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| A cloud with a bitcoin logo  AI-generated content may be incorrect.  Bitcoin Lightning Bank Case Study  The Decentralized and Distributed 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 concentrated 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 |

A diagram of a power supply system

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| 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** |

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| 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 |

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| 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 shares) 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 | Deposit Bitcoin to Lightning Bank to manage the Leverage Long Stable Channel while maintenance is required to avoid liquidation | | **Self-custody Bitcoin in Leverage Long Stable Channel while maintenance is required to avoid liquidation** | |
| Risk | High | High | **High** | **High** |
| Reward | High | High | **Maximum** | **Maximum** |

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| PoW Bitcoin Strategy | Create and Earn in Breadth | Defend in Depth |
| Bonds and Preferred Shares | Bank sells products to Fiat Investors then buys Bitcoin and deposits into a custodial portion of a Lightning Network Stable Channel to grow Bitcoin Lightning TVL and earn yield as a Stable Receiver. Bond interest or share dividend payments are covered by Stable Providers. | 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. |
| Savings and Deposits | Bank provides service for Fiat or Bitcoin Investors to deposit owned Bitcoin into a non-custodial or 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 |
| Loans and Credit Lines | Bitcoin Investors can use their custodial Bitcoin deposits as collateral for borrowing Bitcoin in a loan to be used for increased leverage or borrowing USAT / USDT in a credit line and interest fees are charged. | Mitigate risks by earning Bitcoin interest revenue from lending products |
| 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 |
| Operations Revenue | Bank earns Lightning Network node operation revenue. | Mitigate risks by earning Bitcoin routing and liquidity management revenue |
| 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** |

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| 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. |

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| 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, buyout or 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. Stable Providers offer a fixed interest rate to Stable Receivers so that the yield is immune to Bitcoin price stagnation, so this is just a Bitcoin Investor concern. |
| 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 the profit once Bitcoin recovers but is now on the hook for making interest payments. |

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| Lightning Bank Products | Customer | Balance | Mechanics | Custodial | Redeemable | Yield Sources |
| Bitcoin Lightning Stable Bond | Fiat Investor | Stable Fiat backed by BTC | Deposited bitcoin is stabilized by an over collateralized network of Bitcoin Lightning Stable Providers | Yes | Yes, by both customer and issuer | Fixed Income from Stable Providers |
| Bitcoin Lightning Stable Preferred Share | Fiat Investor | Stable Fiat backed by BTC | Deposited bitcoin is stabilized by an over collateralized network of Bitcoin Lightning Stable Providers | Yes | Yes, by both customer and issuer | Fixed Income from Stable Providers |
| Bitcoin Lightning Stable Loan | Bitcoin Investor | Leveraged BTC | Deposited bitcoin leveraged by a network of Bitcoin Lightning Stable Receivers with the ability to borrow Bitcoin for additional leverage | Yes | Yes, by both customer and issuer | Bitcoin Growth and Lightning Transactions |
| Bitcoin Lightning Stable Credit Line | Bitcoin Investor | Leveraged BTC | Deposited bitcoin leveraged by a network of Bitcoin Lightning Stable Receivers with the ability to borrow USAT / USDT | Yes | Yes, by both customer and issuer | Bitcoin Growth and Lightning Transactions |
| Bitcoin Lightning Stable Deposit | Bitcoin Investor | Leveraged BTC | Deposited bitcoin leveraged by a network of Bitcoin Lightning Stable Receivers | Yes | Yes, by both customer and issuer | Bitcoin Growth and Lightning Transactions |
| Bitcoin Lightning Stable Savings | Fiat Investor | Stable Fiat backed by BTC | Deposited bitcoin is stabilized by an over collateralized network of Bitcoin Lightning Stable Providers | No | Yes, by customer only | Fixed Income from Stable Providers |
| Bitcoin Investor | Leveraged BTC | Deposited bitcoin is leveraged by a network of Bitcoin Lightning Stable Receivers | No | Yes, by customer only | Bitcoin Growth and Lightning Transactions |

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| Lightning Bank Services | | |
| Fiat Investor | Standard | Enterprise-grade Lightning Network Stable Channel liquidity services which provide efficient USD principal balance stability coupled with high-yielding USD interest payments |
| Premium | Standard plus ultra-high yielding USD interest payments generated by locking funds and compounding interest in Bitcoin over the duration of the lock |
| Bitcoin Investor | Standard | Enterprise-grade Lightning Network Stable Channel liquidity services which provide efficient BTC principal balance stability coupled with high-yielding BTC interest payments |
| Premium | Standard plus Bitcoin Drawdown Liquidation Protection. Liquidation can still occur if interest payments are not made or borrowed funds are not returned. |
| Luxury | Premium plus Bitcoin Yield Boost Loans which provide additional leverage with additional risk that the principal can be depleted quicker during Bitcoin Drawdowns so interest payment failures may trigger a liquidation event. |

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**Bonds** are non-convertible, callable, puttable, extendible and secured to the bitcoin contained as a Stable Receiver in Lightning Network channels.

**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

**Preferred Shares** are non-convertible, callable and retractable