tokenize/acc

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1 Summary

Markets have evolved with technology over time. To date, the internet has had the greatest technological impact by lowering barriers to connect, interact, and utilize markets. Early pioneers leveraged the Internet to lower barriers to initial offerings, which were previously gated to only investment banks. Internet-based exchanges, such as the Uniswap Protocol, are the next natural extension of this historical pattern, and the future of finance will be built upon them.

2 An Intro to Internet DPOs

In December 1995, Spring Street Brewery, named after the same street that is now one of the crypto-hubs of New York, raised $1.6m in a direct public offering ("DPO") to support its growth, a first of its kind offering.

The offering was completed via a prospectus on the internet with buyers literally mailing checks with signed forms to purchase shares. Despite the onerous process, the brewery had significant uptake, with users from around the world buying shares of the fledgling micro-brewery.

Even after the DPO, Spring Street Brewery noticed significant demand for its shares and realized it could set up a secondary market to trade them. One of the creators of Spring Street, a Harvard-educated securities lawyer named Andrew Klein, started Wit-Trade - a clearing house to facilitate its DPO and the infrastructure needed for secondary market trading. Utilizing an online bulletin board, trades were matched over email, showcasing an early version of a central limit order book (CLOB) two years before CLOBs were approved for trading on the NASDAQ.

Over the next few years, Wit-Trade supported several offerings over the internet, including MicroStrategy, the (then) Cleveland Indians baseball team, and 1-800-Contacts, all of which democratized their offerings to include internet users on their cap tables.

While Wit-Trade improved the existing IPO model, which only allowed investment banks to take part in the offerings, there were a few key problems with the model.

First, the limitations of financial technology at the time meant Wit-Trade had to custody both funds and shares for all users trading on their platform. This meant Wit-Trade was a central point of failure for the entire system, had no safeguards, and could not be audited easily.

Second, this structure lacked significant liquidity, as there was no sophisticated online exchange or access to a large online capital base. For context, this was two years before PayPal opened its doors as one of the first online payment processors.

Klein, the creator of Wit-Trade, said the main reason for creating this innovation was to lower fees. He took a $5,000 fee instead of the 7% of funds raised that underwriters took. For context, if

an offering raised $100m, then underwriters take a $7m fee. While the cost of trading (the spread and brokerage fees) on online exchanges has plummeted by more than 80% since 1996, underwriters have continued to take a 7% fee on each dollar raised from IPOs from then until now.

However, there is an additional 20% loss that the average IPO takes from underwriters. Underwriters have a structural incentive to underprice IPOs, so the initial offering generally captures less value than the market clearing rate for that firm. This underpricing results in around a 20% loss for companies compared to a fair market value, which is an indirect form of underwriter compensation. This loss is driven by a minority of IPOs which lose substantial value.

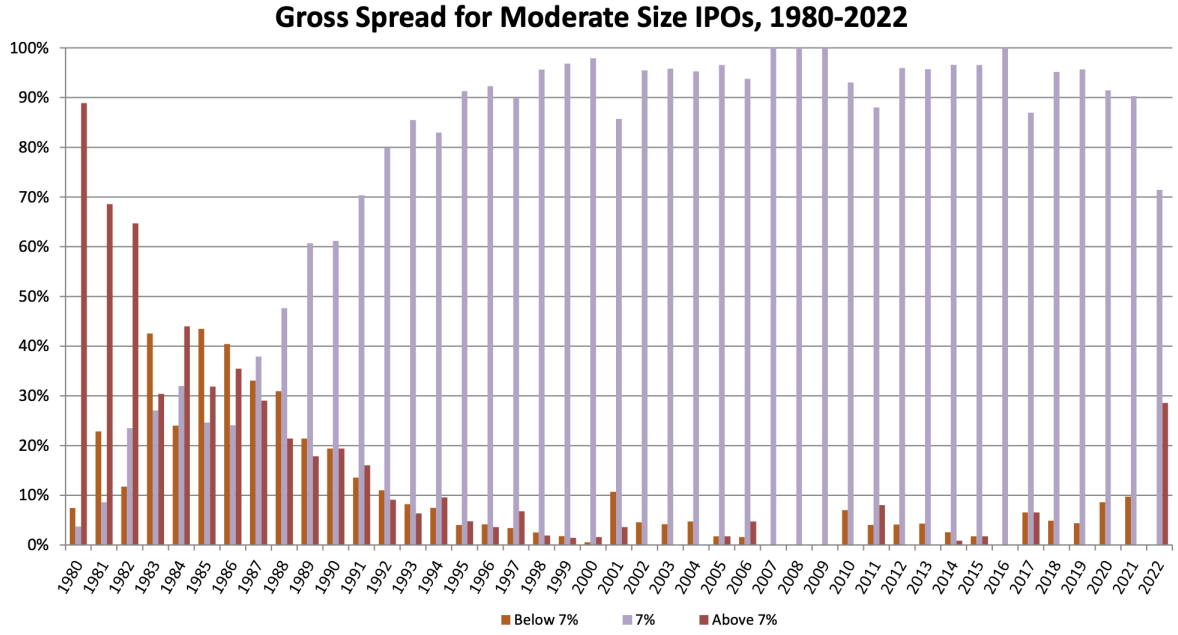

Figure 1: Source: Initial Public Offerings: Underwriting Statistics Through 2023 by Jay R. Ritter

3 Failure of IPO Market Structure

Crypto-based markets take an even larger cut. Although the rates vary from exchange to exchange and from token project to token project, Binance can charge 8% of the total supply[1], which is much more than the 7% **gross spread** taken by traditional underwriters, as the total supply of the token is not sold during the listing process. The gross spread is only taken on the funds raised in the IPO process, meaning that "gross spread" from a Binance launchpad would be around 40%. If $100m in tokens were hitting the market, then Binance would be taking a $40m fee.

In traditional markets, fixed costs from regulatory overhead and centralization of underwriters have significantly slowed down the number of IPOs[2]. These barriers disproportionately impact

[1] Some online commentors argue that this is not an accurate picture, but there is evidence of single digit commitments for the launchpad (5.5%). This is not just done by Binance, but Binance is the largest/most critiqued centralized exchange.

[2] Other authors argued that the impact of the regulatory burden on small IPOs is overstated. They contend that a continued desire for MA, a structural shift in the economy for centralization, and the centralization of underwriters may be the primary drivers of the lack of IPOs.

smaller companies, who are less able to bear the burden of regulatory costs and struggle to attract underwriters (who prefer to support fewer but much larger IPOs).

Additionally, companies no longer need to IPO to raise funds using their equity. Non-bank private credit, which allows companies and individuals to underwrite their loans with private shares, has exploded in recent years. As a result, there is less need for founders and companies to raise capital by selling equity, instead preferring to collateralize it. This gives less access to users to invest into products they care about and want to support.

Using this product, companies can continually capture the upside of their private equity until there is no longer any benefit (or they cannot roll their debt any longer). This allows companies to delay their IPO until they can only issue on public markets, effectively ensuring that private markets will have structurally higher returns than the public markets.

A key question is: Are IPOs even worth it? For employees, they clearly are. The ability to sell these previously illiquid assets gives employees more capital. Well-capitalized employees are much more likely to launch startups after their firm IPOs, which grows overall innovation and redistributes valuable human capital to new firms in the broader economy.

For companies, raising money via public markets is beneficial, because subsequent offerings are both cheaper and more accurately priced. Additional offers are executed at a near-market price (after the new share issuance filling) and thus lack this previously discussed systemic underpricing (around 27%)[3].

Literature also shows that raising relatively more money via public markets (with all else equal) likewise increases the subsequent liquidity of that product, the probability that the company remains operating, and the value captured by companies/employees for issuing equity.

All of this is to say that the underlying IPO market structure is fundamentally broken despite its benefits for society and companies, because of underwriter incentives, regulatory burden, and broader economic market changes. However, all of these issues hastened by path-dependent structural failures caused by skeuomorphic adoption of technology in financial markets.

Financial markets have mostly innovated on small stepwise changes based on the current technology at the time, with leaps coming during times of crisis[4]. This generally means that bad market structure that was previously optimal may be surprisingly Lindy.

4 What are we to do?

A key benefit of onchain financial markets is that they allow nascent financial technology to flourish and overtake incumbents. Creating abstracted, simple, and standard base layers like Ethereum, tokenization standards, or the Uniswap Protocol allows builders to create on top of them as opposed to reinventing the standard every time a new use-case is introduced. These abstractions and standards supercharge innovation, which closes the innovation cycle, leading to more rapid market feedback.

[3]There are also marketing benefits, as the IPO process brings significant eyes to a company, but the internet has decreased the marketing benefits from an IPO, which is an additional reason for the lack of IPOs.

[4]A few examples of this are

- Check 21 which approved electronic checks due to transportation fluctuations as a result of 9/11.
- Dematerialization acceleration in response to Hurricane Sandy flooding a securities vault

Two examples are pool-based over-collateralized lending (like AAVE and Compound) and automated market making (like Uniswap Protocol), which were first-principles approaches to desired actions in financial markets (lending and exchange of assets, respectively). These buck the slow and iterative innovation in financial markets by placing financial primitives on a more even playing field.

Doppler is the next step in the evolution of blockchain financial structures. Just as automated market makers and over-collateralized lending removed middlemen from exchanging and lending, Doppler allows projects to bootstrap liquidity without the need for middlemen or market makers - solving the issues identified with both DPOs and IPOs.

In a financial system where Spring Street Brewery and Wit Trade weren't plagued by technological limitations, their business could have taken off even faster than it did. When underwriters aren't taking 27% – or even 40% in the case of Binance – of a project's capital, founders have better liquidity to invest in their talent and technology. Providing an improved system of offerings keeps the important legacy of equity incentives for employees and favorable liquidity standing, while ensuring that the opportunity to invest doesn't only live with private capital.

The broad tokenization of financial markets will help solve standardization issues that have plagued traditional financial markets since their inception. It also fully realizes the vision of democratizing access to public offerings that started with the dawn of the internet.

DPOs in the 1990s were a first attempt at rethinking issuance by decentralizing issuance marketing (the roadshow) and offering shares at the same price that investment banks traded for them. The Wit-Trade team was just limited by the technology at the time.

However, a 2004 piece looking back on DPOs stated that a "bona-fide internet exchange for offering and exchanging Internet DPOs" is "one key to achieving broader use of DPOs". As an industry, we should accelerate towards that future by making it simpler and faster to create and compose tokenized assets.

We believe that onchain decentralized exchanges are the definition of "bona-fide internet exchange" and that the future of finance will be built on top of them.