

An Introduction to Bitcoin

I like to learn, especially those things that make my life better. Then I like to write books about those new things to help others. So, I have tried to make this book easy to understand and easy to apply. As an example of that, I have defined technical words simply where used in the text, bolded them in the text so you can easily spot them and included their definitions again at the back of this book.

I hope this information does for you what it has done for me. That said, I would love to hear your comments, suggestions and especially your results from the data in this book. I can always learn more. You can reach me by posting on the forum at www.bitcoin-secrets.com.

This book is intended to educate you to be able to make money investing in Bitcoin. It is not investment advice.

Peter Glickman

Introduction

Remember life before the Internet? To phone someone you didn't know, you had to look up their number in the phone book. If you wanted to know how to spell a word with which you weren't familiar, you had to look it up in a dictionary. And if you wanted to drive to a place you hadn't been, you needed to find a map and plan your trip on paper.

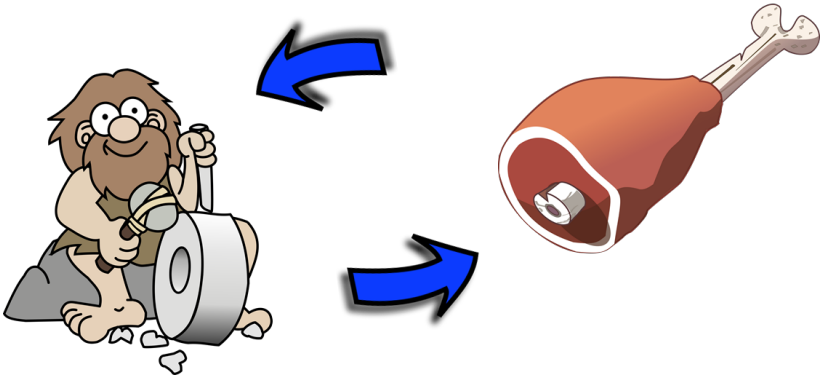
Those are a few of the things that have changed in our personal lives, but business has changed even more. Brick and mortar retail stores are closing because online shopping is taking over. I can remember the thrill I felt when I went to my local Borders bookstore to see my first book on the shelf. I even have a picture of me coming out of the store holding up the book with a huge smile on my face. Enter Amazon. Borders is no more.

Just as Amazon is changing the retail landscape (literally), there is something new that will bring huge sweeping changes to the world of money and finance. Just as Amazon has reduced the number of middlemen and therefore lowered prices. The same will occur for our money. We'll pay less for transferring it to friends and paying bills.

I am certain you have watched the prices of homes, insurance, food, gasoline and entertainment, to mention a few items, grow steadily over time. Some might say that it is not the items costing more, but the dollar buying less. There is something new that may make inflation a thing of the past, but before I explain what it is, let us review the subject of money.

A brief, but interesting history of money

Money is something that you know will be accepted in trade and continues to have value. The technical term for money is *currency*. Currency is something that flows from one person to another to make trade possible.



Barter

Before currency, a chicken farmer traded his fresh eggs for those things he needed, like bread, shoes, etc. However, the cattle herder was not willing to accept 1000 fresh eggs for his new calf because they would go bad long before he could eat them or trade them to others. Trading one item for another is called barter. The problem with barter is that you have to find someone who wants what you have at the exact same time you have it.



Gold dust

The next great advance in trade was the first generation of currency. Something that everyone would accept and that would not spoil (lose value) over time: gold. Now the chicken farmer could sell his eggs for gold and after accumulating enough gold, even if it took a year, could buy a calf. Everyone was willing to accept gold. Gold was stable and didn't spoil. But gold nuggets and piles of gold dust aren't all equal. It is not possible for the cattle herder to say he will sell one calf for 10 gold nuggets because the nuggets are not all the same size and weight.



Minted coins

So, we have the second generation of currency standardized the weight of gold (and silver) with the invention of minted coins. The stamp of the royal mint (the picture of the king) acted as the promise that the coin was real gold and was the expected, standardized weight. Now the chicken farmer could ask the cattle herder how many gold coins he wanted for his calf. This was a great advance for trade, but if you were buying a very expensive item, like a castle, it required several wagons of gold coins and a troop of soldiers to protect the wagons.



Paper money

Paper money solved that problem. The man who wanted to buy a castle could write an order to the man guarding his gold (his treasurer) to pay the castle owner the agreed upon amount of gold on presentation of the order. This was the third generation of currency—money orders, checks and paper money. (From 1863 to 1933, US dollars were called gold certificates and promised the bearer actual gold if requested. In 1933, the U.S. government ended the exchange of dollars for gold.)



Credit

Paper money was very convenient, but what if you needed to pay for something and didn't bring any currency with you? Or what if you didn't want to carry a lot of money around with you? This was handled by the fourth generation of currency—credit and credit cards. One small card in your wallet could now represent small or large amounts of currency and was protected by a personal identification number (PIN).

The problem with coins, paper money and credit is that they are all under the central control of the king or the central bank. In a perfect world, this central control would not be a problem, but some people might say that in today's world, the king imposes too many taxes and the bankers charge too much interest on their loans. Or the king might forbid moving large sums of money into or out of the country. Or the banks might reduce the interest they were paying depositors or take their

depositors money to bail them out of bad investments. Or the king might want to pay off money he borrowed with currency that is worth less.

Inflation

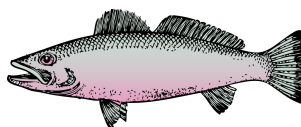
The process of inflation is simply money gradually becoming worth less. This can happen fast (high inflation) or slowly (low inflation). You can see this if you observe that a house that was worth \$100,000 thirty years ago is now worth \$450,000. Inflation occurs when there is an increase in money without an increase in the things it can buy.



For example, suppose you live on an island with 10 people and everyone lives on the fish from the sea. Unfortunately, the sandal maker can only eat so many fish each day. So if you want to buy sandals in the evening, you may find that the sandal maker is not interested in any more fish.



The king of this island is a very smart man. (Some say too smart.) So, he has created paper currency in the form of IOUs. Each IOU promises that the person presenting it will receive one fresh fish in exchange. (The king's bodyguards fish when they are not guarding the king. So, the king has extra fish.)



Now, if you need sandals in the evening, after the sandal maker has eaten the fish he received that day for sandals, you can pay him with IOUs. He can spend these IOUs later to buy fish for a party he's planning for his friends.

On this same island, is a hut maker. Over the years, he has built a really nice two-story hut on the beach with a view, which the king wants. Unfortunately, the hut maker wants more IOUs than the king has fish (which are what the IOUs promise).



One morning the king wakes up with a brilliant new idea: he will write more IOUs than he has fish! (I told you some people thought he was too smart.) At first, everything was fine. The king got the hut with a view and the hut maker received IOUs for enough fish for many parties with his friends.

However, after the hut maker's parties, he still had IOUs left over. One day, he decided to buy a pair of sandals. Unfortunately, another islander was already in the process of buying the only finished pair left. Since our hut maker had many more IOUs than the other islander, he offered twice the usual number of IOUs.

Seeing how easy it was to get more IOUs, the sandal maker increased his everyday sandal prices. Seeing this, the hut maker increased his prices and so on and our little island became the latest victim of inflation.

Our modern world

Leaving the island behind, let us look at our modern world. The government of a country may want to increase their army, but not have enough money. So, the government borrows several million dollars to do that. A year later, when it is time to pay back the loan, the government wants to build a new dam. Now they have a problem, should they build the badly needed dam or pay back the loan?

Unfortunately for the citizens of this country, the treasurer of the country is the grandson of the island king. He “knows” what to do: just print more money. Then the government can build the dam and pay the loan. The result? The dam gets built and the loan gets paid, but the money of the country is now worth less than before. It buys less, so the citizens of the country suffer as prices rise. When the king borrowed the money to build the army, it cost a family \$400 a week for groceries. After printing all the extra money, the SAME groceries cost \$600.



Is it possible to avoid these problems of centralized currency? Could there be a de-centralized currency that doesn't depend on a central ruling authority? There is. It is a new generation of money called Bitcoin.

What is Bitcoin?

Bitcoin is a de-centralized, digital currency that is bought, sold, traded and kept on the Internet. You could say Bitcoin is Internet money.

Because Bitcoin is de-centralized the fees for transferring it are much less than banks charge for transferring dollars or euros. For example, I sent some Bitcoin to my grandson a few months ago and it cost me \$0.63. If I had sent him the money by bank wire, it would have been \$30!

Even better, inflation reduces the value of dollars or euros, but not Bitcoin.

How is it possible to have currency not issued by a government or bank?

It uses three new ideas to prevent forging Bitcoin or spending Bitcoin twice. These ideas were patented in August 2008.

1) Bitcoins are created by solving a complex mathematical problem that has a predictable number of solutions. For example, $1 + 2 = 3$, $3 + 0 = 3$ has two solutions. Each time a computer finds a solution, it notifies the other computers on the network. After verification, that computer is awarded fixed number of Bitcoins—currently 12.5. This process of creating new Bitcoins is called **mining**.

2) The record of all new Bitcoins and any recent transactions is built into a block of data. Each new block carries a complex code generated from the data in the block. Because this currency requires codes, it is called **cryptocurrency**. (*Crypto-* means hidden.) Each block also contains a code built from the code of the previous block. Thus, these blocks are chained together. This is called the **blockchain**.

3) Multiple, identical copies of the blockchain are kept on thousands of computers on the Bitcoin network. Any new transactions have to be verified by these computers as being valid before the transaction becomes part of this historical record. If someone forged a transactions saying he had Bitcoin that he really did not have, the other computers on the network would reject his transaction and it would not be confirmed or recorded.

Important Note: Bitcoin was the first and is the best-known form cryptocurrency, but after Bitcoin hundreds of others have been created, all based on similar principles. I've used the word *Bitcoin* in this book, but **the information in this book (how to buy, where to buy, etc.) applies to nearly all cryptocurrencies.**

Bitcoin's amazing price history

January 2009, the first Bitcoin was created.

22 May 2010, the first real product transaction occurred: at Papa John's in Jacksonville, Florida. It sold two pizzas for 10,000 BTC.

July 2010, Bitcoin rose to 8 cents and two online Bitcoin exchanges were now operating.

February 9, 2011, the value of a Bitcoin was \$1. The value doubled in 3 months.

March 2011, the first British online Bitcoin exchange opened, followed that same month with exchanges offering Bitcoin for Brazilian, European, Polish and other currencies.

June of 2011, Bitcoin was worth \$31.91 and the bitcoin market totaled more than \$200 million. Also. that month, the first

smartphone app permitted storing and spending Bitcoins on mobile phones.

August 2011, the first international Bitcoin conference was held in New York City.

November 2011, the first European conference was held in Prague, The Czech Republic.

December 2012, the first Bitcoin bank was licensed in Europe.

March 2013, the value of a Bitcoin reached \$74.90 and the Bitcoin market reached more than 1 billion dollars.



May 2013, the first real world ATM machine for Bitcoin was put into service in San Diego.

August 2013, the German Federal Ministry of Finance announced it recognized Bitcoin for commercial and private sales.

October 2013, a division of the largest Chinese search engine, Baidu, began accepting Bitcoin as payment for its security services.

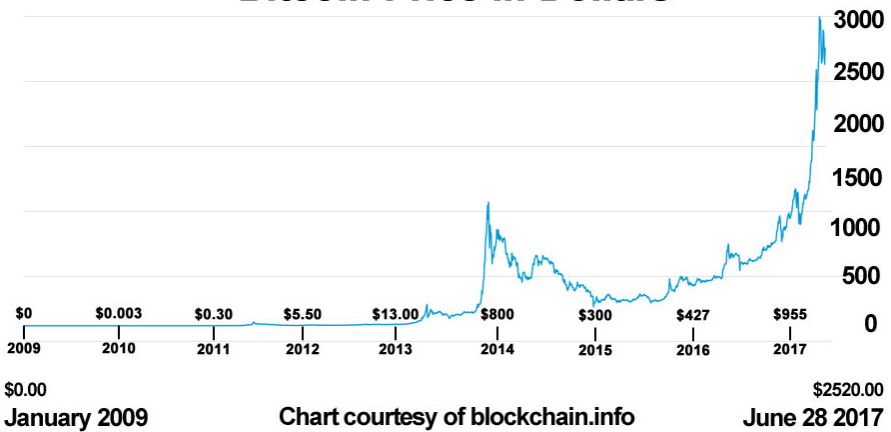
November 2013:

- The value of a Bitcoin hit \$263, then doubled to \$500.
- A Subway store began accepting Bitcoin.

- The US Senate held a hearing on it and the next day the value of a Bitcoin shot up to \$1242!
- Bitcoin officially transferred more money than Western Union.
- A university in Cyprus began accepting Bitcoin as payment for tuition.
- Richard Branson's Virgin Galactic began accepting Bitcoin for space travel.
- Shopify, an Internet shopping cart service, integrated bitcoin as a payment option for its 70,000+ merchants.

April 2017, Japan passed a law legalizing Bitcoin for payment of debts and investments and Russia reversed its policy of attempting to shutdown Bitcoin. Russia announced it is looking to a second cryptocurrency to revolutionize Russia's economy.

Bitcoin Price in Dollars



If you look at the graph above, you will be struck by the dramatic, vertical rises and the later, dramatic drops. Bitcoin has several times risen four to ten times within a month or two. It has also dropped significantly after such rises. These observations lead me to the following rules:

1. Do not put more money into Bitcoin than you can afford to lose.
2. Buy in steps, a little at a time, and only buy more as you see the price rise steadily.
3. Be prepared for a lot of ups and downs along the way.
4. Keep some cash handy to buy when the price pulls back.
5. You can buy and hold if you are planning on holding Bitcoin for two or more years because the general trend is up even with the skyscraper highs and kamikaze lows. You can see this by the prices above each one of the years in the graph.

The negative side of Bitcoin



Bitcoin has been declared a scam, a failure and worse ever since Bitcoin was first brought to the media's attention. The first recorded article, Dec. 15, 2010 was ""Why Bitcoin can't be a currency." It was published in *The Underground Economist*. From then until now, there have been 138 articles declaring Bitcoin dead. Considering the Bitcoin market is 42 billion dollars, three times the size of Twitter, it seems to be a success.

Some people say that since criminals use Bitcoin to transact business or launder their money, Bitcoin should be outlawed. If you think about it, criminals also use knives, but no one would suggest we cut off our noses to spite our faces by outlawing knives. Criminals also use automobiles, but outlawing automobiles would never be accepted by any thinking person. When you think about it, criminals use cash, too. Outlawing cash only hurts the economy.

How to buy & sell Bitcoin

The most important thing to do is to buy some Bitcoin with a small sum of money you do not mind losing. It is like learning to play poker. It is not the same game unless you have some money in the game. If you have some money in the game, you will learn many things very quickly that otherwise would have slipped past you. So, get started!

Buying your first Bitcoin is going to take a few days unless you have a friend who will sell some to you directly or you want to pay about 20% more than the going price.* This is because the governments of most countries now require documented proof

of your identity, citizenship, residence, source of your funds as well as your government tax id number when you earn or spend their currency, such as dollars, euros or pounds.

By law, this information must be verified by a live person, not a computer, so the process is not immediate. With the recent exploding interest in Bitcoin, delays of two to five days are common.

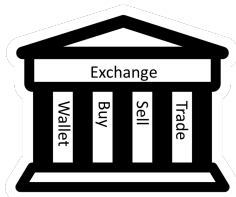
You will be required to take at least one photo of you holding your id to show that your picture matches the photo id. This is to prove it is your id and not someone else's. Use your phone rather than your webcam. You'll need three arms (just kidding), but the picture will be much more readable and you won't have to resubmit it as often. You will probably have to make several tries to get a usable picture.

Before I tell you where to buy Bitcoin, I want to explain two types of programs you need to do that.



A **wallet** is a software program that runs on a computer or phone that does three things: receives, stores and sends cryptocurrency. Software always carries the slight risk that it can be hacked (broken into). So, there are also hardware wallets that combine physical hardware with a software program to do those same

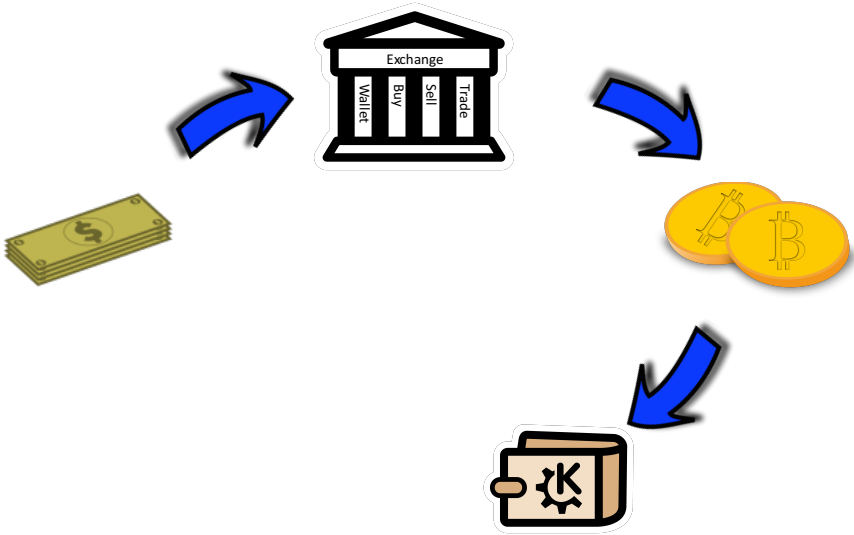
three things, but are nearly impossible to hack. Suggested ones can be found in the Resources section.



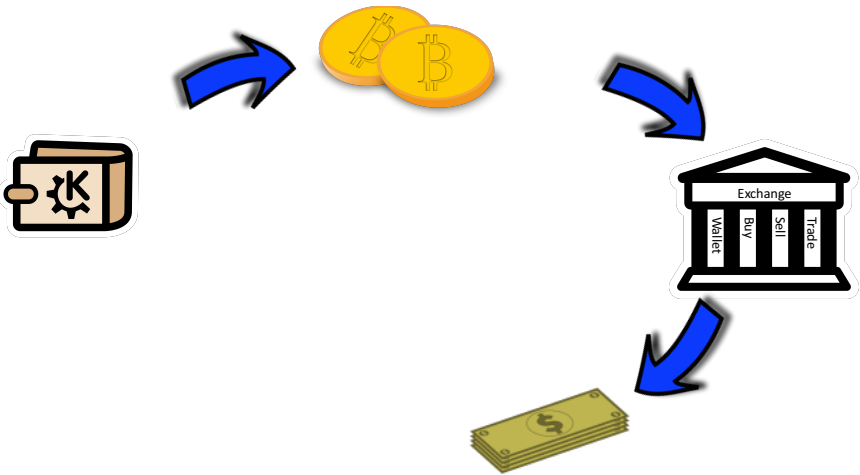
An **exchange** is a website that provides the three wallet functions above (receiving, storing and sending) with three additional functions: buying, selling and trading. All exchanges incorporate wallets. You should think of these as “stock exchanges” for cryptocurrency. Again, suggested ones can be found in the Resources section.

Recently some websites have sprung up which allow buying and selling, but do not provide any way to store the Bitcoins after they are bought. [www. coinmama.com](http://www.coinmama.com) is an example of this. When you buy, it asks you where to send the Bitcoin and you have to give it the address of your non-coinmama wallet.

In most cases, you must open an account at an exchange to buy Bitcoin. Thereafter, you can leave your Bitcoin in your exchange account or send it to your wallet.



When you buy something with bitcoin or send it to a friend, this flows in reverse.



If you are lucky enough to have a friend with Bitcoin who is willing to sell it to you directly, you only need a wallet to receive, store and eventually send it.

Now that you understand wallets and exchanges, Let us go back to how to buy Bitcoin. The good news is that once you have gone through the difficult process of getting approved on an exchange and transmitting dollars, euros or pounds to buy Bitcoin, you can open accounts with other Bitcoin exchanges with just your email address and a password of your choosing. The government reporting requirement is only required where Bitcoin is bought or sold for dollars, euros, etc. not when one cryptocurrency is traded for another.

This is useful because my recommended exchange, www.kraken.com, only trades the fifteen largest cryptocurrencies, but others trade as many as 200 cryptocurrencies and there are good profit opportunities in some of the smaller ones.

*Don't care about the extra cost? You can go to www.localbitcoins.com, create a free account and search for people in your city who will sell you Bitcoin for a premium that same day or within 24 hours. (The State of New York and Germany do not allow these transactions.) You can find people who will accept cash, Amazon gift cards, credit cards, cash deposits to a local branch of a national bank, bank wires, etc.

Localbitcoins.com offers an escrow service to help make these transactions safer as well as providing reputation data for each seller, which includes the number of completed transactions and a feedback score from customers. As of 28 June, the premium for buying bitcoin was about 20% for a local cash transaction in Tampa, Florida. Some people are happy to pay that because the transaction is fast and usually completely private. In fact, depending on the amount, your seller may not require any id at all.

I recommend the following exchanges for buying, selling or trading Bitcoin for US citizens. Note: they all have different

transfer and trading fees and different withdrawal limits. So, you should check to find the most recent data.

- www.Kraken.com, requires bank wires to fund your account with US\$ and trades 15 cryptocurrencies.
- www.Gemini.com, permits funding your account with US\$ at no charge from your US bank, but has a \$500 daily limit and only trades 2 cryptocurrencies.
- www.Bittrex.com, does not accept US\$, only accepts cryptocurrencies, trades 200 of them.
- www.Coinmama.com, accepts credit cards for payment, but requires a separate wallet to receive the Bitcoin you buy. Coinmama only sells 1 one type of cryptocurrency, Bitcion.
- You can find many more exchanges at www.cryptocompare.com.
- Beware of the ones in the section “What to avoid” below.

As I said before, there are now hundreds of other cryptocurrencies. I think of them in groups. First and most important is Bitcoin, which almost always influences the prices of the other coins. If Bitcoin is down, their prices typically go down. If Bitcoin is up, their prices typically go up. This is not true every time for every other cryptocurrency, but it is common enough that it is worth knowing.

The next group is the other well-known cryptocurrencies with market capitalizations of a billion dollars or more, such as Ethereum and LiteCoin. (Market capitalization is the coin price times the total number of coins available.) There are about 8 or 10 of these. Finally, there are the newer cryptocurrencies with much smaller markets. Because their markets are so much smaller, the prices are easily influenced by large volume sales or purchases. So, you have to be careful that the fast price rise of a new coin isn't the brief enthusiasm of only one or two

hundred backers. To avoid losing money, I find it best to only invest in coins with market capitalizations of a half a billion dollars or more.

Anyone who has invested in the stock market will discover that the same investment principles that apply to stocks also apply to cryptocurrency.

1. Cryptocurrencies are speculative. **Do NOT put all your money into this** unless you are in your 20s and are willing to lose it and start over.
2. **Diversification: spread your investments over at least three coins, five is better.** Jim Cramer of the stock investment TV show, Mad Money, calls diversification the only free lunch in town because it improves profit.
3. **When you decide to buy a cryptocurrency, do not do it all at once.** Make several purchases over 3 to 6 weeks, 1/3 or 1/6 each week. This prevents you from buying in just before a big drop in price.
4. **Initially buy a small amount.** Then as you see it rise, buy more.
5. **When you set up an account on a wallet or exchange, set up Two Factor Authentication (2FA) on it.** two-factor authentication uses a phone app, such as Google Authenticator or Authy, which provides a 5 or 6-character number to the wallet or exchange to prove you are the rightful owner. These can be downloaded for free and are very easy to learn.

What to avoid

Over the last year, I've set up accounts on nine different exchanges. Out of those nine, I've actually used seven. Based on my experiences, I recommend that you avoid the following:

- Coinbase.com—Although large and easy to use, they have higher fees. I quit using them when I tried to do a transaction and the website was not responding. Their customer service eventually posted a page that they couldn't handle the volume.
- GDAX.com—Global Digital Asset Exchange, a branch of coinbase. In spite of what they claim on their home page, they had a problem in June 2017, which caused the price of a cryptocurrency that had been trading for around \$300 to drop to \$0.16 (Yes, that's 16 cents!) and had to stop trading to get it corrected. They're now going to make good people's losses from that.
- Bitfinex.com—They are based in Hong Kong and in April 2017 lost the ability for users to withdraw US\$ to the US. This is not as bad as it seems as users can transfer cryptocurrencies to other exchanges which can withdraw US\$.
- Poloniex.com—A Bitcoin withdrawal of mine recently has been held up "awaiting approval" for 5 days and there's been no email from the support tickets I've submitted.

Three ways to make money with Bitcoin

1. Buy and hold Bitcoin—Given the historical price appreciation, holding Bitcoin for two to three years should provide a great return.
2. Buy Bitcoin on an exchange and sell it at a much higher price through www.localbitcoins.com. You need to know your customer so you are not money laundering

for a criminal, but you can make approximately 20% within a short time. Consult www.localbitcoins.com for details.

3. After you have some Bitcoin of your own, follow the market and you'll start to see trends and learn when to buy and sell to make short term profits over weeks or months.
4. There is a fourth way to make money with Bitcoin: mining. However, that is beyond the scope of this book and my research so far has not shown it to be very profitable after all costs are taken into account unless you personally live in a country with a very, very low cost of electricity and want to run the computer yourself at home. That's why this section is called *three* ways to make money.

Important Note: These three methods also work with other cryptocurrencies. For the first technique, buying and holding, I recommend you buy two to four other cryptocurrencies as well because such diversification will reduce your risk. Use www.coinmarketcap.com to pick coins by checking for large market cap(italization) and trend. Do not try to chase trend until you have had some successful experience.

How to track Bitcoin

Once you have bought some Bitcoin, you will want to track it to see how you are doing. Here are four ways to do that easily:

- Download the “Bitcoin Ticker Widget” app to your phone.
- Go to www.coinmarketcap.com and click on “Currencies” in the top left corner. This will give you a list of 100 or 800 cryptocurrencies in market cap order with the percentage up or down for their price for 1

hour, 24 hours and 7 days. If you click on the name of the currency in the list, you will see a price graph and links to the webpage that describes the cryptocurrency and on what exchanges it is sold.

Note: On coinmarketcap.com, you can quickly see the market trend for cryptocurrencies as a whole for 1 hour, 24 hours or 7 days.

- On www.bitcoincharts.com, you can get a graph of Bitcoin's price on any one of the many exchanges it is sold on for periods from 1 minute to two years.
- On www.kraken.com, or any exchange, you can see multiple cryptocurrency prices.

Bitcoin Q & A

What is mining?

To create a new Bitcoin, a computer must solve a very complex mathematical problem. Once it finds a solution to that problem, it submits the answer it found to the other computers on the Internet running Bitcoin software. If that answer is confirmed by 6 other computers, the computer that found the answer (and its owner) is rewarded with a certain number of Bitcoins. At this time, the reward is 12.5 Bitcoins. Mining is a way to make money with Bitcoin whether the price goes up or down.

Should you sell your 401K and buy Bitcoin?

In general, no. More specifically, if you are in your 20s and want to take a risk for a large reward, you might do this. If you are in retirement or about to retire, you should not do this. The best rule is not to invest more money than you are willing to lose. If you are making lots of money or have a long time to make back any losses, you can take on more risk.

Definitions

The following definitions are not in alphabetical order. They are in the sequence needed to easily understand the later definitions. If I were to teach a small child that $4 + 2 = 6$ without first teaching the meanings of the numbers two, four and six and then teach the process of addition, the child would never learn $4 + 2 = 6$. So, I have taken the liberty to put the definitions in a sequence that builds understanding one concept at a time. Even with that said, I recommend you learn these words by reading the text and only use these definitions as reminders. And if you have trouble understanding a definition in this section, try reading the previous definitions in sequence. In this way, you should have very little trouble with the many new ideas of this subject.

Currency – Currency is something you are certain will be accepted in trade for things you want now or at a later time, for example, dollar bills for food at the grocery store. It was invented to make trading and bartering easier. The word *currency* comes from *current* which means to flow [from one person to another]. Before currency, eggs might spoil before they could be traded for clothing or a wagon. The first currency in the Western world was made from coins of gold and silver. Currency 1) is widely and easily accepted, 2) holds its value, 3) endures over time, 4) can be broken into smaller units and 5) is easily verified.

Digital currency – Currency that is represented digitally. Until Bitcoin, digital currency was authorized and controlled by banks, for example credit cards, Paypal or wire transfers. This management led to restrictions and expensive charges. With the invention of Bitcoin, central authorization and control by banks was eliminated along with inflation and expensive charges to transfer it. Central control was replaced by independent verification using a unique, hidden computer code

in each Bitcoin, which prevents counterfeits and fraudulent transactions. Because it relies on a hidden code, Bitcoin is referred to as Cryptocurrency. *Crypto* meaning hidden or secret.

Bitcoin – The first and most widely known Digital Currency that relied on a secret, hidden code that prevents counterfeits and fraudulent transactions. The first Bitcoin was created in 2009 and now (May 2017) numbers roughly 21 million Bitcoins valued at more than 28 Billion dollars. In addition to being widely and easily accepted, holding its value, enduring over time, being divisible and easily verified; Bitcoin is not limited by national borders.

Cryptocurrency – Because it relies on a hidden code, Bitcoin is referred to as Cryptocurrency. *Crypto* meaning hidden or secret. Although Bitcoin was the first, there are now more than 700 other cryptocurrencies.

Altcoins – After Bitcoin, hundreds more cryptocurrencies have been created. Altcoin refers to any other cryptocurrency.

Wallet – A software program for computers or a phone app that does three things: receive, store and send cryptocurrency. Software always carries the slight risk that it can be hacked (broken into). So, there are also hardware wallets that combine physical hardware with a software program to do those same three things, but are nearly impossible to hack.

Exchange – A website that provides the three wallet functions: receiving, storing and sending with three more: buying, selling, trading. All exchanges incorporate wallets. Think of these as stock exchanges for cryptocurrency.

Address (or wallet address) – The Blockchain doesn't contain the name of the owner of the Bitcoin. Rather, it contains the

sending and receiving addresses. Each Bitcoin address is 34 characters: upper or lower case letters and numbers, but no spaces or special characters (!@#\$\$%^&*). If I want to send you Bitcoin, I must get your Bitcoin address and send my Bitcoin to that address. Another name for address is public key. Since they are long and make no sense, it is always best to copy and paste these addresses because Bitcoin sent to a wrong address is either lost forever or sent to someone who has no idea who sent it and can't find that information!

Private key – A private key allows the holder to spend or transfer those coins. Never give out your private key.

Public key – See Address above.

Blockchain – A chain from the beginning of Bitcoin to the present containing blocks of data with that Bitcoin's secret hidden code, when it was originated, which Bitcoin Addresses have owned it. All the computers running Bitcoin software share the same Blockchain data so that any deviation from it, for example an attempt to "counterfeit" a Bitcoin, is easily discovered and rejected as not a valid Bitcoin.

Market Capitalization – A financial measure of how big a company or digital currency is. For example, Apple Inc. has approximately 5 and 1/4 Billion shares. Since each one is worth about \$150 each, Apple Inc. has a market cap of over 800 Billion dollars. There are roughly 16 million Bitcoins. Each one is worth roughly \$2,500 each. So, the market cap of Bitcoin is roughly 40 Billion dollars.

Mining – New Bitcoins are still being made and will be until the maximum number of 21 million is reached. To create a new Bitcoin, a computer must solve a very complex mathematical problem. Once it finds a solution to that problem, it submits the answer it found to the other computers on the Internet

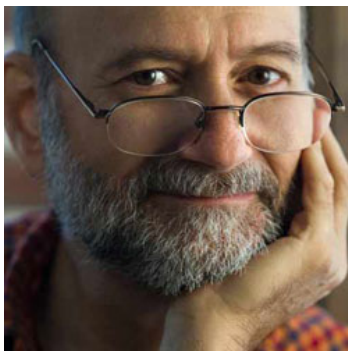
running Bitcoin software. If that answer is confirmed by 6 other computers, the computer (owner) that found the answer is rewarded with a certain number of Bitcoins. At this time, the reward is 12.5 Bitcoins.

Two-factor authentication (2FA) – An added factor to authenticate (verify) a person as the real owner of an account in addition to the standard username and password method. Two-factor authentication can be done with software or hardware. It provides the owner with a six or seven-digit number to be entered into the account. In most cases, the number is only valid for a very short period, such as 30 seconds.

Defi – Defi is the abbreviation for DEcentralized Finance. It is an improvement on centralized finance, the banks. By creating apps (applications) using blockchains and cryptocurrencies, the profit that went to banks can instead be given to users of the apps. Examples of DeFi are NEXO.io which pays interest of as much as 12% on different cryptocurrencies deposited. Another example is staking.

Staking - Staking is locking tokens (promising not to sell them) for a period of time, either day to day or for a specified period such as 3 months. Reducing the number of tokens sold, helps keep the price high and so is valuable to the token holders. In return for locking them, the token holders reward those staking with additional tokens, similar to earning interest at a bank, but with higher interest rates. Staking carries with it more risk as tokens could be stolen (hacked) or the price of the crypto could decline.

About the author



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More information on cryptocurrency can be found at <http://www.bitcoin-secrets.com>.