

Decentralizing Investments

Decentralised Finance Chain (AssetFi)
V2

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Abstract

The financial industry has always been dominated by Bulge Bracket Banks and few of the largest Asset management/Private equity firms. While institutional finance has always been the foundation of our economic growth, a paradigm shift towards blockchain is unavoidable. As we know, DeFi has grown tremendously over the years, there is an unclear path towards blockchain investment and asset management. Since traditional investment firms are capitalizing on the market, a blockchain solution is only necessary to revolutionize institutional finance and traditional fundraising. Therefore, we propose what we call an AssetFi chain, a decentralized investment and asset management chain focused on onboarding investment firms. This AssetFi chain will decentralize asset managers, and they will be able to secure investment and financing for their deal off chain as we implement a hybrid governance protocol, an investment protocol, and a lending protocol. Our aim is to disrupt how existing fundraising is done and redefine how traditional investment is conducted. SUMOTEX is the first ever AssetFi project which offers fractionalized ownership over both physical and metaverse real estate. The aim is to tear down the high barrier of entry for traditional investing where investors are cut off due to their limited capital. As the investment firm on blockchain which focuses on hybrid investing, this paper is focused on the vision of what Sumotex plans to achieve in the near future.

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1.0 INTRODUCTION

Traditional finance has been the backbone of our economic growth. It traces back to the barter system back in 6000 BC. It has evolved so much from the Mesopotamia era where currently the entire global finance market is estimated to be 22.5 trillion USD, growing at a 9% annual rate, taking up 24% of the world's economy. Finance has become a part of our life that we could not live without. People use it to acquire properties by getting a loan from the bank, and to leverage on investment and personal consumption. Institutions on the other hand acquire loans to expand their business, fund working capital, issue bonds, conduct leveraged buyouts (LBO) of their competitors and increase their market share in their respective industries. However, there is an issue with these financial services, they are centralized. Centralized Finance (CeFi) is defined where financial services such as remittance, lending and borrowing are conducted through financial institutes and banks. Users or applicants of the fund are subjected to regulations issued by central banks and their government.

2.0 Problem Statement

Problem arises because most of these financial institutions are tied to their respective financial act which reduces their market shares which means there is a huge opportunity costs and disadvantage. Another challenge which arises from a CeFi is that the entire process from application, due diligence, approval/rejection takes 3 months. If the loan is approved, the drawdown process takes a month. The issue is further aggravated when the transaction becomes more complicated. Private Equity (PE) deal flow takes a longer period to complete, ranging 6-9 months from assessment to investment/drawdown of funds. Investors in the PE space are locked in for at least 1 year which weeds out those short to medium term investors. PE investing also caters for investors with a larger capital as the current entry investment ticket is USD 50,000. Traditional investments are also restricted to their respective geographical boundaries. Investment firms who want to expand geographically can't do it immediately which results in a loss of opportunity and also time as to acquire regulatory approval sometimes takes months. Furthermore, investors who are in the CeFi space are often locked-in. Forcing them to have their liquidity locked for months up to years, even imposing penalties on investors for withdrawing their capital earlier. A solution like AssetFi has solved the fundamental issue of these illiquid instruments, allowing them to freely trade amongst each other when necessary without suffering the penalty imposed in traditional investment firms.

3.0 Solution

3.1 AssetFi Protocol

Our AssetFi protocol solves these issues because we address them at the root of the problem by decentralizing the entire investment, asset management and lending space. At the core, removing the geographical barrier of finance, providing liquidity to assets which are less liquid and providing near- instant disbursement to our investments and lending and fractionalizing and liquidating illiquid assets.

3.1.1 Decentralization of Asset Manager (Role)

With Sumotex AssetFi protocol, any Asset Manager/Family Office/ Private Equity firm can gain access to the technology, resources and funding with a straightforward onboarding process either deal by deal basis or permanent basis

3.1.2 Investment and lending vault (Asset)

Onboarded asset managers will be able to drawdown on the existing pool when the application of the deal is approved by the governance protocol

- **Investment Vault**

Fundraise through SMTX. Invest in Leveraged buyout, Reverse take Over (RTO) or Management Buy Out (MBO)

- **Lending Vault**

Mortgage, asset back lending, refinancing of physical asset, metaverse lending

3.1.3 Governance protocol

The Approvals for every investment will be conducted by the credit community, once approved it will instruct the security trustee to mint SST tokens

4.0 The First Hybrid Asset Backed token (SMTX)

With the vision of releasing our finance blockchain, the asset backed coin must answer the three key questions:

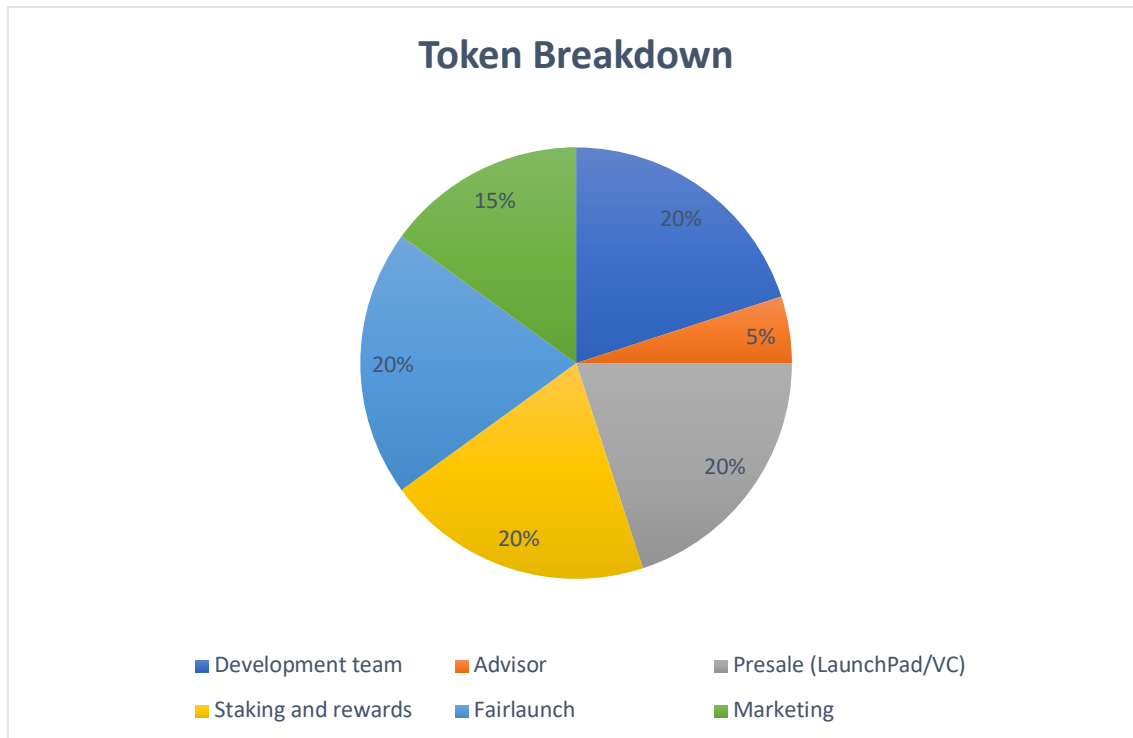
4.1 What assets are the coin backed against:

- Physical real estate
- Metaverse real estate
- Bonds, company shares, CDO
- Debt and equity
- Asset-backed tokens for commodities
- Intellectual Property (IP)
- Cryptocurrencies

AssetFi protocol solves the largest issue of private equity funds because of its nature of low liquidity assets, often locked in for 1-7 years depending on the subscribed funds timeline, the enhanced liquidity via tokenization would increase the value of assets for both investors and fund managers. It hedges the risk of private equity firms going illiquid. Tokenized REITs (Real Estate Investment Trusts) funds will become borderless as there will be no geographical limitation to who can own a piece of real estate. Furthermore, it has become affordable to investors who want to start with a smaller capital as the tokens are divisible.

Bringing onboard fund managers who wish to liquidate/tokenize their funds. SMTX will not be restricted to Institutional clientele but also is built for corporate and retail clients.

4.1.2 SMTX token breakdown



Total SMTX supply: 1 Billion

	Allocation %	Details
Development team	20%	25% per annum vested 5 year
Advisor	5%	20% per annum vested 5 year
Presale (Launch Pad/VC)	20%	vested 6 months
Staking and rewards	20%	
Fairlaunch	20%	
Marketing	15%	

**Details on batch release will be announced in v2*

Details	Price, USD
Presale	0.08
Launch	0.10

** indicative price, confirmation of pre-sale and launch price will determined in future version upon completion of contract audit*

4.2 How is the price determined:

Utilizing Net Asset Value Per Share (NAVPS) as the basis of token price:

$$NAVPS = \frac{\text{Total Assets} - \text{Total Liabilities}}{\text{Number of Shares Outstanding}}$$

5.0 Protocol design

5.1 Token definition

5.1.1 SST- Sumotex Securitized Token (identity token)

For every asset-backed loan issued from the lending pool. X amount of SST will be minted to the borrower and burned proportionally with repayment to the lending pool

5.1.2 Fund Subscription Token (FST)

- FST is minted for every on boarding fund/asset as they are unique to owns own
- FST carries its own value and supply
- FST can only be swapped by SMTX to enjoy returns.
- FST will be burned once the fund/asset liquidates/wind down/exit

5.1.3. SMTX- Hybrid asset backed token

Asset backed token (Refer section 4). SMTX is used as the main transaction currency on the AssetFi protocol:

- Gas fee
- Purchasing SMTX, swap to fund subscription token (FST) to entitle for the fund's profit sharing and dividend.
- Value of the coin will increase proportionally to the Asset deposited in the vault.
- For every fund (liquidated/exit/wind down), equal amount of SMTX will be burned to maintain the price.

5.2 SUMOTEX Special Edition NFT

5.2.1 Usage

Entitled profit sharing from the entire chain according to its unique APY, source of revenue include:

- All existing profits generated from SUMOTEX's solely owned investment and lending
- Gas fee (details to be release in future version)
- Profit sharing from allocated onboarded external investment and asset manager

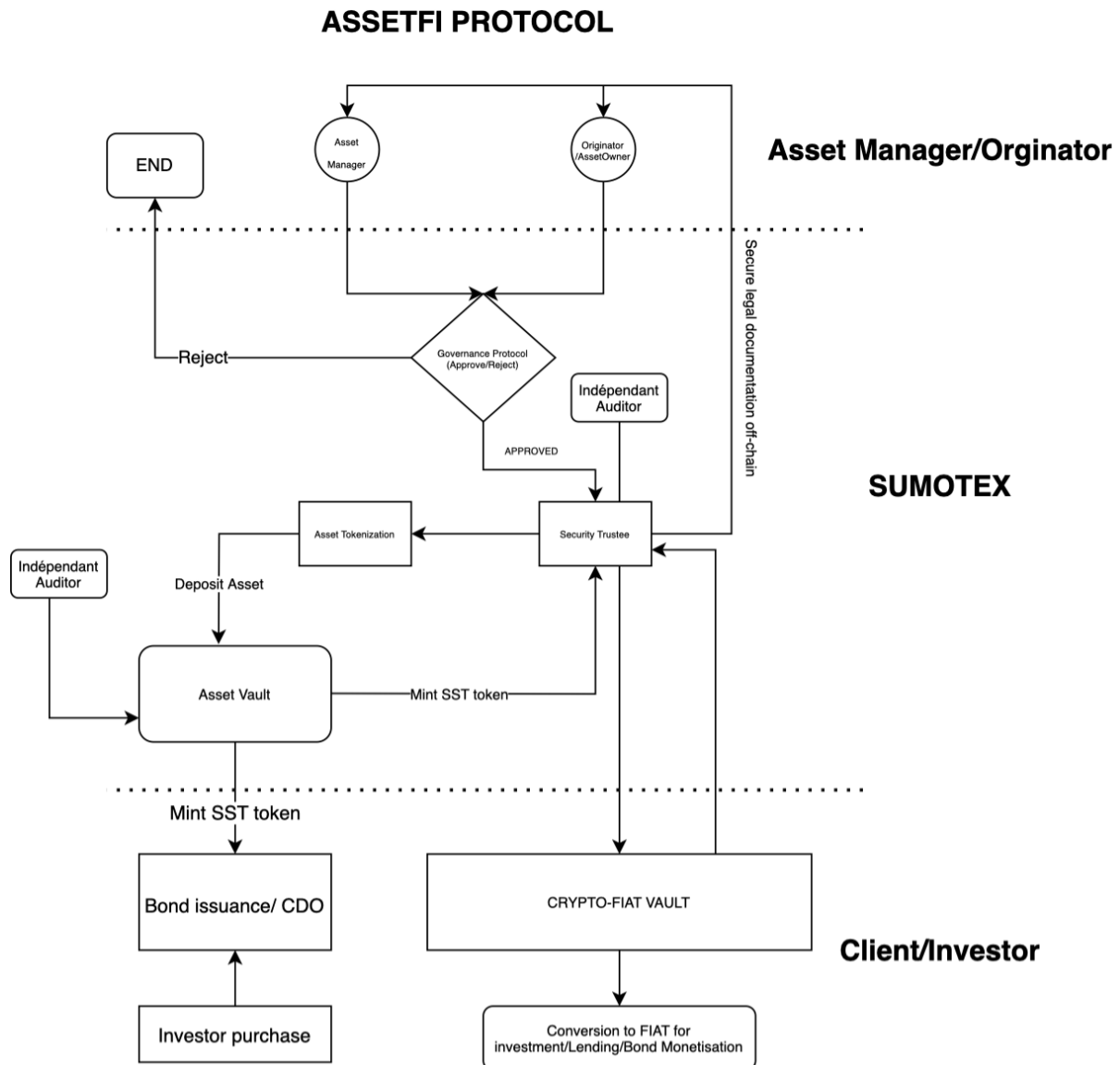
5.2.2 Multi Staking mechanism

Special Edition NFT holders will be able to stake their NFT to generate SMTX at the rate:

Rank/APY	SMTX Token per NFT, daily
25%	5.56
15%	0.67
12%	0.52
7%	0.27
1%	0.22

The staking rewards will be minted at the above rate until the allocated quantity is filled.

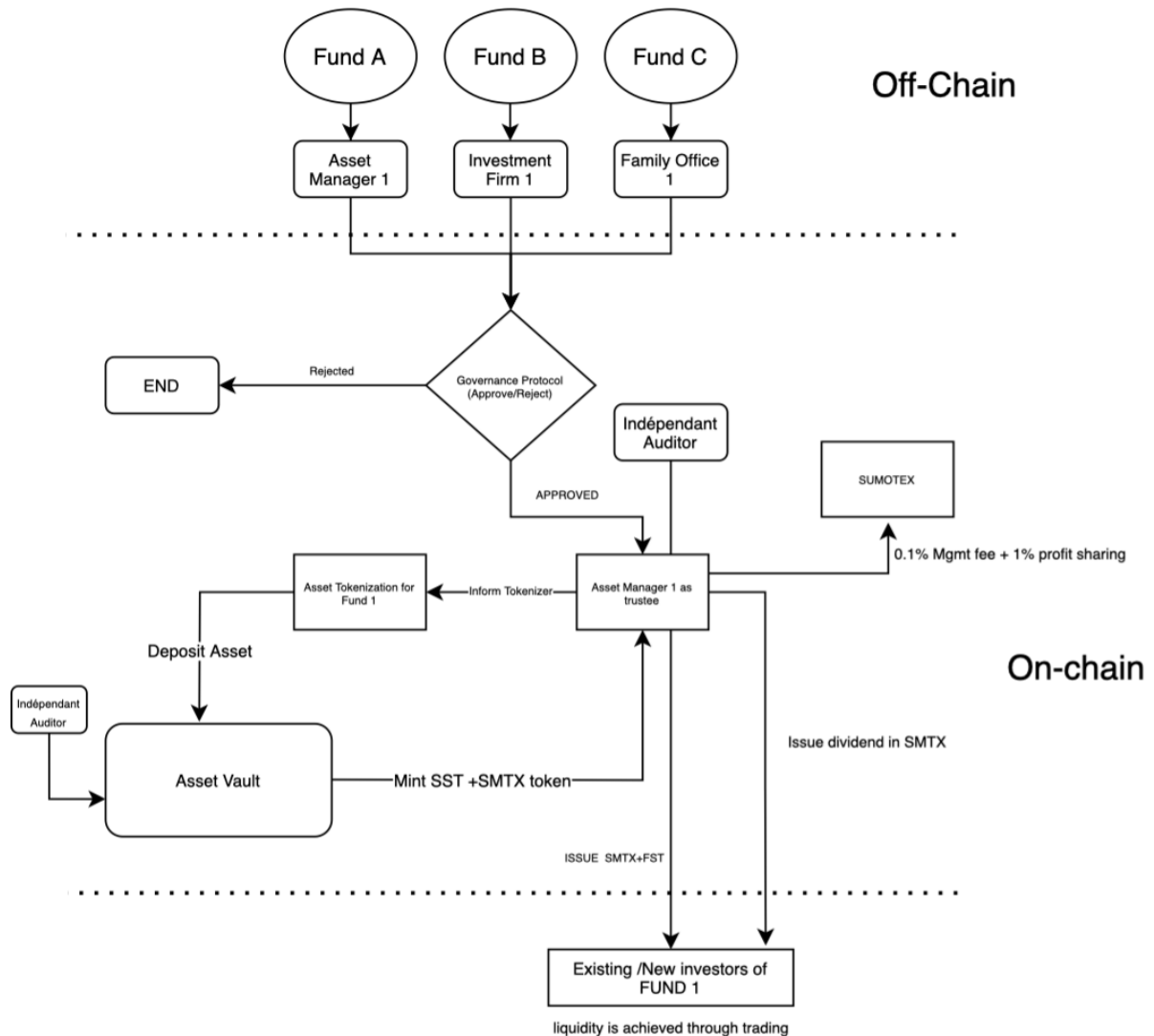
5.3 AssetFi Protocol



The above flowchart presents a birds-eye view of the entire protocol. From the onboarding of external Asset managers/Investment firm/Corporate/Individual. Investment managers who opt to fundraise/tokenize their assets will go through our governance protocol for approval. Once approval is acquired, a Joint-Venture (JV) in the form of a Special Purpose Vehicle (SPV) will be established with both the Investment Manager and Sumotex. Once the SPV is incorporated, the assets will be tokenized and deposited into the vault to mint SMTX/FST/SST to the relevant parties. The firms which are raising fresh capital will receive SMTX where they will deposit them into the Crypto-Fiat Vault and convert them to fiat for usage while investors will purchase FST token which gives out dividend. As for existing funds, FST token will be air-dropped to the existing investors.

5.4 Physical firm/originator onboarding

AssetFi Onboarding Process

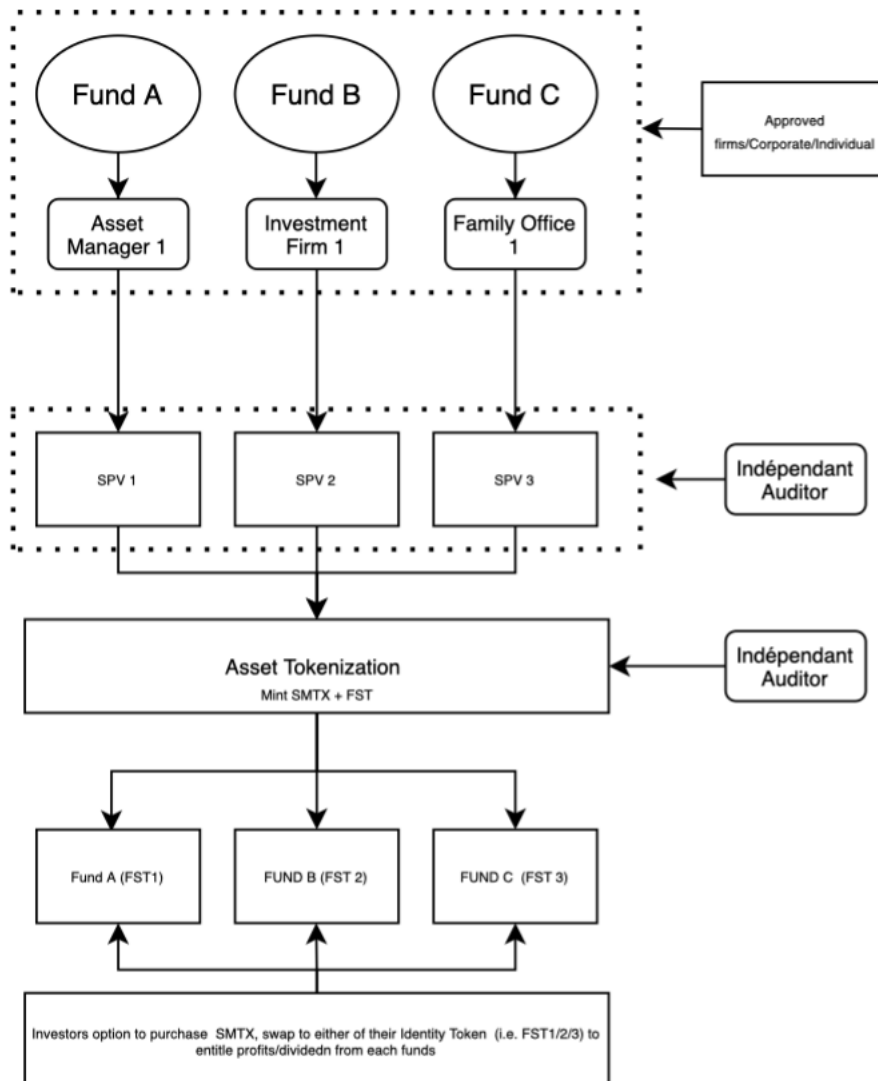


- All interested investment firms will go through a swift onboarding process (Requirements will be published at a later date)
- They will be able to submit/take on deals on the AssetFi Protocol
- Asset owners will be able to tokenize their assets

The AssetFi Protocol will be at the forefront of finance, revolutionizing how CeFi and DeFi work together. The rest of the paper will discuss the protocol and how we achieve true decentralization of investment and lending, the valuation of the token, farming rate, breakdown of token allocation and usage. The detailed investment protocol, real world and metaverse real estate lending, security trustee and onboarding process.

5.5 AssetFi Tokenization Process

AssetFi Tokenisation Process



The flowchart above shows the detail process of the tokenization process. The tokenizer will mint SMTX and FST for two usages. SMTX is used by the investment manager to convert into fiat for usage/ FST is airdropped to existing investors of the fund.

5.5.1 Asset Tokenization Example

1. Let's say, **A (corporate/individuals/institution)** wants to acquire a loan from the bank for mortgage refinancing purpose. Asset is worth 200,000,000 USD but only requires 120,000,000 usd, the standard bank process will take 3-6 months till he/she gets the loan (with a chance of rejection).
2. **A** comes onboard the Sumotex chain, gets approval and tokenizes their asset with a security trustee appointed by Sumotex where **A** will pay 15%(example) per annum. Individual A will receive SMTX coin worth 120,000,000\$, and convert it to fiat for usage.

3. AssetFi Protocol

- Sumotex will issue 120,000,000 units of FST_A token worth 1\$ each for investor to swap from SMTX (for example it is worth 3000\$ at the point in time)- investors will be able to purchase 3000 units of FST_A for 1 SMTX which generates 450\$ worth of SMTX per annum.
- Investors can exit any point in time by selling its FST_A back to SMTX. There will be no lock in period.

4. Redemption

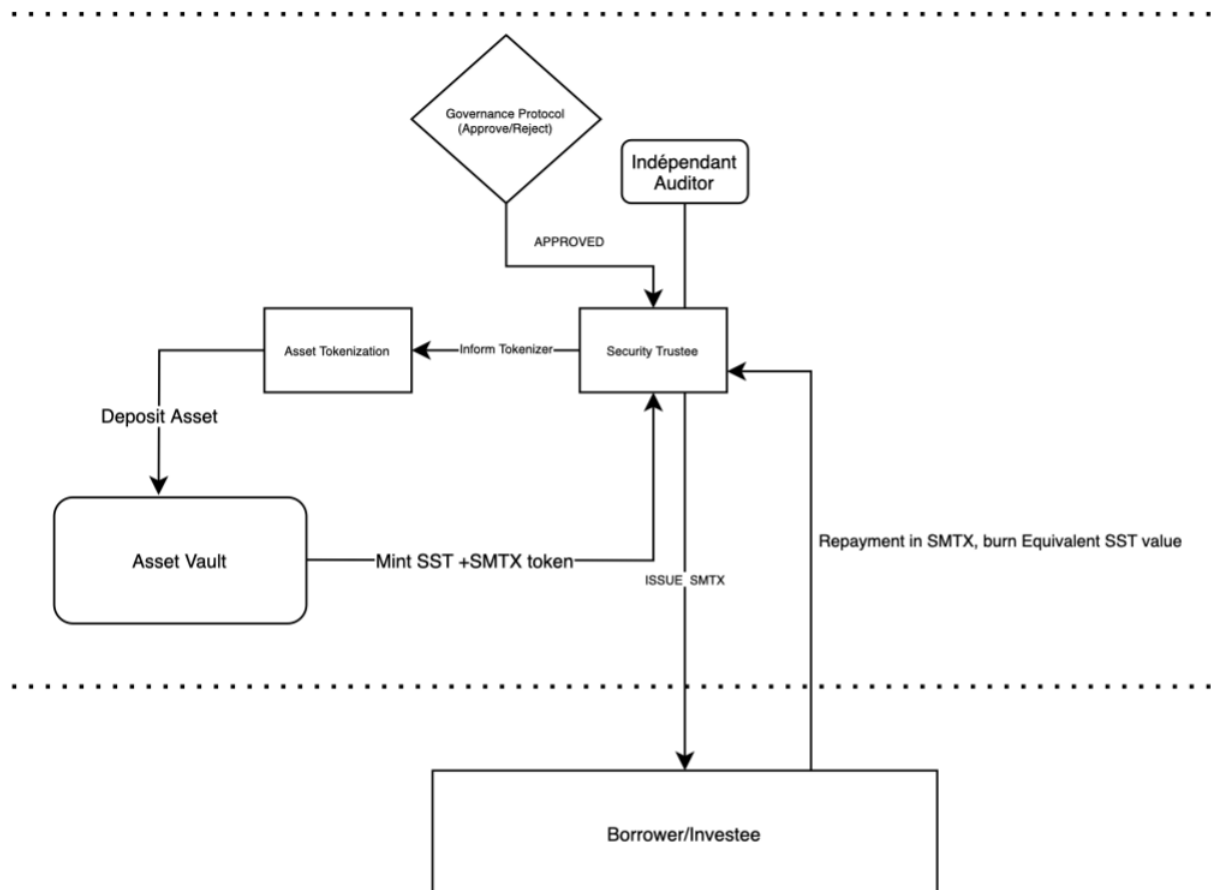
If **A** decides to redeem/exit, individual A will have to buyback 120,000,000\$ worth of SMTX distributed back equally to the investors and all the FST_A and SST_A token (held by the trustee) and will be burned.

5. Default

- If **A** did not execute its buyback option/ default on its monthly repayment.
- Security trustee will take on the responsibility in liquidating the assets and return their capital to the investors.

5.6 AssetFi Lending/ Investment Protocol

AssetFi Investment/Lending Protocol



Our target markets are divided into two categories:

5.6.1 Physical Real Estate/Collateral

The current landscape of secured lending offered by financial institutions have been tightening due to the volatile economy. They are focused on repayments/cash flows from our borrowers which significantly reduced financing options for business owners. Most Small to medium size (SMEs) business owners and construction companies have assets but does not have sufficient cash-flow to fund their operational expenditure. Most of them struggled to unlock the equity in real estate due to the stringent requirements imposed by regulators.

5.6.2 Metaverse Real Estate

The Metaverse has proven itself to be the future of real estate where organizations will operate, earn, learn, play, and gather in the near future. Huge organizations have entered and acquired lands in the Metaverse. As the Metaverse land price soared over the past year, it is crucial to be the pioneer in providing financing options to owners.

Sumotex will be the pioneer and catalyst in revolutionizing how financing is conducted. With our lending protocol, Sumotex will cut through all the red tapes and regulation which enable near-immediate capital hedged against the collateral, be it on real-world assets or Metaverse real estate at a very competitive rate. Sumotex will also provide blockchain mortgage for speculative asset owners whom wished to acquire other assets with our financing in the Metaverse. The borrower's asset will be securitized to secure repayment obligations under the loan of Sumotex. It is achieved by a Token issuance which serves as an evidence/proof. These tokens are then deposited to Sumotex lending pool in order to draw down the loan in stablecoin. The transaction for real world asset will be secured with physical documents that will be used to take security over the asset of a borrower.

5.7 Fund Management Protocol

5.7.1 ADP protocol (Anti-Default Protocol)

3 months of repayment is automatically deducted from the lending pool. If repayment is not made within 72 hour of repayment date, ADP will be triggered.

5.7.2 Security Trustee

Physical documentation and ownership/charge/caveat will be implemented before loan drawdown. This will secure real world assets and protect stakeholders' interests. Upon default of a loan, the trustee's role is to ensure the liquidation of assets is conducted accordingly.

5.7.2.1 Roles of Security Trustee/ Physical Investment firm

The role of this security trustee is essential as they act as the third party/bridge between blockchain and physical transactions. it also serves as an important to the success of an investment as the security trustee will undertake the few roles as listed:

- Assess the financial viability of a transaction with risk mitigation
- Act as an intermediary to generate and execute legal documents which secures the asset from the borrower/vendor.
- In the event of borrower default, the security trustee undertakes the role of enforcing and debt recovery.
- Act as the intermediary in instructing SUMOTEX to mint SST
- Act as the bridge for borrowers in collecting Fiat and instructing the lending pool to burn SST for every proportionate Fiat repaid.

5.8 Defaulted asset

The asset taken over by the security trustee will be liquidated. SST minted to the asset will be burned once the liquidation process is completed and monies are returned.

5.9 Value of SST

As SST is minted proportionally against a real asset. The value of each SST is different due to the difference in every value and tenure of the loan. The equation to calculate the value of Each SST is:

5.9.1 Option 1: (P+I) Principal + Interest

$$\text{Value of SST} = \frac{\text{Loan Amount}}{\text{Tenure of Loan (Months)}} + \frac{\text{Annual Interest(\%)} \times \text{Loan Amount} \times \text{Tenure(Years)}}{\text{Total Months (Tenure} \times 12)}$$

$$\text{Loan Amount} = \text{Asset Valuation} \times \text{MoF (Margin of Finance)}$$

5.9.2 Option 2: Monthly Interest payment +Bullet payment at end of tenure

$$\text{Value of } SST_{1A} = \text{Loan Amount}$$

$$\text{Value of } SST_{1B} = \frac{\text{Annual Interest(\%)} \times \text{Loan Amount} \times \text{Tenure(Years)}}{\text{Total Months (Tenure} \times 12)}$$

5.9.3 Option 3: Blockchain Mortgage (Metaverse Lending and Mortgage)

1. Borrower deposits 10-15% of financed amount
2. SST issued to borrower based on the tenure
3. Partial ownership to be given to borrower until mortgage is fully paid off

$$\text{Value of SST} = \frac{\text{Loan Amount}}{\text{Tenure of Loan (Months)}} + \frac{\text{Annual Interest(\%)} \times \text{Loan Amount} \times \text{Tenure(Years)}}{\text{Total Months (Tenure} \times 12)}$$

5.10 Default Forecasting Model (DFM)

5.10.1 S-Score Model (Sumotex Score Model)

$$Z_i = d_o + d_1X_{i1} + d_2X_{i2} + \dots + d_nX_{in} \quad (1)$$

$$\begin{aligned} d_o &= \text{Intercept} \\ d_1 &= \text{coefficient} \\ X_{i1} &= \text{Financial variables} \end{aligned}$$

$$P(F/C_f) = \frac{P(C_f/F)}{P(C_f/F)+P(C_f/NF)} \quad (2)$$

$P(F/C_f)$ = Probability of model classifying firm as fail by the model

$P(C_f/F)$ = Probability of a company classified as "failed"

$P(C_f/NF)$ = Probability of firms being misclassified as "failed"

Formula 1 and 2 is a proprietary forecasting model developed by SUMOTEX to forecast probability of Default, this logic is embedded in the DFM for approval of loans. The blockchain smart contract pulls real time data from databases around the world to compute updated macroeconomics and microeconomic data through a linear combination of statistically significant predictor variable through real time stepwise regression modelling. With reference to Bayes theorem, the probability is computed to identify the default risk a borrowers carries.

5.11 Asset Valuation

5.11.1 Risk Free Valuation

The security trustee appoints a trusted and well-known real estate valuer to conduct a full valuation report which arrives to a risk-free asset-based valuation. This report will govern the potential loan quantum allowable.

5.11.2 Instant Liquidation model

The instant liquidation model is triggered to recoup investors funds invested in the lending pool.

When repayment > T3 =0, trigger instant liquidation
Security trustee to liquidate SST token back to SMTX for distribution.

6.0 Rewards and Incentive

All **investors and lenders** on the AssetFi protocol are entitled to receive two core incentives on the participation in the protocol:

1. **USD APY**

The basic returns an investor will receive for participating in SUMOTEX, mainly distributed and generated from the interest payment on the loans/dividend and profit.

2. **Junior lenders**- they are the investors who invest USDC to specific/individual borrowing pools. They will receive a higher returns on their investment but at the same time take on more risk as they are considered as **first-loss capital**.

3. **Senior lenders** – They are considered as the Liquidity Providers who supply USDC to SMTX core lending pool. This lending capital will be automatically segregated across the protocol borrowing fund

6.1 Investors reward

Additional SMTX returns all investors on SUMOTEX in exchange for their participation in the protocol. SMTX reward are not defined by borrowers' financing/investment terms but are dependant on the tokenomics and macro level

They vary based on whether one is participating as a backer or LP.

- They are specific rewards to incentivize investors on taking risk of providing the protocol junior capital
- LP can receive rewards by participating in the senior pool liquidity mining.

6.2 Early subscriber/borrowing airdrop

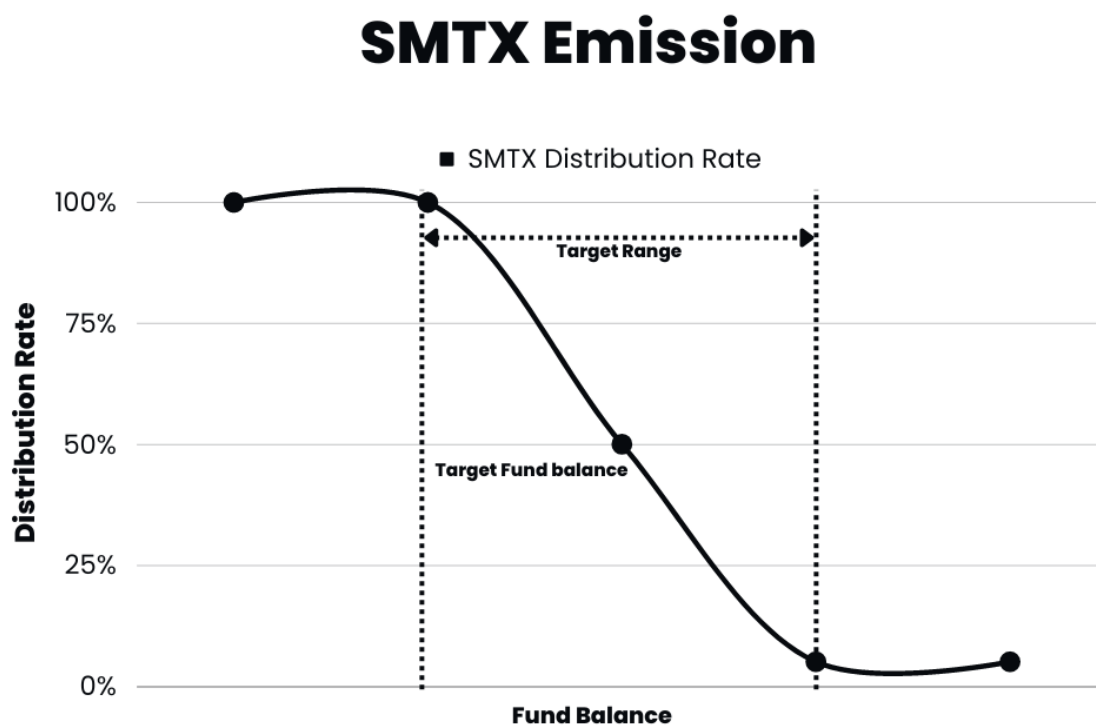
One off airdrop to SMTX core lending and investment fund as Senior Capital/tranche.

6.3 Subscriber rewards

They are distributed as SMTX rewards to investors for interest payment made by different borrowers. For every dollar of interest/dividend repaid, a junior will earn an amount of SMTX, also to incentivise early participation.

6.4 Distribution rate

They are calculated using several parameters:



Target Fund Balance	Target Raise amount from Senior debt Pool
Minimum emission rate	0 SMTX
Maximum emission rate	0.01% to 0.1% of total SMTX supply (over fund lifetime)
Target Range	25 th percentile to 75 th percentile
Comments: The AssetFi protocol can decide the "Target Fund Balance" based on future capital utilisation, not too high that it disburse SMTX to unutilised capital.	

7.0 Lending/Investment pool formulas

7.1 Senior debt

Second-loss capital to the lending pool. In order to mitigate the risk of senior debt fund, 30% of senior debt nominal interest is channelled to the junior tranche and 10% of interest payments will be retained as reserves.

Effective interest rate earned of 60%

$$i_{senior\ debt} = i_{nominal} \times (1 - A_{relocation} - R_{reserve})$$

7.2 Junior debt

$$i_{junior\ debt} = i_{nominal} \times (1 + A_{relocation} - R_{reserve})$$

$i_{nominal}$ = Interest rate charged

$A_{relocation}$ = Junior debt relocation

$R_{reserve}$ = Reserve allocated to protocol

7.3 Example: A real world asset financing with the terms below:

Loan	USD 1,000,000
Interest rate	24% per annum (240,000 USD)
Senior debt (70%)	$i_{senior\ debt} = 24\%(1 - 0.3 - 0.1) = 0.144$ $i_{senior\ debt} = 700K * 0.144 = 100,800\ USD$
Junior debt (30%)	$i_{junior\ debt} = 24\%(1 + 0.3 - 0.1) = 0.288$ $i_{junior\ debt} = 300K * 0.288 = 86,400\ USD$
Protocol Reserve	$(240,000 - 100,800 - 86,400) = 52,800\ USD$

8.0 Conclusion

This paper is designed with the end goal of Sumotex's vision of having its own blockchain. The problem of decentralising institutional finance is solved through the AssetFi Protocol. Furthermore, decentralising and tearing down the barrier of costly investing. Sumotex's NFT holder will enjoy profit sharing from the gas fee, profit sharing from its traditional and blockchain investment and lending. The ease of bringing an off-chain firm to the Sumotex Blockchain will remove the barrier of entry of traditional financial institutions. Holders and existing investors of these off-chain firms will enjoy the benefit of our AssetFi solution where they will have full liquidity and control of their investment while the investment manager will not be pressurized to wind down/liquidate the fund when time is up or when there is still potential in generating more profits from the portfolio. By revolutionising the finance and investment sector, Sumotex's blockchain solution will be able to capitalise on the \$22.5 trillion financial market.