https://doi.org/10.48047/AFJBS.7.10.2025.168-188

African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com

Research Paper Open Access

A STUDY ON ANALYSIS OF ALT COIN PORTFOLIOS & BITCOIN AS AN INVESTMENT INSTRUMENT

Mrs. Muthamma B U
Research Scholar,
CMR University
School of Economics and Commerce
Bengaluru, Karnataka, India.
Mail Id-Muthamma.bu@cmr.edu.in

Dr. Ranjith Kumar .S
Associate Professor,
CMR University
School of Economics and Commerce
Bengaluru, Karnataka, India.
Mail Id-Ranjithkumar@cmr.edu.in

Volume 7, Issue 10, 2025
Received: 14 July 2025
Accepted: 25 Sep 2025
Published: 13 Oct 2025
Doi :10.48047/AFJBS.7.10.2025.168-188

Abstract

This study explores the analysis of altcoin portfolios and Bitcoin as investment instruments, aiming to provide insights into their viability and potential for investors. The research delves into the dynamics of altcoins, which are cryptocurrencies other than Bitcoin, and their performance compared to the more established Bitcoin. It investigates factors such as market trends, volatility, correlation with traditional assets, and the role of Bitcoin dominance in shaping altcoin performance. The study also examines the diversification benefits of including altcoins in an investment portfolio alongside Bitcoin.

Through comprehensive data analysis and statistical modeling, this study aims to identify patterns and trends that can guide investors in constructing optimal portfolios. Additionally, it assesses the risk-return profiles of altcoins and Bitcoin to determine their suitability as investment vehicles. By analyzing historical price data and market behavior, this study aims to provide practical recommendations for investors looking to maximize returns while managing risks in the cryptocurrency market.

Keywords: Altcoins, Bitcoin, Cryptocurrency, Investment, Portfolio Analysis, Risk-Return Profile, Diversification, Market Trends.

INTRODUCTION:

As cryptocurrencies become popular market areas for cryptocurrencies are growing rapidly. Understanding the return rate can support the cryptocurrency world and how design choices affect investors. Another threat to cryptocurrencies is the high volatility in traders' willingness to buy or sell. The adoption of crypto assets has been a major concern for policymakers since Facebook announced its cryptocurrency, in June 2019.

The technology that follows these secret currencies, the world-class system and the open- source network called “blockchain” is often introduced as one of the newest technologies thatoffers a few innovative things in the years to come. The trading volume of crypto-currenciesalso has granger-causality in power consumption. A crypto asset is a digital asset that is not subject to the issuance, sale, or transfer of it is protected by cryptographic technology and distributed electronically using a distributed ledger.

The era of digital technology has spawned the cryptocurrency Bitcoin (BTC) as an exciting new currency in the global community, including Indonesia. BTC is another way to meet theneeds of global financial services that seek comfort, efficiency, and security. The use of digitalcomputer tools to process scientific, economic, and social information has transformed humancapacity, drastically. The visual space has been activated annually because of the efficient useof information resources.

PROBLEM STATEMENT:

The cryptocurrency market offers wide range of instruments to the distinct class of investors for investment. There are numerous monetary instruments available in the cryptocurrency market. It is helpful for individual investors to choose higher investment options, which give excessive returns with excessive risk. It may be very difficult for investors to select a higher

investment strategy amongst various funding alternatives available within the market. Other scholars agree that the attitude of the investors will affect their decision regarding various investment options, and it changes over time due to changes in their perception of risk & return factors of various alternative coins, so the present study is carried out to examine the risk and returns of bitcoin when compared with traditional financial assets.

NEED FOR THE STUDY:

learning and analyzing the cryptocurrency market is a new area. A few works published in recentyears have been of potential interest in this topic. Many scientists have been studying Bitcoinat different angles since its inception. Cryptocurrency is a digital currency, its creation and control of it is based on cryptographic methods. Some researchers say that Bitcoin is just a bubble. The basic value of Bitcoin is difficult to disclose, and history shows that renamed assets are more prone to bubbles [10].

Bitcoin is the first peer-to-peer payment network that is fully controlledby its users without any central authority or arbitrator. Bitcoin is a digital currency that stays inthe payment network of an open source P2P (peer-to-peer). P2P is a computer network model consisting of two or more computers, where each computer in a network area can share. This network makes it easy for users to work directly without the need for services from outside companies.

features of Bitcoin presence of peer-to-peer network, blogs, blockchain,and miners. The peer-to-peer network in Bitcoin allows users to transfer a certain amount of Bitcoin value, these transactions are stored in files called blocks, these blocks are combined with others to form a blockchain called blockchain, and miners solve complex calculations. formulas. to prove the identity of Bitcoin.

In this study, we are going to observe the historical pattern of bitcoin whencompared to other traditional financial assets and state whether or not bitcoin is a worthy investment instrument or not. Later in the study we created and analyzed portfolios of alt coins with different types of tokens. Altcoins such as mana, xrp, ada, Litecoin, ltc coin, Binance coin, dogecoin.

Each is given specific weightage according to the portfolio's desired rate of return and risk. Further an attempt has also been made to suggest an effective mechanism to individuals for executing the schemes more effectively and to the fullest satisfaction of individual saving in financial instruments. It will also be helpful to identify the different investment options that areavailable in the market and the recent investment trends.

OBJECTIVE OF THE STUDY:

- To create & examine an effective altcoin portfolio keeping in mind different risk and return aspects concerning the functionality of these altcoins.

- To study the risk and return of bitcoin when compared with other investment instruments such as Sensex, gold, & exchange rate (US Dollars).
- To conduct a hypothesis test to determine if there is a difference between the returnsof bitcoin when compared to returns of other investment instruments or if there is no difference between the returns of bitcoin and returns of other investing instruments.
- To examine the correlation between Bitcoin and other investing instruments.

SIGNIFICANCE OF THE STUDY:

The present study aims to identify the behavior of bitcoin currency and test whether there is a significant difference between bitcoin and other financial assets in the market & the study will help to plan and determine efficient altcoin portfolios and invest money in proper correlating altcoins.

RESEARCH METHODOLOGY:

The present study is empirical and mainly based on secondary data collected from Yahoo Finance & investing .com. In this study, MS Excel was used to test the results andto make decisions on the hypothesis. Descriptive statistics, Correlation, beta testing and were usedto analyze & interpret the results, and Statistical analysis was used to carry out the results.

This study compares the return and risk of bitcoin, stocks, gold, and the DOLLAR exchange rate. This study is a type of volume study that uses secondary data. The second data used in the study was obtained from www.investing.com; with bitcoin prices and shares. Gold pricescan be found at www.harga-emas.org; The dollar exchange rate is available at investing. Com.The study period from 2010 to 2020 used monthly data or 89 observed data.

The return calculation uses the formula for the difference from the current value to the previous value divided by the value in the past tense. Generally, the return formula can be written as follows:

Where:

$$\text{Return} = \frac{R_{t-}R_{t-1}}{R_{t-1}}$$

Rt = the return at period t.

Rt-1 = the return at period t−1.

This study also measures the risk of each investment instrument. Standard deviation is employedto measure the risk of investments. Standard deviation to measure how far the deviation from the average of each investment instrument. The higher standard deviation value means the higher risk of the investment. Here is the formula to measure standard deviation (σ):

$$\sigma = \sqrt{\frac{1}{n-1}\sum_{s=1}^{n}\left[r(s)-r\right]^2}$$

Where:

σ = standard deviation of investment.n =
number of observations.

r(s) = return of investment.r = average
of investment.

SAMPLING TECHNIQUE:

The questionnaire was distributed among the respondents by sending the Google forms of the questionnaire through mail. For this purpose, a convenience sampling technique has been adopted and the data of 70 respondents is obtained. In this, Individuals were chosen according to the convenience of the research study.

SAMPLING DESIGN:

The research study is based on secondary data. It is an empirical study, where the data is secondary data which have been obtained from Yahoo finance & investing .com.

STATISTICAL TOOLS:

Paired sample t-Test

A paired t-test, sometimes referred to as a t-dependent sample test, is a mathematical process used to determine whether the median difference between the two viewing zeros is zero. In a paired t-test, each topic or business is rated twice, resulting in pairs to be considered. Typical applications of a paired t-

sample include case-control studies or repetitive step designs. Suppose you are interested in evaluating the effectiveness of a company training program. Another option you might consider is to measure the performance of a sample of staff before and after the program and analyze the differencesusing a sample t-test sample.

- Descriptive statistics

Descriptive statistics summarize or explain the features of a data set. Descriptive statistics consist of two basic categories of measures: moderatetrend estimates and variance (or spread) estimates. Medium inclination rates define the center of a data set.

Measurement or variability measures define the distribution of data within aset.

- Correlation

Correlation is used to examine the relationship between quantitive or dynamic class variables. In other words,a measure of how things are related. The study of how variables are related is called correlation analysis

LITERATURE REVIEW:

1. **Yadav, (2021)** - The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 puts a blanket ban on 'private' Cryptocurrencies such as Bitcoin. It also introduces its own digital currency which is often termed as 'Central Bank Digital Currency' ('CBDC') like Tunisia's dinar or China's digital Yuan.
2. **Niji oni, (2021)** - Various national and regional authorities have been forced to grapple with their regulation. One of the most common actions identified across jurisdictions is the Government issued notices about the pitfalls of investing in cryptocurrency markets. WARNING: Cryptocurrencies may create an avenue for illegal activities such as money laundering, terrorism, and other organized crimes.
3. **Alazar, (2021)** - This study aims to explore the potential use of bitcoin as an investment instrument in Indonesia. Return obtained from bitcoin cryptocurrency is compared to other investment instruments,

namely stock returns, gold, and the rupiah exchange rate. The study contributes for the investors who would like to invest on bitcoin.

4. **Yukari, (2020)** - We demonstrate that market-specific factors influence bitcoin returns and can be used to forecast them. Returns on cryptocurrencies are susceptible to events affecting the network, but not the production. We build the network factors to represent how users are embracing cryptocurrencies, and the production factors to represent how much it takes to produce a cryptocurrency. Furthermore, proxies for investor attention and the time-series momentum effect both exhibit good predictions of future cryptocurrency returns.
5. **Satya, (2020)** - The integration of blockchain technologies into everyday activities within large multinationals was officially communicated. How the innovation is grasped will be the way to how it benefits the monetary markets and the world. The perspective for innovation in blockchain looks magnificent and the increases created by acquiring the innovation are unforeseen.
6. **Manuel (2019)** - Some governments around the world have begun to work in the direction of regularizing and supervising digital currency. This paper reviews the challenges faced by five different cryptocurrencies with the highest market capitalization. It also analyses the blockchain technology that underlies each of these currencies.
7. **Ahmet, sensoi, (2019)** - We examine the relationship between the price volatility of cryptocurrencies and that of U.S. and European financial markets. We find positive interrelationships between the conditional correlations of cryptocurrencies with financial market stress. Correlation ships are found to increase substantially during periods of high financial market stress.
8. **vu Hong, (2019)** - The introduction of a new altcoin tends to lower Bitcoin return by 0.7%, according to our study. Negative impact of an Initial Public Offering (IPO) on existing stock prices can also be observed in the cryptocurrency market. Altcoins are close substitutes for Bitcoin in terms of risk diversification.
9. **Shailak Jani, (2018)** - Cryptocurrency represent valuable and intangible objects that are used electronically in different applications and networks such as online social networks, online social games, virtual worlds, and peer-to-peer networks. The paper also analyses how 21 different countries have responded in terms of regulations & legislation towards cryptocurrencies.

10. **Harrigan, (2012)** - Anonymity in Bitcoin is a complicated issue. In this chapter, we consider the topological structure of two networks derived from Bitcoin's public transaction history. We investigate an alleged theft of Bitcoins, which, at the time of the theft, had a market value of approximately US$500,000.

RESEARCH RESULTS

instrument	N	min	max	mean	std. dev
bitcoin (µ1)	89	-0.40157	0.702491	0.0825	0.2269
exchange rate (µ2)	89	-0.05827	0.038655	0.0025	0.0159
gold (µ3)	89	-0.0614	0.11584	0.0088	0.0409
Sensex (µ4)	89	-0.23053	0.144192	0.0096	0.0499

TABLE-1 DESCRIPTIVE STATISTIC

Statistical definitions include rate, minimum, maximum value, and the standard deviation of each investment instrument, namely bitcoin, exchange rate returns, gold return and stock return during the 2014–2022 survey. The return of Bitcoin has the mean highest rate of 8% compared to the return from other investment tools. Moreover, the average deviation of bitcoin recovery is a significant 23% compared to other investment tools. The bitcoin range ranges from -40.14% to 70.24%. table 1 shows the descriptive statistics of the investment instruments studied.

	BTC	*USD*	*GOLD*	*SENSEX*
BTC	1			

USD	-0.02583	1		
GOLD	0.004623	0.215475	1	
SENSEX	0.226839	-0.52626	-0.13158	1

TABLE -2 CORRELATION MATRIX

The matrix of the correlation between investment instruments can be found in Table 2. The highest correlation is found in the return stock and the exchange rate for returns (−0.526). When stock returns increase, the return rate will be lower. In other words, if the dollar exchange rate is strong,the index of the stock price will increase. The strengthening of us dollar exchange rate has contributed to the growth of the domestic economy so that investors can invest more in stocks. Therefore, stock recovery also increases when there is an increase in the rupiah exchange rate. Meanwhile, bitcoin does not show any correlation with other investment tools that are shown witha matrix integration value of less than 5%. This figure shows that bitcoin recovery is not affected by other investment instruments such as the exchange rate, gold, and stock returns.

An overview of the volatility of the profits obtained from each of the investment instruments of the stock recovery, exchange rate recovery, gold recovery and bitcoin return. Eachinvestment tool shows a different flexibility of return. The lowest standard deviation is the exchange rate of 2%, while the highest standard deviation is Bitcoin 22.69%. In other words, investing in bitcoin has a much higher risk compared to other investment instruments. Some investment tools have a low risk of between 2.6% and 4.7%. Investing in the foreign exchange rate has a much lower risk compared to other investments. Gold and stock investments have similar risks of approximately 4.2% to 4.7%.

A wide range of volatility has been found in the return on bitcoin investment, particularly in the period 2012 to 2014. In 2013, the recovery of bitcoin reached a very high level where the recoveryincreased from 10-70%. However, the return was significantly reduced to (- 5%) in 2014. It meansthat investing in bitcoin gets a higher return and a much higher risk compared to other investmenttool.

The next test is to compare the return between each investment tool on a paired sample test, whichis stock-bitcoin, bitcoin exchange rate and bitcoin gold.

Instrument	Mean	Std.dev	St. Error mean	T	dif	sig.
bitcoin - exrate	-0.08	0.2109	0.0223	-3.31	88	0.001
bitcoin -gold	-0.07	0.1859	0.02	-3.01	88	0.003
bitcoin - stock	-0.072	0.1769	0.019	-3.11	88	0.002

TABLE 3 PAIRED SAMPLE TEST

Table 3 shows the paired sample test of each investment instrument with Bitcoin. The results of the paired sample return for investment instruments can be seen in Table 3. The results of the paired sample test between Bitcoin and other investment instruments show a significant value of less than 0.01. It means there is a difference in return between bitcoin and other investment instruments.The estimate indicates the difference between bitcoin and other investment instruments around -8%. The standard deviation indicates about 21% of investments in bitcoin. It means a huge risk of investing in Bitcoin.

Based on the results of the return evaluation of the tested samples on the investment in investment between the investment tools and the definition above, it can be concluded that the researchhypothesis can be concluded as follows:

Ha1: there is a significant difference between bitcoin returns & exchange rate returns. (Accepted atsignificance level 0.01).

Ha2: there is a significant difference between bitcoin returns & gold returns. (Accepted at significance level 0.01).

Ha3: there is a significant difference between bitcoin returns & stock returns. (Accepted at significance level 0.01).

ALTCOINS:

Below is the analysis of altcoins, the analysis contains information about the rate of return, variance, standard deviation, and coefficient of variation, of each coin for the past 4 years, from 2018 – 2022.

1. MANA:

MANA	
rate of return	0.182047526
variance	0.544750721
standard dev	0.7380723
cv	4.0542836
BETA	1.454600866

Mana's average rate of return for the past 4 years is 18% while the standard deviation is 73, after looking at the beta of the coin we can tell that with a 1% change in the market portfolio there is a 145% change in returns of mana. Hence resulting in higher systematic risk.

2.ADA CARDANO:

ADA	
rate of return	0.107762952
variance	0.28957429
standard dev	0.538121074
cv	4.993562866

BETA	1.166746897

ADA's average rate of return for the past 4 years is 11% while the standard deviation is 53, after looking at the beta of the coin we can tell that with a 1% change in the market portfolio there is a 166% change in returns of ADA. Hence resulting in higher systematic risk.

3.DOGE:

DOGE	
rate of return	0.273099693
variance	1.636182752
standard dev	1.279133594
cv	4.683760647
BETA	0.807628706

Doge's average rate of return of the past 4 years is 27% while the standard deviation is 127, after looking at the beta of the coin we can tell that with 1% change in market portfolio there is 80% change in returns of DOGE. Hence resulting in higher systematic risk.

4.LITE COIN:

LTC	
rate of return	0.028428
variance	0.070363
standard dev	0.26526

cv	9.330959
BETA	0.994413

LTC's average rate of return for the past 4 years is 3% while the standard deviation is 27%, afterlooking at the beta of the coin we can tell that with a 1% change in the market portfolio there is a 99% change in returns of LTC. Hence resulting in higher systematic risk.

5..XRP(RIPPLE):

XRP	
rate of return	0.075333
variance	0.23071
standard dev	0.480323
cv	6.376032
BETA	0.738778

XRP's average rate of return for the past 4 years is 8% while the standard deviation is 48%, manahas a volatility of 637%, after looking at the beta of the coin we can tell that with a 1% change in the market portfolio there is 74% change in returns of XRP. Hence resulting in higher systematic risk.

6..BINANCE:

BNB	
rate of return	0.158472

variance	0.373774
standard dev	0.611371
cv	3.85792
BETA	1.256812

BNB's average rate of return for the past 4 years is 15% while the standard deviation is 61%, after looking at the beta of the coin we can tell that with a 1% change in the market portfolio there is a 126% change in returns of BNB. Hence resulting in higher systematic risk.

7.LINK:

LINK	
rate of return	0.159414
variance	0.257533
standard dev	0.507477
cv	3.183395
BETA	1.158458

Link's average rate of return for the past 4 years is 16% while the standard deviation is 50%, afterlooking at the beta of the coin we can tell that with a 1% change in the market portfolio there is a 116% change in returns of LINK. Hence resulting in higher systematic risk.

ANALYSIS OF PORTFOLIOS

Portfolio 1: Portfolio with equal weights.

PROPOTION OF MANA	14.3%
PROPOTION OF ADA	14.3%
PROPOTION OF DOGE	14.3%
PROPOTION OF LTC	14.3%
PROPOTION OF XRP	14.3%

Weights of portfolio 1

PORTFOLIO ANALYSIS	
PORTFOLIO RATE OF RETURN	0.140792
PORTFOLIO VARIANCE	0.173735
PORTFOLIO STANDARD DEV	0.416816

When equal weights are allotted to the seven ALT coins, I, e., 14.30% each, we observe that the mean average return of the portfolio is 14% and the portfolio standard deviation is 41%, after looking at beta of the portfolio we can tell that with 1% change in the market there is 108% changein the portfolio returns.

Portfolio 2: portfolio for maximum returns

PROPOTION OF MANA	0.2
PROPOTION OF DOGE	0.3
PROPOTION OF ADA	0.133
PROPOTION OF BNB	0.133
PROPOTION OF LINK	0.133

Weights of Portfolio 2

PORTFOLIO ANALYSIS	
PORTFOLIO RATE OF RETURN	0.180139
PORTFOLIO VARIANCE	0.30447
PORTFOLIO STANDARD DEV	0.551788

In this portfolio the weights of the coins are allocated as follows- (mana & doge) comprise of 50% of the portfolio because they have the highest mean returns among the seven coins, (ada, bnb & link)comprise 40% of the portfolio and (ltc & xrp) comprise of 10% in the portfolio because their mean returns are least when compared to other altcoins.

We observe that the mean return of the portfolio is 18% and the standard deviationof the portfolio is 55%, we can see that with an increase in the rate of returns, there is also an increase in the standard deviation of if the portfolio, after looking at the beta of the portfolio we can tell that with 1%change in the market, there is 109% change in the portfolio returns.

Portfolio 3: Portfolio with least standard deviation

PROPOTION OF LTC	0.4
PROPOTION OF XRP	0.15
PROPOTION OF LINK	0.15
PROPOTION OF ADA	0.1
PROPOTION OF BNB	0.1

Weights of Portfolio 3

PORTFOLIO ANALYSIS	
PORTFOLIO RATE OF RETURN	0.103396
PORTFOLIO VARIANCE	0.101919
PORTFOLIO STANDARD DEV	0.319843

In this portfolio the weights of the coins are allocated as follows:

Ltc occupies 40% of the portfolio because it has the least standard deviation amongst altcoins. While(xrp &link) occupy 30% of the portfolio. (ada & bnb) occupy 20% of the portfolio and at lastmana & doge occupy 10% of the portfolio because they have the highest standard deviation.

We observe that the mean return of the portfolio is 10% and the standard deviation of the portfolio is 31%, we can see that with an increase in the rate of returns, there is also an increase in the standard deviation of if the portfolio, after looking at the beta of the portfolio we can tell that with 1% change in the market, there is 103% change in the portfolio returns.

Portfolio 4: 80-20 Portfolio

PROPOTION OF LINK	0.2
PROPOTION OF ADA	0.2
PROPOTION OF XRP	0.2
PROPOTION OF BNB	0.2
PROPOTION OF LTC	0.2

Weights of Portfolio 4

PORTFOLIO ANALYSIS	
PORTFOLIO RATE OF RETURN	0.161327
PORTFOLIO VARIANCE	0.203287
PORTFOLIO STANDARD DEV	0.451112

In this portfolio, the weights are allocated as per the 80-20 rule of portfolio weight allocation, where (link, ada, xrp, bnb, & ltc) acquire 80% of the portfolio with weights divided equally while mana & doge acquire 20% of the portfolio weights because they Have smaller market size than compared to other altcoins. We observe that the mean return of the portfolio is 16% and the standard deviation of the portfolio is 45%, we can see that with an increase in the rate of returns, there is also increase in standard deviation of if the portfolio, after looking at beta of the portfolio we can tell that with 1% change in the market there is 128% change in the portfolio returns.

Portfolio 5: optimum portfolio

PROPOTION OF LINK	0.4
PROPOTION OF MANA	0.2
PROPOTION OF BNB	0.2
PROPOTION OF ADA	0.07
PROPOTION OF DOGE	0.07

Weights of portfolio 5

PORTFOLIO ANALYSIS	
PORTFOLIO RATE OF RETURN	0.171138
PORTFOLIO VARIANCE	0.16181
PORTFOLIO STANDARD DEV	0.40315

In this portfolio link coin has obtained 40% weightage because after observing the above four portfolios, we know that link coin provides optimum returns at a lesser standard deviation. While mana & binance coins occupy 40% equally. Cardano & dogecoin occupy 14% weightage equally and at last lite coin & xrp occupy only 6% of the portfolio weight because they provide lessreturns at considerable standard deviation.

We observe that the mean return of the portfolio is 17% and the standard deviation of the portfolio is 40%, we can see that with an increase in the rate of returns, there is also an increase in the

standard deviationof if the portfolio, after looking at the beta of the portfolio we can tell that with 1% change in the market, there is 120% change in the portfolio returns.

FINDINGS

- From the study, we found that bitcoin on average has the highest returns as well as higher risk when compared with other investment instruments such as gold, Sensex, and exchange rate of us dollars.
- By the analysis, it is observed that there is a significant difference between the returns of bitcoin and the returns of other investment instruments such as gold, Sensex, and exchange rates.
- It is observed that link coin is the most optimum coin which can occupy a heavy weightage in any given portfolio because it provides efficient returns at a comparatively decent rate of risk.
- Coins such as mana & doge have a smaller market base, but they provide higher rates of returns of 18% and 27% and higher standard deviations of 73% and 123%.
- Coins such as ripple & lite coins have a larger market base but still have a lower rate of returns ata comparatively lower rate of risk.
- We also get to know that the lite coin is the most volatile when compared to other altcoins.
- After looking at table 2 the correlation matrix we get to know that bitcoin does not show any correlation with other investment instruments.
- After the overall analysis, it can be said that cryptocurrencies are very risky assets the risk factor of every cryptocurrency is above the optimum standard deviation level.
- There is n number of altcoins in the market, since most of the coins are project-based, the existence of the coin comes to the freezing point after reaching or completing its original objective.In the survey, we get to know that most investors are likely to invest in dogecoin and wanted an analysis on dogecoin, although the coin serves no meaningful purpose and is just yet another sign of the market madness.

SUGGESTIONS

- For investors who love risk, then investing in Bitcoin could be an investment alternative. Bitcoin investments promise a higher return compared to other investment instruments. For investors who are risk averse, investing in Bitcoin is not suitable because this investment has the highest risk.
- This research has practical implications for investors seeking high returns. At the same time, investors must also understand the risk associated with investing in Bitcoin.
- Another implication for the Indian government as a cryptocurrency policy maker. Cryptocurrency is developing quite rapidly in this era of the crypto world. The role andregulation of cryptocurrency are needed to secure investors and economic growth.
- To enhance saving habits, the saving mode must attract people by providing many offers or attractive prices.
- Individuals can shift to better investments that yield higher returns.
- Individuals can structure their investment portfolio in such a manner that it would reduceand increase their returns.
- Individuals can consider other factors such as profitability, growth rate, etc beforestructuring their portfolio.
- Individuals can spread their investments across different types of tokens such as utility, platform,payment, & security tokens to maximize their returns**.**

CONCLUSION

Based on the research results discussed in the previous chapter, they suggest that investing in Bitcoin is still promising. The price of Bitcoin rose rapidly during the 2014-2022 study period. The rate of return on Bitcoin investments is the highest compared to other investment instruments: stocks, exchange rates, and gold. Meanwhile, Bitcoin investment also has the highest risk compared to other investment vehicles.

It can be stated that Bitcoin investments provide the highest return (8%) compared to the returns of other investment instruments. However, Bitcoin's very high return comes with a high-risk investment. The risk of investing in Bitcoin is indicated by a standard deviation of 23%, while the standard deviation of the other instruments: stocks, exchange rates, and gold is less than 5%.

Based on the paired sample test results, it shows that the average return of Bitcoin shows a very significant difference compared to other instruments. Meanwhile, the return of the other instruments: stocks, exchange rate, and gold show the same return.

BIBLIOGRAPHY

- Sunitha Dasman (2021). "Analysis of risk and return of cryptocurrency bitcoinasset as a investment instrument."
- Dushmanth (2021). "Analysis of cryptocurrency ALT coins."
- Yukari (2022). "Factors for forecasting bitcoin returns."
- Mestle (2019). "Cryptocurrency- portfolios in mean – variance framework."
- Jusufi (2020). "Modelling the optimal diversification opportunities."
- Hougan (2021). "The guide to bitcoin, blockchain, & cryptocurrency forinvestment professionals."
- Ali (2018). "Applications of blockchain technology beyond cryptocurrency."
- https://www.ibef.org/industry/financial-services-india.aspx
- http://www.economictimes.com
- http://www.googlescholar.com
- http://www.investopedia.com