

Version 1.0.0



# Parachain Bonds by Ankr.

[stakefi-parachain.ankr.com](https://stakefi-parachain.ankr.com)

## Executive Summary

Parachain Slot Auctions are among the most widely-discussed and anticipated events in the blockchain space. Providing the winning projects with access to innovative multi-chain infrastructure, they also offer an opportunity for regular audiences to be involved in the vibrant Polkadot ecosystem. Through crowdloan campaigns, anyone can contribute KSM and DOT to support the bids of their favourite projects, and receive their tokens as a reward.

However, these rewards have their limitations. Once a winning project secures a parachain slot, crowdloan participants find their tokens locked up for up to two years – with no other ways to leverage their funds.

To tackle this issue, Ankr introduces Parachain Bonds – an innovative instrument that unlocks the liquidity of bonded DOT, collects rewards from winning Parachain slot auctions, and distributes rewards from the winning project's tokens to Parachain Bond holders.

Rewards from winning slot auctions are expected to become higher than Polkadot staking rewards, which makes Parachain Bonds a Polkadot High Yield bond.

By lending and trading bonds that represent your stake in the auction, users will be able to make passive income on their investment without waiting for the parachain slot lease to expire.

## Background

In June and July 2021 parachain slot auctions were successfully conducted on the Kusama Network, known as a “scalable multi-chain network for radical innovation and early stage Polkadot deployments”. Karura, Moonriver, Shiden, Khala and Bifrost won the right to lease the five available parachain slots that enabled them to get advantage of the network’s remarkable speed (1500 txs/second) and security, as well as an innovative cross-chain messaging protocol.

To secure a slot, the projects had to make their bids by staking the network’s native KSM token, raising millions of dollars to get ahead of the competition. To get enough KSM, most of the participants conducted crowdloan campaigns, asking their communities to stake the tokens in their support. Supporters of the winning projects had their tokens locked for 6 months – the duration of a parachain slot lease – but were airdropped the project’s unique tokens in return. By using this model, for instance, Karura was able to raise a significant 501,138 KSM (about \$100 million).

Users were able to contribute to different crowdloans 1) directly 2) through centralized exchanges 3) through Bounce Finance, the only decentralized platform on the market to facilitate crowdloan campaigns.

The scale of Kusama parachain slot auctions was remarkable – but this was just a rehearsal before the parachain slot auctions on Polkadot. Just like with Kusama, projects will compete for a parachain slot by bidding the network’s native token, this time DOT. On this occasion, however, the requirements will be much higher, and so will the prizes. Users who will bid on a winner by staking DOT in a crowdloan campaign will potentially receive massive rewards.

Now, if a maximum parachain slot lease on Kusama lasts 48 weeks (a little less than a year), it will be 24 months on Polkadot – meaning that if your favorite project wins, your DOT stake will be locked for 2 years!

### Downsides of participating in Parachain Crowdloans

- ⊖ Your KSM/DOT tokens will be bonded and you will not be able to utilize them during the lease period.
- ⊖ Rewards will be paid out in winning projects’ tokens and there is no platform to accumulate the earned rewards from multiple winning parachain slot auction projects.
- ⊖ Learning curve on how to use Polkadot.js and its ecosystem.

## Solutions offered by StakeFi and Parachain bonds

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Liquidity: Parachain bonds enable liquidity on bonded DOT through an upcoming auction marketplace on Bounce Finance.

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High Yield: Parachain Bonds collect rewards from projects winning Parachain Slot Auctions and distribute rewards to Parachain Bond holders, meaning that Parachain Bonds are like High Yield Bonds, offering a potentially superior yield than the upcoming Polkadot Internet Bonds from Ankr (receiving staking rewards).

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Lending/Borrowing: OnX Finance will develop a lending contract enabling it to collateralize Parachain Bonds and borrow DOT, which can be used to free up liquidity, or buy more Parachain Bonds on Bounce Finance.

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Collect rewards by holding Parachain Bonds (ERC-20 tokens)

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Become a DeFi Parachain Bond Market Maker by estimating the fair value of Parachain Bonds and always be ready to buy Parachain Bonds below your fair value and sell Parachain Bonds above your fair value. The bid-ask spread (difference between your buy and sell price will become your market marking revenue.

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There is no need to run Polkadot.js as Ankr StakeFi will collect the DOT/KSM tokens and participate in the Polkadot crowdloans on Polkadot.js wallet on behalf of the users. As such, we will be able to collect rewards from winning Parachain Slot Auction projects, and distribute those rewards to Parachain Bond holders.

## Ankr's new SDK for Parachain Crowdloans, integrating Parachain Bonds

Ankr has developed a Software Development Kit (SDK) that works with smart contracts and the Polkadot wallet extension with the goal of making the user experience smooth and hassle free for projects willing to integrate Parachain Bonds, such as Bounce Finance, OnX Finance and Clover Finance. The Parachain Crowdloan SDK is by default connected with the Web3 key provider that removes the need to connect it manually.

Projects connecting to Ankr's Parachain Bond SDK will get basic information like listing the available crowdloans or requesting the deposit addresses for selected crowdloans without ever connecting to Polkadot.js.

Our SDK is available [here](#).

## Claiming Rewards with Ankr StakeFi

For Parachain bond holders, Ankr introduces a new reward distribution mechanism, that depends on how long you hold a Parachain bond. The rewards will be claimable by the Parachain Bond holder. If a Parachain bond is swapped to another user, the buyer of the Parachain bond will receive future rewards.

## Parachain Bond Workflow

User crowdsources DOT for its preferred project running a Polkadot Parachain crowdloan to participate in the Parachain Slot auction.

DOT gets allocated to the preferred crowdloan making the user an indirect participant in the crowdloan.

The project uses the crowdsourced DOT to participate in the Polkadot Parachain Slot auction.

Preferred project wins slot and auction user gets Polkadot Parachain Bonds from that project (aDOTp Project Name) as ERC-20 tokens, for which rewards will be distributed during the duration of the lease period and are calculated based on proof of time. Rewards will be distributed as ERC-20 tokens.

Once the user gets the reward, Ankr will charge a 5% fee on the rewards, out of which 2% goes to Ankr's corporate treasury and 3% will go to Ankr's buyback program.

For liquidity, the Parachain Bond holder will be able to either sell on Bounce Finance auction marketplace or collateralize the Parachain Bond and borrow DOT on ONX Finance.

Ankr Bridge will include a Ethereum-Polkadot Parachains Bridge for the projects having a Parachain Bond so that users can easily bridge their rewards from Parachain Bonds from Ethereum to the project's parachain and vice-versa.



## Liquidity of Parachain Bonds

### a. Liquidity on Bounce Finance

A Parachain Bond is a liquid asset and liquidity will come from Bounce Finance auction marketplace.

With an auction marketplace, the Parachain bond holders will get the opportunity to sell their Parachain bonds and obtain liquidity. We expect the circulating supply for each of the Parachain bonds to be limited and trading volume to be low as there will be several Parachain bonds from every Parachain slot auction winning project.

There will be two types of auction systems:

- Fixed swap auction – As the name suggests the price of Parachain bond will be fixed and there will be instant execution of order if an offer is made to buy the bond.
- Sealed-bid auction – This auction will be time bound and all the offers above the minimum amount will be considered at expiry of the deadline the highest offer will be executed.

We believe that an auction marketplace will be more appropriate, which is actually very similar to how Fixed Income products are traded in traditional finance (banks and/or brokers are always available to buy/sell specific bonds at specific buy price (bid) and sell price (ask). The spread between both prices is called the bid/ask spread. Therefore, there will be no counterparty risk related to the liquidity of Parachain Bonds as the liquidity is expected to come from the market.



## Liquidity of Parachain Bonds

### b. Lending on OnX Finance

With OnX Finance bond holders will be able to lend by collateralizing yield generating tokens such as Parachain Bonds and borrow tokens non-generating yield such as DOT.

Given the lack of DEX liquidity, the OnX Finance lending is expected to work based on fair value (1 aDOTp = DOT assuming that higher yield compensates higher liquidity risk), applying a conservative Loan-to-Value ratio (e.g. 75% for Ankr Eth2 Reward Bearing Bond).

The Parachain bonds and the borrowed amount should be ideally on the same network/chain. Therefore, we can expect three solutions under that scenario:

- Usage of onDOT (ERC-20) to borrow, Polkadot stablecoin backed by Polkadot Internet Bonds (ERC-20 tokens)
- Deploy lending contract to Binance Smart Chain and bridge Parachain Bond + rewards to Binance Smart Chain
- Cross-chain lending, DOT lending supply on Polkadot network and collateral (Parachain Bonds) on Ethereum

The quickest solution to implement will be the usage of onDOT as lending supply under OnX Finance. As Polkadot Internet Bonds will enable unstaking, aDOTb is expected to have an elastic supply, which should provide a robust price stability mechanism without counting too much on the size of the total liquidity of aDOTp. As such, it is unlikely to observe strong price discounts for Polkadot Internet Bonds as well as onDOT as onDOT will be pegged to Polkadot Internet Bond value. onDOT would therefore become an alternative source of lending supply to Polkadot on Ethereum.



## Parachain Bond Market Makers and fair value estimation of Parachain Bonds

In traditional finance, bonds trading is enabled by market makers, who provide liquidity to the market. Banks and Brokers usually operate as market makers, estimating the fair value of a specific bond, which depends on several factors such as credit risk, sensitivity to changes in interest rates (duration risk) and liquidity risk (some bonds are more liquid than others). Duration risk is also positively correlated to the maturity of the bonds.

For Parachain Bonds, the relevant factors to estimate its fair value are different from bonds in traditional finance, but the spirit of it stays similar.

Here is how we ascertain price of 1 Parachain bond:

$$\frac{1 \text{ DOT} + \text{Rewarded tokens per day} \times \text{Days until end of Lease Period} \times \text{Rewarded token price vs DOT}}{(1 \text{ DOT} + \text{DOT staking reward APR})^{\text{Days until end of Lease Period}/365} + \text{required risk premium from buyer/seller}}$$

Some of the elements of the formula depend on the user's personal risk tolerance, such as the required risk premium, and some other factors could be added depending on the user's willingness such as the perceived risk associated with Ankr for instance.

The necessity of having market makers comes from the complexity of estimating the fair value of a product, and this complexity comes often from the necessity to make informed decisions and assumptions to estimate the fair value of a product. As there is some risk of not estimating a product perfectly, market makers are compensated through the bid/ask price, which is the difference between the buy and sell price. The mid-price (median between buy and sell price) of all market markets ultimately defines the expected value of a Parachain Bond. As there will be several Parachain Bonds for every project winning Parachain Slot auctions, Parachain Bonds will have different prices depending on the price of the rewarded tokens that it embeds.

Projects winning a Parachain Slot auction aim to reward DOT lenders from Parachain crowdloans with a higher APY than Polkadot staking rewards to compensate users from the lower liquidity of bonded DOT (lease period maximum 24 months) when compared to 28 days unbonding period for Polkadot staking. As such, Polkadot Parachain Bonds are expected to become High Yield Parachain Bonds and if the token from a project increases in price more than DOT, the APY of the Polkadot Parachain Bond is expected to become higher, unless the Polkadot Parachain Bond price increases itself. As such, the price of Polkadot Parachain Bond depends strongly on the price of the project's token vs the DOT token.



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