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CRYPTOCURRENCIES: TREND, SIZE & GROWTH IN INDIA

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Abstract: As time passes, necessity and innovations both go to an advanced level. And these two are the basic key to the betterment and advancement of an economy. Over the years, global payment practices have undergone significant transformations, transitioning from traditional bartering methods to more sophisticated systems such as bank transfers, NEFTs, RTGS systems, and e-payments. With the evolution of these payment practices worldwide, cryptocurrencies have also emerged as a novel form of transactional currency, presenting both opportunities and challenges. Many countries have accepted it but some are still struggling with how malpractices frauds and scams could be prevented while using cryptocurrencies. In India, where regulatory frameworks are still evolving, the landscape for cryptocurrency adoption remains dynamic and complex. The lifting of the ban on cryptocurrencies by the Supreme Court of India in 2020 marked a significant milestone in the country's approach to digital assets. However, the absence of a structured legal framework leaves room for ambiguity and potential risks. Against this backdrop, this study conducts an empirical analysis to shed light on the expansion of cryptocurrencies within India. Around 21,555 cryptocurrencies had been discovered till July 2022 and it has reached to 2.5 million cryptocurrencies as of April 2024, indicating a substantial presence and growing interest in these digital assets. By examining market trends, patterns, and growth trajectories, the research aims to provide comprehensive insights into the size and dynamics of the Indian cryptocurrency market, offering valuable insights for stakeholders and policymakers alike.

Index Terms- Cryptocurrencies, Trend, Growth, Size, Bitcoin, India.

1. INTRODUCTION

Since the turn of the millennium, the world has weathered a series of crises, from the Dot-Com Bubble Burst (1999-2002) to the Banking and Financial crisis of 2007-2008, followed by the Real Estate crash of 2009, and the most recently, the economic recession spurred by the Covid-19 pandemic. These successive crises have rattled the investors' confidence, surpassing even the infamous stock market crash of 1929. Consequently, there has been a discernible shift among investors away from traditional national currencies towards cryptocurrencies. Simultaneously, the increasing intervention of states in financial transactions has left many individuals disenchanted, prompting a desire to reclaim control over their finances. In this context, disruptive innovations such as cryptocurrencies are reshaping the globalized, Internet-driven world (Vora Gautam, 2015).

In January 2009, an anonymous figure known as Satoshi Nakamoto introduced the world to the first cryptocurrency, Bitcoin, to facilitate financial transactions independent of banks or governments. The Bitcoin network officially commenced on January 3, 2009, with the mining of the Genesis block. Notably, the smallest unit of Bitcoin, the satoshi, is named in honour of Satoshi Nakamoto, with 1 satoshi equaling 0.00000001 BTC. While the total number of Bitcoin coins is capped at 21 million, nearly 18.9 million are already in circulation. As Bitcoin's value steadily rose, an increasing number of countries began to legalize

its usage. By July 2022, a majority of developed nations had recognized cryptocurrencies as a legitimate form of payment, with countries like the Central African Republic and El Salvador leading the way (Saptaparno Ghosh).

India witnessed Bitcoin's first recorded commercial transaction occurred in 2010 when Laszlo Hanyecz famously exchanged 10,000 Bitcoin for two pizzas. The establishment of the first cryptocurrency exchange, Unocoin, in 2013 laid the groundwork for the subsequent surge in cryptocurrency adoption within India (Saeed Alzahrani and Daim, 2019).

The years 2019-20 marked a significant period of growth for cryptocurrencies, particularly in India. Despite this rapid expansion, there remains a lack of transparent representation and precise analysis of the cryptocurrency landscape within the country. Therefore, the objective of this research is to investigate the current status of cryptocurrencies in India, focusing on trends, size, and growth. Additionally, we aim to analyze cryptocurrencies by examining risk and returns.

While the Reserve Bank of India (RBI) has maintained a stance against cryptocurrency regulation since 2013, the Indian government introduced a 30% tax on cryptocurrency gains in 2022. Furthermore, indications of impending cryptocurrency regulation were signalled when a government representative announced the completion of a white paper on virtual currencies for review on May 30, 2022. These developments underscore the critical importance of studying the exact status of cryptocurrencies in India. It can be studied comprehensively by including various perspectives such as price parameters, laws and regulations etc.

2. LITERATURE REVIEW

The investigation into the trend patterns, growth trajectories, and size of cryptocurrencies in India is underpinned by a comprehensive review of various literature sources. Employing a descriptive review method, this study draws insights from a plethora of research papers to fulfil its objectives.

Since their inception, cryptocurrencies have been an interesting topic in the Indian financial industry presenting both opportunities and challenges. While cryptocurrencies may not entirely supplant traditional fiat currencies, their underlying blockchain technology holds transformative potential, prompting banks to explore alternative value transfer mechanisms (Raymaekers, W., 2015). However, contrasting perspectives exist, with some envisioning the rise of internet-based, blockchain-powered "virtual banks" potentially replacing traditional banking systems in India (Dey, S. et al., 2018). In the context of the burgeoning commercial industrial revolution, the convergence of four pivotal revolutions—namely artificial intelligence (AI), information communication technology (ICT), the internet of things (IoT), and blockchain—promises to usher in remarkable advancements (Alnooor, Kjell, & Sameen, 2022). Similarly, these technological innovations have demonstrated profound impacts within the banking sector, illustrating their potential to revolutionize various industries.

The inclination of customers towards utilizing various services, be it M-banking or cryptocurrencies, is significantly shaped by factors such as performance expectancy, effort expectancy, and facilitating conditions (Nisha, N. 2016), as well as considerations of profitability, convenience, anonymity, security, and bookkeeping (Yilmaz et al., 2018). Given that cryptocurrencies offer a novel and progressive payment method, they emerge as formidable contenders for future currency platforms, fueled by the rapid advancement and enhancement of technology (Jani, S. 2018). The trajectory of cryptocurrency appears promising, with numerous avenues for innovation opening up in the realms of E-Business and E-payments industries (Jani, S. 2018; James, B. & Parashar, M. 2018; Dey, S., Choudhury, P., & Guha, S. 2018; Doshi & Saloni S. 2020). Despite the growing popularity of cryptocurrencies, the general public remains largely uninformed about their existence, as noted by Mehrotra and MR (2018). This lack of awareness stems from the fact that cryptocurrencies are not issued or regulated by any traditional banking or governmental institution, leading to uncertainties regarding taxation and legal implications of investments. In response to these concerns, a consortium of crypto startups in India established the Digital Asset and Blockchain Foundation of India (DABFI), comprising Unocoin, Zebpay, Coinsecure, and Searchtrade (Vishal Gupta, "The Future of Bitcoin Industry in India," Business World, May 2017). Much like the exponential growth

observed in India's internet usage, the country's interest in cryptocurrency has surged in recent years, although widespread adoption may require further time to materialize (Dey, S. et al., 2018). In cultivating awareness among investors about cryptocurrencies, several critical factors come into play, including monetary considerations, risk assessment, operational intricacies, and legal dimensions (Hassan, S.T. 2018). Notably, the younger generation in India exhibits a proactive attitude towards adopting new technologies, with many viewing cryptocurrencies as a promising avenue for national advancement (Mehrotra, A., & MR, V. 2018). Despite the absence of a regulatory framework in India, there's a growing consensus that governmental intervention is necessary to harness the potential of cryptocurrencies for the country's economy, especially as they gain popularity among privacy-conscious investors (James, B. & Parashar, M. 2018; Mehrotra, A., & MR, V. 2018). Both small and large investors are increasingly embracing this evolving technology, although urban investors display a greater affinity towards cryptocurrencies compared to their rural counterparts (Doshi & Saloni S. 2020). Furthermore, investors possessing privileged information (Park, M. & Chai, S. 2020), coupled with traits such as innovation, risk sensitivity, and a penchant for taking risks, tend to realize excess profits through cryptocurrency adoption (Sun, W., et al. 2020). Profit potential aside, investors are also drawn to the knowledge and risk disclosures provided by cryptocurrency market regulators and distributors, recognizing the inherent volatility of the market and the importance of portfolio diversification to mitigate risk (Sun, W., Tohirovich, et al. 2020). However, sentiments and economic policy uncertainty also influence cryptocurrency prices, occasionally prompting investors to make decisions based on emotions rather than informed analysis (Park, M. & Chai, S. 2020). The interconnectedness of cryptocurrencies with each other and with traditional assets such as EUR/USD demonstrates the intricate dynamics of the digital currency market (Angela, O. & Sun, Y. (2020). While assets like gold, Ripple, and Stellar may not directly impact Ethereum's price, the influence of Bitcoin, Litecoin, and Monero on Ethereum's value underscores the interplay among different digital tokens (Angela, O. & Sun, Y. (2020)).

The COVID-19 pandemic introduced a new perspective on cryptocurrency markets, notably affecting the efficiency of Bitcoin. Despite its prior dominance, Bitcoin's efficiency declined post-pandemic, while other cryptocurrencies emerged as more efficient alternatives (Mnif, Emna, A. Jarboui, and K. Mouakhar. 2020). In India, alongside Bitcoin, cryptocurrencies like Dogecoin, Litecoin, Coronado, Ethereum, and Tether have garnered increasing popularity. Ethereum, in particular, has been recognized for its potential to drive economic growth and investment compared to Bitcoin (Mnif, Emna, A. Jarboui, and K. Mouakhar. 2020). Projections suggest that by 2030, India, along with other nations, could enhance its currency through cryptocurrency adoption (Rajan, A., Kaur, H., Singh, A. K., Sisodia, D. R., & Garg, A. K . 2021). The global shift towards digital transactions is gaining momentum as more individuals and businesses recognize the advantages of speed, affordability, and efficiency, especially with the increasing accessibility and convenience of the internet. In this evolving landscape, cryptocurrencies have emerged as a viable option, bringing India to the forefront of potential adoption as a digital currency alternative (Shakya, V., Kumar, P. P., & Tewari, L. 2021). The impetus for this transition was provided by the demonetization initiative, which propelled India towards becoming a cashless society and created opportunities for the integration of cryptocurrencies and blockchain technology, enabling the seamless conversion of traditional paper currency into digital assets. Key features such as decentralized programming, anonymity, integrity, non-denial, data security, and accessibility are instrumental in facilitating India's journey towards a fully digitalized economy (Rathore, V. S., Kumawat, V., & Umamaheswari, B. 2021).

As India moves closer to digitalization, there is a growing inclination towards cryptocurrencies, reflecting a broader trend towards embracing innovative financial technologies. However, concerns about the potential for illegal activities such as money laundering and hacking have prompted cautious deliberation by the Indian government, which has refrained from granting cryptocurrencies legal status due to apprehensions regarding their potential misuse, including terror funding and black-marketing (Kashyap, A. K., Tripathi, K., & Rathore, P. S. 2021). Nevertheless, despite these reservations, the Indian government has not ruled out the possibility of regulating cryptocurrencies in the near or distant future.

While Bitcoin, the leading cryptocurrency, is still in a developmental phase, its developers are actively engaged in efforts to enhance its resilience and security, addressing vulnerabilities and ensuring its viability as a digital asset. The rapid pace of cryptocurrency adoption in India, coupled with its global reach, underscores the importance of addressing security concerns to safeguard the integrity of financial systems. In this context, ongoing developments in cryptocurrency technology and regulatory frameworks will play a

crucial role in shaping the future trajectory of digital currencies in India and beyond (Bhatt, M., & Jokhi, D. 2022). The circulation of Bitcoins remains fixed, yet the prevailing global currency is not digital but rather fiat currency, subject to regulation by governments and central banks, thereby susceptible to inflationary policy changes (Kurihara, Y., and Fukushima. 2017). Nonetheless, cryptocurrency technologies exert an influence on fiat currency, which is issued by central banks (Giudici, G., et.al. 2019). The advancement of Bitcoin's blockchain technology is notable (García-Corral et.al. 2022), with around 20 million regular Bitcoin users situated in India and the cryptocurrency market witnessing a remarkable 640% increase between July 2020 and June 2021. Despite these statistics, Indian investors exhibit a preference for traditional investment avenues such as bonds, shares, equities, precious metals, and mutual funds, owing to their perceived transparency compared to the volatile nature of cryptocurrency markets. Various impediments, including the proliferation of advertisements, consumer ignorance, and inadequate protection mechanisms, hinder the development of India's cryptocurrency industry (Sharma, K. 2022). Moreover, cryptocurrencies currently fail to fully satisfy all the characteristics and objectives of money, with concerns regarding the fragile mining process, transactional style, security issues in online pools, high volatility, legality, volume, speculative and manipulative actions, and an unclear legal status (Bhatt, M., & Jokhi, D. 2022). Nevertheless, despite these challenges, cryptocurrencies are poised to function ubiquitously, offering additional benefits beyond the traditional currency (Kar, M. (2022). Efforts are underway to mitigate these risks, particularly in democratic and developing nations like India, which are prioritizing measures to safeguard public funds. The finance minister has proposed classifying cryptocurrencies as "digital assets" and advocating for a tax rate (Bhatt, M., & Jokhi, D. 2022). Furthermore, several global central banks are contemplating the legalization of Central Bank Digital Currencies (CBDCs), mirroring initiatives by the Reserve Bank of India (RBI) to introduce an Indian CBDC (Pavoor, A. S., & Ajithkumar, N. 2022). The trajectory of cryptocurrencies in India has not been extensively researched, leaving room for intrigue regarding the reactions of Indian investors towards these digital assets, especially considering the recent implementation of a 30% tax on gains (Shukla, V., Misra, M. K., & Chaturvedi, A. 2022). Despite some discerning investors expressing disappointment due to recent price drops, others remain optimistic, believing that it is premature to dismiss cryptocurrencies as a dead-end, viewing them instead as the future currency platform. This divergence in sentiment underscores the uncertainty surrounding the future of cryptocurrencies in India's financial landscape. However, amidst this uncertainty, there is a prevailing belief among investors that cryptocurrencies, along with blockchain technology, will gain popularity in the future, shaping the trajectory of India's digital economy (Singh, P. 2022).

3. DATA AND SOURCES

The research design of this study is both descriptive and exploratory, using quantitative and qualitative approaches to achieve its objectives. The study exclusively uses secondary data collected from various sources such as research papers, articles, journals, and websites. It focuses on the trends, growth, and size of different cryptocurrencies in the Indian market over the period from January 1, 2017, to December 31, 2022. The top 10 cryptocurrencies are chosen based on their market capitalization as of January 2017, include Bitcoin, Ethereum, XRP, Litecoin, Monero, Ethereum Classic, Dash, Augur, MaidSafeCoin, and Steem. Prices, volumes, and market capitalizations data of these cryptocurrencies are sourced from platforms like CoinMarketCap, Yahoo Finance, cryptochart.com etc in US dollar units. By selecting these 10 major cryptocurrencies, this study addresses the purpose of this study which is to study the significant trends, patterns, growth and size of various cryptocurrencies in India. For analysis and interpretation, statistical methods such as tabulation, graphs, and charts are used for concluding the result.

4. ANALYSIS AND INTERPRETATION

4.1 Cryptocurrency history in India

The cryptocurrency industry in India has undergone significant developments and regulatory shifts over the years. Initially, until 2013, the Reserve Bank of India (RBI) refrained from approving cryptocurrencies, issuing circulars to warn users about their associated risks. In March 2018, the Central Board of Digital Tax (CBDT) proposed a ban on cryptocurrencies to the Ministry of Finance, leading the RBI to issue a circular a month later forbidding banks, NBFCs, and payment system providers from dealing with virtual currencies due to perceived risks. This move prompted virtual currency exchanges to challenge the ban in the Supreme

Court, which ultimately lifted it in 2020, eliciting rejoicing among Indian users. However, despite this ruling, the RBI has continued to caution citizens against cryptocurrency use, focusing on preventative measures. Subsequently, cryptocurrency exchanges experienced a resurgence. On January 29, 2021, India announced a bill aimed at creating a national digital currency and banning private cryptocurrencies. By November 2021, the Standing Committee on Finance, in alignment with industry leaders such as the Blockchain and Crypto Assets Council (BACC), advocated for the regulation rather than the banning of cryptocurrencies. Present indications suggest that cryptocurrencies will indeed be regulated in India, although the specific regulatory body remains unclear. Experts predict that cryptocurrencies will likely be treated as an asset class by the government, with enhanced transparency and accountability expected from trading platforms. To this end, checks and balances may be required for fraud prevention and cross-border transaction monitoring. Despite the regulatory uncertainties, India remains the biggest investor in cryptocurrency, reflecting its significance in the financial landscape despite the prevailing uncertainties about its future (Figure 1) [12].

India's crypto journey
2008 Cryptocurrencies began their journey after the publication of a paper titled "Bitcoin" A Peer-to-Peer Electric Cash System"
2010 Two years later, the first Bitcoin transaction occurred, with a person exchanging 10,000 Bitcoin for two pizzas.
2013 The first circular on cryptocurrencies was issued by RBI. The RBI warned users about the risks.
2018 The RBI issued a circular prohibiting banks and other payment systems from dealing the digital currencies.
November 1, 2018 Nischal Shetty, Founder of WazirX, started the #IndiaWantsCrypto campaign for the positive regulation of crypto in India.
March 2020 Supreme Court struck down the crypto banking ban declaring the RBI circular unconstitutional.
January 29, 2021 Govt announced it will introduce a bill to create a sovereign digital currency
November 2021 It was decided by the government that cryptocurrencies should not be banned but regulated.
2022 Union Finance Minister Nirmala Sitharaman said the govt would tax gains made through cryptocurrency investments at 30 per cent.
May 30, 2022 An official says that the government is ready with its consultation paper on cryptocurrencies.

Figure:1, Source: https://www.dailyo.in/technology/a-history-of-cryptocurrencies-regulation-in-india-36260

In the 2022 budget session, the Government of India (GOI) talked about cryptocurrencies. They tried to understand them better and figure out how they fit into the country's plans. Now, the government wants people who make money from cryptocurrencies to pay taxes on it. Also, they're thinking about making rules to control how cryptocurrencies are used. This means they want to make sure everything is safe and fair when people buy, sell, or use cryptocurrencies. The government of India's goal is to make sure cryptocurrencies can be used safely and responsibly while also helping India's economy grow.

Cryptocurrency exchanges in India such as CoinDCX, WazirX, Zebpay, Unocoin, Coinswitch, Binance, Mudrex, BuyUcoin, etc. offer a wide range of digital assets for trading, yet only a handful dominate the market. Among Indian investors, popular cryptocurrencies such as Bitcoin, Ethereum, Tether, Binance Coin (BNB), XRP, Dogecoin, Solana, USD Coin, and Cardano etc. have secured significant market shares. Over the past 15 years, the cryptocurrency landscape has witnessed the emergence of numerous digital assets, with a notable surge in investments following the year 2020. Presently, there are over 2.4 million cryptocurrencies available on cryptocurrency platforms. Indian investors are not limited to Bitcoin, Ethereum, Solana etc. Now they are moving to various new cryptocurrencies such as Shibu In, Polkadot, Dai, TRON, Shiba Inu, Avalanche, Cosmos, Uniswap, Monero, Toncoin, Bitcoin Cash, ApeCoin, OKB, Filecoin, Gridcoin, Primecoin, Ripple, Auroracoin, Dash, NEO, Mazacoin, Verge, Stellar, Vertcoin, Bitcash Coin, Ethereum Classic, Ambacoin, Zcash, EOS.IO, Nervos Network, Safemoon, Tezos, and others and changing the investment scenario. This diverse array of available cryptocurrencies reflects the dynamic nature of the digital asset market in India, catering to the diverse investment preferences of cryptocurrency enthusiasts across the country.

The top 10 cryptocurrencies on the basis of their market capitalization as of Jan 2017 are shown in table 1 which also includes both the price and the volume of these cryptocurrencies. These data is taken from coinmarketcap.com. & cryptochart.com. Bitcoin, Ethereum, XRP, Litecoin, Monero, Dash, Maidsafecoin, Steem, Ethereum classic, and Litecoin are the top 10 cryptocurrencies in terms of their market capitalization as of 2017. Here the term "market capitalization" refers to the total value of a particular cryptocurrency in the crypto market. The total number of coins or tokens that are actively available for trade and are being used in the market is generally shown by the circulating supply.

Table-1
Price and market cap as on Jan1, 2017& Dec 31, 2022

S.NO.	NAME(SYMBOL)		MARKET CAP		PRICE		VOLUME	
	1.1.2017	31.12.2022	1.1.2017	31.12.2022	1.1.2017	31.12.2022	1.1.2017	31.12.2022
1	Bitcoin (BTC)	Bitcoin (BTC)	$16,050,414,525.76	$318,516,317,872	$998.33	$16,547.50	$147,775,008	$11,239,186,456
2	Ethereum (ETH)	Ethereum (ETH)	$715,049,311.31	$146,453,523,490	$8.17	$1,196.77	$14,731,700	$3,018,513,333
3	XRP (XRP)	XRP (XRP)	$231,408,729.09	$17,113,207,466	$0.006368	$0.3399	$418,978	$337,167,278
4	Litecoin (LTC)	Litecoin (LTC)	$221,718,485.96	$5,036,500,357	$4.51	$70.00	$11,337,500	$367,586,009
5	Monero (XMR)	Monero(XMR)	$190,983,552.40	$2,683,680,023	$13.97	$147.28	$3,923,550	$44,549,077
6	Ethereum Classic(ETC)	Ethereum Classic(ETC)	$122,203,155	$2,177,285,893	$1.3975	$15.69	$3,570,370	$72,084,876
7	Dash (DASH)	Dash (DASH)	$78,523,984	$465,375,427	$11.23	$42.02	$3,684,210	$57,472,489
8	Augur (REP)	Augur (REP)	$43,994,830	$46,872,438	$3.9995	$4.2611	$230,517	$1,776,941
9	MaidSafeCoin(MAID)	MaidSafeCoin(MAID)	$43,862,002.88	$47,601,115.543	$0.09692	$0.1104	$457,685	$1,018

10	Steem (STEEM)	Steem (STEEM)	**$36,999,680**	**$61,667,426**	**$0.1612**	**$0.1457**	**$108,192**	**$4,698,707**

Sources:https://coinmarketcap.com/historical/20170101/&https://coinmarketcap.com/historical/20230101/

The analysis of these top 10 cryptocurrencies from January 1, 2017, to December 31, 2022, reveals the significant growth and market dynamics. Bitcoin (BTC) saw a remarkable increase in market capitalization from $16.05 billion to $318.52 billion, with its price soaring from $998.33 to $16,547.50 and its trading volume expanding dramatically from $147.78 million to $11.24 billion. Ethereum (ETH) experienced substantial growth as well, with its market cap rising from $715.05 million to $146.45 billion, its price jumping from $8.17 to $1,196.77, and its volume increasing from $14.73 million to $3.02 billion. Among all cryptocurrencies, Bitcoin and Ethereum have grown more in terms of price, volume and market cap in their journey from 2017 to 2022. XRP (XRP) grew significantly too, with its market cap increasing from $231.41 million to $17.11 billion, its price from $0.006368 to $0.3399, and its volume from $418,978 to $337.17 million. Litecoin (LTC) saw its market cap grow from $221.72 million to $5.04 billion, its price from $4.51 to $70.00, and its volume from $11.34 million to $367.59 million. Monero (XMR) also expanded, with its market cap rising from $190.98 million to $2.68 billion, its price from $13.97 to $147.28, and its volume from $3.92 million to $44.55 million. Ethereum Classic (ETC) increased its market cap from $122.20 million to $2.18 billion, its price from $1.3975 to $15.69, and its volume from $3.57 million to $72.08 million. Dash (DASH) grew from $78.52 million to $465.38 million in market cap, its price from $11.23 to $42.02, and its volume from $3.68 million to $57.47 million. Augur (REP) saw a smaller increase, with its market cap rising from $43.99 million to $46.87 million, its price from $3.9995 to $4.2611, and its volume from $230,517 to $1.78 million. MaidSafeCoin (MAID) experienced moderate growth, with its market cap growing from $43.86 million to $47.60 million, its price from $0.09692 to $0.1104, and its volume decreasing from $457,685 to $1,018. Steem (STEEM) saw its market cap increase from $37.00 million to $61.67 million, its price decreasing from $0.1612 to $0.1457, and its volume growing from $108,192 to $4.70 million. It sems clearly, BTC and ETH investors gained more as they have been successful in maintaining their top positions in the list. Overall, the data reflects a substantial increase in the size and market presence of cryptocurrencies, highlighting their growing influence and adoption in the financial markets over the five-year period.

If we compare both years, 2017 and 2022, Figure 2 shows the top cryptocurrencies as of Dec 2022 on the basis of their market size. Many of them have replaced most of the cryptocurrencies that were in the list of top 10 in 2017 such as tether, Cardano, polygon, Solana, USD coin, BNB Dogecoin replaced the position of Litecoin, Monero, Ethereum Classic, Augur, Maidsafecoin, Steem. The graph shows how different cryptocurrencies have shared the market from January 2016 to December 2022. As the market began to grow, the cryptocurrency market experienced a surge. Although Other types of cryptocurrencies are discovered. Bitcoin has always had the largest share, starting

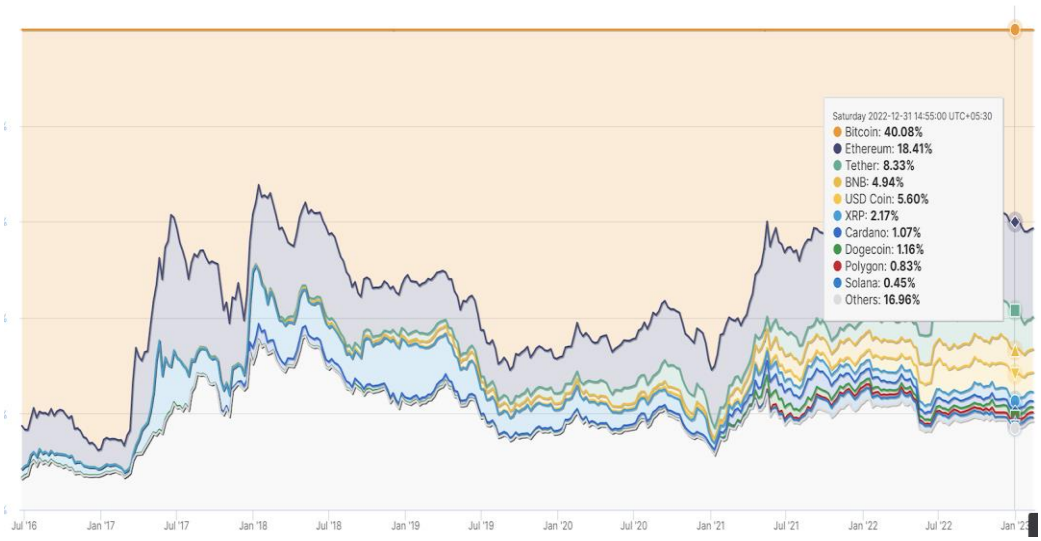

Figure-2, Top cryptocurrencies as of 31st Dec 2022
Source: coinmarketcap.com

with about 80% in early 2017. By the end of 2022, Bitcoin's share had decreased but it still led the market with 40.08%. Ethereum was the second most important cryptocurrency, holding an 18.41% share by the end of 2022. Tether's market share grew a lot, reaching 8.33%, showing that people increasingly want stable, dollar-pegged assets in the crypto market. Binance Coin (BNB) also grew, holding 4.94% by the end of 2022, thanks to its use within the Binance ecosystem. USD Coin (USDC) reached a 5.60% share, highlighting the importance of stablecoins.

XRP had a 2.17% share, staying relevant despite some legal challenges due to its role in cross-border payments. Cardano's share was 1.07%, gaining attention for its focus on security and scalability. Dogecoin, known for its strong community support and public endorsements, reached a 1.16% share. Polygon, with a 0.83% share, and Solana, with 0.45%, became popular for their low transaction costs and fast processing times. Other cryptocurrencies combined made up 16.96% of the market, showing the wide variety of digital currencies available.

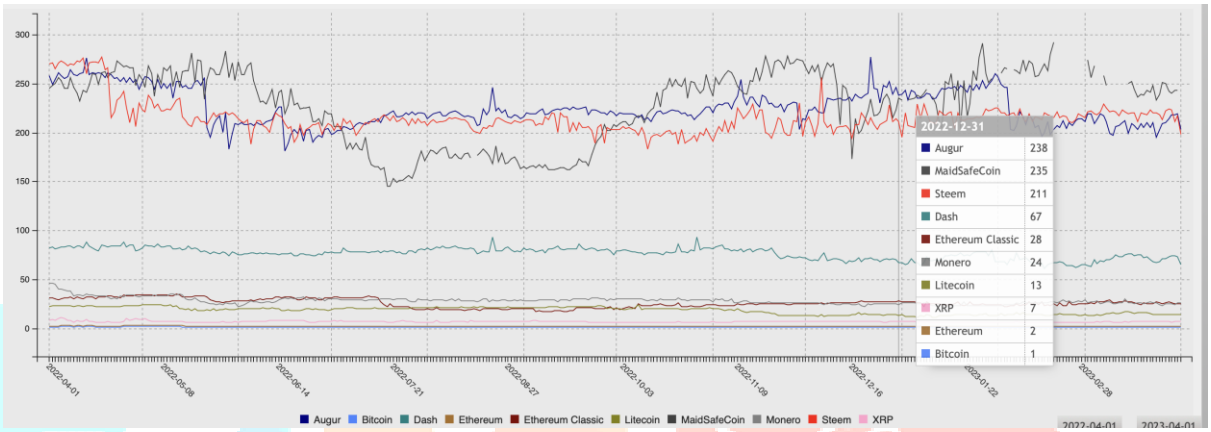

Figure-3, cryptocurrencies rank on 31st Dec 2022
Source: Cryptochart.com

If we compare table 2 and figure 3, it can be concluded that Bitcoin, Ethereum are successful in maintaining heir first, second position in the top 10 positions. Somewhere XRP is also successful in maintaining his position in top 10 positions with 7th position but position of other cryptocurrencies has drop down. Litecoin which was on 4th position as on 2017, slipped down to 13th position. Similarly, Monero slipped from 5th to 24th position. Ethereum Classic is also dropped down from 6th position to 28th position. Dash position slipped from 7th to 67th position.

Similarly, Augur, MaidSafeCoin, Steem has loosed their position from 8th to 238th, 9th to 235th and 10th to 211th position respectively. These 3 cryptocurrencies face the major fall during the period of 2017 to 2022. No doubt that these cryptocurrencies slipped down by their rank but their price, volume and market capitalisation improved in during these 5 years. With the passing of time, new cryptocurrencies emerged and overpowered their position.

Overall, if we talk about their journey, Bitcoin and Ethereum continue to lead, but on the other side the growing presence of stablecoins and other cryptocurrencies indicates a more diverse and widely adopted market. This reflects their increasing use in various financial activities and services.

4.2 Growth of cryptocurrency:

The world came to know about the cryptocurrency in 2008. After that numerous cryptocurrency start-ups and exchanges have been founded. Since Bitcoin, the first decentralised digital currency was released to the public in January 2009, there have been 20,786 cryptocurrencies in use as of 2022. Not all cryptocurrencies, nevertheless, are traded or valued. In India, Bitcoin is the most widely used cryptocurrency[9]. This is likely a result of it having the highest value Table 2, shows the growth chart of all cryptocurrencies from January 1, 2017, to December 31, 2022.

Table-2
2017's Top 10 cryptocurrencies' growth as on 31.12.22

CRYPTOCURRENCY	Market cap Jan 1, 2017	Market cap Jan 1, 2018	Market cap Jan 1, 2019	Market cap Jan 1, 2020	Market cap Jan 1, 2021	Market cap Jan 1, 2022	Market cap Dec 31, 2022	GROWTH IN MARKET CAP % AS ON 31.12.2022	RANK AS ON 31.12.2022
Bitcoin (BTC)	$16,050,407,461	$229,119,155,396	$67,098,634,181	$130,580,829,150	$546,001,594,838	$902,104,193,385	$318,516,317,872	1884.474965 %	1
Ethereum (ETH)	$715,049,208	$74,724,233,458	$14,665,318,370	$14,271,059,633	$83,318,539,689	$448,537,615,143	$146,453,523,490	20381.60069 %	2
XRP(XRP)	$231,408,636	$92,626,457,504	$14,880,496,658	$8,349,802,256	$10,780,931,627	$40,380,448,983	$17,113,207,466	7295.232849 %	7
Litecoin (LTC)	$221,718,275	$12,499,214,454	$1,913,387,274	$2,679,229,284	$8,358,909,486	$10,446,644,958	$5,036,500,357	2171.576557 %	13
Monero(XMR)	$190,983,757	$5,581,120,935	$807,214,007	$795,254,586	$2,421,861,836	$4,517,727,568	$2,683,680,023	1305.187575 %	24
Ethereum classic(ETC)	$122,203,155	$3,376,079,733	$560,395,114	$523,734,647	$663,491,552	$4,603,131,340	$2,177,285,893	1681.693683 %	28
Dash (DASH)	$78,523,984	$8,209,391,130	$692,537,857	$387,089,111	$873,563,642	$1,449,839,572	$465,375,427	492.6538661 %	67
Auger (REP)	$43,994,830	$819,238,200	$90,147,231	$96,356,423	$179,937,620	$209,388,744	$46,872,438	6.540786 7245 %	238
MaidSafeCoin (MAID)	$44,301,487	$483,272,612.58	$58,612,248.49	$35,568,846.52	$144,700,302.32	$190,892,611.96	$47,601,115.54	7.448121414 %	235

Steem(STEEM)	**$36,999,680**	**$988,297,866**	**$84,700,577**	**$43,426,757**	**$64,013,389**	**$171,229,496**	**$61,667,426**	**66.67016039 %**	**211**

Sources: Data is retrieved from cryptocurrencychart.com

itcoin is the first cryptocurrency ever created, and remaining at the top of the rankings consistently ever since it is introduced to the market. It experienced an impressive increase in market capitalization from $16.05 billion to $318.52 billion, representing a growth of 1884.47%, securing its position as the top-ranked cryptocurrency. However, the highest growth has been observed in Ethereum i.e. 20381.60069% and it able to successfully get the next position after Bitcoin. Bitcoin and Ethereum, both experienced a significant shift. Ethereum (ETH) saw an astounding increase of 20381.60%, in its market cap, soaring from $715 million to $146.45 billion, and rankes it second. XRP (XRP) also witnessed significant growth, increasing from $231.41 million to $17.11 billion, a 7295.23% rise, placing it seventh. Litecoin (LTC) grew from $221.72 million to $5.04 billion, up 2171.58%, ranking 13th. Monero (XMR) expanded from $190.98 million to $2.68 billion, a growth of 1305.19%, ranking 24th. Ethereum Classic (ETC) increased from $122.20 million to $2.18 billion, a rise of 1681.69%, ranking 28th. Dash (DASH) grew from $78.52 million to $465.38 million, up 492.65%, ranking 67th. Augur (REP) saw a modest increase from $43.99 million to $46.87 million, a 6.54% growth, ranking 238th. MaidSafeCoin (MAID) grew from $44.30 million to $47.60 million, up 7.45%, ranking 235th. Steem (STEEM) increased from $37 million to $61.67 million, a 66.67% rise, ranking 211th. Overall, the data highlights the rapid expansion and varying degrees of growth across different cryptocurrencies over this period., During their journey, the least growth percentage has been observed in the Augur and Maidsafecoin among all cryptocurrencies. Bitcoin, Ethereum and XRP are still successful in maintaining their positions in the top 10.

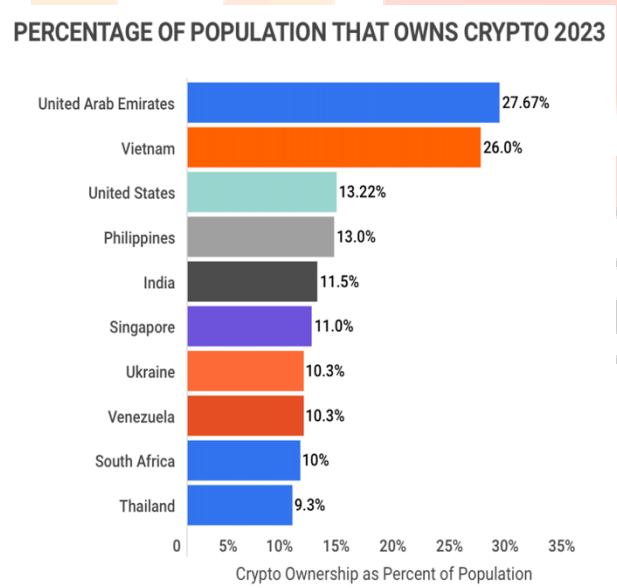

Figure-4, Sources: zippia. "30 striking cryptocurrency statistics [2023]: market value, bitcoin usage, and trends" zippia.com. feb. 28, 2023, https://www.zippia.com/advice/cryptocurrency-statistics/

According to the 2023 report on cryptocurrency statistics from Zippia, the cryptocurrency market continues to expand significantly. Key findings include the existence of over 20,000 cryptocurrencies and Bitcoin leading with a market cap exceeding $457 billion. Bitcoin's value has surged by over 46,449,400% since its inception, with a current price above $23,000. The global blockchain market was valued at $10.02 billion in 2022 and is projected to grow to $67.4 billion by 2026. Additionally, there are about 420 million global crypto users, with India having the most crypto owners. In the list of crypto-ownership whereas the United Arab Emirates secured the first position, India’s 11.5% of the population has invested in cryptocurrencies in 2023 and secured 5th position.

4.3 The Global Crypto Adoption Index, 2022

According to the findings of the Chain-analysis 2022 (September 2022) Global Crypto Adoption Index, which is based in Singapore, Vietnam has been ranked first in cryptocurrency adoption for the second year in a row. Vietnam scored a perfect 1.000 on the overall index, while India came in at #4 with a score of 0.663. According to the report, global cryptocurrency adoption has slowed during the bear market, but it is still higher than it was prior to the bull market. Chain-findings, in a blog post, claimed that "global adoption has levelled off in the last year after growing consistently since mid-2019.". "Our data shows that global adoption has levelled off in the last year"[15]. As per the **2021 Global Crypto Adoption index** issued by Chain-analysis, a company specializing in blockchain analysis, the world witnessed an 880% jump in crypto adoption. An index score of 0.37 garnered India second place in the index behind Vietnam. The Indian crypto market saw a growth of 641% in a year. Clearly, the crypto market world over is showing great potential and is emerging rapidly. It seems to be a promising industry for India too. Based on

Country	Overall index ranking	Overall index score	Centralized service value received ranking	Retail centralized service value received ranking	P2P exchange trade volume ranking	DeFi value received ranking
Vietnam	1	1.000	5	5	2	7
Philippines	2	0.753	4	4	66	13
Ukraine	3	0.694	6	6	39	10
India	4	0.663	1	1	82	1
United States	5	0.653	3	3	111	3
Pakistan	6	0.609	10	10	50	22
Brazil	7	0.562	7	7	113	8
Thailand	8	0.560	12	12	61	5
Russia	9	0.541	8	8	109	11
China	10	0.535	2	2	144	6
Nigeria	11	0.521	18	18	17	20
Turkey	12	0.519	9	9	121	19

Figure 5, Sources: Photo credit: Chain-analysis 2022 Global Crypto Adoption Index. https://www.indiatoday.in/cryptocurrency/story/india-stands-fourth-in-global-crypto-adoption-index-2022-despite-ban-china-remains-active-in-space-2000444-2022-09-15

the data presented in the Chain-analysis 2022 Global Crypto Adoption Index report, it is clear that Vietnam is the most favorable country in terms of cryptocurrency adoption. India manages to climb to fourth place in the rankings despite experiencing a number of ups and downs along the way. Despite the country's ban on cryptocurrencies, China ranks highly on the global crypto adoption index for 2022. Thus, it appears that investors are still active in China despite the government's efforts to discourage them.

5. CONCLUSION:

The findings of this research state lots of cryptocurrencies have grown however, Bitcoin was as usual on the top of the list which has the highest market capitalization as on December 2022. Cryptocurrency is growing with many stoppages and boundaries. In India, it faced many hurdles, ban but in spite of all these, is not stopped. The Cryptocurrency Bill in 2021, shows that it has officially taken a forward step towards regulating cryptocurrency (Nikita Tambe, https://www.forbes.com/advisor/in/investing/cryptocurrency/crypto-bill/). No doubt that the journey of cryptocurrencies hasn't been so easy since its creation because of their high volatility in price, and the absence of any government authority instead it has a promising future in India along with the world. But of course, there are some dark sides also which need to be prevented by strong and invulnerable regulations on it. Profitability, convenience, anonymity, security, and bookkeeping are investors' influence factors. Monetary factors, risk factors, operational factors and legal aspects play a vital role in creating an awareness level about cryptocurrency as an investment intention. It can escalate the M-

banking, E-business, and E-payment sectors**.** This research paper includes studying cryptocurrencies from the Indian perspective. The path of cryptocurrencies in India has been tough. It grow a lot in 14 years but this industry has seen a lot of investment in the last few years, especially during the pandemic. Despite all these, it has to go long. During the study, we found many conclusions. Bitcoin has been having the highest market cap and volume in India, in both Jan 2017 and in Dec 2022 after that Ethereum is the second-rank cryptocurrency in India. Ethereum has the second-highest market share i.e. 18.41% among cryptocurrencies whereas Bitcoin is 40.08% on Dec 2022. Data shows high volatility in cryptocurrencies but still, crypto-owners are continuously investing in them. There is currently no national or international legal framework for cryptocurrencies. Yet findings revealed that about 20 million Indians use cryptocurrencies. India has 4th rank in the Singapore-based Chain-analysis 2022 (September 2022) Global Crypto Adoption Index and in 2023 secured 5th rank in the list of crypto-ownership. India's 11.5% of the population has invested in cryptocurrencies in 2023 according to a source. India is one of the marketplaces for cryptocurrencies that is expanding the fastest. It makes sense for the Indian government to support digital currency given the rapid development of the crypto financial system. Governments would find it challenging to create a system that would enable cryptocurrencies to operate without compromising them (Priyanka Todariya, Drishti IAS Blog).

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