

DHN CRYPTO D-100 INDEX

BTC · Bitcoin

Scoring Report & Methodology Analysis

Total Score: 119 / 160

Research Date: March 2026 | Based on verifiable primary-source evidence

METHODOLOGY NOTE — MONETARY ASSET ARCHETYPE: Bitcoin (BTC) is the only pure monetary asset / store-of-value in the DHN D-100 Index. It is not a smart contract platform, not infrastructure middleware, and not a high-throughput payment network. Several criteria (TPS, smart contract audit, composability, yield instruments, ISO 20022, interoperability) are structural mismatches for Bitcoin's architectural philosophy, which deliberately prioritizes security, immutability, and simplicity over programmability and throughput. Bitcoin's score profile is intentionally polarized: near-maximum in Enterprise governance/security/regulation and Consumer institutional reach, with structural floors in DeFi composability and infrastructure throughput. This accurately reflects Bitcoin's role as the world's first and most secure digital monetary asset — not an application platform.

Pillar	Score	Max	% of Max
Enterprise	34	40	85%
Infrastructure	26	40	65%
DeFi	27	40	68%
Consumer	32	40	80%
TOTAL	119	160	74%

Enterprise

85% of max

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[REG] Regulatory Approval & Compliance

Bitcoin's regulatory status is the most legally settled of any digital asset globally — and the only one for which this is true without meaningful ambiguity. United States: U.S. spot Bitcoin ETF approved by the SEC in January 2024 — the first major crypto spot ETF approval, following a decade of applications. Multiple issuers approved simultaneously: BlackRock (IBIT), Fidelity (FBTC), Invesco, VanEck, WisdomTree, Ark/21Shares, Bitwise, Franklin Templeton, Grayscale (GBTC), Valkyrie. OCC (April 2025): U.S. banks no longer need advance permission to engage in cryptocurrency activities. SAB 121 repealed, SAB 122 enacted (2025): banks can now custody digital assets without onerous accounting treatment. GENIUS Act (July 2025): stablecoin regulatory framework, reinforcing Bitcoin's accepted status as a non-stablecoin monetary asset. BITCOIN Act of 2025 (Sen. Lummis, introduced March 2025): proposes codifying the Strategic Bitcoin Reserve and authorizing Treasury to acquire 1 million BTC over five years — in committee, not yet passed, but the bill's introduction is itself a regulatory milestone. Executive Order (March 6, 2025): Trump established the U.S. Strategic Bitcoin Reserve — the first Western nation to designate Bitcoin as a sovereign reserve asset. U.S. federal government holds ~328,372 BTC (February 2026), the largest known state holder globally. Commodity classification: CFTC has consistently treated Bitcoin as a commodity — not a security — in enforcement actions and guidance. EU: MiCA (2024) provides Bitcoin a clear legal framework as a crypto-asset; Bitcoin is exempt from the more restrictive stablecoin provisions. Germany: Bundesbank and BaFin classify Bitcoin as a financial instrument; Germany has among the most favorable tax treatment (tax-free after 1-year holding). Japan: Bitcoin is a legal payment method (Payment Services Act 2017, updated 2024). El Salvador: legal tender (modified 2025 to voluntary under IMF pressure). 23 nation-states hold Bitcoin (2025, up from 18). New Hampshire (May 2025): first U.S. state to establish a statutory Bitcoin reserve. Texas (June 2025): Strategic Bitcoin Reserve signed into law. The regulatory clarity for Bitcoin is categorically stronger than any other asset in the index — it is the only digital asset that has been granted a sovereign strategic reserve designation by the world's largest economy.

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[INST] Named Institutional Partnerships



Bitcoin's institutional partnership and adoption record is the broadest and deepest of any digital asset — and, as of 2025-2026, the deepest of any non-sovereign financial instrument in history measured by AUM growth velocity. ETF ecosystem (as of early 2026): BlackRock IBIT — \$54B+ AUM (February 2026), 786,300+ BTC in custody, the fastest-growing ETF in history. Fidelity FBTC — \$12-17B AUM. Grayscale GBTC — \$10-15B AUM (stabilizing). Combined U.S. spot Bitcoin ETF AUM: \$115-122B (late 2025), with BlackRock commanding ~59% share. IBIT ranked #6 in all ETF inflows for 2025 — \$25B in net inflows despite a negative year-to-date return ('Boomers putting on a HODL clinic'). Harvard Management Company increased IBIT position by 257% in Q3 2025, bringing total ETF stake to ~\$442.8M. JPMorgan added \$346M, Morgan Stanley added \$724M. 55% of hedge funds globally hold cryptocurrency in 2025 (AIMA/PwC survey), up from 47% — average allocation ~7%. 67% use ETFs or structured products for exposure. Corporate treasuries: Strategy (MicroStrategy) — ~673,783 BTC by early 2026 (3.2% of total supply). Metaplanet (Japan) — 'MicroStrategy of Asia', significant BTC treasury. 100+ publicly traded companies deploying capital into Bitcoin treasuries in 2025. Digital Asset Treasury companies raised \$29B in 2025. Infrastructure: Wells Fargo, JPMorgan, BNY Mellon operationalized Bitcoin-backed lending desks. Wells Fargo now permits Bitcoin ETF shares as collateral for U.S. credit facilities (early 2026). Bitcoin reclassified as 'Tier 1' asset for bank collateral purposes. Bitcoin Market: \$1.8T+ market cap (December 2025) = >50% of total crypto market cap. 1.2% of global money supply. \$742B in new investment during 2022-2025 bull market.

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[ISO] ISO 20022 Compatibility



Bitcoin's ISO 20022 compatibility is the weakest criterion in its Enterprise pillar. The Bitcoin protocol was designed in 2008-2009, well before ISO 20022 became the global financial messaging standard, and Bitcoin transactions carry minimal structured metadata compared to modern payment messaging specifications. Bitcoin transaction data: a standard Bitcoin transaction contains inputs, outputs, amounts, and an optional OP_RETURN metadata field (up to 80 bytes). This is far below the rich structured data fields required for full ISO 20022 compliance (counterparty identifiers, purpose codes, regulatory identifiers, narrative fields, structured address data). Layer 2 workarounds: Taproot (2021 upgrade) improved Bitcoin's script capabilities and enabled more efficient multi-signature transactions, but did not add ISO 20022 metadata structures. Lightning Network payments do not carry ISO 20022 fields natively. Institutional workarounds: Banks and custodians (including those operating the SWIFT-Bitcoin bridge via Chainlink CCIP) translate between Bitcoin's native transaction format and ISO 20022 at the application layer — not at the protocol layer. This is a middleware translation, not native compatibility. Why not 1/5: Bitcoin's global SWIFT integration (through custodial intermediaries) and ETF infrastructure are fully ISO 20022-compatible at the institutional wrapper layer. Wells Fargo's Bitcoin collateral program and ETF-based credit facilities operate within ISO 20022-capable bank infrastructure. Bitcoin itself simply does not embed ISO 20022 natively — and by design, this is unlikely to change given Bitcoin's conservative protocol philosophy.

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[TXV] Live Transaction Volume



Bitcoin's on-chain transaction volume is significant and growing, though structurally limited by its 7 TPS Layer-1 design. On-chain metrics (2025): ~300,000-450,000 daily on-chain transactions (base layer). Transaction volume surpassed \$1 trillion in U.S. crypto transaction volume for January-July 2025 alone (TRM data, approximately 50% YoY increase). Bitcoin dominance: 48.3% of total crypto market cap. \$742B in new investment during the 2022-2025 bull market cycle. Bitcoin Lightning Network: \$1B+ in monthly volume (surpassed 2025, 300% growth YoY). 8 million+ monthly Lightning transactions. Average Lightning transaction: \$223. ETF trading volume: BlackRock IBIT alone — \$880B in cumulative trading volume through November 2025 (all spot BTC ETFs combined). IBIT daily trading volume: 61.5M shares/day. Ordinals/Inscriptions: Generated significant additional on-chain activity and fee revenue in 2024-2025, though this is a temporary demand driver. Score gap from 5/5: Bitcoin's base layer is deliberately limited to ~7 TPS as a design choice prioritizing security and decentralization. Daily on-chain transaction count is lower than Ethereum, Solana, or high-throughput chains. However, Bitcoin processes the highest individual transaction values — it functions as a settlement layer for large-value transfers, not a high-frequency transaction network. Bitcoin handles 40-50% of all crypto merchant payments by value, and Lightning Network volume is growing at 300% annually.

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[GOV] Gov & Central Bank Engagement



Bitcoin has achieved the highest level of government and sovereign engagement of any digital asset — a categorically different order of magnitude from all other assets in this index. U.S. Federal Government: Strategic Bitcoin Reserve established by Presidential Executive Order (March 6, 2025) — the first Western sovereign Bitcoin reserve. U.S. government holds ~328,372 BTC (February 2026) — largest known state holder. BITCOIN Act of 2025 (Lummis bill): proposes acquiring 1 million BTC over 5 years via budget-neutral mechanisms including gold certificate revaluation. Treasury Secretary Scott Bessent and Commerce Secretary Howard Lutnick directly engaged. White House Digital Asset Summit: major crypto companies, including Bitcoin-focused firms, attended alongside President Trump. Bo Hines (Executive Director, President's Council on Digital Assets): stated selling gold holdings to acquire more Bitcoin is a viable budget-neutral approach. OCC + FDIC regulatory changes: removed advance permission requirements for bank crypto activities (March 2025). U.S. State reserves: New Hampshire (statutory), Texas (signed law June 2025), bills in Arizona, Oklahoma, North Carolina, Florida, Pennsylvania, Wyoming, others. Nation-state count: 23 nations hold Bitcoin (2025), 5 new in 2025. Bhutan: sovereign Bitcoin mining and reserve (\$750M, 28% of GDP). El Salvador: legal tender (2021-2025, modified to voluntary 2025). Russia: legalized domestic mining; holds seized Bitcoin. China: holds large seized Bitcoin reserves (despite trading ban). IMF: began permitting some crypto in reserves. Brazil central bank: digital real pilot includes crypto on-ramps. Germany, Switzerland, UAE, Singapore: progressive regulatory frameworks actively welcoming Bitcoin. Bank regulators (OCC, FDIC): issued guidance normalizing bank Bitcoin activities. 49 countries improved Bitcoin access through regulations since 2020 vs. just 4 that restricted. No other asset in this index has a Presidential Executive Order, a Congressional bill to acquire 1 million units, a U.S. Strategic Reserve designation, 23-nation sovereign holder count, and regulatory normalization in the world's largest financial system simultaneously.

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[RWA] Real World Asset Settlement



Bitcoin's role in real-world asset settlement is growing but structurally limited compared to programmable smart contract platforms. Bitcoin is primarily a store of value and monetary settlement asset — not a general-purpose tokenization platform. What exists: Wells Fargo, JPMorgan, BNY Mellon: Bitcoin ETF shares accepted as collateral for credit facilities (early 2026) — real financial asset serving as RWA collateral in traditional finance. This is a new and significant development. Bitcoin-backed bonds: El Salvador issued Bitcoin-backed bonds (\$753M in second issuance, 2025) — a sovereign RWA instrument. Bitcoin mining infrastructure: Bhutan (~\$750M), U.S. publicly traded miners (Marathon, Riot, CleanSpark) — Bitcoin mining capacity as a real-world productive asset backing Bitcoin treasury companies. Ordinals/Runes: enabled NFT-like asset inscription directly on Bitcoin base layer — limited RWA tokenization capability. Stacks sBTC: 1:1 Bitcoin-backed token enabling DeFi on Bitcoin via Layer-2 — early-stage RWA-adjacent capability. Lightning Taproot Assets: enables stablecoins (USDT) on Lightning — monetary RWA. Score gap from 5/5: Bitcoin does not host institutional-grade tokenized securities, bonds, or fund products the way Ethereum (Franklin Templeton, BlackRock BUIDL), Stellar (BENJI, AUDD), or Chainlink's ecosystem does. No native smart contract language on Bitcoin base layer makes institutional RWA issuance technically complex. Bitcoin's role in RWA is predominantly as the underlying monetary asset for products wrapped around it (ETFs, treasury strategies, collateral) rather than as an on-chain settlement layer for other tokenized assets.

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[JUR] Multi-Jurisdictional Legal



Bitcoin's jurisdictional reach is unmatched by any other asset in this index — it is legal and accessible in more jurisdictions, with more formal regulatory recognition, than any other digital or traditional financial asset of comparable age. Verified global legal recognition: United States — commodity (CFTC), strategic reserve asset (Executive Order), ETF approved (SEC), bank collateral (OCC/FDIC guidance). European Union — MiCA compliant, legal in all 27 member states, Germany (financial instrument, tax-free after 1 year), Netherlands, France, Italy all regulated. United Kingdom — FCA registered crypto exchange framework; Bitcoin explicitly recognized as property. Switzerland — Crypto Valley (Zug), FINMA regulated, Bitcoin-friendly banking (Sygnum, SEBA). Japan — legal payment method (Payment Services Act), 39,000+ retail merchants. Australia — regulated exchange framework, ATO tax guidance (property). Canada — regulated exchanges, ETF products trading since 2021. Brazil — crypto regulation act (2023), 110,000+ POS terminals (2026). Singapore — MAS licensing framework. UAE (ADGM, VARA) — formal licensing. El Salvador — legal tender (voluntary). Nigeria — central bank regulatory engagement after initial ban reversal. India — 30% capital gains tax (legal). Vietnam, Philippines, Thailand — growing regulatory frameworks. Russia — mining legal, holdings legal. 23 nation-states hold Bitcoin as sovereign asset. 49 countries improved Bitcoin access through regulations since 2020. Bitcoin has the most extensive, most legally established multi-jurisdictional presence of any asset in this index. No court in any major jurisdiction has ruled Bitcoin to be a security. Multiple courts have ruled it is property.

[SEC] Security & Auditability



Bitcoin's security architecture is the most battle-tested in financial history — 16+ years of continuous operation, the highest hash rate of any blockchain, zero successful protocol-level exploits, and an immutable track record that no other digital asset approaches. Network security metrics (2025-2026): Hashrate: exceeded 1 zetahash (1,000 EH/s) for the first time — the largest computing infrastructure devoted to a single purpose in human history. 35% hashrate growth in 2025. Average 108% annual hashrate growth since 2016. Mining decentralization: 34 countries with >0.1% of total hashrate (8 new in 2025). Top 3 mining pools lost 12% market share over 2 years. 24,700 reachable nodes (14% growth in 2025). Protocol security: Bitcoin has never been hacked at the protocol level in 16+ years. The White House Executive Order itself states: 'The Bitcoin protocol permanently caps the total supply of bitcoin at 21 million coins, and has never been hacked.' Zero successful 51% attacks on mainnet in 16+ years (despite Bitcoin being the world's most financially incentivized attack target). Difficulty adjustment: automatic every 2016 blocks, ensuring hashrate adapts to maintain ~10-minute block times regardless of miner participation. Immutability: the Bitcoin blockchain from block 1 (January 3, 2009) is fully verifiable and has never been reorganized beyond a minor early bug (Value Overflow Incident, August 2010, patched within hours). Proof of Work security model: the most expensive blockchain to attack by a factor of 1000x+ over any other PoW chain. SHA-256 hash function: no known vulnerabilities; quantum resistance roadmap (post-quantum cryptography research active). Taproot (2021): improved script privacy and efficiency, Schnorr signatures. Only known protocol-level incident: 2010 Value Overflow bug — patched within hours, no lasting damage. This is an unambiguous 5/5.

Infrastructure

65% of max

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[IOP] Interoperability Score

Interoperability is Bitcoin's lowest infrastructure score — by deliberate design choice. Bitcoin was built as a self-contained monetary system, not an interoperable multi-chain protocol. Cross-chain capabilities are exclusively achieved through third-party bridges and wrapped asset mechanisms. What exists: Wrapped Bitcoin (wBTC): ERC-20 token on Ethereum, custodied by BitGo — largest Bitcoin bridge, but custodial and dependent on a trusted third party. cbBTC (Coinbase Wrapped Bitcoin): launched 2024, secured by CCIP/Coinbase custody — institutional-grade wrapped Bitcoin on Ethereum/Base. tBTC (Threshold Network): decentralized wrapped Bitcoin with threshold signatures — lower custody risk than wBTC. Rootstock (RSK): EVM-compatible Bitcoin sidechain with merged mining — allows Solidity smart contracts with BTC as gas. Merlin Chain: zk-rollup Bitcoin L2, \$1.7B+ TVL. Stacks: Proof-of-Transfer consensus, Clarity smart contracts anchored to Bitcoin. Lightning Network: enables cross-node payment routing but not cross-chain interoperability per se. Chainlink CCIP: cbBTC bridgeable across 60+ chains via CCIP (Coinbase partnership). Atomic swaps: theoretically possible but not widely adopted in practice. Score of 2/5 reflects: Bitcoin's base protocol has no native interoperability mechanisms, cross-chain bridges introduce trust assumptions that contradict Bitcoin's trustless design philosophy, and the 'Bitcoin-native DeFi' ecosystem (BTCFi) via Stacks/RSK/Merlin is early-stage (Stacks TVL ~\$208M, Rootstock smaller) relative to Ethereum's mature cross-chain ecosystem. Bitcoin's conservative protocol philosophy explicitly resists the type of rapid protocol changes that would be required for native cross-chain functionality.

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[TPS] Transactions Per Second

Bitcoin's base-layer TPS is intentionally minimal — approximately 7 transactions per second, the lowest of any asset in this index. This is not a failure; it is a deliberate architectural choice prioritizing security, decentralization, and immutability over throughput. Base layer: ~7 TPS maximum, ~3-4 TPS average utilization. 10-minute average block time (fixed by difficulty adjustment). 1MB base block size (SegWit enables up to ~4MB block weight). Block confirmation: 1 confirmation (~10 minutes) widely considered sufficient for low-value transactions; 6 confirmations (~60 minutes) for large settlements. Comparison context: Ethereum: ~15-20 TPS base layer. ALGO: 6,000 TPS. HBAR: 10,000 TPS. VET: 10,000 TPS. Layer-2 relief: Lightning Network theoretically supports millions of TPS for micropayments (off-chain state channels), with sub-second finality. In practice, Lightning is used for sub-\$1,000 transactions and growing payment volumes. Why 1/5 and not 0: Bitcoin + Lightning combined represents a credible payment stack for small-to-medium transactions. Lightning processed \$1B+ in monthly volume in 2025 (300% growth). The 7 TPS ceiling is structural and unlikely to change given Bitcoin's governance conservatism, but it is the correct architectural choice for a global settlement base layer rather than a high-frequency transaction network. However, on the specific criterion of transactions per second as defined, Bitcoin scores lowest in the index.

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[UPT] Network Uptime



Bitcoin's uptime record is the most exceptional of any digital financial system — or arguably of any software system — in history. 16+ years of continuous operation since the genesis block (January 3, 2009). Near-zero downtime: Bitcoin's network has effectively never experienced a coordinated outage. Individual nodes may go offline, but the distributed network of 24,700+ reachable nodes ensures no single point of failure exists. The only significant network incident: August 15, 2010 — Value Overflow Incident (CVE-2010-5139). A bug allowed the creation of 184 billion BTC in a single transaction. Satoshi Nakamoto patched the bug within 5 hours, and the chain was reorganized to remove the invalid block. This was resolved in hours and left no permanent damage. No other protocol-level incidents affecting network continuity in 16+ years. Through: 5 Bitcoin halving events (2012, 2016, 2020, 2024 — all executed flawlessly), extreme price volatility events (85-95% crashes), major exchange collapses (Mt. Gox 2014, FTX 2022), nation-state mining bans (China 2021 — network continued without interruption despite >50% hashrate migrating in weeks), COVID, global financial crises, and continued operation through every major geopolitical and market disruption of the last 16 years. The Bitcoin network has never been shut down, paused, censored at the protocol level, or subjected to a successful coordinated attack. This is a definitional 5/5.

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[DEV] Developer Ecosystem



Bitcoin's developer ecosystem is intentionally conservative — the protocol is designed to change slowly and deliberately, which makes for a smaller active developer community compared to Ethereum or Solana but an extraordinarily stable and security-focused one. Bitcoin Core: the reference implementation maintained by ~30-50 active contributors with peer review processes that can span years for significant changes. Bitcoin Improvement Proposals (BIPs): formal proposal process; major protocol upgrades (SegWit 2017, Taproot 2021) take years from proposal to activation. Active developments (2025): Taproot Assets (Lightning Labs): multi-asset protocol enabling stablecoins on Lightning, v0.7 released 2025. Arc/Ark protocol: new off-chain transaction model aiming to improve Lightning's UX. OP_CAT debate: BIP proposing re-enabling a powerful script opcode to enable covenants — significant developer debate in 2025. BitVM: enables verifiable computation on Bitcoin without consensus changes — active research. LNHANCE: bundle of proposed soft forks (CTV, CSFS, IKEY) to improve Lightning and covenants. Layer-2 developer activity: Stacks (Clarity language), Rootstock (Solidity), Merlin (zk-rollup), Hemi (EVM+Bitcoin). River.com: reports 116% business adoption growth in 2025. Score reflects: Bitcoin's base layer developer ecosystem is purposefully small and slow — this is a security feature, not a bug. Layer-2 developer activity is growing. But compared to Ethereum (4,000-6,000 monthly devs, vast tooling) or Solana (98M MAU), Bitcoin's direct developer ecosystem is significantly more constrained.

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[CPT] Cost Per Transaction



Bitcoin's transaction cost profile is bimodal: base-layer fees are significant and volatile, while Lightning Network fees are near-zero for sub-threshold payments. Base layer fee economics: Median transaction fee (2025): approximately \$1-5 for standard transactions during low-congestion periods; \$20-80+ during peak congestion (Ordinals inscriptions drove fees to \$40-100+ in 2024). Fee market: Bitcoin uses a competitive fee market — users bid for block space. Block space is permanently limited, so fees are structurally expected to increase over time as block subsidy diminishes. No fee predictability: unlike ALGO (\$0.001), HBAR (\$0.0001), or Stellar (\$0.000002), Bitcoin fees fluctuate by 10-100x based on demand. Lightning Network fees: extremely low — typically <\$0.01 for sub-LN-capacity transfers, often fractions of a cent. Sub-second finality. This is transformative for micropayment use cases. SegWit/Taproot: reduce transaction weight significantly vs pre-SegWit, lowering fees by 30-50% for compatible transactions. Score of 3/5 reflects the duality: Bitcoin base-layer fees are not competitive for frequent small transactions (the main use case of most other index assets), but Lightning makes Bitcoin viable for micropayments and remittances. The fee ceiling at the base layer is a deliberate design choice — Bitcoin is a settlement layer, and high-value settlements (\$50K+) routinely pay \$5-20 fees that represent a vanishingly small percentage of the transfer value.

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[CON] Consensus Security



Bitcoin's Proof of Work consensus mechanism is the most economically secure consensus system ever deployed. No system in human history has had more computational effort devoted to its security, and no blockchain has been more thoroughly attack-tested and found impenetrable. Proof of Work security properties: 51% attack cost: attacking Bitcoin requires controlling >50% of >1 zetahash of computing power — an amount of hardware that does not exist and would cost tens to hundreds of billions of dollars to manufacture and power. The attack cost exceeds the reward from a successful attack. No mining-adjacent attack vector: Bitcoin has no staking, no validator set, no governance tokens — there is no off-chain mechanism to influence consensus. Game theory: miners must invest in specialized ASIC hardware that is only valuable as long as Bitcoin operates honestly — creating powerful economic alignment. Difficulty adjustment: automatically calibrates every 2016 blocks, ensuring consistent security regardless of hashrate fluctuations. Energy security: Bitcoin's energy consumption (~120-150 TWh/year) is often criticized but is precisely the source of its security — energy expenditure is the work that protects the network. Geographic decentralization: 34 countries with >0.1% hashrate. Top 3 pools lost 12% market share — improving pool-level decentralization. Node distribution: 24,700 reachable nodes globally (14% growth in 2025). Longest chain rule: Simple, auditable, and resistant to manipulation. 16+ years of adversarial testing with the highest financial incentive ever directed at breaking a computer system: zero successful protocol-level attacks.

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[STB] Network Age & Stability



Bitcoin is the oldest active public blockchain by more than 5 years — operational since January 3, 2009. Its stability record over 16+ years through every conceivable market and geopolitical stress test is unmatched. Timeline of stability milestones: 2009: Genesis block. January 3, 2009. 2010: Value Overflow bug patched in 5 hours. Network survived its first and only protocol-level vulnerability. 2011: First major price crash (-94%) — network unaffected. 2013: Mt. Gox handling 70% of BTC transactions; multiple price bubbles and crashes — base layer unaffected. 2014: Mt. Gox collapse (\$450M lost) — largest exchange hack at the time. Bitcoin protocol continued without modification. 2017: Hard fork controversy (Bitcoin Cash split). Bitcoin Core continued without disruption. SegWit activated. 2018: -85% price crash. Network continued. 2020: COVID-19 pandemic crash (-50% in one day, March 12, 2020). Network continued. Third halving executed flawlessly. 2021: China mining ban — >50% of global hashrate relocated within weeks. Network adjusted difficulty and continued without service interruption. 2022: -77% price crash. FTX collapse (\$8B customer funds lost). Network continued. 2023-2024: Spot ETF approval process. Ordinals activity spike. Fourth halving (April 2024). All executed without protocol disruption. 2025: Strategic Bitcoin Reserve established. 1 zetahash hashrate milestone. No protocol disruptions. Governance model: Bitcoin's conservative protocol philosophy (changes require overwhelming social consensus, years of review) is itself a stability mechanism — there is no governance token, no foundation that can issue emergency upgrades, no CEO who can make decisions. This is maximally stable by design.

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[TAR] Tokenized Asset Rails



Bitcoin as a tokenized asset rail is early-stage and structurally limited by the base layer's intentional design simplicity. Unlike Ethereum (hosting \$18.6B+ in tokenized RWAs), Stellar (NAVLINK, Stablebonds), or Chainlink (enabling all chains), Bitcoin's base layer supports very limited tokenization natively. What exists: Ordinals (launched January 2023): enables arbitrary data inscription in satoshis — NFT-equivalent functionality. BRC-20 tokens (2023): fungible token standard on Bitcoin via Ordinals — experimental, not widely used for institutional assets. Runes (April 2024, with halving): improved fungible token protocol on Bitcoin — cleaner than BRC-20 but still early. Stacks sBTC: 1:1 Bitcoin-backed token enabling DeFi/tokenization on Stacks Layer-2 — \$208M TVL. Rootstock (RSK): EVM-compatible sidechain with rBTC — limited tokenized asset activity. Lightning Taproot Assets (v0.7, 2025): enables stablecoin (USDT) issuance over Lightning — new and promising for monetary RWAs. Bitcoin-collateralized products: ETFs (IBIT etc.), El Salvador Bitcoin bonds, Strategy corporate bonds — Bitcoin underlying real-world financial instruments but not Bitcoin hosting tokenized RWAs. Score of 2/5 reflects: Bitcoin itself is increasingly tokenized as an asset (wBTC, cbBTC on 60+ chains via CCIP, multiple ETF structures), but Bitcoin is not a platform for tokenizing other real-world assets at institutional scale. The Ordinals/Runes ecosystem has proven Bitcoin can host inscribed assets, but institutional tokenization deployments are nascent. Long-term, the BTCFi ecosystem (Stacks, RSK, Merlin) may change this score meaningfully.

DeFi

68% of max

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[TVL] Total Value Locked

Bitcoin's DeFi TVL story is complex: Bitcoin is simultaneously the asset with the most total value attributed to it in the crypto ecosystem (\$1.8T+ market cap) and one of the lowest DeFi TVL figures for its own native chain. Bitcoin Layer-1 DeFi TVL: effectively zero — no native smart contracts on Bitcoin base layer. Bitcoin Layer-2 / sidechain DeFi TVL: Stacks: ~\$208M TVL (2025). Merlin Chain: ~\$1.7B TVL (grew rapidly in 6 months, but largely through bridged assets). Rootstock: smaller TVL (~\$100-200M estimated). Total BTCFi TVL: approximately \$2-3B across all L2s and sidechains (rapidly growing). Bridged Bitcoin in other ecosystems: wBTC on Ethereum: ~\$10-15B in wBTC deployed across Aave, Compound, Maker — by far the largest Bitcoin-in-DeFi figure. cbBTC: growing institutional wrapped Bitcoin in Ethereum/Base DeFi. tBTC: decentralized alternative, smaller. If all forms of 'Bitcoin in DeFi' are counted (wBTC on Ethereum + L2 TVL), Bitcoin-adjacent DeFi TVL exceeds \$15B — the second largest in the ecosystem after native ETH. Score of 3/5 reflects: Bitcoin-native on-chain DeFi is early (2-3B), but Bitcoin as an asset class is deeply embedded in DeFi via wrapped versions. The BTCFi narrative is genuinely growing — Merlin's \$1.7B TVL in 6 months is a signal — but compared to Ethereum's \$119B or even LINK's \$100B secured, Bitcoin's native DeFi ecosystem is nascent and the L2 ecosystem remains fragmented.

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[RWP] RWA Protocol Integration

Bitcoin's RWA protocol integration is limited at the base layer but growing through financial product wrappers and a nascent BTCFi ecosystem. Most significant RWA-adjacent integrations: Bitcoin ETFs as RWA products: BlackRock IBIT (\$54B+ AUM), Fidelity FBTC, Grayscale GBTC — these are regulated financial instruments that wrap Bitcoin as a real-world investable asset. Combined U.S. spot BTC ETF AUM: \$115-122B. Bitcoin as ETF collateral (Wells Fargo, JPMorgan, BNY Mellon 2026): Bitcoin ETF shares serving as collateral for traditional credit facilities — direct RWA integration into TradFi lending infrastructure. El Salvador Bitcoin bonds: sovereign RWA (\$753M 2nd issuance). Strategy's corporate bonds: secured by Bitcoin treasury — Bitcoin-backed corporate debt instruments. Lightning Taproot Assets (USDT on Lightning): stablecoin as RWA on Bitcoin's L2. Stacks sBTC + DeFi protocols (Zest Protocol, Arkadiko): Bitcoin-collateralized lending and stablecoin protocols on Stacks. Ordinals/Runes: potential NFT/RWA inscriptions directly on Bitcoin — early stage. Score of 3/5 reflects: Bitcoin is heavily integrated into RWA financial products as the underlying monetary asset, but Bitcoin as a chain hosting tokenized RWAs for other asset types is early-stage. The distinction matters — Bitcoin is a premiere RWA itself, but not yet a premier RWA hosting platform.

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[ICP2] Institutional Capital



Institutional capital deployment into Bitcoin is the defining story of the 2024-2026 period — by every measurable metric, Bitcoin has achieved the deepest institutional capital integration of any digital asset in history, and arguably the fastest institutional AUM accumulation of any financial product category. ETF institutional capital: Combined U.S. spot BTC ETF AUM: \$115-122B (late 2025). BlackRock IBIT: \$54B+ (February 2026) — fastest-growing ETF in history, \$70B peak 2025. Net inflows 2025: IBIT ranked #6 in all ETF categories for total inflows despite negative price return. Total net inflows since ETF launch: \$56B+. 26.3% of IBIT AUM from institutional 13F filers. Harvard endowment: \$442.8M IBIT position (+257% Q3 2025). JPMorgan: \$346M. Morgan Stanley: \$724M. Wisconsin SWIB (state pension): \$160M+ in IBIT/GBTC. Corporate treasury institutional capital: Strategy (~673,783 BTC, \$X0B at any given price). Metaplanet, 100+ publicly traded companies. Digital Asset Treasury companies raised \$29B in 2025. Sovereign capital: U.S. government holds 328,372 BTC. Bhutan holds ~\$750M. 23 nation-states hold BTC. AIMA/PwC: 55% of hedge funds hold crypto (average ~7% AUM); 67% via ETFs/structured products. 86% of institutional investors either hold or plan to allocate to digital assets. 76% of global investors plan to expand digital asset exposure. Bitcoin 'Tier 1' collateral reclassification: Wells Fargo, JPMorgan, BNY Mellon operationalize Bitcoin-backed lending. This is a categorical 5/5 — no other asset in the index, and very few traditional assets in history, have seen this level of institutional capital accumulation velocity.

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[AUD] Smart Contract Audit



Smart contract auditing is largely inapplicable to Bitcoin base layer — Bitcoin has no Turing-complete smart contract language. Bitcoin Script is intentionally limited and non-Turing-complete. This design choice prevents entire categories of smart contract exploits (reentrancy, logic errors, economic manipulation) that have cost DeFi ecosystems billions in losses. Bitcoin protocol security: The Bitcoin Core codebase is reviewed by some of the most rigorous developers in open-source software — every change is reviewed by multiple contributors, tested on testnet, and often deployed with opt-in activation (soft forks). Taproot (2021) was activated via Speedy Trial after years of review. Bitcoin Script limitations: CHECKSIG, MULTISIG, CHECKLOCKTIMEVERIFY, CHECKSEQUENCEVERIFY — a limited, well-audited set. No reentrancy. No loops. No complex state. Layer-2 / sidechain audit state: Stacks (Clarity language): formal verification possible, several professional audits. Rootstock (Solidity): benefits from Ethereum's extensive audit ecosystem. Lightning Network: multiple academic security papers, formal verification research (2025), implementation audits for LDK/Eclair/Core-Lightning. Taproot Assets (Lightning Labs): Code4rena-style competitive audits. Score of 2/5: Bitcoin's lack of smart contracts is simultaneously its greatest security feature and the reason it scores low here. The criterion is specifically about smart contract audit infrastructure — which Bitcoin has very little of because it intentionally has very few smart contracts to audit. BTCFI L2 audit ecosystems are early-stage.

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[YLD] Yield Instrument Variety



Bitcoin's native yield options are minimal — by design. Bitcoin does not have staking, no block reward for token holders, no protocol fee sharing, and no native DeFi yield mechanisms on the base layer. Available yield mechanisms: Bitcoin mining: generates yield (block rewards + fees) for miners, not holders. Not accessible to most retail investors without specialized hardware. Lightning Network node operation: routing fees from facilitating Lightning payments — typically sub-1% annually for well-managed nodes. Requires technical expertise and active management. Wrapped Bitcoin (wBTC, cbBTC) in Ethereum DeFi: supply to Aave (~2-4% APY, variable), Compound, Maker — Bitcoin yield via DeFi wrapper. tBTC in Curve and other protocols: similar yield profile. Stacks: STX stacking earns BTC yield (~8-12% historically) from PoX consensus — genuine Bitcoin yield for locking STX. Stacks DeFi (Zest Protocol): BTC lending/borrowing with Bitcoin-native yield. ETF lending programs: some institutional custodians offer Bitcoin lending (Genesis, Coinbase Prime) — subject to counterparty risk. Strategy/Metaplanet corporate bonds: Bitcoin-backed debt instruments offering yield. Score of 2/5: Bitcoin has the most limited yield ecosystem of any productive asset. This is philosophically intentional — Bitcoin's monetary policy (fixed supply, decreasing issuance) is designed to make Bitcoin a deflationary store of value, not a yield-generating asset. Yield is achievable via DeFi wrappers or L2 mechanisms but requires leaving Bitcoin's base layer or introducing counterparty risk.

5

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[RCL] Regulatory Clarity



Bitcoin's regulatory clarity is the clearest of any digital asset globally, and the only one with a U.S. Presidential Executive Order and strategic sovereign reserve designation. This is a categorical 5/5. Key regulatory clarity milestones: United States: CFTC: Bitcoin is a commodity — consistently maintained through multiple enforcement actions and court rulings (Bitstamp, Kraken, etc.). Multiple federal courts have confirmed Bitcoin is not a security. Spot ETF approval (January 2024): SEC's most explicit statement that Bitcoin is a legitimate, regulable investment product — not a security, not fraud. U.S. Strategic Bitcoin Reserve (March 2025): Presidential designation as a strategic asset explicitly analogous to gold. BITCOIN Act of 2025: Congressional legislation explicitly recognizing Bitcoin as a legitimate diversification and hedge instrument. OCC/FDIC guidance (March 2025): banks may engage in Bitcoin activities without advance permission. SAB 122 (2025): removed accounting barriers for bank Bitcoin custody. No SEC enforcement actions specifically targeting Bitcoin as a security (unlike XRP, ETH debates, numerous altcoins). EU: MiCA provides Bitcoin a clear, stable legal framework in 27 countries. Germany: financial instrument designation; tax-free after 1-year holding — one of the most Bitcoin-favorable tax regimes globally. Japan: legal payment method since 2017. 49 countries improved access through regulation since 2020 vs. 4 restricted. The Bitcoin regulatory landscape as of March 2026 represents the culmination of 16 years of progressive legitimization — it is unambiguous, multi-jurisdictional, and anchored by the most powerful regulatory authority in the world.

2

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[CMP] Protocol Composability



Composability is Bitcoin's structural DeFi limitation — the base layer is intentionally non-composable. Bitcoin Script cannot call other contracts, cannot read blockchain state arbitrarily, cannot interact with external data, and does not support Turing-complete logic. This eliminates the 'money Lego' composability that defines Ethereum DeFi. Base layer: zero native composability with other protocols. Bitcoin transactions are discrete value transfers, not programmable state transitions. No atomic composability with DeFi protocols. Layer-2 composability: Lightning Network: composable within the Lightning payment network via multi-hop routing. Stacks: Clarity smart contracts are composable within the Stacks ecosystem. Limited composability with Ethereum L1/L2 without bridging. Rootstock: EVM-composable within RSK, but bridging to/from Bitcoin introduces latency and trust assumptions. BitVM: enables verifiable computation composable with Bitcoin — active research, not yet production. OP_CAT (proposed): would enable covenants and significantly improve composability — still debated, not activated. Cross-chain composability: Bitcoin is widely used as collateral in other chains' DeFi (wBTC/cbBTC on Ethereum — billions in Aave, Compound). This is composability of a wrapped representation, not native Bitcoin. Score of 2/5: Bitcoin's non-composable base layer is a deliberate trade-off for security and simplicity. The BTCFi ecosystem is nascent and fragmented across incompatible L2 designs. Compared to Ethereum (perfect 5/5 composability) or Chainlink (universal composability layer), Bitcoin's composability story is early.

5

/5

[LQD] Liquidity Depth



Bitcoin's liquidity depth is the deepest of any digital asset and rivals or exceeds most traditional commodity markets. It is the most liquid crypto market by every meaningful measure. Spot market liquidity: \$1.8T+ market cap (largest of any digital asset, >50% of total crypto market cap). Daily trading volume: \$30-80B depending on market conditions — the deepest digital asset market. Bid-ask spreads on Binance, Coinbase, Kraken: fractions of a basis point for BTC/USD — institutional-grade execution quality. CME Bitcoin futures: the largest regulated crypto derivatives market. Daily open interest: \$5-15B+ regularly. Options market (Deribit, CME): deep put/call market with billions in open interest across multiple expiries. ETF liquidity: IBIT alone: 61.5M+ shares/day daily volume. \$880B in cumulative ETF trading volume (all spot BTC ETFs, through November 2025). ETF creation/redemption mechanism creates natural price discovery efficiency. Bitcoin-backed lending: Wells Fargo, JPMorgan, BNY Mellon Bitcoin collateral programs. Billions in institutional credit backed by Bitcoin (2026). Exchange distribution: Binance, Coinbase, Kraken, OKX, Bybit, Bitfinex, Gemini — globally distributed exchange liquidity. 24/7 global trading without closing time or circuit breakers. Lightning Network: \$1B+ monthly volume for small payments. Over-the-counter (OTC) desks: Cumberland, Galaxy Digital, Genesis — billion-dollar block trade capabilities for institutions. Comparisons: Bitcoin's liquidity is comparable to mid-cap commodities (copper, silver) and exceeds many G10 currency pairs in specific time windows. No digital asset is close to Bitcoin's liquidity depth.

Consumer

80% of max

4

/5

[NCA] Non-Crypto-Native Adoption

Bitcoin's non-crypto-native consumer reach is the broadest of any digital asset, driven by ETF accessibility, PayPal/Robinhood/Cash App integrations, and now corporate treasury visibility. 500M+ global crypto holders: Bitcoin is the most recognized and most held, reaching the broadest non-crypto-native audience. In the U.S., 21% of adults (~55M people) own cryptocurrency in 2025, with Bitcoin the leading holding. ETF accessibility: IBIT, FBTC, and other spot Bitcoin ETFs are now available through every major brokerage (Fidelity, Schwab, Vanguard, TD Ameritrade, E*Trade) — enabling Bitcoin exposure without crypto onboarding for traditional investors. This is genuinely non-crypto-native adoption: retirement accounts, 401(k) allocations, standard brokerage accounts. PayPal: 435M users can buy, sell, and hold Bitcoin. Cash App (Block): ~\$1.8B in Bitcoin revenue per quarter; primary on-ramp for millions of young, non-technical consumers. Robinhood: 23M+ users, one of the most popular crypto entry points. Strike: Lightning-native app targeting remittance corridors. Fiat-to-Bitcoin ramps are now embedded in major consumer finance apps globally. National currency context: Argentina, Turkey, Nigeria — Bitcoin increasingly used as inflation hedge and savings by non-crypto-native populations with depreciating local currencies. Score gap from 5/5: Consumer UX for Bitcoin (managing wallets, seed phrases, on-chain transactions) remains intimidating for non-technical users. Lightning Network adoption is growing but not yet mainstream. The consumer experience for Bitcoin-as-payment is far behind Bitcoin-as-investment in terms of adoption.

4

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[MOB] Mobile & Emerging Markets

Bitcoin's mobile and emerging market presence is extensive — driven by inflation hedging demand, remittance corridors, and a growing Lightning Network infrastructure in underserved regions. Emerging market adoption evidence: Nigeria: 45% of Africa's total P2P crypto trading volume. One of the highest per-capita Bitcoin adoption rates globally. Direct inflation hedge for naira devaluation. Argentina: 60% increase in crypto adoption amid peso collapse. Bitcoin and stablecoins as savings preservation tools for middle class. Turkey: 25.6% crypto ownership among internet population — inflation hedge for lira devaluation. Vietnam, Philippines, India: consistently top Chainalysis Global Adoption Index — primarily Bitcoin and stablecoins for remittances and savings. Sub-Saharan Africa: \$205B+ in on-chain value received (July 2024-June 2025, +52% YoY). Latin America crypto adoption +63% (2025). Lightning Network geographic expansion: Strike: operating in over 30+ countries for Lightning remittances. Africa Lightning Network: growing presence in Nigeria, Kenya, South Africa. Bitcoin Beach (El Zonte, El Salvador): pioneered community Bitcoin circular economy. Apps: Phoenix Wallet, Breez, Muun — mobile-first Lightning wallets designed for non-technical users. Cash App (U.S./UK) — Lightning-enabled. Bitnob (Nigeria/Ghana): Bitcoin savings app targeting emerging markets. Score gap from 5/5: Stablecoins (USDC, USDT) have largely captured the 'store of value in mobile/emerging markets' use case in terms of daily transaction volume. Bitcoin's volatility makes it less suitable than stablecoins for everyday transactions — consumers in high-inflation markets often prefer dollar-pegged assets for spending and Bitcoin for longer-term savings.

2

/5

[TxC] Transaction Cost



Bitcoin's base-layer transaction cost is the most volatile and potentially expensive of any asset in this index — a direct consequence of its fixed block space and competitive fee market. Base layer costs: Low-congestion median fee: ~\$1-5 per transaction (2025, standard periods). High-congestion fee: \$20-100+ (during Ordinals/Runes activity peaks in 2023-2024). Fee prediction: unreliable — a transaction submitted at low fees may take hours to confirm during sudden congestion spikes. No fee stability: Bitcoin's fee market is auction-based — there is no maximum fee guarantee. Confirmation time uncertainty: 10-minute blocks mean even a high-fee transaction waits at least one block. During congestion, even high-fee transactions can wait 30-60+ minutes. Lightning Network costs: sub-cent fees for Lightning-capable transfers. Sub-second finality. Transformative for micropayments. But Lightning requires: channel liquidity management, inbound/outbound routing, and is not yet seamless for all user types. Comparison context: Stellar: \$0.000002. ALGO: \$0.0001. HBAR: \$0.0001. ETH (L2): pennies. Even QNT is cheaper for standard transfers. Score of 2/5: The base-layer fee structure makes Bitcoin inappropriate for small-value, high-frequency consumer transactions. Lightning partially addresses this but adds complexity. Bitcoin's fee model is correct for a digital gold settlement layer but incorrect for daily consumer payments — and this criterion specifically measures transaction cost suitability for consumer use cases.

5

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[UCS] Use Case Specificity



Bitcoin has the most clearly defined and consistently executed use case of any asset in this index: decentralized, fixed-supply, sound money — digital gold. This use case has been articulated since the 2008 whitepaper and has never wavered. The white paper's abstract: 'A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution.' In practice, Bitcoin has evolved primarily into a Store of Value / Digital Gold use case — confirmed by: Larry Fink (BlackRock): 'Bitcoin is the digital equivalent of gold.' White House Executive Order: compares Bitcoin to gold as a strategic reserve asset. S&P; Global, JPMorgan, Goldman Sachs institutional research: classify Bitcoin as 'digital gold.' U.S. Strategic Bitcoin Reserve: explicitly analogous to gold and petroleum reserves. 23 nation-states holding Bitcoin as sovereign reserve. Fed policy: institutional research treating Bitcoin as an inflation hedge and portfolio diversifier. The use case has remarkable consistency: the Bitcoin whitepaper's vision of sound money has been consistently implemented for 16 years without a single change to the 21M supply cap, the difficulty adjustment, or the fundamental monetary policy. No other asset in the index has a use case this clearly defined, this well-executed, and this consistently validated across 16 years of adversarial market conditions.

5

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[PIN] Platform Integration



Bitcoin's platform integration is the broadest of any digital asset — it is integrated into every major financial platform, every major crypto exchange, and a growing range of traditional finance platforms. Financial platform integrations: Every major stock brokerage in the U.S. (Fidelity, Schwab, Vanguard, TD Ameritrade, E*Trade, Robinhood, Webull); IBIT and other spot Bitcoin ETFs available to all account holders. Every major crypto exchange globally: Binance, Coinbase, Kraken, OKX, Bybit, Bitfinex, Gemini, Huobi, KuCoin, Bitstamp. PayPal (435M users): buy, sell, hold, and spend Bitcoin. Cash App (Block): primary Bitcoin consumer app; 100M+ users globally. Strike: Lightning-native payments app. Robinhood: 23M+ users. Major banks (Wells Fargo, JPMorgan, BNY Mellon): Bitcoin-backed credit facilities, Bitcoin ETF custody. Traditional financial data: Bloomberg, Reuters, FactSet, Refinitiv: Bitcoin price feeds integrated into institutional data platforms. CME Group: Bitcoin futures and options (regulated). Nasdaq, NYSE Arca: Bitcoin ETF listing. Coinbase Prime: \$245B+ in institutional digital assets under custody. Merchant platform integrations: BitPay, Coinbase Commerce, Strike, OpenNode — Bitcoin payment processors integrated with e-commerce platforms. Shopify, WooCommerce: Bitcoin payment plugin support. 39,000+ merchant locations in Japan alone. Hardware: Ledger, Trezor (category-defining Bitcoin hardware wallets), Coldcard, BitBox. ATMs: 50,000+ Bitcoin ATMs globally. Bitcoin has the broadest cross-platform presence of any digital asset in this index.

5

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[GEO] Geographic Reach



Bitcoin's geographic reach is unmatched — it is the only digital asset with meaningful presence in virtually every country on earth, from the United States (ETF, strategic reserve) to El Salvador (legal tender), Nigeria (P2P trading), Vietnam (remittances), and every major financial center globally. Verified geographic data: United States: 21% of adults own crypto; IBIT in every brokerage account; U.S. Strategic Reserve; White House engagement. European Union (27 countries): MiCA compliant, legal in all member states; Germany most favorable tax treatment. Japan: 39,000+ merchant locations, legal payment method since 2017. El Salvador: Bitcoin legal tender history; 35% of population uses crypto wallets. El Salvador: 85% of small businesses accept BTC. Nigeria: 45% of Africa's total P2P crypto trading; leading global P2P market. India: #1 Chainalysis Global Adoption Index for multiple years. Vietnam, Philippines: top adoption indexes; remittance-driven. Argentina, Turkey: 60%+ crypto adoption growth amid inflation; inflation hedge. Brazil: 110,000+ POS terminals. Sub-Saharan Africa: \$205B+ on-chain value (2024-2025). South Asia: 80% YoY growth in crypto adoption. China: despite trading ban, remains #2 globally in mining; holds seized BTC; underground P2P trading active. Russia: mining legal; BTC holdings active. UAE (Dubai): crypto hub; VARA licensed. Singapore: MAS licensed; regional hub. Switzerland: Crypto Valley; FINMA regulated. 23 nation-states hold Bitcoin. 49 countries improved regulatory access since 2020. Bitcoin's geographic reach is not just extensive — it is the defining global financial asset of the crypto economy.

3

/5

[UXA] UX Abstraction



Bitcoin's UX has improved substantially since 2009, but for base-layer self-custody, it remains technically demanding for non-technical users. The spectrum ranges from the fully abstracted (ETF in a brokerage account) to the highly technical (running a full node and managing HD wallets). Fully abstracted (excellent UX): BlackRock IBIT in a Fidelity brokerage account — zero crypto knowledge required. PayPal: buy Bitcoin in 2 clicks. Cash App: Bitcoin onboarding in minutes. Robinhood: seamless mobile experience. These represent the bulk of new user onboarding. Moderate abstraction: Coinbase (beginner-friendly exchange), Strike (Lightning payments), Swan Bitcoin (recurring purchases), River (institutional-grade self-custody). These require basic crypto knowledge. Technical (lower abstraction): Self-custody hardware wallets (Ledger, Trezor): seedphrase management required. Lightning channel management: requires active liquidity management. Running a full Bitcoin node: significant technical expertise. Score of 3/5 reflects the genuine duality: Bitcoin-as-investment (via ETF) is now as easy as buying a mutual fund — genuinely excellent UX for that use case. Bitcoin-as-payments (Lightning, self-custody) remains significantly more complex than using Venmo or PayPal. The UX ceiling for Lightning is being raised (Phoenix wallet, Breez, Strike), but the base-layer self-custody experience has fundamental complexity inherent to the trustless model that cannot be fully abstracted away.

4

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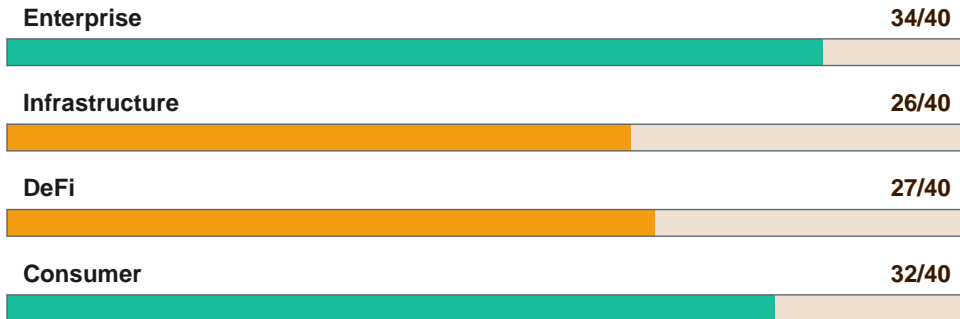
[MCA] Merchant Acceptance



Bitcoin merchant acceptance has reached meaningful global scale, led by Lightning-enabled integrations, El Salvador's legal tender framework, and growing presence in Japan, Germany, the Philippines, and Latin America. Global merchant acceptance data: Among crypto-accepting merchants: 93% accept Bitcoin — the highest acceptance rate of any cryptocurrency. Japan: 39,000+ retail locations accept crypto payments (2026), including major electronics and convenience chains. El Salvador: 85% of small businesses accept Bitcoin (2025 Chainalysis data). Philippines: 1.3M+ merchants integrated with Coins.ph and Ronin — Bitcoin-accessible. Brazil: 110,000+ POS terminals (2026). Germany: 10.2% of e-commerce checkouts support crypto (28 fintech partnerships). UAE: 43% of 5-star hotels accept crypto directly. U.S.: Microsoft (Xbox/Azure), AT&T; (via integration), Steak 'n Shake (Lightning, 50% fee reduction), McDonald's (some regions). 39% of U.S. merchants have implemented crypto checkout (PayPal/NCA report, January 2026). 88% of U.S. merchants receive customer inquiries about crypto payments monthly. Score gap from 5/5: Direct Bitcoin (BTC) payment remains less common than stablecoin (USDC/USDT) payment at point of sale — Bitcoin's volatility makes price-setting difficult for merchants. 76% of crypto payments are in stablecoins. Bitcoin-as-payment is growing but remains primarily a Lightning Network use case, and Lightning is not universally supported. Stablecoins have captured more of the daily merchant payment use case.

OVERALL ASSESSMENT

119 / 160 — 74% Overall Score



COMPLETE INDEX STANDINGS — ALL SCORED ASSETS

Pillar	BTC	ETH	LINK	XLM	HBAR	VET	ALGO	QNT	ICP
Enterprise	34	37	39	31	33	30	24	37	20
Infrastructure	26	37	34	32	35	31	30	32	30
DeFi	27	40	38	23	27	23	23	17	21
Consumer	32	30	27	37	23	33	31	18	27
TOTAL	119	144	138	123	118	117	108	104	98

KEY STRENGTHS

+ The Only Sovereign Reserve Digital Asset — U.S. Strategic Bitcoin Reserve + 23 Nations: No other digital asset has been designated a strategic reserve asset by the United States government. Trump's March 6, 2025 Executive Order, the BITCOIN Act (1M BTC acquisition proposal), and U.S. federal holdings of 328,372 BTC place Bitcoin in a category shared only with gold, oil, and foreign currency reserves. 23 nation-states now hold Bitcoin — a geopolitical legitimacy milestone that no other digital asset approaches.

+ \$120B+ in Spot ETF AUM — Fastest Institutional Adoption in Financial History: BlackRock IBIT (\$54B+ AUM, February 2026) is the fastest-growing ETF in history. Combined U.S. spot Bitcoin ETF AUM reached \$115-122B by late 2025. IBIT ranked #6 in all ETF inflows for 2025 despite negative price returns. Harvard, JPMorgan, Morgan Stanley, Wisconsin state pension all made public Bitcoin allocations. Wells Fargo and JPMorgan now accept Bitcoin ETF shares as loan collateral. This is not a trend — it is structural.

+ 16+ Years Zero Protocol-Level Exploits — 1 Zetahash Hashrate — Greatest Security in Computing: Bitcoin crossed 1 zetahash (1,000 EH/s) in 2025. No computing infrastructure of any kind has ever been secured by more computational work. 16+ years without a protocol-level hack. The White House Executive Order itself notes the Bitcoin protocol 'has never been hacked.' SHA-256 has no known vulnerabilities. 34 countries contribute >0.1% of hashrate. This is the most battle-tested security system in existence.

+ Clearest Regulatory Status of Any Digital Asset — ETF, Commodity, Strategic Reserve, No Security Risk: Bitcoin has no SEC securities classification risk (commodity per CFTC). Spot ETF approved. Strategic Reserve by Executive Order. BITCOIN Act in Congress. OCC/FDIC banking guidance. SAB 122 custody normalization. MiCA compliant. German financial instrument designation. Japan legal payment method. 49 countries improved regulatory access since 2020. No other digital asset has this breadth of unambiguous regulatory clarity.

+ 500M+ Holders, Every Exchange, Every Brokerage, Every Country — Unmatched Distribution: Bitcoin is held by more people in more countries via more platforms than any other digital asset. 21% of U.S. adults own crypto; Bitcoin is the primary holding. Every major exchange, every major brokerage, PayPal (435M users), Cash App, Robinhood. 93% of crypto-accepting merchants accept Bitcoin. 39,000+ retail locations in Japan. El Salvador, Nigeria, Argentina, Vietnam, India — measurable consumer adoption in every region.

WATCH AREAS

- Base-Layer TPS — Permanent 7 TPS Ceiling, Intentional but Real: Bitcoin's 7 TPS is a deliberate design choice — security and decentralization over throughput. But it means Bitcoin's base layer cannot serve as a general-purpose transaction network. Lightning Network partially addresses this (300% volume growth, \$1B+ monthly), but channel management complexity limits mass consumer adoption. The BTCFi L2 ecosystem (Stacks, Merlin, Rootstock) is growing but fragmented.

- DeFi Ecosystem — BTCFi is Nascent, \$15B wBTC vs \$119B ETH Native: Bitcoin-native DeFi is early. L2 TVL (~\$2-3B) is a fraction of Ethereum's \$119B. The BTCFi ecosystem (Stacks \$208M, Merlin \$1.7B) is growing but fragmented across incompatible L2 architectures. wBTC/cbBTC on Ethereum (\$10-15B) is the primary Bitcoin DeFi vehicle but requires trust assumptions. OP_CAT and other proposed script upgrades could unlock native composability, but Bitcoin's governance timeline is measured in years.

- Protocol Conservatism — Slow Governance by Design, Limits Adaptability: Bitcoin's governance philosophy (changes require overwhelming consensus, years of review) is simultaneously its greatest security feature and its greatest competitive limitation. Taproot took 4+ years from proposal to activation. OP_CAT remains debated with no activation timeline. This means Bitcoin cannot rapidly respond to competitive innovations — it can only evolve slowly. In a fast-moving ecosystem, this is a structural risk.

- Fee Volatility — \$1-100+ Range Limits Consumer Payment Adoption: Bitcoin's base-layer fee market produced \$1-5 fees during quiet periods and \$20-100+ during Ordinals/Runes activity peaks. This volatility makes Bitcoin unsuitable as a primary consumer payment method. Lightning partially solves this but adds technical complexity. Until Lightning UX is as seamless as Venmo for all user types, Bitcoin will not challenge stablecoins for daily consumer payment volume.

CATEGORY NOTE

Bitcoin (BTC) scores 119/160 (74%) — ranking #3 in the DHN D-100 Index, behind Ethereum (144) and Chainlink (138). This requires context. Bitcoin's score is structurally constrained by criteria designed for programmable platforms — ISO 20022 compatibility, smart contract auditing, protocol composability, yield instruments, and TPS are all categories where Bitcoin deliberately scores low by design choice, not by failure. Bitcoin's actual strengths — security, regulatory clarity, institutional capital, sovereign recognition, global reach — score at or near the maximum and represent achievements no other asset in this index has replicated. The index ranking of #3 is accurate but somewhat misleading for a store-of-value asset being compared to smart contract platforms and infrastructure protocols on application-layer criteria. Bitcoin is not competing with Ethereum for DeFi TVL or with Chainlink for oracle market share — it is competing with gold for global monetary reserve status, and by that measure it is winning. The \$1.8T+ market cap, 23-nation sovereign holder base, BlackRock IBIT, and U.S. Strategic Bitcoin Reserve are achievements that exist in a different category from any other asset in this index. Bitcoin's 16-year track record of zero protocol exploits, fixed 21M supply, and unbroken network operation is the foundation upon which the entire digital asset ecosystem is built.