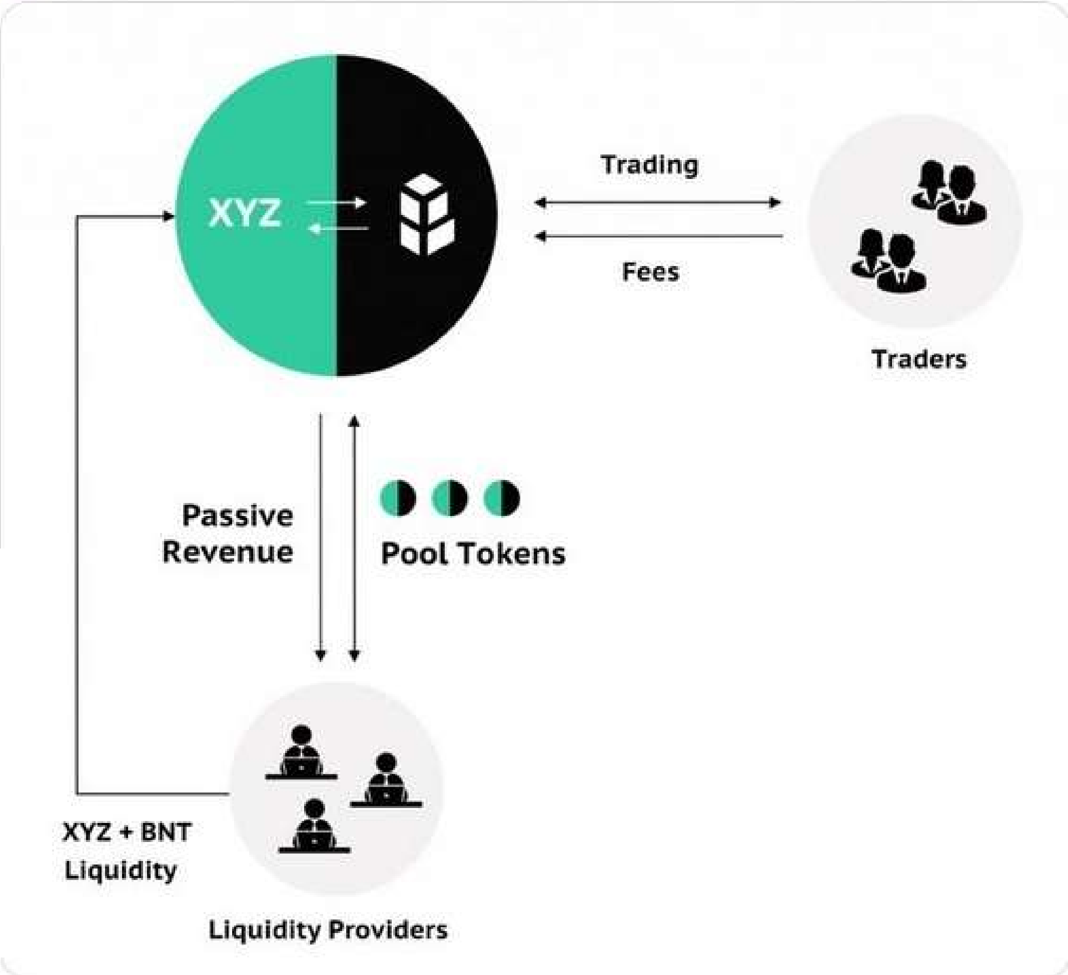
WrathofKahneman
@WKahneman

Yields, liquidity pools, liquidity tokens!- the XLS-30d discussion for an #XRPL Automated Market Maker (AMM) has enormous potential for the network. This is an attempt to understand what #Ripple's David Schwartz called the "secret sauce" of an XRPL AMM. 🧵 in 13 tweets.



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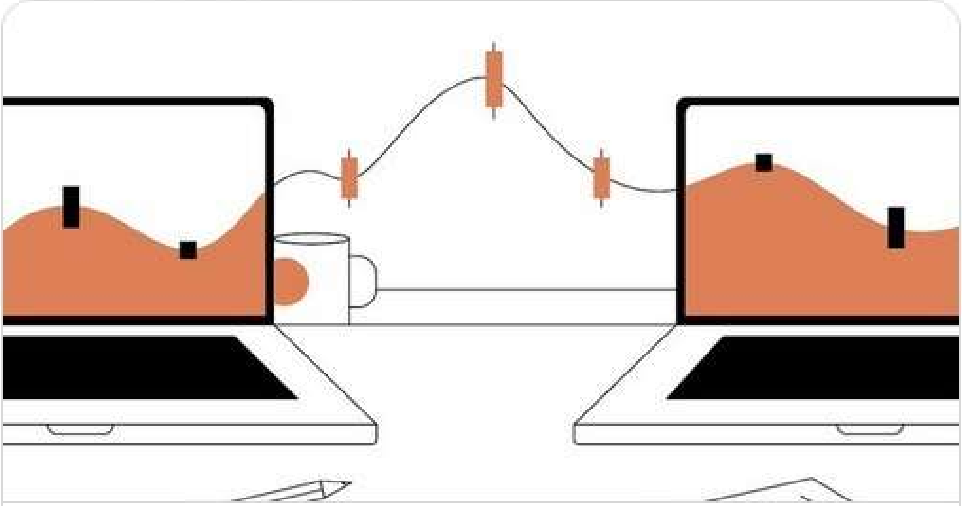
Replying to @WKahneman

1. First, a brief re-cap: Automated market makers (AMMs) allow digital assets to be traded without permission and without traditional orderbooks of buy & sell offers. Trading happens automatically using pools of available tokens called liquidity pools



gemini.com

What Is an Automated Market Maker (AMM)? | Gemini

Automated market makers (AMM) facilitate the decentralized exchange of digital assets using liquidity pools rather than conventional market ...

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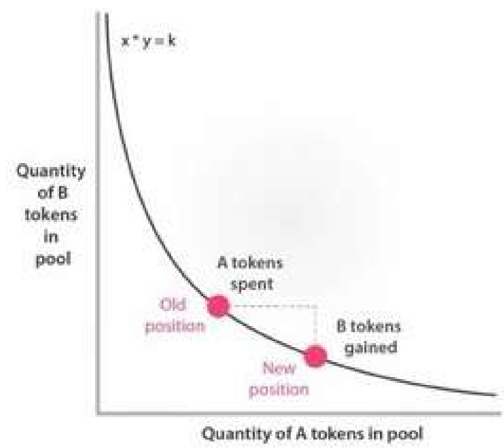
2. Users supply liquidity pools with tokens held in pairs (like you would find in a traditional orderbook) and then represented by a liquidity pool token. By supplying the pool, you earn a small yield. On the #XRPL, this would involve XRP & issued tokens. (Anything on the DEX)



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3. The price of these pooled tokens is mathematically determined and varies from prices on other exchanges, prompting arbitrage; buying/selling on another exchange with better prices. In the long run, arbitrage keeps prices everywhere near the same level. (Pic of Uniswap HB)

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4. But Arbitrage has its own problems and risks. The XLS-30d discussion notes, they "wait until the profit from the arbitrage transaction (and thus the pool's expected loss) exceeds the trading fees" all while racing against other people trying to do the same thing.

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5. Waiting until they can get a profit big enough to profit, more than the trading fees they would incur, they slow price discovery and reduce liquidity. Then they pull tokens out to sell them at the liquidity pool's expense. What can be done about this?

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6. In this video, #Ripple's David Schwartz shared that the XLS-30d proposal has a secret sauce that "allows those who supply liquidity to take a large share of profits that would normally go to arbitragers." The secret sauce?

youtube.com
XRP LEDGER UPGRADE! AUTOMATED MARKET ...
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7. The Github discussions describes a function that continuously auctions off zero-fee trading slots for arbitrageurs and gives these sums to liquidity providers, speeding up arbitrage because there is no trading fee eating up potential profits.

XRPLF/XRPL-Standards

#78 0030 XLS 30d: Automated Market Maker on XRPL

Standard Proposals   6 comments

aanchal4 opened on June 30, 2022

github.com

0030 XLS 30d: Automated Market Maker on XRPL · Discussion #78 · ...

Title: Automated Market Maker on XRPL Revision: 1 (2022-06-30)

Author: Aanchal Malhotra David J. Schwartz Affiliation: Ripple ...

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8." We propose a unique mechanism where the AMM instance continuously auctions off trading advantages, charging them & giving these earnings to liquidity providers. [Allowing] liquidity providers to take a large share of the profits ...normally taken by arbitrageurs.

We propose a unique mechanism where the AMM instance continuously auctions off trading advantages to arbitrageurs, charging them and given these earnings to its liquidity providers. This allows liquidity providers to take a large share of the profits that would normally be taken by arbitrageurs.

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9. Using Liquidity Pool Tokens, arbitrageurs can bid for a zero-fee slot, and then trade immediately with it, without worrying about making more than the trading fee they would otherwise incur.

- Our Innovative Solution: To achieve the abovementioned, we introduce a mechanism for the AMM instance to continuously auction-off trading advantages for a 24-hour slot at zero trading fee! Anyone can bid for the slot with the units of `LPtokens`. The slot-holder can send the arbitrage transaction **immediately** without the need to wait for their profits to exceed the trading fee, thus eliminating the race condition for them. This also reduces the **time window** for which the pool suffers decreased trading volume. Additionally, part of proceeds (`LPTokens`) from the auction are deleted/burnt that effectively increases LP token holders ownership in the pool proportionally. Since it's a continuous auction mechanism, if someone outbids an auction slot-holder, part of proceeds from the auction are refunded to the previous slot-holder (computed pro-rata). For details refer Section 5.

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10. Outbid for your slot? - your LP tokens are refunded in a continuous process. This would seem to push bidding prices up to the thinnest margin where arbitrageurs can make a profit.

As slot holder will have significant advantages for arbitrage, it's expected that arbitrageurs will bid up the price of the auction slot to nearly the value they extract through arbitrage.

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11. The expected results of this new #XRPL AMM mechanism: increased liquidity and pool-supplier profits while allowing arbitrage to remain profitable.

- Expected Results
  - Eliminates wait time & race condition for auction slot holder (arbitrageur)
  - Narrows time windows in which the pool suffers decreased trading volume
  - Liquidity providers additionally reap a share of profits that would otherwise go JUST to arbitrageurs

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12. The idea is that the XRPL AMM makes arbitrage faster, with less risk, while increasing profits for liquidity providers all while increasing liquidity in the system overall; wins for everyone.

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13. There's much more to the XLS-30d proposal, of course; votable trading fees, and the incredible power harnessed by the #XRPL's pathfinding - an XRPL AMM would be a liquidity monster! Looking forward to participating, should it be finished, tested, and voted through.

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Note - XLS30d is listed in the XRPLF.ORG github as a standard proposal. It is under discussion and I highly recommend you read the discussions. It is not currently an amendment proposal being voted on.

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TL;DR

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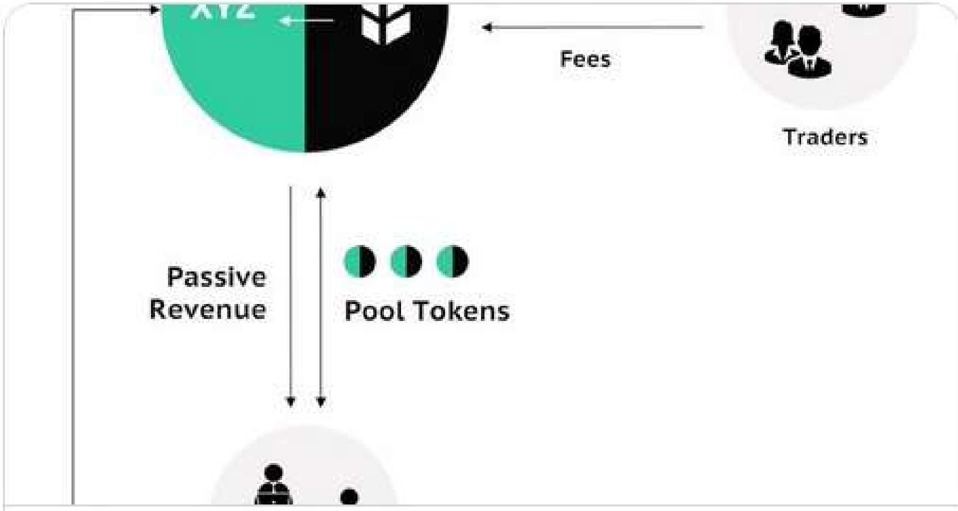
NB, the initial graphic was originally seen here. Not sure what happened to it but the overview of Bancor protocol is helpful:
medium.com/bancor/guide-h...

Good explainer if you need it!



blog.bancor.network
Guide: How to Stake Liquidity in Bancor Pools
The success of the Bancor Protocol depends on users staking tokens in Bancor liquidity pools and generating fees from trade volume.

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along the same lines, I used the Balancer graphic from the Hummingbot Medium page:

medium.com
How to arbitrage Uniswap, Balancer, and other AMMs
How to use our new amm-arb strategy?

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