Open Infrastructure for Custom Indices

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Abstract
Cryptography allows us to secure what we value the most, but the tools we work with are rarely as intuitive as one might expect such important software to be. Everyone wants to adapt to the market but the ones who try, are met by static tools. The tools lack queries, intuition, personalization, transparency and therefore possibly effectiveness. They do not allow users to roam specific data, interactively and extensively. In this summarized document, a non-custodial open-source set-trading terminal is proposed, which ultimately gives unparalleled overview and control over assets, strategies, and the application itself.
Index-terms: Hedging, Web3, Blockchain-assets

1 Introduction
While it might seem like this application is targeted at Blockchain-assets, many parts of this concept are broadly applicable. It should be noted that blockchain-assets themselves are also broadly applicable. E.g, real world financial assets like gold, coffee and different company stocks are starting to become available as tokens on, yet to prove to be stable, blockchain infrastructures.

1.1 Set-trading
Set-trading is not a standard or widely recognized financial term, but the biggest worldwide financial initiatives, are sets which are being traded e.g. S&P500, Nasdaq. Whilst these are commonly recognized as Exchange Traded Funds (ETF's) they are in fact a collection of different items. These items are carefully and actively curated by institutions, often based on the reasoning of another institution. Set-trading is similar but superior to ETF's because in set-trading the user itself defines & structures a collection from beginning to end.

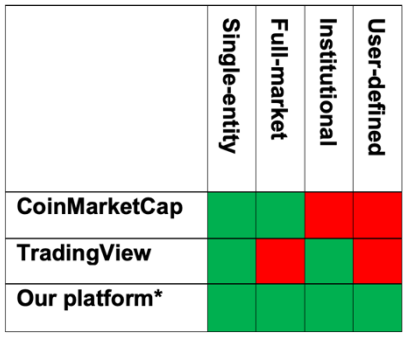
1.2 Non-custodial
Conceptually if a platform is custodial, it needs balances, buyers and sellers. These further require secure infrastructure, robust order-handling, etc. This becomes technically and reliably difficult. If a platform is non-custodial however, it does not *have* to deliver many of these requirements itself or at all. The platform could use reputable services to further deliver the requirements, e.g. Bitfinex, Kraken, etc. Therefore, non-custodially simplifies the technical and security requirements without compromising capabilities.

1.3 Open-source
If users can collectively access and contribute to a platform's public codebase, a platform can be more transparent and adapt to its users more quickly. This becomes more considerable if the platform's development capabilities are limited, and users are really committed to the platform. Open sourcing also has external effects. For example, some users upon choosing their tooling prefer open-source software.

1.4 Terminal
A trading terminal is much like what an airplane cockpit is to a commercial pilot. All the tools, information and details are tailored to a specific strategy and are iteratively refined (by the community) to gain the most advantages over the market as possible whilst using the terminal.

2 Problem
Status quo software mainly compete with each other by generalizing their product for the largest audience. Feature adaptation is often slow because many requirements need to be met, before implementation. If implementation happens at all.

2.1 Indices
The dominating tools and exchanges are limited to single-entity price graphs, full-market price graphs or institutional-index (ETF's) price graphs. If a user wants an aggregated analysis of a set of tokens (user-defined index), users must practically open multiple windows and aggregate results themselves.



2.2 Imitation
The dominating tools and exchanges (in their defense) might offer the option to track a 'portfolio' and/or create 'subaccounts' as an attempt to simulate the power of aggregated analysis through user-defined sets. Users might have to setup new accounts, transfer funds and rely on complex navigation to see the analysis.

Portfolio-tracking specifically, is not consistent and not inherently isolated to a desired set of tokens. Therefore, it most certainly contains noise of coins that are part of a user's portfolio but not part of a specific strategy.

Subaccounts unsuccessfully try to solve this issue. These new accounts get initialized as empty sets, allowing for slightly more consistent tracking of its performance, because its analysis has

a defined start. But it still uses portfolio tracking, so noise can still accumulate over time. For example, if (un)willingly tokens are added to the account. Such actions cannot be cleared.

2.3 Captivity
Further, wallet analysis tools, watchlist tools and portfolio-tracking tools are mainly executing on connection with the realized assets of the user. This means, to do a specific analysis, a user needs to own the exact assets for the analysis. This disallows layered analysis of user-defined indices. The absence of consistent, isolated and automated analysis is commonly known to traders. Most traders journal their trades in 'Excel' or 'Google sheets' because of this. But also, because these tabular data tools offer expandability and freedom in doing so.

3. Solution
An extensive sandbox platform for developers and an intuitive terminal for traders, based on set-trading (a horizontally implementable strategy) could be niche but effective.

3.1 Webapp
On a webapp one can define, monitor and backtrack any combination of different tokens. In the literature of math this is called a set. Hence why it's called set-trading. On the webapp, the user selects tokens and mainly sees the respective aggregated performance in a graph chart. Upon clicking any more tokens they are seamlessly added to the user-defined set that's being monitored.

The free-to-access platform itself allows all users to explore and analyze the entire market in user-defined sets of 1 or more tokens, exposing never before seen market directions & performances. This accessible real-time industry report is the crucial and connecting part of the platform. Users can roam recognized price data & start shaping their custom exploration into more complex levels of analysis such as correlations, time series components, news-analysis and relevant details on exchange-different prices. The open-source developers are responsible for enabling relevant tooling into the sandbox that this platform essentially is.

3.2 Trading
The platform initially does not allow or need users to trade but rather tries to become a user's everyday analysis-tool in such intuitive and user-defined way it's personally binding. It can for example prove or disprove personal market beliefs and/or track personally relevant user-defined sets.