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Research Report
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Research Report

Table of the content

1. Introduction

1.1 Introduction the crypto currencies

1.2 Explain the reason

1.3 Introduction the total profit

2. In-depth research

2.1 Financial Analysis

2.2 Monetary Policy

2.3 Speed of transactions

2.4 Consensus Mechanism

2.5 Steaking Rewards

2.6 Crypto earn rewards

2.7 Functionality of the underlying blockchain

2.8 Adoption and Usage among merchants in US and internationally

2.9 Investment Risk

3. Future Prospects

1. Introduction

1.1 Introduction the crypto currencies

I mainly studied 10 cryptocurrencies this semester, investing in 10 different cryptocurrencies by allocating \$100,000 of virtual currency on average. See figure1 in the Appendix for details of the cryptocurrency I invested in. I invested in Bitcoin, Ethereum, Ripple, Litecoin, Monero, NEO, Binance Coin, Cardano, and Polkadot in January. And I did some research on their recent moves.

1.2 Explain the reasons.

- Bitcoin

The main reason to invest in Bitcoin is because it's a decade old and a mature cryptocurrency. Bitcoin is widely used around the world. Bitcoin's decentralization ensures that individuals or organizations cannot easily tamper with blockchain transactions or damage infrastructure. Investing in Bitcoin can be done without worrying too much about security issues. Bitcoin may not bring higher returns, but its security and widespread use are worth investing in.

- Ethereum

Ethereum 2.0 plans to make blockchain faster and more scalable, so it can be used for more applications. This will give Ethereum more utility and more advantages. Ethereum could also benefit from its widespread utility. Ethereum's success could give it a competitive advantage over Bitcoin and other cryptocurrencies if applications on the Ethereum blockchain require it.

- Ripple

Because of the lower transaction fees that Ripple drives, this payment method is more advantageous than regular transfers. Ripple supports international financial transactions and can be used to send and receive payments in fiat and cryptocurrencies. And payments are offered worldwide, and financial transfers are instantaneous. The price of Ripple is low, and many experts are hopeful about Ripple price forecasts.

- Litecoin

Litecoin is one of the alternative digital currencies created in the wake of bitcoin's global success, with lower fees compared to other cryptocurrencies. Despite having better technology than its predecessor, Litecoin still offers lower transaction costs than other digital currencies.

And Litecoin has more secure than other cryptocurrencies. Cybercriminals try to hijack cryptocurrencies during transactions. Because Litecoin processes are safer and complete faster, they are also less susceptible to unusual transactions such as double expenses.

- Monero

From January 15, 2020 to January 15, 2021, the price of the currency rose more than 137%. In addition, it is not expensive to start up because no special hardware is required. And fungible.

- NEO

NEO supports asset protection. These assets registered on its platform have a proven digital identity and are protected by law. Digital identities support verifiable critical information about individuals, organizations, and other entities participating in the digital environment. The NEO platform also allows physical assets to be linked to their equivalent and unique digital avatars on the network.

- Binance Coin

Binance Coin is likely to generate higher revenue in the future, and Binance Coin has a rich range of payment applications. And Binance Coin can bring in additional revenue.

- Cardano

Cardano is a highly fragmented and promising project that sticks to its strong road map. Potentially leading to even higher returns in the future, Cardano's team worked on an algorithm called Ouroboros, a proof-of-stake protocol that can prove security. It is an efficient consensus algorithm, the first truly rigorous security algorithm in the crypto world, which solves the problem of trading volume cap. As more and more participants join the blockchain, more and more resources will be available.

- Polkadot

Polkadot is a next-generation blockchain protocol that greatly simplifies cross-chain communication and interoperability by integrating multiple blockchains into a single network. In the long term, this is a cryptocurrency worth investing in.

1.3 Introduction the profit

Through the figure 2 from the Appendix, the profit on April 21, 2022 is \$1509. The highest profit through January to May is \$110599. I think the main reason for the lower profits is that most cryptocurrencies are currently losing money due to the fluctuations in the market. One of

the most important reasons is Fed policy. The cryptocurrency's current decline follows the Federal Reserve's decision at its November meeting to raise interest rates to combat inflation.

2. In-Depth Research (I choose Ripple for in-depth research)

2.1 Financial Analysis

Ripple is a blockchain-based digital payment network and protocol with its own cryptocurrency, XRP. Rather than use blockchain mining, Ripple uses a consensus mechanism, via a group of bank-owned servers, to confirm transactions.

Maximum Supply: 100,000,000,000 XRP

Price: \$0.684

Circulating Supply: 48,105,234,849 XRP

Market Capability: \$32,906,025,295 USD

2.2 Monetary Policy

Currently, Ripple Payment Network works with global financial institutions from over 55 countries to improve cross-border payment efficiency. The partnership aims to enhance the customer experience by reducing costs, speeding up payment services and improving security. Ripple supports international financial transactions and can be used to send and receive fiat and cryptocurrency payments. Payments are offered globally and financial transfers are instantaneous.

2.3 Speed of transactions

The speed of transactions of Ripple is 3-5 seconds. XRP can process 1500 transactions per second with an average ledger settlement of 3-5 seconds. On April24, the 24-hour trading volume of \$1,362,394,650 USD.

2.4 Consensus Mechanism

The core principle behind the XRP Ledger's consensus mechanism is that a little trust goes a long way. Each participant in the network chooses a set of validators, servers specifically

configured to participate actively in consensus, via a group of bank-owned servers, to confirm transactions.

2.5 Staking rewards

The annualized reward rate for Ripple is 3.47%. If invest \$1000 for this crypto currency, the monthly reward is \$2.85, the annual reward is \$34.7.

2.6 Crypto earn rewards

Ripple (XRP) could be earning up to 4.5% APR + compounding interest. Earn XRP immediately when deposit XRP on some applications like YouHodler. It can earn XRP with guaranteed returns paid out weekly.

2.7 Functionality of the underlying blockchain

Ripple is an open source and peer-to-peer decentralized platform that allows seamless transfers in any form, be it Dollars, Litecoin, or Bitcoin. Instead of using blockchain mining, Ripple confirms transactions through a group of servers that use a consensus mechanism. Ripple transactions use less energy than Bitcoin, take only seconds to confirm, and cost is very low, trading with Bitcoin this requires more energy, takes longer to confirm, and includes high transaction costs. The XRP Ledger (XRPL) is a decentralized, public blockchain led by a global developer community. It's fast, energy efficient, and reliable. The Independent validator nodes come to an agreement on the order and validity of XRP transactions. This agreement, called consensus, serves as final and irreversible settlement. The ledger reaches consensus on all outstanding transactions every 3-5 seconds, at which point a new ledger is issued. Anyone can be a validator, and active validators on the ledger today include universities, exchanges and financial institutions. There are currently 36 validators, and Ripple runs 6 of them.

2.8 Adoption and Usage among merchants in US and internationally

Ripple is a global, digital network designed to facilitate financial transfers for banks and other financial institutions. Ripple was designed to be a faster, cheaper, more secure alternative to the Society for Worldwide Interbank Financial Telecommunications system of money transfer. The

average XRP transaction takes about 5 seconds and costs less than 1 cent in fees. Ripple's consensus protocol for verification makes XRP transactions much more energy-efficient, faster and cheaper than transactions in Bitcoin. Financial institutions can also use XRP as a bridge currency for foreign exchange trading, reducing costs by holding XRP instead of various global fiat currencies. Ripple's main process is a payment and settlement asset exchange and remittance system similar to the SWIFT system for international money and secure transfers used by banks and financial intermediaries in cross-currency transactions. Ripple ameliorates some of the shortcomings of traditional banks. Even though the platform frequently processes millions of transactions, transactions are settled in seconds on the Ripple network. This is different from the days or weeks it may take a bank to complete a wire transfer. The cost of trading on Ripple is also extremely low, with a minimum transaction cost of 0.00001 XRP required for a standard exchange, while banks charge high fees for making cross-border payments.

2.9 Investment Risk

XRP is not a traditional decentralized cryptocurrency, so the market's perception of XRP will depend entirely on how much Ripple is willing to disclose. If Ripple decides to cancel XRP, investors will have no choice but to take the consequences of Ripple's decision. And Ripple is currently in a legal battle with the Securities and Exchange Commission. The SEC alleges that Ripple sold unregistered securities to U.S. investors when it issued XRP. Much of the coverage for XRP has been negative due to the SEC lawsuit, which has added a degree of risk to XRP.

3. Future Prospects

It has gained some traction in the market recently due to its litigation with the SEC. The lawsuit may give some consumers a better understanding of Ripple as a company and their cryptocurrency, XRP. There is some possibility that this lawsuit will increase investment in XRP, as the price of XRP continued to fall during the litigation and may rebound in the future, which could increase investment in Ripple. In addition, Ripple's focus on technology development, the company's focus on changing traditional banking transactions and shortening time sets it apart from other cryptocurrencies, and XRP has a strong competitive advantage for currency exchange, which could help it achieve higher returns in the future.

Appendix

Figure 1

Main Portfolio












Holdings	Amount
 Play USD	\$852.58
 Bitcoin	฿0.4721
 Ethereum	Ξ6.1723
 Ripple	XRP18,060.7508
 Litecoin	Ł113.1844
 Monero	XMR81.7288
 NEO	NEO221.3813
 Binance Coin	BNB19.0271
 Cardano	ADA4,449.1525
 Polkadot	DOT235.3704

Figure 2

Portfolio  **\$101,509.00** 1.5% ↓

<https://money.usnews.com/investing/term/ripple-xrp>

<https://ripple.com/>

<https://support.coinmarketcap.com/hc/en-us/articles/360043836811-Market-Capitalization-Cryptoasset-Aggregate->

<https://cryptoparrot.com/app>