Oscar Wong via Getty Images

DECENTRALISED FINANCE

Banking on blockchain

Does the rise of DeFi spell the end for centralised finance, or should the two systems borrow from one another to create a banking system that's fit for the future?

Jon Axworthy

Defy (verb) – to openly resist or challenge. DeFi (noun) – a widely used contraction of 'decentralised finance'.

It's fitting that the term for an alternative financial ecosystem that's making waves in the mainstream sounds similar to one for a subversive act. From the outset, DeFi has been all about defying the established hierarchy of banks, brokers and various other gatekeepers of traditional finance.

Jeremy Eng-Tuck Cheah, associate professor of decentralised finance at Nottingham Trent University, describes it as "the latest disruption technology that's changing the architecture of finance as we know it."

> **If there are incomplete or faulty codes, it's likely that funds can be drained out by those who can exploit such weaknesses**

DeFi uses the revolutionary decentralised nature of blockchain database systems to enable friction-free peer-to-peer financial exchanges. It uses so-called smart contracts in the form of 'if…, then…' instructions coded into a blockchain's ledger. For instance, an instruction might be to measure the interchange of supply and demand to set interest rates and dictate the terms of specified financial exchanges accordingly. No intermediary or negotiation is required, because each party to the transaction is already clear about the terms of the contract.

"Smart contracts are stored on the blockchain and run when predetermined conditions are met," says Anton Mozgovoy, co-founder of DeFi savings platform Mover. "They are a revolution because of their composability – because everything is open and accessible, anyone can build innovative things. That also makes the whole DeFi system transparent."

This gives DeFi an advantage over the established transactional methods of centralised finance, because it isn't subject to the opaque internal workings of incumbent financial institutions.

There is, though, a caveat. DeFi has been described as the Wild West of finance – not a phrase that promotes investor confidence. Several critics argue that certain aspects of DeFi amount to little more than get-rich-quick schemes.

"This crypto space is lightly regulated, if at all," observes Igor Makarov, associate professor of finance at the London School of Economics and co-author of a recent working paper on DeFi. "As a result, investors are exposed to numerous risks. The Beanstalk hack is one of many colourful examples."

Makarov is referring to an incident in April in which a hacker extracted $182m (£150m) of cryptocurrency from Beanstalk Farms, a DeFi project whose goal was to balance the supply of and demand for crypto assets. This was proof, if any were needed, that legitimate endeavours could be exposed to bad actors set on exploiting the vulnerabilities of smart contracts. In the first five months of this year, there were $1.4bn-worth of DeFi hacks, according to cybersecurity auditor Hacken.

Moreover, the fact that so much of DeFi's infrastructure is founded on smart contracts means that investors are vulnerable to software flaws that can erase token value.

"If there are incomplete or faulty codes, it's likely that funds can be drained out by those who can exploit such weaknesses," Cheah says. "Apart from source-code vulnerabilities, there's a lack of sophisticated due diligence processes to ensure that codes are free from faults. Ultimately, smart contracts are only as good as the people who write them."

Perhaps the biggest investor concern is the lack of safeguarding baked into DeFi, especially when compared with traditional finance – things such as deposit protection, governmental-level insurance and the various other guardrails that centralised finance investors rely on.

But regulations cannot pre-empt innovation, argues Cheah, who adds: "If the principles underlying innovation are regulated, they can be circumvented or they might end up stifling innovation. And there is a lot of financial incentive to develop software very quickly to replace the role of financial intermediaries. In short, there is money to be made by first movers. So it's not surprising to me that DeFi has earned its Wild West reputation. That's the price you pay for all that innovation."

For all DeFi's flaws, it's hard to ignore how much attention it is attracting in many quarters. The interest of the big banks has certainly been piqued, for instance. They have commissioned a slew of studies to determine what effects DeFi might have on their businesses.

Goldman Sachs published a report in October 2021 that highlighted how DeFi had clear advantages over traditional finance with its ability to provide "access for underbanked populations and faster settlements for users". But it concluded that DeFi was not the finished article, pointing to "hacks, bugs and outright scams".

Dutch bank ING also recently commissioned a white paper. This concluded that DeFi was "a coin with two sides" and that the two services combined could bring benefits to the centralised institution as well as "to DeFi and, more importantly, its customers".

So, what forms might such collaborations take? Cheah believes that banks have a stark choice: adapt or die.

"Banks slow down transactions and can be costlier in the services they provide because they defray costs arising from regulatory compliance," he says. "These higher costs need to be weighed up against the benefits of allowing banks to be part of the DeFi solution. It would certainly be wise for the banks to migrate away from their ageing systems and adopt blockchain technology and principles. But this will not be a cheap endeavour."

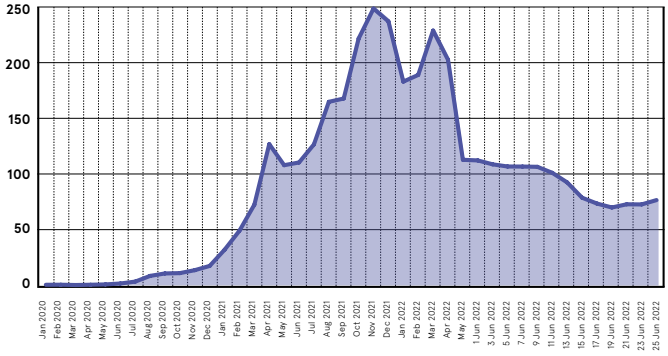
It's likely that DeFi will continue to defy and challenge conventional banking with disruptive innovations, yet remain a frontier populated only by the hardiest investors. But, if incumbent financial institutions become less risk-averse and decide to embrace blockchain innovation, they stand a much better chance of establishing a strong position in a digital-asset economy that's gathering pace.

Meanwhile, the DeFi coin is still turning in the air with plenty of interested parties watching closely to see how it will land.

IS DEFI DOMINANCE SETTLING DOWN?

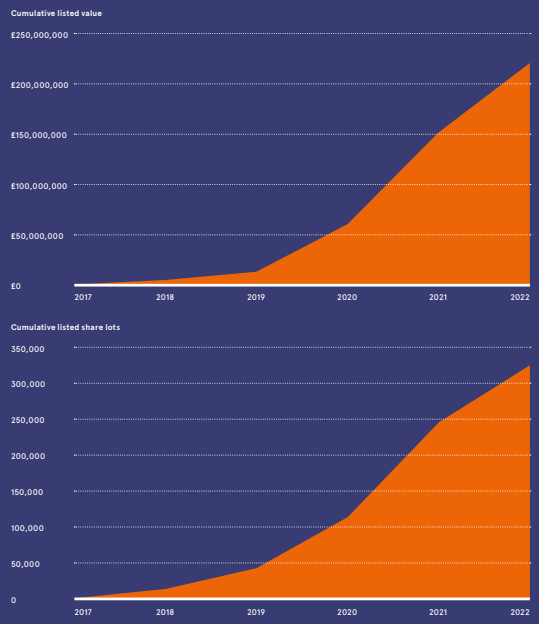
Total value locked in multiple decentralised finance blockchains from Q1 2020 to Q2 2022 ($bn)

DeFi Llama, 2022



INTEREST IN THE SECONDARY MARKET FOR SHARES ON THE RISE

Cumulative growth, in both value (total value of listed shares), and volume (total shares listed) on the Seedrs Secondary Market - from launch in 2017 to July 2022



Seedrs, 2022

Opening up private investment to a wider pool

The secondary market, venture capital (VC) funds and alternative asset classes are now more accessible than they have ever been

Private investment is big business. In Europe alone, there is £200bn in assets under management in private companies in the early to growth and pre-public IPO stage.

Driving that growth is the proliferation of startups, with 3,000 UK businesses every year seeking investment in the seed and growth stage. That growth, in turn, is being fuelled by the current adverse economic and inflationary conditions, prompting firms to try to secure more funding and investors to seek out better returns.

Added to this, companies are staying private for longer in order to try to realise greater returns. For example, in the technology sector in 2020, on average, firms went public after 12 years, up from four-and-a-half years in 1999, according to industry estimates.

At the same time, private equity firms are looking to deploy their institutional capital. The problem, however, is that much of this capital is tied up in illiquid assets and doesn't have anywhere where it can be traded, except with other institutional investors.

As a result, the Seedrs secondary market is quickly gaining popularity as it enables more people that didn't previously have access to invest in private companies. That's evidenced by the fact that there have been 52,600 sell orders worth £20.9m in the secondary market to date. That amounts to £550,000 worth of shares traded per month in the last 12 months.

Added to that, there has been a 32% increase in sellers listing share lots in the last 12 months. Over the same period, there was a 27% rise in share lots listed.

These share lots can produce huge returns. For example, one seller made a £21,000 profit from selling their Revolut shares in less than an hour – the highest margin achieved for a single share lot. In context, the average profit per seller was £513.

Company listings on the secondary market have also soared by an average of 301 in the last 12 months. Concurrently, there has been a 61% increase in the total value of firms listed. Reflecting this, 12 of the businesses listed have a valuation greater than £100m, including Revolut, Paysend, BUX and Perkbox.

"There are many different segments of the market," says Jeff Kelisky, CEO of Seedrs. "There are the early adopters and angel investors who are prepared to take high risks, who will seek to get out when the company reaches a certain maturity and sell to investors who want a safer investment."

> **Essentially, we are doing for investors what Uber did for taxis, by bringing all of these investments into one place where it's accessible for all**

Another growing trend is investment in VC funds. That growth is being driven by VCs' ability to tap into high-end wealthy investors looking to invest in private companies because of the returns they can achieve relative to the stock market.

In this vein, VCs are seeking to make it easier for investors to come on board. Thus, they are taking on a smaller number of big-ticket investors, namely retail and ultra-high-net-worth investors.

VCs are also increasingly opening up to crowdfunding. A prime example of this is Passion Capital, which recently sought crowdfunding for one of its mature funds. Such was the demand, it had to double its share allocation, which then sold out in 20 minutes.

Among the investment sectors most in demand currently are fintech, food and beverage, sustainability, software as a service and wealth management. As people become more concerned about climate change and bring their lives online, that trend will only continue.

Moving forward, investors are increasingly looking to get into alternative asset classes as an affordable way to own a share of something that was previously out of their reach. Among the most popular are cryptocurrency, art and real estate.

"There are a growing number of asset classes that are being made available to a wider group of people," says Kelisky. "Cryptocurrency is one such asset that investors are increasingly attracted to because of the returns they are able to achieve or the wider applications it can be used for, such as in providing cheaper insurance through the use of blockchain automation."

One of the biggest regions for potential growth is North America, with private equity, private debt and real estate expected to account for more than £1tn in assets under management by 2026, according to Preqin. Leading the way here is New York City-based global financial technology firm Republic, which recently acquired Seedrs, and has deployed more than £1.3bn in investments and supported in excess of 600 companies, with 2.5 million users across more than 150 countries.

Republic has hosted 12 regulation crowdfunding campaigns worth £4m each, as well as 22 real estate deals. It also supports more than 50 cryptocurrency clients, guiding projects from seed to liquidity, in addition to operating early and growth-stage institutional cryptocurrency funds.

Seedrs launched initially in 2011 with a crowdfunding platform, helping companies find the capital they need to grow and enabling retail investors to invest directly in start ups and scale ups. Then in 2017 it established a secondary market – one of the first of its kind – where investors can invest in, set the price of and trade out their shares, allowing investors to realise returns ahead of a public offering.

Around 200 businesses currently trade their shares on the market every month. They are exclusively companies that have raised capital with Seedrs and include small retail and technology firms, and even big players such as Revolut.

Seedrs has also helped no fewer than 28 VC funds raise capital between 2013 and 2022, including JamJar (£102.1m), Passion Capital and Seedcamp. Five more are set to go live soon.

"Essentially, we are doing for investors what Uber did for taxis, by bringing all of these investments into one place where it's accessible for all," says Kelisky.

£21,000

the amount one seller profited from selling their Revolut shares in less than an hour; the highest margin achieved for a single share lot

Seedrs, 2022

The performance figures in this article refer to the past and past performance is not a reliable indicator of future results

Approved by Seedrs. Capital at risk

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