Kaiko

MIGRATION GUIDE

Seasonality: Day of Week & Month of the Year

Amberdata → Kaiko

2026

www.kaiko.com

1 At a glance

What this endpoint gives you: for one spot pair on one exchange, this endpoint returns the **average daily realized volatility** per day of the week or per month of the year, over a date range of your choice. Amberdata's two endpoints, **Seasonality: Volatility Day of Week** and **Seasonality: Volatility Month of the Year**, are now combined into one Kaiko endpoint, **Seasonality**, with a `bucket` parameter:

Amberdata endpoint	Kaiko request
`.../realized-volatility/seasonality/day-of-week`	`/seasonality?bucket=day_of_week`
`.../realized-volatility/seasonality/month-of-year`	`/seasonality?bucket=month_of_year`

What changes for you

- You will call a new endpoint, `/analytics/volatility/seasonality`, and pass your Kaiko API key in the `X-Api-Key` header (§2).
- The `bucket` parameter defaults to `day_of_week`. If you used the month-of-year endpoint, please set `bucket=month_of_year`, otherwise you will receive weekdays without any error (§3).
- The pair is now expressed with two lowercase parameters: `pair=btc_usd` becomes `base_asset=btc` and `quote_asset=usd`. Exchange codes also change, for example `gdax` becomes `cbse` (§3, §6).
- The end of the range is now exclusive: `startDate` and `endDate` become `start_time` and `end_time`, and `end_time` itself is not included. To cover the same days, simply set `end_time` one day after your Amberdata `endDate` (§3, §7).
- Without dates, Kaiko averages the pair's whole history (Amberdata used the last 5 years), and there is no maximum range (§3).
- Volatilities are now returned as decimals, for example `0.4971` where Amberdata returned `49.71` (percent).
- `weekday` and `month` become `period`, with lowercase 3-letter labels (`TUES` → `tue`, `MARCH` → `mar`), and `historicalVolatility1day` becomes `realized_volatility_1d` (§5).

Coverage & distribution

Data type: One row per bucket (up to 7 or 12), returned in calendar order

Value: The average of the daily Parkinson realized volatility (each day's high and low, annualised by √365)

Buckets: UTC day of the week (mon to sun) or UTC month (jan to dec)

Source: Spot exchange daily OHLC · one exchange and one pair per request

Exchanges: 26 spot exchanges, including the Amberdata venues listed in §6

History: From 2016-01-01 (later for pairs with a shorter trading history)

Distribution: REST API

2 Endpoint & authentication

	Amberdata (today)	Kaiko (new)
Method	GET	GET
Base URL	`https://api.amberdata.com`	`https://api.kaiko.io`
Path	`/markets/derivatives/analytics/realized-volatility/seasonality/day-of-week or /month-of-year`	`/analytics/volatility/seasonality + bucket`
Auth	API key header `x-api-key`	API key header `X-Api-Key` (your Kaiko key)

Header names are not case-sensitive, so `x-api-key` and `X-Api-Key` refer to the same header: only the key itself changes. **Versioning:** Amberdata reported its version in `payload.metadata.api-version` (`2023-09-30`). Kaiko accepts an optional `api_version` query parameter (the default and current version is `2026-10-01`) and returns it in `meta.api_version`.

3 Request parameters

Amberdata param	Kaiko param	Change	Notes
`/day-of-week` or `/month-of-year` (path)	`bucket` (optional)	NEW	`day_of_week` (default) or `month_of_year`. This replaces the end of the Amberdata path. Values must be lowercase.
`exchange` (required)	`exchange` (required)	RENAMED	The name is unchanged, but the values are now Kaiko codes (§6), for example `gdax` → `cbse`. Codes must be lowercase.
`pair` (required)	`base_asset` + `quote_asset` (both required)	RENAMED	`btc_usd` becomes `base_asset=btc` and `quote_asset=usd`. Both must be lowercase.
`startDate` (optional)	`start_time` (optional)	RENAMED	**Inclusive**, as before. Please use an RFC 3339 timestamp with a time zone, for example `2025-10-01T00:00:00Z` (fractional seconds are optional). A date on its own returns a 400 error.
`endDate` (optional)	`end_time` (optional)	RENAMED	**Exclusive** at Kaiko (Amberdata included it): the range covers `[start_time, end_time)`. For example, `endDate=2026-09-30` becomes `end_time=2026-10-01T00:00:00Z`.
`timeFormat` (optional)	None	REMOVED	This parameter had no effect on this endpoint, since the rows carry no timestamp. You can simply remove it from your requests.
None	`api_version` (optional)	NEW	Lets you pin the response format. The default is `2026-10-01`.

Defaults and limits

- **No dates:** if you include no dates, Kaiko uses the pair's **whole history** up to now for the computation, whereas Amberdata used the last 1,830 days (5 years).
- **One date only:** if you only provide a start date, the range runs up to now, on both sides. If you only provide an end date, Kaiko starts at the beginning of the history, whereas Amberdata started 1,830 days before the end.
- **Maximum range:** there is none at Kaiko. Amberdata rejected ranges over 1,830 days with a 400 error.
- **Checks:** at Kaiko, the start date must be before the end date (otherwise a 400 error is returned).
- **Complete days only:** the current day is not averaged until it ends, on both sides.

4 Response envelope & metadata

These are the fields around the data, in other words the wrapper your parser reads before reaching the numbers. This envelope is **identical on every Amberdata endpoint**.

Amberdata field	Kaiko field	Change	Notes
`status`	None	REMOVED	Please use the HTTP status code (200) instead.
`title`	None	REMOVED	There is no equivalent on success.
`description`	None	REMOVED	There is no equivalent on success.
`payload.data`	`data`	RENAMED	Now at the top level. An **array**, with one row per bucket.
`payload.metadata`	`meta`	RENAMED	Now at the top level.
`api-version`	`api_version`	RENAMED	`2026-10-01` (Amberdata: `2023-09-30`).
None	`count`	NEW	The number of rows in `data`.
None	`next_url`	NEW	Always `null`, since everything comes in one page.
None	`url`	NEW	Your request URL, including `api_version`.

On Amberdata, `api-version` sits inside `payload.metadata`. On Kaiko, `api_version`, `count`, `next_url` and `url` all sit inside `meta`.

Errors and empty results

- **Pair not available on the exchange:** Amberdata returned a 200 response with an empty `data` array. Kaiko returns a **404** error with the code `unknown_instrument` (for example "cbse does not publish doge-chf").
- **Uppercase codes:** Amberdata returned a 200 response with an empty `data` array (no match). Kaiko returns a **400** error.
- **Start after end:** Amberdata returned a 200 response with an empty `data` array. Kaiko returns a **400** error.
- **No observation in the range:** both APIs return a 200 response with an empty `data` array.
- **Missing or invalid parameter:** both APIs return a 400 error. Kaiko errors are `application/problem+json` (RFC 9457) bodies that include `status`, `title`, a `detail` message naming the parameter, and the code `invalid_parameter`.

5 Response data fields

Amberdata field	Kaiko field	Type	Change	Notes
`weekday` (day of week)	`period`	string	RENAMED	Labels below.
`month` (month of year)	`period`	string	RENAMED	Labels below.
`historicalVolatility1day`	`realized_volatility_1d`	number	RENAMED	Bucket average.

Bucket	Amberdata labels	Kaiko labels
Day of week	`MON, TUES, WED, THURS, FRI, SAT, SUN`	`mon, tue, wed, thu, fri, sat, sun`
Month of year	`JAN, FEB, MARCH, APR, MAY, JUNE, JULY, AUG, SEP, OCT, NOV, DEC`	`jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec`

Units: values are annualised realized volatility. Amberdata expressed them in percent (`49.71` = 49.71%), while Kaiko uses decimals (`0.4971` = 49.71%). Rows come in calendar order on both sides, and a bucket with no observation in the range is simply absent (for example, a 3-day range returns 3 rows).

6 Exchange & venue names

For this endpoint, the venue is a **spot exchange** (not a derivatives venue). Please map the identifier you send as follows:

Amberdata name	Kaiko code	Exchange
`gdax`	`cbse`	Coinbase
`binance`	`binc`	Binance
`kraken`	`krkn`	Kraken
`bitstamp`	`stmp`	Bitstamp

Amberdata name	Kaiko code	Exchange
`gemini`	`gmni`	Gemini
`okex`	`okex`	OKX
`bithumb`	`bthb`	Bithumb
`poloniex`	`polo`	Poloniex
`deribit`	`drbt`	Deribit

Kaiko also publishes this endpoint on 17 additional spot exchanges: `arkm` `bnus` `bfnx` `gpsp` `btmt` `btmx` `bvav` `bull` `bbsp` `gate` `huob` `kcon` `lmax` `merc` `mexc` `okcn` `upbt`. Amberdata's codes (for example `gdax`) return a 400 error.

7 Will your values change?

Short answer

The calculation is the same: once divided by 100, the values are directly comparable with Amberdata's, as long as your Kaiko request covers the same days as your Amberdata one. Since Kaiko's `end_time` is exclusive whereas Amberdata's `endDate` was inclusive, simply set `end_time` one day after your Amberdata `endDate` (§8). The only exception concerns OKX, Bithumb and Deribit (see Daily bars below).

- **Same methodology:** on both sides, each day's Parkinson realized volatility (from the day's high and low, annualised by √365) is averaged per UTC day of the week or UTC month over the range.
- **Daily bars:** Kaiko cuts every daily bar at 00:00 UTC, on all exchanges. On some venues, Amberdata used the exchange's own trading day instead: 16:00 UTC on OKX, 15:00 UTC on Bithumb and 08:00 UTC on Deribit. On these exchanges the bars cover a different 24-hour window, so the values may differ from Amberdata's.
- **End of the range:** Amberdata included the `endDate` day, whereas Kaiko stops before `end_time`. If you send the same end date on both sides, that last day is left out at Kaiko, which changes the average of its weekday and month buckets. For example, Amberdata `startDate=2025-10-01`, `endDate=2026-09-30` covers the same days as Kaiko `start_time=2025-10-01T00:00:00Z`, `end_time=2026-10-01T00:00:00Z` (§8).
- **Default range:** without dates, Kaiko averages the pair's whole history, whereas Amberdata used the last 5 years (§3).
- **History:** Kaiko's daily observations start on 2016-01-01, or later for pairs with a shorter trading history.
- **Units:** Amberdata used percent, while Kaiko uses decimals (§5).

8 Before / after examples

Both examples cover exactly the same days on both sides, from 2025-10-01 to 2026-09-30 included.

Day of week: request

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /realized-volatility
    /seasonality/day-of-week
    ?exchange=gdax
    &pair=btc_usd
    &startDate=2025-10-01T00:00:00
    &endDate=2026-09-30T00:00:00
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/volatility
    /seasonality
    ?bucket=day_of_week
    &exchange=cbse
    &base_asset=btc
    &quote_asset=usd
    &start_time=2025-10-01T00:00:00.000Z
    &end_time=2026-10-01T00:00:00.000Z
X-Api-Key: <your-kaiko-key>
```

Day of week: response (real responses; values rounded)

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [
      { "weekday": "MON",
        "historicalVolatility1day": 44.25 },
      { "weekday": "TUES",
        "historicalVolatility1day": 44.46 },
      { "weekday": "WED",
        "historicalVolatility1day": 43.71 },
      { "weekday": "THURS",
        "historicalVolatility1day": 43.89 },
      { "weekday": "FRI",
        "historicalVolatility1day": 49.71 },
      { "weekday": "SAT",
        "historicalVolatility1day": 22.81 },
      { "weekday": "SUN",
        "historicalVolatility1day": 31.41 }
    ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```


Kaiko


```
{
  "data": [
    { "period": "mon",
      "realized_volatility_1d": 0.4421 },
    { "period": "tue",
      "realized_volatility_1d": 0.4446 },
    { "period": "wed",
      "realized_volatility_1d": 0.4371 },
    { "period": "thu",
      "realized_volatility_1d": 0.4389 },
    { "period": "fri",
      "realized_volatility_1d": 0.4971 },
    { "period": "sat",
      "realized_volatility_1d": 0.2281 },
    { "period": "sun",
      "realized_volatility_1d": 0.3142 }
  ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 7,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/
volatility/seasonality?
bucket=day_of_week&exchange=cbse&base_asset=btc&qu
ote_asset=usd&start_time=2025-10-01T00:00:00.000Z&
end_time=2026-10-01T00:00:00.000Z&api_version=2026
-10-01"
  }
}
```

Month of year: request

Amberdata

```
GET https://api.amberdata.com
    /markets/derivatives/analytics
    /realized-volatility
    /seasonality/month-of-year
    ?exchange=gdax
    &pair=btc_usd
    &startDate=2025-10-01T00:00:00
    &endDate=2026-09-30T00:00:00
x-api-key: <your-amberdata-key>
```

Kaiko

```
GET https://api.kaiko.io
    /analytics/volatility
    /seasonality
    ?bucket=month_of_year
    &exchange=cbse
    &base_asset=btc
    &quote_asset=usd
    &start_time=2025-10-01T00:00:00.000Z
    &end_time=2026-10-01T00:00:00.000Z
X-Api-Key: <your-kaiko-key>
```

Month of year: response (real responses; values rounded)

Amberdata


```
{
  "status": 200,
  "title": "OK",
  "description": "Successful request",
  "payload": {
    "data": [
      { "month": "JAN",
        "historicalVolatility1day": 34.55 },
      { "month": "FEB",
        "historicalVolatility1day": 64.45 },
      { "month": "MARCH",
        "historicalVolatility1day": 47.91 },
      { "month": "APR",
        "historicalVolatility1day": 35.96 },
      { "month": "MAY",
        "historicalVolatility1day": 27.70 },
      { "month": "JUNE",
        "historicalVolatility1day": 45.07 },
      { "month": "JULY",
        "historicalVolatility1day": 32.06 },
      { "month": "AUG",
        "historicalVolatility1day": 32.16 },
      { "month": "SEP",
        "historicalVolatility1day": 33.19 },
      { "month": "OCT",
        "historicalVolatility1day": 41.84 },
      { "month": "NOV",
        "historicalVolatility1day": 47.73 },
      { "month": "DEC",
        "historicalVolatility1day": 40.34 }
    ],
    "metadata": {
      "api-version": "2023-09-30"
    }
  }
}
```


Kaiko


```
{
  "data": [
    { "period": "jan",
      "realized_volatility_1d": 0.3455 },
    { "period": "feb",
      "realized_volatility_1d": 0.6445 },
    { "period": "mar",
      "realized_volatility_1d": 0.4785 },
    { "period": "apr",
      "realized_volatility_1d": 0.3596 },
    { "period": "may",
      "realized_volatility_1d": 0.2770 },
    { "period": "jun",
      "realized_volatility_1d": 0.4507 },
    { "period": "jul",
      "realized_volatility_1d": 0.3206 },
    { "period": "aug",
      "realized_volatility_1d": 0.3216 },
    { "period": "sep",
      "realized_volatility_1d": 0.3319 },
    { "period": "oct",
      "realized_volatility_1d": 0.4184 },
    { "period": "nov",
      "realized_volatility_1d": 0.4775 },
    { "period": "dec",
      "realized_volatility_1d": 0.4034 }
  ],
  "meta": {
    "api_version": "2026-10-01",
    "count": 12,
    "next_url": null,
    "url": "https://api.kaiko.io/analytics/
volatility/seasonality?
bucket=month_of_year&exchange=cbse&base_asset=btc&
quote_asset=usd&start_time=2025-10-01T00:00:00.000
Z&end_time=2026-10-01T00:00:00.000Z&api_version=20
26-10-01"
  }
}
```