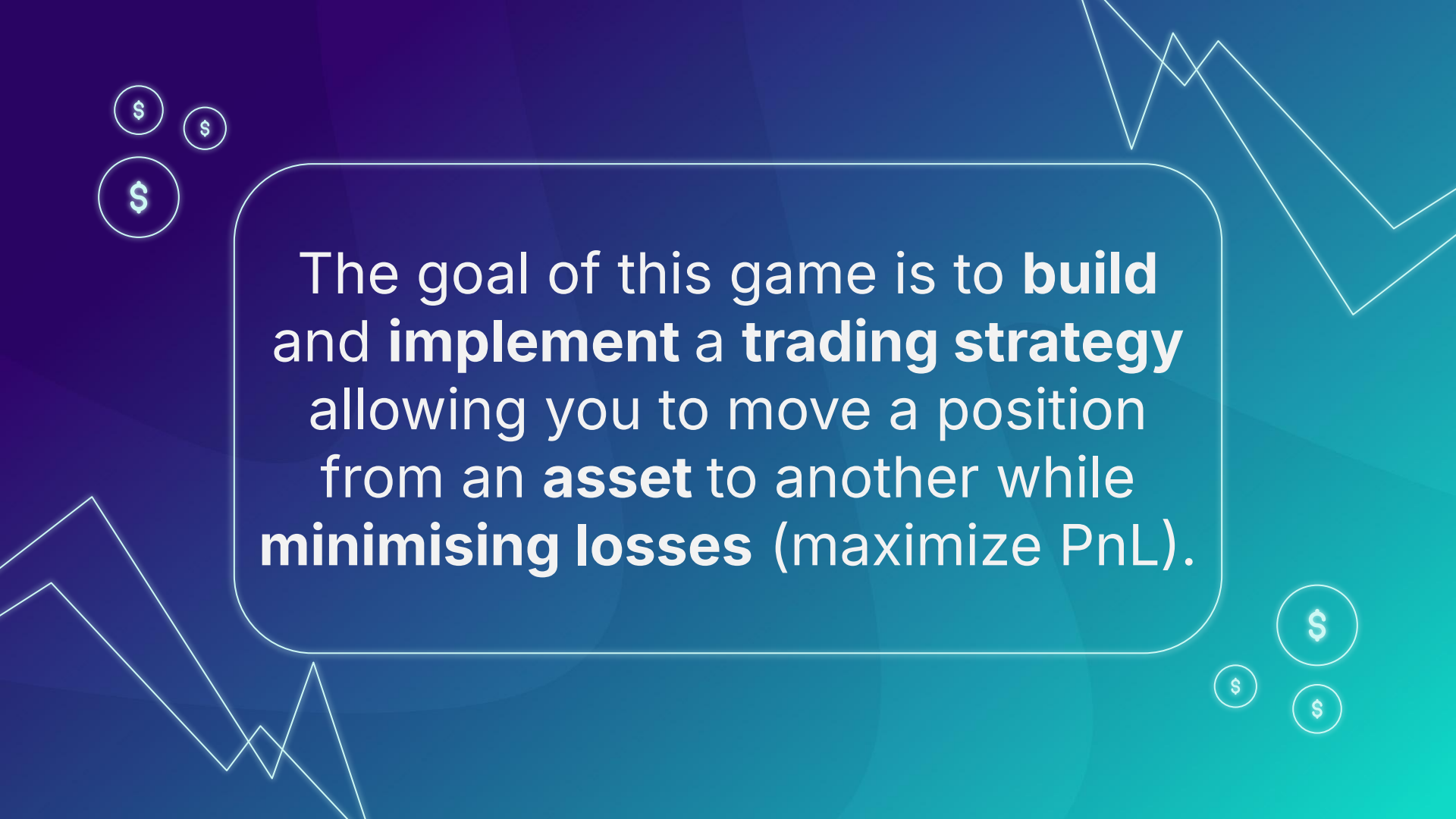


FX

TRADING GAME

“THE BIG EXIT”
UK VS EUROPE





The goal of this game is to **build** and **implement a trading strategy** allowing you to move a position from an **asset** to another while **minimising losses** (maximize PnL).

01

CURRENCY TRADING

Introduction



WHAT IS CURRENCY TRADING?

A trading pair is the quotation of two different assets, with the value of one being quoted against the other.

The only trading pair we will be using is the Euro (EUR) vs British pound (GBP) or shown as EUR/GBP. The quotation $\text{EUR/GBP} = 0.86$ means that one EUR is exchanged for 0.86 GBP.

The exchange price of the asset is constantly moving, so if you sold EUR/GBP at 0.86 and then buy the same amount back 1 second later when it is 0.85, you have sold high and bought low, which means you made a profit!



EXAMPLE

01

BUY @ 0.86

Buy 100 EUR/GBP @ 0.86
= -86 GBP and +100 EUR

03

SELL @ 0.84

Sell 100 EUR/GBP @ 0.84
= -100 EUR and +84 GBP

02

PRICE FALLS

The price of EUR/GBP
falls to 0.84 (Euro
weaken)

04

LOSS!

Zero EUR, but you spent
86 GBP, got back 84 GBP
→ Loss of 2 GBP

02

YOUR GOAL

Maximize your portfolio
during Brexit



UNDERSTANDING YOUR GOAL

You are **starting with a 1 Million GBP** position that you have to manage during the uncertainty of **Brexit**. It has been agreed that **at the end** of the time period – given your firm conducts business in Europe and the UK – **you should have between 30% and 50% in EUR**.

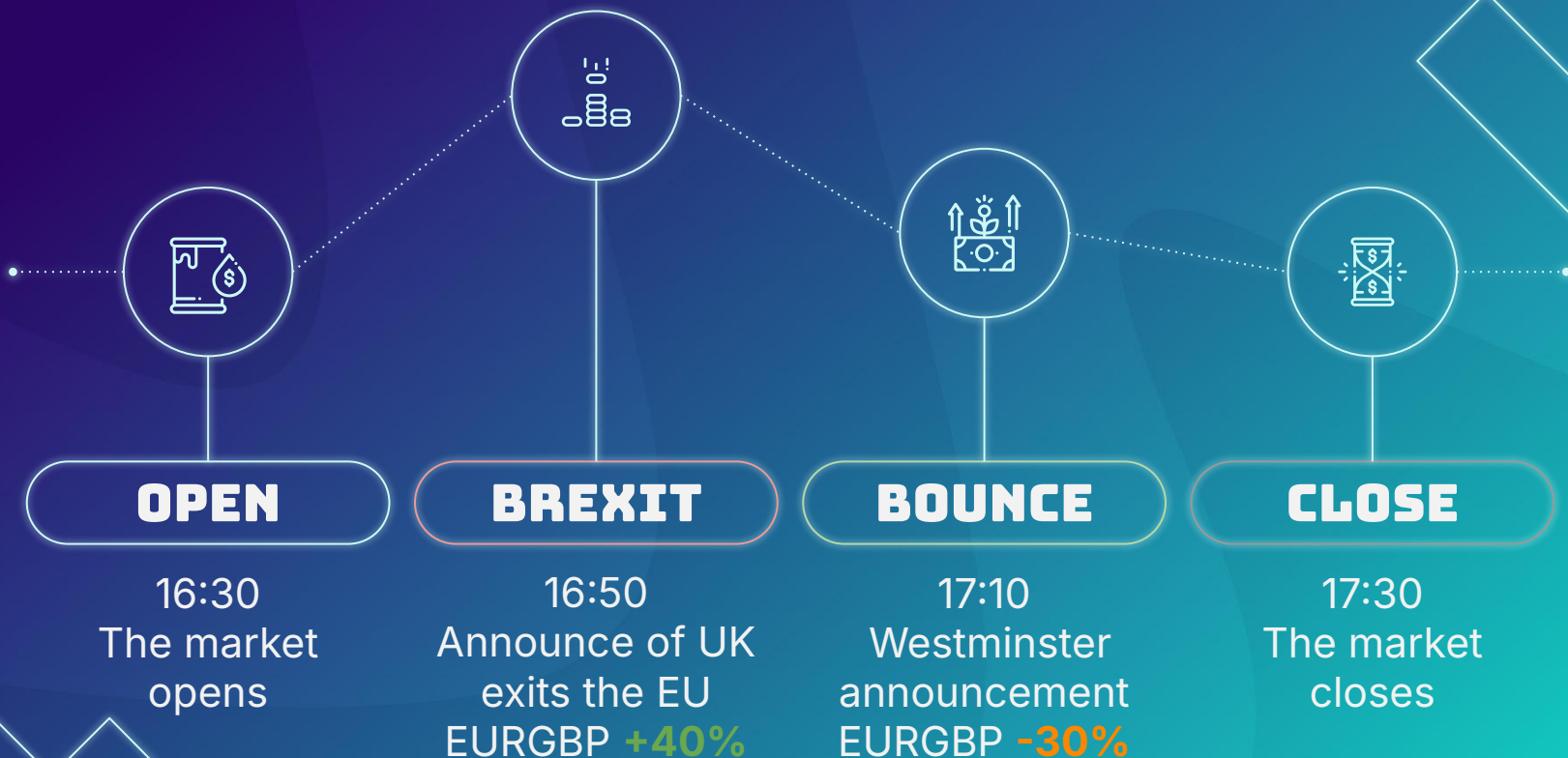


Your objective is to maximize the value of your holding at the end of the day where we will mark to market positions.

The price of the currency pair will vary up to **5% per price period**. You should also keep in mind that **market participants can affect the price** of currencies.

You are free to trade at any time / **every second with a limit of 100k per trade**. We will assess the value of your portfolio at the end of the exercise at the closing price.

NOTABLE EVENTS





03

PROJECT DETAILS

How to, Do and Don't

PROJECT DETAILS

We can provide you with some **basic client code** which will connect to our server and execute buys and sells on products if you are unfamiliar with how to **connect to a REST endpoint**. You should **work as a team to build a better strategy**. It should be fully automated but it could also have manual elements.

You will be issued a **traderID** so that your balance and portfolio can be tracked. This traderID will be allocated the initial balance at the beginning of the day. Please **do not share or lose your traderID**.

RISK & CONTROLS

How do you program your client so you do not trade more than you want? What are safeguards you can put into the code?

STRATEGY

Do you need to keep track of historical prices? If so, what would be a reasonable data structure?

DATA & NEWS

You know there will be big movements in the market. Fortunes can be made during these periods. How will you be able to take advantage of this with code? How will your code detect this movement? How will your code avoid trading prematurely by spotting false positives?



AWARDS FOR



MOST PROFIT

Make the most money
while the market is
open!



BEST STRATEGY

Implement the best
automated trading
strategy!

* You will be asked to explain your trading strategy. The team that by pure chance got the highest PnL and couldn't explain their strategy will not be eligible for prizes.



FX GAME

API

API ENDPOINTS

GET /productList

Returns the list of available products for trading.

REQUEST	RESPONSE
GET http://host:port/ productList	["EURGBP"]

GET /price/{product}

Returns the current price for the given product.

REQUEST	RESPONSE
GET http://host:port/p rice/EURGBP	{ "time": 1633785928, "price": 0.8555345989792149 }

API ENDPOINTS

POST /trade/{product}

Send an order to the exchange.

REQUEST	RESPONSE
<pre>POST http://host:port/trade/EURGBP { "trader_id": "mYtR@d3rld", "quantity": "10000", "side": "Buy" }</pre>	<pre>{ "price": "0.8654634644281273", "success": true } { "price": "0.0", "success": false }</pre>

GET /positions/{trader_id}

Return the inventory in each currency for the given trader ID.

REQUEST	RESPONSE
<pre>GET http://host:port/positions/mYtR@d3rld</pre>	<pre>{ "EUR": 10000, "GBP": 991345.36535 }</pre>

API ENDPOINTS

GET /capitals

Return the inventory in each currency for all the traders interacting with the exchange.

REQUEST	RESPONSE
GET http://host:port/ capitals/EURGBP	<pre>{ "Trader1": { "EUR": 10000, "GBP": 991345.36535 }, "Trader2": ... }</pre>

GET /normalizedcapitals

Return the capital normalized to GBP for all the traders interacting with the exchange.

REQUEST	RESPONSE
GET http://host:port/ normalizedCapitals	<pre>{ "Trader1": 1000062.33260, "Trader2": 1000000 }</pre>

API ENDPOINTS

GET /tradeHistory

Return the history of all trades that happened on the exchange.

REQUEST	RESPONSE
GET http://host:port/ tradeHistory	<pre>[{ "time": 1633784914, "User_name": "Trader1", "side": "Buy", "quantity": 10000, "pair": "EURGBP", "rate": 0.8746554 }, ...]</pre>

THANKS!

Do you have any questions?

CREDITS: This deck was created using resources from
Slidesgo, Flaticon and Freepik

