

“A Detailed Study Of Crypto Currency Wallets In Crypto Currency”

PROF. MRUNMAYEE KANETKAR¹, Dr.Medha Kanetkar²

¹ASSISTANT PROFESSOR

DBM, C.P. & BERAR E.S. COLLEGE, RAVINAGAR, NAGPUR.

²Professor, Coordinator Research Center at C.P. & Berar E.S. College, Nagpur India.

Abstract

With the development of technology and IT services soon the cashless transactions came into limelight and digital money came into existence. Now virtual money which is crypto currency shook the economic system of the world. Crypto currency received its name because it uses encryption to verify transactions. This means advanced coding is involved in storing and transmitting crypto currency data between wallets and to public ledgers. The aim of encryption is to provide security and safety. Crypto currencies don't have a central issuing or regulating authority, instead using a decentralized system to record transactions and issue new units. Instead of being physical money carried around and exchanged in the real world, crypto currency payments exist purely as digital entries to an online database describing specific transactions. When you transfer crypto currency funds, the transactions are recorded in a public ledger. Crypto currency is stored in digital wallets. This study is aimed towards detailed study of crypto currency wallets in crypto currency. For the study the secondary data sources have been taken into consideration. The study finds that security factor in Crypto Currency wallets make it worthy to invest in it. The cryptographic keys increase the confidence to invest in crypto currency and keep the crypto in the wallets. With block chain technology evolving, crypto wallets are expected to be adopted by many businesses, eventually becoming main stream.

Keywords: Crypto Currency, Crypto Currency Wallets, Block chain, Digital Economy.

Introduction of Crypto Currency-

Along with the evolution of human being the development of economy occurred. With the growth of various essential needs mankind has entered in this modern era. In this evolution three things are very important i.e. fire, will and money. In the process of development man has started making transactions and adopted barter system. In the primary stage of evolution of economy the money was not present in any form but in the process of development the amount of transactions increased and barter system failed in the market. For valuation of goods and services there was a need to introduce a third medium which will be accepted by all. In various stages of evolution man has accepted various forms of money. In hunter stage man used bones, skin, hair, teeth as money. In shepherd stage man used cow, bullock, goat etc. as money. In agriculture stage man used wheat, rice, jawar, as money this type of money is called goods money. After sometime man had to use copper, brass and iron particles as money. After that silver and gold were used as money and from them coins were made to use as money. As the transactions increased the exchange of such coins became difficult so the paper currency was introduced. As the development took place credit money took place of paper currency. With the development of technology and IT services soon the cashless transactions came into limelight and digital money came into existence. Now virtual money which is crypto currency trembled the economic system of the world. From March 2020 i.e. 3 years before nobody knew that the world will turn down due to Covid 19 pandemic. All sectors of the economy are affected due to the pandemic norms. Investment sector is also not left untouched. Pattern of investment changed as due to the pandemic investors moved towards making online transactions instead of doing physical transactions. Due to the changing pattern investors started to invest in digital market. Also the use of technology grew rapidly, due to this people got knowledge about various digital investment pattern. Crypto currency is one of them. In last 3-4 years in India investment in crypto currency rapidly increased. Taking cognizance of this Ministry Of Finance imposed tax on returns of crypto in Budget 2022.

Meaning of Crypto Currency-

A crypto currency, crypto-currency, or crypto is a collection of binary data which is designed to work as a medium of exchange. Individual coin ownership records are stored in a ledger, which is a computerized database using strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership. Crypto currencies are generally fiat currencies, as they are not backed by or convertible into a commodity. Some crypto schemes use validators to maintain the crypto currency. In a proof-of-stake model, owners put up their tokens as collateral. In return, they get authority over the token in proportion to the amount they stake. Generally, these token takers get additional ownership in the token over time via network fees, newly minted tokens or other such reward mechanisms.

Crypto currency does not exist in physical form (like paper money) and is typically not issued by a central authority. Crypto currencies typically use decentralized control as opposed to a central bank digital currency (CBDC). When a crypto currency is minted or created prior to issuance or issued by a single issuer, it is generally considered centralized. When implemented with decentralized control, each crypto currency works through distributed ledger technology, typically a block chain that serves as a public financial transaction database.

Bit coin, first released as open-source software in 2009, is the first decentralized crypto currency. Since the release of bit coin, many other crypto currencies have been created.

A crypto currency is an encrypted data string that denotes a unit of currency. It is monitored and organized by a peer-to-peer network called a block chain, which also serves as a secure ledger of transactions, e.g., buying, selling, and transferring. ... Bit coin, Ether, Lite coin, and Monero are popular crypto currencies.

Introduction of Crypto Currency Wallets-

As with the development of Economy money has also been developed from physical currency the economy has travelled towards online currency trading due to advancement in Science and Technology. To save maximum time and generate more output from the individual the Nation has transformed itself into

Techno savvy form. The development of currency led to the development of wallets also as the money could not be always carried in hand earlier people use to keep money in their respective physical wallets, but advancement in technology has given a gift of online wallets to every individual. The online wallets could be kept inside the mobile; by transferring some amount from the Bank an individual can make transactions within seconds. The development of online currency led towards Crypto Currency although it was found in 2009 by Satoshi Nakamoto but it came into focus after the Digital money came into limelight. This development led to the conclusion unlike a normal wallet, which can hold actual cash, crypto wallets technically don't store any crypto. Crypto wallets keep your private keys – the passwords that give access to your crypto currencies – safe and accessible, allowing you to send and receive crypto currencies Therefore, the crypto currency wallets came to use by the investors due to more security..

Meaning of Crypto Currency Wallets-

A crypto currency wallet is an application that functions as a wallet for your crypto currency. It is called a wallet because it is used similarly to a wallet you put cash and cards in. Instead of holding these physical items, it stores the passkeys you use to sign for your crypto currency transactions and provides the interface that lets you access your crypto. Modern crypto currency wallets make the block chain accessible to everyone. When crypto currency was first introduced, sending crypto currency was a manual task that required entering long keys. Today, the software does most of it for you. The first wallet was that of Bit coin developer, Satoshi Nakamoto. The second wallet belonged to Hal Finney, who corresponded with Nakamoto and reportedly was the first to run the Bit coin client software wallet. Nakamoto sent him 10 bit coin as a test, and the crypto currency craze began. Crypto currency wallets are software applications on computers or mobile devices such as phones or tablets. They use an internet connection to access the block chain network for the crypto currency you're using. Crypto currencies are not "stored" anywhere they are bits of data stored in a database. These bits of data are scattered all over the database; the wallet finds all of the bits associated with your public address and sums up the amount for you in the app's interface. Sending and receiving crypto currency is very easy using

these applications. You can send or receive crypto currency from your wallet using various methods. Typically, you enter the recipient's wallet address, choose an amount to send, sign the transaction using your private key, add an amount to pay the transaction fee, and send it. There are types of crypto currency wallets such as hot wallets and cold wallets which can further more subdivided; hot wallets are those which require a strong internet connectivity and cold wallets are those which don't need to have any internet connection.

Literature Review-

- 1) The Author describes that study is focused on crypto currency as an imaginative and technically advanced alternative for globalization. It examined the possibility of an alternative for processing payments across geographical boundaries and if regulated effectively crypto currency could remove a lot of the financial challenges faced in the present.
- 2) Authors focused on the high returns and the high risk that comes along. He believed bit coins aren't mature and investing in bit coins would be like jumping in a dark well without knowing the depth, since bit coin is not backed by anything. One of the challenges to be faced would be to establish it as a currency or commodity. If this is established as a currency, probably RBI will play a leading role in its regulation, while if this is a commodity, SEBI will initiate regulations.
- 3) Study focuses on the remarkable growth in the acceptance of crypto currencies but does not see it replacing paper currencies anytime soon. The problem is to structure it for the law enforcement agencies and users to ensure safety in transactions and the problems to determine a way to charge crypto currency tax. The high growth on bit coins has attracted a lot of interest but the high amount of risk involved in keeping the investors hesitant to invest. Though the study shows belief in virtual currencies, a good legal and regulatory framework is required for investors to trust this form of currency in India.

- 4) Author discusses the change in finance and the world of money. Crypto currencies have a huge risk factor but are increasingly popular and it will be difficult for the government to control the transaction. According to the Block chain Foundation of India, (lobby of around 45 crypto dealers,) claimed that more than 30 new exchanges have applied for membership in the recent two months.
- 5) In an article the author said that Block chain has huge potential to improve the way data is stored. Despite the ban on crypto currency, the block chain is adopted in various government organizations over the counter, markets could come up in the future instead of routing transactions through banks.
- 6) The author focuses on aspects such as the impact of crypto currencies in India and the opportunities that come along with it. It also talks about the various aspects of other countries and their rules and legislature revolving around the Introduction of crypto currencies. A crypto currency is a form of currency that exists only digitally that does not have a central issuing or regulating authority. To prevent fraudulent transactions a decentralized system relies on the block chain system to record and oversee transactions. Block chain technology is a type of system used to record transactions, which makes it difficult to hack. Each block within the chain contains a variety of transactions, and each time a replacement transaction occurs on the block chain, a record of that transaction is added to each participant's ledger. Block chain transactions are recorded with an unchanging cryptographic signature called a hash. To corrupt the block chain, a hacker would have to change every block of a chain, which is constantly growing increasing the system security.

Research Methodology-

Objectives:

1. To study in detail about Crypto Currency wallets in Crypto Currency.

Data Collection:

For this study Secondary data was collected through various sources like-

- Reference books on concerned topic
- Trade journals, financial newspapers, magazines
- Government agencies
- Articles published in periodicals
- Internet/ Website
- Annual reports of various firms

Data Interpretation-

Crypto wallets hold the user's private key and information, while public keys are located on the block chain. With the combination of public and private keys, a crypto wallet can enable a secured operation to validate a balance and send or receive crypto currency transactions. Basically there are two types of core crypto currency wallets which are **Hot Wallets and Cold Wallets** which will be discussed as follows:

- Within the category of **Hot Wallets** there are three types:
 - a] **Online/Web Wallets-** The most famous and mostly used crypto currency wallets as an individual only needs to log in an online service provided by Crypto exchanges and should have strong internet connectivity to make crypto currency transactions by using access of public and private keys.
 - b] **Desktop Wallets-** In this type of wallet a user has stored the cryptographic keys in the application downloaded in the desktop of PC or Laptop and can make transactions keeping in view of the internet connection.
 - c] **Mobile Wallets-** An individual who wants to access and use crypto currency needs to install application in the Mobile phone and can make transactions with the help of cryptographic keys.
- Within the category of **Cold Wallets** there are two types:

a] **Hardware Wallets**- In this wallet the private key for users crypto currency balance is stored in a hardware USB Device which can be attached to and pulled off from a computer or laptop. As it is a hardware device it has no need of any internet connectivity.

b] **Paper Wallets**- The least used crypto currency wallet is Paper wallets as the user has to write down the information of public and private keys on a single piece of paper.

Pros and Cons of Crypto Currency Wallets:

Pros-

- Provides direct and rapid access.
- Transactions are resistant from outside parties interference.
- Wallets are secured due to encryption.
- Increase customer engagement and attract new customers who are interested in investing in crypto currency.
- They have ability to work with multiple crypto currencies.

Cons-

- It is possible to hack crypto currency wallets.
- Compulsion of internet connection in case of hot wallets.
- The data can be lost easily in case of cold wallets.
- No Regulatory authority is involved which can lead to potential risks such as scams and fraudulent wallets.
- Difficult to grasp the concept of private keys, wallet backup etc. especially for beginners.

Best Hot Wallets-

- **Coin base Wallet** - Best for Beginners
- **Meta Mask** - Best for Ethereum
- **Trust Wallet** - Best for Mobile
- **Electrum** - Best Desktop Bit coin Wallet
- **Blue Wallet** - Best Mobile Bit coin Wallet

- **Exodus** - Best for Desktop
- **Crypto.com** - Best DeFi wallet

Best Cold Wallets-

- **Keep Key** - Best Cold Wallet for Beginners
- **Ledger Nano S Plus** - Best Hardware Crypto Wallet
- **Safe Pal** - Best Hybrid Crypto Wallet

Best Crypto Currency Wallets in India-

- Ledger Live
- Trust Wallet
- Meta Mask
- Exodus
- Safe Pal
- Bitget Wallet
- Zerion Wallet
- Solflare
- MEW Crypto Wallet
- Trezor Suite Wallet

How does a Crypto Wallet Work?



Conclusion-

The security factor in Crypto Currency wallets makes it worthy to invest in it. The cryptographic keys increase the confidence to invest in crypto currency and keep the crypto in the wallets. India is the second most country with the maximum number of investors in Crypto Currency and many crypto wallets are also popular in keeping Crypto currency wallets. Crypto wallet apps are an essential tool for anyone who wants to store, manage, and transact digital transactions. These apps offer a range of features and benefits that make them a sensible investment. With block chain technology evolving, it is expected to be adopted by businesses, eventually becoming main stream. **Vrinsoft** is a leading crypto currency wallet development company in India, catering to businesses of all sizes, from startups to enterprises. They have a team of experienced and skilled developers who can build custom, secure, and user-friendly crypto currency wallet apps for various platforms, including mobile, web, and desktop.

References-

- 1) <https://www.jaroeeducation.com>
- 2) <https://www.Wikipedia.org>
- 3) <https://www.financebuzz.com>
- 4) <https://www.economictimes.Indiatimes.in>
- 5) <https://www.google.com>
- 6) <https://www.juscorpus.com>
- 7) <https://www.studocu.com>
- 8) <https://scholar.google.com>
- 9) https://icmai.in/upload/Institute/Journal/TMA_Nov_2021.pdf
- 10) <https://www.investopedia.com/terms/b/blockchain.asp>
- 11) <https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html>
- 12) <https://builtin.com/blockchain>
- 13) <https://www.vrinsofts.com/crypto-wallet-app-development/>
- 14) <https://www.techtarget.com/searchsecurity/definition/crypto-wallet-cryptocurrency-wallet>
- 15) <https://www.highenfintech.com/blogs/digital-wallets-vs-crypto-wallets>