



# 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.

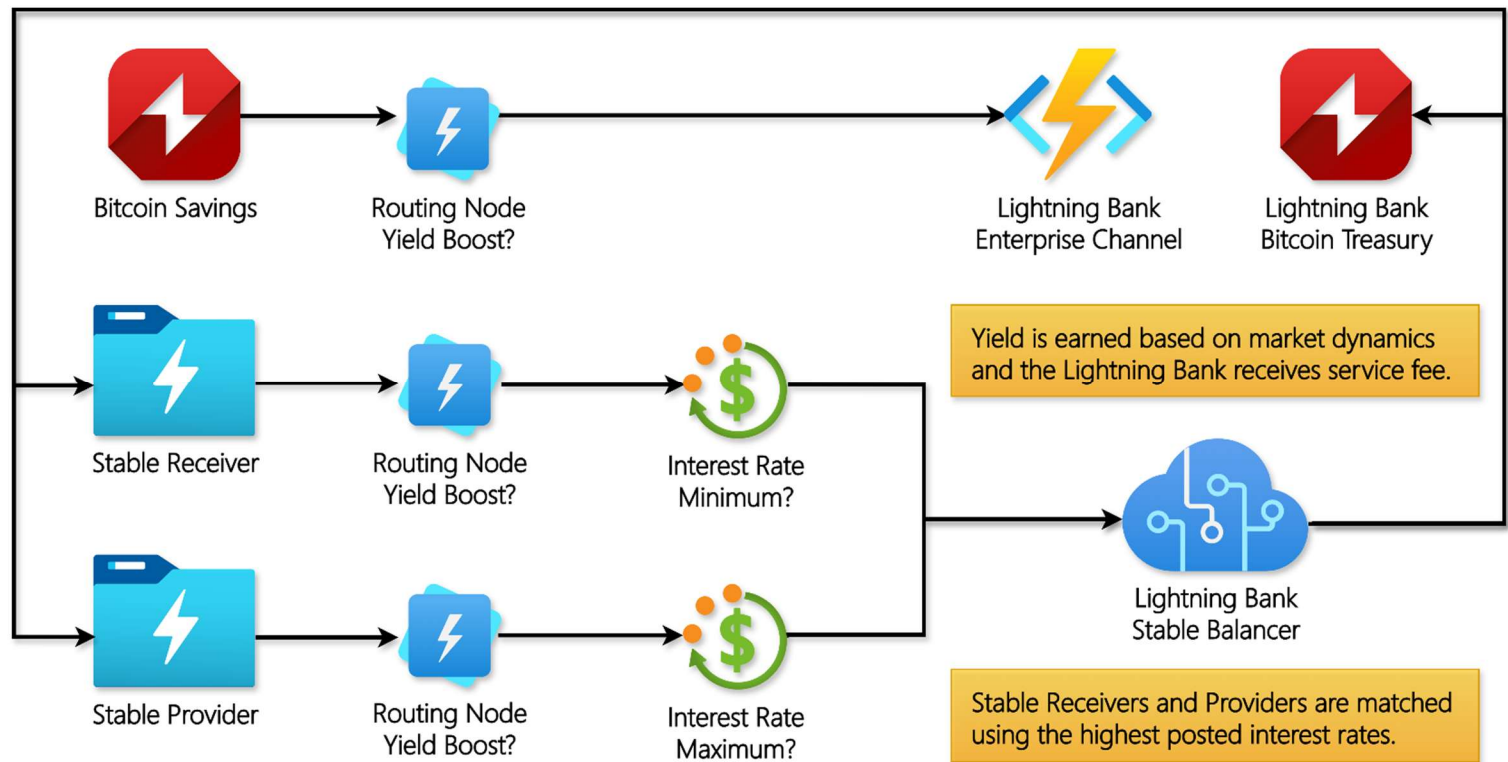
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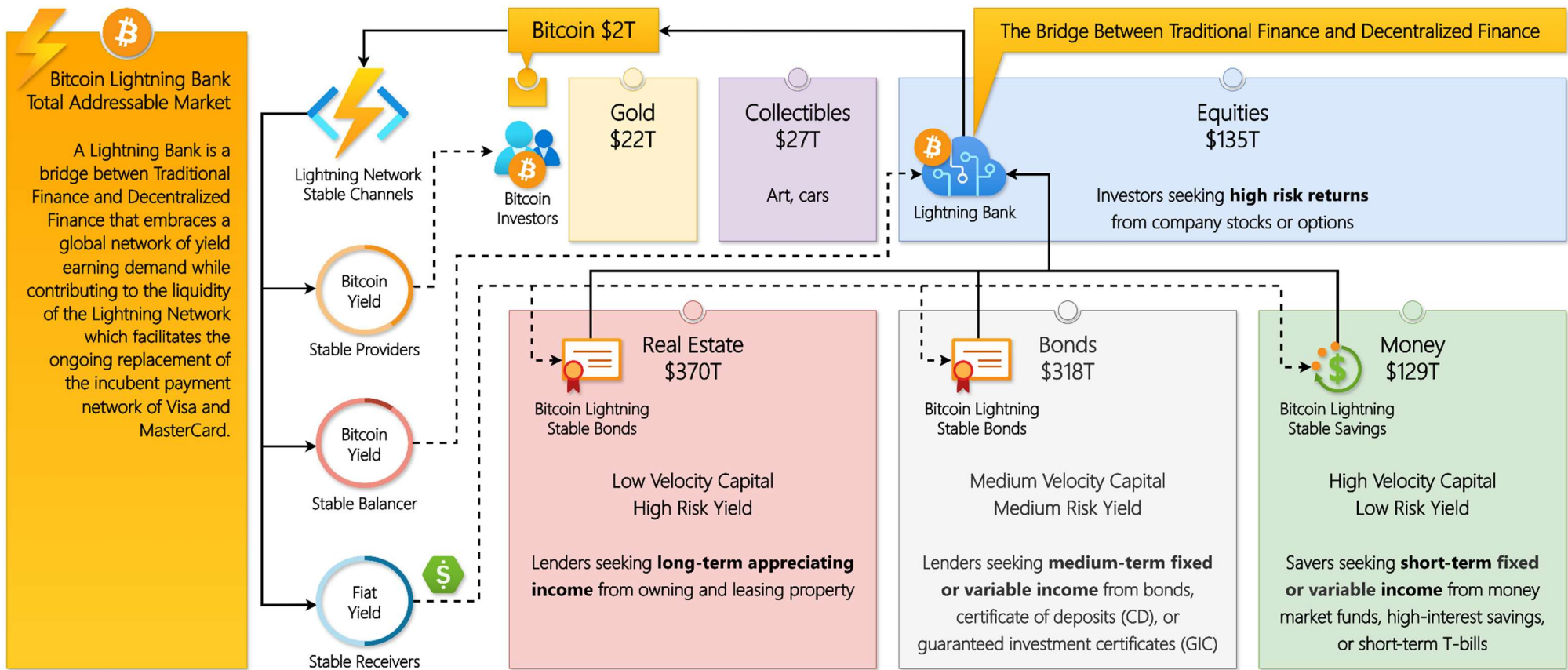
## Bitcoin Lightning Bank Overview and Features

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



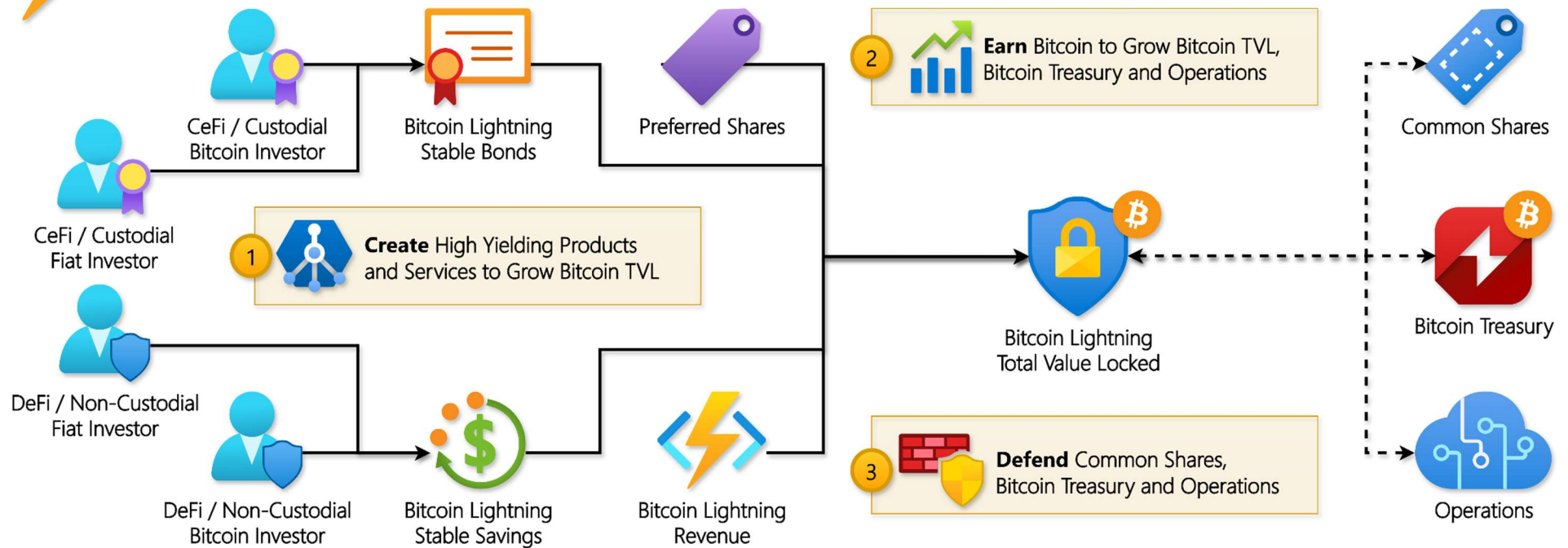
Feature Comparison	Bitcoin Treasury Companies and Bitcoin Banks	Bitcoin Lightning Banks	Bitcoin Lightning Stable Bonds	
Financial Products	Centralized Finance (CeFi)	Centralized and Decentralized Finance (CeFi & DeFi)	Flexible Rates	Fixed or variable rates based on percentage of stable Fiat or Bitcoin CAGR
Financial Rails	Traditional	Traditional and the Bitcoin Lightning Network		
Financial Management	Custodial	Custodial and non-custodial	Tax-Deductible	Interest payments are tax-deductible bank expenditures
Financial Markets	National market limitations	DeFi is globally accessible		
Interest Rate Makers	Company	DeFi is an open and free market	Securable	Bitcoin is stored in unique Stable Channels to extract yield
Bitcoin Participants	Company	Bank, Fiat Investors, and Bitcoin Investors		
Bitcoin Yield Distribution	<b>Concentration within Company</b>	<b>Distributed fairly between market participants</b>	Callable or Puttable	Early redemption option based on Bitcoin Growth Yield performance
Bitcoin Liquidation Risk	<b>Concentration within Company</b>	<b>Distributed between Stable Providers</b>		
Bitcoin Liquidation Priority	<b>Bond holders are paid first</b>	<b>Bank is paid first by liquidated Stable Providers</b>	Extendible	If Bitcoin underperforms then the bond can optionally be extended
Bitcoin Service Fees	<b>None</b>	<b>Bitcoin-denominated liquidity service fees</b>		
Bitcoin Strategy Tools	<b>Profit, Stock, Debt, and Bitcoin Treasury</b>	<b>Same + Bitcoin TVL to defend Bitcoin Treasury</b>	Non-Convertible	Share dilution is not necessary due to the superior yield
Bitcoin Total Value Locked Growth Rate	<b>CeFi = 1 Bitcoin buy adds 1 Bitcoin to BTC TVL</b> <b>500K BTC buys 500K BTC TVL in Custody</b>	<b>DeFi = 1 Bitcoin buy adds 2 Bitcoin to BTC TVL</b> <b>500K BTC buys 1M BTC TVL in Lightning Network</b>		



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	<b>Purchase TradFi products to earn interest or dividends</b>	<b>Self-custody Bitcoin in Stable Channel for greater control</b>
	Risk	Low	Low	<b>Low</b>	<b>Low</b>
	Reward	High	High	<b>Maximum</b>	<b>Maximum</b>
Bitcoin Investor	Goal	Send Bitcoin to Lightning Bank to manage the 2X Leverage Long Stable Channel while maintenance is required to avoid liquidation			<b>Self-custody Bitcoin in 2X Leverage Long Stable Channel while maintenance is required to avoid liquidation</b>
	Risk	High	High	<b>High</b>	<b>High</b>
	Reward	High	High	<b>Maximum</b>	<b>Maximum</b>



## Bitcoin Lightning Bank - The Proof of Work Bitcoin Strategy

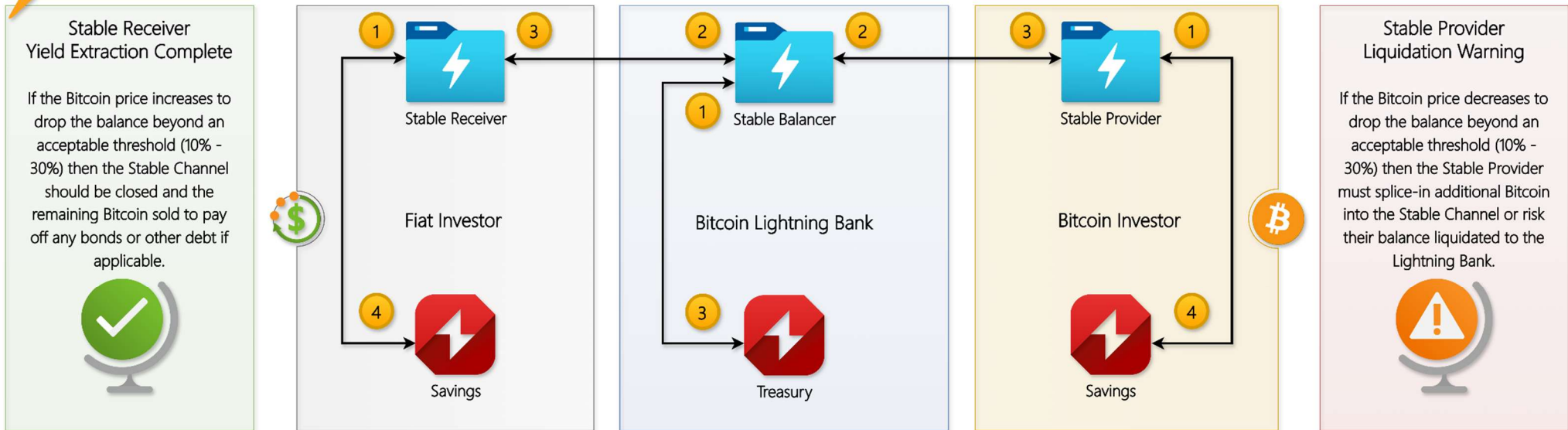


PoW Bitcoin Strategy	Create and Earn in Breadth	Defend in Depth
Bitcoin Lightning Stable Bonds	Bank sells bonds to Fiat or Bitcoin Investors then buys Bitcoin on their behalf and deposits into a custodial portion of a Lightning Network Stable Channel to grow Bitcoin Lightning TVL and earn yield	Mitigate 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 and grow Bitcoin Lightning TVL and earn yield as a Stable Receiver	Mitigate risks by allocating revenue to Stable Receivers so that Bitcoin Yield covers dividend then shares bought back when channel closes
Common Shares	Bank sells Common Shares to buy Bitcoin and grow Treasury or Operations	<b>Share dilution is protected by above practices if done efficiently</b>
Bitcoin Treasury	Bank can deposit Bitcoin Treasury into the Bitcoin Lightning TVL to earn yield	<b>Treasury liquidation is protected by above practices if done efficiently</b>





## Bitcoin Lightning Bank - Stable Channel Life Cycle

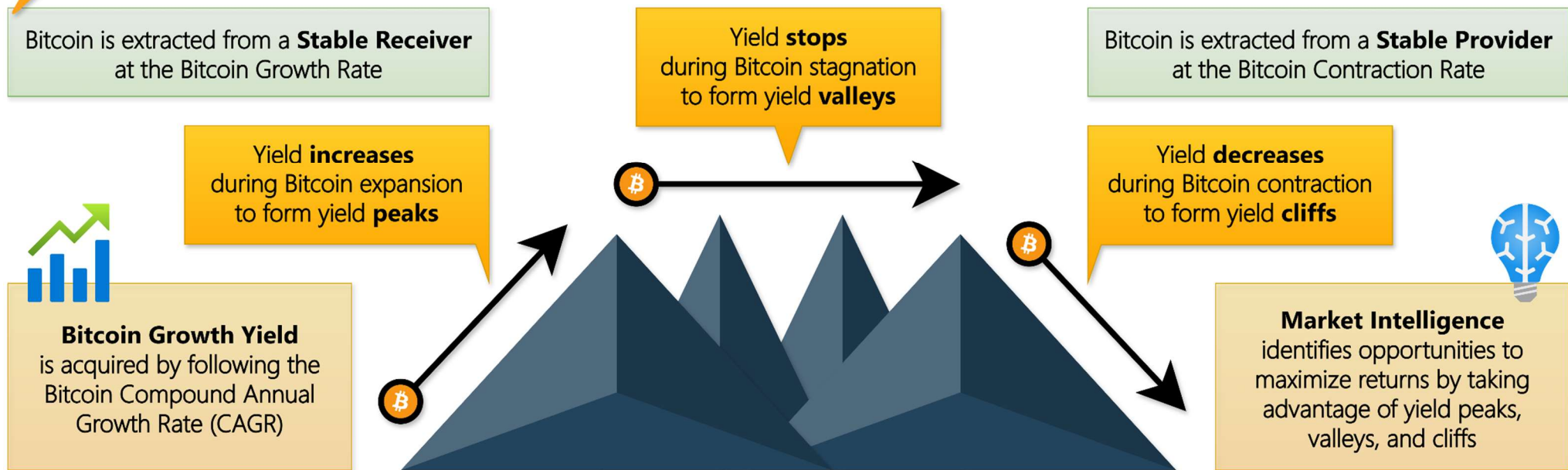


The Lightning Bank Stable Balancer is an intelligent automated market maker (AMM) that maintains a liquidity pool to splice in and out of the Lightning Channels between a Stable Receiver and Stable Provider so that the Stable Receiver has a guaranteed stable Fiat balance backed by Bitcoin.

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.



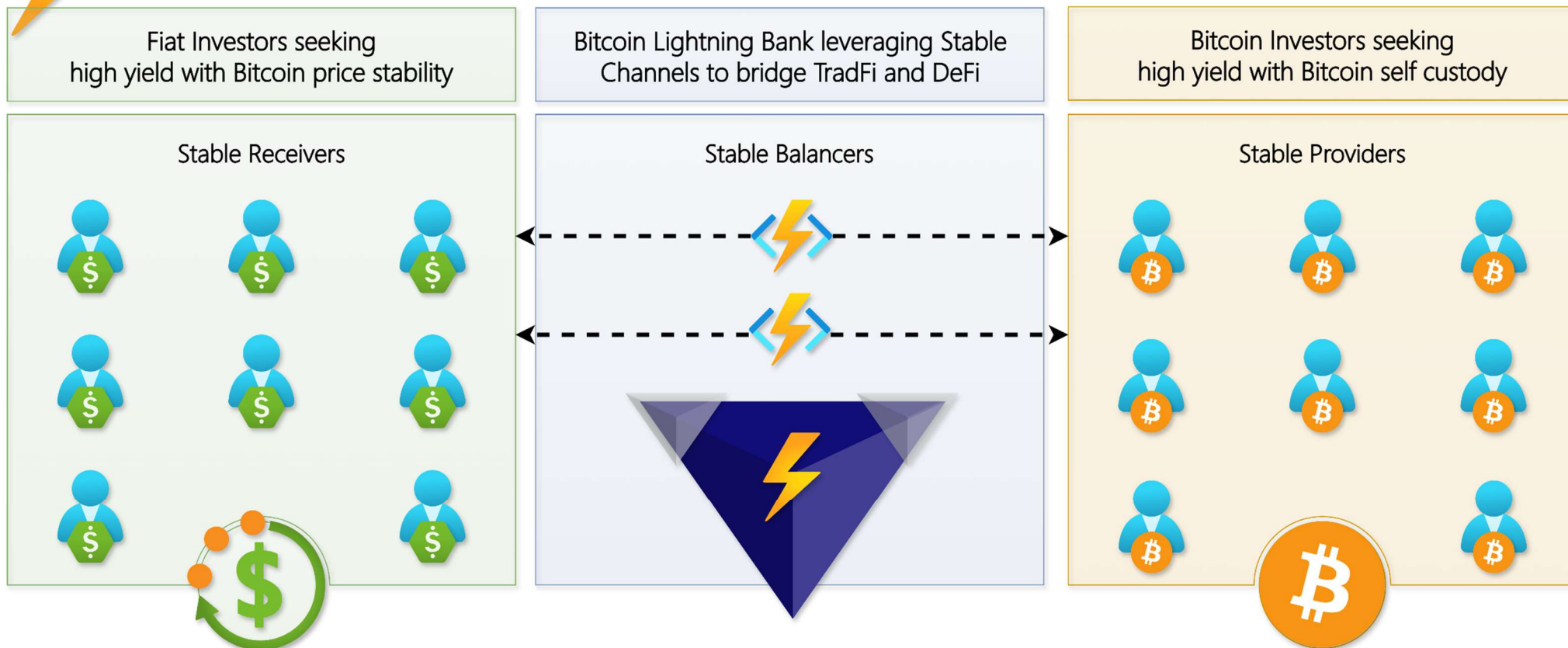
## Bitcoin Lightning Bank - Bitcoin Growth Yield and Market Intelligence



Bitcoin 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



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 <b>Bitcoin Lightning Stable Bonds</b> or <b>Preferred Shares</b> are purchased or Decentralized / Non-Custodial services such as <b>Bitcoin Lightning Stable Savings</b> 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 <b>Bitcoin Lightning Stable Savings</b> are used.



## Bitcoin Lightning Bank - Financial Product Overview

Fiat Investor

CeFi

### Bitcoin Lightning Stable Bonds



- 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

Fiat Investor

CeFi

### Bitcoin Lightning Stable Preferred Shares



- 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

Fiat Investor

DeFi

### Bitcoin Lightning Stable Savings (USD)



- 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 Investor

DeFi

### Bitcoin Lightning Stable Savings (BTC)



- 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



## Bitcoin Lightning Bank Revenue Streams

Revenue Stream	Short Name	Revenue Source	Description
Bitcoin Growth Yield	BiGY	Service Fee – Basic 5%	Lightning Network enterprise stable channel base services that pair Stable Receivers with Stable Providers for yield extraction.
		Service Fee – Premium 15%	<b>Stable Receiver – Compounded High-Yielding Interest</b> Facilitates compounding interest for higher yields and distributes it at the end of the bond maturity date.
			<b>Stable Provider – Bitcoin Drawdown Liquidation Protection</b> Protects against liquidating the position in the event of a Bitcoin drawdown which occurs when the balance decreases beyond an acceptable stability threshold. This feature does not provide Fixed Obligation Overdraft Liquidation Protection so the Stable Provider will still be liquidated in the event an interest payment causes the balance to go beyond an acceptable stability threshold.
			<b>Stable Provider – Fixed Obligation Overdraft and Bitcoin Drawdown Liquidation Protection</b> The ultimate passive investment experience providing complete protection against position liquidation in the event of either Fixed Obligation Overdrafts or Bitcoin Drawdowns which would normally occur when the balance decreases beyond an acceptable stability threshold. The luxury service provides risk-free protection but at the highest cost in fees to the bank because the bank takes on most of the risk.
		Stable Provider Liquidation	When the Stable Provider fails to maintain their balance above an acceptable stability threshold during Bitcoin drawdowns or when fulfilling fixed obligations then the entire position is liquidated to the bank which takes on the burden of providing price stability to the Stable Receiver.
Bitcoin Transaction Yield	BiTY	Stable Provider	The bank can participate as a Stable Provider to earn yield by going 2X long on a portion of its Bitcoin Treasury. This allows the bank to leverage its Bitcoin using its own services without entrusting it with third parties.
		Service Fee	Lightning Network routing fees applied to Bitcoin transactions
Bitcoin Liquidity Yield	BiLY	Service Fee	Lightning Network liquidity leasing fees applied to entities requiring temporary liquidity being relocated to other payment channels to facilitate transactions
Bitcoin Futures Yield	BiFY	Product Fee	The bank can sell options for its stock to allow the convertibility of Bitcoin into common shares if the stock price overperforms Bitcoin by specific dates

Annual Bitcoin Growth Yield Summary Estimates - 5 Year Average							Bitcoin Compound Annual Growth Rate Scenarios		
Participant	Role	Unit	Payment Frequency	Service Type	Rate Type	Yield Allocation	20%	30%	40%
Fiat Investor	Stable Receiver	Fiat	Semi-Annually, Quarterly, Monthly	Basic	Fixed	75% to 37.5%	15%	15%	15%
					Variable	50%	10%	15%	20%
			5 Year Maturity Date (Compounded)	Premium	Fixed	65% to 27.5%	19.35%	21.70%	24.08%
					Variable	40%	11.91%	21.70%	35.03%
Bitcoin Investor	Stable Provider	BTC	Semi-Annually, Quarterly, Monthly	Basic	Fixed Obligation	15% to 52.5%	1.79%	5.85%	8.55%
					Variable Obligation	40%	4.78%	5.85%	6.51%
				Premium	Fixed Obligation	5% to 42.5%	0.60%	4.38%	6.92%
					Variable Obligation	30%	3.59%	4.38%	4.88%
				Luxury	Fixed Obligation	-5% to 32.5%	-0.60%	2.92%	5.29%
Lightning Bank	Stable Balancer	BTC	Semi-Annually, Quarterly, Monthly		10%	1.20%	1.46%	1.63%	
					20%	2.39%	2.92%	3.26%	
					30%	3.59%	4.38%	4.88%	
					40%	4.78%	5.85%	6.51%	
Annual Bitcoin Growth Yield Burndown Estimates									
<div>Bitcoin Yield Remaining</div> <div>* Indicates remaining yield to be extracted from Stable Receiver</div> <div>* Highlighted Percentages indicate when majority of the yield has been extracted for an exit then obtain more Fiat liquidity to purchase additional Bitcoin</div>						Year 1	83.33%	76.92%	71.43%
						Year 3	57.87%	45.52%	36.44%
						Year 5	40.19%	26.93%	18.59%
						Year 7	27.91%	15.94%	9.49%
						Year 10	16.15%	7.25%	3.46%

Service Pairing Fee Summary						
Fiat Investor – Stable Receiver			Bitcoin Investor – Stable Provider			Lightning Bank – Stable Balancer
Basic – 5%			Basic – 5%			10%
Basic – 5%			Premium – 15%			20%
Basic Fixed – 5%			Luxury – 25%			30%
Premium – 15%			Basic – 5%			20%
Premium – 15%			Premium – 15%			30%
Premium Fixed – 15%			Luxury – 25%			40%
Service Pairing Rate Summary * Annual Rates Estimated from 20% to 40% Bitcoin Compound Annual Growth Rate						
Fiat Investor – Stable Receiver			Bitcoin Investor – Stable Provider			Lightning Bank – Stable Balancer
Service and Rate Type	Payment Frequency	Annual Rate (USD)	Service and Rate Type	Payment Frequency	Annual Rate (BTC)	Service Fee
Basic Fixed	Monthly	15%	Basic Fixed Obligation	Monthly	1.79% to 8.55%	10%
			Premium Fixed Obligation	Monthly	0.60% to 6.92%	20%
			Luxury Fixed Obligation	Monthly	-0.60% to 5.29%	30%
Basic Variable	Semi-Annually or Quarterly	10% to 20%	Basic Variable Obligation	Monthly	4.78% to 6.51%	10%
			Premium Variable Obligation	Monthly	3.59% to 4.88%	20%
Premium Fixed	5 Year Maturity Date (Compounded)	19.35% to 24.08%	Basic Fixed Obligation	Monthly	1.79% to 8.55%	20%
			Premium Fixed Obligation	Monthly	0.60% to 6.92%	30%
			Luxury Fixed Obligation	Monthly	-0.60% to 5.29%	40%
Premium Variable	5 Year Maturity Date (Compounded)	11.91% to 35.03%	Basic Variable Obligation	Monthly	4.78% to 6.51%	20%
			Premium Variable Obligation	Monthly	3.59% to 4.88%	30%

Bitcoin Lightning Bank 5 Year Bitcoin Growth Yield Estimates			Bitcoin Compound Annual Growth Rate Scenarios		
Total Value Locked	Forward Metric	Yield Allocation	20%	30%	40%
20K BTC	Bitcoin Earnings Annual Average	10%	120	146	163
		20%	239	292	326
		30%	359	438	488
	Bitcoin Assets Cumulative Total	10%	598	731	814
		20%	1,196	1,461	1,628
		30%	1,794	2,192	2,442
400K BTC	Bitcoin Earnings Annual Average	10%	2,392	2,923	3,256
		20%	4,785	5,845	6,513
		30%	7,177	8,768	9,769
	Bitcoin Assets Cumulative Total	10%	11,962	14,613	16,281
		20%	23,925	29,227	32,563
		30%	35,887	43,840	48,844
1M BTC	Bitcoin Earnings Annual Average	10%	5,981	7,307	8,141
		20%	11,962	14,613	16,281
		30%	17,944	21,920	24,422
	Bitcoin Assets Cumulative Total	10%	29,906	36,534	40,703
		20%	59,812	73,067	81,407
		30%	89,718	109,601	122,110
2.1M BTC	Bitcoin Earnings Annual Average	10%	12,561	15,344	17,095
		20%	25,121	30,688	34,191
		30%	37,682	46,032	51,286
	Bitcoin Assets Cumulative Total	10%	62,803	76,720	85,477
		20%	125,606	153,441	170,954
		30%	188,409	230,161	256,431

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.