

Gild Lab.

Style Guide for Brand
Template 1

Contents

Simple introduction	1
Hasn't this been done before?	4
Realt - Series LLC	4
PAXG/USDT	4
Purpose build blockchains	4
Failed projects	4
Getting introduced and prepared	6
Introduction	6
Preparation	7
Ideation	7
Getting started	11
System phases	11
Design phase	11
Develop & test phase	12
Roles	15
Go Live	19
Audit	20
Maintain / scale	21
Wind down	24
Scenarios	26
Questions	27

Gild Lab Paper 1 - ETHg

The problems with Gold tokens

Why does decentralised Gold matter

If we start from the assumption that everyone in crypto wants everything to be "in crypto" - which does mean different things for many people, but broadly comes under the banner of "decentralisation" then we need ways for people to be able to interact with our code directly on the blockchain.

So a gold token has only the price qualities of gold, it cannot be used in industrial use cases and it's only utility is to be traded against. So the only use that anyone in crypto has for gold is to trade into temporarily, either because they need to "take profits", or because they are concerned about a bearish event, could be short or long term - that's it, there's nothing else, everything else that gold is good for in tradfi doesn't really apply to crypto.

The problem for gold tokens

Right now stablecoins denominated in fiat dominate both of these use cases even though most people in crypto are ultimately very short on fiat broadly. This is a problem beyond inflation because we see regulators rapidly seeking to control, surveil and ultimately limit access to anything that looks like fiat, including dusting off 1930's interpretations of "security" to cover stablecoins, which goes far beyond the howey test. Realistically under these interpretations, gold tokens with an "issuer" would also be securities, but it makes sense intuitively that the US is going to be much more incentivised to control access to the USD than commodities, and there's also a much stronger case to say that a gold token is a commodity derivative, and so under the CFTC.

So we have to ask why people are doing trillions in USD stables volume and only millions in gold? It's not counterparty risk, because people happily use tether, an unauditable entity in the Bahamas. Surely a gold vault regulated in UK, Switzerland or Australia can do better.

One could argue people "just like the dollar", but we believe it comes down to liquidity. Try to actually go to a DEX and place a trade for any gold token you want. There's no liquidity. When people "take profits" or want to "go to stables", they do it on masse at roughly the same time, in 6+ figures each, people literally can't buy gold tokens in this volume on such short notice, at least they can't on a DEX. On the PAXG centralised portal with strict KYC/AML and deposit/withdrawal limits, that only operates in specific jurisdictions, maybe they can, but they can't on DEXes apart from on Ethereum L1 with PAXG.

But the pairings on uniswap for PAXG are PAXG/PAX and PAXG/DAI - whoever is providing that liquidity either is eating a steady loss due to IL from gold/dollar pairing, or is the platform itself - remember that PAXG charges a transfer fee so would be in a privileged position to loss lead with IL

in order to encourage volume on transfers. It's not clear how retail, or how smaller vaults, or vaults with a different business model, can participate - it's also telling that the only pairings are against the other PAX token and a single asset, DAI.

Why don't we see multi gold-token vaults on curve or other defi protocols? Our theory is that a big part of it is simply that centralised exchanges provide on/off ramps for fiat but not gold, so basically the DEX story lives on top of the CEX story; or just raw volume, so there are ETH/USD pairs for the large US tokens that people LP for, and the volume is really really huge, but still, a recent study found that over half of LPs lose money due to IL.

So the short of the problem is:

- If you make a gold token you need a way for people to buy it on a DEX
- Which means you need like \$100M+ liquidity on DEXes with routes to popular tokens, but at the minimum you need a route to ETH (which can then route to everything else)
- If you're too small to put up \$100M in your own token you'll want to pool resources but then run into an explosion of pairs between small vaults, or increasing the surface area of counterparty risk
- If you put up \$100M and don't have a way to subsidise IL then you're looking at multimillion losses every year just on liquidity
- Even if you provide your own liquidity by finding a way to subsidize the IL, it doesn't mean that other people will be able to, so it means that your token won't organically find its way into L2s or niche chains unless you also go there, which would have some massive overhead (something like how balancer v2 can only deploy to the largest chains because of the ongoing overhead of their DAO to maintain each deployment)

This is all ignoring the logistics of auditing the actual gold in vaults, e.g. what Tether struggle with. Stablecoins don't really have these issues, the stable issuers can just print and burn without any logistics of physical assets. There are enough stablecoin issuers operating on that scale that retail can feel comfortable putting up stable pairs on any L2/niche chain with an AMM.

Bridging crypto and gold with ETH Gild (ETHg)

Gild & Ungild summarised

Gild means to cover with gold.

A hybrid erc20 and erc1155 that mints/burns at a reference gold price from Chainlink oracles, denominated in ETH. The erc20 is called EthGild with symbol ETHg. It works much like wrapping/unwrapping ETH to WETH.

Send ETH to the payable gild function to gild it and receive ETHg erc20 and erc1155 in equal amounts at current reference gold price.

Call ungild to burn 100.1% erc20 against any erc1155 to ungild the ETH that was created against that erc1155. Trade either the erc20 and/or the erc1155 on any markets that support those standards.

Our solution

ETH <> ETHg is a mint/burn process that happens entirely outside of the AMM and so isn't subject to IL, and ETHg can be printed "instantly" by anyone who holds ETH, and can be burned by anyone who holds a vault, it's basically a decentralised version of the Tether money printer, except auditable onchain and backed by ETH.

Anyone can mint ETHg, bridge it to their favorite L1/L2 and pair it with their favorite gold token, and bring liquidity to that chain. It also opens up at least 2 new models: - Many physical tokens with relatively small liquidity, like \$1-10M all with TKN <> ETHg pairs that arb bots can maintain (hub and spoke) - Balancer/curve style multi-asset AMM pools where a single AMM pool internally weights vault tokens against ETHg, so e.g. 90% ETHg and 10% other gold tokens

Both of these models allow retail to participate both in trading and LPing and don't have a negative expected ROI that needs to be subsidized by the vault or ETHg team. It's a win/win for ETHg - ETHg also needs pairings with positive expected ROI in order to survive, and ETHg does not have a peg so many people will not want to use vs. a physical gold asset that does have a strong peg. It's really just a roundabout way of providing an ETH/gold-token pairing on every AMM, but without the guaranteed IL that would imply.

This is somewhat similar to the vBNT/BNT system. We can see their historical price data for some reassurance that this model can work.

How does BNT:vBNT perform?

Certainly not "stable" like a pegged stablecoin, but within a 0.2-0.6 range almost always and 0.3-0.45 most of the time. The spike late May was due to a governance attack on the DAO. Recent crash follows the wider market.



• The vBNT token by Bancor is minted 1:1 when LPs stake the native BNT token.

- vBNT gives governance rights, but itself can be traded, e.g. to buy more BNT.
- Some Bancor platform fees burn vBNT to put upward pressure on the vBNT price.
- The vBNT price can never exceed the BNT price as this would allow for an infinite loop of buying, staking, minting, selling.

What could we reasonably extrapolate from vBNT price behaviour to ETHq?

We could expect that the majority of the time ETHg should trade within some predictable ratio range against the gold price. The range of ratios could easily be at least as large as the vBNT:BNT data, so between 0.2-0.6 (~95%) of the time. Most (~60%) of the time the price ratio should sit in a much tighter ratio range, such as the 0.3-0.45 range that vBNT typically sits within. This is the "safe" range for LPs to enter and exit positions. When the overall market for ETH dumps we should expect the ETHg ratio to dump even harder in the short term, but also recover to "normal" faster. The utility of BNT is to be staked indefinitely whereas the utility of ETH is to be consumed for gas, so there is an argument to be made that the ETHg ratio range could be tighter than the vBNT ratio range due to higher external demand on the collateral - current predictions on ETHg are purely speculative.

We suspect/hope we will have a more stable ratio because vBNT is also used for voting, and there was at least one governance attack that pumped the ratio; and also Bancor have an upgrade coming that people generally believe will change the ratio due to different mechanics. We have no contract upgrades and no governance so there's no reason to expect any price distortions due to external events.

ETHq in more detail

Ethgild (ETHg) is a price range bounded hybrid erc20/1155 token.

It presents an alternative to stablecoins for managing volatility in ETH, both as a means to leverage ETH in the case that upside volatility is expected, and risk mitigation in the case that a market crash is expected.

Notably ETHg avoids or mitigates the following problems found in various stablecoins, etc.:

- Liquidation: ETHg will never liquidate user's ETH assets for any reason
- Centralisation: There are no admin keys or risk parameters to be tuned, not even a DAO
- Under Collateralization: There is a strict overcollateralization of all ETH collateral and circulating ETHg

- Tax complexity: Minting ETHg is technically akin to wrapping ETH to wETH, not trading
- Gas costs: Minting/burning ETHg is cheaper than an AMM trade
- USD regulations: ETHg references the chainlink oracle price of gold not the US dollar, there is no "issuer"
- Supply constraints: ETHg has an unbounded elastic supply unlike physical gold in a vault
- Not time based: Unlike an option ETHg never expires and can be held as normal tokens indefinitely
- Non-custodial: Like wrapping wETH, all ETHg is simply a deposit/withdraw to the smart contract
- Simplicity: The entire contract is about 100 lines of code beyond Open Zeppelin standard contracts
- Leverage: The protocol allows users who increase ETHg supply to leverage ETH
- Collateral risk: Only ETH is allowed as collateral
- Front-running/MEV: No trading or other intrablock hysteresis involved in gild/ungild
- Flash loans/reentrancy: Gild/ungild round trips are overcollateralised and burn 0.1% of the ETH collateral
- Opportunity cost: An ETHg mint is fully reversible at any time, unlike selling stables at a local bottom
- No counterparty: Only facilitates internal accounting for each user's own assets for themselves
- No KYC: Users mint/burn tokens for themselves directly on-chain
- No transfer fees: The only fees are gas to mint and the 0.1% overburn
- No rebase: The supply is elastic based on supply/demand rather than algorithmic price targets
- Licensing: ETHg code is released as public domain using the unlicense
- No upgrades: ETHg can only be migrated to a hypothetical new contract by each user

Nothing comes for free however. This is all achieved by abandoning a strict peg and trusting a Chainlink oracle. ETHg is game-theoretically bounded between 0 ETH and the current price of

gold in ETH. As the price increases users are incentivised to mint ETHg through increasingly profitable leverage opportunities. As the price decreases users are incentivised to burn ETHg through a discounted withdrawal of their original ETH collateral.

There is no way of knowing whether the price will be 0.1 or 0.01 or 0.9 of the gold price, but we can say that the negative feedback incentives intensify towards each extreme. If the market price of ETHg is above 1x the current gold price it can be minted and sold for ETH immediately for infinite profit, or until the price reduces.

When a user wants to gild (wrap) some ETH they are minted equivalent amounts of an erc20 (ETHg) and an erc1155 (vault) NFT. The amount minted is the current gold price denominated in ETH according to a chainlink oracle. The ID of the vault is the price it was minted at. When a user wants to ungild (unwrap) their ETH they must burn the originally minted erc20 and erc1155 at a 1001:1000 ratio. In this way it is profitable for users to gild, sell and increase circulating supply during high demand, and buy and burn to ungild ETH collateral during low demand times.

The ETHg ecosystem

Why would I want to gild ETH?

Because you can sell the ETHg and/or erc1155 to people who want to ungild their ETH or hold/ trade gilded ETH. If that sounds circular, consider the following (oversimplified) example to leverage ETH: 1. If the market price of ETHg is 0.8x the reference price of gold then gild 1 ETH and buy 0.8 ETH. If the market price of ETH goes up 50% against gold then sell 0.8 ETH for 1.6x erc20 minted, unlock 1 ETH and sell remaining erc20. 2. Feel somewhat safe knowing that the market price of ETHg erc20 can never be higher than the reference price of gold. For example, if the market price of ETHg is 1.1x gold price then gild 1 ETH to buy 1.1 ETH, infinitely. This means there is an upper limit on the cost to ungild later.

Of course the market price of ETH, erc20, erc1155 and gold are all variable and unpredictable over time. Hopefully the ETHg erc20 market price volatility is somewhere between ETH and fiat/gold.

Why would I want to buy ETHg?

You believe that eventually all gilded ETH will want to be ungilded. You can buy low and sell high. You can LP on standard AMMs and collect fees with limited IL.

Unlike algorithmic coins, there is real ETH behind every ETHg enforced and tracked by erc1155 tokens. Unlike pegged coins, there is no active management or explicit definition of what "high" or "low" should be.

ETHg is burned at 0.1% faster rate than the erc1155 so a sliver of ETH is trapped for every gilding. This should provide sustainable demand on the erc20 token, pushing the market price higher.

As the market price of the erc20 drops the benefits of gilding become less and the incentives to ungild increases. The more ETHg that is bought or locked in contracts (e.g. an AMM), the more ETH is no longer ungildable.

There is no explicit peg to arbitrage, but very cheap ETHg could quickly lead to a bank run on gilded ETH. The bank run brings the ETHg price up due to the overburn mechanism and standard AMM bonding curves.

DeFi & TradFi ETHg addresses

Impermanent Loss via Range Bounding

One HUGE problem for Defi e.g. AMM/DEX is "Impermanent Loss" (IL).

When the price of two tokens changes in either direction on a trading pair the liquidity provider (LP) loses money. The loss is permanent until the ratio of the two prices returns to the LP's entry point, and the loss increases as the ratio changes more.

The standard mitigation is to airdrop newly minted tokens to liquidity providers to try and offset the loss through inflation: "yield farming".

IL is defined by the price ratio between each side of the pair. Stablecoin pairs are usually profitable because the ratio stays constant while trading volume generates fees. Almost all other pairs are not profitable to LP consistently over mid-long term.

ETHg has a price range bounded by a commodity representable on blockchain: Gold.

Because the price range is bounded the IL is bounded and fees from trading volume can credibly offset it. Stablecoin pairs commonly generate ~10% APR from fees.

How does ETHg ensure that it trades within a bounded price ratio?

The collateral token ETH already has wide distribution, strong price history and clear utility (paying for gas).

ETHg is founded on the assumption that every ETH locked will eventually want to be unlocked, either because the price is right or the owner needs it for gas.

If the price of ETHg is ever higher than gold anyone can gild (lock) ETH to mint ETHg and sell for immediate profit, putting unlimited sell pressure on ETHg until the price decreases.

If the price of ETHg is ever lower than the value of the ETH collateral locked then the owners of erc1155 NFTs can buy ETHg and ungild (unlock) ETH worth more than the cost of the unlock, putting unlimited buy pressure on ETHg until the price increases.

Of course, this model assumes the existence of other liquid Gold tokens on-chain.

We will come back to this...

Are there other ratio bound tokens out there?

The vBNT token by Bancor is minted 1:1 when LPs stake the native BNT token.

vBNT gives governance rights, but itself can be traded, e.g. to buy more BNT.

Some Bancor platform fees burn vBNT to put upward pressure on the vBNT price.

The vBNT price can never exceed the BNT price as this would allow for an infinite loop of buying, staking, minting, selling.

Liquidations

Defi products based on loans are all over collateralized: MKR, AAVE, COMP, ALCX, etc.

To enforce the collateralization these products all actively auction off user assets.

That is to say, if the assets deposited by the user ever lose value relative to the loan, then the defi protocol immediately auctions off the asset.

This is like a bank selling your house when the local housing market dips because you took out a loan against it, even if you are up to date with all payments.

This is done for several reasons: - The platforms are trying to maintain a tight peg on some other asset like DAI - The platforms don't want a positive feedback loop of volatility and leverage to destabilise the ecosystems they are providing credit into - The platforms don't completely trust the collateral not to go to zero permanently (even ETH, the asset that pays gas for their own smart contracts!)

Why are liquidations such a problem?

Aside from philosophical concerns around the ideas of "governance", "non-custodial", and "decentralized"...

Liquidations introduce significant systemic risk when many users take out similar loans. Every MKR governance calls visible on youtube dedicates significant time to charting, analyzing and mitigating this risk. Often these risks elicit audible gasps from MKR governance.

When one user is liquidated their assets push the price of an already weak collateral down slightly more, which then triggers the next user in line to be liquidated. The two largest crashes in crypto

recent history, the "black thursday" covid crash and May 2021 were both extremely leveraged events - \$10B and \$8B of liquidations respectively in a matter of hours.

Black thursday is famous for \$0 ETH liquidations from MKR auctions where collateral was sold for literally nothing because the auction bots ran out of DAI to bid with.

Can i get liquidated on ETHg?

NO.

By avoiding the explicit goal of "stability" or "a peg", and removing all governance or external parameters, expectations or price goals, there is never any need to liquidate any ETH in the ETHg ecosystem.

The erc1155 minted and burned for every erc20 minted and burned guarantees over-colleralization of the system as a whole long-term, without ever liquidating any individual token holder. If everyone was to abandon all their ETH then yes, ETHg will also be valueless. If everyone attempted to abandon ETHg by ungilding it would force a "reverse bank run", immediately making ETHg more valuable, incentivising mints.

This is long term thinking and conviction in ETH itself at the expense of short term price volatility. Users have to get past the contradiction in believing ETH could go to zero as an asset while entrusting significant assets to a smart contract on the ethereum network.

Volatility

Why is something like Titan not possible with ETHg?

Algorithmic stables hold tight but when they crack, they crack spectacularly.

ETHg is like an inverse Bancor model, the wild swings are stopped.

*** Counterparty risk

ETHg is not a contract between two people, nor are you entering a deal with protocol or other party. There are no custodians, no admins, no DAO, no third party tokens, no liquidation bots, nothing.

There is no counterparty, just internal accounting.

Well, there is ONE counterparty - the Chainlink oracles that provide the current gold price...

So using ETHg you bear (almost) no counterparty risk.

All you have done is created your own ledger, as of today gold is this price, set aside my ETH formyself into equal credit/debit halves to be reconciled again later.

Without counterparties the only risk other than smart-contracts and regulation comes from price fluctuations, and nobody is exposed to the price until they attempt to transfer/trade. You might sell the NFT and keep the ETHg/ Until you sell there is no risk.

Regulatory concerns for DeFi

We don't say ETHg, "it's like x" because what starts as a rough similie becomes a literal interpretation.

Recent impossible "broker" definitions in America show what happens when a regulator/law-maker learns by metaphor, then tries to interact with reality as though it was exactly the metaphor.

Software developers and network participants are being classified as "brokers" and required to send tax forms and perform KYC, even though the idea of a "financial customer" cannot reasonably cover the simple act of sharing publicly signed messages.

Private keys are being treated as accounts that need custody or are defacto suspicious, but a private key is simply a number - having knowledge of something that others do not is called a "secret" not "an account".

We have not modelled ETHg off another financial product, there are no beneficiaries to the contract, there are no private keys to the contract. There is no DAO making decisions. There are no admins. There is no further development on the core contract or upgrades possible. The contract is public domain (unlicense). The contract does not require external inputs to function (it reads the chainlink oracle, there are no bots required).

Of course... regulation can be crazy... for example, Thailand banned NFTs which technically probably includes anything on the erc1155 standard, including the internal ETHg accounting mechanism...

Using ETHg

What can you do with ETHg?

ETHg a contract that defi can be built on top of, but it needs liquidity and there's no way to do airdrop style farming because that leads to titan, so the only sane way to Liquidity Mine it is against pairs that are not going to suffer major impermanent loss - which sounds like a job for gold vaults which can earn low risk returns.

What are the risks for a vault?

Smart contract risk, temporary impermanent loss risk, game theory we haven't considered that leads to economic exploit, reputation risk, regulatory risk, failure to find product/market fit

What is the upside for a vault?

Very low risk returns on providing liquidity for ETHg, returns grow as ETHg demand and use grows.

LP Vault tokens

Users can put up vault tokens and LP against them and ETHg on an AMM. This way we have low exposure to impermanent loss and also doesn't expose a vault to the risk of holding a competitor's vault tokens.

Contextualising ETHg

Could we say that ETHg is equivalent to VIX and can be used by users to hedge their ETH without losing their ETH?

Yeah hedge ETH without losing it and also leverage it without losing it.

I guess it is kind of like VIX in that the price will go down before and during volatility, but there is no fixed period.

We designed from first principles rather than with an example in mind.

Do you need to build a gold oracle?

Building an oracle is trivial, building an oracle that the entire planet can trust is so difficult that it justifies Chainlink. Even the american government struggled to convince the rest of the world that all the gold reserves in fort knox were/are real. It also seems impossible to gild to physical gold because ETH is backing the gild value, not gold. Trying to back something with gold is going in the other direction.

In this case ETH is the ultimate SoV and the gold price is simply a reference point with which to measure against.

0.1% burn

Is the 0.1% burn needed?

Large amounts of ETHg will be minted when ETH is high as people hedge, then if ETH crashes there will be a large supply of ETHg, and new gildings will be preferentially ungilded as it is cheaper to do so, so we can slowly soak up the ETHg that was minted high, which feeds into the narrative that ETHg price should recover faster than ETH price. At 0.1% it will always be cheaper to gild than to try to trade on an AMM which includes a fee + slippage + high gas.Basically the ETH being locked by the overburn starts at the ATH and works its way down the chart.

Gas or AMM

The gas to gild/ungild is lower than an AMM trade.

Dynamic wrap ratio ETH?

ETHg is nothing like "stablecoin", "peg", "trade", "swap". It is more like wrapped eth with a dynamic wrap ratio, which makes the "gild" name perfect.

xDAI

i deploy erc20 contracts without the erc1155 so no gild/ungild to L2s then ask them to map ETHg as a pure erc20

for xDai i put up an ETHg pair on honeyswap and put in some liquidity then whenever i get a rent payment from realt i just buy ETHg off honeyswap

When to use



right now is exactly when i would gild if it goes up i just ungild if it goes down i have ETHg to drip sell until price recovers

ETHg comparisons

Mirror and SNX

Mirror and snx both liquidate to maintain a peg. ETHg is a contract that has no admin functions.

Key differences would be: - ETHg doesn't track the price of gold, there's no incentives or liquidations or governance to try to push it one way or the other - The erc1155 tracks everyone's individual mints against their ETH, there's no global mint/burn at the protocol level - Overburn and any ETHg locked in other defi contracts are the main things putting upward pressure on price, not the backing collateral itself - The erc1155 tokens can be traded just like the erc20

No matter how low the price of ETHg drops, it is always fully collateralized and would approach the current gold price for as long as there exists some AMM liquidity in the case of any bank run, because of the tracking erc1155 or no matter how low the price of ETH drops i should say so if ETH went to \$1 tomorrow and we had a whole bunch of ETHg out there, then ETHg would go very low too, so in that sense it would be undercollateralized relative to a gold peg.

In a sane world ETHg would not be a synthetic asset because it simply has no mechanism to track the gold price, it only has an upper bound provided by gold, and the lower bound is provided by ETH.

Tesla stock trading

If Tesla trades down to \$660 and TBST stays at \$680, then someone can sell a Tesla share for \$660, deposit \$660 worth of collateral in the smart contract, get back one new TBST, and sell it for \$680, driving down the price. If Tesla trades up to \$700 and TBST stays at \$680, then the smart contract can spend some of its stablecoin collateral to buy back TBST, pushing up the price.

"The smart contract can spend some of its stablecoin collateral to buy back TBST" - this does not happen in ETHg, the ETH collateral is not "the contract's" ownership still resides with the erc1155 holder when you mint ETHg you still own the ETH, but any protocol that can force liquidate is basically saying "the protocol owns the collateral until you close out your position".

SynFutures - Decentralized Derivatives Market

liquidation, x*k=c, 20x leverage

None of these apply to ETHg

Synthetic creation of pairs sounds more like BNT. It has specified expiry dates so sounds like a traditional 2-party derivatives contract. If you minted a stable on a liquidating platform, you would have had your ETH sold when the market dropped recently - but that didn't happen to you with ETHg.

OHM

Mechanically ETHg is similar to OHM in that it mints something as a function of a price. Bonding is the secondary value accrual strategy of Olympus. It allows Olympus to acquire its own liquidity and other reserve assets such as LUSD by selling OHM at a discount in exchange for these assets. The protocol quotes the bonder with terms such as the bond price, the amount of OHM tokens entitled to the bonder, and the vesting term. The bonder can claim some of the rewards (OHM tokens) as they vest, and at the end of the vesting term, the full amount will be claimable.

Maybe the missing context is that for a stable-like coin we want to show that the most profitable thing for someone to do always brings the price closer to "the middle" and increasingly so at the extremes, as a negative feedback, so if the token is perfectly stable there is no profit opportunity, but that's maximum utility for end-users, and if it moves in either direction there's a reason to believe that people will take profit somehow to counteract the move. algo coins typically find it easy to show how they will decrease the price if it gets too high (they mint themselves) but struggle to explain what happens when the price gets too low. If the ETHg price "becomes low" then that implies it was previously higher, which means "someone" who minted prior can profitably buy it at the newly low price and burn it to pull their collateral out. I addition people will front run this and just buy it with the expectation that other ppl will want to pull their collateral.

The risk is that the collateral becomes worthless, leading to nobody being able to profit by burning and for us "low" and "high" are set by the market, there's no explicit peg or active management. We can't predict at what point someone feels it is worth burning, it could be a very wide range like 0.01 to 0.99.

What we're looking out for is if there's a more profitable action someone can take that acts as a positive feedback and pushes the system out of equilibrium faster than it can stabilise.

In theory maximum utility for end users leads to demand that pushes the price up and out of equilibrium again, as we see with stablecoin total MC reaching 170 bill recently and growing strongly every year. If end users are dumping ETHg we should also see either a corresponding crash in the collateral or a lot of ETHg burning.

ETHg contracts & code

Github

https://github.com/thedavidmeister/ethgild

Audit

More information in the comments of ethgild.sol.

More documentation

More information in the comments of ethgild.sol.

Contract deployment

ETH mainnet contract: 0x10e79d0117865b48c825f7db7533ed619d68aac3 Deployed to ETH mainnet with tx: 0xd4b4c3e18dacbe34a836f112c0650f0870a6bc4f977cceb286cd94442ed643e9