Sustainable Development on Indonesian Environmental Risk Assessment

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Abstract. Environmental risks in Bank financing activities arguably draw considerable attention in current era, efforts to mitigate these risks are one way for the Bank to achieve sustainable development. Nevertheless, there are no universal consensus of what environmental risks. This paper will summarize and define environmental risk from several previous studies using literature reviews, in order to obtain a comprehensive summary of the definition of environmental risk for bank financing especially in Indonesia. Furthermore, this study will also describe the mitigation that has been carried out by Banks in Indonesia in dealing with these risks, as well as other efforts that can be taken to better mitigate these risks. The study results found that environmental risk consists of: Transition Risk, Physical Risk, Liability Risk, Legality Risk and Reputation Risk. This study also finds that banks in Indonesia still do not have adequate mitigation against these risks. Transition, legality, and reputation risks can be optimally mitigated by enhancing the Bank's management capabilities, especially in improving the company's human resources in environmental protection efforts. Physical and liability risks on the other hand can be further mitigated by increasing the minimum required insurance coverage for the Bank's debtors including environmental liability insurance and weather insurance.

1 Introduction

Environmental risk has developed into a trend that must be taken into account in today's Bank financing. It started with the implementation of Superfund regulated liability in the 1980s at the United States. The regulation requires lenders (generally banks) to contribute in the cost of cleaning up waste and / or repairing sites and surrounding locations if the Bank borrower contaminated the area [33]. This requires the Bank to take into account the environmental risks that arise in each of the Bank's customers' businesses to avoid additional fees and / or fines that could potentially harm the company [9]. The Government of Indonesia's plans in 2014 for their financial institutions to support sustainable development which reflected in the implementation of sustainable finance, combining economic growth with improved social and environmental quality [21]. This requires Banks as financial institutions to pay more attention to environmental risks that arise in their financing activities.

The World Economy Forum in collaboration with Marsh & McLennan and Zurich Insurance Group issued a report explaining that the five biggest risks that have the highest likelihood of occurring in the next ten years are environmental risks [34]. Meanwhile, economic, social and governance readiness to increase resilience to deal with this is still lacking [31]. The risk alarm requires investors...
and financial institutions to pay attention to environmental risks when investing or channeling financing [32]. There is no universal consensus regarding what environmental risks are referred to, and especially those that affect the financing activities of the Bank. Through this paper, the author will provide a brief description of what environmental risks can affect the Bank's financing activities and how these risks can be mitigated by the Bank, especially in Indonesia.

2 Method
This study uses a literature review method. Literature review can bring together some study results, perspectives, and empirical findings from previous studies. It can also serve as an overview provider in multidisciplinary and / or interdisciplinary studies [27]. Environmental risk is an area that is generally part of science studies, however in practice, Bank financing activities can also be affected by this. The author chose this methodology in order to provide an overview of environmental risks in bank financing in previous studies, as well as to add more information and / or perspectives in it. Environmental risks in bank financing have received minimal attention, at least in banking activities in Indonesia. Through this methodology the authors summarize the results of previous studies, which mostly came from developed countries and translate them into banking financing activities in Indonesia.

3 Result and Discussion

Through a series of literature studies, the author defines environmental risk to bank financing activities in general into five: Transition risk, physical risk, liability risk, legality risk, and reputation risk [7,8].

3.1 Transition Risk

Transition Risks result from a sudden and irregular transition to a low-carbon economy, stemming from changes in environmental policies. The mass production of technology required to relocate capital is likely to have a significant and comprehensive impact on financial stability, as well as on macroeconomics [12]. Transition risks could increase significantly by 2030. A transition to a lower carbon footprint could financially affect a wide variety of infrastructure assets [6].

The transition to a lower-carbon civilization can generally be categorized into two processes, namely: Gradual and Sudden. A gradual transition will take longer for technology to develop sufficiently to keep costs down to a level that is acceptable to the general population. A sudden transition on the other hand occurs in a shorter time, which can lead to a drastic increase in energy prices, declination of corporate value due to the high carbon emissions produced [19].

Indonesia has started the transition steps to a green economy by issuing laws and regulations on green bonds and sukuk in 2017 through the OJK (Financial Services Authority). The green bonds are used for sustainable development projects in accordance with the Green Bond Principles. The issuance of Indonesian green bonds up to April 2019 reached USD 2.7 billion, the largest in the Southeast Asia region. Purchases from the corporate sector for green bonds are also dominated by the financial and banking sectors, indicating positive feedback from the financing sector for the launch of these bonds [5]. However, until 2019, green bonds issued in Indonesia were still minimal and there was no sign that the banking sector in Indonesia would launch these bonds. Some of the factors that underlie this are a lack of human resources in the banking sector, lack of socialization, and a higher risk due to longer payment terms [15].
3.2 Physical Risk

Figure 1. Physical asset Loss due to Extreme Weather
Source: www.bankofengland.co.uk

Physical Risk is the risk arising from the impacts of climate (extreme weather) or geological events (earthquakes) or widespread changes in the equilibrium of an ecosystem, such as soil quality or marine ecology. This will pose a threat to the bank from the physical assets of the bank which become collateral for financing. The insurance industry in this regard has the best innovation experience in analysing the sources of physical risk, by developing coherent metrics, methodologies and models for managing the financial impact of natural disasters such as hurricanes and floods. Therefore, collaboration between the financing sector and the insurance industry can reduce this risk [28]. Collaboration between the insurance and banking industry in Indonesia is still minimal in mitigating risk, banks in Indonesia must take related information and knowledge from the insurance industry [11].

Banks in Indonesia as a finance company are obligated to transfer risks from financing activities in several ways, namely by credit insurance, collateral asset insurance, and fiduciary collateral [23]. Asset insurance on Bank in Indonesia at minimum including: fire insurance (building collateral), sea freight insurance (import / export goods guarantee), and motor vehicle insurance (vehicle collateral) [35]. The collateral asset insurance liability regulation in Indonesia does not specify the type of mandatory minimum policy to be applied, thus Bank borrowers can choose the policy with the lowest price with the minimum coverage usually in the form of a fire policy or FLEXAS (Fire, Lightning, Explosion, Aircraft, Smoke) [1]. Thus reduces the coverage of protection that will be provided to the Bank's collateral assets from the effects of climate change that rapidly occur, such as storms that can actually be mitigated by increasing the coverage of insurance.

3.3 Liability Risk

Liability risk occurs from the demands of parties who feel the loss and / or damage caused by climate change [7]. The Bank is now being encouraged to put pressure on companies with poor environmental performance to limit the development of companies that produce pollution [14]. Lender Environmental Liability (LEL) are thus seen as a key for promoting stronger compliance and enforcement of environmental regulations, LEL also depends on the local government regime and can generally be divided into three categories [30], namely:

1. Non-Existent LEL: the legal regime does not allow environmental liability to lenders and investors (Argentina, Colombia, Peru and Turkey).
2. Complete LEL: the legal regime allows the interpretation that financial institutions can be held responsible for environmental damage caused by borrowers, without limitation (Brazil).
3. Potential LEL: the legal regime allows limited environmental liability to lenders whenever there is a breach of the obligations of financial institutions (UK, United States, Portugal, Germany, Mexico, India, South Africa, Costa Rica and Paraguay).

Corporate responsibility for environmental crimes is regulated in Law number 32 of 2009, Article 97
and Article 115. Based on this law, corporations are considered as legal subjects. If found guilty of committing a crime stipulated in Law number 32 of 2009, the corporation can be held responsible [26]. The lender (Bank) can only be held responsible for environmental damage or remediation costs to the extent specified in the loan agreement [12]. Thus, based on this definition, Indonesia is included in the potential LEL category. Some author argue that Environmental insurance policies allow lenders to transfer potential pollution liabilities to third party insurance companies that have financial expertise in handling pollution claims [25]. In addition, insurance companies can also provide information and advice to both debtors and banks on matters that can endanger the environment. This feedback is particularly useful for banks in directing debtors to take more environmentally friendly business actions.

3.4 Legality Risk

Legality risk has two approaches in its definition, namely legal risk as a significant legal consequence arising from business-related actions and risk arising from legal work products or legal uncertainty (which in turn has significant business consequences) [18]. In September 2018, the Indonesia Ministry of Environment and Forestry found as many as 48 environmental violations caused by the mining of PT Freeport Indonesia (PTFI). This violation has been followed up with administrative sanctions imposed on PTFI through the Decree of the Minister of Environment and Forestry [24]. Most of these violations were related to PTFI mining waste or tailings. Based on Indonesian Law (UU) number 32 of 2009 regarding environmental protection, companies that are proven to have committed environmental damage can be subject to penalties up to freezing their business permits. These sanctions will result in the possibility of credit lost due to cessation of business activities.

Anticipating this can be done by entering a list of documents and / or mandatory requirements for bank customers before the loan disbursement. For example, the Piraeus Bank group in Greece has developed a database on Environmental Legislation and Case law. There are four main pillars in the database, namely: (1) General obligations and trends for environmental protection and sustainable development, (2) Requirements to prevent and reduce operational environmental impacts, (3) Provisions related to actions taken by the Bank to reduce the environmental impact of its business, and (4) detailed content list [29]. Banks in Indonesia do require a document in the form of an AMDAL (Environmental Impact Analysis) as a pre-condition for credit, however most Bank have no willingness to further scrutinize and supervise. AMDAL is unable to mitigate environmental damage [16]. In response to this, Banks can include environmental protection clauses in credit agreements with debtors as well as an annual environmental audit report that the debtor must provide [17].

3.5 Reputation Risk

Reputation risk can occur as a result of adverse actions by clients or unfavorable business activities, which can damage the financial institution's image with the media, the business and financial community, and its own staff. Such damage can result in a market boycott, low ratings, declining market share and lost business opportunities [20]. A study shows that the loss due to reputation damage can exceed the operational losses of the Bank [10]. Hussainey (2010) in his article explains how CER (Corporate environmental reputation) affects investors' considerations in choosing companies. This CER provides investors with relevant information that is very valuable to see the future earnings or estimated future profits of a company. In addition, the results of this study found that there is an important relationship between the high level of the company's environmental reputation / CER with high stock prices [13]. These studies highlighted several important factors that should be taken in managing reputational risk.

Bank Indonesia (BI) requires banks in Indonesia to have an internal reputation risk management system, mitigating these risks is identified as prevention (CSR and communication to stakeholders) and recovery. Nevertheless, BI also explained that reputation risk is still acceptable as long as it is in accordance with the level of risk taken [4]. This statement raises ambiguity in the reputation risk parameters which the Bank must mitigate. Some banks in Indonesia responded to this by setting up
reputation risk parameters based on complaints and negative news [3]. Meanwhile, OJK began to require banks to publish sustainability reports, as an effort to disclose information in their financing activities in 2017 [22]. Critics of the report indicate low quality both in reporting and in practice [2]. This input indicates that sustainable reporting is still relatively new for banks in Indonesia, as well as indicating Indonesian banks are currently in a right path.

4 Conclusion

Environmental risks can be categorised as: Transitional risk, physical risk, liability risk, legality risk and reputation risk. The mitigation of these risk in Indonesian Banks is still insufficient. Transition, legality, and reputation risks can be better mitigated by improving company management in the quality of the Bank's human resources for environmental protection, and including protection clauses and annual environmental audits for Bank debtors in the credit agreement. Physical risks and liabilities on the other hand can be better mitigated by increasing the minimum insurance coverage for bank debtors. The coverage referred to include climate change/weather protection for Bank collateral assets, and minimum liability insurance for Bank debtors. All of the risk mitigation above can be translated into more cost, time and energy. However, it is align with the goals of the Indonesian government in supporting sustainable development in their financial institutions.

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