

# Does Green Finance Matter in the COVID-19 Pandemic? Case Study of Coca-Cola FEMSA “Green Bond Framework”

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**Abstract.** This research focuses and aims to analyze the importance of green finance in helping to minimize the impact of the COVID-19 pandemic and its impact on the Coca-Cola FEMSA's (CCF's) “Green Bond Framework” (GBF) initial goals that could be hampered due to the phenomenon. This research uses the green theory perspective, measured CCF's GBF as a good green investment initiative, using green investment principles, and measured the success of Coca-Cola with the Environmental, Social, and Governance (ESG) concept. This study conducted qualitative research using case study methods and analyzed secondary data in the form of books, journals, articles, news, reports, and websites. The findings of this research are the COVID-19 phenomenon doesn't distract CCF's GBF initial goals and green finance is believed to minimize the impact and occurrence of pandemics in the future. This research also analyzes that CCF can fulfill the ESG criteria, but not all indicators have good results, as in the social field, where Coca-Cola has a bad impact on health. Likewise in the field of governance, where Coca-Cola employees are still dominated by men compared to women. The implications of this research are to contribute to a new understanding, motivate, and increase companies' awareness of the importance of CSR in the form of green finance during the COVID-19 pandemic in achieving sustainable finance and development.

## 1 Introduction

The COVID-19 pandemic is an unprecedented global phenomenon with far-reaching effects. This phenomenon has hampered the fulfillment of the United Nation Sustainable Development Goals (UN SDGs) because of the severe implications for social, national, and economic welfare and sustainability [1]. As of September 20, 2021, deaths from COVID-19 in the US surpassed the 1918 Spanish flu by a total of 675,446 [2, 3]. According to the World Economic Outlook in October 2021, global economic growth fell 3.2% in 2020. The world is affected by a \$90 trillion global economic recession that exceeded anything seen in nearly a century. By 2020, global trade is expected to have decreased by 5.3%, resulting in massive economic losses for developing countries [3]. This study is important because the pandemic phenomenon has caused changes to the environment, and green finance has become one of the most important factors to deal with environmental threats such as the COVID-19 pandemic because green finance can help increase the quality and longevity of mankind [4]. Therefore, Multinational Corporations (MNCs) as one of the important actors in world economy need to provide investment programs, promotions, and environmentally friendly industries around the world to face the environmental crisis [5], such as Coca-Cola Femsa's (CCF's) “Green Bond Framework” (GBF) as part of their Corporate Social Responsibility (CSR) programs.

The global crisis has made the world compete to achieve sustainable development, by making investments that are useful for the community. Green finance can be one of the most essential factors and the most effective strategy to contribute in achieving the Sustainable Development Goals (SDGs) (Sachs et al., 2019) [6], protect, and recover our society from the pandemic's crisis. Green bond initiatives are a part of green finance that can be classified as a method of allocating funds for initiative programs aimed at achieving sustainable finance and development, enhancing the quality of natural resources, the environment, and the health of living things by reducing the negative environmental effects of human activities [7]. CCF released a CSR program for green financial activities in 2020. Initially, “GBF” was developed to optimize CCF's positive impact by aligning its financial strategy with achieving environmental targets in three strategic areas, namely the circular economy, water stewardship, and climate action, while also contributing to the UN SDGs 2030. However, CCF's initial goals could be compromised due to market turmoil caused by the COVID-19. After conducting a literature study related to this topic, only a few studies were discovered. This indicates insufficient research in this area or a gap in the literature. Because previous studies have focused more on the importance of green finance in a pandemic in general, but none have discussed the adaptation and its importance in the case study of CCF's GBF in the COVID-19 pandemic [1, 4, 6, 8]. This research gap has raised questions about “Does green finance matter in the

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COVID-19 Pandemic and will the COVID-19 phenomenon hinder CCF's GBF initial goals?".

### 1.1 Objectives

The purposes of this research are to analyze the importance of green finance in the COVID-19 pandemic, as well as the impact of the pandemic on the GBF's initial goals. The benefits of this research are to contribute to the discussions about the importance of CSR in the form of green finance during the COVID-19 pandemic and its alignment with SDGs 2030, and provide an additional reference for further research. This research is expected to be taken into consideration by the government in policy-making, collaboration with MNCs, the United Nations, and International Organizations to achieve the SDGs, also motivate and increase companies' awareness of green finance and CSR projects to achieve social, economic, and environmental sustainability.

## 2 Literature Review

### Corporate Social Responsibility (CSR) and COVID-19 Pandemic

CSR is a business commitment to contribute to sustainable economic development that seeks to support and help improve sustainability in the Environmental, Social, and Governance (ESG) sector. Meanwhile, John Elkington argues that companies that show social responsibility will pay attention to the progress of society, the environment, and improve the quality of the company or profit [9]. Stephen Brammer and Andrew Millington also explain that CSR can help companies minimize the adverse effects caused by a crisis [10]. A company has a duty and social responsibility to help the community during difficult times or crises, such as the COVID-19 pandemic [11]. The number COVID-19 cases has risen dramatically, resulting in a global reduction in all sorts of economic activity [12, 13]. During the stock market crisis triggered by the pandemic, and according to a sample of companies from 73 countries from January to December 2020, MNCs experienced a substantially bigger loss in company value than Domestic Companies (DCs) [14]. The COVID-19 pandemic has a negative impact on human life and there are a lot of companies that contribute efforts, funding, and resources to overcome the consequences of the pandemic, as a form of CSR towards society and the environment. This leads to a better understanding of which CSR practices are most successful in helping to tackle the COVID-19 pandemic [15].

### Green Finance and Green Bond

Green finance can be regarded as a form of financial investment used to create sustainable development projects and initiatives. Climate finance, industrial pollution control, water sanitation, renewable energy, sustainable infrastructure, and biodiversity protection are all examples of green finance. Including, investing

in initiatives that aim to reduce or eliminate Greenhouse Gas (GHG) emissions, give access to clean water, minimize air pollution, and avoid global warming. Green finance not only improves environmental quality and stimulates social activities, but it also ensures natural resource availability, promotes sustainable financing, and supports economic growth [16-18]. Thus, banks and other financial institutions may help the social and business sectors achieve long-term economic growth by providing green finance (Dalia and Vitality, 2021) [19]. During the COVID-19 pandemic, green finance includes a variety of financial instruments such as green bonds, green securities, green loans, and green project financing that can assist affected countries in improving their environmental quality and economic development [16, 18].

Since the introduction of green bonds, growth in the green financial market for issuers has been particularly substantial. Green bonds are debt securities that are used to fund projects that help the environment [20]. The worldwide green bond market has grown dramatically in recent years and is now regarded as a long-term investment strategy [8]. As a result, green finance, green bonds, and COVID-19 transition bonds can be regarded novel options and approaches for obtaining emergency funding for economic recovery due to this pandemic crisis [18]. However, companies must take responsibility and effectively implement their programs or initiatives in order for green recovery solutions to be effective.

### Theoretical Perspective

Literature study method has been carried out to analyze and further understand the theories used in related topics and found that [21] analyzed their research using the ESG concept. In contrast to [12] who uses Strength, Weakness, Opportunity, and Threat (SWOT) Analysis, while [22] uses Green Theory. This research will use the green theory. The green theory is a theory in IR that discusses environmental problems that occur in global politics [22]. In the International Relations (IR) perspective, the Green Theory exists as a result of human knowledge and awareness of the importance of the environment, as well as the human-nature relationship. The purpose of this perspective is to provide an explanation of the ecological crisis that humans are facing, as well as provide solutions to dealing with this crisis [23, 24]. Green theory's contribution to IR can help us re-examining the relation between the state, the economy, and the environment [25].

The main actors of change in this view are non-state actors who use the Green Politics view to deal with the environmental crisis that occurs. The green theory perspective understands that climate change is a direct consequence of human collective choices [25]. Humans not only cause environmental damage but, humans are also capable of developing and implementing solutions for the damage. According to an ecocentric perspective, the health and well-being of living things, populations, species, and ecosystems must be protected [26]. So, it can be seen from Figure 1, that green theory has three elements, the main actors of change, namely

MNCs, ecocentric perspectives which argue that protecting the health and welfare of living things are important and environmental crisis such as COVID-19 caused by humans. Even so, humans and MNCs can also be actors in protecting nature, by carrying out CSR projects in the form of green finance or investment, and one of them is the “Green Bond Framework” by Coca-Cola FEMSA.

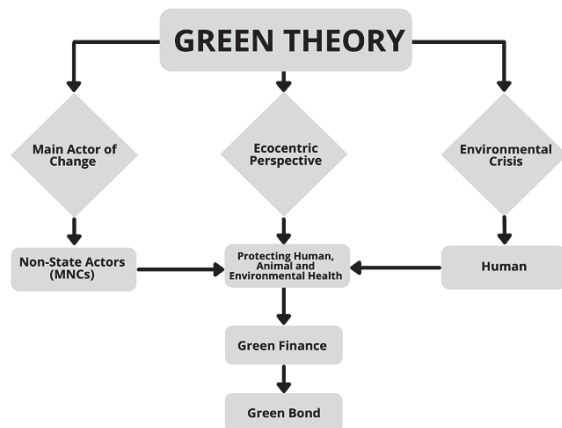


Fig. 1. Green Theory Framework

### 3 Methods

This research was conducted using a qualitative data analysis method, which means that this research does not perform statistical procedures, analyze non-numeric data, or other forms of quantification [27]. The procedure for analyzing the data in this research is by collecting the data, reading it, then organizing and categorizing the data, determining the theme and a relevant theory that will be used to analyze this research, and finally, interpreting the findings or the results [28]. As an approach to exploring qualitative data, this research uses a case study method on the CCF’s “GBF”. A case study is a research strategy to investigate a matter carefully by collecting complete information using various data collection procedures, such as going through documents and analyzing them. For the data analysis process, data is needed in the form of text or images. In this study, different data has been analyzed, to be able to have a deeper understanding of the analyzed data, be able to present the data, and make a broader interpretation of the data [28]. This study was carried out because sustainability, particularly in finance and development, is one of the most important topics. Green finance also has an important role in a pandemic's recovery and CCF is one of the MNCs that was issuing a GBF, which is still rarely researched.

### 4 Data Collection

This research was conducted by collecting secondary data from books, articles, journals, documents, and reports from official websites, as well as a comprehensive literature study by reviewing, and

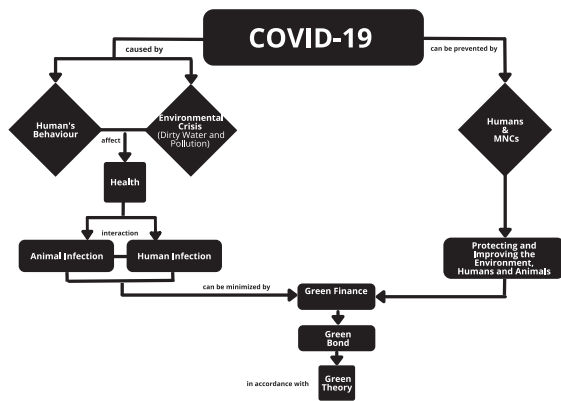
identification of subjects that can bolster a better understanding of sustainable finance and development, CSR, green finance, green bonds, and the COVID-19 pandemic. This data was collected to find out the importance of green finance and case studies on CCF's CSR program, “GBF” and the impact of COVID-19 on the initial goals of GBF.

## 5 Results and Discussion

### Green Theory Analysis and the Importance of Green Finance

The human body can be a reservoir for viruses, such as viruses found in animals. The virus can enter the human body when humans increase their interactions with animals through activities such as raising, slaughtering, trading, and the domestication of exotic animals as pets [29]. Inhumane behavior toward animals can be considered as a major cause of pandemics, as happened at the Exotic Animals' Market in Wuhan, China, where the COVID-19 virus, infected humans for the first time. Environmental expert Jane Goodall said that another pandemic could reoccur in the future if humans do not improve their relationship with the environment [30-32]. As the pandemic continues to spread globally, scientists conclude that environmental damage has become the dominant contributor to the pandemic [32]. There are more than 350 global health organizations that have signed a "healthy recovery" petition addressed to the leaders of the G20, stating that environmental concerns had a devastating effect on humans, such as polluted air and dirty water that can lead to the emergence of viruses. WHO has also stated that improving the environment can increase the likelihood of preventing disease outbreaks. Jane Goodall also reckons that the environmental catastrophe has triggered a pandemic since the environment and human health are inextricably linked, and the only solution to avoid future global outbreaks is to save the planet and focus on sustainability [32].

Figure 2 shows that the COVID-19 pandemic phenomenon has caused environmental changes. This virus is caused by an environmental crisis as a consequence of human behavior. Environmental crises such as air and dirty water pollution, as well as human behavior, can affect the health of living things, such as the infection of animals because many animals are held together in small cages at the Market in Wuhan. The animals' placement can stress the animals and allow the exchange and mixing of several different body fluids. Because of the interaction between people and these animals, the virus housed in these reservoirs can spread to humans. The transmissions are reinforced even more by the handlers' long and stressful work hours, as well as scratches, scrapes, bites, and other injuries inflicted by animals on their handlers [33]. The COVID-19 virus can be avoided by taking actions or initiatives carried out by humans and MNCs in improving the environment and maintaining the health of living things.



**Fig.2.** Green Theory Analysis on Green Finance and COVID-19

All of these things are related and in line with the perspective of green theory where, crises or environmental changes that occur in the world, are a consequence of human behavior. According to an ecocentric perspective, protecting the health and well-being of living things are important. So, actions or initiatives by humans and non-state actors, such as MNCs are needed to be able to maintain the health of living things, prevent and minimize impacts, and provide solutions to environmental crises that occur. Like CCF's "GBF" initiative, with the aim of achieving sustainable finance and development, it can also help prevent environmental crises that could cause a pandemic phenomenon in the future.

**Green Investment**

Green investment or finance, known as environmentally friendly investment centered on ESG, that aims to support corporate practices that will have a positive influence on the environment [34]. The notion defines the company's investment operations focused at environmental protection, pollution reduction, carbon emissions reduction, increase the usage of alternative energy, and natural resource conservation [35]. The development of green and sustainable project innovations is very important to create wider opportunities [36]. The World Bank has succeeded in issuing green bonds using blockchain technology with a potential savings of 10 times the cost of issuing bonds, so that various projects and companies can issue these securities. As of August 2020, 12 of North America Coca-Cola's bottling companies have implemented the blockchain platform for internal supply chain management [37]. CCF is also working on changing its master database and payroll system to cloud-based, to comply with market trends and the digital world [38]. Coca-Cola FEMSA, S.A.B. de C.V. (CCF) or KOF is the largest Coca-Cola's franchised bottling company, headquartered in Mexico City. Sustainability is the main foundation of CCF, and to support that, they issued the "GBF" initiative [39]. Green bonds can be issued by companies, banks, or governments in order to raise funds for climate change solutions and finance environmentally friendly projects. [40] has established

the "Green Investment Principles" as a benchmark in determining and assessing the returns of CCF green investments in "GBF":

**Table 1.** CCF's GBF Implementation on Green Investment Principles

NO	PRINCIPLES	COCA-COLA FEMSA (CCF)
1.	Positive contribution to a green cause	"GBF" was issued by CCF with the aim of achieving sustainable finance and development, particularly in climate action, water stewardship, and circular economy areas [41].
2.	Global GHG emissions' reduction	By 2021, CCF operations could reduce 28% absolute GHG emissions in 2030 compared to 2015 [38].
3.	Sustainable green impact	CCF aims to achieve its sustainability mission and SDGs 2030 with three main focuses and contribute positively to CCF's operation [41].
4.	Definite investment criteria	CCF's "GBF" is considered viable and adheres to the four fundamental principles of the 2018 Green Bond Principles [42].
5.	Strong green impact	CCF has allocated net green bond proceeds of US\$350.12 million to projects that support climate action, water management, and the circular economy [41].
6.	Effective monitoring and engagement	CCF's sustainability and finance team will track and report the distribution of net proceeds from the issuance of green bonds transparently [41].
7.	Report transparency	CCF has released a publicly accessible Green Bond Report.

Table 1 shows that CCF's GBF has met the green investment's principle. With the success of this green investment, it is hoped that CCF can achieve sustainable finance and development, as well as help prevent and minimize the impact of the COVID-19 phenomenon.

**Environmental, Social, and Governance (ESG) Concept**

ESG theorists aim to make companies more ethical and responsible. Many investors also realize that the ESG factor is important to understand the company's goals, strategies, and quality of company management [43]. ESG elements can also be linked to green theory, such as the Environmental (E) side where companies are prohibited from taking actions that will have a damaging effect, such as polluting air and groundwater, which is related to green theory because the environment is the most important thing that must be taken care of. The Social (S) side discusses gender discrimination and relations with the community related to green theory because the environment can be damaged and repaired by humans. Meanwhile, the Governance (G) side

discusses how to manage a company better which is related to green theory because of the importance of governance of an MNC as the main actor of change in improving the environment. The criteria and implementation of the ESG concept in the “GBF” CSR project has various benefits, by being able to measure the CCF's ESG impacts on society, employees, and the planet. There are some criteria that can be considered for each of the three elements of an ESG investment [44-48].

**Table 2.** CCF’s GBF Implementation on ESG Criteria

ESG	CRITERIA	COCA-COLA FEMSA (CCF)
Environment	Reduce water consumption	1.47 liters of water per liter of beverage were generated at the end of 2021 and has decreased by 15% since 2010 [49].
	Reduce energy consumption	CCF's bottling operations used 85% of renewable energy. Between 2018 and 2020, CCF's energy efficiency increased by 9.8%. This increase reflects the benefits of allocating US\$0.95 million from green bond proceeds to energy saving programs [41].
	Increase product recycling and reduce packaging	22 Coca-Cola's bottling factories achieved Zero Waste to Landfill certification in 2020, recycling 116.8 thousand tonnes of manufacturing waste [41]. By 2021, the use of rPET in plastic bottles has reached 31% [41].
Social	Employees' safety	2021 Coca-Cola's total incident rate has decreased by 2.02 over the last 5 years [38].
	Relationship with community	In 2021, 93,012 people, including CCF employees and their families, contributed 254,873 hours to 2,432 volunteer projects [38].
	Public's health and safety	Coke has an adverse effect on the human body [50]. One serving of Coke contains 10tsp of added sugar, while [51] recommends consuming no more than 6tsp of added sugar per day.
Governance	Gender equality	The number of female employees is only 14% and still significantly low compared to the 86% male employees of the 84,568 employees [38].
	Financial transparency	CCF's Fourth Quarter and Full Year 2021 Results

		contain a financial summary that is accessible to anyone [52].
	Inclusivity and diversity	The Human Rights Campaign Foundation and HRC Equidad MX: Global Program for Labor Equality have named CCF as one of the greatest LGBTQ+ workplaces for three years in a row [53].

After being analyzed based on a set of ESG criteria from each of the three elements, it can be said that CCF has had an impact and contributed positively to the environment, social and corporate governance. However, there are still some indicators that haven't had a good or significant impact, especially in the social and governance fields. Because Coca-Cola is still unable to contribute positively to public health and safety because the level of sugar contained in Coca-Cola drinks can harm humans' health. The same applies to gender equality, as there are far fewer female employees than men. With this analysis, it is hoped that Coca-Cola can correct deficiencies and increase its positive contribution so that Coca-Cola can become a company that has good CSR and achieve ESG sustainability.

**Sustainable Development Goals (SDGs)**

CCF has a goal in achieving sustainability, in September 2020, CCF successfully issued green bonds implemented to finance CCF's transition to low-carbon operations, minimize the company's exposure to environmental risks, and strive to achieve sustainability goals and contribute to the achievement of the UN SDGs, especially in the 12th pillar "Responsible Consumption and Production" (Coca-Cola FEMSA, 2020) [39]. The SDGs targets according to (United Nations Global Compact, 2015) [54] have become a reference for CCF in making initiatives or innovations that are in line with the SDG's points. Especially on the 12th pillar, there are several possible targets that hopefully can be achieved by the CCF which also align with the three main objectives of the GBF. CCF undertook initiatives to improve energy efficiency in manufacturing, packaging and logistics with a 9.8% increase in energy efficiency from 2018 to 2020, while CCF's bottling operation electricity use 85% of clean energy [41], this initiative is in line with GBF's climate action objectives. In 2021, CCF already reduced 31% of its packaging and increased product recycling by using rPET in plastic bottles, and recycling 98% of manufacturing waste [38], this initiative is in line with GBF's circular economy goals. Then, CCF reduced its water consumption to 1.47 liters by 2021 [38], and this initiative is in line with GBF's water stewardship objectives.

**Coca-Cola FEMSA’s “Green Bond Framework” Adaptation on COVID-19**

Based on the CCF's Integrated Report 2021 and Green Bond Report 2020, it can be concluded that the COVID-19 phenomenon did not hinder the initial goals of GBF because the results showed that CCF was still

able to carry out and strive to achieve the initial goals of GBF, as well as trying to help and reduce the impact of COVID-19. From 2018 to 2021, CCF has made progress in increasing Coca-Cola's rPET packaging, increasing water efficiency, and reducing CO2 emissions [38], as noted in previous implementations of ESG and SDGs.

This research sees CCF's GBF as one of the breakthroughs in implementing greener CSR and has a good impact on the recovery from the pandemic. CCF has tried to adapt to environmental changes due to the COVID-19 phenomenon as a strategy in overcoming the current implementation of CSR in CCF so that GBF becomes more relevant, by improving performance on three of CCF's GBF main strategies, namely circular economy, water stewardship, and climate action. The COVID-19 pandemic has had an impact on recycling rates, and low oil prices have made pure plastics less expensive than recycled plastics. As a result, Coca-Cola has been working with suppliers and partners to promote the availability of recycled plastic by collecting a bottle or can for every bottle sold around the world [55]. The University of Warwick's researchers determined that a circular economy can aid the pandemic's recovery and the achievement of net-zero carbon emission targets. A circular economy can help the economy adjust to crises such as the COVID-19 epidemic while also making it more sustainable and competitive [56].

During the pandemic, one of the most significant factors in preventing the coronavirus is clean water, sanitation, and hygiene (WASH), but there are still some places that lack of clean water. Since 2010, Coca-Cola has aided with the provision of safe drinking water to more than 10.6 million people. Coca-Cola continued its WASH initiative during the pandemic, providing personal protective equipment and hygiene access [57].

Climate actions are crucial to avoid the occurrence of another pandemic in the future. To combat climate change, GHG emissions must be reduced, which can prevent deforestation and animal migration that can increase the risk of infectious disease spread, also harmful air pollutants that can weaken the immune systems and cause respiratory infections (Harvard T.H. Chan, 2020). As a result, the COVID-19 pandemic can be reminder of the link between health and the environment, as well as the fact that environmental protection may be the only way to avoid another pandemic in the future [56].

During the COVID-19 pandemic, CCF continues to prioritize the safety and well-being of its employees and society by prioritizing health and safety, and also aims to increase the company's commitment in creating economic value [38]. Despite the changing environment due to the COVID-19 phenomenon, Coca-Cola continues to focus on its sustainability strategy, COVID-19 precautions and recovery plans to protect short-term results while advancing the company's long-term goals. Coca-Cola has been trying to contribute, handle and prevent the COVID-19 pandemic by focusing on CSR programs such as, donating drinks to medical centers and vulnerable communities of more than 3.8 million liters, expanding hospital capacity, distributing 1, 9 million medical devices, climate action, water

management, and a circular economy that have become the most important focus of CCF's GBF.

## 6 Conclusion

Emissionsr has demonstrated that CCF can still adapt, run and strive to achieve the initial goals of GBF by reducing water consumption, reducing GHG emissions, increasing the use of rPET bottles, as well as trying to help and reduce the impact of COVID-19 by assisting medical personnel, hospitals, and vulnerable communities. Then, the GBF initiatives and the importance of green finance in the COVID-19 are analyzed using a green theory perspective that, green finance or investment can minimize the impact and occurrence of pandemics in the future. COVID-19 is caused by environmental crisis, so the environment must continue to be taken care of by humans and MNCs as the main actors of change in this perspective, by carrying out CSR projects in the form of green finance or investment, such as CCF's GBF. CCF's green finance initiative has also been measured using the Green Investment Principles which shows that this green finance initiative can be considered a good green finance. GBF's achievement was also analyzed using the ESG concept, where not all of these ESG criteria were fulfilled, such as in the health sector where Coke has a bad impact on humans' health and the lack of gender equality among female employees which affects corporate governance. The achievement of SDGs 2030 were also analyzed, where CCF's GBF may be able to achieve some of the targets of the 12th pillar. With the programs issued by CCF in the GBF initiative, CCF can be said as relevant and has tried to adapt to changes in the global environment due to the COVID-19 pandemic. Because the CSR programs contained in the GBF are expected to help and prevent the consequences of the COVID-19 phenomenon and the upcoming pandemic. For future research, it's recommended to examine further about the role of technology and blockchain in green investment.

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