CEO BIAS, MORAL HAZARD AND ADVERSE SELECTION: A LITERATURE REVIEW ON RISK DYNAMICS IN DIGITAL BANKING IN INDONESIA, WITH A PITCHING RESEARCH APPROACH

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ABSTRACT

This paper investigates the impact of CEO bias, specifically overconfidence, on the financial sustainability of digital banks and the relationship between these risks. To organize prospective assessment into CEO decision-making within the digital banking industry, the evaluation employs the pitching research methodology (Faff, 2015 and 2024).This study compares and contrasts an array of existing theories and prior academic findings published between 1970 and 2024, categorized into key components such as CEO bias, moral hazard, adverse selection, and fintech solutions, and how each of these interacts with financial sustainability and governance in digital banking. This study indicates that CEO overconfidence plays a critical role in influencing the risk management practices of digital banks, particularly in the context of moral hazard and adverse selection. While fintech innovations such as big data and machine learning have improved banks' ability to assess borrower risk, they cannot fully mitigate the risks posed by information asymmetry, especially when CEO bias skews decision-making. This paper is expected to fill part of a gap in linking the studies of how CEO bias impacts the financial sustainability of digital banks, exposing moral hazard and adverse selection. It provides a practical approach to examining the moderating influence of CEO bias on moral hazard and adverse selection in Indonesia's digital banking sector, where fintech tools are heavily relied upon. While previous research has focused on the technical risks of fintech solutions, this paper explores how behavioral biases, particularly overconfidence, impact digital banking sustainability.

Keywords: *CEO Bias, Overconfidence, Moral Hazard, Adverse Selection, Digital Banking, Fintech, Financial Sustainability, Agency Theory, Behavioral Finance*

1. INTRODUCTION

The emerging digital banking trend in Indonesia has markedly increased access to credit and financial services for previously marginalized groups, especially micro, small, and medium companies (MSMEs). Digital banks such as, among others, Bank Jago, Bank Neo Commerce, Bank Seabank, BCA Digital, Bank Raya, Bank Allo, and Hibank, utilizing fintech advancements like big data and machine intelligence, have simplified the evaluation of credit risk and the provision of loans to applicants without conventional credit records. The heightened dependence on these technologies has also created new hazards, particularly those arising from information asymmetry—moral hazard and adverse selection (Akerlof, 1970; Stiglitz & Weiss, 1981).

Alongside the issues of information asymmetry, CEO bias, especially overconfidence, has become a significant element affecting the risk management practices of digital banks. Studies in behavioral finance have shown that overconfident CEOs tend to adopt aggressive lending strategies, underestimating the risks of borrower defaults and excessively depending on fintech solutions to alleviate those risks (Malmendier & Tate, 2005). In Indonesia, where digital

banking remains in its infancy, these biases can substantially impact the long-term viability of institutions (Fuster et al., 2019).

Indonesia's rapidly growing digital banking sector presents unique challenges due to incomplete governance frameworks and limited borrower data. This paper addresses how these challenges interact with behavioral biases, particularly CEO overconfidence, which may exacerbate moral hazard risks and adverse selection (Jagtiani & Lemieux, 2018).

This paper presents a systematic literature analysis to examine the impact of CEO bias, focusing on overconfidence in the interaction between moral hazard, adverse selection, and the financial sustainability of digital banks in Indonesia. This study employs the pitching research methodology (Faff, 2015 and 2024) to establish a systematic framework for forthcoming empirical investigations. Theoretical insights are derived from agency theory, information asymmetry theory, and behavioral finance, providing a thorough perspective on applying these frameworks to risk management in the digital banking industry.

The pitching research approach introduced by Faff (2015 and 2024) provides a structured methodology for framing and executing this research. Below is the pitching research table for this study:

Table 1. Pitching Research Approach
Source: Summarized and synthesized using the Pitching Research Approach (Pfaff, 2015 and 2024)

Component	Description
Title	CEO Bias, Moral Hazard, and Adverse Selection: A Literature Review on Risk Dynamics in Digital Banking in Indonesia, with a Pitching Research Approach
Research question	How does CEO bias influence the relationship between moral hazard, adverse selection, and financial sustainability in digital banks in Indonesia?
Motivation	Understanding how CEO overconfidence influences risk management is critical, given Indonesia's rising reliance on fintech tools in digital banking.
Key idea	This study examines the moderating role of CEO overconfidence in the relationship between information asymmetry and the financial sustainability of digital banks.
Data	A systematic literature review of 20 peer-reviewed articles on CEO bias, moral hazard, adverse selection, and fintech in digital banking.
Tools	Thematic analysis of literature findings and descriptive statistics from existing studies on CEO decision-making and financial outcomes, such as NPL ratios.
Contribution	The study integrates insights from agency theory, information asymmetry theory, and behavioral finance to propose a new framework for understanding CEO decision-making in digital banks.
So what?	The findings provide practical recommendations for improving digital banking governance and risk management practices, particularly in emerging markets like Indonesia.

CEO bias and risk management

The role of CEO bias in influencing risk management decisions is well-documented in the literature. A study by Malmendier and Tate (2005) argue that overconfident CEOs are more likely to engage in high-risk strategies, believing they can control outcomes more effectively than they can. In digital banking, this bias can lead to risky lending practices, especially when moral hazard and adverse selection are already present due to information asymmetry (Fuster et al., 2019).

Moral hazard and adverse selection in digital banking

Moral hazard occurs when borrowers take on more risk after receiving loans because they believe the bank will bear the consequences of any defaults. Adverse selection refers to banks' challenge in identifying high-risk borrowers before issuing loans, often due to incomplete information (Akerlof, 1970; Stiglitz & Weiss, 1981). While fintech tools can help mitigate these risks, they cannot fully compensate for the effects of information asymmetry, mainly when CEO overconfidence influences decision-making (Beyhaghi et al., 2020).

While fintech tools have significantly enhanced risk assessment, several studies argue that they cannot fully compensate for the behavioral risks posed by information asymmetry. In particular, Beyhaghi et al. (2020) and Fuster et al. (2019) found that while machine learning can improve borrower risk profiles, these tools still require human oversight to manage the underlying risks of moral hazard and adverse selection.

Fintech solutions in risk mitigation

While fintech innovations such as big data analytics and machine learning have improved risk assessment in digital banking, their effectiveness has been constrained by how they are implemented and interpreted correctly. Fuster et al. (2019) revealed that while fintech tools can reduce adverse selection, they are less effective at mitigating moral hazard without human oversight. Overconfident CEOs may place too much trust in these tools, underestimating the risks they aim to mitigate. A previous study by Beyhaghi et al. (2020) highlighted that while fintech tools have significantly improved risk assessment, their effectiveness is contingent upon solid governance and proper implementation. In emerging markets like Indonesia, where digital banking governance frameworks are still developing, the overreliance on technology without adequate human oversight increases the potential for risk mismanagement (Fuster et al., 2019). The grand theory that serves as the main anchor of this study is agency theory, developed by Jensen and Meckling (1976), which explores the relationship between principals (shareholders) and agents (CEOs), where agents make decisions on behalf of the principals. According to Jensen and Meckling (1976), the problem arises when information asymmetry allows CEOs to act in their interest, often at the expense of shareholders. In digital banking, CEO bias, particularly overconfidence, may lead to riskier lending practices. CEOs may overestimate their ability to manage credit risk and prioritize short-term gains over long-term financial sustainability.

Information asymmetry theory introduced by Akerlof in 1970, which was subsequently expanded by Stiglitz and Weiss (1981), is being adopted in this paper as the middle-range theory, explaining the imbalances when one party in a financial transaction—typically the bank—has less information about the borrower's risk profile than the borrower does. This can lead to moral hazard, where borrowers behave riskier after receiving a loan, or adverse selection, where high-risk borrowers are more likely to receive loans because the bank cannot accurately assess their risk. Although digital banks use fintech innovations to evaluate risk, these tools are not foolproof, and overconfident CEOs may rely too heavily on them.

The applied theory in this study is based on behavioral finance, precisely the concept of CEO overconfidence. In their study, Malmendier and Tate (2005) argue that overconfident CEOs tend to overestimate their ability to manage risks and underestimate the likelihood of adverse outcomes. In digital banking, this overconfidence can underestimate the risks associated with moral hazard and adverse selection, leading to higher non-performing loan (NPL) ratios and reduced financial sustainability. This theory helps explain how cognitive biases influence lending decisions, even when fintech tools are available to improve risk assessments.

Chart 1 visualizes the flows of the grand, middle-range, and applied theories being used as the framework of this study:
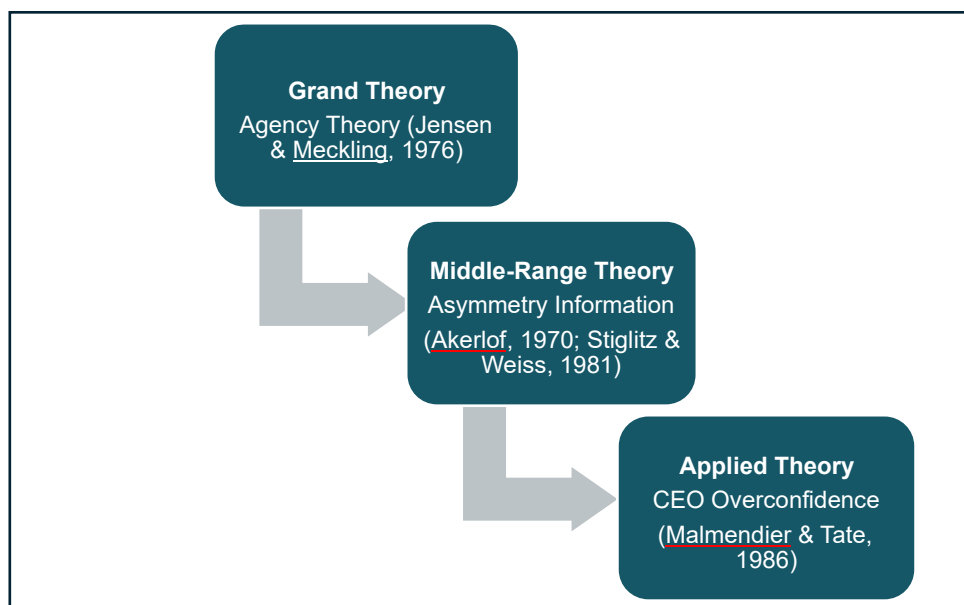

Figure 1. Theory flows
Source: Synthesized from Jensen & Meckling (1976); Akerlof (1980); Stiglitz & Weiss (1981); Malmendier & Tate (1986)

While Table 2 summarizes and synthesizes top 20 previous studies on the subject of this paper.

Table 2. Summary of top 20 previous studies
Source: Summarized and synthesized from previous studies published between 1970 to 2020, sourced from Scopus, Web of Science and Google Scholar.

Author(s) and Year	Publication	Method Year	Findings
Akerlof, G. A. (1970)	*The market for "lemons": Quality uncertainty and the market mechanism*	Theoretical Analysis	Introduced adverse selection, explaining how information asymmetry leads to market inefficiencies.
Stiglitz, J. E., & Weiss, A. (1981)	*Credit rationing in markets with imperfect information*	Theoretical and Empirical Analysis	We demonstrated that moral hazard and adverse selection cause credit rationing and market failures.
Jensen, M. C., & Meckling, W. H. (1976)	*Theory of the firm: Managerial behavior, agency costs, and ownership structure*	Theoretical Analysis	Developed agency theory, explaining conflicts between principals and agents (shareholders and CEOs).
Malmendier, U., & Tate, G. (2005)	*CEO overconfidence and corporate investment*	Empirical Study	Found that overconfident CEOs overestimate their ability to manage risks, leading to riskier investments.
Fama, E. F., & Jensen, M. C. (1983)	*Separation of ownership and control*	Theoretical Analysis	Highlighted the need for independent governance structures to manage CEO decision-making and reduce conflicts.
Holmström, B. (1979)	*Moral hazard and observability*	Theoretical Analysis	Explored how moral hazard arises when agents (borrowers) take more risks due to lack of oversight from principals.

Hackbarth, D. (2008)	*Managerial traits and capital structure decisions*	Empirical Study	Demonstrated that CEO traits, including overconfidence, influence corporate risk-taking and capital structure.
Fuster, A., et al. (2019)	*Predictably unequal? The effects of machine learning on credit markets*	Empirical Study with Machine Learning	Found that machine learning improves credit risk assessment but cannot fully eliminate moral hazard without oversight.
Beyhaghi, M., et al. (2020)	*Adverse selection in corporate loan Markets*	Empirical Study	Showed that fintech can mitigate adverse selection, but CEO bias affects interpretation of data.
Jagtiani, J., & Lemieux, C. (2018)	*The roles of alternative data and machine learning in fintech lending*	Empirical Study with Big Data	Found that big data from fintech improves credit assessments but requires human oversight to mitigate risks.
Shleifer, A., & Vishny, R. W. (1997)	*A survey of corporate governance*	Theoretical and Empirical Analysis	Emphasized the importance of corporate governance in controlling CEO decisions and managing long-term risk.
Eisenhardt, K. M. (1989)	*Agency theory: An assessment and review*	Theoretical Review	Provided a comprehensive review of agency theory, highlighting its application to CEO decision-making in banks.
Rothschild, M., & Stiglitz, J. (1976)	*Equilibrium in competitive insurance markets: An essay on the economics of imperfect information*	Theoretical Analysis	Explained how information asymmetry in financial markets leads to adverse selection and market inefficiencies.
Philippon, T. (2016)	*The fintech opportunity*	Empirical Study	Discussed how fintech innovations reduce inefficiencies but require governance to manage moral hazard.
Kahneman, D., & Tversky, A. (1979)	*Prospect theory: An analysis of decision under risk*	Theoretical and Empirical Study	Introduced prospect theory, explaining how decision-makers, including CEOs, assess risk based on perceived losses/gains.
Kaplan, S. N., & Strömberg, P. (2003)	*Financial contracting theory: An introduction*	Theoretical Review	Discussed the role of contracting theory in managing risk, especially in lending decisions influenced by CEO bias.
Gompers, P., & Lerner, J. (2001)	*The venture capital cycle*	Empirical Study with Venture Capital	Showed how venture-backed firms benefit from external scrutiny, which mitigates CEO overconfidence in risk-taking.
La Porta, R., et al. (1999)	*Corporate ownership around the world*	Cross-Country Analysis	Highlighted the role of ownership structures in controlling CEO decision-making and managing risk in international markets.
Rajan, R., & Zingales, L. (1998)	*Financial dependence and growth*	Empirical Study	Discussed how access to finance and financial structure influence corporate growth in risky environments.
Baron, R. M., & Kenny, D. A. (1986)	*The moderator-mediator variable distinction in social psychological research*	Theoretical and Empirical Study	Explained how CEO bias can act as a moderating variable, influencing risk-taking and decision-making processes.

Conceptual framework

Insights from top 20 references are summarized in Table 3, subsequently categorized into key components such as CEO bias, moral hazard, adverse selection, and fintech solutions, and how each of these interact with financial sustainability and governance in digital banking.

Table 3. Conceptual Framework Category
Source: Summarized and synthesized from previous studies published between 1970 to 2020, sourced from Scopus, Web of Science and Google Scholar

Component	Conceptualization Source(s)	Component
CEO bias (Overconfidence)	CEO overconfidence leads to riskier lending decisions and underestimation of risks, particularly when fintech solutions are over-relied upon.	Malmendier & Tate (2005); Hackbarth (2008); Gompers & Lerner (2001)
Moral hazard	Moral hazard occurs when borrowers take riskier actions post-loan approval because they believe the bank will bear the consequences.	Holmström (1979); Stiglitz & Weiss (1981)
Adverse selection	Adverse selection refers to the bank's difficulty in distinguishing high-risk borrowers due to information asymmetry, leading to poor lending decisions.	Akerlof (1970); Rothschild & Stiglitz (1976)
Fintech solutions	Big data and machine learning improve credit risk assessment but have limitations in entirely eliminating information asymmetry.	Fuster et al. (2019); Beyhaghi et al. (2020); Jagtiani & Lemieux (2018)
Governance structures	Effective governance, including independent boards and risk committees, mitigates CEO overconfidence and improves decision-making.	Shleifer & Vishny (1997); Fama & Jensen (1983)
Financial sustainability	Financial sustainability is measured by NPL ratios, profitability, and the bank's long-term ability to balance risk and reward.	Fama & Jensen (1983); Jensen & Meckling (1976)
Information asymmetry	Information asymmetry leads to moral hazard and adverse selection, requiring human oversight in addition to fintech tools.	Akerlof (1970); Stiglitz & Weiss (1981); Philippon (2016)
Agency theory	Agency theory explains the conflict between principals (shareholders) and agents (CEOs), where CEO overconfidence creates a misalignment of interests.	Jensen & Meckling (1976); Eisenhardt (1989)
Behavioral finance	Behavioral finance highlights the role of cognitive biases, particularly CEO overconfidence, in risk-related decision-making.	Kahneman & Tversky (1979); Kaplan & Strömberg (2003)
Risk mitigation	Risk mitigation strategies require a combination of fintech innovation, human oversight, and strong governance to manage moral hazard and adverse selection.	Fuster et al. (2019); Beyhaghi et al. (2020); Shleifer & Vishny (1997)

Building on the above previous studies, the following hypotheses are being proposed and developed:

CEO bias and financial sustainability. Studies suggest that CEO overconfidence leads to higher NPL ratios due to riskier lending practices and overestimation of risk management capabilities (Malmendier & Tate, 2005; Hackbarth, 2008), therefore H1: CEO bias, particularly overconfidence, negatively affects the financial sustainability of digital banks.

CEO bias and moral hazard. Moral hazard arises when borrowers engage in riskier behavior post-loan approval, a behavior that overconfident CEOs may overlook or underestimate, increasing the bank's exposure to bad loans (Holmström, 1979; Stiglitz & Weiss, 1981). With this, we propose H2: CEO overconfidence amplifies the impact of moral hazard on the risk exposure of digital banks.

CEO bias and adverse selection. Previous studies revealed that adverse selection is a consequence of information asymmetry, where the inability to distinguish high-risk borrowers results in poor lending decisions. Overconfident CEOs may over-rely on fintech tools, increasing the approval of riskier loans (Akerlof, 1970; Beyhaghi et al., 2020), which justify the proposed H3: CEO overconfidence exacerbates adverse selection, leading to higher approval rates for high-risk borrowers.

Fintech solutions as a mediator. While fintech innovations improve risk assessment, they are not foolproof. CEO overconfidence may still lead to misapplication or overreliance on these technologies, leading to suboptimal risk management (Fuster et al., 2019; Jagtiani & Lemieux, 2018). As such, H4: Fintech solutions, such as big data and machine learning, mediate the relationship between CEO bias and financial sustainability, mitigating some of the negative effects of CEO overconfidence.

Governance structures as a moderator. Shleifer & Vishny (1997) as well as Fama & Jensen, (1983) argue that strong governance mechanisms can mitigate risky behaviors of overconfident CEOs by ensuring better decision-making oversight and risk management practices. Based on this, we propose H5: Governance structures (such as independent boards and risk committees) moderate the negative relationship between CEO overconfidence and financial sustainability.

Moral hazard and financial sustainability. Stiglitz & Weiss (1981) mentioned that when borrowers engage in riskier post-loan behavior, banks face a higher risk of loan defaults and non-performing loans. This leads us to propose H6: Moral hazard negatively affects the financial sustainability of digital banks.

Adverse selection and financial sustainability. In their studies, Akerlof (1970) and Rothschild & Stiglitz (1976) revealed that the challenge of identifying high-risk borrowers due to information asymmetry often results in poor credit decisions, leading to higher default rates and reduced profitability. With this finding, we propose H7: Adverse selection negatively impacts the financial sustainability of digital banks by increasing the likelihood of approving loans to high-risk borrowers.

With the above, the overarching hypothesis for this paper can be formulated as:
H8: CEO bias, particularly overconfidence, interacts with moral hazard and adverse selection to negatively affect the financial sustainability of digital banks, with fintech solutions serving as a mediator and governance structures as a moderator.

2. RESEARCH METHOD

Research design
This study employs a systematic literature review, focusing on peer-reviewed articles published between 1970 and 2024. The research focuses on CEO bias, moral hazard, adverse selection, and the use of fintech tools in digital banking. The selected articles were sourced from Scopus, Web of Science, and Google Scholar databases.

Data collection
The literature review focuses on 20 primary studies which address the relationship between CEO bias, moral hazard, adverse selection, and financial sustainability in digital banks. Quantitative data from these studies, such as NPL ratios and CEO compensation structures, were also extracted where available.

While this study adopts Faff's (2015) pitching research approach, one limitation of the methodology is its reliance on secondary data, which may introduce publication bias. Future empirical research should explore the framework proposed in this study using primary data from digital banks in Indonesia.

Data analysis
The selected studies were analyzed using thematic analysis, which identified recurring themes related to CEO bias, fintech solutions, and credit risk management. Descriptive statistics were used to quantify the impact of CEO bias on financial outcomes, such as NPL ratios and overall profitability – represented by gross profit margin, ROE and ROA.

3. RESULTS AND DISCUSSIONS

The impact of CEO overconfidence on risk management
Previous literature demonstrates that CEO overconfidence plays a crucial role in underestimating the risks of moral hazard and adverse selection in digital banking. Overconfident CEOs tend to believe they can manage risks more effectively than they actually can, leading to suboptimal lending decisions and increased exposure to high-risk borrowers. Malmendier and Tate (2005) argue that overconfident CEOs often overestimate the efficacy of their decision-making processes, which in the context of digital banking can result in riskier loan portfolios. This overconfidence is particularly dangerous in markets like Indonesia, where micro, small, and medium enterprises (MSMEs) often have limited formal credit histories, making it more difficult to accurately assess their credit risk.

In their study on CEO behavior in financial institutions, Hackbarth (2008) found that overconfident CEOs are more likely to approve risky investments and lending decisions because they believe they can better manage or mitigate potential downsides. This aligns with the findings of Jensen and Meckling (1976), who argue that agency theory explains how CEOs may prioritize short-term gains—such as increased loan approvals or shortterm profits—over the long-term sustainability of the organization. In the case of digital banks, overconfident CEOs may approve more loans than is financially prudent, particularly to high-risk borrowers, believing that fintech innovations such as machine learning or big data can offset the risks posed by information asymmetry.

Overconfidence in the efficacy of fintech solutions also amplifies the effects of adverse selection. According to Beyhaghi et al. (2020), while fintech tools have improved the ability of digital banks to assess borrower risk, they are not foolproof, particularly when decision-making is influenced by human biases. Overconfident CEOs may overestimate the reliability of these tools and fail to account for their limitations, leading to the approval of loans to borrowers with hidden risks that fintech algorithms fail to detect. Fuster et al. (2019) found that fintech tools, while useful in improving risk assessment, require proper implementation and oversight to function effectively. When CEOs assume that fintech can fully mitigate risks without human oversight, they increase the likelihood of poor credit decisions.

While fintech innovations have improved risk assessment in digital banking, Fuster et al. (2019) caution that these tools require strong governance structures to function effectively. Overconfident CEOs may over-rely on fintech without considering its limitations, leading to poor credit decisions.

Moreover, CEO overconfidence underestimates moral hazard by incentivizing borrowers to engage in riskier behavior post-loan approval. Stiglitz and Weiss (1981) explain that borrowers may take on excessive risks if they believe that the bank will bear the brunt of any default. In digital banking, overconfident CEOs may not adequately monitor borrower behavior post-loan approval, assuming that fintech tools can manage ongoing risk. This lack of oversight increases the likelihood of non-performing loans (NPLs), threatening the financial sustainability of the bank.

The role of fintech in risk mitigation
While fintech innovations are commonly known as a solution to the challenges posed by information asymmetry, the literature suggests that their effectiveness in mitigating moral hazard and adverse selection depends largely on how they are implemented and integrated into the bank's overall risk management framework. Fuster et al. (2019) found that machine learning and big data analytics improve credit risk assessment by providing more granular insights into borrower behavior and creditworthiness. These technologies analyze non-traditional data sources, such as social media activity and spending patterns, to provide a more comprehensive risk profile for each borrower.

However, the efficacy of these tools is contingent on proper governance and human oversight. Beyhaghi et al. (2020) emphasize that fintech tools, while effective at identifying potential red flags, cannot fully mitigate the risks of moral hazard or adverse selection if they are not properly managed. Philippon (2016) adds that while fintech has made significant strides in reducing information asymmetry, it cannot replace the need for strong governance structures that hold CEOs accountable for their decision-making. In cases where CEO overconfidence leads to overreliance on fintech solutions, the bank may approve loans to high-risk borrowers under the mistaken belief that the technology has adequately accounted for potential risks.

The reliance on fintech without sufficient human oversight is particularly problematic in emerging markets like Indonesia, where digital banking is still a relatively new phenomenon. Jagtiani and Lemieux (2018) argue that while fintech has expanded access to credit for underserved populations, including MSMEs, it also introduces new risks that must be carefully managed. Without robust governance frameworks, fintech tools can exacerbate the risks associated with moral hazard and adverse selection, particularly when CEOs assume that the technology can function autonomously.

Additionally, fintech tools are less effective at mitigating moral hazard compared to adverse selection. Beyhaghi et al. (2020) found that while fintech solutions, such as big data analytics, have been successful in improving the accuracy of credit risk assessments and reducing adverse selection, they are less capable of addressing the behavioral risks associated with moral hazard. This is because moral hazard involves a change in borrower behavior post-loan approval, which is difficult for technology alone to predict or manage. As Holmström (1979) explains, moral hazard arises from the inability to fully monitor borrower behavior, a challenge that requires ongoing human oversight.

Governance structures and CEO bias
The literature strongly supports the view that governance structures are essential in mitigating the negative effects of CEO bias on risk management practices. Shleifer and Vishny (1997) argue that strong governance mechanisms, such as independent boards and risk committees, play a crucial role in holding CEOs accountable for their decisionmaking. In the context of digital banking, where CEO overconfidence can lead to poor lending decisions, governance

structures are critical to ensuring that risk management practices are aligned with the bank's long-term financial goals.

A study by Fama and Jensen (1983) highlighted the importance of separating decision management from decision control. In digital banks, independent boards and risk committees can serve as a check on CEO behavior, ensuring that lending practices do not become overly risky due to overconfidence. Additionally, strong governance frameworks can help ensure that fintech tools are used appropriately, with proper oversight and human intervention where necessary. Eisenhardt (1989) suggests that agency theory is particularly relevant in this context, as it helps explain how governance structures can mitigate the risks associated with CEO bias.

In markets like Indonesia, where digital banking is still evolving, the role of governance becomes even more important. La Porta et al. (1999) argue that strong governance mechanisms are essential for ensuring that financial institutions in emerging markets are able to manage risks effectively. In the absence of such structures, CEO overconfidence can lead to the approval of high-risk loans, increasing the likelihood of NPLs and threatening the bank's financial sustainability.

4. CONCLUSIONS AND SUGGESTIONS

The results of this literature review demonstrate that CEO overconfidence plays a critical role in influencing the risk management practices of digital banks, particularly in the context of moral hazard and adverse selection. While fintech innovations such as big data and machine learning have improved the ability of banks to assess borrower risk, they cannot fully mitigate the risks posed by information asymmetry, especially when CEO bias skews decision-making.

The study also highlights the importance of robust governance frameworks in mitigating the negative effects of CEO bias on lending decisions. Strong governance structures, including independent boards and risk committees, are essential for ensuring that CEOs are held accountable for their decisions and that fintech tools are used appropriately to manage risk.

The findings suggest that future empirical research should focus on collecting data on CEO behavior, fintech adoption, and credit outcomes in digital banks, particularly in emerging markets like Indonesia. By employing the pitching research approach (Faff, 2015 and 2024), researchers can develop more targeted studies that explore the interaction between CEO bias, moral hazard, adverse selection, and financial sustainability in digital banking.

While this review draws on the pitching research approach (Faff, 2015 and 2024) to structure the inquiry, one limitation is the potential for publication bias in the selection of studies, particularly in rapidly evolving sectors like fintech where grey literature may also provide valuable insights.

Future research should focus on empirical studies that collect primary data from digital banks in Indonesia. This data will validate the framework proposed, particularly the interaction between CEO bias, fintech tools, and governance structures, which will provide valuable insights for both practitioners and policymakers.

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