

CS162 Project Design

Spring 2022

Ga Eun Lee

Minerva University

Project Overview

The main project goal is to develop DeFi (decentralized finance) services for Klaytn network users. Currently, my project team that consists of two more members outside of Minerva University has developed smart contracts for DeFi services including yield farms, staking, lending, prediction, “pool together” etc. For this CS162 project, I would aim to develop the front end website so called DApp (DeFi application e.g. [Pancakeswap](#)) for three of these services using HTML, JavaScript, and React and receiving data from Klaytn network’s public node. Ideally, I would create a webpage for each of the three services per month and thus deliver three webpages at the end of 15 weeks.

Problem Description

The potential of DeFi’s lucrative and beneficial financial services has not yet been tapped in, as many daily investors encounter multiple challenges both entering and investing in the market. Some of these challenges include understanding DeFi concepts, DApp’s complicated UI, procedural tasks (e.g. installing [Metamask](#)), high risk (e.g. highly volatile prices, potential scam), lacking capital to invest, psychological distance towards DeFi, and even lacking knowledge about DeFi services. Such problem has been proven by the customer needs survey, as when non-DeFi investors were introduced to a relatively low risk service called “stable coin yield farms” 69.7% answered they are interested in investing in this DeFi service. The last section of the paper elaborates further upon how the customer needs survey serves as evidence that the identified problem exists.

This project targets solving the problem in the following ways:

- 1) User-friendly UI e.g. limited display of information, filters including risk-levels
- 2) UI with simple description of DeFi concepts e.g. tool tips with DeFi concept description and link to a more elaborate description, using least jargon as possible
- 3) Services with low risk e.g. stable coin yield farms

Stakeholders of the Project

Stakeholders of this project would be the daily investors that would use our services through our DApp, a venture capital investor that have funded our project team, and possibly collaborators in the crypto-scene. Considering that the project will last 15 weeks and consist of developing the front end, the main stakeholder for the project would be daily investors and our project would benefit them foremost by providing hopefully lucrative financial services and accessible user interface. Moreover, the project will aim to solve the various challenges daily investors face while starting and in progress of investment as outlined in the previous section. Thus, the project will benefit the overall experience of users investing in our DeFi services from start to finish.

Customer Needs Survey

The [survey](#) to assess the customer needs for this project has been carried out on January 20th 2022, receiving up to [51 responses](#) from Minervan students supporting that the problem identified in the previous sections exists. (However, it should also be noted that the responses may not be able to be generalized across all users since the survey was carried out on only Minervan students that probably range from age 18-22 and have higher openness towards new ideas and the survey design also have room for improvement.)

The survey was conducted mainly in three sections: one section for those who are already investing in DeFi, second section for those who heard of DeFi, and third section for those who never heard of DeFi. Out of 51 respondents, respectively 18, 12, and 21 students answered in the corresponding sections.

Have you ever invested in DeFi (Decentralized Finance) before?

51 responses

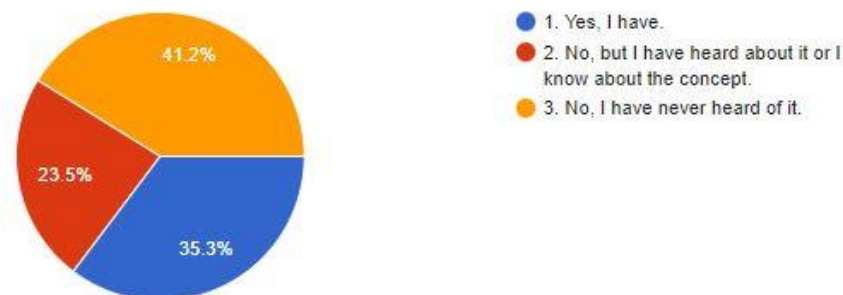


Figure 1. Survey responses to “Have you ever invested in DeFi before?”

For first section respondents, we could see that only 16.7% are already investing in the Klaytn Network and most importantly that 61.1% are not investing but interested in investing in the Klaytn Network, supporting how our service would appeal to DeFi investors in general. Their main challenges during investment were ranked in the following order: understanding DeFi concepts, high risk, DApp’s complicated UI, procedural tasks, and lacking capital to invest. The first and second ranked challenges were agreed upon by about 70% of the respondents and the third and fourth ranked challenges were agreed upon by about 40% of the respondents, supporting that these challenges are essential to current DeFi investors and thus our service is in need.

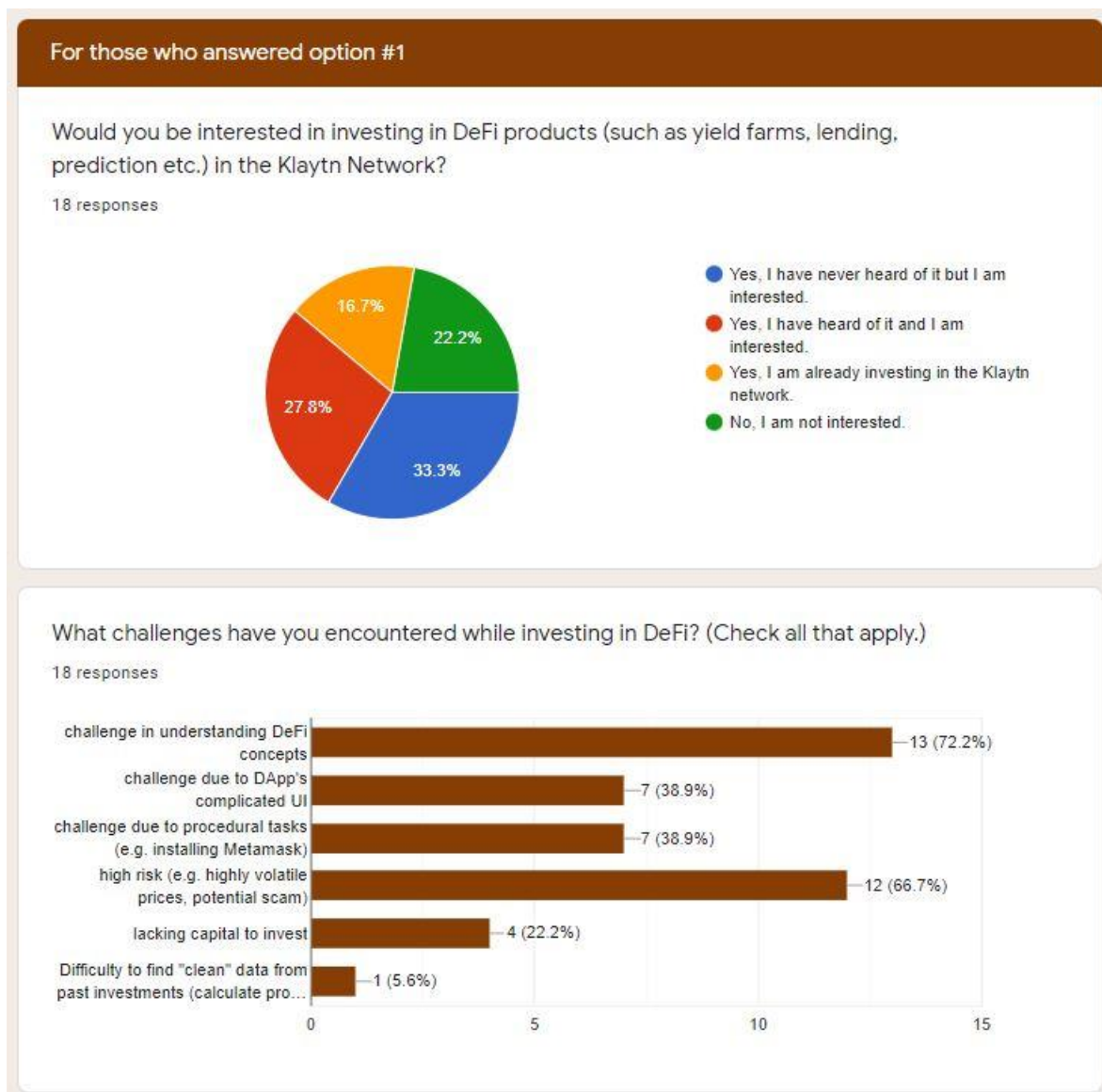


Figure 2. Survey responses from those who are already investing in DeFi

For second section respondents, their main challenges in entering the DeFi market were ranked in the following order: high risk, understanding DeFi concepts, lacking capital to invest, procedural tasks, psychological distance (the last three responses shown in the below figure could be grouped into this category of challenge), and DApp's complicated UI. The first and second ranked challenges were agreed upon by about 50~60% of the respondents and the third, fourth, and fifth ranked challenges were agreed upon by about 25%~40% of the respondents. Thus, these results again support that these challenges are essential to attract potential DeFi investors. Most importantly, when they were introduced to a DeFi service with one of the lowest risks, a whopping 83.3% of the respondents answered they were interested in investing in the product. This means that they have not known about the service before or challenges outlined above have deterred them from investing in DeFi bolstering the problem statement that "the potential of DeFi's lucrative and beneficial financial services has not yet

been tapped in, as many daily investors encounter multiple challenges both entering and investing in the market.”

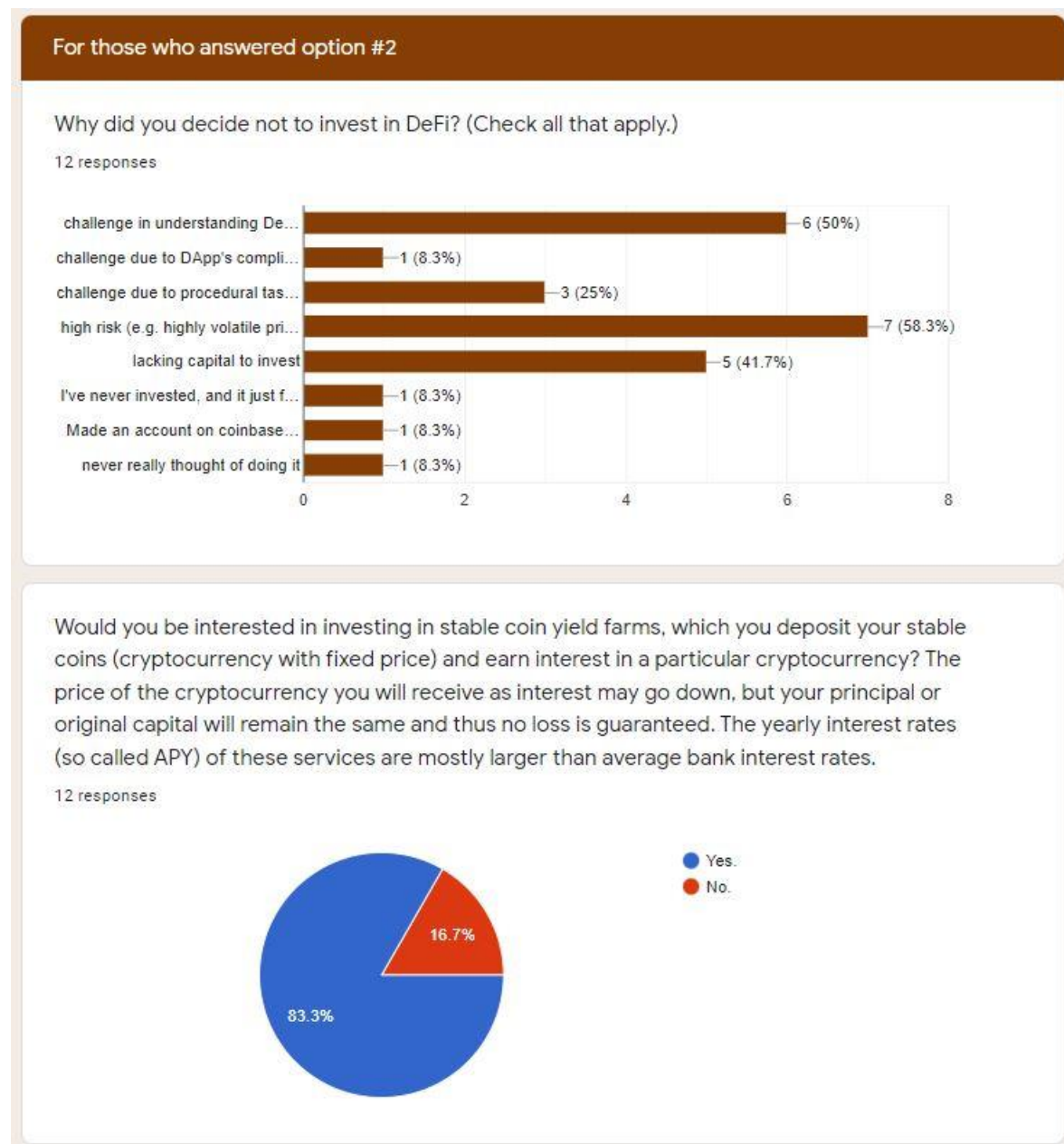


Figure 3. Survey responses from those who have heard of DeFi

For third section respondents, when they were introduced to the same DeFi service with one of the lowest risks, a 61.9% of the respondents answered they were interested, again backing the problem statement and serving as proof of how our services can serve the needs of not only DeFi investors but also non-DeFi investors with the right services and UI tailored to new users with little DeFi knowledge.

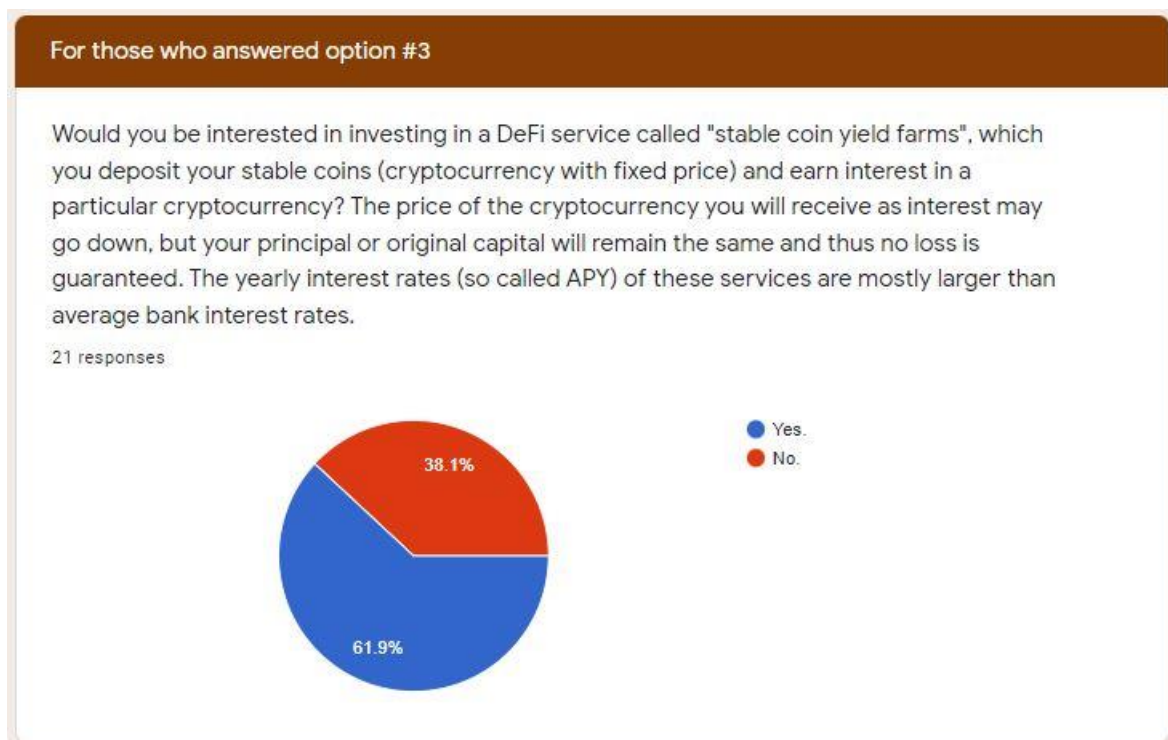


Figure 4. Survey responses from those who have not heard of DeFi