

# Demystifying, Professionalising & Expanding the Cryptocurrency Universe

Hubbis and our exclusive partner for the event, blockchain data platform Chainalysis, presented a fascinating and highly informative one-hour thought leadership webinar on the evolution of cryptocurrencies, targeted specifically at the wealth management community in Asia. In attendance were senior delegates from the wealth industry from across the region. The event comprised two 'halves' - a 30-minute presentation by blockchain expert and Chainalysis Chief Economist, Philip Gradwell, and a roughly 30-minute panel discussion amongst a small number of hand-selected digital asset experts. Philip Gradwell is also author of the highly respected Chainalysis 'Market Intel' weekly report. In his roughly 30-minute presentation, he walked delegates through the evolving universe of cryptocurrencies, supported by a detailed slide presentation that highlighted the vital importance of detailed, forensic-style analysis of blockchain and other crucial data that elevates investment and trading in these digital currencies from mere rumour and speculation to a far more professional and institutional style approach. Philip spends his working days – and much of his spare time, he says - analysing on-chain data to understand cryptocurrency markets. His analysis includes identifying economic fundamentals, how cryptocurrency moves on-chain between exchanges and across borders, and the nature of crypto crime, amongst other topics. In this report we have summarised the key information and insights from Philip's presentation and summarised the subsequent panel discussion. There is no doubt at all from the many positive comments we received after the event that the delegates found the discussion remarkably informative and highly thought-provoking.

Exclusive Partner



## PHILIP GRADWELL'S TALK

### Real world insights

"Chainalysis is the leading provider of blockchain analysis software. We take all of the data that is generated on the blockchain through cryptocurrency transactions, and we make that data useful, we turn it into real world insights. We have a portfolio of products that provide complete visibility into cryptocurrency, whether you're doing investigations, or you're monitoring transactions, or you're trying to understand compliance or if you're trying to get market insights.

### The diverse Chainalysis client base

We have a wide range of customers who use our data in their day-to-day business to make sure, for example, their cryptocurrency wealth is safe, to be aware of and compliant with law enforcement or exchanges running anti-money laundering programmes, or indeed, to identify the opportunities that are in this space.

### The 3 key trends to understand and watch for

You need to see and understand the key trends. One key trend is that Bitcoin, the leading cryptocurrency which has been around for over a decade now, has become known as digital gold; in the past few years it has become an asset that many people are choosing to store wealth in for an extended period of time.

The second big trend is decentralised finance, or what we call programmable money. Decentralised finance is based on Ethereum or on Solana, where you can do

more than just transfer cryptocurrency between people, you can swap it, or you can lend it. That means it has more applications than Bitcoin.

The third big part of the universe are stable coins, such as Tether or USDC. These are effectively digital dollars and are part of the trend to the digitisation of assets, as more real-world assets become represented on the blockchain. You may have heard of non-fungible tokens, where artworks are now being represented on the blockchain, but actually, the biggest case where real-world assets have been taken and represented on the blockchain is in stable coins, where actually people who have created digital versions of typical US Dollars. That may not sound particularly innovative, but it's had a lot of uptake and usage.

### Bitcoin – an overview

It all began in 2009 and in the past two years Bitcoin has hit a transformational phase, first falling in the aftermath of the pandemic's arrival, but then peaking at USD64,000 in April 2021, and recently trading at around USD55,000 [October 9].

Why this dramatic rise? The transactions recorded in a public ledger are called the blockchain. The data is anonymous, so we don't know who exactly is holding the Bitcoin, but we at Chainalysis do a lot of forensic work to actually understand cryptocurrencies that are held, for example, by the big exchanges, so while we don't know names, we can describe their behaviour,

and we can see if they are large investors, for example holding more than 1000 Bitcoin (equivalent to USD55 million plus).

Starting from March 2020, these large Bitcoin investors bought some 800,000 Bitcoin through to February. There are only 18.7 million Bitcoins that have been created to date out of a total of 21 million that will ever exist, and we estimate that 3.7 million of those Bitcoins are lost. So, 800,000 Bitcoin traded out of roughly 15 million available. And much of those Bitcoin were acquired from people who provide liquidity, so very large investors buying more than 1000 Bitcoin at a faster rate, and that has driven the price up.

Why? Largely because this to me is a response to the economic uncertainty that we saw through the onset of the pandemic, and that continues today.

From February, the amount of Bitcoin held by these large investors started to actually decline and smaller investors started to come in, and since then we saw much more price turbulence. So, we think the large investors that came in bought about as much as they want for now, they may buy more in the future, but they pulled in a new swell of retail attention, pushing the price higher but also driving more volatility.

The large investors buying in the past 18 months have been largely through North America, buying from many Asian investors who were early in from 2017, so we have seen a shift in geographical holding patterns.

## The Bitcoin Price Floor

What I call the Bitcoin Price Floor is determined by looking across all investors who have purchased their Bitcoin in the last 12 months, and we see that this price floor has continued to rise, to some USD41,000 I estimate today. Recent price declines did not go below that floor, so that suggests that when the price falls below this buy and hold level of recent investors, they start to buy more, and that provides some support to the market.

In 2020, I estimate the price floor was below USD10,000, today above USD40,000, so that should give confidence. If you're a doubter about Bitcoin, you should really understand that actually there's a lot more at stake now in the industry than there ever was. There's a lot of people who are working hard to overcome some of the shortcomings and limitations of the asset.

## Greater accessibility

Retail access to Bitcoin has greatly increased, especially in the US, with Bitcoin being provided through Square, PayPal, and other leading platforms, it is now increasingly available through retail FinTech apps, in many, many other regions of the world. So, it's really a story of both an institutional adoption from March 2020, but also an increasing boom from the retail market. Actually, with the advent of cryptocurrencies, people on the street are much more engaged with finance, and much more willing to explore new financial products.

## Decentralised Finance (DeFi) on the rise

That leads us nicely into decentralised finance. To understand this better, let's talk about Ethereum,

the second largest cryptocurrency after Bitcoin, and a much more flexible cryptocurrency. You can imagine Bitcoin as a calculator, and Ethereum as a computer; you can actually write any level of complexity into it, you can programme it, and that is what we have seen – an explosion of the types of programmes that people are writing on Ethereum, with all of these different use cases coming under this title of decentralised finance. Solana too has seen a similar phenomenon.

So, with Ethereum or Solana, you can run smart contracts, and people are starting to experiment with other use cases than just saving an asset, for example creating foreign exchange markets.

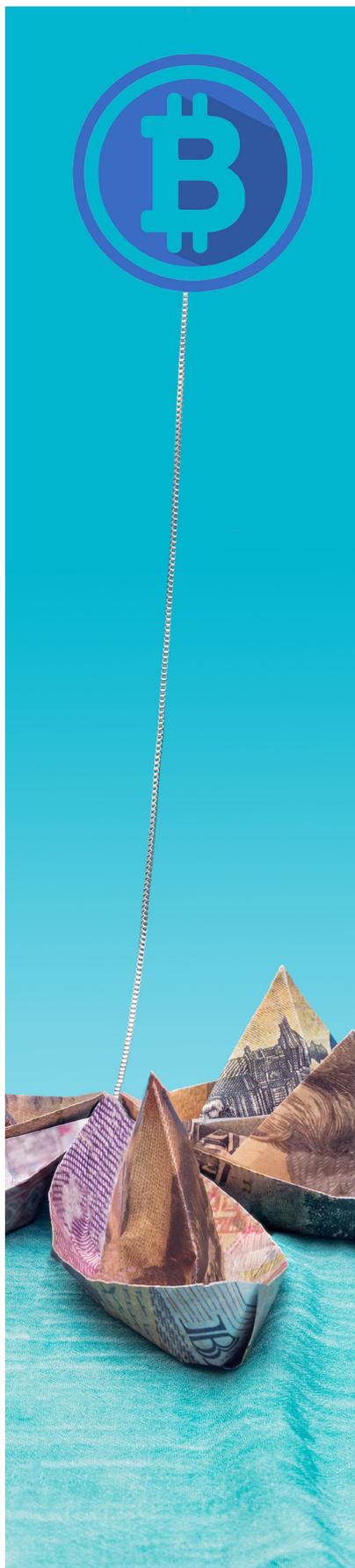
## DeFi and its uses – some examples

In a nutshell, you can see this as implementing traditional finance on the blockchain. One of the biggest decentralised finance applications at that moment is called Uniswap, which provides people with a way to swap almost any pair of cryptocurrencies for any other pair of cryptocurrencies. It has created a very large foreign exchange market.

## Facilitating Forex

I just want to reflect just how incredible this is. There are billions of dollars of volume occurring on Uniswap. And if I had wanted to set up a foreign exchange market where I could do billions of dollars of USD to Yen trading, it would have taken me years, I'd have to get much large, very large amounts of capital, I'd have to face a lot of regulation. But some coders were able to raise a very small amount of money,





spend a few months and set up this foreign exchange market for cryptocurrencies that now runs in a fully automated decentralised way. So, that's Uniswap, really implementing foreign exchange markets for cryptocurrencies.

**And other applications**

Cryptos lending. There's Aave, which is cryptocurrency lending. So, it allows people to actually earn a rate of return on their cryptocurrency or for other people to borrow it.

There is PoolTogether, which allows people to join in 'no-loss' lotteries. Rather than receiving an interest rate on the money that you provide, all of the interest payments are pooled together and then it's given to one lucky person through a lottery.

Then there are non-fungible tokens such as NBA Top Shot, where people are able to buy the digital rights to a video clip of someone doing a basketball shot.

All of these decentralised finance applications, they may be re-implementing things that we see in the traditional world, but they're doing it in a way where there's a very open platform for innovation. And they are able to attract very large amounts of liquidity very quickly, so DeFi has attracted over 12 million Ethereum since June 2020. The centralised exchanges are already facing some competition from these decentralised platforms, with much Ethereum actually moving off of the centralised exchanges into these decentralised platforms. And with Ethereum is worth about USD3600 plus, then that is approaching USD4.5 billion of value being provided to these new financial products.

**So, what about stable coins?**

Stable coins are digital dollars and there have been over USD100 billion worth of stable coins issued so far, most of it in the stable coins known as Tether and USDC.

The majority of the stable coins are used as pairs in cryptocurrency trading. There are some exchanges, where you can only really trade your cryptocurrency for these stable coins. But we can look at the on-chain data that we have at Chainalysis, and we can actually see that there's much more going on in the use of stable coins.

For example, 34 million self-hosted transfers of less than USD1,000 made on Tether since the start of 2020 – these are self-hosted transfers between individuals, rather than these cryptocurrency exchanges – show that there are private individuals who are transferring relatively small amounts in millions of transactions. To me, that suggests that there is actually a network of people who are using Tether and using these digital dollars as a means of payment between themselves, and that in turn means the creation of this alternative financial infrastructure that's being created.

And USDC, which is operated typically by Coinbase and Circle and has more pedigree is used for much higher value transfers, of perhaps USD10,000 and above. USDC is therefore being used perhaps by sort of larger institutions to trade on decentralised finance platforms.

**Stable coins evolving into savings tools**

Finally, people are now using stable coins as a form of savings.

Actually, there is more Tether in USDC that's now held between one and six months than held for less than one month.

I find this fascinating. If you're holding a stable coin, you are trusting a counterparty that they actually will give you back a real dollar when you cash in one of your digital dollars, hence there is some counterparty risk of holding these stable coins. But it seems that lots of people who said they are happy with that counterparty risk actually want to hold digital dollars rather than holding dollars in another banking system.

This means that stable coins are the first example of large-scale digitisation of existing financial assets, people using them for both exchange and now savings.

### Where next for the expanding cryptos universe?

I see cryptocurrencies as the first stage of a wider digitisation of assets.

Digitising assets is complicated. A lot of people talk about putting a house or a mortgage on the blockchain, but actually, it's much easier to do when you create a purely digital asset like Bitcoin, which only exists in computer code. And the next step has been to digitise dollars, which are already a financial instrument from which there have been derivatives created already. In short, this is really the first stage of evolution, and show just how much crypto has matured in the last 18 months.

However, to try to determine for example the value or trajectory of Bitcoin, I come back to the need to look forensically at how other people are holding the asset. The

fundamental value of Bitcoin, and indeed, of other cryptocurrencies, is really still the price that other people are willing to pay for them for the use cases that they might have, like storing it for wealth, or using it to trade on this foreign exchange type app Uniswap.

In terms of what's a mainstream investible asset, Bitcoin really has met the bar more than any other cryptocurrency, but it's still trying to meet the standards of some of the mainstream investors. There's a lot of complicated narratives and myths around Bitcoin that really need to be demystified. For example, we have researched and determined that less than 1% of all of cryptocurrency transactions are related to illicit activity, so that is a myth that needs to be dispelled, because like any asset class there are the ESG metrics, so this needs to be free of criminal activity. So too we are seeing more successful prosecutions related to ransomware demands that require payment in cryptos, so we are seeing improvements there too, as on the blockchain you can actually follow ransom payouts more readily than in the mainstream financial system.

In short, all of these risks that people see around Bitcoin are increasingly being removed from the system, which means it's maturing as an asset.

### Cryptos and their role in transforming finance

There's a famous comment from Marc Andreessen, a famous Silicon Valley VC, where he says that software is eating the world, and what that means is software has lowered the cost of creating and distributing goods and services, with media as the



most obvious example, as we no longer need printing presses, distributors and then stores and other vendors. Anyone can now go online and broadcast to anyone and anywhere.

Finance, though, has never really been disrupted in the same way that, for example, media has by software and the internet. Finance has definitely adopted software but nothing has happened yet that lowers the cost of creating and distributing financial

products. However, crypto has started to do that.

We see the world evolving from Facebook to Instagram to Tik-Tok, and a huge amount of creativity that happens when people have open platforms to experiment on. And really that's coming to finance. Cryptocurrencies may seem like a wild west, but trust me, they've matured a lot in the last 18 months, and they now really provide us is this open platform for innovation.

Accordingly, if you want to understand where the future of finance is going, I think you really need to understand how cryptocurrencies are used today, because we're just going to see a greater and greater pace of innovation. And in that there'll be some very interesting investment opportunities, as well as some risks, which I believe you can kind of manage best with data that for example we at Chainalysis deliver.



## Key Observations from the Panel of Experts: Cryptocurrencies and their Impact on Wealth Management

### Institutional level custody/wallet solutions are supporting expansion

A guest highlighted their institutional grade custody solutions, which essentially offers customers a service to hold and custody their digital assets, and to also offer a network to transfer those assets between different. The solutions include hot wallets, cold wallets, and others. He explained his firm had seen rising interest from wealthy clients going through their private banks and wealth management firms, resulting in increasing activity from the global brand-name investment banks, which are becoming increasingly involved, he said.

### The blockchain and cryptos: their role in rewiring finance

The CEO of what they described as the largest one-stop custodian and asset management platform in APAC agreed that blockchain technology really has the potential to change how money works, and re-wire the existing financial infrastructure, and said it will lead to a very significant wealth redistribution.

### Smart blockchain activity is highly significant for asset management

Bitcoin, this same expert commented, started this revolution by becoming a store of wealth that exists outside of the Fiat system with no centralised issuer, and then along came the smart contract blockchain, Ethereum, which gives rise to DeFi applications creating new financial infrastructure that is more open, accessible, and easier to use than we are used to today. "This basically moves all the money activities to on chain, including payment, loan trading, asset management, those activities are all executed online, with simple protocols and codes instead of middlemen," she explained. "This is very significant for asset management."

### The regulators and authorities are largely becoming accepting

A speaker observed that traditional financial institutions, the regulators, governments, are mostly getting used to cryptocurrencies, although there remains some uncertainty. China is the biggest exception, but this exception proves the rule, he said. "It shows there is some real power in this technology, and that it could be both influential and disruptive," he observed. "I think the phase we're going to go through in the next couple of years, is understanding what's going to be the most constructive use of these technologies, especially with DeFi, getting more wealth redistributed and moving on to blockchains.

### The range of choices will expand, comfort levels will rise

A guest said one can imagine a world where actually, rather than paying, choosing whether you pay on a credit card or a debit card, say, from an app on your phone, you can choose which currency you pay in, and you could pay in your local fiat or you could choose to pay in one of many different cryptocurrencies. He said he expects a cycle of people getting more comfortable with cryptocurrencies, managing the risks, understanding the regulation, and then really increasing adoption, with cryptocurrencies really acting as a competitor to our existing financial system.

### The infrastructure improves and the ecosystem expands

A guest commented on how the institutional level infrastructure is now filtering down to retail clients, with exchanges connected to the custody/wallet platforms, and with more regulatory oversight enhancing confidence in the infrastructure, from account opening to trading and custody.

### **Custody's importance cannot be underestimated**

Another expert concurred, adding that for institutional investors, holding and storing digital assets is as important as the investment itself. As seen from the presentation, the price uplift and the pricing platform for Bitcoin have risen so consistently that holding is the best way to make money, they observed, meaning that holding and storing securely are essential.

"When you choose your custodian service provider, consider these factors," she advised. "One, is this custodian platform providing complete solution from hot storage, cold storage, to multi-signature system, to vigorous risk management system? Are they adaptable? Can this custodian platform streamline all the various DeFi protocols, and make it easier to connect into the existing internal control system of your institution? Also, last but not least, does this custodian player have a track record of continuously evolving their technology and adapting to the latest technology environment?"

### **Advice - work with crypto native firms with rich experience**

An expert advised that because unchained assets involve a complete new set of risks and game rules, insights on both smart contract deploying mechanisms, as well as insights from on-chain data analysis and monitoring are two very key success factors for crypto investment. "Many private clients would be approached by more and more funds that claim to cover crypto, but in my personal opinion, you really need to work with crypto native players who have accumulated rich experience from the last decade interaction with on-chain protocols and the masters of data analysis and observation," she advised.

### **The case for long Bitcoin – but be cautious**

Another expert agreed that long Bitcoin has been a great approach for some years, but then the question is how to go long safely. "The data shows a lot of people lose their nerve," he observed, "there are very few people who have held Bitcoin for five plus years, most people kind of get to a certain price appreciation and sort of say, okay, that's the top." But that, he said, is why mining down further into the data is so important, to understand which part of the cycle that you're in, which investors are holding or selling, because that obviously drives the price. However, for those holding Bitcoin or other cryptos wallet/custody issues are crucial, so be cautious.

### **Glimpses into the future – huge diversity ahead**

This same expert observed that within three to four years, he expects to see digital versions of almost every fiat currency. He said there are many central bank digital currencies, which are different from cryptocurrencies, but that are starting to have some of the same aspects of programmable money that we see with Ethereum. "You will see a world where financial assets certainly are increasingly on the blockchain and more fiat currencies are on the blockchain, you will see stocks and shares being traded 24/7 on cryptocurrency exchanges, either centralised or decentralised," he said.

He added that there will be more collectibles on the blockchain, starting with things like in-game tokens or video clips, and moving into areas such as art and other collectibles. "The really big question is whether we can move more physical assets such as real estate onto the blockchain, and I think that is more likely sooner than later as the regulatory framework is more established to achieve the digitisation of some of these real-world assets."

### **Bite-sizing residential real estate**

A guest highlighted how in the US real estate is already fragmentable on the blockchain, with investors able to buy real estate tokens, perhaps representing a home in the US, for a sum such as USD40,000 and even receive the rental yield from that in terms of cash flow.

### Tokenisation – here to stay

He also pointed to the tokenisation of a Singapore dollar bond this year by a leading bank, bringing the entry price down from at least SGD250,0000 to just SGD10,000. “Digital assets offer accessibility to investments to many of those who in the past would not be able to access those markets,” he said.

### Tokens – the next generation equity

Another guest agreed, adding tokens will become the next generation equity because tokens distributed ownership of a network to investors, developers, users, and they incentivise everyone participating in it to grow the network together. “We will clearly see more and more real-world assets tokenised and traded in the crypto market. We will even see tokenisation of the people that are social influencers, or ownership of a business or a license or even a fund, you will see tokenisation of all these real-world assets. It will be an amazing stage of growth in this next phase of the crypto world.”

### Taking the wide-angle perspective

Gradwell closed the discussion by reiterating the importance of seeing the big picture and mining into all facets of data and sources. “In my role, I must read Elon Musk’s tweets, as he is a market mover. And there is lots of other commentary and social media out there as well we should see, and mainstream media is covering this more and more. But of course, there are more concise and quantifiable data sources, derived as we do at Chainalysis from cryptocurrency data of multiple different types. There’s all the data on exchanges, that’s your prices, your volumes, your order books. But there’s also this on-chain data set, so we can see how much is going through the exchanges, so we can understand the fundamental data set of demand and supply that’s on chain.” In short, investors and the wealth management industry should elevate their vision to a far more institutionalised and professional perspective on these markets.



## CHAINALYSIS AND MARKET INTEL: A VERY BRIEF INTRODUCTION AND PHILIP GRADWELL'S 5 KEY METRICS

Blockchain data platform Chainalysis provides data, software, services, and research to government agencies, exchanges, financial institutions, and insurance and cybersecurity companies in over 60 countries. The data powers investigation, compliance, and market intelligence software that has been used to solve some of the world's most high-profile criminal cases and grow consumer access to cryptocurrency safely.

### Gradwell's expertise

Philip Gradwell as Chief Economist spends his time analysing on-chain data to understand cryptocurrency markets. His analysis includes identifying economic fundamentals, how cryptocurrency moves on-chain between exchanges and across borders, and the nature of crypto crime, amongst other topics. Prior to joining Chainalysis, Philip led a team of economic consultants working globally on energy system analysis and climate change economics.

There are few, if any, experts better positioned than Chainalysis. The blockchain data platform was founded in 2014 and today, the US-headquartered firm has become a major global component in building trust between the key players in this space – amongst law enforcement bodies, regulators, cryptocurrency businesses, financial institutions and investors.

### Mining the blockchain for data

To mine this data from the blockchain and other sources, Chainalysis has created the pre-eminent compliance, regulatory, and investigative software that can detect and prevent activities on the blockchain such as money laundering, terrorist financing, child exploitation, ransomware, and more.

And Chainalysis works with financial institutions and investors worldwide to tailor data to their needs, informing them of real-world investment and trading activity of note amongst the growing cohorts of what the firm calls 'whales', the major investors that are driving the rising activity on the blockchain.

And this is a truly vast market - the total cryptocurrency universe is valued at approaching USD1.5 trillion and total trading activity in 2020 was estimated at more than USD3 trillion. Bitcoin is the bellwether at more than USD1.05 trillion, Ethereum is the next biggest at approaching USD435 billion and there are numerous other cryptocurrencies.

### Satellite view

"At Chainalysis," Philip states, "we have a dataset that's similar to having a satellite view of all of the economic activity that's going on in

cryptocurrency, and we can see in granular detail what assets large investors are buying or holding and how they're transferring them. In short, anyone wanting to take a serious, professional approach to this dynamic market can use Chainalysis research and data to make investment decisions based on hard facts and far-reaching data. All this is immensely relevant to anyone involved in the private wealth industry."

Philip also authors the new weekly Chainalysis Market Intel data-driven subscription product provides powerful insights into cryptocurrency markets. In the weekly, Philip consistently breaks down the most significant shifts in on-chain cryptocurrency flows and tells readers what they mean for the market as a whole. There are five key metrics, as below.

### Conclusion - Making data your advantage

Chainalysis believes that better data is one of the biggest advantages an organisation can have, especially when it comes to cryptocurrency. The firm reports that whether you're a seasoned veteran of the industry or your firm is just now entering the cryptocurrency market for the first time, blockchain data can help you spot opportunities and risks others miss. ■



## THE FIVE KEY CHAINALYSIS METRICS FOR UNDERSTANDING MARKET MOVEMENT & MOMENTUM:

### » One: Total Flows

Total flows represent the total value transferred over time on a given cryptocurrency's blockchain between different entities, so that this metric tracks every dollar of value that changes hands on the blockchain. This is impossible for traditional assets but is possible for cryptocurrencies due to their transparency and the intelligence that Chainalysis adds to blockchain data. Total flows, therefore, help reveal the vital trends in investors' intentions and overall market sentiment.

### » Two: Exchange inflows

Exchange inflows refers to the total value of assets received by cryptocurrency exchanges. Exchanges are where cryptocurrency users go to trade, so large increases in exchange inflows as tracked by on-chain data can be for predicting future price movements.

### » Three: Inter-exchange flows

While exchange inflows allow users to track cryptocurrency received by exchanges broadly, Market Intel also allows users to track flows to and between specific types of exchanges, such as Crypto-to-crypto (C2C) exchanges, Crypto-to-fiat (C2F) exchanges, Derivatives-only exchanges, and Decentralised exchanges (DEXes). Inter-exchange flows can also signal important changes in trader sentiment and market direction.

### » Four: Trade intensity

Trade intensity measures the ratio between the amount of a specific cryptocurrency an exchange receives on-chain – meaning from the wider cryptocurrency ecosystem outside the exchange itself – and how often that cryptocurrency is traded between the exchange's users. Higher trade intensity often signals that more exchange users want to buy a specific crypto asset than want to sell, as it shows that there is demand for the asset on that exchange but little new deposits of the asset to meet that demand.

### » Five: Liquidity

Liquidity measures how likely an entity on the blockchain — self-hosted or a business — is to send the cryptocurrency it receives to another entity. Mathematically, liquidity is calculated by taking the average ratio of net to gross cryptocurrency flows over the lifetime of the entity in question.

