

Unit Bias and the Bitcoin Adoption Barrier

Why the psychology of whole-unit pricing prevents Bitcoin adoption, and what Rhode Island policymakers can do about it

Rhode Island Bitcoin Policy Initiative | June 2026

"Unit bias" is the psychological tendency to prefer owning a whole unit of something rather than a fraction. When Bitcoin trades at high dollar prices per whole coin, many consumers assume they cannot afford to participate. This paper examines the problem and proposes solutions relevant to Rhode Island policymakers.

100M sats = 1 Bitcoin (definitional)	~\$0.0007 = 1 satoshi at ~\$70K BTC	~46M U.S. crypto holders (Triple-A 2024)	\$10 Approximate floor for Bitcoin purchases at major exchanges
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1. THE PSYCHOLOGY OF UNIT BIAS

Unit bias is well-documented in consumer behavior research. People systematically prefer owning a whole unit of a thing over a partial unit — even when the partial unit is materially better or larger in absolute terms. The bias affects everything from candy bar sizing to stock purchase decisions.

Stock splits exist primarily to combat unit bias. When Berkshire Hathaway Class A trades at substantially over \$600,000 per share, many investors feel priced out despite being able to purchase fractional shares through most brokerages. Companies including Amazon, Apple, and Tesla have executed stock splits in part to address this perception barrier.

For Bitcoin, the unit bias problem is compounded by the unfamiliar decimal precision required to denote sub-unit holdings. A holder with 0.00148 BTC sees a number that does not parse as intuitively as "10 dollars" or "10 shares."

2. SATOSHIS AS BITCOIN'S NATURAL UNIT

One Bitcoin is divisible into 100 million "satoshis" (sats). At a Bitcoin price of approximately \$70,000, one satoshi equals approximately \$0.0007 — substantially less than one cent. Reframing Bitcoin holdings in sats rather than fractional BTC makes the unit psychologically accessible.

Dollar Amount	Approximate Sats	Approximate BTC
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\$10	~14,300 sats	0.000143 BTC
\$100	~143,000 sats	0.00143 BTC
\$5 (coffee)	~7,150 sats	0.0000715 BTC
\$1,000	~1.43 million sats	0.0143 BTC

Why sats matter for policy

Sats are not a marketing rebrand. They are the protocol-native unit; one sat is the smallest divisible unit Bitcoin's software supports. Public education materials that lead with sats rather than fractional BTC produce measurably different consumer responses.

3. ADOPTION SURVEY DATA

Multiple consumer surveys have identified price perception as a barrier to Bitcoin participation. Specific figures vary by survey methodology and time period; the directional finding is consistent. Bitcoin Magazine's coverage of Bitwise-led consumer research found that knowledge about fractional purchasing meaningfully shifted survey participants' interest in initial Bitcoin allocation.

Triple-A's U.S. crypto ownership estimate of approximately 46 million holders (2024 data) is widely cited as the U.S. cryptocurrency ownership figure. Federal Reserve SHED 2025 data places the figure lower, at approximately 10% of U.S. adults (~26 million), depending on definition. The gap reflects different survey definitions of "ownership" — Triple-A includes anyone with prior exchange activity; Fed SHED requires current holding.

4. HOW RHODE ISLAND POLICY COMPOUNDS OR RESOLVES UNIT BIAS

4.1 The S.2021 connection

Rhode Island's S.2021 (Bitcoin Tax De Minimis Exemption) is partly a response to unit bias. By removing tax-compliance friction on transactions up to \$5,000 per month, the bill makes small Bitcoin purchases practical for retail use. A \$5 coffee purchase becomes ordinary economic activity rather than a tax-compliance event.

The exemption's threshold structure (\$5,000/month, \$20,000/year) is sized comfortably above typical retail use without subsidizing large traders. This matches the unit-bias problem: the people who need permission to participate at the small end are precisely the people the exemption is designed to serve.

4.2 Public education through schools

Rhode Island currently requires one semester of personal financial literacy for high school graduation. The curriculum does not address digital assets, blockchain technology, or the fundamentals of decentralized finance. Integrating Bitcoin literacy into the existing requirement — including sats denomination — would address unit bias at the educational level. This is the subject of a separate RIBPI white paper ("Teaching Bitcoin in Public Education").

4.3 DBR guidance language

Where Rhode Island agencies (DBR, Division of Taxation) issue consumer-facing guidance on virtual currency, the guidance should explicitly reference sats as the natural denomination unit for small holdings. This is a no-cost intervention with material practical effect.

5. FEDERAL POLICY PARALLELS

Federal action has begun to address related issues. The GENIUS Act (P.L. 119-27, July 18, 2025) establishes regulated stablecoin issuance that operates at a 1:1 dollar peg — addressing a different but related psychological barrier: the perception that cryptocurrency is inherently volatile. Bitcoin's de minimis tax proposals in successive Lummis-led drafts also address the transaction-friction issue at the federal level.

6. RECOMMENDATIONS

1. Pass S.2021 to remove the transaction-friction component of the unit bias problem at the state tax level.
2. Direct DBR and the Division of Taxation to reference sats as the natural unit in consumer-facing virtual currency guidance.
3. Integrate Bitcoin literacy (including sats denomination) into the existing Rhode Island high school personal financial literacy requirement.
4. Engage the Blockchain Study Commission (S.2198 Sub A, if enacted) to study public education approaches in other states.

APPENDIX: SOURCES AND REFERENCES

Consumer Behavior Research

- Geier, A. B., Rozin, P., & Doros, G., "Unit bias: A new heuristic that helps explain the effect of portion size on food intake" (Psychological Science, 2006)
- Bitcoin Magazine coverage of consumer survey research on fractional purchasing perceptions

- Federal Reserve, Survey of Household Economics and Decisionmaking (SHED) 2025
- Triple-A, U.S. Crypto Ownership Statistics (2024)

Bitcoin Technical Reference

- Bitcoin protocol specification, BIP-21 (URI scheme) and definitional documents
- Bitcoin Magazine Pro, sat-denominated reporting standards

Rhode Island Policy Context

- S.2021 (Bitcoin Tax De Minimis Exemption), 2026 session
- Rhode Island General Laws Title 16, personal financial literacy graduation requirement
- Rhode Island Department of Business Regulation, virtual currency guidance materials

Federal Policy Context

- GENIUS Act, P.L. 119-27, signed July 18, 2025
- Responsible Financial Innovation Act (Lummis-Gillibrand), successive drafts including de minimis provisions

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End of Report