

## Cryptocurrency as a Payment Method in the Tourism Industry: A Comparison of Volatility, Correlation and Portfolio Performance

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**Abstract :** With the rapidly growing of blockchain technology and cryptocurrency, various industries which include tourism has added in cryptocurrency as the payment method of their transaction. More and more tourism companies accept payments in digital currency for flights, hotel reservations, transportation, and more. For travellers and tourists, using cryptocurrency as a payment method has become a way to circumvent costs and prevent risks. Understanding volatility dynamics and interdependencies between standard currency and cryptocurrency is important for appropriate financial risk management to assist policy-makers and investors in making more informed decisions. The purpose of this paper has been to understand and explain the risk spillover effects between six major cryptocurrencies and the top ten most traded standard currencies. Using data for the daily closing price of cryptocurrencies and currency exchange rates from 7 August 2015 to 10 December 2019, with 1,133 observations. The diagonal BEKK model was used to analyze the co-volatility spillover effects between cryptocurrency returns and exchange rate returns, which are measures of how the shocks to returns in different assets affect each other's subsequent volatility. The empirical results show there are co-volatility spillover effects between the cryptocurrency returns and GBP/USD, CNY/USD and MXN/USD exchange rate returns. Therefore, currencies (British Pound, Chinese Yuan and Mexican Peso) and cryptocurrencies (Bitcoin, Ethereum, Ripple, Tether, Litecoin and Stellar) are suitable for constructing a financial portfolio from an optimal risk management perspective and also for dynamic hedging purposes.

**Keywords :** blockchain, co-volatility effects, cryptocurrencies, diagonal BEKK model, exchange rates, risk spillovers

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