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CAPSTONE PUBLIC PROJECT SUMMARY

Project Title:
“Quantitative Analysis of
Decentralized Crypto Exchanges &
Qualitative Review of FTX”

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The following document lays out the capstone project summary by discussing the project overview and objectives, the project methodology & data resources, the results achieved, and experiences learned. Some details of the project will be omitted due to the non-disclosure requirement.

Project Overview and Objectives

The project contains two parts: 1) Quantitative analysis of decentralized crypto exchanges; and 2) Qualitative review of FTX. The project was carried out for the company, which compares different brokers and exchanges and advises independent investors and traders in selecting satisfactory platforms tailored for their specific needs. The importance of the project arises from the fact that in recent decades trading of digital assets has demonstrated an exponential growth which has increased the role of crypto exchanges substantially.

The sponsor company has qualitative reviews of many financial providers on its official website and has recently started reviewing centralized crypto exchanges in depth. The company has been dedicated to extending the pool of reviewed crypto exchanges due to the increased number of retail investors investing in or trading cryptocurrencies and other digital assets. FTX is currently one of the top five centralized crypto exchanges and has accumulated a large enough trading volume since its launch. Thus, the main part of the project required a detailed qualitative review of the FTX crypto platform, which will be published on the company's website.

Although centralized crypto exchanges have been dominating the market since the beginning of the crypto era, decentralized crypto exchanges have already begun challenging centralized ones in terms of their trading volume in recent years. They started disrupting the traditional way of trading tokens through centralized crypto exchanges. According to The Block (the global information services provider in the digital asset space), the spot volume ratio of decentralized crypto exchanges to centralized ones was 11.88% as of May 2022¹. The biggest problem is minimal information about the decentralized crypto exchanges, making it harder for individual investors and traders to compare and contrast these exchanges. Hence, this would be beneficial for the sponsor company to quantitatively analyze the centralized crypto exchanges and identify the most demanded and progressing exchanges for an in-depth review to be conducted in the future.

Project Methodology & Data Resources

For the part of the quantitative analysis of decentralized crypto exchanges, the top 20 decentralized crypto exchanges were selected to analyze. Data was collected through each exchange's website and other reliable online databases.

Initially, I identified the top 20 decentralized crypto exchanges based on their 1-week average trading volume from the list posted by Dune Analytics released on 03.06.2020². Dune Analytics is the Ethereum-centric analytics platform where diverse types of free on-chain crypto data and up-to-date dashboards are displayed. However, this data source did not include some of the most prominent decentralized crypto exchanges due to unreliable data from the platforms. Since they were big enough, I chose coinmarketcap.com as a second source for selecting the extra four exchanges which were included in the list of platforms to be quantitatively analyzed³.

After selecting the top 24 decentralized crypto exchanges in total, the necessary parameters were chosen for collecting data, such as types of products and services available; fees; blockchain used; a number of users, etc. The parameters were decided on the basis that these will explain the most critical sides of the exchanges and formulate a better view of them.

The data relating to the parameters were mainly retrieved from each exchange's website. The necessary data was primarily extracted from the exchanges' official websites, while some data was unavailable on them. Due to this, other online databases were used to collect the data, such as cryptowisser.com⁴. The collected data were stored in an excel file in an organized order to compare these exchanges.

For the data collection regarding the qualitative review of FTX, two different approaches were utilized: 1) collecting data through online sources, such as FTX's official website and other free online databases; 2) collecting information through a first-hand experience by opening a live account in the platform. FTX presents sufficient information about its platform on its official website; however, for some information, there was a need to check other databases. In addition, I registered in the exchange to have first-hand involvement and record my user experience. During the test, I checked the exchange's services along the criteria laid down in the methodology and noted my experiences step by step.

During the process, I used the sponsor company's methodology to produce an overall score for the exchange, as per 8 key areas which were required to be addressed: fees; account opening & deposit, withdrawal; research & platform, customer service; product selection; security; education; and extra features.

Results Achieved

Quantitative part: today, a vital problem of the crypto market is limited information about decentralized crypto exchanges. To address this issue, there was a need to identify which exchanges were relatively more important than their counterparties, and the first part of this project aimed to collect relevant data for various parameters for this purpose. The quantitative analysis of decentralized exchanges allowed us to see which exchanges are significant in terms of their trade volume, customer base, and extent of their products/services and which ones offer more advantages for their users in respect of their trade fees and other parameters. The result was that a few decentralized crypto exchanges, which are larger than their competitors, need to be examined in-depth in the future in order to provide a valid review of these exchanges. Some of these exchanges were Uniswap, PancakeSwap, Curve, Balancer, SushiSwap, and others.

Review part: For this part of the project, an extensive review of one of the major centralized crypto exchanges, FTX, was carried out. This allowed us to see how FTX is placed among other reviewed exchanges by the sponsor company in terms of its overall score. The score was obtained from running a Microsoft Excel model on the 100 data points collected. Many advantages were found along with a few disadvantages of the exchanges, which were extensively analyzed and written down. A detailed review will be published on the sponsor company's website.

Learning Outcomes

Both parts of the project required the application of diverse concepts, many of which were relatively new to me. The project helped me acquire a profound knowledge of centralized and decentralized crypto exchanges and the types of services and products they offer to their users. Quite a large number of crypto and exchange-related terms and their application regarding crypto trading and exchanges were acquired during the project. In addition, professional writing skills were essential to adopt since a large set of information was required to be written in a structured way.

References

- 1 - <https://www.theblockcrypto.com/data/decentralized-finance/dex-non-custodial/dex-to-cex-spot-trade-volume>
- 2 - <https://dune.com/queries/4319/8411>
- 3 - <https://coinmarketcap.com/rankings/exchanges/dex/>
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