

The logo for Arbitrage features a stylized, teal-colored letter 'A' on the left. The 'A' is composed of three overlapping triangular shapes that create a sense of depth and movement. To the right of the 'A', the word 'Arbitrage' is written in a teal, serif font. The 'A' in the word is significantly larger than the other letters, and the overall design is clean and professional.

Stop Watching | Start Living

**Our Mission**

To provide educational and affordable tools that are easy to use and reduce the barriers to enter into any market so that every individual has the opportunity to pursue their personal and financial aspirations.

ArbitrageBands™ boasts objective indicators which provide definitive entrance and exit points while eliminating noise. The system uses statistical and financial analysis in conjunction with visual cues to simplify decision making while offering flexibility based on each user's understanding of research, market knowledge, and risk tolerance.

The last issue of *State of the Bands* indicated the beginnings of a securities bear market on December 3, 2018. In this issue of *State of the Bands* Cryptocurrency and Blockchain Technology will be examined.

Cryptocurrency is a decentralized digital cash system that relies on encryption to make transactions secure. The technology was originally introduced to solve the security vulnerabilities associated with the use of credit card transactions on the internet.

Cryptocurrency evolved into a method that allows anonymous, decentralized transactions with the inception of Blockchain technology.

Today, Cryptocurrency comes in many varieties with even more use cases.

## Leading Cryptocurrencies

### Bitcoin [BTC]

Founded by Satoshi Nakamoto, BTC is the first globally successful cryptocurrency. Released in 2009 in the wake of the Global Financial Crisis, Bitcoin introduces a digital currency with a decentralized medium known as Blockchain.

### Ripple [XRP]

Founded by Chris Larsen, XRP released in 2012, is a blockchain driven token that facilitates cross-border transactions at significantly lower costs and at far greater speeds. Transactions are settled in a matter of seconds—significantly faster than the hours or days required by other cryptocurrencies or bank transactions.

### Ethereum [ETH]

Founded by Vitalik Buterin, ETH released in 2015, is best known for its smart contracts. Ethereum was created to compete against web-based companies that house data. Smart contracts provide protection against hacking, data manipulation, and theft.

During 2018 there were several major cryptocurrency forks. Each fork created a separate and new cryptocurrency entity which resulted in a wider spectrum of choices for the early adopters but punished all the uninformed, late investors to the market space.



Image: © Sorapop Udomsri | Dreamstime.com

## Forks and Market Fluctuations Cryptocurrency - 2018

### May 15, 2018—Bitcoin Cash (BCH)

Enabled enhanced features facilitating use cases such as timestamping, representative tokens, and more complex transaction scripting.

**Bear Market alert - May 12, 2018 at 5:00 PM EDT**

### July 5, 2018—Bitcoin Gold (BTG)

Created to avoid ASIC-mining.

**Bear Market alert - May 16, 2018 at 4:00 AM EDT**

### May 29, 2018—Ethereum Classic (ETC)

Difficulty Bomb removed from Ethereum Classic Mainnet in order to avoid collapse of the network.

**Bear Market alert - May 22, 2018 at 3:00 AM EDT**

### ETH

**Bull Market alert - December 22, 2018 at 5:00 PM EST**

### BTC

**Bull Market alert - December 28, 2018 at 3:00 PM EST**

Cryptocurrency Comparison			
	BTC	XRP	ETH
Distinguishing Factor	fiat alternative	financial services	smart contracts
Transactions Per Second	7	1500	15
Avg Transaction Speed	10 min	4 sec	14 sec
Price	\$3,792.11	\$0.36	\$147.94
Market Capitalization (in billions)	\$67.4	\$14.9	\$14.5
Data Sources: <a href="http://valuewalk.com">valuewalk.com</a> ; <a href="http://fxempire.com">fxempire.com</a> ; <a href="http://coinmarketcap.com">coinmarketcap.com</a>			

However, all cryptocurrencies are not created equal, but there are definite benefits for those who remain well informed.

XRP has the most transactions per second and is the least expensive of the three tokens previously mentioned. This often leads seasoned investors to trading this token like a penny stock because of the high volume, high speed and high liquidity.

Bitcoin, Bitcoin Cash and Bitcoin Gold has a staggering 7 transactions per second. This fact makes the price of these tokens harder to manipulate which is ideal for those who still hold onto the traditional ideology of buy and hold.

ETH has immense appeal due to the ease of use, the overwhelming documentation on “How to Create A Token” and the use of smart contracts, which offer transparency, security, easy regulation and a very extensive general ledger for each transaction. Large institutions, governments and banks *can and are* benefiting from this new way to do business.

## **Challenges, Needs, Milestones**

### **Cryptocurrency Challenges**

1. Need to tether—parking money in third-party company token to avoid additional transaction time
2. Length of time required for transactions to complete—up to seven days per transaction per direction
3. Electronic wallet—loss of private key leads to loss of funds
4. Transaction fees based on value of asset converted

### **Cryptocurrency Needs**

1. Eliminate the need to tether
2. Reduce the amount of time per transaction
3. Easier access to cryptocurrency assets
4. Flat fee per transaction

### **Cryptocurrency Milestones**

1. Stable Coins
2. Blockchain Patents
3. ATMs and Mining
4. Standards and Regulations

## Cryptocurrency Milestones—Stable Coins

Stable coins bridge the burgeoning world of cryptocurrency and the traditional world of fiat currencies. Stable coins are equally paired to another stable asset, such as gold or the U.S. dollar, and have low volatility.

First, a distinction must be made between a Stable Coin and a Tether token. A company called Tether Limited issues Tether tokens. Each token issued is represented as a liability for Tether Limited. Therefore, the company can refuse or be unable to fulfill the liability, leaving no recourse. Tether Limited issued its first token in February 2015. Due to the newness of this company, the lack of transparency, and the amount of cryptocurrency transactions the long-term viability for Tether Limited to maintain a 1:1 ratio may require due diligence.

USDC is a stable coin introduced by Circle International Financial in September 2018. Circle, which is backed by Goldman Sachs, has stated it would hold deposits on a 1:1 basis in accounts that would be audited monthly. The first Attestation was performed and certified by the accounting firm Grant Thornton LLP on October 31, 2018.



Image: © Akarat Phasura | Dreamstime.com

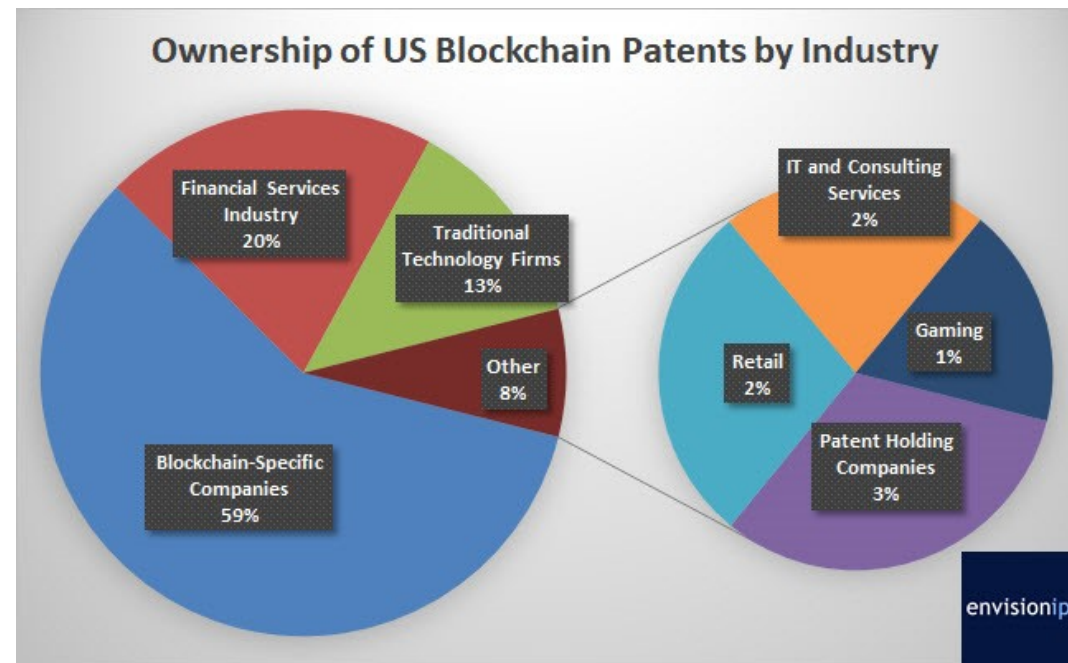


## Cryptocurrency Milestones—Blockchain Patents

Patent application activity in cryptocurrency and blockchain technology has increased significantly over the past five years. According to EnvisionIP, an intellectual property firm based in New York, patent filings and approvals are increasing across the board, with significant activity in Financial Services firms, traditional Technology firms, and Blockchain Specific companies. Companies positioning themselves to benefit from blockchain technology include financial stalwarts Bank of America, Mastercard, and Fidelity; and technological giants IBM, Amazon, Intel, and Google.

### SELECT BLOCKCHAIN PATENT HOLDERS

IBM 27  
 DELL 8  
 INTEL 6  
 AMAZON 4  
 MICROSOFT 4  
 GOOGLE 4  
 BANK OF AMERICA 43  
 MASTERCARD 27  
 FIDELITY 14  
 NASDAQ 5  
 CME 2



Source: envisionip.com





## Cryptocurrency Milestones—ATMs and Mining

Bitcoin has a limited supply of coins available to be mined. 21,000,000 Bitcoins exist but over 17,000,000 have already been mined. Bitcoin uses a controlled supply system which means for every 210,000 BTC coin that is mined the reward per hour for mining is reduced by half.

The Bitcoin block mining reward halves every 210,000 blocks, the coin reward will decrease from 12.5 to 6.25 coins.

Total Bitcoins in circulation:	17,465,575
Total Bitcoins to ever be produced:	21,000,000
Percentage of total Bitcoins mined:	83.17%
Total Bitcoins left to mine:	3,534,425
Total Bitcoins left to mine until next blockhalf:	909,425
Bitcoin price (USD):	\$3,919.00
Market capitalization (USD):	\$68,447,588,425.00
Bitcoins generated per day:	1,800
Bitcoin inflation rate per annum:	3.83%
Bitcoin inflation rate per annum at next block halving event:	1.80%
Bitcoin inflation per day (USD):	\$7,054,200
Bitcoin inflation until next blockhalf event based on current price (USD):	\$3,564,036,575
Total blocks:	557,246
Blocks until mining reward is halved:	72,754
Total number of block reward halvings:	2
Approximate block generation time:	10.00 minutes
Approximate blocks generated per day:	144
Difficulty:	5,618,595,848,853
Hash rate:	39.46 Exahashes/s

Chart Source: [bitcoinblockhalf.com](http://bitcoinblockhalf.com)

## Cryptocurrency Milestones—ATMs and Mining

The next coin release date/half reward date is approximately May 25, 2020. Scarcity is the primary reason why the price of BTC is much higher than any other cryptocurrency.

This chart shows the number of bitcoins that will exist in the near future. The Year is a forecast and may be slightly off.

Date reached	Block	Reward Era	BTC/block	Year (estimate)	Start BTC	BTC Added	End BTC	BTC Increase	End BTC % of Limit
2009-01-03	0	1	50.00	2009	0	2625000	2625000	infinite	12.500%
2010-04-22	52500	1	50.00	2010	2625000	2625000	5250000	100.00%	25.000%
2011-01-28	105000	1	50.00	2011*	5250000	2625000	7875000	50.00%	37.500%
2011-12-14	157500	1	50.00	2012	7875000	2625000	10500000	33.33%	50.000%
2012-11-28	210000	2	25.00	2013	10500000	1312500	11812500	12.50%	56.250%
2013-10-09	262500	2	25.00	2014	11812500	1312500	13125000	11.11%	62.500%
2014-08-11	315000	2	25.00	2015	13125000	1312500	14437500	10.00%	68.750%
2015-07-29	367500	2	25.00	2016	14437500	1312500	15750000	9.09%	75.000%
2016-07-09	420000	3	12.50	2016	15750000	656250	16406250	4.17%	78.125%
2017-06-23	472500	3	12.50	2018	16406250	656250	17062500	4.00%	81.250%
2018-05-29	525000	3	12.50	2019	17062500	656250	17718750	3.85%	84.375%
	577500	3	12.50	2020	17718750	656250	18375000	3.70%	87.500%
	630000	4	6.25	2021	18375000	328125	18703125	1.79%	89.063%
	682500	4	6.25	2022	18703125	328125	19031250	1.75%	90.625%
	735000	4	6.25	2023	19031250	328125	19359375	1.72%	92.188%
	787500	4	6.25	2024	19359375	328125	19687500	1.69%	93.750%





Chart Source: bitcoinblockhalf.com

## Cryptocurrency Milestones—ATMs and Mining




Most Cryptocurrency ATMs are one-way; they allow the purchase of Bitcoin (BTC) and other cryptocurrencies. Some ATMs allow the option to sell cryptocurrencies as well.

The number of ATMs accepting Ether (ETH) has increased almost 50% since the inception of USDC in September 2018.

### September 2018

NAME	START	END	DIFF
 Bitcoin	3658	3796	138 (3.77%)
 Ether	1298	1435	137 (10.55%)
Altcoins	2086	2217	131 (6.28%)
 Litecoin	1978	2102	124 (6.27%)
 Bitcoin Cash	998	1105	107 (10.72%)

### October 2018

Name	Start	End	Diff
 Ether	1435	1743	308 (21.46%)
 Litecoin	2102	2298	196 (9.32%)
Altcoins	2217	2406	189 (8.53%)
 Bitcoin Cash	1105	1270	165 (14.93%)

### November 2018

Name	Start	End	Diff
 Ether	1743	1882	139 (7.97%)
 Bitcoin	3927	4042	115 (2.93%)
Altcoins	2406	2519	113 (4.70%)
 Litecoin	2298	2403	105 (4.57%)
 Bitcoin Cash	1270	1338	68 (5.35%)

Chart Source: coinatmradar.com

## Cryptocurrency Milestones—Ethereum Standards

Ethereum technology is geared towards complicated interactions between parties rather than consumer payments. The uses of the network expand far beyond financial transactions. A streamlined protocol and improvements in token development standards have made it easier for cryptocurrency exchanges to list new tokens on their trading platforms. These advances enable progress in this emerging market.

Ethereum Token Standards			
Standard	Description	Backward Compatibility	Commentary
ERC20	Established a standard for creation and transfer of tokens on Ethereum platforms	Initial standard	Uniformity addressed industry liquidity issues Accidentally burns tokens sent under certain circumstances
ERC223 (23)	Provided solutions for token loss error inherent in ERC20	Security improvement Compatible with ERC20	Users can accept/decline tokens Tokens may still be lost under very specific circumstances
ERC777	Introduces function to identify receipt of tokens and initiate a smart contract immediately following initial transaction Incorporates implementation of central registry of contracts on the Ethereum network (ERC820)	Security improvement Not compatible with ERC20 Compatible with ERC223	Lowers transaction overhead Users can reject tokens from blacklisted addresses Allows expanded uses of smart contracts

Data Sources: 101blockchains.com; coinintelligence.com

## Future of Cryptocurrency—Market Developments

### Cryptocurrency Futures

Currently Bitcoin futures can be traded on CBOE and CME. Nasdaq is scheduled to offer BTC futures in early 2019. NYSE owner Intercontinental Exchange is planning an early 2019 launch of an Exchange through its Bakkt subsidiary. This exchange will be the first to offer to settle futures contracts with physical Bitcoin.

CBOE	Bitcoin Futures	Dec. 10, 2017	first exchange to offer Bitcoin futures
CME	Bitcoin Futures	Dec. 17, 2017	highest volume of Bitcoin futures
Bakkt (Intercontinental Exchange)	Physical Bitcoin Futures	“early 2019”	awaiting regulatory approval from CFTC
NASDAQ	Bitcoin Futures	Q1 2019	awaiting regulatory approval from CFTC
VANECK/SOLIDX BTC ETF	Exchange Traded Fund	unknown	awaiting regulatory approval from SEC

### Cryptocurrency and Forex

The global foreign exchange market is the largest financial market in the world with average daily volumes exceeding \$5 trillion—roughly 12X the larger than the futures market and 27X larger than the equities market.

With cryptocurrency pairs available in every major fiat and the emergence of a stable token (USDC) as a trusted global standard, the growth potential of cryptocurrency is limitless.



Image © Maxkabakov | Dreamstime.com

## Cryptocurrency—A Year in Review

Sounds great, right? Apparently many technological and financial opportunities exist in the “crypto world”—but 2018 was an awful year for cryptocurrency. Prices plummeted throughout much of the year—down as much as 94% from January highs.

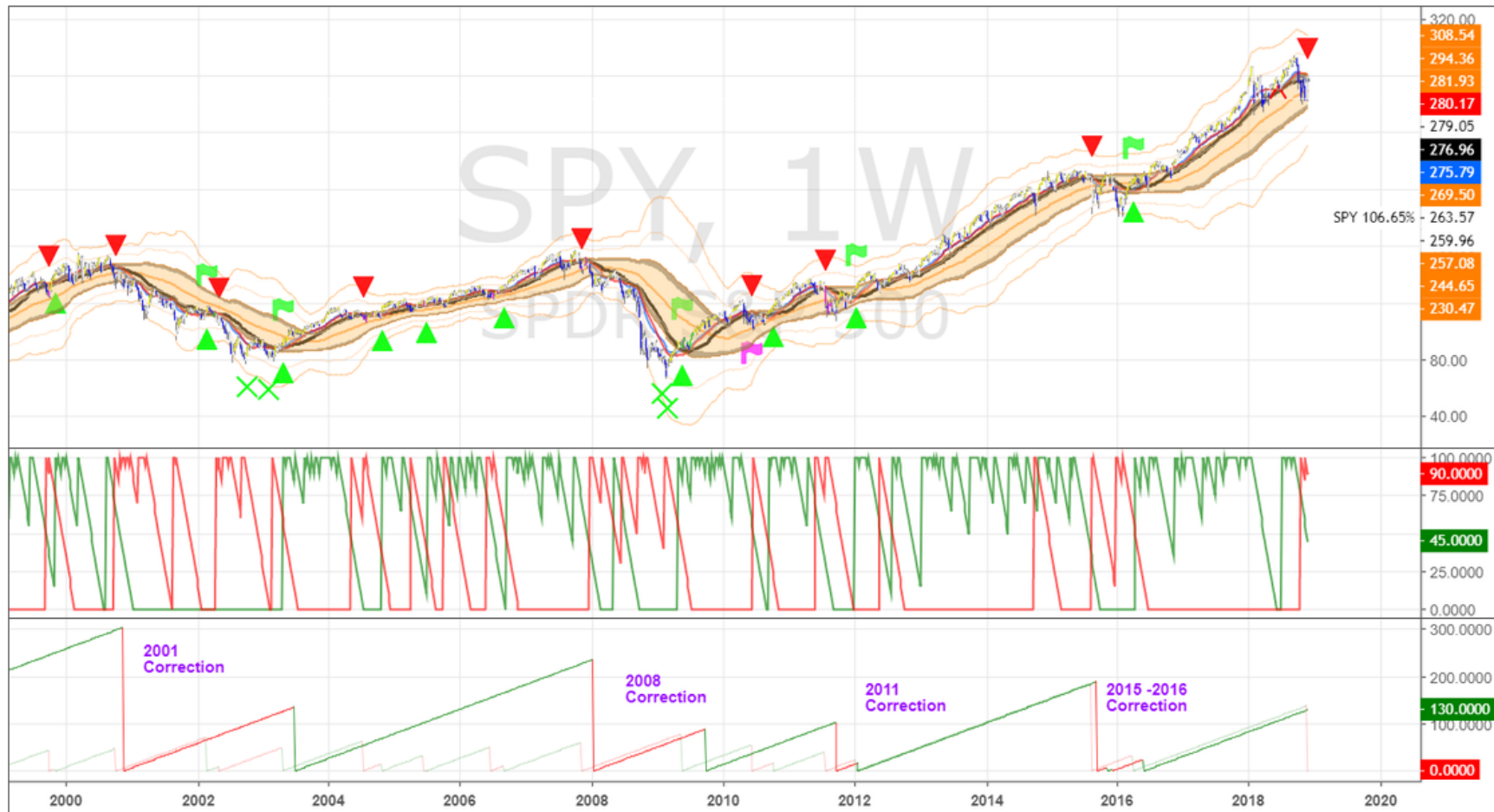
Cryptocurrency Price Comparison - 2018					
	High	Date	Low	Date	% Loss
BTC	\$17178.00	01.05.18	\$3128.89	12.15.18	81.79%
XRP	\$3.300	01.01.18	\$0.246	08.14.18	92.55%
ETH	\$1419.96	01.13.18	\$80.60	12.14.18	94.32%

Due to the size and magnitude of this prolonged downtrend ArbitrageBands' Breaker indicator is the ideal choice to identify both the beginning and the end of a long term uptrend or downtrend...



Arbitrage Breaker is a clear indicator of market corrections and rallies. In the chart below, An Arbitrage Bear market Breaker Alert was triggered prior to each major correction and rally since 2000. Arbitrage Correction indicators fired on November 16, 2000, November 19, 2007, September 26, 2011, August 10, 2015 and, most recently, on December 3, 2018.

aixguru published on TradingView.com, December 10, 2018 08:14 CST  
 AMEX:SPY, 1W 263.57 ▼ -6.27 (-2.32%) O:280.28 H:280.40 L:262.44 C:263.57



Created with TradingView

ArbitrageBands™ prediction of the significant decline in the Spring of 2018 and the late December rally illustrate the power of the Arbitrage System as a compelling momentum indicator. The image below is using the weekly chart as its strategy and on May 7th, 2018 Arbitrage Breaker signaled an exit of BTCUSD.



Just like 2017 that experienced a cryptocurrency rally end of year, 2018 followed suit. However, overall, this past year has been a bear market for cryptocurrency. In the illustration below there were a few opportunities in XRP but without Arbitrage Breaker in place extreme losses were the norm.



Ethereum priced at 789.23 entered a bear market on March 12th 2018 according to ArbitrageTrade’s Weekly Breaker strategy. A sustained uptrend on shorter time frames is needed to confirm a Long Term Bull Market will continue into 2019.



Adding Arbitrage Trade Level indicator helps to better illustrate the directional changes in each band. It is easy to see that the black line in the center of the graph is moving toward the dotted green line which indicates positive momentum for a bull rally in progress. Arbitrage Trade Analytics is expecting a substantial rally once the black line crosses the dotted green line. Similar to the rally of 2017 seen below.



Some Additional Alerts From The Ethereum Daily Chart further illustrate the effectiveness of Arbitrage Trade’s Bands and analytics.



Arbitrage Trade’s swing trader alert triggered on the Hourly Chart on December 17th, 2018 for Ethereum which had a current price of 88.05—almost the 52-week low. The momentum generated on the hourly chart allowed entry and as of today’s date, January 7th, 2019, Ethereum is valued at 156.19. According to the Daily Chart a price target of ~471.00 is expected for 2019.





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#### Contact Us

Arbitrage Trade welcomes your questions or comments regarding the Terms:

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