Digital Note Values & Synthetic Utilities

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July, 2018

ABSTRACT: Cryptocurrencies have the potential to offer investors unrivalled returns as a result of their unique value-utility properties such as limited supply quotas and exponential payment utility. In the past decade, we have all seen the effects of this as Bitcoin has surged more than 1 million percent and other cryptocurrencies such as ETH and more recently, XRP, have followed similarly. However, what is less understood is that the invention of smart contracts by Vitalik Buterin in 2015 has now given rise to a potential form of value inflation that is not covariant on market hype or randomness. Rather, we are in a stage of potential Blockchain evolution now wherein developing cryptocurrencies with more than 1 million percent plus value inflation events are not just achievable but can be continually repeated and sustained. I show how by synchronising basic escrow functions and token issuance cycles between smart contracts how it is possible to develop what is in effect the world's first inflatable form of cash value. I detail how a synthetic income swap utility employing the smart contract function enables any calculation of a cryptocurrency asset via standard discounted cash-flow mechanisms, in effect, putting cryptocurrencies on par with securities, real estate and any number of income-generating assets. In doing this, I identify the first ever synthetic income cash instrument. I answer specific questions about the veracity of the huge performance gains inherent in cryptocurrencies and show how they are non-pyramid-biased and are in fact, entirely market randomized returns similar to those of any others in most investment products. Finally, I show how this non-securitised form of cash synthetically mimics core Blockchain functions and coding in value form, which may be of significant consideration with respect to innovation trends on Blockchain in general.

I. CALCULATING FINANCIAL VALUE FOR BLOCKCHAIN ASSETS

1. Introduction: The History of Money

Money as we know it today has been a feature of our world since around 800 BC – 600 BC, when the first coins were minted in Turkey between the reigns of King Alyates II and Queen Hermodike II. Coins were first minted with the exact amount of metal stipulated and only later during Roman times did coins become regularly debased and did seigniorage become a feature of the manufacture of cash instruments. Separately, the Chinese Emperor Qin Shi Huang introduced a copper coin in about 200 BC which was made with a hole through the middle of it, affording it additional mobile utility by way of being able to be carried on the back of horses via a single string that ran through the coins' center as opposed to in much heavier ceramic pots. While the Chinese were some centuries late to adopt the concept of coinage versus western societies, their invention of the paper note in the 7^{tt} – 11^{th} century predates the earliest form of paper money in Europe by around half a millennium. Around 1700, banks in England began independently printing banknotes which could, once brought into the bank, be exchanged on the spot for a pre-agreed amount of silver. Thus, in their original form, bank notes were nothing less than securities according to the contemporary definition – that is to say, promises to pay the bearer a fixed agreed amount of money on a certain date in the future.

Notes were designed with the intent of being able to represent larger sums of underlying base metal and to be more convenient to draw on. Later they became effective fundraising instruments for British banks, since customers would seldom exchange their notes for metal and thus a greater amount of value could be issued than was held in vaults by the banks.

2. Digital Notes: The Evolution of Cryptocurrencies from Tokens to Proxy Coins

Cryptocurrencies began with the creation of Bitcoin in 2009 by a pseudonymous programmer named Satoshi Nakomoto. All cryptocurrencies from the time of Bitcoin up until the Ethereum Virtual Machine went live in 2015 were referred to as digital coins. When Ethereum was invented, the creator Vitalik Buterin proposed a method of digital currency manufacture on top of its protocol whereby tokens could be constructed by entering a few lines of code into the Ethereum Blockchain and paying the miners in ETH, the network's local currency, for verifying the creation of the tokens. In economic terms, token money is money where the unit's face value exceeds the cost of production of the unit.

Nearly all money today in circulation can be considered token money. Blockchain Tokens bear a remarkably similar relationship to digital coins in that with the minting of a digital coin, the face value may exceed the cost of production according to the market but it is still in part determined by the electricity cost in producing it. With digital tokens, cost of production is so negligible that sale price is always greater than production cost no matter what.

Given that Blockchain is now one decade into its evolution as a financial technology (albeit it even if it is not yet one adopted by the major part of society), it becomes only logical to ask – what are the characteristics, the functions and what is the utility of digital notes?

A digital note ideally ought to answer a question commonly asked since the gold standard was abolished by President Nixon in 1972 and one which you hear commonly asked on Blockchain today. That question is: what is the real value property of a unit of currency?

Given that notes began life as promissory paper, we can easily simulate such a scenario without necessarily securitising the product by enabling a re-exchange of the token for its original unit of purchase as a result of the smart contract's ability to escrow sums of payment for extended period of time. For example, if someone pays 1 ETH for a token we create on the Ethereum network, we can extract a fee for the manufacturing process and innovation of the token and subsequently we can allow the remaining portion of the ETH to be held securely in the token's smart contract until a certain date in the future when it can be re-exchanged for the token that it was first used to purchase.

If we alter the algorithm between issuance of the tokens and re-exchange of the tokens with the ETH in the smart contract, for instance by progressively issuing less tokens per ETH entered into the smart contract at point of issuance and then equalising all re-exchanges of tokens and underlying cryptocurrency in the smart contract on a fixed like-for-like basis, the result is one whereby a leverage effect in terms of the price of the initial unit of digital currency used to pay for it is created by the holder commonly getting back more ETH than they submitted initially. It was on this basis that we first created Futereum in January 2018. Thus, Futereum can be considered the world's first digital note.

At heart, a digital note is nothing more than a proxy digital coin, or a proxy digital token, being the unit of token money value that is employed in temporarily representing the digital coins in the token's smart contract prior to re-exchange. Because digital notes represent actual

cryptocurrencies that they are in some sense categorically themselves, as opposed to an alternate form of value such as when a paper note represented a pound of silver, the effect is one whereby digital notes are able to be employed in leveraging and artificially magnifying potential investment returns for digital currency investors across a broad range of digital assets, and employing a whole series of highly-imaginative cost-of-sale formulas that ultimately affect the price of the notes themselves. In this way we are the first to have identified how to engineer not just utility but also value on the Blockchain.

To summarise, a digital coin is a unit of cryptocurrency attached to the creation of a specific Blockchain. A digital note is a smart contract utility-enhanced token where the token is used by way of being ascribed a proxy value for the underlying value that is stored inside the smart contract for which the token is ultimately re-exchanged.

3. Value Reflection & Value Loading In Digital Notes

Digital notes can be expressed in the form of any token with a smart facility where the escrow function in the token's smart contract or similar facility represents a possible storage place for any sort of crypto value for a period of time. Digital monetary instruments, as for any monetary instrument, rise in value the higher the value of the goods they purchase rise in price. This is not a well-understood process, but it is a process I have identified in both real and in digital economies. It is easier to identify in digital markets due to constrained supply of digital assets, making such trends more noticeable. We can call this scenario where a type of value is conferred onto the currency as a result of the currency being able to purchase an asset of a comparatively higher price value for what it is: *reflection*.

Value reflection is still not very well understood. An example is where 100,000 tokens are enabled to purchase 100,000 shares of a company at the value of $5 per share. In such a case, the tokens would immediately have $500,000 of *reflected value*. If they did not, someone else would simply purchase the tokens under that sum and then use them to purchase the shares which they would sell for a marked-up price to make an arbitrage profit.

When a smart contract such as Futereum holds Ether inside it, the value reflection of the ETH reflected on the price of the FUTR or FUTX digital note is essentially internally-reflected value that is somehow part of the character of the digital note. The process by which this value reflection comes about however does so slightly differently to that of most currencies, for it is only created at point of purchase. Thus, value loading is the term we use to describe the moment when ether (or whatever other digital asset is being employed as the unit of purchase) is sent to the smart contract, safely-stored there and where the newly-issued digital note is simultaneously sent from the same smart contract to the purchaser with the additional utility of being re-exchangeable at some point with a greater or lesser amount of that initial purchase asset.

4. Intrinsic Value of Digital Notes

Digital Notes have an additional dimension of utility to most cryptocurrencies in their potential for re-exchange as units of proxy digital coinage with the original purchase asset stored in the smart contract. As a result of this additional dimension of Utility, digital notes also have an additional dimension of value that very significantly makes them far more conventional monetary instruments than standard cryptocurrencies. This is because whereas valuing most cryptocurrencies involves using a variety of experimental formula and "best-guess" approaches, valuing digital notes is no different at all to valuing any investment is. When

undertaking an investment valuation, aby far the most common approach is to use a discounted cash-flow analysis to arrive at a net present value of the asset being valued.

The formula for calculating DCF for an asset value in present terms that is three years into the future from now is expressed as follows:

$$PV = CF_1 / (1+k) + CF_2 / (1+k)^2 + CF_3 / (1+k)^3 + [TCF / (k - g)] / (1+k)^{n-1}$$

where PV = present value, CF_i = cash flow in year I, k = discount rate, TCF = the terminal year cash flow, g = growth rate assumption in perpetuity beyond terminal year and n = the number of periods in the valuation model including the terminal year.

Presently, no digital asset can be valued this way as there is not an expected income receipt from a cryptocurrency, since its utility is purely that of a payment utility. Indeed, prior to the advent of cryptocurrencies, which due to limited supply quotas, tended towards big increases in value as a result of a more exponential demand function than availability permitted at equilibrium value, it was never imagined that currencies themselves would resemble income assets. Currencies prior to cryptocurrency innovation were merely mechanisms with which to pay with things for, and were only materially worth speculating on the direction of against one another by applying substantial (1,000% in many cases) portions of leverage.

With digital notes, however, there *is* an income receipt that is expected at some point in the future. This income receipt while not specifically a classifiable dividend or such is nevertheless manifest in the form of a re-exchange of the digital notes with the original units the notes were purchased with.

For example, when we purchase 114 FUTR for 1 ETH while the Futereum smart contract is selling in the first of ten tiers, by the time the exchange of all FUTR and all Ether takes place, assuming that the total number of tokens that count be issued are so in year two, then we would be able to value the FUTR's net present value discounting the asset at a comparable rate of return we might achieve in the underlying asset.

So, let's assume that ETH is $500 today, and that I expect to receive 8x the amount of Ether from the Futereum smart contract as per the realistic probability of doing so if all the tiers of the smart contract are sold out somewhere in year two. Further, I assume that ETH has risen to $2,000 by three years' time and that the growth rate going forward is 35% (around half). The Futereum smart contract will not accept any re-exchange until year 3 if that is the case. Further, I estimate that I make around 50% profit per year trading comparable cryptocurrencies. Therefore:

((-500)/(1+50%))^1+(0)/(1+50%)^2+(4250)/(1+50%)^3+(1,687/50%-25%)/(1+50%)^3-1
+($2000*8/50%/35%)/(1+50%)^3-1
*8
= $4717.50

The result is that the value I have obtained from the Futereum smart contract's functionality is $4717.50 per Ether, representing what is a time-adjusted equivalent present value of an additional $4,267.50 when Ether is in the form of a Futereum digital note.

Presciently, the DCF formula can be used to certify whether holding the actual underlying asset or whether purchasing whatever digital note proxy coin equivalent is a better bet. For instance,

assuming that the appreciation of Ether is expected to be around 1000% per year for the next 3 years then:

(-500)/(1+1000%))^1+(0)/(1+1000%)^2+(50000)/(1+1000%)^3)+(50000/50%-25%)/(1+1000%)^3-1
+($45,000/1000%/100%)/(1+1000%)^3-1
*8
= $127,495

In this case, my expected value for Ether in 3 years' time is $50,000, with an additional $5,000 a year in future growth since I discounted the growth down by 10x after the realization of the investment and since Ether was growing at a rate of an additional 1000% per year during the invested period. The value at which I invest my $500 is enhanced with thousands in additional capital once the Ether is inside the Futereum smart contract as we can see. This means that to make the same sort of return as I could expect to make using making Futereum digital notes I would need to have an extra 200 times the capital I do today! Such a scenario is not unrealistic in venture capital investments, doubling the potential excitement for such digital note products.

Clearly, the ability to calculate currency values on the same basis that we do income-generating assets is a unique and unchartered innovation prospect.

The flexibility of digital notes to make permissible discounted cash-flow valuations of cryptocurrency utility is perhaps the most exciting aspect of the smart contract build in terms of wider application to the investment world, for in allowing such valuations to be performed, digital notes can be compared on a like-for-like basis directly with all sorts of investments, such as real estate, stocks, bonds and others.

Further, such investments now that they have a discounted future value based on a specific income ratio equivalent, can be ascribed multiples for trading, in the way that securities are valued via the business cash flows.

Remarkably, all this is made possible without securitizing a single portion of the digital currency unit as well, inviting the possibility for significant levels of disruption in equity and securities markets henceforth over the next few years.

5. MNY As a Digital Note

MNY is a unique type of digital note as a result of its *loaded reflected value* attributes. MNY receives FUTR and FUTX as a form of payment and is made available for sale according to a price history identical to that of Bitcoin's historical trading cost multiplied by the value of one FUTR and/or FUTX per every $10 expenditure in Fiat terms. This results in a number of different scenarios.

First of all, MNY is usually either cheaper or more expensive to purchase on an intrinsic basis in either FUTX and/or FUTR at any one time and/or depending on the amount of MNY an investor is seeking to purchase, and rarely are the two likely to compare in terms of true value. Unless both currencies are mineable via ETH at exactly the same level at the same point in time, depending on the amount of FUTR an ETH holder is looking to purchase via smart contract and/or on exchange, four purchase alternatives are possible:

1) Purchase FUTR with ETH via smart contract and mine MNY
2) Purchase FUTX with ETH via smart contract and mine MNY

3) Purchase FUTR with COE (or another cryptocurrency) via exchange and mine MNY
4) Purchase FUTX with COE (or another cryptocurrency) via exchange and mine MNY

MNY receives FUTR and FUTX as a unit of purchase. FUTR and FUTX are received as a unit of purchase for ETH. Therefore, MNY is a "proxy of a proxy" for ETH. The result is one where at the end of 21 million units of MNY issuance, all MNY is equally exchangeable for a lilke-for-like percentage sum of FUTR and FUTX that is stored in the smart contract.

Because FUTR and FUTX both store ETH in their own smart contracts, and yet much of the ETH that is stored therein is likely to become unswappable for a long period of time as a result of the time that the ether proxy spends in the MNY smart contract (and is therefore non-exchangeable with ether for that period) the amount of ETH per FUTR and per FUTX is likely to increase a lot during the period that FUTR and FUTX are in the MNY smart contract. Thus, at the point of re-exchange, which is to say, at the point when MNY switches for the FUTR and FUTX distributed share that was used to purchase it, the amount of ETH per FUTR/FUTX received per MNY could be much greater than the anticipated 1 ETH / 34 FUTR average that is currently the case in forecast Futereum outcomes. In fact, it may well be the case that more than 1 ETH per 1 FUTR and 1 FUTX is the resultant exchange amount. Either way, with 1 MNY being exchangeable for approximately 80 FUTR, the resultant outcome whereby even the highest level of value obtainable on a per-level / cycle ratio, wherein 1 ETH is the cost of 2 FUTR, the ROI for all MNY sales is net positive.

Therefore, if we want to calculate a very simple net present value for one ether invested in either FUTR or FUTX at the point that Futereum token is invested in MNY the calculation on a discounted cash-flow basis is:

((-500)/(1+50%))^1*80+(0)/(1+50%)^2+(4250)/(1+50%)^3+(1,687/50%-25%)/(1+50%)^3-1
= ($1332.26*40 FUTR/ETH)/(1+50%)^3-1
= $15,788.75

This exponent on this calculation shows the power of the MNY mining tool when used in conjunction with the FUTR/FUTX tokens. Specifically, 1 ETH with the value of $500 has a net present value automatically, merely by positioning of the FUTR into the MNY smart contract, of over $15,000. The result is a net present value gain of 29,000%, and this is discounting at an aggregate compound rate of 50% a year, an incredibly unlikely event in and of itself.

6. Crosschain Applications

Aside from the Futereum and MNY smart contracts, we have set up an exchange called Yoshiee. Yoshiee features a number of pairs, both internal to the cryptocurrencies we have designed and external. A group of 16 of the top cryptocurrecnies are pitted against one another in a series of 8 pairs; each of the components of these pairs are then listed against MNY. MNY is listed against tether, a controversial USD proxy issued by Bitfinex.

Although not likely to be backed by USD as the exchange claims, nevertheless Tether functions as a liquid proxy for USD and thus is an acceptable Fiat substitute here for investors who want to sell MNY early and cash out into USD. COE, a token manufactured principally for the purpose of paying staff and early investors, sells against FUTR and FUTX in order for such investors and parties to be able to easily access MNY. Note that the FUTR and FUTX sold here on exchange is already-mined by another party via the Futereum smart contracts. As a result, COE has a very limited supply with a variable cost increase derived from market sales

of the asset. All COE is premined and stored in a secure foundation wallet. This aspect of COE whereby the entire currency is premined serves as an advantage for stimulating purchases of MNY and/or FUTR and/or FUTX at any time where liquidity in either asset may be more scarce.

One of the major features in the coming years of Blockchain innovation is the development of other ex-Ethereum Blockchains as standards in and of themselves. The variances in core utility between these various Blockchains is likely to be very slight, with by far the bulk of utility remaining very much the same. Indeed, almost every industry competition comes down purely to a value war of some kind ultimately, be it in the fields of automobiles, airlines or architecture. We should not expect it will be any different then with Blockchain innovations.

Despite the magnificent prospects for alternate utility, no Blockchain is geared toward any sort of specialised utility whatsoever. This implies even more that a value war of some kind is on the verge of coming into being. Digital notes will help on several fronts with such value wars: they will increase the value proposition of alternate Blockchains by retaining supply off the tradeable market in the smart contracts of the notes themselves, they will help investors to more accurately identify cross-chain values and locate where those values are identifiable as cheap or dear based on future expected returns, and they will give the cross-chains a utility outside their core payment utilities. Indeed, we have successfully translated the Futereum smart contract onto the QTUM Blockchain thus far, and there is no performance distinction to date.

II. UNDERSTANDING THE ROLE OF SYNTHETIC UTILITIES

7. Summary of coins & proxies

FUTR, FUTX: Digital Note (Synthetic Node)
MNY: Digital Note (Synthetic Blockchain)
COE: Digital Note (Synthetic Sidechain)
QUTR, **QUTX**: Digital Crosschain Note (Synthetic Crosschain Node)

8. Digital Notes

DNs involve the synthetic application of payment utility via smart contracts for one or more digital tokens combining to produce a natural hyper-inflation of value. By combining and crossing over various token-release algorithms it is possible to create a number of value events that, once combined, produce an extraordinary increase in gross value over the amount of value initially invested over a very short space in time. This is the primary utility of DNs.

9. What happens to 1 ETH invested in FUTR and MNY Digital Notes?

1) 1 ETH = $450. This is invested into the Fueterum smart contracts (either FUTR or FUTX) and produces 114 FUTR or 114 FUTX (on the first mining tier; soon it'll be 89 FUTX in return as the first mining tier is nearly used up!) That is $3.94 / FUTR or FUTX!

2) After that, use FUTR or FUTX and send it to the MNY smart contract. The MNY smart contract mines at roughly the historical cost of BTC. In the example going from the first MNY tier, we get in return for 114 FUTR, which purchases us 5579.43 MNY. Therefore, we have spent 8 cents per MNY in this transaction. Half the FUTR you sent is stored in the MNY smart contract with the other half paid out as part of a feemine. Therefore about 56.5 FUTR is stored in return for your MNY, giving your MNY an

intrinsic value of around 4 cents / MNY at the point of purchase (because it is backed by half the FUTR you paid in the form of a potentially swappable asset).

3) As MNY synthetic mining continues, the average cost of MNY increases a lot, meaning more FUTR and more FUTX loaded with ETH in their own smart contracts begins to build up, increasing the average intrinsic value of MNY.

4) At the end of the 21 million MNY issuance, all MNY swaps back for all the FUTR and the FUTX in the MNY smart contract. The rate at which the MNY swaps back for FUTR is about 80 FUTR per MNY. Therefore, you now have 446,355 FUTR in your possession after you have swapped your 5579.43 MNY.

5) Now, the 446,335 FUTR has an increasing amount of ETH stored in the Futereum smart contract. We don't know how much ETH will be stored in the Futereum smart contracts, but approximations based on timing events indicate that around 0.25 ETH per 1 FUTR is a likely amount. The likely worst case possible event is that 0.03 ETH per 1 FUTR will be yours (almost certainly it will be higher). In this worst case event, your total ETH after you have swapped FUTR into its smart contract results in 13,525.30 ETH in return for your 446,355 FUTR.

6) Assuming no increase in the price of ETH at all, the return in USD with ETH at $450 is $6,086,387. This represents a net return of 1,352,430%!

10. What about later-stage miners? Are they penalized to subsidize the earlier entrants?
The first thing that strikes you about any return of over one million percent is the potential for there to be some sort of Ponzi-like quality to the value production process. However, when configured correctly, there is no Ponzi value creation process in play at all. How is this? Simply, because of the combined use of the Futereum smart contracts (there is either FUTR or FUTX that can be used to mine MNY) and the MNY smart contract, both of which are releasing tokens according to different algorithms, on top of the fact that prices vary according to differing values of the underlying coins – in this case, ETH – there is every chance that a later-stage miner may be able to obtain better value than an earlier-stage one.

To see this illustrated, consider the following:

A) A purchaser of MNY playing at tier 2,000 with an average price of 26.9 FUTR / MNY purchases FUTR from the Futereum smart contract at the then-present value of 2 FUTR / ETH, since the Futereum smart contract is on its very last mining tier. ETH is selling at $450 / ETH. At tier 2,000, MNY is selling for 26.9 FUTR / MNY. Therefore, the purchaser spends $6,052.90 per MNY purchased. At the end of the swap-back, ETH is still $450 and he receives a return of around 80 FUTR / MNY. He waits for a period of time to elapse, until the FUTR reaches the final synthetic mining tier in the smart contract, and sells his 80 FUTR for a discount of 15% to smart contract (ETH is still $450 / ETH). The miner has made a profit of $24,547.10.
Tier: 2,000 | Price Paid / MNY: $6,052.90 | Profit: 306%

B) Another purchaser of MNY decides to come to the party a bit later and joins in at tier 2,500, where MNY is retailing from the smart contract at a price of 122.48 FUTR / MNY. Clearly, if he holds out until the swap-back, the miner will end up with a net loss in pure FUTR terms (although this would not be a case after multiple MNY cycles as a

result of the gradual build-up in unswapped FUTR that lies in the MNY smart contract). However, this miner purchases FUTR at a cost of 1 ETH / 114 FUTR and ETH is still $450 / ETH. Therefore, the effective dollar cost of mining MNY at this stage in the synthetic mining cycle of MNY when utilizing the comparatively cheaper FUTR smart contract value is $483.47. Later on, at tier 2,700, this miner notices that MNY is selling at 727 FUTR /MNY. Discounting his MNY by 15% to smart contract mining cost in terms of FUTR, he sells for a net profit of $112,082.09.
Tier: 2,500 | Price Paid / MNY: $483.47 | Profit: 23,182%

C) A third miner purchases the second miner's MNY at $112,565.56 and holds out until the end of the swap. During this time, ETH experiences something of a cryptobull euphoria, and soars in value to $11,000 / ETH. After swapping his MNY for around 80 FUTR, he then waits for the Futereum smart contract to reach tier 10 and sells for a 15% discount to market. The miner has made a net gain of $327,917.91.
Tier: 2,700 | Price Paid / MNY: $112,082.09| Profit: 232 %

Clearly, the circumstances driving the profitability of MNY as a cash instrument are so varied and so lacking in early/late stage correlation that there is no pyramid economics present. The outcome of profitability for the miner of MNY simply varies, for a variety of reasons, from market timing of the purchase and sale of ETH, FUTR and MNY, and a whole range of value events that lie in between.

Consider that much of the FUTR and FUTX in the MNY smart contract, and by the same law of logical reasoning, much of the ETH in the Futereum smart contracts will not swap and thus will become excess FUTR / FUTX / ETH to swap-back for at the end of the next cycle, and we can factor in an additional variety of calculations that show how even for the purchaser of MNY at values far in excess of $100,000 / MNY, the smart contract makes economic sense on a wage growth-adjusted, inflation-adjusted and market return-adjusted scale, and the product simply adds up to being something of a great long term investment / value-inflated cash instrument!

11. "If it's this easy to make money, why hasn't anyone done this before?"
To understand the likely answer to this question, an important realization needs to be grasped: that despite the revolutionary changes in the way we live from the evolution of technologized healthcare systems, to methods of transportation that would have previously been unthinkable to our architectural construction, to our entertainment and digitization of information, there has been no net alteration to the way we treat value in an economic sense in the past 2,000 years or more.

This is a somewhat shocking reality when you consider the implications of it: everything, from the way we fight wars and conquer entire countries (with digitally-enabled missile-bearing hyper-fast aerodynamic vehicles that cover hundreds of miles an hour a mile above the earth) to the way we live (with electricity enabling the lengthy and bacterially clean storage of food and drink in refrigerators and lighting up our homes in the dark as well as cooling them down in the heat or warming them up in the cold) has altered so radically that to the average citizen of Julius Caesar's Roman Empire the world would seem completely unrecognizable yet by the same measurement, the fundamental way in which we calculate and redistribute value would be entirely familiar. The net effect of this bipolarity in innovation trends between the scientific revolution our lives have undergone in the past two millennia and the consistency of how we treat the value that fuels such changes necessarily dictates that there is bound to be a

dangerously yawning wealth gap open up. Sure enough, we have arrived at such a point in time.

Our perception of transactional value only radically altered as recently as 2009, with the innovation of Bitcoin: before such a point, transactional value manufacture was considered purely the domain of megabanks and sovereign governments. Shortly after, when Vitalik Buterin designed an easy-to-use application that effectively sat on top of a Bitcoin-like internet protocol (the internet protocol itself was then only two and a half decades old, remember) the ease with which everyday individuals could create synthetic Bitcoin-type replicas and ascribe them individually-constructed and sold values opened up exponentially more.

It is therefore only natural when we take into context the history of the development of the internet in the late 1980s, to the development of an online consumer economy in the late 1990s and 2000s, to the development of an internet monetary protocol at the end of the 2000s and the installation of "smart" financial technology on top of that protocol in the mid-2010s that there should be in the present day, which is to say, at the end of the 2010s, the emergence of superior digitally-enabled value-related smart technology that could, like the other innovations that we have been afforded over the past two millennia, radically alter our notions of equality, wealth and society.

In a specific sense, the enabling of multi-varied algorithm-enabled transactional value exchanges to inflate the value of money has only been in potential existence for the past two years' then – that's since the creation of the Ethereum network. Before the creation of Ethereum, the reality of MNY was not just unthinkable, it was impossible to execute with any realistic sense of achievement. Out of those past two years, we have spent one of them developing the Fuetreum and Monkey smart contracts which enable the value inflation effects that are made possible in the form of MNY, the world's first digitally-enhanced organically value-inflatable currency. The question "why hasn't this been done before?" is quite simply answered in that before the present day, it hasn't been possible to manufacture a currency with such properties. Digitally distributed value is a whole new ball game.

12. What opportunities for other developers are there with respect to MNY?

Anyone can build a feeder currency for MNY by creating a digital note. In its most basic form a digital note is a unit of value created on the Blockchain such as Tether, which exchanges for / purchases USD. In more complex guises, smart contracts are enabled to facilitate such exchanges. MNY accepts smart contract enabled notes that have been thoroughly tested and audited by one of our development team.

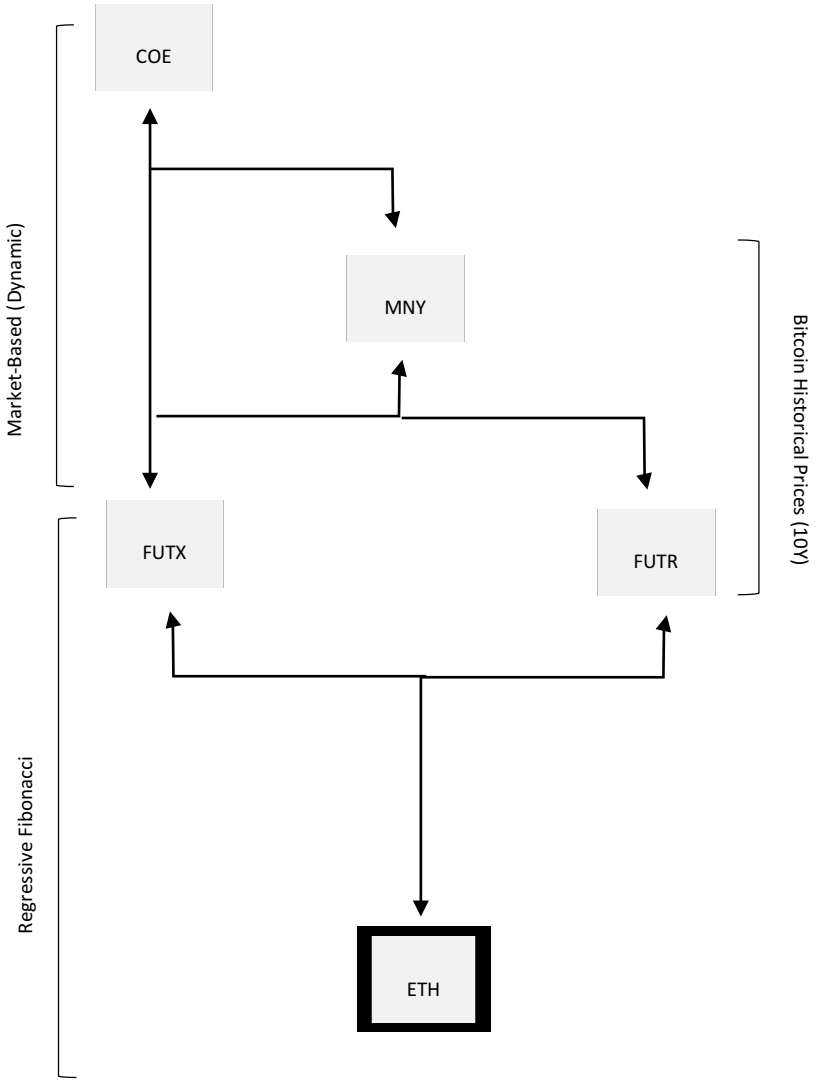
The algorithms can vary and there is no rule as to how the synthetic mining ratios between payment and re-exchange may happen. Generally, MNY feeder currencies should be based upon a more established currency with high liquidity. Once developed and approved, the feeder may submit to an open vote which is undertaken by note holders using 1 MNY per vote per wallet.

Within a pre-set period (say, a week) if the feeder notes are accepted by the community in a majority vote outcome then the feeder may be used to mine MNY too. The addition of feeder currencies is one of the most exciting features of the product as it can vary the underlying MNY value as speed up / slow down mining.

13. What is Coeval (COE)?

If we take the observation that MNY is a digital note, which is in essence a "proxy of a proxy" (for example, with FUTR being a "proxy" of ETH) then COE is a "side proxy." A side proxy works a little like a synthetic side-chain. Similarly, COE borrows from the MNY smart contract innovation certain features at the same time as it interacts with that smart contract, in the same way a side-chain (gateway) is constructed a little like a host Blockchain – with servers, nodes etc. – but which is ultimately an addendum product as opposed to a primary feature. COE is an ERC20 smart contract that mines according to its own price history on CoinMarketCap repetitiously in cycles the same way as MNY mines repetitiously in cycles according to Bitcoin's CMC price history entries.

What is unique about COE is that MNY is the currency that mines it, and that furthermore, once it is is sufficiently bloated with MNY in its own smart contract as a result, it will be allowed to mine MNY itself. This feature essentially puts MNY back in the MNY smart contract, but with a coat. Holders also benefit from the sort of exponent increase post-re-exchange of COE for MNY that holders of FUTR or FUTX do in the case of ETH. The first cycle of COE is completely premined and is delivered to a community of initial investors who seeded the MNY smart contract development.



14. FUTR: Use of Phi Algorithm to Simulate PoW Mining Effect

The Fibonacci sequence is a numerical order based on the algebraic function *Phi* first discovered by Leonardo Pisano and published the Italian mathematician's 1202 book *Liber Abacci*.

The sequence was first postulated by Pisano as a means to understanding the potential infinite increase of rabbit populations in rural areas, and it is today used to underpin many of the world's most sophisticated financial markets trading algorithms.

The ratio comprises a mathematical formula whereby the previous two numbers in the sequence combine to give the result of the subsequent answer to the equation *ad infinitum*:

1 + 1 = 2
1 + 2 = 3
2 + 3 = 5
3 + 5 = 8
5 + 8 = 13
8+ 13 = 21
13 + 21 = 34
21 + 34 = 55
34 + 55 = 89
55 + 89 = 114
etc.

A wide number of professional Crypto traders also rely heavily and in some cases exclusively on Fibonacci-regressive technical analysis today to formulate alpha-generating trading ideas and approaches.

Futereum Smart Contracts must contain two apparently contradictory functions which must be equally satisfied in order to justify the utility of the tokens that are purchased in the form of Futereum Utility Tokens.

Those functions are the ones as set out in our second Blockchain build-out objective:

> Function 1 = The smart contract results in a more equitable distribution of Ether than before it was employed by the user
>
> Function 2 = Initial miners and high-frequency miners of Futereum Smart Contract tokens should stand to benefit more from this equitable distribution

The paradox is resolved by means of employing a Fibonacci equation inside the mining algorithm of the Futereum Smart Contract.

In the event of the Futereum Smart Contract for Ether (FUTR), we employed the equation as an expression of the amount of FUTR an ETH receives in the process of mining the smart contract.

I achieved this by progressively decreasing the amount of FUTR mined per ETH sent to the smart contract as the mining level is increased:

Level	FUTR	FUTR/ETH	ETH
1	1,000,000	114	8,772
2	990,000	89	11,124
3	960,000	55	17,455
4	910,000	34	26,765
5	720,000	21	34,286
6	650,000	13	50,000
7	560,000	8	70,000
8	450,000	5	90,000
9	320,000	3	106,667
10	170,000	2	85,000
Total	**6,730,000**	**-**	**500,067**

FUTR: The first use of Fibonacci in a token mining schedule resembles the mining schedule for BTC very closely as a result of the similarity to the POW "halvening events"

In the example above, which represents the actual number of Ether employed in the mining of the FUTR smart contract, 1 million FUTR initially distributed across a range of miners who collectively contribute 8,772 ETH; subsequently, 990,000 FUTR are mined by a total of 11, 124 ETH etc. Naturally, the progressive difficulty (cost) of the mining process is only compounded by any price increase in ETH.

In this way, the Fibonacci equation driving the FUTR mining algorithm of this Futereum Smart Contract creates an identical mining effect to Proof-of-Work (PoW) mining, where difficulty of a coin's mining is subject to two factors, those being the cost of the unit of value being mined and the relative age of the Blockchain at the point of mining.

To date, we have not been able to discover a more efficient mining protocol type than PoW. PoW is such an effective method of digital currency mining precisely because over time it forces the miners into higher cost-per-unit mining equations, resulting in an intrinsically higher cost (price) per coin. Economically this process produces a greater expansion of the network underlying the mining process. This POW-likeness of the FUTR does not in itself result in a more equitable distribution of Ether to the FUTR miners however. Therefore, to achieve this using the Fibonacci sequence we employed in the smart contract development, we embedded an exchange function at the end of a fixed period in time after the last mining of the smart contract took place.

If all the FUTR produced by the smart contract is mined in under a 12-month period, then at the end of month 13 a temporary function is enabled in the smart contract whereby a FUTR holder is given a brief period of time to exchange the amount of FUTR held for a percentile-wise equivalent amount of ETH held in the smart contract since the point when the FUTR was mined.

This percentage-equitable exchange of FUTR with ETH held in the smart contract, when combined with the Fibonacci equation that is the basis of our mining algorithm, results in simultaneous equitable distribution of Ether to FUTR holders as well as preferential treatment of early and regular FUTR miners, since those who mined FUTR in the initial period of the smart contract and those who mined FUTR when ETH was relatively cheaper in value and who

are thereby likely to be the most active miners gain more than late-stage one-off miners of FUTR.

15. Non-Premined Approach: Fee-Enabled Mining Solution

It has been a relatively popular occurrence recently for developers of Blockchain and smart contracts to premine a portion of the token supply as a means of rewarding themselves or the foundations they represent in financial terms for the work undertaken at point of development.

I am uncomfortable with the concept of premine for the reason that it tends to lead to a moral hazard effect, whereby the party who is the beneficiary of the premined tokens is usually excessively rewarded versus those holders who either mined the tokens or who purchase the tokens on an exchange. As a direct consequence of premine containing such a developer-biased value function, core developers who ought to be safeguarding the value of the projects they undertake to build frequently accept offers for their tokens on exchanges which are far below an acceptable market price for that of their customers, and this substantially undermines the utility token price over time.

Therefore, instead of premining the FUTR smart contract, we developed a fee schedule based on achievement of actual mining levels being achieved over time. Assuming 10 Levels of mining difficulty being achieved over 12 months, with an additional one-off charge for product development, the fee schedules we developed is as follows:

- Monthly Charge: 0.4% for Month 1-12 (there is no fee for additional months)
- Level Cost: 0.6% per Level 1-10
- Administrative Fee: 5%

These fees, which comprise a total of 15%, are removed at source upon mining of the FUTR in ETH tokens. We find this a more effective approach to rewarding the smart contract developers and the foundation than the premining alternative, principally because it incentivises us to mine and hold FUTR with the ETH received by way of the small fee payments charged instead of selling out the order books on exchange with the premined tokens.

16. Conclusion

The duality in Ether proxy status that is conferred on MNY is what helps it achieve a truly distributed value outcome, as well as what allows it to have a non-definite intrinsic value at any point in time due to the amount of ETH stored in both FUTR and FUTX smart contracts which varies according to level and cycle of the individual smart contracts. In other words, while one can arrive at a concrete value for MNY, that value is only concrete at the moment in time the calculation is performed. A split-second later, it may change (albeit not by a lot). This quality of MNY is expected to give it both payment utility and speculation / trading utility as merchants and speculators can divine a concrete value for the digital asset at the same time as they can speculate on its future price outcome.

Ultimately, it is expected that the MNY Synthetic Blockchain will become one of the major catalysts for stimulating investment consistently (rather than in a patchwork quilt way as is currently the case) across the Blockchain asset market while always being grounded in autonomous and trustless smart tech solutions without the dependency investors current have on centralised exchanges, ICO promoters and misleading cryptocurrency news cycles (often now too with government anti-Blockchain PR).

MNY	COEMNY	COE	MARKET CAP	COE/USD	COE RETURN	MARKET
21,000,000	210.0	100,000.00	$ 248,768,850.13	0.03	-	-
21,000,000	129.8	100,000.00	$ 900,000,000.00	0.77	-	-
21,000,000	7.6	100,000.00	$ 9,900,000,000.00	131.75	389590%	3880%

COE Returns: The exponential increase in MNY value combined with any sort of market moving event gives COE a huge edge over the returns of the market as a whole. Here, the market rises 3,880% while COE jumps 389,590%.

Thus, the MNY Synthetic Blockchain could become one of the principle catalysts for unique and unprecedented tech innovation in Blockchain while also serving to be Blockchain investors' best long-standing reliable source of income and capital gains with a non-traditional market correlation and a higher-than-average (several hundred percent plus per quarterly annual cycle) return functionality.

MNY and COE are designed specifically to be the only Blockchain assets that a passive investor needs to buy to access the innovation, growth and dynamism on the ERC network. To access an ETH-biased portfolio, simply purchase more MNY; if an investor wants a more speculative altcoin-weighted portfolio then a ZUR-weighted portfolio makes more sense.

An investor can achieve true passive value holdings however simply by holding one unit of value consistently: COE. With COE, an investor is able to hold a continually rising amount of every single token used to mine into MNY, including, via its MNY holdings that contain elements of COE within them, more COE. COE is unrestricted for exchange-back between 50,000 – 100,000 COE issuance leaving a great length of time for exchange utility, unlike the other two tokens which have limited exchange-back periods once in a while. At the same time, its utility whereby a minimum base value is held over the course of its mining lifespan combined with inter-cycle 9-month periods of zero mining utility holds enough supply off the market to give it a continually – and substantially – supported market pricing movement.

Appendix: Smart Contracts

FUTR: https://etherscan.io/token/0xc83355ef25a104938275b46cffd94bf9917d0691
FUTX: https://etherscan.io/token/0x8b7d07b6ffB9364e97B89cEA8b84F94249bE459F
MNY: https://etherscan.io/token/0xd2354acf1a2f06d69d8bc2e2048aabd404445df6
Miner: https://etherscan.io/address/0x091cc9f811709f4667c188e24861192aa6145c6e#writeContract
GitHub: https://github.com/dmh-co
Video: https://youtu.be/STjEGyjpUAY
Website: https://dmh.co