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Editorial

Dear Reader,

This edition of the Crypto Research Report covers the debate about the “Bitcoin bubble” vs. “Bitcoin hyperdeflation”, how to apply technical analysis to cryptocurrencies, hard forks, and ways to hedge Bitcoin’s risk of being replaced by another cryptocurrency. This edition and every future edition of the CRR will include three chapters that are relevant for investors. First, each edition will start out with a summary of the quarter’s most important highlights. Second, an entire chapter of each report will be dedicated to covering the technical and financial aspects of specific coins or tokens. In the current report, we focus on the most heated debate in the cryptocurrency community: Bitcoin vs. Bitcoin Cash. Finally, each report will include an in-depth explanation of a “crypto concept”. Each Crypto Concept chapter will focus on a seemingly difficult idea or trading strategy within the cryptocurrency market. In this edition, our “Crypto Concept” chapter covers hard forks. Since certain countries are outlawing ICOs, such as China and South Korea, more and more entrepreneurs are turning to hard forks to create new cryptocurrencies.

Thank you for reading the first edition of the [Crypto Research Report](#) that we published in Q4 of 2017. We received wonderful feedback and constructive criticism from many of you. An important clarification concerns the tax treatment of cryptocurrencies in Germany. In our report, we wrote that Germany has no VAT tax; however, there is a capital gains tax on cryptocurrency gains if the cryptocurrency has been held for less than one year. As many of our readers pointed out, it is correct that Germany does not charge a VAT tax on cryptocurrencies. However, the latter statement is false. Germany never charges a capital gains tax. Instead, Germany charges income taxes on cryptocurrency gains, and the income tax that investors must pay follows Germany’s progressive tax schedule. We strongly advise cryptocurrency investors to discuss their particular situation with a professional tax accountant.

As always, the second edition of the report will be available for free in Germany and English on our homepage, [CryptoResearch.Report](#).

Cryptocurrencies will most likely follow the same volatile and exciting path that they have been on for the past nine years. We hope our report will be a helpful tool for investors navigating this market.

**Demelza Kelso Hays
Research Analyst, Incrementum AG**

Demelza Hays

In Case You Were Sleeping: Ikarus Edition

“In 1924 John Maynard Keynes stated that an excellent economist has to possess a unique combination of gifts. He had to be a mathematician, historian, statesman and philosopher. In regard to Bitcoin, this list needs to also include several more traits. An excellent crypto-economist should also be a software, hardware and blockchain specialist on top of the above. Faced with these almost insurmountable intellectual hurdles it is easy to see why traditional economists have a hard time joining in the discussion.”

Jochen Möbert, Deutsche Bank

Key Takeaways

- The crypto market has seen its sixth bubble and crash.
- The most recent crash was accompanied by the biggest surge in criminal and fraudulent activity so far.
- Governments around the world are trying to come to terms with how to regulate cryptocurrencies.
- Even after the crash, further growth of ICOs and platform tokens like ETH or NEO is expected.

"30th anniversary of Black Monday, when markets dropped 23% in a day. In crypto we just call that Monday."

Alexander Tapscott

Bitcoin flew too close to the sun. Now the eyes of the world are upon the crypto market. With all the consequences that follow. Argentina is the land of tango, steak, and inflation. From one day to the next it can happen that those delicious empanadas cost an unsuspecting tourist 30 to 40 percent more. Locals are accustomed to getting a new menu with every pizza delivery due to higher prices. Many have long since renounced the Peso, which is abused again and again by the government and central bank for public financing. Major purchases are paid for in U.S. dollars. In the countryside, there are even a few communities that organize trade amongst themselves, completely without the use of state money.

Of all places, in 2018 this is the country where the most powerful people on the planet will discuss regulations for Bitcoin and other cryptocurrencies, as Argentina will be hosting the G20. Apparently, the topic is already on the agenda for the meeting in March – according to U.S. Treasury Secretary Steven Mnuchin. He is not alone: the French Finance Minister Bruno Le Maire and the German government have declared Bitcoin a top priority for G20.¹

The issue at the G20 will of course not be if the deflationary Bitcoin as an actual viable alternative to the broken system of fiat currencies. Rather, the discussion will focus on the looming triple threat: terrorists, money launders, and criminals – all of whom have apparently discovered Bitcoin for their illegal businesses.

Will these discussions lead to anything? Multiple press releases and declarations will most likely be published and cause some disruptions on the cryptocurrency market. However, no one really believes this could kick-start a global set of rules. Even on the off-chance that two states as opposed as China and Japan could come to a consensus, there are countless smaller countries that aren't going to be part of the discussion at all.

"However, recent developments, such as the listing of Bitcoin futures contracts by US exchanges, could lead European banks too to hold positions in Bitcoin, and therefore we will certainly look at that."

Mario Draghi
European Central Bank President

To a certain degree it would be preferable if states would and could control the abuse of cryptocurrencies – and we are not talking about terrorists or money launderers here. The price explosion over the last months of 2017 has given way to an immense wave of criminal activity, scams and hacks. The dip in the market back in January 2018 just caused for the list of distressing occurrences we were collecting for this report to grow at an uncontrollable speed.

Let's back up and go back to the beginning. There is much more going on in this sector than the call for regulations on the one hand and the surge of illegal profiteers on the other. The new boom has made room for many a promising project of the second and third blockchain generation. The blockchain has not only made it into the mainstream but is also slowly seeping into daily life. More and more existing companies are taking a closer look at the blockchain technology.

We are well aware that the title "In Case You Were Sleeping" is slightly mean. The developments in this field are running at such a speed that even the most attentive spectator is likely to miss a good deal of the action. In this chapter we will try and eradicate the white noise and block out the useless information circulating out

¹ Sujha Sundararajan, "Mnuchin Calls for Crypto Regulatory Talk," *Coindesk*, Feb 2, 2018, <https://www.coindesk.com/mnuchin-talk-crypto-regulation-g20-summit/>.

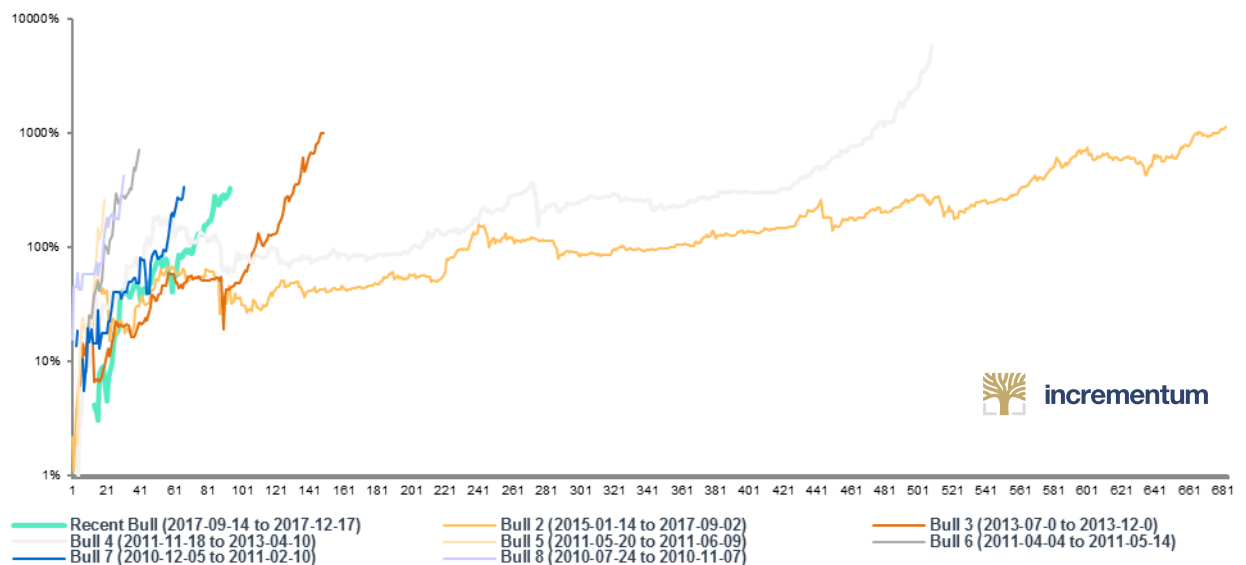
there in the Internet and in the media. We will break it down to the most essential pieces so that our readers are better informed. This chapter will consist of four areas which shaped the market in the last months of the year 2017 and the beginning of 2018 :

- ▶ **Bubble & Crash**
- ▶ **Hacks & Scams**
- ▶ **Reaction & Regulation**
- ▶ **Adoption & Trends**

a. Bubble & Crash

It all happened as it always has. Bitcoin reached an all-time high and then predictably it fell again. All common stages of the classic bubble were accounted for: euphoria, infatuation, denial, fear, desperation. When Bitcoin fell under \$7000 and the market capitalization of the whole sector halved, the funeral preparations by nay-sayers were already underway. The fact that cryptocurrencies have already survived five such bubbles, as the brilliant analysis by Michael B. Casey shows, is dutifully ignored by said grave diggers.² Figures 1 and 2 show Bitcoin's largest rallies and drawdowns since 2010.

Figure 1. Bitcoin Bull Markets (# of Days) from 2010–2018



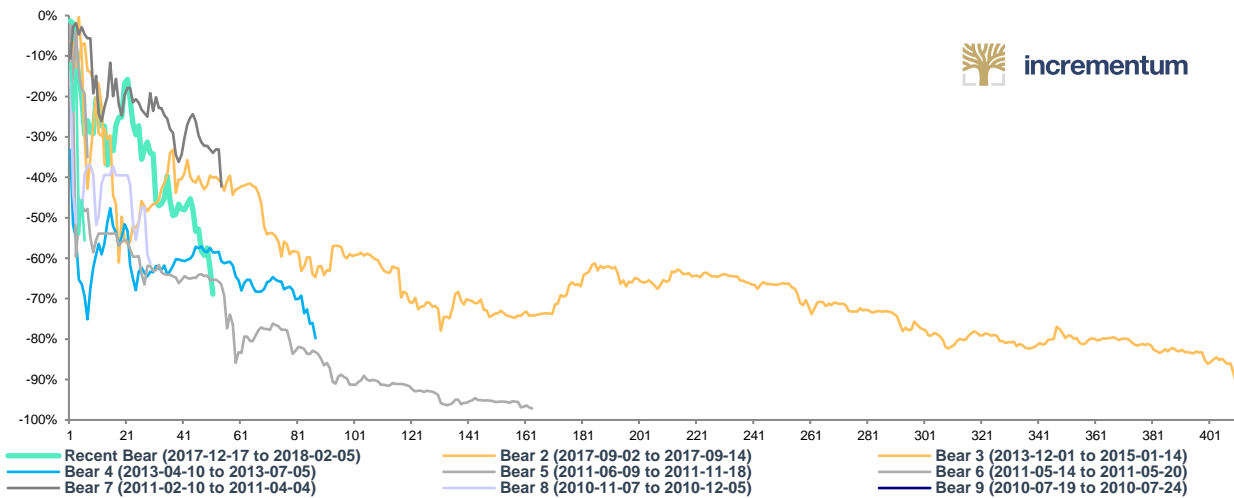
Source: Coindesk.com, Incrementum AG

In general, we are talking about old-school economists who said it from the start: Bitcoin is a scam. On February 2, Nouriel Roubini took the cake by claiming we are witnessing “the largest bubble in the history of mankind” because Bitcoin had lost 60% of its worth.³ Uber-Keynesian Paul Krugman could hardly contain his joy over the Bitcoin crash – he even created a new word for it: “cryptofreude” alluding to the German word “Schadenfreude” (i.e. to revel in someone else’s pain).

² Michael B. Casey, “Speculative Bitcoin Adoption/Price Theory,” *Medium*, Dec 27, 2016, <https://medium.com/@mcasev0827/speculative-bitcoin-adoption-price-theory-2eed48ecf7da>.

³ “US-Ökonom Roubini: ‘Die Mutter aller Blasen platzt jetzt,’” *Die Presse*, Feb 2, 2018, https://diepresse.com/home/wirtschaft/boerse/5365158/Bitcoin_USOekonom-Roubini_Die-Mutter-aller-Blasen-platzt-jetzt.

Figure 2. Bitcoin Bear Markets (#of Days) from 2010–2018



Source: Coindesk.com, Incrementum AG

According to Roubini and Krugman Bitcoin will fall to zero and the whole crypto sector will simply dissolve. Of course, this may happen. However, we are still baffled by these economists who so profusely claim to know it better than anybody else. Especially considering that Bitcoin has seen five bubbles, crashes, and recoveries. Each time gaining in worth – which actually speaks in favor of Bitcoin.



Since cryptocurrencies are unregulated and relatively new, media coverage and rumors have an even stronger impact on market prices compared to traditional asset classes. Source: Kevin (KAL) Kallaugher, Baltimore Sun, C.W. Syndicate. Call Number: CGA.AAEC.012 [65551]

Roubini and Krugman can end up being right, Bitcoin could drop to zero and then disappear. If this should be the case and Bitcoin is already a thing of the past at the time of publication, please accept our sincerest apologies for our harsh tone of voice. Nonetheless, if history has taught us anything it is that mainstream economists such as Roubini and Krugman have a very hard time grasping the matter of Bitcoin. Strangely enough, both do not let an opportunity pass to voice their opinions in the media on a matter they do not seem to understand.

Jochen Möbert from Deutsche Bank explained the predicament of economists as follows: “In 1924 John Maynard Keynes stated that an excellent economist has to possess a unique combination of gifts. He had to be a mathematician, historian, statesman and philosopher. In regard to Bitcoin, this list needs to also include

several more traits. An excellent crypto-economist should also be a software, hardware and blockchain specialist on top of the above. Faced with these almost unsurmountable intellectual hurdles it is easy to see why traditional economists have a hard time joining in the discussion.

All's well that ends well? Not so fast. Möbert also criticizes the other side: "Bitcoin enthusiasts tend to simplify the topic at hand and predict a complete market absorption and completely ignore the negatives of Bitcoin in comparison with conventional currencies and the traditional banking business. They underestimate how many people are actually scared off by a global, decentralized technology outside the legal sphere."

We could not agree more; however, in Nouriel Roubini's defense one should add: He recognized the potential for a scam epidemic in the blockchain sphere and rightly so, criticizes it. The problem is, Roubini is convinced that the whole thing is a scam, one huge Ponzi scheme. Even Jamie Dimon, CEO of JP Morgan, has called Bitcoin a scam.⁴

"The widespread adoption of new technologies, including internet services, cryptocurrencies and payment systems, could require substantial expenditures to modify or adapt our existing products and services."

Bank of America

We strongly disagree: This initial scam phase is part of the Wild West stage of any new unregulated market, and Bitcoin and the blockchain have simply a maturing process ahead of them to weed out the bad seeds. In this respect, the crash of the past months is to a certain extent desirable because it is cleansing the market of criminal, half-baked ideas. That is how free market economy works. But it might be a tall order to expect mainstream economists to recall this after more than a decade of bail-outs and quantitative easing.

In our first report we already predicted that it may come to an ICO mania, which in turn would cause a bubble and the inevitable crash. As did many others. Even the founder of Ethereum, Vitalik Buterin, warned of the bubble.⁵ Based on current analysis we can also expect it not to have been the last ICO-bubble.

In actual fact larger companies are looking into generating money via ICOs. Some may all the same be more in the category of "marketing-stunt" as the proposed revival of Kodak via an ICO. Others, such as the chat-app "Telegram" that apparently wants to raise up to a billion dollars, should be taken more seriously. Clearly exemplified by the sheer number of self-proclaimed Ethereum-successors (like NEO, EOS or Cardano) we can safely say the ICO craze has not yet reached its peak. These so-called platform coins will probably be the true winners of 2018, but more on that later.

b. Hacks & Scams

No one can deny that the crypto market has a dark side. The dark web itself would not be able to function the way it does without Bitcoin (and privacy coins such as Monero). Hacks and scams have been part of the deal of getting into cryptocurrencies from the very beginning. The rise of Ethereum and the aforementioned ICO boom together with the general growth of the market cap in the last months of 2017 as a whole have increased these dubious developments immensely. As prices began to fall, so did some of the dubious projects. The

⁴ Hugh Son, Hannah Levitt and Brian Louis, "Jamie Dimon Slams Bitcoin as a 'Fraud'," *Bloomberg*, Sep 12, 2017, <https://www.bloomberg.com/news/articles/2017-09-12/jpmorgan-s-ceo-says-he-d-fire-traders-who-bet-on-fraud-bitcoin>.

⁵ Avi Mizrahi, "Ethereum Founder Vitalik Buterin: We are in an ICO Bubble," *Finance Magnates*, Sep 11, 2017, <https://www.financemagnates.com/cryptocurrency/news/ethereum-founder-vitalik-buterin-ico-bubble/>.

following chapter will highlight only a few of the possible problems which one is confronted with in the crypto sector.

Hackers Steal Half a Billion – is North Korea to Blame?

“The U.S. Commodity Futures Trading Commission (CFTC) is advising customers to avoid pump-and-dump schemes that can occur in thinly traded or new “alternative” virtual currencies and digital coins or tokens. Customers should not purchase virtual currencies, digital coins, or tokens based on social media tips or sudden price spikes. Thoroughly research virtual currencies, digital coins, tokens, and the companies or entities behind them in order to separate hype from facts.”

CFTC

“Their (Bitconnect’s) official videos are effectively promising 1% daily returns and touting this as the primary benefit of the project.

Ethereum and bitcoin, on the other hand, are backed by a proven and consistent record of 200-700k daily txs and \$100k-4m daily txfees.”

Vitalik Buterin

In a hack targeting the cryptocurrency NEM, which has great similarities with the hack against the Bitcoin exchange Mt. Gox a few years ago, more than \$500 million were stolen in February. Once again it hit a Japanese exchange: Coincheck. It was the same mistake as with the Bitcoin heist at Mt. Gox: Coincheck had stored NEM reserves in a “hot-wallet”, i.e. in an account with connections to the Internet.

Usually exchanges store these reserves in “cold-wallets”, out of reach of prying hacker hands. Although this can be considered the largest crypto theft of all time, amazingly enough the exchange survived the hack. They also stated that they plan to reimburse the affected clients. The plot twist: The South Korean secret police voiced the suspicion that North Korea is to blame for the hack.⁶

Confido and Bitconnect: Gone With the Wind

Bitcoin has already infiltrated our daily usage of language. Without hesitation we talk of blockchains, ICOs and we even say “hodl” when we mean hold. One of the more undesirable words of the new vocabulary is “exit scam”. It describes exactly what we think when we hear the term. It is a scam in which a lot of money is collected, and the initiator then bags it all and makes a run for it.

Once the term was only used for shady exchanges that eventually took off with their investor’s money. Since the ICO boom, new versions of the old trick have arisen: in comes Confido. This coin was distributed via ICO at the beginning of November 2017. We will spare our readers from having to read about the details of the apparent “business model” of the coin. The ICO raised a total amount of \$375,000 dollars. This money then quickly vanished together with the founders. On November 14, 2017, the coin was worth \$1,20, it subsequently crashed to 2 cents. The website, blogposts, and all social media channels of Confido: deleted.⁷

The prize for the most dramatic exit, however, still goes to Bitconnect. Without exaggeration, this is probably the biggest rip-off the crypto market has seen so far. Bitconnect promised its investors ridiculous returns. All they had to do was invest their Bitcoins in Bitconnect. The extent of the whole story is not known, but the Bitconnect token had a market cap of more than 2.5 billion when the whole operation came crashing down. At the height of the game the value was more than \$400, after the crash it was merely \$5.⁸

Sadly, frauds like these have become commonplace on the crypto market. Similar scams in Spain and in Austria have recently been discovered.⁹ The simple fact that

⁶ Sohee Kim, “North Korea Suspected for Hatching Coincheck Heist,” *Bloomberg*, Feb 6, 2018, <https://www.bloomberg.com/news/articles/2018-02-06/north-korea-is-said-to-be-suspected-of-hatching-coincheck-heist>.

⁷ Arjun Karpal, “Cryptocurrency start-up Confido disappears with \$375,000 from an ICO, and nobody can find the founders,” *CNBC*, Nov 21, 2017, <https://www.cnbc.com/2017/11/21/confido-ico-exit-scam-founders-run-away-with-375k.html>.

⁸ “Cryptocurrency Market Capitalizations,” CoinMarketCap, <https://coinmarketcap.com/currencies/bitconnect/>

⁹ Nikolaus Jilch, “Ermittlung gegen ‘Optiomont’: Ein Bitcoin-Pyramidenspiel aus Österreich,” *Die Presse*, Jan 31, 2018, https://diepresse.com/home/wirtschaft/boerse/5363950/Ermittlungen-gegen-Optiomont_Ein-BitcoinPyramidenspiel-aus-

Dear users, we have reason to believe that there had been malicious attacks that temporarily gained access to @etherdelta <https://t.co/NnqU5Er4rj> DNS server. We are investigating this issue right now - in the meantime please DONOT use the current site.

— EtherDelta (@etherdelta) December 20, 2017

⚠️ 2/2 *BE AWARE* The imposer's app has no CHAT button on the navigation bar nor the official Twitter Feed on the bottom right. It is also populated with a fake order book.

There are two types of cryptocurrency exchanges: those that have been hacked and those that will be hacked. Source: EtherDelta.

“Reminder: cryptocurrencies are still a new and hyper-volatile asset class and could drop to near-zero at any time. Don’t put in more money than you can afford to lose. If you’re trying to figure out where to store your life savings, traditional assets are still your safest bet.”

Vitalik Buterin

these Ponzi schemes do fall apart as soon as the price begins to sink is not further noteworthy, they always do in the end. What sets Bitconnect apart, however, is the sheer volume of the whole operation. Plenty of Bitconnect advocates actively posted on YouTube and in turn gained more followers and investors. Unfortunately, the end of Bitconnect, whose founders are still unknown, has not lead to the end of YouTube scammers, nor to the improvement of the YouTube crypto content. But this in itself would be worth a whole chapter.

What Else?

Sadly, if they are not careful, investors can also lose money due to minor hacks. These hacks or scams sometimes do not make it into the media, as they are almost seen as part of the deal. Here is a minor example: Hackers targeted the Blackwallet website and stole \$400,000 worth of XLM. A similar case occurred to the Monero wallet mymonero.com in which a hacker managed to get away with money in the form of Monero in mid-December.¹⁰ This story never broke out of the Monero-Reddit thread into the wider view of the public, as seemingly only a small portion of investors were damaged. Both cases seem to be based on skillful phishing tactics which enabled the hackers to gain access to the DNS servers. Worst of all, it is almost unavoidable for users to become victim of such attacks.

Users of the popular exchange Etherdelta had to learn this the hard way when more than 300 ETH – at the time worth \$250,000 were plundered from the site.¹¹

Iota users who used an online seed-generator when creating their wallet would also come to regret this later: Iota coins in the total worth of almost \$4 million were silently removed from the wallets of these users in January. The way in was via the online seed generator.¹² Needless to say, such heists occur predominantly when the prices are high and there is much to gain. We therefore expect to see a pick-up of fraudulent activity as soon as the bull market resumes in full.

c. Reaction & Regulation

Even if you tried to follow the news regarding various plans and statements for regulations of cryptocurrencies by different states and government authorities 24/7, you would still be bound to miss half of it. It has become the fashion of the day for politicians and jurisdictions to try to understand the phenomenon that is the blockchain, and they are desperately trying to keep up with it and its consequences. This has given way to a mass of attempts to create a regulatory framework on the go. Everyone is confronted with the same problem. In a very good paper concerning this issue, Jochen Möbert from Deutsche Bank highlights one core obstacle. “Attempts for a regulatory framework are faced with the complication that a global, decentralized currency has many alternatives.”

¹⁰ https://www.reddit.com/r/Monero/comments/7kmzkv/psa_regarding_recent_reports_of_mymonero_thefts/
¹¹ Stan Schroeder, “Cryptocurrency exchange EtherDelta got replaced with a fake site that steals our money,” *Mashable UK*, Dec 21, 2017, <https://mashable.com/2017/12/21/etherdelta-hacked/#rKj9VSYqwgqJ>.
¹² Avi Mizrahi, “IOTA Attacked for Subpar Wallet Security Following \$4m hack,” *Bitcoin.com*, Jan 22, 2018, <https://news.bitcoin.com/iota-attacked-for-subpar-wallet-security-following-4m-hack/>.

As previously mentioned, discussions have reached the highest levels of



Deutsche Bank's current marketing campaign, *Why Banks Matter*, is trying to remind people that bank investments are a crucial ingredient for innovation, economic growth, and for the planet in general. Source: Deutsche Bank Twitter.

government and will be a topic at the G20 summit. Möbert is skeptical if these talks can be constructive: "The implementation of international regulations, for example on G20 level, is all the more illusory as different attitudes of governments world-wide towards regulatory needs in this sector are already apparent. For example, Canada and Japan are obviously aiming for a more Bitcoin-friendly regulatory framework."

Japan is a noteworthy exception in several regards.¹³ Bitcoin is a legal payment method, and the general public seem to not have few if any reservations regarding the cryptocurrency. A different analyst from Deutsche Bank even suggested that (at one point at least) almost 40 % of the total crypto volume came from Japan.¹⁴

Other Bitcoin-friendly countries are small and well known within the international finance sector. We are of course talking about

Switzerland and Singapore. The latter, which is extremely popular for companies wanting to initiate an ICO, has already expressed in quite clear terms that they do not intend to ban the trade of cryptocurrencies. As the Deputy Primeminister Tharman Shanmugaratnam puts it: "This is an experiment. It is still too early to say if cryptocurrencies will prevail."¹⁵

Switzerland is very keen to show how open it is towards Bitcoin and the blockchain. The area of Zug has unofficially been named "Cryptovalley", and in some places you can even pay your taxes via Bitcoin – this is rarely taken advantage of, but it is a statement. The Swiss Finance Minister Johann Schneider-Anmann has made such a case for cryptocurrencies that the Crypto Finance Conference in St. Moritz felt the need to give him an award for his efforts. His reasoning for his positive approach towards cryptocurrencies reads as follows "Innovations have helped this country achieve greatness. We have now finally reached an innovative moment in the finance world. Cryptocurrencies are part of the fourth Industrial Revolution. We are merely looking to see what new possibilities it can bring."¹⁶ Russia's Sberbank is also betting on Switzerland as their location in regard to cryptocurrencies.¹⁷

"First they ignore you, then they laugh at you, then they fight you, then you win."

Mahatma Gandhi

¹³ <https://www.ft.com/content/b8360e86-aceb-11e7-aab9-abaa44b1e130>

¹⁴ Tyler Durden, "One Bank Believes It Found The Identity Of Who Is 'Propping Up By The Bitcoin Market'," *Zero Hedge*, Dec 14, 2017, <https://www.zerohedge.com/news/2017-12-14/one-bank-believes-it-found-identity-who-propping-bitcoin-market>.

¹⁵ Lubomir Tassev, "No Strong Case to Ban Crypto Trading, Singapore Says," *Bitcoin.com*, Feb 7, 2018, <https://news.bitcoin.com/no-strong-case-to-ban-crypto-trading-singapore-says/>.

¹⁶ "Bundesrat über Kryptowährungen: 'Die Schweiz soll zur Krypto-Nation werden'," *SRF*, Jan 19, 2018, <https://www.srf.ch/news/wirtschaft/bundesrat-ueber-kryptowaehrungen-die-schweiz-soll-zur-krypto-nation-werden>.

¹⁷ Sberbank setzt für Cyberwährungen auf die Schweiz," *Handelszeitung*, Jan 30, 2018, <https://www.handelszeitung.ch/invest/sberbank-setzt-fur-cyberwaehrungen-auf-die-schweiz>.

Until recently, Austria had a finance minister who was and proud fan of Blockchain, Harald Mahrer.¹⁸ He even initiated the "Blockchain Roadmap Austria". However, after the last elections he stepped down, and since then nobody else seems responsible for the matter. A positive development and sign that the topic may still be taken seriously is the founding of the Institute for Cryptoeconomics at the University for Economics in Vienna.



Dear [REDACTED],

In December 2016, the Internal Revenue Service issued a summons demanding that Coinbase produce a wide range of records relating to approximately 500,000 Coinbase customers. Coinbase fought this summons in court in an effort to protect its customers, and the industry as a whole, from unwarranted intrusions from the government.

After a long process, the court issued an order that represents a partial, but still significant, victory for Coinbase and its customers: the order requires Coinbase to produce only certain limited categories of information from the accounts of approximately 13,000 customers.

We are writing to let you know that the above-described court order requires us to produce information specific to your account.

Bitcoin automated teller machines and over-the-counter cryptocurrency markets such as Bitcoin.de and LocalBitcoins.com are popular because transactions are not shared with tax authorities. Source: Coinbase.

Like in many other European countries, the Austrian government is waiting on directive from the European Union on how to proceed regarding any regulations. The Union itself has so far only taken one vital step. That is to include crypto dealers and exchanges to the money laundering regulations. This means the same "know-your-customer" (KYC) which apply to banks also apply to the crypto market.¹⁹ Interestingly enough, back in 2015 the European Court of Justice already ruled that sales tax should not apply to Bitcoin.

Nonetheless, the question still arises on a regular basis. We believe, so far, Europe seems to be doing quite well in matters of the crypto market. This observation is further supported by the fact that no European measure has led to disruptions, panic, or huge falls in the

market, as they were always well foreseeable and in good measure.

A further European country – outside the EU – which has made a name for itself on the Bitcoin-friendly side of things is Iceland. Many Bitcoin mining farms are to be found there due to fortunate weather conditions and cheap power supply.

China, on the other hand, has opted for a less friendly and more chaotic approach. Not a day goes by in which the West is safe from dreadful news from the Yellow Dragon. The meme "China bans Bitcoin" has reached cult status in the scene. Peking has in part started to tackle one topic after the next since the second half of 2017. First, they forbade ICOs, then all exchanges were expelled from the People's Republic, lastly even Miners, that had sprouted in China due to very low energy prices, were silently asked to leave. A complete ban on crypto trading lies in the air, as even the "Great Firewall", China's prime Internet censorship tool, was used to deny Chinese users access to international market platforms.^{20 21 22}

"ICOs which have already taken place will only be assessed in the context of investigations into potentially unlicensed activities. The same applies to submissions made to FINMA solely for information."

FINMA, February 16, 2018

¹⁸ <https://futurezone.at/thema/start-ups/oesterreich-will-zentrum-fuer-blockchain-technologie-werden/288.232.922>

¹⁹ "EU: Einigung auf strengere Regeln für Bitcoin-Handelsplattformen," *Die Presse*, Dec 15, 2017, https://diepresse.com/home/wirtschaft/boerse/5339451/EU_Einigung-auf-strengere-Regeln-fuer-BitcoinHandelsplattformen.

²⁰ Lulu Yilun Chen and Justina Lee, "Bitcoin Tumbles as PBOC Declares Initial Coin Offerings Illegal," *Bloomberg*, Sep 4, 2017, <https://www.bloomberg.com/news/articles/2017-09-04/china-central-bank-says-initial-coin-offerings-are-illegal>.

²¹ Chao Deng, "China Quietly Orders Closing of Bitcoin Mining Operations," *The Wall Street Journal*, Jan 11, 2018, <https://www.wsj.com/articles/china-quietly-orders-closing-of-bitcoin-mining-operations-1515594021>.

If you're spending more than a few hours a week as a crypto-investor, you're doing it wrong. 1. Never have less than 75% of your port in #Bitcoin 2. Dollar cost average 3. Never use margin. 4. Remember, 99% of what you hear from traders is BS."

Max Keiser

This strict approach has many a reason: Firstly, China has an authoritarian government. Just because the country opens itself up to capitalism, does not mean that it was ever part of the plan to give billions of Chinese economic freedom and independence – at least not without the “protection” of the yuan. There is also a great worry that assets will slowly but surely make their way out of the country and most probably to the United States of America. Russia, also under authoritarian rule, has similar issues. The main difference being the Chinese hunger for and joy in gambling.

The same goes for South Korea where the Bitcoin mania has reached a pinnacle unheard of on these shores. The government has also introduced regulations in the vain hope to cut back the hype. Even though western media has reported the ban of exchanges, this has yet to be realized.²³ The crypto bug has reached all levels of the nation. Civil servants and politicians have been caught having used insider information of the government's steps to profit from certain crypto trades based on this knowledge.²⁴

India's finance minister Arun Jaitley apparently called for a ban on Bitcoin and caused a ripple through the crypto market. India's Bitcoin industry and western media reacted turbulently until his statement was corrected as he had actually said in a speech that Bitcoin cannot be accepted as a legal method of payment. This may not be praise and support, but it is also far off from a ban. India has set up a research team to look into the subject in more depth.²⁵

The USA have done the same, under the name Task Force. U.S. authorities are having a hard time dealing with the topic of Bitcoin. Nonetheless, a hearing of the managers of CFTC and SEC at the beginning of February was largely welcomed by the community. The authorities of course used this chance to voice criticisms and underline how necessary regulations are for the market – but generally the optimism and belief in a long-term chance of survival toward cryptocurrencies and the blockchain was surprising. Subtext: Bitcoin is here to stay.²⁶

d. Adoption & Trends

Bitcoin and the crypto sector as a whole have undergone a huge surge this past year. The exchanges already had a hard time coping with all-time highs of many altcoins this past summer. The boom that was to follow in the winter months put this new and very young infrastructure for blockchain assets to the test. Many of the large, international exchanges had to halt the registration process of new customers for a couple of weeks. Others were simply not attainable in certain parts

²² David Meyer, "China Enlists Its 'Great Firewall' to Block Bitcoin Websites," *Fortune*, Feb 5, 2018, <http://fortune.com/2018/02/05/bitcoin-china-website-ico-block-ban-firewall/>.

²³ Dahee Kim and Cynthia Kim, "South Korea says no to ban cryptocurrency exchanges, uncovers \$600 million illegal trades," *Reuters*, Jan 31, 2018, <https://www.reuters.com/article/us-southkorea-bitcoin/south-korea-says-no-plans-to-ban-cryptocurrency-exchanges-uncovers-600-million-illegal-trades-idUSKBN1FK09J>.

²⁴ Kevin Helms, "South Korean Officials Caught Trading On Insider Knowledge of Crypto Regulations," *Bitcoin.com*, Jan 18, 2018, <https://news.bitcoin.com/south-korean-officials-caught-trading-on-insider-knowledge-of-crypto-regulations>.

²⁵ Sindhuja Balaji, "India Is Not Banning Cryptocurrency, Here's What It Is Doing Instead," *Forbes*, Feb 6, 2018, <https://www.forbes.com/sites/sindhujabalaji/2018/02/06/india-is-not-banning-cryptocurrency-heres-what-it-is-doing-instead>.

²⁶ Lucinda Shen, "Bitcoin Traders Are Relieved at CFTC and SEC Cryptocurrency Senate Hearing Testimony," *Fortune*, Feb 7, 2018, <http://fortune.com/2018/02/06/bitcoin-price-cftc-sec-cryptocurrency-hearing/>.

of the world. For example, the ever-popular exchange Kraken in Europe. The app Coinbase is already known for hiccups in the system when the price moves drastically in either direction.

It therefore comes as no surprise that more and more suppliers are rushing into the market hoping to pick up some crumbs of this profitable cake. Take the Asian exchange Binance, for instance. A mere few months old and already it is classified as a top league player. And this trend shows no sign of stopping. More established providers, especially in the field of finance apps, have made first moves to expand into the crypto market. One of the most famous is Revolut which lets you buy Bitcoin, Ethereum, and Litecoin.²⁷ It does have one major drawback though, the app does not let you store your amassed wealth of coins on a wallet. According to Revolut, their clients do not ask for this option that is why it is not offered. This is astounding because this means that next to long-term investors and the altcoin gamblers there are casual Bitcoin buyers out there who only want to profit from the price. By extension this leads to an ever-growing number of proxies for Bitcoin in the form of certificates or CFDs.

"If you give crypto to a friend or family member — to anyone really — ask how much it is worth. If the gift is worth more than \$15,000, it requires you to file a gift tax return."

Robert Wood
Tax Lawyer, San Francisco

In 2017, Ethereum was a huge game changer in the world of crypto. It introduced the concept of smart contracts and ICOs into the blockchain. It did not take long for imitations and competitors to appear in the market. Antshares, now called Neo, rose to fame in the summer months and is known as "the Chinese Ethereum" as it also has smart contracts on the blockchain which in turn acts as a platform for other products and tokens. One of the founders of Ethereum set up a further competitor: Cardano; and then there is also Icon, "the Ethereum of South Korea" and last, but definitely not the least, EOS, the "Ethereum killer".

Which of the above will be the last one standing? Will more than one or even none survive? At this moment in time nobody can really tell. For now, all we can say is that these platforms seem to be more attractive for investors than singular projects or the "old school" cryptocurrencies. It is very likely that Ethereum can use its first-mover advantage, together with technological advances and a huge community of developers, to extend its lead on the competition in 2018. A so-called flipping, in this case that Ethereum takes the first spot in the market, is well in its reach, especially as banks such as UBS and Barclays have Ethereum on their radar.²⁸

Yet another player who has specialized in "simple ICOs" and has caught people's eyes with the projects Mobius and Kik is Stellar (XLM). The chat app Kik initiated their ICO on Ethereum before they decided to swap to the Stellar blockchain. "We've been using Ethereum to date, and to be honest I call it the dial-up era of blockchain," said CEO Ted Livingston. Another company betting on the Stellar blockchain with its cryptocurrency MobileCoin will be Moxie Marlinspike's chat app Signal, the ICO is said to happen this year.

²⁷ "Am Handy tummeln sich die Banken," *Die Presse*, Dec 17, 2017, <https://diepresse.com/home/meingeld/aktien/5340102/Am-Handy-tummeln-sich-die-Banken>.

²⁸ Michael de Castillo, "UBS to Launch Live Ethereum Compliance Platform," *CoinDesk*, Dec 11, 2017, <https://www.coindesk.com/ubs-launch-live-ethereum-platform-barclays-credit-suisse>.

The largest ICO in the pipeline for 2018 is yet another chat app: Telegram. It is held in high regard already and the company plans to collect \$1 billion with their cryptocurrency Gram. There are no official plans yet, although, there is a whitepaper circulating on the Internet. This largest ICO is, however, supposedly taking place on the “old school” Ethereum blockchain.²⁹

If Kik, Signal, and Telegram as relatively small players in the social media and chat sector are already creating crypto coins, how long will it take Facebook and Co. to do the same? And if Robinhood, Revolut and Cash as small players in the finance sector are betting on cryptocurrencies, how long can your trusted old bank wait before it finally catches on?

²⁹ Mike Butcher & Josh Costine, “Telegram plans multi-billion dollar ICO for chat cryptocurrency,” *TechCrunch*, Jan 8, 2018, <https://techcrunch.com/2018/01/08/telegram-open-network>.

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Bubble or Hyperdeflation?

Key Takeaways

- Bitcoin's price has fallen 70 % since December 2017. Bitcoin's 30-day volatility has risen to 6 % compared to gold's 1.5 %. The fundamentals of the technology remain unchanged.
- Bitcoin is a better store of value than medium of exchange because of high transaction fees and network latency. Most cryptocurrency users are hoarding Bitcoin and using fiat as a medium of exchange. Subsequently, the U.S. dollar's velocity is double Bitcoin's.
- Bitcoin's hyperdeflationary price movement is caused by investors injecting their trust into the cryptocurrency. This is the opposite of a hyperinflation where heavily debased fiat currencies evoke a crisis of confidence.



“Few people understand this because no one alive had seen a good being monetized in real-time as is happening to bitcoin today.”

Vijay Boyapati

We want to sincerely thank Professor Dr. Guido Schäfer, Professor Dr. Robert Murphy, and Mark Valek for contributing to this chapter. Guido Schäfer is an associate professor of economics at WU Vienna. Robert P. Murphy is a research assistant professor with the Free Market Institute at Texas Tech University. He is also a senior fellow at the Mises Institute in Auburn, Alabama. Mark Valek is a fund manager and research analyst at Incrementum AG.

“When I see a bird that walks like a duck and swims like a duck and quacks like a duck, I call that bird a duck.”

James Whitcomb Riley

Since December, Bitcoin’s price dropped 69 % from a high of \$19,224 to a low of \$5,920 in early February.³⁰ The last time Bitcoin’s price plummeted this much was after the 2013 rally when it reached \$1,000 per coin for the first time. During a 411-day correction, Bitcoin’s price dropped 87 % from \$1,163 on November 30, 2013 to \$152 on January 14, 2015. The general narrative in the media is that the current downward spiral is the bursting of the bubble; however, the fundamentals of the technology have not changed since December. **This article explains what a bubble is, why some senior market analysts believe that Bitcoin is a bubble, and why they may be right if Bitcoin does not become widely adopted as a store of value or medium of exchange.**

a. What is a Financial Bubble?

Prior to the 20th century, bubbles were few and far between. The Dutch tulip mania in the 1630s, the British South Sea Bubble of the 1710s, and the French Mississippi Company of the 1710s are the most commonly cited examples of early bubbles. In

recent times, the term “bubble” has been applied to collapses of several financial asset classes, including the 1930s stock market crash, the 1980s Japanese real estate market deflation, the 1990s Asian financial market collapse, the Internet stock bubble, and the 2000s housing crisis, amongst others. The commonly used definition of a bubble is “a surge in asset prices unwarranted by the fundamentals of the asset” and an “eventually burst, causing prices to precipitously decline before stabilizing at more reasonable levels”.³¹ For a familiar reference point, large tech-company stocks shrank up to 86 %, while other companies went out of business entirely during the “Internet bubble”.³²

A burgeoning body of academic literature has developed around the topic of causes, impacts, and indicators of bubbles. Sociologists and behavioral economists have proposed several explanations for bubbles, including the greater fool theory and herd mentality. Economic theory holds that bubbles are a recurrent and damaging feature of our financial system³³; however, a quantitative test for determining if an asset’s price is a bubble does not exist.

According to economist Dr. Jean-Paul Rodrigue, a bubble has four phases beginning with an increase in the value of an asset. Smart investors who understand the value of the technology begin building positions. In the second phase, institutional money enters the market, and the smart money investors reinforce their positions. In the third phase, the media gets involved, and everyone

Two Explanations for Bubbles

1.) The greater fool theory follows from Keynes’ beauty contest interpretation of stock markets.

Overly optimistic investors buy overvalued assets hoping to sell them to even more overly optimistic investors in order to generate profit. The party comes to an end, when the greatest fool is left with no one to sell the overvalued asset to. The greatest fool takes the greatest loss as the financial value of the asset contracts.

2.) The herd mentality follows from the investment wisdom that the best predictor of tomorrow’s price is today’s price.

If cryptocurrencies are following an uptrend, and have for several years, why should the trend reverse tomorrow? However, as all financial market participants eventually learn, what goes up must go down. When enough investors begin to believe that the fundamentals of the asset do not justify the price, the bubble deflates and investors who bought in at the top, burden the loss.

³⁰ Bitcoin traded above \$20,000 on some exchanges.

³¹ “Bubble”, Investopedia, 2018, <https://www.investopedia.com/terms/b/bubble.asp>.

³² Jim Edwards, “One of the kings of the ‘90s dot-com bubble now faces 20 years in prison,” *Business Insider UK*, Dec 6, 2016, <http://www.businessinsider.com/where-are-the-kings-of-the-1990s-dot-com-bubble-bust-2016-12>.

³³ Preston Teeter and Jörgen Sandberg, “Cracking the enigma of asset bubbles with narratives,” *Strategic Organization* 15, No. 1 (2017), <http://journals.sagepub.com/doi/abs/10.1177/1476127016629880#articleCitationDownloadContainer>.

starts to say that the latest guests to the party are “unsophisticated”. At this point, the smart investors and institutional investors cash out and realize their gains. The final phase is marked by a collapse in the asset’s price because investors lose confidence in the fundamentals of the asset.³⁴ Rodrigue’s theory is similar to the Dow theory which is the basis of technical analysis. Even though this description is strongly simplified, it may serve as a guideline for the evolution of a typical financial bubble.

Figure 3. Phases of the Typical Bubble



Institutional money has not moved into cryptocurrencies yet. Therefore, one could argue the cryptocurrency market is either still in the smart investor phase or the cryptocurrency market skipped the institutional investor phase and is the second bull trap. Source: Dr. Jean-Paul Rodrigue.

b. The Top 5 Reasons Analysts Call Bitcoin a Bubble

Increasingly used as synonym for tulips and the tulip mania of the 1630s, Bitcoin’s long-term sustainability is garnering serious doubts. The CEO of J.P. Morgan Chase, Jamie Dimon, called Bitcoin a fraud when Bitcoin reached \$4,000 in September of last year.³⁵ Recently, Paul Krugman claimed that Bitcoin is a larger bubble than the 2008 housing crisis.³⁶ The 100,000 percent increase in Bitcoin’s value over the past five years is considered to be unwarranted exuberance because of five main reasons.

³⁴ Jean-Paul Rodrigue, *The Geography of Transport Systems*. New York: Routledge, 2017.

³⁵ https://people.hofstra.edu/geotrans/eng/ch7en/conc7en/stages_in_a_bubble.html

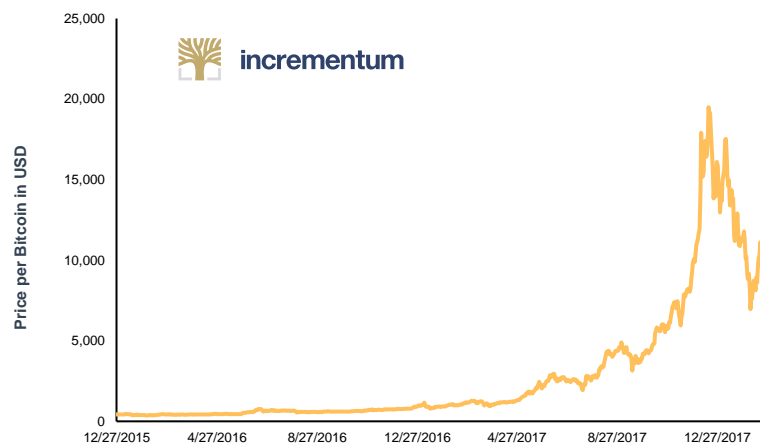
³⁵ Jamie Dimon retracted his statement in an interview on Fox Business in early January, <https://www.ft.com/content/e04e359a-e9e9-3f8e-8e2f-3f4373e5efb0>.

³⁶ Jacqui Frank, Kara Chin and Joe Ciolli, “Paul Krugman: Bitcoin is a more obvious bubble than housing was,” *Business Insider*, Dec 15, 2017, <http://uk.businessinsider.com/paul-krugman-says-bitcoin-is-a-bubble-2017-12?r=US&IR=T>.

1.) Chart Looks Like a Bubble

In 2017, Bitcoin's price rose from approximately \$1,000 to \$20,000. However, Bitcoin's performance over the past three months looks like a deflating bubble. Economists Eng-Tuck Cheah and John Fry analyzed empirical data on Bitcoin's price fluctuations and found that a bubble could explain 48.7% of Bitcoin's price movement.³⁷ Similar results were found by MacDonell (2014) and Garcia et al. (2014). Figure 4 shows the most recent price collapse that has revitalized the bubble argument on social media.

Figure 4. Bitcoin's Recent Run-up and Correction



Source: 99bitcoins.com, Incrementum AG

2.) Bitcoin Has No Use Cases

“Novel technology is not the same as better technology or better economics.

That is clearly the case with Bitcoin: while perhaps intended as an alternative payment system with no government involvement, it has become a combination of a bubble, a Ponzi scheme and an environmental disaster.”

Agustín Carstens
General Manager, Bank for
International Settlements

Bitcoin's original purpose was to be a medium of exchange unbacked by government. However, critics claim that a new monetary system cannot be created out of thin air by a few cryptographers in Palo Alto. This argument consists of two main parts: first, Bitcoin does not have any use case outside of being a medium of exchange; second, Bitcoin is not a tangible commodity.

The proponents of the first argument claim that fiat currencies such as the U.S. dollar and the euro have value because the government backs them and because you can pay your taxes in them. Similarly, gold has value because it can be used in industrial applications. Following this logic, Bitcoin has no value because it cannot be used to pay taxes in most jurisdictions and it has no physical applications.

The second argument follows from Austrian Economics and Ludwig von Mises' regression theorem. The regression theorem states that the purchasing power of fiat today can be traced back to purchasing power of fiat yesterday which can eventually be traced back to when fiat was convertible for gold and other commodities.³⁸

³⁷ Eng-Tuck Chea and John Fry, "Speculative Bubbles in Bitcoin markets? An empirical investigation into the fundamental value of Bitcoin," *Economic Letters* 130 (May 2015), pp. 32–36, <https://www.sciencedirect.com/science/article/pii/S0165176515000890>.

³⁸ Ludwig von Mises, *The Theory of Money and Credit* (1912).

The theory holds that the purchasing power of money can be regressed to a time when money was not used as money but as a commodity. Gold's original

purchasing power was established on the free market through the forces of supply and demand because gold could be directly used as jewelry. Since Bitcoin is digital, some analysts argue that Bitcoin's purchasing power is backed by nothing. Instead, speculation is the main reason the price keeps going up. According to this logic, the price will plummet when speculators stop speculating because Bitcoin is not legal tender, and it has no industrial demand to support its price on the market.

The Asset Bubble Checklist

1.) The asset's price skyrockets. ✓

Bitcoin's price rose by 1,900% in 2017. Over the past five years, Bitcoin had a 100,000% return on investment.

2.) Everyone is talking about the asset. ✓

Even the American singer Katy Perry sported cryptocurrency logos on her nails to show enthusiasm for what some investors call a new asset class.

3.) When people quit their day jobs to become investors in the asset. ✓

Thousands of young people are quitting their job in hopes of becoming #CryptoRich. The South Korean 23-year-old Eoh Kyong-hoon left math for Bitcoin, "I no longer want to become a math teacher... I've studied this industry [cryptocurrencies] for more than ten hours a day over months, and I became pretty sure that this is my future."

4.) Investors are taking on debt to purchase the asset. ✓

"We've seen mortgages being taken out to buy bitcoin. ... People do credit cards, equity lines." - Joseph Borg, President of the North American Securities Administrators Association.

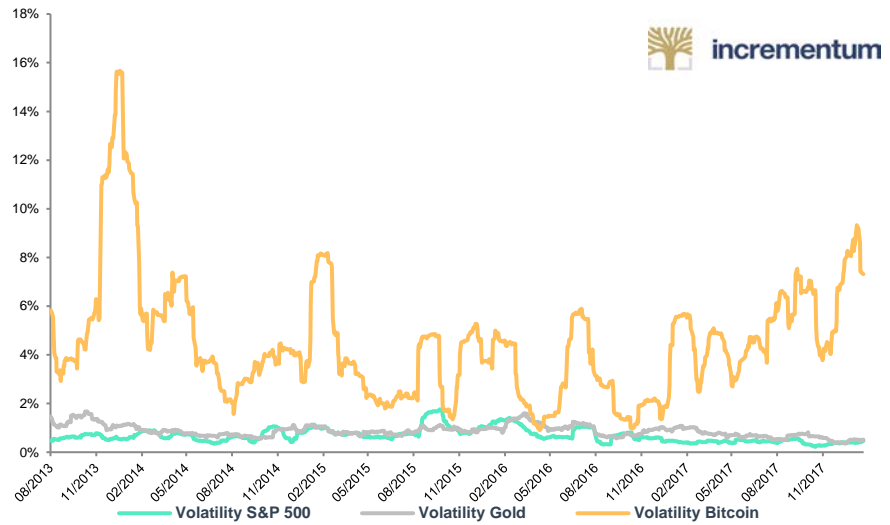
3.) Bitcoin Has the Highest Volatility of Any Asset Class

Bitcoin's original purpose was to be an electronic cash system. Critics claim that Bitcoin is too volatile to be a store of value or a unit of account, and therefore, Bitcoin is a bubble. Volatility is generally measured by calculating the standard deviation of the asset's return. [The Bitcoin Volatility Index](#) tracks Bitcoin's price fluctuations. As shown in Figure 5, Bitcoin's rolling 30-day volatility has been over 6 % during the past month. At

the same time gold and the S&P 500's rolling 30-day volatility was 1 %. More volatility means more risk. According to this statistic, Bitcoin is a significantly riskier asset than gold or the S&P 500. Bitcoin has a 30 % correction every quarter, while the S&P 500 has had 12 corrections of 30 % or higher since its inception in 1929.³⁹ The main point is that Bitcoin's volatility makes it poor money, and if it is poor money, then why does it have value?

³⁹ Jake Weber, "The Bitcoin Bubble Explained in 4 Charts," *Mauldin Economics*, Nov 13, 2017, <http://www.mauldineconomics.com/editorial/the-bitcoin-bubble-explained-in-4-charts#>.

Figure 5. 30-Day Rolling Volatility of Bitcoin, Gold, and the S&P 500 from 2013–2018



Source: 99bitcoins.com, Incrementum AG.

4.) The Supply is Unlimited

“Whether any of today’s cryptocurrencies will survive over the long run seems unlikely to me, although parts of them may evolve and survive.... To my eye, they still seem too primitive to be the long-term answer.”

Steve Strongin,
Head of Global Investment
Research, Goldman Sachs

Another prominent reason why Bitcoin is called a bubble is because the supply of cryptocurrencies is unlimited. The open-source and digital nature of Bitcoin enables thousands of new cryptocurrencies to be created for free. As the Crypto Concepts chapter on software forks explains, 19 hard forks of Bitcoin were created, and some of them had an impact on Bitcoin’s price. In addition to hard forks, new tokens can be created on the Ethereum blockchain with only 66 lines of code, and all 66 lines of code can be copy-pasted from online sources. There are even YouTube tutorials on how to create new cryptocurrencies in under six minutes. In 2017, over 472 new cryptocurrencies were launched. According to this argument, the demand for cryptocurrencies is larger than the supply. However, since the demand is finite, and the supply is theoretically infinite, the bubble will eventually collapse, and investors will lose billions of dollars.

5.) An Even Better Technology Will Replace Bitcoin



“Innovation is the ability to see change as an opportunity – not a threat.” – Steve Jobs. Source: Shutterstock

Bitcoin has only been around since 2009, and the technology has evolved from being a free and fast payment system to an expensive and slow payment system. Critics of Bitcoin claim that if it does not implode because of other factors, Bitcoin will be replaced by a cryptocurrency with superior technological features. Specifically, Bitcoin will be replaced by a cryptocurrency that does not require billions of dollars in electricity and mining hardware per year.⁴⁰ Also, post-blockchain technologies such as Hashgraph and IOTA are the talk of all blockchain conferences and meet-ups because they promise to solve the Bitcoin scaling problem. The smartest minds in the world are working on better blockchains because the reward for creating a cryptocurrency better than Bitcoin is astronomical. As fast cars replaced slow horse buggies and sleek

⁴⁰ “Bitcoin Energy Consumption Index,” *Digi Economist*, 2018, <https://digiconomist.net/bitcoin-energy-consumption>.

iPhones replaced Nokia bricks, the adage goes that Bitcoin is a bubble because it will not be around forever.

c. The Root Cause of Financial Bubbles

In the past 20 years, we have experienced the dot-com bubble, the housing bubble, and now stock and bond markets are close to their all-time highs. Some skeptics are calling the current economy the “Everything Bubble” because every asset class is hitting an all-time high. Around the world, markets have entered uncharted territory. In the U.S, the Dow Jones Industrial Average reached 26,000 for the first time in history. The Case-Shiller Real Estate Index is back at its 2006 high. In Europe, trillions of euros have been poured into corporate and government bonds that have negative yields, and the UBS Swiss Real Estate Bubble Index is the highest it has been since the 1989 real estate downturn.

However, the increase in price of real estate, stocks, bonds (and cryptocurrencies) cannot be explained by a fundamental improvement in the economy. Former FED Chairman, Alan Greenspan, referred to the Dow’s 44 % increase since Trump’s election and the bond market as financial bubbles. Other critical analysts like Peter Schiff regularly point out that industrial nations do not have real [productivity growth](#). While financial markets are roaring, the economy still seems to have severe problems.

“We are working our way towards stagflation.”

Alan Greenspan

The increase in asset prices does not match a complimentary increase in economic activity; however, another variable is highly correlated: namely, the money supply. Throughout history, excess money has been present before every single bubble.

d. What is Money and Why Is Excess Money a Bad Thing?

Several economists have observed that excess money is the catalyst of unsustainable financial bubbles; however, economists do not even agree on the definition of “money”. Mainstream monetary theory suggests that money is a **medium of exchange, a unit of account, and a store of value**. In contrast, the Austrian school of economics holds that money’s main purpose is being a medium of exchange, while unit of account and store of value are secondary.⁴¹

⁴¹Ludwig von Mises, *The Theory of Money and Credit* (1912).

To reconcile the two branches of economics, one possibility is that money's value comes from each of money's functions. For example, some people demand money because they want a medium of exchange; others demand money because they want a store of value. The purpose of a medium of exchange is to exchange between two real assets; however, a medium of exchange does not necessarily need to be a store of value and vice versa. In *Principals of Economics*, Carl Menger

Definition of Money

We asked two economists for their definitions of money: Associate Professor of Economics at WU Vienna, Dr. Guido Schäfer, and Research Assistant Professor with the Free Market Institute at Texas Tech University, Dr. Robert Murphy.

Schäfer: *To serve as money, an object must fulfil the functions of a medium of exchange, a store of value, a unit of account and of legal tender. As of now, bitcoin fulfils these functions only to such limited degrees that I do not think it can be considered as money.*

Murphy: *Mises argued that a money was a medium of exchange that was generally accepted within the community. This is a fuzzier criterion; the dividing line between money and non-money is not very sharp. So, I think the fair test for bitcoin and other cryptocurrencies is something like this: If we ever get to the point where the people in a community with at least 1,000 people could manage to get by only using the cryptocurrency to make purchases (like paying rent, buying groceries, paying the utility company, etc.), then it would clearly be a money."*

argued that certain goods such as livestock, tea, and slaves functioned as a medium of exchange, while precious metals, jewels, and pearls were used as a store of value. In early agrarian societies, cattle were primarily used as a medium of exchange while wealth was accumulated in salt. In *Austrian School for Investors*, Taghizadegan, et al. (2014), explain how African tribal chiefs hoarded ivory before European merchants began using it as a medium of exchange.⁴² Since the 1600s, gold has been kept in clearing houses and depositories as a store of value while paper certificates of deposit became the most marketable medium of exchange.

In the current financial system, the supply of money is increased via credit expansion triggered by artificially low interest rates. Due to the architecture of fiat money systems, central banks are authorized to create money out of thin air.⁴³ A large portion of the newly created money is channeled directly into financial assets, which raises the prices of those

assets. Meanwhile, a small amount goes to entrepreneurs and small business owners who want to expand operations.⁴⁴

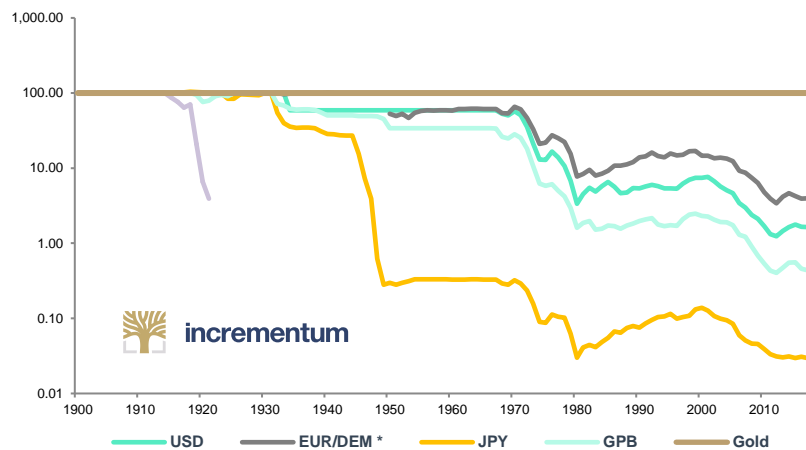
In addition to indirectly raising the demand for financial assets by pumping newly printed money into financial markets, printing money debases the currency. Each newly printed dollar decreases the purchasing power of the other dollars circulating in the economy. When central banks create new money, they do not create new goods or services. Therefore, the new money can only be spent on the existing supply of goods and services. Since the demand for goods and services goes up and the supply is fixed, price inflation ensues. Due to the inflationary bias of the fiat money system the currencies are no good long-term store of value. Gold still is seen as a store of value. **If one denominates paper-currencies in Gold one might get a different perspective of the long-term stability of fiat money.**

⁴² Rahim Taghizadegan, Ronald Schöferle and Mark Valek, *Austrian School for Investors: Austrians Investing between Inflation and Deflation*. Mises Institute, 2014. https://www.amazon.com/dp/B01D2A4Z7S/ref=dp-kindle-redirect?_encoding=UTF8&btcr=1.

⁴³ Jörg G. Hülsmann, *The Ethics of Money Production*. Mises Institute, 2008.

⁴⁴ People who are unwilling or unable to take on debt do not directly receive any of the "economic stimulus".

Figure 6. Fiat Currencies in Terms of Gold (Logarithmic Scale)



The data for the Euro refers to the Deutschmark prior to 1999. Source: World Gold Council, GoldMoney, Incrementum AG

"I am also pleased to report that our financial system is now far stronger and more resilient than it was before the financial crisis that began about a decade ago. We intend to keep it that way."

Jerome Powell
Federal Reserve Chairman

Under fiat monetary systems, average Joes and Janes can no longer store their money under the mattress for safekeeping. If they do, price inflation will eat away the purchasing power of their savings by 2% to 7% per year based on official and unofficial calculations, respectively. Permanent money debasement discourages saving and encourages consumption spending on cars, clothing, and vacations. People who are determined to save money are forced to take on additional risk to preserve the purchasing power of their savings over time. Instead of saving their money in bank accounts, savers are forced to look for other long term stores of values like stocks, bonds, and real estate.

The main problem is that printing money is only a short-term strategy.

If the purchasing power of a currency depreciates too quickly, demand for that currency decreases. In hyperinflations, demand for holding currency tends toward zero. Subsequently, the currency becomes worthless. However, increases in the money supply happen all the time. Harvard professors Kenneth Rogoff and Carmen Reinhart analyzed the past 800 years of our global financial history and found that governments always increase the money supply and that frequently governments print so much money that confidence in the money collapses.⁴⁵

Table 1 shows 21 governments inflated their currency in Europe, Oceania, and North America between 1800 through 2008.

⁴⁵ Kenneth Rogoff and Carmen Reinhart, *This Time is Different*. Princeton: Princeton University Press, 2009.

Table 1. Severe Inflation in Europe, North America and Oceania from 1800 – 2008.

Country	Peak Year of Inflation	Annual Price Inflation in Percent
Australia	1854	57.4
Austria	1922	1733
Belgium	1812	50.6
Canada	1917	23.8
Denmark	1800	48.3
Finland	1918	242
France	1946	74
Germany	1918	22200000000
Greece	1923	30200000000
Hungary	1946	96300000000
Italy	1944	491.4
New Zealand	1980	17.2
The Netherlands	1918	21
Norway	1812	152
Poland	1923	51699
Portugal	1808	84.2
Russia	1923	13535
Spain	1808	102.1
Sweden	1918	35.8
United Kingdom	1800	34.4
United States	1864	24

Source: Kenneth Rogoff and Carmen Reinhart, *This Time is Different: Eight Centuries of Financial Folly*. The authors calculate inflation as the annual change in the consumer price index.

“Although fiat money is physically worthless, people attribute value to it because they anticipate that in the future other people will be willing to accept it in exchange for some real goods.”

Guido Schäfer

In summary, newly created money from low interest rate policies and limited ways to save money have led to excess cash in the economy. The excess cash must go somewhere. Currently, the excess cash has found its way into stocks, bonds, real estate, collectables, and cryptocurrencies. Like all of the bubbles before, removing the excess cash will remove the bubble. If central banks raise interest rates too much, the nominal growth of financial markets will slow down or even decline.

e. Why Bitcoin May Not Be a Bubble

It is true that low interest policy and demand for a secure way to save are fueling part of Bitcoin’s rise in price. If central banks stop debasing the purchasing power of fiat currencies and people can return to the good old days of saving cash in their bank accounts, a large portion of Bitcoin’s appeal will vanish. In contrast, Bitcoin’s price will go much higher if fiat currencies continue to be a poor vehicle for saving. The number one reason Bitcoin may not be a bubble stems from Bitcoin’s technological qualities that make it a superior way of saving value. The upward price trend and speculation around Bitcoin stems from Bitcoin’s potential to be a global and permissionless system of managing wealth that cannot be confiscated. Like with Gold, one also gets a different perspective denominating the USD in Bitcoin. We would not expect the steep decline of the USD to continue, however the deflationary nature of Bitcoin would imply that it has more value relative to an ever inflating USD (or any other FIAT money).

Figure 7. USD in Terms of Bitcoin (Logarithmic Scale)



Source: Coindesk.com, Incrementum AG

“...even with gold, there is a possibility of a huge discovery that makes it unsuitable as a money. (Or in the future we may have machines that can easily rearrange matter in order to turn base materials into gold.) This type of thing can’t happen with bitcoin. But the disadvantage with bitcoin is that it’s hard for people to understand, and also that it is (according to one definition) a fiat money, with purchasing power being ultimately dependent on expectations.”

Robert Murphy

Also, the five reasons why analysts call Bitcoin a bubble can be countered. First, it is true that Bitcoin’s price fluctuates heavily; however, this does not mean that Bitcoin is not a good investment. To avoid buying at all-time highs, several investors invest a small amount of money in cryptocurrencies every month to gain exposure at an average price. This strategy is commonly referred to as cost averaging. Highly volatile assets have the advantage, that a small position of a portfolio has a reasonable impact on the overall performance. If sized correctly a saver/investor may be able to handle the volatility much better.

The second argument that Bitcoin has no value because it has no use cases collapses upon closer inspection as well. The 19th century economist Carl Menger observed that value is subjective. Each individual values Bitcoin for a different reason. The market price is a surrogate of information concerning the individual preferences of consumers in society. If one Bitcoin costs \$10,000, this means that a lot of people around the world value Bitcoin even though it is not a physical commodity. The third argument that Bitcoin is the most volatile asset class is also not evidence that investors should avoid Bitcoin. Many investors specifically target volatile asset classes with active trading strategies. Fourth, any analyst or economist that says the supply of cryptocurrencies is infinite does not fully understand the technology. Creating cryptocurrencies by copying and pasting code is free and can be used to increase the supply of cryptocurrencies. However, creating a new cryptocurrency does not mean it will have a network of users. Creating a network of users requires scarce resources such as capital and labor. Although the supply of cryptocurrencies is technically unlimited, the supply of global cryptocurrency networks is limited. The final point regarding Bitcoin being replaced by a better technology is probably the strongest argument against Bitcoin. However, Bitcoin is open-source, and many developers say that Bitcoin code change the underlying code to reflect consumer preferences. If another coin, such as Bitcoin Cash, begins to overtake Bitcoin, the original Bitcoin can adopt Bitcoin Cash’s features if necessary.

“The rise in Bitcoin's value is not a bubble, but a natural feature of its design & economic incentives. Bitcoin's supply is strictly scarce; there'll never be more than 21 million. Adoption must lead to a rise in value. In turn, rising value leads to more adoption.”

Saifedean Ammous

f. Three Potential Outcomes

Bitcoin was designed to fulfill three functions of money: store of value, medium of exchange, and unit of account. Bitcoin's inherent scarcity removes the problem of excess money and currency debasement from the financial system. The total number of units is capped at 21 million and its inflation rate is more predictable than fiat or gold. Similar to Gold, Bitcoin allows Joes and Janes to save without having their savings diluted slowly by ever increasing money supply (or quickly in the case of hyperinflation). In both cases there may well be phases, where a saver has to be willing to lose nominal purchasing power for a longer period of time. However, Bitcoin does not only enable secure saving, this technology also allows people to directly send their savings to other people without converting into fiat or any other asset. The Bitcoin network does not depend on intermediaries. Stocks, bonds, real estate, and fine art, all depend on government stability and efficient courts that uphold legal contracts. Even owning gold was outlawed in the U.S. from 1933–1974. Today, it is only possible to move \$10K worth of gold out of the U.S. at once.

Given Bitcoin's qualitative features, there are three possible outcomes for Bitcoin.

1.) Bitcoin Becomes A Store of Value

Bitcoin's qualities of durability, portability, fungibility, divisibility, scarcity, and non-confiscatability are attracting an injection of trust from users. The nominal and real price of Bitcoin in terms of the good and services that it can purchase is increasing because more and more people are demanding it. Since the quantity is

fixed, all of the fluctuations in demand directly impact the price of Bitcoin. In contrast, investors are withdrawing trust from fiat currencies. In the U.S., quantitative easing 1,2, and 3 have resulted [in over \\$12 trillion newly printed dollars](#). In January, the dollar index hit its lowest point since 1987 and its lowest exchange rate with the yuan since 1994.⁴⁶

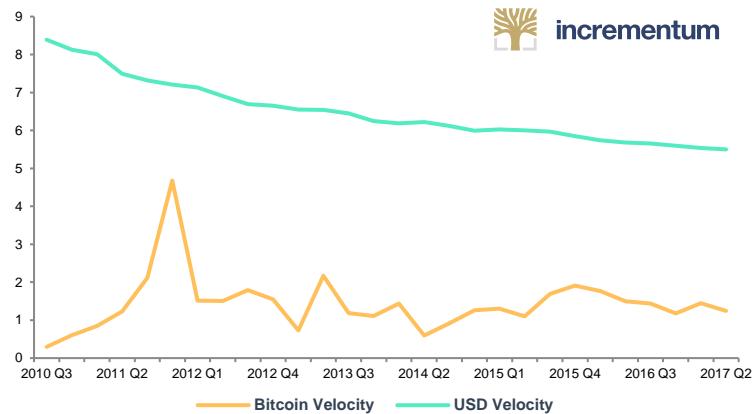
Velocity, or how often a currency is spent, is one way to estimate a currency's value. Gresham's law says that overvalued money flows into circulation while undervalued money is hoarded. Named after the 16th century financier Thomas Gresham, the law states that people hold on to money that is expected to retain its value and spend money that is expected to lose its value. Thus, inflationary money changes faster than deflationary money. Figure 8 compares the velocity of the dollar and Bitcoin. In this graph, velocity of the dollar is the ratio of nominal GDP to the M1 money supply, velocity of Bitcoin is calculated as the ratio of Bitcoin's transaction volume in USD to Bitcoin's market capitalization in USD.



If Bitcoin does monetize, people will be able to directly spend Bitcoin without converting into fiat currencies such as the Swiss franc or euro. Source: <https://imgur.com/gallery/gE8hDnY>

⁴⁶ Peter Schiff, „Ep. 324: Obama & Yellen Strand Trump & Powell in Dodge,“ *YouTube*, Jan 31, 2018, <https://www.youtube.com/watch?v=4NN7n3ABYx4&feature=share>.

Figure 8. Historical Velocity of Bitcoin and the U.S. Dollar



Source: Quandl.com, St. Louis Federal Reserve FRED Database, Incrementum AG

When the media has negative reports concerning Bitcoin, such as China is outlawing ICOs or the electricity use is unsustainable, the perception that Bitcoin can become a global store of value is weakened, and the price drops. A crisis of confidence leads to investors pulling out their investments. Similarly, investors inject trust when there is good news about Bitcoin’s adoption such as the Lightning Network or CFTC Chairman Christopher Giancarlo’s positive comments about Bitcoin at the hearing on [blockchain on February 6](#) of this year.

If Bitcoin is adapted as store of value in the long term, the current period of volatility may be referred to as Bitcoin’s “hyperdeflation” phase, and this is the first time in history we are experiencing this type of economic phenomena. Investors are speculating whether or not Bitcoin will become digital gold, and rightly so. Due to the inflationary design of fiat money, Bitcoin exhibits interesting properties relative to fiat money as store of value. If Bitcoin achieves this goal, the price may level out and volatility could fall drastically.

2.) Bitcoin Becomes A Store of Value and a Medium of Exchange

The original Bitcoin white paper written by Satoshi Nakamoto states that Bitcoin was intended to be an electronic *cash* system; however, many people believe that Bitcoin can never become global and permission less money. According to Dr. Schäfer (and several other experts), the authorities will crack down on the technology if people really started to use it. In addition to legal uncertainty, Bitcoin’s high transaction fees and network latency make it cumbersome to use as a medium of exchange. If one mistake in the receiver’s address is made, the Bitcoin are gone forever. If the Bitcoin are sent to an Ethereum address by accident, the Bitcoin are gone forever. If a coffee is bought with Bitcoin, the merchant has to wait at least ten minutes before they know if the payment was valid. If a transaction is sent in the wrong amount, there is no way to do a chargeback or file a dispute.

Given the technological problems, **the majority of Bitcoin users do not use it as a medium of exchange.** Our current payment system is easier to use. We already have credit cards, banks, and PayPal to facilitate our payments to merchants around the world. On the other hand, technologies such as the Lightning Network and SegWit may eventually make Bitcoin a good medium of

“Bitcoin might totally collapse and be forgotten, and I think that’s a good likely outcome but it could linger on for a good long time, it could be here in 100 years.”

Robert Shiller
Nobel Laureate

exchange as well. If Bitcoin can scale to become a global medium of exchange, its purchasing power will increase because it will be able to serve three distinct functions: storing value, transmitting value, and ultimately being a unit of account.

We contacted two monetary economists, which have different views on this topic. Table 2 summarizes the views of the professors on why Bitcoin has value, and whether or not Bitcoin is a bubble.

Table 2. Will Bitcoin Become Money?

Economist	Dr. Guido Schäfer	Dr. Robert Murphy
Could Bitcoin ever become money? If so, how?	<ul style="list-style-type: none"> No, authorities would crack down. 	<ul style="list-style-type: none"> Yes, if enough merchants accept Bitcoin.
Do you think gold is a better money than Bitcoin?	<ul style="list-style-type: none"> Neither of the two are money. 	<ul style="list-style-type: none"> There are pros and cons to gold and Bitcoin.
Do you think Bitcoin is a bubble?	<ul style="list-style-type: none"> I do think that Bitcoin is/was a bubble as people mainly hold Bitcoin in the expectation of higher prices in the future. Also, the underlying economic fundamentals (as fuzzy as they may be) move much more slowly than the price increases. 	<ul style="list-style-type: none"> Probably yes in the medium run but no in the long run.

Source: Exclusive interview, Incrementum AG

3.) Bitcoin Becomes Neither and Collapses

Bitcoin's success so far has been nothing short of a miracle. Since Bitcoin's inception in 2009, Bitcoin has been declared "dead" hundreds of times in the media.⁴⁷ The Bitcoin network has several threats including hacking the SHA-256 encryption algorithm, being outlawed by governments, a 51 % attack, and solar flares bringing down the Internet. If Bitcoin fails to become a global store of value or medium of exchange, the value and subsequently the price of Bitcoin will fall.

Conclusion

The Bitcoin revolution is about having a way to store and transmit value that does not depend on central bank monetary policy, capital controls, or property rights. The reason people pump their paychecks into real estate, bonds, and stocks is not because these assets make a better medium of exchange. These assets make a better store of value than fiat currency, and Bitcoin has the technological features to become an even better store of value than these assets. If Bitcoin manages to additionally achieve worldwide adoption as a medium of exchange, the price of Bitcoin will most probably have a spectacular return going forward. If Bitcoin fails, the price will collapse, and it will go down in history as one of the largest bubbles of all time.

Eighteen years after the infamous highs of the tech-markets in the year 2000 most companies have embraced the opportunities of the Internet. Today, the Internet is definitely not referred to as a bubble. Similar to internet stocks, many of the cryptocurrencies may be gone in five years from now; however, the dream of a decentralized and private store of value has been born, and this will inspire an onslaught of technologies until the mission is complete. **Diversification is a key**

⁴⁷ "Bitcoin Obituaries: Bitcoin has dies 259 times," 99Bitcoins, 2018, <https://99bitcoins.com/obituary-stats/>.

component of building a portfolio that retains value in the long run.

The major takeaway is that a little bit of gold, a little bit of cryptocurrencies, and a little bit of fiat may provide investors with a type of insurance against changes in the future. **Future generations may use a combination of cryptocurrencies, commodities, and fiat currencies depending on which money serves their needs the best for each of their different goals.**

Coin Corner: War Within Bitcoin

Key Takeaways

- The main problem that the cryptocurrency community is debating is how to garner widespread adoption for Bitcoin. High transaction fees have pushed cryptocurrency users to other coins such as Bitcoin Cash.
- Bitcoin Cash's transaction fee is approximately \$0.16 while Bitcoin's is approximately \$4. Likewise, the average time it takes to confirm a Bitcoin Cash transaction is ten minutes while the average for Bitcoin is over an hour.
- Since August 1, 2018, Bitcoin Cash's average daily return was 0.64% while Bitcoin's was 0.58%. However, Bitcoin Cash's volatility was double Bitcoin's over the same period. The two cryptocurrencies' price returns have a low and positive correlation.

“... Bitcoin is an excellent idea. It fulfills the needs of the complex system, not because it is a cryptocurrency, but precisely because it has no owner, no authority that can decide on its fate. It is owned by the crowd, its users. And it has now a track record of several years, enough for it to be an animal in its own right.

Finally, Bitcoin will go through hick-ups (hiccups). It may fail; but then it will be easily reinvented as we now know how it works. In its present state, it may not be convenient for transactions, not good enough to buy your decaffeinated espresso macchiato at your local virtue-signaling coffee chain. It may be too volatile to be a currency, for now. But it is the first organic currency.

But its mere existence is an insurance policy that will remind governments that the last object establishment could control, namely, the currency, is no longer their monopoly. This gives us, the crowd, an insurance policy against an Orwellian future.”

Nassim Taleb

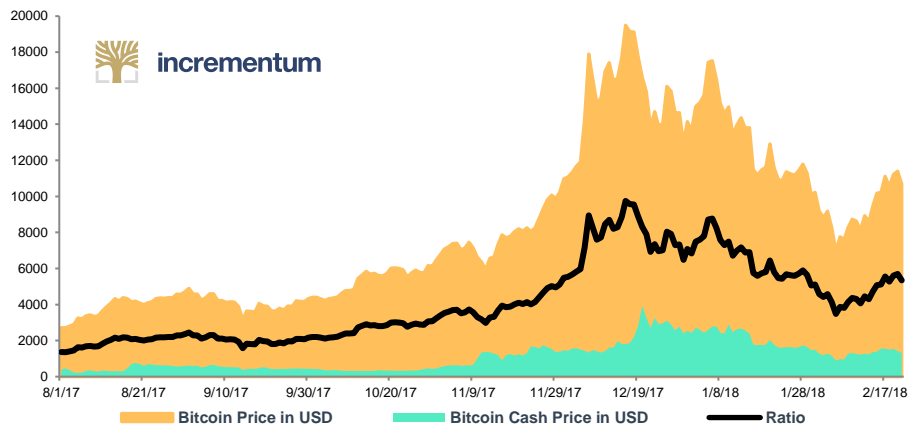
From now on, every edition of the Crypto Research Report will include a chapter dedicated solely to covering coins and tokens that are relevant for financial market participants. At the moment, the most debated coins are Bitcoin and Bitcoin Cash. In this chapter, we will review the arguments being made on both sides, and we explain the steps we are taking to hedge Bitcoin’s risks of being replaced by a better technology.

“Best way to destroy your investment in Bitcoin: gather an Internet mob to go redesign Bitcoin.”

Nick Szabo

Bitcoin Cash came into existence on August 1, 2017 after a hard fork of Bitcoin.⁴⁸ Believers in Bitcoin have split into opposing fractions. Both groups believe that Bitcoin’s value comes from being a fast and affordable global payment system. The disagreement is about how to achieve that goal. One camp, the Bitcoin Cash camp, believes that Bitcoin should have bigger blocks now. Another camp believes that bigger blocks may be inevitable, but they would like to try all other options before resorting to a hard fork. This camp is researching and developing tools such as SegWit, The Lightning Network, Sharding, and Schnorr signatures. Other camps believe that big blocks will never be a feasible solution to Bitcoin’s scaling problem. To take a step back, the first section explores Bitcoin’s scalability problem. The second section compares the quantitative and qualitative characteristics of Bitcoin and Bitcoin Cash, and the final segment discusses how mining hash power may be a good proxy for sentiment in cryptocurrency markets.

Figure 9. Ratio of Bitcoin to Bitcoin Cash



Source: Coinmarketcap.com, Incrementum AG

a. Scaling a Blockchain

The main problem that the cryptocurrency community is debating is how to garner widespread adoption for Bitcoin. As argued in the featured article of this edition, “Bubble or Hyperdeflation?” Bitcoin’s value can be explained by being a global and permissionless store of value and payment system. However, scalability issues with the blockchain technology are hindering further Bitcoin adoption. The high transaction fees and latency on the Bitcoin network has ruined user experience. The transaction fees on the Bitcoin and Ethereum networks are currently too high to facilitate micropayments. The rise of transaction fees has pushed applications

⁴⁸ For more information on hard forks, please refer to the “Crypto Concept” chapter at the end of this report.

onto other more affordable blockchain protocols. For example, the nanopayment token, Satoshi Pay, uses the Stellar blockchain because their business model relies on low transaction fees.⁴⁹

The drama began when Bitcoin developers proposed Segregated Witness (SegWit) as a solution to the scaling debate. Invented in 2015 by Bitcoin developer Pieter Wuille, SegWit reduces the amount of data required for each transaction. Since each Bitcoin block has a data limit of 1 MB, reducing the data required for each transaction means that the network can process more transactions. Segregated Witness reduces the data required for each transaction by removing data related to signatures or segregating the witness from the transaction.

What Is a Block?

A data block contains a list of transactions that have been broadcasted to the network by users. Blocks are added one after the other in a chronological order, creating a chain, hence, the name *blockchain*. A candidate block is a block that has not been confirmed in the blockchain. Before confirming the candidate block and the transactions inside of it, cryptocurrency miners compute hashes until they find a number that is less than a specific number set by the software protocol. In the Bitcoin protocol for example, miners must find the right “nonce”, or arbitrary number, that produces a hash lower than the difficulty target set by the software. The hash that is lower than the difficulty target becomes that specific block’s identification number. The first miner to find a hash that is lower than the given difficulty target will receive a reward and the transaction fee that the sender paid to the network when they broadcasted their payment. After approximately ten minutes, the block of transaction will be confirmed by all of the computers in the network, and there will be no way for the sender to get double-spend the Bitcoin.

On February 21, 2016, developers and firms in the cryptocurrency space came together to discuss Bitcoin’s scalability problem. **In what became known as the Hong Kong Agreement, members of the Bitcoin community agreed to release Segregated Witness as a short-term solution to the scaling problem.** To achieve this agreement, the proponents of Segregated Witness had to find a compromise with the so-called big blockers who wanted to scale Bitcoin by increasing the block size. The compromise was that Bitcoin’s block size would be increased once the developers had built a safe hard fork implementation. This implementation was supposed to increase Bitcoin’s block size from 1 MB to 2 MB.

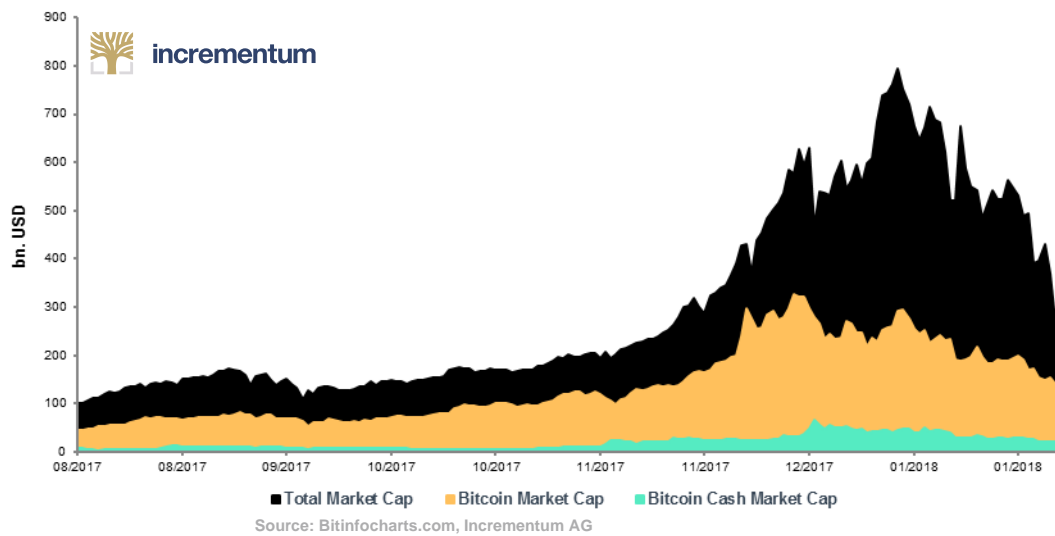
As shown in Figure 11, the Bitcoin transaction fee hit a high of \$55.16 on December 22, 2017. Meanwhile, Bitcoin Cash flaunted fees well below \$1. Network latency, or how long it takes for a transaction to be confirmed on the network, also

reached record times during January. As of now, each transaction takes approximately eight days to be confirmed on the network on average. In contrast, the average time for a Bitcoin Cash transactions confirmation is ten minutes.⁵⁰ This number can be compared to Ethereum, which takes approximately two minutes for a transaction to be confirmed in the blockchain. Given the better user experience of Bitcoin Cash, it is no wonder that Bitcoin Cash’s value relative to Bitcoin increased from 0.1 Bitcoin on August 1, 2017 to a high of 0.24 Bitcoin on December 20, 2017. Bitcoin Cash has dropped down to 0.14 Bitcoin or approximately \$1,000 per coin since then.

⁴⁹ <https://medium.com/@SatoshiPay/satoshipay-partners-with-stellar-org-4288ae0baa72>

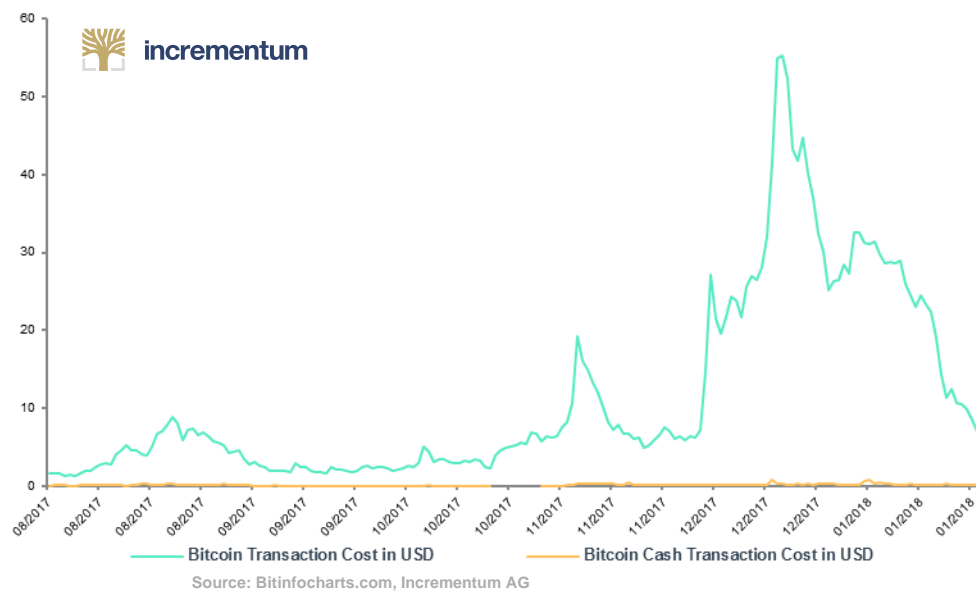
⁵⁰ If a cryptocurrency user pays the highest fee to send a transaction on the Bitcoin network, the average time for that transaction to be confirmed is the same as a transaction on the Bitcoin Cash network: ten minutes.

Figure 10. Market Caps of the Total Cryptocurrency Market, Bitcoin, and Bitcoin Cash (in Billions of USD)



As shown in Figure 10 Bitcoin’s market share to Bitcoin Cash has recovered a bit, but Bitcoin Cash has retained its position in the top five cryptocurrencies for several months. This could signal that market participants are not settled on the debate.

Figure 11. Bitcoin vs. Bitcoin Cash Transaction Fees (in USD)



b. Bitcoin versus Bitcoin Cash

There are three main reasons why Bitcoin Cash has not toppled Bitcoin despite having lower transaction fees and confirmation times.

1.) The Proponents of Bitcoin Cash Have Conflicts of Interest

The main proponent of Bitcoin Cash is the early Bitcoin investor Roger Ver who denounced his U.S. citizenship for political reasons. Since 2011, Roger Ver has been an outspoken proponent of Bitcoin and libertarianism. Critics of Bitcoin Cash frequently point out that Roger Ver served ten months in federal prison in the U.S. However, there is plenty of evidence that Roger Ver's interest in Bitcoin Cash is not purely financial. In 2012, Roger Ver donated money to create the Bitcoin Foundation, which supports the developers of Bitcoin. Additionally, Roger Ver has donated millions of dollars to educational charities such as the [Foundation for Economic Education](#) and Angela Keaton's antiwar.com.

Roger Ver is a frequent guest on talk shows, and his behavior during interviews is [notoriously raucous](#). However, Roger Ver's profile is not the shadiest profile involved in Bitcoin Cash. Roger Ver is aligned with Jihan Wu, who is the owner of the Bitcoin mining hardware company Bitmain, and Craig Wright, who claims to be Satoshi Nakamoto.

Critics of Bitcoin Cash accuse Jihan Wu of hard-forking the Bitcoin blockchain in order to gain personal wealth. Due to a technology flaw in Bitcoin's proof-of-work

consensus algorithm, accusations have been made that Wu's company Bitmain was able to gain a competitive advantage over other cryptocurrency miners.⁵¹ As documented by the Bitcoin Core developer Gregory Maxwell, Bitmain may have been able to save [\\$100 million per year](#). Using a patented technology called AsicBoost, Jihan Wu was able to mine block headers for candidate blocks using less electricity than other miners.

Many Bitcoin Cash supporters believe that Jihan Wu was just doing business as usual. After all, savvy businessmen always find ways to cut costs. However, critics of Bitcoin Cash say that Jihan Wu spearheaded the movement to hard fork Bitcoin on August 1, 2017, because he was losing his competitive advantage over other cryptocurrency miners.

Shortly after the Hong Kong Agreement, it

"Amazon went from \$86 to \$6 in the dot-com bubble and is \$1,400 today. It took 8 years to recover back to \$86.

Webvan went from \$25 to \$0 in 2 years and went bankrupt.

If you think #Bitcoin has Amazon-level disruption and staying power then #hodl.

If you think \$BTC is Webvan, sell."

Chris Koerner



John McAfee
@officialmcafee



Jihan Wu, Roger Ver and myself discussing how to put marriage and divorce on the blockchain.



10:05 PM - 17 Oct 2017

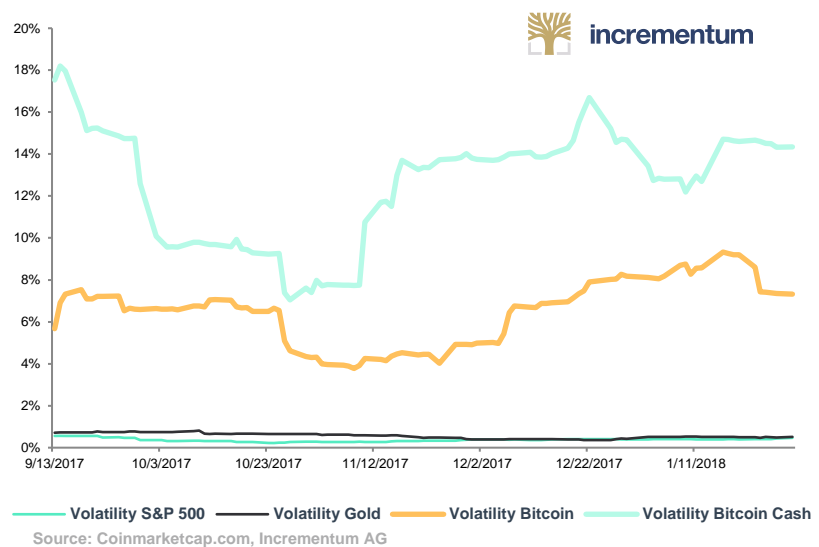
Two of the main proponents of Bitcoin Cash, Roger Ver and Jihan Wu, discussing cryptocurrencies and blockchains with John McAfee. Source: [Twitter](#).

⁵¹ <https://themerple.com/what-is-asicboost/>

became apparent that not everyone in the cryptocurrency community agreed to the dictates passed down from the community members who were present at the meeting. Jihan Wu began speaking out against SegWit in favor of increasing the block size. When SegWit gained enough support in the community, Jihan Wu acted quickly to bring Bitcoin Cash into existence.

Segregated Witness removes the possibility of exploiting the AsicBoost advantage that Jihan Wu has a patent on in China. Opponents argue that miners who mine Bitcoin Cash can covertly use AsicBoost to gain an unfair advantage. Since AsicBoost is patented, Jihan Wu has a legal right to higher profits. The closed-source nature of the AsicBoost protocol can be used to centralize cryptocurrency mining even more than it is already. In Jihan Wu's defense, he denies that his company ever used AsicBoost. Instead, he claims that he switched to Bitcoin Cash because he believes that having a larger data limit on Bitcoin blocks is the best way to scale Bitcoin.

Figure 12. Bitcoin vs. Bitcoin Cash Volatility



2.) Increasing the Block Size Gives Miners an Advantage

“The number of lightning channels on mainnet surpasses 1,000! It's fast, it's anonymous, it's free and it's decentralized. #Bitcoin #SegWit #LightningNetwork ☐”

Armin van Bitcoin

When Bitcoin Cash did a hard fork from the Bitcoin protocol on August 1, 2017, the total amount of data that could be contained in each block increased from 1 MB to 8 MB. To put this into perspective, downloading 20 emails on to your phone requires approximately 1 MB of data. In the Bitcoin network, 1 MB of data can be processed every ten minutes, which effectively limits the number of transactions on the Bitcoin blockchain to 7 transactions per second.

For years, members in the community have been critical of this limit on the transactions. Several solutions have been proposed, including Segregated Witness, Lightning Network, and increasing the block size with a hard fork. The first two options try to solve Bitcoin's scaling problem without a hard fork of the software.

Segregated Witness was introduced to Bitcoin on August 24, 2017, when a soft fork was released to the network. However, most Bitcoin nodes have not upgraded their

version of the Bitcoin software, and therefore, Segregated Witness is only used in approximately 14 % of all Bitcoin transactions. In addition to SegWit, the Bitcoin community has been working on the Lightning Network since 2015. Invented by [Joseph Poon and Thaddeus Dryja](#), the Lightning Network is an additional payment system that is built on top of Bitcoin. As discussed in the following section, the Lightning Network is already reducing the costs of using Bitcoin.

“3 million today. Let’s say that in two years, we have 30 million people. To maintain exactly the same level of fees as we have today, we need a block that is 10 MB in order of magnitude bigger. Five years from that, bitcoin gets really successful and we need to get 300 million people to use it. Now we need 100 MB blocks.”

Andreas Antonopoulos

Unlike SegWit and the Lightning Network, increasing the block size can lead to centralization. As explained by Andreas Antonopoulos, as the size of each block increases, the time it takes for each node to validate that block also increases. A

node cannot begin searching for a new block until they have validated the last block. Therefore, the miner who found the last block has an advantage over the other miners. Even if it only takes seconds for the other nodes to validate the latest block, these seconds could forfeit their chance of successfully finding the next block first. The miner who found that last block can directly begin mining the new block on their old block. This means that the miner who found the last block gains time instead of losing time, which makes the advantage even greater. To compound the problem, large miners are more likely to find the new block because they have a larger share of the mining network.

Critics of Bitcoin Cash argue that larger blocks result in centralization of the miners who validate the transactions. As Jameson Lopp of BitGo discussed on [episode 1,064 of the Tom Woods Show](#), centralization of the network can decrease the security of the network for several reasons. Jameson argues that miners could form a cartel and

change the rules of validation. For example, miners could decide that their profits are too low, and they could force a hard fork of the protocol that increases the total number of Bitcoins. Since only a few miners would be validating transactions, the

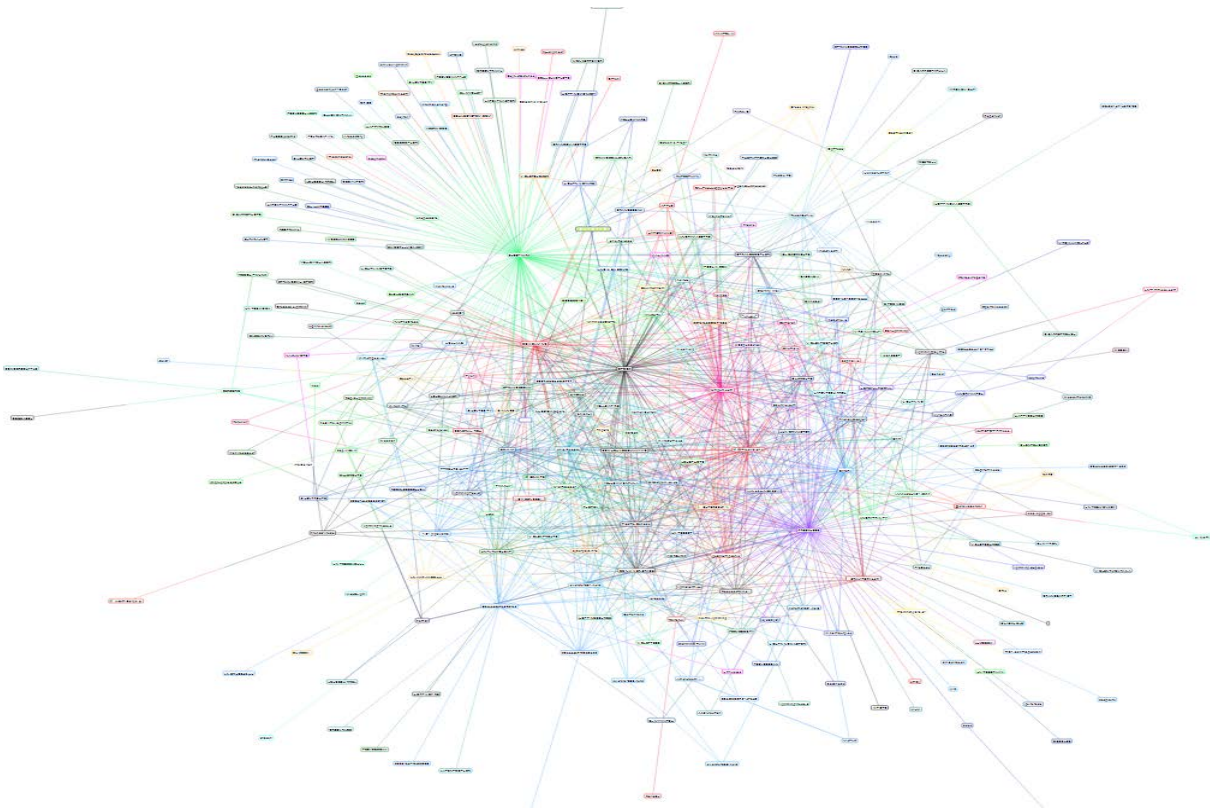
The Lightning Network

How it works: The Lightning Network increases the number of Bitcoin transactions by reducing the throughput of transactions on the Bitcoin blockchain. Instead, transactions are settled off-chain using payment gateways and a chain of IOUs. To use the Lightning Network, two users broadcast to the blockchain that they want to open a bidirectional payment channel. Once the channel is open they can send transactions back and forth between each other for free. The payment channel tracks their transactions, and when they are ready to close the payment channel, the final balance of their transactions will be broadcast to the Bitcoin blockchain.

Benefits: The Lightning Network enables the Bitcoin network to process more transactions per second for a lower fee. Currently, Bitcoin can process between 3–7 transactions per second and each transaction costs approximately \$4. The Lightning Network will enable thousands of transactions to occur per second for free.

Risks: The Lightning Network cannot pay a user who is not online, and if a user is unresponsive, payments can take hours to receive. If a large part of Bitcoin transactions are settled on the Lightning Network, and a technology flaw is found, this could damage the reputation of Bitcoin.

average users of the network would not even be aware that the supply of Bitcoin changed.



A map of the Lightning Network Mainnet. The first successful transaction was performed in late December of 2018. In the past month, the number of transactions on the Lightning Network has grown exponentially. Source inmainnet.gaben.win

In addition to forming a cartel, concentration of miners also makes the network more vulnerable to external attacks. For example, if Jihan Wu’s company and a few other Chinese miners become the main validators of the network, the Chinese government could easily shut down Bitcoin by making mining illegal. Centralization reduces a cryptocurrency’s censorship resistance. Censorship resistance is the ability for any user to make an account or send a transaction without permission. If only certain companies validate transactions, governments can encourage or force those companies to stop certain users from making accounts and sending transactions

As discussed in the chapter “Bubble or Hyperdeflation”, part of Bitcoin’s value comes from being a global and permissionless store of value. If Bitcoin or other cryptocurrencies become too centralized, their ability to become a global and permissionless store of value decreases. One metric that is often cited as a way to measure the centralization of a cryptocurrency is the number of nodes and the growth of nodes over time of a cryptocurrency. Currently, there are 1,043 nodes running on the Bitcoin Cash network and 10,059 nodes running on the Bitcoin network. However, this metric has limitations. Since no permission is required to run a node, one individual or company can operate several nodes. Therefore, Bitcoin may look more decentralized than Bitcoin Cash because more nodes

operate the Bitcoin software, however, this number can be manipulated. A precise measure of centralization does not currently exist.

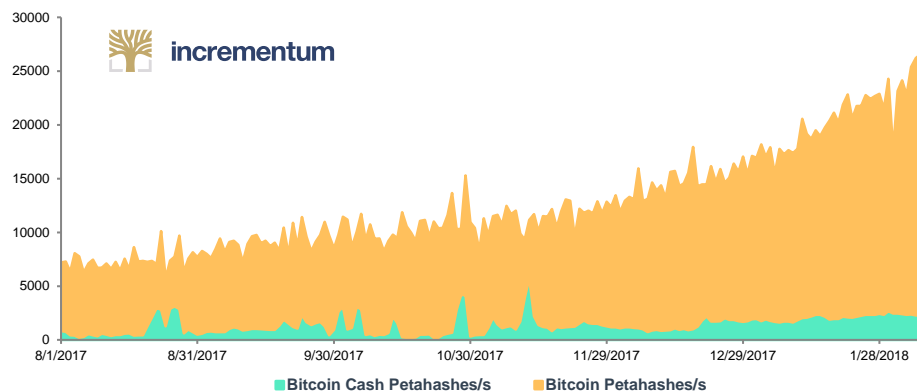
3.) The Original Bitcoin is Scaling Slowly

If users can send fast and affordable transactions over the original Bitcoin blockchain without the centralization problem of bigger blocks, Bitcoin Cash may slowly lose users. As mentioned in the previous section, the Lightning Network and Segregated Witness are both being used to scale the original Bitcoin blockchain. Currently, [429 nodes are using the Bitcoin Lightning Network](#) and over 1,000 payment channels are open. The Austrian cryptocurrency broker, Coinfinity, successfully completed the first Lightning Network transaction using a Bitcoin Automated Teller Machine (ATM) in early February of 2018. In addition, companies such as Coinbase are implementing Segregated Witness, which will further reduce the amount of data being sent over the Bitcoin blockchain.

c. Hash Rate as a Proxy for Market Sentiment

A proxy for how much “community support” a specific cryptocurrency has is mining hash rate.⁵² If a proof-of-work coin, such as Bitcoin, has more hash power than another coin, such as Bitcoin Cash, this is a sign that more people support the former. Large investors, such as exchanges, buy cryptocurrencies from miners directly to save money on exchange fees. Subsequently, miners have more information about demand than average investors. Furthermore, many miners are directly in contact with the developers of the coins that they mine. To forecast earnings and costs, miners can ask developers if and when they plan to change the coin’s mining algorithm. For example, miners who are concerned that Ethereum will switch to proof-of-stake can ask Ethereum developers when they plan to release the proof-of-stake algorithm Casper on the network. Miners use this information to decide which graphics cards to buy because specific cards are better at mining specific algorithms.

Figure 13. Bitcoin vs. Bitcoin Hash Rate



Source: Bitinfocharts.com, Blockchain.info, Incrementum AG

⁵² Adam Hayes, “What Factors Give Cryptocurrencies Their Value: An Empirical Analysis,” SSRN (March 16, 2015), <https://ssrn.com/abstract=2579445>.

In addition to being a metric for a coin’s popularity, the hash rate measures the security of a blockchain network. Blockchains that have more hash power are more secure than blockchains with less power. This is because double spends and 51 % attacks are harder to perform on blockchains that garner larger amounts of capital investment. The website gobitcoin.io tracks the cost of attacking the Bitcoin network over time. If an adversary wanted to attack Bitcoin, they would need to invest approximately \$6 billion in hardware alone. This figure does not include electricity costs or cooling. As shown in Figure 13, Bitcoin’s mining hash rate has been considerably higher than Bitcoin Cash’s, which signals that Bitcoin is more secure and more popular than Bitcoin Cash. However, the Bitcoin Cash network still has a much higher hash rate than other cryptocurrencies. This means that Bitcoin Cash is still a potential threat to Bitcoin.

Table 3. Bitcoin vs. Bitcoin Cash

Cryptocurrency	Bitcoin	Bitcoin Cash
Transaction Fee	• Average fee is approximately \$4.	• Average fee is approximately \$0.30
Transaction Speed	• Average time for one confirmation is 3 hours.	• Average time for one confirmation is 10 minutes.
Average Daily Return (August 2017–February 2018)	• 0.58%	• 0.64%
Volatility (measured by standard deviation August 2017–February 2018)	• 6.04%	• 12.58%
Correlation of Price Returns (August 2017–February 2018)		• 25.97%

Source: Incrementum AG

Conclusion

Blockchains are inherently slow and expensive databases, and the cryptocurrency market is divided on how to solve these problems. **What we are seeing is the free market at work. Professional and institutional investors that are willing to pay high fees are using Bitcoin, while users who are less willing to pay high fees are switching to other coins such as Dash, Ripple, and Bitcoin Cash.**

Bitcoin Cash is one way to hedge the risk that Bitcoin fails. If code errors are found in second-layer technologies such as the Lightning Network, Bitcoin’s price will be negatively impacted. However, Litecoin, Dash, and lesser-known forks of Bitcoin, such as Feathercoin, also offer a hedge against Bitcoin’s experiment with the Lightning Network and Segregated Witness. Bitcoin has a stronger hash rate than Bitcoin Cash, meaning that Bitcoin is a better store of value because it is more secure. Also, Bitcoin’s code repository on GitHub is more active than Bitcoin Cash’s, which signals that more brainpower is being contributed to solving Bitcoin’s problems. Like putting eggs in many baskets instead of one, prudent investors are diversifying their portfolio across a basket of coins.

In the next edition of the Coin Corner, we plan to focus on “post blockchain” coins such as Hashgraph, and we will cover two other money coins that have unique technological features: Monero and IOTA. **If there are specific coins that you would like to have covered, please email us at Crypto@Incrementum.li.**

Technical Analysis: Is a Crypto Winter About to Start?

Key Takeaways

- Although the “Hodl” strategy has been successful over the last couple of years, it is questionable, especially, when it comes to low market cap altcoins.
- Sentiment in the crypto market is still extremely optimistic if not idealistic.
- Technically, the correction is not over yet. Instead, we may have entered into a “crypto winter” that could last a couple of months or years.



“No Matter How Long The Winter, Spring Is Sure To Follow.”

Proverb

We want to sincerely thank Florian Grummes for contributing this chapter. Florian is the founder and CEO of Midas Touch Consulting (www.midastouch-consulting.com). Our readers can sign up for his updates and free newsletter with this link: <http://bit.ly/1EUdt2K>

After an epic rise from \$162 up to \$19,886 in just over two years, the price of Bitcoin fell by nearly 70 % between December 17, 2017 and February 6, 2018, to under \$6,000. Alternative cryptocurrencies (altcoins) came under tremendous pressure too and some of them lost 80–90 % of their recently achieved all-time highs. Meanwhile, at least Bitcoin was able to recover some of those losses and has reached \$11,300 again. Early cryptocurrency investors are still sitting on very comfortable gains, but investors who started during the last two to three months have underwater positions. They are only hoping that Bitcoin & Co. will recover as soon as possible.

a. “Hodl” – Easier Said Than Done

A boy asked his Bitcoin-investing dad for 1 Bitcoin for his birthday.

His dad responded: What? \$11,554??? \$10,354 is a lot of money! What do you need \$12,782 for anyway?

It is yet to be seen if this relatively new group of mostly inexperienced market participants will be able to follow the well-known battle slogan “hodl”. To cryptocurrency investors, hodl is the strategy of simply holding all purchased coins and tokens through any correction, trusting that the crypto and blockchain technology is still at the very beginning of its development and that in the medium to long term much higher prices are to be expected.

Although this approach has worked extremely well over the last nine years, this strategy must be seriously questioned in light of the current bloodbath and the possibility of another two-year “crypto-winter”. Ultimately, many roads lead to Rome, and every investor or trader has to decide for himself or herself which strategy suits them best. **The pain from the enormous volatility of cryptocurrencies and the incredible patience required by the hodl strategy is simply not for everyone.** Here an investor’s psyche is challenged to the utmost: especially if they follow the market closely and regularly. If they look at prices just once every few months, the hodl strategy will naturally be much easier.

Latent Danger of a Bubble Speaks Against the Hodl Strategy

Nocoiner: "How does it feel to lose 40% of your money in a month?"

Bitcoiner: "Not as bad as losing 47,000%+ in five years."

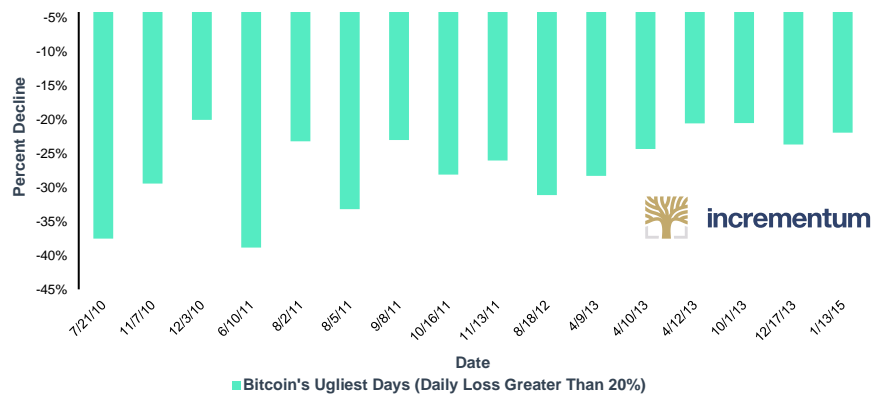
Armin van Bitcoin

If one considers the possibility that Bitcoin is a bubble, the hodl strategy becomes questionable. Investors who experienced the Internet bubble at the end of the 1990s know that the classic “buy-and-hold” strategy will eventually stop working. An investor could be right for many years, but if they missed a sale during the highs in 2000/2001, they lost their entire investment. Most of the Internet stock highfliers went straight into bankruptcy. A similar fate soon or later will probably impend to most of the altcoin bag holders. In this regard, the hodl strategy must be viewed critically and should at least be accompanied with appropriate risk management.

Trading in the Short to Medium Time Frame

Another approach to making money with cryptocurrencies is short-to-medium-term trading (day trading / swing trading). Using the help of classical chart analysis, cryptocurrencies can be screened for possible entry and exit signals. Of course, here too, many roads lead to Rome, meaning to success. Every trader has his or her personal favorite indicator or setup, and he or she has an appropriate time window and their own risk management approach. It is therefore not possible to come up with a successful strategy for everyone. However, the crypto market is based on the same laws and principles as all other markets. The crypto market is not as distorted by intervention as other markets, such as the bond market, which is heavily manipulated by central bank quantitative easing. Since there is less distortion, many technical analysis strategies and indicators work better because prices are surrogates of real information about market participants. All in all, trading in the crypto market also involves consistent risk and money management and above all a professional approach. Investors who treat their trading as a business will naturally be more successful.

Figure 14. Bitcoin Has Had 16 Days With Losses Greater Than 20% During the Past 8 Years



Source: Coindesk.com, Incrementum AG

The Vast Majority is Losing Money

As the crypto market has seen a clear uptrend over the last two years, all traders should have made good profits. Anyone who has not managed to make money in these markets must seriously ask him or herself if trading is the right occupation.

12 Questions to Check If You Are Investing Responsibly

1. How well does the trader know him or herself?
2. How disciplined is he or she?
3. How exactly did they do their homework and their preparations?
4. Are they acting emotional or rational?
5. Are they immediately convinced by exaggerated promises of profits?
6. Do they take losses personally?
7. Can they accept losses as part of trading & investing or are they dwelling over their losses forever?
8. How much do they think they can predict markets with extensive fundamental analysis or sophisticated charting?
9. Is the trader ready to learn from their mistakes?
10. Do they take responsibility for their results?
11. Has the trader accurately calculated the risk before buying?
12. Are they really aware that no one knows the future? No guru, no famous stock market letter writer, no central banker and no politician...

The bottom line is that the crypto market will run the same way as any other market in the medium to long term: an estimated 90 % of traders paying in and only 10 % of traders making consistent profits. For longer-term investors, this ratio improves slightly to around 80 % losers and 20 % winners.

The Future is Uncertain

Why does Pareto's 80/20 rule apply to investors? Quite simply, nobody knows the future, and trading and investing is about psychology. Ultimately, everyone pokes around in the dark: some with more experience and discipline, others completely overwhelmed by their emotions, a third group is an unclear mix of both, a fourth group, the so-called greenhorns (especially active in the crypto sector), and finally and unfortunately, a certain number of criminals or fraudsters!

Know Thyself!

Therefore the ancient Greek aphorism "Know thyself!" applies to any participant in the crypto market as well as in all other markets and of course in life in general. Anyone who made a conscious investment decision must also have a plan to exit. Whether this is based on technical signals, fundamentals, sentiment data, or a mixture is ultimately everyone's personal decision.

The revolutionary nature of blockchain technology is what's driving the hype and even though we may be years away from viable blockchain-based assets, we may very well see several more bubbles?

Mick Sherman, co-founder and
CEO of Hercules Tech

However, there is an important difference in the crypto market. Many "millennials" believe that cryptocurrencies will replace our fiat money system. They are convinced that they do not need to exit because they will be able to directly spend their cryptocurrencies one day. As seductive and idealistic as it may sound, the victory of decentralization is not sure yet! In any case, the established financial system will certainly not give up its power and its control without massive resistance. Therefore, a partial exit into other asset classes may be part of a prudent strategy if an investor's portfolio becomes too heavily concentrated in crypto assets.

b. Sentiment Analysis – the Discipline of Kings

Sentiment analysis sheds a questionable light on cryptocurrencies because the mood of the crypto market continues to be extremely optimistic, if not idealistic. For market participants interested in the medium to long-term timeframe, sentiment analysis is probably the supreme discipline. Anyone who understands

mass psychology can determine highs and the turning points of long-term trends with amazing accuracy.

Ultimately, market prices are created by constantly fluctuating perceptions of market participants.

Subsequently, there can never be an objective or fair price of an asset. **If a financial asset is heavily discussed in the mainstream press, it can be assumed with great certainty that everybody is invested in it already and that there will be no more new buyers.** Therefore, it would be advisable to do the opposite of the masses once such signals appear.

The problem, however, lies in the relatively small number of crystal clear signals. For example, the front-page of the German newspaper *Bild* showcased gold bars during the top of the gold rally in August of 2011. Regarding Bitcoin, the online edition of the *Süddeutsche Zeitung* reported Bitcoin's colossal price gains exactly two days before its 2013 high on November 28, 2013. As everybody knows, Bitcoin crashed from \$1,156 to \$162 in the following

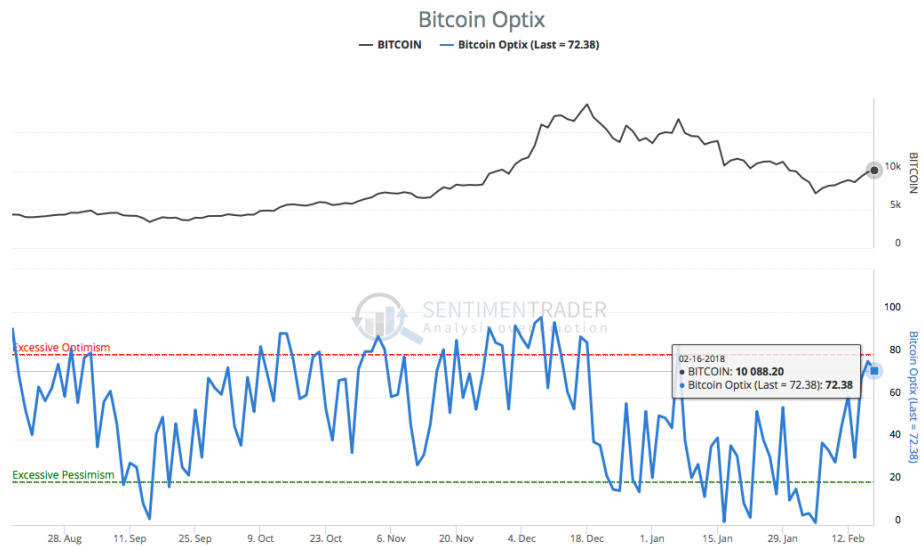
months and disappeared for two years into a crypto winter. However, sometimes the signals can be accurate. **On December 17, 2017, CNBC delivered a perfect sell signal with their headline: *Analyst who predicted Bitcoin's rising now sees it hitting \$300,000–\$400,000.***

Crypto Sentiment is Hard to Grasp

In addition to the famous front-page indicator, there are of course many other approaches to measure the mood among market participants. In the young crypto market, there is no established sentiment data available. Futures on Bitcoin have been trading for only two months with relatively manageable volume. As a result, traditional sentiment data such as put-call ratios, Sentix, and sentiment surveys are not available to the extent that investors are familiar with from other markets. The website sentimentrader.com provides a well-functioning sentiment indicator called Bitcoin Optix. Here, an automated algorithm compares Bitcoin's expected future volatility with the current price behavior and the discount of a Bitcoin ETF in relation to its NAV. Recently, the sentiment indicator reported an extremely pessimistic sentiment, but this has strongly recovered over the last couple of days.



Source: CNBC.



The latest sentiment data clearly shows that the early February recovery in Bitcoin brought sentiment back to very optimistic levels. Source: Sentimentrader.com.

Alternative sentiment indicators are also of interest in the crypto sector. Twitter tweets, Reddit posts, the size of a telegram group, or simply the contents of YouTube comments can be helpful for gauging the market’s mood. For example, investors can find numerous comments that expect an asset’s price to rise to the moon very shortly below any YouTube video about finance, gold, or crypto. As a true contrarian, that should give you something to think about.



Right after the launch of Bitcoin Futures trading in December, Bitcoin lost 70%. Source: Midas Touch Consulting/Tradingview

Currently, only major financial and economic news portals have added a new crypto section; however, more data analysis and reporting are needed because new trading opportunities via Contracts for Difference (CFDs) and Bitcoin futures are available. For example, data on Bitcoin Futures are available in the U.S. Although futures exchanges were originally created primarily to hedge future fluctuations in market prices (for example, agriculture producers), hedge funds and private traders use futures markets to profit from price fluctuations. Since all of the

futures markets in the USA are regulated, the Commodity Futures Trading Commission (CFTC) publishes the current positions of traders every Friday. This information is completely new to the unregulated crypto market and should become very helpful and valuable in the medium term. In the short term, however, only a very thin data series is available so that comparisons and classifications of the current positions have to be treated with caution.

Commitment of Traders (CoT) for Bitcoin

Traders in Financial Futures - Futures Only Positions as of February 13, 2018														
Dealer			Asset Manager/			Leveraged			Other			Nonreportable		
Intermediary			Institutional			Funds			Reportables			Positions		
Long	Short	Spreading	Long	Short	Spreading	Long	Short	Spreading	Long	Short	Spreading	Long	Short	
BITCOIN-USD - CBOE FUTURES EXCHANGE (1 Bitcoin)														
CFTC Code #1330E1														
Positions														
55	0	0	0	119	0	619	2,861	138	2,091	1,660	32	2,769	894	
Open Interest is 5,704														
Changes from: February 6, 2018														
0	0	0	0	119	0	-195	-711	23	-675	-443	-6	-375	-210	
Total Change is: -1,228														
Percent of Open Interest Represented by Each Category of Trader														
1.0	0.0	0.0	0.0	2.1	0.0	10.9	50.2	2.4	36.7	29.1	0.6	48.5	15.7	
Number of Traders in Each Category														
.	0	0	0	.	0	.	9	47	6	21	11	.		
Total Traders: 9 47 6 21 11 .														

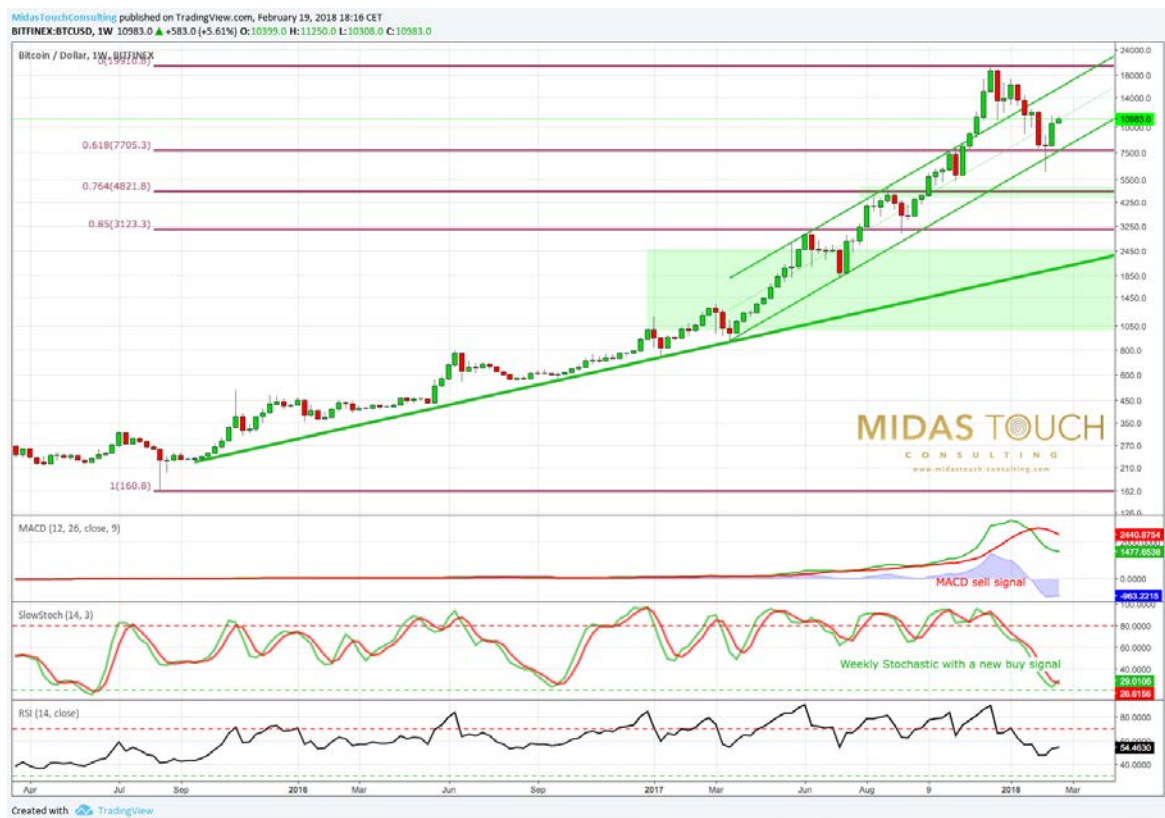
The CoT Report shows that hedge funds are largely short while amateurs are mostly long. Source: CFTC

Based on the current CoT report for Bitcoin Futures, it is obvious that traditional funds (asset managers / institutional investors) are not heavily invested in Bitcoin. Similarly, there is virtually no position of hedgers (intermediary dealers). This is because there are not many securitized products available on Bitcoin, which would have to be hedged via the derivatives market.

In contrast, the “leveraged funds” (hedge funds etc.) have significantly expanded their short positions in recent weeks, which means that they occupy 50.2 % of the open interest. The “other reportables” (dealers with systematic trading approaches and high volume) show more or less balanced positions. Finally, the small speculators continue to be massively long, representing 48.5 % of all open interest. **The large short position held by hedge funds and at the same time the strong bullish position of small speculators rather point towards further falling prices.** It is also noticeable that the correction in December began pretty much on the day when Bitcoin Futures started to trade. However, an obvious causality is not easy to detect.

c. Bitcoin Technical Analysis

After such a brutal crash, it always makes sense to take a look at the big picture. Otherwise the short-term high volatility may cause investors to lose sight of the larger trends in the market. **On the weekly chart, Bitcoin's long-term uptrend is still intact.** Basically, the price for one Bitcoin has returned back to where it was trading at the end of November. So far, the sharp correction ended just below the typical 61.8 % - Fibonacci retracement. If the overall correction continues, the next lower retracement level (76.4 %) would be around \$4,818. This level coincides with the intermediate high at \$5,000 from last September. Therefore, technically it is still possible that the price of Bitcoin could fall towards \$4,500 - \$5,000 in the coming months. This assumption is also confirmed by the fact that Bitcoin temporarily dipped below its green uptrend channel. Despite the fast recovery and the move back into the channel, the general support of this uptrend channel has been weakened.



The weekly chart for Bitcoin still has an uptrend intact. Source: Midas Touch Consulting, Tradingview

In the "worst case" scenario, one target of the correction could be another significantly lower uptrend line (currently around \$2,075). The lower Bollinger Band (\$3,236) also offers a lot of space and will need much more time to reach current price levels above \$11,000. A very encouraging signal, however, is the new buy signal that comes from the slow stochastic oscillator. After reaching its oversold zone this indicator now has turned and would have a lot room to move higher.

On the Bitcoin daily chart, the recovery, which began just two weeks ago, has already made up well over a third of the previous correction, and has now reached the classic 38.2 % Fibonacci retracement around



On the daily chart Bitcoin's recovery is very overbought. Prices above \$12,200 are bullish, any move below \$8,000 is very bearish! Source: Midas Touch Consulting, Tradingview

\$11,300. Bitcoin's price trajectory for the next couple of months will most likely be determined at this important resistance zone. If Bitcoin prices can breakout above \$11,300, bulls will be back in charge and should quickly push prices towards \$14,500. If the bulls instead fail at this first Fibonacci retracement, it would be a clear sign of weakness. In that case, everything will depend on the support zone around \$8,000.

"Up to 2008, sovereignty created currency. We now live in a world where currency creates sovereignty."

Andreas Antonopoulos

The crypto markets are either facing a winter or the beginning of the next rally. Using a slightly more complex Fibonacci projection consisting of the first down wave from \$19,889 to \$10,700, and the bounce back up to approximately \$17,200, the 1.236 % extension would be at \$5,891 and the 1.382 % extension at \$4,550. The first extension was already reached when Bitcoin hit a low at \$6,000. The 1.382 % extension confirms further downside potential towards \$4,500 to \$5,000. Given the strongly overbought situation on the daily chart, a pullback is getting more and more likely in the short term.

Despite the strong recovery, one should realistically assume that the crypto market is not out of the woods yet. The correction that begun two months ago may take a few more months, if not a year or two, or even longer. Bitcoin could possibly fall back to about \$5,000 and theoretically correct as low as \$2,500. For most of the altcoins this would mean dramatic losses again. Only a move above \$12,200 and

especially above \$14,500 will increase the odds that the correction is over, and Bitcoin is on the way to new all-time highs.

Conclusion

Facing the ongoing crypto euphoria, it cannot be ruled out that Bitcoin and the crypto sector are already in a corrective winter cycle. The future is unknown, but this young asset class will likely experience further correction. In addition to the described blind idealism, the rather bearish CoT data and the questionable technical picture do not yet speak for a rapid rebound or rallies to new all-time highs. However, cryptocurrencies and the blockchain technology will not disappear. On the contrary, after a hard and possibly bitter winter, Bitcoin prices beyond \$50,000 and \$100,000 are certainly possible in the coming decade. If Bitcoin prices move above \$12,200 and \$14,500 in the short term, reconsideration of the bearish outlook is expected.



Trader Joke: The markets may be crashing but I sleep like baby at night: every hour, I wake up and cry. Source: singularityissonear on Reddit

Crypto Concept: Forks

Key Takeaways

- Forks are neither a new nor a temporary phenomenon. They are a key part of the permissionless innovation in the development of blockchain protocols. We expect more upcoming forks in 2018.
- Forks can be separated into consensus splits and changes in protocol rules, where hard forks and soft forks can be distinguished. Both users and miners can be the initiators of forks.
- Investors should be aware that they must have control of their private keys to have guaranteed access to the hard-forked coins. Also, replay attacks may jeopardize an investor's coins on the original chain. To find out more about fork precautions, see the box "Investors Alert" below.

“A ‘hard fork’ occurs when a new rule is introduced, one that is no longer compatible with old software. If you do not join the upgraded version of the blockchain, you do not get access to the new system’s user base and transactional traffic. Think PlayStation 3 and PlayStation 4: In a hard fork, you cannot play PS3 games on PS4 and you cannot play PS4 games on PS3. Should a soft fork take place, sticking with the PlayStation analogy, you would be able to play PS3 games on the PS4 (but not PS4 games on PS3).”

Credit Suisse, Blockchain 2.0

“There’s nothing like an agreement in the crypto world. It’s about consensus.”

Philipp Büchel

“I personally like hard forks. Particularly, I like the fact that they give users a measure of control, requiring them to opt in to protocol changes. Sure, they can be a little more chaotic if they’re controversial, but that’s the price of freedom.”

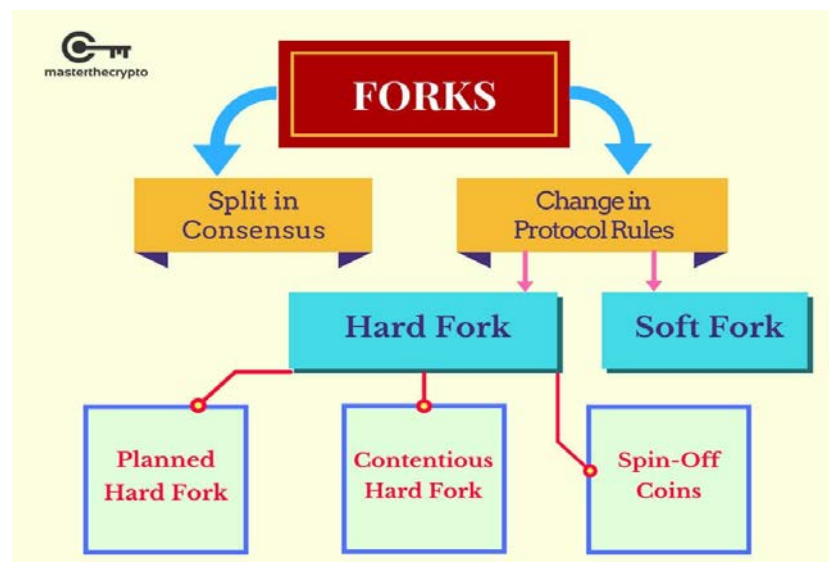
Vitalik Buterin

In 2017, several famous forks of Bitcoin were launched including Bitcoin Cash and Bitcoin Gold. **More than \$44 billion of market value was created via forks last year.**⁵³ This trend will most likely continue during 2018 because forking an existing cryptocurrency is an easy way to create a new cryptocurrency. First, ICOs are illegal in several countries; however, hard forks are not. Second, forking an existing coin automatically gives the new coin a network of users: everyone who held the old coin now has access to the new coin. This eliminates the obstacle of building a network of users from scratch. Finally, forking an old coin can have lower development and marketing costs compared to creating a completely new coin.

What is a fork?

A “fork” in the context of software development describes the creation of a branch of a program that represents a different version. The concept itself is nothing new in the world of software, as it has been around since the 1980s. The first documented fork was MIT’s Lisp Machine OS in 1981.⁵⁴ In open-source projects, anyone is allowed to “fork off” a version of existing code. Forks are used when no clear agreement could be established in a developer community, and consequently, community members split off and create altered software code.

So why have forks become such a big deal in the world of cryptocurrency lately? Given the high interest in speculation of blockchain protocols such as Bitcoin, a fork has quickly become much more than just a technical term, as it also has huge financial implication for investors and speculators in cryptocurrencies. Before we assess these implications, let’s take a brief look at what types of forks can be distinguished.



Source: <https://masterthecrypto.com>

⁵³ Blockchain Research Institute, tweet on Twitter, Feb 10, 2018, <https://mobile.twitter.com/GeniaMiinko/status/962393176769167362>.

⁵⁴ “MIT Lisp Machine License Signed,” press release, Oct 1, 1980, http://www.textfiles.com/bitsavers/pdf/symbolics/LM2/MIT_Lisp_Machine_License_Signed_Press_Release_Oct1980.pdf.

“If you run a vegetarian-only restaurant and you change it to be an only-vegan restaurant then you are soft forking it; if you change it to include meat you are hard forking.”

Andreas Antonopoulos

What Types of Forks are There?

1.) Unplanned Forks

Unplanned forks, or consensus splits, occur every time two miners find new blocks at the same time. However, this type of fork is not permanent because the longest chain rule resolves the discrepancy automatically. As soon as the next block gets mined, the longest chain represents the valid one and the other chain is abandoned. Thus, this type of fork does not impact cryptocurrency prices.

2.) Planned Forks

Planned forks activate at a certain block time and are usually announced by the developers of a blockchain protocol. This type of fork only happens if developers intentionally change the code to update the rules of a protocol. Here, two types of protocol upgrades can be distinguished.

a) Soft Fork

A soft fork is a voluntary way to upgrade a software where participants who do not upgrade merely risk out on missing new functionalities. This type of fork is considered to be “forward-compatible” from the viewpoint of existing nodes. In the

case of a blockchain soft fork, this means that old nodes will still recognize the new blocks as valid after the update. Thus, old nodes can in principle still use the same blockchain without performing the upgrade. Note that if a soft fork is coordinated by miners, it’s called a “miner-activated soft fork” (MASF), whereas if a soft fork is coordinated by owners of full nodes without the support of miners, it is called a “user-activated soft fork” (USAF).



A prominent example of a soft fork is BIP141, better known as Segregated Witness, which was activated in August 2017 when the majority of miners switched to the new version of the Bitcoin protocol. As can be expected for a soft fork, due to backwards-compatibility transfers between new “Segwit” addresses and old addresses are possible.

b) Hard Fork

A hard fork is the more extreme type of a fork because it is incompatible with previous software, and thus updating becomes necessary for all participants. In the case of a blockchain hard fork, a permanent divergence in the blockchain is caused by non-upgraded nodes not following new consensus rules. Depending on the willingness of blockchain participants to upgrade their nodes accordingly upon the proposal of either the miners (MAHF) or the users (UAHF), two results are possible:

11 Hard Forks of Bitcoin have occurred since December of 2017 including Bitcoin God, Bitcoin Top, Bitcoin Silver, Bitcoin Cash Plus, Lightning Bitcoin, Bitcoin Platinum, and Super

Investor Alert: Hard Forks

Investors should keep in mind that in order to gain control of the new hard forked coins investors must hold their cryptocurrencies in so-called cold storage wallets where they control the private key to the wallet.

While cold storage is generally recommended for security reasons, it becomes especially important during a hard fork. Cryptocurrency exchanges can decide if they want to support a fork or not, and several exchanges do not give their customers access to the new hard-forked coins. Consequently, those who hold their cryptocurrencies in “hot wallets” on cryptocurrency exchanges might not get any of the new hard-forked coins credited to them. Sometimes, exchanges may release the additional coins several weeks later when the coin has already fallen in value dramatically. In some cases, exchanges pocket the additional coins themselves and investors are duped!

Additionally, caution is advised immediately after a fork because of security issues such as “replay attacks”. For security reasons, cryptocurrency investors are advised to avoid transferring cryptocurrency out of cold storage immediately following a hard fork.

i) In the case that some nodes do not update and enough support for old chain remains, two competing blockchains result. **A well-known example of a hard fork where the old chain remains to be supported to this day is Ethereum**, which was hard forked in 2016 after the leading developers of the Ethereum protocol decided to alter the code in an emergency response to the successful attack on “the DAO”. The members of the community who ran full nodes and opposed the hard fork refused to upgrade their nodes. Thus, the old chain still exists to this day under the name Ethereum Classic.

ii) Most of the time, however, all participants support the new chain and move along with upgrading their nodes. In this case, the old chain simply dies off. **A recent example is the Ethereum Byzantium hard fork in late 2017**, which went through smoothly without any complications and the old Ethereum chain simply ceased to exist.

c) Spin-off Coins

Aside from forks originated for the purpose of upgrading a blockchain protocol to improve it, the open-source nature of many protocols allows any developer to clone it, add a few new features and release it under a new name. Some well-known examples of spin-off coins based on the Bitcoin codebase are Litecoin, Peercoin, Namecoin and Dogecoin. In 2017 alone, 19 Bitcoin forks were released in total.⁵⁵ In many cases, these forks are used as a quick way to capitalize on the public’s familiarity with Bitcoin. In 2017, more capital flowed into new cryptocurrency forks than ICOs. There even exists a website promoting the automated generation of a [Bitcoin fork](#). Thus, some people speculate that more Bitcoin forks will be seen in 2018.

Table 4. Bitcoin Hard Forks

Cryptocurrency Name	Date	Market Cap
Bitcoin Cash (BCH)	01.08.2017	\$26,216,237,778
Bitcoin Gold (BTG)	24.10.2017	\$2,374,196,127
SegWit2x	16.11.2017 (Cancelled)	Not Applicable
BitcoinX	12.12.2017	\$0

Source: Incrementum AG.

⁵⁵ Olga Kharif, “Bitcoin May Split 50 Times in 2018 as Forking Craze Mounts,” *Bloomberg*, Jan 23, 2018, <https://www.bloomberg.com/news/articles/2018-01-23/bitcoin-may-split-50-times-in-2018-as-forking-craze-accelerates>.

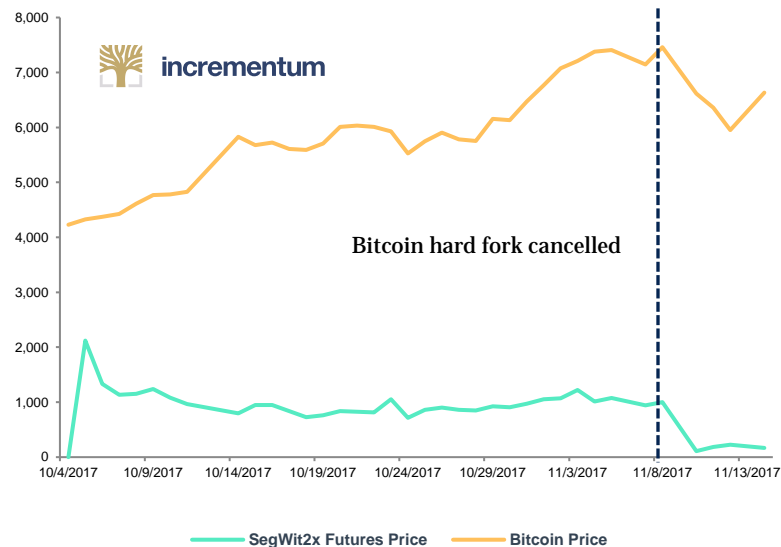
“In the same way the Internet enabled permissionless innovation by allowing anyone to create a website without asking permission, forking allows anyone to create their own network without asking permission. It’s A/B testing on steroids.”

Taylor Pearson

What Implications Do Forks Have For Cryptocurrency Investors?

Forks do not only have technical implications but also affect the price of a cryptocurrency being forked in multiple ways. While unplanned forks (consensus splits) usually do not impact the price at all and the price impact of soft forks is usually limited, it is hard forks that result in two competing blockchains that are most relevant for investors. When a coin is hard-forked, the holders of the original cryptocurrency are automatically entitled to the coins on the new blockchain. This occurs because the private keys that control an address on the original blockchain also control an address on the new forked blockchain. Hence, investors have exposure to the original cryptocurrency and the new hard forked cryptocurrency, which presents an opportunity to profit from the fork. The value of the new coin that results from the fork can be sold. Market participants discount the future value of this coin and bid up the price of the original coin before the fork happens.

Figure 15. Bitcoin and Hard Fork SegWit2x Futures



Source: Quandl.com, Incrementum AG.

“If you look at the market cap of Ethereum before the hard fork and the split into Ethereum Classic, the combined market cap of Ethereum and Ethereum Classic is greater than the market cap before the split – and everybody got what they want.”

Roger Ver

As the strategy of buying a cryptocurrency before a fork and selling the new coins after the fork spreads, prices will rise even earlier, as traders try to buy the original coin before others. As a result, the price of a cryptocurrency usually rises before a fork takes place and drops once the fork has occurred. If the hard fork is cancelled, the price of the original chain drops because the discounted future value of the hard-forked coin is zero (see Figure 15).

Conclusion

While forks are a long-standing way to upgrade software protocols without forcing everyone to participate in the upgrade, there are real risks and opportunities for investors. On the plus side, the possibility of forks keeps development teams in check and might prevent rash, hasted decisions. Additionally, forks represent a possibility to create new coins in jurisdictions where ICOs are banned by law, such as China. On the negative side, a large number of spin-off coins may dilute the initial idea of a protocol and split the joint efforts of the community further. **One thing is for sure: we are going to see more forks in 2018.**

10 Facts About Max Tertinegg, the CEO of Coinfinity

Key Takeaways

- The largest threats to the cryptocurrency space are the block size debate and prohibition of cryptocurrencies in some jurisdictions.
- 2018 will be the year that large financial intermediaries enter the crypto space. By the end of the year, hundreds of millions of people will be using cryptocurrencies.
- Max Tertinegg particularly likes Ardor (ARDR) and Bitcoin (BTC) at the moment.

“The open-source nature of public blockchain protocols, combined with intrinsic mechanisms to break down monopoly effects, mean that the vast majority of this economic surplus will accrue to users. While tens or perhaps hundreds of billions of dollars of value will also likely accrue to the cryptoassets underlying these protocols and therefore to investors in them, this potential value will be fragmented across many different protocols and is generally insufficient in relation to current valuations to offer a long-term investor attractive returns relative to the inherent risks. The one key exception is the potential for a cryptoasset to emerge as a dominant, non-sovereign monetary store of value, which could be worth many trillions of dollars.”

John Pfeffer



We want to sincerely thank Max Tertinegg for contributing to this chapter. Max Tertinegg is the CEO and founder of Coinfinity. Coinfinity is one of the largest cryptocurrency brokerages in Austria. Recently, Coinfinity was the first company to successfully complete a transaction using the Lightning Network on a Bitcoin Automated Teller Machine. In addition to managing Coinfinity, Max is a Bitcoin activist and musician.

This chapter features a sneak peek into the life of the CEO of Coinfinity and advisor to the Crypto Research Report, Max Tertinegg.

1.) How did you get into the crypto space?

“The Stone Age did not end due to the lack of stones but because new technologies appeared.”

President Vladimir Putin

I heard about Bitcoin in 2011 in a Podcast and was fascinated by the idea of a non-governmental form of money. To be honest, I thought about Bitcoin as just a purely idealistic concept without any real-world relevance and did not expect it to grow that fast. But here we are now ...

2.) What does your business do?

We are a cryptocurrency broker, helping people buying and selling Bitcoin and other cryptocurrencies. Also, we consult on the topic of blockchain technology.

3.) What is the competitive advantage your company has over other firms in your industry?

We focus on customer service and try to help people getting into this new space safely and with caution.



Hard copies of the Crypto Research Report are available in English and German. Please email Crypto@Incrementum.li for more information.

4.) As a crypto broker, what is the most challenging part of your job?

Keeping up with the enormous pace – the crypto scene is developing very, very fast.

5.) Some investors claim that high-frequency trading and intermediary markets exist for cryptocurrencies. Do you think that exchanges manipulate prices on a small scale so that limit orders are executed, which generates handsome transaction fees for the exchange?

I'm pretty sure that crypto markets are manipulated by one player or another. But I guess that's the case in any market without too much regulation and is something that can't be avoided.

6.) What is the biggest opportunity for young entrepreneurs who want to make a successful business in the crypto space?

Having a mindset advantage over other players in the market who still think that crypto is just a fad that will go away at some point.

7.) What is the biggest threat to the crypto space?

Internal risk (technological and political obstacles, e.g., the block size debate) and external threats like over-regulation or potential prohibition of cryptocurrencies. But I'm pretty optimistic that all these threats won't stop Bitcoin and other cryptocurrencies.

8.) Where will the sector be at the end of 2018?

Many banks and traditional financial players will be active in the space. We won't have mainstream adoption yet, but cryptocurrency users will be in the hundreds of millions.

9.) Where will the sector be at the end of 2025?

It will be ubiquitous – like the Internet today.

10.) Do you mind telling us what coins you like most at the moment?

Bitcoin and Ardor.

11.) During your career as a crypto broker, what were the strangest and the funniest things that happened? Please give us a story.

People have to fill in their Bitcoin address on our web platform when buying Bitcoins from us. It was a funny moment when a customer in our office tried to put in his postal address and then complained that the form won't accept it.

Incrementum Insights: How Will Cryptocurrencies Change Finance?

Key Takeaways

- A blockchain is an inclusive database. Via Internet, anyone around the world can access transparent capital markets that are cryptographically secure.
- Blockchain and cryptocurrencies are here to stay. Like other technologies and asset classes, they will be regulated.
- The largest misconception is that intangible assets have no value. If that were true, a lot of the assets we trade today would be worthless. Value is subjective and based on individual preferences.

“Virtual currencies mark a paradigm shift in how we think about payments, traditional financial processes, and engaging in economic activity. Ignoring these developments will not make them go away, nor is it a responsible regulatory response. The evolution of these assets, their volatility, and the interest they attract from a rising global millennial population demand serious examination.”

Commodity and Futures Trading Commission
Chair Christopher Giancarlo



We want to sincerely thank Stefan Kremeth for contributing to this chapter. Stefan Kremeth is the CEO of Incrementum AG in Liechtenstein. Prior to joining Incrementum, Stefan worked for UBS, Sal. Oppenheim, and Lombard Odier. Mr. Kremeth is also the writer of [Stefan's Weekly](#), a weekly newsletter that covers practical questions concerning equities, commodities, and pension systems, amongst other financial topics.

"We conclude that Bitcoin has a wide range of interesting applications and that cryptoassets are well suited to become an important asset class."

St. Louis Federal Reserve

"Blockchain will change a lot of things, it could even help make our state more efficient the way it is administered."

Hereditary Prince of
Liechtenstein and Count Rietberg
Alois

In this chapter, the CEO of Incrementum Stefan M. Kremeth shares his experience with cryptocurrencies and the blockchain technology. Coming from a financial background, Kremeth finds the crypto space to be faster and more inclusive. In this interview, we discuss some of the misconceptions about cryptocurrencies and what role he sees for his firm in this space.

Can you tell us a little bit about Incrementum and about yourself?

I cofounded Incrementum AG, a wealth management firm, in 2013. Today, the partners of the company expanded to encompass Ronald Stöferle, Mark Valek, and Dr. Christian Schärer.



From left to right: Christian Schärer, Mark Valek, Ronald Stöferle, and Stefan Kremeth.

My career in finance began when I was a young man. After completing an apprenticeship at UBS, I worked for UBS in various countries. After some time, I switched employers and eventually held executive positions in two private banks. Parallel to this, I attended the Swiss Banking School and I acquired an executive MBA in international asset management from the University of Liechtenstein. After which I continued my studies at Durham University in England. I am currently a part-time doctoral student in the business school at Durham.

How is the crypto space different from the traditional finance space?

It is very different. First of all, everything is quicker and faster. Costs have been minimized. A broader part of the population can access financial services in the crypto space compared to traditional banking. People who normally would not have access to capital or banking facilities can have access to financial services via Internet.

In my opinion, this "inclusive" aspect of the blockchain technology is revolutionary. Capital market transactions can become easier, quicker, cheaper, and available on a global scale thanks to the blockchain technology.

Do you see any common misconceptions about cryptocurrencies and blockchains?

Yes, actually. There is the misconception that intangible assets do not have value. However, this is not true: some cryptocurrencies are backed by tangible assets, some provide access to potential earnings, and some provide access to a network.

We can look at this argument the other way around as well. If I am wrong, and it is the case that intangible assets have no value, then this would apply to a lot of other asset classes as well. For example, fiat currencies are mostly intangible. Although fiat currencies are backed by a government that can tax income, that does not make fiat currencies tangible in my opinion.

 **European Central Bank** ✓
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Could #bitcoin offer a viable alternative to traditional currencies? Join in our third #ECBYouthDialogue and tell us what you think! If you have questions about #cryptocurrencies, why not #AskDraghi! Find out how here: ecb.europa.eu/ecb/education ... @debatingeurope



29,506 votes • Final results

75% of the ECB's Twitter followers who participated in the poll believe that Bitcoin is a viable alternative to fiat.

Source: European Central Bank Twitter

However, I think we are the very beginning of the blockchain revolution. At Incrementum, we believe that a lot of the cryptocurrencies that we see today are going to disappear in the short to mid-term. There is potential for some to stay, and for some to stay for a long time. If cryptocurrencies stay around, I am convinced that regulators will regulate cryptocurrencies like every other investment, which they should do in order to level the playing field for all financial assets.

The technology will stay. If a young person has a fantastic idea but is sitting somewhere in Bangladesh with limited access to financial markets, the blockchain technology enables him or her to tap into the global capital market. With an Internet connection, he or she can find people who are willing to fund their idea in exchange for virtual tokens. The blockchain helps people make businesses, and I find this fantastic.

I am not a conspiracy theorist, but historic events, regulations, and high capital requirements restrict market access to newcomers. The blockchain technology can reduce the barriers to capital and financial services, such as lending, borrowing, and saving.

Do you see a role for Incrementum in the crypto space? Incrementum has the Crypto Research Report, but do you have any other products in the pipeline?

Yes, since we see a future for the blockchain technologies and cryptocurrencies, we are working on crypto-related products. As you mentioned, we produce a quarterly research report on cryptocurrencies called the Crypto Research Report. We decided to do a Crypto Research Report because we wanted to build-up our own base of knowledge on the topic. Second of all, we want to inform a broader audience about what is actually happening in this space. The report is unbiased and informative. We never give investment advice. Our other report, [In Gold We Trust](#), has become an industry standard for gold market participants. Like In Gold We Trust, we hope that the Crypto Research Report becomes a go-to guide for financial market participants interested in the blockchain technology.

Also, we have seen demand in the market for a crypto fund. Not everyone wants to open wallets at exchanges that have limited history or no history. A lot of people

"Particularly the whole blockchain technology is very interesting. I think one has to really see it as a very risky asset class if it is really an asset class. Well, obviously now, some people are investing a lot."

Hereditary Prince of Liechtenstein and Count Rietberg
Alois

want to have consolidated reports on their assets for tax and regulatory reasons. We believe that a regulated product that stores a diversified portfolio of cryptocurrencies will be interesting for investors. Of course these investors must know that cryptocurrencies are very volatile. However, a company that is regulated by financial market authorities, has transparent accounting, and a good reputation can help investors enter this market with the appropriate risk management.

Together with a custodian bank and a fund administrator, we have filed a proposal at the Liechtenstein Financial Market Authorities for a license for a multi-currency crypto currency fund and have received approval some days ago!

You mentioned that the Crypto Research Report does not give investment advice. Why is that?

There are various reasons. First, a neutral and informative report can be used by a much wider audience, which will increase our brand exposure worldwide. We want to signal that Incrementum is ahead of the curve by informing readers about the

market. If our report is well done, it has the potential to become the standard for crypto research in the entire industry. Second, there is a regulatory reason. We do not want to find ourselves in a situation where our readers take investment decisions solely based on our report. As a wealth-management firm, our readers could come after us if they lose money because of our advice. Incrementum is working with academics at the University of Liechtenstein to bolster the Crypto Research Report's scientific rigor and relevance; however, we make the academic research easy for everyone to understand.

If the report is free, how does the report contribute to Incrementum's bottom line?

Thanks to the neutrality of the report, we are able to find sponsors such as Bank Vontobel, who benefit from cryptocurrency research and increased brand recognition in the cryptocurrency space. We like to have sponsors from various business fields, and our sponsors can advertise services such as fund custodianship, cryptocurrency exchanges, and cryptocurrency trackers. We are looking for more sponsors, and we encourage prospective firms to contact us if they are interested.



The "In Gold We Trust Report" written by Ronald Stöferle and Mark Valek.

About Us

Demelza Kelso Hays

Demelza Kelso Hays has been conducting research in the field of crypto-related assets since 2013. In addition to teaching a course on cryptocurrency at the University of Liechtenstein, Ms. Hays regularly presents and writes on the topic of cryptocurrencies. Her work has been published in several distinguished print and online magazines including *Forbes*, *Süddeutsche Zeitung*, *Zero Hedge*, *Mises.org*, and *Frankfurter Allgemeine Zeitung*.



Incrementum AG

As a sister report to the internationally acclaimed [In Gold We Trust report](#), the Crypto Research Report brings the same quality and rigor to understanding the cryptocurrency market. The Crypto Research Report is a report produced by Incrementum AG.

Incrementum AG is an owner-managed and fully licensed asset manager & wealth manager based in the Principality of Liechtenstein.

What makes us stand out in the asset management space? We evaluate all our investments not only from a global economic perspective but also by taking into account global monetary dynamics. This analysis produces what we consider a truly holistic view of the state of financial markets. We believe our profound understanding of monetary history, out-of-the-box reasoning and prudent research allows our clients to prosper in this challenging market environment.

Dr. Christian Schärer, Stefan Kremeth, Demelza Hays, Ronald-Peter Stoeferle and Mark J. Valek



Advisors

In order to provide accurate information on the most important and recent updates in the crypto space, a diverse team of thought-leaders, academics, and finance experts form our board of advisors. The mission of our board is to stimulate discussion on the most pressing risks and opportunities in the cryptocurrency market. Our advisors come from different countries, different education paths, and different careers. However, they all have one trait in common: their avid interest in the blockchain technology and cryptocurrencies. To stay up-to-date, the advisory board meets on a regular basis to discuss current affairs and the next quarter's outlook. All meeting minutes are posted as a transcript and released for free on our website at www.CryptoResearch.Report. Our board members include:

Max Tertinegg

Max Tertinegg is the CEO and co-founder of Coinfinity in Graz. Since 2014, Mr. Tertinegg has worked with merchants, investors, and regulators in Austria to build a cryptocurrency community. Currently, he is working on cryptocurrency storage solutions that are affordable and easy to use.



Oliver Völkel

Based in Vienna, Oliver Völkel is a partner at StadlerVölkel Attorneys at Law. He assists corporations and banks in all stages of capital market issuings and private placements (national and international). His focus is on new means of financing vehicles (Initial Coin Offerings, Initial Token Offerings) and drafting and negotiation of cross-border facility agreements and security-documentation, also in connection with cryptocurrencies and tokens. Mr. Völkel also advises on other cryptocurrency related banking matters, regulatory matters, capital markets regulation, general corporate and corporate criminal matters.



Stefan Wieler

Stefan Wieler, CFA, CAIA, is the vice president of research and corporate sales at Goldmoney. For the past two years, Mr. Wieler has been the head of research at BBL commodities, which is an energy-focused hedge fund that trades WTI, Brent, RBOB, HO, Gasoil, and Natural Gas. Previously, he was a senior oil analyst for Goldman Sachs.



We sincerely want to thank the following friends for their outstanding support:

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