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Analysing Risk and Returns: A Study on Selected Crypto Currencies

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Abstract
The present study focuses on "Crypto currency" also called digital money existing on the block chain. It refers to the transactions related to computer-generated currencies which are secured by crypto currencies. The data considered in the project is from 2017 to 2023. The objective of this research is to compute and compare the risk and return performance of the selected crypto. In India, crypto currency investment carries a high degree of risk due to its uncertain legal status and lack of regulation. The Reserve Bank of India has issued warnings about the potential financial, operational, legal, customer protection, and security related risks associated with dealing in crypto currencies. However, the potential for high returns has also attracted many investors. To make informed decisions, Indian investors should conduct thorough research on the market, stay up-to-date on regulatory changes, and diversify their investment portfolios. It is also essential to have a clear understanding of one's risk tolerance and not invest more than one can afford to lose. In conclusion, by taking a balanced and well-informed approach to invest in crypto currencies, Indian investors can make effective decisions that weigh both the potential risks and returns.
Keyword: *Crypto currency, Block chain, Risk, Return performance, Legal status, Regulation*

1. Introduction

Crypto currency is a form of digital currency or virtual currency that exists only in the digital world. They are not coins or banknotes. They are stored and exchanged electronically. Crypto currencies are different because they are not controlled by any government or central authority, such as a bank [1]. Instead, crypto currencies are based on a techno log, called block chain, which is like a digital ledger that keeps track of all transactions. This technology ensures that transactions are secure and transparent. People use crypto currencies for many reasons. Some see them as a form of investment, hoping that the value of crypto currencies will increase over time [2]. Others use them for online purchases, as some businesses accept crypto currencies as payment method Crypto currencies also allow for faster and cheaper transactions than traditional banking methods.

1.1 Purpose

Crypto currencies are viewed as promising investment assets, attracting many Indian investors due to their potential for significant returns. However, investing in crypto currencies in India comes with notable risks stemming from the uncertain legal status and lack of regulation. To navigate this landscape, Indian investors should conduct thorough market research and stay informed about regulatory changes to make well-informed investment decisions [3]. Diversifying investment portfolios is recommended to mitigate the risks associated with crypto currency investments. Additionally, investors should carefully assess their risk tolerance and avoid investing more than they can afford to lose. By adopting a balanced and informed approach, Indian investors can effectively evaluate the potential risks and returns associated with crypto currencies [4].

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1.2 Objectives of the Study

- To understand crypto currencies including block chain and cryptographic principles.
- Analyse the economic implications of crypto currencies on traditional financial systems, monetary policies, and global trade dynamics.
- Examine the practical applications of crypto currencies, such as financial inclusion initiatives and cross-border remittance solutions.
- Explore the emergence of decentralized finance (DeFi) platforms and their potential impact on the financial industry.

2. Methodology

The Data extracted to calculate Analysing Risk and Returns Selected Crypto Currencies Namely Bit coin, Ripple, Binance, Cardano, Ethereum table 1. In order to analyse trend and trade mechanism of selected crypto we use Secondary Data [4]. From 2016 to 2023 [7years] the price volatility is considered for trend patterns and to make investment decisions table 2. The study evaluated by 3- factorial, 4- factorial, 5- factorial, 6-factorial, Mean, Standard Deviation, T-Statistics, Sharpe, Skewness, Kurtosis table 3.

2.1 Analysis

Table 1 ANOVA Test

Year	Profit Ratio (Percentage)	User data (in million)
2018	73	18
2019	77	42
2020	17	29
2021	62	32
2022	49	43
2023	146	31

Table 2 Regression Statistics

Multiple R	0.061846
R Square	0.003825
Adjusted R Square	-0.24522
Standard Error	47.72409
Observations	6

Table 3 ANOVA Regression

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	34.98002	34.98002	0.015358	0.90735
Residual	4	9110.353	2277.588		
Total	5	9145.333			

Table 4 Intercept

	Coefficients	Standard Error	t Stat
Intercept	79.98512	77.67511	1.029739
X Variable 1	-0.28672	2.313598	-0.12393

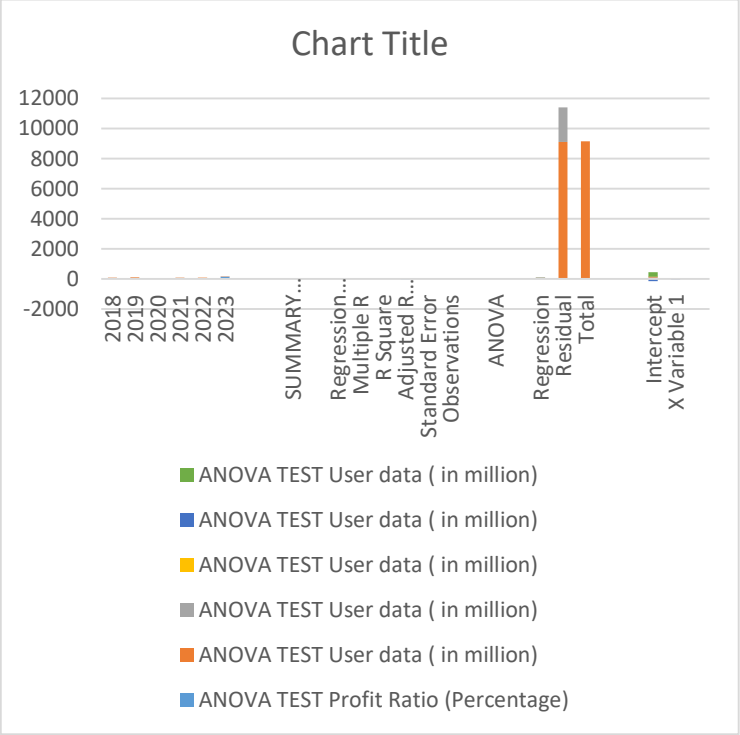

Figure 1 Analysis chart

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Interpretation: The correlation coefficient (Multiple R) between the independent and dependent variables was found to be 0.061846, indicating a weak positive correlation between them [5]. However, table 4 the coefficient of determination (R Square) was only 0.003825, suggesting that a mere fraction of the variance in Profit Ratio can be explained by the independent variable [6].

3. Observations

- Before investing in crypto currencies, it's crucial to understand the underlying technology, such as block chain, and the fundamentals of the specific crypto currency you're interested in [7].
- Begin with small investments and avoid investing more money than you can afford to lose.
- Spread your investments across various crypto currencies to mitigate risk and maximize opportunities.
- Keep yourself updated on the latest news, regulatory changes, and market trends in the crypto currency space to remain vigilant.

Conclusion

We conclude that crypto currency returns exhibit low exposures to traditional asset classes like stocks, currencies, and commodities. This challenges common explanations that tie crypto currency behaviour to functions such as a stake in block chain's future like stocks, a unit of account like currencies, or a store of value like precious metals. Instead, our findings suggest that crypto currency returns are predictably influenced by two specific market factors: momentum and investor attention. Furthermore, our research questions the effectiveness of supply-related factors such as mining costs, price-to-"dividend" ratio, or realized volatility in predicting crypto currency returns. We also highlight the potential impact of block chain technology, embodied in crypto currencies, on various industries.

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