

## Diversifier or More? Hedge and Safe Haven Properties of Green Bonds During COVID-19

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**The COVID-19 pandemic represents a global case of the fragility of the financial markets and vulnerability of natural disasters and exceptional risks. Against the backdrop of the COVID-19 pandemic, this study explores the ‘hedging’ and ‘safe-haven’ potential of green bonds for conventional equity, fixed income, commodity, and forex investments. Our results show that the green bond index could serve as a diversifier asset for medium- and long-term equity investors. It can also serve as a hedging and safe haven instrument for currency and commodity investments. This study is the first to provide evidence on the hedging and safe-haven potential of green bonds during the COVID-19 pandemic. Our findings imply that green bonds could play a constructive role in global financial recovery efforts without compromising the low-carbon transition targets as they can also be a source of finance for green energy.**

During the COVID-19 pandemic equity markets in the US hit the circuit breaker four times in two weeks and the markets in Europe and Asia touched the rock bottom. These events exemplarily represent a global case of the fragility of the financial markets and their vulnerability to natural disasters and exceptional risks. Even though the financial crisis following the COVID-19 pandemic might be deeper, it will most likely be short-lived compared to the 2008 global financial crisis. However, the driving factors behind the financial slowdown are more convoluted than during the global financial crisis.

Considering the significant losses in financial markets in the aftermath of the COVID-19 pandemic, the interactions between different financial assets become vital to safeguard against exceptional risk. It also becomes important to acknowledge the need for safe haven assets (Table 1) as well as the benefit of diversification across asset classes.

Green bonds are increasingly considered as potential assets for portfolio diversification and additionally, have been viewed as hedge, and safe-haven asset for conventional assets, e.g. stocks, bonds, commodities. Hence, the possible diversification and hedging potential of green financial assets is of particular interest for investors of conventional assets and economic decision-makers. Better insights in their potential could help the design of climate-friendly economic policies and portfolio investments.

In our analysis, **we use representative equity, bond, commodity and currency indices and investments to explore the diversification and hedging properties of green bond investments.**

Our full sample results reveal that:

- The green bond index could serve as a diversifier asset for medium and long-term equity investors.
- It can also be a hedging and safe-haven instrument for currency and commodity investments.

The sub-sample analysis of the pandemic crisis period finds:

- A heightened short and medium-term lead-lag association between the green bond index and conventional investment returns.
- That however, the green bond index emerges as a significant diversifier for long-term investors.
- A lead-lag association in quantile returns that decreases over time for the parallel lower return quantiles of the green bond index and equity investment.
- An increasing trend in the divergent return quantiles indicates the decoupling of the green bond index returns from the convention asset returns.

The findings offer several implications for investors and decision-makers to minimize investment risk and enhance the investment in low-carbon assets.

- Equity investors with medium and long-term horizons can use green bond investments to diversify their portfolios.
- Commodity and currency investors may hedge downside risk by including green bonds in their portfolios.
- Green bond issuers and holders can not only achieve low-carbon investment objectives, but also avoid extreme turbulence in financial markets.
- The resilience of green bonds during the pandemic suggest they could serve as an instrument of recovery and rebooting the global economy.

Thus, governments can allocate resources from their financial stimulus packages to this alternative investment to help them reboot their economies without sacrificing the low-carbon transition targets set in different initiatives such as the Paris agreement and sustainable development goals.

The implications are not only important from the perspective of portfolio and risk management, but they also provide a chance to evaluate the long-term contribution of green bonds to sustainable financial markets and climate-friendly goals, particularly during the turbulent times of the pandemic. Also, the predictive nature of the results assists investors to better understand the dynamic relationship between green bonds and other financial markets under different market conditions.

<p><b>Green bonds</b></p>	<p>Green bonds hold similar characteristics as conventional fixed-income corporate instruments; however, their proceeds are only utilized for environment-friendly projects. Stock markets worldwide have introduced specific green bond segments.</p> <p>Also, in view of the environmental concerns, governments around the globe aim to move from fossil fuels to renewable energy sources. This transition to a low-carbon economy requires large amounts of financial resources and investments in climate-friendly, low-carbon, and energy-efficient projects. Moreover, catching up with the transition to a low carbon economy entails disinvestment in conventional energy and mobilizing financial sources for green projects.</p>
<p><b>Safe haven assets</b></p>	<p>The idea of the safe-haven asset is rooted in the notion of investor loss aversion, which expresses that investors are more concerned about minimizing losses than realizing associated gains in periods of the economic downturn. Thus, investors look for safe-haven assets that are negatively correlated or uncorrelated with traditional assets during financial turmoil periods.</p> <p>Commonly, studies show various assets, including gold, long term treasury bonds, currencies, and cryptocurrencies, have been used as effective hedgers and safe-haven assets.</p>

**Table 1: Assets classes and characteristics**

**References:**

Arif, M., Naeem, M., Farid, S., Nepal, R., Jamasb, T. (2021). Diversifier or More? Hedge and Safe Haven Properties of Green Bonds During COVID-19. Link: [green\\_bonds-arif-wp01-final-v001-al-2020\\_12\\_10\\_1.pdf \(cbs.dk\)](https://www.cbs.dk/files/2021/12/green_bonds-arif-wp01-final-v001-al-2020_12_10_1.pdf)

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