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Navigating Climate Risk Through SFAS: A Sustainable Accounting Strategy

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Abstract
Climate change has become a pressing global issue with far-reaching impacts on various sectors, especially heavy industries such as manufacturing, mining, energy and metals. This phenomenon affects the operations and sustainability of these sectors through physical risks, such as natural disasters, and transition risks from climate change policies. This study aims to explore the application of Indonesian Financial Accounting Standards (SFAS) in the context of climate change impacts, focusing on SFAS 74 on insurance contracts, SFAS 71 on financial instruments, and SFAS 68 on fair value measurement. The results show that these three accounting standards complement each other in managing climate change risks. SFAS 74 improves the accuracy of measuring insurance liabilities related to natural disasters, while SFAS 71 addresses financial instrument risk by considering the impact of climate change on market value. SFAS 68 plays an important role in measuring the fair value of physical assets affected by environmental change. The integration of guidance from IFRS S2 and TCFD into SFAS is expected to improve transparency and consistency in climate change risk reporting, facilitate better risk management, and support more informed investment decisions. This research also identifies challenges in implementation and provides recommendations for adaptation of accounting standards to address climate change risks more effectively.
Keywords: climate change, SFAS, risk, fair value, reporting

Introduction

Climate change has become an urgent global challenge with significant and far-reaching impacts for various sectors, not least heavy industry (Ding et al., 2021). This phenomenon involves changes in extreme weather such as floods, droughts, and increasingly frequent storms, as well as more complex impacts such as changes in weather patterns and sea level rise (Seneviratne et al., 2021). The heavy industry sector, which includes manufacturing, mining, energy and metal industries, is highly dependent on natural resources and energy (Cheng et al., 2020). Therefore, the impacts of climate change on these sectors are very real and affect their operations and long-term sustainability (Sun et al., 2020).

The risks faced by heavy industry can be divided into two main categories: physical risks and transition risks (Daumas, 2024). Physical risks include losses arising from natural disasters such as floods, storms and droughts. These disasters can damage infrastructure, destroy physical assets, and disrupt production processes (Eslamian & Eslamian, 2021). For example, production facilities affected by flooding may experience damage to machinery and equipment, as well as disruptions in the supply chain that can affect smooth operations. In addition, prolonged droughts can disrupt water supply, which is a crucial element in many industrial processes, especially in the mining and energy sectors.

On the other hand, transition risks stem from policy and regulatory changes aimed at reducing carbon emissions and addressing climate change. These policies may include the introduction of carbon taxes, emissions caps, or incentives for the use of green technologies (Semieniuk et al., 2021). For heavy industries, which are often the largest emitters, these transition risks could mean increased operational costs to meet new regulations or make investments in cleaner technologies. The policy may also affect companies' business models and investment strategies such as by encouraging investments in renewable energy or energy efficiency technologies.

Faced with these challenges, heavy industries need to provide transparent and comprehensive disclosures of climate change impacts in their financial statements (Gulluscio et al., 2020). These disclosures should include information on how companies manage these risks, both physical and transitional (Settembre-Blundo et al., 2021). For example, companies should disclose how natural disasters that occur affect their assets, as well as mitigation measures taken to reduce the impact of future disasters. In addition, companies should report how climate change policies affect their operational costs and business strategies, including investments in green technologies or changes in supply chains (Secinaro et al., 2020).

In an effort to improve transparency and consistency in climate change risk reporting, various standards and initiatives have been developed. One of the key initiatives is the Task Force on Climate-related Financial Disclosures (TCFD), established by the Financial Stability Board (FSB) (Ngo et al., 2023). The TCFD provides guidance to companies on how to report climate change-related risks and opportunities in their annual reports (Hösli & Weber, 2021). The guidance covers four key areas: governance, strategy, risk management, and metrics and targets used to manage climate change impacts (Stoner, 2020). By following these guidelines, companies in the heavy industry sector can provide more complete information on how climate change affects their strategies, operations and financial results (Abdi et al., 2020).

In addition to the TCFD, the International Financial Reporting Standards (IFRS) Foundation also introduced IFRS S2: Climate-Related Disclosures Standard. This standard is designed to improve the quality of climate change-related disclosures by providing more detailed and structured guidance on how companies should report the impacts of climate change (Bertrand, 2024). IFRS S2 introduces new requirements that include disclosures about how climate change affects a company's business strategy and objectives, climate change-related risks and opportunities, and its impact on financial position and results of operations (Suta et al., 2022). The standard aims to provide a consistent and measurable framework for companies to report information related to climate change (Atanasov, 2022).

In Indonesia, Statement of Financial Accounting Standards (SFAS) 74 regulates accounting for insurance contracts and provides guidance on the recognition, measurement, and disclosure of insurance liabilities (Santosa & Purnamasari, 2023). SFAS 74, which is adopted from IFRS 17, sets out the accounting principles that insurance companies should apply in reporting their obligations to pay future claims as well as the necessary technical reserves (Harimintarti & Mita, 2024). Although SFAS 74 provides guidance on accounting for insurance liabilities, it does not specifically cover disclosure of climate change-related risks.

With increasing concern about the impacts of climate change, there is an urgent need to integrate climate change-related information in corporate financial statements (Hösli & Weber, 2021; Gulluscio et al., 2020). IFRS S2 provides more specific guidance on how companies should disclose climate change-related risks and opportunities, which is relevant for companies following SFAS 74.

The implementation of IFRS S2 in the financial statements of companies that follow SFAS 74 involves several important aspects. First, companies must identify and disclose climate change-related risks that may affect their portfolios, including physical risks from natural disasters and transition risks from changes in climate policy (Tjan et al., 2024).

Second, the methodology for measuring insurance liabilities may need to be adjusted to account for climate change risks, such as updating technical reserve estimates to take into account the impact of climate change. Finally, IFRS S2 increases the need for transparency in climate change risk disclosures, which should be integrated in companies' annual reports to provide a clear and detailed picture of the impact of climate change on insurance liabilities and financial results (Tjan et al., 2024).

The implementation of IFRS S2 in the context of SFAS 74 may face several challenges, such as the collection of relevant data, adjustment of accounting processes, and professional training. Companies may require time and effort to adjust their accounting and reporting processes to match the requirements of IFRS S2. This includes collecting relevant data on climate change risks and their impact on insurance liabilities, adjusting measurement methodologies, and raising awareness and training on IFRS S2 among accounting and risk management professionals.

Overall, the integration of climate change-related disclosures in insurance accounting through IFRS S2 and SFAS 74 plays an important role in ensuring corporate transparency and accountability. By following the guidance provided by IFRS S2, companies can provide more comprehensive and relevant information regarding climate change risks, which in turn supports better decision-making by investors and stakeholders. Clear and detailed disclosures about climate change impacts not only assist companies in managing their risks but also contribute to global efforts to address climate change challenges (Flammer et al., 2021).

In an era of growing globalization and modernization, environmental issues such as climate change have become a major highlight, not only in the context of public policy but also in the world of business and accounting (Sharma & Soederberg, 2019). The impacts of climate change, which include natural disasters, changes in weather patterns, and fluctuations in natural resources, are increasingly felt and affect various aspects of company operations (Loucks, 2021). As a result, accounting and financial reporting must adjust to address and disclose the risks and opportunities arising from this phenomenon (Guthrie et al., 2020). This research aims to explore the application of various Indonesian Statements of Financial Accounting Standards (SFAS) in this context, as well as to provide insights into how companies can better report and manage climate change-related risks.

The research has several key objectives that include identifying and reviewing the application of SFASs, assessing the impact of climate change on financial reporting, identifying challenges and gaps in the application of SFASs related to climate change risks, and suggesting improvements and adaptations in accounting and financial reporting standards. By integrating SFAS 74, SFAS 71, and SFAS 68 in the context of climate change risks, this research seeks to understand how these accounting standards are applied in practice and how they can manage the risks and opportunities arising from climate change.

The evaluation of the impact of climate change on financial statements includes how climate change affects the estimation of insurance liabilities, fair value of assets and liabilities, and financial instruments (Scholten et al., 2020). This research also aims to identify challenges and gaps faced in the application of SFAS related to climate change risks and provide recommendations for improvements or adaptations in accounting and financial reporting standards. These recommendations may include suggestions for the development of more specific standards related to climate change risk disclosures, as well as additional guidance for companies to manage and report climate change impacts more effectively.

As such, this research is expected to make a significant contribution to the understanding and practice of climate change risk disclosure in financial statements, as well as assist companies in addressing the challenges arising from climate change. Ultimately, by improving transparency and accountability in financial reporting, companies can better mitigate risks, capitalize on opportunities, and contribute to global efforts in dealing with climate change.

Research Method

This research uses a qualitative method based on a literature study to explore the application of the Statement of Financial Accounting Standards (PSAK) in managing climate change risks. The focus of the analysis lies on PSAK 71 (Financial Instruments), PSAK 74 (Insurance Contracts), and PSAK 68 (Fair Value Measurement). This approach aims to review the literature that discusses the theory and implementation of PSAK in the context of climate change. Research steps are as follows:

1. Secondary Data Collection
   Data sources include:
   a. Academic journal articles that examine the relationship between climate change and financial reporting practices in accordance with PSAK.
   b. Accounting Standards PSAK 71, PSAK 74, and PSAK 68 as the main guide in analyzing the application of accounting principles related to climate risk.
2. Data Analysis
   Data was analyzed using thematic analysis method, which includes:
   a. Thematic Coding: Categorizing information based on accounting elements, such as recognition, measurement, and disclosure of financial risks.
   b. Identification of Patterns and Gaps: Comparing PSAK principles with practices disclosed in academic literature to understand implementation challenges.
3. Drawing Conclusions
   Findings are summarized by highlighting relevant SFAS implementation synergies, accounting challenges in managing climate change risks, and recommendations to improve the reliability and relevance of financial reporting.

Results and Discussion

This study focuses on the application of various Financial Accounting Standards Statements (SFAS) in dealing with risks and opportunities arising from climate change in the heavy industry sector. By integrating SFAS 74, SFAS 71, and SFAS 68, this study examines how these standards can be used synergistically to ensure that financial statements accurately reflect the impacts of climate change on companies in this sector.

Application of SFAS 74: Insurance Contracts in the Context of Climate Change Risk

SFAS 74, or the Financial Accounting Standards Statement governing insurance contracts, is the latest standard that replaces SFAS 62 (Puspamurti & Firmansyah, 2020). This SFAS is very relevant for insurance companies, especially in the heavy industry sector, which are increasingly faced with climate change risks (Qadri et al., 2022). The implementation of SFAS 74 changes the way insurance companies recognize, measure, present, and disclose obligations related to insurance contracts (Veronica & Purnamasari, 2024). Basically, SFAS 74 provides a new measurement model that is more appropriate to handle the increasing risks due to climate change, such as storms, floods, and forest fires.

Recognition and Measurement Concepts in SFAS 74

One important aspect of SFAS 74 is the different approach to measuring insurance liabilities compared to SFAS 62. If in SFAS 62 insurance companies use a simpler and more static measurement model, SFAS 74 applies a more dynamic approach by using the "Current Fulfillment Value" method. This method considers future cash flows, discounts, and risk adjustments that better reflect current economic realities (Graham, 2022).

In the context of insurance companies that provide protection for physical assets in heavy industry, such as factories, refineries, or mines, measuring insurance risk requires calculations

that take into account the potential for natural disasters due to climate change (Pagnottoni et al., 2022). The increasing frequency of natural disasters such as major floods in Southeast Asia or stronger tropical cyclones in the Americas, means that insurance companies must be more careful in measuring their premiums and liabilities (Chaudhary & Piracha, 2021).

In SFAS 74, companies must adjust mortality and morbidity assumptions to extreme climate events. For example, after a major flood, insurance claims increase sharply. In this case, SFAS 74 requires companies to consider the impact on the discounted value of contractual obligations and future cash flows to be received or paid.

The Impact of Climate Change on the Measurement of Insurance Premiums and Claims

Climate change also affects the determination of premiums in insurance contracts regulated by SFAS 74. In the new measurement model, environmental risk factors such as increasing storm intensity, sea level rise, and frequency of forest fires must be taken into account (Angra & Sapountzaki, 2022). This requires the determination of higher premiums in areas prone to disasters (Viganò & Castellani, 2020). For example, mining companies in Australia operating in bushfire-prone areas may have to pay higher insurance premiums to protect their assets from bushfire risks due to heat waves.

At the same time, insurers must consider increased claims from climate change-related insurance contracts. More frequent natural disasters are leading to increased claims from heavy industries experiencing infrastructure damage or production shutdowns (Sheehan et al., 2023). For example, the oil and gas industry in the Gulf of Mexico, which is frequently hit by tropical cyclones, frequently experiences damage to offshore platforms and mining equipment (Ramenzoni et al., 2024). Insurance claims for such damages increase as the frequency and intensity of tropical cyclones increases. SFAS 74 provides a framework for insurers to account for these larger contractual obligations in their financial statements.

More Transparent Disclosure in SFAS 74

SFAS 74 emphasizes the importance of more transparent disclosure regarding the assumptions used in calculating insurance liabilities. In the face of climate change uncertainty, companies must provide sufficient information regarding the risk assumptions used in determining insurance premiums and claims (Gatzert et al., 2020). Insurance companies that work with heavy industrial sectors, especially those with high risks such as mining or oil and gas, are required to disclose in detail how climate change risks are included in their assessment models (Chernov & Sornette, 2020).

For example, insurance companies that protect factories in Southeast Asia need to disclose the risk of major floods that can damage infrastructure, delay production, and increase recovery costs (Pulhin et al., 2021). If such floods occur more frequently than expected in the initial risk model, insurance companies must update their models and disclose changes in these assumptions in the financial statements (Gray, 2021).

Insurance companies are also required to disclose differences between current cash flow estimates and previous assumptions, especially if there are significant changes in weather patterns or climate regulations (Elliott, 2021). This is important because investors and other stakeholders need a clear understanding of how companies are managing evolving climate risks.

Comparative Study: SFAS 62 vs. SFAS 74

One of the biggest improvements in SFAS 74 compared to SFAS 62 is the more forward-looking approach. Under SFAS 62, the valuation of insurance liabilities often used more static assumptions and did not fully account for rapid changes in the external environment, such as

climate change. SFAS 74, on the other hand, uses a more dynamic measurement model that is responsive to real-time changes in environmental risks.

For example, under SFAS 62, an insurance company protecting coastal assets could only take historical weather patterns into account in valuing their liabilities. However, under SFAS 74, companies are required to account for the increasing risks of sea level rise and more frequent coastal storms. This means that insurance premiums and reserves for future claims must be more flexible in reflecting new risks.

In SFAS 62, insurance liabilities are measured using a more structured and simple approach, such as historical cost measurement. However, SFAS 74 uses a more complex approach, including risk adjustments, which allows companies to measure risks that are more difficult to predict, such as the long-term impact of climate change.

Example of Implementation of SFAS 74 in Heavy Industry

One example of the application of SFAS 74 is in a mining company operating in a high-risk area such as Brazil (Saes & Muradian, 2021). This area often experiences flash floods, which can damage mining infrastructure and cause production to stop. Mining companies that use insurance to protect their assets must consider the impact of these events on their insurance premiums and contractual obligations.

In this scenario, the insurance company providing protection for the mine must consider the potential for large claims due to damage to mining infrastructure. Given the increasing frequency of flooding every year, insurance companies must update their assumptions periodically. Under SFAS 74, the measurement of this liability must be done by taking into account future cash flows, higher risk adjustments, and discount adjustments based on current environmental conditions. Thus, SFAS 74 enables companies to better address long-term risks triggered by climate change.

Implementation of SFAS 71: Financial Instruments and Their Impact on Climate Change Risk

SFAS 71 regulates the recognition, measurement, presentation, and disclosure related to financial instruments (Firmansyah & Matoviany, 2021). This standard has significant implications for companies in heavy industries that face risks due to climate change. These risks include physical risks (such as natural disasters that can damage assets) and transition risks (such as changes in climate policy and the shift towards renewable energy). The implementation of SFAS 71 helps companies assess how these changes may affect the value of their financial instruments.

In heavy industry sectors, such as mining, energy, and manufacturing, which often have large investment portfolios including infrastructure or property, climate change risk can have an impact on the decline in the value of assets related to natural conditions or policies that support carbon emission reductions (Campiglio et al., 2023). Financial instruments such as bonds, stocks, or derivatives related to this sector are also vulnerable to market volatility due to climate change (Battiston et al., 2021).

Recognition and Measurement of Climate Change Risk in SFAS 71

SFAS 71 establishes two main models for recognizing and measuring financial instruments:

1. Amortized cost for financial instruments held to maturity.
2. Fair value through profit or loss or other comprehensive income (OCI) for instruments traded or that have changes in market value.

Fair value is very important in SFAS 71, because it provides a more accurate picture of current market conditions, including how climate change affects the valuation of financial instruments. Financial instruments related to companies or assets in disaster-prone locations,

such as coastal properties prone to sea level rise, will experience higher value fluctuations. Market volatility due to natural disasters or environmental policies can make measuring financial instruments more complicated, but SFAS 71 offers a mechanism to account for this volatility.

For example, energy companies that invest in the fossil fuel sector may face transition risks related to shifts in global environmental policies targeting carbon emission reductions (Bolton & Kacperczyk, 2023). When strict regulations on carbon emissions are implemented, fossil fuel companies may experience a decline in the value of their shares or bonds issued (Mésonnier & Nguyen, 2020). SFAS 71 requires companies to measure the fair value of these instruments more carefully by considering climate policy risks.

Impact of Climate Change Risk on Financial Instruments

Climate change poses various risks to the financial instruments of heavy industry companies, both directly and indirectly. These risks include:

Physical Risk. This risk is related to natural events, such as storms, floods, or forest fires, which are increasingly common. Critical infrastructure, such as factories or mines, can be directly affected by natural disasters, leading to a decline in asset value. Financial instruments such as loans or bonds that are collateralized by physical assets may experience a decline in value due to the risk of physical damage (Eslamian & Eslamian, 2021).

Transition Risk. Transition risk includes the impact of the shift towards a low-carbon economy. For example, companies investing in the fossil fuel sector may face a decline in demand due to global policies to reduce the use of fossil fuels. This causes a decrease in the fair value of financial instruments related to the sector. Under SFAS 71, fair value must reflect this risk in measuring financial assets or liabilities (Semieniuk et al., 2021).

Market Volatility. Climate change also affects market volatility. Financial markets often respond quickly to climate-related developments, such as devastating natural disasters or new climate policies. For example, government policies related to limiting carbon emissions or subsidies for renewable energy can cause price fluctuations in financial instruments, including stocks and derivatives. SFAS 71 requires companies to use a flexible measurement approach to reflect these market dynamics.

Example of Application of SFAS 71 in Heavy Industry Sector

A relevant example is an oil and gas company operating in the United States, where regulations related to greenhouse gas emissions are increasingly stringent. The company may have financial instruments in the form of bonds used to fund the exploration of new oil fields. However, with the shift towards renewable energy and increasing carbon emission regulations, the market value of these bonds may decline drastically because investors view the oil sector as high risk in the long term.

Under SFAS 71, companies must perform fair value assessments regularly, which means they must take into account the potential impact of emission reduction policies and the risk of decreasing demand for fossil fuels. If the decline in the value of the bonds is material, the company is required to disclose this risk in their financial statements. SFAS 71 allows companies to measure such instruments at fair value and recognize significant declines in value as an expense in the income statement.

Disclosure of Climate Change Risks in SFAS 71

SFAS 71 requires more transparent disclosure of risks affecting financial instruments, especially those related to climate change. Heavy industry companies operating in the energy or critical infrastructure sectors must disclose in detail how physical and transition risks related to climate change may affect the value of their financial instruments.

For example, a mining company in South Africa may face the risk of water shortages due to drought caused by climate change. This will affect the company's financial performance and, ultimately, the fair value of the financial instruments issued by the company. In this case, SFAS 71 requires companies to disclose the key assumptions used in the valuation of financial instruments, including the potential impact of climate change risks.

This disclosure is essential to provide transparent information to investors and other stakeholders on how the company is managing risks arising from climate change. Investors, for example, need this information to understand the potential decline in the value of their investments in the long term, especially if the company does not take adequate mitigation steps against climate risks.

Comparative Study: SFAS 71 and International Standard IFRS 9

SFAS 71 in Indonesia is adopted from IFRS 9, which also regulates financial instruments under international standards. One of the main differences is in the adjustment to local conditions, such as national climate policies or regional market dynamics. In Indonesia, where the transition policy towards renewable energy is still developing, companies may face challenges in fully implementing this standard.

In contrast, in countries that already have more advanced climate policies, such as Europe, the application of IFRS 9 standards is stricter regarding climate change risks. For example, companies in the energy sector in Europe are required to disclose in detail the impact of climate risk on the value of their assets, especially in the context of the transition to renewable energy.

Implementation of SFAS 68: Fair Value Measurement in the Context of Climate Change

SFAS 68 provides comprehensive guidance on fair value measurement, a concept that is very important amidst the challenges faced by companies in the heavy industry sector due to climate change (Purwanti et al., 2023). Fair value measurement reflects the price that would be received in an asset sale or settlement transaction or a liability settlement in the primary market, which is now increasingly influenced by environmental risk factors such as climate policy, natural disasters, and pressure to switch to clean energy (McDonough et al., 2020).

In heavy industry, climate change has a significant impact on the value of a company's assets. Assets such as plants, property, equipment, and natural resources can face direct physical risks due to natural disasters such as floods, storms, or forest fires that are increasingly common. In addition, assets related to fossil fuels or high-emission sectors may experience a decline in value as a result of increasingly stringent regulations to reduce carbon emissions and the market shift towards renewable energy (Hansen, 2022).

Fair Value Measurement and Its Impact on Climate Change Risk

Fair value measurement based on SFAS 68 requires companies to consider current market conditions, including risks arising from climate change. In heavy industry, this is often more complex than in other industries because most of their assets are physical and located in areas vulnerable to extreme weather changes. SFAS 68 distinguishes three input hierarchies for fair value measurement, namely:

Level 1: Quoted prices in active markets.
Level 2: Observable data, other than quoted prices, that are available in the market.
Level 3: Unobservable inputs (typically used when market inputs are not available and require management judgment).

In the context of climate change, many assets in heavy industry may require Level 3 valuations, meaning companies must use significant assumptions in assessing the fair value of their assets. An example is the valuation of natural resources, such as coal mines or oil fields,

which may be affected by government policies to reduce fossil fuel consumption. Companies must adjust their estimates of the fair value of these assets to take into account regulatory risks and changes in global demand associated with the energy transition.

Impact of Climate Change Risk on the Value of Physical Assets

Climate change poses significant long-term uncertainty for companies in the heavy industry sector, particularly regarding the value of their physical assets. For example, large plants or equipment located in coastal areas are vulnerable to the risk of rising sea levels or damaging storms. If these assets are damaged or at risk of losing value due to a natural disaster, companies must reassess their fair value, which could impact their financial statements.

For example, a steel mill company with a plant near the coast may experience a decline in the value of its assets due to potential flooding or storm surges. Under SFAS 68, the company must take this environmental risk assumption into account when determining the fair value of the plant. If climate risk increases, the fair value of the asset may be lower than previously assessed, which will ultimately impact the company's financial disclosures.

Challenges in Measuring Fair Value Due to Climate Transition Risk

In addition to physical risks, heavy industry companies also face transition risk, which is the risk arising from the shift to a low-carbon economy. Assets that have historically been highly valued, such as coal-fired power plants or infrastructure related to fossil fuels, may experience a decline in fair value due to regulatory and market pressures that encourage the use of renewable energy.

For example, a company that owns a coal-fired power plant may face significant challenges in measuring the fair value of these assets in the future. As carbon emissions regulations become more stringent and demand for clean energy increases, the market value of these assets could decline. Under SFAS 68, companies are required to disclose the assumptions used in measuring fair value, including estimates of future environmental policies and market expectations.

As part of the measurement process, companies should consider (1) government environmental policies that may affect the value of their assets, (2) market demand for clean energy, which may lead to a shift away from fossil fuels, and (3) new technologies that may replace existing assets or infrastructure.

Companies are also expected to strengthen transparency in these fair value assessments, especially given the high level of uncertainty due to climate change.

The Need for Transparent Disclosure in SFAS 68

SFAS 68 requires disclosure of the assumptions used by companies in their fair value assessments. In heavy industries, this disclosure is especially important because it helps stakeholders understand how companies assess risks related to climate change. If a company has assets in areas prone to natural disasters or invests in projects that may be affected by environmental policies, they must clearly disclose how these risks affect fair value measurements.

For example, mining companies operating in tropical areas may face a higher risk of flooding or landslides due to climate change. If there are significant changes in weather assumptions or environmental regulations that could affect the value of mining assets, companies must disclose this information in their financial statements, in accordance with the provisions of SFAS 68. This disclosure is essential to ensure that investors and other stakeholders have a clear picture of the company's financial resilience to climate risks.

Comparative Study: SFAS 68 and IFRS 13 in Facing Climate Change

SFAS 68 is basically an adoption of IFRS 13 in Indonesia. Although both have similar principles, there are several local adjustments that can be relevant to describe in the context of fair value measurement related to climate change. In Indonesia, as a developing country with high dependence on natural resources and infrastructure that is vulnerable to natural disasters, the implementation of SFAS 68 faces unique challenges compared to developed countries.

In developed countries, such as the United States or Europe, the implementation of IFRS 13 is often stricter in terms of climate risk measurement. This is due to more established environmental policies and stronger market pressure to shift to a low-carbon economy. In this context, the fair value measurement of assets in the fossil energy sector or old infrastructure becomes very important, especially due to the expectation of changes in climate policy in the near future.

In contrast, in Indonesia, the challenges of measuring fair value due to climate risk can be more focused on direct physical risks such as natural disasters, because Indonesia is located in the ring of fire zone, prone to earthquakes, floods, and volcanic eruptions. In this context, companies may have to reassess the value of their assets more frequently than companies in countries that are less exposed to environmental risks.

Conclusion

This study examines the application of three Statements of Financial Accounting Standards (SFAS), namely SFAS 74 on insurance contracts, SFAS 71 on financial instruments, and SFAS 68 related to fair value measurement in the context of climate change in the heavy industry sector. The conclusion of this study shows that these three standards work synergistically to manage the risks and opportunities arising from climate change. SFAS 74 offers a more accurate and responsive approach to measuring insurance liabilities for natural disaster risks, such as floods and forest fires, with a current fulfillment value model that considers future cash flows and risk adjustments. This helps insurers measure their premiums and liabilities more appropriately in line with changing environmental conditions.

On the other hand, SFAS 71 provides important guidance in valuing financial instruments by considering the impact of climate change risks, both in terms of physical risks and transition risks. The standard requires the use of fair value to reflect market fluctuations and the impact of environmental policies that may affect the value of financial instruments. Meanwhile, SFAS 68 emphasizes the importance of accurate fair value measurements for physical assets, such as factories and mines, which are vulnerable to natural disasters and changes in environmental regulations. With these three standards in place, companies in the heavy industry sector can better manage and report on the risks associated with climate change, as well as provide more transparent information to investors and stakeholders regarding the impact of climate change on their financial statements.

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