

MVRV: how market value compares with what holders last paid on-chain

MVRV divides a coin's market value by its realized value, a tally of every coin at the price when it last moved on the blockchain.

v1.1 · Oct. 21, 2026, 12:14 a.m. ET · 5 sources

CONTENTS

How to read it / Where it misleads

The formula

Example data

Who publishes it and how definitions differ

Where the ratio comes from

What it means

Sources

1. How to read it / Where it misleads

MVRV compares what a cryptocurrency's coins are worth at today's price with what they were worth when each last moved on its blockchain. A reading of 2 means the market values the coins at twice that on-chain tally; a reading below 1 means less.

The measure has clear limits. A coin moving on-chain is not the same as a sale: an exchange shuffling wallets or an owner sending coins to themselves resets the tally with no change of owner, and trades inside exchanges or funds never touch the chain. Lost coins stay in the count at the old price at which they last

moved. And it works only on blockchains whose ledgers are public, so fully private coins are left out (source 1).

The inputs can also vary by provider. Coin Metrics values each coin at the USD closing price on the day it last moved (source 1), and each provider applies its own rules for which coins count and when a coin last moved, so two sites can publish different figures for the same coin on the same day.

This explains how a metric is calculated. It is not a signal, forecast or recommendation, and past readings do not predict prices. Le Coin does not publish live readings of this metric.

2. The formula

$MVRV = \text{market value} / \text{realized value}$

Market value is market capitalization: price times the coins in circulation. Realized value, also called realized cap, is the sum of every coin valued at the price on the day it last moved on-chain.

Coin Metrics defines realized cap as "the sum USD value based on the USD closing price on the day that a native unit last moved (i.e., last transacted) for all native units" (source 1). It defines MVRV as "the ratio of the sum USD value of the current supply to the sum 'realized' USD value of the current supply," computed as its market cap metric divided by its realized cap metric (source 2).

3. Example data

The figures below are invented to show the arithmetic. The three coins sit on an imaginary blockchain, and every coin now trades at \$40.

Coin	Price when it last moved	Current price
A	\$10	\$40
B	\$20	\$40
C	\$50	\$40

From those inputs, the calculation runs in three steps.

Output	Calculation	Result
Market value	$3 \times \$40$	\$120
Realized value	$\$10 + \$20 + \$50$	\$80
MVRV	$\$120 / \$80$	1.5
MVRV after coin A's owner sends it to themselves at \$40	$\$120 / (\$40 + \$20 + \$50)$	about 1.09

The last row shows the main weakness: the reading fell from 1.5 to about 1.09 with no sale, no new owner and no change in price.

4. Who publishes it and how definitions differ

Coin Metrics, a crypto data firm, publishes MVRV and documents its method in public. It values each unspent output, a discrete chunk of coins on chains such as bitcoin, from the date the output was created. On account-based chains such as Ethereum, where balances sit in accounts, it uses the later of the last date the account sent a transaction or the date it was created (source 1).

Its other choices shape the result. Coin Metrics uses the ledger as of the last block of each day, counts only a chain's native coin and leaves out tokens issued on top of it (source 1). It does not publish the metric for fully private coins such as Monero, and for coins with optional privacy such as Zcash it scales up the figure from the visible balances (sources 1, 2). It also lists a separate "Free Float MVRV" (source 2).

Coin Metrics says the measure was first introduced in a talk by Nic Carter in 2018. It describes realized cap as "perhaps best-understood as a metric which captures the average cost basis of all current holders," while noting that "interpretations vary" (source 1). Cost basis is the price an investor paid.

In Le Coin's view, that caveat is the one to keep. Realized value tracks when coins last moved, which overlaps with what holders paid but is not the same thing.

Glassnode, another on-chain data firm, defines the metric the same way at its core: "MVRV (market-value-to-realized-value) ratio is a ratio of an asset's market capitalization to its realized capitalization" (source 4). Its documentation says realized cap "is computed by valuing each UTXO at the price when it was last moved" and "represents the aggregate on-chain cost basis of the supply" (source 5). A UTXO, or unspent transaction output, is the discrete chunk of coins described above.

The difference is in framing and scope. Glassnode presents realized cap as cost basis outright, where Coin Metrics calls that one interpretation among several. Glassnode's technical note is written in terms of UTXOs, while Coin Metrics also spells out a rule for account-based chains. Glassnode also publishes versions of MVRV restricted to coins held for shorter or longer periods (source 5).

5. Where the ratio comes from

MVRV was introduced by Murad Mahmudov and David Puell in an Oct. 1, 2018 post, "Bitcoin Market-Value-to-Realized-Value (MVRV) Ratio" (source 3).

6. What it means

In Le Coin's view, MVRV is best read as a description of how far today's market value sits from an on-chain record of past prices. Before comparing two readings, check that they come from the same provider using the same price history and the same handling of private and dormant coins.

Sources

1

Coin Metrics docs, "Realized Market Cap (USD)" (CapRealUSD), <https://github.com/coinmetrics/docs-website/blob/master/asset-metrics/market/caprealusd.md>, accessed 2026-10-16, 8:31 p.m. ET.

2

Coin Metrics docs, "MVRV (Market Cap / Realized Market Cap)" (CapMVRVCur), <https://github.com/coinmetrics/docs-website/blob/master/asset-metrics/market/capmvrvcur.md>, accessed 2026-10-16, 8:31 p.m. ET.

3

Murad Mahmudov and David Puell, "Bitcoin Market-Value-to-Realized-Value (MVRV) Ratio," Oct. 1, 2018, <https://medium.com/@kenoshaking/bitcoin-market-value-to-realized-value-mvrv-ratio-3ebc914dbaee>, accessed 2026-10-16, 8:30 p.m. ET.

4

Glassnode docs, metric guide, "MVRV Ratio," <https://docs.glassnode.com/further-information/metric-guides/mvrv/mvrv-ratio>, accessed 2026-10-16, 8:32 p.m. ET.

5

Glassnode docs, API endpoints, "Market" (Realized Cap entry), <https://docs.glassnode.com/basic-api/endpoints/market>, accessed 2026-10-16, 8:32 p.m. ET.

TITLE	MVRV: how market value compares with what holders last paid on-chain
VERSION	v1.1 · Oct. 21, 2026, 12:14 a.m. ET
ONLINE	https://lecoin.news/field-guide/mvrv/

Holding the Corner.

Not financial advice.