

## :: Cryptocurrency Ecosystem Notes ::

Matthew Garon - Updated On 2018/8/11

Nav Links - 2017 Q2, Q4; 2018 Q1, Q3

[May 5th, 2017]

Bitcoin is the best performing currency two years in a row, seeing a 35% increase in 2015 and a 126.2% increase in 2016, finishing at \$968.23 USD.<sup>1</sup> It was also the best performing currency in 2013, seeing a 5,429% increase then.<sup>2</sup> As of today, the 5th of May, 2017, Bitcoin is valued at \$1,579.90 USD,<sup>3</sup> which is already far past the 30% increase in price since the new year needed to establish it as the best performing currency of 2017 as well.

Bitcoin, as well as most alternative cryptocurrencies, is deflationary, and sees a drastic rise in price as it stabilizes.<sup>4</sup> As Bitcoin has risen sharply in price the last two years it, "has become even steadier than established reserve currencies like the British pound."<sup>5</sup> Bitcoin's stability is now that of a large-cap stock, sitting at a \$25 Billion USD market cap currently,<sup>6</sup> which kills one of the perennial criticisms of cryptocurrency.<sup>7</sup> It will most likely continue this trend as Bitcoin tracks gold as a hedge against economic uncertainty while American, Japanese, and Italian banks are being bailed out.<sup>8</sup> Liberal estimates, for the high hopes of Bitcoin ETF approval by the SEC and the activation of SegWit, place the value of Bitcoin at \$5,000 USD by the end of the year.<sup>9</sup> Conservative estimates place BTC at \$10,000 USD by 2021 even if it doesn't increase its cryptocurrency market share,<sup>10</sup> guaranteeing safe long-term investment.

On top of this, there is a large altcoin industry; the alternative cryptocurrency markets are gaining favor as well, as altcoins now account for more than 40% of the cryptocurrency market capitalization.<sup>11</sup> Ethereum, a popular alternative cryptocurrency now sitting at \$7.5 Billion USD market cap, rose 1,141% since the year started.<sup>12</sup> This will mean that we will likely start seeing altcoins in the top five of the best performing currencies alongside Bitcoin, furthering adoption and support for cryptocurrency and stabilizing alternative currencies in parallel with Bitcoin. This allows safe short-to-long-term investment in altcoins additional to investments in Bitcoin.

Even if the cryptocurrency ecosystem became less stable and returned to high volatility, this would still be good for investing. I've averaged ~20% margins from passive monthly BTC trades, relying on volatility. A 20% average margin is not nearly as high as some of the 40% averages I've seen from more active traders, but with more time invested you would see a higher margin or a significantly higher frequency of trading, which would compound a decent amount. Money being made on the way up as well as the way down means volatility will be steadier as adoption grows.

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<sup>1</sup> Desjardins, Jeff. *Bitcoin: The Top Performing Currency For a Second Year in a Row*. VisualCapitalist.com, Jan. 3, 2017. (<https://money.visualcapitalist.com/bitcoin-top-performing-currency-second-year/>)

<sup>2</sup> Ibid.

<sup>3</sup> According to Coinbase's list price at noon of May 5th, 2017. (<https://www.coinbase.com/>)

<sup>4</sup> Young, Joseph. *World's Best performing Currency: Bitcoin Inflation Rate Drops To 4%*. CoinTelegraph.com, Sep. 25, 2016. (<https://cointelegraph.com/news/worlds-best-performing-currency-bitcoin-inflation-rate-drops-to-4>)

<sup>5</sup> Ibid.

<sup>6</sup> According to CoinMarketCap's API at noon of May 5th, 2017. (<https://coinmarketcap.com/>)

<sup>7</sup> Erik Voorhees noted this when the market cap of BTC hit ~10 Billion. (<https://twitter.com/ErikVoorhees/status/759093439807885313>)

<sup>8</sup> Valenzuela, Joël. *Erik Voorhees: Bitcoin Has Achieved the Stability of a Large Cap Stock*. CoinTelegraph.com, Jul. 30, 2016. (<https://cointelegraph.com/news/erik-voorhees-bitcoin-has-achieved-the-stability-of-a-large-cap-stock>)

<sup>9</sup> Young, Joseph. *Bitcoin Price New All-Time High at \$1,442, Bitfury Executive Predicts \$5,000*. CoinTelegraph.com, May 2, 2017. (<https://cointelegraph.com/news/bitcoin-price-new-all-time-high-at-1442-bitfury-executive-predicts-5000>)

<sup>10</sup> Ogundeji, Olusegun. *Bitcoin Price Over \$10,000 by 2021 If It Manages to Hold Market Share: Voorhees Prediction*. CoinTelegraph.com, Apr. 27, 2017. (<https://cointelegraph.com/news/bitcoin-price-over-10000-by-2021-if-it-manages-to-hold-market-share-voorhees-prediction>)

<sup>11</sup> Suberg, William. *Ethereum Price Over \$80 As Bitcoin Crypto Market Share Plummets to Less Than 60%*. CoinTelegraph.com, May 1, 2017. (<https://cointelegraph.com/news/ethereum-price-over-80-as-bitcoin-crypto-market-share-plummets-to-less-than-60>)

<sup>12</sup> ETH started at \$8.27 USD on Jan. 1st, 2017, and now sits at \$94.42 as of May 5th, 2017. (<https://coinmarketcap.com/currencies/ethereum/#charts>)

[November 29th, 2017]

Since writing this in May, some significant changes have occurred, far surpassing even the wildest estimates I had predicted for the end of the year. Bitcoin is currently valued at ~\$10,400 USD (and hit \$11,400 highs this very morning).<sup>13</sup> Bitcoin currently has a market cap of \$176 billion USD, more than seven times of what it was in May.<sup>14</sup>

Since writing in May, SegWit was activated and universally adopted with little to no issue, driving the price past \$5,000 USD as predicted. SegWit2x was predicted to drive the price down as it would create a hard fork, however SegWit2x was beaten down violently and helped drive the price of Bitcoin up to \$8,000. It has also been announced (since May) that Uruguay and Russia will be issuing their own state-backed cryptocurrencies, further driving the price up.<sup>15</sup>

Of course, there has been a lot of opprobrium about this being a 'bubble', noting that ~1,000% increase in value in a year is 'too much', despite the 5,429% increase in value that occurred in 2013. Every time a crypto veteran hears this, they ask, "Which one?" This usually leaves people confused, but since there's already been dozens of bubbles, and each pop generates a bounce that leaves the price higher than when it popped, bubbles are nothing but positive volatility in the crypto ecosystem. Just since I have been writing this the price of BTC has fallen ~\$1,000 USD, which makes sense - everyone in North America is waking up and 10k is a nice round number, a *psychological limiter* that most weren't prepared to pass last night.

But again, you could ask where the 'bubble' is? There was a 2k pop three-ish months ago from 5k to 3k, which subsequently bounced to 8k. These pops are good signs for cryptocurrency; a lot of people have a hard time understanding this because they treat cryptocurrency like stock or hard assets when it is neither and has no reason to behave exactly the same as them.

Let's say that this pop keeps dropping after I finish writing, and that there's a 50% loss of Bitcoin's value by the end of today, leaving Bitcoin at roughly \$5,000 USD tonight. Given the power of exponential trends, this is only a two-month setback for Bitcoin.<sup>16</sup> At that price there would still be more than a 500% increase in value since the beginning of the year and Bitcoin would still be the best performing currency in 2017. Only new daytraders and people looking to turn fiat profit from crypto (both considered outsiders) believe the USD price tie to BTC is meaningful here. Long term investors and enthusiasts are not in this purely for profit, they will keep using Bitcoin as the technology it was intended for and the currency it reifies as secondary to that.

As a closing note, it should be obviated that the 'true' floating price of any currency is not arbitrary and has several objective means to calculate those ties. This can be done with Bitcoin just the same. A quick way to check whether the price of Bitcoin is actually in "a bubble" is by taking its total supply (16.7 million current circulating supply,<sup>17</sup> 21 million hard-cap) and diving it from 1% of the M0-M3 global money supply (representing a 1% global adoption) and seeing how much each coin should be worth. Considering that blockchain technology is partially used and can be fully used as the backbone of the NYSE and most of the major world banks already,<sup>18</sup> the percentage is easily projectable to 20%, so both numbers will be calculated in the following tables to show a wide range of adoption.

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<sup>13</sup> According to BitcoinAverage's API at eleven of November 29th, 2017. (<https://bitcoinaverage.com/en/bitcoin-price/btc-to-usd>)

<sup>14</sup> According to CoinMarketCap's API at noon of November 29th, 2017. (<https://coinmarketcap.com/>)

<sup>15</sup> Uruguay digitized their peso. (<https://news.bitcoin.com/uruguay-first-in-the-world-to-launch-digital-currency-not-bitcoin-it-stresses/>)  
Russia's launching the 'CryptoRuble'. (<https://cointelegraph.com/news/breaking-russia-issuing-cryptoruble>)

Lebanon may also be doing the same soon. (<https://news.bitcoin.com/central-bank-of-lebanon-hints-at-state-backed-cryptocurrency/>)

<sup>16</sup> Jameson Lopp noted this exponential increase in value. (<https://twitter.com/lopp/status/935216776396378112>)

<sup>17</sup> Taken from CoinMarketCap's API at noon of November 29th, 2017. (<https://coinmarketcap.com/>)

<sup>18</sup> I am particularly referencing Equibit's article. (<https://www.visualcapitalist.com/blockchain-backbone-stock-market/>)

**:: Current True Bitcoin Price Per Coin ::**

	<b>At 1% Global Adoption</b>	<b>At 20% Global Adoption</b>
<b>M0<sup>19</sup></b>	(36,800,000,000,000*0.01)/16,700,000 "True Value" = <b>\$22,035.93 USD</b>	(36,800,000,000,000*0.20)/16,700,000 "True Value" = <b>\$440,718.56 USD</b>
<b>M3<sup>20</sup></b>	(90,400,000,000,000*0.01)/16,700,000 "True Value" = <b>\$54,131.74 USD</b>	(90,400,000,000,000*0.20)/16,700,000 "True Value" = <b>\$1,082,634.73 USD</b>
<b>Current PPC</b>	\$10,000 USD approximate 24h average	\$10,000 USD approximate 24h average
<b>Over/Under?</b>	BTC undervalued by <b>120%-441%</b>	BTC undervalued by <b>4,307%-10,726%</b>

MRG

Numbers ran are based on the prices at noon of November 29th, 2017. The most conservative estimate places the current true value 120% above the current USD price evaluation, and the most liberal estimate places the current true value at 10,726% above the current USD price evaluation. These will shift to be *slightly less* when the 21 million hard-cap of minted coins is hit, as the calculations will be done with 21 million instead of 16.7 million, but these will shift to be *significantly more* when more cryptocurrency technologies back stock and asset markets and when more crypto-based options and derivatives become available on major exchanges, as the calculations will be done with broader global value metrics instead of M0 & M3.

If the current trend of adoption continues, we can project loose estimates for future PPCs by adding the market capitalization of all stock markets (73 trillion USD) and a conservative estimate of the derivatives market (544 trillion) onto the M3 global money supply (90 trillion). This is shown in the table below. Including the capacities and uses of smart-contracting that Bitcoin made possible, we could also include the global real estate market to add another 217 trillion USD, but I'm skipping this now, as most people either don't believe Bitcoin's value extends to hard asset exchange or they don't believe anything in these tables anyways, but keep in mind that skepticism of BTC's value based on its extension into the derivatives market can be hedged by the lack of inclusion of real estate. This makes the following table fairly accurate.

**:: Projected True Bitcoin Price Per Coin ::**

	<b>At 1% Global Adoption</b>	<b>At 20% Global Adoption</b>
<b>M3 + Stocks + Derivatives<sup>21</sup></b>	(707,000,000,000,000*0.01)/21,000,000 "True Value" = <b>\$336,666.67 USD</b>	(707,000,000,000,000*0.20)/21,000,000 "True Value" = <b>\$6,733,333.33 USD</b>
<b>Current PPC</b>	\$10,000 USD approximate 24h average	\$10,000 USD approximate 24h average
<b>Over/Under?</b>	BTC undervalued by <b>3,267%</b>	BTC undervalued by <b>67,233%</b>

MRG

<sup>19</sup> 2017 numbers taken from *All of the World's Money and Markets in One Visualization* on VisualCapitalist. (<http://money.visualcapitalist.com/worlds-money-markets-one-visualization-2017/>)

<sup>20</sup> Ibid.

<sup>21</sup> Price calculated by adding *Global Stock Markets* and *The Derivative Market* from the former VisualCapitalist article to the *Broad Money* value. (<http://money.visualcapitalist.com/worlds-money-markets-one-visualization-2017/>)

[February 26th, 2018]

2017 closed in the best way possible, ~50% lower than its peak of \$20,000. This is great for two reasons: firstly that a 50% pop after a ~2,000% rise makes it look like "the bubble" has popped and so skeptics have finally shut up; secondly this bull-bear cycle was expected and exactly matches with the volatility trend in Bitcoin's history. What is meant by this is that there is a bull-bear cycle every few months where the price increases 200% on average and then dips 40% on average.<sup>22</sup> When you know this, and know that volatility has also been dropping on average every year of the currency's existence, "the face of volatility," stops sounding like a reasonable name for something so predictable.<sup>23</sup>

This also means we have a new plateau for the USD price-tie of Bitcoin at \$20,000. Here at the end of February, the price is still hovering at 10k, but many are expecting Bitcoin to close 2018 much higher than 10k, and much higher than its 2017 peak of 20k. The conservative predicted price is at 50k.<sup>24</sup> The means used for predicting this rise are an increase in general adoption and use, further acceptance into futures and options markets (of which there are plenty now),<sup>25</sup> and the continued spread of the Lightning Network of which had more nodes than BCH only a week after it went to mainnet.<sup>26</sup> The Lightning Network is jokingly described as, "unfairly cheap," because it only costs \$4 USD to open a channel compared to the \$60+ USD of sending a next-block transaction on the Bitcoin blockchain.<sup>27</sup> This alone has almost single-handedly solved all scaling problems for Bitcoin in the near and even distant future and should lead to a significant price rise the further it rolls out.

Additional reasons to believe a 50k marker will be hit by the end of the year are the successful implementations of fully decentralized blockchain-based goods markets like OpenBazaar and Particl, fully decentralized predictions and forecasting markets like Augur, fully decentralized exchange platforms like Bisq, fully decentralized organizations and jurisdiction bodies like Aragon, and now even fully decentralized news outlets like DNN and transmedia content franchises like Cellarius. Blockchain technologies serve as the backbone for all of these projects and many more are sure to be developed in 2018, pushing the price of Bitcoin further still.

A prediction from earlier in this document that came true for the close of 2017 was that several altcoins are now joining Bitcoin in the top-ten performing currencies of the planet, a list increasingly depopulated by national fiat currencies. The notable large-mcap altcoins that joined this list are NEO with a 52,092% rise (4.9 billion mcap),<sup>28</sup> Ripple with a 34,093% rise (86.5 billion mcap),<sup>29</sup> Stellar with a 18,600% rise (6.1 billion mcap),<sup>30</sup> Ethereum with a 9,428% rise (72.8 billion mcap),<sup>31</sup> Dash with a 9,218% rise (8.4 billion mcap),<sup>32</sup> and Litecoin with a 5,2012% rise (12.8 billion mcap),<sup>33</sup> for a total mcap of 191.5 billion, rivaling Bitcoin's 236.7 billion mcap at the close of 2017. The addition of altcoins into this top-ten list was predicted when altcoins passed the 50% portion of the total market capitalization in the crypto ecosystem; there was an exponential jump towards this starting in May of 2017.<sup>34</sup> Following this trend, it's safe to predict that the top-ten list of currency performance for 2018 will be *entirely* large-mcap cryptocurrencies.

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<sup>22</sup> Joseph Young noted this when referencing an older Fundstrat graphic. (<https://twitter.com/iamjosephyoung/status/959515954114785280>)

<sup>23</sup> BVI is being used for volatility indexing, starting from 2010. (<https://www.buybitcoinworldwide.com/volatility-index/>)

<sup>24</sup> Thomas Glucksmann was noted by many for pointing this out. (<https://www.cryptocoinsite.com/bitcoin-prediction-analysts-predict-bitcoin-will-hit-50k-in-2018/>)

<sup>25</sup> Even CME trades Bitcoin futures now. (<https://www.forbes.com/sites/antoinegara/2017/10/31/move-over-pork-bellies-exchange-giant-cme-group-to-begin-trading-bitcoin-futures/#6ff2c5fc2fbf>)

<sup>26</sup> As of writing this, the Lightning Network currently sits at 891 nodes and 1,478 channels. (<https://lnmainnet.gaben.win/>)

<sup>27</sup> Blockstream CSO Samson Mow said this. (<https://twitter.com/Excellion/status/953874303820312576>)

<sup>28</sup> \$0.145424 USD at year opening and \$75.90 USD at year close. (<https://coinmarketcap.com/currencies/neo/>)

<sup>29</sup> \$0.006434 USD at year opening and \$2.20 USD at year close. (<https://coinmarketcap.com/currencies/ripple/>)

<sup>30</sup> \$0.00249 USD at year opening and \$0.4656 USD at year close. (<https://coinmarketcap.com/currencies/stellar/>)

<sup>31</sup> \$8.07 USD at year opening and \$768.91 USD at year close. (<https://coinmarketcap.com/currencies/ethereum/>)

<sup>32</sup> \$11.15 USD at year opening and \$1,039.03 USD at year close. (<https://coinmarketcap.com/currencies/dash/>)

<sup>33</sup> \$4.41 USD at year opening and \$234.30 USD at year close. (<https://coinmarketcap.com/currencies/litecoin/>)

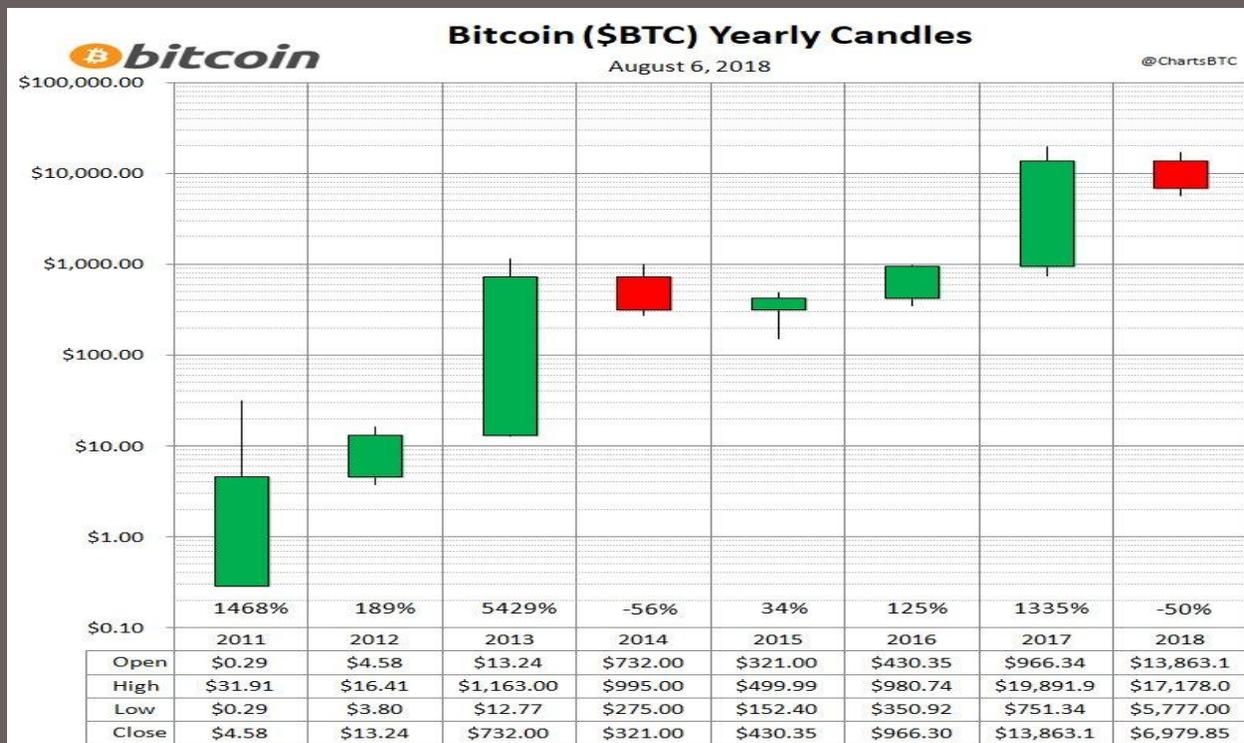
<sup>34</sup> CRIX is being used for altcoin market share indexing. (<http://crix.hu-berlin.de/>)

[August 11th, 2018]

The price of BTC is currently \$6,324.60 USD.<sup>35</sup> Despite the prior notes of 50k estimates by the end of the year, I predict a slightly bullish but mostly sideways trend leaving us with a price between 8k-10k USD at year's end. The price has taken a few several-hundred dollar direct hits because of the SEC's turn-down of the Winklevoss' ETF proposal, but the price is being propped up by things like more integration with the NYSE, the huge advance of the Lightning Network,<sup>36</sup> DLT use in Mastercard,<sup>37</sup> and further general adoption. Many more ETF proposals are coming up in the next year like VanEck & SolidX, GraniteShares, and Direxion, so that solves that problem.<sup>38</sup>

In line with previous quarter's notes, it should be pointed out that Iran is joining the list of countries launching their own state-backed cryptocurrency,<sup>39</sup> there is a parabolic curve tracker that was spawned from John McAfee's dick-eating countdown,<sup>40</sup> it's been written about in some detail that Know-Your-Customer and Anti-Money-Laundering practices cost many more billions than all ICO scams put together,<sup>41</sup> and Cointelegraph is getting stronger numbers than CoinMarketCap did for ROI of the top ten projects of 2017.<sup>42</sup> That sums up the normal ecosystem notation; now for some charts.

The following image shows that the 50% loss we've seen this year is logarithmically inconsequential.<sup>43</sup> You can also see in that there is a clear four-year cycle being followed, as predicted by the four-year halving periods of the technology.



<sup>35</sup> Price taken on 18/08/12. (<https://bitcoinaverage.com/en/bitcoin-price/btc-to-usd>)

<sup>36</sup> This graphical comparison is beautiful. (<https://twitter.com/lopp/status/1022077129771687936>)

<sup>37</sup> Several other crediting corporations have done this as well. (<https://cointelegraph.com/news/mastercard-files-patent-for-payment-system-linking-blockchain-currency-fiat-accounts>)

<sup>38</sup> As shown by Bitcoin EDU. (<https://twitter.com/BitcoinEdu/status/1024562650993152000>)

<sup>39</sup> Pertinent that this is happening mostly in places with histories of instability. (<https://news.bitcoin.com/the-iranian-government-is-preparing-to-launch-its-own-cryptocurrency/>)

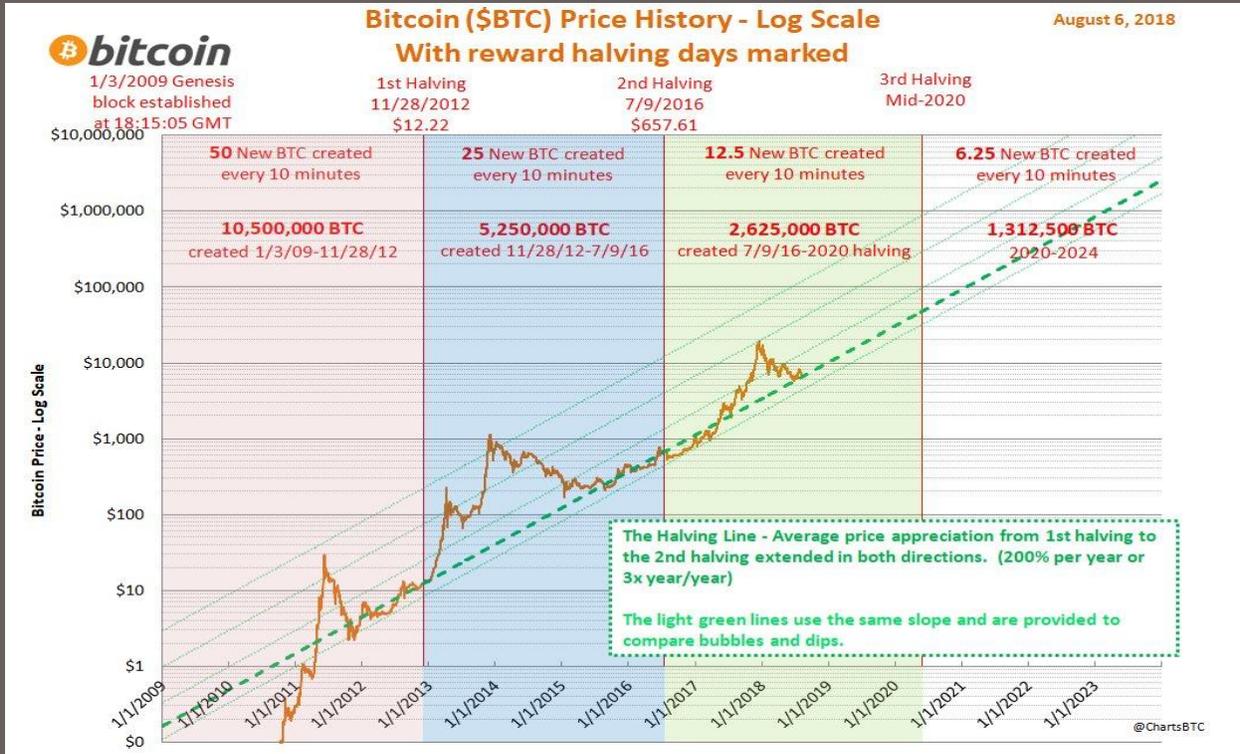
<sup>40</sup> Scroll down to see tool adjustments and McAfee screenshots. (<https://bircoin.top/>)

<sup>41</sup> Edan Yago putting new meaning into 'crypto manifesto'. (<https://www.coindesk.com/theres-a-bigger-scam-than-anything-in-crypto-its-called-kyc-aml/>)

<sup>42</sup> Including projects that don't have large market caps. (<https://cointelegraph.com/news/top-10-crypto-deals-in-2017-returned-over-136-000-on-average-report-shows>)

<sup>43</sup> Provided by ChartsBTC. (<https://twitter.com/ChartsBTC>)

The next image shows the halving periods as delimiting columns against the USD price of BTC with an average price line cutting through.<sup>44</sup> Additional points on logarithmic scales can be made here, since you can plainly see the 'bubbles' of each cycle are significantly reduced, meaning the currency is becoming exponentially more stable over time.



While this is a very strong indicator of a stable upward trend with predictable four-year cycles, this should be weighed against the decreasing propensity of miners to HODL. Parabolic Trav shows in this last chart that miners are holding for shorter periods, directly proportional to the cost of mining.<sup>45</sup>



<sup>44</sup> Ibid.

<sup>45</sup> Which he briefly discusses. (<https://twitter.com/parabolictrav/status/1028261690784153600>)

It may be the case that increased global inflation of fiat, when correlated with the deflation of Bitcoin, re-balances the trend back to the parabolic rise shown in the middle chart. This depends on the competency of the Fed to handle global reserve stability, of which I am doubtful, but time will tell. There are some additional broader notes this quarter on the future of cryptocurrency that I think need to be addressed in no particular order.

One:

Comparing the narrative at the beginning of Bitcoin's invention to the narrative now, there has been close to a complete shift committed by the 'average' user. The average user of this technology has shifted from anti-government systems, from resistance to central control and enjoying regulatory ambivalence, to *needing* government approval to make it 'legit' as a currency. The focus has shifted away from the inherent value and use-cases of the technology to the singular use as a currency and it's 'speculative' value. This is silly for obvious reasons and of which many people have already discussed, but for investment purposes you should keep this in the back of your head. The long term has not changed.

Two:

If the price of Bitcoin or even all cryptocurrencies really did drop to zero USD, this would have very interesting sequela. The cost of really advanced/bulky smart contracts would be zero dollars to operate. There would be no fees involved in securing a network. Everything would be free, in a sense. Granted, most people would no longer be interested in using those networks and miner support would be almost non-existent, but it wouldn't matter since you only need two miners in opposition in order for the networks to be secure. The implosion of most networks at zero dollars and the infinite expansion of some others would be an amusement-offset-economic ruin.

Three:

People on twitter noting that the lack of female investors in cryptocurrency would leave women without any wealth or asset power if we got even half-way to hyperbitcoinization have actually touched on something magical and politically perverse. Women take far less financial risks than men, and there are many reasons for this on both the sides of nature and nurture, but the case remains that they take less risks. This is touted as an achievement, and yet it has stopped many women from becoming early adopters of cryptocurrency. A potentially interesting anthropological study, and as my personal conviction, I believe this same 'achievement' is the very thing that has stopped women from dominating (or at least proportionately matching) the financial power of men for all of time preceding now. All new forms of currency and wealth acquisition have required severe to devastating financial risk, at least to become a true 'early adopter'. As long as women remain less willing to take financial risks, women will be precluded from the highest echelons of financial powers. Because this is only partly due to nurture, it will be until biology is transcended in a totalizing sense that womankind will remain in the eternal trap of economic inferiority. The time is now, while Bitcoin is still cheap, to convince women to invest, lest they be 'systematically oppressed' another millennia for a force they blame on anything other than their aversion to risk.

This is not to say there aren't other reasons that sufficiently account for the financial sublimation of womankind and thereby their cultural exploitation, as there are indeed many *sufficient* states of affairs that lead to this occurrence. I contest however that this aversion to financial risk is the singular *necessary* condition by which women will forever be bound. It would not be possible to systematically exploit the woman in a cultural sense without the neutering of their financial power. The economic function of a society is, after all, the meta-expression of that society's will.