

Bitcoin Beginner's Guide BY Trace Mayer, J.D.







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ABOUT THE AUTHOR

The main purpose of this guide is to provide ideas and information on how to safely use Bitcoin and Bitcoin services to avoid many undesirable and harmful effects others have experienced.

Ideas can only be overcome by other ideas. Money and force are impotent against ideas. Government abuse of currency has enabled many evils including the rise of dictators and perpetuation of genocide. The abandonment of sound money is the chief reason, if not the only reason, that the world has become such a dangerous place. Bitcoin, being merely open-source software code, is a powerful idea and tool to counteract these evils.

As the worldwide fiat monetary system evaporates it will take education, humility and willingness to explore new technologies like Bitcoin to successfully navigate the chasm and retain one's wealth. We are feeling the gigantic tectonic plates underneath the financial system begin to shift.

The shift of wealth that is happening is gargantuan and if one is properly positioned they can profit handsomely from the change. Bitcoins, like gold, are a sterile asset and an increase in the price of bitcoins only represents a shift of wealth that has already been created and was stored in some other asset to holders of bitcoins. Luck is when preparation meets opportunity.

Trace Mayer is an entrepreneur, investor, journalist, monetary scientist and ardent defender of the freedom of speech. He holds a degree in Accounting and a law degree. He has studied Austrian economics focusing on the work of Murray Rothbard and Ludwig von Mises.

He is a strong advocate of the freedom of speech and member of the Society of Professional Journalists, hosts the <u>Bitcoin Knowledge Podcast</u>, operates <u>RunToGold</u> and <u>HowToVanish</u> and authored <u>The Great Credit Contraction</u> and many other works.

Trace Mayer has appeared on Canada's national financial network BNN, ABC, NBC, many radio shows, conferences, to many private groups and is syndicated through Seeking Alpha, Yahoo! Finance and MarketWatch.

He was among the first popular bloggers to publicly recommend Bitcoin in its infancy with a market cap under \$2m and well before its massive rise to about \$500m in March 2013. So if you like, use or have profited from Bitcoin then you possibly were directly or indirectly influenced by Trace. Almost all of his writings and interviews are at: http://www.RunToBitcoin.com

He has always been very interested in entrepreneurship, money and the financial markets. He believes education is the key to opportunity and humility, the ability to change and adapt, are essential to successfully allocate capital.

He generally deals with high-net worth individuals. He may be available for interviews, speaking, training, writing or consulting.

And you can signup for the **free** email updates at the websites where you will learn the latest tips and advice to protect your wealth and privacy.

COVER CREDIT: Reddit user <u>nagdude</u>





INTRODUCTION

Imagine being able to send any amount of money to anyone anywhere in the world at anytime without the possibility of funds being frozen, seized, confiscated or impeded in anyway all for a tiny or no cost. That is Bitcoin.

Bitcoin has opened the monetary Pandora's Box. Since Bitcoin slithered out of the primordial monetary ooze in 2009 the Bitcoin economy has been growing, dying, regenerating, evolving, metastasizing and developing at an extremely rapid pace. One thing is for sure: Bitcoin has not disappeared.

This decentralized peer-to-peer irreversible non-freezable crypto-currency, the ultimate 'offshore bank account' or last plane account, and the surrounding services now offer tremendous utility to hundreds of thousands of people on a daily basis.

It also makes easy and possible *anonymously* paying for online goods or services. This is extremely important if you want to protect your Internet privacy by using Virtual Private Networks (VPNs). You should never trust a VPN that doesn't accept bitcoins.

If you have not seen the extremely popular videos, **What Is Bitcoin?** at <u>WeUseCoins.com</u> and <u>Blockchain Explained</u>, then I highly recommend viewing it to get a succinct and accurate overview.

There have also been a significant number of unfortunate events where bitcoins have been absconded, embezzled or stolen. Additionally, as with anything scams and thieves exist so due diligence to find reputable service providers must be done to protect your capital.

Nevertheless, with this short <u>Beginner's Guide To Bitcoin And Bitcoin</u> <u>Services</u> you will be able to safely, easily and quickly learn how to store, acquire, sell, spend, speculate and invest bitcoins.

HOW DOES BITCOIN WORK?

Bitcoin miners perform a function that is analogous to gold mining but very different. While gold miners mine rocks to produce gold which has integrity and scarcity based on internal characteristics based on atoms and chemical law Bitcoin miners mine numbers which have integrity and scarcity based on internal characteristics based on cryptographic protocols and mathematical law.

Bitcoin mining is how the numbers and information of the Bitcoin network is secured, validated and verified.

The Bitcoin mining community must solve a complex cryptographic math problem to create a block. Once solved the answer can be easily verified by other Bitcoin miners. Blocks are solved approximately every ten minutes and the difficulty of the complex cryptographic problem varies based on the total computational power of the Bitcoin network. Additionally, miners listen for transactions, which are ledger transfer announcements, broadcasted through the peer-to-peer network as transactions. These transactions are then processed and confirmed by being included in a block and adding the block to the blockchain.

Each transaction is included in a block and all blocks constitute the Bitcoin blockchain. Therefore, the Bitcoin blockchain contains a record of every Bitcoin transaction that has ever happened.

Most Bitcoin miners perform this labor because miners that solve a block earn (1) any transaction fees paid by customers for faster transaction processing and (2) the block reward which is a predetermined amount of bitcoins as specified by the protocol.

Bitcoin mining is a very competitive market. Bitcoin miners are unable to either increase their own block reward beyond the rules in the protocol or process invalid or fraudulent transactions that could corrupt the Bitcoin network. Because anyone can become a Bitcoin miner and the Bitcoin network is the largest distributed computer network in the world therefore it is extremely improbable that any particular Bitcoin

miner that may be acting maliciously could compromise the blockchain. Thus, Bitcoin mining is used to protect the neutrality and the consensus of the network even if not all Bitcoin miners can be trusted.

SUMMARY OF RECOMMENDED SERVICES

STORE (my favorite: Breadwallet + Armory)

Bitcoin.org - the open-source software

Breadwallet - easy online wallet to store bitcoins

Armory - The safest and most secure Bitcoin wallet.

Piper Wallet - A Raspberry Pi for a cheap cold storage device

ACQUIRE

Popular exchanges: **Kraken** and **Circle**.

SPEND AND SELL

<u>Coinapult.com</u> - Send bitcoins to an email address or mobile phone number and has a very interesting LOCKS service

<u>Private Internet Access</u> - Anonymize your Internet traffic. Never trust a Virtual Private Network (VPN) that does not take bitcoins

<u>BitPay.com</u> - Payment processor with daily direct deposits

Purse.io - Receive major discounts spending Bitcoins on Amazon

FIVE STEPS TO MAKE A BITCOIN TRANSACTION IN UNDER 30 MINUTES

I understand, you are impulsive and just heard about this newfangled thing called Bitcoin and the first thing you want to do is go out and make a transaction. Sure, you could read this entire guide.

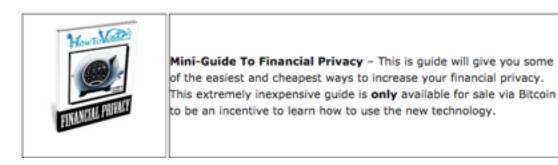
But what if you want to just get down to it and buy something with bitcoins in the next 30 minutes? You learn by doing so here you go!

STEP ONE

You need a wallet to have bitcoins you purchase sent to. For this I recommend <u>Blockchain.info</u> for a web based wallet or <u>Breadwallet</u> for the iPhone. Blockchain.info has had security issues in the past so only keep minimal funds in it. If you want the ultimate in security then <u>Armory</u> is the only solution for true cold storage. I us both and it comes down to time or money..... So pick your poison!

STEP TWO

So what fancy new product or service do you want to buy? Well, it would be good to know approximately how many bitcoins are needed. Perhaps it is the \$3 Mini-Guide To Financial Privacy (<---- click the link!) to say Thank You since this guide is so helpful.





STEP THREE

Now you need to get some bitcoins into your brand new wallet. <u>Circle</u> is another option to link with your bank account via ACH or credit cards. You can usually have Bitcoins in under ten minutes. By now hopefully you have a friend or two you can buy a bitcoin from. Or you might be able to find someone at a <u>local Meetup group</u> or perhaps on <u>Local Bitcoins</u> but be very careful. **Speed & Privacy Tip:** Get some bitcoins from a friend for some cash.

Sure, the effective exchange rate may be rather steep but if you are only exchanging \$40-60 (1 year VPN is about \$40 and you should definitely buy it with bitcoins!) and learning how to use this magic Internet money then just chalk it up to Bitcoin school. Time or money and be sure to get a comfortable margin of extra bitcoins because the exchange rate fluctuates. Nothing is more annoying than being .2 BTC short and having to make another trip!

STEP FOUR

Ok, now it is time to go to the website where you want to make the purchase. If you already had it open then refresh the webpage so that any payment amounts get updated to the current exchange rate.

If you chose Blockchain.info then login, click the Send Money tab and do a Quick Send to the wallet address for payment (copy and paste that big nasty thing above Waiting For Payment!) and specify the number of bitcoins (1.209 in this case).

If you chose Breadwallet then paste the wallet payment address into the Send Payment section, specify the number of bitcoins (1.209 in this case) and click send!

STEP FIVE

Once you click Send then the payment should be submitted to the network for confirmation. A confirmation is where a the bitcoin network recognizes the transaction as valid and irrevocably moves the bitcoins from one wallet address to another.

Some processors require 0 confirmations and others 6+. With the Mini-Guide To Financial Privacy we use Bitpay so it should be available immediately after sent to the network. Once their limit is reached then they should allow access to the good, confirm the invoice paid, etc. and, just so you know, 0 confirmations are required for any HTV products so click: Download.

CONCLUSION

And those are five simple steps to help you make your first Bitcoin purchase in under 30 minutes! You will become more comfortable with the technology the more you engage with the Bitcoin economy. Then when you use those clunky barbarous relics like online banking, debit or credit cards, money orders or checks it will seem like you are carving a letter to someone in stone!

STORE

Bitcoins are stored in a bitcoin wallet and can be accessed by anyone with the private encryption key. If your private key is compromised then the bitcoins could be transferred to a wallet for which you do not possess the private key.

There have been multiple thefts amounting to hundreds of thousands of dollars including the infamous MyBitcoin which absconded with many bitcoins, including a lead Bitcoin developer's¹, and Bitcoinica where over 43,000 bitcoins were stolen² and a few months later an additional 18,000³.

Like physical gold which can either be in your physical possession or entrusted with a third party so likewise a bitcoin wallet can be in your possession and/or the possession of a third-party.

For your personal possession only I recommend using the Bitcoin software⁴ or the Bitcoin Armory⁵⁶. This can be cumbersome and if you lose the private key contained in the wallet.dat file then you will not be able to access your bitcoins. For the particularly savvy you could even use a 'brainwallet' which may be the most secure method available⁷.

EASY AND SECURE

An extremely easy tool is the Blockchain.info online wallet⁸. The private keys are encrypted in your web browser before being sent to the

¹ http://www.bitcoinmoney.com/post/8366783098/launch-bitomat-mybitcoin

² http://www.bitcoinmoney.com/post/17566027429/bitcoinica-interest-payments

³ http://www.bitcoinmoney.com/post/23748723157/bitcoinica-no-database-backups

⁴ http://bitcoin.org/

⁵ http://bitcoinarmory.com/

⁶ http://www.marketwatch.com/story/most-secure-bitcoin-wallet-armory-raises-600k-led-by-trace-mayer-2013-09-16

⁷ http://www.forbes.com/sites/jonmatonis/2012/03/12/brainwallet-the-ultimate-in-mobile-money/

⁸ https://blockchain.info/wallet/

Blockchain.info server so it is not possible for them to abscond with the bitcoins.

There are easy to use Android and iPhone Blockchain apps. My favorite is Breadwallet. For almost all use cases a combination of Breadwallet and Armory will provide a security profile to very securely protect your bitcoins.

The main risk is that the client side encryption of the private key could be compromised by the Blockchain server. But if you are only keeping a few hundred dollars worth of bitcoins then I think they are the easiest and most secure option.

ENCRYPTION IS MATH

Encryption is math. With Bitcoin there are *public keys* with corresponding *private keys*. To move bitcoins from one public key to another you need to be able to solve a math problem. With the *private key* it is really easy to solve the math problem. Without the *private key* it is nearly impossible. Using a brainwallet you can use math to convert a *phrase* to a *private key*.

For example, the *phrase* bitcoin is really cool converts to the *private key* 5KeoZLodmz6jghYRXakYXNRGVqg683kQdeADWkSkbdnGzDqygaA for the *public key* 17NEJi3EFyDtjvqhDmU14EVkf5eJBtdF4g. You can create brainwallets (phrases) at <u>brainwallet.org</u> or in the Import area of <u>Blockchain.info</u>. Just remember to be extremely careful when directly handling private keys.

OFFLINE STORAGE - ULTIMATE SECURITY

One of the **most secure** forms of storing bitcoins is via a cold wallet also known as offline storage. With a cold wallet you use a computer, like a \$200-300 netbook, that never has an Internet connection to generate the private keys to the wallet and store encrypted. Armory innovated this entire space in a very easy to use way and has a large number of <u>tutorial videos</u>.⁹

Using html/javascript code completely offline you can <u>create private keys</u> and <u>generate transactions</u>. ¹⁰¹¹¹² Here are seven easy steps to apply this principle of using a cold wallet:

- (1) Transfer the address and transaction generator code via USB to the offline computer.
- (2) Create the private keys and store them in a .pdf, .txt, etc. file.
- (3) Create a TrueCrypt volume and if desired a hidden volume.
- (4) Place the files containing the private keys into the TrueCrypt volume. I like to place the public keys in the main folder, along with some dummy private keys, and the other private keys in the hidden folder.
- (5) Transfer the TrueCrypt volume via USB to an online computer.
- (6) Store the TrueCrypt volume in many places such as Dropbox, Amazon Cloud, Google Drive, Gmail, multiple USB sticks, email to friends, etc.
- (7) With Armory's watching only wallet you can watch wallet balances without exposing private keys.

There are many applications for this such as with having a 'savings' wallet and a 'checking' wallet where you move bitcoins. Even more advanced would be estate planning or asset protection strategies. Of course, this is premised on the html/javascript code not being compromised and there not being a virus or any type of hidden program, like a keylogger, that gets transferred via the USB device. So be sure to practice good computer hygiene.

⁹ https://bitcoinarmory.com/tutorials/

¹⁰ http://www.howtovanish.com/images/offline-transactions.zip

¹¹ https://www.bitaddress.org/ [beware when creating transactions; any unused inputs go to miners]

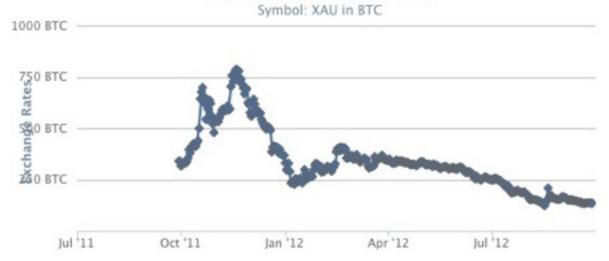
¹² https://www.strongcoin.com/blog/the easiest way to create secure offline bitcoin transactions

ACQUIRE

Gold has outperformed all major asset classes over the past decade. And bitcoins are outperforming gold!

CURRENCIES VERSUS GOLD							
	BITCOIN	USD	EUR	JPY	CNY		
2001		-2%	-7%	-15%	-2%		
2002		-20%	-6%	-11%	-20%		
2003		-16%	0%	-8%	-16%		
2004		-5%	2%	0%	-5%		
2005		-15%	-26%	-26%	-13%		
2006		-19%	-10%	-20%	-16%		
2007		-24%	-15%	-19%	-18%		
2008		-4%	-8%	19%	3%		
2009	4867%	-21%	-19%	-23%	-21%		
2010	387%	-22%	-28%	-11%	-19%		
2011	1320%	-10%	-12%	-5%	-6%		
2012	170%	-6%	-4%	-16%	-5%		

Gold Ounces Bitcoin Trend



To participate in the Bitcoin economy you must first acquire some bitcoins. This can be done by mining or from someone who sells them either in person like from <u>Local Bitcoins</u> or through an online service. Several popular exchanges are <u>Kraken</u> and <u>Circle</u>.

To buy them through an exchange you will need to fund an account with fiat currency and fees are usually around 0.75%.

Keep in mind that Visa, MasterCard, Discover and American Express charge merchants about 1-5% of the gross amount, subject merchants to chargebacks and transactions are not private. Domestic and international wire transfer fees average around \$20-45. Western Union is no different.

Transferring value over distance is expensive with the current barbarous relic of a 500 year old financial and monetary system.

Once you have bitcoins they can be transferred for nearly free with no middlemen to charge you, freeze your funds or disclose your transactions to snoopy advertisers, private investigators, governments, etc.

The main risk with using an exchange are the wire transfer fees, possibility of a lost wire, the exchange may abscond with your funds, the bank(s) used by exchange may freeze or slow the use of funds, etc. I would only use the exchanges for amounts greater than \$5,000.

EASY AND VERY LITTLE RISK

Finding a friend bitcoins is an easy way which skips the exchange services so you can have your bitcoins sent directly to your wallet with a service like Breadwallet.

TRADE-OFFS

With money and currency, and Bitcoin is no exception, there are three main costs: (1) time/convenience, (2) money and (3) privacy.

<u>Kraken</u> has some very experienced Bitcoiners at the helm. They are doing everything they can to be in compliance with regulation and have a very powerful trading engine. You can also go long or short with margin.

<u>Circle</u> is a fixed price brokerage service that connects directly to your bank account via ACH or credit card. They are great for moving in and out of bitcoin and fiat. They also act as a Bitcoin wallet.

<u>Local Bitcoins</u> is slower and much less convenient with higher fees but significantly more privacy. You could also gather with a <u>local Meetup group</u>. But remember to be extremely careful!!!

So, it really just depends what the buyer or seller wants in terms of costs they are willing to pay in time/convenience, money and privacy.

It would sure be nice to find an exchange service that is instantaneous from anywhere with no fees and absolute privacy. If you find the unicorn then please let me know. In the meantime, Bitcoin entrepreneurs are financially incentivized to create services that overall costs in terms of these three areas.

For example, you could join <u>Local Bitcoins</u> and the more people who do that the more convenient, lower fees and more private the exchange market becomes.

In the meantime, there are inevitable trade-offs like everything else in life. So choose whatever you want for the situation.

SELL OR SPEND

So, somehow you got suckered into mining, buying or accepting bitcoins in exchange for a good or service and now you either want to sell or spend them. After all, what good are they if you are unable to exchange them for something you value higher?

Well, with millions of dollars worth of bitcoins changing hands everyday there are many people who will either buy or accept your bitcoins in exchange for a good or service. The <u>Bitcoin Magazine</u> is a great place to learn about general Bitcoin news, merchants, services, etc.

Playing games with Bitcoins is a favorite past-time of many. There are lots of them out there but I will leave you to discover them.

Want something more solid than fancy 'cryptographic hash' then consider publicly traded <u>Overstock</u> which has thousands of products for sale and are usually cheaper than Amazon!

Want to shop on Amazon but get a 5-30% discount? Then consider <u>Purse.io</u> and use <u>Parcel</u> if you are a NYC *privacy* ninja.

<u>BitPay</u> is a payment processor for merchants. Merchants can accept bitcoins as payment which are then instantly converted to FRN\$, MXN, EUR, CAD or GBP and batched daily via direct deposit to their bank account or bitcoin wallet. Merchants can specify what percentage of payments are converted.

BitPay is a great company for a merchant to quickly, easily and efficiently begin accepting bitcoins. They have signed up more than 1,000 merchants and currently process approximately 1,000-2,000 bitcoins per day for restaurants, a dental office, computer supplier and many others¹³.

¹³ http://finance.yahoo.com/news/bitpay-exceeds-1-000-merchants-130000458.html

EASY, FAST AND LITTLE RISK

Your ISP may keep logs of all your Internet traffic. One way to increase the privacy of your browsing habits is to use a Virtual Private Network (VPN). But what good is a VPN if it can be tied to your identity via a credit or debit card? Never trust a VPN that doesn't accept bitcoins. Hence why we recommend Private Internet Access where a year subscription is \$39.95. This should be your first Bitcoin purchase.

What if you want cold hard cash? Well, there are easy solutions. Use <u>LocalBitcoins.com</u> to meet people at the local coffee shop or mall. But be careful!!!

There are hundreds of merchants listed on the wiki Trade page¹⁴ and merchants may offer significant discounts for bitcoin payments.

The main risks of spending bitcoins is sending to an incorrect address, dealing with a disreputable or untrustworthy merchant since payments are irreversible like cash and getting a bad deal. With fees both into and out of bitcoins you will want to be careful spending them.

For example, I offer discounts of about 40% with various books and guides when paid via bitcoins using the <u>online store</u>. There are plenty of ninja strategies included in <u>State Income Tax Optimization</u>.

So be sure to spread the word to merchants about Bitcoin, perhaps give them this free beginner's guide, and ask for a discount. In this economy many merchants will take payment however they can get it. And cash has always been king!

¹⁴ https://en.bitcoin.it/wiki/Trade

SPECULATE OR INVEST

There are two ways to either speculate or invest with bitcoins.

First, you can do a pure speculation on the currency appreciation relative to fiat currencies, gold, silver, etc. Bitcoins have outperformed gold over the last few years and gold has outperformed all major national fiat currencies.

Second, you can invest in bitcoin denominated investments.

There are a few Bitcoin related stock, bond, option and futures markets but they come and go. And **beware** as previously largest exchange GLBSE **failed**¹⁵.

The interest rate on a currency is dependent on the underlying strength of the economy using it. Since the United States and Eurozone are so weak the yields have been in a zero-interest rate environment for years.

Of course, bitcoin investments should be treated as highly speculative and you should do as much due diligence as you feel comfortable with before deciding whether to speculate or invest any capital in either bitcoins or bitcoin denominated investments. There is risk of fraud, embezzlement, etc.

But there is also tremendous opportunity. When you invest in a high-yield investment where compounding is possible while denominated in a strengthening currency then your returns in the base numeraire, like dollars, euros or gold, can be multiplied.

If you begin any serious investment in the Bitcoin economy then I highly recommend you get a lay of the land for tax law.

¹⁵ http://bitcoinmagazine.com/interview-with-glbses-nefario/

START A BITCOIN BUSINESS

Another way to invest bitcoins is by accepting bitcoins with one of your current businesses or by starting a new Bitcoin business. <u>BitPay</u> offers a complete set of merchant tools to help businesses accept bitcoins¹⁶. Three business that accept bitcoins are the <u>Bitcoin Magazine</u> and my favorite <u>Bees Brothers</u> which sells delicious honey harvested by some young teen brothers.

You may not have heard the story of Jim, Donna and Noah¹⁷. Jim had sold his business and began traveling the world. Donna, his sister, would occasionally send him money via Western Union. During one transaction she was arbitrarily placed on the Terrorist Watch List for attempting to send him money. Noah, Donna's 20-something year old son, also attempted to send Jim money and was likewise placed on the Terrorist Watch List. There was no due process, no reason given and no known ability to appeal.

You can start your own Bitcoin business easily and for free to meet the market need for money remittance using <u>Local Bitcoins</u> where anyone can buy or sell bitcoins in person and avoid being placed on any potential lists.

There is tremendous market opportunity in the money remittance industry. For example, Western Union's 2010 annual gross revenues were about \$5.2 billion with 84% happening between private individuals. To send \$1,000 from the United States to Mexico would cost about \$30. From the United States to Germany would be about \$68 plus currency conversion fees. Could you provide the service faster, cheaper or with more privacy?

Remember, if you do meet someone in person to exchange cash and/or bitcoins then remember to follow best safety practices like meeting at a public place, protect your identity by not allowing your car or license plate to be seen by them, protect your password or computer securely, know how to identity counterfeit fiat currency and make sure that a sufficient numbers of confirmations, perhaps 1-6, happen with the transaction.

¹⁶ http://www.howtoacceptbitcoin.com/

¹⁷ http://lewrockwell.com/orig13/card-l1.1.1.html

Bitcoin reduces costs in money, time and privacy.

With extremely low transaction fees and no risk of chargebacks a merchant can recognize a higher profit from transactions.

Bitcoin payments can be made extremely quickly using mobile apps. For experienced users this can take about the same amount or less than using cash or getting a credit or debit card authorization.

In terms of privacy, nothing but cash compares to Bitcoin. As a result, your customers eliminate the risk of identity theft and potential political persecution. Thus, if a merchant fails to accept Bitcoin¹⁸ then customers have significant reasons to question the integrity and honesty of the merchant. After all, why do they want to see my name, credit card number, government issued ID and know the billing address?

Of course, every jurisdiction has different laws that would be applicable so be sure to understand and follow those which are applicable.

¹⁸ http://www.howtovanish.com/2012/09/why-bitcoin-acceptance-should-be-a-bellweather-of-liberty-proponents/

CONCLUSION

Bitcoins are a new revolutionary currency with tremendous utility. Over the past year there have been significant innovations making simple secure online storage along with quick and easy acquisition of bitcoins possible. Many merchants are accepting bitcoins and you can effortlessly convert them into national fiat currency.

The real speculative and investment excitement is with the developing capital markets within the Bitcoin economy and outrageous cash-on-cash returns currently being generated there and with private lending.

Why not begin experimenting with this innovation to see whether the Bitcoin economy provides you any utility? Paying anonymously for the <u>Private Internet Access's VPN service</u> is a great first purchase.

After all, with the worldwide monetary and financial system in commotion we see with the Bitcoin economy that monetary innovation is in forward motion like never before. There will be a solution to this gigantic mess and the innovators and creative destroyers will stand to reap tremendous profit. There is a chance that Bitcoin will play a significant role.

With governments engaged in massive quantitative easing, currency controls and intrusive privacy destroying legislation like FACTA then what are your options?

Have you ever thought or taken action to answer the question: If you had to take the last plane out of your country then (1) where would you go and (2) how would you maintain your standard of living?

Bitcoin could very well be your perfect last plane account. There are currently hundreds of thousands of people regularly using it around the globe, wallets cannot be frozen, there are no arbitrary limits and your wealth can, unlike physical gold, easily cross borders as it can exist as nothing but a brainwallet with nothing to declare or have seized at customs.

BITCOIN RELATED VIDEOS

What Is Bitcoin? (1:44)

This video is a short animated introduction to Bitcoin, made possible with donations from the Bitcoin community.

Screw Banks (1:00)

Starring: Vampire Squid, Jon Corzyne, Bought Congress, PayPay, The Ben Bernank Printer, and a Colombian Hooker!

Are Bitcoins and Unusual Hats the Future of Currency? (8:14)

Explains what the new virtual currency Bitcoin is and how it is like other things limited in amount like virtual hats.

Understanding Bitcoin Security with Trace Mayer (30:39)

An overview video about Bitcoin.

Bitcoin is the Universal Glue & Open Transactions (9:28)

Discussion with Chris Odom about how Bitcoin is the universal glue in the realm of financial cryptography.

Expanding the Bitcoin Business Community (39:02)

The reasons why adopting Bitcoin will increase revenue and lower costs for merchants.

Dr. Edwin Vieira's Speech at GATA Washington Conference (14:59)

Discussion of political currency and the impact on political machinery.

BASIC BITCON QUESTIONS ANSWERED

What is Bitcoin?

Bitcoin is a protocol and software platform that enables a new digital currency called bitcoins (BTC) that can be exchanged from person to person without using banks.

How does one acquire bitcoins?

- Accept bitcoins as payment for goods or services.
- Buy bitcoins at one of the <u>Bitcoin Exchanges</u>.
- Trade traditional currency for bitcoins using one of several services.
- Trade traditional currency for bitcoins face to face using a <u>local</u> directory.
- Earn bitcoins through competitive mining.

How does Bitcoin work?

Bitcoin is a <u>triple entry bookkeeping system</u> where a public ledger of every Bitcoin transaction is validated and distributed in real-time through the peer-to-peer Bitcoin network. The whole network is secured and regulated through cryptography. Anyone can process transactions using computer processing power, often with specialized hardware, and potentially earn a reward in bitcoins for this service which is often called 'bitcoin mining'.

How difficult is it to make a Bitcoin payment?

Bitcoin payments are easier to make than any existing banking or credit card process. Payments are made from a wallet application, either from your computer or smartphone by entering the recipients address either by scanning a QR code, touching two phones together with NFC technology or copying and pasting, entering the amount, and pressing send.

What are some advantages of Bitcoin?

 Unrestrained payments - It is possible to send and receive any amount of money anywhere in the world at any time. No bank holidays. No borders. No imposed limits.

- Low or zero fees Bitcoin payments currently process with either no fees or extremely small fees. Users may include fees with transactions to receive priority processing which results in faster validating and authenticating of transactions by the network. Additionally, merchant processors exist to assist merchants in processing transactions, converting bitcoins to fiat currencies with daily direct deposits to bank accounts and provide these services for much lower fees and less risk than with Paypal or credit card networks.
- Less fees and risks for merchants Bitcoin transactions are secure, irreversible and do not contain customer's sensitive or personal information. This protects merchants from losses caused by fraud or fraudulent chargebacks and there is no need for PCI compliance. This allows merchants to easily expand to new markets where either credit cards are not available or fraud rates are unacceptably high. The net results are lower fees, larger markets and less administrative costs.
- More protection for consumers Bitcoin payments are made without needing personal information tied to the transaction. This offers strong protections against identity theft. Users are in full control of their transactions therefore it is impossible for merchants to force unwanted or unnoticed charges which can happen with either ACH debits, debit cards, Paypal or credit cards.
- Transparency <u>All information</u> concerning the Bitcoin money supply is readily available on the blockchain for anybody to see, verify, measure, and use in real-time.
- Distributed The Bitcoin ledger, commonly called the blockchain, is distributed throughout the world and stored by Bitcoin miners. This adds a level of resiliency and redundancy that is unmatched in the payments space and a payment processing network. For example, the Federal Reserve does all their payment processing at 100 Orchard Street, East Rutherford, New Jersey and have back-up systems that can be brought online within 60-90 minutes at the Federal Reserve Banks of Richmond and Dallas. If those three centers were compromised or destroyed then the entire monetary system of

the Federal Reserve would be greatly impaired and probably completely nonfunctional.

What are some disadvantages of Bitcoin?

- Not widely accepted Many people are still unaware of Bitcoin. Everyday more businesses accept bitcoins because they have advantages of doing so, but the list remains small and still needs to grow in order to gain improved usefulness through networking effects.
- Volatile The total value of bitcoins in circulation and the number of businesses using Bitcoin is still very small compared to what it can be. Therefore relatively small movements in the market can significantly affect the price. In theory, volatility will persist as the market scrambles to determine a bitcoin's price as this nascent currency matures. Never before has the world seen a startup currency, so it is truly difficult (and exciting) to imagine how it will play out.
- For geeks Many user tools are still not ready for everyone and users still need to protect their money by themselves, or trust young online wallet services that still don't offer any insurance against theft or other bad events. New tools and services are constantly being developed to make Bitcoin more accessible to the masses. But from now, Bitcoin is a bright new invention that starts to meet the real world.

Is Bitcoin secure?

The Bitcoin technology - the protocol and the cryptography - has a strong security track record. Bitcoin's vulnerability is in user error. Bitcoin wallet files that store the necessary private keys can be accidentally deleted, lost, stolen or compromised. Consequently, users need to employ security practices to protect their money or use service providers that offer good levels of security and insurance. As Bitcoin has grown in adoption, more service providers have appeared to make it easier, safer, and more convenient to use and safely secure bitcoins. Bitcoins are not covered by insurance schemes or depositor insurance like the FDIC, but could be with a service provider that offered that service.

Is Bitcoin legal?

To the best of our knowledge, Bitcoin has not been made illegal by legislation in any jurisdiction.

Additionally, regulators from various jurisdictions have taken steps to provide individuals and businesses with rules on how to integrate this new technology into businesses and other activities. For example, the United States' FinCEN has issued non-binding and non-determinative guidance on how it characterizes certain activities involving virtual currencies.

Useful resources:

- <u>Virtual Currency Schemes European Central Bank</u>
- Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies
- Bitcoin Virtual Currency: Unique Features Present Distinct Challenges for Deterring Illicit Activity

What about Bitcoin and taxes?

Bitcoin is not a fiat currency with legal tender status in any jurisdiction. But often tax liability accrues regardless of the medium used. There is a wide variety of legislation in many different jurisdictions which could cause income, sales, payroll, capital gains or some other form of tax liability to arise with Bitcoin. Since all transactions are public record and stored permanently, it is a bad idea to attempt to use Bitcoin to evade taxes.

Does Bitcoin encourage illegal activities like money laundering? Bitcoin is a censorship-resistant technology. However, it is not anonymous and the use of Bitcoin leaves extensive and permanent public records.

The Federal Bureau of Investigation concluded on page two of the report *Bitcoin Virtual Currency: Unique Features Present Distinct Challenges for Deterring Illicit Activity* that 'The FBI assesses with low confidence, based on current user and vendor acceptance, that malicious actors will exploit Bitcoin to launder money.'

Bitcoin prevents many criminals from being able to engage in illegal behavior. Because of the way Bitcoin works customers do not need to reveal personal information to merchants. This decreases the amount of data available to illegal actors and acts as significant protection against identity theft, credit card fraud and several other attack vectors. Bitcoin transactions are irreversible which prevents chargebacks or frauds and transaction traceability means it is impossible to counterfeit bitcoins.

Additionally, law enforcement authorities have already begun using sophisticated techniques to analyze Bitcoin transactions in their criminal investigations. So it may be that the Bitcoin software is not very attractive for criminal enterprises.

Is Bitcoin a bubble?

Choices based on individual human action by hundreds of thousands of market participants is the cause for bitcoin's price to fluctuate as the market seeks price discovery. Some reasons for this change in sentiment may be a loss of confidence in the currency, a large difference between value and price not based on the fundamentals of the Bitcoin economy, excessive press coverage stimulating speculative demand, fear of uncertainty and just old-fashioned irrational exuberance and greed.

Why did Bitcoin's price crash in June 2011?

Choices based on individual human action by hundreds of thousands of market participants is the cause for bitcoin's price crash in June 2011. Some reasons for this change in sentiment may be a loss of confidence in the currency, the largest exchange, MtGox, having a security incident, a large difference between value and price from the large amount of press coverage which stimulated speculative demand which was not based on fundamentals of the Bitcoin economy and just old fashioned irrational exuberance and greed.

How might a surge in bitcoin's price be explained?

The price of bitcoins is determined by supply and demand and the supply is fixed at 21 million because of the rules of the Bitcoin protocol. There are two main types of demand: speculative and

transactional. As more people use bitcoins to transact economic activities this increases demand and the price of bitcoins. So likewise as more people speculate on the future of Bitcoin by saving or hoarding bitcoins then this increases demand for bitcoins and the price. The result is an increase of network effects and increased adoption.

Is Bitcoin a Ponzi Scheme?

A Ponzi scheme is a fraudulent investment operation that pays returns to its investors from their own money or the money paid by subsequent investors instead of from profit earned by the individual or organization running the operation.

Bitcoin is an open source software project with no central authority and consequently no one is in a position to make fraudulent representations about investment returns. Like other major currencies like gold, United States dollars, Euros, Yen, etc. there is no guaranteed purchasing power and the exchange rate freely floats which can lead to volatility where owners of bitcoins can make or lose value.

Bitcoin is an innovative currency and payment system and not a Ponzi Scheme. However, since Bitcoin transactions are irreversible it can be attractive for a Ponzi scam operator and there have been several notable Ponzi scams which have failed and did use Bitcoin.

Who is Satoshi Nakamoto, the creator of Bitcoin?

The creator of Bitcoin never revealed his real identity and simply left his invention to the world. Satoshi created the first Bitcoin implementation and remained active in the development for a few years before choosing to leave the project. Meanwhile, a strong community of developers, miners, users and supporters have spontaneously emerged to continue the project.

Can bitcoins become worthless?

Yes. There are thousands of currencies in the fiat currency graveyard as a result of hyperinflation such as the German Mark, United States gold and silver certificates, Argentine Peso and more recently the

Zimbabwe Dollar. Unlike a physical currency like gold Bitcoin is a completely virtual currency. While Bitcoin was designed to be censorship-resistant to enable it to continue existing if there were to be some type of technological problem of significant severity then it is possible Bitcoin could be destroyed and then all bitcoins would cease to exist and become worthless.

Being an open-source project allows anyone to contribute software code so those with value stored in bitcoins have a strong financial incentive in making sure Bitcoin continues to exist. For example, there has been only one major security incident and it was fixed in August 2010. While there have been no major security incidents since that does not preclude the possibility that there could be others. There was an unanticipated 'hard fork' on 12 March 2013 which was quickly resolved with minimal impact on Bitcoin users. But the longer Bitcoin exists without a major security incident or other unanticipated software bugs then the more likely market participants will gain greater confidence in Bitcoin.

Being a completely virtual currency Bitcoin is particularly well suited for use on the Internet or with mobile devices and unlike other fiat currencies and payment systems like Paypal or credit cards. As a payment tool, bitcoins are like gold because bitcoins are no-one's liability and Bitcoin transactions are not subject to counterparty risk like traditional banks engaged in fractional reserve banking.

Thus, using Bitcoin protects merchants and users from bank failures, Cyprus-style problems, empowers Bitcoin users to have exclusive control of their funds and because Bitcoin balances are stored in an extremely large decentralized distributed computer network they cannot be fraudulently altered by anybody.

Why do people trust Bitcoin?

Bitcoin is open-source software which means that everyone has access to all of the source code all of the time. The rules of the system are embedded into the source code and the participants all impose those rules on each other simultaneously. To change the system would require everyone to switch to a new version of the software that

used different rules, and because Bitcoin users are spread across the world it is outside the power of any single jurisdictional authority to mandate such a change.

Cryptography is well established and a fundamental technology used in online banking. But unlike fiat currency with central banks and online banking with heavily peer reviewed cryptographic ciphers Bitcoin has been able to construct a currency and payment network that removes the need to trust a central authority.

Consequently, many people trust Bitcoin because it requires absolutely no trust at all.

Bitcoin is an anonymous currency?

Bitcoin is a censorship-resistant technology. However, it is not anonymous but pseudo-anonymous. The use of Bitcoin leaves extensive and permanent public records for each transaction. All transactions can be traced since their origin and IP addresses are permanently logged by organizations listening on the network. All of these informations can easily be accessed by competitors, law enforcement or anyone else.

However, there are a few technically difficult and costly methods that enable users to interact with Bitcoin in very private ways. The Federal Bureau of Investigation concluded on page two of the report *Bitcoin Virtual Currency: Unique Features Present Distinct Challenges for Deterring Illicit Activity* that 'The FBI assesses with low confidence, based on current user and vendor acceptance, that malicious actors will exploit Bitcoin to launder money'.

Transactions are difficult to conceal from best practices in network data analysis, data mining and forensic accounting techniques. In most transaction, personal information must be revealed to receive the goods or services from an order. This makes keeping full anonymity with Bitcoin transactions very difficult or impossible.

