BondAppétit Whitepaper v.2

Disclaimer

Before reading the given whitepaper, please note that everything described herein regarding the BondAppétit protocol and further development of the infrastructure surrounding it is presented as a contemplated plan of action. During the development of the project, the contemplated actions may change. You assume all responsibility for investment decisions you make. Any information provided on bondappetit.io or in any marketing materials shall not be treated or deemed as investment advice or a recommendation of any kind.

You must consider the risk that BondAppétit may not be able to implement the Protocol Launch Phases described herein. You must bear in mind that the launch of Phase 2. RWA Collateralization and Phase 3. Direct Investment may be postponed or cancelled. Your investments are not secured. In case it is not possible to implement any of the phases of the BondAppétit protocol, you may lose all of your investments.

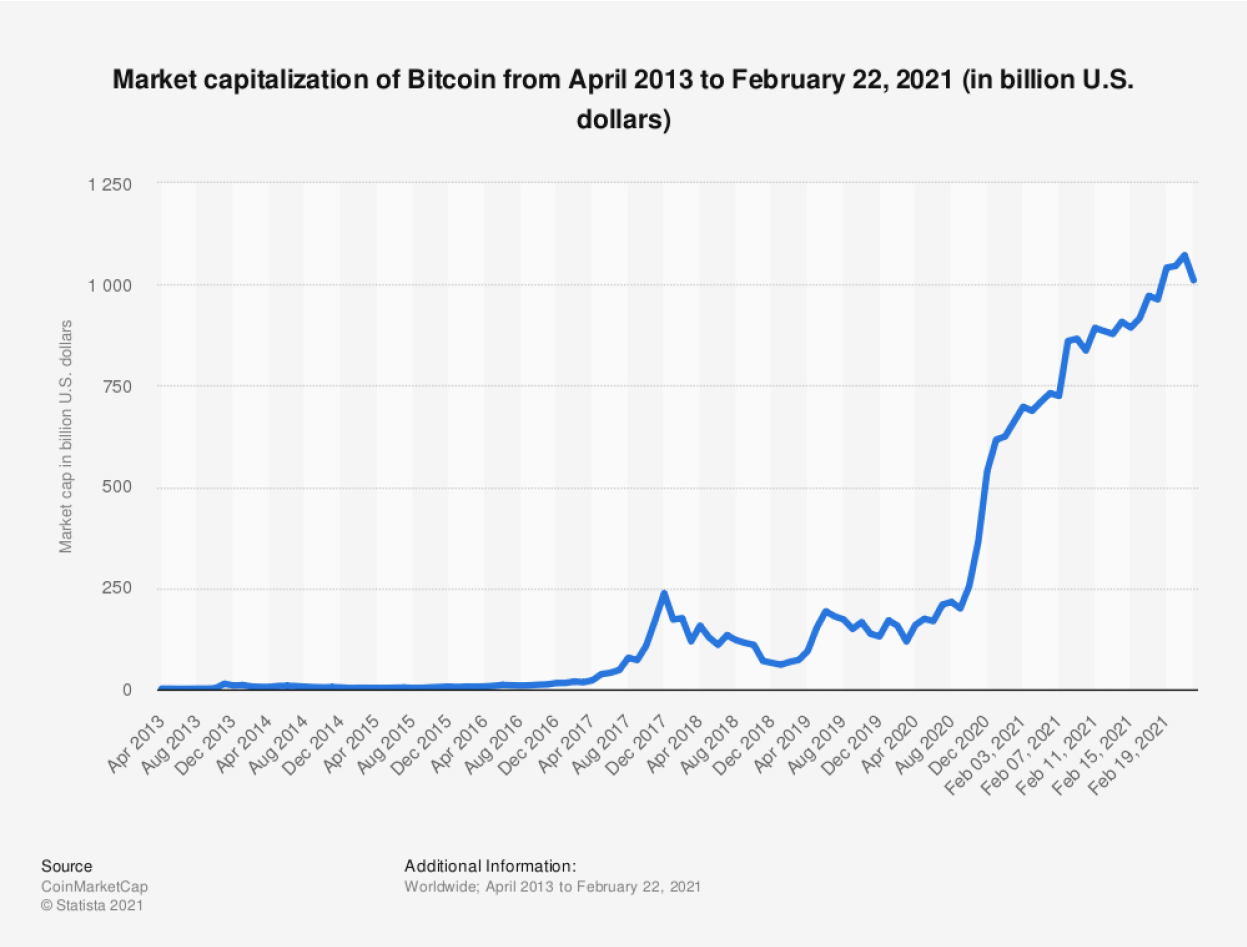
Some statements in the given whitepaper are provided for your attention and constitute forward-looking statements. Such statements are based on assumptions and forecasts on the basis of current market trends. These assumptions and forecasts may be affected by the following non-exhaustive list of factors:

- Amendments in the laws, regulations and/or regulator's approaches and opinions affecting decentralized finance around the world;
- Changes in market trends and interest towards crypto assets;
- Problems and failures in the operations of the applicable blockchain;
- The risk of cyber attacks and other threats.

1. Introduction

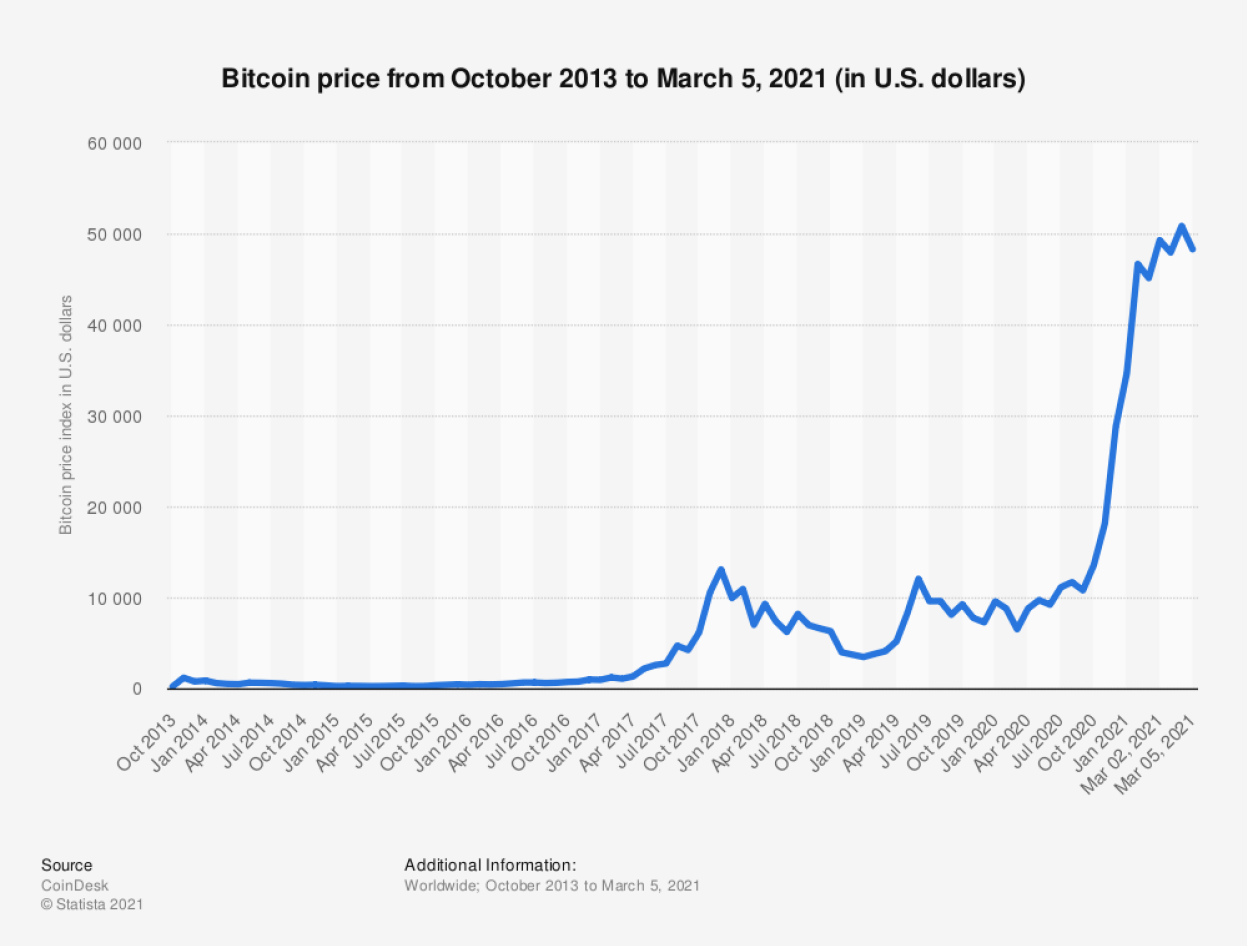
Since the invention of Bitcoin in 2008, the crypto market has been introduced to more than 4000 cryptocurrencies. The market capitalization of Bitcoin equals $1 trillion in 2021, while the total market capitalization of the crypto market crossed

the $1.7 trillion mark and is expected to grow even further. However, the market is isolated from traditional finance and there are few instruments tied to real profitability.

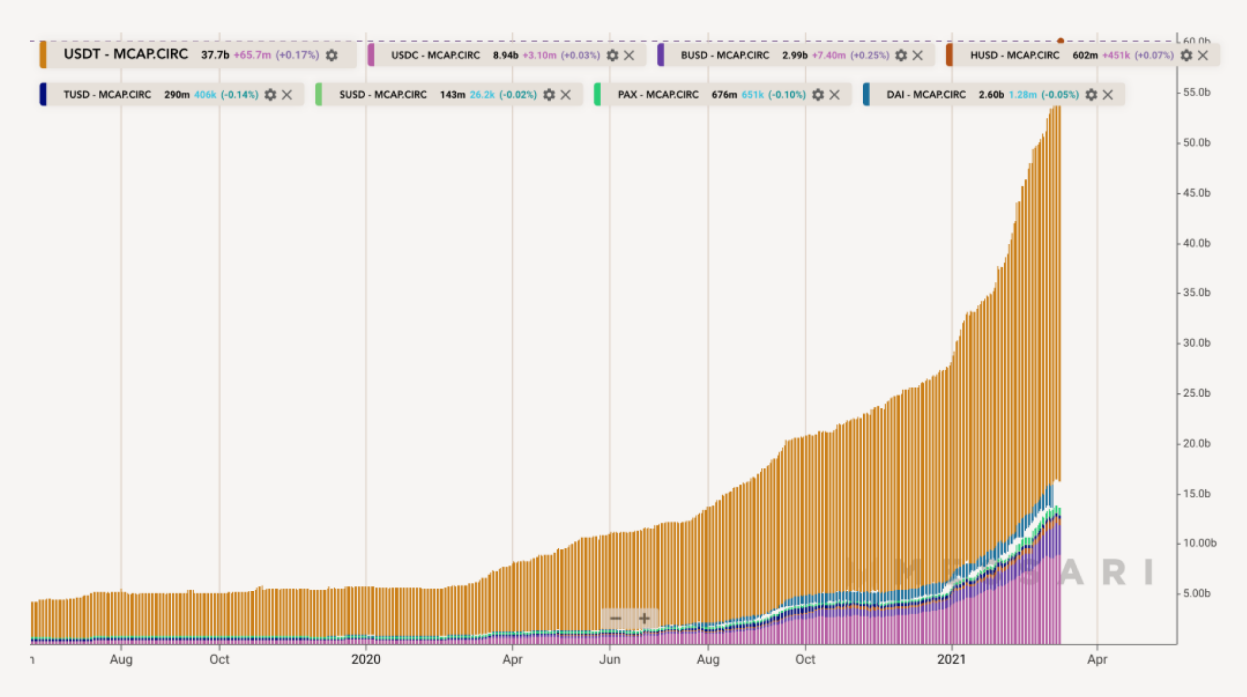


Market Problems

As nearly all assets in the crypto market suffer from high volatility, it seems to be a logical starting point. During 2020 alone, the price of Bitcoin has suffered a 53% loss and then gone up 57.4%. Sure, that year was rather unusual but the market situation was even more radical in 2019. Let's take a look at the real price in USD now: the BTC price has gone up from $5,167 on April 15 to $10,907 on June 27 only to drop to $7,980 on October 7. The situation was similar in 2018 with a significant drop in price after Bitcoin boom in December 2017.



A solution to both volatility and lack of ties to real-world assets came in the form of stablecoins. Originally pegged to fiat money or exchange-traded commodities such as precious metals, stablecoins were presented as crypto-assets designed to avoid fluctuations in value — a safer option for investors looking to minimize their financial risks. In 2020, the market capitalization of stablecoins crossed the $51 billion mark.



However, there were several cases when stablecoins turned out to be a bit volatile. The first case is Tether, the company behind the largest stablecoin backed by the US dollar on the market, which faced accusations of being unable to provide audits for their reserves while continually issuing new coins into circulation. Then, in October 2018, Tether price dropped below the value of its underlying asset, USD, when in theory it should be worth exactly $1.

Later, new types of stablecoins emerged — crypto-collateralized coins. Rather than being backed by fiat, crypto-collateralized stablecoins hold currencies such as Ether (ETH) in escrow for the issuance of new tokens. In doing so, users have the ability to mint and burn tokens without needing to utilize or trust a centralized third party.

However, there is a major drawback — over-collateralization used to account for price volatility. Most commonly, this ratio is set at 150%, meaning that in order to issue $100 worth of a certain stablecoin, you will need to post at least $150 worth of ETH as collateral.

In March 2020, the most popular crypto-backed stablecoin DAI failed to maintain its soft peg to the US Dollar. A sharp drop in the price of Ether — the primary digital asset used as collateral in the MakerDAO protocol for collateralizing loans of the dollar-pegged DAI stablecoin — created underlying congestion on the

Ethereum blockchain while also liquidating thousands of collateralized debt positions (CDPs) held by investors. As a result, investors lost $8.325 million.

Another issue with the crypto market is a lack of means to generate revenue tied to real profitability. In the traditional economy, depositing funds to savings account or purchasing fixed-income securities will bring you guaranteed income simply for holding an asset. Sure, there are risks, but holding stablecoins without any income seems to be even riskier with no reward for holding an asset.

The most recent change in this regard came with the emergence of Decentralized Finance. Decentralized Finance (DeFi) is an open finance infrastructure that allows investors to earn fixed periodic income by lending or holding their assets via DeFi protocols. However, with the DAI case in mind, protocols will require over-collateralization as there are no guarantees with such a volatile market. This leads to a situation where many protocols won't actually work with a borrower unless they can effectively front a significant amount of assets, which undermines the essential function of borrowing.

But even with the current flaws, stablecoins have proven to be the backbone of the crypto market ensuring safekeeping of funds during periods of high volatility. Decentralized Finance has provided a wide range of ways to benefit from crypto for investors — we've seen an emergence of new exciting assets and projects.

At the same time, DeFi has a gigantic potential to start a revolution in the business loan market. On the other side of the table, there are borrowers that are willing to take the best of DeFi infrastructure and benefit from a loan at terms that no traditional venue can offer. These same borrowers can also provide a missing piece in the DeFi infrastructure — a wide range of low-volatility assets can be provided as collateral.

With that in mind, meet a decentralized protocol that connects real-world debt instruments (bonds) with the Ethereum ecosystem — BondAppétit. We provide an extra layer of stability and connection with fiat cash-flows mixed with fixed periodic income — something no other DeFi protocol can offer.

Debt securities (bonds) is a financial instrument that has been used to preserve savings for decades. Now, it can be used as collateral in the crypto world.

BondAppétit offers a unique opportunity for investors to benefit from both income generated by the collateral that lies inside the protocol and interest payments paid

by borrowers. Simultaneously, we are aiming to offer DeFi borrowing to real gourmets of the financial world.

2. Overview of the Protocol

BondAppétit is based on the Ethereum blockchain and provides a wide range of unique features:

- Real-world collateral (bonds);
- An infrastructure that connects decentralized finance and traditional debt instruments with the participation of regulated securities and cryptocurrency broker/dealers;
- Use of real-world debt obligations (and corresponding interest payments) within the protocol to provide real fiat cash-flow to governance token liquidity pools.

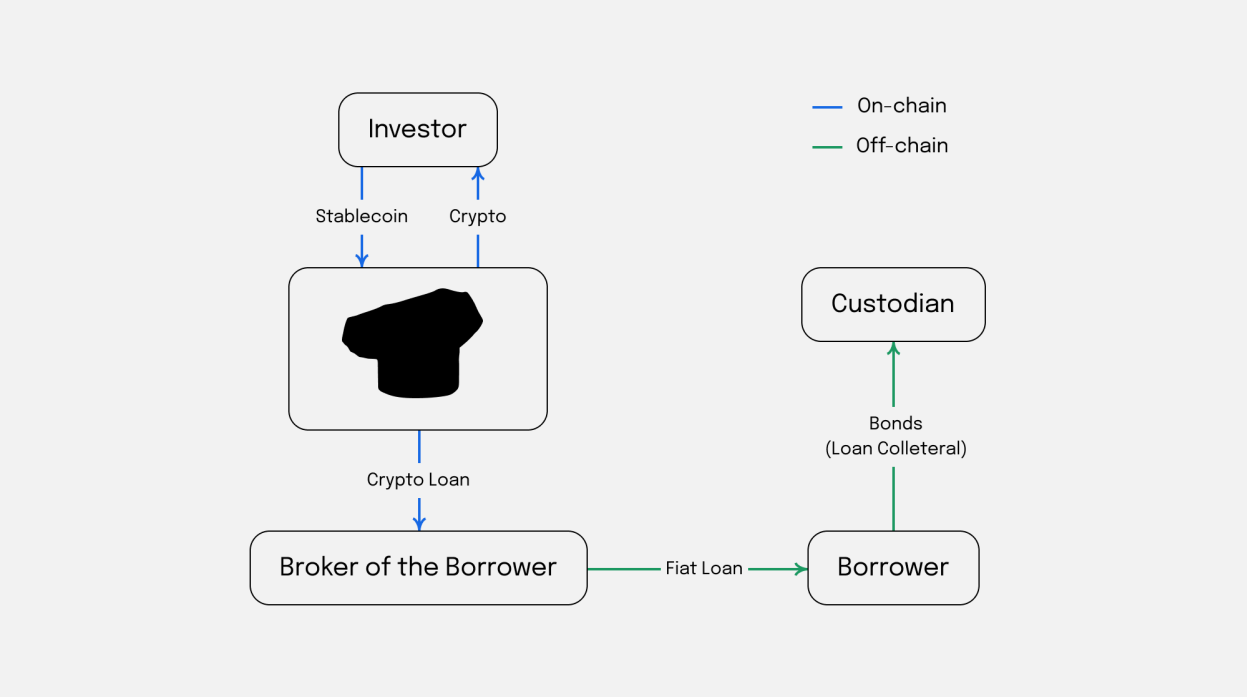
It also includes all standard DeFi features:

- Ethereum-based smart contracts;
- Stablecoin tied to assets of the protocol;
- Community-owned Governance token — the value of which grows along with the profit of the protocol and its development;
- Incentivization mechanisms for the community, including the distribution of protocol's profits and support of liquidity providers.

Also, BondAppétit utilizes the best elements of on-chain and off-chain infrastructure to provide a new instrument for diversifying risks and receiving passive income:

Aa On-Chain	Off-chain
Use of open-source components from Compound Governance, Compound Open Price Feed, Synthetix	Use of traditional securities accounting systems for collateral locking
Price and Security Oracles	Use of bank and brokerage accounts for fiat and securities settlements

Aa On-Chain	Off-chain
Listing on exchanges and use of liquidity pools, such as Uniswap, Curve, Balancer	Connection to Bloomberg terminal and other securities pricing sources



The main asset inside the protocol's ecosystem is the stablecoin — BondAppétit USD (USDap). The price of USDap equals $1 at all times. The token is issued only if the protocol has sufficient collateral. Information regarding the collateral can be checked through blockchain at any time. The USDap price is balanced automatically based on a basket of real-world debt obligations that form part of the protocol's assets.

The borrowing process is built in the most convenient way for a borrower in order to ensure compliance with regulatory and financial requirements and the conclusion of an appropriate agreement. A borrower can receive funds in fiat as well as in crypto.

3. BondAppétit USD (USDap)

As mentioned in the overview of the protocol, the main asset inside the protocol's ecosystem is the Real World Asset-Backed Stablecoin — USDap.

The price of USDap always equals $1 and is balanced automatically based on a basket of real-world debt obligations that form part of the protocol's assets. Information about the protocol's assets is provided by oracles connected to custody accounts holding the collateral. Issuance of USDap is technically impossible without sufficient collateral, the price of which is tied to USD.

Besides providing a whole new product for DeFi and traditional markets, we aim to make USDap one of the most popular stablecoins in the market.

The use of real-world debt obligations allows the protocol to earn fixed periodic income, which can be distributed to holders of protocol tokens under incentivization mechanisms established by the community.

To ensure the stability of the protocol, the price of USDap is based on a basket of several debt obligations with different terms, interest rates, and redemption dates.

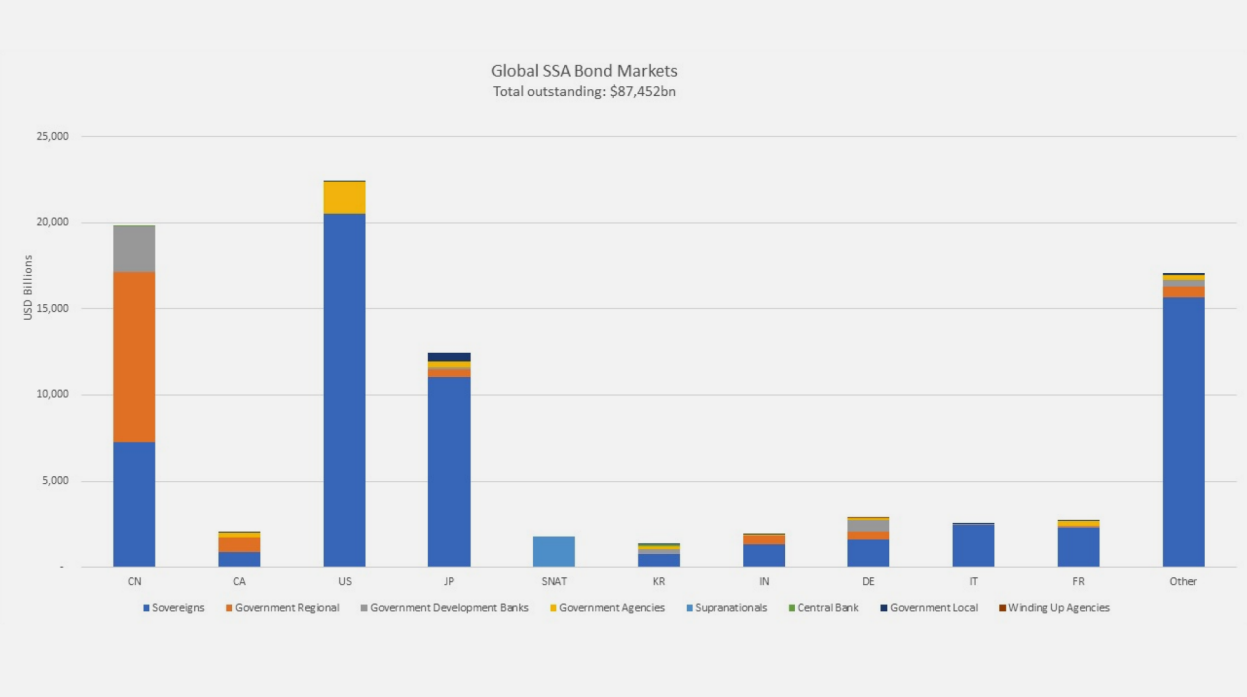
3.1 Collateral Assets

A new type of asset lies in the foundation of the protocol — fixed-income securities (collateral). The use of this asset type prevents the protocol from over-collateralization and ensures the stability of the asset even in times of high volatility on the crypto market. Initially, the protocol will collateralize strictly fixed income securities of stable companies.

Corporate Bonds Market Overview

As of August 2020, the overall size of the global bond markets, in terms of USD equivalent notional outstanding, is approximately $128.3tn. This consists of $87.5tn SSA bonds (68%) and $40.9tn corporate bonds (32%). Collateral assets are part of the corporate bonds market.

The global corporate bond markets are dominated by the U.S. ($10.9tn) and China ($7.4tn). Between them, they make up 45% of the total global corporate bond market. 53% ($21.5tn) of outstanding corporate bonds are issued by financial institutions.


Global SSA Bond Markets
Total outstanding: $87,452bn
USD Billions
25,000
20,000
15,000
10,000
5,000
-
CN
CA
US
JP
SNAT
KR
IN
DE
IT
FR
Other
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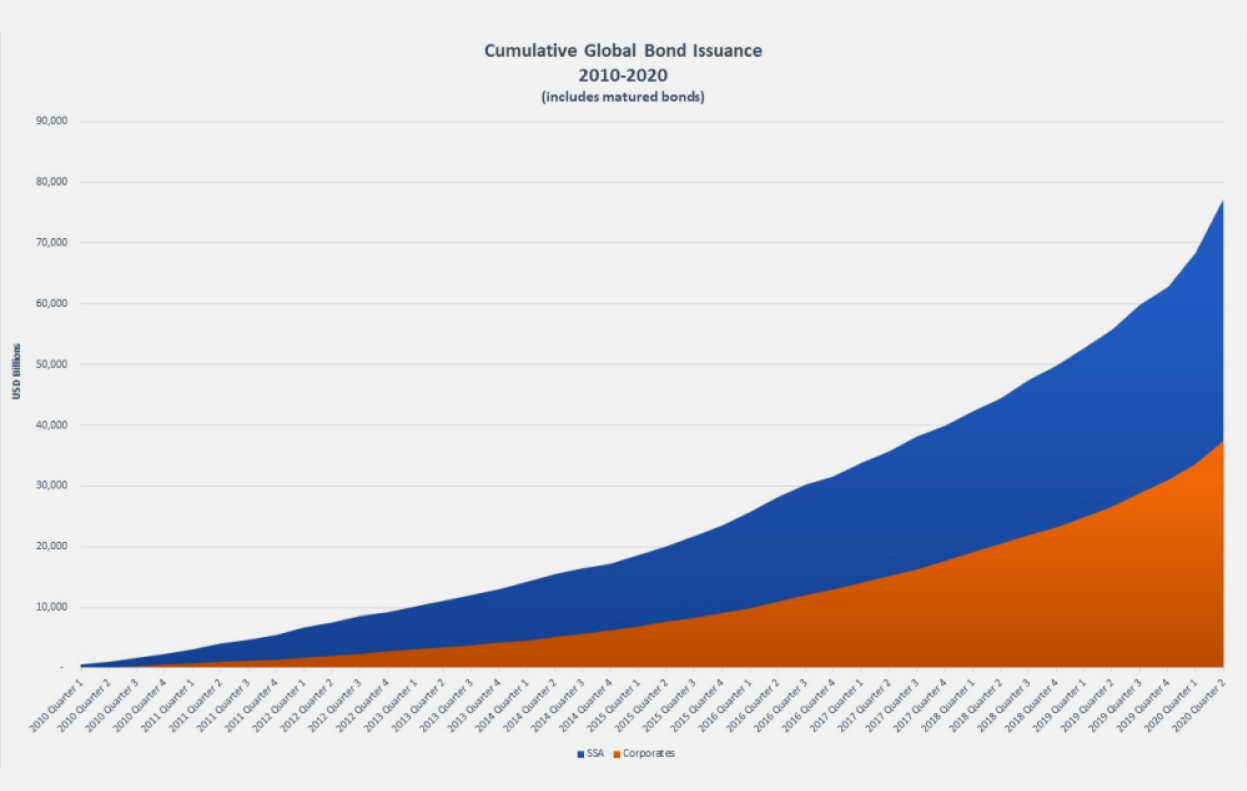
Government Regional
Government Development Banks
Government Agencies
Supranationals
Central Bank
Government Local
Winding Up Agencies


Cumulative Global Bond Issuance
2010-2020
(includes matured bonds)
USD billions
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
SSA
Corporates

To ensure transparency, the protocol updates the price of real world-assets on several proven and recognized sources such as Bloomberg and CBonds (for detailed process please check section 6.1 — Price Oracles). Simultaneously with the update, the protocol publishes the price to the oracle and activates the security protocol. In the event of a significant change in asset price, the protocol might initiate additional capitalization or emergency shutdown.

3.2 Stablecoin Generation

The protocol constantly monitors the overall value of the collateral and issues new USDap right after collateralization of new assets, based on the following formula:

$\triangle QABT = Bondn * BondPricen$

- $\triangle QABT$ — the amount of stablecoins that the protocol can issue additionally if the value of collateral provided by borrowers is sufficient;
- *Bondn* — an infinite number of assets in the basket;
- *BondPricen* — the market value of the collateral

Example:

100 debt securities were added as collateral by borrower 1 with a value of $95;

100 debt securities were added as collateral by borrower 2 with a value of $105;

The protocol requests the asset price from the price oracle and then issues the amount of USDap that equals the overall value of the collateral.

As a result, the protocol will issue: 95 + 105 = 200 USDap

3.3 Liquidity Pools and Additional Capitalization of the Protocol

Liquidity Provision

Sufficient liquidity and the ability to exchange USDap for another liquid asset are vital for the correct operation of the protocol. Initially, the protocol will provide its own liquidity pools on the Uniswap exchange (later, we'll add more exchanges). The protocol has chosen Uniswap to provide an opportunity to exchange USDap for any other asset to all participants of the protocol (including automatic protocols).

As soon as the participation of the protocol's community in liquidity pools will be sufficient, the protocol will reduce its participation in liquidity pools. In order to stimulate participation in liquidity pools, the protocol provides the reward in governance tokens — BondAppétit Governance (BAG) (the list of liquidity pools to stimulate is determined by the community of the protocol).

Additional Capitalization

The protocol might require additional liquid assets to ensure future development and operations. For these cases, the protocol has the scenario of selling governance tokens from the protocol's reserves. In this scenario, BAG will be sold following the procedure below:

1. Private offering of BAG below the market price to current BAG holders. Funds will be locked until the end of the additional capitalization round. This scenario will allow current users to increase their share in the project, additionally providing the funds needed for the protocol. At the same time, users won't be able to purchase a higher amount of BAG than they already own.

   The formula for determining the available amount of BAG for current token holders:

   $Quantity = SUM * (TokenholderBAG/BAG onmarket)$

   - $\triangle$ *SUM* — Amount of funds required by the protocol;
   - *TokenholderBAG* — Amount of governance tokens in token holder's wallet;
   - BAG*onmarket* — Overall amount of governance tokens on the market.

   The formula for determining the price of governance tokens for current token holders:

   $Price = \triangle BAG price - DiscountAmount\%$

   - $\triangle$ BAG — Market price for governance tokens on the Uniswap exchange
   - *DiscountAmount* — Discount percentage that is determined by the community of the protocol.

   Since current token holders acquire governance tokens at the discounted price, they receive clear benefits after selling the asset at the market price.

2. A public offering of BAG at the market price through public exchanges. In this case, governance tokens are sold through an intermediary at the market price without any quantitative restrictions.

Treasury

In order to attract new borrowers, the protocol will require the involvement of intermediaries. As intermediaries charge fees for their operations, the protocol will require a budget to cover these costs.

These fees originate from the fact that transferring money from the fiat world to crypto and vice-versa may cost 2-3.5% of the loan to cover services of banks, brokers, and exchanges involved in the process.

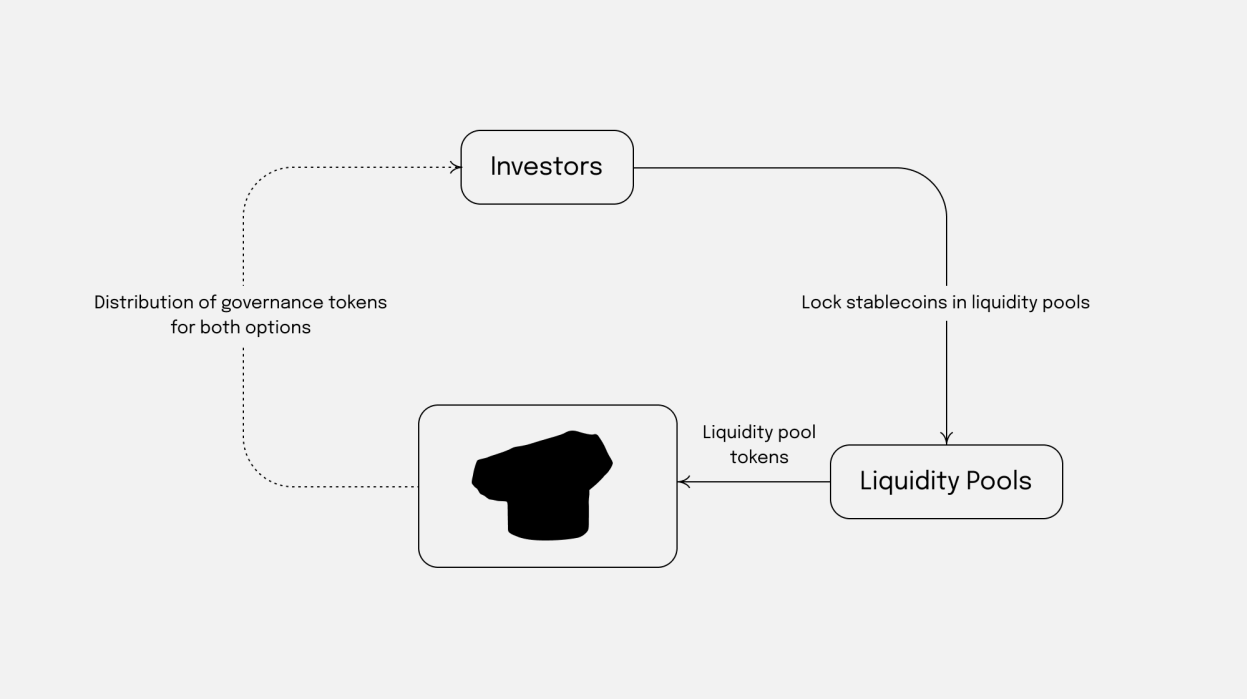
To compensate fees, the protocol creates a special pool called Treasury. The pool is formed through the offering of BAG and by the allocation of the protocol's profits (decided by the community of the protocol). Prior to forming a pool, the protocol indicates the target amount and expiration date.

Funds can be withdrawn from the pool after one of the conditions below is met:

1. The target amount is raised;
2. The offering has reached its expiration date.

If conditions are met, the community of the protocol votes on the withdrawal of funds from the treasury. After that, community members will be able to check the payment for intermediary services in order to ensure the transparency of the Treasury function.

3.4 Interest Payouts & Incentivization Mechanics



The protocol provides reward mechanisms for participants in the form of BAG. At the moment, we have two reward mechanisms for our communauté gourmande:

Participate in a liquidity pool that includes USDap/BAG on Automated Market Maker-based (AMM) decentralized exchanges and centralized exchanges. Using this method, the community of the protocol will receive reward per block on account of the continuous increase in the price of liquidity pool technical tokens.

Liquidity pool technical token (LPT) is an ERC-20 technical liquidity pool token used for calculation of the reward. The reward is calculated through a change in token's price per block, while the reward rate is decided by the community of the protocol.

The price of a technical token is calculated using the formula below:

```
RewardPerToken = Distribution / (TotalSupply + Stake) / Duration
— RewardPerToken — a reward (in BAG) per block for each staked token
— TotalSupply — a number of tokens staked earlier
— Stake — a number of new tokens to be staked
— Distribution — a number of BAG tokens currently being distributed
— Duration — a number of blocks for which a staking reward will be granted
```

Example:

```
The contract distributes 2,000 BAG tokens (Distribution) for each 10 blocks (Duration). 50
tokens were staked earlier (TotalSupply). A user plans to stake 20 more tokens (Stake) at
 the 3rd block. For every staked token, the user will receive per block: 2,000 / (50 + 20)
/ 10 = 2,857142857 BAG tokens. During staking (7 blocks), the user will receive: 2,8571428
57 * 7 * 20 = 400 BAG tokens.
```

Earn additional BAG token during USDap sell round. Using this method, the community of the protocol will set an additional reward per 1 USDap token in BAG tokens to stimulate the faster sale of new USDap tokens from the protocol.

3.5 Target Audience

The target audience of the USDap includes four types of investors:

- retail crypto investors
- sophisticated crypto investors
- institutional investors
- cryptocurrency exchanges

Retail crypto investors

Experience

Investors come from a wide range of backgrounds; most are newcomers or have intermediate-level trading experience.

Investment appetite

Average investor would invest from $1,000 to $5,000.

Motivation

Investing in a crypto asset that is backed by traditional collateral and has stable fixed income with several other incentivization mechanisms inside the protocol.

Sophisticated crypto investors

Experience

Investors that have advanced trading experience and rely on data and analytics provided by professional brokers.

Investment appetite

Average investor would invest from $5,000 to $10,000.

Motivation

Investing in a crypto asset that is backed by a traditional collateral.

Institutional investors

Institutional investors are currently paying close attention to the crypto market in general and DeFi in particular. A stablecoin backed by traditional assets of reputable large-scale companies could potentially spark huge interest among institutional investors.

Cryptocurrency exchanges

Holding large amounts of volatile cryptocurrencies, crypto exchanges could potentially welcome the opportunity to invest part of their BTC funds in a stablecoin backed by a traditional regulated fixed-income asset.

4. Key Actors, Borrowing Process and Risks

There are two mechanisms available in order to borrow funds from the protocol. Both require the use of intermediaries' services which allow ultimate borrowers to lock real-world assets as collateral and obtain funding.

This section describes the process of whitelisting intermediaries as well as the ultimate borrowers, and details both mechanisms mentioned above.

4.1 Intermediaries and borrowers

Intermediaries assume the key role in terms of connecting protocol with real-world assets.

The main function of the intermediary is to find new borrowers, who are willing to lock their debt securities in order to obtain liquidity from the protocol.

Intermediaries must satisfy the following basic requirements:

1. Holding of at least 1% (this amount can be subject to changes by the community of the protocol) of the total amount of issued Governance tokens and locking this amount in protocol's smart contract;
2. Approval by majority voting of Governance token holders and whitelisting by the protocol.

In addition to basic requirements, the community may establish additional requirements to be fulfilled by the intermediaries, which will be published on the protocol's website. Such requirements include:

- Financial Intermediary License and supervision from regulators;
- Insurance;
- Internal audit;
- Ability to exchange cryptocurrency to fiat and vice-versa in compliance with applicable regulations.

In order to perform their functions, intermediaries must take into account the requirements established by the community of the protocol, such as:

1. The amount of funds which protocol is willing to make available to be borrowed;
2. Interest rate which has to be paid to the protocol;
3. The loan term.

Once the information above is available, the intermediary finds a borrower who must satisfy the following requirements:

- The borrower must own debt securities whose value would cover the amount indicated in section 1 above;
- The interest rate on debt securities shall be at least equal to the interest rate established in section 2 above;
- The redemption period of debt securities must match the term of the loan indicated in section 3 above.

4.2 Custodians

The main function of the custodian is to provide a custody account in traditional securities accounting systems that are used to safekeep debt securities.

Ancillary functions include:

- Informing the protocol and the community on the amount of debt securities held on the custody accounts;
- Participation in settlements between the borrower and the intermediary.

The custodian must fulfill the following requirements:

- Regulated under securities markets regulation with ability to provide custody services to the clients;
- Approved by majority voting of Governance token holders and whitelisting by the protocol;
- Must be able to technically exchange information with the protocol.

4.3 Borrowing process

There are two mechanisms available for borrowing funds from the protocol. The difference between them lies in the legal structure of the deal between the borrower and the intermediary.

Both mechanisms, as well as corresponding risks and mitigation measures, are described below.

Mechanism 1: Loan agreement

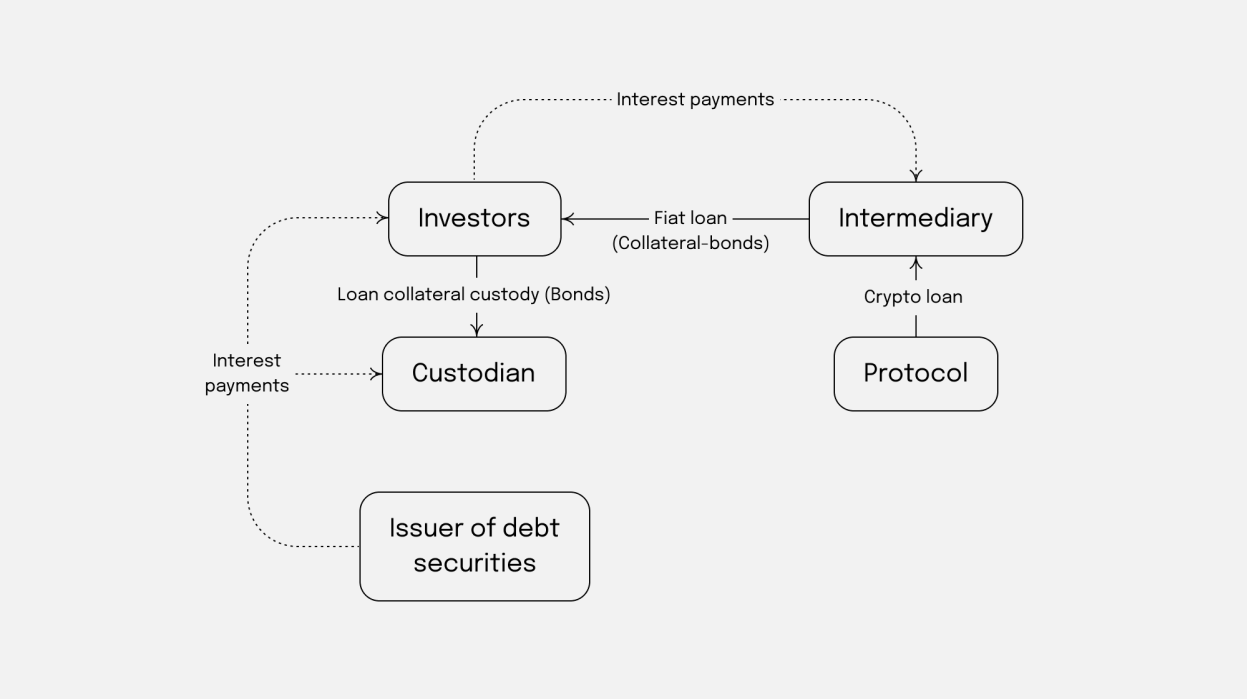
A. Borrowing

1. The borrower enters into a loan agreement with the intermediary, providing debt securities as collateral.
2. Securities are transferred to a custody account opened by the custodian, who ensures that the collateral cannot be transferred throughout the term of the loan.
3. The agreement also provides that in the event of a borrower’s default, the intermediary is entitled to receive the collateral and sell it.
4. Custodian transmits information about the amount of collateral to the protocol.

5. Stablecoins are issued by the protocol and sold to the market in return for cryptocurrency which is stored in the protocol.
6. The intermediary borrows the cryptocurrency from the protocol and converts it into fiat.
7. The intermediary lends the fiat to the borrower under the loan agreement.

B. Interest Income

1. The borrower continues to own the securities (even though being unable to sell them as they are locked into the collateral custody account) and receive interest income.
2. The borrower uses interest income received on debt securities to pay interest under a loan agreement with the intermediary.
3. The intermediary converts payments received from the borrower to crypto and makes corresponding payments to the protocol.



C. Risks for the Protocol

Under this mechanism, the protocol is less vulnerable against the actions of the intermediary, as debt securities are locked on the custody account and the intermediary is not able to freely dispose of them.

However, once the borrower has repaid the debt to the intermediary, there is still a risk for the protocol that the intermediary will not repay his part to the protocol.

In order to mitigate this risk, the following measures are undertaken:

1. The intermediary is preselected and whitelisted by the community to ensure that only reputable entities are allowed to borrow from the protocol;
2. Governance tokens are locked by the intermediary in the protocol prior to taking the loan, and cannot be unlocked unless the intermediary fully repays the loan to the protocol.

Mechanism 2: Sale and Purchase Agreement

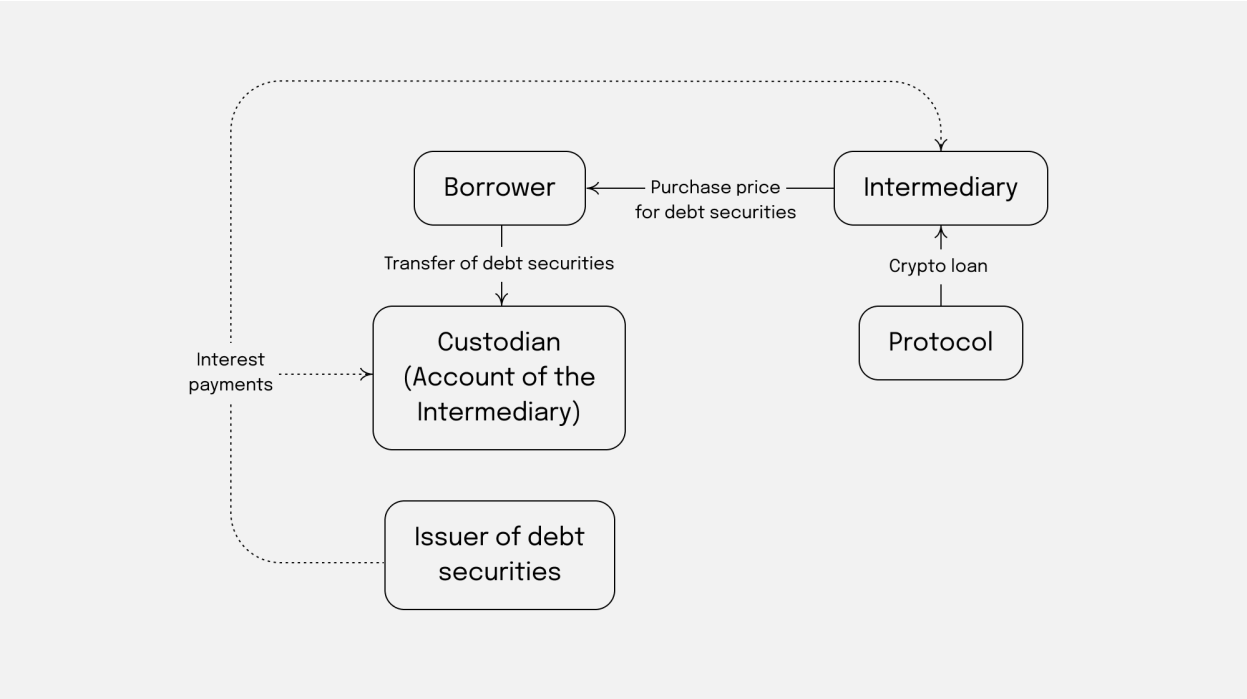
A. Borrowing

1. The borrower enters into a sale and purchase agreement with the intermediary, under which the borrower sells debt securities to the intermediary with deferred payment.
2. The securities are transferred to a custody account opened by the custodian in the name of the intermediary. As opposed to the Mechanism 1, securities are in no way limited and remain at complete disposal of the intermediary.
3. Custodian transmits information about the amount of debt securities on the account of the intermediary to the protocol.
4. Stablecoins are issued by the protocol and sold on the market in return for cryptocurrency, which is stored in the protocol.
5. The intermediary borrows the cryptocurrency from the protocol and converts it into fiat.
6. The intermediary transfers the fiat to the borrower in fulfillment of the deferred payment under the agreement.

B. Interest Income

1. The intermediary becomes the owner of the securities and receives interest income.

2. The intermediary converts payments received on the securities to crypto and makes corresponding payments to the protocol.



C. Risks for the Protocol

Under this mechanism, the protocol is more vulnerable to the actions of the intermediary, as debt securities are not locked and remain fully available to the intermediary.

In order to mitigate this risk, in addition to measures mentioned in the previous section, the intermediary must comply with all the requirements indicated in section “Intermediaries and borrowers” above.

Default

In addition to the risks indicated above, the following non-payment risks can be applicable to the protocol despite the chosen borrowing mechanism:

- The default of the intermediary;
- The default of the borrower;
- The default of the custodian;

- The default of a debt security issuer.

5. BondAppétit Governance (BAG)

Governance is one of the most important foundational things for each DeFi protocol. BondAppétit aims to reach a fully decentralized governance structure using the best practices that have proven to be effective in other protocols. In order to achieve this, BondAppétit will be working to build a strong community that will become a driving force of the protocol for years to come.

The main tool for decision-making in the protocol is the BondAppétit Governance (BAG), which also acts as the main reward and incentivization tool for participants of the protocol and the community.

5.1 Acquisition of BAG

1. They can be acquired on the market (Uniswap or other exchanges) at market price;
2. Distributed to those users who decided to lock their USDap/BAG into liquidity pools and provide the protocol with liquidity pool tokens (similar to other DeFi protocols);
3. Purchased at a special price in case of investment round (detailed explanation is available in section 3.3);
4. Earned additional BAG during the initial sale of new USDap tokens from the protocol.

To ensure the inexhaustibility of BAG, the protocol reserves the ability to issue new tokens. The decision regarding the issuance of new tokens is taken by a voting of the token holders.

5.2 Initial Offering and Distribution of BAG

- 20% to the BondAppétit team and future team members, subject to 4-year vesting;
- 14% to BondAppétit founders, subject to 18 months moratorium on sale;
- 1% to the pre-launch investor;

- 65% reserved for protocol usage and future governance participation incentives.

After issuance, the tokens are distributed to wallets or smart contracts. To ensure the moratorium on sale, the following restrictions will be set for the founders' wallets **strictly during the moratorium period**:

1. The minimum balance of BAG tokens on the wallet (is equal to the initial investment amount);
2. No possibility to transfer of BAG tokens from the founders' wallets.

Such a mechanism allows the founders to participate in voting, while ensuring the fulfillment of moratorium on sale.

We understand that the availability of a higher number of governance tokens on the market might cause a significant drop in value, therefore all tokens distributed to the team at the project launch are locked in the protocol for 4 years according to the vesting schedule below:

Year	Amount of tokens	Distribution (%)
Q2 2022	8 000 000,00	40%
Q2 2023	6 000 000,00	30%
Q2 2024	4 000 000,00	20%
Q2 2025	2 000 000,00	10%

*all voting power of team tokens will be transferred to founders until vesting period will come

5.3 Decision-Making Mechanisms Using BAG

BAG holders are entitled to influence the future and features of BondAppétit. In order to enforce certain actions, a simple majority of token holders must vote for a certain proposal.

All features of the protocol can be divided into 3 categories:

Aa Protocol's Management	Liquidity	Development of the protocol
Add a new asset type (collateral) to the basket; Add a new asset type to the Price Oracle; Whitelist a new Depository smart contract; Whitelist a new asset for Invest or Market contract; Start the emergency shutdown procedure;	Change in the reward rates for participation in liquidity pools; Choose the profit distribution of the protocol; Changing the list of assets available in exchange for USDap.	Proposal and voting on new features of the protocol; Change the rate of technical costs for the maintenance of the protocol; Initiate additional capitalization of the protocol; Apply changes to current smart contracts.

6. Technology

While cooking the delicious technical stuffing of BondAppétit, we were inspired by great work of developers from Compound, MakerDAO, Uniswap, and other DeFi protocols based on the Ethereum blockchain.

The current approach in the market consists of both pros and cons.

The main disadvantage, of course, is the unpredictability of the protocol's fees. That's why we've carefully structured our smart contracts utilizing the most up to date technologies with simple goals in mind — reduction in complexity of smart contracts that will result in reduction of Gas fees. At the same time, we hope that the main problem will be solved with the release of Ethereum 2.0.

Outside of using home-baked solutions only, we've also tried to utilize existing solutions to the maximum. BAG token is based on the Compound Governance system as it allows ensuring transparent and secure management of the protocol by the community. Additionally, Compound Governance adds new features, for example, it allows to delegate a vote to another participant.

For price updates, the protocol utilizes Compound Open Price Feed — an oracle that allows Reporters to sign price data using a known public key, which can be submitted on-chain. The protocol codebase is hosted on GitHub and maintained by the community.

For staking process, the protocol utilizes Synthetix StakingReward — the special contract to distribute the specific amount of tokens in limited time for locking liquid assets of LP tokens.

Another significant task was to provide the maximum security of BondAppétit. The dev team conducts regular internal and external audits of smart contracts both during development and after their implementation in the main network.

For developers, we prepared a technical documentation section on our website - http://bondappetit.io/docs

6.1 Price Oracles

Price oracle is a tool for supplying data on the current price of the collateral. As BondAppétit uses fixed-income instruments as collateral, the actual asset price must be received from external sources such as Bloomberg, CBonds, direct APIs to exchanges.

6.2 Alert and Emergency Oracles

Emergency oracle is a tool responsible for the security of the protocol. Emergency oracles monitor the current value of the collateral, as well as the market price of USDap. If the price of the collateral is insufficient to guarantee the stability of USDap, the protocol will initiate additional capitalization or emergency shutdown procedure.

6.3 Governance

The system of contracts that are designed to ensure correct operations of governance mechanisms inside BondAppétit. These contracts primarily allow the community of the protocol to change configurations of the protocol and manage it in a decentralized and transparent manner.

6.4 Depository Smart Contracts

Depository smart contracts are designed with one specific goal — provide the data on the collateral to the protocol and the community. In order to achieve this, a smart contract must ensure constant communication between the custodian and the protocol.

The protocol provides a separate smart contract for each custodian and each depository smart contract must be whitelisted by the community of the protocol. As soon as the smart contract is launched, the custodian is required to send information on the amount of collateral currently stored on the account. After the

information is received, the smart contract publishes information on assets on the blockchain.

6.5 Issuer

This smart contract acts as a depository that is used to balance the cost of the collateral and the volume of issued USDap.

6.6 Treasury

The treasury smart contract ensures safe storage of the protocol's ETH and ERC20 tokens. Treasury is managed by the community of the protocol using the protocol's governance mechanisms.

6.7 Staking

The Staking smart contract ensures the correct operation of staking in the protocol. The main function of the smart contract lies in providing correct staking rewards for the participants.

6.8 Vesting

The Vesting smart contract is used for the correct distribution of reward to the protocol's team members.

6.9 Market

The Market smart contract is used to sell USDap for a fixed price with an ability to receive rewards in the form of BAG tokens.

6.10 Depositary Balance View

The Depository Balance View is a smart contract that is used for calculation of the portfolio value in USD. All Oracle contracts are obliged to implement this interface for communicating with the protocol.

6.11 Budget

The Budget smart contract was designed for a simple but vital role — to distribute ETH for the expenses of the protocol.

6.12 Investment

The investment smart contract is used for the initial offering of BAG. Basically, this smart contact is entitled to sell BAG for the investment round of the protocol.

6.13 Buyback

The Buyback smart contact is used to buy BAG tokens from liquidity pools that include protocol's assets. Used as default action to utilise protocol profit.

6.14 ProfitSplitter

The ProfitSplitter smart contract is used to communicate with the Budget contract. Basically, this smart contract distributes protocol's profit to the Budget smart contract and initiates buyback of BAG tokens.

6.15 Woodpecker Service

The open-source code tool that invokes smart contracts of the protocol. A fee for each transaction executed in the protocol will be automatically replenished by Budget contract.

6.16 Cryptocurrency Exchanges

One of the key processes in the lifecycle of the protocol is the exchange of USDap for a liquid asset that will be later exchanged for fiat money through a public exchange. Thus, any exchange or protocol with sufficient liquidity can be used for exchange operations.

6.17 UniswapMarketMaker

To ensure the liquidity of the USDap, the protocol utilizes liquidity pools on AMM-based decentralized exchanges and centralized exchanges. The reward (in BAGs) is allocated for maintaining the liquidity level in pairs associated with the protocol’s stablecoin. (For more details please refer to section 3.4).

7. Legal

Tokens issued by BondAppétit have the following classification for legal purposes:

7.1 BondAppétit USD (USDap)

BondAppétit USD does not have a legal issuer (as it is created by the protocol itself). The token represents the means of transferring value, and it is defined as such exclusively by market participants. The token itself does not imply any obligations of the protocol or any of its participants.

Price stability is connected to the protocol's assets, the price of which should always be close to the value of the USDap in circulation.

USDap owners do not possess any rights to assets of the protocol. Neither they have any legal mechanisms or rights to oblige the protocol or its participants to buy-back or redeem USDap or receive any other payments or assets from the protocol. The value or liquidity of USDap is not guaranteed, meaning that no individual or legal entity guarantees the acceptance of the token as payment for goods or services, its price, or the ability to exchange it for any other asset.

7.2 BondAppétit Governance (BAG)

BondAppétit Governance does not have a legal issuer (as it is created by the protocol itself). The token represents the mean of transferring value, and it is defined as such exclusively by market participants. The token itself does not imply any obligations of the protocol or any of its participants.

The asset price is not stable and depends on two factors: the profitability of the protocol and expectation of the protocol's growth. BAG can be allocated by the protocol to USDap/BAG owners, and can also be purchased on the market. The value or liquidity of the BAG is not guaranteed, meaning that no individual or legal entity guarantees the acceptance of the token as payment for goods or services, its price, or the ability to exchange it for any other asset.

8. Protocol Launch Phases

In order to ensure the fast deployment of the protocol, the protocol will be launched in 3 phases. Each phase is launched with its own goal. Once the goal is achieved, the community of the protocol can move the protocol to the next phase.

Phase 1. Investment Stage (April 2021 — July 2021)

At the first phase, our goals will be:
Attracting enough liquidity for USDap on Uniswap. Users will be able to invest USDC/USDN in the protocol by locking up their funds for a 3-month period. As a

reward for this action, the protocol will distribute 5% of the initial BAG offering to all participants of the first phase.

Raising funds. The investment process will be structured through an offering of BAGs on the open market. The protocol aims to attract $1.2M. $1M will be used for the purchase of RWA and $200,000 will cover the liquidity pool support and protocol expenses for fiat/crypto conversions and technical expenses of the protocol (oracles maintenance).

Phase 2. RWA Collateralization (July 2021 — 2023)

After raising funds, the protocol will initiate the next stage. After purchasing RWA, the protocol will collateralize these assets, which will strengthen USDap and will offer the first truly RWA-backed stablecoin on the market. Also, at this stage, the protocol will start receiving profits and distribute coupon payments from holding the RWA to BAG token holders.

Phase 3. Direct Investment (Q1 2023)

The last stage of the protocol's launch. We expect that the protocol's capitalization will reach $100M at this point. No more BAG tokens will be issued to the open market at this phase.

Users will be able to purchase USDap directly from the protocol and us on the open market. This will increase the popularity of the protocol, due to an increase in rewards, as no more BAG will be issued.

9. The Future of the Protocol

Initially, developers of BondAppétit were driven by a simple and ambitious goal — providing DeFi borrowing from current protocols to traditional companies. However, the market right now is designed to work strictly with crypto assets and over-collateralization is a significant hurdle for traditional market players, even with all benefits of DeFi in mind.

That discovery led to the creation of BondAppétit. During the first development stage of the protocol, BondAppétit aims to provide sufficient liquidity for the protocol's assets, build a strong community of the protocol, spread the concept of DeFi borrowing to the traditional market, and take a significant role in the DeFi market.

During the second development stage which is planned to start in 2022, BondAppétit aims to create a borrowing platform that will operate directly with issuers of fixed-income debt instruments. Therefore, providing access to traditional financial instruments in a fully decentralized manner. As a platform, BondAppétit will charge fees from the borrowers for each deal completed on the platform. Another feature that is vital for correct operations of the protocol on the second stage is the automated prediction system that will forecast asset price, calculate coupon payments and forecast possibility of default for each issuer.

The long-term goal of the protocol lies in building a stable bridge between traditional and decentralized finance. Such a goal can't be achieved in a short timeframe. Therefore, the launch of the protocol and first borrowers will only lay the foundation.

In the long-term, BondAppétit will allow increasing capitalization of crypto to a whole new level by tying it to the real-world assets whose prices depend on the true performance of companies and traditional market situation. Simultaneously, the protocol aims to provide traditional financial market players with regulated and clear access to the whole crypto market. The first step to achieve this will be helping them utilize DeFi borrowing. In a 4 years perspective, BondAppétit aims to bring at least 0.1% ($40.8 billion) of the overall corporate debt securities market to the crypto market.

Right now the borrowing process includes intermediaries, such as custodians and brokers. As soon as regulation will allow to change the approach, BondAppétit will provide an opportunity for direct borrowing from the protocol, removing all intermediaries from the process in order to cut down costs of the protocol.

When it comes to the assets that form BondAppétit, the initial plan is to be listed on all major crypto exchanges by the Q3 2021 and reaching the capitalization of $50M by the end of 2021.

Original developers of the protocol are true believers in utilization of the blockchain technology and most importantly in the crypto market. Therefore, as new types of traditional assets will emerge in the form of tokens (security tokens, tokenized securities), BondAppétit will be looking forward to using them as collateral instead of the same assets in the traditional form.

With all these ideas in mind, we would like to present you the Roadmap of BondAppétit:

Aa Q2 2021	Q3 2021	Q4 2021	Q2 2022	Q2 2023	Q2 2024
Protocol launch	2 separate debt obligations provided as collateral. Reach $2 000 000 in capitalization of the protocol. Listing on centralized and decentralized exchanges	5 separate debt obligations provided as collateral. Reach $10 000 000 in capitalization of the protocol. Listing on centralized and decentralized exchanges	Reach $35 000 000 in capitalization of the protocol; Listing on major exchanges	Reach $150 000 000 in capitalization of the protocol	Reach $600 000 000 in capitalization of the protocol
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