



The Final Monkey Capital White Paper

# The Decentralised Autonomous Hedge Fund (DAF) Reconsidering Bitcoin With Reusable Value & Energy Efficiency Harrison & Vallis (3@Dunaton.com)

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**Abstract:** One of the most common complaints one hears when it comes to cryptocurrencies goes something like this: “If only I had known what Bitcoin would become in 2010 I would be a millionaire. I would not have thrown away my hard drive with thousands of Bitcoin on it.” Because of the rapid and unanticipated rise in the price of Bitcoin, many would-be millionaire or even billionaire millennials lost out on their chance at securing a lifelong fortune. The effect of this is not just personal. For those that have gained meaningfully from the increase in the Bitcoin price, either directly or indirectly, such individuals have been able to finance businesses, propagate a new rise in the news and entertainment industry, help an Initial Coin Offering (ICO) market into coming into being and much more. At the same time, Bitcoin is dirty and environmentally inefficient. The currency’s mining activities consume 42TWh of electricity a year, the same amount of CO<sub>2</sub> emission as the equivalent of 1 million transatlantic flights. Clearly, such wealth production is not sustainable. Further, the wealth production that has come about has been widely criticised as a result of being purely valued via its own utility. Using our earlier discovery of proof-of-value synthetic protocol, we create a token that mines according to the exact block history of Bitcoin divided by an equal factor (62.5) to produce a total of around 17m tokens. Between 17m and 21m tokens the synthetic protocol randomises purchase prices for our New Bitcoin until all 21m tokens are issued. Thereafter, each New Bitcoin is re-exchangeable for the pro-rate equivalent sum of cryptocurrency in the token’s smart contract. There is no premine and the smart contract is 100% trustless by design. As a result, we afford those who missed out on their first opportunity to purchase Bitcoin the exact same opportunity while advancing the Bitcoin model with a significantly cleaner form of mining and with value constantly underlying the coin in the New Bitcoin smart contract. One of the consequences of our innovation is that we create a structure that is more complex by design than a standard smart contract, but due to the fact that token holders do not have any voting rights, it cannot be considered a Decentralised Autonomous Organisation (DAO). This hybrid smart contract and Bitcoin DAO we characterise by the label Decentralised Autonomous Hedge Fund (DAHF).

## 1. Introduction

Traditionally there are two dominant forms of cryptocurrency mining, those being proof of work (Satoshi Nakamoto; 2009) and proof of stake (Sunny King, Scott Nadal; 2012).

Since 2014, with the creation of Ethereum smart contracts, there is a third identifiable cryptocurrency mining form, although its protocol is synthetic. This is proof of value (Harrison; 2017).

The differences between proof of work and proof of stake on the one hand, and proof of value on the other hand, is that the latter is a mining form applied only to tokens while the former two are applied to digital coins. The differences between digital coins and tokens has to do with their methods of production. Whereas coins are produced via node-enabled

software applications, tokens are produced as a result of the enabling of a smart contract application which runs on top of such a platform. This is why we say that the production of tokens is synthetic in protocol terms. Essentially, the Ethereum Virtual Machine (EVM) synthetically replicates the function of a Blockchain so that in order to create a new digital asset it is not necessary to start with building a new Blockchain every time.

A major consequence of token production is that these new synthetically-produced cryptocurrencies are significantly environmentally cleaner and more energy-efficient than proof of work coins are. This is because they do not involve the additional employment of running energy-intensive external hardware in order to manufacture. At the same time, because the prices at which tokens are sold are pre-programmed prior to sale, tokens hold the potential to be profoundly more economically-efficient than proof of stake coins. Proof of stake coins are problematic in that they are economically very inefficient because production is biased to larger “stakers” of existing coins. With proof of stake protocols, coin mining takes place in individual wallets, with the majority of coins going to the largest coin holders. This produces massive value wastage over time.

Via means of employing an Ethereum smart contract pre-programmed with proof of work mining data extracted from Bitcoin’s historical mining schedule and by thereby applying a proof of value synthetic protocol to enable mining of a new cryptocurrency so that it mimics Bitcoin’s price on a time-shortened trajectory, we show how it is possible to create a 100% environmentally-efficient, Bitcoin-price-and-volume-equivalent token.

The token we create has superior value attributes to that of Bitcoin. This is because unlike proof of work protocols which are pure spent-cost manifest as transaction cost, our token constantly maintains value-efficiency by way of acting at the final unit of common purchase for the every cryptocurrency used to mine it initially. The way this works is that when a purchaser of the token contributes one of the qualifying cryptocurrencies (e.g. ETH, EOS etc.) to the smart contract, the smart contract stores this unit of value securely until all 21 million tokens are issued. At that point, the smart contract permits the holder of one of our tokens to exchange their token back for a pro-rate equivalent share of the contents of the smart contract. Irrespective of whether or not the holder chooses to enter into the re-exchange transaction at the end of the issuance cycle or not, there is a value durability conferred on the token as

a result of the potential stored value that exists on a per-unit basis in the token's smart contract. The token is called Monkey (MNY).

In addition to offering energy- and value-efficiency to Bitcoin mining, we enhance this product further with a discount premium token that offers the holder of the discount premium token an increased amount of MNY on a lunar monthly cycle. The discount premium token is called Coeval (COE). Every 30 days, COE holders are afforded the option of using their tokens to submit to the MNY smart contract and under certain circumstances that demonstrate that MNY is being heavily-mined by alternate tokens, to receiving more MNY-per-COE than they would for example by using ETH. This discount feature allows us to measure the amount of utility versus value being employed in the MNY manufacturing process which provides an excellent basis upon which to found a value-oriented super-structure whereby cryptocurrencies are afforded the opportunity of being considered mainstream investment products. In other words, the logical end result of this experiment is that cryptocurrencies will become integrated into the mainstream investment product portfolio of most asset management, private wealth management and other regulated financial services provider portfolios, thereby offering those who are invested in them significantly higher chances of benefitting from the powerful gains that they have shown in comparison to other, less return-sensitive financial products that by and large only benefit issuers.

## **2. The Economics of Recycling**

Recycling is a process that belongs to a system: reduce, reuse and recycle. The purpose of recycling is to convert waste into reusable utility. The first form of recycling appeared in 1031 in Japan, with the creation of repulped paper.

This was later extended in preindustrial times to metal coins. Most recently, it has been applied to fuel sources upon which economic utility is powered. While increasingly environmentally-efficient manufacturing processes exist with respect to paper, metals and other artificial products such as plastics, none has been more effective than the act of recycling at controlling environmental damage.

This is partly a result of dubious manufacturing claims (it is easy for any manufacturer to claim theirs is a more environmental approach to production) and a result of the simple observation that in the reduce, reuse and recycle system, reduction of natural resources damage is the first effect of a cyclical recycling system.

### **3. Cryptocurrency Mining**

Proof of stake mining protocol as proposed by King and Nadal claimed to consumed less energy in the manufacturing of new digital currencies by bypassing the requirement for external mining hardware in favour of online nodes run by proof of stake miners.

While this proposal dealt with the reduction aspect proposed by the green system, there was no reuse process involved. The lack of reuse would ultimately consign proof of stake to nothing much more than a technical trick.

For investors, proof of stake has been detrimental overall, despite the carbon emission reductions it has claimed to improve. An investment in the world's first proof of stake currency, Peercoin, pales in comparison to that of any proof of work currency.

Despite suggestions by Ethereum's founder Vitalik Buterin that the world's second largest cryptocurrency will move to proof of stake mining in 2018, there is no sign yet this is going to be the case. Other blockchains such as NEO and ICON have opted for hybrid stake-work systems which essentially defeat the environmentally-efficient purpose of proof of stake protocols.

Proof of value was introduced as a mining concept with Ether derivative Fueterium, but it remains by-and-large a fringe cryptocurrency manufacturing process. This is primarily down to the employment of proof of value in cryptocurrency-investment-specific transactions, with no external reference to wider socio-economic utility yet.

Proof of value at its core was really introduced with the advent of the Ethereum smart contract and the Initial Coin Offering (ICO). Still, proof of value offers the world the best possible compromise between these two undecided protocols.

In proof of value synthetic protocols, tokens are issued at different and increasing values as the smart contract is mined by means of an investor sending a separate cryptocurrency to the smart contract. The result is the effect of a proof of work protocol in proof of stake form.

We see the proof of value mining synthetic protocol as the basis for a potentially much larger innovation: proof of dimension. In proof of

dimension mining, a token is used as a method of payment for another token which is issued by a smart contract, and the proceeds are stored within the smart contract.

While stored, the investor has no control over the token and nor does the management team.

The smart contract is built in multi-token mining capability, enabling a whole range of investors to effectively use their existing method of payment as a way in which to hedge the unit of payment and diversify (and in most cases, increase) the payoff. At the end of the issuance cycle of all the tokens, there is a re-exchange function applied meaning that any investor can receive the pro-rate unit of payment for their token in the form of the underlying asset group by simply sending it back to the MNY smart contract. Once sent back, the token itself will be sent back to the original miner of the token while the underlying share of assets is sent to the token holder, creating in effect, a Fiat version of MNY that is usable by the original MNY smart contract miners. This will give the purchasers of MNY the incentive to mine the very final levels of the smart contract when prices are higher (although not significantly higher as a result of the randomized pricing of the last 4m tokens in the smart contract),

**FIG 1: COMPARISON TABLE**

	POW	POS	POV/POD
<b>System</b>	Hardware	Software	Code
<b>Type</b>	Coins	Coins	Tokens
<b>Economy</b>	High	Low	Very High
<b>Energy</b>	Dirty	Clean	Reuse
<b>Complexity</b>	High	High	Low
<b>Cost</b>	Spent	Invested	Reinvested
<b>Target (P)*</b>	>100%	<50%	100%

*\*Production*

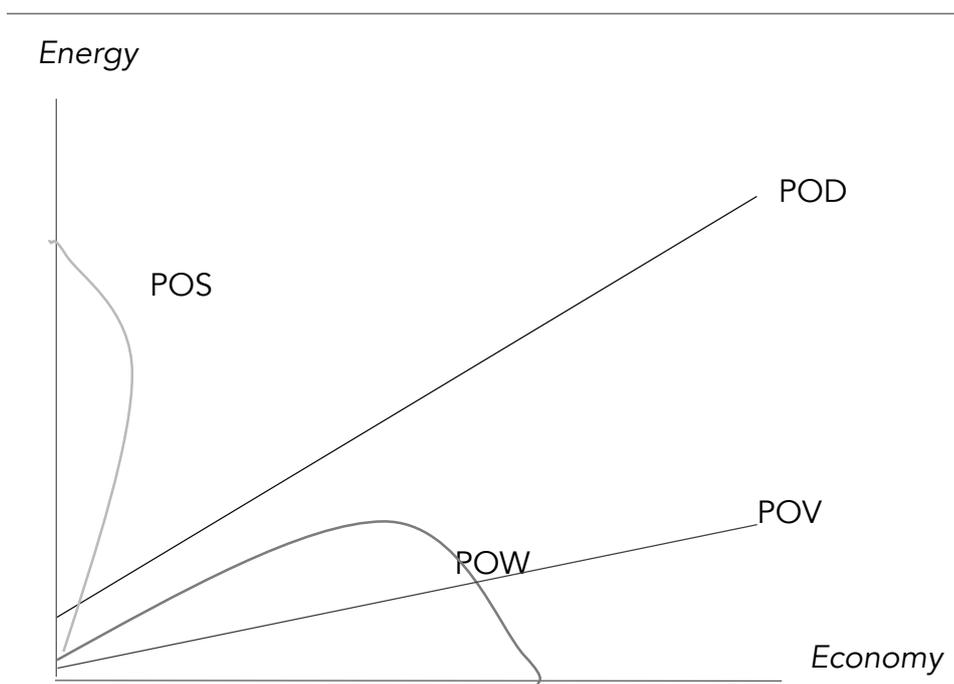
This mechanism of issued value along the lines of a proof of work cryptocurrency being reinvested at proof of stake costs in alternate ecosystem components results in two major benefits.

One, the value loss that is traditionally associated with proof of stake mining programs and the installation of master nodes which creates legal

complications in areas of the world such as the United States with respect to potential securitisation is bypassed.

In our case, we use exactly the same mining history data points as that of Bitcoin, creating an entirely synthetic Bitcoin cost structure.

FIG 2: PROTOCOL COMPARISON TABLE



Second, proof of work mining programs are still experimental and by no means complete. There are substantial risks with such protocols, the most serious of which is what happens as Bitcoin begins to show a lacklustre new coin issuance trend.

Because the increased cost of mining new bitcoin pushes the price of the digital asset skyward, for a decade now the world's largest cryptocurrency has posted 900,000%+ gains. When no substantial volumes of coins mined at increased cost enter the market however, this will begin to drag on the price of the digital coin.

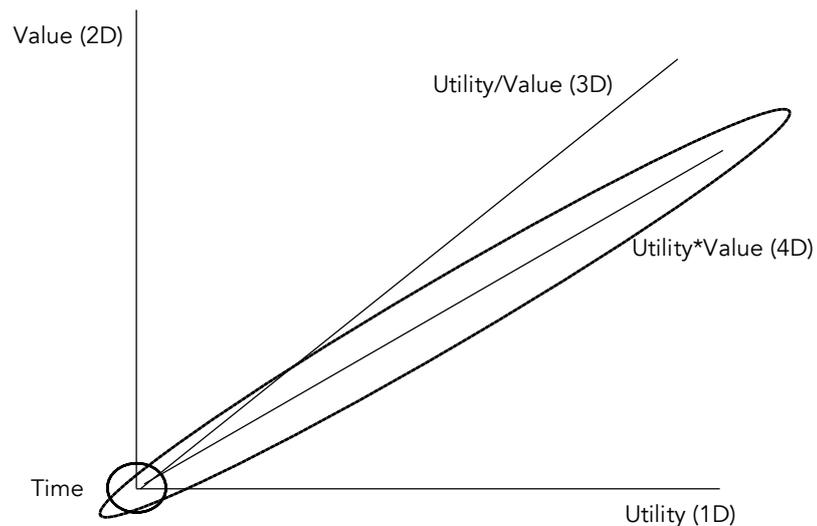
#### 4. Currency Dimensions

We call this new variant of POV synthetic mining by the label proof of dimension (POD) after the idea that there are within Decentralised Hedge Funds 3 dimensions of value and 3 dimensions of utility. This is

exceptional and may even be the first time that an automated software has ever enabled 3 equal dimensions of utility and value.

To understand currency value and utility dimensions we must consider first what a currency is used for. It is first of all used for the purpose of making payments. Thus, Utility is the first dimension of a currency.

FIG 3: CURRENCY DIMENSIONS



The second dimension of a currency we can consider to be what is received in return for the utility of the currency itself: value. In the third dimension of currency lies  $Utility/Value$ , or literally, the amount of benefit that is extracted from the Utility of the amount of currency that is being deployed. 3<sup>rd</sup> dimensional currency transactions govern exchange rates, the price-to-earnings value multiples of securities and other mechanisms of value determination that are in use in the financial markets in the present day.

In the fourth dimension exists almost the opposite equation which we experience far less of:  $Value \cdot Utility$ , or, in simpler terms, the measure of benefit (measured in utils) that is derived from the  $Utility/Value$  in the currency multiplied by the price (Value) of the currency being used by way of mechanism of representation for payment (Utility). The process of introducing this additional dimension to the currency framework has a time-dilation effect wherein value is concerned. This means that as time goes on, it multiplies at a factor that is at a right angle to present value.

A unit of payment such as a copper coin has multiple one-time, very brief, two-dimensional representations of currency value. Its value is present at the point of transaction after which period it is latent. A share has a slightly more value-enhanced rotation of this value equation so that the organic value within it is growing (hopefully) even as it is being stored as a mechanism for whatever future payment it makes (or receives in the form of dividends, as the case may be).

With 3D currency mining applications, such as that in use in the case of the DAHF, there is an additional dimension in play; the point where the unit of transactional value is used to repurchase its own unit of payment. At that point, the unit of currency is refunded in full even as the currency remains the property of the holder. This mechanism of value storage is very similar to what the US dollar looks like today, where there is no value underlying it any more, except for the value that was underlying it for a very long period of history.

In other words, the time wherein the value is stored in some way confers a transactional value on the currency and this process can be understood as one whereby the historical utility of the currency is thereby conferring present-day value, so that utility and value are multiples of one another rather than fractionally-related. (We can see this by judging that if there was a fractional relationship, then the present-day value – or hoped-for future value – would be in some sense splitting the utility that the currency provides. This does not happen in this case.)

We call them dimensions because while appearing to be opposite in many senses, the relationships between Value and Utility and Utility/Value and Utility\*Value are in no way binary. This is consistent with dimensional formations – while lying at odds to one another there is a non-binary complementary and even correlative relationship between the facets of a shape.

In summary, zero-dimensional currency is the asset itself without value; first dimensional currency is at the point of the supply-demand equilibrium (however hypothetical this may in fact be); second dimensional currency transactions occur at the point that a currency achieves a specific net asset value; the third dimension of value is where that net asset value's potential increase or decrease in the future is translated into present-day utility; finally, fourth dimensional currency is where the legacy of the currency's transactional value is in some way implied as a form of benefit available to the currency holders. In the fourth

dimensional instance, we have three dimensions of value (2,3,4) and three dimensions of utility (1,3,4) giving us the representation of a three-dimensional currency.

As a final note on this topic, we emphasise here that than anything else, sovereign governments rely on the fourth-dimensional status and three-dimensional appearance of their currencies to finance their objectives and to increase the amount of money they make every year manufacturing it. The decentralized hedge fund simply takes that same conception of value and reworks it on an automated structure to synthetically recreate a historical value legacy in the unit of currency MNY.

For this reason we are quite certain that government officials will not take kindly to the introduction of our decentralized autonomous hedge fund, since in theory, now anyone can pick a few interesting investments, assemble them as we have, and begin competing with mainstream investment advisors with virtually no skill or knowledge of investing at all. While we are not insensitive to the threat this poses major financial institutions and government departments, we don't have any sympathy with such institutions anyway.

## **5. Defining Metacurrencies**

Another way to summarize the decentralized autonomous hedge fund is by denoting what the instrument of utility – in this case, MNY – that it produces is conferred with. We define a Metacurrency as a Blockchain asset wherein external value is somehow present and multifariously represented within the utility of the token in an intrinsic sense.

Base value is important for Metas since one of the key distinctions of Metas vs. cryptos is their value-loaded or value-implied character.

For instance, if 1 ether was used to purchase a metacrypto note and the metacrypto note retained via smart contract some fraction of the ether – say, 0.1 ether – then it is unlikely that the metacrypto would fall below the value of 0.1 ether and if it did then the metacrypto note would represent immediate value to the purchaser.

Value-loading of the metacrypto note in turn therefore affects the values of the other Metas being traded on exchange because it provides a minimum value of price support upon the purchase of Metas via the implied value in the purchasing agent.

The way in which value runs within digital assets is not well understood by purchasers of such assets so we will take a minute to explain it.

When a bitcoin purchases an ether, the Fiat value of the bitcoin is a significant factor in determining how that purchase event affects the consequent value of the ether after the purchase. Imagine for example that 1 bitcoin purchases approximately 10 ETH, and now imagine the bitcoin is selling for \$20,000 / bitcoin.

The market capitalization of the ether is now \$20,000 higher after 1 bitcoin has purchased it. Now imagine that the bitcoin is only selling for \$10,000 at fiat value. The same purchase event has had half the level of impact on the pricing of the unit of digital currency it has been used to purchase.

Therefore, the base value of the underlying currency pair that is used to purchase the majority of digital assets is a very important factor in the value increase or decrease of those assets.

By implying a minimum value via the storage of some form of value in a smart contract, the base value of META is always maintained at a very minimum level.

## **6. Understanding the Third Currency Dimension of Technology**

To grasp what we mean here, think back to the first portable music player, the Sony Walkman. The first Walkman was released on the same day as Monkey Capital went to market its ICO: July 1. Except the year in which the metallic blue-and-silver Walkman TPS-L2 was first sold was 1979.

The product retailed in Japan for around \$150, which is anywhere from \$500 to \$800 in today's terms, depending on which country in the world you were in where it was sold. You can still purchase one of those first 30,000 limited edition Walkman models for roughly the same value, so as investments go, it's not great: while you haven't lost any money, a 0% return isn't going to buy you a Lambo any time soon.

As far as subsequent models go however, the Walkman's net return is dreadful. Check up the price for a standard 1980s Walkman on eBay and you'll find the product, which retailed up into the thousands of dollars in inflation-adjusted terms, is now less than ten bucks in value. While about 0.0075% of Walkman holders have broken even on their portable stereo investments then, the rest are more than 99% in the red.

And yet the portable music market has done nothing but boom, creating trillions of dollars in wealth as it has transited from cassette player to compact disc player to MP3 player, becoming nimbler, more versatile and more durable in each of its latest disruptive incarnations. (Walkman alone made nearly a trillion in inflation-adjusted terms.)

Look at who is making the money, however. It is not the purchaser who makes anything – 99.9925% of lost more than 99.3% of their money buying Sony's portable cassette player in the subsequent 3 decades. It is the manufacturer and the retailer, who are both capturing short-term profit margin spikes.

And so, it is with cryptocurrencies. The whole reason why tokens ascend so rapidly upon creation is for the same reason all tech products do: they are new and dynamic and you want to have them for that reason. Once you get used to them, their value fades. Their value dies completely once another shiny new technology comes along. Manufacturers of cryptocurrencies are the miners, most of which live near one of us, in mainland China. The retailers are the companies such as Coinbase, with billions in VC funding. Bitcoin will die, and just as for Sony and shopping malls, Mr. Miner and Mr. Wallet Exchange will remain merrily counting profits long into the future, well onto the next new thing by that time.

This is not to suggest that the investor cannot extract a handsome short term gain off speculating on the early launch of newly issued cryptocurrencies. That they most certainly can do.

But to talk of Bitcoin as a sensible long-term investment in which families ought to have niche portfolio holdings for the kids' college fund is sheer foolishness and amateurism.

We are not in the camp that believes cryptocurrencies are worthless at all. Rather, we are in the camp that believes that very soon, if not already, the maximum amount of value that could have been extracted from Bitcoin will have been and there will be no point in holding it any more. That is why none of us owns BTC. The King will one day be dead and we will need an heir.

## **7. Introducing a Fourth Dimension of Technological Currency**

Because of the traditional depreciation of software innovations being at odds with the durability of currency itself, we must in some way introduce

a fourth dimension of currency for it to have a long-term chance of success. This is not a dissimilar or even separate problem from the one the USA faced in the 1970s, when the country's own growth was essentially undermined by the constraints of supply-related increases in utility of oil in the rest of the world reflected in a repressed gold price, meaning that the dollar couldn't be supplied in high enough quantity to satisfy the nation's back-then aggressive global manufacturing ambitions.

Introducing the fourth dimension of currency, Utility\*Value, is what eroded that slope for the United States economy. In the same way, the cryptocurrency economy is presently far too reliant on one currency, Bitcoin, which has an intrinsic value that is far lower than the utility that can be extracted from the Utility/Value equations in Bitcoin's third dimension. Thus, by creating the decentralized hedge fund, we in fact install on the Blockchain a range of renewed value exponents as a result of tying up alternate methods of payment within the payment cycle of MNY.

## **8. Background To Monkey Capital**

Monkey Capital was launched as a decentralised hedge fund in July 2017. At the time, there were two components to the decentralised nature of the fund in the form of two digital assets, those being Coeval (COE) and Monkey (MNY). COE was issued by DMH&CO with an issuance value of \$2 as a token which would purchase 10,000 MNY at a forthcoming Initial Coin Offering (ICO) to be held on August 8, 2017. The object of MNY was that it would be an entryway into the decentralised fund's portfolio of assets which would over time grow exponentially in size, without ever being in and of itself a security.

The reason we were opposed to securitisation of decentralised assets from the very start was simple: securitisation runs against the whole ethos of decentralisation, which is rooted in management-controlled value parameters. The decentralisation of returns has led to some almost unbelievable wealth-creating effects.

To list the top 3 assets: Bitcoin began trading at a price of 10 cents in 2010 and is now around \$9,000, representing a return of 9,000,000%; Ethereum was first offered at 14 cents in 2014 and can now be readily purchased or sold 430,000% higher at around \$600 each; Ripple began trading at half a basis point (0.005 cents) in 2013 and currently sells for 90 cents per XRP, representing a 17,900% gain with around 15% of that having materialized in the past 12 months alone.

When compared alongside securitised returns, there is almost no argument in favour of adopting the latter as a comparable investment return asset class, let alone including securities in the same domain of value as decentralised ones. If securities are included among Blockchain assets, you can expect to see similar returns to those that are presently traded elsewhere on securities exchanges.

During 2017, the top 3 performing stock exchanges comprised Argentina's Merval Index, up 77%, The Nigeria All-Share Index, which was 42% higher and Turkey's Borsa Istanbul, with 42% improvement over the previous year. Even if we average these three top-performing indexes and multiply the cumulative returns over the same time period as for our digital asset comparison pairs (which is optimistic at best) there is nowhere near the same sort of return profile among securities assets as there is for decentralised ones.

We are dumbfounded when we hear that teams are lining up to offer dividend-enhanced securities on the Blockchain, and that customers actually want such products. The only affect that putting securities on the Blockchain will have is to lower the average return by a massive factor, so that digital payment utility value as a market becomes virtually unrecognizable and fails to do what it does so well today, which is make investors incredibly high returns without the requirement for a large upfront capital investment.

At the same time, there is a distinct consciousness over the lack of intrinsic values that are represented among digital assets. The concern over the lack of real, tangible value is both understandable and wise. If the only area an asset is able to derive its source of value from is in its core utility, then ultimately it becomes nothing other than a commodity that exists with zero dimensions of additional currency value other than its own specific function(s).

For now, the gamble is that digital markets will grow exponentially year-on-year, and thus the current premiums on digital assets will be justified by the future demand for the utility of such assets, but this is a gamble that, very much like a ponzi scheme, targets over 100% efficiency. In other words, betting on digital payments as a source of continually-increasing value by themselves is 100% sure to result in a catastrophic loss one day.

With both these arguments in mind, what appealed to us was the idea that we could somehow take the best from the exponentially-growing digital payments market and the best from the world of products which have tangible values, and formulate a new sort of asset class that would somehow work exactly like a payment tool and thereby remain non-securitised and unhindered by the continual interference of senior management teams and Board directors, while benefitting somehow from the soundness of underlying value that was sourced outside of the world of digital payments upon which these hybrid assets would draw their own values rooted in tangible values.

Brazen as we were, we seriously miscalculated the amount of work involved in achieving such an aim, let alone establishing a decentralised pool of such assets which digital payment asset holders could access on a whim.

The ICO of MNY was subsequently cancelled to a degree of angry by overall supportive investors. In order to buy time to find the potential solution while still keeping the market we had prematurely fostered active, we offered for sale a variety of digital assets for sale which we advertised with the proposed benefit of such assets becoming ultimately convertible into a brand-new COE/MNY token combination. Needless to say, we ended up trying the already shattered patience of the last of our remaining supporters beyond an acceptable threshold. It was not the finest moment in management history.

Meanwhile, however, as we wound down the previous market we had clung onto over a period of 6 months, we sought to find the answer to the problem we had set out so brazenly self-assured would take us just a few weeks to discover: how is it possible to represent real, tangible, growth and income-supported value on the Blockchain without tripping up over securities regulators?

To date, no one has managed to solve that particular puzzle; instead, eager to enhance their payment utility tokens with real value, many ICOs offer all sorts of dividend-equivalent features within their digital asset promotions, most of which are quite illegal to offer in the places they are advertised and sold.

We emphasize here that we had no aversion to dealing with securities regulators other than that they were not responsible – and are still not

responsible – for overseeing the sorts of assets we were seeking to create and invest in.

The sorts of assets we had in mind still had the return profiles of Bitcoin, Ethereum and Ripple; they just happened to share the value foundations of Apple, Microsoft and Berkshire Hathaway as well. The plan of allowing investors to cumulatively participate in a passively-administered decentralised (digital asset entry-based) fund was looking a lot harder than we at first imagined.

For a short while our dreams of creating a decentralised hedge fund looked like wishful thinking and worst of all, wasted time and money. However, as we began working with some financial advisors on various side projects in London, we began to formulate a way in which such assets could be constructed.

As we proceeded with this new line of enquiry, we realised in so doing that we would need to build a marketplace for these new hybrid payment utility-income value derivative assets in order to maximize their potential.

We realised that what we had to do was build a marketplace for our decentralised fund to invest into – after all, without a market, how does the fund make money?

We called our new value-loaded digital assets Metacurrencies, or three-dimensional currencies, due to their dual status at both digital payment utilities and digital assets that held a form of referenced income value. We wrote a paper. No one bothered reading it except the lawyer, who read it cover to cover. That was usually a bad sign.

Amazingly, none of the lawyers complained. We knew this was as good a starting point as we were likely to encounter any time soon. We also knew we by now understood the process inside-out to a somewhat unhealthy degree.

“Basically, what we are doing is building the closest thing to a security without it being a security,” explained one of our legal advisors to a fellow lawyer in one conference we sat in. “What is it then?” asked the fellow lawyer in response. “That’s a very good question. It’s a cryptocurrency with actual value,” replied our legal eagle. We were finally getting somewhere.

As we made headway in laying the foundations of the marketplace we would build for our Metacurrencies alongside our slowly-expanding team of advisors, partners and other industry and market professionals, privately the Founders circled back to the original aim of creating a decentralised hedge fund.

After all, a decentralised digital capital asset market was beginning to take shape now; a decentralised hedge fund was surely entirely plausible.

Partly, we confess, this circling back was something we were forced to do as a result of having so many now exasperated, dispirited or plain disinterested investors to make good on from our somewhat ill-advised entry to the cryptocurrency market from the year before.

## **9. Value Loading**

Value loading is a term we use to describe the process whereby an alternate, non-Blockchain form of value is ascribed to a digital payment asset. The earliest example of value loading among Blockchain assets is probably via BitPremier. BitPremier is a site where sellers of real estate, aircraft and other luxury high-end assets offer such assets for sale in Bitcoin. By employing Bitcoin in the role of acting as a purchasing agent for such products, the value of such products is in a sense loaded onto the Bitcoin Blockchain. Value loading in its very nascent form is probably what contributed to the massive ascent of Bitcoin's price.

By loading another external asset's value onto a digital payment asset, there is no securitisation of the cryptocurrency, even though there is considerable price reference created in the process of doing so. After all, if Bitcoin is used to purchase multiple houses in California, the value of California real estate is in a sense reflected in the price of Bitcoin. This is especially so given that Bitcoin has only 21 million units in circulation. Therefore, simply by offering assets in abundance for sale in return for a limited-supply digital asset, there is a tangible sense in which the value of the assets being bought and sold with that digital currency are affecting the value of the digital asset being used as a mechanism of payment. This process of value loading is what underpins the Metacurrency values in a way that other cryptocurrency assets are not supported.

## **10. The MNY Smart Contract & Discount Premium Offerings**

After serving as the exclusive purchase option that is used for the purchase of MNY at the MNY ICO, COE goes on to act as a discounted purchase option for MNY. The way that we work out the value of the

discount offered has to do with the way in which we calculate the price of MNY that is sold.

When MNY is sold, because it is presented in USD, at the values that Bitcoin was sold for historically, the MNY smart contract figures out which token is being used to make a purchase and converts it into a dollar value that is manually-adjusted according to the day's price of that token. For example, EOS may have a value of \$4 per EOS on Tuesday and \$8 per EOS on Wednesday; in such a case, 0.5 EOS would purchase the amount of MNY on Wednesday that it would have on Tuesday (assuming no one had purchased new MNY from the smart contract the previous day, or else the price may have risen, offsetting the balance).

The COEMNY exploits this dollar-averaging function of the smart contract once every 30 days to factor in a purchase discount for 2 days a month. The purchase discount is based on the amount of MNY remaining unsold versus the amount of COE that remains unsold.

Considering that MNY has a total supply of 21,000,000 MNY and COE has a total supply of 100,000 COE, there is a COEMNY equivalence ratio of 210. We use this equivalence ratio to factor the COEMNY discount and work out what value COE will have at the point of purchasing new MNY on the discount days thus:

$$\begin{aligned}(\text{MNY}/\text{COE})-(210) &= x \\(x/210) &= y \\y+\$1 &= z\end{aligned}$$

where  $z$  is the price of COE that is used to effect the purchase of MNY on the discount premium days of the month. The discount premium then is of course  $y$ .

Discount premiums more generally – not only in the case of COE – are something that we may use to stimulate the use of certain cryptocurrencies that we wish to attract into the decentralised hedge fund at various points in time.

For instance, if we were given sufficiently reliable indications that ICX was due for a heavy push skywards, we could manually adjust a similar calculation which would stimulate purchases of MNY by this asset. Because the asset is underlying the eventual re-exchange value of MNY, therefore the MNY itself would ultimately have a greater (fourth dimensional) value component to it.

## **11. The Decentralised Hedge Fund**

Now that we understand the basis for Metacurrencies – that they are used in the cases of the purchase of high-value assets – we can begin to see how a decentralised hedge fund composed of underlying Metacurrencies can viably be created.

Simply, by issuing a token that has continual claim over a basket of assets, in this case cryptocurrencies that purchased them, and combining the token with the sale price of Bitcoin's price history, the decentralised fund is producing value at an enormous rate but it is decentralised and completely non-securitised. What we have just described is exactly the product that was offered to a group of excited investors in July 2017: wealth in perpetuity for the everyman character, and a way in which value accrued over time irrespective of the fund's market value.

The way in which the decentralised hedge fund is set up is identical to the way in which it was sold at the outset. There are two tokens, COE and MNY. COE can be used to value-mine MNY. After that point, it is returned to the MNY holders. Needless to say, this puts tremendous value appreciation potential underneath both the COE price in the early stages of the value mining cycle and the MNY token in the later stages of the cycle.

COE is purchasable either on market or at values commensurate with the ETH price history. MNY is either purchasable on market or at prices resembling the BTC price history. Before MNY is completely issued, or at roughly the same point in time before it approaches complete issuance, but not after that point, a sister decentralised hedge fund will be established and COE will be used to value mine the sister decentralised hedge fund.

### **Conclusion**

Metacurrencies are currencies with three dimensions of value and three dimensions of utility clearly installed on their transaction schedules. They are a major step in value innovation of digital assets. They provide the purchaser with the assurance of real base value that can be obtained with the unregulated non-securitised asset of hyper-inflated value that they are hoping to extract unusually high returns from.

Ultimately, what resulted from our efforts was one of the innovations we are most proud to say we ultimately succeeded in bringing to market.

Despite the odds, the birth of non-securitised asset structuring on a digital distributed and the concurrent establishment of unregulated, non-securitised asset management functions via the same category of decentralised asset class concurrently took place in the start of the second quarter of 2018. We may have been a little late to get to the party, but then again, we cannot help but notice either that we are still the first to have arrived here.