A COMPREHENSIVE ANALYSIS OF CRYPTO CURRENCIES AS AN ASSET – THE KEY DRIVERS AND THEIR INFLUENCE ON THE WORTH OF CRYPTO CURRENCIES

Kanishka Kashyap

Vandana International Sr. Sec. School, New Delhi

ABSTRACT

Nowadays, Cryptocurrencies are very famous and are considered digital assets stored in a public ledger format on a computerized database with strong cryptography techniques or blockchains to protect the transaction record. It has recently attracted a significant number of holders. Because cryptocurrencies are based on brand-new technology with an unknown future, numerous academic studies have been conducted to develop theoretical models of cryptocurrencies and their potential future. Because they account for a significant portion of the cryptocurrency market capitalization—roughly 83.4% of the total market—we have considered the most prominent cryptocurrencies in this investigation—namely Bitcoin, Ethereum, Ripple, and Litecoin. The study aims to determine whether there is a significant correlation between the prices of Bitcoin, Ethereum, Litecoin, and Ripple cryptocurrencies, as well as whether there is a significant correlation between the Bitcoin cryptocurrency pricing and the prices of Ethereum, Litecoin, and Ripple cryptocurrencies.

The study used both secondary and primary data from various websites and questionnaires. The study has shown that the prices of these cryptocurrencies are highly correlated. Additionally, it has been discovered that when Ethereum and Litecoin prices rise, so do Bitcoin prices. Ripple prices will only rise if Bitcoin prices fall.

INTRODUCTION

Cryptocurrencies are recently developed digital forms of currency that can easily transfer through a cryptography system between buyers and sellers [1]. It was created in 2008 by Satoshi Nakamoto, and it uses the blockchain to protect all transmission records and store all transactions in a computerized database [2]. The crypto market has grown in a way that has been hard to predict and at a rate that has never been seen before in its brief history [3]. It has backed a brand-new applied science with untapped potential. However, it performs the same functions as other traditional assets, at least in its current form [4].

The cryptocurrency's Blockchain method is an explorer service that stores all transaction records to guarantee transaction transparency and security.

Because any fixed authority does not authorize these networks, the user is not cheated [5]. These networks could be described as a self-administration system [1]. A blockchain is a list of records,

146

or blocks, that keep growing indefinitely and secure the misuse of cryptography [6]. The role of blockchain, a system that was a very important part of the ongoing global revolution, has led to a significant rise in the quality and prevalence of cryptocurrencies in economic environments in recent years. After the creation of Bitcoin in 2008 by Satoshi Nakamoto, the rapid expansion of blockchain technology sparked several shifts and enhancements in the financial sector.

As a means of transaction mediation, bitcoins are clever. Bitcoins are regarded as the first cryptocurrency to be redistributed [7]. It was authorized by the cryptography developer and was registered on August 13, 2008, under the domain name "Bitcoin.org." an electronic peer-to-peer cash system. After that, several cryptocurrencies, including Ethereum, Ripple, Litecoin, and others, were registered. However, Bitcoin stands out among all available cryptocurrencies with 1.7 trillion, or 86% of the cryptocurrency's total market capitalization [8]; 3].

Analysts identify Bitcoin, Ethereum, Ripple, and Litecoin as standard cryptocurrencies. As a single independent investment, Ripple earns the most, followed by Litecoin and Bitcoin. However, Ripple has the highest volatility, followed by Bitcoin and Litecoin. The coefficient of variations, which combines risk and return, reveals that Ripple is the best cryptocurrency, followed by Bitcoin and Litecoin [9].

OBJECTIVE OF THE STUDY

The study's objective is as follows:

• To determine whether there is a significant correlation between the prices of Bitcoin, Ethereum, Litecoin, and Ripple cryptocurrencies.

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III. The study used secondary and primary data from various websites and questionnaires. West Bengal was selected as a primary data point. From 2015–16 to 2020–21, gathered daily prices of the cryptocurrencies under consideration for the secondary data. To improve the standard and quality of the research, the data are outlined and encapsulated. Can find these documents in libraries, online, and in other places.

CONSTANTS AND ANALYSIS

A. OBJECTIVE 1 The fitness level of the correlation coefficient between the variables is evaluated in table 2 of the correlation table. The preceding demonstrates a strong correlation between bitcoin, Ethereum, Litecoin, and Ripple prices. When the p-value is less than 0.05, a high correlation indicates that all four coins have significant relationships with one another.

BITCOIN_PRICE	8139.702	7725.3300	1650
ETHEREUM_PRICE	290.2125	310.39667	1856
LITECOIN_PRICE	68.46311	55.784473	1650
RIPPLE_PRICE	.3278049	.30608040	1650

TABLE II. CORRELATION

		BITCOIN_PRICE	ETHERUM_PRICE	LITECOIN_PRICE	RIPPLE_PRICE
BITCOIN_PRICE	Pearson Correlation	1	.842**	.622**	.316**
	Sig. (2-tailed)		0	0	0
	N	1650	1650	1650	1650
ETHEREUM_PRICE	Pearson Correlation	.842**	1	.807**	.621**
	Sig. (2-tailed)	0		0	0
	N	1650	1650	1650	1650
LITECOIN_PRICE	Pearson Correlation	.622**	.807**	1	.790**
	Sig. (2-tailed)	0	0		0
	N	1650	1650	1650	1650
RIPPLE_PRICE	Pearson Correlation	.316**	.621**	.790**	1
	Sig. (2-tailed)	0	0	0	
	N	1650	1650	1650	1650

**Correlation is significant at the 0.01 level (2-tailed).

B. OBJECTIVE 2 Model Summary Table 3 displays the regression model's adaptability to the data. R or multiple correlation coefficients are used to evaluate the predictability of the dependent variable in a model summary. While the coefficient of determination, or R square, utilizes an independent variable to represent the variability of the dependent variables, Our independent variables account for 78.7% of our dependent variable's variability, as indicated by their R Square value of 0. The multiple correlation coefficient, or R, is 0.887 in Table 3, indicating a high level of prediction.787.

TABLE III. MODEL SUMMARY

MODEL	R	R SQUARE		ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE
1	.887A	.787		.786	3571.4861
A. PREDICTORS: (CONSTANT), RIPPLE_PRICE, ETHEREUM_PRICE, LITECOIN_PRICE					

The fitness of the data to the study's regression model is evaluated in ANOVA table 4. table above demonstrates that the regression model accurately predicts the dependent variable, which is statistically significant because the p-value is less than 0.05.

TABLE IV. ANOVAA

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	77417938168.659	3	25805979389.553	2023.124	.000[b]
1	Residual	20995574122.983	1646	12755512.833		
	Total	98413512291.641	1649			
a. Dependent Variable: BITCOIN_PRICE						
b. Predictors: (Constant), RIPPLE_PRICE, ETHEREUM_PRICE, LITECOIN_PRICE						

TABLE V. COEFFICIENT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	2498.721	139.992		17.849	.000
1	ETHEREUM_PRICE	23.360	.472	.954	49.458	.000
	LITECOIN_PRICE	26.314	3.415	.190	7.705	.000
	RIPPLE_PRICE	-10782.54	469.255	-.427	-22.97	.000
a. Dependent Variable: BITCOIN_PRICE						

The information required to predict the dependent variable from the independent variables and determine whether these independent variables significantly contribute to the study's model (according to the calculated significance) is represented in the coefficients table in table 6.

The overall level of contentment derived from the "Ethereum Price" and "Litecoin Price" is depicted in the table above likewise "Ripple Price." The following regression model or equation

149

can be seen as a result of these components being statistically significant (each component has a significant value of less than 0.05 or 0.000):

CONCLUSION

Cryptocurrency is a type of digital currency based on blockchain technology. In 2008, Satoshi Nakamoto was the one who developed it for the first time. The first cryptocurrency was Bitcoin, established in 2008 under the domain name "Bitcoin.org." The price of bitcoin is equal to 2498.721 times the price of ether (0.954), litcoin (190), and Ripple (0.427). With a market capitalization of 66% of the cryptocurrency market, Bitcoin is regarded as one of the largest cryptocurrencies. We have chosen the most well-known cryptocurrencies, including Bitcoin, Ethereum, Litecoin, and Ripple, for this study. It has been discovered that there is a strong correlation between the prices of each cryptocurrency.

The study also found that the prices of other cryptocurrencies influence the price of Bitcoin. The rise in Ethereum and Litecoin hurts Ripple, but Bitcoin prices are expected to soar. This indicates that the price of bitcoin will decrease if the price of Ripple rises. At the same time, the price of cryptocurrencies is significantly influenced by societal influence. For example, the performance and price of other cryptocurrencies may also impact the cryptocurrency's value. The study also demonstrates that smaller studies and research can aid investing in cryptocurrencies.

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