

Rational mNAV

What is MSTR actually worth — in Bitcoin?

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by @rationalmnav

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The question

If you believe in Bitcoin, you face a choice: hold your own coins, or buy shares in a Bitcoin treasury company like Strategy (MSTR), the company that holds 842,000 of them. MSTR bulls say the company *outruns* Bitcoin — it grows its coins-per-share every year, so a share of MSTR is a Bitcoin position that compounds. Skeptics say you're paying a premium for leverage, dilution, and counterparty risk you could avoid with a hardware wallet.

Both stories are half-true, and neither is a valuation. The honest question is: **at what price does buying MSTR beat simply holding your own Bitcoin — measured in Bitcoin, over your horizon, at your risk tolerance?** That number exists. We built a model to compute it, an interactive tool so you can compute it under *your* assumptions, and a 35-page white paper documenting every mechanism. This is the short version.

One number, honestly defined

Everyone in this corner of the market quotes “mNAV” — but the term hides three different measurements, and they are not interchangeable. **Equity mNAV** divides the common stock's market cap by the value of *all* the coins — what a shareholder pays per coin of gross treasury exposure. **Enterprise mNAV** adds the preferreds and convertible debt (net of the cash reserve) to the numerator — what the entire capital structure pays for the coins. **Net-assets mNAV** instead nets the senior claims out of the coin side — the premium on the shareholder's residual slice after everyone senior is paid.

All three appear in our results, but the analysis leads with *equity* mNAV, and the reason is analytical rather than cosmetic. The question this whole framework answers is posed by the *common shareholder*, whose return over a multi-year hold is governed by one state variable: Bitcoin backing per share, and how the financing program grows it. Equity mNAV is the only one of the three whose denominator is a directly observable, assumption-free quantity (coins $\times$ spot) and whose numerator is exactly the claim being valued — it isolates the residual equity without having to impute a value to the preferreds or the converts, and it keeps the per-share backing legible. (Purists will note the “N” is a courtesy: nothing is actually netted, so it's really a multiple of *gross* asset value. We keep the familiar term.)

On that measure, MSTR trades today near **0.77 $\times$ equity mNAV**: the market prices the common stock at a roughly 23% *discount* to the company's Bitcoin. Bulls call that free money. Bears call it deserved, pointing at \$22B of preferred stock and convertible debt that sits ahead of shareholders.

Neither reaction is analysis. The number that matters is what we call the **rational mNAV**: *the entry premium (or discount) at which buying MSTR today and holding it for the right length of time leaves you exactly as well off as holding your own coins*, after demanding extra return for the risks of the wrapper. Pay less than your rational mNAV and MSTR is the better Bitcoin position. Pay more and you should self-custody.

Computing it requires simulating the whole machine — so that's what the model does: **5,000 simulated futures**, quarter by quarter, of Bitcoin, interest rates, and every layer of the company's balance sheet, with nothing assumed that ought to be earned.

How the machine actually works

Five mechanisms drive everything. Each is modeled explicitly, and each is calibrated to public data.

1. Bitcoin has a fair price, and it isn't today's price. Daily prices swing wildly around Bitcoin's long-run trend. We anchor the model to a fair value derived from the 200-week moving average (adjusted for its built-in lag) — the line every cycle has respected. Today that fair value sits around \$101,000 against a

spot near \$61,500: the model starts from the statement that *Bitcoin itself is cheap*, and lets the gap close over about two years. The same logic works in reverse: at a mania top, the model would mark Bitcoin *down* toward trend. Your growth assumption (from a conservative flat 10%/yr to a bullish 40%→20%/yr) compounds from that fair line, not from one day’s tick.

2. The company runs a yield engine with a duty cycle. Strategy sells preferred stock (STRC and its siblings) — perpetual instruments paying a dividend — and uses the proceeds to buy Bitcoin. When Bitcoin’s trend growth exceeds the dividend cost, every dollar raised adds coins behind each share: this is where “Bitcoin Yield” comes from. The model prices the preferreds dynamically: their required yield widens when coverage thins or volatility spikes, and the issuance window opens and closes accordingly. Across simulations the window is open roughly 44% of the time under bullish assumptions — and even in a flat-Bitcoin world, about 31%. The engine also runs in reverse: below fair value the modeled firm buys back its own discounted stock and tenders for its own discounted preferreds — exactly the playbook the real company adopted in July 2026.

3. Leverage without a crystal ball. How much preferred should sit on top of the coins? A fixed target is wrong for an asset this volatile: a leverage ratio that is safe at a bear-market bottom becomes lethal after a crash from a mania top. The modeled firm sets its target *countercyclically* — high when price sits below the fair line, low when it’s stretched above — sized so that even a repeat of history’s worst drawdown leaves the structure intact. Crucially, the firm is given **no crystal ball**: it estimates the cycle from trailing data a real treasurer could compute, and a half-Kelly test on *realized* growth versus its own coupon chokes new leverage whenever the tape stops paying for it — protection against the nightmare where management believes in a recovery that never comes. Today this rule reads (in the company’s own reported metric, Amplification = Bitcoin Reserve ÷ Net Reserve): the cycle position alone would license roughly 1.9×, the prudence cap pulls the working target back toward ≈1.4×, and the company’s actual amplification sits at ≈1.5×. The model and management are in the same neighborhood.

4. The premium is earned, not assumed. The single biggest mistake in MSTR models is hand-picking the exit multiple. Here the premium is *computed* on every path from a simple identity: the market pays net backing, plus a multiple of the excess yield the machine is credibly generating,

$$\text{mNAV} = \text{net backing} + (\text{forward BY} - \text{hurdle}) \times \text{duration},$$

with the forward-yield term calibrated on the 2020–2026 record: premiums expand convexly in uptrends and collapse to backing in downtrends. Feed the machine a bear market and the model prices you like the market actually does — which is why it can explain today’s 0.77× instead of assuming it away.

5. Bitcoin is finite, and the model takes that seriously. A company compounding coins forever would eventually own the network — so the model brakes it three ways: buying pressure pays escalating scarcity costs as the float thins; the pace of purchases shrinks with the remaining supply; and the carry test halts accumulation when growth stops clearing the coupon. Calibrated together, the modeled firm is unlikely to obtain more than **about five million coins** — roughly 30% of the ~17 million accessible Bitcoin — even in the most bullish scenarios over the multi-decade horizons this framework prices — and every one of those scarcity costs is charged against your valuation.

What the model says today

Under the base case (Bitcoin at 30%→15% diminishing growth, a 3.5%/yr charge for wrapper risk), as of the early-August 2026 snapshot:

- **Fair value: roughly \$130 per share** against a market price near \$95 — the model says MSTR beats self-custody on about 92% of simulated paths at today’s price. (Under the more aggressive 40%→20% outlook, fair value is roughly \$155 and the beat rate 98%.)
- **Rational equity mNAV ≈ 1.2×** against the market’s ≈0.74×: run to its optimal exit, the trade is worth paying up to about 1.2× the coin value per share — well above today’s print.
- **Rational net-assets mNAV ≈ 1.46×** — the same fair value, restated on the basis the company itself now reports. Since July 2026, Strategy’s published mNAV divides the equity by coins *net* of debt and preferred claims (less the USD reserve), so any premium looks mechanically larger on that basis: netting claims out of the denominator amplifies whatever ratio remains. Today’s market quote reads ≈1.05× on the company’s basis while the model’s fair value reads ≈1.46× — the same gap as the equity framing, in the currency the company’s own reporting now speaks. (The enterprise framing sits between, at ≈1.31×.)

- **The risks are priced, not ignored:** across base-case paths, a 5% chance of at least one forced coin sale at a convertible maturity, a well-under-0.1% chance of a dividend-driven coin sale, and a 0.2% chance of a preferred dividend pause. In a permanently flat Bitcoin world those numbers get much worse — the tool will show you exactly how much.

Optimal holding horizon

There are two different holding periods in this framework, and the distinction matters. Your **planned horizon** is a personal constraint — how long you’re actually willing or able to keep capital in the trade. The **optimal holding horizon**, τ^* , is something the model computes: the pre-committed exit date that maximizes what the trade is worth *today*. The tool prices both — enter your planned horizon and it will also show you the optimum and let you flip between them — because if your plan and the optimum are far apart, that gap is itself information: it tells you how much value your constraint is costing you.

Why does an optimum exist at all — why not just hold forever? Because the wrapper’s advantages are front-loaded while its costs never stop. The gains — the discount to fair value closing, the premium re-rating as the yield engine restarts, fast coin accumulation while the company is still small — arrive mostly in the early years. The costs — your wrapper-risk hurdle compounding, preferred dividends, and the scarcity brakes biting harder as the coin pile grows — compound indefinitely. Early on, the machine adds more per year than it charges; eventually that reverses, and every additional year subtracts value. τ^* is the crossover.

Under the base case the optimal pre-committed hold is about **four years**, worth $\approx 1.2\times$ what the same capital earns in self-custody — with a forgiving plateau from three to six years (the more aggressive $40\%\rightarrow 20\%$ outlook peaks near five years at $\approx 1.35\times$). Hold thirty years and you’d have done *worse* than a hardware wallet: past the crossover, dividends and scarcity costs subtract more than the machine adds. Two factors drive the clock. Your *risk tolerance* dominates: demand no premium for wrapper risk and holding is free, so the model says hold almost forever; demand 6%/yr and the trade shortens to two or three years. Your *Bitcoin conviction* stretches it: the stronger the growth path, the longer the machine out-earns its costs. The full belief cube — every combination of Bitcoin model and risk hurdle, each priced at its own optimal horizon — is below: each cell shows what you should pay *today* (as a multiple of coin value) and the optimal holding period in years. Find the row matching your Bitcoin conviction and the column matching your paranoia; that’s your number.

The belief cube — today’s rational mNAV at the optimal pre-committed hold (Aug 2026 snapshot)

		Equity mNAV						Enterprise mNAV						Net-assets mNAV			
Your Bitcoin model	GBM (flat 10%)	1.05× $\tau^*=3y$	0.99× $\tau^*=3y$	0.93× $\tau^*=3y$	0.89× $\tau^*=2y$	GBM (flat 10%)		1.32× $\tau^*=3y$	1.26× $\tau^*=3y$	1.21× $\tau^*=3y$	1.18× $\tau^*=2y$	GBM (flat 10%)		1.48× $\tau^*=3y$	1.40× $\tau^*=3y$	1.32× $\tau^*=3y$	1.27× $\tau^*=2y$
	DR 20→10	1.20× $\tau^*=5y$	1.12× $\tau^*=3y$	1.06× $\tau^*=3y$	1.01× $\tau^*=2y$	DR 20→10		1.47× $\tau^*=5y$	1.39× $\tau^*=3y$	1.33× $\tau^*=3y$	1.28× $\tau^*=2y$	DR 20→10		1.71× $\tau^*=5y$	1.59× $\tau^*=3y$	1.50× $\tau^*=3y$	1.43× $\tau^*=2y$
	DR 30→15	1.54× $\tau^*=30y$	1.28× $\tau^*=4y$	1.19× $\tau^*=3y$	1.13× $\tau^*=3y$	DR 30→15		1.78× $\tau^*=30y$	1.54× $\tau^*=4y$	1.46× $\tau^*=3y$	1.40× $\tau^*=3y$	DR 30→15		2.18× $\tau^*=30y$	1.82× $\tau^*=4y$	1.69× $\tau^*=3y$	1.60× $\tau^*=3y$
	DR 40→20	1.85× $\tau^*=30y$	1.46× $\tau^*=5y$	1.33× $\tau^*=4y$	1.25× $\tau^*=3y$	DR 40→20		2.08× $\tau^*=30y$	1.71× $\tau^*=5y$	1.59× $\tau^*=4y$	1.51× $\tau^*=3y$	DR 40→20		2.63× $\tau^*=30y$	2.08× $\tau^*=5y$	1.89× $\tau^*=4y$	1.77× $\tau^*=3y$
		0%	2%	4%	6%			0%	2%	4%	6%			0%	2%	4%	6%
		Wrapper-risk hurdle						Wrapper-risk hurdle						Wrapper-risk hurdle			

Every number above is an entry valuation: what you should pay today, with the exit strategy priced in — not a forecast of where the premium will trade later.

Common objections, answered inside the model

“Issuing shares below NAV torches shareholders.” Sometimes. Two thresholds decide it. Above equity mNAV of 1.0, issuing raises *both* coins-per-share (gross BPS) and coins-net-of-claims-per-share (net BPS) — unambiguously good. Below equity parity but with net-assets mNAV still above 1.0, the trade splits: gross BPS falls at a known rate ($1/\text{mNAV}$ per dollar, versus selling coins) while net BPS still rises — defensible as *defense*, sized to obligations, never free. Below net-assets parity, both measures fall and nothing about issuance works. The model issues in the middle band only when the package is accretive — when a dollar of equity unlocks more than a dollar of coin-buying capacity through the preferred stack — and buys stock back below the same threshold otherwise. Dilution in this model is a priced tool, not a reflex, and the market inside the simulation punishes the firm’s yield the moment it stops being accretive.

“They said they’d never sell Bitcoin — and then they sold.” The model never believed the slogan. Its simulated firm sells coins as a last resort to defend the dividend, tenders for discounted preferreds, and buys back stock in bear markets — behavior derived from first principles as *optimal*, months of simulated time before the real company announced the same playbook in July 2026. A treasury that adapts is worth more than one that keeps promises to a slogan.

“What if Bitcoin just goes sideways for a decade?” Then the wrapper loses to self-custody — the model says so plainly: in a permanently flat world the equity is worth roughly $0.6\text{--}0.7\times$ its coins, the dividend-pause probability rises to double digits, and the optimal holding period collapses to the two-year convergence trade. That scenario is exactly why the hurdle input exists. The model’s job isn’t to reassure you; it’s to price the world you actually fear.

What this is not

It is not a forecast, and not advice. It’s a **consistency machine**: you supply beliefs — a Bitcoin growth path, a holding horizon (or let the tool optimize it), a price for wrapper risk — and it returns the valuation those beliefs imply, with the capital-structure mechanics handled honestly in between. The model doesn’t consider your personal tax situation, and it deliberately models only the *current* yield engine — if management builds new ones (credit products, software, yield on the stack), the long-horizon numbers here are conservative. Change the inputs and the verdict changes; that’s the point. If the output surprises you, one of your inputs is doing the work — and the tool will show you which one.

Conclusion

Denominating value in Bitcoin turns the question of a treasury company’s worth into a clean comparison against self-custody and exposes the premium as a function of three beliefs rather than a number to be argued in the abstract. The rational mNAV follows from one’s Bitcoin outlook, one’s trust in the corporate wrapper, and one’s holding horizon. Much of the public disagreement over Strategy’s fair premium is, on this reading, a disagreement over these inputs conducted without making them explicit. The contribution here is a transparent engine that makes the premium the consequence of stated assumptions, so that debate can move to where it belongs: the assumptions themselves.

Run it yourself with your own assumptions: rationalmnav.com

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