

MARK MOSS / RESEARCH

BITCOIN VALUATION LAB · VERSION 1.0

THE MARKET. THE SHARE. THE MATH.

A guide to the Bitcoin
store-of-value projection model

A conditional framework, not a promised price.

Frozen September 2026 research · 2025 working baseline

START HERE

What this guide contains

The calculator asks what follows from a market-size path, an adoption assumption and a supply schedule. This guide makes all three visible.

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This is an educational gross-market comparison. It is not a consolidated wealth census, statistically established adoption forecast or personalized allocation recommendation. The numerical model is frozen; changing source pages do not silently update it.

Use the calculator first, then read the chapter behind the assumption you want to challenge. The model and chart data can also be inspected as JSON and CSV in the accompanying website.

01 / THE BIG IDEA

Start with the market. Not a price target.

A two-minute explanation of what this model calculates, what it assumes, and how to challenge it.

A different question produces a different model

“Where is Bitcoin’s price going?” skips the question that matters first: **what job could Bitcoin do, for whom, and at what scale?** Bitcoin Valuation Lab starts with the markets people use to hold wealth. It projects the size of that comparison universe and asks what a chosen Bitcoin share would imply.

This is the market-disruption question used in venture investing, adapted to a monetary asset. We are not assigning Bitcoin a company’s revenue multiple. We are calculating a conditional monetary valuation from a market size, an assumed share and a supply denominator.

Mark’s v1 thesis is deliberately visible: 1.5% of the combined store-of-value universe in 2030, 8% in 2040 and 15% in 2050. You do not have to agree. The calculator lets you change the shares without rewriting the historical evidence.

[MODEL] [VC-GURLEY]

Two levers. One transparent equation.

Implied BTC price = modeled SOV universe × assumed Bitcoin share ÷ projected BTC supply

Lever one is the size of the market. Historical monetary relationships and a frozen economic path inform the future size of the store-of-value, or SOV, universe. This part contains estimates and explicit long-run extrapolations.

Lever two is adoption. You decide what percentage Bitcoin represents. The current presets are scenario judgments, not probabilities, measured migration rates or forecasts issued by a bank.

The supply convention converts capitalization into a per-coin value. It does not create demand. A constrained supply schedule is compatible with many possible prices, including a much lower price if demand weakens.

[MODEL] [BTC-CORE] [BTC-SUBSIDY]

Do not confuse a calculation with a promise.

The calculator answers “what follows from these assumptions?” It does not establish that the assumptions will occur.

Four labels that make the model readable

Label	Meaning	Example
Sourced	A value or definition reported by an identified publisher. It may still be an estimate.	Savills' end-2024 property estimate.
Derived	A calculation or bridge from stated inputs.	The model's property roll-forward to 2025.
Assumed	A forward judgment, selected relationship or user input.	Bitcoin represents 15% of the pie in 2050.
Calculated	The output produced when the inputs are combined.	An implied nominal price per Bitcoin.

The same labels appear in the basket notes, technical appendix and source library. Passing software tests does not upgrade an assumed input into an observed fact.

[MODEL] [PROPERTY]

How to use the lab

Start in **Simple mode**. Choose a monetary path, select a preset, and change one Bitcoin-share assumption. Watch market capitalization and price respond while the market-growth path remains fixed.

Next, keep adoption fixed and change the monetary path. That isolates a different question: how much does the result depend on money continuing to expand relative to economic output?

Use **By market** only when you want to assign capture separately to gold, property, bonds, loans, equities, money and collectibles. In that mode, the combined Bitcoin share is an output. It does not also obey your Simple-mode preset.

No wallet, brokerage account, live quote, personal balance sheet or subscription is required. This release runs offline and does not send your inputs anywhere.

02 / THE MARKET

What is in the nearly \$1Q basket?

Seven categories, one explicit accounting perimeter, and no claim that every dollar is unique investable cash.

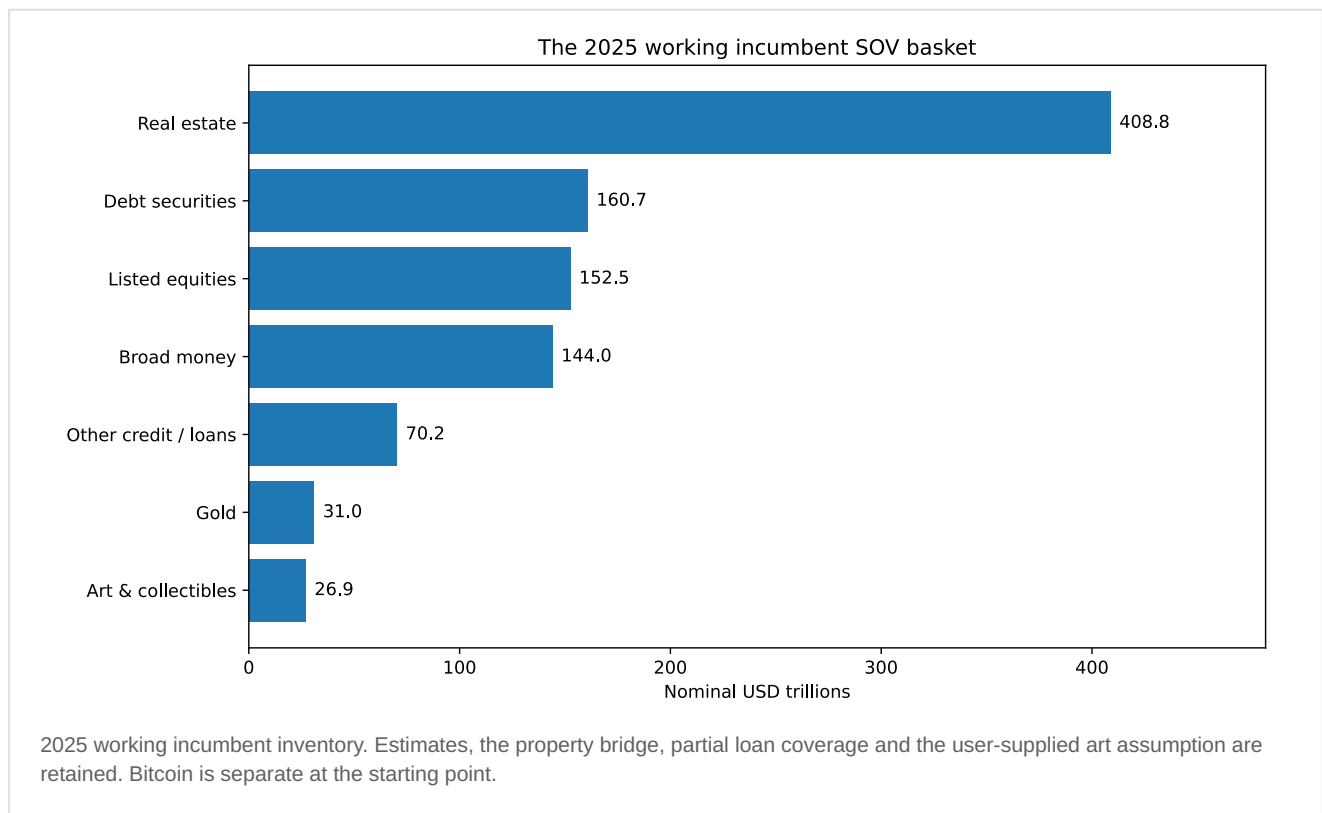
The frozen 2025 working baseline

The credit-corrected incumbent basket totals **\$994.13T**. Adding the retained Bitcoin starting value once gives a combined comparison of **\$995.87T**. “Nearly one quadrillion dollars” is a rounded description of that modeled baseline, not a new current wealth survey.

Category	2025 working value	Evidence treatment
Gold	\$30.99T	Derived stock valuation[GOLD] [GOLDPRICE]
Real estate	\$408.79T	Source estimate + 2025 bridge[PROPERTY]
Debt securities	\$160.70T	Published securities stock[SECURITIES]
Other credit / loans	\$70.22T	Covered loan-form claims; partial coverage[C01] [C03] [C04] [C05] [C06]
Listed equities	\$152.48T	Adjusted working estimate[SECURITIES] [INDIA]
Broad money	\$144.00T	Attributed global estimate + proxy history[MONEY] [M2US] [M2CN] [M3EA]
Art & collectibles	\$26.93T	User assumption; unverified all-holder estimate[ART] [MODEL]

The categories do not all have an independently observed December 31 closing value. Dates and transformations remain visible below. Future category shares describe this chosen gross inventory, not shares of all household net worth.

[MODEL]



Real estate: compete for the savings role, not the building

Property can provide shelter, rent, productive land and a way to hold wealth. The model includes the broad all-property estimate, rather than pretending there is an observed global split between an investment component and an owner-occupied component.

The frozen source is Savills' \$393.30T end-2024 estimate. The model's \$408.79T 2025 amount is an explicit one-year bridge. Bitcoin capture denotes a hypothetical reallocation of some savings-related value. It does not mean Bitcoin provides housing, rental income or agricultural output.

[\[PROPERTY\]](#) [\[MODEL\]](#)

Bonds and equities: different economic claims

Debt securities are outstanding negotiable obligations. They include more than sovereign bonds, and their source valuation conventions are not uniformly market-price marks. **Listed equities** represent ownership claims on companies. The model uses total capitalization, not an index's dividend-reinvested return.

For equity, v1 retains a documented working adjustment to the India component. This is not an official correction by the publisher. A future data revision should be versioned rather than silently substituted into the calculator.

Bitcoin can be proposed as an alternative for some discretionary savings allocation, but it does not replace a bond's contractual payment or a company's productive earnings. The fraction that might switch remains an adoption assumption.

[\[SECURITIES\]](#) [\[INDIA\]](#) [\[MODEL\]](#)

Why the loan category was added

Removing broad credit solved one duplication risk but also omitted identifiable loan-form claims. The targeted correction adds **\$70.22T** from specified China, U.S. and euro-area loan series. It does not calculate a residual by subtracting unrelated money and securities totals from an IIF headline.

The selection uses China's listed RMB, FX, entrusted and trust loan components; U.S. commercial-bank loans and leases; and the euro-area private-sector loan stock without the loan-transfer adjustment. The inputs, currency conversions and source definitions are available in the credit bridge download.

This is covered loan-form credit, not a complete global non-securitized-loan census. Some loans may remain on a bank's balance sheet while a linked vehicle issues securities. That economic linkage has not been fully removed. Missing countries and lender classes are unmeasured, not zero.

[C01] [C03] [C04] [C05] [C06] [C07]

Gold, money and collectibles: three different evidence standards

Gold means the retained estimate of all above-ground metal, marked at the corresponding bullion price. It is broader than private investment bullion. The model does not count gold funds on top of the metal they represent.

Money starts with an attributed \$144.00T broad global compilation. Historical growth comes from a scaled U.S.-China-euro-area proxy. Broad money is more than physical currency, and the source definitions may include liquid securities or fund claims.

Art and collectibles use Mark's explicitly unverified \$18T art plus \$6T other-collectibles estimate for 2023, assumed disjoint and bridged to 2025. The much smaller Deloitte UHNW estimate covers a different owner population; it does not validate the all-holder figure. Jewelry and collectible coins may also overlap bullion value.

[GOLD] [GOLDPRICE] [MONEY] [ART] [MODEL]

A finite pie is an accounting convention, not a claim that overlap vanished

A property, a loan secured by it, an equity interest in its owner, and a deposit funding a lender can be distinct gross claims linked to the same economic activity. Adding them does not create an equal amount of unique net wealth.

The model reduces obvious literal repetition and makes its chosen categories explicit. It does not claim to have consolidated every financial intermediary or removed every look-through exposure. Its finite-pie rule keeps scenario outputs arithmetically coherent; it does not transform the basket into cash that could all migrate into Bitcoin.

Keep this distinction in any chart caption: **modeled gross store-of-value comparison universe**, not "all the money in the world."

[MODEL] [C06] [IIF]

03 / HISTORICAL FOUNDATION

What did the historical evidence actually show?

A usable history with explicit gaps, rather than a manufactured fifty-year dataset.

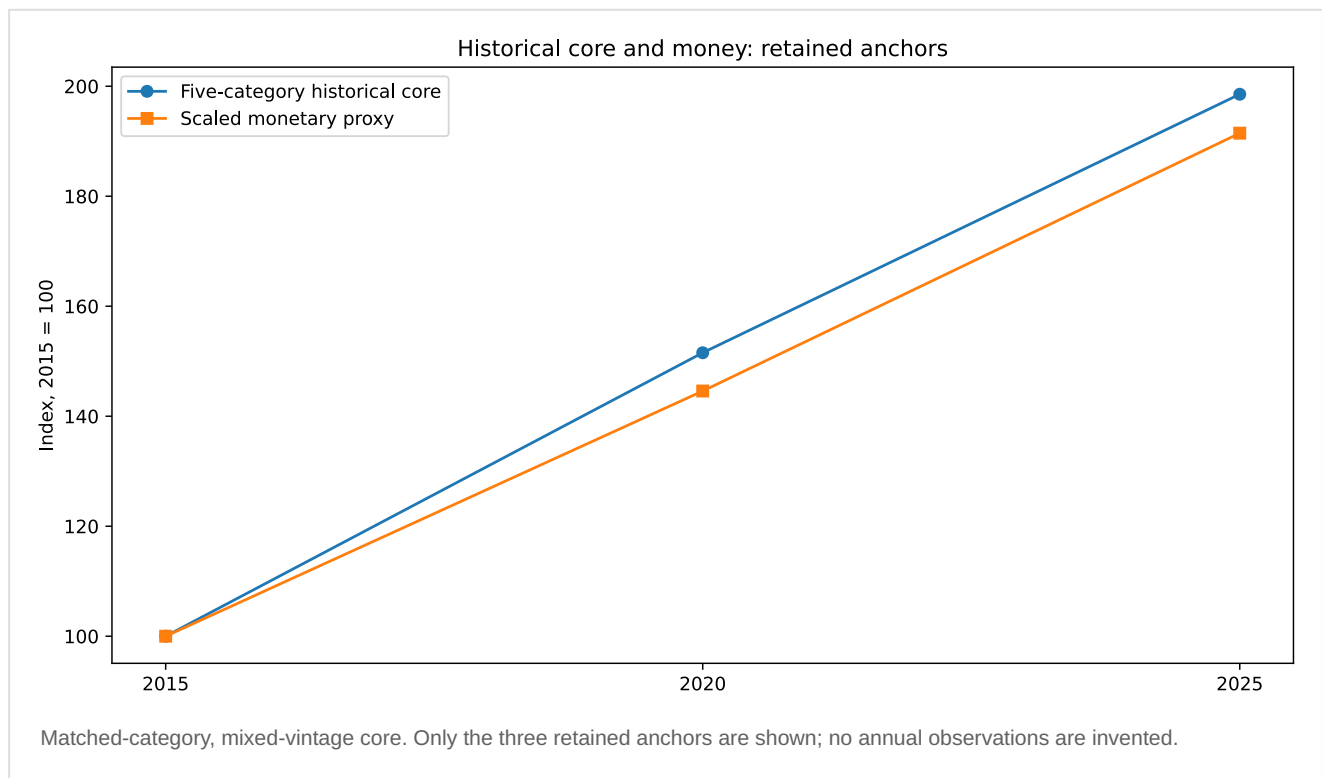
Three comparable-core anchors, not fifty complete annual observations

The retained five-category core includes money, gold, property, debt securities and equities. It excludes art and the later loan addition because matching historical stocks were not established. The historical money series is scaled to the working global anchor; it is not a direct worldwide census at each date.

Anchor year	Five-category core	Money proxy, scaled	Coverage
2015	\$451.78T	\$75.21T	Art and added loans excluded
2020	\$684.63T	\$108.74T	Art and added loans excluded
2025	\$896.97T	\$144.00T	Art and added loans excluded

The 2025 historical-core total is therefore smaller than the corrected seven-category starting basket. We do not join those two totals into one uninterrupted historical growth chart.

[MODEL] [MONEY] [PROPERTY-OLD] [SECURITIES]



Measure elapsed time, not the number of rows

For comparable endpoints, annualized growth is $(\text{ending value} / \text{starting value})^{(1 / \text{elapsed years})} - 1$. A five-row lag is not necessarily five years. That distinction mattered when the early source files contained irregular intervals.

On the retained core, the 2015–2025 annualized rate is approximately **7.10%**, compared with **6.71%** for the scaled monetary proxy. The core's earlier half-decade is approximately 8.67%; the later half-decade is approximately 5.55%. These describe selected endpoints and coverage, not a law that every asset's growth must slow.

The historical observations are useful context. They do not by themselves establish causality, a stable money-to-asset response coefficient, or the next 25 years of growth.

[MODEL]

Relative shares matter as much as absolute growth

An asset can rise in dollar value while losing share of the basket. Conversely, an unusually strong valuation period can make its share rise rapidly. We therefore examine each asset relative to the chosen core, rather than simply extending its fastest recent absolute CAGR.

The selected property drift is approximately -0.60% a year in log relative weight; equities use approximately $+1.06\%$. Gold, bonds, collectibles and the added loans use zero selected relative-weight drift before normalization. Zero here means a neutral allocation assumption where evidence was insufficient or disrupted, not zero dollar growth.

The gold result is deliberately not described as a 30- or 50-year full-basket finding. The longer retained comparison was only a partial financial basket. Bond history also crosses a coverage change, and the property and equity vintages have limitations. Those gaps are a reason to label assumptions, not to hide them.

[MODEL] [SECURITIES]

What this history does not tell us

It does not prove that faster M2 mechanically causes a particular Bitcoin return. It does not show a smooth, universal trend for every store of value. It does not measure the amount of each market that Bitcoin can take.

Nor does a larger dollar addition prove accelerating percentage growth. A larger base can produce a larger dollar increase at the same or even a lower annual rate.

The practical standard for this educational model is traceable evidence and correct mathematics. Sparse endpoints remain sparse. Interpolations and bridges stay labeled. A growth assumption does not become a fact just because the program reproduces it.

[MODEL]

04 / THE MONETARY ENGINE

How the model grows the SOV universe

The active calculation, the institutional cross-checks, and the point where published forecasts become model extensions.

Follow the active path

1 Historical money / GDP relationship ↓

2 IMF nominal GDP path ↓

3 Modeled broad money ↓

4 Non-money SOV / money ratio ↓

5 Finite SOV total

The calculator does not choose seven unrelated future asset returns. It first projects money, then the size of the non-money pool relative to money. Asset weights allocate that pool. Changing a category's relative-weight assumption changes the mix, not the externally determined total.

The active institutional starting point is the retained April 2026 IMF nominal-world-output series at market exchange rates. The published table includes \$118.176T for 2025 and \$158.392T for 2031. These are economic-output levels, not SOV stocks and not amounts added directly to the basket.

[MODEL] [IMF-GDP]

From economic output to the money path

The historical monetary proxy combines U.S. M2, China M2 and euro-area M3. In the reference path, the model preserves the 2018–2025 log-growth difference between that proxy and nominal world GDP. This is the *monetary-deepening* assumption: money continues changing relative to the scale of economic activity.

Future money log growth = future GDP log growth + retained historical money/GDP log drift

The retained reference drift is approximately 0.021341 log units a year. The shorter 2020–2025 alternative is approximately −0.006947. Those periods tell different stories. The reference implies roughly 7.02% annual money growth through 2050; it is not a reliable law estimated from a long stable sample.

The world-scale baseline uses \$144T, while the historical relationship uses a narrower geography. Applying a constant scale does not make that history a direct observation of every country's money supply.

[MODEL] [M2US] [M2CN] [M3EA] [MONEY]

From money to the finite pie

Let **M** be money and **N** be the non-money store-of-value pool. The model carries forward the selected historical drift in **N/M**. The retained annual log drift is 0.005784, approximately 0.58% in log terms.

That drift was calculated from the available gold-property-equity numerator relative to money over 2015–2025. Bonds were omitted from that calibration because of the source break; art lacked comparable history. Applying the drift to the larger current pool, including added loans, is a disclosed transfer assumption.

$$N(t) = N(2025) \times [M(t) / M(2025)] \times \exp(0.005784 \times \text{elapsed years})$$

Money plus the non-money pool gives the incumbent total. A small starting-state bridge includes existing Bitcoin once, giving the combined comparison used for the price calculation. No separate credit-growth, inflation or AI multiplier is added on top.

[MODEL]

What each institution does and does not supply

Source	Role in v1	Not a claim that...
IMF WEO[IMF-GDP]	Active upstream nominal-GDP path feeding modeled money.	The IMF forecasts a \$6.15Q SOV universe.
IMF Fiscal Monitor + IIF[IMF-FM] [IIF]	Retained government/private/financial credit diagnostic.	Public-debt growth is applied to every asset.
BIS[BIS-GLI]	Definitions and credit/liquidity cross-checks.	BIS publishes the model's global-M2 path to 2050.
CBO[CBO]	Long-term U.S. fiscal cross-check.	U.S. federal debt is a world-money forecast.
PBOC / Fed / ECB[C01] [C04] [C05]	Selected additional loan stock inputs.	The covered loan subset is all global lending.

These roles are not a single sequential chain in which every source causes the next calculation. In the released finite-pie engine, CBO and the retained BIS liquidity commentary are context rather than active multipliers.

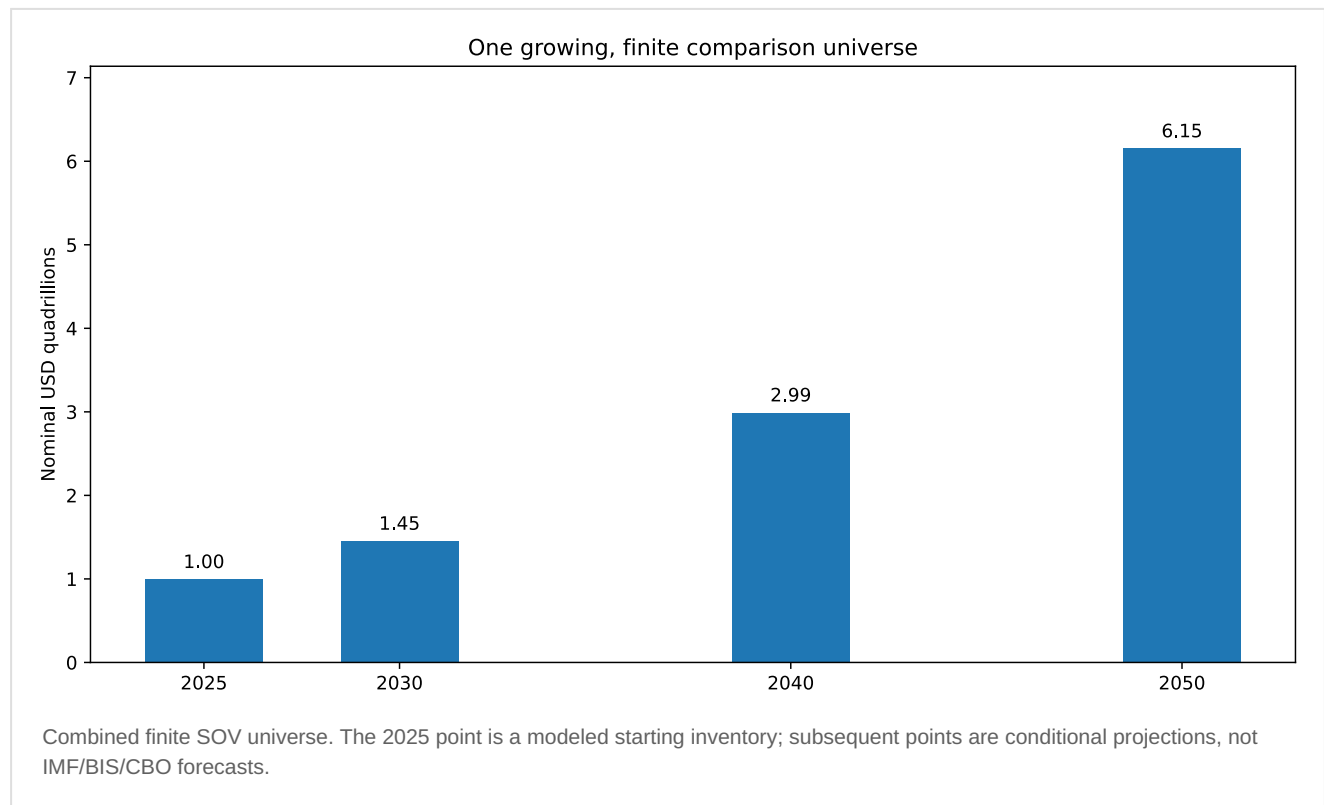
Where institutional forecasts stop

The retained IMF appendix supplies 2025, 2026, 2027 and 2031 nominal-output levels. Values for 2028–2030 are geometric model interpolations. After 2031, the model extends the 2027–2031 terminal GDP growth rate, approximately 4.68%, and continues the selected monetary-deepening assumption.

CBO's long-term material has its own U.S. horizon. Its existence does not turn the global 2040 and 2050 paths into institutional forecasts. The extension is the model's choice, and the source library preserves that distinction.

[\[IMF-GDP\]](#) [\[IMF-FAQ\]](#) [\[CBO\]](#) [\[MODEL\]](#)

Year	Combined reference pie	Treatment
2030	\$1,454.23T	Conditional model output
2040	\$2,990.69T	Conditional model output
2050	\$6,152.87T	Conditional model output



05 / THE VC LENS

Think like a venture investor. Keep the denominator honest.

A framework for asking about disruption, not a shortcut from a company's user growth to Bitcoin's market capitalization.

Begin with the job, the market and the reason to switch

A useful venture question is not "what stock price do we need?" It is "what problem does this product solve, how many customers could choose it, and how much economic activity could it win?" Bitcoin's proposed job in this model is portable, verifiable, scarce long-term savings.

The v1 sequence is market size, market growth, assumed penetration, then implied value. It deliberately does not pretend that the penetration has already been derived from customer cohorts. Reach, retention and allocation expansion are the proposed v2.0 upgrade.

In 2014, Uber investor Bill Gurley argued that better service could expand addressable demand beyond the historical taxi market and that assumed share ceilings needed a rationale. That is a useful challenge to a narrow denominator. It is an investor's argument, not a rule that any superior product achieves a particular market share.

[VC-GURLEY] [MODEL]

What changes when the product is Bitcoin

Business / asset	Adoption measure	Economic measure
Ride service	Retained riders and rides per rider.	Bookings, revenue and business economics.
AI application	Retained organizations and workflows used.	Durable revenue, usage expansion and margins.
Bitcoin	Capital represented by retained adopters and their allocations.	Desired holdings and a conditional monetary valuation.

For an AI application, a successful trial is not the same as organization-wide usage. Bessemer emphasizes retention and expansion into recurring workflows. That distinction transfers as a modeling question: Bitcoin adoption should ultimately concern retained capital, not only wallets or app downloads.

A share of annual rides or room nights is a flow measure. A share of the SOV universe is a stock-value measure. V1 does not insert "Uber or Airbnb took 10%" as a Bitcoin coefficient, nor does it equate a company's market capitalization with a share of the property it helps users book.

[VC-AI] [MODEL]

Turn product advantages into hypotheses about behavior

Bitcoin's design allows peer-to-peer transfer, self-custody, public verification and a constrained issuance schedule. Those characteristics can be attractive for particular savings needs. Holding through a volatile market, securing keys and meeting fixed nominal obligations create different considerations.

Mark's thesis is that these advantages become sufficiently compelling to win a much larger savings role. The model does not quantify the statement "100 times better," and it does not apply a 100× premium to an asset value.

The behavioral questions are concrete: does easier access bring in more retained capital? Do adopters maintain larger allocations? Do treasury and investment mandates permit meaningful holdings? Do people continue choosing Bitcoin after a severe drawdown? Product quality must eventually show up in those choices, not only in a persuasive analogy.

[BTC-FAQ] [MODEL]

AI is an adoption channel, not an automatic valuation bonus

Lightning Labs documents tools for Bitcoin-based agent transactions. Coinbase also documents an agent-payment route using a stablecoin. Technical availability establishes possible payment channels, not the amount of savings that will remain in Bitcoin.

For AI to support a higher Bitcoin share, owners or operators would need to choose sustained Bitcoin savings, reserve, collateral or working balances. Rapid transactions with small balances can create high volume without proportionate retained value.

V1 adds no standalone AI growth multiplier. A future model could make access, retention or allocation respond to specific AI channels, while testing competing implementations. That work is deliberately deferred rather than smuggled into the present numbers.

[AI-BTC] [AI-USDC] [MODEL]

06 / BITCOIN ADOPTION

The assumptions are the point. Make them visible.

Three editable presets, an explicit conviction thesis, and a clear boundary between assumed shares and calculated prices.

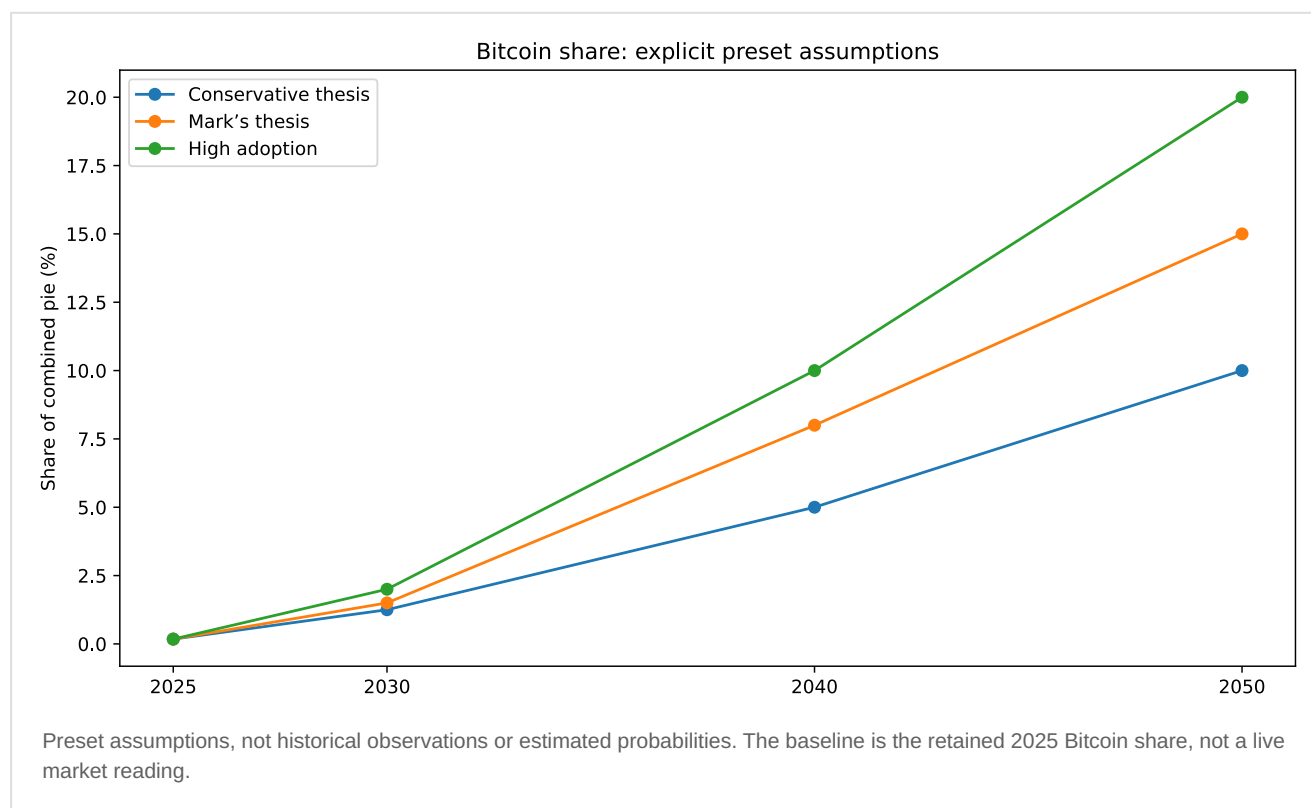
The three whole-pie presets

Preset	2030 share	2040 share	2050 share
Conservative thesis	1.25%	5.00%	10.00%
Mark's thesis	1.50%	8.00%	15.00%
High adoption	2.00%	10.00%	20.00%

Mark's Thesis is the default. It assigns Bitcoin 1.5%, 8% and 15% of the modeled combined pie at the three milestones. The earlier 1.25% / 5% / 10% path remains available as "Conservative thesis." That name means lower assumed capture relative to the other presets, not objectively low risk, a confidence level or a statistically conservative forecast.

The High Adoption preset uses 2%, 10% and 20%. None of these is a measured future adoption rate. The numeric controls also accept custom shares and do not require them to increase over time.

[MODEL]



What the default calculates

Year	Combined pie	Bitcoin share	Implied nominal BTC price
2030	\$1,454.23T	1.50%	\$1,060,562
2040	\$2,990.69T	8.00%	\$11,433,564
2050	\$6,152.87T	15.00%	\$43,977,147

These prices are arithmetic consequences of the chosen market path and capture fractions. They are not fixed annual Bitcoin growth-rate inputs, nor does the calculator estimate the probability of reaching them.

The strongest explanation is conditional: **“This is my adoption thesis. Here is the projected market it applies to, and here is what the math implies.”** Readers can disagree with either the market path or the share assumptions without disputing the arithmetic.

[MODEL]

What would have to happen?

For the stronger paths to be persuasive, Bitcoin would need to move beyond occasional trial positions into durable savings behavior. Distribution would have to broaden, custody and operating practices would have to support continued participation, and enough holders would need to retain or increase their allocations through difficult periods.

Institutional and treasury adoption would need to be economically meaningful, not merely permission to purchase a small amount. Digital commerce or AI use would need to create sustained balances rather than transaction volume alone. Alternative stores of value and competing monetary technologies would still exist.

These are underwriting conditions, not five newly fitted coefficients. The model supplies no independent probability that they occur. A 15% share of this gross comparison universe is a substantial monetary-adoption thesis even though other large categories can still be larger.

[MODEL] [AI-BTC] [AI-USDC]

Whole-pie share and category capture answer different questions

Simple mode asks, “What percentage of the entire combined universe does Bitcoin represent?” A 15% answer determines Bitcoin’s total capitalization and the aggregate residual. It does not uniquely determine how much gold or property remains.

By-market mode asks, “What effective fraction of each category is attributed to Bitcoin?” The program sums those contributions, subtracts each from its counterfactual category allocation, and calculates the resulting Bitcoin share.

$$\text{Total Bitcoin share} = \text{sum of } [\text{category weight} \times \text{that category's capture fraction}]$$

The reset values in By-market mode are retained illustrative category settings, not a derivation of Mark’s whole-pie preset. Other credit mechanically matches the bond setting. Both modes preserve one finite pie, but their inputs are intentionally independent.

Bitcoin versus *remaining* gold appears only in By-market mode. At 100% gold capture, remaining gold is zero and the ratio is undefined; the app says so instead of displaying a misleading infinity.

[MODEL]

A worked example with round numbers

Suppose the projected comparison universe were \$2 quadrillion, Bitcoin’s assumed share were 5%, and the supply denominator were 21 million. Bitcoin capitalization would be \$100 trillion. Dividing that by 21 million produces approximately \$4.76 million per coin.

That is an illustration of the equation, not one of the released milestone forecasts. The app uses the retained, more precise pie and supply values. A large calculated capitalization does not mean the model has estimated an equal quantity of new cash inflows.

[MODEL]

The two modes should never fight each other.

Simple mode: total Bitcoin share is an input. By-market mode: total Bitcoin share is an output. Switching modes does not silently rescale one set of assumptions to fit the other.

07 / SENSITIVITY LAB

What if the assumptions are wrong?

Separate market-growth uncertainty from adoption uncertainty, and change one lever at a time.

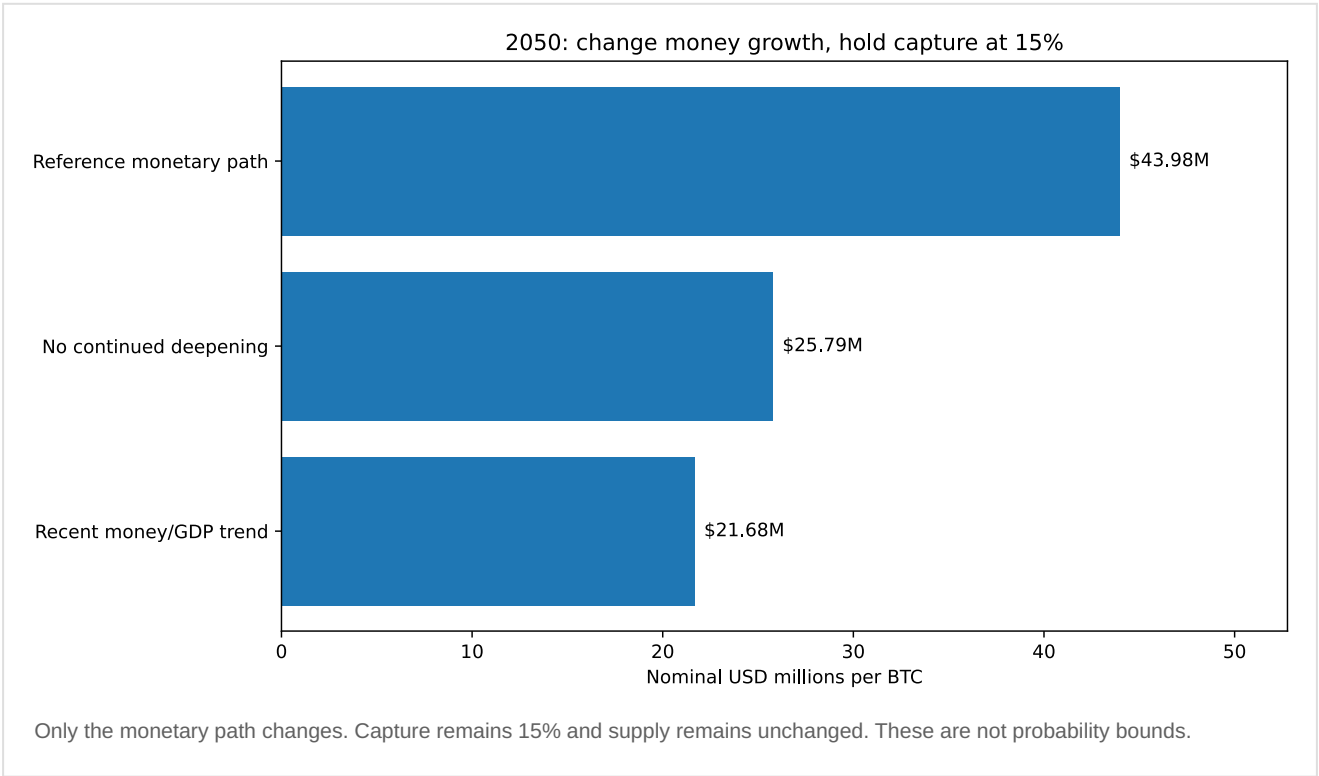
Same adoption. Different monetary paths.

The table holds Mark’s default 2050 share at **15%** and uses the same supply denominator. Only the retained monetary control changes.

Monetary path	2050 combined pie	Share held fixed	Implied nominal BTC price
Reference monetary path	\$6,152.87T	15%	\$43,977,147
No continued monetary deepening	\$3,608.82T	15%	\$25,793,766
Recent monetary-growth trend	\$3,033.49T	15%	\$21,681,613

No continued monetary deepening removes the persistent rise in the money/GDP ratio. Recent monetary growth uses the shorter retained ratio trend instead. These are two specific tests of the monetary assumption, not arbitrary lower and upper forecasts.

[MODEL]



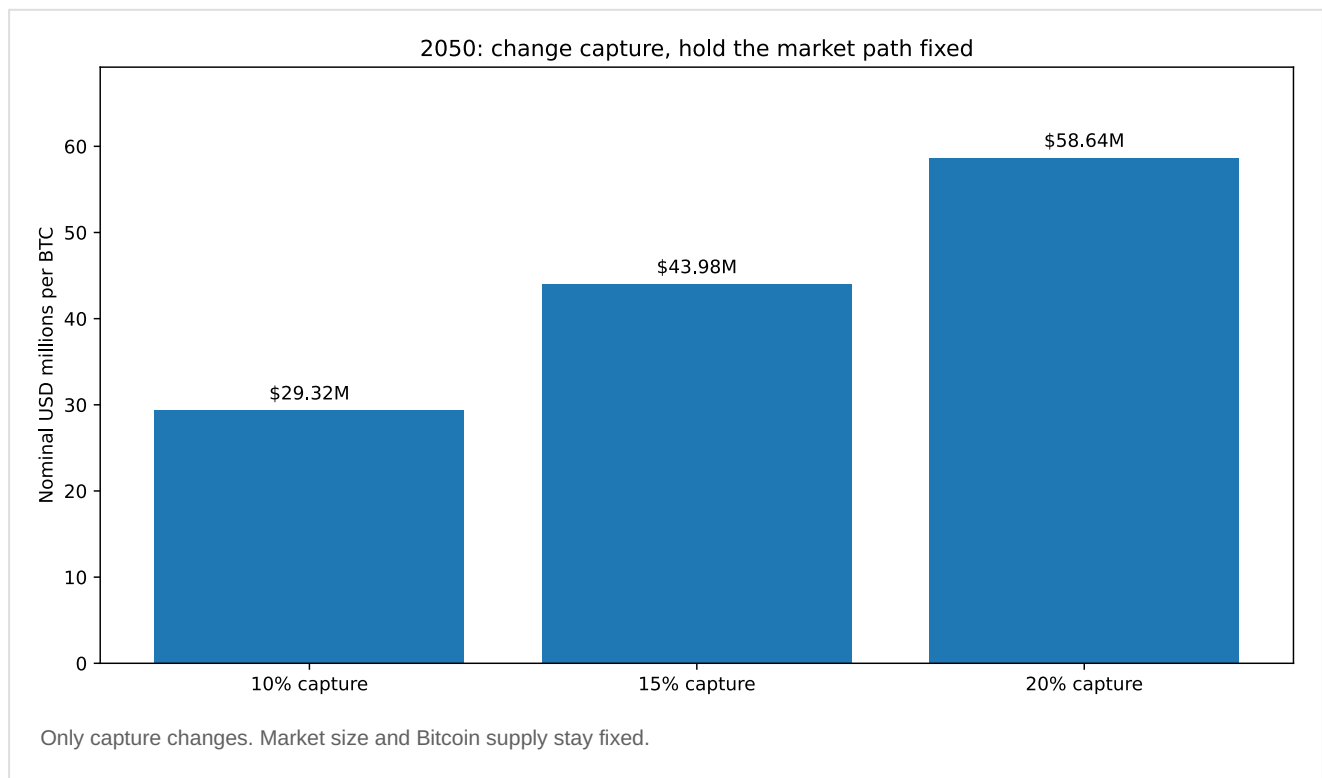
Same market. Different adoption.

Now hold the reference pie fixed and change only the Bitcoin-share preset. This is the separate adoption question.

Preset	2050 share	Implied nominal price
Conservative thesis	10.00%	\$29,318,098
Mark's thesis	15.00%	\$43,977,147
High adoption	20.00%	\$58,636,195

At a fixed pie and supply, doubling the share doubles the implied price. That is a mathematical identity, not evidence that adoption itself can be doubled. The app makes this dependence visible so the reader can see where conviction enters.

[MODEL]



Nominal dollars are not unchanged purchasing power

The headline outputs are future nominal U.S. dollars. They do not have the same purchasing power as a dollar in 2025.

For illustration, the retained 2.3% annual consumer-inflation assumption makes a 2050 dollar worth approximately 0.57 dollars in 2025 consumer purchasing power. On that assumption, the default reference 2050 price of \$43,977,147 is approximately \$24,907,848 in 2025 dollars.

This is an illustration, not a new inflation forecast. SOV-market growth is not the same thing as consumer-price inflation. No inflation uplift is added to the nominal forecast a second time.

[\[MODEL\]](#)

These tables are not a safe range

The lowest displayed preset is not a floor for Bitcoin. The controls do not exhaust possible technical, competitive, monetary or demand outcomes. A much smaller share, slower market growth, or both can produce a substantially lower result; zero future share produces zero modeled allocation.

The most informative test is specific: identify the disputed assumption, change it, and hold the rest fixed. The uncertainty does not disappear because the output is precise to the dollar. That precision is useful for checking arithmetic, not for claiming forecasting accuracy.

In the calculator, use the macro selector for the market question and the sliders for the adoption question. Export the selected scenario with its version and assumptions so another reader can reproduce exactly what you changed.

[\[MODEL\]](#) [\[BTC-FAQ\]](#)

08 / TECHNICAL METHODOLOGY

Show the work

Definitions, equations, dates, source roles, and the exact boundary between frozen inputs and editable assumptions.

1. The measurement perimeter

All model stock values are in nominal USD trillions; one trillion is 10^{12} dollars and one quadrillion is 1,000 trillion. The model retains gross real assets and financial claims, with incomplete consolidation and heterogeneous valuation conventions. This is not an investable portfolio or a market-cap-weighted security index.

The reference baseline is 2025, assembled using releases available in the research cutoffs. Some 2025 values are bridges from 2024, and the art reference begins as an unverified 2023 input. Retrieval dates are separate from observation dates. A 2026 publication can report a 2025 observation without converting a 2026 observation into 2025 data.

Version 1 freezes these estimates. A source website changing after release does not automatically alter the app.

[MODEL]

2. Market-path equations

Let t be the target year, $\tau = t - 2025$, M_t the modeled broad-money stock, and $V_{i,0}$ each non-money category's starting value. The non-money starting pool N_0 includes the new covered loan category.

$$\begin{aligned} R_t &= (N_0 / M_0) \times \exp(d_R \tau) \\ N_t &= M_t \times R_t \\ I_t &= M_t + N_t \end{aligned}$$

The frozen ratio drift d_R is 0.005784085289. Money is generated upstream from the retained IMF nominal-GDP path and the historical money/GDP drift. Reference and the two monetary controls are exported exactly, not recreated from rounded headline totals.

$$\begin{aligned} \text{Raw weight}_{i,t} &= V_{i,0} \times \exp(d_i \tau) \\ \text{Weight}_{i,t} &= \text{raw weight}_{i,t} / \text{sum of all raw non-money weights} \\ V_{i,t} &= N_t \times \text{weight}_{i,t} \end{aligned}$$

Property's selected relative log drift is -0.005963207; equity's is 0.010576055; the other non-money drifts are zero. A category's selected drift is not its final percentage change in share after normalization. The normalizing denominator changes too.

[MODEL] [IMF-GDP]

3. The added loan calculation

The six selected loan-form inputs are converted and summed. The China rows use $268.4 + 1.05 + 11.35 + 4.67$ trillion CNY, multiplied by $1.1750 / 8.2262$ USD per CNY. U.S. loans and leases use 13,433.4 billion USD / 1,000. The euro-area input uses $13,630$ billion EUR $\times 1.1750 / 1,000$.

Covered additional credit = 70.224129565291 trillion USD

This amount increases N_0 , not the selected historical drift. Its initial raw relative weight is based on the added stock and its selected drift is zero. Future values of other categories can change slightly through normalization even though their historical starting values and drift assumptions remain unchanged.

No compatible long historical aggregate for this precise loan perimeter was established. The future treatment is therefore a neutral relative-weight convention, not an empirically measured loan-growth forecast.

[C01] [C03] [C04] [C05] [C06] [MODEL]

4. Bitcoin enters the combined starting pie once

The retained Bitcoin observation is 2025-12-31T00:00:00.000Z: price \$87,509, publisher circulating supply 19,969,815 BTC and capitalization \$1.75T. Its timestamp is the start of December 31, not an exact common close for all incumbent markets.

$k = (I_0 + B_0) / I_0 = 1.001757862261$
Combined pie $P_t = k \times I_t$

The bridge preserves the existing Bitcoin stock once without an independent growth bonus. Its common initial bookkeeping fraction is $B_0 / (I_0 + B_0)$, approximately 0.1755%.

This proportional bookkeeping is not an observed history of which asset holders sold to buy Bitcoin. It must not be presented as such.

[BTC-REF] [MODEL]

5. Capture and residual accounting

Simple: $B_t = P_t \times h_t$
 Aggregate residual = $P_t \times (1 - h_t)$
 Price = $B_t \times 10^{12} / \text{supply}_t$

h is the whole-pie fraction, not the percentage number typed in the control. The app converts 15% to 0.15. Category residuals are unspecified in Simple mode.

By market: $B_t = \text{sum of } [k \times V_{i,t} \times c_{i,t}]$
 Residual $_{i,t} = k \times V_{i,t} \times (1 - c_{i,t})$

The money category participates in the category sum. Total Bitcoin plus all residuals equals the combined pie. Capture fractions replace the initial fraction rather than being added to it, so existing Bitcoin is not counted again.

Market capitalization is a price-times-units valuation. It is not a calculation of net dollars that must enter the asset. The one-for-one residual rule is this model's scenario convention, not a universal claim about market-price dynamics.

[MODEL]

6. Supply, timing and rounding

Milestone	Retained projected supply
2030	20,567,858 BTC
2040	20,925,676 BTC
2050	20,986,589 BTC

The retained implementation uses an idealized 600-second block interval and the halving schedule, calibrated to a publisher circulating-supply observation. It advances an equivalent issuance coordinate, not an independently retrieved future chain height. Unclaimed rewards, actual block timing and supply-provider definitions can differ.

No lost-coin haircut, constrained liquid float or scarcity multiplier is added. Headline figures round for readability; the downloadable model retains full working precision. The app uses milestones only and does not draw a supposed daily Bitcoin forecast between them.

[BTC-CORE] [BTC-SUBSIDY] [BTC-REF] [MODEL]

7. One calculation source for web, tables and downloads

The release contains a frozen model configuration and one shared JavaScript calculator engine. The browser, preset-result export and build-time report tables use that engine. The displayed monetary categories are not manually copied from earlier rounded examples.

Checks cover reference-output parity, all preset inputs, all monetary paths, category sums, zero/100% capture, invalid numeric input, residual conservation, mode independence, and browser behavior. Separate source metadata identify evidence limits. A passing calculation test cannot certify future economic behavior.

The build metadata records input hashes and the exact release identifier. Earlier research files remain unchanged; restricted publisher material is not embedded in the public site. Source citations link to original publishers, while the release provides its own derived model tables for inspection.

[MODEL]

09 / FAQ & GLOSSARY

Questions worth asking before trusting a number

Direct answers to the questions most likely to arise when the calculator is shared.

Is this a forecast or a thought experiment?

It is a conditional projection model. Historical evidence and selected relationships inform the future market path, while Bitcoin's market share is explicitly assumed. A reader can use it to examine a thesis without treating the displayed price as the most likely outcome.

Calling it a scenario does not excuse incorrect numbers. It makes the assumptions that produce the numbers visible.

[MODEL]

Does Bitcoin have to take all of gold's value?

No. Bitcoin can receive modeled contributions from several categories. In the finite-pie convention, a category may grow in dollar value while losing relative share. A total Bitcoin target alone does not determine which categories surrender that share.

Simple mode therefore compares Bitcoin with the rest of the pie, not with an invented residual gold figure. By-market mode calculates the residual gold implied by your chosen category inputs.

[MODEL]

Why not multiply Bitcoin by AI payment volume?

A payment is an activity over time. A savings balance is a stock at a time. The same balance can finance many transactions. Multiplying an activity forecast by an arbitrary factor would add a new model, not simply improve this one.

AI may matter if it changes sustained balances or allocations. V1 explains that possible channel but assigns no numerical AI premium.

[AI-BTC] [AI-USDC] [MODEL]

Is the basket bigger than net wealth?

It can be, because it counts real assets and several layers of financial claims. A bond, a loan and an equity claim can be different instruments without being independent underlying wealth. The \$995.87T combined starting number is a modeled gross comparison, not a consolidated net-wealth census.

Broad credit is not added again on top of money, securities and the selected loan-form bucket. Remaining look-through overlap is disclosed rather than declared solved.

[MODEL] [C06] [C07]

Why is the baseline 2025 rather than today?

This is a frozen research release assembled from dated observations and estimates. A current Bitcoin quote would not make the rest of the global basket current. Mixing a live quote with stale market stocks would introduce a new date mismatch.

Future revisions can update the model as a dated version. The current app deliberately has no live API dependency.

[MODEL] [BTC-REF]

A short glossary

Term	Meaning in this lab
Store of value	An asset or claim held partly to carry purchasing power into the future. A role, not a guarantee.
Gross inventory	Sum of the selected real assets and financial claims before comprehensive consolidation.
Broad money	Currency, deposits and other liquid components under the relevant statistical definitions.
Monetary deepening	Change in money relative to the economic-output measure used in the model.
Market share	A fraction of the specified modeled stock-value pie, not a fraction of users or transactions.
Capture	A chosen fraction attributed to Bitcoin within the finite-pie convention.
Nominal price	Dollar value at the future date, not adjusted for consumer purchasing power.
CAGR	Constant annual rate that connects two endpoints; it does not describe every intervening year.
Relative-share drift	A modeled change in raw relative category weight before normalization.
Sensitivity	A controlled change to an input, not a measured probability interval.
T / Q	T = trillion dollars; Q = quadrillion dollars = 1,000T.

What belongs in version 2.0?

The deferred work is a behavioral adoption model: reachable capital, new adopters, retention, and allocation expansion. It could compare those mechanisms with Mark's explicit whole-pie milestones, rather than replace them silently.

Version 1 is intentionally finished without that upgrade. No later model, source update or category migration is implied to be running in the background.

[MODEL] [VC-AI]

10 / SOURCE LIBRARY

Sources and evidence roles

References preserve what each source contributes and what it does not establish. Live availability and model-data verification are different checks. No source supplies the final Bitcoin share or implied price.

MODEL / Model authority

Frozen credit-corrected v1 model

Mark Moss / Bitcoin Projection Model · September 2026

Used for: Current levels, formula parameters, monetary paths, supply milestones, and all calculated results.

Limitation: Educational gross-inventory model. Source data, reconstructed estimates and user judgments have different evidence status.

Build-time check: Credit source package: 18 supplied tests executed successfully; numerical adapter checked separately.

[downloads/model.json](#)

Original source IDs: CREDIT:FROZEN; final credit-corrected candidate

IMF-GDP / Active upstream input

World Economic Outlook, April 2026: Statistical Appendix, Table A1

International Monetary Fund · April 14, 2026

Used for: Nominal world output at market exchange rates, including 2025, 2026, 2027 and 2031 levels.

Limitation: 2028–2030 are model interpolations; later years are extensions. IMF does not forecast this SOV total.

Build-time check: Live source and PDF Table A1 inspected during this build.

<https://www.imf.org/-/media/files/publications/weo/2026/april/english/tablea.pdf>

Original source IDs: S2R:IMF_WEO_Apr2026

IMF-FM / Retained credit diagnostic

Fiscal Monitor, April 2026

International Monetary Fund · April 2026

Used for: Government debt-to-GDP path used in the retained sector-credit comparison.

Limitation: It is not a direct driver of the final SOV pie once the monetary path is frozen; it does not project world M2.

Build-time check: Retained source from frozen research; not comprehensively re-audited in this build

<https://www.imf.org/-/media/files/publications/fiscal-monitor/2026/april/english/execsumch1-combined.pdf>

Original source IDs:

IMF-FAQ / Definition / horizon

World Economic Outlook: frequently asked questions

International Monetary Fund ·

Used for: Explains WEO coverage, release conventions and forecast horizons.

Limitation: Forecasts are conditional and revised; preserve release vintages.

Build-time check: Live page opened during this build.

<https://www.imf.org/en/publications/weo/frequently-asked-questions>

Original source IDs:

BIS-GLI / Definition / cross-check**Global liquidity indicators**

Bank for International Settlements ·

Used for: Foreign-currency credit to non-bank borrowers, including loans and international debt securities.

Limitation: Not a complete measure of world broad money and not an official 2050 liquidity forecast.

Build-time check: Live page opened during this build.

<https://data.bis.org/topics/GLI>

Original source IDs: S2R:BIS_GLI

CBO / U.S. fiscal cross-check**The Long-Term Budget Outlook Data: 2026 to 2056**

Congressional Budget Office · 2026

Used for: U.S. long-term fiscal and economic context.

Limitation: Not a global asset or M2 forecast; no direct multiplier in the released calculator.

Build-time check: Live landing page opened; underlying workbook not independently re-audited in this build.

<https://www.cbo.gov/publication/62044>

Original source IDs:

IIF / Credit perimeter / cross-check**Global Debt Monitor**

Institute of International Finance · 2025–2026

Used for: Broad credit categories and sector context.

Limitation: Not added as another category. No subtraction of unmatched IIF, SIFMA and money totals.

Build-time check: Retained upstream source. Full proprietary report not redistributed.

<https://www.iif.com/Products/Global-Debt-Monitor>

Original source IDs: CREDIT:C08

MONEY / Working scale estimate**Global Broad Money Supply Reaches \$144 Trillion in 2025**

Ehsan Soltani / Econovis via Voronoi · December 2025 observation

Used for: Attributed \$144T end-2025 broad-money baseline.

Limitation: Independent compilation, not a harmonized IMF census. Historical growth is scaled from the narrower model proxy.

Build-time check: Retained source from frozen research; not comprehensively re-audited in this build

<https://www.voronoiaapp.com/money/-Global-Broad-Money-Supply-Reaches-144-Trillion-in-2025-5166>

Original source IDs:

M2US / Historical monetary input**M2 Money Stock (M2SL)**

Federal Reserve via FRED ·

Used for: U.S. component of the historical monetary proxy.

Limitation: December monthly average; not the whole global money supply.

Build-time check: Retained frozen observations; live observations not substituted.

<https://fred.stlouisfed.org/series/M2SL>

Original source IDs:

M2CN / Monetary and loan input**2025 Statistical Communiqué**

National Bureau of Statistics of China · February 28, 2026

Used for: China M2 endpoint and RMB loan cross-check.

Limitation: Different monetary and credit aggregates are not independently additive.

Build-time check: Retained source from frozen research; not comprehensively re-audited in this build

https://www.stats.gov.cn/english/PressRelease/202602/t20260228_1962661.html

Original source IDs: CREDIT:C09

M3EA / Historical monetary input**Monetary developments in the euro area, December 2025**

European Central Bank · January 29, 2026

Used for: Euro-area M3 endpoint and methodology.

Limitation: M3 is broader than cash and deposits; national definitions and changing membership remain caveats.

Build-time check: Retained source from frozen research; not comprehensively re-audited in this build

<https://www.ecb.europa.eu/press/stats/md/html/ecb.md2512~48fd6bad29.en.html>

Original source IDs: CREDIT:C10

FXHIST / Historical conversion**Foreign exchange rates, annual G.5A releases**

Federal Reserve ·

Used for: Currency conversion convention in the frozen money proxy.

Limitation: Annual-average FX is not an exact last-day market mark.

Build-time check: Retained source from frozen research; not comprehensively re-audited in this build

<https://www.federalreserve.gov/releases/g5a/>

Original source IDs:

PROPERTY / Market-size estimate**How much is global real estate worth?**

Savills Research · October 2025

Used for: End-2024 all-property value of \$393.3T; reported 2019–2024 growth.

Limitation: The \$408.79T 2025 model value is an explicit bridge, not a reported 2025 census.

Build-time check: Live article inspected during this build.

<https://impacts.savills.com/market-trends/how-much-is-global-real-estate-worth.html>

Original source IDs: S2S:SAVILLS2024

PROPERTY-OLD / Historical anchor**The total value of global real estate**

Savills Research · 2020 observation

Used for: Retained 2020 all-property estimate.

Limitation: Publisher coverage and valuation vintages differ across the history.

Build-time check: Retained source from frozen research; not comprehensively re-audited in this build

<https://impacts.savills.com/market-trends/the-total-value-of-global-real-estate.html>

Original source IDs:

SECURITIES / Historical market stocks**Capital Markets Fact Book, 2026 edition**

SIFMA / BIS / WFE · 2026 edition

Used for: Outstanding debt securities and global listed-equity capitalization.**Limitation:** Debt coverage changes in 2018; stock capitalization is not shareholder total return. Equity working baseline contains a disclosed adjustment.**Build-time check:** Retained publisher tables; not re-extracted in this educational build.<https://www.sifma.org/wp-content/uploads/2025/07/SIFMA-Capital-Markets-Fact-Book-2026-Edition.pdf>

Original source IDs: S2S:SIFMA

INDIA / Equity estimate adjustment**NSE 2025 market summary**

National Stock Exchange of India · January 1, 2026

Used for: Retained NSE-only proxy replacing the disputed India component.**Limitation:** Working adjustment omits BSE-only companies and is not an official global-source correction.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this buildhttps://nsearchives.nseindia.com/web/pressrelease/2026-01/PR_cc_01012026_20260101194417.pdf

Original source IDs:

GOLD / Gold stock scope**Gold Market Primer: Market size and structure**

World Gold Council · Frozen 2025 stock reference

Used for: Retained whole-stock gold valuation and monetary versus other uses.**Limitation:** Live page may be revised. The model preserves its frozen quantity/valuation; not all physical gold is investment bullion.**Build-time check:** Live page opened; frozen stock quantity not independently re-extracted from the current page.<https://www.gold.org/goldhub/research/market-primer/gold-market-primer-market-size-and-structure>

Original source IDs: S2S:GOLD

GOLDPRICE / Gold valuation input**Gold market commentary: December 2025**

World Gold Council · December 2025

Used for: Retained matching end-2025 price reference.**Limitation:** Price times estimated physical quantity; no extra quantity uplift in future share allocation.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://www.gold.org/goldhub/research/gold-market-commentary-december-2025>

Original source IDs:

ART / Narrow art comparison**Art and finance: global forum discussion**

Deloitte / ArtTactic ·

Used for: A source estimate for ultra-high-net-worth art and collectibles holdings.**Limitation:** Not the source of the model's \$24T all-holder assumption. That figure is Mark's unverified 2023 scenario input.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://www.deloitte.com/lu/en/about/press-room/global-forum-future-of-art-finance.html>

Original source IDs:

C01 / New credit input**2025 financial statistics report**

PBOC via Shanghai financial regulator · January 16, 2026

Used for: China RMB, FX, entrusted and trust loan-form stocks.**Limitation:** No ABS or full AFRE total is added again; incomplete global loan coverage.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://jjj.sh.gov.cn/ZXYW178/20260116/88e3368ecfee4e639ae9aa8dd93729c3.html>

Original source IDs: CREDIT:C01

C03 / New credit conversion**Euro reference exchange rates, December 31, 2025**

European Central Bank · December 31, 2025

Used for: USD 1.1750 and CNY 8.2262 per EUR in the frozen credit calculation.**Limitation:** Reference rates affect the new loan conversion only, not the earlier money FX convention.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://www.ecb.europa.eu/stats/exchange/eurofxref/shared/pdf/2025/12/20251231.pdf>

Original source IDs: CREDIT:C03

C04 / New credit input**H.8 Assets and Liabilities of Commercial Banks**

Federal Reserve Board · January 9, 2026

Used for: Table 3, row 9, December 31: \$13,433.4B loans and leases.**Limitation:** Commercial-bank coverage only. This is not all U.S. or global lending.**Build-time check:** Live PDF Table 3 inspected during this build.<https://www.federalreserve.gov/releases/h8/20260109/h8.pdf>

Original source IDs: CREDIT:C04

C05 / New credit input**December 2025 monetary developments annex**

ECB via Banque de France · January 29, 2026

Used for: Retained €13,630B unadjusted private-sector loan stock.**Limitation:** Loan-transfer adjustments are not added. Linked non-derecognized securitizations remain a scope limitation.**Build-time check:** Text endpoint opened; screenshot retrieval failed. Retained source input used, not newly certified.https://www.banque-france.fr/system/files/2026-01/ecb.md2512_0.pdf

Original source IDs: CREDIT:C05

C06 / Accounting limitation**What is securitisation?**

European Central Bank ·

Used for: Distinguishes derecognized and non-derecognized loan transfers.**Limitation:** The added loan bucket is not claimed to exclude every securitized underlying exposure.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://data.ecb.europa.eu/methodology/what-securitisation>

Original source IDs: CREDIT:C06

C07 / Accounting definition**Private-credit statistics documentation**

BIS ·

Used for: Clarifies why generic bank credit is not a loan-only stock.**Limitation:** Do not add a broad bank-credit total beside its securities components.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://www.bis.org/pages/statistics/credit-private-documentation.pdf>Original source IDs: CREDIT:C07

BTC-REF / Starting observation**Historical snapshot: December 31, 2025**

CoinMarketCap · December 31, 2025

Used for: Retained price, publisher circulating supply, and capitalization.**Limitation:** 00:00 UTC is the beginning of December 31. Not a perfectly synchronized world year-end census.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://coinmarketcap.com/historical/20251231/>Original source IDs:

BTC-CORE / Protocol reference**v29.0 chain parameters**

Bitcoin Core · Pinned v29.0

Used for: Subsidy-halving interval used by the retained idealized supply calculation.**Limitation:** Model advances an equivalent issuance coordinate at 600 seconds per block; not a live chain-height prediction.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://github.com/bitcoin/bitcoin/blob/v29.0/src/kernel/chainparams.cpp>Original source IDs:

BTC-SUBSIDY / Protocol reference**v29.0 subsidy implementation**

Bitcoin Core · Pinned v29.0

Used for: Integer-satoshi subsidy implementation.**Limitation:** No lost-coin or liquid-float haircut is applied.**Build-time check:** Retained source from frozen research; not comprehensively re-audited in this build<https://github.com/bitcoin/bitcoin/blob/v29.0/src/validation.cpp>Original source IDs:

BTC-FAQ / Product attributes / limitations**Frequently asked questions**

Bitcoin.org ·

Used for: Peer-to-peer transfer, self-custody, verification and issuance mechanics; volatility and operational risks.**Limitation:** Technology properties do not identify a future market-share percentage.**Build-time check:** Live page opened during this build.<https://bitcoin.org/en/faq>

Original source IDs:

VC-GURLEY / Venture-capital analogy**How to Miss By a Mile: An Alternative Look at Uber's Potential Market Size**

Bill Gurley, Above the Crowd · July 11, 2014

Used for: Why a product improvement can change addressable demand and why assumed share ceilings need a rationale.

Limitation: An investor argument, not Bitcoin evidence or a transferable adoption coefficient.

Build-time check: Original author page opened during this build.

<https://abovethecrowd.com/2014/07/11/how-to-miss-by-a-mile-an-alternative-look-at-ubers-potential-market-size/>

Original source IDs:

VC-AI / Behavioral framework**Mastering product-market fit: a playbook for AI founders**

Bessemer Venture Partners ·

Used for: Adoption, retention and usage expansion as separate product questions.

Limitation: Used to explain the deferred v2.0 approach, not as a numerical Bitcoin input.

Build-time check: Original investor page opened during this build.

<https://www.bvp.com/atlas/mastering-product-market-fit-a-detailed-playbook-for-ai-founders>

Original source IDs:

AI-BTC / Potential adoption channel**The Agents Are Here and They Want to Transact**

Lightning Labs · February 11, 2026

Used for: Bitcoin/Lightning agent tools and transaction infrastructure.

Limitation: Technical availability does not establish sustained Bitcoin savings balances.

Build-time check: Original developer page opened during this build.

<https://lightning.engineering/posts/2026-02-11-In-agent-tools/>

Original source IDs:

AI-USDC / Competing adoption channel**Accept agentic payments with x402**

Coinbase Developer Platform ·

Used for: A documented stablecoin-based agent-payment route.

Limitation: Payment volume is not Bitcoin capitalization or retained savings demand.

Build-time check: Official documentation opened during this build.

<https://docs.cdp.coinbase.com/coinbase-business/checkout-apis/accept-x402-payments>

Original source IDs:
