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Session: S15 - Financial innovation in real estate

Title: Exploring the nexus between real estate tokens and green real estate equities: new evidence from a time - frequency connectedness approach

Abstract:

The growing awareness regarding climate change has contributed to the rise of sustainable and green investments across various sectors and markets, including energy, housing, industry, and transportation. In this context, and especially with the advent of the Fourth Industrial Revolution, the real estate sector has increasingly incorporated green and innovative solutions to address environmental concerns, such as greenhouse gas emissions.

Considered one of the cornerstone technologies of the Fourth Industrial Revolution, blockchain presents opportunities for alternative investments in the real estate market through financial technology (FinTech) and decentralized finance (DeFi). While the relationship between traditional markets, like real estate, and green investments has been widely studied, specific aspects, like real estate tokens and sustainable and green real estate equities, have not yet been thoroughly explored. This study aims to fill that gap.

To achieve this objective, the current study investigates the connectedness between real estate tokens and the sustainable and green real estate equities for the period from August 4, 2021, to September 30, 2024. By employing the frequency time-varying parameter vector autoregressive (FTVP-VAR) method introduced by Chatziantoniou et al. (2023), our findings may prove useful for crypto managers and investors seeking to adjust their portfolio diversification and hedging strategies involving real estate tokens and their sustainable equity counterparts.

The findings highlight a weak to moderate degree of return and volatility spillovers between the two asset classes, particularly over long investment horizons. Specifically, real estate tokens act as net receivers of return spillovers and net transmitters of volatility spillovers, with some switching behaviours depending on high- or low- frequency conditions, thereby offering some diversification benefits. Conversely, real estate equities tend to be net transmitters of return spillovers and net receivers of volatility spillovers. Furthermore, the portfolio analysis indicates that

real estate tokens provide limited hedging opportunities against their green counterparts.

Keywords: Real estate tokens, Time-frequency connectedness, Green real estate markets, Diversification opportunities.