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VIGOR Stablecoin Summary

VIGOR stablecoin, VIG token

t.me/VIGORstablecoin

<https://github.com/VIGORstablecoin>

The VIGOR stablecoin project core theme is that crypto-backed stablecoins are fundamentally concerned with jump-to-zero price risk and volatility risk. Our stablecoin platform enables the separation and transfer of those risks. **VIGOR** is the stablecoin (“cash” instrument) created on our platform; it is a crypto-backed stablecoin on the EOS blockchain that tracks the US dollar. Our platform in a broader context is a decentralized autonomous smart contract prime broker that enables users to:

- A. borrow stablecoin against EOS native tokens and
- B. borrow EOS native tokens against stablecoin collateral.

The project utility token is called **VIG**. Our technical whitepaper: <https://vig.ai/VIGOR.pdf>

VIGOR Stablecoin

The VIGOR stablecoin system enables separating and transferring volatility risk of collateral and price jump risk from borrowers to insurers. The system is the crypto version of borrowing and lending but lenders are called insurers. Borrowers lock up tokens as collateral and borrow stablecoins. The collateral is price risky so excess collateral is required along with buying loan insurance (vaguely similar to homeowners paying PMI private mortgage insurance on a home loan). The insurers lock up crypto tokens as collateral that capitalize an insurance pool. Borrowers pay an insurance premium (VIG tokens) into the system. The insurers earn and bailout any loans that become undercollateralized. When a bailout is triggered the borrower’s collateral and debt is assigned pro-rata (according to contribution to solvency) to the insurers which recaps the debt. A cut of the VIG premium is stored in the final reserve which acts as an insurer of

last resort. Storing VIG in the reserve over time has the effect of shrinking the free float of VIG making it more scarce.

Market price discovery and on-chain risk & compliance

The cost or price of the loan insurance adjusts based on how risky the system is relative to a target; this is market price discovery without the need for trading or an order book. The risk model considers levels of overcollateralization, debt and insurance assets. It is fully on-chain and follows regulatory standards for insurance businesses; we call this on-chain risk and compliance. It is an insurance industry risk-based capital model where insured loan rates adjust to drive solvency of the system to a target. The amount of the price adjustment is determined by a pricing model similar to equity default swaps that considers volatility and price jump risk. If vRAM becomes available we will be able to implement more robust risk, stress tests, and pricing models on chain. Note that Bitshares uses a limit order book for price discovery and requires trading. While that provides efficient pricing we think this is too cumbersome and will dampen scale. Also note that Maker platform has no price discovery, occasionally the loan rate is arbitrarily reset by voters (basically a few whales). This is an example of inefficient pricing which leads to a need to apply overly conservative leverage limits and high penalties for liquidation, again limiting scale. Our platform is in between these two extremes with respect to price discovery unlocking scalability.

DAPP network and DSP

On-chain risk and pricing is both data intensive and calculation heavy. As the DAPP network (liquidapps.io) offers vRAM and vCPU we use that stack extensively.

Oracle

VIGOR requires price data feeds for valuing collateral tokens. The delphioracle by eosTitan (<https://github.com/eostitan/delphioracle>) is fed by EOS block producers and will be our source of reference pricing. BP's feed the oracle with pricing, the oracle notifies our contract that new prices are available, and our contract takes action by updating our entire contract.

Risk Premia

How much should it cost a user to borrow stablecoin against crypos? We use a risk premia (RP) approach to account for the risks embedded in such a proposition:

$R = \text{risk free rate} + \text{credit RP} + \text{volatility RP} + \text{price jump RP} + \text{liquidity RP} + \text{maturity RP}$

Risk free rate: consider covered interest parity and cross currency swap spreads

Credit RP: borrowers build a credit score which is based on the amount and timeliness of VIG paid-in to cover payments due over time.

Volatility RP: collateral prices may follow a random walk, a diffusion process

Price jump RP: the price diffusion process may include price jumps to zero (we look to quantitative financial models of jump-diffusion CEV models for equity default swaps, as specified in our whitepaper. (We currently use OTM asset-or-nothing binary derivatives for our initial releases as we wrestle with limits of on-chain computation in these early days)

Liquidity RP: our bailout model is frictionless, insurers post collateral ahead of time.

Maturity RP: we offer a constant maturity product that rolls every minute.

Considering the embedded risk premia our contract calculates both a model price R and model risk (solvency) which is offered to users of the platform. User activity in turn drives price discovery as the model price is adjusted to drive solvency to a target set by custodians.

Structured product and scalability

Borrowers and insurers are not linked one-to-one. A structured product is employed to socialize losses across all insurers and may be tranching for insurers to choose their desired risk level relative to their premium income. This design allows for highly leveraged borrowing, a necessary feature for the VIGOR stablecoin to scale (onboarding more user types such as short term traders seeking high leverage). We believe that makerdao clones will not scale because they do not measure risk and have arbitrary pricing leading to the need to apply overly conservative leverage limits.

Final Reserve

There are three levels of backing for stablecoin loans. Borrowers overcollateralized their loans protecting against normal volatility. Insurers post tokens as insurance assets which provide further backing against price jump risk. The final reserve provides a third layer of backing in case the insurers go bust, and is more formally described as the buffer that covers stress losses or model risk (underestimating risk).

Low Friction Bailouts

Our bailout mechanism is very low friction, there is no trading or auctions required. The insurers escrow their tokens ahead of time and are available to recap bad debt. In contrast, makerdao bailouts are high friction. In the event of a black swan, their system must auction MKR into distressed markets, precisely when there will be no buyers.

Truly Multicollateral

By default we are building VIGOR as multicollateral (in a more meaningful way than MakerDao who is really just allowing to have separate single-collateral backed loans, for each loan you can choose a different collateral type, they didn't design for portfolio risk). We will actually consider a portfolio of collateral backing a single loan, it's the difference between Reg-t margin requirements and Portfolio Margin requirements used by brokers.

Tokens

VIGOR stablecoin is a token on EOS with US dollar stability

- **Borrow**
 - Borrow 'cash': take a VIGOR stablecoin loan using your EOS cryptos as collateral
 - Borrow crypto: short sellers can borrow EOS cryptos using VIGOR stablecoin as collateral
- **Earn**
 - Insurers: Send EOS cryptos into insurance pool that backs the stablecoin
 - Lenders: Send EOS cryptos into the lending pool to be lent out

VIG deflationary utility token

- **VIG is a fee token**
 - loan fees are paid and earned denominated in VIG
 - pay the VIG, earn the VIG
- **VIG is a reserve asset**
 - A cut of VIG fees is sent permanently into a reserve which backs the stablecoin as an insurer of last resort
 - VIG is deflationary; the free float shrinks over time making it more scarce
- **VIG users run the platform**
 - Using VIG over time to pay/earn fees can make users eligible to cast votes for DAC custodians who execute updates to software and configuration
- **VIG users get a crypto credit score**
 - Paying VIG fee on time allows borrowers to build a crypto credit score

Voting and Crypto Credit Score

The users of the system are the voters, both borrowers and lenders. This is unique in that borrowers are given a seat at the table to delegate their concerns to elected custodians. This is a revolutionary alternative to traditional lending where lenders have all the power and heavy handed regulation is used to protect borrowers. Users will be chosen at random when they try to transact on the system, giving them voting rights for a period if they meet minimum criteria such as a minimum amount of VIG premiums paid/earned in the past and a minimum debt/insurance asset amount.

Governance and the DAC

VIG.ai is the decentralized autonomous community (DAC) that is building this stablecoin platform. That link is a user interface that can be hosted by anyone anywhere, which interacts with the DAC contracts on the EOS blockchain. The DAC controls the keys to all of the smart contracts that compose the stablecoin platform. This project decentralizes financial services on the EOS dApp layer where perhaps Block.one cannot as they focus on the base layer EOSIO and are a US company having raised a large amount of funds. VIGOR is governed as a DAC launched on the EOS mainnet. It has up to twenty one custodians from our community which control multisig permissions to the smart contracts. Genesis custodians can claim pay each period denominated in VIG tokens. Token sales and airdrops are not planned (except for airdropping 5% to eosDAC for use of their awesome tools, and 5% to our core community airdrop list containing EOS account names from our very early community on telegram which has been closed based on DAC proposal and renamed as legacy airdrop list). The fate of the DAC will be at the mercy of the genesis custodians and community to finish building and launch the VIGOR smart contracts and UI. DAC doesn't take any fees off the system. All VIG fees paid in by borrowers are paid to the insurers, with a cut going into the final reserve which backs the stablecoin. DAC will be paying out VIG to it's custodians forever out of its own corpus, according to the **VIG token distribution glide path (see below)**, claim pay will reduce over time, by how much will be decided by future custodians and VIG will maybe have a discernible value to make those decisions. Over the long term, DAC will manage its VIG corpus like a permanent capital portfolio paying out annually only the average of the past three years total returns to preserve the purchasing power for multigeneration survival; similar to methods used by endowments and foundations.

VIG token distribution... Glide Path

Q3-2019

10% custodian pay

5% msig transfer to eosDAC (they will distribute)

5% VIG payout to early community airdrop list

Q4-2019

9% custodian pay max or lower based on \$ market cap,

Q1-2020

8% custodian pay max or lower based on \$ market cap,

5% VIG payout to early community airdrop list

Dev Hyperdrive, select Developers voted to earn up to 150,000 VIG per day to push an MVP to Mainnet

Q2-2020

7% custodian pay max or lower based on \$ market cap,

Q3-2020

6% custodian pay max or lower based on \$ market cap,

Q4-2020+ pay custodians in VIG such that the purchasing power of the remaining VIG in dollars can be maintained within reason based on future growth opportunities

FAQ

[Is there an MVP?](#)

Yes it is deployed to dev.vigor.ai. We invite devs to help us. t.me/VIGORdev

[At what points does the system issue stable coins](#)

stablecoins are issued by the contract when a loan is taken. This happens when the borrowers lock up tokens as collateral. The tokens can either be EOS or a portfolio of crypto tokens supported by the system.

Can a borrower get their crypto back

Borrowers can get their crypto back by paying off their debt with stablecoins which are then retired.

What do I need in order to secure/ get a loan in stablecoins

For a borrower to receive a stable coin loan, the borrower needs to lock in their crypto collateral and deposit the appropriate amount of VIG tokens, calculated as a percentage of stable coin debt to be used as premiums to insure the loan collateral.

The system requires that your collateral contains some VIG so it can take premiums every period.

What happens when the value of my collateral falls below the amount I borrowed in stable coins

when your collateral drops below the value of the loan issued, the loan will enter bail out. At this point the insurers take over and recap the undercollateralized loan to ensure system health.

Am I only allowed to lock my EOS as collateral or can I also add other assets in my portfolio

The system will allow for a portfolio to work as collateral backing a single loan.

What additional crypto assets can i include in my portfolio for as collateral

Many EOS native tokens, chosen by users. In order to guarantee system health, custodians would have the multisig permissions to add and remove collateral types, they are elected delegates and will make proposals and debate to push their proposals through.

What's the main differentiators between VIGOR and MakerDAO?

VIGOR improves on what we think are shortcomings to legacy MakerDAO:

0. On Makerdaos's system borrowers are slaves with no voice ruled by MKR whales, and the role of insurers/governor is entangled into one, same as traditional lenders. On VIGOR we have two user types both with voting rights. Borrowers pay a premium to take stablecoin loans against collateral and another type of user, insurers, also post collateral to back those loans to earn the premium. Both of our user groups have voting rights and delegate their desires to custodians. Like the idea of bank run by both borrower and lender? That's the VIGOR model.

1. VIGOR will extend into letting users borrow EOS tokens against stablecoin collateral (for short selling). Makerdao system cannot do that.

2. Makerdao does not measure risk, and pricing is arbitrarily chosen which leads them to set overly conservative leverage limits. This limits scale since their only user base is low leverage hodlers. We recognize that stablecoins are about price jump risk (default risk) and the need to transfer/insure against jumps. Projects that ignore jump to default risk are playing a dangerous game. We designed our smart contracts with clearly defined on-chain risk and pricing based on equity default swaps and Solvency II risk based capital requirements. Our market determined price discovery unlocks the ability to set higher more efficient leverage limits and onboarding short term traders who want higher leverage.

3. MKR governance is intractable. Voter participation is near zero (except for whales who dominate and push their agendas through easily). MKR voters are supposed to vote on risk and pricing, which is laughable because MKR holders are not necessarily skilled in those areas, and agreeing on complex model/price is impossible. VIGOR governance is more tractable because risk and pricing is built-in (on-chain) and voters simply delegate their interests to elected DAC custodians who are experts or can hire experts.

4. Makerdao bailouts are high friction. They must auction collateral and MKR into distressed markets, precisely when there will be no buyers. VIGOR bailout mechanism is low friction. Backers post collateral ahead of time, and is ready to recap loans. Also with maker it is unclear if there is a reserve available during a black swan (rumor is that founders will pony up to save the day), we explicitly have a reserve that backs the backers.

5. Makerdao MKR holders have no idea what their risk/return profile looks like. The VIGOR system is run like an insurance business with a solvency measure used by regulators in the insurance world (Solvency II), the risk and pricing is explicitly specified in the whitepaper (equity default swaps) and calculated on-chain for unprecedented transparency. VIGOR may tranche the insurers into junior (takes first loss) and senior for better user experience. Performance measures are also on chain such as RAROC (risk adjusted return on capital)

6. Our platform is multicollateral, but Makerdao is fake-multicollateral. Makerdao is really just allowing to have separate single-collateral backed loans, for each loan you can choose a different collateral type, they didn't design for portfolio risk). VIGOR considers the user total portfolio of collateral backing a single loan.

Is the VIGOR platform like Bitshares/BitUSD?

bitUSD is based on having an exchange, with an order book for traders of exotic CFD's (contracts for difference), each side putting up collateral and placing bid or ask. The exotic feature enables the long side (bitUSD holder) to be fungible by defining a set of heuristics where the long is allowed to settle their position at any time with whoever happens to be the least collateralized at that time at a trusted settlement price, along with some margin call features)

Bitshares uses a limit order book for price discovery and requires trading. While that provides efficient pricing we think this is too cumbersome and will dampen scale. Also note that Maker platform has no price discovery, occasionally the loan rate is arbitrarily reset by voters (basically a few whales). This is an example of inefficient pricing which leads to a need to apply overly conservative leverage limits and high penalties for liquidation, again limiting scale. Our platform is in between these two extremes with respect to price discovery and scale.

Our VIGOR stablecoin platform has no order book or trading (but still has a market determined price discovery mechanism). The platform is something like borrowing cash against a house and paying mortgage insurance (pmi) with simple advertised adjustable rates for borrowers to pay on their individual loans and insurers to earn on the pool of loans. It centers on a credit default swap variant (equity default swap), a structured product, and an insurance industry risk-based capital model where insured loan rates adjust to drive solvency of the system to a target. If a user wants a stablecoin loan, they post collateral tokens and are required to insure them by paying a periodic premium to buy the protection leg of an equity default swap (eds). Premiums from a basket of these eds flow to the insurers who are sellers of a single eds written on that same basket of collateral, which is funded meaning that insurers have escrowed tokens ahead of time to be available to cover bailouts, and physically settled meaning insurers take possession of the impaired collateral and debt in the event of default (loan becomes undercollateralized), recapping the loan. The insurers are further backed by a reserve that grows over time as it absorbs a cut of all premiums.

How does VIGOR compare to Dan's "High Liquidity Price Pegged Token Algorithm" (<https://medium.com/@bytemaster/high-liquidity-price-pegged-token-algorithm-d86d71188162>) ?

Dan's idea is different than the VIGOR platform. I understand it's like pretending that EOS is an ETF share of a basket composed of a safe asset USD and a very risky asset MMS. In Dan's framework, the pricing relationship between the ETF share (aka

ETF NAV) and the basket (aka ETF market price) is supported by “arbitrage” traders trading on a limit order book, for example selling EOS to buy a basket of USD and MMS when EOS is expensive and vice versa (and the basket weights rebalancing as the market maker deals USD). One problem is that MMS doesn't exist or have a market value outside of this construct, it's a plug figure so there can be no true arbitrage.

If Dan's framework facilitates a global short position in USD (incentivised by trading fees paid) where P&L accrues to MMS holders when collateral prices move, then our framework facilitates a global short put option to insure the borrowers collateral (incentivised by insurance premiums paid) where profit accrues to the borrower as collateral prices rise (unlimited) and losses accrue to the borrower as collateral prices fall (but only to a limit, a floor beyond which losses accrue to insurers, and ultimately governance token holders if insurers are wiped out).

There isn't enough incentive for stablecoin to be minted in the first place in Dan's framework, for example who would want to trade EOS for a mix of MMS and USD.

In our framework the origin of cash money is credit, stablecoin is minted by people wanting to borrow cash against their EOS holdings, to monetize their crypto, there is endless demand for credit, and hence the creation of VIGOR stablecoin. Borrowing stablecoin against ur crypto hedges ur downside crypto exposure, and enables opportunity to sell the stablecoin proceeds for other assets to take leverage. Can you monetize your EOS using Dan's algorithm? Nope. For example if you own EOS can you borrow stablecoin using your EOS as collateral and without selling your EOS? No.

Dan's algo seems to have arbitrary risk requirements i.e. setting a fixed target amount of overcollateralization where everyone will simple agree is enough for “solvency” is an arbitrary risk specification. And further there is no definition of what is meant by solvency. Undefined risk leads to overly conservative limits, ultimately limiting user scale. In the VIGOR framework it is clear that volatility risk and price jump risk are being transferred using collateralization along with equity default swaps and a structured product at a price that drives solvency to a target where solvency is clearly

defined as sufficient insurance capitalization per solvency ii. This will allow VIGOR to have efficient leverage limits enabling scale

In Dan's algo price stability is driven by trading against an order book which we think is too granular/cumbersome for users which limits scalability. In VIGOR price discovery is simpler yet fully market driven. The user is simply presented with the current rate for loan insurance which adjusts over time based on the system balance between debt and insurance assets, and a pricing model that considers the amount of overcollateralization on each loan.

Dan's algo depends on trading. Liquidity dries up during distressed markets / black swans, so I think he is underestimating liquidity risk. In VIGOR we have low friction bailouts which means the insurers have escrowed collateral ahead of time to recap loans; they simply become owners of the debt and remaining distressed collateral, no trading is required during distressed markets. Also our platform extends to epic features such as lending EOS (borrowing EOS against stablecoin, for selling short), and building a crypto credit score. VIGOR innovates on chain insurance, risk and pricing. This PEX algorithm joins the long list of projects that are ignoramus with respect to price jump risk.

Appendix

Borrowing crypto against stablecoin collateral (“securities” lending)

The borrower posts stablecoin collateral k_1 and draws debt $-k_2$ creating stablecoin k_2 . lender posts collateral tokens into pool. k_2 is swapped for s , borrower initiates long put p and short call c against the pool, and buys upside token even swap (TES) protection from the pool. The insurance pool now has $k_2 - p + c =$ synthetic long s , and is selling protection on the upside TES. The borrower holds $k_1 + s + (-k_2 + p - c) = k_1 + s +$ synthetic short s and is a buyer of protection on an upside TES. Borrower can now withdraw s and sell it on the market, expecting price to fall and buy it back cheaper, transfer it back to the contract, initiate settlement by exercising the put p against the pool, call c is worthless, TES is worthless, swap s for k_2 , wipe debt $-k_2$, withdraw k_1 .

The borrower will not actually want to withdraw more than say 90% of s , leaving 10% as overcollateralization for the upside TES, because if the price of s rises too much then the upside TES will trigger bailout.

The final reserve would need to participate in liquidity provision. For example lenders put EOS collateral tokens into the pool and make them available for locate. If they all get located, and one lender wants to leave, they cannot. they must wait for either a sufficient amount of borrowers to unwind against the pool, or new lenders to come along and put in collateral into the pool for locate, or finally they could instantly unwind against the reserve (either borrow stablecoin against the reserve or the reserve lends EOS tokens, and the reserve could hand off to the pool when tokens become available). All transactions against the reserve would need to be accounted for so it can be applied pro-rata to all insurers for the appropriate period when they eventually leave. This argument applies also for the case that borrowers want to leave, at a time when there are no new borrowers. seem like this idea would require at genesis to seed the reserve with some EOS native tokens

The functionality to allow borrowing collateral against stablecoin will be EPIC.

Let's review the facts

VIGOR stablecoin project at vig.ai

We are a borrow and earn community

- 1. borrow VIGOR stablecoin against your crypto, borrow crypto too**
- 2. earn VIG on your cryptos while helping support stability**

We decentralize as much as possible: we are trying to run as a DAC where users get to run the platform; they delegate their preferences by electing custodians who govern using multisig proposals. We will run as a decentralized financial service on the dApp layer while B1 focuses on eosio base layer.

The lending platform is simple to use: no trading or auctions or order books yet there is market based priced discovery. Loan prices adjust based on supply/demand for borrowing and insuring loans.

Borrow cryptos: Borrow EOS against VIGOR stablecoin (yes for short sellers)

Diversify: Use lots of different EOS native tokens to back loans for better loan premiums.

Bailouts are inevitable but easy: all the insurers earn as a community but in return must also share in keeping the system afloat and let's us all enjoy a stablecoin on the EOS ecosystem, good for everyone.

Borrowers have a voice and are not slaves: we give borrowers and insurers equal vote power to elect custodians.

Leverage for short term traders: come and get it. Want downside protection against your bag, we got that too: take a VIGOR loan and hodl it.

Earn on your EOS: put cash to work like your granddaddy says, he's old but smart.

random commentary:

Balance comes to VIGOR today, the yang for the yin

VIGOR deployed its crypto backed stablecoin platform to jungle recently, a platform for Borrowing Stablecoin against collateral. And now we introduce Crypto Lending, the other half of the equation, the compliment, the ability to lend and borrow EOS and other tokens using VIGOR stablecoin as collateral (to be deployed to jungle very soon). It integrates tightly into the same patent pending VIGOR risk and pricing framework, and resides inside the same smart contract.

Solvency

it's a mystery why every other stablecoin simply skips the main idea... stability.

With VIGOR, we stress test an insurance pool of tokens to arrive at a solvency capital requirement, SCR. It's done on-chain with full transparency based on insurance regulatory models. Solvency Ratio compares the amount of backing in the system at any given time relative to the capital requirement. What if the stress test models are wrong? We have a reserve that grows with usage to cover the so called stress losses. What if the system has less capital than the requirement at any given time? Pricing adjusts to drive solvency to the risk target. Borrower/insurer activity is a debit/credit to the risk budget.

What about stablecoins that use bancor? Sorry bancor is an automated market making system concerned with trading and market microstructure not default risk. We suggest two problems...that liquidity will dry up in a black swan event, and that stability based on trading fees isn't appropriate compensation to support default risk.

VIGOR stablecoin is live on jungle testnet, and the DAC invites more participation to further build the platform as we head towards production deployment.

Join us at VIG.ai build. claim VIG.

! Read at your own risk !

You have been warned. Below is the basic 'trifecta' that hit me like a freight train a couple years ago.

1. Bitcoin: The greatest discovery since agriculture (and agriculture was a pretty big discovery)

Bitcoin has already proven that distributed ledger tech works, no matter what happens going forward. It's a tech allowing two people to make a deal without a trusted middleman with full transparency.

2. A new era and revolution in open source:

Blockchain has enabled open source projects to have a built-in financing mechanism; a way for participants to extract value, not only create value. This will unleash the pent-up massive building power behind open source which will overtake privateers and corps.

3 Web3 an internet of value transfer:

The legacy internet was limited to the transfer of information. Blockchain will deliver on the true promise of the internet.

Those three things got this stuffed shirt into crypto, shocked and persuaded, never to return

get up stand up....tid bit for today

Some clarity about how to think about price discovery on the VIGOR platform. There's a punch line toward the end I promise, which is the reason for this note so read on. The VIGOR stablecoin project looks at crypto backed loans, identifies the embedded risks, and creates a framework to price the risks so we can separate and transfer them (we think the biggest risks are jump to default price risk and volatility in token prices). To that end, first we've got an on-chain risk model based on the insurance regulatory risk-based capital model called Solvency II (interpretation: we do a stress test and measure solvency, the model and results are on-chain for full transparency). Next we have a pricing model based on equity default swaps, we call token event swaps TES, (interpretation: same thing as an out of the money digital knock-in put option which

represents insurance that you can buy which pays off if your token price falls drastically. And for such an option the amount of stablecoin borrowed relative to collateral is the over collateralization and represents the moneyness of the option). Last we have a structured product to bring together pricing and risk and manage cash flows, it's like a CDO (we pool the insurance for socialized losses).

So how does price discovery fit into this? As borrowers and insurers make/take loans, prices update to drive risk to a solvency target set by custodians. The interpretation of that: Suppose risk of the system is on target and suppose a borrower likes the displayed loan price and takes an incremental loan. All else equal, the real time stress test will report that solvency is slightly worse. This causes pricing to be adjusted slightly higher in order to attract more insurers and repel borrowers in an effort to improve solvency once again and bring risk closer to target.

Now for the punchline... the price discovery is not based on the canonical availability of volume or liquidity in an order book. It is based on the availability of risk budget, a scarce resource to be spent sparingly. Now you see the light....stand up for your right. VIGOR stablecoin. Decentralized.

I'm generally against wp/bounty (only use for us rn is promotional gimmickry) in this genesis state, I want custodians to be upstarters that wanna be endowed, owners. not rent seekers. as custodians cross check each other for dead weight, I wanna be sensitive to the definition of "dead weight". I believe the most unlikely person can drop a single word (or a single line of code) at right time in the right place that can make more difference than all our ego filled self reported efforts.

wake up and smell the coffee, we have a responsibility here, eosio is a general smart contract platform, coins of the stable genre, financial infrastructure, financial products, yea even derivatives have to be built on the dapp layer. don't believe me, (dont) just watch, go ask Dan!....son, ain't cha been alistenin? b1 has confirmed our suspicions, they're gonna decentralize the core, and projects like VIGOR are gonna decentralize finance on the dapp layer. for lack of a better acronym, out with fintech and in with findec

this project was born when Chester, after having a morning coffee and thumbing the pages of John C. Hull and Solvency II recognized that stablecoin projects are either too naive to address default risk or simply skirts the issue that stablecoins fundamentally are dealing with jump to zero price risk.

help us build the VIGOR stablecoin at vig.ai accept no alternative

hello, your local stablecoin eryman here with a public service message: don't forget the origin of money is credit, its fundamental!

^ back to our rhetoric

the origin of money is credit; stablecoins are borne out of borrowing. there is insatiable demand for borrowing. on the other hand the concept of putting cash to work is fundamental. wallets filled with various tokens all over crypto land are like an army of isolated pools of value which while have a growth potential also have an element of erosion, "cash" drag. obviously in crypto u dont deposit them into an FDIC "backed" bank to earn interest, enabling the bank to lend fiat. What you can do is stake those tokens into the VIGOR insurance pool to earn VIG, enabling the lending of stablecoin. Borrowing and insuring, folks. welcome to crypto, welcome to VIGOR.

<https://www.usdebtclock.org/#>

what's the largest number on there? yep you got it, money creation -> notional on ccy/credit derivatives (tools used to transfer risk from one party to another, sound familiar? is chester hedron in the house

mystery meat

Mathematical finance can seem a bit complicated but derivatives and pricing models aren't magical not mysterious. They are simply about market convention. The way it

works is that wall street participants implicitly agree to use the same models to communicate. And importantly, pricing models don't replace market prices, they are math tools to replicate observed prices discovered in liquid markets. The models that can replicate observed prices best (and also have an economic explanation so it's not overfit biased) become adopted as unexpressed convention.

Let's take a specific example. I know a guy who knew a guy who once built a SABR model for a bank. https://en.m.wikipedia.org/wiki/SABR_volatility_model Why build that? Well SABR tries to model the volatility smile in interest rate derivatives. what does that mean? Means that liquid derivatives markets tend to display a price increase/decrease with moneyness. SABR tries to explain and be able to replicate that with math. Why replicate?. So traders can run pre-trade scenarios, risk managers can run stress tests and sensitivities (bumping model inputs and see what happens to price, aka the greeks like delta theta vega), sales desk can price/sell off the run or more bespoke but similar instruments that don't have a liquid market for price discovery. There are lots of competing models but some like SABR become part of the standard convention.

VIGOR marketplace uses some conventional models, specifically for equity default swaps and binary knock in options, and will be used just as in traditional markets to run stress tests, scenario analysis and to suggest/fit a moneyness smile for example so we can provide a model price for loans of all collateral levels including those with low liquidity/price discovery.

Don't think of VIGOR pricing models as a special mystery meat with an award winning taste but secret formula, They are just part of a standard market convention, to understand observed prices, suggest pricing where liquidity may be low and to provide a toolset for analysis. The VIGOR crypto lending platform is setting the standards and conventions in crypto finance. Transparent. Trustless. Decentralized.

... and I don't recommend the mystery meat

****Vigor Insurers and RAROC****

Time to play hard ball. Insurers that participate in the insurance pool on the Vigor platform constantly earn VIG to insure stablecoin coin loans (and earn to insure EOS lends against price rallies). But you do know that insurers will take some losses over time right? After all the purpose of the insurance pool is to recap any failed loans/lends. So let's talk for a minute about why would anyone be an insurer. The answer is risk adjusted returns, and the relentless search for calculated yield. Still don't follow? There is a measure in the Vigor stablecoin platform called RAROC (risk-adjusted return on capital). It is the returns that the insurance pool earns relative to the capital requirement. It answers the simple question, "How much do I earn as an insurer accounting for the fact that I will absorb some bad loans over time?" You say that's a rigged measure, the capital requirement is bull**. Well, the capital requirement follows the regulatory practice of Solvency II used by the insurance regulators in the EU and the meaning of a capital requirement is to estimate the unexpected losses based on stress tests at assumed levels of certainty. Note that the expected loss portion is generally absorbed by collateral posted by the borrowers themselves, leaving the unexpected losses to be covered by insurers. Now if the stress tests are wrong, or the assumptions are misspecified, then we introduce in the Vigor platform the "final reserve". It covers the tail losses above and beyond the capital requirement, losses beyond unexpected losses, called stress losses designed to handle this model risk. Insurers in the Vigor system will watch RAROC as a barometer for how efficient it is to be earning VIG as insurer taking into consideration that insurers can suffer losses over time (unexpected loss); the RAROC is the risk adjusted yield for insurers to compare with other potential opportunities outside the Vigor platform as they chase yield in the crypto economy.

VIGOR - market price discovery for lending rates

Other projects that set loan prices through voting is a terrible idea. With VIGOR stablecoin the lending fee is market determined considering the supply and demand of capital and the search for risk adjusted yield. Here's how price discovery works in VIGOR. The system is stress tested to find the solvency capital requirement necessary to survive a black swan event. If the system is not adequately capitalized relative to the requirement then solvency is less than 100% and prices adjust higher to attract more insurers and reduce further loan demand. It is price discovery based on risk budgeting. every user transaction is a credit or debit to the risk budget, and prices adjust to keep the budget balanced. this leads to much more efficient pricing than other platforms where whales control and dictate loan prices thru voting.

Also in VIGOR if you put up more collateral against your loan, the rate is lower. On other platforms your loan rate is constant even if you put up more collateral, just plain silly. How do we do that? Simple the more collateral you put up, the less insurance you need to buy.

Elevator pitch

market price discovery versus overlords dictating prices

frictionless bailouts, no auctions

on chain risk management (stress testing), based on solvency ii insurance regulatory capital requirements

nobody else offers this: lock stablecoin, borrow eos to short sell

users will run the platform, forced to vote when transacting, to delegate key ownership to 21 msig custodian candidates, who are voted in and out

truly multi collateral. on maker multi collateral means separate loans each backed by a single collateral. we use portfolio collateral baskets. look up the difference between portfolio margin and regt margin.

separate insurers from governors. we have 3 distinct parties: borrower, insurer, custodian. not a mixed kludge

result is efficient, scalable, more transparent, more tractable governance----->

higher leverage limits

cheaper loans per unit risk,

enables short sale

VIGOR stablecoin. powered by VIG.

VIGOR a **borrow** and **earn** community

instant **VIGOR** loans

killer features

Borrow"Cash">Lever10>GoShort>Earn

risk management stress tests are done on-chain to gauge capital adequacy and risk based capital requirements

pricing model: derivative models are used ... options because we are dealing with price jump risk

market price discovery: user transactions are a debit/credit to the risk budget; prices auto-adjust to drive risk to target

simple. no order books, no auctions. users take the displayed rate or leave it. frictionless bailouts. true multi collateral

VIGOR Stablecoin tracks USD

from wall street to crypto. the search for real transparency, absolute trustlessness, true finance. from the perspective of financial engineers we just looked around at stablecoins and said nobody is doing any stress testing, what about regulatory risk based capital requirements and frameworks? there are no derivative models, there are no real structured products, i don't get it. so VIGOR was born

VIG Token

simply put VIG is a fee token and a reserve asset. borrowers post collateral to borrow stablecoin loans. they pay to insure the collateral by paying VIG to insurers. **pay the VIG, earn the VIG.** a cut of the fees is forever stored in a reserve to back the insurers, **VIG is deflationary.** VIG usage leads to ability to vote and earn a credit score. fixed supply 1B

powered by **VIG** token

Pinned message

Help us build VIGOR -> Register as a candidate at vig.ai or vigor.ai or vigstack.io (need to ask us for a stake token) and fill out a profile, top 21 voted candidates can claim VIG every day

Website: <https://www.vigorstablecoin.com>

Summary: <https://vig.ai/vigorstablecoin.pdf>

Whitepaper: <https://vig.ai/vigor.pdf>

Youtube:

https://youtu.be/5ZRIKO_OtK8

<https://youtu.be/zdPR8nOWOrA>

<https://youtu.be/sCxVe59P-EI>

<https://youtu.be/ne-RyqLauP8>

<https://youtu.be/FfgQtPOO1eg>

<https://www.youtube.com/watch?v=sCxVe59P-EI>

https://www.youtube.com/watch?v=cJRfCx_xfal

https://www.youtube.com/watch?v=_XgDQ4AUcNU&feature=youtu.be

Medium, eosDAC article

<https://medium.com/eosdac/eosdac-enabled-vigor-the-crypto-backed-stablecoin-on-eos-b7faae6d35a9>

VIGOR on jungle testnet

<https://drive.google.com/file/d/1I5dhoxF4Rai0FqULOPiSw9E4UdKoLCj6/view?usp=drivesdk>

Original WP?: https://drive.google.com/file/d/10aeoHNU6Vjz1iNUKCO_j0uxs0YzBwhXn/view?usp=drivesdk

dev update: <https://drive.google.com/file/d/1f8y0RjtZdbN0yKF1M84Rsfi7IsGkU8or/view>

Chart: <https://vig.ai/vigorvsmakerchart.pdf>

Medium: <https://medium.com/@andrew.peter.bryan/vigor-stablecoin-vusd-on-eos-bd3d47a947ea>

EOS Nation - HotSauce:

<https://link.medium.com/WFN4FcvexY>

sound money: https://drive.google.com/open?id=11PI2TtLpyQ1sFDUDEiH_MIA0-9AUr9I

these groups are where we are working on our craft

t.me/VIGORgov

t.me/VIGORdev

t.me/VIGORmedia