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Analysis of Financial Innovation in Enhancing the Green Economic Transition at PT. Astra Argo Lestari Tbk

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Abstract

Objective: The author's objective in writing this article is to analyze the implementation of financial innovations at PT. Astra Argo Lestari Tbk in supporting the transition towards a green economy over the past three years.
Method: This study employs descriptive-qualitative research to investigate a specific event.
Results: In 2021, the company took progressive steps in developing innovations and technologies to strengthen its operations. In 2022, the company committed to consistently exploring and leveraging the best opportunities for its advancement. In 2023, the company continued to advance Astra Agro's sustainability vision by setting achievement targets aimed at 2030, in line with its sustainability commitments.
Originality/Value: This article asserts that financial innovation plays a crucial role in accelerating the transition to a green economy at PT. Astra Agro Lestari Tbk. The company has utilized modern financial instruments to design a green economic transition, which resulted in profit increases in 2021-2022. Despite experiencing a profit decline in 2022-2023, the company continues to enhance digitalization programs to improve business efficiency in support of sustainability goals by 2030.

Keywords: financial innovation, economic transition, green economy
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Introduction

In the current era, transitioning to a green economy has become imperative for organizations, including large corporations that aim to remain relevant and sustainable in the long term. PT. Astra Argo Lestari Tbk is one of the prominent entities in the industry, not exempt from this challenge. In response to global demands for environmental protection and resource efficiency improvement, financial innovation has emerged as a key strategy enabling companies to adapt and thrive within the green economy context.

Financial innovation is increasingly crucial in understanding how PT. Astra Argo Lestari Tbk leverages modern financial instruments to design a transition to a green economy. Through this approach, the company can identify new opportunities, manage risks, and optimize the use of financial resources to enhance efficiency and positive environmental impacts. Effective implementation of financial innovation requires a deep understanding of the challenges, opportunities, and various external and internal factors that can influence the industry (Gustika, 2020).

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From 2021 to 2023, PT. Astra Argo Lestari Tbk has taken significant steps to accelerate the transition to a more sustainable business model. In 2021, the company focused on identifying and implementing financial strategies that support their vision of achieving ambitious environmental goals. The year 2022 was dedicated to evaluating their progress in the green economic transition while designing new measures to reduce negative environmental impacts and promote resource efficiency.
In 2023, PT. Astra Agro Lestari Tbk is expected to have expanded its green economic initiatives, utilizing financial innovation analysis to refine financial strategies, enhance access to sustainable capital, and expedite the implementation of innovative projects. This study aims to enhance understanding of the role of financial innovation in promoting the green economic transition at the company during this period, with the hope of strengthening their commitment to the industry.

The formulation of the problem
How has PT. Astra Argo Lestari Tbk implemented financial innovation in their efforts to accelerate the transition to a green economy over the past three years?

The objective of the problem
The objective of this study, based on the research question, is to analyze the implementation of financial innovation at PT. Astra Argo Lestari Tbk in supporting the transition to a green economy over the past three years.

Literature Review and Hypotheses Development

Green Economy
A green economy is defined as low-carbon, resource-efficient, and socially inclusive. In a green economy, job growth and income are driven by public and private investments in economic activities, infrastructure, and assets that enable reduced carbon emissions and pollution, increased energy and resource efficiency, and prevention of biodiversity loss and ecosystem services (Pratiwi & Amri, 2022). In essence, a green economy seeks growth through pro-poor environmental investments. This concept helps shift the focus of debates from reconciliation to the synergy of relationships.

In recent years, a new economic development concept known as the green economy has emerged. This concept emphasizes using technology and knowledge to understand the relationship between nature and humans and to reduce the negative impacts of global warming. The concept was launched as an innovative initiative to achieve sustainability, encompassing three main pillars: economic, environmental, and social. One of the key areas is improving financial systems. Renewable energy resources hold great potential as innovative alternatives for electricity generation. The spread of renewable energy is a crucial step, exploring options to mitigate climate change, save energy, and create green jobs. The use of renewable energy is better for the environment because it harnesses energy from wind, water, or the sun, thus causing less pollution and harm to the Earth (Susanti, 2023).

Developed countries are expected to lead by significantly changing their consumption and production patterns. Developing countries are given opportunities to achieve targets set within the sustainability framework (Hayat et al., 2021). Meanwhile, industrialized nations have the responsibility to provide technological and financial assistance to developing countries. This division of responsibilities is expected to facilitate a more just and effective global transition to a green economy.

Regulations Related to Green Accounting

Here are several legislative regulations that are relevant to green accounting:

Law No. 23 of 1997 Concerning Environmental Management

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The regulation stipulates that every individual or entity engaged in business activities must manage, conserve, and provide accurate information regarding the environment. Legislative measures also establish regulations for legal sanctions against those who violate these provisions, particularly if such violations result in environmental damage and pollution.

Law No. 40 of 2007 Concerning Limited Liability Companies
The regulation mandates that businesses utilize their natural resources fairly and adequately, taking into account social and environmental considerations. It also imposes penalties on companies that violate these provisions according to applicable regulations.

Bank Indonesia Regulation No. 7/2/TBI/2005 Concerning Asset Quality Assessment for Commercial Banks
The regulation emphasizes the importance of environmental factors as a requirement for obtaining credit from banks. Those seeking loans from banks are required to demonstrate their commitment to environmental management.
Environmental management is assessed through the PROPER system, which evaluates the quality of a company's waste management on a scale of five levels: black, red, blue, green, and gold. This system classifies businesses based on how well they manage their waste, with a black rating indicating poor management and a gold rating indicating excellent management.

Decision of the Chairman of the Capital Market Supervisory Agency and Financial Institution Supervisory Board KEP/134/BL/2006 Concerning the Obligation to Submit Annual Reports for Issuers or Public Companies
The regulation encompasses provisions related to corporate governance, referring to practices and policies that govern how a company is managed and supervised. The annual report mentioned must detail the company's activities throughout the year, including expenditures related to its responsibilities in community welfare and environmental stewardship.

Financial Accounting Standards (PSAK) Statements No. 32 and No. 33
These are accounting guidelines that regulate the obligations of businesses operating as mining industry managers and holders of Forest Concession Rights (HPH) regarding the preparation of their financial statements.

Financial innovation

According to Hermanto & Andrew (2023), this function highlights the payment process involving media changes, fund transfers from savers to investment users, fund pooling for timing changes, such as risk reduction using diversification mechanisms and insurance, and consumption postponement.

The ope rationalization of the financial system includes various resource costs, such as human resources, equipment, and capital utilization from intermediary financial institutions. Additionally, financial facilitators (such as stockbrokers, market makers, financial advisors, and others) play a role in this process.

The emergence of new possibilities in products, services, or financial instruments provides confidence that there will continue to be demand to participate in the financial system (Rahmad Samosir et al., 2024). Based on this foundation, financial innovation appears capable of reducing costs, potential losses, or providing products, services, or equipment as needed by participants.

Banking measures its level of financial innovation using two different methods: using a dummy and natural logarithm. The dummy is used to represent financial innovation, while the natural logarithm of the number of ATM's serves as a proxy for other financial innovations.

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Criteria for evaluating financial innovation involve a dummy with different values. To measure financial innovation using the dummy and natural logarithm, the formula used is as follows:

IK_1: 1(ATM)

IK_1: 2 (ATM & internet banking or mobile banking)

IK_1: 1 (ATM,internet banking and mobile banking)………… (2)

IK_2: LnATM………………………………………….... (3)

Financial Management

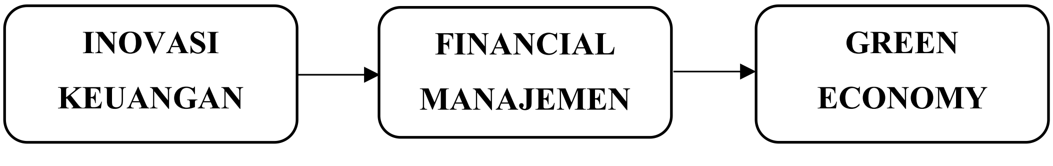
Financial management is a process where a company plans, directs, and makes financial decisions to efficiently and effectively manage its finances. This function encompasses three key aspects: financial planning, financial control, and financial decision-making (Suwarno, 2023). Financial planning is a crucial stage in financial management where businesses develop long-term financial goals and formulate strategies and action plans to achieve them.

Liefman states that financial management is the process by which businesses raise funds and use them for acquisitions or investments in assets, including property. Suad Husnan describes financial management as the management of financial activities. Gutenberg defines financial management as "How the company is organized to raise funds, how they raise funds, how these funds are used, and how the company's profits are distributed." According to Jacques (2001), financial management includes all activities related to acquisition, financing, and management of assets based on general objectives.

In the context of financial planning, businesses are expected to consider various financial resources available, including but not limited to income, expenses, investments, and cash flow. Financial management integrates with financial control, which involves actions to efficiently manage funds, manage financial risks, and monitor and control incurred costs (Sukenti, 2023). This aims to ensure that the company has adequate capabilities to meet established financial plans, as well as to identify, assess, and manage financial risks, ultimately aiming to enhance the company's economic performance. It is crucial for companies to regularly review their financial performance and take corrective actions if deviations from the established financial plans are identified (Stocks, 2016).

Financial management encompasses several interconnected domains (Aidhi et al., 2023). One of these is cash flow management, which involves managing the inflows and outflows of cash from the company, focusing on fund arrangements to align with operational and strategic needs. Then, there's asset management, which involves controlling and optimizing company inventories, inventories, and equipment to ensure maximum efficiency and productivity. Additionally, debt management is a critical part of financial management, consisting of managing loans from financial institutions, bonds, or other financial obligations to manage financial risks and ensure sufficient fund availability. Lastly, investment management requires strategic decision-making regarding the allocation of company funds into financial instruments such as stocks or bonds from other entities, considering risks and long-term investment goals.

Conceptual Framework



In the research planning stage, a conceptual framework is developed to illustrate the relationship between theories or concepts that form the basis of the study. This framework

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depicts the interconnections among financial innovation, finance, and the green economy. Financial innovation refers to the development of new financial products, services, and processes aimed at enhancing efficiency, accessibility, and financial inclusion. Finance is crucial for empowering individuals, enabling business growth, and driving economic development. The green economy encompasses economic activities aimed at promoting sustainable development and reducing environmental impact (Hasdiana, 2018).

Method

During the research planning stage, a conceptual framework is crafted to elucidate the interrelationships between foundational theories or concepts guiding the study. This framework specifically outlines the connections among financial innovation, finance, and the green economy.

Financial innovation pertains to the creation of novel financial products, services, and processes designed to improve efficiency, accessibility, and foster financial inclusion. Finance plays a pivotal role in empowering individuals, facilitating business expansion, and catalyzing economic development.

On the other hand, the green economy encompasses economic endeavors aimed at advancing sustainable development objectives and mitigating environmental impacts (Hasdiana, 2018).

In summary, the conceptual framework in research planning serves to delineate how financial innovation, finance, and the principles of the green economy interact and influence each other within the context of the study.

Result and Discussion

Table 1. Financial Performance

Statement of Profit or Loss and Other Comprehensive Income			
Net Revenue	20,745	21,829	24,322
Gross Profit	2,771	3,822	4,83
Net Income	1,088	1,792	2,067
Profit attributable to:			
- Owners of the Parent Company	1,056	1,727	1,971
- Non-controlling Interests	32	65	96
Comprehensive Income for the Year	**1,136**	**1,986**	**2,454**
Comprehensive Income Attributable to:			
- Owners of the Parent Company	1,104	1,919	2,357
- Non-controlling Interests	32	67	97
Financial Position (Balance Sheet)			
Current Assets	7,118	7,391	9,414
Non-current Assets	21,728	21,859	20,986
Total Assets	**28,846**	**29,249**	**30,400**
Short-term Liabilities	3,882	2,053	5,960
Long-term Liabilities	2,398	4,953	3,268

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Total Liabilities	**6,28**	**7,006**	**9,229**
Total Equity	**22,566**	**22,243**	**21,171**
Ratio Analysis and Other Information			
Net Working Capital	2,708	2,898	2,455
Net Profit Margin	4%	6%	7%
Net Profit Margin	5%	8%	10%
Net Profit Margin	5%	8%	9%
Gross Profit Margin	13%	18%	20%
Current Ratio (x)	1.8	3.6	1.6
Debt-to-Asset Ratio (x)	0.2	0.2	0.3
Debt-to-Equity Ratio (x)	0.3	0.3	0.4
Outstanding Shares (in Millions)	1.925	1,925	1,925
Earnings per Share (Full Rupiah)	549	897	1,024
Net Asset Value per Share (Rupiah)	11,724	11,557	11,000
Interim Dividend per Share (Rupiah)	82	85	102
Final Dividend per Share		319	359

Table 2. Operational Performance

Planted Oil Palm Area (Ha):			
Core Land	213,158	214,815	214,498
Producing	193,289	192,936	192,025
Non-Producing	19,869	21,879	22,473
Plasma Land	72,229	72,229	72,229
Producing	72,229	72,229	72,229
Non-Producing	-	-	-
Total Planted Area	265,518	287,044	286,727
Producing	265,518	265,165	264,254
Non-Producing	19,869	21,879	22,473
Distribution of Planted Oil Palm Area (Ha):			
Sumatra	105,3	105,27	105,253
Kalimantan	129,804	130,84	130,762
Sulawesi	50,283	50,934	50,712
Profile of Oil Palm Tree Age (Ha):			
Non-Producing (<4 Years)	19,869	21,879	22,473
Producing:			
Productive Trees (4-15 Years)	102,319	113,448	123,794
Old Trees (>15 Years)	163,199	151,717	140,46
Average Age	16.2	15.1	15.8
Summary of Fresh Fruit Bunches (FFB) Production (Tons):			

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Total FFB Production	4,353,645	4,273,200	4,326,790
Core FFB	3,312,149	3,159,536	3,222,725
Plasma FFB	1,041,496	1,113,666	1,104,065
Total Processed FFB	6,752,102	6,867,828	7,601,095
Summary of Processed Palm Oil Production (Tons):			
Palm Oil	1,275,539	1,303,765	1,473,017
RBDPO	17,289	12,546	31,603
Olein	441,671	362,456	447,563
Stearin	115,918	95,25	108,866
PFAD	23,621	23,902	26,547
Kernel	272,31	282,007	314,73
Palm Kernel Oil	45,158	47,641	42,87
Palm Kernel Expeller (PKE)	56,142	62,661	56,866
Yield TBS - Ton/Ha	16.40	16.12	16.37
Yield TBS Inti	17.14	16.38	16.78
Yield CPO - Ton/Ha	3.10	3.06	3.17
Palm Oil Yield	18.89%	18.98%	19.38%
Palm Kernel Oil Yield	4.03%	4.11%	4.14%
Palm Kernel Oil Yield	41.35%	40.22%	38.40%
PKE Yield	51.40%	52.90%	51.00%

Year 2021

In 2021, the Company took progressive steps in developing innovation and technology to strengthen its operations. Throughout the year, there were no significant material transactions, and no conflicts of interest arose within the corporate environment. The Company's comprehensive income for 2021 amounted to a total of Rp. 2.45 trillion, marking a significant increase of 425.2% from Rp. 467.25 billion in 2020.

The primary reasons for this increase were the rise in average selling prices of Crude Palm Oil (CPO) and the decrease in prices of palm oil derivatives, which aligned with the higher market prices of the products sold and other operational costs. Of the total amount of loans received by the group, Rp. 5.696 billion (compared to Rp. 5.624 billion in 2020) were hedged using fixed interest rates. Additionally, the total value of commodity transactions on the Malaysia Exchange reached RM 523 million as of December 31, 2020, with final settlement dates ranging from February to July 2021. The impact of these fair value transactions was measured based on quoted prices, totaling Rp. 323,578 million.

Year 2022

In 2023, the Company continued to advance the Astra Agro sustainability vision by setting targets for achievement by 2030, aligning with its commitment to sustainability. The main focus was on achieving operational excellence, including improving efficiency and effectiveness in harvesting processes and enhancing corporate governance with an emphasis on eliminating unnecessary costs. Additionally, efforts in digitization were intensified, leveraging data analytics and artificial intelligence to support corporate decision-making. Research and development efforts were also strengthened to drive sustainable innovation in company operations.

However, in 2023, the recorded losses showed comprehensive income of Rp. 48.20 billion from other comprehensive income, marking a 75% decrease from the Rp. 193.87 billion recorded in 2022. Several factors contributed to this decline, including loan repayments

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maturing over 60 months from the draw down date, occurring between October 6, 2017, and August 30, 2019. Additionally, loan repayments maturing over 36 months from the draw down date, occurring on September 9, 2022, also contributed. These loans require interest payments every three months. Furthermore, trade debt repayments ranged from 14 to 45 days.

Regarding interest rate risk management, out of the total loans obtained from group banks, Rp. 2.312 billion was hedged using fixed interest rates. This amount is lower than the Rp. 2.360 billion recorded as of December 31, 2022..

Conclusion and future direction

Therefore, the conclusion of this article asserts that financial innovation plays a crucial role in accelerating the transition to a green economy at PT. Astra Agro Lestari Tbk. The company has utilized modern financial instruments to design a green economic transition that resulted in increased profits in 2021. However, the company experienced profit declines in 2022 and 2023. Furthermore, the company continues to enhance its digitalization programs to improve business efficiency in support of its sustainability goals by 2030.

Moving forward, further studies could evaluate the concrete impact of PT. Astra Agro Lestari Tbk.'s financial innovations in supporting the transition to a green economy. Future research could include a deeper analysis of the financial strategies implemented and measure their effectiveness on the company's economic and environmental performance. This would provide a more comprehensive understanding of how financial innovation can contribute to achieving corporate sustainability targets.

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