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ECO-FUNDS BASED ON A PORTFOLIO CONSIDERING CORPORATE CARBON PRODUCTIVITY

Abstract:

Socially responsible investment (SRI) involves investors selecting companies based on their level of social responsibility. An eco-fund is an SRI-type investment trust that invests in environment-friendly companies, also known as “eco-excellent” companies. In many cases, the process of choosing the companies to be included in the trust is not transparent and, due to subjective decisions by fund managers, it is not clear how the investment rate is determined.

In this study, we propose four eco-funds and evaluate their performance. Since the risk of the eco-fund should be distributed, the investment rate will be determined so that the percentage of the top brands is low. The portfolio should consist of brands with high efficiency in environmental investment.

First, we evaluate a company’s environmental management capability and profitability using quantitative data such as the amount of sales, greenhouse gas emissions, and ROE (return on equity). We then determine a set of brands for the eco-funds to invest in. To determine the investment rate for each stock or portfolio, an environmental minimum variance frontier is calculated.

The proposed eco-funds are (1) EEC fund, (2) Beta fund, (3) Expanded beta fund, and (4) Environmental index fund. (1) The EEC fund invests in brands that perform well both in terms of environmental management based on carbon productivity and profitability based on ROE. (2) The Beta fund invests in brands that perform well both in environmental management based on carbon productivity beta values and earnings efficiency based on ROE. (3) The Expanded beta fund invests in brands that perform well only in environmental management based on carbon productivity beta values; it includes more brands than the Beta fund. (4) The Environmental index fund invests in all the brands considered and is a benchmark to measure the performance of the other eco-funds.

Keywords:

Eco-funds, Carbon Productivity, Environmental Investment, Portfolio

JEL Classification: Q59, Q56, M00