

Perpetual Coin Offering

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The current system of attracting capital to blockchain projects has established a brand new kind of relationship between project's founders and its prospective participants, including both investors and end users.

ICO (Initial Coin Offering) enabled the greatest projects, such as Ethereum, FileCoin, and Cosmos, to raise funds. But it is just the beginning of a new movement, and now I will tell you how to improve ICO and make it more balanced for everyone.

First of all, I will outline the main characteristics of a new means of raising capital; I will then provide the detailed explanation (formulas included) for each of them:

- **Fair**
- **Clear**
- **Predictable**
- **Liquid**
- **Limitless**
- **Perpetual**

As you can see, I have declared six features that I will need to prove to you in my new form of ICO.

Blockchain

I will start with the environment, in which we propose these ICOs to be held. It is a blockchain called Minter that is developed by us and will be used for the issuance of new coins. In short, it is a PoS project built atop the Tendermint's consensus engine, which can be integrated into the Cosmos Network. You could read more about our experiment here:  minter.network

An essential feature of our blockchain is that almost the whole emission of the base coin will be mined by validators as a reward for blocks, which will allow us to balance the forces inside the ecosystem greatly. The very idea of a chain is simple—we provide users with an opportunity to create coins and integrate them into popular projects as well as with easy-to-use tools for managing them. We focus on fast and free-of-charge transactions, since, in our opinion, these are the most vital things nowadays. If a mass user cannot enjoy such benefits of a blockchain to the fullest, other things can end up being unnecessary. We adhere to an opinion that what we need to do now is what banks did a hundred years ago—bring money to the masses. Back then, they managed to achieve that by using paper, thus eliminating the need to carry heavy gold and silver around. Today, we are optimizing the system by removing the intermediaries and creating the new level of trust and security with the use of cryptography.



In our blockchain, we have purposefully limited the functionality until we reach a high speed and volume of transactions. Minter has one significant distinction—the creation of a new coin is possible only if it is backed by BIP, our base currency mined by validators for completing the blocks. There is no better currency than the one paid by a system for its maintenance. It is a real digital currency, neither pegged nor asset-backed. This backing approach will eventually create what we call the network of liquidity because one will be able to instantaneously and limitlessly exchange any coin for any other one. Such operations are executed with the use of math formulas introduced by economist John Keynes and kindly modified by the Bancor network.

Keep this aspect in mind, since it is key here—instant and absolute liquidity of any coin, with no limitations due to the volume and search of counterparties.

Now I can proceed to describe my idea of ICO which any individual or team would be able to launch on Minter in a matter of hours, if not minutes. It is worth mentioning here that I am deeply certain that it will be people and small teams who will become the stars of the new market. The “long tail” of the coins created for small communities and projects will account for 90% of the turnover of the networks. The same as with YouTube, which has millions of authors about whom no one knew a

few years ago and now people watch their videos with different engagement. The Internet of information showed that users would themselves decide who is the creator and who is the consumer. And vice versa. The only thing that users need for that is appropriate tools and the freedom of action.

In this document, I will try to focus not on the user side called user experience but rather on the economy—relationships between founders, investors, and participants.

To create a coin on Minter, one needs to take only a few steps: determine the value of Constant Reserve Ratio, specify the volume of the Genesis emission, and place the first reserves—in other words, buy back initial emission.

From this moment on, I will need to introduce some formulas in the text. For a better understanding of the very process, let us assign our coin the following parameters:

CRR – 40%

Reserves – 100 BIP

Emission – 2500

CRR (Constant Reserve Ratio) reflects the volume of BIP reserves backing a newly issued coin. The higher the coefficient, the greater the reserves and thus the lower the volatility. And vice versa. The reserve itself consists of BIP that had been raised and then put into a smart contract; it can either increase or decrease, in cases of emission and burning, respectively. In terms of initialization, the size of reserves reflects the minimum sum of money, which is necessary to issue a new coin, transferred to a smart contract. The number can be set by the creator themselves, thereby determining the price of one unit after the initialization is completed.

For those willing to observe the processes of emission and burning, here is the base formula:

$$E = C \left(1 - \sqrt[W]{1 - \frac{T}{S}} \right)$$

E – amount of BIP, C – Reserves, W – CRR,
S – Total emission, T – amount of coins being sold.

Coin Name
NewsCoin

Initial Reserve
100 BIP

CRR (Constant Reserve Ratio), %

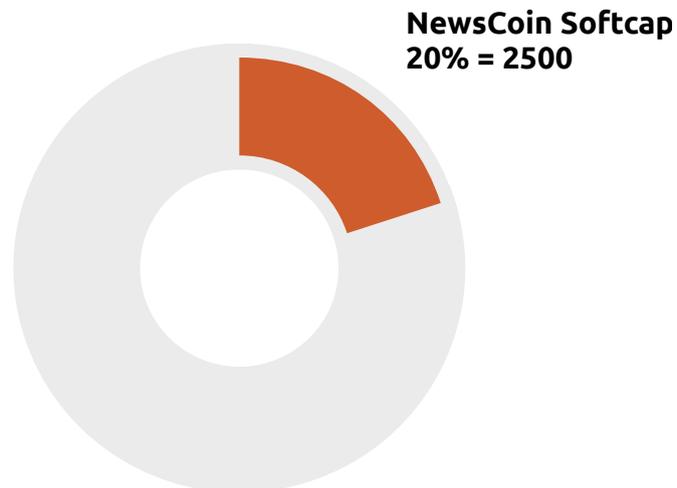
1 **40** 100

Initial Number of Coins
2500 NewsCoin

Wallet of Creator
Mx703c4b2bd70c16
9f5717101caee5432
99fc946c7

Launch!

The figures given above are just an example—one could use their own for their project and adjusted for their needs. We will see the situation in which the project is targeting a specific soft cap (a minimum target sum of funds raised), after which 20% of coins remain with the creator. I am stressing again the fact that these parameters may vary.



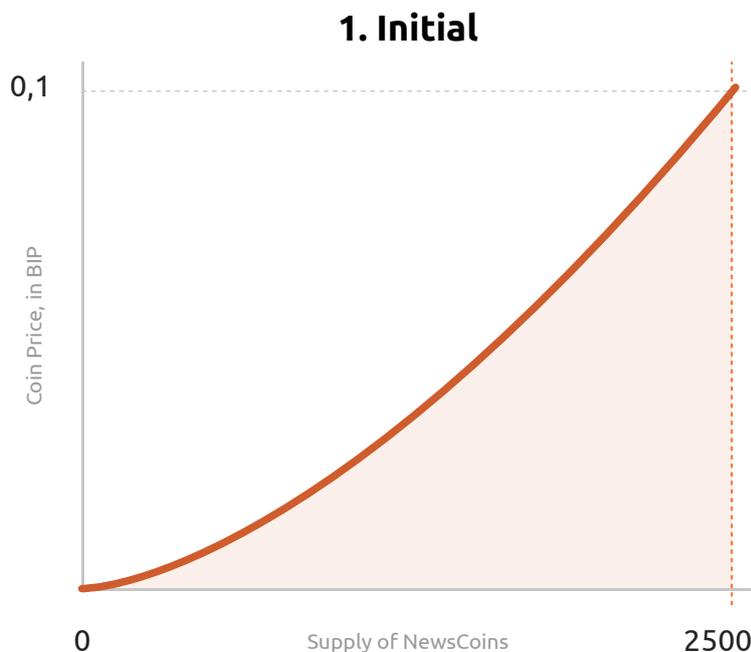
Initialize the creation, and you will have a new coin. Let us dub it NewsCoin and imagine it will be accepted for access to paid articles on a news website. Paying for quality content on websites is a burning issue; ad monetization does also lose its efficiency with the growth of ad blockers' popularity; even big sites have difficulties with the setup and implementation of even the simplest subscription models.

Fair

It is time to elaborate on what a fair ICO is. Critics blame the market mainly because of the fact that founders sell the most part of the coins and run away with the money. Moreover, they claim large blocks of emission, for which they pay nothing. They do so because they are creators; no one is surprised as such practice is widespread. On the one hand, it is not bad since many projects are released having the prototype already, and some even have already operating systems. On the other hand, it is difficult to understand why the blocks are of such size. For instance, Telegram reserved 4% for the team, and due to this fact, one might think of other projects being greedy. It is unknown where 66% of XRP is, as the team keeps it for later. We face two problems—all money raised through an ICO goes to the founders' pockets, and founders themselves determine the number of the coins to claim.

In our case, however, the founders pay for the coins. Not much, but still. Not much, because they are founders and they have carte blanche for the lowest price. No one would ask "How did they get them? Why so many?" Everything has been paid for.

In our example, after the transaction, founders have 2,500 NewsCoin for which they in average paid $100/2,500=0.04$ BIP apiece. Yes, due to the fact that the reserves are not full, the price of each new coin is a bit higher than that of the previous one, which is one of our fundamental ideas.



If now you think that one may finish the ICO by selling coins back for BIP and make substantial gains, I will disappoint you—the formulas work in both directions, and by burning (selling to the system) 2,500 NewsCoin, one will receive the initial 100 BIP. Look at the graph; everything is pretty simple.

Now let us discuss an important question: does the creator have the right to do anything they want with their coins since they paid for them just like others? Even though they did at a lower price. But still, they paid. In my opinion, in our ICO model, where everything is regulated by math and smart contracts, all participants are equal. Everyone pays for everything.

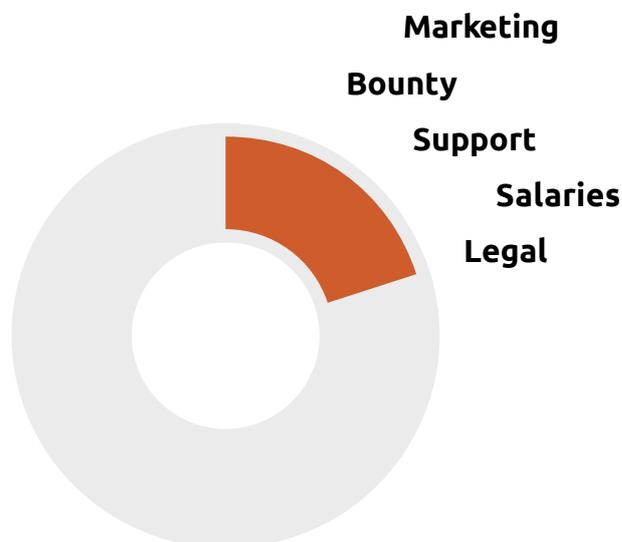
Consider the following idea: small projects consisting of one person or a small team are not ready to prepare reports and presentations for investors and work with lawyers. Face the truth: these people will rather use collected funds to quit their jobs and fully dedicate themselves to their projects. This money will be used for their salaries, office rent, and employing the first workers. There is a great probability that these funds will go in the wrong direction, but put on the scales two models:

- Coins for which the creator paid. They will pay for the next coins, too. Just like all other participants
- Coins allocated to creators by themselves, plus all developments acquired through a fundraising

Even if you have any doubts at the moment, we will try to dispel them next.

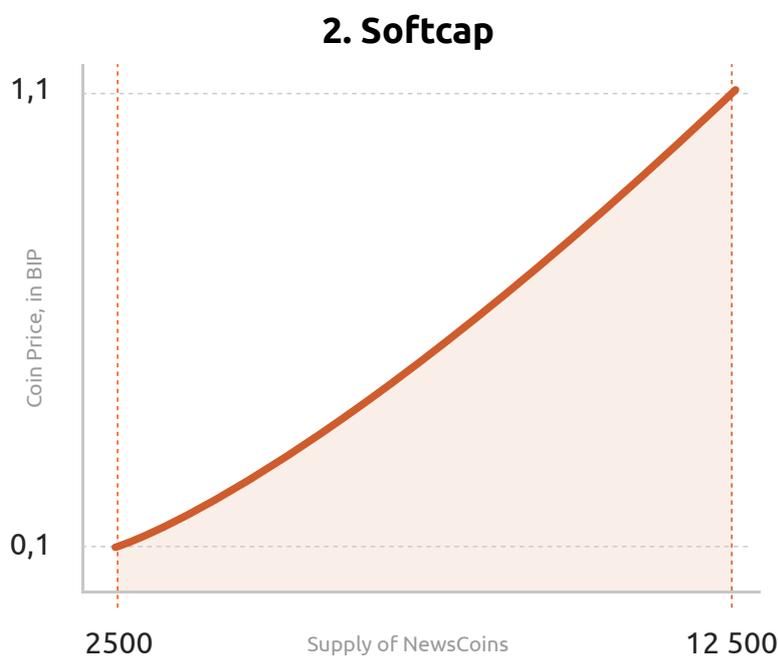
In our system, the creator can do whatever they want to with their coins. They will use them to pay bounty rewards if they wish. Not at an investor's expense—because a few percent of emission reserved for bounties are, in fact, inflating the investor's stake—but from their project budget where owner decides how to spend funds.

But remember: the more information of the movements of the creator's stake, the higher the trust and hence the price.



Clear

Once the first 2,500 coins are created, the project will offer investors to participate in its ICO, setting the soft cap at 12,500 NewsCoin. Terms and conditions are specified in a smart contract on a blockchain, and even the expiration date can be set. If the total amount of coins is less than expected, or the date expires, all participants—including the founder—will receive what they invested back. Automatically.



What could be more clear? The founder can beforehand estimate how many coins they would need to start the project. The estimation is simple—they project the price of 2,500 NewsCoin in their possession if sold once the soft cap is reached.

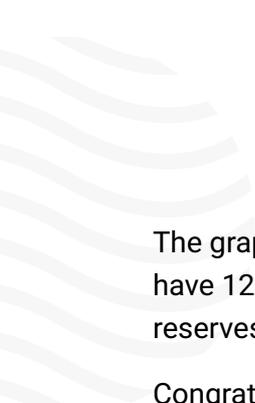
Let us examine the following figures:

VOLUME	PRICE
2500	0,1
5000	0,28
7500	0,52
10 000	0,80
12 500	1,12

For 10,000 NewsCoin, the participants will pay 5,490.17 BIP (thanks again to the Bancor network who prepared and checked all formulas!)

The average price is 0.55

The price moved from 0.1 to 1.12



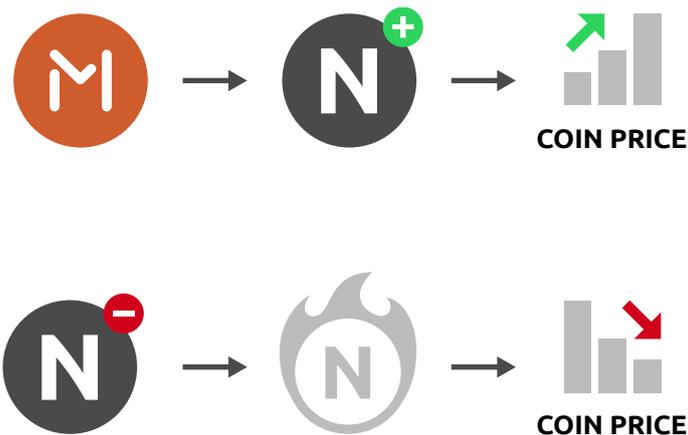
The graph shows that with each new purchase, the price of the coin grows slightly. As a result, we have 12,500 coins and 5,590.17 BIP reserve in our system. Not on the creator's balance, but reserves in a smart contract.

Congratulations to founder! They managed to raise enough funds to start their project. But it is too early to rejoice—they will not have access to funds in a way one might expect in a traditional ICO. All BIP collected will be in reserve, and one could get them only by selling the coins.



Predictable

Since our entire network is regulated by math formulas, developed by leading economists and Nobel prize-winners in the past 70 years, we think we must use these formulas to clarify the processes of emission and burning coins.



Any participant can see what the price of the coin will be at any level of emission. If one wants to sell, they send the coin to the smart contract which burns it and transfers the corresponding amount of BIP. Want to buy? Send BIP, already knowing the price at which you will receive the coins. This is predictability that is not offered anywhere else—neither on exchanges with market makers nor directly by private individuals. We have everything regulated by formulas.

What I would also call predictability is observing the price change. In our case, no one can manipulate the market by playing with the order book or 1% of the market capitalization (hello, Tether!)—rises and declines always emerge based on the same formula: someone either replenishes the reserves or empties them. It is also possible to see in advance at what price you will buy/sell. Spikes in the prices, traders knocked out by margin calls; such things are absolutely impossible in our model.

That is why the founder will know the price of the coins for which they paid once the soft cap is reached. And participants will know to what level the price will drop if the founder sells all of their coins at a time.

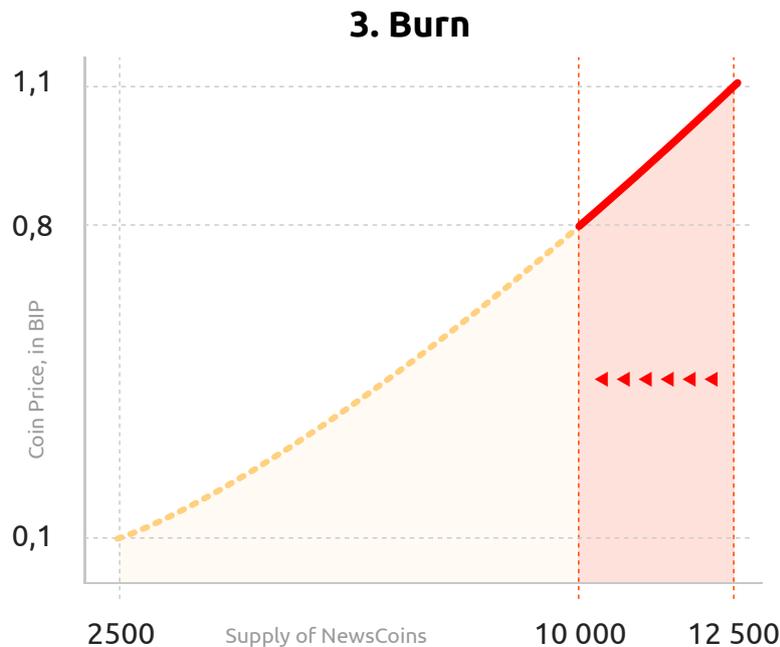
Consider the following example:

After reaching the soft cap of 12,500 coins, the sale of 2,500 of them will bring in 2,390.17 BIP. The initial investment of 100 BIP put in the first emission will increase 24-fold. Not bad, right?

What will happen to the network if the founder is foolish or cunning and decides to sell all of their coins at a time?

First of all, note that they will receive only the part of reserves. The greater part, but not the whole, as in a traditional ICO.

Secondly, after the transaction, there still will be a 10,000-coin emission left in the system, as well as reserves at the level of 3,200 coins and the price of 1 NewsCoin equal to 0.8.

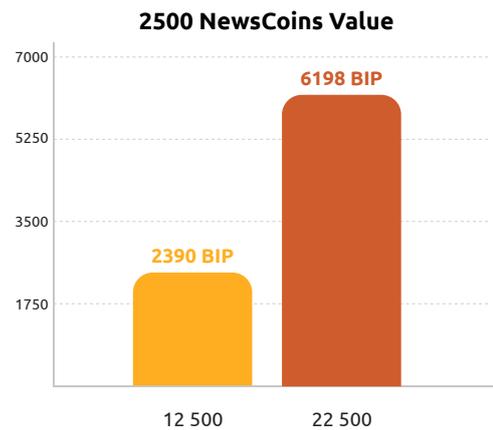


Can you name at least a few projects in which after the founder runs away with the funds, the price would decrease only by 29%? Of course, in such scenario, a bank run would occur, but what we do now is just look at the figures. Remember, such a drop will take place in case of the liquidation of 20% of emission.

If the founder is a fool and cashes out to finance the development, on the one hand, we will congratulate the investors; on the other hand, feel sorry for the founder. Although investors will end up with their coins being worth less, they will also get a lower price to enter again. In fact, what we will have here is the project with its reserves and also a substantial amount of funds on the founder's hands who can eventually reach their goals. Therefore, the price is most likely to go up. So, how did I dare call the founder a fool? That is because, given the much predictable pricing

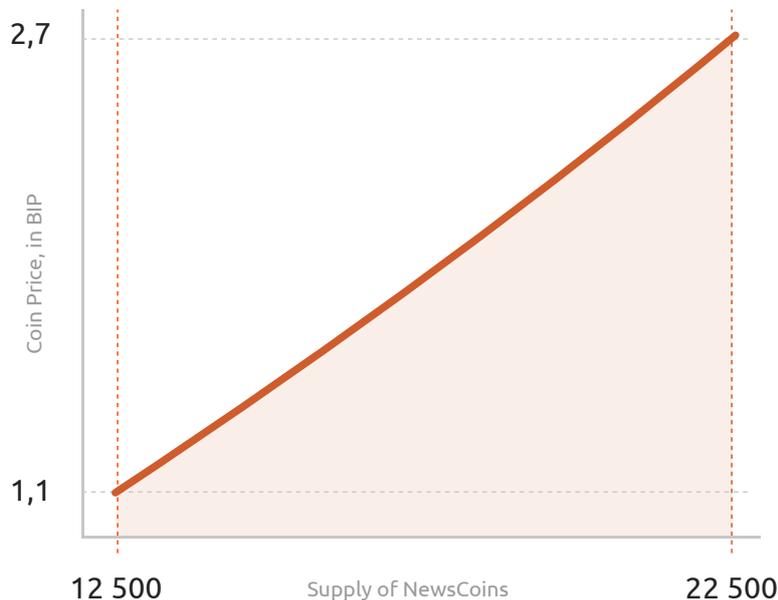
system and the possession of the cheapest coins, the founder's role is to sell the coins in small amounts, step-by-step, keeping participants informed about the project development stages and the launch of new services.

Remember, if the founder sells all of their coins immediately after the soft cap is reached, they will receive 2,390 BIP. If they manage to then prove to the market that their project is cool enough to have attracted 10,000 more coins, apart from those 10,000 which had already been purchased, the value of this founder's stake will be 6,198.07, which is 62 times bigger than their initial investment. 2.6x the amount they planned to raise at the soft cap.



Let us now calculate how many of their coins they will need to sell to receive what was planned for the soft cap if there are two times more investors than was initially planned and the total emission is 22,500. The answer is 915 NewsCoin or 36% of their coins.

4. Success

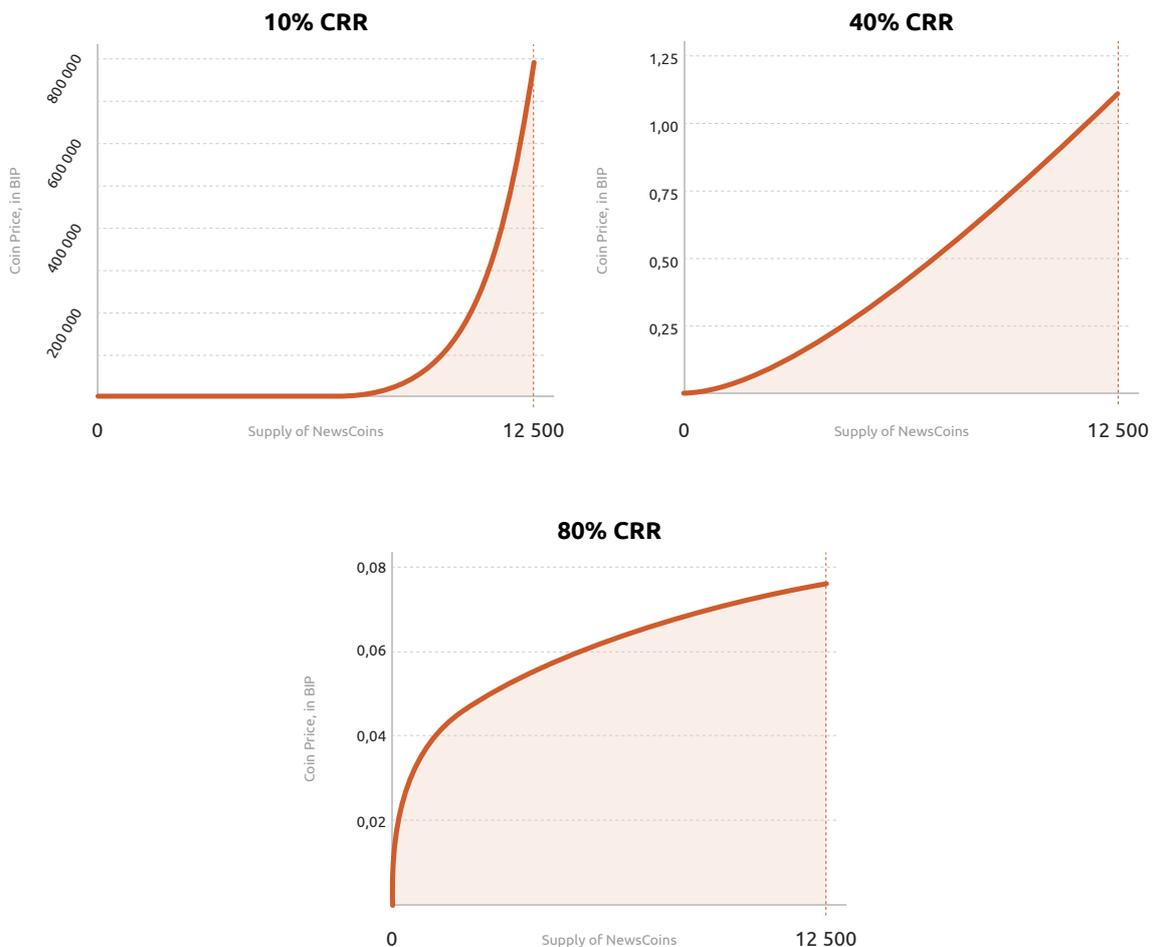


And all these operations can be executed not only predictably, but also at any moment. Let us now talk about the king of the market—Liquidity.

Liquidity

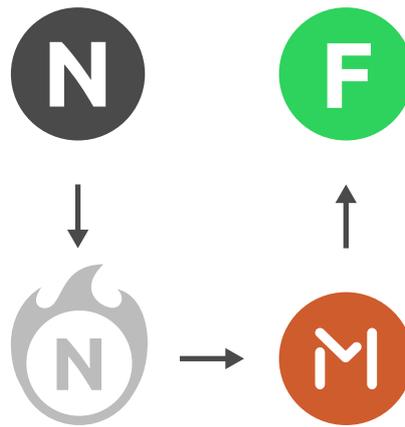
We are building our network around the idea that all issued coins can be instantaneously exchanged for the base currency BIP using the formulas we have introduced above in the NewsCoin case. Also, any coin can be exchanged for any other one using our base coin BIP. Liquidity = Freedom. Fiat money has come to a dead end largely due to being incapable of offering people fast and attractive terms of circulation and exchange. Let me reveal something: thanks to the fact that Minter is built atop the Tendermint technology, we will be compatible with the Cosmos network, which means that as soon as this year, our users will be able to exchange the coins they issue for bitcoin, ether, and other major currencies in just one click/tap.

Liquidity of our network is secured by reserves. You can set them at 1% or 100%—it is just a specification of a coin that, in the first place, determines its volatility. The higher the CRR, the more stable the coin increases/decreases. Generally, CRR is a measurement of creator's confidence in their project.



Someone might think that the system may be deceived by issuing the coin with low CRR and reserves and setting the price at the same level as that of the expensive coin. But in practice, in the course of the exchange, the reserves of a cheap coin will shortly go to the near-zero level, and this price will be used to buy the expensive one. There are no miracles, and math does not lie.

Coins issued within our system will not need to be listed on the exchanges, even on the decentralized ones. Through BIP, they will be able to be paired with almost the whole cryptocurrency market.



BURN VOLUME	PRICE CHANGE
20%	-29%
10%	-13,4%
5%	-6,5%

Let us look at the absolute and instant liquidity in terms of volatility. As you can remember, if we burn 20% of emission, the price of the coin will drop by approximately 29%. If 5% is burned, the price will decline by only 6.25%, and if 10% is burned, the price drop will amount to 13.4%.

Can you imagine what will happen if someone started selling 10% of ETH's emission? The losses would be substantially higher. The examples provided above reflect only a 40% CRR. The higher this coefficient, the more stable the currency; along with that, it does not lose its liquidity.

Why do we use the phrase "absolute liquidity?" In our case, it is true. You can go as far as to sell 100% of coins in one transaction, having emptied the reserves. Such approach adds one very interesting feature to our ICO—at the level of a smart contract, we are capable of realizing the payback for the participant at their entry price, LIFO (last in, first out).

In his document about DAICO, Vitalik wrote that participants must have the option not only to choose the entry price but also withdraw their applications. We have fully put that to work—one can foresee the price of the coin at each of the stages and enter/exit whenever they wish, as our liquidity will provide for that.

Limitless

Limitations, including regulations, are what the crypto revolution was started against. We set higher goals for a free market and the exchange of capital with no intermediaries.

We were much surprised when last year, the community itself started to introduce limitations on the very market mechanisms of participating in an ICO. Yes, what I am talking about is the lists of participants, their validation, and time and amount limits. Exchanges—a market element that should incentivize the exchange and integration of new coins into the economy—introduce deposit and withdrawal limits, baffling the participants. The only thing I can say is: "Stop the madness!"

Minter will be able to fully allow for the freedom of participation for everyone. If a large investor wants to buy dozens of coins, they will do it in one transaction. If a founder wants to sell their coins, they will not have to ask for anyone's permit; they will not need to use the escrow wallets, either. A user wants to buy a few coins, even a small fraction of a coin? They are welcome.

If liquidity provides us with the freedom of trade, the removal of restrictions will eliminate any manipulative tricks. As I have already mentioned, the price cannot just go up and down; it must be backed by reserves. So add liquidity to the absence of limits, and you will get the fairest and freest market in terms of pricing.

Each time I encounter a bonus system for early investors, a bounty program for the community, long lines, and min and max purchase limits, I do not understand which part precisely of the word DECENTRALIZATION the founders and participants cannot comprehend? Often the limits on a coin are put by a blockchain itself. We now do not want to point the finger at anyone, but how could one use a project if, despite the great number of participants, it processes only tens of transactions per second? We create Minter with the initial throughput of 1,000 transactions a second, eyeing the 5,000-10,000 levels in the coming years. Making big promises is easy, but trust me, users do not need projects in which transactions cost dollars and take hours to get confirmed. These limits do also need to be removed.

Returning to the YouTube's "long tail" analogy, I will tackle the problem that many blockchains failed to solve: as well as a lot of things in our life, which start with a small success, the bloggers come unpopular and in a year can top the Trending list. How does a platform change for them? It does not. The same account, the same tools, and only the size of the audience and figures are different. We have an absolutely different story on blockchain—someone reaches the highest capacity and even considers transferring tokens to another blockchain. At least, the new forks and other side-chain developments such as the Lightning Network occur. A new generation of ICOs must ensure that founders, participants, and investors do not face such limits and the like.

Perpetual

Here comes the most important idea of our ICO—it needs to be perpetual. It would be strange to see a system where everything is created for the sake of a free market, and yet the emission is limited.

Looking at it fundamentally, there are few projects that do really need a finite supply of issued coins. Others can follow the free market rules—if there is demand, emission should continue. Demand depends on a number of factors: how good the team is at fulfilling its promises, the network effect experienced by users, and real-life use cases. There are many factors, even in the case of removing restrictions as we outlined above, but there is no reason for conducting an ICO in the form of an actual initial coin offering; and more than that, for limiting it by time, etc.

Price elasticity, not you, will decide how many coins will be in circulation. If someone thinks that following this way, the system can grow only in one direction—i.e., issue new coins at a higher price—it they are, of course, wrong.

Each participant has their own reasons behind making transactions—e.g., someone might consider it is a great exit price and cash out, hence they will burn coins and decrease the price of a token in the network. In turn, the price will become an attractive entry option for another participant. Friedrich von Hayek, a Nobel prize-winner, who published his work about information working for the benefit of society, could be proud of us. Because each project with its currency adds one more indicator of its performance—price and price fluctuation of its currency. Will you buy a product of someone whose currency's value is dropping all the time? Does it make sense for a bank to participate in financing a startup by replenishing its reserves if its coins are bought by others gradually? Does it make sense for a consumer to accept change in a fiat currency rather than in a project's coin?

I would like to further discuss the terminology and replace ICO by PCO (Perpetual Coin Offering). Historically (if I can use this word given the 5-year lifetime period of the ICO market), ICO has implied the process of raising funds, limited by time or amount. It was so as it was hard to implement a perpetual process, and there were no such advances in technology as there are today.

The fact that there is no artificial pressure on the price caused just by the finite supply itself, which often drives the prices up and soon transfers the coin from the “medium of exchange” category to the “investment vehicle” category, does also speak in favor of a perpetual model. People do not want to pay with a currency that rises fast. No one wants to borrow coins which will be much more expensive when the payment is due.

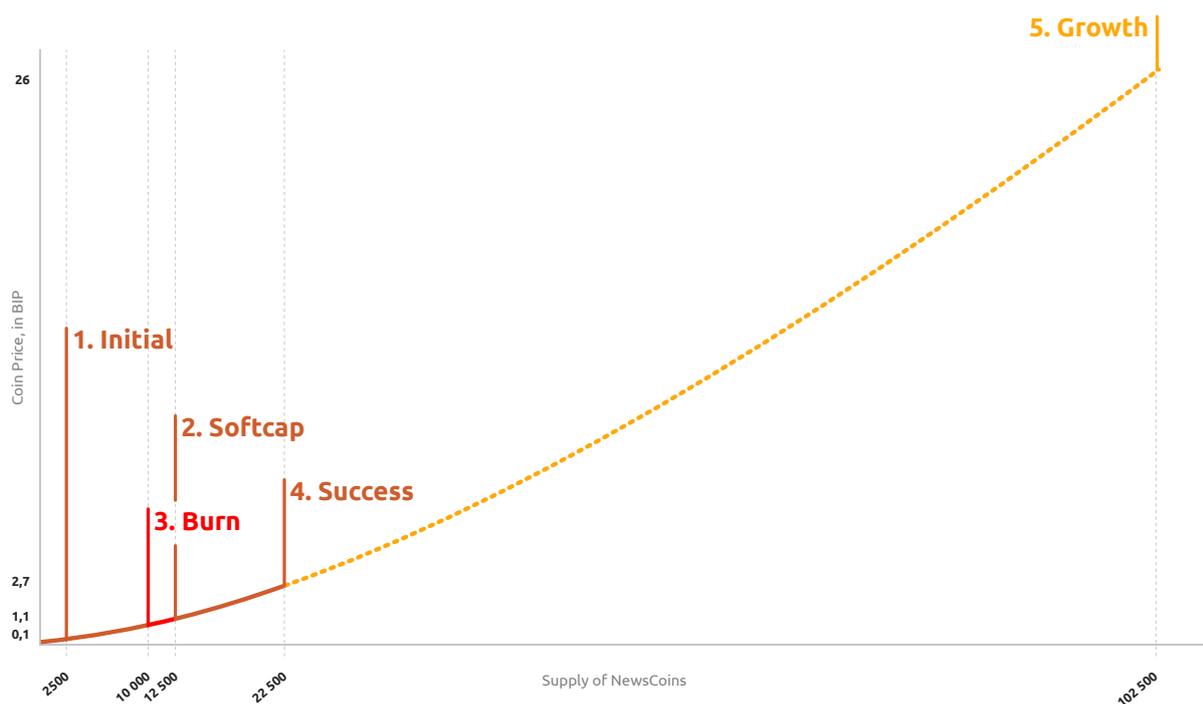
The attentive reader will ask why introduce the soft cap instead of starting emission and buying Genesis coins so that the project lives its life just like a YouTube channel. I consider the soft cap the only form of the public commitment by the project's founder given to its participants. To put it in plain English: Let's raise capital together, and I will then sell the part of my coins, [number] of which I now have, and will then work on the project development to increase the market cap. If the

soft cap is not reached, all investments will automatically return to investors, including the founder, in full. The reserve balance will be reset to zero.

Perpetual Coin Offering

PCO offers a fair—as fair as it can only be at the current level of smart contracts development—form of raising capital from any type of investors at any stage with no limits and with the option to enter and exit with no additional obligations.

At the time, we cannot fully estimate the potential of the perpetual supply, but compared to what can now be considered the fairest model among all mass models—DAICO—we went even further. Our participants vote with money—if they do not like something, they withdraw capital. This is the clearest signal that can be sent to founders.



Will our model be able to cope with a large influx of participants? Let us imagine that NewsCoin issued not 10,000—as was planned—but 100,000 coins. The price of one coin will increase to 26.25, which is 263x the initial price. And the founder's initial 100 BIP will become 64,000 BIP. It is interesting that the price (just like Ether's in the past three years) will rise 1,000-fold only if the project's whole emission is 100x the initial one. Did you ever wonder why there are such movements in bitcoin and altcoin prices? Now you will not—because the reserves are constantly replenished, and it will be the first time in history when one could state that the coin is “backed by something.”

PCO Use Cases

Of course, PCO will not be suitable for everyone, so let us examine the most vivid examples of new coins created using our formulas:

YouTube Channel

Imagine a new model of monetization for a video blogger when they can realize a lot of interactive activities paid for with their own coins on a blockchain. First of all, it is voting for what the next video will be about. It is no more just a simple poll but concrete funding when the users' preferences are backed by their money. Another interesting implementation is the mechanisms implemented by Patreon a long ago when users who pay money receive a link to the video a few days earlier than the others. Want to go shopping to buy blogger's merch and pay with their coin? Not a problem. There is no more need to adapt to different payment systems across the world.

Popular News Website

For a long time, the websites have been seeking a new form of making money, which would balance between the growth of traffic and revenues. It is known that users are not easily convertible to the paid subscription and it is also difficult to convert them through paywall systems. Minter will enable any website to implement a completely different model when by watching ads and generating traffic for free pages, a user will be able to stack coins and later use them to get access to paid content. It will all happen automatically; people will not need to put any of their efforts. If their balance is less than the required amount, it is always possible to suggest topping it up or completing some tasks, such as sharing the article with friends to earn money on their visits. The greater effect will be reached if the websites unite into a single big network.

Mobile Game

The Freemium model has become commonplace. Thanks to it and modern distribution technologies, hundreds of millions of players really enjoy even the free versions of the games and start paying if the game is to their liking. Along with that come the incentive to become the first owner of coins of a potential hit, which will later be played by millions, and the opportunity to earn not just game points but real liquid capital from inviting friends. It is especially beneficial to implement the coins on a blockchain for a publisher of a series of games, as they can transfer the audience from one game to another, keeping their balances and providing new incentives.

Shopping Center

Shops, cafes, and entertainment venues, which are located on the same site, can help stimulate purchases from each other. It is much more interesting to give not just discount on goods, but specific coins that a person can spend in a nearby cafe. Security and fault tolerance of blockchain allows all participants to safely deposit and withdraw coins, being confident that no one will



receive extra money. At the same time, the transaction fee will always be close to the market's minimum—a couple of cents, not percent, as it is usually the case with cards and banks.

Fan Club

Perhaps one of the most interesting forms of the coin issuance is related to people's love and passion for an artist, project, or topic. The coin can become both a means of support—i.e., donations—and the form of voting or obtaining membership in the club. It can be used to access creations, both electronic and real. The most important thing is that this would be the first time that communication would be built directly, without intermediaries and restrictions. And the more popular the topic, the more participants in it. Imagine if Michael Jackson or U2 had had their coins for all these years? Or a soccer player—for instance, Messi? Artists and photographers, scientists and architects, writers and musicians—from now on, they all will be able to not only communicate directly with their fans but also build long-term economic relations, not limited by anyone or anything . . .

As you can see, perpetual emission has the great potential to become a simple form of establishing relations in communities, being self-regulated by the demand of the free market.

Eugene Gordeev,
Founder of Minter
February 1, 2018

