

Course I:

DeFi Infrastructure

1. The History of Decentralized Finance

(iv) Early CeDeFi

Origins of DeFi

Fintech

- When costs are high, innovation will arise. However, if there is a strong layer of middle people, innovation may not be fast
- Consider the FX market
- Alice needs to buy €100m with dollars at the end of September to pay for a machine
- Alice goes to her bank and they quote a rate

Origins of DeFi

Fintech

- Carol needs to sell €100m (translate into dollars) at the end of September
- Carol goes to her bank and the bank quotes her a (different) rate
- The difference in the rates – the spread – is the bank's profit (and it can be substantial)

Origins of DeFi

Fintech

- 20 years ago a company is formed with a simple idea
- Suppose Carol and Alice use the same bank. Why not match them together? Indeed, if either Carol or Alice had multiple banking relationships, you could match people from other banks
- Let the banks do the credit quality evaluation and pay them a very small fee for that
- The “spread” – which is a significant cost for Alice and Carol vanishes

Origins of DeFi

EUROMONEY

Markets on a war footing



Botín emerges victorious at Santander

The bizarre economy of Belarus

Forex exchange model threatens multi-bank sites

ONLINE FOREIGN EXCHANGE

Forex goes into future shock

When forex trading first harnessed the internet, banks tried to attract clients to their individual platforms. They soon faced the problem that some customers were obliged to seek the best price for every transaction. Hence the difficult birth and troubled childhood of multi-bank platforms. End-users seem little more happy with these systems than the rival banks that set them up. And before they have had a chance to digest their implications clients are being offered the prospect of trading directly with each other. Jennifer Morris reports on a market whose innovators may have taken a step too far

Campbell Harvey knew he had a captive audience. Stand up in front of a group of CFOs and suggest that perhaps they're paying over the odds for foreign exchange transactions and you very quickly become the centre of attention.

"They were all nodding and saying yes, the costs are huge," recalls Harvey, whose day job is teaching finance at Duke University business school in North Carolina. "So I pointed at one of them and said 'you have €10 million to sell'. Then I turned to another and said 'you need to buy €10 million' – you guys should be talking to each other."

It seemed obvious to Harvey and his then PhD student and now business partner Arman Glodjo that the online forex markets could do better. "The standard spread on a \$1 million euro transaction is \$500 by pips, then there are other costs, such as clearing and settlement, that add on around \$25," says Harvey. That is too high. By slimming down the banks' role to preserving credit lines and providing a clearing mechanism, he estimates that end-users could cut the cost of doing a standard \$1 million transaction in half and stand to save even more on larger deals. Over a year, the potential economies are phenomenal. And as the managers of three Bermuda-based hedge

by another client of one of those banks.

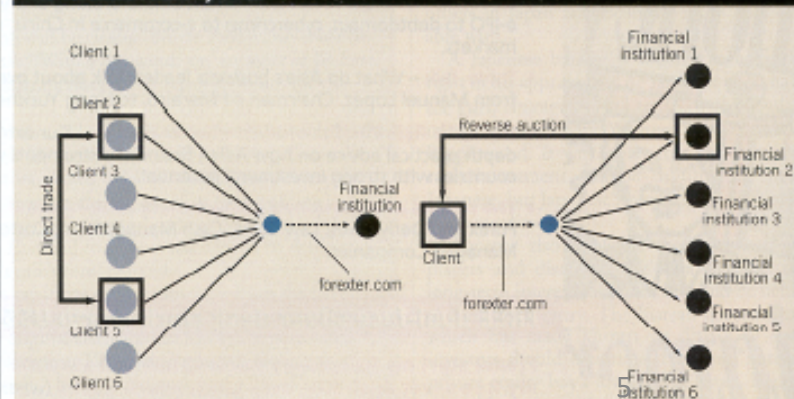
In the first case, the bank processes and clears the trade normally. In the second, the trade happens via the bank, which handles the clearing, even though the trade is taking place client to client. They might be customers of the same bank or one might have a relation-

now entered the mainstream with a deal with BMG. But Glodjo says the technology is actually closer to that of Grutella, a type of software that allows for the decentralized sharing of files. When users look for material, the search engine hops from PC to PC to find the requested file, rather than going to a central server.

In the same way, requests on Forexster are seen by the entire client base of the bank, rather than just a single institution, and all of that group can compete for them. "When a CFO posts a trade, the system performs an arbitrary number of credit hops to find the best price," explains Glodjo. Furthermore, a client trying to sell €200 million is not dependent on finding another counterparty with the exact opposite requirement. "Part of the order might be filled by a natural seller and the rest by a bank." In the worst-case situation that there is no corporate on the other side, a bank or banks would theoretically step up for the whole amount. "If your bank is on Forexster, they should give you the same price as if you had called them up and asked for one," asserts Glodjo.

So far so good. But the devil is in the detail and the flaw in Harvey and Glodjo's plan could prove to be fatal. As they themselves point out, it is hugely profitable for banks to keep clients apart, so they will fight tooth and nail to defend the status quo. "It will eventually be forced on them by clients who really love this idea and will say to the banks 'either

The forexster.com system



Source: Forexster

Campbell R. Harvey

Origins of DeFi

Fintech

- Can you imagine pitching to the Board of Directors of a major bank the following:
 - Spend the money to implement this fintech idea and eliminate one of your major profit centers

Origins of DeFi

Fintech

- Can you imagine pitching the Board of Directors of a major bank the following:
 - Spend the money to implement this fintech idea and eliminate one of your major profit centers
 - Fortunately, many banks saw the future and wanted to be first in to this peer to peer system

Origins of DeFi

Fintech

- Another early decentralized idea was “dark pool” trading
- 1979 the US SEC instituted Rule 19c3 that allowed stocks listed on one exchange, e.g., NYSE, to be traded on another exchange
- Many institutions moved their large block trading to peer to peer trading in dark pools.
- Currently, almost half of stock trading is done in dark pools

Origins of DeFi

Fintech

- Paypal founded in 2000 as a way to speed up payments
- Banks have followed with initiatives like Zelle
- Importantly, these payment initiatives use the legacy banking infrastructure

