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The Green Economy Crisis Turbulence and the Reaction of Finance Distribution in Indonesian Banking

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ABSTRACT

The main objective of this research is to encourage the increase of banking soundness from green economy crisis by proposing a research model that focuses on banking activity through financial distribution to achieve balance and sustainable economic development. This, in turn, is expected to reduce the global economic crisis pressure. This study analyzes quarterly times series data from the Bank of Indonesia reports from 2009-2023, in order to investigate the determinants of the degree of banking soundness and banking activity. The degree of banking soundness is measured by the Liquidity Ratio, Profitability Ratio, Solvency Ratio, and Activity Ratio. The data is analyzed with the Ed Waves Index and Structural Equation Modeling (SEM) analysis, using the AMOS software. The paper's main finding is that financial stability, as measured by the liquidity ratio, significantly influences intermediary banking, both of savings and loans. However, only bank loans significantly impact for green economy. Furthermore, a green economy crisis can be prevented through bank loan distribution. The paper finds that increasing bank lending can help provide financial liquidity and thus help to prevent an economic crisis. Therefore, financial liquidity can circulate well. Furthermore, the selective and careful process of providing loans will reduce the Non Performing Loans risk in banking and the green economy crisis impact.

1. INTRODUCTION

The exploration of the climate change effect was found to have a lot of influence on financial activities. First, climate change has changed the finance globally movement. Therefore, the frequency of financial interactions between countries is increasing [1-3]. This attachment makes financial turbulence contribute to banking activities as an intermediary in financial circulation and overall economic growth [4-6]. Second, there is currently a change in economic behavior that results in high exploitation of natural resources and the environment, resulting in increasing disequilibrium [7, 8]. Third, financial sensitivity has increased, both internal and external pressures. Therefore, financial turbulence has resulted in a green economy crisis and sustainable development implementation in the economy is difficult to achieve. Sustainable development aims to create financial stability and long-term economic growth that has a positive impact on Environment, Social and Government (ESG) programs, both in the present and future.

The green economy crisis threatens the world economy [9-11]. These symptoms are seen through the climate change pressure [12, 13]. Several countries in the world agreed to find solutions through the G-20 International Conference [14-16]. Symptoms of the green economy crisis can be found in the ocean, extreme weather, food and health [17, 18]. As a result, world GDP is shrinking by 18% for the next few years, assuming a 30℃ increase in global heat [19, 20]. The green economy crisis causes are global warming, the financial crisis proximity, and the high use of technology [21]. Various alternatives have been developed to create harmony between industrial and environmental activities, including allocating the state budget to all financial sectors that have the main objective of preserving the environment [22, 23]. The overall effect of global pressure has an impact on various aspects, including changes in the financial sector which are an alternative for increasing the green economy [24-26].

In line with these conditions, the United States Government is serious about solving world problems by injecting funds of USD 11 billion per month to anticipate the green economy crisis [27]. The large amount of funds approved by the American Congress means that increasing the green economy will optimistically reduce the financial crisis occurrence in the future.

This concept is inversely proportional to the green economy in Indonesia, Indonesia's declining ranking in preserving the environment, based on Global Green Finance Indonesia Index 9 data, is in 56th position out of 81 countries compared to other Asian countries [28-30], it is a serious matter for all groups in anticipating this damage.

Therefore, the problem faced is the declining ability of banking activities to increase the green economy achievement in Indonesia [31, 32]. There is a gap between the concept of increasing green economy in Indonesia and other countries. In Indonesian finance context, the financial flow distribution process occurs due to interactions in achieving financial stability and economic growth, the banking role in achieving these goals requires the banking intermediary function, this refers to how to control the finance distribution and macroeconomics for crisis impact anticipation. Macroeconomic pressure can lessen the effectiveness of the financial system. In other words, the financial crisis impact occurs due to the macroeconomic pressure reaction which causes the financial crisis impact to become stronger in the long term.

Crucially, the relationship between the green economy crisis is faster than the economic financial activities turnover, which has a negative impact on the sustainable development achievement for developing countries such as Indonesia. A faster financial turnover flow is needed compared to the green economy crisis pressure. This research examines the financial distribution effectiveness and the banking sector resilience through financial performance (liquidity, profitability, solvency and activity) in reducing the green economy crisis impact through the banking intermediary function. Based on experience, most studies have found that the financial performance of the banking sector has a consistent effect on increasing financial flows, thereby stimulating economic growth [33]. The distribution of banking finance stimulates financial stability in the financial market, and has a positive impact on macroeconomic performance [34]. The macroeconomic dimensions that have the most influential reactions to economic growth and financial stability are inflation and interest rates [35, 36]. These two dimensions are an important part in controlling the finance distribution for the banking sector to maintain the intermediary function in increasing the green economy indirectly, this indicates that the banking sector performance in increasing the green economy is greatly influenced by changes in macroeconomic behavior [37, 38].

However, some studies present conflicting results, banking intermediaries are very sensitive to macroeconomic changes, resulting in financial crisis easily occurring [39, 40]. Additionally, the banking intermediary activities behavior also shows that financial distribution has increased, resulting in financial distribution increasing financial risks and banking capital, thus having a negative impact on financial stability and economic growth [41, 42]. The inconsistency in these findings suggests that financial distribution provides an indirect link between banking sector performance and an increasing green economy. This research also introduces other macroeconomic variables that also influence the increasing the green economy.

Critical analysis in the research was conducted by comparing several findings from previous studies, by grouping them into various groups, first, the green economic crisis was found in the thinking by scholars [17, 20, 43-46] who found that the green economic crisis occurred due to the inconsistency of financial users in increasing environmental sustainability process, resulting in an unbalanced finance distribution, but the research conducted was only related to the policy concept in the banking sector, and still requires expansion of research by using several variables that can affect the green economic crisis.

Second, previous studies [3, 6, 47-49] explain that the banking intermediary function only measures general financial flows such as the total amount of savings and loans, the weakness of their research is because the banking financial performance measurement does not refer to the banking resilience aspect in facing the economic crisis.

Third, previous studies [3, 6, 50-52] illustrate that financial distribution has a level of financial sensitivity through the government policies determination, which indirectly causes fluctuations in macroeconomic variables, but their research shortcomings are because the financial fluctuations measured do not fully use macroeconomic variables and there are still variables that may have a positive influence on the overall financial flow.

Through the results of previous research, this research was conducted to complete the gap in previous research by filling in previous research deficiencies through a novelty model, including: First, the green economic crisis measurement was built by developing the Ed Waves Index model, the development model through the internal and external pressures interaction that create turbulence in the financial crisis. Second. This research also develops the thinking of previous studies [34, 53-57]. Related to the banking intermediary function in previous studies only using savings and loans aspects, but in this research the intermediary function is extracted in various research ratios such as liquidity ratios, profitability ratios, solvency ratios and activity ratios, making this research more comprehensive. Third, the external financial pressure concept in the form of more perfect macroeconomic pressure is the development part in this research, resulting in the pressure intensity in financial distribution becoming complex towards the green economic crisis turbulence, as a framework of thought presented in Figure 1.

The variables selection in this research is based on the balance theory through financial distribution in the banking sector in increasing the green economy which has consistently declined in several countries. In this context, the preventing a green economy crisis is carried out based on the banking capability to manage its financial circulation. Meanwhile, the green economy crisis is heavily influenced by financial behavior due to overall macroeconomic pressures, and affects the financial performance of the banking sector. Lastly, the reaction of all indicators becomes a key factor in determining financial distribution, which aims to ensure that the green economy crisis does not have a negative impact in either the short or long term. Therefore, this research explores and analyzes the influence of banking financial performance on the green economy. In addition, this research also analyzes the indirect influence of financial performance on increasing the green economy through banking activities.

Figure 1 is a theoretical framework that explains the financial integration process in the green economy through financial distribution in the banking sector. This relationship shows that theoretically, there is financial interaction through banking activities. First, internally, the green economic crisis occurs due to the positive interaction between savings and loans, which is known as the banking intermediary function [58-62]. Second, externally, the green economic crisis can also occur through macroeconomic variables which are the financial turnover process as a measure of velocity of money that drives financial activity in the financial market [9, 63-68]. Third, financial distribution becomes a connecting aspect between the banking intermediary function and velocity of money transactions, resulting in the green economic crisis turbulence increasing significantly [19, 69-72]. Therefore, the

intriguing from this research is that every change in the intermediary function and external macroeconomic pressure can have an impact on the financial ecosystem, thus having a significant impact on the green economic crisis which can affect the environment in the long term.

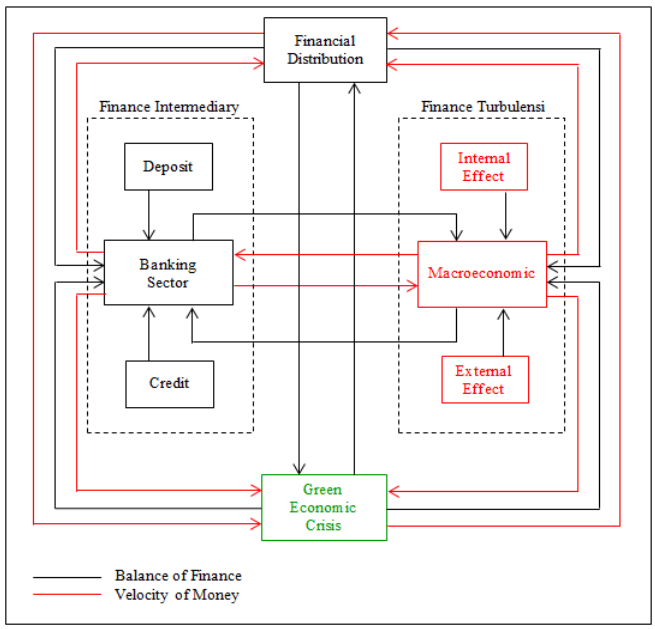

Figure 1. Framework theoretical

Thus, this research provides benefits for all decision makers in maintaining the financial ecosystem and environmental ecosystem, first, in theory, this research measures the banking sector's ability to manage its finances using a financial ratio model. Through this model, the banking sector can increase liquidity and financial resilience to changes in macroeconomic indicators. Second, managerially, the ability to make decisions and manage finances based on the banking intermediary function becomes better, and this research also becomes a control over financial fluctuations in the economy, therefore the goal of achieving a green economy through the banking sector performance becomes better and more optimal.

The specific objectives of this research are to test and analyze the direct effects of green economy in relation to the banking sector's role in building a financial ecosystem, which is aligned with increasing banking capabilities to create a more dynamic green economy, although the banking sensitivity level to macroeconomic variable pressures is very weak, especially when there is turbulence in the financial crisis pressure such as the Covid 19 pandemic or other crisis in the economy.

Consequently, this research aims to develop a new model that focuses on finance distribution for the effectiveness of banking performance in maintaining the intermediary functions balance, and the development of resilience tests of banking capabilities in facing macroeconomic pressures, for a positive impact on financial stability and economic growth in the future. Thereby contributing to the sustainable development through financial distribution control for financial balance by increasing the green economy for developing countries as a whole. Through a new model elaboration for increasing the green economy for developing countries and other countries, it can be concluded that this research design has novelty through a model formation using several aspects that have not been studied by other researchers, especially related to the banking intermediary function and the green economy crisis. In addition, this research novelty is shown through; First, using banking soundness measures through several ratios in the banking activities concept such as liquidity ratio, profitability ratio, solvency ratio and activity ratio. Second, measurements are carried out on the entire number of banks comprehensively, both conventional and sharia banking. Third, using the Ed Waves Index development model as a measurement model for financial pressure in financial distribution. This research is more worthy as a consideration for the Central Bank or the banking sector in decision-making.

Therefore, with a comprehensive research on how to increase green economy growth based on established parameters, it will be possible to answer the green economy crisis problem which has become a global issue. Finally, this research is very appropriate and important for all government sectors in improving the understanding and green economic crisis prevention, especially in making optimal financial management decisions in relation to maintaining sustainable environmental sustainability, for human life now and the future.

2. METHODS

In answering the problem gap, this research began with collecting data from all banking sectors in Indonesia, consisting of 92 conventional banks and 13 Islamic banks, with a total of 105 banks as samples in this research. The banking sample selection was carried out purposively, considering that the damage caused by the green economic crisis did not only occur in some banks in Indonesia but rather there was a contribution from all banks. In addition, banks have high interconnections between one another in the financial system through financial distribution in the financial market.

Specifically, the data collection period from 2009 to 2023 is a time series through Bank Indonesia's annual report data which is presented quarterly, making it easier to calculate the progress of increasing or decreasing financial activities in the banking sector.

This research is based on the combination of financial balance theory with velocity of money theory [22, 73], with aims to analyze the green economy crisis impact on banking activity as a financial distribution for sustainability development. The initial model is:

$$\alpha = \sum \mu + \eta + \upsilon$$
$$\beta = \sum \zeta + \xi + \varsigma$$

The sample size determination

$$\alpha = \beta$$

The value of α is a function of savings (μ), deposits (η) and demand deposits (υ). On the other hand, the value of β is a function of working capital credits (ζ), investment (ξ), and consumption (ς).

The operational transformation of α and β as banking financial flows occurs due to several aspects. First, to maintain the bank's internal financial balance [74-76] Second increasing banking income [77, 78]. Third, maintaining banking

soundness [56, 79, 80]. Fourth, improving relations with external banking such as the government sector, industrial sector and individuals [81]. And fifth, maintaining financial stability and broader economic growth [82-84].

The operational process of financial flows at α and β is carried out by increasing the savings amount as a basis for increasing loan distribution to the industrial sector which aims to improve environmental sustainability, with increasing loan distribution preventing a green economic crisis. Therefore, the sampling technique to represent financial distribution in banking activities in this research is

$$\left(\sum \mu+\eta+\upsilon\right)=\left(\sum \zeta+\xi+\varsigma\right)$$

The size of the financial circulation α and β can be measured by calculating the amount of α as savings in a period, on the other hand β as loan distribution also in the same period. This circulation is calculated based on the category that; First, when savings are greater than loan distribution, this indicates that the potential for a green economic crisis is increasing. Second, when there is a balance between α and β, this measurement does not have an effect on the green economic crisis. And third, when savings are smaller than bank loans, the risk of a green economic crisis is smaller. However, this measurement is very much determined by the financial balance and velocity of money level. Therefore, to measure the pressure on the green economic crisis, it must be done comprehensively based on the relationship between financial balance and velocity of money as the basic capital in determining the green economic crisis turbulence

Base on the banking activity as an implementation of the balance and velocity of money theory. The research involves four variables in banking performance, namely liquidity (current ratio, quick ratio, cash ratio), profitability (gross profit margin, operating profit margin, net profit margin, return on assets, return on investment), solvency (total debt to asset ratio, total debt to equity ratio), and activity (receivable turnover, inventory turnover, fixed asset turnover, total asset turnover).

This research was conducted in five stages.

First, collect and calculate banking performance.

Second, build a model based on the findings in the first stage.

Third, measure the banking performance pressure magnitude based on financial distribution as a banking financial activity, the measurement uses the following model.

Balance using liquidity measurements

$$\alpha_1=\sum_{t=0}^{n}\varepsilon.\,liquid.\left(\mu+\eta+\upsilon\right)_{1<0>-1}+\sum_{t=0}^{n}\varepsilon.\,liquid.\left(\zeta+\xi+\varsigma\right)_{1<0>-1}$$

Balance using profitability measurements

$$\alpha_2=\sum_{t=0}^{n}\varepsilon.\,profit.\left(\mu+\eta+\upsilon\right)_{1<0>-1}+\sum_{t=0}^{n}\varepsilon.\,profit.\left(\zeta+\xi+\varsigma\right)_{1<0>-1}$$

Balance using solvency measurements

$$\alpha_3=\sum_{t=0}^{n}\varepsilon.\,solva.\left(\mu+\eta+\upsilon\right)_{1<0>-1}+\sum_{t=0}^{n}\varepsilon.\,solva.\left(\zeta+\xi+\varsigma\right)_{1<0>-1}$$

Balance using activity measurement

$$\alpha_4=\sum_{t=0}^{n}\varepsilon.\,activ.\left(\mu+\eta+\upsilon\right)_{1<0>-1}+\sum_{t=0}^{n}\varepsilon.\,activ.\left(\zeta+\xi+\varsigma\right)_{1<0>-1}$$

The financial balance model based on financial activities and banking intermediary functions serves to maintain financial stability and economic growth in order to achieve the green economy target.

Fourth, calculate the financial volume through the banking intermediary functions. This condition is shown in the following equation:

Liquidity for green economy

$$\Delta\,\text{Liquid}=\frac{((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{liquid}}{((\sum\mu+\eta+\upsilon)_{t-1}+(\sum\zeta+\xi+\varsigma)_{t-1})_{liquid}-((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{liquid}}$$

Profitability for green economy

$$\Delta\,\text{Profit}=\frac{((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{profit}}{((\sum\mu+\eta+\upsilon)_{t-1}+(\sum\zeta+\xi+\varsigma)_{t-1})_{profit}-((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{profit}}$$

Solvency for green economy

$$\Delta\,\text{Solva}=\frac{((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{solva}}{((\sum\mu+\eta+\upsilon)_{t-1}+(\sum\zeta+\xi+\varsigma)_{t-1})_{solva}-((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{solva}}$$

Activities for green economy

$$\Delta\,\text{Activ}=\frac{((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{activ}}{((\sum\mu+\eta+\upsilon)_{t-1}+(\sum\zeta+\xi+\varsigma)_{t-1})_{activ}-((\sum\mu+\eta+\upsilon)_t+(\sum\zeta+\xi+\varsigma)_t)_{activ}}$$

Fifth, calculating the financial effectiveness level through the banking sector finance distribution to prevent the green economy crisis is measured based on the following model:

Increasing green economy in financial activities

$$\left(\sum\mu+\eta+\upsilon\right)_{1>0}=\left(\sum\zeta+\xi+\varsigma\right)_{1>0}$$

There is no increase or decrease in the green economy in financial activities.

$$\left(\sum\mu+\eta+\upsilon\right)_{1>0>-1}=\left(\sum\zeta+\xi+\varsigma\right)_{1>0>-1}$$

Green economy declines in financial activities.

$$\left(\sum\mu+\eta+\upsilon\right)_{-1<0}=\left(\sum\zeta+\xi+\varsigma\right)_{-1<0}$$

Subsequently, data analysis in this research utilizes the Structural Equation Modeling (SEM) technique through the use of AMOS software, the data analysis used is a causal relationship to determine the reaction between variables, with the aim of producing a systematic model in analyzing green economy problems based on financial distribution and banking intermediary functions.

Another aspect of selecting the Structural Equation

Modeling (SEM) analysis tool is that it requires measurement of latent variables that cannot be measured directly, where these variables are determining variables in answering the problem gap in this research. In addition, the testing results using Structural Equation Modeling (SEM) are needed to ensure and test the theoretical model of previous researchers to ensure the research model suitability [85].

Thus, this research uses a standard measurement model with a significance level of 5% which is considered to have a strong relationship between the measured variables, to ensure that the relationship that occurs is an optimal result that can be interpreted in measuring the green economic crisis turbulence on financial distribution in banking [73, 85]. Therefore, based on the model formed, tested through financial pressure reactions, both due to internal and external influences. This research is a new development model for the banking sector financial system in facing financial turbulence, therefore consistency in improving the green economy can continue to be sustainable.

3. RESULTS AND DISCUSSION

3.1 Result

Based on Table 1, the four financial distribution factors in the banking sector-liquidity, profitability, solvency and activity-are identified as an important basis for understanding the magnitude of the green economy crisis impact. This is crucial to know how much influence financial variables contribute to banking sector activities through intermediary functions. The main determinants of the effectiveness of the financial system in supporting the green economy are the volume of savings and loans. The operational definition of the variables in Table 1 indicates the ratio value of each variable measurement item. Consequently, the instrument value in this research becomes clear to determine the measurement results' accuracy. Furthermore, all tested variables provide results with a strong level of accuracy in describing the relationship between one variable and another in this research.

Table 1. Variables operational definition

Ratio	Items	Item Code	Variable	Variable Code
Current Assets/Current Liabilities X100%	Current Ratio	L1		
Cash+Securities+Current Receivables/Liabilities x100%	Quick Ratio	L2	**Liquidity**	L
Cash+Securities/Current Liabilities x100%	Cash Ratio	L3		
Net Sales–Cost of Goods Sold/Net Sales x100%	Gross Profit Margin	P1		
Earnings before interest and Tax/Sales x100%	Operating Profit Margin	P2		
Earning After Tax (EAT)/Net Sales x100%	Net Profit Margin	P3	**Profitability**	P
Earnings before interest and tax/Total assets x100%	Return on Assets	P4		
Earning After Tax (EAT)/Total Assets x100%	Return on Investment	P5		
Total Debt/Total Assets x100%	Total Debt to Asset Ratio	S1	**Solvency**	S
Total Debt/Capital x 100%	Total Debt to Equity Ratio	S2		
Sales/Average Receivables x100%	Receivable Turnover	A1		
Sales/Inventory x100%	Inventory Turnover	A2	**Activities**	A
Sales/Fixed Assets x100%	Fixed Asset Turnover	A3		
Sales/Total Assets x100%	Total Asset Turnover	A4		
Total Savings	Savings	T1		
Total Giro	Giro	T2	**Savings**	Save
Total Deposit	Deposit	T3		
Total Investment Credit	Investment Credit	C1		
Total Working Capital Credit	Working Capital Credit	C2	**Loan**	Loan
Total Consumer Credit	Consumer Credit	C3		

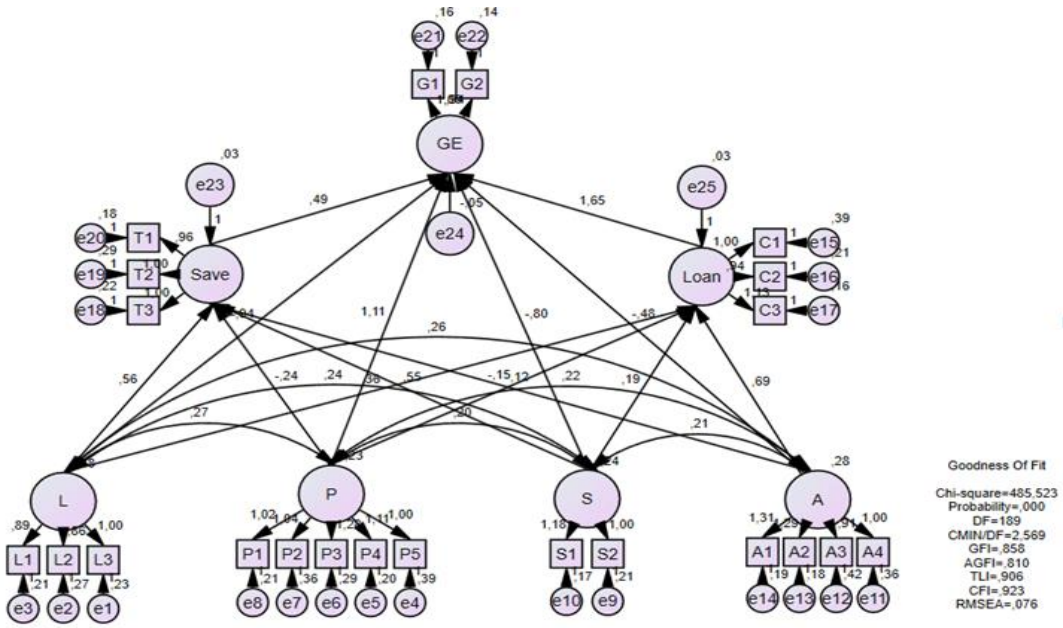

Figure 2. Full structural model result

Table 2. Distribution of finance against banking activity

Variables	Std. Estimate	Estimate	Critical Ratio	P	Reaction
Liquidity → Save	0.174	0.560	3.216	0.001	Accepted
Profitability → Save	0.289	-0.242	-0.836	0.403	Rejected
Solvency → Save	0.179	0.545	3.048	0.002	Accepted
Activity → Save	0.123	0.121	0.984	0.325	Rejected
Liquidity → Loan	0.150	0.361	2.408	0.016	Accepted
Profitability → Loan	0.252	-0.153	-0.607	0.544	Rejected
Solvency → Loan	0.144	0.191	1.323	0.186	Rejected
Activity → Loan	0.134	0.688	5.140	0.000	Accepted

Source: SEM AMOS Results, 2024

Table 3. Banking activity against green economy

Variables	Std. Estimate	Estimate	Critical Ratio	P	Reaction
Save → Green Economy	0.474	0.485	1.023	0.306	Rejected
Loan → Green Economy	0.546	1.648	3.017	0.003	Accepted

Source: SEM AMOS Results, 2024

Table 1 reports the measurements variable and Figure 2 shows results of the Structural Equation Modeling (SEM) estimates and the goodness-of-fit tests. The evaluation results yield a Chi-Square value with a significance level of 0.000, significantly below the cutoff level of ≥0.05. However, compensating for this, CFI (Comparative Fit Index) ≥0.9 is considered [85]. Consequently, the model satisfies the fit criterion.

The test results as presented in Table 2, show that the financial activities distribution through liquidity and solvency (β=0.174, C.R=3.216, p=0.001; β=0.179, C.R=3.048, p=0.002) significantly and positively influence for saving, This implies that liquidity and solvency are accepted. Furthermore, the saving variable is not significantly influenced by profitability and activity (β=0.289, C.R=-0.836, p=0.403; β=0.123, C.R=0.984, p=0.325). This implies that profitability and activity are rejected.

On the other hand, liquidity and activity (β=0.150, C.R=2.408, p=0.006; β=0.134, C.R=5.140, p=0.000) significantly and positively influence for Loan. This implies that liquidity and activity are accepted. However, the loan variable is not significantly influenced by profitability and solvency (β=0.252, C.R=-0.607, p=0.544; β=0.144, C.R=1.323, p=0.186). This implies profitability and solvency are rejected. Furthermore, the variable that plays an important role in financial distribution in the banking sector is liquidity.

To address gaps in previous research, this research continued by measuring the bank activity contribution to the green economy, shown in Table 3. The calculated results found that bank savings are rejected for green economy (β=0.474, C.R=1.023, p=0.306) and bank loans have a significant and positive influence for green economy (β=0.546, C.R=3.017, p=0.003). Additionally, the banking loan effect as an intermediary function is able to prevent the negative impact of the green economy crisis.

3.2 Discussion

Based on the financial distribution measurement model on the green economy crisis impact, these findings answer the problem gap from previous research. The significance of financial distribution on green economy is validated in this research, the results are in line with existing literature reviews, consistent with the findings of previous studies [86-88]. Financial liquidity is the main key in controlling the green economy crisis, the significant influence of financial distribution has an impact on improving the banking sector performance. The results demonstrate that increasing banking liquidity will have a positive effect on the banking soundness level through intermediary functions, both in terms of the savings and loan amounts.

The more convincing measurement aspect of this research results is shown through the accuracy and complexity of the measurement variables in this research, such as Figure 1 and Table 1, which describe the comprehensive flow of financial distribution in the banking sector, through various measurement aspects. First, the aspect of supporting banking soundness and strength, in Table 1 shows that the dimensions of banking performance capability must be supported by a strong level of liquidity [57, 68, 76, 89-92], high profitability [20, 43, 72, 93, 94], stable solvency [83, 95-97], and smooth activities [17, 76, 98-100]. The dimensions of banking performance capability show the focus of banking sector performance as the basis for determining banking soundness through the quality and quantity of financial distribution.

Meanwhile, this measurement dimension symbolizes contribution the banking sector ability in managing the intermediary function of both bank savings and loans [15, 52, 56, 72, 101-103], because directly or indirectly it will be a support and reinforcement in anticipating external pressure as a trigger for the green economic crisis both nationally and internationally.

Second, the degree of financial intervention plays an important role in explaining the synchronization and overall stability of banks' savings and loans. Articulation in the aspect of financial distribution control is explained in Table 2. Moreover, each dimension shows the pressure significance on the banking intermediary function, which indicates strength or weakness the financial distribution level. However, the finance implementation of banking sector does not have a positive effect on financial balance, only liquidity and solvency have significance on banking sector saving activities, meanwhile, profitability and banking sector activities do not affect banking savings.

On the other hand, only liquidity and financial activities have a significant influence on bank lending activities, but profitability and solvency react differently to bank loans. Therefore, in Table 2 it can be concluded that this research implementation shows the banking sector strictly and specifically controls banking financial liquidity consistently and comprehensively through the Current Ratio, Quick Ratio and Cash Ratio measurement channels, because it has a strong

influence on the banking intermediary function both on savings activities and banking activities partially and simultaneously.

Third, the aspect of the Green economy crisis turbulence, financial connectivity in this research is carried out by testing the savings and loans activity to determine the intermediary function strength when receiving external shocks that stimulate the green economy crisis turbulence. Meanwhile, financial distribution is still required to be able to circulate even though there is pressure on the banking intermediary function. This research results show a significant reaction to the economic crisis turbulence through banking sector loans, while savings do not show a positive response to the green economic crisis turbulence, this behavior is described in Table 3.

Financial synergy can be explained logically that the green economic crisis turbulence becomes sensitive when the intermediary function control through bank loans is not carried out optimally, the side effect of increasing the bank loan risk because NPLs have a negative impact on banking financial performance in the form of liquidity risk which can also reduce the banking soundness level.

Finally, Figure 2 shows the reality of holistic and comprehensive interconnection of financial distribution through the banking intermediary function, in maintaining and anticipating both internal and external financial pressures, which result in the green economic crisis shock, thus having a negative impact on financial stability and sustainable economic growth. Next, in Figure 2 also explains more accurate and specific financial synergy with maximum results, which have a broad impact on other sectors. In addition, these results are the basis for decision making for the banking sector and other sectors that have the same relationship to the preventing the green economy crisis process.

Overall, the research findings contribute to the banking sector in controlling financial distribution to perform well, especially in the loan distribution process. Increasing loans affect financial market activities, thus stimulating the financial circulation movement. Therefore, the process of distributing loans to industries that have good performance in improving environmental sustainability will help the economy in preventing a green economy crisis.

Based on this research findings, the green economy crisis impact can be prevented through several policies in managing financial distribution. One of them is by continuing to channel credit to the industrial sector. The credit generating process must be carried out selectively to maintain financial stability, consistent with previous research results [104-106]. Interestingly, financial liquidity plays an important role in the green economy crisis. The results indicate that the financial distribution process through the banking intermediary function makes financial circulation more stable and can prevent the green economy crisis.

Previous research found that the cause of the financial crisis was due to the banking sector experiencing a decline in financial performance, due to the lack of control in credit recognition resulting in an increase in the risk of non-performing loans and a decline in banking soundness [107, 108].

Considering these findings, the banking sector has a high sensitivity level, because financial reactions are highly influenced by market behavior in adopting financial pressures and have an effect on financial distribution. It is not merely, concrete evidence of less than smooth financial distribution results in a drought of financial liquidity in the banking sector. Furthermore, banking experienced losses due to the increasing risk of financial capital. Bank Indonesia under this pressure liquidated several banks as part of its financial policy to anticipate a prolonged green economy crisis.

The intriguing finding from this research suggests that the banking sector can increase lending by using a strict selection process based on caution in its decision-making. It is not merely, it is necessary to control the credit use that has been given, in order to achieve the maximum level of banking soundness and prevent a green economy crisis.

The research findings provide insights in the form of financial policy arrangements in the banking sector, proper financial circulation can prevent a green economy crisis through Bank Indonesia's monetary policy. Therefore, these findings provide a more comprehensive view of green economy crisis through the relationship between monetary and fiscal policies in enhancing financial stability and economic growth and preventing green economy crisis.

Additionally, it is important to consider the policy in financial distribution. Therefore, the intermediary function and financial performance are in line with the decline in financial risk and the improvement of banking soundness through the financial liquidity regulation in preventing the negative impact of the green economy crisis.

Considering these findings, it can be concluded that the green economy crisis can be anticipated through financial distribution policies based on the banking intermediary function to increase financial liquidity. The high level of credit provision in industrial sectors that focus on environmental preservation has a positive impact on the green economy. Furthermore, increasing financial distribution through loans will reduce the green economy crisis. In addition, it will indirectly increase financial stability and sustainable economic growth.

Theoretical implications

1) Expansion of the financial balance theory: This research shows that the financial balance theory can be articulated in various aspects of the economy, this theory expansion can be reviewed through the financial distribution process. In economic law, balance is only interpreted as equality between supply and demand, but this research results prove that the theory expansion is not only due to the financial circulation existence in the banking sector, but this balance can also be measured based on financial distribution by modifying financial flows through various financial pressures that affect the green economic crisis turbulence.
2) Financial activities behavior in the banking sector: The financial balance synergy with the velocity of money indirectly has an effect on banking sector activities, which in the long term can increase the green economic crisis turbulence. This research highlights the importance of managing financial distribution when there are changes in macroeconomic pressures, thus, the intermediary function does not experience imbalances and has a negative impact on the green economic crisis turbulence.
3) Contribution to the measurement model of green economic crisis turbulence: This research provides important contributions to the causes and anticipation of the green economic crisis turbulence effects both

nationally and internationally. This research also provides an understanding of how financial distribution can create turbulence in the green economic crisis, while also providing input in decision making through a financial distribution model along with all the macroeconomic weaknesses pressures that are measured in this research.

4) Contribution to financial literacy: This research provides a strong contribution to the literature development related to financial behavior. This contribution can build a new concept of the banking sector resilience in facing all financial pressure fluctuations that affect, more specifically because this research develops financial constructs in anticipating the green economic crisis turbulence which can damage the environment due to financial user behavior, both in the short and long term.

Managerial implications

1) Development of economic policy: This research highlights the importance of maintaining financial distribution to avoid the green economic crisis turbulence which has a negative impact on financial and environmental aspects simultaneously, resulting in permanent damage in the long term, which will slowly damage the financial and environmental ecosystem by causing acute depression in financial activities through pressure on economic indicators. Therefore, the Central Bank, Government, Banking and Society have a strong bond in maintaining the financial and environmental ecosystem by implementing policies that are pro-healthy environment and anti-crisis green economy.
2) The importance of soundness banking sector performance: This research shows that the financial health of a country depends on the soundness banking sector, the banking sector performance and the Central Bank behavior are the main keys in maintaining financial distribution through synergy between the government and all economic actors. The banking sector is the economy focal point and will have a high level of sensitivity in managing finances, therefore it is a shared task to maintain financial pressure for an optimal economy.
3) Holistic green economic: This research claims that banking activities in the Indonesian economy have holistic and comprehensive synergy with various sectors, both the economic sector and the environmental sector. This attachment occurs because of holistic financial activities through various policies in maintaining and controlling financial distribution with strong sensitivity in responding to pressure from economic indicators, therefore, strong synergy and cooperation are needed between the government and agencies to anticipate the green economic crisis turbulence as an effort to create a sustainable green economy in Indonesia.

4. CONCLUSIONS

The analysis focused on the crisis green economy impact based on the financial distribution of the banking sector. This research reveals the latest models and methods through the use of banking financial ratios, both conventional and sharia, through the Ed Waves Index development model in determining economic pressure on the green economy crisis.

The banking sector can prevent the crisis green economy by maintaining the financial turnover level, both savings and loans. However, banking financial liquidity is an important concern for financial stability and economic growth, because it is the main indicator in preventing the impact of economic crisis. It suggests that not only liquidity but also must control the banking soundness level through other financial performance indicators. Therefore, this research emphasizes that the banking sector continues to channel credit as part of maintaining financial liquidity, which can prevent a green economy crisis.

The results of this research can be articulated that passive financial behavior in the banking sector and other sectors will hinder financial flows that stimulate the macroeconomic variables movement and vice versa, macroeconomic variables can affect the banking intermediary function, making economic performance inefficient. The consequence is long-term financial turbulence and has an impact on the green economic crisis. In this context, preventing turbulence in the green economic crisis requires the banking sector to channel loans carefully to the industrial sector that aims to improve environmental sustainability, behind that, The articulation of the green economic crisis demands our awareness to use loans effectively and efficiently to maintain the financial ecosystem and the environment together.

On the other hand, the banking sector is indirectly required to maintain financial flows through intermediary functions, to form an optimal financial ecosystem for increasing financial resilience and the green economy crisis turbulence. In this context, banking is the most important element in creating financial stability and economic growth in achieving effective sustainable economic development.

Furthermore, a suggestion for future research is to expand the research area to external factors to create overall financial balance.

This research significantly contributes to the banking sector in carrying out its intermediary function to achieve financial stability. The Indonesia central bank is an institution that engages in macroeconomic policy, with the goal of achieving both stability and sustained economic growth. The practical implications of this research provide a clearer insight for reducing and preventing the green economy crisis through an effective and efficient financial distribution process.

Furthermore, this research can also guide policymakers in developing policies and programs that support the development of financial stability and economic growth by strengthening factors that influence, which has an influence on the banking intermediary function, to support the goals achievement of an effective financial ecosystem, flexible policies such as monetary policy are needed to regulate the gap in financial distribution through the banking intermediary function against the macroeconomic pressures identified in this research. Therefore, through this policy, financial distribution can be controlled in improving banking and economic performance, especially in creating financial stability and sustainable economic growth.

Overall, the practical implications of this research contribute to all policy makers in the financial sector, especially for the government such as Bank Indonesia, the Financial Services Authority and other financial institutions in facing the green economy crisis pressure or other financial pressures.

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