



A STUDY ON THE AWARENESS AND PERCEPTION OF CRYPTOCURRENCY IN BANGALORE

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ABSTRACT Cryptocurrency is a digital currency which is created for the purpose of transaction as a normal currency. It uses Cryptography and Blockchain technology to secure its exchanges and limit the production of a particular type of cryptocurrency and keep track of each and every transaction in whole network. The Cryptocurrency laden with so much new age technologies and a huge market presence all over the world, but still, even after a decade of its existence, it has not attained an established image as a new age currency system among majority of the countries in the world and people are still skeptical about its worth. It's almost a decade that Cryptocurrencies are existing in all over world but still its status has not been identified as whether it will ever attain the actual currency status or it will remain as a part of investment portfolio. To know the awareness and perception level of cryptocurrency in Bangalore as it is a cosmopolitan city, the study has been carried out.

KEYWORDS : Currency, Cryptocurrency, Investment, Blockchain.

Brief Introduction

Money is something which keeps a great value in life of any living human being on this planet and its history dates back to ancient time when Gold, Silver and other metal coins were used for buying goods and other essential items.

Actually, before the dawn of Monetary System, the Barter System was the main mode of transaction i.e., people were exchanging goods in exchange of other goods of their specific need or requirements. Gradually, Barter System got replaced by Monetary System and later on different currencies came into existence which were adopted by different countries of the world. The metal coins which were predominantly used for exchange were overshadowed by Paper Money as it was easy to carry from one place to another and presence of big denominations in printed paper form helped big businesses to carry out big transactions.

Gradually, the use of cash transactions started fading away due to invention of Plastic money by the mid-20th century as it was resolving the security issues like stealing or theft of carrying large amount of cash. It became easy for people to keep a card made of plastic to use for various transactions instead of keeping huge amount of cash.

Later on, progressive development of computers and invention of Internet gave birth to Internet banking and due to further advancement of mobile phone technology, we can easily avail the facilities like mobile banking or mobile payment gateways where all transactions will be done just through one click in our mobile. Now, we do not have to carry anything but just a smart mobile phone and rest will be taken care by all the advanced technology.

Till here, we need a particular count of cash printed or minted by the Government and it will be kept in a bank through which we carry out all our transactions, which is a form of centralized system but now we have gone one step ahead and Decentralized form of currency has emerged which is being used in transactions for various purposes, known as CRYPTOCURRENCY.

Cryptocurrency is a digital currency which is created for the purpose of transactions as a normal currency. It uses Cryptography and Blockchain technology to secure its exchanges and limit the production of a particular type of cryptocurrency and keep track of each and every transaction in whole network.

Cryptography

Cryptography is an age old technology which is being used to secure data or information from being stolen or misused. In Cryptography, the data is encrypted in form of ciphertext and then decoded, so that it can be understandable by the user.

The following picture is the representation of Cryptography...

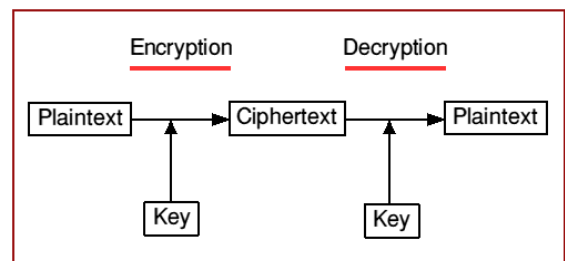


Figure- 1.1

Blockchain

The decentralized blockchain technology on which many of today's biggest cryptocurrency coins are built act as public ledgers where all of the transactions that have been performed within the network are stored for anyone to independently verify. Public ledgers are what make trustless peer-to-peer transactions possible, because the users of that digital currency know that all of the transactions on the network will be confirmed and displayed on the blockchain.

On a blockchain, transactions are recorded chronologically, forming an immutable chain, and can be more or less private or anonymous depending on how the technology is implemented. The ledger is distributed across many participants in the network — it doesn't exist in one place. Instead, copies exist and are simultaneously updated with every fully participating node in the ecosystem. A block could represent transactions and data of many types — currency, digital rights, intellectual property, identity, or property titles, to name a few. (The first crypto-currency was Bitcoin, which was created in 2009. Satoshi Nakamoto (the unknown inventor of Bitcoin) on 9 Jan 2009 announced the first release of Bitcoin, a new electronic cash system that uses a peer-to-peer network or blockchain to prevent double spending. It is completely decentralized with no server or central authority. The creation and value setting of these currencies are entirely dependent on public and market forces.

The Cryptocurrency laden with so much new age technologies and a huge market presence all over the world, but still, even after a decade of its existence, it has not attained an established image as a new age currency system among majority of the countries in the world and people are still sceptical about its worth. Even though more number of countries coming forward to regularise its use in day to day business transactions, some countries are regulating its use as part of financial investment as digital asset by devising rules and regulations but still countries like India and China are not showing any friendly stance towards the cryptocurrencies neither in form of currency nor as investment tool.

Transaction Process of Cryptocurrency

As Cryptocurrency is an entirely digital entity, so its exchange or

transaction involves all technical process which are based on computer programming, various kinds of algorithms, artificial intelligence etc. The transaction of cryptocurrency (e.g. Bitcoin) can be explained as follows-

1. A wants to send money to B.
2. The transaction is represented online as a “block”.
3. The block is a broadcast to every party in the network (assuming there are multiple networks).
4. Those in the network approve the transaction is valid (multiple confirmations).
5. The block then can be added to the chain, which provides an indelible and transparent record of transactions (with the help of address of the block chain).
6. Then the money finally moves from A to B.

Bitcoin has no intrinsic value (cannot be redeemable) Bitcoin exists only in the network (has no physical value like commodities). Hence it cannot be determined from whom the money gets transferred to which person on the other side.

Its supply is not regulated by central banks of the respective countries except few. Therefore, it is difficult to trace the transactions of crypto currencies.

The general diagrammatic representation of transaction of cryptocurrency is given below-...

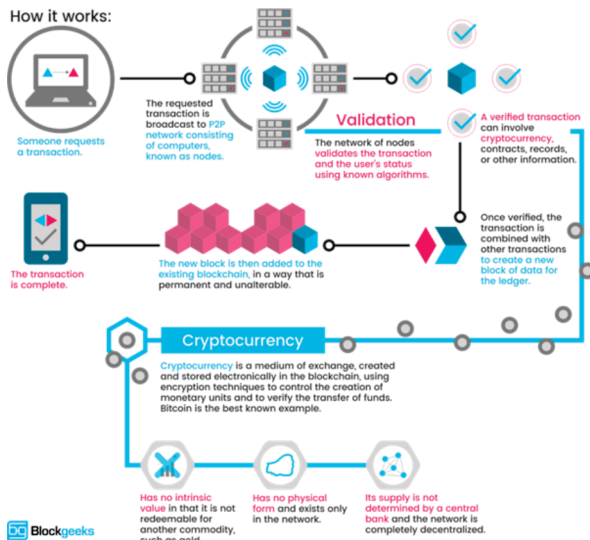


Figure- 1.2
Source: (<https://blockgeeks.com/guides/what-is-cryptocurrency/>, n.d.)

Different Types of Cryptocurrency

In all over the world, there are more than 1600 cryptocurrencies available till date and the number is growing every passing day. Some of the different cryptocurrencies are explained as follow-

Bitcoins

Bitcoin is a kind of digital currency where cryptography rules are used to control and generate the unit of currency. Bitcoin comes under umbrella of cryptocurrency and it was the first and most valuable among knowns cryptocurrency. This is also known as decentralised digital currency.

Litecoins

Litecoin is also a form of cryptocurrency. This is also known as peer-to-peer cryptocurrency. It is available as an open-source software project. It was released under the MIT/X11 license. In case of Litecoin the creation and transfer of coins follows open source cryptography protocol and algorithm. By technical comparison litecoin is almost identical to bitcoin. The minor difference is processing speed of network in both the cases. In Litecoin network speed is faster than bitcoin. Also the algorithm used in litecoin is different than bitcoin.

Ethereum

Ethereum is an open source software platform which uses blockchain

technology. This open source one can used to build and deploy decentralize applications. Similar to Bitcoin, Ethereum is also distributed to public to use as a blockchain network. The most important difference between Bitcoin and Ethereum is the way blockchain application platform is used in both the cases. The Bitcoin work for one particular application where peer to peer transaction take place and only for bitcoins but in case of Ethereum the blockchain technology/platform can be used for any decentralized application.

Namecoin

Namecoin is also falls under cryptocurrency preview and this is an experimental open source where it uses technology which can improve the security, the way decentralization take place and can also control the speed of internet for some of the network infrastructure. It uses key/value pair registration and follows the bitcoin technology for transfer system.

Ripple

Ripple is well known for digital payment system rather than for cryptocurrency. Ripple functions on peer to peer decentralize platform and it too uses the open source technology. It allows flawless money transfer independent of form of currency like bitcoin, litecoin, Yen and USD.

Auroracoin

Auroracoin is known for decentralised, peer-to-peer, and secure cryptocurrency released in 2014 in Iceland . This was as an alternative to the Icelandic Króna and purpose was to bypass governmental restrictions associated with the national fiat currency. The reason behind launching this currency as to replace the existing currency and become the official cryptocurrency of Iceland. This was the first currency which comes under country specific cruptocurrency.

Monero

Monero was launched in April 2014 and it is an open source cryptocurrency. This is represented as XMR. It mainly focuses on property where individual units are essentially interchangeable, privacy and decentralization. Monero uses an unclear public ledger, which means that anyone can do the transactions, but no outside people over network can tell the source, amount or destination. Monero uses a secure way to validate the transaction over network known as Proof of Work mechanism.

Zcash

Like Bitcoin, Zcash is also a cryptocurrency where transaction data is posted to a public blockchain. But it uses a very high security where users personal and transaction data remain completely confidential. There are very selective feature where one can disclose the transaction details for specific purpose like audit. It is highly secured over network.

Bit coin cash

Bitcoin Cash is also falls under cryptocurrency. The existing bitcoin has blocksize as 1 MB which was limited in one way to do store high number of transaction. To amend the size of the block from 1 MB to 8 MB in 2017 developers did the code change. This change was named as hard fork and it came into effect from 1st Aug 2017. Because of this change the blockchain and cryptocurrency for split into two. If anyone was owing the bitcoin when this fork was formed then he was also the ownr of same number of Bitcoin cash units.

Bitcoin private

Bitcoin Private is a cryptocurrency where user will get an option to keep the sender , receiver and amount private in a given transaction. This is completely opposite to bitcoin and other cryptocurrencies where transactions are transparent and anyone can see the details.

Issues or Challenges Associated with Cryptocurrency

As cryptocurrency is innovative in all its endeavour and have attained a unique place at global platform and people are also enthusiastic about its presence but the journey of cryptocurrencies till now is kind of roller coaster ride and the same is expected in the near future. There are so many challenges associated with the cryptocurrency which are discussed as below-

- **Regulation-** Cryptocurrency regulation is the most required aspect currently in cryptocurrency industry. As some of the countries have already regulated its use and transaction in the

current financial market but some of the countries coming forward to take friendly call towards its regulation. Until and unless, it won't be regulated throughout the world, it will be perceived as illegal means only.

- **Volatility**- As its regulation is still awaited throughout the globe, it will not be taken as stable system and there will be high fluctuations in its demand and supply, which leads to its volatile in nature, i.e. within short period of time, its value changes abruptly.
- **Security**- As it is entirely a digital asset, from its creation or mining to transaction, exchange, storage, all happens in digital form, so it is always susceptible for security threat. Any time hackers can attack any part of it and compromise its existence.
- **Cost**- Nothing comes free of cost and the asset which is entirely the creation of technology will also be more valuable. All the innovative technologies involved in it, are costly, so it comes with a price.
- **People's perception**- As the regulation of cryptocurrency across the globe is still awaited, so people still perceived as illegal means and are sceptical in making any view regarding cryptocurrency.
- **Upgradation of technology**- As the whole concept of cryptocurrency depend on the technology, and we know technology is intensively dynamic in nature. It has to be upgraded at continuous basis. The upgradation always comes with the dearer cost.
- **Theft**- This is also a major setback for cryptocurrency holders. The storage of the keys of cryptocurrencies is a huge risk which is once stolen cannot be recovered and as it is not completely regularised product across the world. Therefore, theft is a major challenge in safeguarding this digital asset.
- **Risk for investors and users**- The cryptocurrency is still in its early stage, even though it has attained its age of one decade (Origin of Bitcoins, 2009) but it has not accepted by many countries of the world, so still no proper regulation has come to axe it under some set of rules, regulation and laws. Therefore, due to lack of regulation, it is very volatile in nature which impose great risk appetite to its users and investors.

Significance/ Need for the study

Cryptocurrency is a new age technology based digital currency and its popularity is increasing among people gradually but the Government and regulatory authorities are still doubtful about its use and there are many legal and security issues linked with it. Cryptocurrencies are mainly being used as investment tool and it is highly volatile in nature. So it is imperative to study the effectiveness of cryptocurrency as investment tool among people in Bangalore by knowing their awareness and perception levels.

Industry Profile of Cryptocurrency

Cryptocurrency is a digital currency which is entirely intangible in nature and involves cryptography and blockchain as major technological backbone in its creation and further processing like transactions, distribution and security of different cryptocurrencies.

The first Cryptocurrency, which was created in January'2009 by a pseudonymous inventor named Satoshi Nakamoto, was BITCOIN and after that so many altcoins have been created till date. Many countries of the world have taken friendly stance towards the acceptance and regularisation of cryptocurrency but still, there are many countries in the world which are sceptical about its regularisation including India too. There are many issues linked with cryptocurrency like volatility, security, legal issues etc.

The estimation of exact market size of any industry is a difficult task and in case of cryptocurrency, it is herculean task to do its industry profile as it is highly volatile in nature. Every then and now its valuation differs with a great extent. In recent time i.e. in last two years, the cryptocurrency, especially Bitcoins have emerged as the major player in the market capitalization all across the globe.

Market Capitalization means the number of coins available in the market multiplied by the current market price of that coin in prevailing market.

The graph below (Figure 2.1) showing the trend of market capitalization of bitcoins from April, 2013 to December, 2018. It can be observed from the graph that valuation of Bitcoins is very short lived.



Figure-2.1
Source: ((coinmarket.com, n.d.), n.d.)

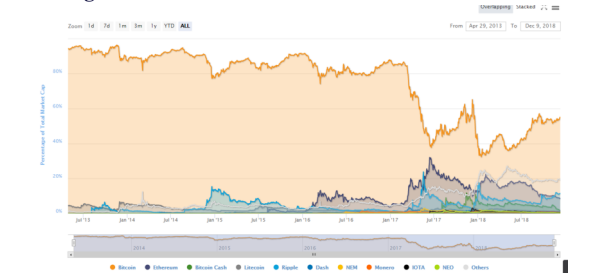
The graph below (Figure-2.2) is showing almost similar trend as Figure-2.1 but without considering Bitcoins. The Market Capitalization of cryptocurrency (including Bitcoins and Altcoins) was in astronomical growing trend since last one and half year, i.e. Jan, 2017 to mid of the 2018 but after that it is showing continuous downward sloping trend and volatility is in high range.



Figure-2.2
Source: ((coinmarket.com, n.d.), n.d.)

The Figure-2.3 is showing percentage of Total Market Capitalization of Bitcoin and other popular altcoins.

Percentage of Total Market



Capitalization
Figure-2.3
Source: ((coinmarket.com, n.d.)

ICO (Initial Coin Offering)

Initial Coin Offering (ICO) is just like IPO (Initial Public Offering) where companies offer their shares to general public to raise the funds, same way cryptocurrencies which are new in market traded through the ICOs and transactions happen either in exchange of regulatory currency or other cryptocurrencies. The ICOs have seen upsurge in recent time.

Growth Drivers

• **Economic Expansion**

Important factor in the rise of the cryptocurrency market is the current economic expansion. Observing the history of cryptocurrencies – with blockchain and Bitcoin coming into existence in 2009 and Bitcoin's subsequent exponential growth after 2013 – it is easy to see that as market fears calmed after the 2008 recession, investors' appetite for risk returned to pre-recession levels. And as the stock market experienced an almost all-time record year in 2017, investor confidence upsurge to historic highs as well – a perfect environment

for the growth of a new type of risky investment asset.

• **Blockchain Technology**

Blockchain has taken the technology world like a storm with the rise of Bitcoin. Prior to the invention of blockchain technology, bitcoin and the rest of the cryptocurrency world were virtually worthless. Blockchain technology is simply a ledger that contains a sequence of transactions in the form of blocks that update automatically across a series of independent databases located in multiple geographic locations, which provide the base for Decentralised system. This technology has great implications for many industries but has already had fast effects on the currency and financial technology area. Cryptocurrency gets its value because of increased efficiency, decreased transaction costs, and heightened security which are provided by blockchains. It permits for users to make unforgeable and verifiable transactions, whereas avoiding the digital fees sometimes enacted by banks for on-line transactions. Since its introduction in 2008, the worth of cryptocurrencies has fully grown at astronomical rates, that explains the exuberance and entrance into reverse mergers for digital assets. That growth and also the integration of blockchain the monetary sector is anticipated to continue.

• **Investor Appetite**

One of the key drivers of the expansion seen within the crypto market has merely been an outsized increase in capitalist craving. Over the course 2017, cryptocurrencies received an outsized quantity of attention from investment and government establishments that legitimized them as investment assets. In Feb and Apr, Japan issued laws requiring cryptocurrencies to register with the monetary services agency – a step towards the legalisation of cryptocurrencies. In June, Goldman Sachs declared that because of widespread demand, their markets division would begin covering Bitcoin. Further CME declared it'd begin issuance of Bitcoin derivatives. All of these events, among others, showcase the confined capitalist demand for cryptocurrencies.

Attractive Investment Features

Decentralized: Monetary policy set by central banks might cause devaluation of centralized currencies. Whereas cryptocurrencies aren't controlled by any government and so aren't subject to the need of central banks and are majorly controlled by market dynamics.

Secure: Cryptocurrencies, by its inherent definition, are secure. The decentralized nature of blockchain technology permits for unforgeable, verifiable transactions to take place across geographic locations. This evaporates various kinds fears critics have raised for the past decade concerning cryptocurrencies.

Completely Digital: As cryptocurrencies are completely digital, there are no transportation charges whatsoever, nor transaction charges. Even banks through internet banking charges some fees for transactions on regular basis, while the digital nature of cryptocurrencies considerably decreases the price of digital transactions.

Growth in Value: With the advancement of technology capable of utilising cryptocurrencies, the market has shown that there's an uptrend of seeking digital currencies. As a result, cryptocurrencies have a become a valuable technique for holding and appreciating wealth.

Untapped Uses: Investors are observing that this is just the start of the uptrend for cryptocurrencies. Still there are many applications that are either has to be start or to be explored. These may include smart contracts, ESOP's, capital raising and likewise many more.

Growth Restraints

• **Regulation**

Regulator treatment of cryptocurrencies has not been completely decided yet, however uncertainty over the future regulations to be placed on the investing and trading in the crypto market is a major hindrance to the growth crypto market. In fact, a lack of [regulatory oversight scares many wannabe investors away](#) and lends to the stereotype that cryptocurrencies are used only by illicit users looking to launder money. Many investors are worried that governments are looking to completely ban the use of cryptocurrencies and has already taken place in some countries. Additionally, as regulators around the world have seen the appreciation in the crypto market and hope to capitalize on its growth, questions have been raised about the tax norms of cryptocurrencies. This year, the SEC disapproved of a

Bitcoin ETF and declared tokens were “securities” thereby restricting their legal use to that of a normal security (only investment purpose). Later in same year, the Chinese Central Bank declared that ICO's were illegal. The crypto market has proven to be even more sensitive to news on regulation and government treatment than traditional stock exchanges. This trend of sensitivity, combined with continued uncertainty, will curb the growth of cryptocurrencies. As still developed world is trying to understand and institutionalize cryptocurrencies.

• **Volatility**

As previously observed, the crypto market has seen extreme levels of volatility over the course of its growth and expansion. Although certain investors would view this trend positively, there is a large portion of the world's capital that is off-limits to cryptocurrencies because of their high volatility. Cryptocurrencies are so volatile for many reasons including:

- Lack of Intrinsic Value
- Lack of Regulatory Framework
- Lack of Institutional Capital

Many of these are characteristic of immature and newly created markets and should be resolved over the course of the coming decade as the market matures. But until these issues are resolved, volatility will continue to play major role in crypto market.

• **Cybercrime**

Last but not the least, the growth of the cryptocurrency market is confined to the degree to which it can assure all the investors that their money will be safe. This seems to be traditional investing logic, but with the innovative nature of cryptocurrencies, investors are particularly cautious about the safety of their invested capital. Despite the security facilitated by blockchain technology, the crypto world is still entirely digital and therefore vulnerable to cyber-attacks. This has already occurred multiple times over the past five years with hundreds of millions of dollars being stolen by hackers all across globe.

Research Methodology

Review of Literature

1. Akshay A., Shivashankarachar Y. - “*A Study On Security Issues In Investments And Transactions In Bitcoins And Cryptocurrencies*” In this paper, they have focused on the unique characteristics of Bitcoin as a Cryptocurrency and the major security issues related with the transaction and investment of Bitcoins. The security of the Bitcoins is the major area of research. As its origin is mainly technology based but it is still vulnerable during transaction process. The security issue is not related only to the mining and transaction of Bitcoins but its online storage also poses major security threat. This paper also pointed out the other risks associated with Bitcoins like no regulation regarding its transaction in India. Therefore, no considerations regarding any kind of grievances related to the Bitcoins. Other issues are like less awareness among people about bitcoins, volatility, transactions of Bitcoins by illicit users as it is part of decentralised system, no central regulation etc.

2. Everett J. & Team, Department of US Treasury - “*Risks and Vulnerabilities of Virtual Currency- Cryptocurrency as a Payment Method*” In this paper, authors have explored the risks and challenges for the use of cryptocurrencies as an alternative to traditional currencies for illicit users, consumers, the official sector, and financial institutions. Through exploring the cryptocurrency needs and requirements for each of these groups, it is easy to understand which groups are most likely to navigate to specific cryptocurrencies, and then develop an appropriate response. The emergence of cryptocurrencies as a new method of payment has broad implications for illicit users, consumers, the official sector, and financial institutions. There are significant risks and challenges that must be overcome before these users adopt and accept cryptocurrencies to conduct financial transactions on a large scale. This adoption will require adaptation of the cryptocurrency protocols and regulation to meet the requirements of each of these perspectives.

3. Jeffrey Mazer, Financial & Investment Analysts, USA – “Demystifying Cryptocurrencies, Blockchain, and ICOs” The Jeffrey Mazer is a Freelancer Financial Expert in USA. He provides his expertise to various organisations and institutions for financial analysis. In this article he has explained each and every concept related with Cryptocurrency like what is cryptocurrency,

technology used in Cryptocurrency like Blockchain and cryptography. How transaction process takes place in cryptocurrency through blockchain system, how miners complete the process of transactions. He has also explained the various kinds of cryptocurrencies and market capitalisation of Bitcoins and other altcoins along with Initial Coin Offering (ICOs). He has also discussed the issues related with cryptocurrencies all across the world and also discussed about its regulation by Governmental agencies across the globe.

4. Christian Catalini, MIT Expert- “Blockchain, Explained”

In this Blog (MIT Digital), the author has explained in detail about the Blockchain Technology and its origin linked with the origin of cryptocurrency. He has emphasized that blockchain technology has provided the basic inherent values to Cryptocurrency like low cost of verification and networking, privacy and security etc. He has also explained how this blockchain technology will disrupt other sectors like Banking, Finance, Money Transfer, Money Payments, Identity & Privacy, Internet of Things, Robotics, Artificial Intelligence etc. He has predicted that the blockchain technology will be booming all over the globe in coming decade.

5. World Crypto Index (Cryptocurrency Guide, News and Reviews)

This platform is available online which provides all the basic as well as extensive knowledge about cryptocurrency and daily updates of the Cryptocurrency. It also keeps track records of cryptocurrency market where all the cryptocurrencies are being traded. The cryptography technology is very well explained here and how this technology makes cryptocurrencies the most secure form of transaction system all across globe. Further, it has been explained that how Cryptography technology can change the future of Central Banking and Financial Institutions Safety and Security system.

6. Sudhir Khatwani (CoinSutra) – “Future of Bitcoin and other Cryptocurrencies in India after RBI’s Ban”

In this article, it has been discussed that what is the scenario of Bitcoins and other Cryptocurrencies in Indian Market after the RBI’s ban of transaction of these virtual currencies in INR (fiat money) through its own entities like banks and other financial institutions. The author has discussed the various implications against the ban of the transactions of these cryptocurrencies through banks. He has pointed out that the same stand was taken by Chinese Government and it resulted in upsurge demand of cryptocurrencies by crypto investors through other channels. The same can be done in India also because there are other platforms and peer to peer transaction facilities available to buy and sell cryptocurrencies in India. He has also emphasized on the innovative technology used in Cryptocurrency, i.e. Blockchain which is going to be the new Dot Com Boom in the world in coming decade and by banning the Cryptocurrency in India, the millennial investors and technocrats will miss a chance to establish themselves in this field. He has suggested that, though the case is pending in Supreme Court, the RBI will mend his stand on the cryptocurrency and try to regularise it as investment purpose for diversified financial asset category to minimise its illegal trading in the black market.

7. Peter De DeVries – “An Analysis of Cryptocurrency, Bitcoin and the Future”

In this research paper, author has done the SWOT Analysis of Bitcoins along with the other Cryptocurrency and has given conclusion on its future perspective. The **Strength** of the bitcoins lies within its design and limited number of its production which will never face inflation pressure. The **Weakness** of the Bitcoins, again lies in its transaction process where each and every transaction is visible to all public ledger chains which can be susceptible for some cyber-attacks and thefts. The **Opportunity** can be observed through, by extending the innovative technologies involved in Cryptocurrency like Cryptography and Blockchain to current Banking and Financial System which can be made more secure and decentralized system. The **Threats** are related with the high volatile nature of these virtual cryptocurrency, which can be stabilised across the globe, if it can be regularised uniformly. The future is still uncertain particularly for these currencies but the technologies associated with it, will be the new boom across the globe.

8. Shailak Jani- “The Growth of Cryptocurrency In India: Its Challenges & Potential Impacts on Legislation”

In this Research Paper the author has tried to explain how technology has led to the origin of Cryptocurrency and its growth trend in global market as well as its business in Indian market. The paper also focusses on the expectations and confidence of the users towards

cryptocurrency. The paper also envisages that how 21 countries of the world have reacted towards cryptocurrency i.e. whether Friendly or Neutral or Hostile stance towards it. The paper also listed the issues and challenges faced by Cryptocurrency.

Statement of the problem

Project Title – “A Study on the Awareness and Perception of Cryptocurrency in Bangalore”

The problem of the study: The Cryptocurrencies can be utilized just like our traditional currency for transaction purpose but still the Regulatory Authority as well as Government are sceptical about its use. It's almost a decade that Cryptocurrencies are existing all over world but still its status has not been identified as whether it will ever attain the actual currency status or it will remain as a part of investment portfolio. People are also not much aware about the worth of cryptocurrency and mostly they perceive it as illegal means.

Objectives of the Study

1. To study the awareness and perception level of cryptocurrency among people in Bangalore.
2. To determine the willingness of people to choose Cryptocurrency as an investment tool.
3. To study the future prospect of cryptocurrency in India through people's perception.

Scope of the Study

As Cryptocurrency is a digital currency which has not been perceived as legal means of transaction for day to day activities till now in majority of the countries in the world. In India too, it has not been taken positively by the Government or Regulatory Authority, as currently RBI has issued notice to ban any transaction related to Cryptocurrency through any bank in the country. So the study of its awareness and perception among people which is mainly based in Bangalore will give some insight on how people have perceived its presence in our own country. As Bangalore is a cosmopolitan city, it represents the population of various states of the country. So this study will reflect the overall perception of Indian people.

The samples under study were employed people in various public/private/educational institutions, Business community, unemployed categories and students but limited to Bangalore City only. As survey was done through Google Survey Form, so it was restricted to the people who have online connectivity.

Operational Definition of the Concepts

- **Cryptocurrency** is an intangible currency which is purely characterised by digital technology. It is designed by the amalgamation of innovative technologies like Cryptography and Blockchain.
- **Cryptography** is an old age technology where data is in the form of codes which can be decoded by specific receiver of that data. Currently, Cryptography is highly evolved technology from its inception stage which provide enhanced security feature to Cryptocurrency.
- **Blockchain** is the other major technology involved in cryptocurrency which provides basis for its transaction and accounts easy. The decentralisation of cryptocurrency is possible due to Blockchain technology only.
- As the study consists of two variables, comprised of Awareness and Perception of people regarding Cryptocurrency.
- **Awareness** is the knowledge or recognition of anything.
- **Perception** emphasize on how people understood or interpret by awareness of that thing. In Perception process, due to exposure of certain stimulus some sensation arises which sends the signal to the brain and it interpret the result about stimulus. So in the process of perception first in the process of understanding the world around us, first step is attention which creates sensation to the brain and then interpretation will happen.

So these both variables have been studied through Survey Method which comes under Exploratory Research by the means of Questionnaire.

Methodology

The Research Design for this study is mainly based on Exploratory Research method which involves qualitative investigation in most of the cases. It is the simplest and most loosely structured design. The data have been collected through Primary Data collection which involves

Survey Method based on questionnaire. The options in each question is either multiple choice or Likert Scale Rating type.

The questionnaire was circulated to some specific part of Bangalore region in form of Google Survey Form, to measure their awareness and perception of cryptocurrency. The questionnaire was prepared keeping in mind to cover all the demographics like male, female, age group starting from 20 years and above, working (public/private/educational institutions), business people, non-working, students etc. Even different annual income groups have been taken into account.

The two variables which were under study have been measured accurately through tables and graphs and results have been interpreted. On the basis of results and interpretations, findings, conclusion and suggestions have been given.

Other than Primary Data, Secondary Data have also been collected for the study of general growth trend among Cryptocurrency market in India and the world. The secondary data are mainly collected through online platforms like websites, blogs, articles etc. The data have also been collected from books, journals, newspaper etc.

Sampling

The Sampling is mainly convenience sampling based in Bangalore. The questionnaire was distributed especially to working class community, business & students and their responses were collected which formed the basis of study. As the questionnaire was in Google Survey Form, so it was easy to reach to different sampling units in Bangalore region.

Sources of Data

The data collected through Primary data which was collected for the first time through Survey Method (Exploratory Research) and Secondary sources which were already available through books, websites, journals, articles etc. were collected to understand the actual understanding of people towards Cryptocurrency at local and global level.

Tools for Data Collection

Primary data collected through Survey method, based on Questionnaire, circulated in the form of Google Forms online. Secondary data referred from various articles, journals, research studies available online, newspapers etc.

Plan of analysis

The data collected through Questionnaire were drafted in Table format and then results were analysed through Bar diagram and Pie charts and results were interpreted for different sampling units to determine their awareness and perception level about Cryptocurrency. The future prospect was predicted on those interpreted results.

Limitations of the Study

There are few limitations in the study like-

1. As the sampling taken were convenience sampling, so it might not necessarily be the representation of the actual population of the Bangalore region.
2. As the survey was circulated through Google Survey Forms, which require internet connection. So, this study is limited to the internet users only.
3. Some of the respondents of sampling units filled the survey without any interest and knowledge, which lead to sampling error to some extent.
4. Cryptocurrency is a global product, but this study is mainly based on the people of Bangalore, so it will not give clear picture of its adoption at larger platform as people really want to have this as currency or investment tool.

Learning Outcomes

By carrying out this project, I learned many different things like-

- Concepts related to the cryptocurrency and different technologies involved in it.
- All the issues linked with cryptocurrency in domestic and global context.
- The industry performance of cryptocurrency across the globe.
- The views of people and government regulatory agencies towards cryptocurrency at national and international level.
- Simultaneously I learned how to do a research analysis through survey method.

- Learnt the basic tools like creating Google Survey Forms, use of MS Excel as a tool in research study etc.

Data Analysis

The data analysis includes the processing of all the data collected through survey in form questionnaire, to convert it some usable form, so that required information can be extracted and conclusion can be drawn from that information.

The data collected through primary data sources (questionnaire survey method) were tabulated and calculated in percentage form. Analysis were done on the basis of tabulated data. The further analysis of data was done either through bar graph (2D diagram) or Pie Chart and interpretations were carried out on the basis of those graphs.

As the questionnaire consisted of 16 questions and had either multiple choice questions or Likert Scale based questions, so accordingly tables have been created and graphs were plotted. On the basis of Tables and Graphs, the data has been analysed and interpreted.

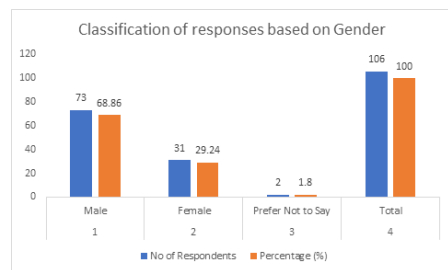
Data Analysis of all the questions of the questionnaire are given below-

Table 4.1 Shows number of respondents on the basis of Gender.

SL.No	Response	No of Respondents	Percentage (%)
1	Male	73	68.86
2	Female	31	29.24
3	Prefer Not to Say	2	1.8
4	Total	106	100

Analysis

Among all the respondents 73 are male, 31 are female and 2 respondents are not in favour of disclosing their gender.



Graph 4.1 Shows number of respondents on the basis of Gender

Interpretation

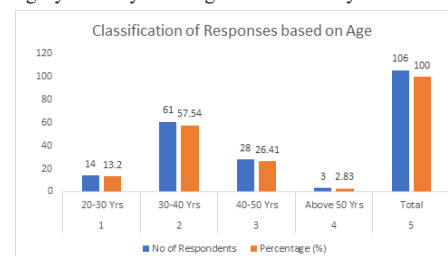
From the above table and graph, it can be observed that, among all the respondents 68.9% are male, 29.24% are female and 1.8% fall into category who are not willing to disclose their gender.

Table 4.2 Shows number of respondents on the basis of Age Category.

SL.No	Response	No of Respondents	Percentage (%)
1	20-30 Yrs	14	13.2
2	30-40 Yrs	61	57.54
3	40-50 Yrs	28	26.41
4	Above 50 Yrs	3	2.83
5	Total	106	100

Analysis

Among all respondents, 14 belong to the age category of 20-30 years, 61 belong to the 30-40 years age category, 28 belong to the 40-50 years of age category and only 3 belong to the above 50 years.



Graph 4.2 Shows number of respondents on the basis of Age Category.

Interpretation

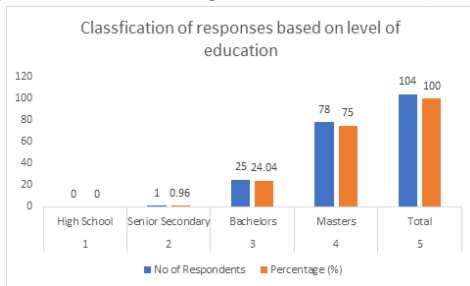
From the above Table and Graph, it can be observed that among all respondents 13.2% belongs to 20-30 years of age group, 57.54% in 30-40 years, 26.41% in 40-50 years and 2.83% fall in above 50 years of age.

Table 4.3 Shows number of respondents on the basis of their educational qualification.

SL.No	Response	No of Respondents	Percentage (%)
1	High School	0	0
2	Senior Secondary	1	0.96
3	Bachelors	25	24.04
4	Masters	78	75
5	Total	104	100

Analysis

Among all the respondents, only 1 respondent has Senior Secondary as Educational Qualification, 25 respondents have Bachelor Degree and 78 respondents have Master Degree as their Educational Qualification.



Graph 4.3 Shows number of respondents on the basis of their educational qualification.

Interpretation

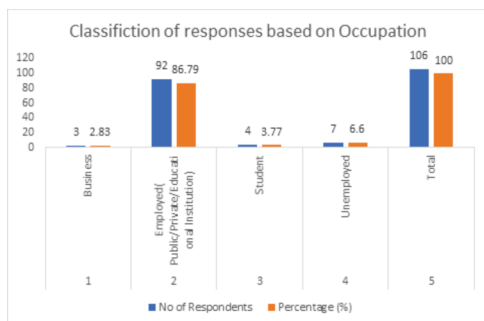
From the above table and Graph, it can be observed that among all respondents 0% belongs to High School, 0.96% belongs to Senior Secondary, 24.04% belong to Bachelor degree and 75% belong to Master degree.

Table 4.4 Shows number of respondents on the basis of their Occupation.

Sl. No	Response	No of Respondents	Percentage (%)
1	Business	3	2.83
2	Employed(Public/Private/Educational Institution)	92	86.79
3	Student	4	3.77
4	Unemployed	7	6.6
5	Total	106	100

Analysis

Among all respondents, 3 are Business persons, 92 respondents are employed in various sectors, 4 are students and 7 are unemployed.



Graph 4.4 Shows number of respondents on the basis of their Occupation.

Interpretation

From the above Table and Graph, it is observed that among all respondents 86.79% are employed (public/private/educational

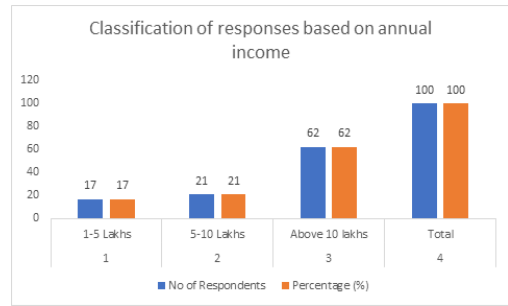
institution), 6.6% are unemployed, 3.77% are students and 2.83% are business class.

Table 4.5 Shows number of respondents on the basis of their annual income.

SL.No	Response	No of Respondents	Percentage (%)
1	1-5 Lakhs	17	17
2	5-10 Lakhs	21	21
3	Above 10 lakhs	62	62
4	Total	100	100

Analysis

Among all respondents, 17 earn in-between 1-5 lakhs of annual income, 21 respondents earn in-between 5-10 lakhs and 62 respondents earn more than 10 lakhs.



The Figure 4.5 Shows number of respondents on the basis of their annual income

Interpretation

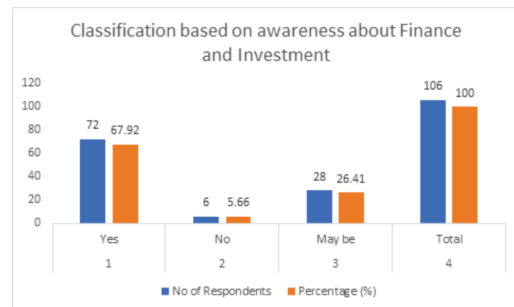
From the above Table and graph, it can be observed that among all respondents, 62% earn above 10 lakhs, 21% fall under 5-10 lakhs and 17% are in between 1-5 lakhs.

Table 4.6 Shows number of respondents on the basis of their awareness of Finance, Banking and Investment.

SL.No	Response	No of Respondents	Percentage (%)
1	Yes	72	67.92
2	No	6	5.66
3	May be	28	26.41
4	Total	106	100

Analysis

Majority of the respondents, i.e. 72 are well aware about their Finance, Banking and Investment. Only 6 respondents are not aware about it and 28 respondents are not sure about their knowledge of Finance, Banking and Investment.



Graph 4.6 Shows number of respondents on the basis of their awareness of Finance, Banking and Investment.

Interpretation

From above Table and Graph, it can be observed that, among all respondents 67.92% are aware about their finances & investments, 5.66% respondents are not aware and rest 26.41% are not sure about it.

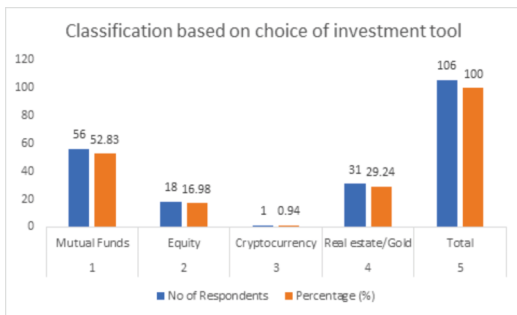
Table 4.7 Shows number of respondents on the basis of their favourite Investment tool.

SL.No	Response	No of Respondents	Percentage (%)
1	Mutual Funds	56	52.83
2	Equity	18	16.98
3	Cryptocurrency	1	0.94

4	Real estate/Gold	31	29.24
5	Total	106	100

Analysis

Among all the respondents, 56 respondents favoured the Mutual Funds as their favourite investment tool. 18 respondents favoured Equity, 31 favoured Real Estate/Gold as their investment tool and only one responded in favour of Cryptocurrency.



Graph 4.7 Shows number of respondents on the basis of their favourite Investment tool.

Interpretation

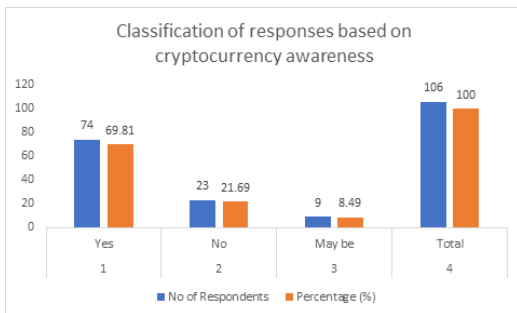
From the above Table and Graph, it can be observed that 52.83% respondents have responded for Mutual Funds as their preferred investment then 29.24% as Real Estate/ Gold, 16.98% as Equity and only 0.94% have chosen cryptocurrency as their preferred investment tool.

Table 4.8 Shows number of respondents on the basis of their Awareness of Cryptocurrency.

SL.No	Response	No of Respondents	Percentage (%)
1	Yes	74	69.81
2	No	23	21.69
3	May be	9	8.49
4	Total	106	100

Analysis

The maximum number of respondents, i.e. 74 are aware about cryptocurrency, 23 respondents are not aware at all and 9 are not sure about it.



Graph 4.8 Shows number of respondents on the basis of their Awareness of Cryptocurrency

Interpretation

From the above Table and Graph, it is observed that 69.81% respondents are aware of Cryptocurrency, 21.69% do not know about it and 8.49% are not sure about Cryptocurrency.

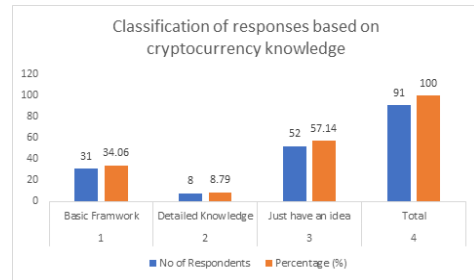
Table 4.9 Shows number of respondents on the basis of their knowledge of Cryptocurrency.

SL.No	Response	No of Respondents	Percentage (%)
1	Basic Framework	31	34.06
2	Detailed Knowledge	8	8.79
3	Just have an idea	52	57.14
4	Total	91	100

Analysis

Among all the respondents, 31 respondents know the basic framework of Cryptocurrency, 8 respondents have detailed knowledge about

cryptocurrency and 52 respondents have only some idea about cryptocurrency.



Graph 4.9 Shows number of respondents on the basis of their knowledge of Cryptocurrency.

Interpretation

From the above Table and Graph, it is observed that 57.14% respondents have an idea about Cryptocurrency, 34.06% respondents know about its basic framework and 8.79% are well knowledgeable in Cryptocurrency.

Table 4.10 Shows number of respondents on the basis of their preference to choose Cryptocurrency as.

SL.No	Response	No of Respondents	Percentage (%)
1	Currency	35	38.04
2	Investment tool	57	61.95
3	Total	92	100

Analysis

Among all the respondents, 35 respondents prefer to see cryptocurrency as Currency form and 57 respondents prefer it to be like Investment tool.



Graph 4.10 Shows number of respondents on the basis of their preference to choose Cryptocurrency as.

Interpretation

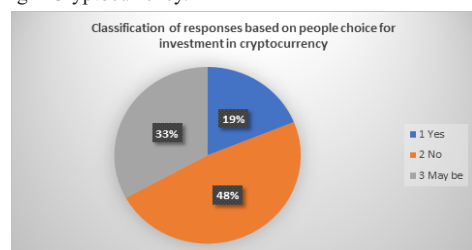
From the above Table and Chart, it is observed that 38.04% of respondents want to see Cryptocurrency as Currency and rest 61.95% are in favour of Investment tool.

Table 4.11 Shows number of respondents on the basis of their choice whether to invest in Cryptocurrency or not.

SL.No	Response	No of Respondents	Percentage (%)
1	Yes	20	18.87
2	No	51	48.11
3	May be	35	33.02
4	Total	106	100

Analysis

Among all the respondents, 20 respondents have shown their interest to invest in Cryptocurrency, 51 respondents are not in favour of investing in Cryptocurrency and 35 respondents are not sure about investing in Cryptocurrency.



Graph 4.11 Shows number of respondents on the basis of their choice whether to invest in Cryptocurrency or not.

Interpretation

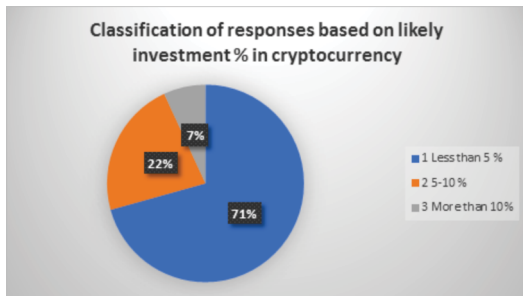
From the above Table and Pie chart, it can be observed that 18.87% respondents are agree to invest in Cryptocurrency, 48.11% respondents are not in favour of investment in Cryptocurrency and 33.02% are not sure about it.

Table 4.12 Shows number of respondents on the basis of income range.

SL.No	Response	No of Respondents	Percentage (%)
1	Less than 5 %	41	38.68
2	5-10 %	13	22.41
3	More than 10%	4	6.91
4	Total	58	100

Analysis

Among all the respondents, 41 are ready to invest less than 5% of their annual income, 13 respondents are interested in investing 5-10% of their annual income and only 4 respondents have shown interest to invest more than 10% of their annual income.



Graph 4.12 Shows number of respondents on the basis of income range.

Interpretation

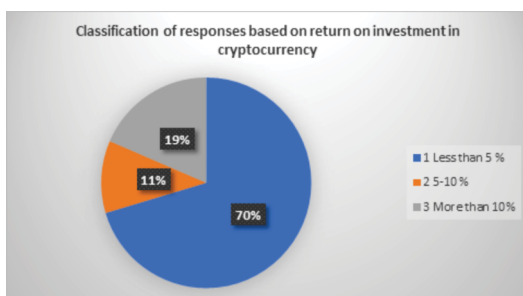
From the above Table and Chart, it is observed that 38.68% would like to invest in Cryptocurrency but less than 5% of their total annual income, 22.41% would like to invest in the range of 5-10% of their annual income and 6.91% respondents would like to invest more than 10% of their annual income.

Table 4.13 Shows number of respondents on the basis of their Return on Investment in Cryptocurrency.

SL.No	Response	No of Respondents	Percentage (%)
1	Less than 5 %	19	70.37
2	5-10 %	3	11.11
3	More than 10%	5	18.52
4	Total	27	100

Analysis

Very less number of respondents have invested in Cryptocurrency. So number of responses are very less. So among all the responses, 19 respondents have got less than 5% of return on investment in Cryptocurrency. 3 respondents have got in between 5-10% of return on investment in cryptocurrency and 5 respondents have got more than 10% of return on investment in Cryptocurrency.



Graph 4.13 Shows number of respondents on the basis of their Return on Investment in Cryptocurrency.

Interpretation

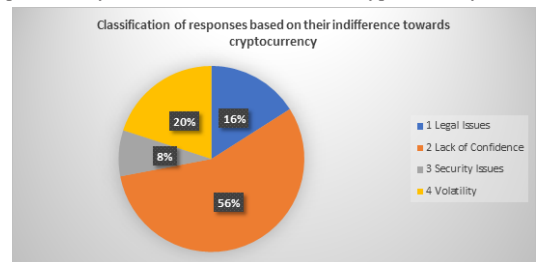
From the above Table and Chart, it is observed that 70.37% respondents got less than 5% of return on investment in cryptocurrency, 11.11% got in between the range of 5-10% of return and 18.52% got more than 10% of return on investment in Cryptocurrency.

Table 4.14 Shows number of respondents on the basis of their indifference towards Cryptocurrency.

SL.No	Response	No of Respondents	Percentage (%)
1	Legal Issues	12	16
2	Lack of Confidence	42	56
3	Security Issues	6	8
4	Volatility	15	20
5	Total	75	100

Analysis

Among all the respondents, 12 respondents have sought the reason as legal issues attached with cryptocurrency as their indifference towards cryptocurrency, 42 respondents have shown that they do not have confidence in cryptocurrency, 6 respondents sought the reason as security issues related with cryptocurrency as their indifference towards it and 15 respondents have given the high volatile nature of cryptocurrency as their indifference towards cryptocurrency.



Graph 4.14 Shows number of respondents on the basis of their indifference towards Cryptocurrency

Interpretation

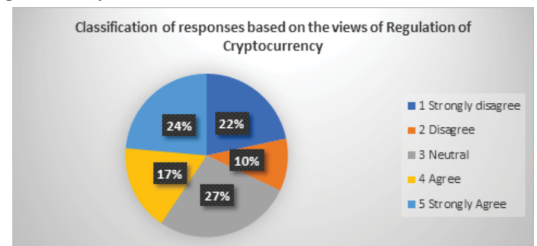
From the above Table and Chart, it is observed that 16% respondents have shown their disinterest towards Cryptocurrency due to legal issues, 56% have shown their lack of confidence in Cryptocurrency, 8% see security reasons as their lack of interest towards cryptocurrency and 20% sought the reason of disinterest as volatile nature of Cryptocurrency.

Table 4.15 Shows number of respondents on the basis of their view on regulation of Cryptocurrency.

SL.No	Response	No of Respondents	Percentage (%)
1	Strongly disagree	23	21.7
2	Disagree	11	10.38
3	Neutral	29	27.36
4	Agree	18	16.98
5	Strongly Agree	25	23.58
6	Total	106	100

Analysis

Among all the respondents, 23 respondents are strongly disagreeing for regulation of cryptocurrency, 11 respondents are disagreeing with its regulation, 29 respondents are in neutral position, 18 respondents are in agreement with the regulation of cryptocurrency and 25 respondents are strongly agreeing with the regulation of cryptocurrency.



Graph 4.15 Shows number of respondents on the basis of their view on regulation of Cryptocurrency.

Interpretation

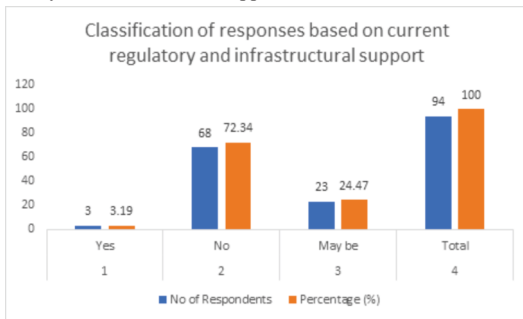
From the above Table and chart, it is observed that, the Government of India and other Regulatory Authorities of India should regularise it or not, so for this 21.70% have shown their strong disagreement, 10.38% have shown disagreement, 27.36% are in no opinion category, 16.98% are in agreement and 23.58% are in strong agreement.

Table 4.16 Shows number of respondents on the basis of their views on current regulatory and infrastructural support for cryptocurrency in the country.

SL.No	Response	No of Respondents	Percentage (%)
1	Yes	3	3.19
2	No	68	72.34
3	May be	23	24.47
4	Total	94	100

Analysis

Among all the respondents, 3 think that we have all the regulatory and infrastructural support, 68 respondents are in view that we do not have regulatory and infrastructural support and 23 are not sure about it.



Graph 4.16 Shows number of respondents on the basis of their views on current regulatory and infrastructural support for cryptocurrency in the country.

Interpretation

From the above Table and Graph, it is observed that 72.34% respondents have accepted that we do not have all the regulatory and infrastructural support, 24.47% are not sure about it and 3.19% are in agreement that we have all kinds of support to regulate it.

Key Findings, Suggestion, Conclusion

Findings of the study

From the Data Analysis and Data Interpretation, following findings have emerged-

1. Majority of the respondents are Male.
2. Most of the respondents fall in the age category of 30-40 years.
3. Majority of the respondents are having Master degree as their highest level of education.
4. Most of the respondents are in Employed category i.e., employed in either public, private or educational institutions.
5. Most of the respondents earn more than 10 lakhs of Annual Income.
6. Among all respondents, majority of the respondents are well aware about their finance, banking and investment area.
7. Mutual Funds are the most favourite investment tool for majority of the respondents followed by Gold/Real Estate.
8. **Around 75% of the respondents are aware about the Cryptocurrency.**
9. Almost half of the respondents have an idea about Cryptocurrency. Very limited number of respondents have extensive knowledge of Cryptocurrency.
10. **Majority of the respondents feel that Cryptocurrency should be regularised as Investment tool.**
11. **Half of the respondents are not in agreement to invest in Cryptocurrency** and rest 35% are not sure about it. Only 15% are ready to invest in cryptocurrency.
12. Among the respondents, those who are ready to invest in Cryptocurrency, majority would like to invest around 5% of their annual salary.
13. Among the respondents, those who have already invested in Cryptocurrency, majority have got around 5% of return followed by more than 10% of return on investment in Cryptocurrency.

14. **Those respondents who have not shown interest in Cryptocurrency have sought the reason as 'Lack of Confidence in Cryptocurrency' followed by volatility and legal issues.**
15. **Almost half of the respondents are in view that Government of India should regularise the use of Cryptocurrency.**
16. Majority of the respondents have opinion that we do not have infrastructural and regulatory support required for Cryptocurrency adoption.

Suggestion

1. As cryptocurrency is a part of decentralized system and it is available across the globe, so it is aptly required to regulate its use to stabilise its demand, as it is very volatile in nature. Its regulation is also important to mitigate its use by illicit users.
2. As Cryptocurrency inherently imbibe the most innovative technologies of the world currently, so imposing complete ban on it, will be a loss to the millennial generation to learn and experience such innovative product. Therefore, its regulation is justifiable.
3. As this study was conducted on a very small scale, so the data collected and their findings might be differed from actual perception of people. Therefore, it is advisable and recommendable to conduct a study on large scale to have extensive idea about people's perception. So that it can provide a base for the Government and its regulatory agencies to make their decisions properly.
4. The Sampling Units chosen were mainly Convenience sampling units which formed the basis of this research study but those sampling units were not guided properly, how to fill the questionnaire and how to respond each question for their proper response. So there have been some degree of sampling errors which can be observed during Data Analysis. This error can be avoided if proper guidance will be given during filling up of the questionnaire.

Conclusion

From the above findings, it can be concluded that people in general are aware of the Cryptocurrency and they would like to see it as part of their investment portfolio as it provides good return. But they are not willing to invest in Cryptocurrency due to lack of regulation from Government and regulatory authorities. If Government of India and its regulatory authorities will come forward to regulate its use and transaction in financial market, it can play a major role in entire investment portfolio.

As it is well known that Cryptocurrency is the product of all new age innovative technologies, and many countries of the world have already regulated its use in day to day business and many countries are coming forward to regulate its transaction in financial market. So, Indian Government and its regulatory authority should come forward and take steps to regulate the transactions of Cryptocurrency as investment option.

Questionnaire for Primary Sources of Data

Survey on Awareness and Perception of Cryptocurrency

I am pursuing management studies and doing project on "A Study on the Awareness and Perception of Cryptocurrency in Bangalore". To establish the fact that Cryptocurrencies will mark its impact and become universal currency or remain as a part of investment portfolio, I want to collect data on its awareness and the perception among general public. All the information collected through this Survey will only be used for the study purpose.

* Required

1. Gender * Mark only one oval.

- Male
- Female
- Prefer not to say

2. Age *

Mark only one oval.

- 20-30yrs
- 30-40yrs
- 40-50yrs
- Above 50 yrs

3. What is your highest level of education? * Mark only one oval.

- High School
 Senior Secondary
 Bachelors
 Masters

4. What is your occupation? * Mark only one oval.

- Employed(Public/Private/Educational Institution)
 Business
 Unemployed Student

5. What is your annual income ? Mark only one oval.

- 1 - 5 lakhs
 5 - 10 lakhs
 Above 10 lakhs

6. Do you think, You are financially aware regarding your understanding of banking, finance and investment? * Mark only one oval.

- Yes
 No
 Maybe

7. What is your favourite investment tool in financial market? *

Mark only one oval.

- Mutual Funds
 Equity
 Real estate/Gold
 Cryptocurrency

8. Are you aware of cryptocurrency? * Mark only one oval.

- Yes
 No
 Maybe

If "Yes" then please answer the following questions.

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