# BookieDAC – Decentralised Betting

## Abstract

* Works as a betting exchange like “Betfair”
* Share holder dividend paid from commission charged to winning bets
* Workers add events to the platform with details such as when the event takes place, the competitors, close of bets etc.
* Workers will receive a percentage of the winnings commission giving them incentive to promote the events to as many punters as possible.
* Reviewers are in place to resolve any disputes in the results posted by workers and rewarded for this task.

## Introduction

Gambling is big business and with the rapid acceptance of online gambling in the past decade it seems set to stay. The major problem with most betting agencies is due to the financial restrictions placed upon them given their physical operating location, they are restricted to only providing certain services for people of certain countries. This also means ultimately governments decide weather their population are able to use certain betting services over others.

Furthermore current establishments limit you to only gamble on those events that have been listed on their site. This means they will generally only put up those events that will be profitable, meanings users may not be able to bet on smaller events.

We propose a decentralised adaptation of a “Betting Exchange” to overcome these current issues. The system will be based upon the Decentralised Autonomous Corporation model proposed by Invictus Innovations and explained in further detail below

## How It Will Work

### Betting Model

The model we propose will rely on the already existing idea of a Betting Exchange. As the name suggests this works more in line with a traditional stock market. Users either go “long” on a particular option if they feel it will happen or they can go “short” if they do not believe that event will take place. A bet will not be filled until a user agrees to match the order of another user. The main advantage of this model is no money needs to be provided by the DAC to back the bets.

To quickly exemplify this concept for those unfamiliar with market based betting, let’s pretend Brisbane Roar are playing Sydney FC in a football match. Bob feels Sydney won’t win. He logs into the bet exchange and has an account balance of 5BTC. At most Bob can put up 5BTC for his short so the best odds he can offer is 1:6. If Brisbane roar win bob will loose the 5BTC, but if they loose as he has predicted he will make a profit of 1BTC. He decides to add his bet to the market.

Steve on the other hand is an avid Brisbane Roar fan and decides he wants to place a bet on the game. He logins and see’s his account balance is 1 BTC. He browses to the football market section and finds the market for the Brisbane Vs Sydney game. Straight away he see’s the market order placed by Bob at 1:6 and decides to lock it in as these are the best odds being offered. Steve now stands to make 6 BTC if his beloved Roar win the game but will loose 1 BTC if they fail to be victorious.

As Steve has filled Bob’s entire order it no longer appears on the market screen and the bet will now be locked in until the end of the game. The game is played and the Brisbane Roar are victorious so Bob looses his 5 BTC and Steve is paid 6BTC less a commission fee which is paid to the provider of the market service.

This example is vastly simplified but describes the basic mechanisms behind a market based approached to betting. Furthermore there is room for users to trade their bets allowing for users to lock in a profit before a result is even known. Further information can be found on the Internet about how these markets work and future articles regarding BookieDAC will look to explain the process so end users can maximize their experience with the system.

### Decentralised Markets

Traditional betting exchanges are heavily centralized and this limits their potential. For example, traditional exchanges have to rely on a service to provide the information about all the events taking place that day. As such they will generally only allow for betting on a limited pool of events which they feel will be popular. They may also not provide markets on particular events for any reason they may feel from government pressure to having a vested interest in not doing so.

The obvious way to resolve this is by allowing everyday users to be able to add markets to the system. On the surface this may seem to be a chaotic thing to do but with the aide of workers who are paid from the dividend, you can see that a model could work to allow this sort of ability.

If we were to say a worker receives 30% of the dividend from each bet that is paid as a result of the market they have created, we would instantly have a way to encourage content to be added without needing a team to maintain the daily events. Workers would be graded based on previous markets they have created and utilizing other metrics of trust such as KeyHotee. Factors that could be taken into account could include how accurate the results they have posted have been, timeliness to update the market with price sensitive information (eg. A horse pulls out of a race), number of people who have bet in their markets etc. This model would obviously allow for multiple markets to exist for the same event but this would be healthy, as it would create competition for the best content providers.

Not only have we now got the content in a decentralised manner, we’ve also created a new industry. The fact that workers receive a percentage of the commission means they have a vested interest in seeing as many people enter that market as possible. Therefore, they will promote the market via any means they see fit to maximize their profits. All for just adding content to a betting system!

The obvious question that has been raised is how do we know for certain the results added by a worker are correct and what happens in the case where it is not.

When a bet is resulted, all those who placed a bet in that market will be able to verify the result via a vote within a predefined amount of time. Each users vote will be weighted based on past votes with a number between 0 - 1. If a user voted in the past that a result was invalid when in reality it turned out to be true, they lose 50% of their vote weight. Otherwise if it was true it increases by 0.1 till it reaches 1.

Once the voting time period has been met the votes would be tallied and if greater than 50% feel the result was correct the bets are paid. Otherwise the matter is put forward for review.

The review team would consist of a multiple people who wish to be reviewers but are picked at random for each case. They would not be aware of what result the worker has put forward nor who the other reviewers are and simply be shown the initial betting market and asked to find the result. Once all the reviews are in they are tallied and the result with the most reviewers supporting it would be the one to determine the result of the event. If the result they find is different to what the worker put forward, the worker will not receive the commission for the winning bets and this is used to pay the reviewers. Otherwise the result remains the same and the worker & winners still get their payment. The reviewers would still receive a percentage of the commission but this would be less then in the case where the worker has provided false information. The cost would hurt the corporation bottom line so it would discipline those who caused the dispute the come into effect by dropping their voting weight, thus discouraging users from falsely reporting true results.

### Generating Revenue

As has already been mentioned earlier in this article, every time a winning bet is paid out a commission will be taken and this is where the DAC will generate it’s main revenue from.

It will be decided upon release what the exact figures will be with regards to the percentage charged but based on current bet markets fees this will probably be a figure between 1-3%. From this fee the corporation will have to pay it’s workers and reviewers in the ways described earlier and the remaining money will be transferred immediately to BookieDAC shareholders.

At this stage there should be no other foreseeable costs to the DAC but if they are identified these will be factored into costing. Therefore, assuming a strong user base can be formed, we can expect to generate a profit.

We will provide further information with modeling of predicted returns in a future paper but some assumptions can be made based upon the figures presented in this document.

## Share Distribution

With the current paradigms with the view that mining to distribute shares is not the way to go, we propose a potential way to resolve this issue. As mentioned earlier workers and reviewers will receive a percentage of the commission. But what if instead they received shares in the DAC instead of fee? This would allow the coins to be mined into existence until the total market cap was reached at which point the fees would be derived from the commission. Doing this would give potential workers further motivation to make the DAC successful and thus grow the value of the corporation.