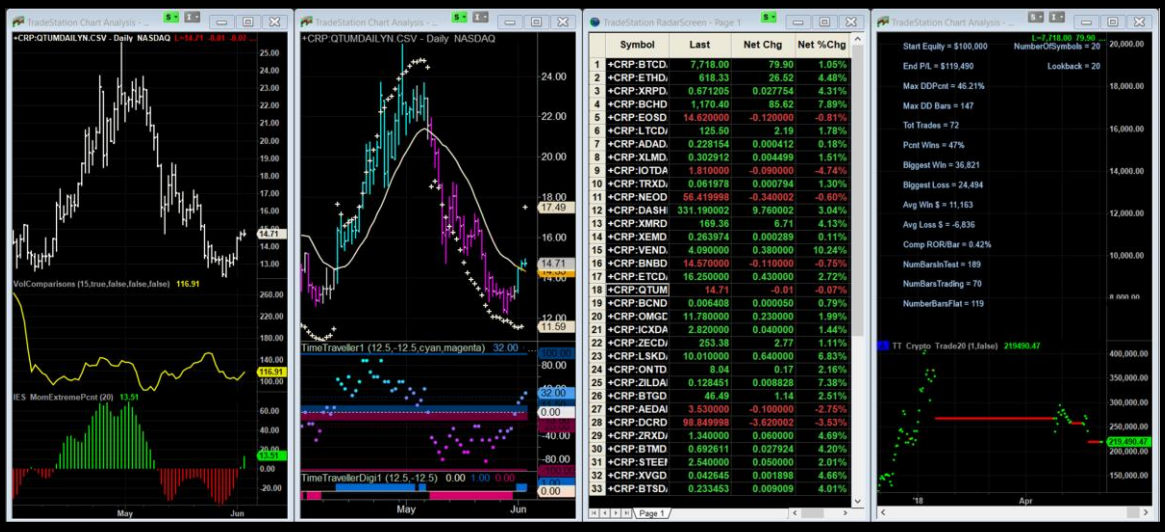


TIMETRAVELER TRADING

Seratio Whitepaper 11.0

CCEG Blockchain UN Lab

Seratio Whitepaper 11.0: TimeTraveler

TimeTraveler Trading is part of CCEG's SERATIO® family of Blockchain solutions

Dr Jurg Richards, William Brower, Barbara Mellish MBA ACIB MIRM and Professor Olinga Ta'eed PhD FIoD

Other white papers[1]

Seratio Blockchain 1.0: Currency of Intangible Non-Financial Value
Seratio Blockchain 2.0: Values Based Impact Interventions
Seratio Blockchain 3.0: Proof-of-Impact Transaction Platform
Seratio Blockchain 4.0: Platform for Non-Financial Enterprise Solutions
Seratio Blockchain 5.0 Decentralised Learning Ledger
Seratio Blockchain 6.0: Initial Coin Offering
Seratio Blockchain 7.0: The Microshare
Seratio Blockchain 8.0: Women's Coin
Seratio Blockchain 9.0: Growth Impact Bond
Seratio Blockchain 10.0: Student Coin
Seratio Blockchain 11.0: TimeTraveler Trading
Seratio Blockchain 12.0: Golgo Property Token

TimeTraveler Trading: www.TimeTraveler.tech

Seratio Coins ICO Platform: www.seratio-coins.world

Rothbadi Institutional Blockchain Consultancy & Advisory: www.rothbadi.com

CCEG Blockchain UN Lab: www.ccegblockchain.com

Internet-of-Value Blockchain Alliance for Good: www.bisgit.org

Frontiers in Blockchain **peer reviewed journal**: www.frontiersin.com/blockchain

CCEG Think Tank: www.cceg.org.uk

23rd June 2018 [version 11.09]

[1] https://github.com/seratio/whitepaper

TIMETRAVELER TRADING

Based in Zurich, TimeTraveler Trading (www.timetraveler.tech) is a futuristic automated crypto trading platform and tokenised growth fund management that allows crypto traders to rise above the chaos by bringing 35 years of award winning Tradestation® methodology to the crypto world. Currently requiring manual execution, the next step is fully automated from coin selection through decision making regarding all trading include position sizing, as well as entries and exits and when risk controls require defensive postures like moving to cash (Tether). The 4 panel TimeTraveler platform provides Volatility and Momentum indicators, TimeTraveler risk profile visualization, realtime feeds of all crypto quotes that feed in, and finally the equity performance curve.

The second phase of development is to expand the system into a Swiss FINMA regulated Crypto-Exchange providing well tried and tested secure, scalable with selectable risk profiles algorithms to allow direct liquidation to or from regular FIAT currency.

The third, and even more exciting phase is the linking of the financial Timetraveler Exchange operating the security Timetraveler Token with the independently developed Seratio Microshare Exchange through the non-security utility TT Token Microshare token. In real terms, this means a two exchange system swapping any non-financial coupon such as retailer discounts or airline loyalty points, for real financial assets such as money.

This realises a breakthrough technology and concept in value exchange opening a regulated market potentially even greater than that of Binance with its current US$ 1 billion annual performance. For investors, we are issuing 100 million tokens (hard cap) to represent 100% of the Net Profit share, guaranteed.

1 TimeTraveler in Outline

1.1 Intro to Crypto

For the newbie, here is a quick introduction to the cryptocurrency market.

- Cryptocurrencies (CC) are an important asset class with $286 billion in market cap
- The long term risk posed by fiat currencies losing value is substantial
- CCs have the potential to eliminate the normal fiat (country reserve backed) currency risk
- CC's are still an infant asset class and have no behavior models with which to compare
- Extreme run-up is commonly exhibited in most CCs making them highly attractive
- Extreme drawdown is also common, posing substantial risk
- CCs are difficult to trade
- Issues to deal with when trading CC's
    - Coin selection is difficult as there are large numbers to choose from
    - Many of the coins are likely to eventually be worthless
    - Many coins have low liquidity
    - Compared to other asset classes volatility of most CCs tends to be high, very high or extremely high
    - There are many exchanges. Each transacts only some specific coins
    - Most exchanges do not accept fiat money
    - Some exchanges require payment in Bitcoin or Ethereum or other CC
    - Interacting with some exchanges can be exceedingly difficult
    - There is always a potential regulatory issue to be concerned about
    - The theft of cryptos from exchanges raises concerns about how to protect them
- TimeTraveler offers a way to participate in CC trading by taking advantage of the upside potential and at the same time managing risk to generate a uniquely attractive return-to-risk profile

1.2 Macro Model

The universe of available cryptocurrencies has grown exponentially over the last few years. There are currently over 800 available cryptocurrencies from which to choose and as many tokens. It is necessary to identify those currencies which present the greatest opportunity. TimeTraveler maintains its own data farm to collect and store real time prices on CCs traded on many exchanges around the world. This gives us an exceptional ability to monitor the

universe of CCs and alert us to unusual price movement early enough to trade proactively. Although the initial screening of candidates for trading involves measuring market capitalization, the coin selection process also involves understanding and evaluation of the technology behind each currency, assessing their potential for market differentiation, estimating their chances for early adoption as an instrument of e-commerce, quantifying their current and potential future liquidity, and perhaps most importantly determining the risk associated with each including the risk connected with acquisition and storage. CCs typically exhibit volatility levels that are not even approached by investment vehicles in any other asset class. That makes it difficult to utilize conventional trading models as the basis for a mechanical trading strategy. While the buy and hold strategy may appear to be successful, the severe drawdowns make it unappealing.

In the long run, most cryptocurrencies will only have value if they are accepted in lieu of fiat money or provide a more efficient vehicle for transactions in lieu of fiat. In the short run they have become a tool for speculation which has given rise to extreme levels of volatility. At this point it is not known whether there will eventually be only one successful cryptocurrency or several. It is certainly possible that there could be many if some are specifically targeted to fill e-commerce in niche markets. Thus it may be necessary to invest in some for the long run while other investments will be far more active in the short-term and some currencies will see both types of investing. TimeTraveler is designed to always trade the coins with the greatest likelihood of eventually being accepted so it has a built-in mechanism to eventually hold the most successful coins.

1.3 Allocation

The outsized returns and risks from cryptocurrency investing require careful allocation to each instrument. The timing of holding the coin is critical since gains can disappear quickly in the unusually high volatility experienced by most coins. Allocation is initially done at a macro level by assessing the broad environment. This can result in periods of time when the entire portfolio moves to cash (Tether). At other times it may be necessary to put only a portion of the assets to work trading. During favorable times it is likely that all the assets will be employed at the same time trading. TimeTraveler is capable of doing these things automatically.

1.4 Micro Model

The extreme volatility of Bitcoin demonstrates the difficulty of market timing. Any back-testing would quickly confirm that the most profitable strategy would be to buy and hold assuming past behavior is a predictor of the future. That strategy also entails the greatest risk. There exists no fundamental analysis capable of predicting where the coin prices will go. TimeTraveler is systematically driven to identify coins of interest, take positions in them, exit positions that are less favorable, and to take profits and exit trades before price collapses. Risk control is a large part of the trading plan and is built-in to the systematic

trading algorithms. Because the potential for long term growth is so huge, we expect that volatility will continue to be exhibited in the price behavior for some time to come. TimeTraveler extracts extraordinarily high profits during periods of extreme volatility and also steps away from the markets if volatility is too extreme.

1.5 Rebalancing

The portfolio components are unlikely to appreciate at the same rate. There is a possibility that periodic portfolio rebalancing will be needed. Not doing so might allocate too much of the assets to one cryptocurrency and that could increase overall risk. Rebalancing would move money from the most heavily invested cryptocurrencies to the least invested. That said, most of the time, the systematic algorithms of TimeTraveler have the ability to automatically balance the portfolio when trades are exited and new trades are placed.

1.6 Managing Trading Risk

Investing in cryptocurrencies requires the ability to time entry and exit of positions and manage risk of adverse moves as well. The TimeTraveler systematic algorithms automatically deal with most of the risk although manual intervention is always a possibility in unusual circumstances. The systematic risk controls have two components, macro and micro. The macro controls look at the overall crypto environment and determine if it is safe to trade. If not, all assets are moved to Tether. The micro controls examine each position and determine if that coin should be liquidated because it poses an outsize risk.

1.7 The Current Crypto Environment

Bitcoin is the world's leading cryptocurrency. It began trading in 2010, about 3 years before any other coin began trading. Since its inception, it has always maintained the largest market capitalization of any coin. Most coins are heavily positively correlated with Bitcoin and so it acts as a leader in several ways. When Bitcoin is trending higher, most other coins do so as well. When it is declining in price, most other coins follow suit. Because it has been around longer that all other coins, Bitcoin has matured somewhat and while still volatile, it is not nearly as volatile as coins that are much younger.

The technology that went into Bitcoin makes it one of the most secure coins available. The standards for confirming a transaction are more stringent than many other coins. This high standard makes it difficult to attack which is one reason Bitcoin transactions are so secure. For the very same reason, it is relatively inefficient at making transactions. It is slow and energy intensive. Coins that came after it had the benefit of using some of the concepts of Bitcoin to be more efficient. Some of these accomplished that by weakening the standards for confirming transactions. That means they are more open to attack.

There has been quite a bit of press around the viability of Bitcoin to survive and go on to be one of the coins that eventually have any value. We wish to state our position on the media controversy as Bitcoin plays an important role in TimeTraveler.

1.8 The Case for Bitcoin

Blockchain technology is a major disruptor. It has the potential to disrupt entire industries including the use of fiat money. Bitcoin, Ethereum, and Ripple are already examples of this and there are many others. Cryptocurrencies have the potential to disrupt fiat currencies by becoming a more secure and efficient means of making transactions as well as avoiding the pitfall of fiat currency inflation.

It is important to recognize the distinction between disrupting fiat currency and disrupting the means of making transactions. There already exist several e-commerce solutions for making electronic transactions without the use of money. An example of that would be PayPal and Apple Pay. China has 2 competing solutions for e-commerce payment (Ali Pay - Alibaba and WeChat Pay – Tencent). To the extent that cryptocurrencies become more efficient than the existing means of making transactions, it is very likely that cryptocurrencies could disrupt them.

However, the longer term issue is about the disruption of fiat money. While some purists would define fiat money as printed currency like dollar bills or pound notes, the layman view is that if something is priced in dollars, and purchased with green bills, credit card, or a check, it is still paid for in fiat currency. That is because it is priced in dollars. The problem comes when governments and institutions undermine the value of the dollar by debt expansion. The ultimate consequence is inflation where the value of the dollar, as measured by its purchasing power, is weakened through inflation. In extreme examples, the value can be rendered worthless through hyperinflation. This becomes a problem for anyone trying to save money as the asset decays over time. Cryptocurrencies, should they be successful, would have profound consequences for countries and governments around the world because their adoption would mean that savers could retain value in an asset that would not be subject to inflation.

Inflation is a real risk today. In fact, it is the stated goal of Federal Reserve banks around the world to incite inflation. The purpose of course is to enable governments with substantial debt burdens to repay those debts with cheaper dollars. Increased inflation also results in increased tax revenues. For these reasons governments around the world have been attempting to stimulate economies by lowering short-term interest rates in the hope that the resulting economic growth would begin to increase inflation. While inflation is good for governments it is not so good for individuals on a fixed income, particularly retirees. One problem with inflation is controlling it. Should there be some worldwide event that triggers a round of high inflation it can get out of control and be difficult to stop. Venezuela,

Argentina and Turkey are recent examples of this problem which resulted in the rampant printing of fiat money (debt expansion).

Some cryptocurrencies do not have this risk of inflation because they have a finite amount. When you measure the cost of Bitcoin in dollars it would appear that the value of the Bitcoin is increasing as price goes up. On the other hand, if dollars were measured in terms of Bitcoin, then we would say the value of the dollar is decreasing as the cost of Bitcoin goes up. This makes cryptocurrencies very attractive particularly where inflation is a problem or a perceived problem or even a potential problem. Cryptocurrencies can be very efficient by eliminating the need for middlemen like banks and other financial institutions. They offer the ability to consummate private, secure, peer-to-peer financial transactions more quickly and for less cost. They offer to provide the prospect of confidentiality to both buyers and sellers. For these reasons they have a good probability to disrupt fiat currencies and existing payment methods.

Cryptocurrency are also very attractive to many that fear the consequences of a debt bomb explosion leading to excessive inflation. While history has many examples of countries burdening themselves with excessive debt, this recent decade is the 1st in history where almost all developed nations in the world are in the same position of having taken on excessive levels of debt. There are examples of countries that have gone bankrupt and defaulted on their debt like the Soviet Union in 1998. Should something like that happen today the resulting tsunami could sweep across all developed nations and make debt essentially worthless. Cryptocurrencies would not be hurt by such events when the measured in the buying power of the cryptocurrency. However fiat currencies would be devastated. A successful cryptocurrency would essentially be a safe store of value and thus be attractive to many fearing the debt bomb explosion.

There are many cryptocurrencies today and it is not clear which if any of them will dominate. It's also very possible that many will survive and thrive in the years to come. Perhaps the biggest threats to cryptocurrencies are posed by government regulation. Some, like China, countries have already seen this threat and have stepped in to close cryptocurrency exchanges. Government banning or limiting of the use of cryptocurrencies for transactions is also a possibility. As of this writing, the European Union plans to implement stricter rules for cryptocurrencies. The European Union will follow South Korea and China on cryptocurrency regulation to prevent money laundering and terrorism financing on virtual currency platforms by restricting cryptocurrency trading. The fact that governments in the developed nations of the West start to regulate cryptocurrencies is a risk. The longer cryptocurrencies remain unregulated the more likely they will be able to move in the direction of supplanting fiat currencies. Should they move far enough along in the development process and begin to be accepted for regular e-commence, it might be difficult for governments to ban or restrict them.

The ultimate goal of cryptocurrency is to be accepted worldwide in lieu of fiat money for all financial transactions. The coin that is accepted for e-commerce first is the most likely to

succeed. Even if that coin is not the best technologically, it can still nose out its competitors if it is widely adopted first. We believe Bitcoin still is the leading cryptocurrency towards the goal of adoption and it will be an important asset in the TimeTraveler Program. Bitcoin currently has the highest market capitalization of any cryptocurrency. In addition, on exchanges around the world, most other cryptocurrencies are priced in Bitcoin and some as well in dollars or Tether.

1.9 Recent Criticism of Bitcoin

We wish to address the recent criticism directed at Bitcoin in the press.

1) **Bitcoin volatility is increasing**
   In the run-up to the launch of the futures exchange of Bitcoin, volatility increased dramatically but has been declining since the peak in price at 19,716. In fact, by our measure, even the peak volatility associated with the peak prices in December, 2017 never reached the levels of volatility set in earlier price explosions such as the June, 2017 price run up. Today volatility is much lower.

2) **Bitcoin is inefficient at making transactions**
   There are many other coins that are more efficient. In the short run this hurts Bitcoin's performance. However, the Lightning Network may solve many of the issues including cost per transaction and scalability related to efficiency. The Lightning Network acts as a central hub for clearing Bitcoin transactions. Progress continues to be made on decentralizing the Lightning Network which would greatly enhance its acceptance and thereby offer benefits to Bitcoin.

3) **Bitcoin is struggling to be accepted as a credible asset**
   Right now it is not accepted for payment by most businesses. Most people are reluctant to spend it because it may be worth much more tomorrow that it is today. Volatility makes it an unwanted instrument as a payment vehicle. The competition from alternative cryptocurrencies generates uncertainty in businesses about which ones to accept. This is all true but some of those issues will be eased by the Lightning Network. Right now, it is still very early in the life cycle of Bitcoin. It is still primarily the speculation instrument for those wanting to get rich quick. Bitcoin and all other cryptocurrencies will have extraordinary growth over the next few years. Eventually, one or several of these currencies will be widely accepted for e-commerce all over the world. Acceptance is now the key to success.

4) **Bitcoin is a bubble**
   The only known non-crypto price explosion in history that bears any resemblance to that achieved by Bitcoin in 2017 is the tulip bulb mania of the 1600s which began and ended rather quickly and with catastrophic consequences for late buyers. Bitcoin has exhibited several price explosions since 2010 and the most recent in 2017 displayed far less volatility than it did in earlier price explosions. If this was a mania, there are no signs that it is dying.

On the contrary, there continues to be major interest in cryptocurrencies. More and more research is done in this area and the number of articles published every year continues to expand.

5) Likelihood of Bitcoin success

Most would agree that success of cryptocurrencies is going to be all about worldwide adoption for use in commerce. We can think of the current period as a race for acceptance and adoption. In theory, only adopted coins will eventually have value. Many of the cryptocurrencies are likely to eventually be worthless. The coin that gets adopted first will be one of the most successful winners and make it much more difficult for any other coin to displace it. This is a race and right now and Bitcoin is in the lead. However, it very well may turn out that different coins become adopted for specific types of transactions. One coin does not necessarily need to be used for everything. Even if Bitcoin does not eventually become the dominant coin for the bulk of transactions for non-crypto things, it still may be the preferred coin in which to transact when buying and selling other coins. Finally it is going to be difficult to find a safer coin to invest in. That alone could give it preferential status when making very large transactions. That could position it as a vehicle for very wealthy individuals. So oddly, a case could be made for Bitcoin even if it was not widely used in commerce. It has the ability to store value because it is trusted. It is this trust that is likely to position Bitcoin for ultimate survival. No other coin is positioned to survive in this many ways and that makes Bitcoin very special.

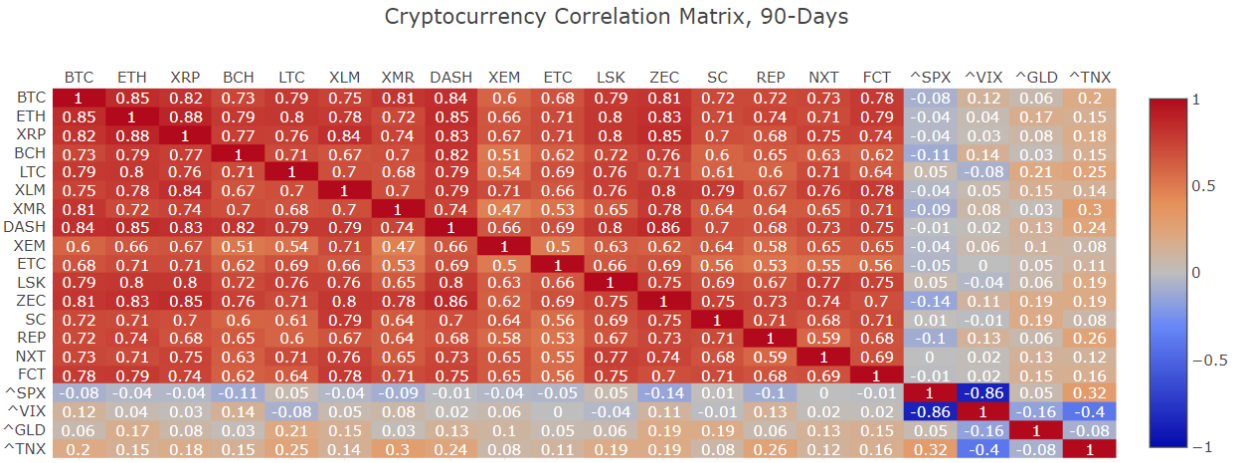
2 TimeTraveller™ (TT) Trading Plan

2.1 Overview Strategy

- Bitcoin has a unique role and acts as a leader in the mix of cryptocurrencies
- Currently the strategy is fully automated up until the trades are placed
- The List of the top 20 coins ranked mainly by Market Cap is maintained
- Trades are placed once each day based on mechanical signals
- Listed cryptos are selected for purchase primarily based on price momentum
- No more than 5 Listed cryptos will be owned at any one point in time
- A crypto losing momentum will be sold and replaced by another Listed crypto
- There may be periods of time when the portfolio is flat (no positions held)
- Going flat means all cryptos are liquidated and exchanged for Tether (USDT)
- Tether is a crypto trading 1 for 1 with the US Dollar
- At times when all funds are in USDT, it may be beneficial to hedge the US Dollar
- To support our future efforts, we plan to facilitate an incubator of lesser cryptos

2.2 Bitcoin

The only crypto with a price history starting before 2011 is Bitcoin. It is considered the grandfather of all cryptos. It has dominated the crypto space since inception by grabbing and holding onto the largest market capitalization. Most cryptos are exchangeable into Bitcoin. Not all cryptos can be exchanged directly for all other cryptos, so it puts Bitcoin in a unique position. All other cryptos tend to be strongly price correlated to Bitcoin.



Source: https://www.sifrdata.com/cryptocurrency-correlation-matrix/

Bitcoin performance will drag the entire market of coins higher or lower. This is particularly risky when Bitcoin experiences a blow-off top and begins to collapse. Other coins will experience extreme volatility and their collapse will be particularly violent. For this reason, we use extreme Bitcoin price volatility as a filter to shut down the portfolio positions and move to USDT (equivalent of move to cash) for a period of time before resuming trading.

We do not foresee when Bitcoin will fail to be a leader. The reason for this is simple. If nothing else, it will remain a store of value. It will also give this young industry a pillar of stability as cryptos vie for space to carve out a niche. There will always be a need to maintain a standard against which all cryptos measure their own value. This will become particularly important when fiat currencies come under attack. We believe as the market matures Bitcoin volatility will drop and become much more stable. This will provide investors with a safe place to store value as fiat currencies lose value.

2.3 The Strategy

A list of the top 20 cryptos is maintained. These are the coins that have large market cap and significant volume.

TradeStation RadarScreen - Page 1

	Symbol	Last	Net %Chg	Jurg_Volume_MarketCap	
				Volume	Mkt Cap
1	+CRPD:BTCI	9,318.200	1.45%	7,227	157,013
2	+CRPD:ETHI	752.280	-0.08%	2,878	74,775
3	+CRPD:XRPI	0.802	-1.47%	612	31,867
4	+CRPD:BCHI	1,638.340	1.64%	1,273	27,522
5	+CRPD:EOSI	17.940	-1.10%	1,200	15,272
6	+CRPD:LTCI	157.060	-1.60%	448	9,010
7	+CRPD:ADA	0.324	-1.45%	178	8,515
8	+CRPD:XLMI	0.378	-2.17%	54	7,154
9	+CRPD:IOTD	2.280	-6.94%	113	6,789
10	+CRPD:TRXI	0.081	-2.49%	358	5,456
11	+CRPD:NEOI	76.330	-0.97%	120	5,013
12	+CRPD:XMR	227.520	1.87%	42	3,584
13	+CRPD:DAS	443.160	-0.14%	103	3,572
14	+CRPD:XEMI	0.380	0.36%	20	3,399
15	+CRPD:ETCI	21.500	-4.32%	294	2,278
16	+CRPD:QTUI	20.200	-3.21%	144	1,849
17	+CRPD:ICXD	4.210	-5.61%	40	1,709
18	+CRPD:LSKI	11.860	-2.55%	20	1,286
19	+CRPD:BTGI	70.050	-2.30%	25	1,217
20	+CRPD:XVG	0.076	2.50%	138	1,110

Page 1

A proprietary methodology called Time Traveler (TT) is used to select cryptos from the List for purchase, sale, and risk control. TT uses a proprietary momentum algorithm to rank the coins in order of highest to lowest. The coins are then filtered by a proprietary volatility algorithm to narrow down selection. The strategy picks and holds the top 5 coins at all times by liquidating the weaker coins as needed. A position is exited in one of 3 ways. First is the routine trading exit where the coin is no longer in the top 5 and thus triggers an immediate exit. The second way is in the event that the volatility of the coin reaches extreme levels or if certain unfavorable momentum conditions exist, we immediately get out. The third way is in the case where Bitcoin triggers a collapse from a high volatility event. This is known as the Kill Switch that shuts down trading and forces the liquidation of the positions until the market recovers. The TT algorithm also employs an auto-rebalancing technique to facilitate proper distribution across the 5 positions.

We have performed extensive back-testing of the strategy on the available data. The data does not go back very far in most cases which limits reliable back-testing. The testing was done on daily data in 3 Stages as follows:

- Stage 1: Testing on Bitcoin alone over 2836 days
- Stage 2: Testing on 8 coins over a period of 1018 days
- Stage 3: Testing on 20 coins over a period of 206 days

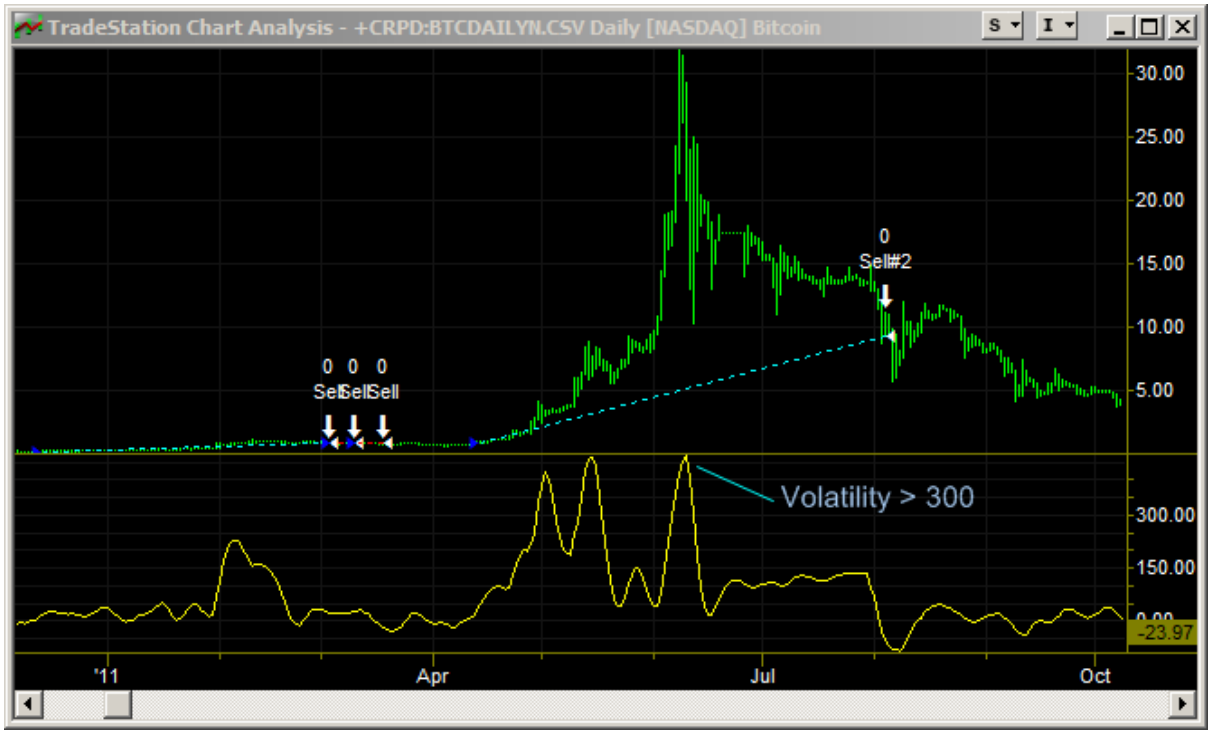
The testing does not include slippage and trading costs which are unknown until trading begins. Slippage is the cost penalty imposed when you cannot get filled at a favorable price. Right now we do not know how trades will behave when they are executed in sizable volume. We can assume that, with the amount of money that we will be using for trading, the slippage will be significant. Also, we did not run any tests on coins in the incubator. These will be a small part of the portfolio and should provide similar returns. One benefit the incubator will offer is increased diversification. The incubator coins will be traded with the same TimeTraveler methodology as the portfolio but it will use a different set of coins.

Stage 1, Testing Bitcoin Only

Stage 1 testing provided the first inkling of possible performance measurements. It allowed the strategy to be tested on the greatest amount of data, thereby exposing the strategy to the most real-world price behavior. The test started with an initial equity of $10. The test generated the following results:

Data Date Range: 7/18/2010	to 6/20/2018
StartEquity	$10
Net Profit	$2,610,956
Max Drawdown Percent	61%
Length of Worst DD	889 days
Number of Trades	84
Percent Winners	50%
Daily ROR	0.45%
Number of bars trading	2836

Drawdown (DD) is a measure of the percentage of the portfolio equity that was lost since peaking at some earlier date. The 61% drawdown in this case means that at some time the portfolio equity peaked and then was 61% lower at some later date. The actual Bitcoin pricing exhibited drawdowns in excess of 90% so this strategy managed to capture a good portion of the profits while reducing risk substantially. However, without any other coins in the simulation, there was no way to diversify away the risk.



The simulation results are less likely to reflect future Bitcoin performance as Bitcoin evolved in a virtual vacuum of recognition and acceptance. It reached volatility levels more than once that are unlikely to ever be experienced again by Bitcoin in the future. As an example, the recent blow-off top in December 2017 reached maximum volatility levels that were still only 50% of levels reached in 2010, 2011 and again in 2013. This is clearly shown in the charts that follow. The Stage 1 testing defined parameter settings that were then used in Stage 2 testing.

BTC Volatility in 2011 exceeded 300

BTC Volatility in 2017 never got much higher than 150

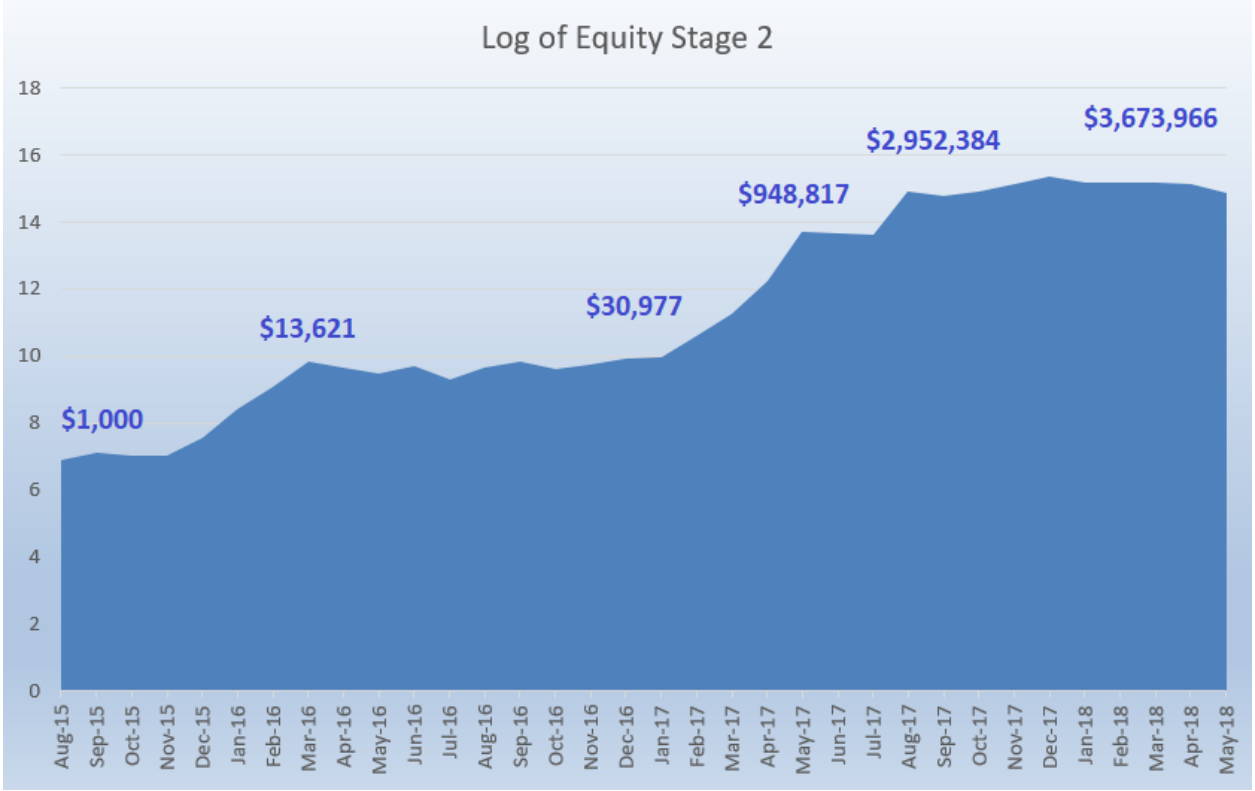
Stage 2, Testing 3 out of 8

Stage 2 testing was applied on a small group of crypto currencies that had about 3 years of history. The crypto with the shortest history sets the test range of data. Thus if one of the symbols began trading in June 2017 and all the other symbols started trading in 2013, the back-test would be forced to start in June 2017. There are only a handful of symbols that approach 3 years or more of history, so by assembling 8 of the symbols with the longest track records, we have a reasonable sample of possible outcomes when switching coins based on momentum. In this test, no more than 3 coins were held at any one time. The TT algorithm always picked the top ranking 3 of the 8 symbols. The portfolio start equity amount was $1,000. Here are the test results from Stage 2 testing:

Data Date Range: 9/7/2015 to 6/20/2018
BTC, ETH, XRP, LTC, DASH, XMR, XLM, XEM

StartEquity	$1,000
Net Profit	$3,672,966
Max Drawdown Percent	57%
Length of Worst DD	253 days
Number of Trades	1360
Percent Winners	51%
Daily ROR	.81%
Number of bars in test	1018
Number Bars Trading	643
Number Bars Flat	375

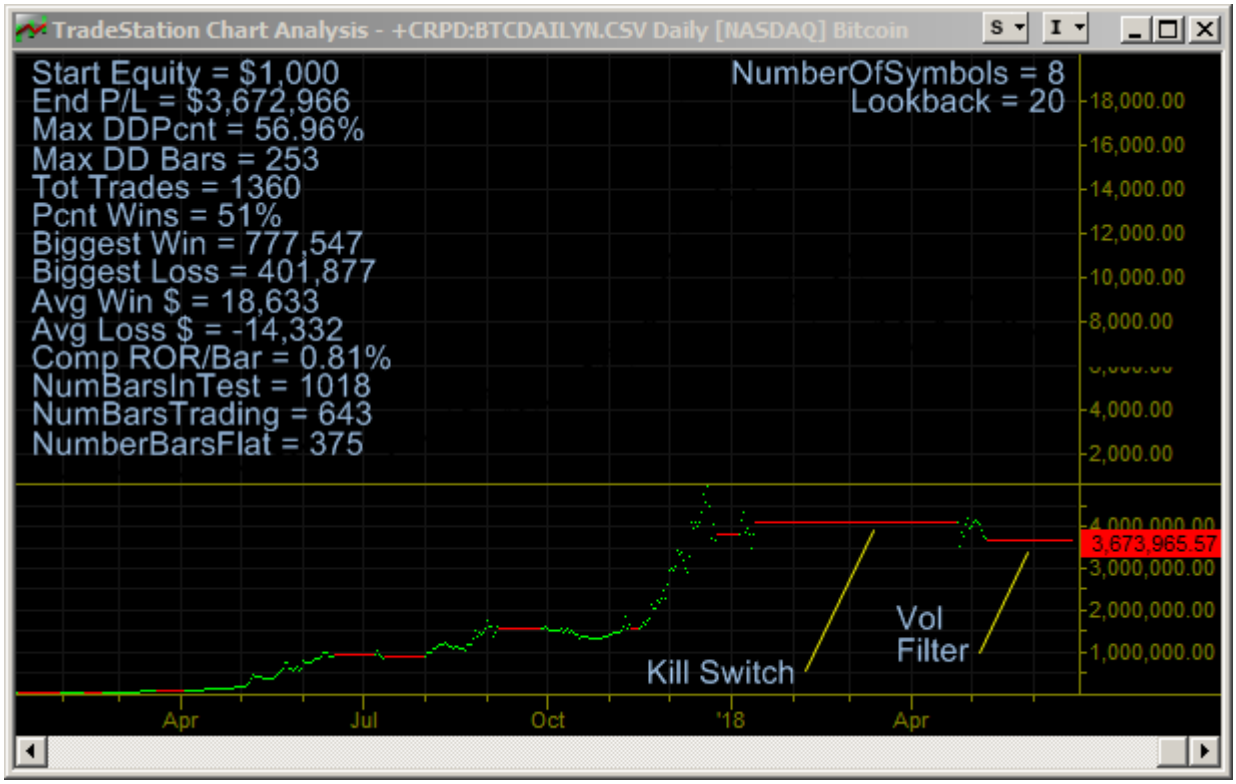
The equity curve is exponential over the duration of the test. This can be best visualized by viewing the natural log of the P/L on a monthly basis which is shown below. The graph demonstrates that growth comes in spurts with sideways movement in between. There are times when the equity curve declines in value. This occurred at the start of the simulation during the first 3 months. Explosive growth took place in months 4 through 7 followed by an extended period of slow growth until month 16 when growth again exploded.



Stage 2 Natural Log of P/L on a Monthly Basis

The results illustrate the benefit of TT. Not only did the rate of return (Daily ROR percent) increase dramatically (from .45% to .81%), the drawdown also dropped dramatically. Since drawdown is a measure of risk, this portfolio is much less risky than trading only Bitcoin all by itself. The Daily ROR percent is a measure of how much the portfolio compounds every day since inception. Very small changes in this measure can have large changes in Net Profit. In this case, the jump from 0.45% to .81% is a staggering jump in the performance.

Normal returns are measured annually. However, the returns in trading crypto currencies are so high that we chose to measure daily returns. To put the daily returns in perspective, $10 invested at a daily rate of .1% would be worth $14.39 one year later.



Stage 2 Test Results Plotting Recent Daily Equity

Stage 3, Testing 5 out of 20

Stage 3 testing includes 20 symbols that will be used for actual trading. The top 5 momentum coins will be held every day. Some of the symbols have very little history so the back test does not go back very far. It also spans the months of January into April of 2018 which was when trading was halted by the Kill Switch for about 99 days. When the Kill Switch is activated, all coins are exchanged for Tether. During the 99 days of the Kill Switch the portfolio was effectively out of the crypto market. During that time Bitcoin experienced several rally attempts along with the rest of the crypto market only to fail repeatedly and plunge to lower lows. This would have been a dangerous time to be trading cryptos. The TT algorithm for the Kill Switch is turned off by confirming positive momentum and volatility behavior of Bitcoin. Below is the performance of the Stage 3 Testing. More recently, the

volatility filters caused the positions to be moved to cash as well and will begin trading when momentum and volatility turns favorable.

20171127 through 20180620
BTC, ETH, XRP, LTC, DASH, XMR, XLM, XEM, ADA, BCH,
BTG, EOS, ETC, ICX, IOT, NEO, QTUM, TRX, XVG, LSK

Start Equity	$100,000
Net Profit	$155,890
Max Drawdown Percent	22.69%
Length of Worst DD	111
Number of Trades	255
Percent Winners	49%
Daily ROR	0.46%
Number of bars in test	206
Number Bars Trading	51
Number Bars Flat	155

The Daily ROR is still high despite the number of days the strategy was flat. That is due to sitting on the sidelines waiting for the TT algorithm to resume trading. Of the 206 days that TT was actually running, trading was active for only 51 days and idle for 155 days.

Stage 3 Test Results

2.4 Hedging

Although not all Kill Switch periods last as long as the most recent one, it is clear that there is currency exposure risk when all of the funds are left in Tether as the dollar can weaken. We believe that it might be preferable not to take on that risk. Instead, we could hedge the risk by opening a futures account and selling US Dollar futures contracts. To offset any risk of holding money in a US dollar based asset we could sell 1 future for each $100,000 of money held in Tether. The future contracts would be bought back when the Kill Switch is turned off and trading resumes.

2.5 Incubator

At the very start of trading, we propose to set aside 10% of the account balance to trade a second set of coins that do not have enough volume and market capitalization to rank in the top 20 of all coins. This would position us in the future to hold coins that attract enough attention (and Market Capitalization) to make it into the top 20. At that time, we would swap out the coin with the least market capitalization on the top 20 list with the highest market capitalization coin from the incubator list.

Our expectation is that in the long run, the incubator strategy will be a beneficial to the ultimate profitability of the overall portfolio. It will keep us aware of coins that are more favorable. We found that less prominent coins have greater upside potential and we want to capture this growth before the coins get to be too well known.

We will replicate the TT trading strategy on 20 other coins that are next in line measured by market capitalization along with BTC and ETH. The process of selecting the other coins to include in the incubator list has only one requirement. Each coin in the list must be exchangeable directly into Tether. Our investing in those coins is expected to hasten the growth of those coins and improve their chances of adoption. Inclusion of BTC and ETH coins in the incubator list is for the purpose of risk control. Those two coins control the risk levers that can shut down trading. That will round out the entire list to 20 coins.

Coins that survive and go on to be major success stories will by necessity have to come through the incubator and then onto our portfolio list. Coins that ultimately fail will be removed from our list and in several years all the coins we own will be major success stories.

2.6 Data

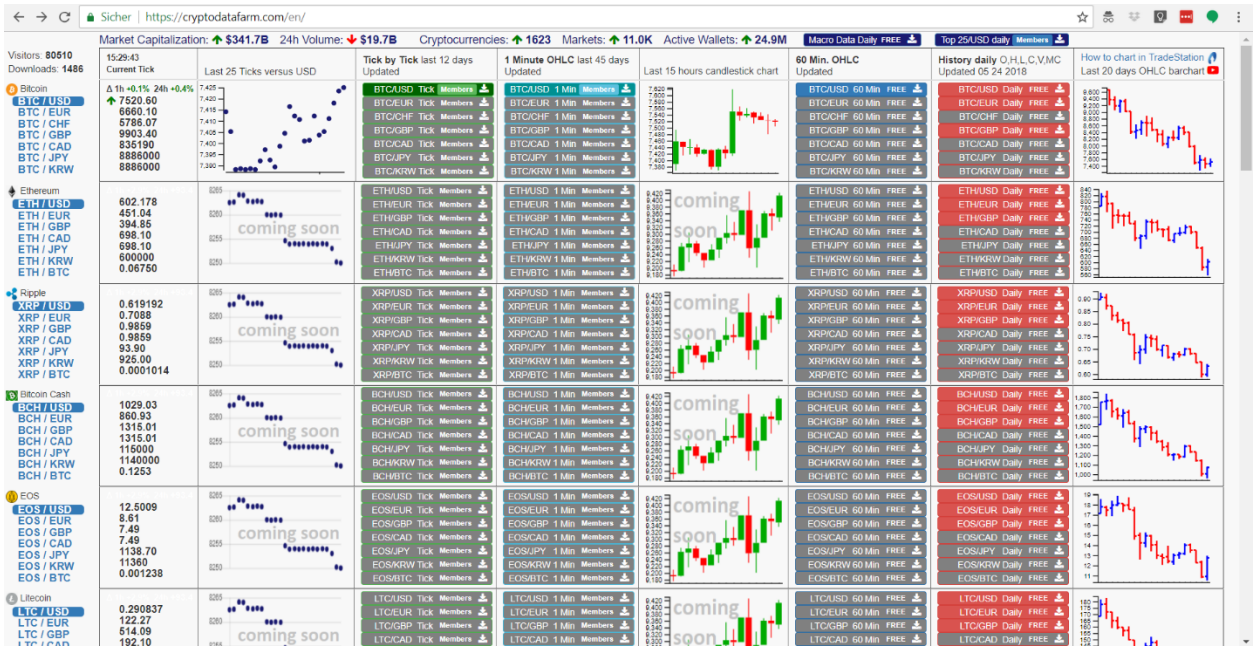
In order to generate trading strategies we needed reliable historic price data on all the coins of interest. We found that crypto pricing data is not aggregated in one place. There was no single data provider for crypto pricing that generated reliable historical data. As a result, we developed our own site and it is the repository of historic and real time crypto pricing data

for about 40 of the most important crypto currencies. Some of this data is being made available to the public free of charge. You can see the data at the following site:

https://cryptodatafarm.com/en/

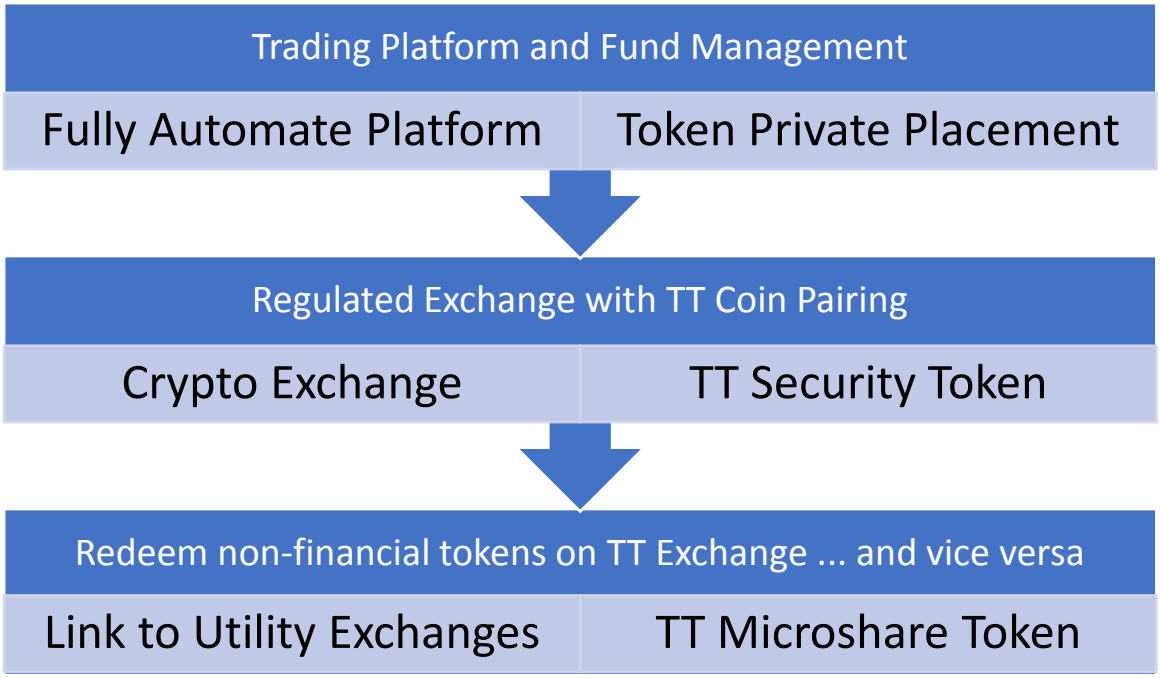
The site is still under construction. Currently the daily data is available for download. Eventually, the intraday data will also be available to download for a fee.

We expect this site will eventually become the one stop go-to website for all traders looking to build systematic trading strategies on crypto currencies as well for anyone interested in quotes and charts.



3 TimeTraveler 3-Phase Development

We have a designed a 3 phase plan across the next 12 months which ostensibly consists of further developing the TTT technology into standard regulated (eg. Swiss FINMA) crypto exchange allowing the take advantages and benefits of automated crypto management with the liquidity of an exchange. This integration is only enabled by allowing internal pairing of trades with the TimeTraveler Token which will be trading independently on other exchanges as an ERC20 token in its own right.

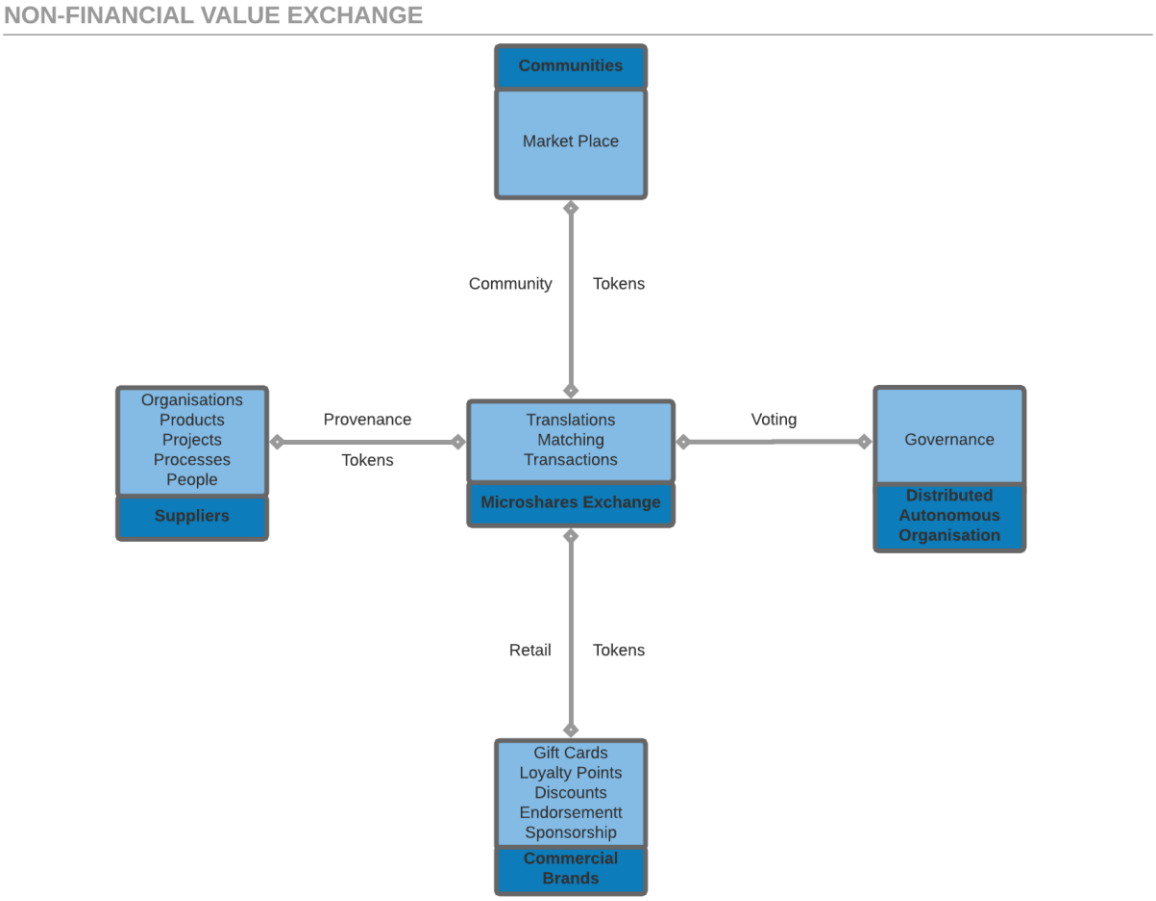


The final phase allows external use of the TT Exchange to redeem non-financial utility tokens providing financial liquidity to existing tokenised offerings whether blockchain or not eg.

- Retailer discounts
- Loyalty points
- Gift cards
- Airmiles
- Carbon credits
- Coupons and vouchers, etc
- Tokenisation of Organisations CSR
- Tokenisation of Product Provenance
- Tokenisation of Project and Processes
- Tokenisation of People eg. community tokens
- Governance and Voting stakes
- …. etc

Of course, the trade can also be done in the other direction, whether financial instruments like diamonds, land, gold, buildings, etc are traded for non-financial instruments.

This is done using the TT Microshare Token, a parallel system created by the Seratio Blockchain (www.seratio-coins.world) that links financial and non-financial tokens. Initially this functionality will be provided by linking to the Rothbadi Microshare ClassicDelta decentralized exchange which is described elsewhere[2] and illustrated below.



Whilst we believe the Microshare ClassicDelta Exchange is the first of its kind, piloting the mechanism of bi-directional redeeming of security and non-security (utility) tokens enables TimeTraveler to offer the same benefits to all kinds of other 'exchange' mechanisms which are non-financial in construct and so far have struggled to mainstream their offering. This is a global game changer. Although the secondary token market has only started in the last 2 months with entities like Templum[3], Numeum[4], tZero[5], the jury is out as there has not been much traction yet.[6]

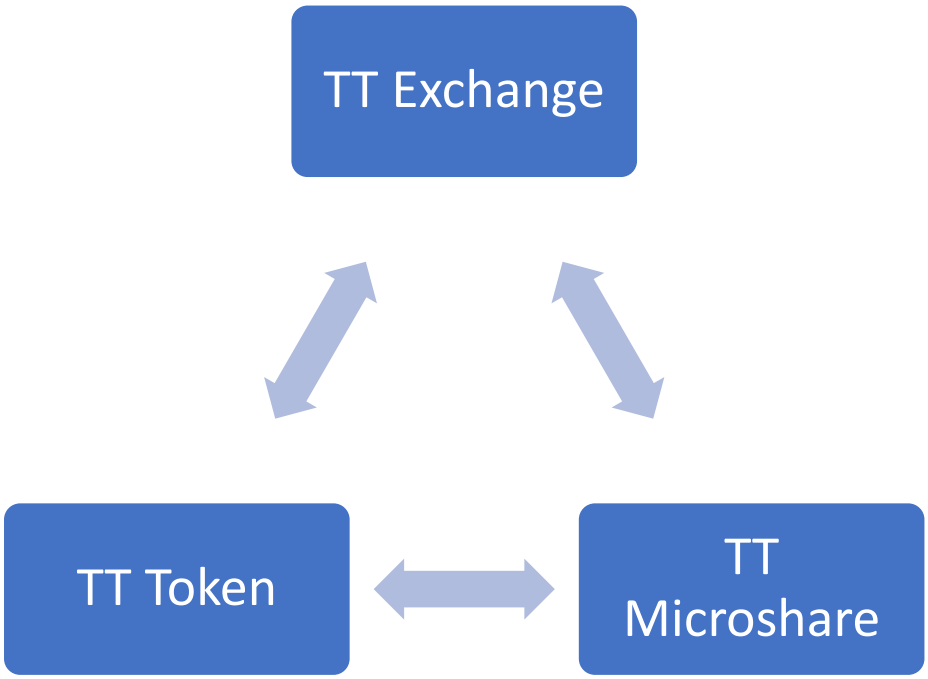
2 https://ccegblockchain.com/2018/06/13/classic-delta/

3 https://www.tradetemplum.com/

4 https://blockchainassetsai.com/

5 https://www.tzero.com/

6 https://www.forbes.com/sites/astanley/2018/04/30/security-token-blues-key-secondary-market-trading-custody-questions-still-linger/#7509c20f5a7d



4 Profit Share of a Crypto Exchange

TimeTraveler Coin (TTC) is a tokenised offer of the annual Net Profits of TimeTraveler AG, the parent company including TimeTraveler trading, fund management, exchange and transacting components. Each TTC holder is eligible to a percentage of the Net Profits of the company in perpetuity which is better than holding an equity stake in the company; companies are not obliged to give away their profits through dividends which are subject to the Board's approval. TTC ensures it happens transparently through the use of an XBRL based blockchain smart contract.

We are issuing 100 million tokens (hard cap) to represent 100% of the Net Profit share, guaranteed. How profitable are exchange based crypto companies? Well Binance, the best known in the market, after 8 months from start-up achieved Q1 results of US$ 7.5m, and Q2 results of US$200m. The TimeTraveler Coin will also be used as an internal pairing mechanism within the TimeTraveler exchange platform thus giving it value in itself. Further utility will be achieved through the third phase development of TimeTraveler which includes using TTC to provide liquidity in the retail and supply chain markets – we think this is a Unicorn idea.

Each TimeTraveler Coin is offered at UK£ 1 each, with an initial private placement first round targeting UK£ 5 million at 55% discount ending 30th September 2018. There may be 2nd and 3rd rounds to fund further development phases which include the exchange and the transaction platforms. Overall a hard cap of 100 million tokens will be made available. Each token holder will be incentivised not only with a 55% discount, but also a 5x uplift on their share of the first year externally audited Net Profits of TimeTraveler AG, 2x in the

second year, and 1x every year thereafter; the 5x and 2x offers will not be repeated in future rounds.

What does this mean in real terms? An illustration might help. If TimeTraveler achieves UK£ 100m Net Profit in the first year (not quarter), UK£ 200m in the second year, and UK£ 400m in the third year, then the UK£ 5m investment will achieve c. UK£ 55m profit in the first year, UK£ 44m in the second year and UK£ 44m in the third year. Cumulatively this represents an RoI of approaching x30 in 3 years, and you still have your TTC token to keep or sell to someone else who can benefit from the rise. But of course it will only continue as long as the company trades and naturally we cannot guarantee the profit level, but we are a group of experienced professionals operating in an exponential marketplace.

4.1 Private Placement

TimeTraveler, based in Zurich, is owned 50% by the founders Dr Jurg Richards and William Bower, and 50% by Rothbadi & Co (www.rothbadi.com) headquartered in the UK. The company is currently being registered and all TimeTraveler IP including non-compete shareholder agreement put in place ready for launch. The joint venture has contracted Centre for Citizenship Enterprise and Governance (CCEG) to manage their Private Placement through the secure tried and tested platform www.seratio-coins.world which conducted the UK's first ICO with UK regulator FCA guidance in October 2017.

For the Private Placement in Student Coin for each *GBP£1.00* invested – Investors will receive 1 TimeTraveler Token and 1 TimeTraveler Microshare Token. The TimeTraveler token is a tradeable Ethereum ERC20 standard digital currency. The technology behind it has already been taken through Initial Coin Offering which was 100% successful.

The TimeTraveler Coin will be deposited in a newly created free personal digital SER Wallet for the investor within specified time of receipt of cleared funds. The token will then be fully tradable or exchangeable by the investor.

The minimum Investment is UK£ 10,000

Private Placement UK£ 5 million soft cap target at 55% discount

Please note this is not an ICO – there is not public offering.

All investors must fall within the definition of "Experienced Investor" – FSA (experienced investor funds) Regulations 2012. It is recommended that all investors do their due diligence.

Terms and Conditions can be found on the website and are downloadable in a pdf [7].

[7] The purchase of Tokens and Microshares are further subject to the Terms and Conditions available at www.seratio-cons.world. Nothing in this whitepaper constitutes advice. You are recommended to seek

The TimeTraveler Coin is part of the Seratio Branded Coins. The TimeTraveler Token (ETH based), and later TimeTraveler Microshare (ETC based), is compliant with ERC20 Token Standard and are developed utilising latest developments in the sector. The Development Team is pioneering the ERC827 standard for added security and user comfort. The codes have been subjected to a full rigorous security audit by UK professionals Sandblocks Consulting experienced in blockchains, nuclear and railways industries.

TimeTraveler Coin will be minted to the free SER Wallets on 31st October 2018 after a full audit. With the exception of the tokens issued to the TimeTraveler Stakeholders, which are subject to further hold periods, all other tokens become freely tradable immediately. TimeTraveler AG anticipated listing the token on a minimum of 3 exchanges.

Once the initial token distribution is complete and depending on the community demand, the TimeTraveler Coin Team may have other token generating round for other phases of the project but this will within the 100 million hard cap. The 55% discount, the 5x and 2x Net Profit % uplift will not be available in these rounds.

4.2 Using SER to Invest in Incentive

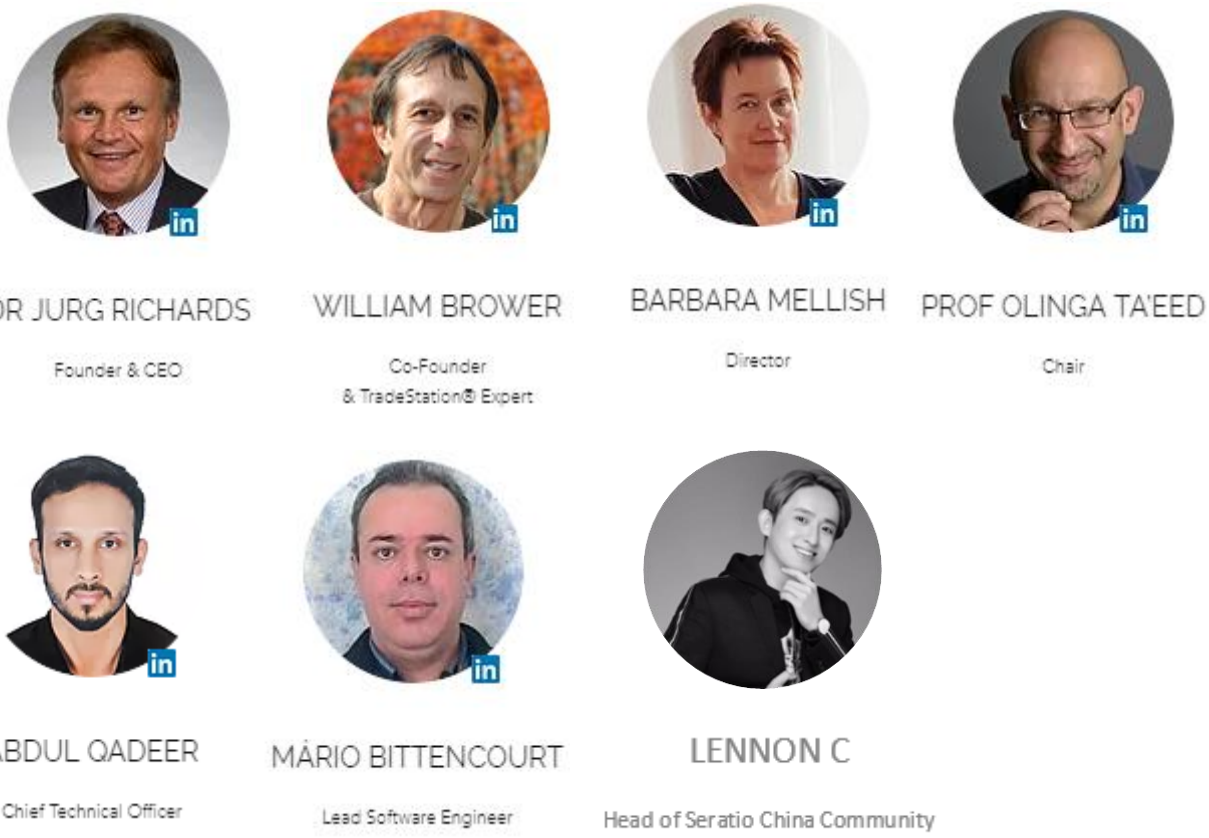
An incentive package has been implemented to reward those who have received SER tokens either through the Seratio ICO or through subsequent purchasing of Seratio tokens after minting.

- UK£ 1.00 Investor at TimeTraveler Coin Private Placement receives 1 TimeTraveler Token.
- UK£ 1.00 Investor at TImeTraveler Coin Private Placement also receives 1 MCR-TimeTraveler token
- Investor at Private Placement is allowed to utilise his/her pre-existing SER tokens to invest in the TimeTraveler Coin, but only to a maximum of 3 SER (3 pre-existing SER tokens). This is conditional on taking part in the TimeTraveler Coin Private Placement.
- SER investment at further private placement rounds will not have any discount
- SER will not be accepted for the first Private Placement, only BTC, ETH or FIAT.
- The value of the SER will be determined before the start of the next Private Placement.

independent financial advice. Buying, selling and holding digital assets or cryptocurrency is never without risk. The market itself can go down as well as up, and the digital assets you pick can perform badly. If you are going to purchase digital assets it is important to research each proposition to see if it is suitable for you. Make sure you do not purchase more than you can afford to lose. You can also consider purchasing in a number of unrelated digital assets in order to spread your risk. The value of digital assets in the market can go down as well as up. This Private Placement is governed by the law of England and Wales, and is subject to the exclusive jurisdiction of the England and Wales.

Example Return on Investment (RoI) - Based on purchasing SER at £0.20p, and valued at UK£ 1 at future rounds, this package is equivalent to x 3.2 RoI, however they will also be receiving a Net Profit share of the company equivalent to their token holding subject to 5x, 2x, 1x uplift in the next years.

5 The Team



Founder and CEO Dr Jurg Richards is an experienced business manager, chief financial officer, money- and pension fund manager with a passion for risk evaluation and risk management with a focus now on cryptocurrency markets. As an ex-floor trader in the pits in Chicago he has funded and owned corporations and investment vehicles, held various positions in private banking, asset management, research and investment management, and consults high-net-worth individuals, institutional investors and hedge fund managers.

Fund Manager & TradeStation® Expert, **William Brower** is a skilled designer and developer of trading systems. As the lead programmer from the beginning of TradeStation®, and a world expert on TS programming he develops trading strategies for futures, equities, options and FX. William used these skills to enter the world of cryptocurrencies including

trend following, spread trading, market neutral, pattern recognitions. He was the first to develop and offer commercial software to perform Monte Carlo Simulation for a portfolio reward-to-risk analysis specifically tailored for TradeStation® users. He evaluates trading strategies and develops software for risk control and portfolio rebalancing.

CTO Abdul Qadeer has 5 year's experience on software development with extensive experience of Automation, Data Mining, Machine Learning, Deep Learning, and AI implementation into Research Robots, Development of the Research Robotics applications. William and Abdul are supported by **our lead Software Engineer Mário Bittencourt** who brings over 30 years of software development experience, plus our team of data analysts and software engineers.

Non-Executive Director Barbara Mellish MBA ACIB MIRM represents Rothbadi & Co on the Board of TimeTraveler AG. She has 30 years at Barclays Bank ending up on the as Head of Card Scheme Global Governance (Barclaycard), before in retirement becoming Director of Payments Integrity and Security at UK Payments Council responsible for transactions of UK£ 385 billion per day. She is currently Non-Executive Director at Hinckley and Rugby Building Society, a UK Bank, and Managing Partner at Rothbadi & Co.

Non-Executive Chair Professor Olinga Ta'eed PhD FIoD is the Founder and Director of the Centre for Citizenship, Enterprise and Governance, the parent company of Rothbadi & Co. He is a leading authority on Non-Financial Metrics and Blockchain, world's first Professor in Blockchain at Birmingham City University in the UK, Chief Editor of the world's first peer reviewed journal *Frontiers in Blockchain*, as well as Executive Editor of the leading journal on the Movement of Value - *Social & Value & Intangibles Review,* as well as official UK university voice on value creation - *Efficiency Exchange*.

6 Background Information

The Centre for Citizenship, Enterprise and Governance (CCEG) www.cceg.org.uk which is the world's leading Think Tank on the Movement of Value and established in 2013 based on a theoretical framework in 2011. We have 5 divisions within a not-for-profit structure that carries 120,000 members. We are independent of any particular organisation.

(i) Metrics division

This is housed in www.seratio.com which provides open source non-financial metrics. We have over 100 commissions (www.socialearningsratio.com) and provide SaaS platforms to support government legislative frameworks for UK (eg. Social Value Act 2012 www.publicvalue.online), Modern Slavery Act 2015 (www.modernslavery.uk), 5 EU commissions (www.socialvalue.eu), 2% law in India/Indonesia/Mauritius, etc. We also have an active research interest in Personal Value (www.serat.io). We have our own journal Social Value & Intangibles Review https://issuu.com/seratio

(ii) Blockchain division

We have one of the largest blockchain teams in the world operating in an academic environment (www.ccegblockchain.com) which includes the UK's first (and so far only) official ICO operating under FCA (www.seratio-coins.world). You will see there our advisors include Eversheds Sutherlands solicitors – a global firm, and Chandler Guo who is now owner of US$ 10 billion bitcoin and a third of Ethereum in the world (https://irishtechnews.ie/why-seratio-is-a-unique-ico-chandler-guo-world-blockchain-summit-dubai-25th-october-2017/)

We have 12 open source whitepapers https://github.com/seratio/whitepaper and a 24/7 news feed https://seratio-coins.world/news/

We have c. 20 commissions from prestigious organisations to for TGE (Token Generating Events) for www.womenscoin.com launched in New York and House of Lords, Student Coin www.studentcoin.uk, Growth Impact Token, TimeTraveler Trading www.timetraveler.tech, Black Value Coin www.ubuntucoin.io, City Coin www.cityblockcha.in, Islam Coin (http://ow.ly/9nD3306wUdk), UNDP Coin (www.cceg.org.uk/lab), etc.

We run the IoV Blockchain Alliance for Good (www.bisgit.org). We have signed two 5 year agreements to provide Blockchain education and solutions to Fordham University in New York, and Chengdu UESTC University in China (the largest blockchain solution provider for Chinese government). On 23 June 2018 CCEG will release the inaugural edition of the first independent international peer review journal in the sector, *Frontiers in Blockchain* (https://www.frontiersin.org/journals/blockchain), in partnership the world's largest open access academic publisher, Frontiers Media (https://blog.frontiersin.org/2018/04/19/blockchain-journal-olinga-taeed-christopher-clack/).

(iii) Cyber Futures division

We have setup a consortium of 15 universities, and partnership with Microsoft, Tata, British Telecom and Informa Plc (FTSE 100 company in education) at www.cyberfutures.net. This has 2 funding commitments through www.Edcast.com (backed by Softbank – largest software VC in the world) and Kerzner Family Office in South Africa. Edcast is a global provider of MOOC's and our online education partner.

(iv) Efficiency Exchange division

As from 2nd October we are the owners of www.efficiencyexchange.ac.uk which was given to us by 4 organisations that run universities in the UK – HEFCE, JISC, UniversitiesUK and LFHE. In return we are educating the sector on value in the sector. We also have ownership of exchange.ac.uk which we intend to be the basis of a new Digital University for September 2018 release as a global proposition.

(v) Rothbadi - Blockchain Impact Institutional Consultancy and Advisory

We have secured UK£ 1m funding to start a high end institutional consultancy and advisory aimed at banks, corporates, investment houses including impact/faith investing, incubators, family offices, governments, ngo's, UHNWI, etc (www.rothbadi.com). It is established in Zurich but also using the CCEG presence in Shanghai, New York, Kochi, Tokyo and London.

WHITEPAPER SCHEDULE

Updates are available at: https://github.com/seratio/whitepaper

1.0 Currency of Intangible Non-Financial Value (October 2016)
2.0 Values Based Impact Interventions (December 2016)
3.0 Impacting With Value: Capture-Translate-Transact-Report (February 2017)
4.0 Seratio Platform Architecture (March 2017)
5.0 The Blockchain Educational Passport (April 2017)
6.0 Seratio Initial Coin Offering (August 2017)
7.0 The Microshare (October 2017)
8.0 Women's Coin (February 2018)
9.0 Growth Impact Bond (March 2018)
10.0 Student Coin (April 2018)
11.0 TimeTraveler Trading (June 2018)
12.0 The Golgo Property Token (June 2018)

bisgit.iov
Blockchain Alliance for Good

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