When Digital Turns Physical

How YFI becomes the leading world bank

The Restaurant Era of Digital Finance

Ethereum ends the oligopolized banking industry, just as the internet ended the oligopolized journalism industry. Banks on Ethereum have one product to sell: yield [1], so we occasionally refer to Ethereum banks as yield-optimizers. Anyone will be able to launch their own bank, a.k.a. their own yield-optimizer, on Ethereum with the same friction as launching their own website on the internet. However, banking on Ethereum will be more competitive than journalism on the internet, whose competition has been hindered by prominent social media companies' moats of user-generated data. Rather, Ethereum banking's competitiveness will be more in line with the Food & Beverage (F&B) industry, where any product can be sold by any company, primarily due to Ethereum's open-source nature versus the walled garden nature of the current version of the internet [2].

We're primarily interested in projecting the future of Ethereum banking and so will turn to journalism and F&B frequently to find similarities. We can borrow from the internet's landscape due to information's potential to be fully digital, similar to yield's. We can borrow from the F&B's landscape due to its fierce competition, where the largest brands are forced to innovate to stay relevant. The dynamic of specialization and aggregation is identical across all three industries.

	Banking	Food & Beverage	Journalism
Industry Focused	Some banks may be experts in biotech, green energy, or any other industry in which the bankers may have an edge because of a deeper understanding of technical nuances than others	Some F&B may be experts in keto, paleo, vegan, or any other diet in which the chefs may have an edge because of a deeper understanding of how to make foods that serve that population.	Some news organizations may be experts in geopolitics, technology, finance, or any other industry in which the journalists have an edge because of a deeper understanding.
Region Focused	Some banks may only invest in cities, states, or countries in which they have an edge, due to local knowledge.	Some F&B may only serve food pertaining to city, state, or country culture, due to local knowledge.	Some news organizations may only cover cities, states, or countries in which they have an edge, due to local knowledge.

Yield Focused Aggregation	Some banks will aggregate strategies across all industries and regions that they believe are worthwhile to their customers.	Some F&B will aggregate offices from all industries and regions that they believe are worthwhile to their customers.	Some news organizations will aggregate knowledge/coverage across all industries and regions that they believe are worthwhile to their customers.

Economies of Scale on Ethereum

Where the industries differ is their ability for monopoly or oligopoly formation, due to different flavors of economies of scale. Economies of scale in the F&B industry emerge from the bulk purchasing and production of goods. Economies of scale in the internet's journalism industry should emerge from the bulk purchasing and production of goods as well, but instead have emerged from social media relationship graphs, stifling competition.

Economies of scale on Ethereum will emerge from the bulk purchasing and production of goods, just as they do in the F&B industry. Instead of capital being spent on nutrients, however, as it is in the F&B industry, it is spent on yield: you spend capital, expecting the initial capital + x% in return. Sometimes, this is referred to as the economies of scale of capital, although it is really just the bulk purchasing of yield with capital, just as one would bulk purchase food with capital. The largest Ethereum banks will be able to charge smaller fees than competitors but offer higher-quality yield-products, due to that, for example, 1% on $1trn is greater than 5% on $100bn. This dynamic is what allows large winners to provide better services at lower costs than competitors [3].

Fees paid to an Ethereum bank are used to pay the right people to continue to allow that bank to perform well. In an archetypical Ethereum bank, there are three parties needed to coordinate to provide yield-optimization services: 1) the strategists to think of new ways to earn yield, (2) engineers to turn the strategists' ideas into real Ethereum integrations, and 3) another group of engineers, security-focused engineers, to audit these integrations, ensuring that funds will not be at risk. Due to the high social (the coordination of these three separate groups) and technical (the best strategists or security engineers can command far greater salaries than the secondaries in their field) costs of running an Ethereum bank, we believe that economies of

scale in Ethereum banks will allow for mass-market winners to emerge [4]. The degree to how the winners scale in comparison to second-tier players, whether it is Coke versus Pepsi or McDonalds versus every other fast-food chain or Starbucks versus every other cafe chain, is yet to be determined. We surmise that the fees generated by an Ethereum bank do not reach diminishing returns until a significantly high inflection point, as the leading yield-optimizer will offer yield-optimizing products that feature all regions and all industries of the world, a steep task to implement [5].

Earning Yield on Ethereum

The mainstream consumer's idea of the highest-yielding financial products differs significantly depending on the customer. The bank that will attract the greatest amount of capital will be the one that accounts for the customers' large discrepancies in taste. Consequently, the largest Ethereum banking winners will be those offering customized products that can be easily implemented into a maximally diverse array of larger portfolio schemes. This dynamic appears identical to the largest winners of the internet's journalism industry, where the biggest winners are those that serve the largest possible customer base.

In fact, risk-adjusted yield follows a similar input-output function as perspective-informed truth. All highest value investment strategies (outputs) are derived from other investment strategies (inputs); all highest value journalism perspectives (outputs) are derived from other journalism perspectives (inputs). One might hope there would be a canonical best yield, just as one would hope for a canonical truth for the state of the world, but it appears that these two utopias are out of reach and instead customer's investments and news will instead be influenced by each other simultaneously, molding into an emergent formation known as the market.

There have been hopes for canonical truths, such as Wikipedia's role in the internet's journalism sector. There will be hopes for 'canonical yields' in Ethereum's banking sector. Canonical yields take the form of a risk-free return, as determined by a decentralized community of self-vetted experts, identical to Wikipedia's structure. While canonical truths or canonical yields are useful for establishing more opinionated articles or strategies, neither dominates the market because humans are constantly playing group-individual majority games that will never reach a stasis equilibrium.

Aggregation as the Largest Winner

From the internet's journalism industry, we've learned that the best method to reach widespread appeal is aggregation. Yield aggregators will attract the largest amount of capital to their strategies, which will compound as their strategies' benefit from the economies of scale discussed earlier, allowing them to offer a higher quality service (i.e. higher risk-adjusted yields at lower costs) than competitors.

Aggregators offer yield products denominated as many on-chain assets as possible, utilizing the best possible strategy to optimize the yield on that asset. Some users may want to optimize yield on their dollars, others on their euros, others on their Ether, their Bitcoin, their Tesla stock, etc.. Certain products and strategies will leverage each other. For example, a strategy to optimize yield on Ether may involve taking a loan with the supplied Ether as collateral, and deploying that loan into another strategy. This is how Yearn Finance's (YFI's), who we believe is well-positioned to become the leading Ethereum bank, yETH vault currently works. The design space of the interactions between strategies, in order to best optimize yield for capital providers, will continue to grow as the entire Ethereum industry grows.

Finding the Winner

The winning aggregator will have the strongest global brand of any Ethereum bank, which itself is an abstraction of customer service, namely consistency in product and marketing offering. Customers like consistently good things. Therefore, customer service really is everything, and perhaps has always been everything. The constitution of customer service in the proliferation of banking services is attached in the Appendix.

All the referenced factors are dependent on the people creating the product. Path dependency is fairly involved due to the economies of scale discussed above. Initial winners, those that find product-market fit and achieve sustainable revenue to pay for growth, will have larger budgets to continue to attract talent, thus further improving their product and further increasing the barrier for competitors. However, it is too early to declare a single Ethereum bank a winner from path dependency, as there are a few current initial winners, and so team remains of utmost importance.

Teams

Teams come in all shapes and sizes, from individuals to countries. Teams entering new markets win initially based on innovation, offer customers something they wanted but couldn't find before, and then continue to win via economies of scale and the continued execution by a now larger, still innovative team. This is how all competitive markets work [6]. Achieving scale puts you in a better position than upstart competitors, but competitors will arise if the leader fails to continue to innovate. Thus, when we determine the best aggregators on Ethereum, we look at team incredibly closely, namely:

1) a teams' ability to innovate, bringing new products to market that have high demand, as signaled by the usage of those products by consumers

2) a teams' competency and work-ethic. Through public datasets, one can see when developers are working (It's kind of creepy but it is what it is.). The best, hardest-working developers innovate at the highest rate.

3) team size, which may eventually grow large enough to be deemed a community instead of a team. Team size is largely an abstraction of our first two points. The most innovative, hardest-working team in the aggregation market will attract the largest amount of capital from the most amount of people, and consequently grow their community and balance sheet at a compounding rate. The community growth will help push brands and memes, which will further growth through organic marketing that a wide array of crypto projects have mastered.

4) the team and community's ability to allocate resources in the best way to continue to incentivize growth (whether that be through equity issuance or revenue sharing). The best way to incentivize growth as an aggregator is to properly share revenue with strategists, developers, and capital deployers, thus giving less weight to equity holders and more weight to those that sustainably make the project valuable [7]

The aggregator's brand grows based on the work of the individuals that empower the aggregator, but the aggregator's brand itself soon becomes larger than any single individual's, simply due to its design to target as wide an audience as possible. This is why social media

winners or F&B aggregators are bigger brands than any singular entity that helped build the aggregator.

However, as also stated above, Ethereum will alter this paradigm at the margin by, pun intended, decreasing the margins of these aggregators' equity holders, and instead enhancing the wages of their coordinated parties that empower the aggregator, such as strategists or security engineers. The open-source nature of Ethereum banks allows for the creation of competitors where the aggregator's equity holders are forked out and replaced by other equity holders. Forks are difficult to coordinate, both socially and technologically, but are a powerful defense mechanism against monopolistic tendencies. Although yield optimization will likely be viewed as a higher value service than information aggregation, as yield optimization is the synthesis of significant knowledge work [8], there will be no closed-garden monopolies. Like the F&B industry, product innovation must ensue throughout the entire Ethereum bank's life cycle.

Yearn.Finance (YFI) As the Current Leader

Based on our establishment of aggregators as the most valuable Ethereum banks, and our establishment of innovation and community as the most important variables in finding successful aggregators, [Yearn.Finance](#) (YFI) is the clear leader to be Ethereum's most valuable bank. YFI has the top core team in the space, innovates continuously in its product offerings, innovated completely in its equity offering, and has the largest and most dedicated community of any Ethereum bank, largely due to its combination of the other variables mentioned. Finally, the YFI community has, with its recent governance proposals, exhibited that it is willing to act 'un-monopolistically' through adequately incentivizing strategists and developers to continue to join the aggregator. Acting 'un-monopolistically' is crucial for not blowing a lead in competitive industries, as monopolistic actions will fail in a competitive market.

Thus, we are bullish that YFI will be the leading Ethereum banking provider, and consequently the world's leading banking provider. While we cannot properly value what the leading world bank would be worth, we can surmise that it would be worth at least $100bn, looking at Starbucks and McDonald's as the highest valued restaurant chains. However, given that where we store our money is likely to be deemed significantly more valuable than where we get our calories, we surmise that the leading Ethereum bank could be valued significantly higher, potentially by a factor of 10x [9]. We reference these companies as opposed to journalist

aggregator valuations because journalist aggregators are priced by the market as closed-end monopolies, whereas we've established that Ethereum banks are open-sourced.

Conclusion

Like the restaurant business, competition in Ethereum banking will be brutal, a far cry from the walled-garden internet winners who can't appear to lose in the Web 2.0 era. The biggest banking winners will likely be aggregators, similar to how the aggregators of journalists today are worth far more than any specific publication [10]. The primary difference will be that, due to Ethereum's innate open-source nature, anyone with enough resources can create an aggregator (like a Facebook or Twitter), thus preventing aggregators from extracting monopolistic rents, although the resources required to deploy secure smart contracts at the scale of aggregators will still be significant. However, we also believe that yield optimization is a higher-value service than journalism, due to that yield optimization is the synthesis of investors' processing of information created by journalists, and so that Ethereum banking aggregators will achieve higher free cash flows than the internet's current journalist aggregators. The aggregator that we believe will be the market leader for years to come is YFI. YFI has the most innovative product offerings, the most innovative founding team, the strongest community, and the best brand [11]. For these reasons, as long as the YFI community continues to innovate make intelligent governance decisions, we believe that the Ethereum banking restaurant race is its to win.

Endnotes

[1] More specifically, risk-adjusted yield. Risk on Ethereum is both technical via code and economical via under-collateralized loan defaults -- Ethereum's technical risk is new to the banking system, while loan default risk is pertinent to the current banking system [1a]. The fully open-source nature of Ethereum allows for you or trusted parties to fully quantify both technical and economic risks, unlike the traditional banking system, where rehypothecation and other misrepresentations of economic risk are kept hidden from consumers. The other product that modern banks sell, liquidity vis a vis payments, is already native to Ethereum, and so banks on Ethereum need not devote any resources to it.

[1a] Although the federal reserve tries its best to act ameliorate concerns of default risk, there are 'side effects' of their actions. The re-creditization of under-collateralized banks only work over the long-term if the real economy grows at the same rate that the fed re-collateralizes these loans or companies. The real economy is not growing at a rate that will allow for a significant portion of these debts to be paid back without aggressive fiscal policy, fiscal policy that will devalue the dollar through inflation. To avoid such reliance on fiscal policy and monetary policy, both central points of failure, the US banking industry will eventually turn to [free market banking](), as described in this article, although that is a tangential subject.

[2] All smart contracts on Ethereum are open-source. The primary difference between journalism on the internet and banking on Ethereum is that all integrations will be open-source, whereas all of the largest journalism winners of the internet are closed-source, meaning they use [walled gardens]() to trap users [2a].

[2a] Facebook does not allow other applications to plug into its social graph; Twitter and Instagram do not allow other applications to plug into its follow graph; Reddit does not allow other applications to plug into its community graph. On Ethereum, applications may have certain elements that are closed-source or proprietary, such as front-end code or private key security infrastructure. However, an overwhelming majority of the Ethereum stack is fully open-source.

[3] This dynamic can in large part account for [the exchange-traded fund (ETF) boom](), along with increased transparency of holdings, another feature of Ethereum-native banking.

[4] The better the strategists, the higher the yield. The better the developer and security auditors, the cheaper insurance would be on the funds.

[5] The implementation of strategies, specifically the secured encoding of them, will rely on constant due diligence from security engineers.

[6] Often a characteristic of new industries or markets, like Ethereum. The intense competition can be maneuvered with the implementation of algorithmic processes to aggregate yield, which YFI is the best at doing.

[7] YFI recently did this, although we do not know yet if their allocation strategy is too much or too little. It is, however, revolutionary, and a step in the right direction).

[8] The ability to ingest and process all of the information created by journalists, as well as other data sources, to create the best investment products is a more difficult task than reporting the information that informs the investors' synthesis. This has been a long-standing truth, as deemed by the market, with financiers earning significantly more than journalists.

[9] We have a wide range based on potential error, as we could foresee it being worth both significantly less and significantly more.

[10] The industry-specific and regional-specific banks can be thought of as your news outlets, none of which are as valuable as Facebook.

[11] Due to the excellent developer team, product innovation, and fair token distribution.

Appendix

The parallels between banking's yield and journalism's knowledge are more similar to each other than F&B, as banking and journalism are both abstract knowledge games. Food, on the other hand, is a hard good, consumed physically. However, the internet has still fundamentally F&B, primarily because F&B consumption is fueled by knowledge—what are the best diets, the best brands, the best restaurants, etc.. This also led to F&B becoming dominated by aggregators, from Amazon to Doordash to Opentable.

While the internet has also fundamentally changed investing, the internet disrupted finance on top of the old finance stack and has been fundamentally restricted by the oligopoly of that stack. Of note, everything done on Ethereum could also be done on the old finance stack, the combined internal databases at Goldman Sachs, Visa, and Square. The biggest difference is that, due to trust requirements, these companies do not create the intra-company APIs required to create a similar customer experience. Additionally, due to trust requirements, third-party developers would never build on top of these company's databases, as they know they would eventually be closed off, with their work used to enrich the company's shareholders. Ethereum increases the rate of innovation in banking, to bring banking services to a higher quality than the

internet's journalism services, due to the open-source nature of Ethereum's aggregators and consequently their need to remain competitive, more in line with the dynamics of the F&B industry.

Criteria for Banking Customer Services

1) Create yield products for base assets that customers want. The more, the merrier, typically, as it is better to bring on the marginal customer via the marginal asset than to lose that customer to another aggregator.

2) Creating yield products whose yield in the base asset is consistently higher than risk-adjusted alternatives for that same asset. I probably won't put my USD somewhere that's promising 1% (even if I love their mission) if another bank that I trust is offering 9%.

3) Consistently meeting yield promises. This comes down to building trust with the customer that your word is your word. Don't advertise 9% and return 5%. You won't have happy customers.

4) Provide your services above at a cost that is competitive or lower than competitors.