

## Indian Budget 2022: A Make-or-Break Moment for Cryptocurrency

Preethi Nanjundan<sup>1,\*</sup>, Blesson Varghese James<sup>2</sup>, Jossy P George<sup>3</sup>, Dilpreet Kaur Kukreja<sup>4</sup>, Yugjeet Singh Goyal<sup>5</sup>

<sup>1,3</sup>Department of Data Science, Christ University, Pune Lavasa Campus, India

<sup>2,4,5</sup> Department of School of Commerce, Finance & Accountancy, Christ University, Pune Lavasa Campus, India

### Abstract

People are liable to the tax rate if they transfer digital assets during a specific fiscal year. There is no distinction between income from businesses and investments or between short-term and long-term gains because the 30% tax rate is applicable regardless of the sort of income. By clearly stating how it would be charged, the Indian budget 2022 has provided some direction. Losses were consequently experienced by both new and old cryptocurrency buyers. Under Section 115 BBH, it is illegal to offset cryptocurrency losses with cryptocurrency gains—or any other gains or revenue, for that matter. The implementation of the 30% tax rule on digital assets has caused the collapse of the cryptocurrency market, and there is a possibility that investors will continue to suffer losses in the future.

**Keywords:** Cryptocurrency, Digital Economy, Digital Currency, Tax, Indian Budget 2022, Digital Leaders, Indian Government

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\*Corresponding author. Email: [preethinanjundan@christuniversity.in](mailto:preethinanjundan@christuniversity.in)

### 1. Introduction

Cryptocurrency is a popular mode of investment for the investors now-a-days. Even after the implication of a 30% tax rate, it is welcomed by the majority of cryptocurrency investors. [7] The finance minister of India included Section 115 BBH in the 2022 budget which is laid on all the gains obtained from trading cryptocurrencies on or after April 1, 2022, this clause imposes a 30% tax (plus any relevant surcharge and 4% cess). This proved to be the highest income tax bracket in India is equal to this rate (excluding surcharge and cess). [5] Five major crypto currencies (i.e. Ethereum, Bitcoin, Wrapped Bitcoin, Marker, Lido Staked ETH) are taken into consideration on the basis of their close price and volume. Forecasting Techniques used are- Time Series Model and Linear Trend Model. The future trends of the market are forecasted after the implication of the new budget tax rule on the crypto market. [2] The findings show that the

Budget Amendment of 1 February 2022 prompted the market to crash, which in turn led to a negative trend in the close price. Investor losses were a result of Budget 2022, and investors now dread paying high taxes even when they are losing money. [4]

### 2. Related work

Cryptocurrency has become a popular topic for investment over the past several years, particularly among youthful investors. Even though it is higher than rates on other asset classes like equities or bonds, the implementation of a 30% tax rate is welcomed by the majority of cryptocurrency investors. Early adopters of Cryptocurrency may be able to capture a segment of the market that has and wants to use Cryptocurrency before their competitors gain the ability to do so to strategically develop complete digital ledgers and smart contracts.[1] Investors make their own investment decisions based on their personal market analysis. [2] Considering the

outcomes of the formation and development trends inherent in blockchain technology and cryptocurrencies, trade organizations and financial and economic structures in the middle term can acquire potential economic opportunities. [3] Cryptocurrency is still in an evolution phase, and it has not gained much of the user base in India, acceptance of cryptocurrency by major banks and e-commerce websites is very important and also educating people about cryptocurrency will significantly help in adoption of cryptocurrency. India has a significant barrier ahead to its taxation of VDAs, the crypto industry is also bound to face some challenges along the way. [4] The Indian government is developing cryptocurrency legislation and regulation around core issues of taxation, revenue, consumer protection, and governance. [5] Most of the survey sample thinks that there is somewhat a moderate amount of risk and majority of them think the legitimization of crypto will not occur, and taxation is not a good step. The journey of cryptocurrency is not too long in India but it has seen many ups and downs in this short span. [6] The banning of cryptocurrencies bill in 2019 and Supreme Court verdict in 2020 are the key issues, “the future seems promising for cryptocurrency enthusiasts given the level of innovation and adoption to date. With the emergence of non-fungible tokens (NFTs), a digital image stored on the blockchain ledger that is not interchangeable, there seems to be no end to the virtual finance world”. The virtual currency users and investors will have to make sound financial decisions and lobby for laws and regulations which cater to not only their interests but also the general public. [7]. Sharma et al. (2020) presented a comprehensive study on the impact of COVID-19 on global financial indicators, emphasizing its swift and significant disruption. The research highlighted the massive economic downturn, with global markets losing over US \$6 trillion in a week in February 2020. Their multivariate analysis provided insights into the influence of containment policies on various financial metrics. The study underscores the profound effects of the pandemic on economic activities and the potential of using advanced algorithms for detection and analysis [8]. Alenezi et al. (2021) developed a novel Convolutional Neural Network (CNN) integrated with a block-greedy algorithm to enhance underwater image dehazing. The method addresses color channel attenuation and optimizes local and global pixel values. By employing a unique Markov random field, the approach refines image edges. Performance evaluations, using metrics like UCIQE and UIQM, demonstrated the superiority of this method over existing techniques, resulting in sharper, clearer, and more colorful underwater images [9]. Ghosh et al. (2023) embarked on a comprehensive study to assess water quality through predictive machine learning. Their research underscored the potential of machine learning models in effectively assessing and classifying water quality. The dataset used for this purpose included parameters like pH, dissolved oxygen, BOD, and TDS. Among the various models they employed, the Random Forest model emerged as the most accurate, achieving a

commendable accuracy rate of 78.96%. In contrast, the SVM model lagged behind, registering the lowest accuracy of 68.29% [10].

### 3. Methodology

#### 3.1 Data Collection

The source data was collected from Crypto Market Site (coinmarketcap). The time span of data is from 1st April 2021 till 30th November 2022. Five cryptocurrencies were taken into consideration- Bitcoin, Ethereum, Wrapped Bitcoin, Marker, Lido Staked LTH. Adjacent Close and Volume are the variables on which Time Series Analysis (Trend Analysis) is done.

Table 1. List of Cryptocurrencies

Date	Bitcoin	Wrapped Bitcoin	Lido Staked ETH	Ethereum	Marker
4/1/21'	\$58,926.56	\$59,037.64	\$1,907.92	\$1,919.16	\$2,103.30
4/2/21'	\$59,098.88	\$59,155.04	\$1,946.23	\$1,976.93	\$2,296.46
4/3/21'	\$59,397.41	\$59,401.19	\$2,052.75	\$2,142.90	\$2,480.89
4/4/21'	\$57,604.84	\$57,538.13	\$1,992.69	\$2,027.67	\$2,236.48

#### 3.2 Time Series Analysis

The source data was collected from Crypto Market Site (coinmarketcap). The time span of data is from 1st April 2021 till 30th November 2022. The forecasted data indicates a constant or declining trend that will be followed in the future, making it even more difficult for investors to deal with this type of trading because of the low probability of profit.

$$y(t) = x(t)\beta + \epsilon(t) \quad (1)$$

### 4. Methodology

#### 4.1 Open Data

The open price is an important indicator of market sentiment and can be influenced by a variety of factors, including news events and market trends. The constant downward trend in the open price of cryptocurrency following the Indian budget news suggests that the news had a negative impact on the cryptocurrency market which created fear among cryptocurrency investors, leading to a sell-off of their holdings. The cryptocurrency market is highly volatile and subject to sudden shifts in sentiment and price movements. The news about the Indian budget had a bad effect on the bitcoin market since it scared investors and caused them to dump their

holdings. Cryptocurrency prices are extremely volatile since they are impacted by market trends and news stories.



**Figure 1.** Open Price of the crypto currency over the period of time

### 4.2 High Data

The announcement had a significant impact on investor and trader sentiment, leading to a decrease in the value of cryptocurrencies. The lack of legal or regulatory recognition makes it difficult for digital asset owners to transact and invest in cryptocurrencies, potentially leading to a reduction in the overall demand for such digital assets. The Indian budget announcement has thus had a negative effect on the cryptocurrency market, leading to a downward trend in prices. Due to a lack of legal recognition and a decline in demand for digital assets, the Indian budget release had a negative effect on market mood and decreased the value of cryptocurrencies.



**Figure 2.** High Price of the crypto currency over a period of time

### 4.3 Low Data

The Indian government has already voiced concerns about the use of cryptocurrencies for illegal operations and the possible hazards they represent to the integrity of the financial system. As a result, any information on cryptocurrency regulation or taxation in India may have

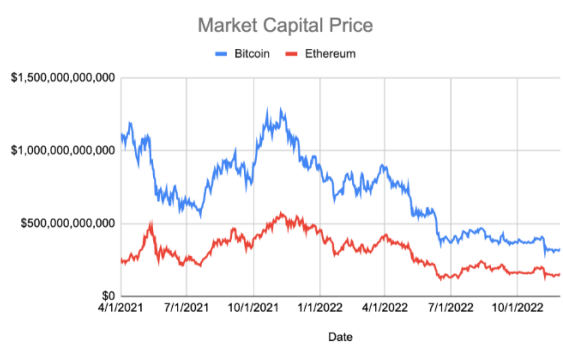
an effect on the price of cryptocurrencies, even if it is negative. A decline in demand for cryptocurrencies in India could result in a downward trend in pricing if the budget includes any measures that are seen as being averse to the cryptocurrency business, such as tighter regulation or higher taxes. The unlawful use of cryptocurrency and potential hazards to the financial system worry the Indian authorities. Regulation and taxation may have an effect on cryptocurrency prices, possibly causing a downward trend if budgets include policies that are unfavorable to the sector.



**Figure 3.** Low Price of the crypto currency over a period of time

### 4.4 Market Capital

News about bitcoin regulation or taxation in India also adds to investor apprehension and market turbulence, which can lead to a decline in the market capitalization for cryptocurrencies. If investors are afraid to invest in cryptocurrencies because they are unsure of the government's position on the sector, demand and subsequently market capitalization may decline. It's crucial to keep in mind that the cryptocurrency market is extremely volatile and might affect its values and market capitalization. Investor concern is increased by India's regulation and taxation of bitcoin, which could lead to market instability and a drop in the market capitalization of cryptocurrencies. Values and market capitalization may be affected by market volatility.



**Figure 4.** Market Capital of the crypto currency over a period of time

## 5. Result and Discussion of the Experimental Work

The Indian government suggested a prohibition on private cryptocurrencies and the creation of a central bank digital currency in the Union Budget 2021–22, which was unveiled on February 1, 2021. (CBDC). A circular from the Reserve Bank of India (RBI) prohibiting banks and other financial institutions from working with cryptocurrencies was released in April 2018. Due to this, the prices of cryptocurrencies significantly fell in India, with the price of Bitcoin falling by more than 20% in a single day. Despite several rumors suggesting that it is considering a ban on private cryptocurrencies, the Indian government has remained wary of cryptocurrencies. The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, which attempts to outlaw private cryptocurrencies while establishing a legal framework for the creation of a digital rupee, was proposed by the government in January 2021. In March 2020, the RBI's ban was overturned by the Supreme Court of India, and as a result, the price of bitcoin increased by more than 10% in a single day in India, from about INR 6,50,000 to about INR 7,20,000. The price of Bitcoin in India fell by more than 10% in a single day, from about INR 32,00,000 to about INR 28,50,000, when the Indian government presented the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 in January 2021.

Table 2. Forecasted Market Capital Volume of the Crypto Currency

Date	Bitcoin	Wrapped Bitcoin	Lido Staked ETH	Ethereum	Marker
12/1/22'	\$384,06 4,742,41 7.59	\$5,214,7 25,133.9 9	\$3,577.8 57,942.8 5	\$293,82 5,282,09 9.28	\$2,029,1 54,889.4 6
12/2/22'	\$383,21 4,841,69 8.84	\$5,198,4 53,407.8 6	\$3,580,9 10,162.3 9	\$293,88 5,093,72 2.10	\$2,028,3 12,078.1 6
12/3/22'	\$382,26 0,930,94 3.97	\$5,182,3 97,142.2 4	\$3,584,4 56,142.3 3	\$293,99 0,620,40 6.81	\$2,027,9 67,795.2 9
12/4/22'	\$381,38 3,772,59 3.61	\$5,166,1 01,488.0 4	\$3,587,6 55,544.8 6	\$294,07 0,364,77 4.18	\$2,027,4 57,101.6 6
12/5/22'	\$380,53 1,227,34 9.92	\$5,149,6 25,076.8 5	\$3,590,7 98,580.3 9	\$294,14 4,960,10 4.32	\$2,026,9 02,561.7 9

## 6. Conclusion

The budget has been a mixed bag, bringing about both uncertainty and fear while also bringing about some encouraging developments. The budget's restriction on private cryptocurrencies action is in line with the Central

Bank of India's (RBI) cautious approach to cryptocurrencies due to worries about money laundering and other illegal activities. The potential ban has alarmed a lot of cryptocurrency exchanges and trading platforms in India because it might affect their operations and cause them to lose customers. But the budget also suggested the creation of a CBDC, which would help India's cryptocurrency market. A CBDC's implementation is viewed favorably since it may lead to increased financial inclusion and increase the effectiveness of the payment system. The budget's proposal to establish a framework for a digital asset ecosystem was another encouraging move. The development of an official digital currency and the availability of blockchain-based financial services are made possible by this framework. India has the ability to create distinctive ideas and goods that can be used in other nations, which might help it become a leader in the global cryptocurrency business. In conclusion, the Indian budget for 2022 has had a conflicting effect on the country's cryptocurrency market. The implementation of a CBDC and the development of a digital asset ecosystem may help the business, notwithstanding the uncertainty and fear that the proposed ban on private cryptocurrencies has generated. The Indian 2022 budget has a chequered record, and the cryptocurrency market is shrouded in doubt and anxiety. The RBI's cautious approach to cryptocurrencies and the potential prohibition on private cryptocurrencies raise concerns about money laundering and illicit activity. To increase financial inclusion and the efficiency of the payment system, the budget also suggests the introduction of a Central Bank Digital Currency (CBDC). The idea to create a digital asset ecosystem also makes it possible to create an official digital currency and financial services based on blockchain, which may help India take the lead globally in the cryptocurrency sector.

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