



The Spillover and Leverage Effects of ESG and Non-ESG Equity Exchange-Traded Funds (ETFs)

Fu-Ying Chen^{1,*}, Jo-Hui Chen^{2,†}

1. *Ph.D. Program in Business, Chung Yuan Christian University, Taiwan*

2. *Department of Finance Chung Yuan Christian University, Chung-li, Taiwan*

Accepted September 2023

ABSTRACT

The sustainable finance market is experiencing rapid growth as investors increasingly focus on environmental, social, and governance (ESG) factors in portfolio selection and management. This research utilizes the General Autoregressive Conditional Heteroskedasticity -in Mean-Autoregressive Moving Average (GARCH-M-ARMA) and Exponential GARCH-in Mean-ARMA (EGARCH-M-ARMA) in studying the spillover and leverage effects of returns and returns volatilities of ESG and non-ESG equity exchange-traded Funds (ETFs) and their tracing stock indices. The study finds that there is positive volatility in returns between the two investment vehicles. We have unilateral influence and bilateral relations as well. These results have proven that ESG and non-ESG ETFs positively impact the volatility of their stock index returns. The significant positive findings in this study examined the relationship between risks and returns in daily ETFs and stock prices. The findings evidenced that their positive relationship has a bilateral and unilateral impact. ESG information linked to the Global Reporting Initiative (GRI) standards is provided to the market. The results showed that ESG criteria could be used as a guideline for the management and investment of corporations. Both the GRI standards and the Topic-Specific Standards Report have positively impacted the volatility of ETF and stock index returns.

Keywords: Spillover Effects, Leverage Effect, ESG ETFs, GARCH Models

* Corresponding Author, College of Business, Chung Yuan Christian University, Chung-Li, Taiwan, R.O.C.

E-mail: ares.fy.chen@gmail.com

† Dept. of Finance, Chung Yuan Christian University, Chung-Li, Taiwan, R.O.C. E-mail: johui@cycu.edu.tw