Learning from DeFi: Would Automated Market Makers Improve Equity Trading?

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Summary

Can AMMs improve traditional markets?

- Model AMM liquidity provision and calibrate to US equities
- Optimally designed AMMs could save U.S. investors up to 30% in annual transaction costs, leading to substantial welfare improvement.
- Save \$54 billion in transaction costs

Welfare gains for liquidity demanders

- Using idle funds in brokerage accounts

Highlights the idea that AMMs do not have to be on-chain

- Bullish AMM (Centralized cryptocurrency exchange)



Break even liquidity provision and risk sharing

AMM liquidity provision is not competitive due to risk sharing

- Liquidity providing in AMMs would tend to approach break even fees but never arrive
- Rational liquidity provider would not enter a break even pool
- Rational liquidity provider would leave a break even pool

Paper only focuses on the benefits to liquidity demanders

 No benefit to the liquidity provider but assumes they take on risk for the benefit of liquidity demanders

Liquidity providers profit 3bp (8bp) a day for retail (institutions) (Aquilina et al. 2024)

How sensitive are the findings to liquidity providers earning a profit?



Coexisting or standalone

The paper is not very clear on if the AMM is trading alongside the existing market or completely replaces the existing market

- Key for the assumptions on volume, trade sizes and fee revenue

Having days with no AMM trading suggests that it is coexisting with the other markets

- Is this done by trade?
- What about arbitrage volume?

Free lunch?

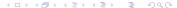
Average daily savings per stock day: \$8,303

Paper suggests that the savings come from

- Risk sharing
- Repurposed idle capital
- Overnight risk

Information generation is costly for liquidity providers in traditional markets

- Require a higher rate of return
- AMM liquidity providers pay for the information generation (Adverse selection)
- Savings could come from the AMM liquidity providers paying less for the information



Conclusion

Great paper, pleasure to read

Tackles an important question and highlights the potential benefits of AMMs