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The Effect of Distributive Justice in the Remaining Business Profits Distribution Scheme on the Potential of Fraud in Credit Distribution with ESG-Based Sustainable Profits as a Moderating Variable

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ABSTRACT: This study aims to analyze the effect of distributive justice in the distribution of the Remaining Business Profits/RBP (=Sisa Hasil Usaha/SHU) on the potential of fraud in credit distribution with sustainable profits based on Environmental, Social, and Governance (ESG) as a moderating variable in cooperatives. The research is motivated by the importance of implementing the principle of justice in the distribution scheme of RBP as part of cooperative governance, which is expected to minimize the potential of fraud in the credit distribution process. Furthermore, ESG implementation is viewed as a sustainable governance approach that has the potential to strengthen the effectiveness of fraud control.

The study used a quantitative approach with a survey method by distributing questionnaires to 33 respondents consisting of cooperative administrators, supervisors, and managers. Data were analyzed using SPSS through validity tests, reliability tests, descriptive statistical analysis, classical assumption tests, linear regression analysis, and moderated regression analysis (MRA).

The results indicate that the research instrument meets the criteria for validity and reliability. The results of the classical assumption test indicate that the data are normally distributed and do not experience multicollinearity or heteroscedasticity. Regression analysis shows that Distributive Justice in the RBP Distribution Scheme has a positive and significant effect on the Potential of Fraud in Credit Distribution, indicating that the independent variable explains 37.4% of the variation in the dependent variable. Meanwhile, the results of the Moderated Regression Analysis indicate that the interaction between Distributive Justice in the RBP Distribution Scheme and ESG-Based Sustainable Profits has no significant effect on the Potential of Fraud in Credit Distribution. Therefore, ESG-Based Sustainable Profits are not proven to moderate the relationship between Distributive Justice in the RBP Distribution Scheme and the Potential of Fraud in Credit Distribution.

This research implies that increasing the implementation of distributive justice principles scheme in RBP distribution needs to be accompanied by strengthening internal control systems, organizational governance, and effective oversight mechanisms. Furthermore, ESG implementation in cooperatives needs to be more comprehensively integrated into operational processes so that it not only functions as a sustainability policy but also supports fraud prevention efforts.

KEYWORDS: Distributive Justice, Remaining Business Profits Distribution Scheme, Potential Fraud in Credit Distribution, Environmental Social Governance (ESG) – Based Sustainable Profits, Moderated Regression Analysis.

1. INTRODUCTION

Referring to Law No. 25 of 1992 concerning Cooperatives, Chapter III of the Law states that cooperatives must play a role in developing the economic potential and capabilities of their members and the community in order to improve their economic welfare, which will ultimately strengthen the people's economic resilience (Law, 1992). However, the hope that cooperatives can become a pillar of the Indonesian economy still seems unlikely to be realized. In fact, their development can be said to be very limited. Even from a legal perspective, cooperatives still rely on a law drafted 33 years ago. An attempt was made to replace it in 2012, but it was revoked again because it was deemed to conflict with the 1945 Constitution (Harruma, 2022). To date, no new legislation has been drafted or amendments have been made to Law No. 25 of 1992.

There is no recent data available from the Central Bureau of Statistics (Biro Pusat Statistik/BPS) to determine the number of cooperatives in Indonesia. The BPS, referring to data from the Ministry of Cooperatives, reported 127,846 cooperatives in 2021, with East Java the province with the most cooperatives, followed by West Java and then Central Java (BPS, 2022). Of the officially registered cooperatives, it is unclear how many operate in the savings and loan sector. The 2021 statistical catalog published by BPS shows that savings and loan cooperatives accounted for 90.02% of the total number of cooperatives in 2020. The lack of up-to-date data on officially registered cooperatives suggests that the legality of an institution formed within the community and claiming to be a cooperative may be questionable.

The existence of cooperatives only comes into the spotlight when problems arise that result in losses for the community. Several cases revealed between 2021 and 2025, involving amounts reaching trillions of rupiah, are cited. These problems generally surfaced because the losses incurred were substantial. However, other cooperatives that may have similar problems went unreported because their value was considered small or their impact was local.

A case recently uncovered in October 2025 involved alleged fraud by the Bahan Lintas Nusantara cooperative, which operates in several cities in Central Java, including Salatiga, Solo, Boyolali, Klaten, Semarang, Magelang, and Kebumen. There is no definitive figure for the total losses the customers suffered. However, according to a report released by the Indonesian National Police's Tribatanews in June 2025, the identified losses had reached IDR 6.6 billion from 38 individuals reported the case (Indonesian National Police, 2025).

This case adds to a long list of similar issues, such as the Melania Credit Union experienced in April 2025. The cooperative, which had previously received various awards, defaulted on member savings totaling Rp 210 billion. This amount went undetected due to non-performing loans never reported by its management (Tempo, 2025).

Table 1. Summary of Cooperative Fraud Cases

Cooperative Entities	Estimated Loss	Scope of Impact	Identified Main Modus Operandi
KSP Indosurya	IDR 15 - 16 trillion	National	Non-member fundraising, fictitious investments by suspected administrators.
Melania Credit Union	IDR 210 billion	Regional	Manipulation of financial reports, not reporting the Non-Performing Loan (NPL) ratio.
Koperasi Bahan Lintas Nusantara	IDR 6.6 billion	Central Java (Salatiga, Solo, Boyolali, Klaten)	Fraudulent investment scheme disguised as a cooperative savings account with unrealistic returns.
KSP Sejahtera Bersama & Pracico Group	Part of the accumulated IDR26 trillion	National	Fraudulent investment scheme disguised as a cooperative savings account with unrealistic returns, caused by internal control weakness and absence of whistleblowing system,

Source: (Achmad & Djumena, 2025)

Table 1 shows that in addition to the recent Melania Credit Union case, several cooperatives have also faced problems related to possible fraud in previous years, such as the Indosurya Savings and Loans Cooperative (Koperasi Simpan Pinjam=KSP), the Wahana Sentosa Berkah Service Cooperative, the Sejahtera Bersama Cooperative, the Pracico Inti Utama Cooperative, the Pracico Inti Sejahtera Cooperative, the Intidana Cooperative, the Timur Pratama Indonesia Cooperative, and the Lima Garuda Cooperative. The resulting losses reached nearly Rp 26 trillion, of which only around Rp 3.4 trillion has been repaid. This is not a small sum (Achmad & Djumena, 2025).

Statistically, there are 127,846 active cooperatives in Indonesia with a business volume of IDR 182.35 trillion in 2021 (Purmiyati & Hadi, 2023). Over 90% of these cooperatives operate in savings and loans activities, it can be said that they play a crucial role in public financial inclusion. However, fraudulent lending practices remain a serious challenge, threatening the sustainability and trust of members. This indicates inadequate management and internal controls within savings and loans cooperatives. Even long-established cooperatives with years of success have experienced difficulties, as in the Melania Credit Union case. As a transformative step, Law Number 4 of 2023 concerning the Development and Empowerment of the Financial Sector (BPK RI, 2023) mandates a clear division between closed-loop (serving only members) and open-loop (collecting funds from society, not members-only) savings and loan cooperatives. The close-loop saving and loan cooperatives must be supervised by the Ministry of Cooperatives and SMEs, while open-loop cooperatives required to transfer into financial services institutions and directly supervised by the Financial Services Authority, starting January 2025. This regulatory transition is a crucial momentum for refining the identity of cooperatives in Indonesia.

The misappropriation that occurred in several cooperatives was undoubtedly due to various factors, but the primary cause was the lack of adequate oversight of the management of the funds. Article 23 of Law 23/1992 states that the Members' Meeting, as the highest authority, has the authority to elect and appoint both managers and supervisors. While the work of the Managers can be delegated to a third party who is not a cooperative member, Article 38 (1) specifically states that the Supervisors are elected from and by the members. If this process were implemented, an internal control function should already be in place (Law 1992). The question then becomes: do the members acting as supervisors possess the necessary knowledge to adequately implement internal control activities?

Because cooperative business is essentially a joint activity among its members, it is highly likely that the Managers are also members. In such circumstances, a conflict of interest naturally arises because the Managers also have an interest in the distribution of the Cooperative's Remaining Business Profits (RBP). Managers, who also serve as members, may feel pressure or desire to demonstrate high cooperative profitability in the hope of achieving a large RBP. Research conducted by Hidayati and Filianti (2018) found that an imbalance in RBP and the presence of external capital can put pressure on cooperative managers and potentially lead to fraud if not monitored (Hidayati & Filianti, 2019). Furthermore, RBP system that is not managed transparently can also lead to potential fraud, as found in research conducted by Tania et al. (Tania, Dewi, & Gamayuni, 2025). Profitability can be a basis for evaluating fraud risk, as pressure to maintain a profit amount can encourage manipulation if not balanced with strong governance.

Efforts to achieve profitability can focus on both short-term and long-term activities. Sustainable profitability is a business's ability to achieve long-term profitability by integrating environmental, social, and governance (ESG) considerations into its operations. One focus is balancing short-term profits with long-term returns by investing in areas that prioritize future environmental and social growth through the implementation of good governance.

In the context of cooperatives or socially oriented companies, sustainable profitability is crucial for maintaining member trust, regulatory compliance, and the ability to withstand long-term crises. Currently, the implementation of sustainable activities in cooperative businesses is limited to agricultural or livestock cooperatives, which directly impact the natural environment. For example, by 2024, four cooperatives in Central Java were designated as national green cooperative pilots. Bren Wiratsongko, Green Cooperative Project Manager (Adaptation Readiness) at the Yayasan Rumah Energi, explained that green cooperatives are being implemented in existing the cooperatives by incorporating elements of environmental awareness and management improvements, including inclusive membership for women, people with disabilities, and other vulnerable groups (Pristiandaru, 2024).

Sustainability issues, particularly those related to social, environmental, and good governance, are no longer new and should be a common knowledge, especially among business owners. The intention to engage in activities based on sustainability issues is an indication of ethical business practices. Conventional efforts to achieve profitability tend to act as a pressure factor due to demands that focus solely on economic growth. Sustainable profitability, on the other hand, encompasses not only economic factors but also social, environmental, and good governance. It can be assumed that individuals who understand sustainable profitability are expected to be more aware of business ethics. Therefore, it is possible that an understanding of sustainable profitability can be a factor that reduces the potential of fraud.

Based on this background, this study aims to improve previous research reports that still mechanically tested as simple linear relationships. The researcher reconstructs the conceptual framework by proposing a novelty in the form of testing the effect of Distributive Justice in the RBP Distribution Scheme on the Potential of Fraud in Credit distribution, by placing ESG-Based Sustainable Profits as a moderating variable. This approach is expected to provide strategic recommendations for strengthening healthier, ethical, and accountable cooperative governance amidst the transition period of national financial sector regulations.

2. REVIEW OF LITERATURE

2.1. Fraud Theory and Ethical Basis

Fraud in business is nothing new. This trend had been studied long before Cressey (1953) examined the underlying motives of fraudulent business practices. Cressey (1953) stated in the introduction to his book that many accountants believed that embezzlement could be eliminated by tightening accounting controls. However, Cressey argued that a business requires trust, and when accounting controls are rigid enough to eliminate embezzlement, the business will also fail. Embezzlement arises from commercial transactions that rely on trust, particularly in employee-employer relationships. Therefore, a prevention program based on the understanding that opportunities for embezzlement inevitably exist in modern businesses is needed (Cressey, 1953).

Cressey (1953) found that trust violations arise when 1) there is no non-shareable problem, 2) there is an opportunity to commit the trust violation, 3) there is a lack of information or knowledge about the crime, and 4) there is no key verbalization or rationalization.

Embezzlers generally reason that they have financial problems that they cannot tell others, thus encouraging them to commit the act. These unspeakable financial problems are further explained in many ways, including: feeling embarrassed to share their difficulties due to prestige, so they feel the need to solve the problems themselves, and being reluctant to ask for help because they believe there will be no solution.

The second reason basically arises because the perpetrator has knowledge that there is an opportunity to commit the embezzlement. The perpetrator believes that the crime they have committed will not be known by others because of their position as a trusted person. In addition, the perpetrator also has good technical skills and accurate information so they can translate their knowledge into an act of embezzlement (Cressey, 1953).

The third reason is rationalization, which includes various more specific reasons. For example, the perpetrator believes that the perpetrator is merely borrowing money from the company. Some perpetrators feel they own the company and therefore feel justified in taking money from it. However, others are completely unconcerned about the consequences of their actions and even consider themselves special thieves (Cressey, 1953).

The link between ethical factors and fraudulent acts was also found in research by Tania et al. (2025), whose results support Cressey's (1953) theory that the existence of internal controls in cooperatives does not guarantee the cooperative's freedom from fraud. This is due to the individual's level of morality. The condition that fraud can occur not only depends on the presence or absence of internal controls but also on ethical factors, as also found in the conclusions of research by Kesumawati and Pramuki (2021). They found that morality influences a person's tendency to commit fraud. The higher a person's morality, the more likely they are to avoid fraudulent behavior. However, the lower their morality, the more likely they are to pursue their own desires without regard for the interests of others.

2.2. Fraud Theory: From the Fraud Triangle Model to the SCORE Model

Efforts to identify the causes of fraud in the business world have given rise to various theoretical developments. Cressey (1953) laid the initial foundation with the trust violation theory, which posits that a person commits fraud when three factors simultaneously exist: a non-shareable financial problem, a procedural opportunity, and a moral rationalization that the act is commensurate with the situation. The development of current theories regarding fraud has not moved far from what Cressey has expressed. As developed by several authors after Cressey, the fraud had new terms, such as the fraud diamond by Wolfe and Hermanson (2004), which adds the capability dimension of the perpetrator's intellectual capacity, position, and technical skills to exploit weaknesses in internal control systems without detection. As Wolfe and Hermanson stated, the fraud begins with an "Incentive", which is the feeling of need to commit fraud. Supported by the existence of an "Opportunity", that is the detection of a weakness in the system. Furthermore, reinforced by the "Rationalization" that the action will be commensurate with the risk. And the determining factor is "Capability", that is the technical ability possessed by the perpetrator to commit fraud.

Recent development of terms is from Vousinas (2019) who analyzed the driving forces of fraud that are more indicative of the current phenomenon. Vousinas developed a model with 5 factors called S.C.O.R.E. The first factor is Stimulus (=incentive), which is a pressure to commit fraud. The second factor is Capability, a person's ability to make fraud a reality. Opportunity is a condition that supports the possibility of fraud, usually due to a certain position or title involving broad authority, so that the perpetrator feels confident that their actions will not be discovered. Rationalization factors will provide the impetus for fraudulent acts. This can occur due to economic needs under the pretext of borrowing to be repaid, or the urge to feel underappreciated for their services at the company, leading the perpetrator to believe that the company assets they took are theirs. The final factor developed by Vousinas includes the ego factor, where ego is the result of the interaction between what a person desires and what his conscience desires in order to achieve what he desires. This final factor stems from the building blocks of a person's ethical understanding and awareness.

The latest developments were systematized by Vousinas (2019) through the development of the S.C.C.O.R.E. (Stimulus, Capability, Collusion, Opportunity, Rationalization, Ego) model, which reflects the complexity of fraud in the modern era. Stimulus or pressure includes financial and non-financial incentives, such as the need to maintain the stability of a cooperative's financial performance. Capability refers to the managerial power of management to bypass credit authorization channels. Collusion describes a covert agreement between internal and external actors to facilitate financial statement manipulation. Opportunity arises from weak organizational oversight and poor segregation of duties. Rationalization occurs when the perpetrator justifies their actions as compensation for unfair rights received. Meanwhile, ego (or arrogance) reflects a superior belief that internal rules or formal regulations do not apply to them due to their position of power.

2.3. Remaining Business Profits in Savings and Loan Cooperatives

The cooperative business model was originally envisioned as a pillar of the Indonesian economy. This was clearly stated in the government's considerations when issuing Law No. 25 of 1992 concerning Cooperatives, which became the sole foundation for cooperative businesses in Indonesia. This business model is considered excellent because it exists from and is for its members. Article 17 states that cooperative members are both owners and users of cooperative services (Law No. 1992).

The cooperative's organizational structure consists of a Members' Meeting, Supervisory Board, and Management, with the Members' Meeting holding the highest authority, as stipulated in Articles 21-22 of Law No. 25 of 1992 concerning Cooperatives (Law No. 1992). One of the powers vested in the Members' Meeting is to determine the Net Operating profit (Article 23). And because decisions at the Members' Meeting should be made based on deliberation and consensus or by majority vote (Article 24), the distribution scheme for the Business Surplus (RBP) determined at the Members' Meeting is certainly formed democratically based on the principle of justice for the benefit of the majority of members. Therefore, ideally, if cooperative businesses become businesses that dominate the Indonesian economy, it is hoped that these cooperative businesses will be able to increase the level of prosperity of the people.

Improving the welfare of cooperative members is certainly the goal of cooperative members. Therefore, a high and increasing share of the RBP is expected throughout their membership. Because cooperative officials/management often are also members of the cooperatives, the desire to achieve a high RBP can be a significant pressure for the management. This is revealed in research by Tania et al., who found that the challenge for cooperatives is to maintain consistent year-over-year increases in RBP. Specifically, in savings and loan cooperatives, this challenge is related to reducing the number of non-performing loans (Tania, Dewi, & Gamayuni, 2025). A high number of borrowers who defaulted potentially reduce profits that lead to a decrease in the RBP.

Although the Management and Supervisory Board are appointed from among cooperative members, Articles 32 and 33 of the 1992 Cooperative Law state that for the management of business activities, the Management may appoint a Business Manager bound by an employment contract, in accordance with the agreement reached at the Members' Meeting. The statement that the appointment of a Business Manager can be made through an employment contract indicates that the cooperative can request external parties other than members to manage the cooperative's business. The appointment of a Business Manager should be based on the cooperative's needs, specifically to ensure better management of the cooperative's business. It should be compared to management by the board alone or by members, who may lack the technical skills required for the cooperative's business.

When management is handed over to a third party who is not a member of the cooperative, a lack of ownership can arise, leading to actions solely to fulfill work obligations. The impact is probably that, to meet high profit targets and generate substantial net income, managers will resort to various measures, both ethical and unethical, including intentional negligence or fraud. In the case of savings and loan cooperatives, this intentional negligence, for example, involves granting credit to parties who are not qualified, which can ultimately lead to bad debts. If the manager's morality is low, these pressures may push them to maximize their personal needs by embezzling funds, knowing that the cooperative's survival will be jeopardized.

2.4. The Influence of Distributive Justice of the RBP Distribution Scheme on the Potential for Fraud in Credit Distribution

The Remaining Business Profits (RBP) in the cooperative ecosystem is a fundamental right of the members, allocated based on capital and business services. However, the distribution of RBP often triggers internal conflict when designed without considering distributive justice. Distributive justice in organizational psychology analyzes whether the output or rewards received by managers are commensurate with operational input, the level of job risk, and professional dedication.

In many savings and loan cooperatives, the RBP distribution scheme established at the Annual Members' Meeting is often deemed biased, where the remuneration for managers and operational employees (account officers) being minimal compared to the surplus returns enjoyed by passive members with substantial capital.

Based on Social Comparison Theory, this imbalance in the input-output ratio creates a perception of acute distributive injustice at the management level. This dissatisfaction weakens personal moral integrity and creates a strong psychological drive to justify (rationalize) deviant behavior. Managers and operational employees tend to justify credit fraud—such as extending credit to fictitious borrowers, concealing bad debt reports to maintain performance bonuses, or accepting illegal commissions (kickbacks) from undeserving customers—as a fair, informal compensation mechanism for the lack of official recognition from the cooperative. Conversely, when the RBP distribution scheme is designed fairly, transparently, and proportionally to management contributions, the incentive to manipulate credit is eliminated.

H1: Distributive justice in the Remaining Business Profits (RBP) distribution scheme has a positive and significant effect on the potential for fraud in credit distribution in savings and loan cooperatives.

2.5. Conventional Profit vs. Sustainable Profit

In general accounting, profit can be defined as the excess of revenue after deducting various expenses. In Chapter 5, paragraphs 5.1–5.2 of the Indonesian Financial Accounting Standards for Private Entities, it is stated that when an entity reports financial performance activities in two statements, namely comprehensive income and a profit and loss statement, the components of the profit and loss statement are all items of income and expenses for the period (DSAK-IAI, 2024). That is similar to preparation of financial statements using other accounting standards, such as the Indonesian Financial Accounting Standards or the Indonesian Financial Accounting Standards for Micro, Small, and Medium Enterprises.

In paragraph 7 of the Statement of Financial Accounting Standards 201, profit and loss is defined as total revenue minus expenses, excluding other components of comprehensive income (DSAK-IAI;2013). Meanwhile, in Chapter 5 of the Indonesian Financial Accounting Standards for Micro, Small, and Medium Enterprises, the financial performance of an entity is presented in the profit and loss statement, which can include components of revenue, financial expenses, and tax expenses. Essentially, the report presents all income and expenses for the reporting period, unless Indonesian Financial Accounting Standards for Micro, Small, and Medium Enterprises requires otherwise (DSAK-IAI;2016).

Referring to the financial statement format as stated in financial accounting standards, profit is defined as the excess of income over expenses. If the opposite occurs, a loss will occur. This profit (or loss) arises from various business activities of the entity. These activities can be solely focused on the economy (business as usual), but can also arise from activities that also incorporate elements that consider social and environmental sustainability.

By definition, there is no mention of sustainable profit. However, sustainable profit can be derived from the term sustainable finance. The Financial Services Authority (2025) states that sustainable finance and financing the transition towards sustainable economic growth constitute an ecosystem comprised of various factors. Funding for sustainable economic activities requires fundamental factors such as policies, regulations, norms, or standards that guide products, transactions, and financial services. These elements must align with economic, environmental, and social factors. Guidelines for preparing financial statement disclosures, which are expected to better demonstrate aspects of sustainable economic activities, were initiated by the GRI (2025). In its presentation, GRI expects that monetary flows within an entity will demonstrate more transparent disclosures. While not directly referred to as sustainable profit, GRI-guided disclosures provide a clearer explanation of the source of an entity's income and the allocation of its monetary expenditures (especially related to social factors). Essentially, these guidelines will pressure entities to be more transparent in disclosing monetary inflows and outflows related to social and environmental activities.

This research distinguishes profit into two terms: conventional profit and sustainable profit. Conventional profit is profit derived from ordinary business activities (business as usual), which do not consider or have not yet incorporated elements that support sustainable activities. Meanwhile, the term "sustainable profit" is a term coined to indicate that the profit generated by an entity incorporates elements of sustainability in the economic, social, and environmental sectors.

2.6. The Moderating Role of ESG-Based Sustainable Profits

In conventional accounting, profit is defined as the nominal difference between revenue and operating expenses within a financial reporting period, in accordance with the Indonesian Accounting Standards for Economic, Social, and Small and Medium Enterprises and Indonesian Accounting Standards for Small and Medium Enterprises. However, this excessive focus on short-term profits triggers opportunistic managerial behavior in the form of earnings management. Subramanyam (2017) defines permanent profit or sustainable earnings as an estimate of the average, stable profit a company is expected to earn over its lifetime, taking into account current operating conditions.

In a modern framework, this concept is synergized with the Environmental, Social, and Governance (ESG) pillar, where achieving a financial surplus must be integrated with environmental awareness, social justice for all stakeholders, and the enforcement of accountable ethical governance. The integration of social and environmental sustainability performance has been empirically proven to improve the quality of financial reporting and minimize the volatility of an entity's profits. When savings and loan cooperatives comprehensively adopt ESG pillars, the organization establishes a highly stringent and transparent monitoring structure. Governance requires a clear separation of functions, credible financial audits, and consistent implementation of a professional code of ethics. This dramatically strengthens managers' morale and tightens operational oversight of credit distribution.

The initial conceptual model proposed in the previous researches report only tested the mechanical relationship between conventional profit-sharing schemes and fraud potential in a linear fashion. This linear approach was deemed inadequate in explaining the psychological and sociological reasons behind fraudulent behavior by cooperative managers. Through the conceptual reconstruction in this new research report, this research integrates aspects of organizational justice with ESG-based sustainability profits, resulting in several significant theoretical and methodological novelties.

Therefore, the integration of the concept of "ESG-Based Sustainable Profits" as a moderating variable provides new insights into the effectiveness of internal control mechanisms. Conventional research generally assumes that fraud prevention can be achieved mechanically by tightening audits, internal control or adding formal oversight regulations. However, cases of default in large cooperatives demonstrate that even rigid internal controls can be breached if management morale is low and internal collusion is rampant.

Although managers may perceive distributive injustice in their personal RBP distribution scheme, the organization's commitment to ESG-based Sustainable Profits presumably will block opportunities and dismantle ethical rationalizations for fraud. Managers recognize that short-term credit manipulation for personal gain will be readily detected by an integrated governance oversight system and can destroy the long-term value and social sustainability of the cooperative. Therefore, the existence of ESG-based Sustainable Profits will moderate the effect of distributive injustice of RBP Distribution Scheme on the potential of fraud in Credit Distribution.

H2: ESG-based Sustainable Profits moderate the relationship between distributive justice in the Remaining Business Profits (RBP) distribution scheme and the potential for fraud in credit distribution in savings and loan cooperatives.

2.7 Research Paradigm

This research paradigm describes the causal influence path of the independent variable (X) on the dependent variable (Y), as well as the interaction of strengthening or weakening the relationship by the moderating variable (Z).

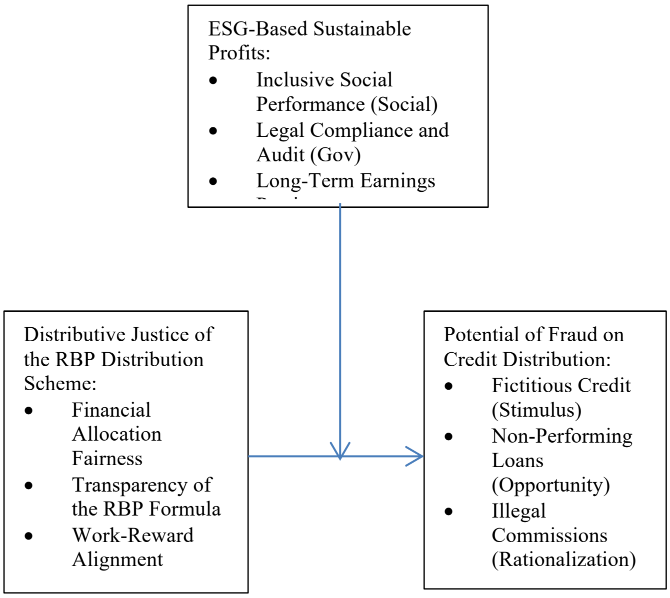

Figure 1: Research Paradigm

3. OBJECTIVES AND RESEARCH QUESTIONS

Several crucial issues identified in the savings and loan cooperative ecosystem in Indonesia are as follows:

1. High Escalation of Financial Scandals and Fraudulent Practices: A series of defaults and misappropriation of member funds at large savings and loan cooperatives in Indonesia (such as Melania Credit Union, Koperasi Bahan Lintas Nusantara, and KSP Indosurya), resulting in losses to the public amounting to tens of trillions of rupiah, reflect the fragility of the cooperatives' internal control and credit risk management systems.
2. Regulatory Gaps and Complexity of Supervisory Transition: The legal basis for savings and loan cooperatives, which still relies on Law Number 25 of 1992, is considered outdated and poorly adapted to the modern financial industry. Meanwhile, the transition from oversight of open-loop cooperatives to the Financial Services Authority (OJK) under the Law of Developing and Epowerment the Financial Sector requires radical governance reform.
3. Agency Conflict of Interest: The institutional structure of cooperatives creates a unique agency conflict, where managers, who also serve as members, often face pressure to deliver high short-term profitability in order to increase annual RBP.
4. Distributive Inequity in the RBP Distribution Scheme: Conventional RBP allocation schemes are often considered biased because they provide minimal rewards to operational managers (account officers) compared to the profits enjoyed by passive members with large capital. This creates cognitive dissonance and triggers rationalizations for committing credit fraud to obtain informal personal compensation.
5. Dominance of Short-Term Profit Orientation: Performance measurement of savings and loan cooperatives is still fixated on conventional profits (business-as-usual) and neglects the integration of Environmental, Social, and Governance (ESG) pillars. A concern for ethical governance and social sustainability is crucial for blocking loopholes in managers' morality that could manipulate credit quality reports.

Research questions

To achieve the above objectives, the study addresses the following research questions: (i) Does the distributive justice of the Remaining Business Profits (RBP) distribution scheme (Variable X) negatively influence the potential of fraud in credit distribution (Variable Y) in Savings and Loan Cooperatives? (i) Does distributive justice in the Remaining Business Profits (RBP) distribution scheme positively influence the potential for fraud in credit distribution in savings and loan cooperatives? (ii) Does ESG-based sustainable profits (Variable Z) negatively influence the potential of fraud in credit distribution (Variable Y) in Savings and Loan Cooperatives? (iii) Does ESG-based sustainable profits (Variable Z) moderate the relationship between the distributive justice in the RBP distribution scheme (Variable X) and the potential of fraud in credit distribution (Variable Y) in Savings and Loan Cooperatives?

4. METHODOLOGY

4.1 Research Approach and Sampling Method

This research was designed using a quantitative method with a causal-explanatory approach to test the existence and strength of the influence between variables in the structural model. The target population of this study was all operational managers and members of active savings and loan cooperatives in Central and West Java.

The sample was determined using a purposive sampling technique with specific inclusion criteria to ensure the credibility of the primary data obtained. Selected respondents must meet the following criteria: active savings and loan cooperative administrators who also serve as members, operational managers or heads of credit divisions, and credit analysis employees or account officers with a minimum of two years of service. Primary data collection was conducted through a structured questionnaire that measured respondents' perceptions of the research indicators using a 5-point Likert scale.

In addition, this study collected secondary data in the form of annual financial reports, management accountability reports, and records of RBP distribution for the last three financial years to examine the persistence of profitability and the quality of organizational sustainability disclosures.

4.2 Statistical Analysis Methods and Moderation Model Testing

Statistical data analysis to test the associative hypothesis was conducted using the Moderated Regression Analysis (MRA) method. The estimation model was tested in stages through the following three regression equation steps:

Step 1: Estimating the Direct Effect of Independent Variables

$$Y = \beta 0 + \beta 1X + e$$

Step 2: Adding Moderating Variables Linearly

$$Y = \beta 0 + \beta 1X + \beta 2Z + e$$

Step 3: Testing the Full Moderation Interaction Effect

$$Y = \beta 0 + \beta 1X + \beta 2Z + \beta 3\,(X \times Z) + e$$

Where Y represents the Potential of Fraud in Credit Distribution score, X represents the Distributive Justice in the RBP Distribution Scheme, and Z represents the ESG-Based Sustainable Profits score. The notation $X \times Z$ represents the interaction (multiplicative) variable between Distributive Justice in the RBP Distribution Scheme and ESG-Based Sustainable Profits. The symbol $\beta 0$ indicates the regression intercept constant, while $\beta 1$, $\beta 2$, and $\beta 3$ represent the estimated coefficients of the regression parameters for each variable, and e is the error term.

The determination of the role and classification of the ESG-Based Sustainable Profits variable (Z) as a moderating variable is based on the statistical significance of the regression coefficient parameters in the equation tests in Steps 2 and 3. The researcher formulated the following rigid moderation categorization criteria:

- Pure Moderator: Occurs when the $\beta 2$ coefficient is statistically insignificant ($\beta 2 = 0$) in the Step 2 equation test, but the interaction coefficient $\beta 3$ is statistically significant ($\beta 3 \neq 0$) in the Step 3 equation test. This condition proves that the pure Z variable moderates the causal relationship without acting as a direct independent variable.
- Quasi Moderator: Occurs when the $\beta 2$ coefficient is statistically significant ($\beta 2 \neq 0$) in the Step 3 equation test, and the interaction coefficient $\beta 3$ is also statistically significant ($\beta 3 \neq 0$). This condition indicates that the Z variable has a dual role, namely as a direct independent variable (predictor) and as a moderating variable for the interaction.
- Predictor Moderator: Occurs when the $\beta 2$ coefficient is statistically significant in Step 2 of the equation test ($\beta 2 \neq 0$), but the $\beta 3$ interaction coefficient is statistically insignificant in Step 3 of the equation test ($\beta 3 = 0$). In this case, the Z variable only functions as an additional independent variable and has no moderating power.
- Homologized Moderator: Occurs when the $\beta 2$ coefficient and the $\beta 3$ interaction coefficient are simultaneously statistically insignificant ($\beta 2 = 0$; $\beta 3 = 0$). In this case, the Z variable does not interact with either the independent or dependent variables, but has the potential to partition the model error variance.

5. RESULTS AND DISCUSSION

The results of the descriptive statistical analysis indicate that the variable " Distributive Justice in the RBP Distribution Scheme " (X) has an average value of 4.5606 with a standard deviation of 0.41210. This average value indicates that most respondents gave a high rating to the implementation of distributive justice in the distribution of RBP of the cooperative. The relatively small standard deviation indicates that respondents' perceptions tend to be homogeneous.

The variable "Potential of Fraud in Credit Distribution" (Y) has an average value of 4.3977 with a standard deviation of 0.43013. This indicates that respondents have a relatively high perception of the indicators used to measure the potential of fraud in credit distribution. Meanwhile, the variable "ESG-Based Sustainable Profits" (Z) obtained an average value of 4.0774 with a standard deviation of 0.37627. This value indicates that the implementation of Environmental, Social, and Governance (ESG)-based Sustainable Profits in cooperatives is perceived quite well by respondents. A standard deviation value smaller than the mean indicates that respondents' responses are relatively consistent. The reliability test results showed a Cronbach's Alpha value of 0.831. This value is greater than the minimum threshold of 0.70, indicating that all items are reliable. Therefore, the research instrument is capable of providing consistent measurement results when used under the same conditions.

Discussion of Classical Assumption Tests

a. Normality Test

The Shapiro-Wilk test yielded a significance value of 0.064 (>0.05). Therefore, the residuals of the regression model are normally distributed, thus meeting one of the basic assumptions of regression analysis.

b. Multicollinearity Test

A Tolerance value of 0.862 and a Variance Inflation Factor (VIF) of 1.160 indicate that there is no significant correlation between the independent variables. A Tolerance value greater than 0.10 and a VIF value well below 10 indicate that the regression model is free from multicollinearity.

c. Heteroscedasticity Test

Tests using the Glejser method showed that the variable Distributive Justice in the RBP Distribution Scheme has a significance value of 0.720, while the variable ESG-based Sustainable Profits has a significance value of 0.396. Both values are greater than 0.05, so it can be concluded that the regression model does not experience symptoms of heteroscedasticity. The residual variance can be considered constant so that the regression model meets the homoscedasticity assumption.

The Effect of Distributive Justice in the RBP Distribution Scheme on the Potential of Fraud in Credit Distribution.

The results of a simple regression analysis indicate that Distributive Justice in the RBP Distribution Scheme has a positive and significant effect on the Potential of Fraud in Credit Distribution. This is indicated by a regression coefficient of 0.655 with a significance level of 0.000 (<0.05). These results indicate that the research hypothesis stating that Distributive Justice in the RBP Distribution Scheme influences the Potential of Fraud in Credit Distribution is accepted.

The positive regression coefficient indicates that each one-unit increase in perception of Distributive Justice in the RBP Distribution Scheme will increase the dependent variable score by 0.655 units, assuming other variables remain constant.

The coefficient of determination (Adjusted R Square) of 0.374 indicates that Distributive Justice in the RBP Distribution Scheme explains 37.4% of the variation in the Potential of Fraud in Credit Distribution, while the remaining 62.6% is influenced by factors outside the research model.

Furthermore, the F-test yielded a significance value of 0.000 (<0.05), thus declaring the regression model suitable for explaining the relationship between the two variables.

These findings indicate that the Distributive Justice in the RBP Distribution Scheme is significantly associated with changes in the Potential of Fraud in Credit Distribution variable. Therefore, Distributive Justice in the RBP Distribution Scheme is a crucial factor in cooperative governance because it contributes to the dynamics of organizational behavior related to credit distribution.

The Role of ESG-Based Sustainable Profits as a Moderating Variable.

The "Distributive Justice in the RBP distribution scheme" focused on the analysis from the administrative structure of remaining profit distribution to a more in-depth evaluation of managers' moral perceptions in the fairness of the economic rewards they receive. Through a social comparison theory approach, researchers were able to uncover one of the major mysteries in cooperative governance: why high-performing managers or operational managers still resort to credit misappropriation?

The answer lies in a sense of distributive injustice. When managers perceive their financial rights are being exploited to provide generous profits to passive members, their morality weakens. This sense of distributive injustice triggers an immediate rationalization that taking illegitimate profits from credit distribution is a natural way to seize financial rights seized by the cooperative.

Then, the integration of the concept of "ESG-Based Sustainable Profits" as a moderating variable provides new insights into the effectiveness of internal control mechanisms. Conventional research generally assumes that fraud prevention can be achieved mechanically by tightening audits, internal control or adding formal oversight regulations. However, cases of default in large cooperatives demonstrate that even rigid internal controls can be breached if management morale is low and internal collusion is rampant.

In this research the Moderated Regression Analysis (MRA) was conducted by including an interaction term between Distributive Justice in the RBP Distribution Scheme and ESG-Based Sustainable Profits (XZ).

The analysis results showed an interaction coefficient (XZ) of 0.601 with a significance value of 0.154 (>0.05). This value indicates that the interaction term between Distributive Justice in the RBP Distribution Scheme and ESG-Based Sustainable Profits does not significantly influence the Potential of Fraud in Credit Distribution.

Therefore, the hypothesis that ESG-Based Sustainable Profits moderates the relationship between Distributive Justice in the RBP Distribution Scheme and the Potential of Fraud in Credit Distribution is not accepted.

Although the interaction term is positive, it is not statistically significant, and therefore cannot be concluded that ESG-Based Sustainable Profits strengthens the relationship. The results indicate that the presence of ESG-based sustainable profits has not been able to change the strength nor the direction of the influence of Distributive Justice in the RBP Distribution Scheme on the Potential of Fraud in Credit Distribution.

This situation can be explained by the fact that the implementation of ESG principles in the cooperatives studied is likely still in its early stages and therefore has not been optimally integrated into the credit distribution governance system. Therefore, members' perceptions regarding the fairness of the distribution of remaining business profits play a more direct role in influencing organizational behavior than through ESG-based governance mechanisms.

These findings also indicate that the influence of ESG is more likely to emerge as an independent variable directly influencing organizational performance rather than as a moderating variable in the relationship between distributive justice of RBP distribution scheme and fraud potential in distributing credits. Therefore, future research is recommended to consider other variables such as the effectiveness of internal controls, the organization's ethical culture, the oversight system, or the quality of cooperative governance as moderating or mediating variables.

ESG-based Sustainable Profits should go beyond formal mechanisms by creating an ethical, transparent, and inclusive business ecosystem. The application of ESG criteria forces cooperatives to adopt high governance standards such as strict compliance with laws, regular audits, transparent financial reporting disclosures, and strong social responsibility. This sustainability commitment – presumably - should enhance individual moral integrity and eliminates the opportunity for fraud perpetrators to rationalize. Thus, the existence of ESG-based Sustainable Profits serves as a moral and procedural defense capable of neutralizing deviant impulses caused by dissatisfaction with the distribution of RBP scheme. However, this is not the case in this research result.

Last, this model reconstruction provides an important contribution to the direction of national cooperative supervision under the umbrella of the "Development and Empowerment of Financial Sectors" Law (OJK). With the transition period for oversight of open-loop savings and loan cooperatives to the Financial Services Authority (OJK) beginning in early 2025, this research model provides a relevant evaluation tool for regulators. The government and cooperative agencies must not only monitor short-term financial health indicators but also ensure that cooperatives implement fair incentive schemes for operational managers and adopt sustainable finance principles to prevent the systemic risk of future misappropriation of member funds.

Regulatory Recommendations and Governance Practices:

Regulatory Reform on the Distribution of Profitable Assets by the Ministry of Cooperatives and SMEs stated that the government is advised to develop new technical guidelines requiring a review of the Profitable Assets distribution formula (RBP) in the Articles of Association of savings and loan cooperatives. The allocation of Profitable Assets (RBP) for management, supervisors, and operational managers should be designed proportionally based on evaluations of work contributions, risk management, and operational credit responsibilities, rather than solely calculated based on passive savings contributions from members. This reform is crucial to minimizing perceptions of distributive injustice that fuel the rationalization of fraud.

Adoption of ESG Standards and Green Cooperative Certification: Savings and loan cooperatives should actively adopt environmental, social, and governance (ESG) sustainability pillars into their long-term business planning. Management should align credit disbursement criteria with social sustainability considerations, such as inclusiveness of vulnerable groups, women, and people with disabilities, or prioritize the ones which had implemented sustainable activity in their business. This will be in accordance with the national green cooperative model. Also, implement transparent financial reporting disclosures in accordance with Financial Accounting Standards for Private Entities or Financial Accounting Standards for Small, Micro and Medium Entities to ensure the governance in finance reporting.

Implementation of Separation of Functions and a Whistleblowing System: Cooperative management must eliminate the centralization of financial authorization authority in a single leadership figure to eliminate opportunities for fraud. Cooperatives must implement a strict segregation of duties between credit analysis, fund disbursement, and bookkeeping functions, and provide a secure, confidential whistleblowing system for members and employees to detect early indications of misappropriation.

Alignment of Supervision with the Provisions of the Law of Development and Empowerment of Financial Sector (OJK) stated that Management of savings and loan cooperatives must immediately prepare governance, licensing, and administrative compliance infrastructure during the transition period of savings and loan business classification. Open-loop cooperatives must accelerate the integration of their financial reporting systems to align with the Financial Services Authority's (OJK) strict supervisory criteria to minimize the risk of legal sanctions, administrative fines, and even revocation of their legal entity.

6. CONCLUSION

This research has successfully reconstructed a new, more comprehensive, ethical, and accountable conceptual framework to mitigate the risk of fraud in credit distribution in savings and loan cooperatives in Indonesia. Through a synthesis of agency theory, distributive justice, and the Fraud Hexagon (S.C.C.O.R.E.) model, this research uncovers the close link between perceived unfairness in the distribution of economic surplus (RBP) and the emergence of rationalizations for corrupt behavior at the cooperative management level. This research uncovers the close link between perceived unfairness in the distribution of economic surplus (the distributive justice in the RBP distribution scheme) and the emergence of rationalizations for corrupt behavior at the cooperative management level (potential of Fraud in Credit Distribution).

The distributive justice of the RBP distribution scheme is identified as a key determinant influencing the moral integrity of managers in credit distribution. The unequal distribution of RBP between active managers and passive members creates cognitive dissonance that triggers managers to abuse their authority and violate creditworthiness regulations for informal personal compensation.

Furthermore, this research positions ESG-based sustainable profits is not a moderator that effectively reduces the potential of fraud. Previously presumed that the cooperatives' commitment to ESG pillars creates a transparent, ethical, and accountable operational environment, thus offsetting or reducing the motivation for fraud despite perceptions of unfairness in personal financial distribution. However, this is not proven in this research.

This research framework is highly relevant for application in the context of the transition to national cooperative regulation following the enactment of the Law of Development and Empowerment of Financial Sector, where strict oversight of open-loop cooperatives by the Financial Services Authority (OJK) demands high standards of governance and sustainable accounting.

Based on the research findings on the effect of Distributive Justice in the RBP distribution scheme on the Potential of Fraud in Credit Distribution with ESG-Based Sustainable Profits as a Moderating Variable, the following conclusions can be drawn:

1. The analysis results indicate that the research instrument meets data quality criteria. All statement items are declared valid and reliable. Furthermore, the research model meets classical assumptions, including tests for normality, multicollinearity, and heteroscedasticity, thus making the regression model suitable for testing the research hypotheses.
2. Distributive Justice in the RBP distribution scheme has a positive and significant effect on the Potential of Fraud in Credit Distribution. This indicates that changes in perceptions of distributive justice are significantly related to changes in the Potential of Fraud in Credit Distribution scores in the cooperatives studied. Distributive Justice in the RBP distribution scheme explains 37.4% of the variation in Potential of Fraud in Credit Distribution, while 62.6% is influenced by factors outside the research model.
3. ESG-Based Sustainable Earnings have not been shown to moderate the relationship between Distributive Justice of RBP distribution scheme and the Potential of Fraud in Credit Distribution. Therefore, the implementation of ESG-based Sustainable Profits in the cooperatives studied has not been able to strengthen or weaken the influence of Distributive Justice of RBP Distribution Scheme on the Potential of Fraud in Credit Distribution.
4. The results of this study indicate that the existence of ESG practices in cooperatives acts more as a stand-alone organizational characteristic than as a factor that alters the relationship between Distributive Justice of RBP Distribution Scheme and the Potential of Fraud in Credit Distribution. This finding indicates that reducing the potential of fraud is not only determined by the perception of fairness in the distribution of remaining operating profits or ESG implementation, but is also influenced by other governance factors such as the effectiveness of the internal control system, the quality of supervision, the organization's ethical culture, transparency in credit management, and human resource competency.

7. IMPLICATIONS AND RECOMMENDATIONS

The results of this study provide theoretical and practical implications.

1. Theoretical Implications

This study contributes to the development of organizational justice theory and fraud theory by demonstrating that the relationship between distributive justice and fraud potential is not always influenced by ESG implementation as a moderating variable. This finding suggests that successful ESG implementation may not necessarily alter the influence of distributive justice if it is not optimally integrated into the cooperative's governance system.

2. Practical Implications

For cooperative management, the results demonstrate the importance of improving the quality of credit distribution governance by strengthening internal control systems, implementing transparency principles, improving oversight, and establishing an ethical organizational culture. ESG implementation also needs to be integrated into operational processes, particularly in credit risk management and internal oversight, so that the benefits of ESG are not only reflected in sustainability reports but also support fraud prevention.

Research Limitations

This study has several limitations that must be considered when interpreting the results, such as:

1. The number of respondents was relatively limited, so the results cannot be generalized to all cooperatives in Indonesia.
2. The independent variables used only explained 37.4% of the variation in the Potential of Fraud in Credit Distribution, so there are still other factors that were not included in the research model.

3. The variables were measured using respondent perceptions through a questionnaire, thus allowing for perception bias and social desirability bias.
4. The moderating variables used were limited to ESG-Based Sustainable Profits, so they do not reflect all aspects of organizational governance that could potentially influence the relationship between the variables.

Recommendations

Based on the research results, several recommendations can be made as follows:

1. For Cooperative Management

a. Create a balance and justice scheme in the RBP distribution to avoid fraud potency in the cooperative activity.
b. Improve the effectiveness of internal control systems, especially in the process of debtor eligibility analysis, credit document verification, and monitoring of non-performing loans.
c. Optimize internal oversight and audit functions so that potential irregularities in credit distribution can be detected early.
d. Integrate ESG principles into all cooperative governance processes, particularly in aspects of risk management, information transparency, and accountability in decision-making.

2. For Further Research

a. Add other variables that theoretically influence the potential of fraud in credit distribution, such as internal control effectiveness, organizational culture, good corporate governance, human resource competence, individual morality, whistleblowing systems, and information asymmetry.
b. Use a larger sample size and involve cooperatives from various regions to increase the generalizability of the research results.
c. Develop a research model using a mediation approach or Structural Equation Modeling (SEM) so that the relationships between variables can be analyzed more comprehensively.
d. Re-testing the Fraud Potential in Credit Distribution construct to ensure the variable measurement direction fully aligns with the theoretical concept, thus strengthening the interpretation of the relationships between variables.
e. Testing ESG implementation not only as a moderating variable, but also as an independent and mediating variable to provide a more comprehensive picture of its role in cooperative governance.

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