## Problem Statement 1

### Bringing Foreign Exchange Markets to Blockchains

Foreign exchange markets facilitate the conversion of trillions of dollars' worth of fiat currency every day and, in turn, set market prices and exchange rates across the globe from AUD to ZAR. Despite the massive value exchanged in these decentralized markets, the value captured is largely monopolized by a small number of players and is not readily open to individual currency holders to profit from or utilize in a transparent manner.

Blockchain technology can address some of these inefficiencies by virtue of its peer-to-peer nature and open architecture. Assets representing underlying fiat currencies such as those found on FX markets can be issued by banks or individuals holding reserves. These assets can be exchanged for other assets instantaneously, regardless of location. The underlying market can also be used to facilitate real-time cross-border transactions tied to local currencies and payment systems.

To learn more about foreign exchange markets and blockchain-based exchanges, please read:

- https://en.wikipedia.org/wiki/Foreign_exchange_market
- https://en.wikipedia.org/wiki/Decentralized_exchange

### Problem Description

Today, the main participants in FX markets are large multinational banks, who often act as intermediaries on behalf of speculators, buyers/sellers, and other actors. By placing themselves in the middle, they can effectively price gouge, collude, and otherwise extract exorbitant fees from others who require currency trades and delivery.

Because FX trading takes place over multiple markets, there are also price inefficiencies and arbitrage opportunities to be captured, some of which could be potentially mitigated by reflecting aggregated market price data on a "decentralized exchange" built on top of a blockchain platform.

The problems to be addressed in this challenge are multi-faceted:

- How to create a level playing field for accessing FX rates in a p2p fashion
- How to reduce information asymmetries amongst participants and across markets
- How to reflect external price data on decentralized orderbooks built on blockchain platforms
- How to facilitate trust and reliability in the issuance and settlement of the traded assets on the blockchain

## Expectation

It is expected that the solution includes the following components:

1. Mapping out the value flows in existing global FX markets
2. Analysis of average spreads across currency pairs of interest, by volume (tip: consider why G20 currencies trade with much tighter spreads than exotics)
3. Methods for creating transparency and trust in issued fiat currencies and other assets to blockchain networks
4. Methods for tying market data and other sources of liquidity to orderbooks available on various blockchain networks
5. Solutions for interfacing and initiating transactions across networks

While we do not expect fully functional or fleshed out deliverables for each of the components listed above, the most successful solutions will be those that coherently and convincingly outline touch points and technology required to bring pieces of the existing FX markets to blockchain platforms.

## Evaluation Criteria

The evaluation parameters will be listed on the hackathon landing page.

## Tools & Technology

1. Block explorers such as AlgoExplorer: https://algoexplorer.io
2. FX markets data from providers like: https://www.oanda.com/fx-for-business/historical-rates
3. Wallet and blockchain SDKs to pull and submit network data

## Resources & References

- https://developer.algorand.org

## Frequently asked questions

TBD