Arun, 2018; Thinh & Thu, 2020; Vo et al., 2022).

Table 5: Important Theories

Theory	Studies related to Developed Countries	Studies related to Developing Countries	Studies related to other Cross-countries
Agency Theory	(Balla & Rose, 2015; Fan et al., 2019; Uygur, 2013)	(AlQudah et al., 2020; Chaity & Islam, 2022; Galdi et al., 2021; Khalil, 2022; Mardnly et al., 2021; Sadaa et al., 2023; Thinh & Thu, 2020; Uwuigbe et al., 2016; Valdiansyah & Murwaningsari, 2022)	(Alam et al., 2020; Almutairi & Quttainah, 2020; Fitri & Siswantoro, 2021; Kolsi & Grassa, 2017; Mersni & Ben Othman, 2016; Shira, 2022)
Positive Accounting Theory	(Abdul Adzis et al., 2016; Kwak, Lee, & Eldridge, 2009)	(Lassoued et al., 2017; Ozili & Outa, 2018; Thinh & Thu, 2020)	(Amidu & Issahaku, 2019; Lassoued et al., 2018; Ozili, 2019a; Vo et al., 2022)
Social norm theory	(Grougiou et al., 2014)		(Abdelsalam et al., 2021)
Resource Dependence Theory	(Fan et al., 2019)		(Almutairi & Quttainah, 2020; García-Sánchez et al., 2017)
Stakeholders Theory	(Grougiou et al., 2014)		(Almutairi & Quttainah, 2020; Amidu & Issahaku, 2019)
Tokenism Theory	(Fan et al., 2019)		
Stewardship Theory			(Almutairi & Quttainah, 2020; Mersni & Ben Othman, 2016)
Legitimacy Theory	(Grougiou et al., 2014)		(Salem, Ezeani, et al., 2021)
Bad management hypothesis			(Wu et al, 2016; Proença et al, 2023)

Both agency theory and positive accounting theory have been used widely in developed, developing and cross-country contexts. In addition to the two theories mentioned above, researchers have also used some theories while investigating the antecedents and mitigators of bank EM in the context of developed or cross-country. For example, Grougiou et al. (2014) used stakeholder theory, legitimacy theory and social norm theory to explain the relationship between corporate social responsibility (CSR) and EM of US banks. According to stakeholder theory, a firm's main objective is not wealth maximization but to engage all stakeholders (Freeman, 1999). The key challenge for the firm is to satisfy the needs of different coalition partners (concerning information asymmetries and conflicts of interest) involved directly or indirectly in the firm's functioning. The legitimacy theory suggests that a firm operates in an environment of socially endorsed behavior where they try to portray that their actions align with societal norms and values. When an organization fails to behave according to socially acceptable norms, legitimacy gaps arise, which raise questions about the firm's long-term survival. The social norm theory "draws attention to how endorsed patterns of behavior affect economic attitude" (Grougiou et al., 2014, p.3). Legitimacy theory has also been used in voluntary disclosure-related studies (Salem, Ezeani, et al., 2021). Social norm theory has also been used to establish the link between religion and bank EM (Abdelsalam et al., 2021). While investigating the role of corporate governance in bank EM, researchers have used several theories, viz., stakeholders theory (e.g., Almutairi and Quttainah, 2020), stewardship theory (e.g., Almutairi & Quttainah, 2020; Mersni and Ben Othman, 2016), resource dependence theory (e.g., García-Sánchez et al., 2017) and tokenism theory (e.g., Fan et al., 2019). Some researchers have used the bad management hypothesis to establish the link between bank efficiency and EM (Proença et al., 2023; Wu et al., 2016). The hypothesis states that because of poor managerial skills regarding bank lending strategies, there are higher problem loans and lower profitability in banks. The lower profitability induces managers to hide their inefficiency by manipulating earnings. **Table 5** shows the relevant theories used by the researchers in the context of developed and developing countries.

5. Antecedents

5.1. Corporate Governance

Our systematic review has found corporate governance (CG) to be a crucial factor influencing bank managers to engage in EM.

5.1.1. Board size

Among the board-related factors, a large board size was found to be effective in mitigating EM (e.g., Abu-Dawleh et al., 2022; Alam et al., 2020; Almutairi & Quttainah, 2019; Elnahass et al., 2022; Kolsi & Grassa, 2017; Shahroor & Ismail, 2022). A larger board size helps with better monitoring and can include experts and more independent directors. Large board size has been found to be mitigating EM in both developed, i.e., UAE (Shahroor & Ismail, 2022) and developing, i.e., India (Kumari & Pattanayak, 2017). Therefore, developed and developing economies are the same regarding the impact of board size on bank EM. However, as per some cross-country studies, a larger board size may not always effectively mitigate EM (Shira, 2022; Vasilakopoulos et al., 2018). This is possible because of the free-rider problem associated with the large boards. Therefore, the effectiveness of board size in mitigating bank EM still remains an empirical question.

5.1.2. Gender diversity

Bank EM can also vary depending on the gender diversity of the board. Female directors are believed to be more risk-averse and less tolerant of opportunistic behavior (Fan et al., 2019). Very few studies investigated the role of board gender diversity on bank EM (Almutairi & Quttainah, 2019; García-Sánchez et al., 2017). Unlike developed economies, female representation at the top of the corporate board is minimal in developing economies. The inadequate representation of female directors may lead to tokenism issues, and female directors in senior positions may adapt to a male-dominated culture. This argument is supported by Biswas, Bhattacharya, Sadarangani, et al. (2022), who found a positive impact of board gender diversity on EM in Indian commercial banks. Similar views are expressed by Fan et al. (2019) in the context of developed economies (USA) and concluded that a minimum number of female directors (i.e., 30%) is required for gender diverse board to be an effective mitigator of bank EM in the USA. This effect is further intensified when female directors have higher educational qualifications, greater board experience and audit or nomination committee members. However, there is a need for further research on this issue in the banking sector in both developed and developing markets to generalize the findings.

5.1.3. Directors

The presence of independent directors (Kolsi & Grassa, 2017), foreign (Wu et al., 2015) and important board committees (Mangala & Singla, 2021b) are consistently found in the literature as mitigators of bank EM, especially in developing economies. Independent directors may resolve the agency problem between managers and shareholders because they have minor conflicts of interest while overseeing managers. By inviting or hiring outside directors, a company can develop strategic prospects and enhance its engagement with the outside world (Almutairi & Quttainah, 2019). The monitoring role of foreign/outside directors becomes more effective in Islamic banks compared to conventional banks because of the ethical principles and moral values associated with the Sharia supervisory board (Almutairi & Quttainah, 2019).

5.1.4. Audit

Besides board-related factors, audit quality also plays a crucial role in EM. For example, audit committee size, independence and joint audit can effectively mitigate bank EM in developing economies (Mangala & Singla, 2021b). However, a larger audit committee may only sometimes effectively mitigate EM in banks (Shahroor & Ismail, 2022). Therefore, the independence of the audit committee is a crucial step to ensure the reliability of the audit and the financial reporting (Mangala et al., 2021b). The joint/co-audit further enhances the audit quality because bank managers cannot simultaneously influence the opinion of multiple auditing firms (Mangala et al., 2021b; Salem, Usman, et al, 2021). The audit committee's effectiveness can be enhanced by the presence of an expert or former auditor in the audit committee across a group of African countries (Mnif & Slimi, 2023) and MENA countries (Mersni & Ben Othman, 2016). The presence of industry-specialized auditors can also improve audit quality in developed economies (Bratten et al., 2020; DeBoskey & Jiang, 2012; Teclezion & Muzatko, 2015).

Audit quality also depends on the type of auditors. According to Ozili (2022b), African banks audited by big-4 auditors engage in EM and the effect is more noticed during economic downturns. This is possible because when big-4 auditors penetrate the market initially, they monitor the clients less. This is further supported by Ozili (2017), who reports that big-4 auditors do not curb EM in African banks. On the contrary, Salem, Usman, et al. (2021) found that big-4 auditors mitigate EM in Islamic banks of MENA developing countries. Sometimes, audit fees also enable EM in banks because lower fees lead to lesser engagement and monitoring by the auditor. However, big-4/5 auditors can moderate this relationship in banks

in the USA (Krishnan & Zhang, 2014). On the contrary, higher audit fees paid to the auditor in smaller banks can also result in higher earnings management because the small banks are less scrutinized by the regulators (Kanagaretnam, Lim, et al., 2010). Voluntary disclosure in the audit committee can mitigate EM (Salem, Ezeani, et al., 2021).

Although good CG mitigates EM in banks, some CG attributes can enable EM in banks. Executive compensation has been found as an enabler of EM in banks in developed economies (Cornett et al., 2009; Uygur, 2013), developing economies, i.e., China (Alhadab & Al-Own, 2019; Cornett et al., 2009; Hou et al., 2021; Uygur, 2013) and other European countries (e.g., (Alhadab & Al-Own, 2019). Additionally, CEO-related characteristics can influence the bank EM. First, Incoming CEO has been found to be enablers of EM in Germany (Bornemann et al., 2015; Shen & Wang, 2019). Second, CEO duality has been identified as an enabler of bank EM in emerging Asian countries (Shira, 2022) and other Islamic countries (e.g., Alam et al., 2020; Shira, 2022). In order to mitigate the problem associated with CEO-duality, a separation between the positions of CEO and Chairman is favored as it prevents the accumulation of influence and increases the oversight of the Board (Alam et al., 2020) . Concerning the CEO's pay-for-performance, it is assumed that if the CEO's compensation is related to stock performance, EM is more likely. Cornett et al. (2009) found a positive relation between CEO pay for performance and EM in US holding banks.

To summarize, based on the studies with specific reference to developed economies, executive compensation, audit committee size, and incoming CEO or CEO turnover are enablers of bank EM in developed economies under the CG theme. However, board gender diversity, expertise in the audit committee, type of auditors and board size can mitigate bank EM in developed economies. For developing economies, the board size, board independence, audit committee size, its independence, big-4 auditor and joint audit have been found as mitigators of bank EM. While CEO duality and gender diversity have been found to be enablers of EM in developing economies, the differences in gender diversity can be attributed to the inadequate female representation at the top of the bank board in developing economies. The extant research has yet to investigate the issue of audit fees and auditor industry specialization in developing nations.

5.2. Ownership Structure

The ownership structure is another important factor that influences EM in the banking sector. Concentrated ownership is found to be an influential enabler of bank EM in developing economies (Lassoued et al., 2017; Zainuldin & Lui, 2020). On the one hand, the concentration of ownership reduces the agency conflict between shareholders and managers since an increase in the concentration of ownership contributes to better control of the conduct and activities of managers. AlQudah et al. (2020) found that concentrated ownership mitigates EM in Jordanian banks. On the other hand, increased concentration of ownership presents another agency problem between blockholders and minority shareholders. The blockholders with supervisory power on the board can try to maximize their benefits at the cost of minority holders rendering the internal governance process inefficient. Thus, the blockholders can encourage managers to engage more in EM. However, Bouvatier et al. (2014) found that better institutional quality can mitigate the impact of concentrated ownership on EM in European commercial banks.

Since the role of concentrated ownership on bank EM is unclear, literature has further investigated the monitoring role of different shareholding patterns. In most developing countries, the banking sector has a three-tier structure of ownership- state-owned banks, domestic private banks and foreign banks. Due to a lack of competition, political and bureaucratic interference, resource misallocation, and unethical lending practices that ultimately result in banking fraud, the governance structure in government-owned banks is

regarded as being weak (Doan et al., 2020; Lassoued et al., 2017). In a system with such subpar governance, managers are more likely to commit earnings manipulation (Doan et al., 2020). This behavior is more pronounced during election years in developing countries. Although state ownership enables EM, studies suggest that institutional investors can help curtail EM behavior in banks in developing economies (AlQudah et al., 2020; Rizani et al., 2022). The efficient monitoring hypothesis states that institutional investors can effectively monitor the firm management by leveraging their majority shareholder's knowledge, professional skills and experience (Li et al., 2022). Therefore, institutional investors have the potential to track the opportunistic actions of the manager. However, the passive hand hypothesis states that institutional shareholders with small stakes favor short-term gains rather than long-term ones. Therefore, institutional investors are less likely to engage in monitoring activities. This short-term attention of institutional investors encourages managers to participate in income streamlining in both developed and developing countries, i.e., Japan (Kwak, Lee, & Mande, 2009; Lassoued et al., 2017).

In a nutshell, the role of ownership structure on bank EM has yet to be studied extensively across the globe. Our systematic review shows that extant literature has focused more on cross-country and developing economies samples. One reason for focusing on developing economies can be the concentrated nature of ownership structure in such economies. Ownership structure has been used as a moderating variable in many studies on bank EM across developed and developing economies (e.g., Guo et al., 2021; Skała, 2021; Surifah, 2015; Wu et al., 2018). State ownership has been found to be one of the enablers of bank EM in developing countries. Although institutional ownership can enable bank EM in both developed and developing economies, it can mitigate bank EM in developing nations according to the efficient monitoring hypothesis. While the passive hand hypothesis seems more prominent in developed economies, both efficient monitoring and the passive hand hypothesis apply to developing economies. Therefore, unlike state ownership, extant research remains inconclusive in explaining the role of institutional ownership on bank EM. Similarly, extant literature remains inconsistent in explaining the role of family ownership and managerial ownership on EM in the banking sector in developing countries.

5.3. International Financial Reporting Standards (IFRS)

A strand of research has identified IFRS as an effective mitigator of bank EM in cross-country context (Amidu & Issahaku, 2019; Attia et al., 2013; Gebhardt & Novotny-Farkas, 2011; Leventis et al., 2011; Ozili, 2019b), developed economies (Abdul Adzis et al., 2016) and developing nations (Ozili & Outa, 2019; Uwuigbe et al., 2016). However, some research shows that IFRS is not effective in mitigating EM in banks. For example, Ozili and Outa (2018) found the adoption of IFRS does not mitigate EM in South African banks. Similar views are expressed by Cameran and Perotti (2014) in the context of Italian banks. The differences in the findings can be attributed to the enforcement quality of IFRS. The influence of IFRS on the earnings management of Nigerian banks was found to have inconsistent evidence in Ozili and Outa's (2019) study, which was driven by the enforcement quality. Additionally, there may be variations between adopting IFRS (voluntary or mandatory), which can cause differences in the findings. Thus, stringent enforcement of IFRS, rather than adoption, irrespective of whether the country is developed or developing, should lead to the mitigation of EM.

5.4. Efficiency and Diversification

Bank efficiency is a topic that has captured much attention in the last few decades, especially after the global financial crisis. Recently, a few studies examined how efficiency can influence EM and earnings quality in banks. This area is still developing, and the current findings are inconclusive. While efficiency can lessen EM, inefficiency can motivate EM in banks. Valdiansyah and Murwaningsari (2022) found that banks with higher cost inefficiency practice more EM in Indonesian (developing economy) banks. However, their study shows that better CG can improve bank efficiency and reduce the negative impact on earnings quality. This finding is further supported by Chaity and Islam (2022) in the context of commercial banks in Bangladesh (a developing economy), where they evaluated bank efficiency, including some CG variables. Therefore, bank efficiency can be a crucial factor in determining the level of EM in developing economies, and bank efficiency would further depend on the level of corporate governance in such countries. However, due to the paucity of research, we could not conclude that bank efficiency is a possible determinant of bank EM in developed economies.

Concerning diversification, Tran et al. (2019) found that diversification leads to greater EM in US banks. The impact of diversification varies according to the bank size, dividend payment and the financial crisis (Tran et al., 2019). Diversification increases the information asymmetry, and bank managers can utilize this information gap to manipulate earnings (Guo et al., 2021). Contrary to this, in a cross-country context, Amidu and Issahaku (2019) explain that diversification may not necessarily enable EM in banks because the income (fees, commission and other trading income) generated from diversification does not provide much room for managerial discretion.

5.5. Funding Structure and Liquidity

As banks generate revenue primarily from the lending business, banks also need funds to carry out the lending function. The funding structure can also influence how managers select an accounting technique. Banks fund their operations from wholesale as well as retail deposits. Retail deposits are less sensitive to earnings fluctuations compared to wholesale deposits. As such, banks with heavy retail deposits are less likely to smooth earnings due to increasing scrutiny from deposit insurance corporations (Jin et al., 2018). The bank wholesale-funding structure is an enabler, and retail-based funding is a mitigator of EM in developed countries (Cheng et al., 2011; Gombola et al., 2016; Kwak, Lee, & Eldridge, 2009; Lartey et al., 2022). However, how bank funding structure impacts EM in developing economies is yet to be explored.

Apart from the source of bank funding, the level of funding can further influence bank EM. Bank funding is directly related to its liquidity and bank liquidity can also play an important role in its financial reporting. A bank with less liquidity requires external finance, and to attract more external funds, it may indulge in earnings smoothing to show a steady flow of income (Gombola et al., 2016). A strand of research has found a positive impact of liquidity risk on bank EM in developed economies (e.g., Gombola et al., 2016), in developing economies (e.g., Valdiansyah & Murwaningsari, 2022) and on cross-country samples (e.g., Othman & Mersni, 2014).

5.6. Religion and Culture

Religion can play an important role in mitigating bank EM. Most of the religion-specific studies have covered cross-country samples and found that Islamic banks are less involved in EM banks (Abdelsalam et al., 2016, 2021; Almutairi & Quttainah, 2019; Elnahass et al., 2014;

Kanagaretnam et al., 2015; Lassoued et al., 2018; Quttainah et al., 2013). This is because of their ethical and moral values related to Sharia banking compared to conventional banks. In addition, numerous studies have compared EM between Islamic and conventional banks, taking it as a moderating variable (e.g., Almutairi & Quttainah, 2020; Elnahass et al., 2014; Riahi, 2020; Suripto, 2022)). Therefore, the role of religion in bank EM has been extensively studied across countries. Apart from religion, organizational culture also determines managerial discretionary behavior. In a compete and create-dominant organizational culture, US banks engage in EM using LLP, and this behavior is less evident in a collaborate-dominant organizational culture (Luu et al., 2022). Organizations with compete and create-dominant cultures focus on the external environment to react to the changes in the external environment in an innovative manner, outperform rivals and reward employees for achieving such goals. However, such evidence is yet to be explored in developing economies.

5.7. Macro-economic Factors

Among the macroeconomic factors, the Basel regulation was the most important regulation that impacted EM in banks. Before the Basel era, there were very limited incentives for EM in banks because EM could directly impact bank capital. Loan loss provisions, the bank's most significant discretionary accrual, were part of the numerator of the capital calculation. Therefore, any fluctuation in the LLP would directly impact bank capital. The Basel norm has dramatically changed this calculation; now, only a small portion of the LLP is part of the capital ratio, giving managers more leeway for EM through LLP without much impact on capital (Anandarajan et al., 2007). In addition to Basel regulation, other banking and macroeconomic reforms influenced the EM behavior in banks. The research mainly concentrated in developed countries like the USA, where reforms were undertaken following the global financial crisis.

In the context of developed economies, Basel regulation has been found to be an enabler of bank EM (Anandarajan et al., 2007; Lim & Yong, 2017; Rivard et al., 2003). However, Jutasompakorn et al. (2021) recently found that Basel III regulation reduces EM behavior in European banks. This is because Basel III brings more regulations, reducing discretionary managerial behavior. Apart from reforms and regulations, economic policy uncertainty (EPU) can influence discretionary managerial behavior in banks. The studies on the impact of EPU on bank earnings quality remain highly concentrated in developed markets (e.g., Jin et al., 2019; Tran and Houston, 2021; Ozili, 2022c). EPU increases the information asymmetry, and investors face difficulty segregating good news from bad news during EPU. This further allows managers to manipulate earnings to convey the desired results (Jin et al., 2019). There is also political uncertainty that enables EM in banks. During election years, banks keep higher discretionary LLP in the developed markets (Ozili, 2020). About the institutional factors, voice and accountability, enforcement of banking and accounting rules have been found to be a significant mitigator of bank EM (Altamuro & Beatty, 2010; Delis et al., 2018; Ozili, 2022c).

In the context of developing economies, Nikulin and Downing (2021) did not find any significant differences in the EM behavior of Russian banks after the implementation of banking regulation and oversight in Russia. Ozili and Outa (2018) found evidence of income smoothing (EM) in African banks influenced by the business cycle of their customers or economic conditions. Generally, banks keep more provisions during the economic boom to set aside reserves for an economic downturn. We need more evidence for institutional factors due to the paucity of research in developing countries.

However, in the context of cross-country samples, a strand of research shows that the greater the institutional quality, the lesser the earnings quality (Dal Maso et al., 2018; Fonseca & González, 2008; García Osma et al., 2019; Kanagaretnam et al., 2014). Ozili (2019a) noticed that bank income smoothing is mainly evident post-financial crisis and can be prevented with

strong investor protection in Africa. Prudential supervision can also create scope for EM in European banks because regulators encourage income smoothing for bank stability, and this can be mitigated only under the effective enforcement of accounting rules and market discipline (Di Fabio et al., 2021). This is done mainly to signal business stability.

5.8. Others

In addition to the above firm-specific factors, extant research shows that job insecurity can lead to EM in banks (Kanagaretnam et al., 2003). Similarly, bank managers can engage in EM to meet or beat the analyst forecast (Robb, 1998). Further, bank EM also depends on the listing status of the bank (Beatty et al., 2002; Chen et al., 2021; Ghosh, 2007; Ozili, 2017), bank risk (Aristei & Gallo, 2019) and stability ((El Diri et al., 2021). Among other macroeconomic factors, fintech, the covid-19 pandemic, and national culture have been found to be significant drivers of bank EM. Citizens' financial literacy, social capital, and FDI act as mitigators for bank EM. All of these other factors are either in the context of developed economies or cross-country samples.

6. Consequences

More research is needed regarding the consequences of bank EM, and the extant research has mainly focused on how EM impacts bank performance and stability. Extant research measured bank performance mainly through bank efficiency and stock market-related performance measures. EM can adversely impact bank efficiency because excessive LLP hinders banks from transforming inputs into outputs efficiently and creates problems in monitoring, thereby contributing to the bad management hypothesis (Wu et al., 2016; Proença et al., 2023). The efficiency studies mainly used data envelopment analysis or stochastic frontier analysis to measure bank efficiency. EM can have either a positive or negative impact on stock market-related performance measures. DLLP during economic downturns can lead to abnormal negative returns from stocks because investors view excess DLLP as a probable sign of massive defaults during downturns. Mangala and Singla (2022) and Ujah et al. (2017) found a negative impact of EM on bank financial performance. The negative performance is also further evident in subsequent years (Mangala & Singla, 2022). DLLP can lower stock trading liquidity (Zhang & McIntyre, 2021). However, DLLP produces positive abnormal returns during the economic boom (Hegde & Kozlowski, 2021). The positive impact is because DLLP is often seen as good news by investors, and a higher LLP is a signal of positive future earnings (Beaver et al., 1997; Kanagaretnam et al., 2009). The positive impact of DLLP on bank performance is mainly noticed in banks with auditor expertise within the banking industry (Kanagaretnam et al., 2009); with low regulatory capital in the fourth quarter (Liu et al., 1997). Islamic banks value DLLP less than conventional banks in the MENA region (Elnahass et al., 2014).

EM can severely impact bank stability. EM can contribute to systematic risk (Kim et al., 2020; Tran et al., 2022)**, and the effect is more noticeable** during uncertainty (Ma & Song, 2016)**.** The effect on bank stability can be mitigated with gender diversity (Sadaa et al., 2023) and financial strength (Tran et al., 2022). Although Cohen et al. (2014) found that EM can adversely affect bank stability during a financial crisis, some studies found that the adverse effect disappears during the crisis (Ma & Song, 2016). Sometimes, investors do not recognize the EM and treat the reported high earnings as better performance. However, following some bank failures, investors recognize the EM, which negatively affects bank risk (Yasuda et al., 2004). Since EM increases banks' cost of borrowings (McIntyre & Zhang, 2020), managers are likely to take additional risk by investing in risky projects to generate better yields (Vo et al., 2022)**.** Apart from the bank risk and stability, EM can adversely impact bank liquidity (Haq et

al., 2019) and analyst forecast accuracy because of inaccurate information (Hong et al., 2020). Another exciting outcome of EM is that it can lead to higher CSR disclosures (Grougiou et al., 2014). CSR can be used to mask EM behavior in banks because EM is not socially desirable.

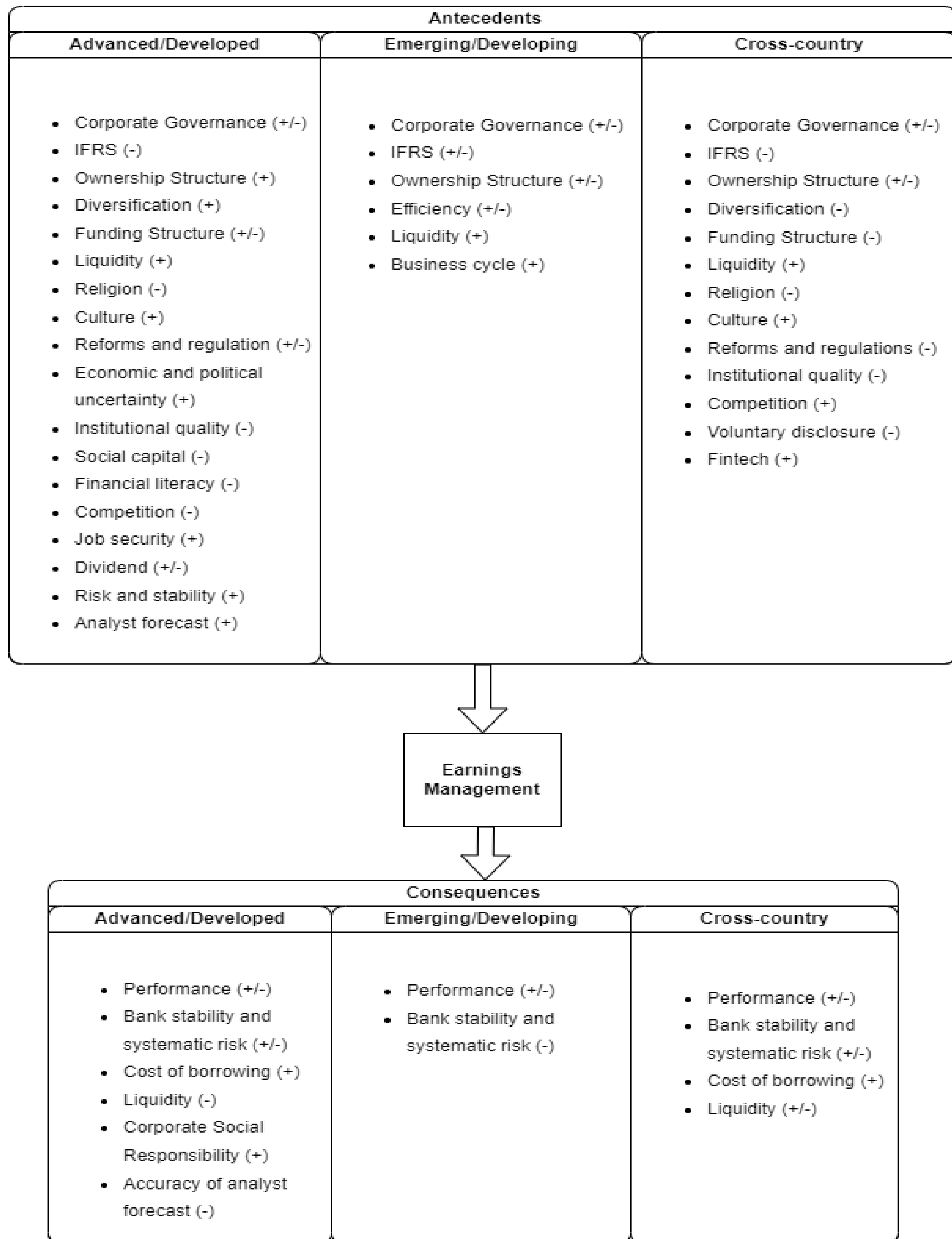

Fig. 5: Conceptual Framework

In the context of developed economies, on the one hand, bank EM hurts profit efficiency, stock trading liquidity, bank stability, liquidity and accuracy of analyst forecasts. On the other hand, it positively impacts future earnings, stock return, bank stability, cost of borrowing and corporate social responsibility. In the context of developing economies, more research is needed to investigate the outcomes of bank EM. Some researchers found a negative impact of EM on bank financial performance (e.g., Mangala & Singla, 2022; Ujah et al., 2017), while others found a positive impact (Zulfikar & Sri, 2019). Sadaa et al. (2023) found a negative impact on bank stability. The differences in the findings about the performance can be because DLLP is often seen as a piece of good news by the investors, and a higher LLP is a signal of positive future earnings. The contradictory findings concerning bank stability can be because sometimes, the investors could not recognize the EM and treat the reported high earnings as better performance. Thus, it reduces the chances of a systemic crash and minimizes bank risk.

In **Fig. 5**, we have presented a conceptual framework of the antecedents and consequences of bank EM.

7. Implications and Future Research Agenda

The systematic review presented a complete framework for the bank EM enablers, mitigators, and outcomes. The study analyzed the causes and implications depending on developed and developing countries. The study emphasizes the inconsistency of the findings, implying that some factors are context-specific and cannot be generalized. To explain EM in banks, the study identified two primary theories: agency theory and positive accounting theory. The study concentrated on accrual-based EM, which is significant in the banking industry. By evaluating accruals, researchers can offer standard setters actual information concerning which standards are useful and where there may be room for improvement. The identification of facilitators and mitigators in both developed and developing economies improves awareness of appropriate factors in various institutional settings, which can help regulators and policymakers make policy decisions.

The current study offers the following future research agenda:

- The extant research is highly concentrated in developed economies, and the literature in developing economies is limited. A good number of cross-country studies exist. However, cross-country research needs to be conducted focusing on developing nations. The study of EM on BRICS (Brazil, Russia, India, China, and South Africa), which is considered the most significant and crucial emerging economies group, is a possible candidate for testing the current theories and hypotheses.
- The extant literature has shown mixed results regarding the IFRS and bank EM. While the level of enforcement quality is assumed to be the prime cause, more empirical evidence needs to be provided to support this claim. Therefore, future research can test the role of IFRS in a better institutional setting with high enforcement quality and see if IFRS can mitigate bank EM.
- The role of institutional quality on bank EM needs further investigation in the context of developing economies because the low quality of institutional setting characterizes such economies. In such a poor institutional setting, the chances of EM increase.

- Bank stability can be influenced by other macro-economic factors like trade openness, competition and financial inclusion. However, how banks counterbalance the impact of these factors on reported earnings is yet to be explored. Future studies can investigate this aspect in the context of competition-stability and competition-fragility hypotheses.
- The impact of diversification on bank EM has been documented in the context of the US and other cross-country samples. However, further investigation is needed to understand the same issue in the context of developing economies and enhance the generalizability of the findings.
- Audit fees and auditor industry specialization can significantly affect bank EM in developed nations. However, extant research still needs to investigate the issue in developing nations.
- Unlike state ownership, extant research remains inconclusive in explaining the role of institutional ownership on bank EM. Similarly, extant literature still needs to be more consistent in explaining the role of family and managerial ownership on EM in the banking sector.
- Although the impact of bank funding structure on EM has been studied in developed nations, more research is needed in the context of developing countries. Therefore, future research can investigate similar issues in the context of developing countries to see if there are any contradictory findings.
- The role of EPU and political uncertainty has yet to be explored in developing economies. Future research can explore the role of EPU in developing economies because developing economies experience higher policy uncertainties. Similarly, since the banking sector of developing economies is state-dominated, it will be interesting to see how political uncertainty can exacerbate the level of EM in banks.
- Organizational culture has not been studied extensively in the literature and there is a scope to extend the work of Luu et al. (2022) in the context of developing countries where the organizational culture can be different compared to the US.
- More research is needed about the outcomes of bank EM, especially in developing nations. Future research can look into the impact of EM on bank ESG, bank efficiency and liquidity in developing economies.
- The relationship between EM and CSR remains highly debated in the literature. However, there is significantly less focus on the CSR and ESG of the banking sector. Future studies can extend the work of Grougiou et al. (2014), who found a positive impact of bank EM on CSR in US banks by exploring the greenwashing of ESG disclosures and how managerial entrenchment can influence the relationship.
- It is also essential to consider the bi-directional and cyclic relationship between factors like efficiency, stability, liquidity and analyst forecast because such factors act as both antecedents and consequences. Ignoring reverse causality can lead to biased estimates.

8. Conclusion

The study presents a systematic literature review on the antecedents and consequences of bank EM. According to the review, there has been a significant increase in empirical studies on bank EM during the past ten years, demonstrating a global increase in interest in bank financial reporting. The systematic literature review analyzed the 182 papers assessed based on several

factors, including the authors, citations, journals, and country status. The review has categorized various antecedents and outcomes based on accrual-based EM and with country status, such as developed and developing countries. In addition, we provide a comprehensive framework for potential relationships between facilitators, mitigators, and outcomes with EM in banks. The present study identified gaps in the existing literature and suggested future research avenues. Similar to other studies, our current study has some limitations. The study considers only published articles related to antecedents and consequences of bank EM and only in English. Although the review has used the two most popular and widely used databases to search articles, future research can include other databases to add to the findings.

Appendix I: Summary of the antecedents of Bank EM

Typology	Factor (Antecedent)	Sub-factor	Citation			Enabler/Mitigator EM
			Studies related to Developed Countries	**Studies related to Developing Countries**	**Studies related to other Cross-countries**	
1. Firm-specific	1. Corporate Governance	Corporate governance index	(Leventis & Dimitropoulos, 2012)	(Biswas, Bhattacharya, Sadarangani, et al., 2022)		**Mitigator**
	1.1. Corporate Governance (Board related)	Board Size			(Shira, 2022; Vasilakopoulos et al., 2018)	**Enabler**
			(Shahroor & Ismail, 2022)	(Kumari & Pattanayak, 2017)	(Abu-Dawleh et al., 2022; Alam et al., 2020; Almutairi & Quttainah, 2019; Elnahass et al., 2022; Kolsi & Grassa, 2017)	**Mitigator**
		Board Independence			(Abu-Dawleh et al., 2022; Almutairi & Quttainah, 2019; Elnahass et al., 2022; Kolsi & Grassa, 2017)	**Mitigator**
		CEO duality		(Shira, 2022)	(Alam et al., 2020)	**Enabler**
		Board committees, board meetings		(Mangala & Singla, 2021b)	(Kolsi & Grassa, 2017)	**Mitigator**
		Board gender diversity		(Biswas, Bhattacharya, Sadarangani, et al., 2022)		**Enabler**
			(Fan et al., 2019; Janahi et al., 2021)		(Almutairi & Quttainah, 2019; García-Sánchez et al., 2017)	**Mitigator**
		Executive compensation	(Cornett et al., 2009; Uygur, 2013)	(Hou et al., 2021)	(Alhadab & Al-Own, 2019)	**Enabler**

	Incoming CEO/CEO turnover	(Bornemann et al., 2015; Shen & Wang, 2019)			**Enabler**
	Foreign directors		(Wu et al., 2015)	(Almutairi & Quttainah, 2019)	**Mitigator**
1.2. Corporate Governance (Audit related)	Audit Committee Size	(Shahroor & Ismail, 2022)			**Enabler**
			(Mangala & Singla, 2021b; Salem, Usman, et al., 2021)	(Elnahass et al., 2022; Fitri & Siswantoro, 2021)	**Mitigator**
	Joint/co-audit		(Mangala & Singla, 2021b; Salem, Usman, et al., 2021)		**Mitigator**
	Audit committee independence		(Mangala & Singla, 2021b; Salem, Usman, et al., 2021)		**Mitigator**
	Audit fees	(Kanagaretnam, Krishnan, et al., 2010)			**Enabler**
		(Chen et al., 2016)			**Mitigator**
	Audit committee expert			((Mersni & Ben Othman, 2016)	**Mitigator**
	Big-4/5 Auditors		(Khalil, 2022)	(Ozili, 2022b)	**Enabler**
		(Krishnan & Zhang, 2014)	(Salem, Usman, et al., 2021)	(Kanagaretnam, Lim, et al., 2010; Ozili, 2017)	**Mitigator**
	Auditor Industry Specialization	(Bratten et al., 2020; DeBoskey & Jiang, 2012; Teclezion & Muzatko, 2015)		(Kanagaretnam, Lim, et al., 2010)	**Mitigator**
	Voluntary disclosure			(Salem, Ezeani, et al., 2021)	**Mitigator**

2. IFRS/International accounting standards			(Ozili & Outa, 2018)		**Enabler**
		(Abdul Adzis et al., 2016)	(Ozili & Outa, 2019; Uwuigbe et al., 2016)	(Amidu & Issahaku, 2019; Attia et al., 2013; Gebhardt & Novotny-Farkas, 2011; Leventis et al., 2011; Ozili, 2019b)	**Mitigator**
3. Ownership Structure	Concentrated ownership		(Lassoued et al., 2017; Zainuldin & Lui, 2020)	(Bouvatier et al., 2014; Kolsi & Grassa, 2017; Pinto et al., 2020; Shira, 2022)	**Enabler**
			(AlQudah et al., 2020)		**Mitigator**
	Institutional ownership	(Kwak, Lee, & Mande, 2009)	(Lassoued et al., 2017)		**Enabler**
			(AlQudah et al., 2020; Rizani et al., 2022)	(Miller et al., 2021)	**Mitigator**
	State ownership		(Lassoued et al., 2017)	(Doan et al., 2020)	**Enabler**
	Managerial ownership		(AlQudah et al., 2020)		**Enabler**
			(Rizani et al., 2022)		**Mitigator**
	Family ownership		(AlQudah et al., 2020)		**Enabler**
			(Lassoued et al., 2017)		**Mitigator**
4. Efficiency			(Valdiansyah & Murwaningsari, 2022)		**Enabler**
			(Chaity & Islam, 2022; Mathuva & Nyangu, 2022)		**Mitigator**
5. Diversification		(Guo et al., 2021; Tran et al., 2019)			**Enabler**

					(Amidu & Issahaku, 2019)	**Mitigator**
	6. Funding Structure		(Cheng et al., 2011; Gombola et al., 2016; Kwak, Lee, & Eldridge, 2009; Lartey et al., 2022)			**Enabler**
			(Jin et al., 2018)		(Amidu & Kuipo, 2015)	**Mitigator**
	7. Liquidity		(Gombola et al., 2016)	(Valdiansyah & Murwaningsari, 2022)	(Othman & Mersni, 2014)	**Enabler**
	8. Religion		(Cantrell & Yust, 2018)		(Abdelsalam et al., 2016, 2021; Almutairi & Quttainah, 2019; Elnahass et al., 2014; Kanagaretnam et al., 2015; Lassoued et al., 2018; Quttainah et al., 2013)	**Mitigator**
	9. Cultural Factors	Organizational culture	(Luu et al., 2022)			**Enabler**
		Dividend	(Tran & Ashraf, 2018)			**Enabler and Mitigator**
		Job security	(Kanagaretnam et al., 2003)			**Enabler**
		Analyst forecast	(Robb, 1998)			**Enabler**
		Risk	(Aristei & Gallo, 2019)			**Enabler**
		Failing banks (Bank instability)	(El Diri et al., 2021)			**Enabler**
Macro-economic factors	10. Reforms and Regulations	10.1. Basel regulation	(Anandarajan et al., 2007; Lim & Yong, 2017; Rivard et al., 2003)			**Enabler**
					(Jutasompakorn et al., 2021)	**Mitigator**

		10.2. Other reforms and regulations	(Fan et al., 2020; Kilic et al., 2013; Kim et al., 2019)			**Enabler**
			(Balla & Rose, 2015; Mamun et al., 2019)		(El-Halaby et al., 2020; Mathuva & Nyangu, 2022)	**Mitigator**
	11. Uncertainty	11.1. Economic policy uncertainty	(Danisman et al., 2021; Tran & Houston, 2021; Yiqiang Jin et al., 2019)			**Enabler**
		11.2. Political uncertainty	(Ozili, 2020)			**Enabler**
	12. Business Cycle	Economic boom		(Ozili & Outa, 2018)		**Enabler**
	13. Institutional Quality		(Altamuro & Beatty, 2010; Delis et al., 2018; Ozili, 2022c)		(Dal Maso et al., 2018; Fonseca & González, 2008; García Osma et al., 2019; Kanagaretnam et al., 2014)	**Mitigator**
	14. Others	Weighted Covid-19 cases	(Nguyen et al., 2023)			**Enabler**
		Fintech			(Ozili, 2022a)	**Enabler**
		Competition	(Jiang et al., 2016) **mitigator**		(Shira, 2022)	**Enabler and Mitigator**
		Social capital	(Yang et al., 2021)			**Mitigator**
		Financial Literacy	(Jin et al., 2021)			**Mitigator**
		FDI			(Pinto et al., 2020)	**Mitigator**
		National culture			(Kanagaretnam et al., 2011)	**Enabler**

Appendix II: Summary of the consequences of Bank EM

Consequences (Outcome)	Sub-outcome	Citation			Positive/Negative
		Studies related to Developed Countries	**Studies related to Developing Countries**	**Studies related to other Cross-countries**	
1. Bank performance	Efficiency	**Profit efficiency**- (Prior et al., 2019)		(Proença et al., 2023; Wu et al., 2016)	**Negative**
	Other performance	**Future earnings**- (Beaver et al., 1997; Kanagaretnam et al., 2009; Liu et al., 1997)	**Financial performance**- (Zulfikar & Sri, 2019)		**Positive**
		Stock trading liquidity- (Zhang & McIntyre, 2021)	**Financial performance**- (Mangala & Singla, 2022; Ujah et al., 2017)		**Negative**
		Stock return- (Hegde & Kozlowski, 2021)		**Valuation**- (Elnahass et al., 2014)	**Mixed**
2. Bank stability and systematic risk		(Cohen et al., 2014; Ma & Song, 2016)		(Vo et al., 2022)	**Positive**
		(Kim et al., 2020; Tran et al., 2022)	(Sadaa et al., 2023)		**Negative**
		(Yasuda et al., 2004)		(Riahi, 2020)	**Mixed**
3. Cost of borrowing		(McIntyre & Zhang, 2020)		(Shen & Huang, 2013)	**Positive**
4. Liquidity					**Positive**
		(Haq et al., 2019)		(Riahi, 2019)	**Negative**
5. Non-financial disclosures	Corporate social responsibility	(Grougiou et al., 2014)			**Positive**
6. Others (Accuracy of analyst forecast)		(Hong et al., 2020)			**Negative**

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