Appendix 2. Bitcoin Staking Risk Profile Comparison

This appendix supports the claim in Section 2.1 that no Bitcoin yield product currently in production combines Bitcoin-denominated yield with self-custody. It compares the risk surfaces of the live alternatives against the proposed protocol bond, classifying each risk by whether its maximum loss can be quantified at the time a position opens. BTC has no native yield, so every BTC yield product introduces risk; the analysis below shows which risks each product carries and which the protocol bond removes.

The Stacks BTC protocol bond fills a market need for a native BTC yield product with known, bounded, and quantifiable risk. Stacks accomplishes this by collapsing all risk vectors into a single measurable loss percentage – 5%. The risk is completely isolated to STX, while the BTC sleeve remains in the user's wallet, free and clear from any other obligations.

> **1. Singular, quantifiable risk surface.** The only incremental, product-specific exposure introduced is 5% paired STX, marked daily, with a known notional set at the lock transaction.
>
> **2. BTC redeemable in ~10 minutes.** Principal is never "time-locked" in the same way that comparable products use the term. The Early Exit mechanism allows BTC redemption within one Bitcoin block confirmation. This potentially allows the same BTC to be utilized in other yield-bearing products that require collateral or a time-lock.
>
> **3. Principal and yield denominated in BTC.** BTC is the input and the output. There is no wrapper, synthetic token/dollar, or altcoin payout that has to be converted back. The single non-BTC element is the 5% paired STX, which is the explicit tradeoff to participate in the bond.

Risk Taxonomy

The taxonomy below groups risks present in the BTC yield market into three tiers by severity. Tier 1 covers risks where the maximum loss is not computable at issuance: custodial, smart-contract, and counterparty failures whose magnitude depends on external solvency or operational events. Tier 2 covers risks where the maximum loss is computable from disclosed parameters. Tier 3 covers opportunity costs that do not impair principal but restrict asset allocation.

Tier 1 — Unbounded principal loss

#	Risk	Mechanism	Protocol types that carry this risk
1.1	**Custodial insolvency**	Third party holds the BTC; bankruptcy, commingling, legal freeze, or segregation failure impairs recovery. Historical precedents: Mt. Gox, FTX, Celsius, BlockFi.	Centralized lending platforms; institutional custodial yield funds; wrapped-BTC issuers.
1.2	**Smart-contract / protocol exploit**	Bug, hacks, governance attack, or oracle manipulation drains the contract holding the BTC.	DeFi lending protocols; synthetic-asset protocols; restaking protocols; cross-chain bridges.
1.3	**Bridge / wrapper depeg**	Tokenized BTC trades away from 1:1 with native BTC if custody or arbitrage breaks.	Wrapped-BTC products on non-Bitcoin chains.
1.4	**Counterparty default / rehypothecation**	Custodian or platform lends the BTC to a third party who fails to return it, or otherwise becomes unable to return participant BTC.	Custodial BTC-lending products; rehypothecating CeFi yield platforms; structured products with options.
1.5	**Operational complexity/ catastrophic loss**	Capital loss can occur if the participant fails to maintain continuous operational discipline (channel monitoring, watchtower coverage, on-chain fee reserves) during a breach attempt, force-close, or pending-payment resolution.	Lightning routing; self-operated channel-based BTC infrastructure.
1.6	**Yield denomination mismatch**	Yield accrues in a non-BTC, non-USD asset that can decline independently of BTC.	Governance-token reward programs; alt-token staking-yield products; BTC restaking programs paying in target-chain tokens.

Tier 2 — Bounded principal loss

#	Risk	Mechanism	Protocol types that carry this risk
2.1	**Slashing**	Protocol-enforced penalty for validator or operator misbehavior, capped at a known ratio.	Direct PoS validation; BTC restaking protocols.
2.2	**Liquidation**	Collateralized position forcibly closed when LTV breaches a threshold; loss equals collateral less recovery.	DeFi collateralized borrowing; margin lending platforms; structured products with BTC-as-collateral overlays.

Tier 3 — Opportunity cost

#	Risk	Mechanism	Protocol types that carry this risk
3.1	**Time-lock illiquidity on principal**	BTC principal cannot be redeemed before lock or notice-period expiry. Capital is unavailable for other use during the lock.	Bonded staking without early-exit; term-lending products; CeFi fixed-term deposits; channel-based BTC infrastructure.
3.2	**Paired-asset price exposure**	Participant must hold a non-BTC asset upfront, whose price affects P&L during the holding period.	Dual-asset staking programs; dual-asset liquidity pools; collateralized borrowing against BTC.
3.3	**Capped upside**	Covered-call or similar overlay forfeits BTC appreciation above a strike price in exchange for premium income.	Covered-call income strategies; BTC-income structured notes.

Risk x Product Matrix

Table 1. The matrix maps seven products against the risks defined above. The Stacks Bitcoin Staking column is shaded for emphasis.

#	Risk	Stacks BTC Bonds	Babylon LBTC	Lightning routing	wBTC / Aave	Coinbase BTC yield	Bitwise BTC yield	Maple BTC Yield
Tier 1 — Unbounded principal loss								
1.1	Custodial insolvency	○	○	○	●	●	●	●
1.2	Smart-contract exploit	○	●	○	●	●	○	●
1.3	Bridge / wrapper depeg	○	●	○	●	●	○	○
1.4	Counterparty default / rehypothecation	○	○	○	●	●	●	●
1.5	Operational complexity, catastrophic loss	○	○	●	○	○	○	○
1.6	Yield denomination mismatch	○	●	○	○	○	○	●
Tier 2 — Bounded principal loss								
2.1	Slashing	○	●	○	○	○	○	○
2.2	Liquidation	○	○	○	●	○	●	○
Tier 3 — Opportunity cost								
3.1	Time-lock illiquidity	○	●	●	●	●	●	●
3.2	Paired-asset price exposure	●	○	○	○	○	○	○
3.3	Capped upside	○	○	○	○	○	●	○

● carries the risk ○ does not carry the risk

Table 1. Maple BTC Yield characterization reflects the program structure as it existed April–November 2025; the product has since been unwound, with 15% of lender principal currently retained pending legal resolution. Coinbase BTC yield refers to Coinbase's family of BTC yield offerings (Bitcoin Yield Fund and on-chain BTC yield via cbBTC on Base). Bitwise BTC yield reflects Bitwise's institutional BTC yield offerings, including the Kraken covered-call partnership and the Lombard Bitcoin Smart Accounts program (Q2 2026).

Case study: Maple/Core BTC Yield

Maple BTC Yield was an institutional Bitcoin yield product launched in partnership with the Core Foundation in April 2025. The product custodied BTC at qualified institutional custodians (Copper, BitGo), used Bitcoin L1 timelocks to preserve self-custody during deployment, and generated yield via Core Network's dual-staking mechanism. CORE token volatility was hedged through put options funded by cash collateral from Core Foundation. By mid-2025 the program had grown to over $150M in client BTC and was tracked by institutional rating frameworks as a leading self-custodial BTC yield offering. By November 2025 the program had unwound, with 15% of lender BTC principal currently retained pending legal resolution.

Table 2. 4 of 5 risk categories materialized, ultimately leading to its failure:

Risk (matrix ●)	
1.1 Custodial insolvency	The “bankruptcy-remote segregated portfolio” structure that institutional underwriting relied on did not prevent 15% of lender principal from being withheld. The legal architecture designed to ring-fence lender assets failed to return them whole.
1.4 Counterparty default / rehypothecation	Core Foundation was both the hedge counterparty for the CORE put options and the party whose injunction blocked Maple from selling CORE tokens. The unwind that constituted the program's downside protection depended on those sales and could not be executed.
1.6 Yield denomination mismatch	The CORE token, in which yield originated before conversion to BTC, declined approximately 90% between launch and Q4 2025. The hedge designed to absorb this decline was the same hedge that broke (see 1.4); the two risks compounded.
3.1 Time-lock illiquidity on principal	The program’s 90-day lockup meant participants could not exit when warning signs of partnership stress emerged in Q3 2025. Capital was committed when it could no longer be moved.

Maple BTC Yield was not a fringe product. It was institutional-grade by every conventional measure – qualified custodians, hedged exposure, segregated portfolio structure, audited operations – and was rated as such by third-party trackers. The Maple losses were not the failure of one risk in isolation but the compounding of correlated risks, and institutional ratings cannot price this in advance. Stacks Bitcoin Staking was deliberately designed to avoid this construct, collapsing every incremental, product-specific exposure into a single, bounded metric that an allocator can size and confidently underwrite.

Implications

The Maple/Core product launch along with the Babylon/Lombard partnership demonstrate clear demand for a native BTC yield protocol. However, it also reveals the complexity of constructing a product that is sustainable and comparable in risk to native POS networks such as Ethereum and Solana.

The Stacks BTC Staking product is materially better than native ETH or SOL staking on this dimension, as it does not require a multi-day unbonding period to redeem principal. Because the BTC remains unencumbered on Bitcoin L1 and is redeemable in ~10 minutes via Early Exit, it is available as collateral or cash-flow input for orthogonal yield strategies – covered calls, treasury overlays, or other structures – that can be additive to the 3% protocol yield without disturbing the bond.

Sources: Stacks Bitcoin Staking Whitepaper (May 2026); Maple Finance and Core Foundation public disclosures (April 2025 – November 2025); public product documentation for comparable yield offerings.