BITCOIN LIGHTNING BANK

CASE STUDY

The Decentralized Strategy

October 2025

ABSTRACT

The Bitcoin Compound Annual Growth Rate (CAGR) was 76.93% over a 10-year timespan from January 1, 2015, to January 1, 2025. Institutions are investing into Bitcoin Exchange Traded Funds (ETFs) which shoulder all the Bitcoin volatility, while many corporations are implementing creative fund-raising initiatives referred to as "accretive dilution" to sell shares and purchase Bitcoin for their Bitcoin Treasury. In August 2020, MicroStrategy (now Strategy) made news headlines of their Bitcoin accumulation initiative. In recent years, many Bitcoin Treasury Companies have followed in Strategy's footsteps however they are all highly centralized entities that use traditional financial products in traditional markets. Bitcoin Lightning Banks have a substantial competitive advantage to the industry by integrating all borrowing and lending products into the Bitcoin Layer 2 Lightning Network, which offers an open, global, and instantaneous settlement layer to provide superior yield while receiving revenue generating service fees. This case study shines a light on the massive potential that a Bitcoin Lightning Bank has when fusing Bitcoin and innovative Lightning Network technologies with traditional markets to challenge the status quo. Additional research and development are required to prove the feasibility of a Lightning Bank; however, I believe that it is not out of reach for those willing to put in the effort and resources.
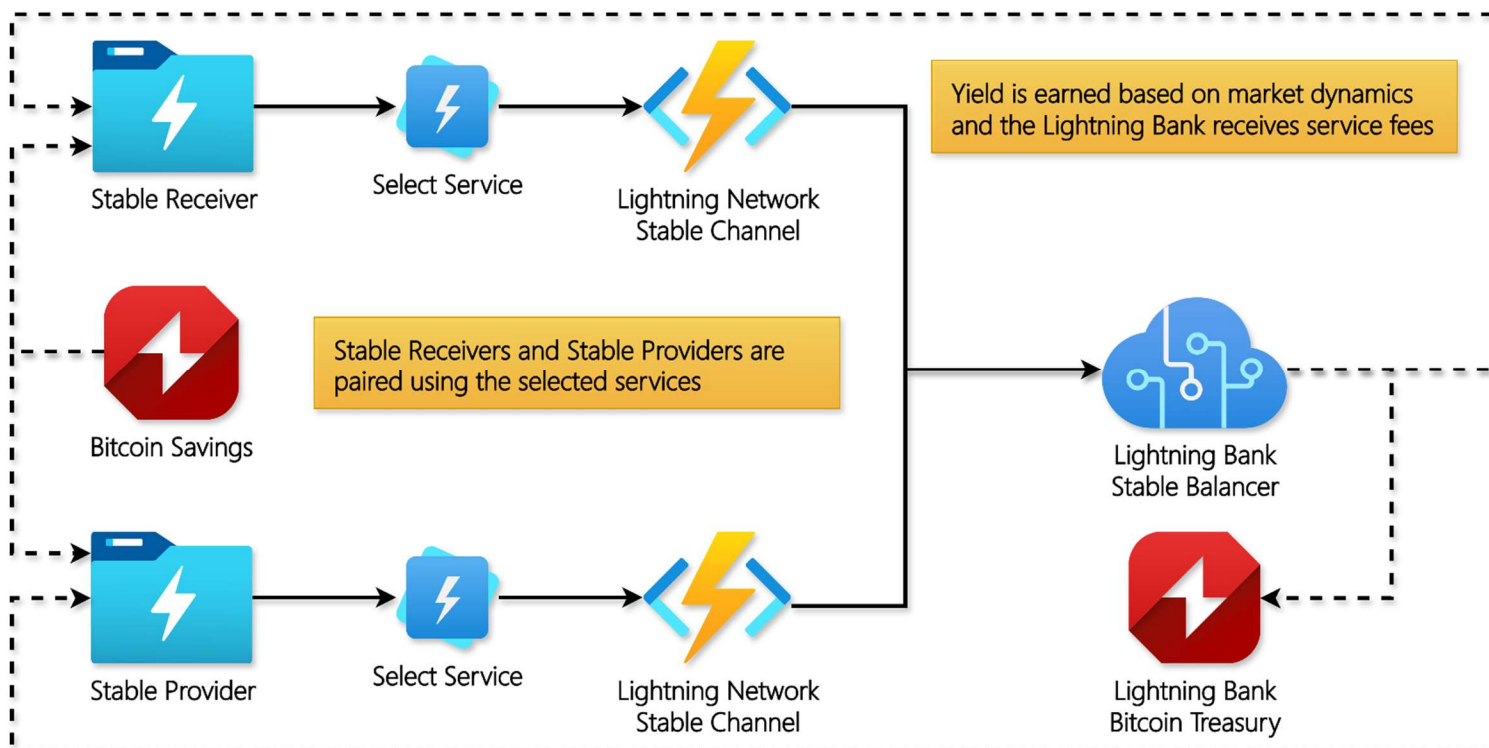
Kyle Hutchinson

Bitcoin Lightning Bank Overview and Features

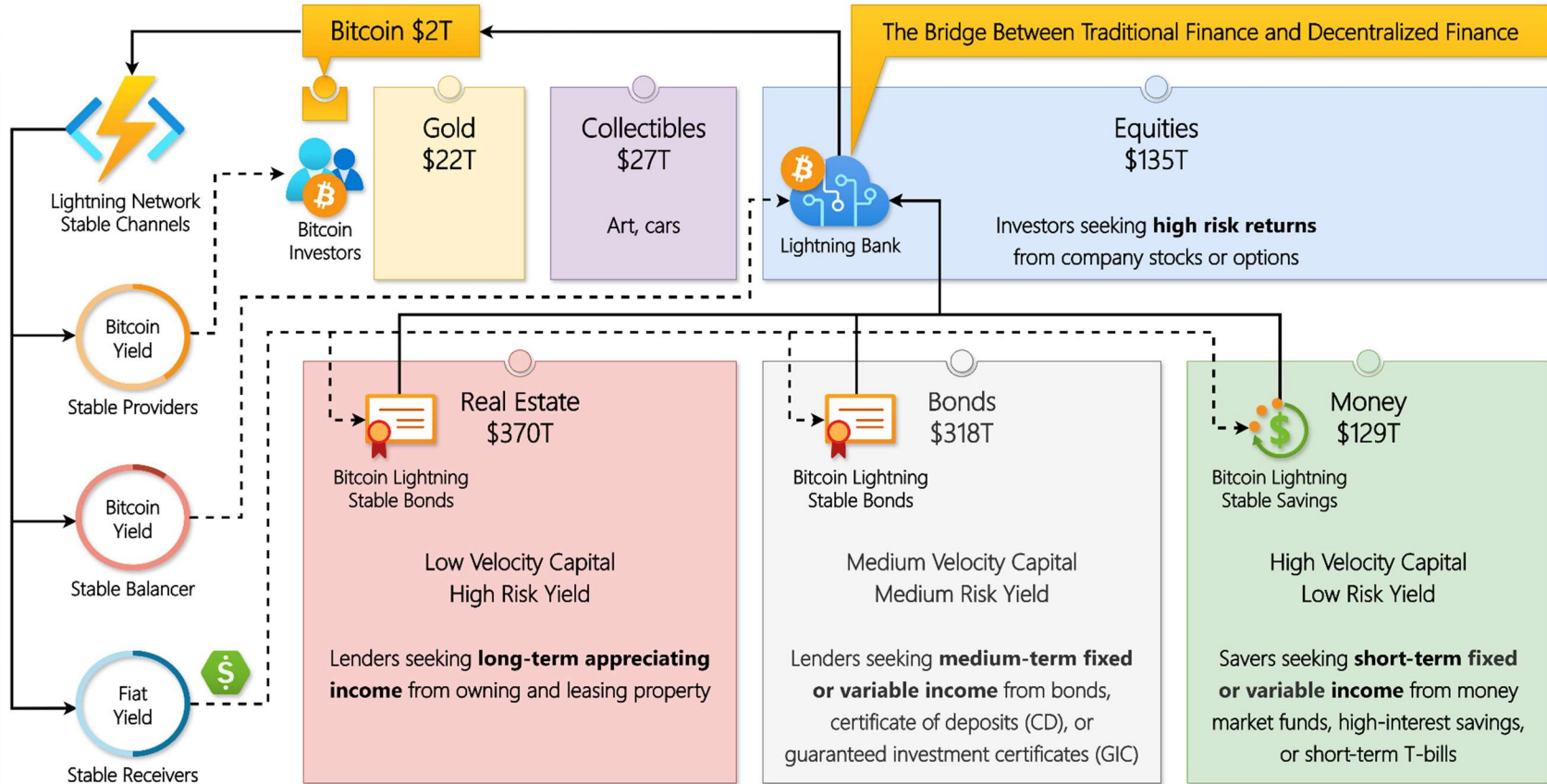Stable Receivers are Fiat Investors that Buy Bitcoin with Fiat Price Stability to Earn Yield

Stable Providers are Bitcoin Investors that 2X Long Bitcoin to Earn Yield

Yield is earned based on market dynamics and the Lightning Bank receives service fees

Stable Receivers and Stable Providers are paired using the selected services

Feature Comparison	Bitcoin Treasury Companies and Bitcoin Banks	Bitcoin Lightning Banks
Financial Products	Centralized Finance (CeFi)	Centralized and Decentralized Finance (CeFi & DeFi)
Financial Rails	Traditional	Traditional and the Bitcoin Lightning Network
Financial Management	Custodial	Custodial and non-custodial
Financial Markets	National market limitations	DeFi is globally accessible
Interest Rate Makers	Company	DeFi is an open and free market
Bitcoin Participants	Company	Bank, Fiat Investors, and Bitcoin Investors
Bitcoin Yield Distribution	**Concentration within Company**	**Distributed fairly between market participants**
Bitcoin Liquidation Risk	**Concentration within Company**	**Distributed between Stable Providers**
Bitcoin Liquidation Priority	**Bond holders are paid first**	**Bank is paid first by liquidated Stable Providers**
Bitcoin Service Fees	**None**	**Bitcoin-denominated liquidity service fees**
Bitcoin Strategy Tools	**Profit, Stock, Debt, and Bitcoin Treasury**	**Same + Bitcoin TVL to defend Bitcoin Treasury**
Bitcoin Total Value Locked Growth Rate	**CeFi = 1 Bitcoin buy adds 1 Bitcoin to BTC TVL** **500K BTC buys 500K BTC TVL in Custody**	**DeFi = 1 Bitcoin buy adds 2 Bitcoin to BTC TVL** **500K BTC buys 1M BTC TVL in Lightning Network**

Bitcoin Lightning Stable Bonds	
Flexible Rates	Fixed or variable rates based on percentage of stable Fiat or Bitcoin CAGR
Tax-Deductible	Interest payments are tax-deductible bank expenditures
Securable	Bitcoin is stored in unique Stable Channels to extract yield
Callable or Puttable	Early redemption option based on Bitcoin Growth Yield performance
Extendible	If Bitcoin underperforms then the bond can optionally be extended
Non-Convertible	Share dilution is not necessary due to the superior yield

Bitcoin Lightning Bank Total Addressable Market
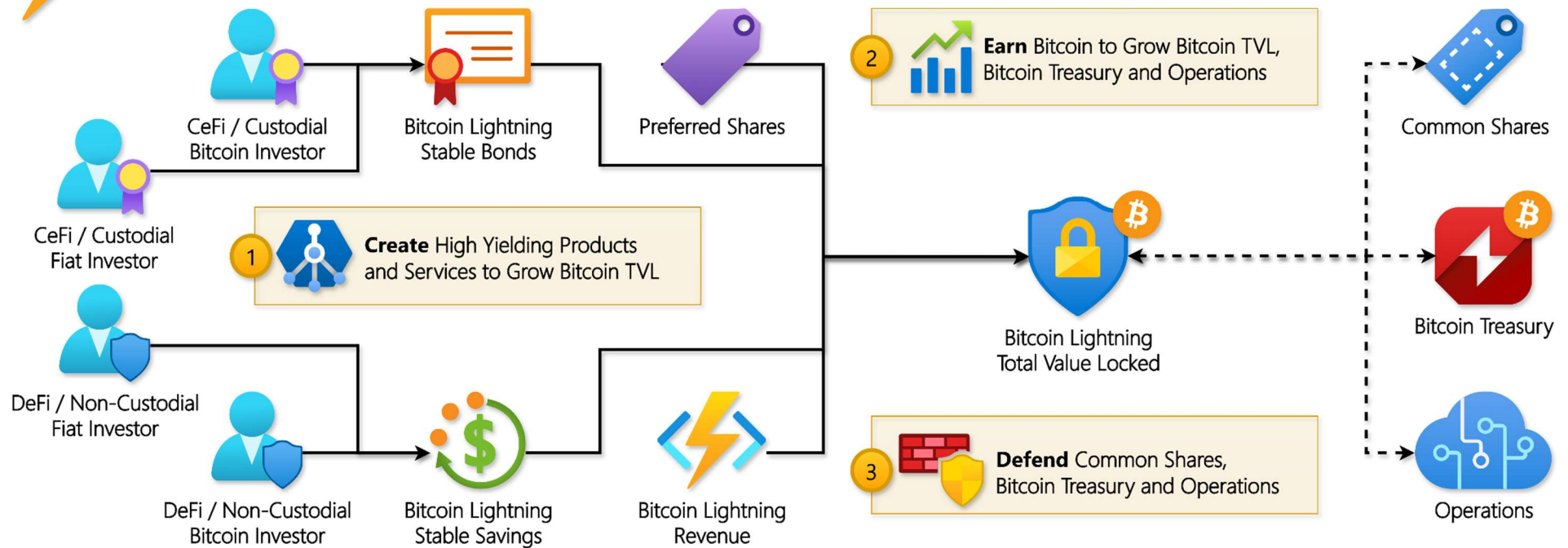
A Lightning Bank is a bridge betwen Traditional Finance and Decentralized Finance that embraces a global network of yield earning demand while contributing to the liquidity of the Lightning Network which facilitates the ongoing replacement of the incubent payment network of Visa and MasterCard.

Lightning Network Stable Channels

Bitcoin Investors

Bitcoin Yield — Stable Providers

Bitcoin Yield — Stable Balancer

Fiat Yield — Stable Receivers

Bitcoin $2T

The Bridge Between Traditional Finance and Decentralized Finance

Gold $22T

Collectibles $27T — Art, cars

Lightning Bank

Equities $135T — Investors seeking **high risk returns** from company stocks or options

Real Estate $370T
Bitcoin Lightning Stable Bonds
Low Velocity Capital
High Risk Yield
Lenders seeking **long-term appreciating income** from owning and leasing property

Bonds $318T
Bitcoin Lightning Stable Bonds
Medium Velocity Capital
Medium Risk Yield
Lenders seeking **medium-term fixed or variable income** from bonds, certificate of deposits (CD), or guaranteed investment certificates (GIC)

Money $129T
Bitcoin Lightning Stable Savings
High Velocity Capital
Low Risk Yield
Savers seeking **short-term fixed or variable income** from money market funds, high-interest savings, or short-term T-bills

Use Cases		Centralized Finance (CeFi)	Decentralized Finance (DeFi)		
		Custodial	Non-Custodial Stable Receiver	Non-Custodial Stable Provider	Non-Custodial
Stable Channel	Stable Receiver	Lightning Bank	Fiat Investors	Lightning Bank	Fiat Investors
	Stable Provider	Lightning Bank	Lightning Bank	Bitcoin Investors	Bitcoin Investors
Lightning Bank	Goal	Store Bitcoin that was procured from liabilities (ex: bonds, preferred stock) into a Stable Receiver and/or Bitcoin Treasury into a Stable Provider then provide liquidity services to extract and distribute yield		Provide liquidity services to extract and distribute yield	
Fiat Investor	Goal	Purchase TradFi products to earn interest or dividends	Self-custody Bitcoin in Stable Channel for greater control	**Purchase TradFi products to earn interest or dividends**	**Self-custody Bitcoin in Stable Channel for greater control**
	Risk	Low	Low	**Low**	**Low**
	Reward	High	High	**Maximum**	**Maximum**
Bitcoin Investor	Goal	Send Bitcoin to Lightning Bank to manage the 2X Leverage Long Stable Channel while maintenance is required to avoid liquidation		**Self-custody Bitcoin in 2X Leverage Long Stable Channel while maintenance is required to avoid liquidation**	
	Risk	High	High	**High**	**High**
	Reward	High	High	**Maximum**	**Maximum**

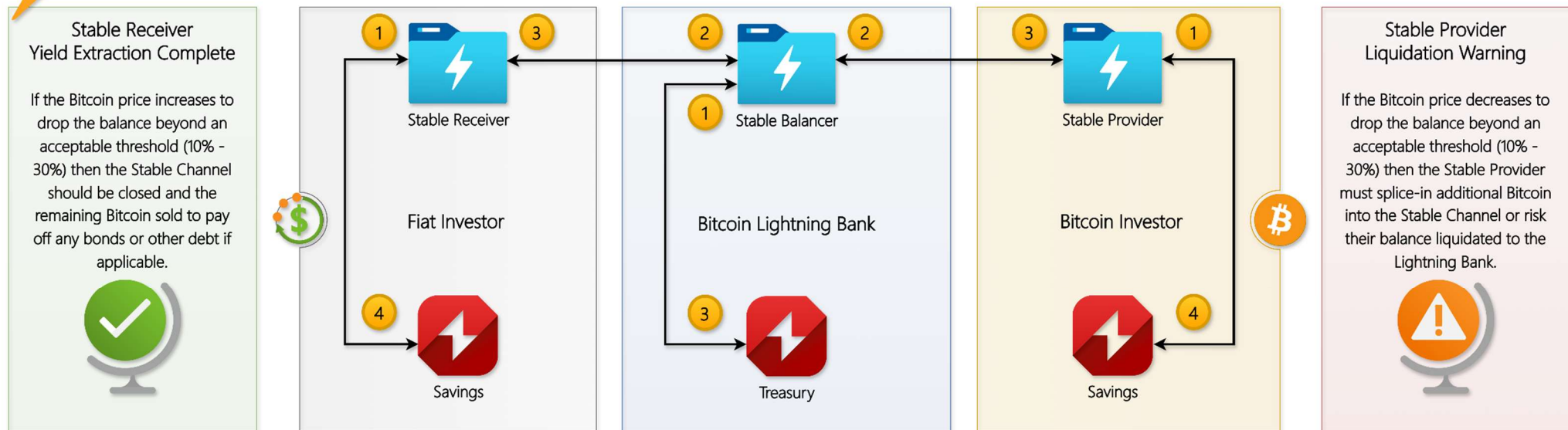# Bitcoin Lightning Bank - The Proof of Work Bitcoin Strategy

PoW Bitcoin Strategy	Create and Earn in Breadth	Defend in Depth
Bitcoin Lightning Stable Bonds	Bank sells bonds to Fiat or Bitcoin Investors then buys Bitcoin on their behalf and deposits into a custodial portion of a Lightning Network Stable Channel to grow Bitcoin Lightning TVL and earn yield	Mitigate risks by implementing market optimization techniques. If Bitcoin overperforms then the bank closes the Stable Channel and sells remaining Bitcoin to pay back the bond. If Bitcoin underperforms then the bank can either extend the bond or buy it out.
Bitcoin Lightning Stable Savings	Bank provides service for Fiat or Bitcoin Investors to deposit owned Bitcoin into a non-custodial portion of a Lightning Network Stable Channel to grow Bitcoin Lightning TVL and earn yield	Mitigate risks during Bitcoin drawdowns by ensuring Bitcoin Investors either top-up their positions or face liquidation to the Bank
Bitcoin Lightning Revenue	Bank receives Lightning Network service fees to grow Bitcoin Lightning TVL and earn yield as a Stable Balancer or Stable Provider	Mitigate risks by earning Bitcoin revenue from products and services
Bitcoin Lightning Total Value Locked	Bank enables custodial and non-custodial access to Lightning Network Stable Channels & Enterprise Channels to earn yield and grow Treasury or Operations	Mitigate risks during Bitcoin drawdowns by ensuring Bitcoin Investors either top-up their positions or face liquidation to the Bank
Preferred Shares	Bank sells Preferred Shares to buy Bitcoin to grow Bitcoin Lightning TVL and earn yield as a Stable Receiver and distribute it is dividends to shareholders	Mitigate risks by allocating revenue to Stable Receivers so that Bitcoin Yield covers dividend and can be called back when the channel closes
Common Shares	Bank sells Common Shares to buy Bitcoin and grow Treasury or Operations	**Share dilution is protected by above practices if done efficiently**
Bitcoin Treasury	Bank can deposit Bitcoin Treasury into the Bitcoin Lightning TVL to earn yield	**Treasury liquidation is protected by above practices if done efficiently**

Bitcoin Lightning Bank - Stable Channel Life Cycle

Stable Receiver Yield Extraction Complete

If the Bitcoin price increases to drop the balance beyond an acceptable threshold (10% - 30%) then the Stable Channel should be closed and the remaining Bitcoin sold to pay off any bonds or other debt if applicable.

Stable Receiver — Fiat Investor — Savings

Stable Balancer — Bitcoin Lightning Bank — Treasury

Stable Provider — Bitcoin Investor — Savings

Stable Provider Liquidation Warning

If the Bitcoin price decreases to drop the balance beyond an acceptable threshold (10% - 30%) then the Stable Provider must splice-in additional Bitcoin into the Stable Channel or risk their balance liquidated to the Lightning Bank.
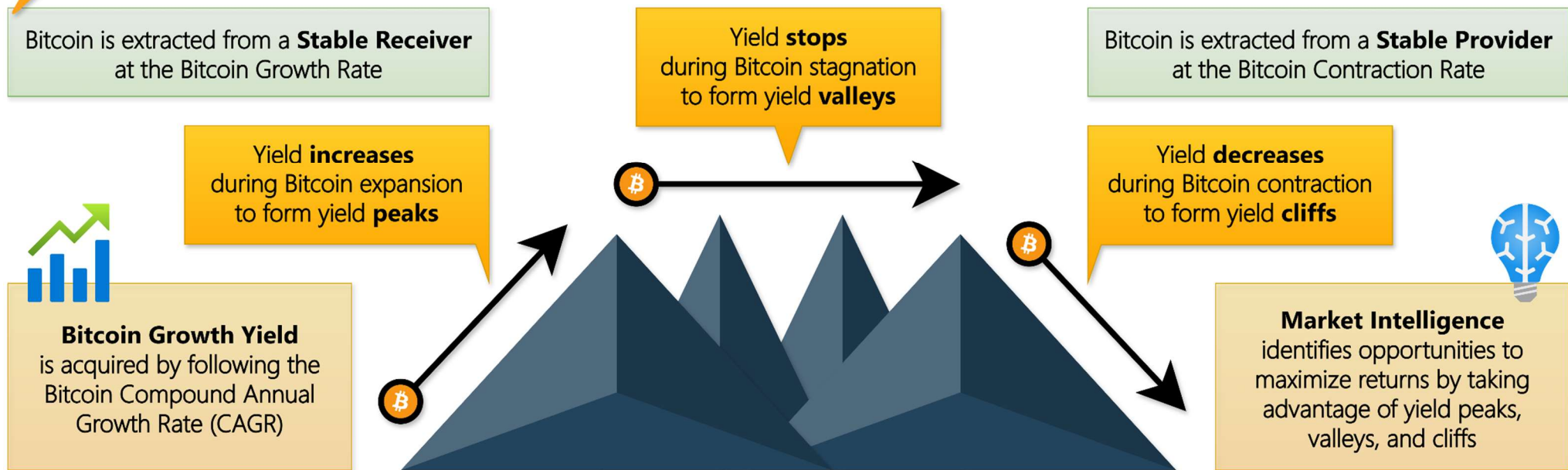
The Lightning Bank Stable Balancer is an intelligent automated market maker (AMM) that maintains a liquidity pool to splice in and out of the Lightning Channels between a Stable Receiver and Stable Provider so that the Stable Receiver has a guaranteed stable Fiat balance backed by Bitcoin.

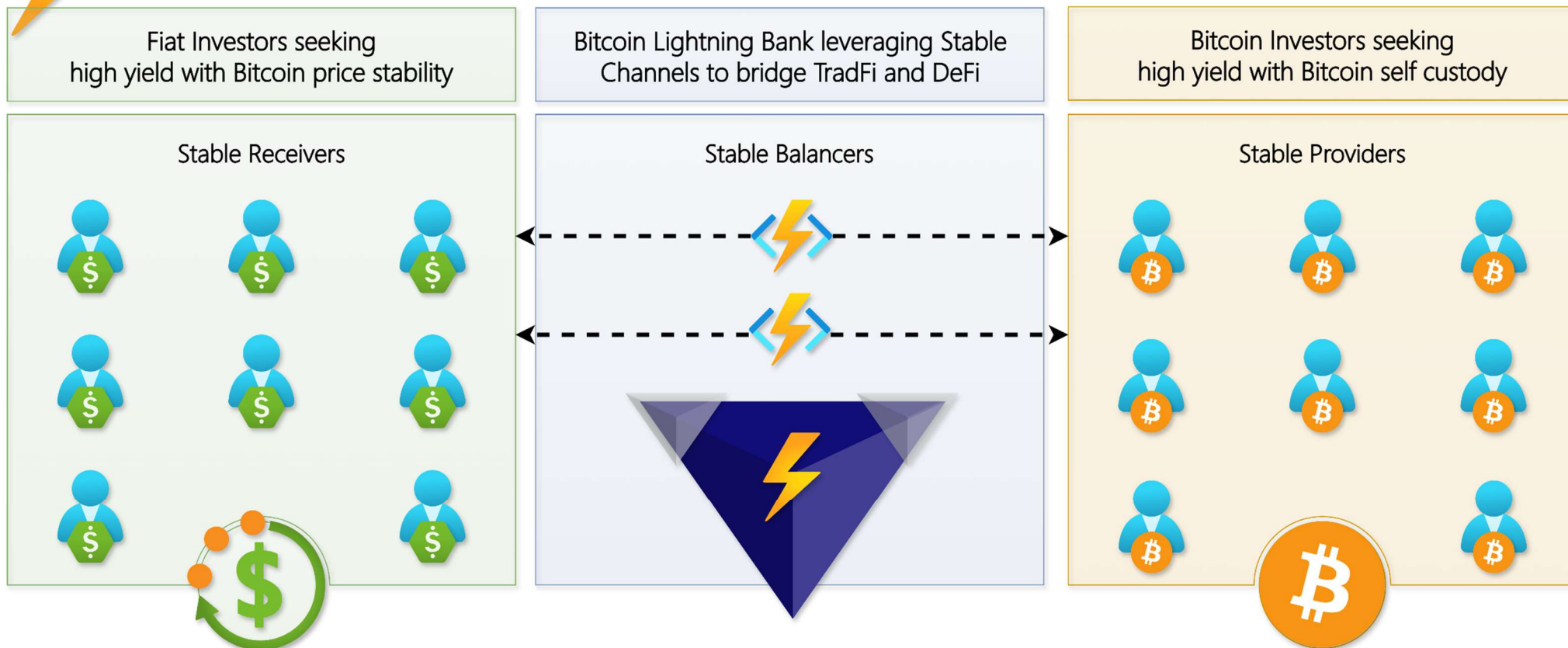|	Stable Channel Life Cycle	Description
1	Start or Splice-In Stable Channel	Stable Receiver, Stable Balancer, and Stable Provider add Bitcoin into the Lightning Channel to either initiate the connection or keep it active and just splice-in liquidity.
2	Upon Bitcoin Price Movement, Send Bitcoin to Stable Balancer	If the Bitcoin price increases, then the Stable Receiver sends Bitcoin to the Stable Balancer. If the Bitcoin price decreases, then the Stable Provider sends Bitcoin to the Stable Balancer.
3	Rebalance Stable Receiver and Stable Provider then Distribute Bitcoin Yield	Stable Balancer periodically sends Bitcoin to the Stable Receiver to ensure a stable Fiat balance, sends Bitcoin to the Stable Provider to ensure a stable Bitcoin balance, and distributes the remaining Bitcoin Yield to all participants based on the pre-defined yield allocation agreements.
4	Close or Splice-Out Stable Channel	Stable Receiver and Stable Provider remove Bitcoin from the Lightning Channel to either close the connection or keep it active and just splice-out liquidity.

Bitcoin Lightning Bank - Bitcoin Growth Yield and Market Intelligence

Bitcoin is extracted from a **Stable Receiver** at the Bitcoin Growth Rate

Yield **stops** during Bitcoin stagnation to form yield **valleys**

Bitcoin is extracted from a **Stable Provider** at the Bitcoin Contraction Rate

Yield **increases** during Bitcoin expansion to form yield **peaks**

Yield **decreases** during Bitcoin contraction to form yield **cliffs**

Bitcoin Growth Yield is acquired by following the Bitcoin Compound Annual Growth Rate (CAGR)

Market Intelligence identifies opportunities to maximize returns by taking advantage of yield peaks, valleys, and cliffs

Bitcoin Growth Yield Scenario		Market Intelligence Strategy
Yield Peak	Yield increases during Bitcoin expansion	When the Bitcoin price rises to reach a yield threshold it is ideal to close the Stable Channel, sell the remaining Bitcoin, and then call the bond back for repayment. Afterward, new bonds can be issued with the yield to extract and duration terms reset. When the bank sells the remaining Bitcoin during market overperformance it frees liquidity so that it can issue new bonds then purchase Bitcoin again later during market underperformance thereby maximizing returns that leverages the Bitcoin volatility.
Yield Valley	Yield stops during Bitcoin stagnation	When the Bitcoin price stagnates then the yield is dynamically reduced or stopped entirely. If the yield returns have been underwhelming throughout an entire bond lifespan, then the bond can be extended to capitalize on future positive Bitcoin price movements or hedged with a put option to sell back the bond to the Bank. In addition, Stable Providers can offer a fixed interest rate to Stable Receivers so that the yield is immune to Bitcoin price stagnation to entice more investors.
Yield Cliff	Yield decreases during Bitcoin contraction	When the Bitcoin price decreases then any yield not yet distributed is given back to the Stable Receiver as well as Bitcoin is transferred from the Stable Provider to the Stable Receiver to make their fiat balance whole. When the Bitcoin rises again then Bitcoin is sent back to the Stable Provider to make their Bitcoin balance whole. If Bitcoin experiences a significant drawdown and a balance threshold is reached, then the Stable Provider must top-up their balance or risk liquidating their entire position to the Bank. If liquidated, the bank will take all of the profit once Bitcoin recovers and can choose to distribute extra yield to bond holders to compensate for the lack of Bitcoin yield.

Bitcoin Lightning Bank - The Decentralized Strategy

Fiat Investors seeking high yield with Bitcoin price stability	Bitcoin Lightning Bank leveraging Stable Channels to bridge TradFi and DeFi	Bitcoin Investors seeking high yield with Bitcoin self custody
Stable Receivers	Stable Balancers	Stable Providers

The Decentralized Strategy	Lightning Channel Role
Fiat Investor	Stable Receiver holds a Bitcoin balance and remains stable in fiat terms. Centralized / Custodial products such as **Bitcoin Lightning Stable Bonds** or **Preferred Shares** are purchased or Decentralized / Non-Custodial services such as **Bitcoin Lightning Stable Savings** are used.
Lightning Bank	Stable Balancer holds a Bitcoin balance and provides stability mechanisms to ensure both participants have the proper balance while distributing yield based on pre-defined yield allocations.
Bitcoin Investor	Stable Provider holds a Bitcoin balance and remains stable in Bitcoin terms. Decentralized / Non-Custodial services such as **Bitcoin Lightning Stable Savings** are used.

Bitcoin Lightning Stable Bonds

Fiat Investor — CeFi

- Stable USD balance backed by Bitcoin in custody
- Secured over collateralization by a decentralized network of Bitcoin Stable Providers in Lightning Network Channels
- Flexible duration market intelligence features that supports callable, puttable, and extendable actions based on Bitcoin growth yield
- Flexible interest rates that supports fixed set by Stable Providers or variable based on Bitcoin Compound Annual Growth Rate
- Flexible interest payment frequency of monthly, quarterly, semi-annually, or end of maturity annually compounded

Bitcoin Lightning Stable Preferred Shares

Fiat Investor — CeFi

- Stable USD balance backed by Bitcoin in custody
- Secured over collateralization by a decentralized network of Bitcoin Stable Providers in Lightning Network Channels
- Flexible duration since shares can be purchased or sold in the market as you see fit
- Flexible dividend rates that supports fixed set by Stable Providers or variable based on Bitcoin Compound Annual Growth Rate
- Monthly dividend payments

Bitcoin Lightning Stable Savings (USD)

Fiat Investor — DeFi

- Stable USD balance backed by Bitcoin in self custody
- Secured over collateralization by a decentralized network of Bitcoin Stable Providers in Lightning Network Channels
- Flexible duration self custody features allows you to deposit or withdraw as you see fit
- Flexible interest rates that supports fixed set by Stable Providers or variable based on Bitcoin Compound Annual Growth Rate
- Flexible interest payment frequency of monthly, quarterly, semi-annually, or end of maturity annually compounded
- Lightning Bank SDK for functionality integration into popular Lightning Wallets

Bitcoin Lightning Stable Savings (BTC)

Bitcoin Investor — DeFi

- Stable BTC balance in self custody
- Secured over collateralization by a decentralized network of Bitcoin Stable Receivers in Lightning Network Channels
- Flexible duration self custody features allows you to deposit or withdraw as you see fit
- Flexible interest rates that supports fixed set by Stable Providers or variable based on Bitcoin Compound Annual Growth Rate
- Flexible interest payment frequency of monthly, quarterly, semi-annually, or end of maturity annually compounded
- Lightning Bank SDK for functionality integration into popular Lightning Wallets

Lightning Bank Products and Services	Customer	Service	Fee	Description
Bitcoin Lightning Stable Bonds Bitcoin Lightning Stable Preferred Shares Bitcoin Lightning Stable Savings	Fiat Investor	Standard	0%	Enterprise-grade Lightning Network Stable Channel liquidity services which provide efficient USD principal balance stability coupled with high-yielding USD interest payments
		Premium	0%	Standard plus ultra-high yielding USD interest payments generated by locking funds and compounding interest in Bitcoin over the duration of the lock
Bitcoin Lightning Stable Savings	Bitcoin Investor	Standard	10%	Enterprise-grade Lightning Network Stable Channel liquidity services which provide efficient BTC principal balance stability coupled with high-yielding BTC interest payments
		Premium	**20%**	**Standard plus Bitcoin Drawdown Liquidation Protection. Fixed interest payments are still required otherwise liquidation can occur if the balance goes below the acceptable threshold.**

Lightning Bank Fixed Income Bitcoin-Backed Equities and Securities (Bonds & Preferred Shares)								Bitcoin Compound Annual Growth Rate Scenarios					
	Fiat Investor			Bitcoin Investor				20%	20%	30%	30%	40%	40%
#	Service	Payment Frequency	Annual Rate (USD)	Service	Payment Frequency	BTC Yield Allocation	Fee	BiGY Only	BiGY & 1% BiTY	BiGY Only	BiGY & 1% BiTY	BiGY Only	BiGY & 1% BiTY
1	Standard	Monthly	7.50%	Standard	Monthly	90%	10%	6.28%	8.08%	9.50%	11.30%	11.60%	13.40%
2	Premium	Maturity Date	11.16% to 16.42%	**Premium**	**Monthly**	**80%**	**20%**	**5.08%**	**6.68%**	**8.04%**	**9.64%**	**9.97%**	**11.57%**
3	Standard	Monthly	10.00%	Standard	Monthly	90%	10%	4.78%	6.58%	8.28%	10.08%	10.58%	12.38%
4	Premium	Maturity Date	14.88% to 21.89%	**Premium**	**Monthly**	**80%**	**20%**	**3.59%**	**5.19%**	**6.82%**	**8.42%**	**8.95%**	**10.55%**
5	Standard	Monthly	12.50%	Standard	Monthly	90%	10%	3.29%	5.09%	7.06%	8.86%	9.57%	11.37%
6	Premium	Maturity Date	18.60% to 27.36%	**Premium**	**Monthly**	**80%**	**20%**	**2.09%**	**3.69%**	**7.20%**	**7.20%**	**7.94%**	**9.54%**
7	Standard	Monthly	15.00%	Standard	Monthly	90%	10%	1.79%	3.59%	5.85%	7.65%	8.55%	10.35%
8	Premium	Maturity Date	22.32% to 32.84%	**Premium**	**Monthly**	**80%**	**20%**	**0.60%**	**2.20%**	**4.38%**	**5.98%**	**6.92%**	**8.52%**
9	Standard	Monthly	17.50%	Standard	Monthly	90%	10%	0.30%	2.10%	4.63%	6.43%	7.53%	9.33%
10	Premium	Maturity Date	26.05% to 38.31%	**Premium**	**Monthly**	**80%**	**20%**	**-0.90%**	**0.70%**	**3.17%**	**4.77%**	**5.90%**	**7.50%**
Lightning Bank Service Fees				Standard	Monthly	10%	-	1.20%	1.40%	1.46%	1.66%	1.63%	1.83%
				Premium	Monthly	20%	-	2.39%	2.79%	2.92%	3.32%	3.26%	3.66%

Derivatives NAV (DNav) = Bitcoin Growth Yield (BiGY) generated from Bitcoin Compound Annual Growth Rate

Lightning NAV (LNav) = Bitcoin Transaction Yield (BiTY) generated from Lightning Network Routing Fees

Credit NAV (CNav) = Preferred Shares are non-convertible, callable and retractable | **Bonds** are non-convertible, callable, puttable, extendible and secured | **Premium Bonds** are tax-exempt zero coupons with the same annual rate in USD as **Standard Bonds** but instead compounded in Bitcoin and then is sold at maturity to provide a lump sum USD payment

Annual Bitcoin Growth Yield Burndown Estimates	Duration	20% BTC CAGR	30% BTC CAGR	40% BTC CAGR
	Year 1	83.33%	76.92%	71.43%
Bitcoin Growth Yield Remaining	Year 3	57.87%	45.52%	36.44%
* Indicates remaining yield to be farmed from Fiat Investor	**Year 5**	**40.19%**	**26.93%**	**18.59%**
* Highlighted row indicates when majority of the yield has been farmed as an ideal channel closure guideline	Year 7	27.91%	15.94%	9.49%
* Bitcoin Growth Yield (BiGY) generated rom Bitcoin Compound Annual Growth Rate (BTC CAGR)	Year 10	16.15%	7.25%	3.46%

Lightning Bank 5 Year Bitcoin Yield Estimates			Bitcoin Compound Annual Growth Rate Scenarios		
Total Value Locked	**Forward Metric**	**BTC Yield Allocation**	**20% BTC CAGR** BiGY & 1% BiTY	**30% BTC CAGR** BiGY & 1% BiTY	**40% BTC CAGR** BiGY & 1% BiTY
20K BTC	Bitcoin Earnings Annual Average	10%	122	148	165
		20%	**243**	**296**	**330**
	Bitcoin Assets Cumulative Total	10%	608	741	824
		20%	**1,216**	**1,481**	**1,648**
400K BTC	Bitcoin Earnings Annual Average	10%	2,432	2,963	3,296
		20%	**4,865**	**5,925**	**6,593**
	Bitcoin Assets Cumulative Total	10%	12,162	14,813	16,481
		20%	**24,325**	**29,627**	**32,963**
1M BTC	Bitcoin Earnings Annual Average	10%	6,081	7,407	8,241
		20%	**12,162**	**14,813**	**16,481**
	Bitcoin Assets Cumulative Total	10%	30,406	37,034	41,203
		20%	**60,812**	**74,067**	**82,407**
2.1M BTC	Bitcoin Earnings Annual Average	10%	12,771	15,554	17,305
		20%	**25,541**	**31,108**	**34,611**
	Bitcoin Assets Cumulative Total	10%	63,853	77,770	86,527
		20%	**127,706**	**155,541**	**173,054**

The goal is to offer the highest interest Bitcoin-backed products and services on the market to generate demand and build the world's largest decentralized Bitcoin Total Value Locked (TVL) located in Lightning Network channels that dual serve as routing nodes to provide more liquidity and scalability to the Lightning Network.

The pathway to 2.1 million Bitcoin TVL on the Lightning Network has never been clearer.