BLOCKCHAIN.COM

https://www.blockchain.com/explorer
(I own no cryptocurrencies, therefore I have no conflicts of interest, nor do I recommend ANY cryptocurrency over any other)

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Bitcoins do not exist except on ebay as semi-worthless tokens.
Cryptocurrencies – a new way of understanding money

Or... a new way of making money

Or... a new way of losing money
FOMO
The Netherlands Tulip Investment Strategy
• You create an inflatable car! Great gas mileage, can fold up and fit in a small box
• You produce 100 of the Airmobile. They sell in minutes.
• You want to build more, but you need money. You issue an IPO 1,000,000 shares
  People buy your shares and share price increases.
• Share holders are part owners of Airmobile.
• People buy/sell your sell stock in Airmobile.

• You create a crypto currency called Bettycoin
• You seed the crypto by giving 10 of your friends 1 Bettycoin each
• Others hear an ad by Tom Sellick that says, “I have never experienced such a wonderful investment in my life. It is much safer than gold, very liquid for selling. It is the most significant investment you can ever make. Do you want to be a billionaire? Then consider Bettycoin. Trust me – I have a mustache.”
• People want to buy a Bettycoin, so the owners agree to see ½ of their coin to the highest bidder.
• You give yourself 1,000 Bettycoins, and sell them to highest bidders.
• The price of a Bettycoin grows from $1 to $1,000.
Basics 1

• A “bitcoin” is a “cryptocurrency”
• One bitcoin can be divided 1,000,000 times
• There are literally thousands of cryptocurrencies
• All cryptocurrencies are nothing but zeros and ones in a database spread around the world
• Cryptocurrencies cannot exist without the Internet
How to buy and sell a cryptocurrency

1. Have an account with real money in it (PAYPAL or bank)
2. Connect to a crypto “exchange” (more on this later)
3. Establish an ID and password*; this will create a “wallet” for you**
   a. BUY – tell the exchange how much you want to spend and why crypto you want to buy
      1. The exchange will find a seller of the crypto you want to buy
      2. The exchange will extract funds from your account and move to seller
      3. The exchange will extract crypto from seller and move to your account
      4. The exchange will extract a “fee” from both seller and buyer
   b. SELL - basically just the reverse of the above

• There is NO help desk to call if you lose this information; if you lose it or forget it, you will never be able to access your wallet
• ** no one will be able to equate your name to this account – it is just a number now residing in a database spread around the world
- The bank owns the physical database where your account lives
- You can access your account, you can get help if you need it
- The bank builds a “firewall” to keep out the bad guys
In the crypto world NO ONE owns the physical database where your account lives.

There are literally hundreds (if not thousands) copies of the crypto database scattered around the world.

No one to call for help.

Bad guys just need to figure out your password and name, and it is “game over”.

Your “transaction” (either buy or sell)
1. A buy/sell transaction gets executed by an crypto “exchange”
2. All transactions are written to a **block**
3. When a block reaches a certain size, there is a mad scramble to validate all of the transactions in that chain of transactions in the block; first company to validate that the data is correct (called “mining” wins and is awarded bitcoins *
4. Once a block is “validated”, it can never be altered and there is a permanent record of EVERY crypto transaction ever done; every transaction ever made has been recorded and validated and made part of a long list “chain” of blocks. Ergo the name “BLOCKCHAIN”.

* This is the ONLY way bitcoins are generated!
**Facts of Life**

- Say you want to spend $1,000 to buy a bitcoin
- Money is moved from your bank account THROUGH an “exchange” which finds a seller
- The “exchange” charges you a fee
- Say BTC (the bitcoin actual crypto name) is selling for $30,000
- You get moved into your wallet \((1000 \times .005)/30000\), or \(995/30000 = .0331666666\) bitcoins

- If you want to sell them you tell an exchange you have some number to sell, and the exchange will find a buyer
- Both the seller and buyer are charged a small percentage
- An exchange exists to make money!
What is money?

- A U.S. dollar is worth a dollar because our government says it is.
- A EURO is worth a EURO because a bunch of governments say it is.

A U.S. dollar is just paper, right?

1. It is the official currency of the U.S.
2. The U.S. controls supply
3. The U.S. sets interest rates
4. Keeps things relatively stable (non volatile), so at the end of the day the paper in wallet is worth something; a dollar value might vary a tenth of a cent (compared to an exchange rate with another country), but overall it stays about the same
5. A dollar can be used to buy something and later that dollar can be used to buy something else
6. Can be stored to used in the future... although
7. Inflation can erode dollar value
Who started this .... Uh... stuff? A “name” called Satoshi Nakamoto. In 2009, he/it transferred 10 bitcoins to another’s “wallet” as a reward after this guy mined some blocks.

- Approximately 46 million people own bitcoin
  ~13% will purchase cryptos in the next year
  84% of crypto investors are between ages of 25-44
- Facebook jumps into cryptocurrency with Libra.
  (If Facebook wants to jump start Libra, I am waiting for them to announce, “We are giving every Facebook user 20 Libras!”)
Picks and Shovels - Crypto Mining 101

Remember, cryptocurrencies DO NOT exist except in a database, so what are you mining?
Crypto Mining 101

• Sophisticated computer software that examines block of crypto transactions
• You have to be first one to “validate” the last block of transactions
• As a reward you get some number of bitcoins
• Mining is about helping to keep transactions fraud free (think of a CPA company)
• You don’t even have to have a computer! You can use the “cloud”! For free!

https://www.bitdegree.org/crypto/tutorials/how-to-mine-cryptocurrency
Seriously want to mine cryptos? Buy Antonopoulos' book to learn about technical nitty gritty of bitcoin. Or… watch 12 sessions (combined duration: 15-16 hours) taught by Princeton professor and other PhDs.

https://www.youtube.com/watch?v=fOMVZXLjKYo
All of this data is encrypted – which means average mortal cannot decipher the contents without a “key”

Mining computers are computational CPUs only – they load a skinny O/S (not MS Windows!)
All they do is keep guessing (millions of times) of the number of bits and order of the encrypted data

Blah, blah, blah . . .
Here is what you own after you transferred money from your bank to someone

10111001110000111110000011010100010000110000100000100000010000000

- TICTOK
- YAHOO.COM
- MSNBC.COM
- CNN.COM
- GMAIL messages
- Your stocks and bonds*
- Your frequent flyer miles
- All of those cute emojis

* It is possible to physically hold a stock certificate, but most do not want to
• Estimated it will take another ~100 years for the remaining 2.4 million bitcoins to be put into circulation
• In 2024 (estimate) the reward will be 3.125
• Eventually the reward will get to zero and the full supply of 21 million bitcoins will be done
There are estimated 200 trillion data mining computations going on as you read this slide.

- Think of the electricity cost
- Think of your mining competition
- Think of the return on investment to be a mining company and get so little for your effort?
- Estimated that mining companies had assets of around $140B in BTC as recently as 2 years ago
- Competition and costs go up, and mining companies have to sell some BTC to get cash to continue operations; estimated mining assets are around $75B now
Bitcoin errata

- Currently there are about 18.5 million bitcoins in circulation
- https://www.blockchain.com/charts/total-bitcoins shows you in near real-time how many bitcoins are in circulation
Want to get into crypto mining?

• Download software
• Can use your ordinary laptop
• Can mine almost ANY crypto
• A 1% fee is charged if you are successful mining
• Can get paid with cryptos and moved directly to your wallet
Blockchain.com

Every exchange exists to make money; small % fees are charged for transactions and storage (if you want to use their wallet bank)
Silk Road
Best Places to Buy Bitcoin in 2022

• **Best Overall:** Coinbase
• **Largest:** Binance!
• **Best for Beginners:** eToro *(high fees; nice “play with me first” fun trading)*
• **Best for No Cost:** Robinhood *(commission free; limited cryptos exchanged)*
• **Best Instant:** CoinMama *(easy to use if you have wallet already set up; convoluted fee structure)*
• **Best for Interest and Borrowing:** BlockFi *(can use bitcoins as collateral without selling; can borrow against your holdings)*
• **Best for Privacy:** Bisq *(nice for first time novices; low commissions)*
• www.buy.bitcoin.com
• Celsius

No website is 100% secure; once you purchase any cryptos, if stored in THEIR wallet, move to your own private one (of course they might charge a “fee” for this!)
• June 7, 2022 – Crypto Exchange Celsius cannot handle all the trades put to it
• Celsius shuts down
• People cannot access their wallets
• Celsius promises to try and recover trades and wallets

Bank of England boss Bailey says 'be prepared to lose all your money' in crypto after lender Celsius freezes accounts

June 14, 2002
FRAUD

Estimated $7.7 BILLION has been stolen in 2021!

Bitcoin has been on the market for over a decade and never been hacked. Wallets have been hacked, but not the underlying bitcoin system.

Remember – no one is in control of who buys or sells. There is a log in the blockchain, but buyers and sellers only known are “ids”

Transactions go into a “wallet”

If bad guys get into your wallet, look out. And the bad news – cryptos get moved, then moved again, then distributed again, and your 10 bitcoins are now in 100 wallets. They will use every and any trick they can to get into your wallet.

Bots are looming. If, for instance, you type in a trade wrong; you meant to buy .10 bitcoin but you type in 10. A bot will make the trade before you can correct it yourself.
El Salvador adopts bitcoin as legal tender in September 2022 (they have ~1,400 bitcoins)

Bitcoin used to order 2 pizzas

Tesla Motors says they will accept bitcoins to purchase one of their cars; within 2 months rescinds that decision

El Salvador adopts bitcoin as legal tender in September 2022 (they have ~1,400 bitcoins)

There is a political PAC for the acceptance of BITCOIN as “legal” tender. The funny thing is, this PAC contributes real money to political folks – they do not accept BITCOIN 😊

Even the North American Bitcoin conference that at one time accepted bitcoins as payment, stopped taking bitcoin!

Dell and Expedia toyed with accepting cryptos, then abandoned it.

Red Cross and National Kidney Foundation accept donated cryptos

October 2021, Houston Firefighters’ Relief and Retirement Fund bought $25,000,000 bitcoin and ether.
(Day Russia invaded Ukraine)
Investment thoughts

- All digital currencies fluctuate wildly and unpredictably; profits and losses are impossible to predict
- ALL digital currencies trading companies are unregulated; (Feds can “ask” a trading company to stop “user 101010” from trading, but nothing says they have to do that) Trading companies can be hacked.
- Digital wallets can be hacked
- Digital currency is not legal tender. No law requires anyone to accept it.
- In the U.S., we have FDIC – nothing like this exists in the digital currency world
- Once a payment is executed, it can never be reversed. There is no “whoops” button.

- NEBR Research: Top 10,000 crypto investors own ~1/3 of all digital tokens
- Chainalysis: Transactions over $10,000,000 accounted for more than 60% of trades
- CoinMarketcap: 2020 crypto market = $774 billion; 2021 crypto market = $2.2 trillion
- Specialized ATM’s and Coinstar Coin kiosks will take your money and buy crypto
- Staples Center L.A. renamed “Crypto.com Arena”
- Miami Heat basketball team now play in the “FTX Arena”
• Tom Brady (aka Mr. Quarterback for Tampa) says he would “love to” accept a portion of salary in bitcoin, Ethereum, or Solana.
• Mat Damon, in 2022 Super Bowl commercial, gazed out into space and says history is made up of, “The ones who embrace the moment and commit. Fortune, favors the brave.” (he was hawking some obscure, easily forgotten crypto)
Peter Lynch: “When you hear someone hyping a stock, what do you really know about their investing skills and track record?”

Warren Buffett: “I’m pretty sure crypto currencies don’t manufacture anything.”
Are bitcoins tulips?
Bitcoin could 'easily' recover to hit $100,000 over next the 24 months, powered by tech developments and macroeconomic improvements, says Anthony Scaramucci *

* He is CEO of Skybridge Capital, and investment business
FOMO
Thank you – please go to the OLLI URL and complete feedback form

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