WWW.JARUDA.ORG
E-ISSN: 2962-973X
Publisher
PT. RADJA INTERCONTINENTAL PUBLISHING

THE ROLE OF DIGITAL ASSET INVESTMENT IN COUNTRY ECONOMIC GROWTH

Reza Juanda[1], Falahuddin[2], Muttaqien[3], Rico Nur Ilham[4], Frengki Putra Ramansyah[5], Muhammad Multazam[6]

[1,2,3,4,5]Faculty of Economics and Business, Universitas Malikussaleh
[6]Faculty of Economics and Business, Universitas Bumi Persada
Corresponding E-mail: rezajuanda@unimal.ac.id

Abstract

Cryptocurrency is one of the investment commodities that can generate returns and already has a permit to be traded in exchange trading through the Indonesian Commodity Futures Trading Supervisory Agency (BAPEPTI). Digital crypto assets traded in Indonesia are quite a lot through the Indodax trading company. The purpose of this study is focused on formulating a risk management process in investing in digital cryptocurrency assets. In addition, the results of this study will produce policy recommendations known as LCTR or "Legal Cryptocurrency and Tax Revenue" which are expected to be considered by the government in formulating policies on digital crypto assets so that the interests of all parties can be accommodated in order to realize maximum state revenue from trading digital crypto asset commodities. This type of research is quantitative descriptive with a research population of 10 cryptocurrency coins with the largest market caps in Indonesia, namely Cryptocurrency Bitcoin (BTC), Ethereum (ETH), Ripple (XRP), Bitcoin Cash (BCH), Litecoin (LTC), Stellar, DASH, Dogecoin, Zcash, Monero in Indonesia. The type of data in this study is time series data taken from January 2017 to December 2020 by conducting a documentation study conducted on the publication of monthly cryptocurrency transaction reports, so that a target population of 480 (4 years x 12 months x 10 coins) monthly report data was obtained for the research sample. The data analysis method in this study uses multiple linear regression and data analysis using e-views statistical software version 10.

Keywords: Cryptocurrency Risk and Return, Triagle Policy

INTRODUCTION

Investment is a direct or indirect investment, as well as short-term or long-term with the aim of obtaining expected profits or other forms of benefits from the results of the investment itself. From the investment there is a desired return. One of the most important parts in learning investment is how to measure risk and return. Expected Return is the return that investors expect to obtain in the future. In reality, almost all investments contain uncertainty or risk (Tandelilin 2010). Market capitalization, Cryptocurrency Bitcoin is the highest among other cryptocurrencies based on data on May 30, 2018, Bitcoin's market capitalization value reached US$ 128.10 billion, second place followed by ethereum with a market capitalization of US$ 58.57 billion. (RN Ilham et al. 2019)

This study will examine the issues that are being debated (Debatable) in the investment world, namely the characteristics of cryptocurrency sales market instruments in Indonesia have similarities with BEI sales market instruments in terms of return and risk. Return is measured by capital gain while risk is measured by capital loss or a decrease in the price of the investment instrument (RN Ilham, 2017). Cryptocurrency or crypto currency is increasingly known by many people in Indonesia. This can be seen from the representation of blockchain whose impact can be enjoyed directly by the community (consumers), and there are still many other potentials that can be explored, so that interest in cryptocurrency, generally as an investment instrument, has actually only increased sharply after the Bitcoin exchange rate experienced a fairly high spike.

Specifically, this study will conduct a Focus Group Discussion by inviting financial experts and leaders of the financial services industry with the aim of collecting input and suggestions from the draft policy recommendations that will be produced from the research process. Because the regulation of the Crypto digital asset market or better known as cryptocurrency in Indonesia is still very minimal, even so, cryptocurrency investment continues to increase. This is marked by the emergence of various exchanges or companies that act as intermediaries in buying and selling crypto assets. In early August 2019, Tokocrypto, a local exchange based in

Jakarta, was officially launched. So it is necessary to conduct a study that can provide recommendations on cryptocurrency transaction policies that regulate the pattern of cryptocurrency digital asset trading in Indonesia. The entire process carried out in this study will produce several instruments in the form of policy recommendations and investment strategy formulations as well as risk control models and are expected to be able to help investors in choosing investment strategies and decisions, especially digital crypto assets in Indonesia by considering risk factors. This is supported by the development of cryptocurrency trading exchange companies, many of which have conducted soft launches in May 2017 and sell two types of crypto, namely Bitcoin and Ethereum. The number of users of this exchange from May to now has been more than 10,000. Another exchange that has been operating since 2014, namely Indodax with the name Bitcoin Indonesia, has 1,337,839 users. Of course, this is a very interesting opportunity in the digital asset trading process for investors in Indonesia, so there needs to be a strategy in implementing risk management, especially in investing in digital cryptocurrency assets.

THEORETICAL REVIEW

Capital Asset Pricing Model (CAPM)

Asset pricing models are an important part of finance that is used to predict the relationship between expected return and risk of an asset. Asset pricing models continue to develop along with the many criticisms directed at the first asset pricing model, namely the Capital Asset Pricing Model (CAPM).

Risk Management

Risk management can be defined as a structured and systematic process in identifying, measuring, mapping, developing alternative risk handling, and monitoring and controlling the implementation of risk handling.

Economic Theory of Regulation

Banking regulations in Indonesia are generally implemented in Bank Indonesia regulations through its circulars which are always updated or changed according to the conditions and situations of national banking. According to (Siringoringo 2012)16] as the developer of the economic theory of regulation, regulation is an act of group pressure that produces laws and policies to support businesses and protect consumers, workers, and the environment.

RESEARCH METHOD

Figure 1 Research Roadmap for assessing return on investment in digital crypto assets based on risk factors

Publisher
PT. RADJA INTERCONTINENTAL PUBLISHING
WWW.JARUDA.ORG

Population and Sample

The population of this study is all Cryptocurrency digital assets traded on crypto trading exchanges in Indonesia. While the sample in this study is cryptocurrency that has the largest market capitalization value in Indonesia.

Data Types and Sources

The type of data used in this study is secondary data obtained from monthly transaction reports of cryptocurrency digital assets in Indonesia.

Data Analysis Methods

The following is the Moderate Regression Analysis (MRA) Model regression equation that will be used in this study, as follows:

Equation 1 : Y = b0 + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + b6X6 +ei

Equation 2 : Y = b0 + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + b6X6 + b7Z+ b8X1*Z+ b9X2*Z+ b10X3*Z+ b11X4*Z+ b12X5*Z+ b13X6*Z+ ei

Where:

Y = Cryptocurrency Returns
X1 =*BetaCryptocurrencies*
X2 = Inflation Rate
X3 =Currency Exchange Rates
X4 = World Oil Prices
X5 = Coal Price
X6 = World Gold Price
Z = Velocity of Cryptocurrency
b0 = Constant
b1-b13 = Regression Coefficient
ei = Error Term

RESULTS AND DISCUSSION

Hypothesis Testing

Table 1
F Test and T Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	-3.763608	0.697173	-5.398381	0.0000
X2	-0.128047	0.120038	-1.066726	0.2872
X3	-0.000306	8.40E-05	-3.641669	0.0003
X4	-0.008310	0.004501	-1.846218	0.0662
X5	-0.008040	0.003530	-2.277641	0.0237
X6	1.86E-06	1.29E-06	1.437688	0.1519
Z_X1	0.841937	0.277804	3.030683	0.0027
Z_X2	0.169484	0.186994	0.906363	0.3657
Z_X3	0.000213	0.000130	1.641204	0.1021
Z_X4	0.006795	0.007631	0.890385	0.3742
Z_X5	-0.007423	0.011893	-0.624161	0.5331
Z_X6	-3.97E-06	2.32E-06	-1.710158	0.0886
C	3.694364	1.192147	3.098917	0.0022

Effects Specification	SD	Rho
Random cross-section	0.000000	0.0000
Idiosyncratic random	0.453008	1.0000

Weighted Statistics			
R-squared	0.561607	Mean dependent variable	0.142107
Adjusted R-squared	0.538432	SD dependent var	0.697110
SE of regression	0.473608	Sum squared residual	50.91720
F-statistic	24.23335	Durbin-Watson stat	1.787175
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.561607	Mean dependent variable	0.142107
Sum squared residual	50.91720	Durbin-Watson stat	1.787175

Source: Appendix 9 processed data 2024

F Test

In this study, the number of observations (n) is known to be 140 and the number of parameters (k) is 13, so that df1 = k-1 = 13-1 = 12 is obtained; df2 = nk = 140-13 = , then at α = 0.05 Ftable = 1.795 is obtained.

Based on Table 5.2, the Sig value is 0.00000 <0.05. So it can be concluded simultaneously that Beta Cryptocurrency (X1), Inflation Rate (X2), Exchange Rate (X3), World Oil Price (X4), Coal Price (X5), World Gold Price (X6), interaction of Beta Cryptocurrency (X1) with Velocity of Cryptocurrency (Z), Inflation Rate (X2) with Velocity of Cryptocurrency (Z), Exchange Rate (X3) with Velocity of Cryptocurrency (Z), World Oil Price (X4) with Velocity of Cryptocurrency (Z), Coal Price (X5) with Velocity of Cryptocurrency (Z), and World Gold Price (X6) with Velocity of Cryptocurrency (Z) have a significant effect on Cryptocurrency Return.

t-test

In accordance with (n) = 240, the number of parameters (k) = 13, df = (nk) = 140–13 = 127 then at the error level α = 0.05, the t table is obtained = 1.970. Based on Table 5.2 it can be explained that:

a. It is known that the Beta Cryptocurrency coefficient value against the Return of cryptocurrency is negative, which is -3.763 and the p-value is 0.000 <0.05, then Beta Cryptocurrency has a negative and significant effect on the Return of cryptocurrency, meaning that every increase in Beta cryptocurrency by 1 rupiah will significantly reduce the Return of cryptocurrency by 3.76 percent, and vice versa. Based on Table 5.8, it can be explained that:
b. It is known that the coefficient value of the Inflation Rate on the Return of cryptocurrency is negative, namely -0.128 and the p-value is 0.287> 0.05, so the Inflation Rate has a negative and insignificant effect

Publisher
PT. RADJA INTERCONTINENTAL PUBLISHING
WWW.JARUDA.ORG

on the Return of cryptocurrency, meaning that every 0.01 percent increase in the Inflation Rate will reduce the Return of cryptocurrency by 0.12 percent, and vice versa.

c. It is known that the coefficient value of the currency exchange rate against the cryptocurrency return is negative, namely -0.0003 and the p-value is 0.0003 <0.05, so the currency exchange rate has a negative and significant effect on the cryptocurrency return, meaning that every 1 rupiah increase in the currency exchange rate will significantly reduce the cryptocurrency return by 0.0003 percent, and vice versa.
d. It is known that the coefficient value of world oil prices on cryptocurrency returns is negative, namely -0.008 and the p-value is 0.066> 0.05, so world oil prices have a negative and significant effect on alpha 10 percent on cryptocurrency returns, meaning that every increase in world oil prices of 1 US dollar will significantly reduce cryptocurrency returns by 0.008 percent, and vice versa.
e. It is known that the coefficient value of the reference coal price on cryptocurrency returns is negative, namely -0.008 and the p-value is 0.023 <0.05, so the reference coal price has a negative and significant effect on cryptocurrency returns, meaning that every 1 US dollar increase in the reference coal price will significantly reduce cryptocurrency returns by 0.008 percent, and vice versa.
f. It is known that the coefficient value of the world gold price on cryptocurrency returns is positive, namely 1.86 and the p-value is 0.077> 0.05, so the world gold price has a positive and significant effect on alpha 10 percent on cryptocurrency returns, meaning that every increase in the world gold price of 1 US dollar will increase the cryptocurrency return by 1.86 percent significantly, and vice versa.

Moderation Effect Test

a. It is known that the MRA coefficient value of the interaction of velocity of cryptocurrency_beta cryptocurrency on cryptocurrency returns is positive, namely 0.841 with a T count of 3.030> 1.970 and a p-value of 0.002 <0.05. This shows that the velocity of cryptocurrency variable is not a moderator variable that affects the relationship between cryptocurrency beta and cryptocurrency returns.
b. It is known that the MRA coefficient value of the interaction of velocity of cryptocurrency_inflation rate on cryptocurrency returns is positive, namely 0.169 with a T count of 0.906 <1.970 and a p-value of 0.365> 0.05, this shows that the velocity of cryptocurrency variable is not a moderator variable or cannot moderate the relationship between the inflation rate and cryptocurrency returns.
c. It is known that the MRA coefficient value of the interaction of velocity of cryptocurrency_currency exchange rate on cryptocurrency returns is positive, namely 0.0002 with a T count of 1.641 <1.970 and a p-value of 0.102> 0.05. This shows that the velocity of cryptocurrency variable is not a moderator variable or cannot moderate the relationship between currency exchange rates and cryptocurrency returns.
d. It is known that the MRA coefficient value of the interaction of velocity of cryptocurrency_world oil prices on cryptocurrency returns is positive, namely 0.006 with a T count of 0.890 <1.970 and a p-value of 0.374> 0.05. This shows that the velocity of cryptocurrency variable is not a moderator variable or cannot moderate the relationship between world oil prices and cryptocurrency returns.
e. It is known that the MRA coefficient value of the interaction of velocity of cryptocurrency_reference coal price on cryptocurrency returns is negative, namely -0.007 with a T count of -0.624> -1.970 and a p-value of 0.533> 0.05. This indicates that the velocity of cryptocurrency variable is not a moderator variable or cannot moderate the relationship between the reference coal price and cryptocurrency returns.
f. It is known that the MRA coefficient value of the interaction of velocity of cryptocurrency_world gold price on cryptocurrency returns is negative, namely -3.97 with a T count of -1.710> -1.970 and a p-value of 0.08> 0.05 but significant at alpha 10 percent. This shows that the velocity of cryptocurrency variable is a moderator variable that moderates the relationship between world gold prices and cryptocurrency returns. This means that the higher the level of velocity of cryptocurrency will strengthen the negative influence of the decline in cryptocurrency returns due to the increase in world gold prices.

Conclusion

Based on the results of the data analysis that has been carried out, several conclusions can be drawn from this study, namely as follows:

1. The results of the data analysis show that there is a negative and significant influence of the Beta Cryptocurrency variable on the Return Cryptocurrency. This means that if Beta Cryptocurrency increases, then the Return Cryptocurrency will decrease.
2. The results of the data analysis show that there is a negative but insignificant influence of the Inflation Rate variable on Cryptocurrency Returns. This means that if the Inflation Rate increases, the Cryptocurrency Return will decrease slightly.
3. The results of the data analysis show that there is a negative and significant influence of the Currency Exchange Rate variable on Cryptocurrency Returns. This means that if the Currency Exchange Rate increases, the Cryptocurrency Return will decrease.
4. The results of the data analysis show that there is a negative and significant influence of the World Oil Price variable on Cryptocurrency Returns. This means that if the World Oil Price increases, the Cryptocurrency Return will decrease.
5. The results of the data analysis show that there is a negative and significant influence of the Coal Price variable on Cryptocurrency Returns. This means that if the Coal Price increases, the Cryptocurrency Return will decrease.
6. The results of the data analysis show that there is a positive and significant influence of the World Gold Price variable on Cryptocurrency Returns. This means that if the World Gold Price increases, the Cryptocurrency Return will increase significantly. The world gold price does have an influence on stock market investment when trading is sluggish.
7. The results of the multiple regression analysis of the MRA model show that the interaction of beta cryptocurrency with the velocity of cryptocurrency does not have a significant effect on the Return of Cryptocurrency. This means that if the interaction of beta cryptocurrency with the velocity of cryptocurrency increases, the Return of Cryptocurrency will remain or be constant. It was revealed that the Velocity of cryptocurrency does not affect the relationship between beta cryptocurrency and the return of digital asset investment so that the higher the rate of turnover of digital crypto asset transfers will not necessarily reduce the return.
8. The results of the multiple regression analysis of the MRA model show that the interaction of the inflation rate with the velocity of cryptocurrency does not have a significant effect on the Return of Cryptocurrency. This means that if the interaction of the inflation rate with the velocity of cryptocurrency increases, the Return of Cryptocurrency will remain or be constant. It is revealed that the velocity of cryptocurrency does not affect the relationship between inflation and cryptocurrency investment returns, meaning that the faster the rate of turnover and transfer of digital crypto assets will not affect investment returns and in the end the inflation rate will still hamper the rate of economic growth.
9. The results of the multiple regression analysis of the MRA model show that the interaction of the exchange rate with the velocity of cryptocurrency does not have a significant effect on the Return of Cryptocurrency. This means that if the interaction of the exchange rate with the velocity of cryptocurrency increases, the Return of Cryptocurrency will remain or be constant. It was revealed that the velocity of cryptocurrency did not significantly affect the relationship between the exchange rate and the return of cryptocurrency, this happened because considering the determination of the rupiah exchange rate which adopts a free floating system is greatly influenced by the global economy and the size of Indonesia's balance of payments whether it is a surplus or deficit, so that even though the rate of turnover and transfer of digital crypto assets is getting faster, it is not immediately able to increase investment in the digital crypto asset market.
10. The results of the multiple regression analysis of the MRA model show that the interaction of world oil prices with the velocity of cryptocurrency does not have a significant effect on Cryptocurrency Returns. This means that if the interaction of world oil prices with the velocity of cryptocurrency increases, then the Cryptocurrency Return will remain or be constant. It was revealed that the velocity of cryptocurrency does not affect the relationship between world oil prices and cryptocurrency market investment returns, this happens because automatically when world oil prices increase, it will provide positive sentiment towards the flow of capital entering the money market and capital market as well as the crypto digital asset market so that the price of digital asset commodities will continue to increase.

11. The results of the multiple regression analysis of the MRA model show that the interaction of coal prices with the velocity of cryptocurrency has an insignificant effect on Cryptocurrency Returns. This means that if the interaction of coal prices with the velocity of cryptocurrency increases slightly, then the Cryptocurrency Return will remain or be constant. It was revealed that the velocity of cryptocurrency does not affect the relationship between coal prices and cryptocurrency market investment returns, this happens because when coal prices increase, it will provide a contiguous effect or an affected impact that will produce positive sentiment towards capital flows entering the money market and capital market as well as the crypto digital asset market so that the price of digital asset commodities will continue to increase.
12. The results of the multiple regression analysis of the MRA model show that the interaction of gold prices with the velocity of cryptocurrency has a significant negative effect on Cryptocurrency Returns. This means that if the interaction of gold prices with the velocity of cryptocurrency increases, then the Cryptocurrency Return will decrease drastically and significantly. It was revealed that the velocity of cryptocurrency weakens the relationship between the influence of gold prices on cryptocurrency market investment returns, this happens because when the price of gold increases it will provide positive sentiment towards the flow of capital entering the money market and capital market but this does not happen in the crypto digital asset market so that the price of digital asset commodities will decrease because gold has a different market segmentation than other assets because gold tends to be more in demand and is a zero risk investment instrument or has almost no risk.

REFERENCES

Amsyar, I., Christopher, E., Dithi, A., Khan, A. N., & Maulana, S. (2020). The challenge of cryptocurrency in the era of the digital revolution: A review of systematic literature. Aptisi Transactions on Technopreneurship (ATT), 2(2), 153-159.

Ghofur, Ruslan. 2012. "Distribution Policy on Islamic Economics." Islamic Journal of Islamic Studies. http://ssrn.com/abstract=2189964.[17]

Ilham, Rico Nur, Erlina, Khaira Amalia Fachrudin, and Amlys Syahputra Silalahi. 2019. "Positive Effect in Efficient Application of Corporate Social Responsibility in PT.Indonesia Asahan Aluminium as an Indicator Enhancement Efforts Public Welfare North Sumatra."[3]

Ilham, rico nur. 2017. "Pengaruh Manajemen Laba Terhadap Nilai Perusahaan Dengan Good Corporate Governance."[2]

Lex Crimen.2018.Pemberantasan Tindak Pidana Pmealsuan Mata Uang Dan Uang Kertas Menurut Undang-Undang Nomor 7 Tahun 2011 Tentang Mata Uang.[5]

Penman, Stephen, and Francesco Reggiani. 2013. "Returns to Buying Earnings and Book Value: Accounting for Growth and Risk." Review of Accounting Studies 18(4): 1021–49. (13)

Rico N.Ilham et all. (2019). Comparative of the Supply Chain and Block Chains to Increase the Country Revenues via Virtual Tax Transactions and Replacing Future of Money. International Journal of Suplly Chain Management.Volume 8 No.5 August 2019.

Rico N.Ilham et all. (2019). Investigation of the Bitcoin Effects on the Country Revenues via Virtual Tax Transactions for Purchasing Management. International Journal of Suplly Chain Management.Volume 8 No.6 December 2019.

Siringoringo, Renniwaty. 2012. "Perbankan Di Indonesia." Buletin Ekonomi Moneter Dan Perbankan juli: 1–24.

Tandelilin, Eduardus. 2010. Kanisius Portofolio Dan Investasi.

Wang, Y., Lucey, B., Vigne, S. A., & Yarovaya, L. (2022). An index of cryptocurrency environmental attention (ICEA). China Finance Review International, 12(3), 378-414.

www.rekeningku.com

Zheng, M., Feng, G. F., Zhao, X., & Chang, C. P. (2023). The transaction behavior of cryptocurrency and electricity consumption. Financial Innovation, 9(1), 1-18.