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CRYPTO INSIGHTS

After the Crypto Deluge, What's Next for Web3?

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As the crypto industry and global investors work through the current bear market, Cumberland takes a closer look at Web3, and the opportunities—and potential hurdles—ahead in fulfilling the promise and the utility of decentralization.

Despite the recent rally, crypto is currently down ~65% from the November '21 all-time highs, with many alt coins down 80% or more and some more than 90%. How exactly did we get here?

There have been many ingredients with varying degrees of complexity and correlation: geopolitical factors, inflation, tech sector headwinds, the rapid emergence of idiosyncratic risk for specific assets, and extensive defaulting of highly leveraged participants in the crypto industry, to name just a few. While the macro situation (specifically around inflationary expectations) has somewhat improved in recent weeks, things have been far more challenging than the market expected at the start of the year, with stagflationary concerns impacting high-beta growth assets. In this environment, crypto is at the far end of the risk spectrum and acts as the 'hyperactive canary in the coal mine'.

In our view, this tie-in to the broader headwinds across the market isn't surprising. The innovations at the core of the crypto economy are in their infancy and despite rapid iterations by builders, we are still in the early stages of adoption. As a long-duration asset (i.e., payoff and realization far in the future), crypto will be heavily driven by overall market sentiment, recessionary concerns and long-term interest rates, just as we see with early-stage tech stocks. Over time, we expect this volatility and correlation to subside.

The Wheat from the Chaff

Yet, so much of the current crypto market volatility also has much to do with the nature of most crypto projects to date. In the seven years since smart contracts were invented, the majority of early applications have focused on DeFi, which we broadly assume to cover trading, yield farming and leverage. DeFi projects typically have low barriers to entry or 'moats', and those iterative dApps are often bootstrapped into existence through liquidity incentives.

When markets decline, speculative activity drops off materially and liquidity incentives are worth significantly less. As such, trading volumes, leverage, yield farming, TVL and cross-chain bridging volumes all decline. This degradation in on-chain fundamentals typically leads to a drastic reduction in token prices.

Given the incentive-driven reflexivity in many DeFi protocols, lower prices often drive second order effects through falling liquidity incentives. This leads to lower on-chain activity and TVLs, which leads to lower token prices. This cycle perpetuates until sellers are exhausted, often at dramatically lower prices.

It is, without a doubt, a perfect storm scenario and not the optimal foundation for a sustainable and thriving investment space. The scale of volatility and reflexivity may deter institutional investors from becoming long-term participants in the crypto asset market, ultimately to the detriment of further innovation.

To reach the next phase of an increasingly on-chain world and to see material institutional adoption outside a very limited number of assets, we need to see protocols with genuine, non-incentivized economic value. On that, we remain cautiously optimistic.

After the Crypto Deluge, What's Next for Web3?

Why Web3?

The most successful internet businesses have been those that offered customers low-cost convenience combined with a stellar user experience, mainly via removing friction or improving liquidity (or a combination of the two). We believe Web3 is the natural next phase of evolution here.

Over the past year, we have seen the emergence of Web3 projects offering real-world utility and a few are beginning to stand out and deliver traction with users. Many of these projects have been crypto-native clones of existing proven successful businesses. Going forward, we anticipate a high percentage of new projects coming from the Web2/SaaS space, but we also expect that some new and genuinely innovative projects will emerge.

And yet, if the popular narrative is that tech businesses will be “remade” on crypto rails, what does crypto itself really add? Let's take a closer look.

Firstly, a **decentralized platform has no rent-seeking middleman** (thereby improving take rates for workers and pricing for users) and **can use a native utility coin or even a stablecoin as the currency of its ‘microeconomy.’** This both reduces friction and disintermediates payments networks, and also allows for token-based equity to be used to incentivize early users and create community ownership.

Secondly, a **permissionless, decentralized platform allows for rapid bootstrapping of users/workers (i.e., liquidity).** Clearly, early token incentives help here. However, on a more sustainable basis, decentralization provides improved automation and coordination. This allows economic activity or investment across long-tail, small-scale use cases or niche markets that otherwise wouldn't be economically viable.

One example of this is **Vibe Bio DAO**, which allows individuals with rare diseases to organize and fund treatments that otherwise might not receive funding. **Content creation** is another example – think of the success of Wikipedia, with small-scale content creators adding content on a pro-bono basis. A particularly interesting, but unintuitive, instance of this is **Adim**, a new initiative backed by Rob McElhenney (the creator of It's Always Sunny in Philadelphia) aimed at decentralized scriptwriting.

With crypto primitives, we can begin to incentivize and coordinate more of these small-scale contributors and unlock new ways for creative people to work together within a construct that prevents a centralized entity from extracting supernormal rents from well-entrenched users and builders.

Another important emerging aspect of Web3 business models is the concept of ‘community.’

This sounds somewhat vague and esoteric, but we are already seeing it across some of the major DeFi protocols (e.g., **Sushiswap**) and in the NFT space (e.g., **the Bored Ape Yacht Club** parties).

As users and workers accumulate tokens, they then also become incentivized as investors, which creates an inherent behavior shift, with the goal of having platform take rates that more closely optimize for overall stakeholder utility. This should lead to much greater user and worker loyalty, and therefore project longevity, which is a positive for investors. We see concepts like token-gated commerce evolving out of this (e.g., allowing only the owners of a particular NFT to purchase certain goods or services). This sense of community is something that few businesses in the Web2 space have managed to create and could unlock new ways to monetize IP, brand value and exclusivity.

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Conceptualized Case Study: CryptoTaxi, a Decentralized Ride Sharing Platform

As a theoretical example of what a Web3 platform could achieve over and above its Web2 incumbent, let's conceptualize a decentralized ride sharing service (we will name this CryptoTaxi).

CryptoTaxi is run by a small team of developers and has an automated onboarding process for new drivers (e.g., processing background checks, checking insurance). The platform take rate is 5% vs 20-30% at traditional ride sharing companies. This results in higher take-home pay for drivers and also lower prices for riders. CryptoTaxi has its own native L1 (which is based on the Cosmos SDK) and blockchain transactions are at negligible cost, which is baked into the overall ride cost and paid to node operators. These node operators also receive an inflationary staking yield as an incentive for running or validating the network.

In order to use CryptoTaxi, riders need to pay in \$CTX tokens, which can be bought on major centralized and decentralized exchanges and through the CryptoTaxi app in exchange for crypto or fiat. This buying pressure creates demand for \$CTX against limited supply/free float. And since rides are at a fixed price in USD, a high \$CTX can be used to buy more rides, which allows for underlying price stability in the everyday service.

CryptoTaxi allocated 50% of their tokens to rider and driver incentives: with every ride for the first 12 months, drivers and riders are awarded a free \$CTX token, which at a fully diluted valuation of \$5bn is worth ~50c per ride (10bn tokens and by implication up to \$2.5bn of marketing spend, or 2.5bn rides which compares to ~6bn pa on Uber). This marketing spend is like allocating stock-based comp to users and drivers, which is completely impractical for existing internet and software businesses.

As a result of lower fares and higher driver take home pay (subsidized by \$CTX tokens), CryptoTaxi is highly disruptive to incumbents and takes material market share. A low-cost base (even with the need for driver screening and customer service) and a primarily non-cash marketing and infrastructure spend allow the platform to remain profitable at this low take rate, though revenue generation would be modest. However, the utility demand for \$CTX

given its use in paying fares adds a significant valuation premium to the token, which drives more meaningful token holder return. This can be thought of as akin to buying iPhones with Apple shares.

In a nutshell, the platform takes market share, bootstrapped by early token incentives. This is much like the cash incentives and subsidies for traditional ride sharing players but does not require the high upfront cash burn and helps build liquidity on both sides of the platform (i.e., drivers and riders). Given the low platform margin, this liquidity is sustainable once liquidity incentives are dropped (timing TBD by governance).

Users, and especially drivers, accumulate \$CTX tokens, which are both currency and equity. With ownership of \$CTX tokens, drivers have a vested interest in the success of CryptoTaxi and therefore have greater loyalty toward the platform versus lower-wage gig workers. The platform take rate is determined by a governance voting framework, with drivers as \$CTX holders having a much greater voice than in traditional equity governance where large shareholders have the final say. \$CTX tokens can also be delegated to validators for a 5-10% staking yield.

The profits will accrue to the treasury, which is controlled by token holders through governance and can be used to buy and burn the token or provide other forms of value accretive return, such as acquisitions or investments.

While challengers will try to enter the market using their token as an early incentive, CryptoTaxi is difficult to disrupt as the platform operates at an extremely low take rate, has scale over limited centralized fixed costs and has first mover/brand/liquidity advantage in a number of cities worldwide.

We recognize this is all clearly extremely idealistic and ignores various practical difficulties and the challenges of competing with established, well-financed incumbents, along with user inertia and the frankly anarchic reality of decentralized project governance and management to date. However, this gives us a variation of a template for what a typical real world Web3 business could look like and how this could be highly disruptive to existing incumbents.

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Let's recap our conceptualized Web3 business template:

- Highly automated with limited centralized cost base;
- Node infrastructure run by validators, incentivized with staking yield and transaction fees;
- Token incentives used for user and worker acquisition, which limits the need for upfront cash burn;
- Payment on crypto rails using the native token as a currency which allows for fast, efficient, low-cost transactions outside traditional payment networks;
- Owned by users and workers who begin to operate like equity holders and are more loyal to the platform;
- Drives tokenholder value through utility demand rather than just through margin or the promise of future margin. This allows for shareholder value generation at low margins/take rates and in theory is extremely disruptive;
- While traditional barriers to entry are far less applicable, these businesses build liquidity and in time become an entrenched base layer for third parties to build upon (e.g., applications building on top of **Arweave**, a decentralized storage provider). This take rate structure also makes it difficult for new entrants to disrupt the 'Web3 incumbent', particularly if there is a sense of community ownership and loyalty.

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What kinds of businesses work in the Web3 world?

At its core, a decentralized platform tends to lend itself to highly fragmented underlying markets, essentially cottage industries with many small providers. This clearly echoes the concept of a traditional Web2 platform business: providing market access and liquidity for producers (or peer-to-peer users) to access users. In this way, we can think of **Airbnb**, **Uber**, **Tinder** or **TripAdvisor** as prime candidates for Web3 forks, and potentially even online marketplaces like **Etsy** or **eBay**.

Render is another example in this category. Render is a peer-to-peer GPU (graphics processing) platform allowing GPU farms or individuals to sell spare capacity to users looking to undertake GPU intensive jobs, primarily NFT artists at this point. This is far more cost effective for users than building their own in-house capacity, and sellers are willing to supply capacity at highly competitive rates given the negligible marginal cost. **Livepeer**, which offers decentralized transcoding for video streaming (compression into various streaming formats) is a similar model. Other decentralized hardware centric players in the Web3 space are **Arweave**, **Storj** and **Filecoin** (peer-to-peer storage) and **Helium** (a decentralized IoT and 5G network).

Social networks also would translate well to a Web3 model, with the token being used for marketing spend (creating incentives to join and interact, or perhaps as reward for high social engagement or ranking) and users retaining and perhaps even selling their own data and/or using it to build an on-chain identity.

Braintrust, which is a recruitment site for high-end tech workers to find temporary project roles with some of the world's leading employers (e.g., **Google**, **NASA**, **McKinsey**), fits into this model. There are currently ~60k job seekers registered on the platform and the average job pays ~\$77k. Braintrust is one of the first Web2-style platform businesses built on crypto rails and, in our view, is essentially a highly specialized social network, with powerful platform effects and first mover advantages. The deep 'liquidity' of talent should attract and retain

employers. And being crypto native, Braintrust uses its BTRST token to reward new joiners along with incentivizing third-party recommendations and vetting. At the time of publication, 54% of the total BTRST token supply is allocated to community incentives and rewards.

Real world assets in the DeFi space are another use case. We see platforms like **Credix** and **Centrifuge** as solid examples.

In the case of Credix, using stablecoin rails allows B2C consumer lenders in emerging markets to access wholesale financing (from USDC lenders on platform) at much lower rates than existing incumbent providers. Without crypto, these local markets are difficult for wholesale financing to access given cross-border payment frictions, making it a challenge to lower borrowing costs in those geographies.

For Centrifuge, accessing long-tail securitization opportunities allows new classes of borrowers to access credit at reasonable rates. A typical use case would be SMEs or gig workers turning invoices into NFTs and using these as collateral for short-term loans. If you can lend to a gig worker at say a high single digit APY over a short duration, but fully collateralized against their next paycheck (which could in theory be automatically routed to the lender in the case of default), this opens up affordable credit to a much wider user base. This is one variation of the next evolution of peer-to-peer lending: crypto rails reducing TradFi banking friction and NFTs allowing for collateralized lending, with on-chain identity supporting undercollateralized lending in the future.

There are clearly limits to this decentralized 'cottage industry' model. A peer-to-peer system essentially turns economies of scale on its head, and so it is difficult to imagine traditional physical 'widget maker' businesses being disrupted by Web3 players.

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In a similar sense, Web2 businesses like Amazon, which is essentially an online marketplace combined with a hyper competitive logistics operation, work well as highly centralized entities with huge scale economics and seem more immune to disruption from Web3. But even for Amazon, the platform take rate is around 30%, and so a decentralized marketplace would be highly attractive to low margin retailers, with last mile delivery likely outsourced to centralized incumbents. Or, one could imagine a decentralized Uber-style delivery operation in which drivers might bid for delivery jobs, collecting directly from smaller scale retailers.

Are Current Crypto Management Structures Fit for the Task?

In many ways, projects like Render, Helium and Braintrust are much closer to traditional tech companies than L1s or DeFi protocols, which should help TradFi investors analyze them through familiar equity-like frameworks. But with this comes an inherent tension with the concept of a truly decentralized business run by governance.

While a DEX or perhaps a borrow/lend platform is generally a relatively simple, single product protocol and can, in theory, be run by committee (much like a membership club in the real world), we feel this approach does not lend itself well to a Web3 business.

For example, in the case of Braintrust, centralized management needs to be highly competent in sales and business development in order to attract the Fortune 500 to the platform as hiring partners. In the case of Render, the CEO has 20 years' experience running one of the world's leading design software packages and can introduce the Render network to the white space of potentially millions of artists using the already well-established Octane Render software package and its competitors.

For Helium, as the platform moves into 5G, there is a need for deep telecoms industry expertise. Decentralized, sometimes chaotic DAO-style organizational structures are not well-suited to protocols that must be professionally managed and nimble, particularly in emerging

marketplaces with far lower barriers to entry than traditional tech businesses.

What exactly is the optimal corporate structure? We see core platforms evolving into essentially base-layer infrastructure: to some degree, autonomous and decentralized, but overseen by competent management teams. These teams would need to have a high degree of sovereignty across both day-to-day operations and longer-term strategic considerations and would be elected—and overseen—by token-holders. The 'high touch' or discretionary parts of the value chain could be outsourced to non-crypto native third parties or partner organizations. These TradFi players might then operate the 'last mile' B2C components such as marketing and or front-end product development, with this part of the value chain open and quasi-decentralized. This approach would be ideal for the proliferation of the network (e.g., relying on decentralized business development, which would offer a cash sum to anyone for every lead brought to the platform that ultimately converted to a sale).

Summary

It is still very early days for the first generation of Web3 businesses, though some are beginning to deliver strong, early momentum. As we see it, these businesses are part of the next wave of crypto, fulfilling the promise and the utility of decentralization. As Web3 protocols evolve to resemble traditional tech companies built on crypto rails, these platforms should fuel a more accessible on-ramp to crypto for TradFi investors.

In fact, we are already seeing this, though perhaps at a slower rate than late last year given the broad weakness in the tech sector. The protocols we mentioned above have the capacity to be highly disruptive to existing centralized rent-taking models given 1) lower cost bases, 2) lower pricing and 3) more engaged users and stakeholders.

Lastly, if these businesses can drive material token holder value creation through utility demand (rather than through margin), this has the potential to be revolutionary in how investors think about return generation: shifting towards opportunities for sustainable value creation for permanently low-margin, highly scalable business models with first-mover positions that will likely be difficult to disrupt.

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