

Bit by Bitcoin

If you are being bombarded with news about bitcoin, but don't have a clue what it is, you are not alone. The Reserve Bank of India and the Finance Ministry have warned investors against bitcoin and other cryptocurrencies, as has the Securities Exchange Commission in the US, which has also sounded an alarm on initial coin offerings (ICOs). India's Income-Tax Department is probing bitcoin exchanges to gather information about their transactions and ET reported on Saturday the department is in the process of determining at what rate they should be taxed under the goods and services tax regime. Bitcoin prices have risen over 1,700%, or 18-fold, this year, compared with an increase of 28% and 26% in the Nasdaq Composite Index and the BSE Sensex, respectively. They are hovering around \$17,700 per bitcoin (BTC) in the US and ₹11.4 lakh in India. ET Magazine tells you all you need to know about bitcoin, ICOs and the brouhaha over them.

:: G Seetharaman

WHAT IS BITCOIN?

Bitcoin is the largest of cryptocurrencies, which are virtual tokens with no physical backing. They function on a technology called blockchain, which is nothing but a record of all transactions on a decentralised network of computers (reportedly 9,500) around the world. **Bitcoin accounts for 55% of the value of all virtual currencies in circulation**

WHO CREATED IT?

An anonymous individual or group of individuals named Satoshi Nakamoto in 2009. In 2016, an Australian programmer, Craig Steven Wright, claimed to be the inventor of bitcoin

HOW MANY BITCOINS ARE THERE?

16.7 million

There is a limit of **21 million**, which is expected to be reached in 2140

WHAT ARE ITS KEY FEATURES?

There is no central monetary authority for bitcoin, like the RBI for the rupee, and every computer that processes transactions and creates bitcoins is part of the network and all these computers work together. **A bitcoin can be divided up to eight decimal places (0.00000001), with the smallest unit called Satoshi, after the creator**

IS IT LEGAL?

It is hard for governments to ban bitcoins, since they do not have geographical boundaries, but that has not stopped governments in Ecuador, Bolivia and Bangladesh from outlawing trading in cryptocurrency. **India has said bitcoin is not legal tender and is yet to take a call on a report submitted by a government committee on cryptocurrency**

IS IT ANONYMOUS?

It is reasonably anonymous in that you can have multiple alphanumeric addresses to transact in bitcoins and the currency has been used to buy drugs and pay ransoms. But, given that there is a **record of all transactions, if the addresses are linked to your personal identity, your cover is blown**

IS IT SECURE?

Not absolutely. Hackers have targeted different bitcoin exchanges. **Last week, a Slovenian-based exchange lost \$64 million of cryptocurrency and a similar amount of bitcoin was stolen from a Hong Kong exchange last year**

HOW IS BITCOIN CREATED?

Through a process called mining, in which those with specialised hardware and software compete with each other to process and confirm transactions happening on the network in every 10-minute block, by solving a mathematical puzzle. **The miner that does it the fastest is allotted 12.5 BTC (it was initially 50, then 25; it is halved every four years), in addition to transaction fees, after the miner's solution is verified by enough peers**

CAN ANYONE BECOME A BITCOIN MINER?

Technically, yes. But it is expensive (bitcoin mining equipment costs around ₹2.5 lakh a pop) and very competitive. Experts say India is not conducive to large-scale mining, since its electricity costs are high relative to other countries. **According to Power Compare, a UK-based website, bitcoin mining consumes more electricity than 159 countries and the annual cost of mining is \$1.5 billion**

HOW TO BUY BITCOIN?

You can buy directly from a holder of bitcoins or through a bitcoin exchange, by linking your bank account or cards or e-wallet. You will have to create an alphanumeric address, which is like your account number that is publicly available and you can use to receive bitcoins, and a private key, which is like your bank account password. Once you have bought the bitcoins, you should move them to your private digital wallet. The exchanges follow KYC (know your customer) norms like bank accounts. Before you buy, make sure you understand the concept behind bitcoin and the riskiness of the investment

WHICH ARE THE BITCOIN EXCHANGES IN INDIA?



WHERE CAN YOU USE IT?

In the US, some big names like travel site Expedia and Microsoft accept bitcoin, but in India no major website directly accepts it. Some bitcoin exchanges sell gift vouchers which can be used on e-commerce sites

Bitcoin is still more of a novelty in India than in developed markets and large merchants, either online or offline, do not accept it

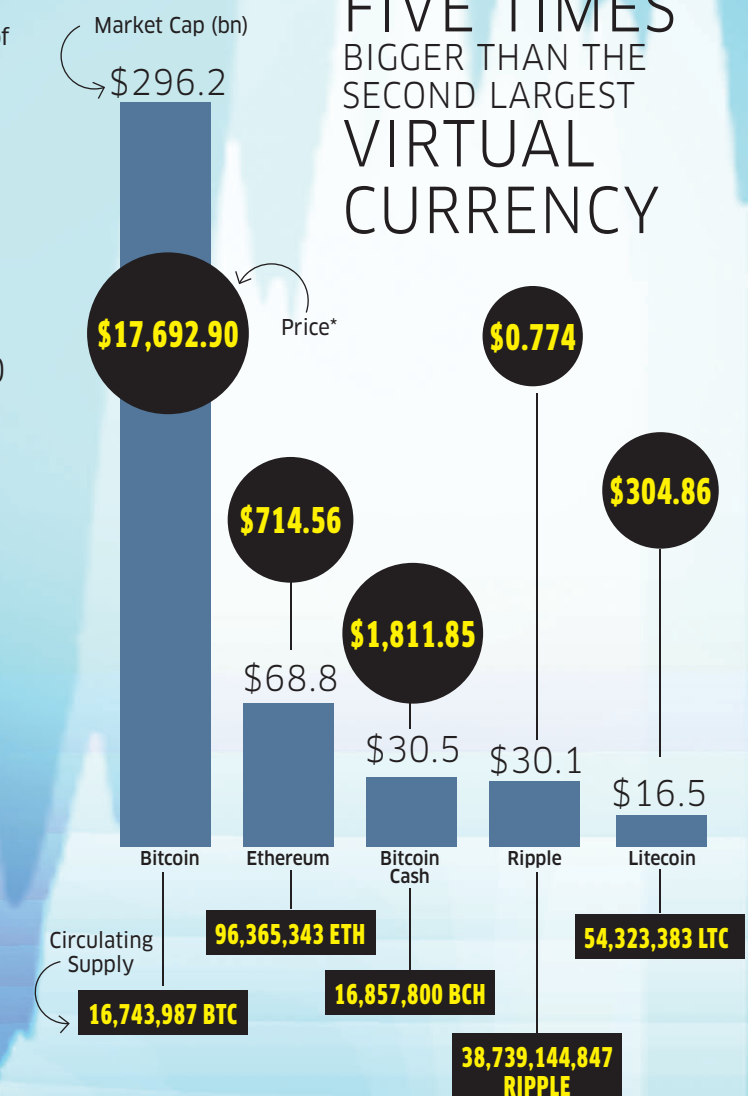
WHICH ARE THE OTHER CRYPTOCURRENCIES?

Ethereum, Bitcoin Cash, Ripple and Litecoin are among the other large cryptocurrencies. CoinMarketCap.com, a data site, lists over 1,300

WHAT ARE ICOs?

An alternative to raising money from the public through an initial public offering or venture capitalists, ICOs are a form of crowdfunding, where the company issues a new virtual currency similar to bitcoin, in exchange for bitcoin and other popular cryptocurrencies, which can be used usually only on the platform the company is building. **The total money raised through ICOs till the end of last year was under \$300 million, but now it is more than ten times higher, at \$3.8 billion.** China and South Korea have banned ICOs and other countries could follow suit

BITCOIN IS FIVE TIMES BIGGER THAN THE SECOND LARGEST VIRTUAL CURRENCY



Source: CoinMarketCap.com | *Volume weighted average of prices reported on 400 exchanges |

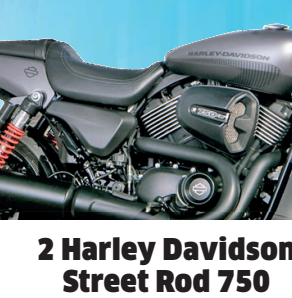
If bitcoin were a company, it would be **three times as big as PayPal by market value**

If cryptocurrency as a whole were a company, it would be **more than two-and-a-half times bigger than Citigroup**

1 Bitcoin Can Buy



1 Hyundai Creta



2 Harley Davidson Street Rod 750

5 Samsung 65-inch, 4K smart TV



13 iPhone X

410 gm of 22 kt gold



Source: Bitcoin.org, CoinMarketCap.com, CoinDesk.com, Zebpay.com, the New York Times, the Economist