Lite-Paper
Dezember 2020
Important Update - 08.12.2020

The litepaper is already outdated and only gives the reader a vague expression of what the early ideas and direction was.

The team is currently preparing a wiki that explains the current steps that will be taken until the full platform.

Those will include explanations about our current implementations but also future development

Already implemented:

- DEUS Swap
- DEUS basic staking contracts

To be implemented next weeks:

- The Conductor
- The Conductor market maker
- The sand of time vaults (multi dimensional staking contracts)

To be up to date on the current development progress & read our medium blogs

https://medium.com/@deusfinance

https://lafayettetabor.medium.com/

And also join our social media channels.

t.me/deusfinance

https://t.me/deusfinance_news

twitter.com/deusdao
DEUS finance Lite-Paper:

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Executive Summary

DEUS finance is a Decentralized Finance (DeFi) protocol that allows bringing any verifiable digital and non-digital asset onto the blockchain.

It boosts the transfer of value across many different markets and exchanges with unprecedented ease, transparency, and security. The launch system is currently being built on the Ethereum-blockchain and will be chain-agnostic in the future.

It started out originally as development on a tool to manage the asset basket for a community crypto investment pool. This turned into the vision of DEUS as a DAO-governed, decentralized platform that holds and mirrors assets.

Key benefits of DEUS finance

Aside from being an easy vehicle for investing in cryptocurrencies or baskets of cryptocurrencies, DEUS intends to bridge the crypto-economy and the traditional markets.

Key benefits:

- Allows for simplified investment into cryptocurrencies in the form of a blockchain-based derivative

- Enables crypto-investors to easily invest in traditional assets and commodities

- For the first time allows a flexible combination of crypto and non-crypto assets in one basket

Furthermore, with its system design, DEUS is well-positioned to allow easy and diversified investment into the tokenized incentive-, prediction-, and data-economy that will shape our future economy.
DEUS in a nutshell

DEUS works via the creation of the so-called “Registrars”, which can act either as blockchain-based derivatives or asset-backed funds, through which an investor places ETH into the algorithmically controlled DEUS system treasury. A registrar-specific token is then minted and given to the investor.

When the investor wants to sell their investment, they send back their registrar token (which is then destroyed) and are automatically given back the current value of the asset or basket in ETH from the treasury.

All this is transparently executed on the Ethereum blockchain via open-source smart contracts. This is hardcoded, there are no IOU’s or guarantees one needs to trust, all is done immutably on-chain. Furthermore, there will be mechanisms in place preventing the creation of fraudulent registrars.

Assets can include cryptocurrencies, stocks, bonds, or commodities - virtually any asset whose value a market can capture and provide verification of. The current market value of an asset is being provided to the DEUS system via decentralized blockchain oracles.

The internal algorithmic balancing mechanism of the treasury ensures that the rise and fall of mirrored asset prices of individual registrars, as well as the withdrawal of funds from asset-backed or treasury-backed registrars by investors, does not lead to a greater imbalance in the system.

The provision of additional liquidity to the registrars/treasury, as well as the creation and management of well-performing registrars, are economically incentivized within the system. Hence, DEUS strives to sustainably provide the highest efficiency and security levels possible with the current technology.
DEUS actors

Micha the Maker

Responsible for lending out money to the reserve to aid the system in times of treasury shortages, he will get daily yield for lending out his money but also risks losing shares of his deposits. Micha is betting that the treasury is strong enough and that the demand of buyers and sellers in the DEUS ecosystem is balanced.

Tris the Trader

Uses DEUS Swap or other exchanges to trade the increasing of the DEUS price based on the increasing of the total value of the ecosystem. He tries to buy DEUS at the times when the value is falling and tries to sell them again when the value is higher. He is also interested in taking arbitrage opportunities when prices on the official DEUS Swap are different from the prices on other exchanges.

Harry the Hodler

A typical cryptocurrency investor, he likes the Idea of DEUS the protocol, and everything around it. That’s why he invested in DEUS early and holds the token long term.

Harry has no interest in buying tokens when the demand for registrars is decreasing or selling them when the demand is high. He just holds because he believes the project will in the long run attract many potential users and that it has a high total market cap in all registrars, which will ultimately lead to a higher price of the DEUS token.

Celine the Creator

She is interested in creating registrars and she knows financial markets well, so she uses the DEUS user interface to create her own registrar. Other people like
Tim the Taker can then provide liquidity to her created registrar and she gets a share of the fees paid by Tim the Taker.

Celine can create any registrar of any variation, depending on which asset or assets currently available through the DEUS platform it should mirror.

It is also possible to manage the registrar actively, but this is a Job for Frank the Fund Manager (below).

**Tim the Taker (Investor)**

Tim is mainly interested in buying registrars created by Celine or other registrar owners. He is interested in having a collective crypto basket, but also sees that he can now trade stocks or buy the S&P 500 as a registrar. That’s why he decided to use DEUS as a platform to hedge his money.

Tim also saw that there is a registrar pegged to the USD in 2019, so he can now also hedge his Portfolio against inflation.

Tim really likes the idea of having such a variety of possible assets. He constantly checks the DEUS protocol for new registrars, and maybe one day he knows enough to create his own registrar!

**Frank the Fund Manager**

Similar to Celine the Creator, the difference being that Frank has even more knowledge and takes responsibilities for all liquidity providers of that registrar. He has the fund manager’s backend and is able to trade with assets that are held & mirrored inside of the registrar.

Frank can choose an additional management fee that is paid by Tim the Taker and other users when adding or withdrawing liquidity to the managed registrar.

**Statement of intent & collaboration**

*Technology is nothing but a tool to further the human spirit.*

The DEUS project is under active development and the current Litepaper is a reflection of this ongoing process. Its purpose is to give insights into the current development before we release the whitepaper and the first minimum viable product.
Our goal is to have an MVP ready, where users can create registrars that can mirror all cryptocurrencies available on CoinGecko / Coinbase Pro. Furthermore the integration of the traditional stock market assets, enabling the creation of registrars tied to real-world markets possible at the end of Q4.

Like so many blockchain projects, DEUS is partly a start-up and partly a sophisticated economic experiment, with the potential to revolutionize a key part of our financial system.

DEUS is currently being developed by a dedicated team that was chosen by the DEUS Council(DAO) and is ultimately a collective effort involving delegates, with the aim of decentralized governance.

With each development progression comes an active exchange of ideas with our community of investors, enthusiasts, and expert advisors, to ensure a working ecosystem that delivers on its promise.

We will be openly discussing potential and vision, possible ecosystem and market risks, and malicious actors. Additionally, we are preparing external reviews of the token economy and an eventual security audit of the platform.

If you are interested in actively contributing or advising the DEUS Project, PM us on Telegram, Discord, or write us an e-mail at info@deus.finance

Understanding DEUS

Current References

Let's take a basic look at three important concepts from the traditional financial world, which inspired us and are necessary in order to understand how DEUS works.
1. Derivatives

A derivative is a financial security that derives its value from an asset or a basket of assets. Such a security is essentially a contract between two parties agreeing to base its value on the current market price of an asset.

The derivatives market is the largest of its kind, with an estimated market cap of $1.2 quadrillion. It is currently about 3000 times larger than the entire cryptocurrency market.

Benefits of derivatives:

- Give investors better access to a multitude of different assets and markets without having to actually hold them
- Allow for easier risk management and asset diversification

2. Economic Stability

Dynamic market environments can at times cause volatility, resulting in systemic problems - as regularly witnessed in our economies.

In a traditional economy, a key function of certain branches of the government and the central bank is to provide stabilizing support for the economy in times of need and boost it in times of growth.

The Federal Reserve, for example, can increase or decrease the base rate in order to increase lending, drive spending, and provide needed liquidity.

System-relevant companies or entire sectors can be bailed out if their failure would lead to greater market instability.

A healthy, robust economy is not one of static performance, but rather one that can adapt swiftly and balance out unhealthy market volatility.

3. Leverage & Capital Requirements

Capital requirements
In the traditional financial world, banks or other financial institutions have capital requirements. They are usually represented by a capital adequacy ratio: equity expressed as a percentage of risk-weighted assets. Such requirements are put into place to ensure that these institutions do not take on excess leverage and risk becoming insolvent.
Based on the capital requirements, financial institutions can provide leverage to the market.

**Leverage as described by Wikipedia:**

In *finance*, leverage (or gearing in the United Kingdom and Australia) is any technique involving using *debt* (borrowed funds) rather than fresh *equity* in the purchase of an asset. Normally, the lender will set a limit on how much risk it is prepared to take and will set a limit on how much leverage it will permit, and would require the acquired asset to be provided as collateral *security* for the *loan*. Leveraging enables gains to be multiplied.

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**What is DEUS?**

The DEUS protocol is a blockchain-based investment ecosystem that aims to introduce something we call “institutional backing” to the decentralized blockchain world.

It provides tools to mirror assets with the help of decentralized oracles, the DEUS treasury, and furthermore allows the integration of on-chain and off-chain managed assets.

The DEUS treasury is a mixture of a central bank and a department of commerce for the DEUS ecosystem of registrars. Just like a government and a central bank, it functions to balance the DEUS internal economy by providing liquidity where it is needed. Furthermore, the DEUS system allows the tokenization of assets through "institutional backing" instead of 1:1 backing.

Parts of DEUS employ similar mechanisms to stablecoins such as DAI, but instead of having an individual user-minted token backed by that individual...
user’s assets, DEUS backs the whole basket of all users’ assets against the whole basket of all users’ pooled collateral.

The 4 Pillars of DEUS

DEUS is an ecosystem designed around four Pillars.

I. The DEUS token

The DEUS token works to balance the entire DEUS ecosystem by providing liquidity to the treasury. Token holders are incentivized to stabilize by pegging the token value to the value of the total ecosystem. They hold a stake in the total network.

For example, the Ethereum network incentivizes people by rewarding them for providing computational power and securing the network, a process called Ethereum-mining. DEUS incentivizes users to buy and hold DEUS.
Bob deposits 1 ETH into the DEUS ecosystem and the contract mints DEUS tokens. Once the DEUS system has grown, and the DEUS price increased with it, Bob burns his DEUS tokens and gets more ETH, equivalent to the ecosystem's growth.

If the growth is negative it is the inverse process.
II. The DEUS Treasury & Registrars

During normal market conditions, the DEUS treasury operates similarly to a credit card institution. Through its backing, the users’ withdrawals can be settled immediately. Users’ deposits flow directly into the treasury to cover earlier credits.

During normal market behavior, where the ratio of deposits and withdrawal is balanced, the treasury can balance out the market pressure in both directions.

Through this leverage effect, the price mirroring of the registrars can be sustained.

The DEUS registrars offer great investment flexibility, and can securely combine different mechanisms. They can be broadly divided into two categories. The first type is the index registrar, which securely mirrors assets with the help of oracles. It functions like a derivative.

The second registrar type is a fund registrar, in which the actual assets are held. This can be inside of DEUS, where tokens are locked in a smart contract, or outside of DEUS, where the status of the assets has to be regularly verified.

A registrar is managed by its owner, who is rewarded a percentage fee of the registrar’s trading value or performance. This fee is set by the manager and competes against the fees of other registrars.

When an investment into a registrar takes place, the investor receives specific registrar tokens in exchange for their payment in ETH (or other Ethereum tokens). These registrar tokens are continuously matched to the current oracle-verified market price of an asset. The registrar’s owner can choose whether they want to have the price mirrored through rebasing the quantity in the wallet, or through changing the price of the token inside of the minting contract when selling.
Either way, the price of the registrar token is ultimately and immutably the price of the underlying asset, as long as he sells it through the DEUS platform.

Once the investor wants to cash out and withdraw their investment, the registrar tokens are exchanged back to ETH/ETH-tokens by the smart contract and burned by the system. This immutably guarantees execution. Investors have full custody of their registrar tokens and are thus solely responsible since the blockchain-based system cannot be tampered with.

DEUS provides liquidity for registrars. During sudden spikes in demand, the protocol basically “lends” the money in advance.

Because DEUS is an ecosystem and not individual investment vehicles, buying into individual registrars means buying fully or partially into the system’s treasury.

The treasury fully or partially covers all registrars. This applies to registrars that mirror assets, but to a varying degree, as well as to on- and off-DEUS-managed assets.
Figure 5. Tokenization through institutional backing. Trade settlement through the DEUS Treasury.

Detailed explanation of Figure 4.
Alice and Bob both decide to use the DEUS platform to buy stakes in APPLES and BANANAS. Both invest 1 ETH each into the respective registrars mirroring their asset of choice.

We learned during normal market behavior the Treasury helps to settle that deals, the ETH flows into the treasury. After some time the price for apples and bananas has changed, and both Alice and Bob want to withdraw their Ethereum again. Apples rose in price and Alice now gets 10% more Ethereum from the Treasury, equal to 1.1 ETH.

The price of bananas, however, fell, and Bob now gets 10% less for his stake in the registrar, equal to 0.9 ETH.

The question is, what happens when both registrars have risen in value and the Treasury gets to the point where there is more Ethereum to pay out than is currently held in the Treasury?

Which brings us to the next pillar...

### III. The DEUS Reserve

The DEUS reserve is a fail-safe mechanism backed by Ethereum assets. It plays no role during normal operations and is designed to be a backing mechanism during periods of treasury shortages. It might never be used.

To incentivize a healthy reserve, investors will be able to lock tokens, locking them for a period of time into the DEUS reserve. They will get rewarded by daily yield payouts from the fees charged inside the DEUS ecosystem.

In turn, they risk their staked tokens, as the reserve is the last resort measure. In the theoretically possible case of treasury illiquidity, the reserve is tapped into, and stakeholders could lose a percentage of their shares.

Like with insurance, DEUS reserve stakeholders are basically making a bet that the DEUS ecosystem is self-balancing through its Treasury and that the reserve will not be employed.

The operating parameters of the reserve can later be adjusted through the council and community governance, to provide optimal risk-management given future economic circumstances.
IV. Leverage Effect

The DEUS Treasury (and the reserve) in combination with index registrars create a leverage effect within the DEUS ecosystem, allowing for the creation of more registrars than individually possible through 1:1 backing.

This is comparable to the effect banks achieve by lending out more than they hold in reserve. DEUS aims to carefully adjust these mechanisms, with the guidance of the council and community governance, to achieve a desirable risk/system-benefit ratio, as well as the long-term sustainability of the creation, trading, and settlement of all registrars.
Registrar Types

In-depth look at the different Registrar types:

Index Registrars (ready in Q4 2020)

Index registrars mirror assets through an oracle price feed, which securely transposes the price of assets onto the registrar. The funds deposited into an index registrar by investors go right into the DEUS Treasury, paying investors back when they decide to cash out.

In the future, leveraged registrars combined with a liquidation feature will also become possible.

Fund Registrars

Fund registrars are asset-backed. The assets can be held and managed on- or off-DEUS.

On-DEUS fund registrars (ready in Q2-Q3 2021)

On-DEUS fund registrars are used to lock ETH and native Ethereum tokens in a smart contract, thus creating an on-chain managed asset pool. More chain types will be added in the future.

These tokens can be managed by the registrar’s owner and a stabilization contribution is paid to the DEUS ecosystem’s Treasury.

With the roll-out of governance, a feature will be added to allow liquidity providers to vote for the removal of an asset inside of any registrar.
Off-DEUS fund registrars (in active legal research)

Off-DEUS fund management means that the registrar’s owner will be able to withdraw funds from the liquidity pool to use them custodially, in order to invest that money into desired assets (both on- and off-chain).

Current proposal regarding off-DEUS managed registrars:
Investors should be able to sell their registrar-investment (thus withdrawing liquidity from that registrar). They will be paid by the DEUS Treasury and the registrar owner has 24 hours to pay the treasury back. Should they take longer, the DEUS Treasury will charge a fee to the registrar owner for doing so.

Fund owners must be formally registered, verified, and fully licensed traders. Furthermore, precise proof of the assets held must be available.

Completely off-chain-managed funds can only be registered by regulated funds. DEUS will set up the legal structure to support and enforce this.

Note: The current registrars are designed as regular investment vehicles.

Proposal for additional registrar types:
High-frequency registrars, with much faster oracle price updates will be implemented in the future.

Leveraged registrars, option like registrars, CFD registrars.

Combined registrars

The different types of registrars can be combined, allowing, for example, the combination of on-chain cryptocurrencies and traditional off-chain assets within the same registrar.

DEUS ultimately strives to combine the transparency and liquidity of cryptocurrencies with traditional markets' acceptance and flexibility.
DEUS Expansion Phases

1. On- & Off-Chain Assets
Open Cryptocurrency registrar creation publicly to all users, but with a vetting process in place, to ensure the creation of valid registrars.

2. Onboarding of traditional market assets
Implementing traditional assets to our oracles, enabling the creation of price feeds of traditional legacy markets. S&P 500 / Nasdaq / QQQ / DAX for example.

3. Certified legal entity to drive the adoption
We see our mission as an active effort to drive the adoption of decentralized technologies. Therefore, we aim to build a bridge between the “old world” of fiat and traditional assets and the burgeoning crypto world. With this in mind, we are seeking to launch a legal entity at some point in the future, fully licensed to manage and trade stocks, bonds, and other assets, in order to integrate them into the DEUS registrars.

Path to decentralized governance

The only way to prevent corruption and inefficiency, in the long run, is through transparency and decentralized control mechanisms.

However, the council must be able to govern, so they must be knowledgeable and possess the ability to act.

In democratic societies, this is achieved by regular voting and delegation. We vote for people whom we deem to best represent the interest of our society. They, in turn, employ knowledgeable experts who determine appropriate policies.

DEUS will facilitate a gradual transition from a team-led operation to a community-led system, operated by democratically elected experts.

Steps towards decentralized governance of DEUS:

1. DAO Team development with community input
2. Establishment of an expert advisory DEUS DAO council
3. Democratization of the council
4. Decentralized, delegatable governance. Council elected by the community instead of the DEUS DAO team

Technology

Choice of Blockchain protocol

In the long term, DEUS will be chain-agnostic. For now, we are building on Ethereum, one of the most widespread chains with a proven track record and the largest developer community.

We have our sights set on Solana, BrightID, Hathor, renVM & RAMP blockchains. Given the rapid innovation within the industry, the technologies mentioned only serve as a waypoint, final decisions on what is best for the system's operation will be taken together with the DEUS council and the wider community.

Oracle data sources

During the early days, we will be relying on our proprietary oracles, integrated with exchange APIs of Binance, Kucoin, and Gate.io, as well as APIs from coin-tracking platforms such as Coingecko and CoinMarketCap.

In the later stages, we will be adding open oracles, decentralize our data source, and later yet upgrade to the zero-knowledge implementation of open oracles in partnership with Zoracles.

Interface / platform

DEUS will feature a fully functional, secure Web 3.0 portal, interfacing with Metamask and other common wallets. Emphasis will be placed on the ease of use, providing users with a clean, minimalistic user interface.
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