

Dear Investors,

The Ethereum Developers Conference (DEVCON) is one of the most important and interesting in the crypto conference calendar. I last attended DEVCON3 in Cancun in November 2017, just after I established the Fund on 1 July 2017.

As the name suggests, DEVCON is primarily for the Developer community (computer scientists, cryptographers, mathematicians etc.) so a fair amount of the content is highly technical. Presenters get into the weeds on subjects dealing with cutting edge cryptography, zero knowledge proof applications and quantum resistant blockchains. But there are also presentations about real world adoption, user interface, decentralised ecosystems, cryptoeconomics and the merging of technologies like AI and Crypto.

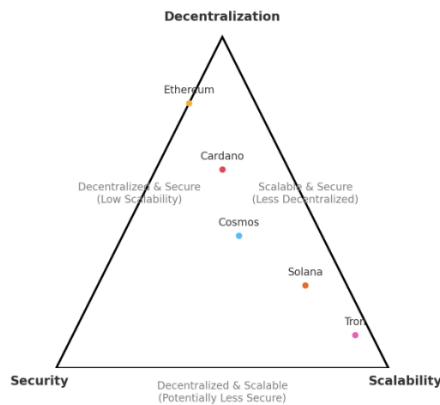
DEVCON7, attracted over 11,000 people from over 130 countries. Walking into the convention centre each day felt like entering a football stadium. The buzz of excited conversations was all around, a positive atmosphere. The formal conference lasted 4 days but there were a number of side events before and after the conference with many teams - who usually work remotely - spending time together.

My objective in attending was to assess the current state of the Ethereum project to determine if the thesis - that Ether will eventually flip Bitcoin as the most valuable cryptoasset - is still valid. We know that for the past 18 months or so Ether has underperformed Bitcoin from a price perspective. The question I have is whether this is because of Bitcoin's strength or Ether's weakness and also if this is a long term outcome. Should the Fund change its weighting of Ether.

Related to this question is the question around the so-called 'Ethereum Killers'. Layer 1 blockchains like Solana, Cardano, Polkadot, Tron, Cosmos and others. Some of these projects have out-performed Ether from a price perspective - some have not - but the question for me is whether these projects have long term futures as competitors to Ethereum or are they complementary to Ethereum or will they eventually fall away.

Ethereum Build Philosophy

In blockchain technology we have what is known as the 'Blockchain Trilemma'. The trilemma highlights the three key aspects of blockchains (Decentralization, Security, Scalability) and the trade-offs that arise when trying to optimise any two while often compromising the third. You can see in the diagram below where some of the Layer 1 blockchain projects sit and the trade-off they have made.



With technology projects often there is often a 'F*&^ it lets it ship it' attitude. This refers to technology that is not perfect but is at least acceptable to launch into the market. The mentality here being that first product to market is paramount. An often used example here was the video recorder, Betamax had the better technology but shipped second to VHS and VHS won the largest market share.

With respect to blockchains some are of the view that achieving Scalability (but trading off Decentralisation and Security) is the first to market strategy as this will encourage faster and wider adoption of the blockchain. It is this narrative which to a large extent has driven the price movements of Solana, Tron and some others.

One of the themes at DEVCON7 was making the point that Ethereum is being built as the settlement layer for the world's financial and other critical systems for the next 100 years. This is a serious and significant project. It's acceptable for an electronic consumer product like a video recorder to use 'ok' technology, it is not acceptable for a blockchain project to adopt a 'F*&% it lets ship it' attitude. Security and Decentralisation is paramount and this is what the Ethereum developers have optimised as part of their build philosophy.

So How and When will Ethereum Scale

In October 2020 the Ethereum community broadly adopted what is known as the 'roll-up centric roadmap'. Under this model the scaling of Ethereum will be at a second layer. Since then a number of L2 projects have emerged, including : Optimism; Arbitrum ; ImmutableX; Polygon and a number of others. There is a great dashboard called [L2 Beat](#) which keeps track of L2 activity. At present there is USD 44 billion of value locked up in L2 projects.

The example often used to explain L2 is the so-called 'bar tab approach'. Very simply, instead of every single transaction for the purchase of a cup of coffee being transacted on Ethereum, a tab is set-up behind the bar and a table captain keeps the records of transactions and then batch settles them on the Ethereum chain. In this way the Security and Decentralisation of Ethereum can be used by many many L2 projects who focus more on Scalability.

[ImmutableX](#) for example, (which we own in the Fund) focuses on NFTs and gaming. They are able to provide instant trade confirmation, massive scalability, and no gas fees without compromising user custody. This is only possible because of the 'roll-up centric roadmap' approach to scalability.

There was a lot of discussion at DEVCON about the L2 ecosystem. One topic was the question of whether it was good for Ethereum or whether it would be better to have more transactions settling on Ethereum directly. The conclusion here was that while in the short term L2's have reduced the fees on Ethereum, in the medium to long term the L2 strategy to scale will give large real world use cases and users (like the SWIFT system) the confidence to adopt Ethereum at scale.

Another L2 topic was around the subject of intraoperability and useability. These were technical talks but the key takeaway is that most L2 projects and indeed Ethereum itself will to a large extent be abstracted away from the end user experience. No end user wants to know about L2 and Ethereum. They just want to get stuff done with as few clicks as possible.

My sense is that Ethereum has solved the scalability issue by adopting the 'bar tab' method. The front end developer community is focused on abstracting away the complexities of using these systems for everyday people using everyday applications. Over the next period of time we will see increased adoption rates, particularly by large existing administrations. One example is BlackRock, who have used Ethereum to issue a tokenised bond fund. There are many other such examples, we are just at the beginning.

Censorship Resistant - Decentralised - Credible Neutrality

Three high level themes of DEVCON were reminders that these three properties are paramount to the success of Ethereum. All and any design decision the Ethereum developers make are made with these three properties in mind. Many technology projects start out with grand ideals based on

principles but inevitably become compromised as practicality meets theory (one example here is OpenAI, which was founded as an AI safety project that was open and not-for-profit. It is now closed and for profit!). The Ethereum community is determined to not make the same type of mistake.

I don't see this type of thinking in all Layer 1 blockchain projects. The focus within the Ethereum community is on these principles and building systems for the next 100 years. I could fill a whole newsletter on this topic. If you wish to learn more about these principles and why they are important see the article [here](#).

Thousands of projects within Decentralised Ecosystems

While Ethereum itself is decentralised, this technology enables many industries to become decentralised. Many of the booths and discussion rooms at DEVCON focused on these decentralised ecosystems.

Of course we know about the development of DeFi. But here is a short list of some of the other decentralised ecosystems that are evolving.

Science = DeSci
Social Media - DeSoc
Physical Infrastructure Networks = DePIN
File Storage = DeSto
Identity = DID
Exchanges = DEX

I call them ecosystems because within each group there are hundreds of related projects. When I visited booths or dropped into discussion rooms at DEVCON I found the level of innovation incredible. I personally have never been exposed to such a free and open marketplace where any idea can be explored and developed. All of the thousands of projects within dozens of ecosystems are being built using Ethereum as the base layer technology.

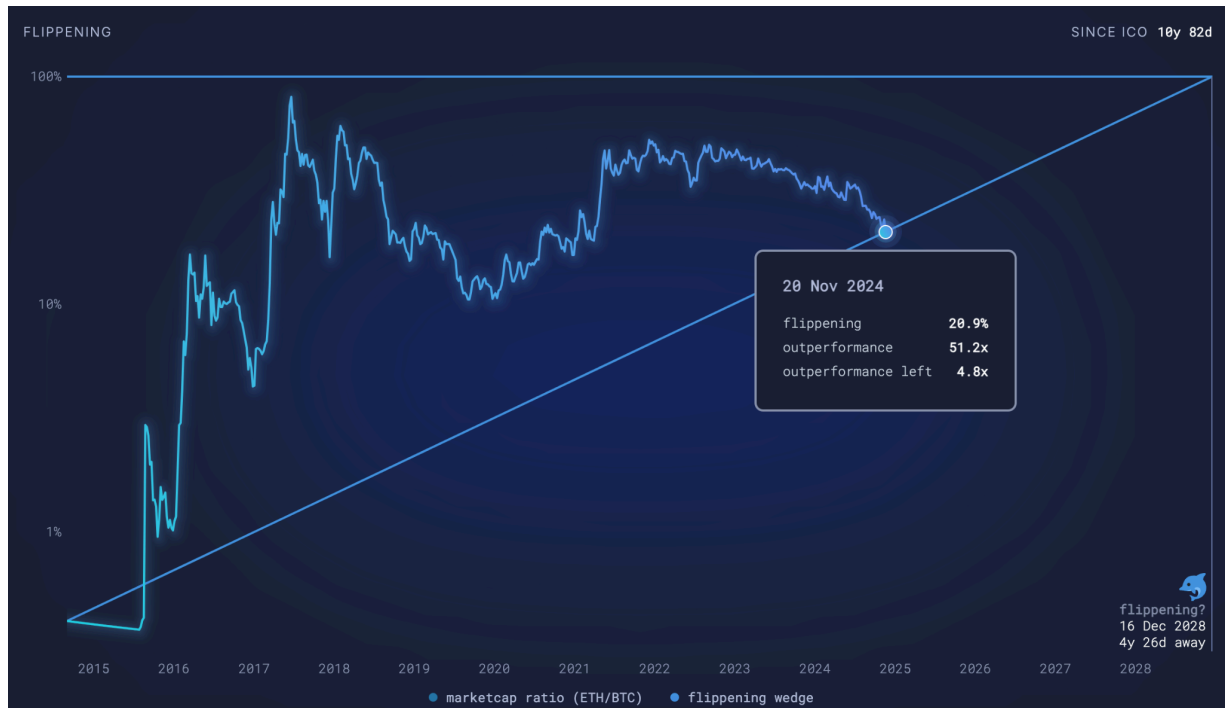
I find DeSci one of the most inspirational examples of the benefits of decentralisation. One DeSci project is VitaDAO. VitaDAO seeks to break down some of the issues of funding scientific and medical research. It's a complicated problem but some solutions are being offered by the VitaDAO project and they are seeing some results. If you would like to know more about DeSci in general there is a great podcast [here](#).

When I think about adoption and real world use cases for Ethereum these decentralised ecosystems are as real as anything else. They are early and there is a lot of experimentation going on, but these projects are being led by people with deep domain experience who are serious about developing solutions to the problems they see within their existing systems.

The Flipping Dashboard

The key metric we are interested in is the market capitalisation (number of issued units x unit price) value of Ether versus Bitcoin. The chart below comes from the Ultrasound Money dashboard. There are some interesting observations to make based on the data represented in this chart.

1. Ether came close to flipping Bitcoin in July 2017, it became 81.5% of Bitcoin's value.
2. As at the date of 25 November the market cap of Ether has grown 51.2 times faster than that of Bitcoin.
3. According to this data and the assumptions used, the Flipping will happen in December 2028.
4. At the moment the market cap of Ether (USD 373 billion) is 21% of the market cap of Bitcoin (USD 1.8 trillion).



No doubt Bitcoin is the flavour of the year. The attitude towards crypto generally and Bitcoin in particular has shifted significantly. Particularly in the US. Everything I have been saying about Bitcoin adoption is happening. We have corporations, the world's largest fund managers and sovereign countries (soon to include the US) now buying Bitcoin. Up until 18 months ago the main buyers of Bitcoin were individuals and hobbyists. Basically these retail players took Bitcoin from zero to over USD 1 trillion over a 15 year period. It is totally possible that over the next 10 years, with these new buyers entering the market, the value of Bitcoin could become USD 3-4 trillion. That would put Bitcoin at over USD 200,000 per coin.

Ether is more difficult to understand. Bitcoin is 'Digital Gold', it has scarcity and it's a digital asset. But what is Ethereum? The narrative is more difficult to conceptualise. Some say it's 'Digital Oil' but that in itself requires quite a bit of further explanation.

The narratives around Ether are more like the narratives around the Internet in the early days. Even today it is difficult to describe what the internet is, but we certainly know what it does and how our lives are intertwined with its operation. Ethereum will be the same.

From an institutional investor point of view Bitcoin has broken the dam so to speak. Accepting that cryptoassets have value, learning how to value them, hold them and account for them paves the way for other cryptoassets to be adopted by institutional portfolio managers. Ether is the next one they will look at in detail. When they do, they will see that Ether has a yield, it also has digital scarcity and it also has significant utility value : it is not just a 'dumb rock'. They say that Bitcoin is the pathway drug to the whole cryptoasset marketplace and Ether will be the very next asset of interest.

Concluding Comments

If I had to make just one comment about DEVCON7 it would be this...The Ethereum project has by far the largest amount of brainpower going into the development of the project. Not everyone can do the type of work these developers do, it's technical cutting edge computer science, cryptography and mathematics. When making an investment it's often about backing people. Ethereum has the largest 'mind share' of any group working in the blockchain space. Some of them could be wrong. But I doubt they would all be wrong. This ultimately is why I believe Ethereum will meet its objective and become one of the world's most widely used pieces of software and an incredibly valuable asset.

Ether is currently around 36% below its all time high of USD 4,878 (10 November 2021). As Bitcoin pushes into the USD 2 trillion territory Ether has not even cracked ½ a trillion. This to me, in the context of what I have outlined above, seems not right. Ether with a market cap of USD 1 trillion relative to Bitcoin and say Microsoft (MSFT market cap = USD 3.1 trillion) seems not unreasonable. At that level Ether would be worth USD 8,300. This is a reasonable medium term target for Ether.

The way I think of our portfolio is that Bitcoin is a macro risk off asset. It will underpin solid steady growth in the portfolio over the long term and it will continue to outperform most other asset classes over time. Ether is our long term trade in this space. We are placing our trade in Ether on the basis that it has more utility than Bitcoin, it has a yield and that it will become the world's computer. In our view, it will eventually push past Bitcoin on a total market cap basis.

On top of the Ether flipping thesis we continue to pick over all new cryptoasset issuances looking for cryptoassets that are going to bring billions of everyday people 'on-chain' in the same way that billions of people and businesses went 'on-line' in the early part of this century. Chainlink, ImmutableX, Bittensor, Decentraland are some such projects. But we tread carefully with assets other than Bitcoin and Ether as we have significant opportunity loss as well as actual loss if we allocate too early to the wrong projects.

As always, please do not hesitate to contact me on 04 5090 0151 or at ian@bca.fund if you have any questions.

Best Regards



Ian Love

Founder and CEO

Blockchain Assets Pty Ltd

The content of this newsletter has primarily been prepared by a human, Ian Love. Artificial intelligence has been utilised for some fact-checking and for providing explanations of some specific words and concepts.

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