

Crypto Survival

The Key to Long Term Profits

By Pablo A. Lema

*For Mom,
I could never have imagined a better mother.
Thank you for taking such good care of me.*



Towards a theory of crypto investment:

Okay, you have made it this far. You have your exchange accounts funded and have delved deeply into crypto investor circles; you have purchased some coins and are now holding for the next few years. You are not and should not be a speculator/day trader; you have come far on your journey and I am sure it has been a learning experience. Otherwise, you would have given up a long time ago.

But something bothers you, doesn't it? There is simply a bit too much damn chance in the mix. Some coins moon, others die, yet others do not seem to make up their minds. And it is an excruciatingly slow process, you feel insecure at times: "Perhaps," you think "I risked too much, have I made a dire mistake?" If you have read my previous two books and followed the advice contained therein, you likely have not, but I am here to help set your mind at ease for the long term. I am here to help you hold for years on end and in peace.

I will tell you the secret to successful crypto investing up front, but then you will have to bear with me while I explain it or it will make no sense:

Given that most crypto assets will fail no more than 5 years after launch, the secret to successful crypto investing is not to look for assets that are going to "moon," but rather assets that are going to *survive*.

Suppose I offer to sell you two stocks (representing two companies), however, you must hold one of these certificates for 100 years. If you choose the one with the highest yield at the end of these hundred years, you will gain your heart's desire.

Further, I will tell you only one thing about each stock: Stock “A” belongs to a fantastic company in the present, it is growing fast and has been smashing sales records for the past few years. It is generating excess cash galore and has a smart management team. The only thing that I will share about stock “B” is that it is guaranteed to survive the one hundred year mark as a functioning company with public stock. Which one is the best bet?

I am sure you realize this is a trick question. The main problem is that one hundred years is a long time, and nothing going on with the companies today, has any bearing on whether they will exist, let alone be more profitable than any other company, one hundred years from now. This is why, under our model, we always choose the company we know for a fact is still around one hundred years from now. Stock “A” is unknowable, but the fact stock “B” has survived reveals a lot about the average success of the underlying business.

The fact that stock “B” has survived the hundred year wager, suggests that the company has, on average, been generating excess cash, because it otherwise would not have made it. This generation of excess cash suggests the underlying securities of this company would have appreciated over time, at the very least keeping par with inflation. Thus, company “B” one hundred years from now, is at the very least, a marginally more successful company than it is today.

So why is this important? Because this is the exact model under which crypto operates, just that we do not need to wait one hundred years to observe the outcomes of our bets. Crypto operates on an accelerated market cycle and five years is often more than enough to see this situation play out.

In the following pages, we will explore the basic ideas of how new crypto assets are created and why they increase in price. Our primary thesis is that inputs such as funding, innovation, and a great team, directly affect the long term survivability of a coin, and that survivability is the single best indicator of potential price appreciation for any crypto asset.

The following premises underlie our thesis:

1. About 92%¹ of coins launched today will be worthless in 5 years.
2. Coins become worthless because they lack one or more of the following criteria:

- A great team
- Innovation
- Ample funding

¹ <https://bit.ly/Most-Cryptos-Fail>

3. If a coin that fulfills this criteria survives the 5 year death march, it must be at a higher price than when launched 5 years earlier. Survival implies at least marginal returns.



A great team

A great team is crucial to the advancement of any crypto project, but what makes a team “great”? It is not technical know-how, we will discuss that later in our “innovation” criteria. Rather, it is the leadership’s ability to create a unifying sense of purpose through all stakeholders, and to do so without resorting to tribalism.

My misgivings of tribalism, which is rife in crypto circles, do not have a moral foundation, but rather a practical one, tribalism is bad for business. The core team is the defacto lead actor in the life of all crypto assets, and if it does not act as a unifying force, splinter actors will arise which will split the focus and energy of the community. Prominent examples include Bitcoin Cash and Ethereum Classic.

As the Bitcoin Clash example reveals, many splinter assets are not to be disregarded off hand and have shown to this day, multi-year staying power. They are however, a sign of a community in disarray.

A Core team's other main function is representing the crypto asset in the real world, this includes educating the media and lawmakers about the asset as well as interacting with everyday crypto users and innovators and doing its best to attract them to their project. Some teams are better at this than others.

Certain core teams have a reputation for fostering discord and trolling competing assets, I advise against investing in such a cryptocurrency as this behavior likely signals

a foundational problem in culture and community. I can assure you right now, that the coin that makes it mainstream, to everyday users worldwide, will not be the one with the best trolls, it will be the one with the best technology and a leadership focused on welcoming different types of users.

Another important factor in judging a core team is how it plans for its transition from ecosystem lead to ecosystem contributor. The Core team will play a decisive role sustaining and growing the protocol and its ecosystem in the early years of a crypto asset, but it must not do so in a way that perpetuates this role indefinitely. There must be a plan to transition into community rule and to integrate myriad actors to avoid the splintering detailed above. There must be a plan of continuity, past core team leadership.

Finally, a core team must be independent of outside interests, and focused exclusively on the best ways to grow the protocol ecosystem. We will later discuss decentralized ways to fund this sort of work, but we should generally frown upon core teams being funded by stakeholders that stand to benefit from its decisions. This is one of the gripes I have with Bitcoin's funding model and its refusal to explore alternative, blockchain based means to fund itself.

As a cornerstone of our investment philosophy, a core team is an independant steward of the protocol's early years. It should also be prepared for its own obsolescence and create mechanisms to unite the community and bring all actors, even radicals, into the decision making process.



Funding

If we consider Bitcoin for a moment, we will realize that it is a miracle that it ever succeeded as a project, and by any measure it has been a wildly successful experiment.

Bitcoin was deployed by a single entity, “Satoshi Nakamoto,” and for the first several years developed and maintained exclusively by hobbyist programmer’s with no budget and limited donations of money and time. It was the pet project of a highly skilled and dedicated group that sprouted around it and shepherded it to the next level, I venture to say we will never see this model replicated in crypto again.

Fast forward ten years and we have highly funded startups burning through tens of millions of dollars in venture capital, trying to launch “the next Bitcoin,” and 92% of them will fail because they will not reach a critical mass of adopters before running out of money.

There are myriad funding models: angel funding, crowd sales, and finally on chain funding mechanisms and each has its own costs and benefits. Let’s take a look at each in turn:

Angel funding does not tend to be sustained long term, and mainnet asset launch tends to be the spot where Venture Capitalists stop committing money. This makes sense because after mainnet launch, it is nearly impossible to assign more “founder coins” to compensate investors. So under current conditions, VC’s tend to provide teams seed funding to get their projects off the ground, usually for a set amount of tokens, but funding post-launch is limited.

The next step in contemporary startup cryptocurrency funding tends to be crowd sales/Initial Coin Offerings (ICO’s) where coins can be pre-sold or sold at launch to users worldwide in exchange for hard money. This is an interesting funding mechanism because it allows teams to receive funding and get their tokens into large numbers of users’ hands very quickly. It does suffer from issues of legality in many jurisdictions, but that is beyond the scope of this book.

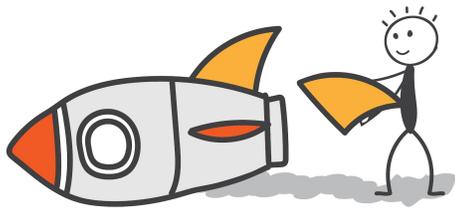
Both of these common funding mechanisms suffer from the flaw that once they run out, they are very hard to replenish. Ethereum, post ICO, famously almost burned through all its presale money and serious adjustments had to be made to keep development going.

Some contemporary assets have deployed, or tried to deploy, mechanisms whereby the core team may receive a portion of block rewards for a number of years post launch, ostensibly to offset development costs, but these “direct from the block” monies are hard to account for and since these payment mechanisms are hard coded in, they are difficult to change if a developer in charge of distributing these funds is hacked or otherwise compromised.

The most sound solution to date is the treasury model, pioneered by Dash and which has started to be adopted by other assets. I have gone in depth into this issue in

my other books so I will only mention that the Treasury is a portion of the block reward, paid out by the network to actors that are approved by stakeholders referred to as masternodes who vote to authorize a limited number of monthly treasury payments. Anyone with 1000 Dash can be a masternode. To simplify things, this model provides permanent on chain funding with proper oversight and governance.

We have covered the main funding models used by projects to sustain long term development and innovation, but clearly the final model of distributed governance is the most efficient. When considering crypto assets, I assign extra points to projects whose long term funding is both decentralized and transparent. If a protocol must be uncensorable to be effective, so must its funding mechanisms. I would advise against investing in any projects that are not willing to explain how they plan to keep the lights on post launch.



Innovation

Innovation is a cultural issue, and it is important that we see continuous innovation baked into a target team's DNA. To avoid disruption, the core team must at all times seek to improve the protocol in meaningful ways.

Technology is a field where innovation comes to teams at light speed, today's bleeding edge is tomorrow's computing paper weight. What we need to see in any investable asset is technology that continues to solve real issues for users right from the design White Paper and through the life of the crypto asset.

Bitcoin would be a good counter example to this suggestion, it is famously slow to incorporate innovation and this is the main reason why there are many altcoins, Bitcoin has been unwilling to innovate in any meaningful way for nearly a decade.

Bitcoin has a point, you cannot “move fast and break things,” when you are responsible for a couple hundred billion dollars of other people's money; but neither can you afford to let other people innovate you into irrelevance. The block size debate is a good example of this.

Bitcoin entered civil war when it began to experience a congested blockchain and high transaction fees as adoption grew. When I encountered Bitcoin in 2011 and into 2012, you could send any amount of coins for anywhere from fractions of a cent to a few cents in Bitcoin. In later years, I personally experienced \$65 USD fees on a 200 dollar transaction. I no longer use Bitcoin because it is slow and expensive compared to other protocols.

This situation has allowed altcoins which still adhere to Bitcoins original economic model (cheap, uncensorable, worldwide transactions) to begin to eat Bitcoins lunch. You may not notice it because Bitcoin is still the 800 pound gorilla in the room, but Bitcoin was neigh 100% of the crypto market in 2012, this has dropped to 65% in recent years, post civil war. It will continue to fall.

A balance must be present in target assets, between a conservative approach to production and a constant desire to innovate usefulness into an asset. Not only must the core team not allow other assets to eat its lunch, it must not become complacent enough to believe that innovation and disruption will not happen to it. There is no such thing as being too big to be disrupted.



Innovation must solve real world problems

Much of my method in identifying targets for investment, relies on judging asset innovation and thinking to myself, “how will this protocol make my money easier, better, faster?” and “can it do it for the rest of the world?” This is a tough standard, but crypto is exceptionally poised to deliver.

I believe the most important factor in judging the potential of a new crypto asset is to consider what problem it is currently solving. That is, “how is this asset making the allocation of my scarce resources more efficient?” By scarce resources I mean anything from how I manage my fiat money to how I distribute my attention.

Coda protocol is an interesting case study. Coda uses a technology called Zero Knowledge Proofs to compress the size of its blockchain by utilizing proofs of fixed size to attest the state of the network at any one time. Basically your blockchain never grows beyond 22kb, or the size of a few tweets.

Coda Protocol provides an outstanding solution to the allocation problem of computing resources. In coins such as Bitcoin, full verification of the state of the network requires downloading and parsing hundreds of gigabytes of raw data; Coda allows this to be done near instantly and at insignificant cost in terms of processing power and space.

It is hard to overstate Coda’s potential as an up and coming protocol, but it is more important to also understand that this is the sort of innovation we should be looking for, order of magnitude improvements to the building blocks of any crypto asset.

An interesting problem in the market of attention is being solved by the Brave browser and the BAT token. BAT turns the economic model of the internet on its head. Basically, it allows *anyone* to be paid for viewing ads and for other activities of attention.

Attention is an economic problem that can be solved by crypto assets in ways that range from causing us to sink our time into the latest of on chain games to expediting how we deal with and are compensated for our time online, such as receiving micropayments for viewing ads.

These innovations to the economics of attention are essentially transplants from the “old” web, mimicking and putting upside down traditional models such as pay for click advertising and gaming-as-a-service or micropayments. They are solutions to existing problems.

As investors, we should keep our eyes peeled for what is coming, solutions to problems we have not yet considered, will come out of the efficiencies created by crypto assets. These are currently unknowable, but investable crypto assets will be built around them.

Issues of disintermediation and innovation are built into the potential base of crypto assets. We are at the very start of a race that will lead to decentralized everything (financial), which will allow for an unlimited number of new value exchange types.

All in all, I advocate for investing in assets that solve real problems, most of these will be economic problems, because crypto assets are native to this sphere. But we should keep our eyes peeled, any innovation that allows me to “save” (fees, hard disk space, time, etc.) or that allows me to be compensated for my time by monetizing my content (Steem) or attention (BAT) are the basic components of investable assets.



The building blocks of innovation

When looking at innovation in a crypto asset, what are we really talking about? What are we really innovating on top of and how can we separate real innovation from your run of the mill, flashy, pump, and dump scheme?

A protocol can be innovative in several different ways, but all of these innovations, however varied, will be based upon changes to the foundational building blocks of crypto assets.

A crypto asset is composed of the following layers:

1. A consensus layer: this is the part of the protocol which describes how the ledger will function and what rules will govern it.
2. A mining layer: this part of the protocol is concerned with extending the ledger and ensuring it continues to be appended according to the rules of consensus.
3. A propagation layer: this part of the protocol is concerned with communication and how different parties keep track of changes to the ledger.
4. A programmable layer: part of the protocol that can execute arbitrary code and extend the functionality of the asset outside its hard coded functions.

It is possible to innovate through any of these layers, but we have seen a focus on certain areas. For example, the peer to peer mechanism coded into the propagation layer has seen limited improvement over the last few years, most crypto protocols are still peer to peer in the same way, and this has been true since Bitcoin's launch.

The programmable layer of crypto assets is not, as many people think, an invention of Ethereum. Ethereum was merely the first crypto asset with a Turing Complete programming language built in, Bitcoin already boasted a limited programmable layer on its protocol.

Ethereum did begin the innovation race on this particular layer and we have seen an explosion in programmable assets. The most memorable being Tezos, which built-in a secure programming language into its protocol, one that can assure the integrity of deployed code to avoid some of the serious bugs in some deployed Ethereum contracts which have led to massive losses; such as the memorable “DAO” hack.

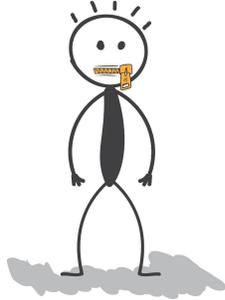
The programmable layer is set for great innovation in the coming decade, and we should keep an eye out for crypto assets that develop these innovations in the coming years. Some of the issues that need to be solved, include storage and processing power on chain, both of which are currently low and very expensive.

As we begin to see more complex apps deployed on new protocols, I believe we will begin to see scaling of on-chain solutions, with the aim of vertical integration and uncensorable code. Current solutions which rely on off-chain storage and pre-processing should see disruption in the coming decade.

Regardless, I believe on chain solutions are always preferable to off chain solutions, and although by today’s standard launching a full scale app completely on chain for any asset is a pipe dream, this is an area to watch.

The migration some projects have undertaken, from Bitcoin’s Proof of Work to the now common Proof of Stake consensus method pioneered by Peercoin is a rather remarkable innovation to a key building block of any crypto asset. Proof of stake changed the economics of chain security by taking it from industrial mining interests and dividing it proportionally among holders of a particular crypto asset. Staking rights under PoS are distributed as a fraction of coins held by each address.

These are just two examples of what improvements can be made by constructing upon the building blocks of crypto assets. The point of this brief discussion is to suggest that when judging whether a crypto asset is solving a real problem, focusing on the solution as a function of one or more crypto building blocks, is the right thing to do.



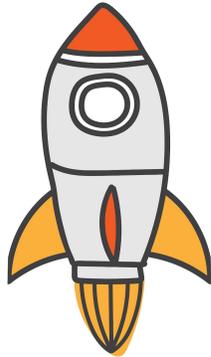
An uncomfortable truth

It is important to point out one of many uncomfortable truths that a professional investor must be intimately familiar with: Not all great inventions make great investments. As a matter of fact, many of them make lousy investments.

Consider, for example, the airline industry, a world changing invention; bad economics and gung-ho labor groups have made it a money pit since pretty much day one. Warren Buffett swears them off at least once a decade, then goes buy one and loses his shirt. Biotech is another industry where innovation happens at a breakneck pace, but flops are about as common as in crypto. Come to think of it, crypto is an innovation fest, but 92% of projects will flop.

My point here is that innovation by itself, like other key metrics, is pretty useless on its own. Many people believe that investing in a tech product should be judged by tech standards, regardless of its management team, funding, etc. Nonetheless, they are wrong, a great project must have it all. Coca-Cola's taste is not what made it great, yes it was an innovative and pleasing taste, but it took a lot of money and leadership to make Coke, Coke.

As an investor you must be ruthless, if the building blocks are not there, head for the exit. Regardless whether the project just invented something cool and radically new, if the project does not hit all the boxes discussed in this book, walk away.



Launch Economics

There are many elements you must consider when embarking on an investment journey as discussed in this book, but I would like to share a truism that has guided my own investing for many years. “Follow the money, it will set you free.”

Following the money means being aware of the economics of a project, but more germane to our discussion, is being aware of the economics of project launch. The best projects will always put the retail investor first, you should always be relatively on par with all genesis day actors (investors, founders, team members, etc.).

Back in the stone age when I started investing in the early 2010's, there was no such thing as a “pre-launch,” token, an ICO, or SAFT; the project was either public or it was not, and everybody had a fair-ish chance to buy tokens at market price. At some point developers realized they could make insta-bucks (as opposed to waiting for their self-purchased tokens to appreciate), by assigning themselves an allocation of tokens at launch. This is the very definition of a free lunch (for them).

The evolution of project launches has been remarkable, I will go through it very briefly: Bitcoin launched and anyone was free to mine as much of it as they liked, with a laptop CPU even. Satoshi acquired a hoard of over a million Bitcoins this way. It was the cleanest launch we ever will have, it was open and no pre-mine existed, anyone was free to participate. Without needling the point too much, you could, however, make the argument, it was not really fair, only a handful of guys knew about Bitcoin (even fewer cared), those early guys made a fortune. Launches have been messy from day 1.

The next evolution in launch economics were the pre-mine and the fast-mine. These are basically different sides of the same coin. A developer either assigns himself

a block of tokens on genesis or pulls a stunt where he sets difficulty very low at launch and launches quietly (not secretly), netting a high number of coins this way. This was standard operation for new developments for quite a while.

Finally, Ethereum brought us the ICO which spawned SAFT's and other techniques. Basically an ICO or SAFT tells you: "money today for tokens tomorrow," they amount to pre-sales often on nothing more than a White Paper and a dream. This is the standard today.

I have listed these three periods in coin launches to point out two things: The first is that it is difficult to judge these people, developing assets costs money, why not get it while the getting is good? The other is the shift from developers getting paid years after launch to now *years* before any code is written.

This reminds me of a book I read on credit card debt. The author argued that the average American is drowning (much like America) in debt, because somewhere around the 60's, business went from "pay before you play," with things such as layaway for expensive purchases and years of saving up for such expenses, to "play before you pay," where credit cards led to americans gorging themselves on debt.

I think parallels can be drawn here and the outcome is generally equivalent, this has led to a grand degradation of the economic incentives of both people and crypto protocols. The reason I write this is to let you know that there are still some teams with a moral compass and a backbone, and they are doing the right thing. This is where we want to be.

The ideal when considering an investment is to see developers and other insiders buying tokens or mining them on a very public genesis day, right beside Joe Public. It speaks to quality when a team sinks its own money into a project to acquire its own tokens, it means they are willing to eat their own cooking.

The team that does this is stating that they believe the potential returns outweigh the risks, this is great information from an insider. On the other hand, assigning yourself tokens says that you believe other people's money should pay for your risk. The choice is clear.



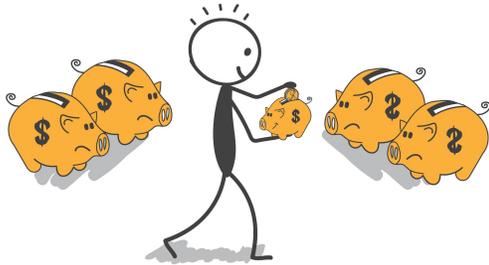
5 years?

Our advice on investing for no less than five years is not random. Studies have shown that, as mentioned previously, 92% of new crypto assets will have failed by the five year mark. This knowledge allows us to focus our search, not to look for the coin with the flashiest features today, but rather to deconstruct a new asset and consider whether it has the features needed to be here several years down the road. Looking at things this way breaks down the problems of investing in crypto assets and focuses our attention.

The most difficult job that we have as investors is to get out of our own way and let time take care of itself. Most traders fail because they cannot leave their investments well enough alone. I remember running a startup that sold an automation solution for technical traders. We used a long term indicator best viewed in terms of charting over at least several weeks or months.

The problem with our solution was that our bot allowed users to specify the period for the bot to sample the market and decide whether to trade or not; many novice users often set this down to one second, in spite of best practices, getting in their own way. Most investors want to do something or at least watch something happen. This is suicidal behavior in crypto investing.

Five years in crypto is really equivalent to about a twenty-five year holding period in the real world stock market at this point, and this is the point where things begin to equalize. Investing is an upside down world where you are more likely to know what happens twenty five years from now than what will happen one hour from now, the long term market trend is up, while the short term is radically unknowable.



Investment stage

It is our general aim to be early stage investors. We want to invest as soon as we have an understanding of how the fundamental building blocks, and the inputs deployed in creating a crypto asset (team, innovation, and funding) manifest in a candidate token. This may happen very early, prior to mainnet launch even, but you must have a solid grasp of the protocol before investing any money.

Readers of my previous books will notice that my thinking on this subject has evolved. I previously advocated investing exclusively post launch, and at least 6 months after the genesis event. This behaviour was designed to gauge the soundness of a protocol, such as its security, quality, and adoption. I now believe that by studying inputs and outputs of a protocol, we can take advantage of an earlier investment.

This exercise is actually quite simple, it will generally involve studying the credentials of a core team (team), the funding mechanisms around development post-launch (funding), and finally the quality and applicability of innovation being brought to bear on the project (innovation), and making an educated guess as to whether this token will be here half a decade from now (long lastingness).

Gauging the “long lastingness” of a protocol is clearly the hardest of these tasks, diligent research will show in a near binary fashion that; a protocol either has funding or it does not. A project team is either experienced and high quality, or it is not. A project is either innovative or it is not. Long lastingness requires a judgement call.

It is important to understand that as time passes, long lastingness becomes clearer (the Lindy Effect). A project that has survived for three years, all things being

equal, clearly has a better shot at reaching the five year mark than a project launched yesterday; much like the sample stock question laid out in the first chapter.

This judgement call requires experience but more important than that, a clear mind; an ability to see the project and the team as they are, not as we wish them to be. Innovation is of course key to this but the ability to lead this innovation and spend the team's talent and funding diligently and frugally is more important.

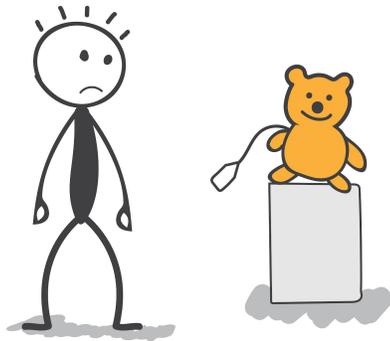
One of the key things that I look for when investing in new crypto assets today is the previous history of the founders. Technical know-how is key, but lack of entrepreneurial experience may kill early stage investing. There must be a proven track record from day to day operators that they can and have previously shepherded a startup from seed round to viable product. This is a heavier burden than it appears.

Notice that I do not say “shepherded to success” or “to sale.” Tech startups have an attrition rate second only to cryptocurrencies; no, I look for a team that is capable of delivering the innovation promised relatively on time but very much on budget. This is a much more attainable goal. Of course if one of your founders sold his startup to Google for a billion dollars, well more power to them.

However, it is important to avoid social media influencers and attention hogs. Having delivered a successful, name brand project twenty years ago should not carry much weight with you when judging the pedigree of a potential target's founders. We care about what founders are doing in the present, any information older than a few years is ancient history. Founders, the kind we want, are unable to rest on their laurels, they are serial innovators.

When judging an early stage investment, be especially wary of promotion. This seems odd doesn't it? Well the reason is that a quality team will rarely engage in much promotion, if any, the innovation itself will attract users. Unlaunched coins being talked about by brand name promoters on Twitter? Ninety-nine times out of a hundred you can ignore them and move on. Do not look for the exception, play the numbers.

Finally, remember that if things do not align, you can always invest in a later stage. Never let your zeal to be “in on the ground floor” overpower your reason. If we have the funding and the innovation, but not the right team, take a pass until the leadership proves itself. You can apply this to any part of this equation.



Price is not key

Price is not an important factor when deciding to make a crypto investment, a more important metric is percent ownership in the protocol. This is because launching a coin with a billion tokens, or a mere ten million tokens, will have an effect in terms of price because there is a limit to the market cap a coin may achieve relative to other coins and the global crypto asset market cap in a decent time frame. The fewer tokens issued at a cheaper price, the better.

As always, if you have identified a good investment target for investment, try to invest as much money as you can safely afford to lose at this point. If you want a hard target, try to own at least 0.05% of a given token at launch. This will sometimes be easy while other times pricing will make it impossible, adjust accordingly.

Price is an interesting metric by which to judge an investment, it is ever present and easy to determine. However it is a low quality metric, price will fluctuate day to day, and year to year with neigh a sign of reason or measure. Our focus should be on owning as much of a network as we can afford if the economics make sense. Remember, no token is worth an infinite price, there is definitely a price at which a quality token should be acquired and definitely a price at which the same token should be ignored.

The difference between these two will generally be the nominal market cap of the token we are considering (price*tokens issued) versus the market cap of a comparable asset and the market cap of the entire crypto market. If a protocol is launched which issues a billion tokens at one dollar, the market cap of this token is one billion dollars. This is a much more investable asset than if the same token issues at one hundred

dollars, where its market cap would approach 50% of the ENTIRE crypto space. One clearly has room to grow, the other is clearly going down fast.

Beware of market cap games at launch, these are particularly popular with pyramid scheme scams as they can quickly establish a high nominal market cap. It is a good way to deceive investors about the size and assumed soundness of a project. There is nothing to be inferred from the market cap of a project at launch or in the long term, always return to innovation, funding, and team. Long lastingness is key.



You are not special

Always remember that your kindergarten teacher was wrong, you are not special. What I mean is that you do not have a crystal ball. Needless to mention, you do not have any special insight into what the price of an asset will do tomorrow. Also, unless you have studied similar methods before (variants of value investing), or have studied some fundamental analysis as it applies to crypto, well, then you have no insight greater than anyone else at this point. Do not feel bad, I don't either.

I do not credit what success I have had as a crypto investor to any particular insight, but rather to dedicating myself to constructing the framework I am trying to transmit to you. Investors in general tend to fail in similar ways but there are only a few proven frameworks to becoming successful, believing that you are that little snowflake with particular insight, will get you killed.

You should always understand the limits of your competency. What do you really know? This is hard because many of us may know a lot about a narrow subject, but humans tend to take those slivers of real understanding, and believe they can apply

them to all problems; this is Charlie Munger's famous "man with a hammer syndrome," to the man with a hammer, everything looks like a nail.

If you do not understand the limits of what you know as an investor, and dedicate yourself to expanding them, you will fall into a category of persons that experience only disaster. Another favorite Mugerism of mine, suggests that it is always better to "employ a man with an IQ of 100 who thinks his IQ is 85, than a man with an IQ of 160 who thinks his IQ is 175. That second man will get you killed." And this is what happens to most investors who do not follow the rules (not necessarily my rules, but those of a proven framework), they get themselves killed in the market.

The main skill you require as a crypto investor is the ability to evaluate data in a dispassionate way. This is hard because this data will likely be colored by personal finance. Why do we study a coin? Because it has peaked our attention, there is something about it we like, and when we like something, we want it to succeed. By the time you have started researching a prospective asset, you have already made up your mind about it, it is key to take a step back and judge its features (team, funding, and innovation), not only dispassionately, but with an eye to discarding this token.

What I mean is that once you accept the limits of your competency, it follows that you are likely wrong about a prospect. Do not feel bad, I study hundreds of coins per year and only make an investment every few years. I discard way more than 99% of candidates that peak my interest.

I take an extra step that I advise you to take as well: I acknowledge that something about a prospective token appeals to me, but I am actively 99% sure I am wrong about it. I am trying to prove myself wrong. I look for things in the fundamentals of a token to prove me wrong. I want to be proven wrong, because this is where I am most comfortable. Making an investment is akin to jumping off a skyscraper for me, I want to be wrong, I do not want to jump.

I suppose that my point here is to preach humility. If we accept that we do not have special insight or powers as investors, if we can convince ourselves that we should discard more than 99% of the projects we research, that will both lead us to educate ourselves, and just as importantly, to avoid costly mistakes. Regardless if you miss an opportunity here and there, a rich investor's sins are of omission, not commission.



What is risk when investing in a crypto asset?

Risk, economics, and finance majors will tell you, equals volatility. Volatility refers to how bumpy a ride a security will give you between points A and B. How far up and down in price will a crypto asset fluctuate between the time you purchase it and the time you decide to sell? This is clearly asinine.

First, let us consider why we purchase any sort of investable asset: the purpose is clearly to gain purchasing power relative to what you started with once you sell this asset a few years down the road. Now, if you are an investor, as opposed to a speculator, then does it really matter to you that volatility in the asset was twice as high as that of another asset you could have purchased previously? No, what you care about is how much your asset has returned at the end of your holding period relative to the second asset.

Volatility is one of those concepts that people who are starting out as investors become enamored with. Specialists love to write about it and people love to choose assets for investment with respect to their volatility. The truth, however, is that only the uninitiated take this course. Speculators looking for fast, intra day or intra week returns will actually find volatility a useful metric when trying to adjust their risk strategies, but what can it tell an investor? Nothing.

One of the key reasons that volatility tells us so little as investors, much as I laid out in the first chapter, is that volatility of an asset today has so very little effect on the value of an asset five years from now. Volatility tells us nothing about the long term prospects of a crypto asset in terms of the building blocks of that asset or what the

machinery of industry will do with any particular set of inputs of leadership, money, and innovation.

When considering an investment in any asset, you should discard any indicator that will not give you an approximately reliable view to an asset's value at least 5 years down the road. The reason that I have gone into detail regarding my models, is that these are the only features of an asset today that I have found to have any predictive value years down the road. And they can be applied widely.

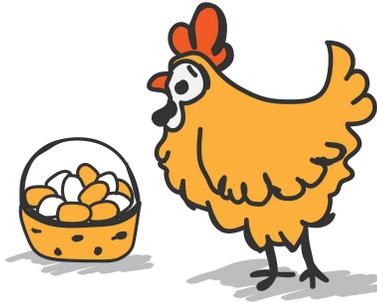
It makes intuitive sense that the size of your war chest today, paired with team and innovation, point to a successful investment. Likewise, by studying that innovation, in terms of the building blocks of crypto assets, we may get a better indicator than if this examination had not taken place. Volatility has no such qualities.

What really is risk then? Risk, for an investor, is the probability of an investment losing value; it's that simple. When considering the risk of any investment, we should be primarily concerned with how we can protect ourselves against this loss of value.

Risk as loss of value refers not only to nominal loss in convertibility to fiat, but also loss of value relative to benchmark returns. In the case of the crypto market, as it currently stands, the main benchmark is Bitcoin. Currently accounting for over 60% of crypto asset value, we should carefully weigh each new investment versus an equal investment in the signature cryptocurrency of our time. If we can accrue higher and less risky returns there, there is no need to search elsewhere.

Alternative crypto asset investment has, for the uneducated investor, an inordinately high degree of real risk. Bitcoin on the other hand, given current levels of liquidity and integration into the real world financial system, has a much, much lower risk of going bust in the next five years.

The reason that we prefer investing in alternative cryptocurrencies is that the systems outlined in this book are designed to bring down the risk of investing in altcoins, to at least match that of Bitcoin; with the added benefit that altcoins have an orders of magnitude higher ceiling in which to appreciate, in a much shorter time frame.



Do not diversify

For the purposes of this discussion I am going to assume you are only investing in crypto assets, and nothing else.

Given our last discussion, I am about to give you some really strange advice, do not diversify your crypto investments. Perhaps a more digestible way of saying this is that one should not diversify when diversification does not bring with it significant strategic advantages, such as a significant reduction in risk of loss or some sort of tactical benefit that can reasonably be foreseen.

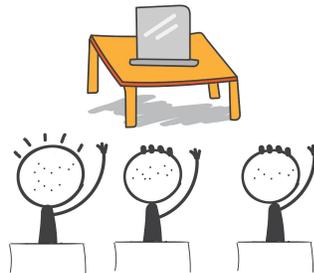
Diversification for the sake of diversification does not in itself reduce risk. A lack of correlation among portfolio assets is a good enough way to reduce the risk that all your assets will plummet at the same time, but it is hardly a guarantee. Crypto assets are generally highly correlated. While junk crypto assets may once in a while dance to their own tune, investable crypto assets will generally dance to Bitcoin's lead.

As I have surely said elsewhere, I am a huge fan of Warren Buffett; he has a saying I am not sure can be fully attributed to him, but it goes like this: "You put all your eggs in one basket, and then you watch that basket." This means that a concentrated portfolio allows you to closely monitor the quality of your holdings and thus keep a close watch on your assets. This is not doable in a highly diversified portfolio so this suggestion implies a concentration of investments.

Being a crypto only investor implies a limited enough palette of assets to paint your portfolio with, but we favor a very specific concentration of qualities as detailed in previous pages. Given the limited number of assets that fit this criteria, you can expect

very high volatility and almost absolute correlation in your crypto portfolio. This negates any value in portfolio diversification.

There are no good ways to get around this high correlation and volatility, but there are some good reasons to bear it. The types of assets described have the highest chance of order of magnitude growth relative to crypto assets with different qualities. Second, risk of permanent loss is very diminished in the types of assets described, quality will eventually be worked into the price of an asset by the market. A concentrated crypto portfolio is really the only option available to the thoughtful crypto investor.



Purchase and Sale Events

What are the effects of crypto's crazy swings on our initial investments as well as our liquidation events? Well, they are both crucial and unimportant.

They are radically unimportant as we begin to execute purchase orders for new investments. Heavy bull and bear markets will affect, but not determine, asset pricing on launch and asset prices will stabilize soon after launch. Launch pricing will in all likelihood reflect the lower end of the price scale in the history of this coin. New coins have no history and little traction, few of them will peak this early and those that do are not investable assets under our criteria.

That does not mean they may not hit lower targets in the future, it simply means early pricing will likely be on the lower end of the spectrum of pricing in this coins long term history. This is the reason we are advocating earlier stage investments than previously suggested.

There are of course exceptions, ZCash is one of them. The way ZCash launched, made it extremely scarce in the first few hours and when coins hit exchanges they traded for thousands of dollars each. Several years after launch, ZCash has never again hit those peaks and people who bought at those prices are out of luck.

This is a highly unusual situation and only likely to be replicated when the initial supply of a given asset is extremely limited. ZCash was prominent pre-launch and enjoyed high demand, it was a perfect storm. I am coming around to low difficulty mining on launch to encourage a large supply of coins hit exchanges quickly. This is clearly not a problem for a no-name asset with low demand, but it's something to watch for as fewer and fewer great projects will fly under the radar as time moves forward.

We should be looking to understand an asset's supply and demand conditions on launch. Immerse yourself in every candidate asset's economics, White Papers and launch protocols. If coins have been assigned to the team at genesis, are those subject to a lockup period? How long is this period? Are these bulk or scaled release of tokens?

What we are trying to determine is how many tokens could hit the market the first few weeks. The most scammy projects will include unrestricted tokens at genesis, that is a big red flag, it allows the team to cash out instantly and gives them no incentives to deliver to the community.

Be very wary of both very high unrestricted allocations to founders, et al. and of an insufficient supply of coins for exchanges on launch. Both situations should lead us to take a "wait and see" approach and withhold investing until things become clearer.

Markets, on the other hand, will have an all encompassing effect on our decision to liquidate our investments (several years down the road). It is worth repeating that as long term holders, we are unconcerned by market swings up until the time in which we decide to liquidate our tokens. Markets are on permanent bull and bear cycles and the length of these is impossible to determine.

Unlike real world markets, cryptocurrency markets tend to cycle very quickly. In a traditional market, such as a stock investment, a bear or bull market may last for upwards of ten or fifteen years, whereas crypto markets have tended to cycle within a handful of years only. This fact allows us to advise investors to, if at all possible, refrain from selling in very marked down trends.

I am only speaking of situations where there is steep and long term price collapse, reflecting a deep bear market, allowing us to avoid "guessing" at the state of the market and engaging in speculative behaviors.

This is advice I am loath to give, because it wrecks of market timing. On the other hand, there is a strong base for suspecting that cryptos accelerated cycles will maintain themselves into the foreseeable future, and thus waiting out a bear market in crypto is not as unreasonable a strategy as it would be in the stock market.



Taking advantage of inefficient markets

The only people who will ever tell you that markets are efficient, are idiots and professors. Let's take a quick look at some market inefficiencies and begin to construct our argument for exploiting them from that point on.

There is a clear difference between price and value. "Price is what you pay, value is what you get." In 2020, oil futures prices turned negative, in essence meaning that oil producers would pay all comers to take oil off their hands. I think a short aside on how this happened is germane.

There were clearly many factors influencing this event, but the accepted story goes as follows: futures contracts that are not liquidated must be settled in specie at the end of the holding period. Basically, the town where these oil futures warehouses were located had run out of storage space due to very low demand for oil from worldwide Covid-2019 quarantines (creating a large stockpile).

In essence, traders were not buying these contracts; because of the storage issue, anyone holding the contract by liquidation would have to figure out a way to store a few thousand barrels of oil safely; since literally no one would buy the securities off of you.

Now this is clearly a problem, and it got compounded by falling markets and a general dire outlook. However, the events here suggest that oil at this juncture was not only worthless, but people would pay you to take it off their hands. Given that the world runs on oil, and it is a highly liquid commodity in general, this is clearly ridiculous.

Many investors who understood the price of oil did not reflect its value, bought (or were gifted) contracts at this juncture, not with the intent of figuring out how to skirt

delivery and trade the paper, but of actually receiving the oil, storing it, and selling it later. This is the kind of thinking we wish to engender, always remember those shiny tokens you are trading are supported by an underlying value.

Now, returning to the original discussion, if you believe markets are indeed efficient, you must make the argument that physical barrels full of oil not only had no value at this juncture, but that it was reasonable for people to pay you to take them away; with a straight face. Clearly this is impossible.

With this clear example we have established that the market is perfectly capable of irrational pricing, and is therefore inefficient, *at least some of the time*. Part of the trick lies in identifying these inefficiencies, but they really should be clear to any detached observer, if you are being gifted value, you take it.

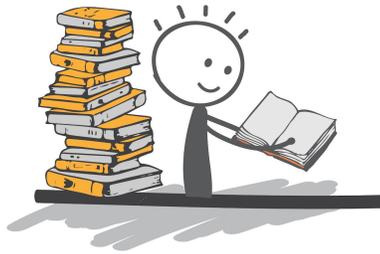
There are marked inefficiencies in the crypto market, particularly in and around new issues. Semi-liquid assets are rife for exploitation. This is the reason that we invest so much time in studying candidate assets, because the release date is the most likely point at which the value of team, technology, and funding are likely to be mispriced.

There are of course other key times when crypto assets are likely to be mispriced, such as the peaks and troughs of bull and bear markets. We are not advocating market timing, we should instead build an ability to identify irrational situations. When a no-name coin jumps from number 50 on coinmarketcap to number 5 in a 24 hour period, without major news, this is such an irrational situation.

But my favorite type of irrational situations involve bear moves, because they are the easiest to identify. Suppose we have invested in a viable coin, with good technology and ample funding. If this coin has a track record of delivery, a sudden collapse in price should be met with scepticism. A radical collapse in price, say of about 50% in a few hours, should be met with jubilation and ample buying. If there is no viable explanation for such a collapse, we are likely exploiting serious mispricing.

Is there really a difference in Bitcoin if its price is \$100 at 9AM, and \$50 at 11AM the same day? Unless there has been some major event affecting the core foundations of Bitcoin, the answer is no. You are investing in the exact same Bitcoin (innovation, team, funding) at both times, if you were willing to invest at a price of \$100 at 9AM, isn't a price of \$50 at 11AM a steal? Remember we are investing in fundamentals, not the madness of numbers on a ticker.

This is a key advantage crypto investors hold over, say, stock market investors; these types of radical asset mispricings play out over hours and days instead of months and years. We do not have to wait very long to profit from our strategies, and since we only seek to invest in the most radical, and clearly obscene mispricing events we come across; the odds of being right more often than not, are on our side.



Gain every edge you can

Our investing method is all about gaining an edge in crypto asset selection. Did you know that some of the casino games that rake in billions for corporations, have statistical advantages (the house advantage), as low as 3%?

This means that a player executing a perfect strategy would be expected to lose no more than 3\$ out of every hundred dollars for each gaming session. Did you lose a *lot* more than that the last time you went to Vegas? There is a danger in investing, much like gambling, that if we lose sight of our edge, we will by default face ruin at the hands of our intuition. A lot of losing gamblers go with their “gut”. Winners understand, you have to play by the numbers.

The current and likely most efficient strategy in stock investing is called indexing. This strategy works by buying every stock in the market, weighted by market cap and rebalancing periodically. Essentially, this guarantees you the market return, which is also better than what 85%² of money managers will achieve over a ten year period. Our strategy however, relies on mean deviating investments, or what are called outliers. The goal is to outperform Bitcoin, which is our default measuring stick.

The factors which influence our “edge” are partly determined by network effects. The entire potential of a candidate crypto asset depends on the value of the token appreciating in relation to adoption. If a protocol is not designed to appreciate as more people use it, then this is not a viable investment. Think of stable coins such as Tether and USD-C, these coins fit several of our criteria in terms of funding, team, and a

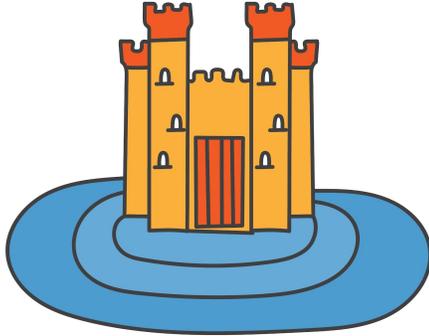
²<https://bit.ly/Most-RL-Funds-Fail>

degree of innovation. But stable coins are certainly not investable assets as they are designed to neither appreciate nor lose value.

Our edge is reliant on the marginal utility gained by each new adopter. Our candidate assets' network must become more valuable and more useful as adoption increases. If we can identify a token where the marginal utility increases not only with adoption but **per unit** of consumption, we have stacked the deck in our favor as far as is possible. One of the reasons we focus on investing in tokens which aim to be used as currencies is because marginal utility does not decline with each unit of asset consumed.

This is part of the reason we do not invest in "protocol" tokens, such as assets that aim, for example, to be used as tokens in distributed storage. It is clear to see that each additional unit of the asset we use, has a declining marginal utility; no one has infinite storage needs. Every unit we spend on distributed storage is one less unit that we need; money is one of the few commodities where additional units consumed do not diminish our taste for additional units.

Our edge is strengthened by gauging adoption. Our criteria are a way to gauge a protocol's fitness for adoption, but we must also consider how efficient this exchange of value is likely to be. Coins that not only do not lose marginal utility, but maintain it or even increase it with use are the gold standard. I would venture that Ethereum has taken great strides in this area. As the Ethereum network goes mainstream, Ether will only gain in value as new contracts and services pop up in the network. Once there is a large library of services, Ether will act like a true currency, and because of all this opportunity and content available on the network, tokens will only increase in value as services scale.



Moat's:

In investing, moat's are what are termed **durable competitive advantages**. Basically moat's are the features which stop the cryptocurrency next door from eating your lunch. When looking for investable crypto assets, we want to find assets with the deepest, widest moats possible.

Moat's usually cover:

- branding
- switching costs
- monopoly status
- proprietary technology
- price

I will take these in turn:

Branding: this is big with Bitcoin. When someone thinks of cryptocurrency, they automatically think of "Bitcoin". It's gotten to the point where it is unconscious, "I am a cryptocurrency investor," "oh so you work with Bitcoin?" Consumers' minds are anchored to the Bitcoin brand, and this is one of the key reasons why Bitcoin is relevant. I would venture that Ethereum has a branding moat as well, but one that is much smaller than Bitcoin's. This is one of those moats that I would love to see in our investable assets, but given that we are early stage investors, this is highly unlikely.

There is one exception to this rule however, and it is Brand Name developers and team members. ZCash, Coda, etc. all have very well known industry members sponsoring them. “Bitcoin Jesus”, Roger Ver, is the face of Bitcoin Cash. If you can find an asset with a brand name team, this is a great incentive to invest, provided the team is known for the right reasons. Prominent intellectuals, technologists, developers; these are all welcome. We do not want any “crypto felons”, we are looking for people with a history of achievement and delivery.

Switching Costs: Props if you see a way for a crypto asset to lock users into its ecosystem, but I do not see this as likely. We like to invest in “coins as money” protocols, or more simply, **digital cash**. Digital cash should be easy to purchase and easy to sell, if something new comes along, I can think of a few reasons why I would not be able to jump ship from the best constructions of digital cash: There can be an ecosystem of value around a coin, Bitcoin for example is accepted by most services and is integrated widely. But is this really enough to keep me on board when a cheaper, faster crypto asset pops up around the corner? Experience would suggest it is not. This is at best a shallow moat.

Monopoly Status: I do not believe that monopoly moats apply to crypto, as everything is open source and easy to copy. As it should be.

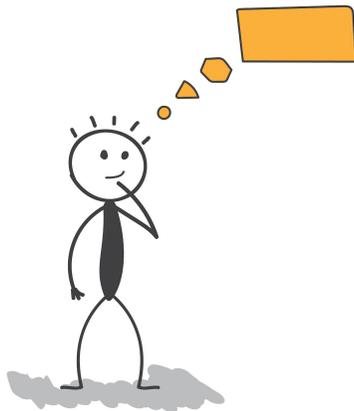
Proprietary Technology: This is an interesting type of moat. Keeping in mind that most cryptocurrency projects are open source, and that it is trivial to copy any of their features, I believe there is a moat around “technology innovation.” Experience has shown that if a protocol innovates a feature, like ZCash did with SNARK anonymity, there will be copies, but these are unlikely to overtake the original.

I cannot think of a single example where a copycat crypto asset, one which did not add additional, real innovation, has overtaken its parent cryptocurrency. This strikes me as a moat type unique to crypto assets and one we should definitely watch, surely the best thing we can do is invest in first movers and innovators whose economics and characteristics fit our models of crypto development.

Price: The “price” moat in traditional investing refers to being the low cost producer, but I would like to adapt this moat to fit the cryptoverse a little bit better: we should seek to invest in assets that offer the lowest transaction/usage costs among its peers. This is a moat Bitcoin used to have but lost during the Blocksize War. Keeping use of the network as cheap as possible is the smartest way to gain and keep adopters, especially when your nearest competitors have much higher pricing.

I would advise against investing in any asset which does not have the lowest cost for usage of its network, or is close enough to make using it or a cheaper alternative near substitutes. As we consider what makes an investable crypto asset, investable, a lot has to do with how efficient it is. In this case efficiency comes down to usage cost.

It is important we not only look for moats in our investments, but the right moats. Clearly Bitcoin's name brand moat is deep, but can you bet your life savings that it alone will protect it from the innovation and pricing onslaught coming from all sides? I would say that is a risky wager, and you do not have much edge. On the other hand, looking at lower cost networks and key innovators, is a good way to approach asset selection.



Models

Let us review our investment model: We suggest that an investor who acquires assets based on a criteria determined by abundant funding, a problem solving innovation, and a great team, is unlikely to flounder. Our model takes these factors as inputs and we wait to see the outputs (protocol) that the machinery of industry will produce.

But what is this “machinery of industry,” and how can it help us find the edges of our investment model? We need to look only at ourselves for this, as entrepreneurs we are “the machinery of industry.” We are also the edges of not only our investment model, but any investment model. When humans get involved, even highly efficient systems begin to break down.

I am often reminded of an old saw by statistician George Box, which says that “all models are wrong, but some models are useful.” The model we have built throughout

this book can be attacked, especially at the edges, but isn't the fact that it works more important?

We must create efficiencies at all stages of our model to defend it. The most obvious place to start is to consider, prior to investing, how efficiently the machinery of industry is at converting our inputs into a working protocol. Large amounts of capital, talent, and innovation should produce proportionally large solutions. Unfortunately, this is often not the case.

Looking at the efficiency model, we can see a failure in conversion from inputs to outputs in most ICO's to date. This failure in efficiency is rather large, as many ICO projects not only produced bad outputs, but many failed to produce any outputs at all.

The failure of any well funded, innovative protocol, is necessarily at the human level. If you use high quality inputs, but only produce low quality outputs, this shows a failure of leadership. A person like this should not be trusted with our money more than once.

This reminds me of Mark Karpeles and the Mt. Gox fiasco. For those of you who do not know, Mark was the CEO of Mt. Gox, an exchange which at one point controlled over 80% of cryptocurrency trades and billions of dollars in flow.

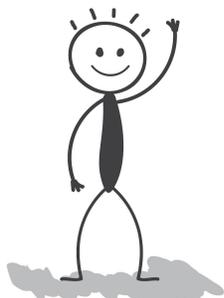
Mark had at his fingertips the very definition of high quality inputs in terms of innovation and funding, but he was a poor leader and his team suffered. Mark went to jail because he was bad at security and lost hundreds of thousands of Bitcoins. He destroyed Mt. Gox in a spectacular implosion of leadership. We should not trust Mark with our lunch money, much less our investments, ever again. Mark found the edges of his operating framework.

Risk is highly correlated to efficiency under our model. Low efficiency, which means quality inputs producing junk outputs, is the same as loss of capital. Loss of capital is also found at the edges of our investment model, the places where light does not shine and which are not lubricated by thoughtful industry.

Leadership is foundational. We have briefly touched on this issue earlier, regarding what incentives should be available to founders. A system which incentivized founders to produce high quality protocols, and hold for the long term, is key.

Formulas are all fine and good, right up until these meet the machinery of industry. Right up until blood and brain start making judgement calls, this is where most investment systems will fail. Our model is particularly effective because it takes into account these behavioural landmines and is organized in such a way as to minimize them, but we must always remember that they exist.

Finally, we must remember the lessons of the Lindy Effect and realize that long term survivability makes not only our investments more profitable, but less risky. An investment under our model benefits from the passage of time and uncertainty is reduced over the long term. These investments are antifragile.



Experience-Final Words

Do not let a lack of experience demotivate you, crypto investing is a very doable trade as long as you can grasp the theory behind it, it is certainly an order of magnitude simpler than alternative investment types such as stocks or bonds. Crypto is special because there is no faux accounting to wade through. No off balance sheet vehicles or other nonsense, it is just you and the protocol.

What I am asking you to do is to identify a great team, with ample funding and an innovative implementation (notice I did not say *idea*, ideas are a dime a dozen), and finally, the right team mechanics. A crypto asset that is more likely to last the longer it has been around. When you find a protocol that fits this criteria it will be joyfully obvious, you won't be able to contain yourself when you finally find one on your own. If there is any doubt in your mind that you have found such a protocol, then the right move is to not invest. It has to be that obvious to anyone who sees the candidate protocol.

The type of investing we wish to accomplish here, relies on the fundamental inefficiencies of the market and its tendency to misprice assets. This is a very real phenomenon.

Remember that adoption is predictive of future value, we want the mechanics of a candidate token to offer at least linear increases in token value per new user. Exponential increases in token value with use are the gold standard. Remember that team, innovation, and funding are key to creating a product that is ready for this sort of adoption, a team without funding, or funding without innovation, cannot develop the kind magic that leads to long lastingness.

Above all, stay centered, crypto investing is more about character than it is anything else.

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Notes

If you are able, please take a moment to leave a review on Amazon, this is infinitely useful to us and helps get us started on future projects.

Feel free to reach out to me at Pablo@Pablo-Lema.com for any crypto related matters, I welcome email correspondence.

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