EMpulse Street FX Index - ميتودولوژي

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https://em

The EMpulse Street FX Index publishes daily "street" exchange rates of emerging-market currenc ies against USDT (treated as 1 USD): the rate people actually pay, not the official one. The index combines transaction-based market data with quotes from public market sources; each series ca .rries a confidence class, and the limits of the data are published with it

Components

component | what it is | where it appears

transaction
regates ent
live table

The exchange-based component

- Which exchanges. Only exchanges that publish a documented public API for their offers, reada ble without an

  account, v
  lows the e
  30 days: a
  appear or
  .s otherwi

- The hour. Per exchange, currency and side the best offers by price (up to 20) give the best pric ,e, the median

  the depth
  onvention
  rather tha
  urrency ÷
  and sell a
  .id) / med

- Reliability of an exchange (0–1, recomputed daily over 30 days): accuracy = max(0, 1 − dev / = 5 %), dev

  median di
  ur (with fe
  depth aga
  5·depth +
  .pulated b

- Confidence. A day is high with at least three exchanges within 2 % of each other, medium with at least

  three exch
  ule below

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Coverage and activity

:The index of a currency is one number per day, built from the components above

;when only one component publishes, the index is that component •

when sev
veraged w

A currency is active when the index has a day within the last 14 days (/v1/currencies: status = "
active", active_since = the first day of the current run of data without a break longer than 14 da
ys). A currency without a recent day is coverage in progress: we are adding market sources for it
, its published history stays available, and it returns to the active list on its own once a recent da
y exists. The live table of the website shows active currencies only; the number of currencies qu
.oted in the plans is the number of active currencies

:For every active currency the latest day carries

sources — the number of independent market sources behind the day (the transaction-based c •
omponent counts

as one, ev
or more, a
.in the AP

confidence — the class of the latest day (high / medium / limited, see below); when the day is t •
hree

.or more c

A currency is published from its first market source on: a day with one source is limited and carri
es the note coverage improving (website, API, MCP) — the number is real, its uncertainty is state
d, and more sources are being added. medium needs two independent sources, high three agree
ing within 2 %. The exchange-based component enters the activity rule only once its order book
s show at least three independent offers in an hour and two days of data; a currency without a si
.ngle data point stays coverage_in_progress

Daily index fields (`GET /v1/rates/{cur}`)

buy — the day's weighted average rate at which a client buys USDT for fiat. A side with too fe •
w data

.points fo

.sell — the same for the side where the client sells USDT •

mid — (bu

;side — what mid is based on: both, buy (only buy exists) or sell (only sell exists) •

null when
.ead agai

spread_pct — (buy − sell) / mid × 100, only when side = "both"; otherwise null. It is usually •

.positive;

confidence — high, medium or limited. Every currency has a base class from its coverage •

a day with
a points t
.data poin

- in_progress — true for the latest day of a currency while the day is still being collected and its data point
.ch a day
- mid_7d — arithmetic mean of the valid mid values over the last 7 calendar days, including the .day itself
- chg_1d_pct, chg_7d_pct, chg_30d_pct — (mid / mid_N_days_ago − 1) × 100, comparing with exactly
or 30 cale
r if the tw
.by rough
- exchange_spread_pct (Pro and Enterprise) — the cross-exchange spread of the exchange-based component on the
.day (see

.Valid mid" means a non-null mid that is not flagged as an outlier"

A side that does not move

Sometimes one side of the market stops moving while the other keeps trading at changing prices: over several days (five, for the daily index) its median rate stays within 0.05 %, or every day on that side clears at a single price. Such a price is quoted rather than traded, and a mid halfway between it and the live side would be meaningless. In that case the index is based on the moving side alone: mid equals that side's rate, side names it (buy or sell) although both buy and sell are published, and spread_pct is null. The rule is applied day by day and lifts itself as soon as the quiet side starts moving again; when both sides are equally still (a flat market) nothing changes. .The hourly index applies the same rule over a window of 24 hours

Outliers

:A day is flagged flag = "outlier" when all of the following hold

- ;it has a mid
it has few
enuine
- its mid deviates by more than 10% from the median mid of the surrounding window of ;calendar
- the window contains at least 3 other days with a mid (otherwise there is not enough data to judge,
.(and the

Outlier days keep their own buy, sell, mid and spread_pct values so that clients can see them, but they are excluded from mid_7d and all chg_* calculations (for the outlier day itself and for the .days that would reference it)

Revisions and timing

- Days are UTC calendar days. The current day is incomplete until 00:00 UTC and is revised during the day;
.it is mark
- Because the outlier window looks 15 days forward as well as back, flags (and therefore mid_7d and
chg_*) of
.culated o

- Free API keys receive data up to the previous day; pro and enterprise keys include the current .day

.Series de

Hourly index (`GET /v1/rates/{cur}/hourly`, Pro and Enterprise)

The hourly index is the daily index at hourly granularity: for every UTC hour and currency, buy a nd sell are the weighted average rates of the hour's market transactions on each side, mid, side .and spread_pct follow the daily rules, and confidence is the currency's base class

- How the hourly series is built. Every currency with hourly market data has a series. For each U TC hour

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ource con
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- Hours and sides. A row exists for every hour with market data. A side needs at least **3 data p oints in the

hour** to
tells whic
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- Outliers within the hour. The hour's aggregates are built from transactions within ±20 % of the hour's own

median ra
.that does

- Daily summary. Each day of a per-currency response carries vwap (the weighted average rate of the whole

day, both
n index va
om the ho
two-sided
a two-side
.unts ever

- In progress. The current UTC hour is in_progress = true while it is being collected and will be re ;vised

.GET /v1/r

- Timing. Transaction-based hourly rows arrive with the daily update, which covers the last three days (late

transactio
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blic websi
ate of the
.he last va

Multi-source street index (`GET /v1/street-index`, product "Street

Rate Index — multi-source")

For every currency where public market sources publish street rates — next to the transaction-b
ased series where one exists, on its own where it does not — the index publishes the rate quote
d in open sources: exchangers' public Telegram channels, the rates sections of local publishers, f
orums. A published rate is a fact; we keep the number, the time and the link to the post, never t
.he text

- Quote — one number from one public post: quoted currency (ISO 4217), base (USD; USDT is co
unted

  as USD ar
  me of the
  udit only
  .veral citi

- Side convention. side is the client's action, as in the index: a client *buys* USD at the

  exchange
  post that
  .id is a qu

- Extraction. Regular expressions for the common formats first ("USD 1650/1665", "Покупка: 11
/ 810

  Продажа
  ngali / Pe
  es about
  ncy word
  .it returns

- Plausible range per currency and base: the transaction-based reference of the last 30 days, ot
herwise

  the media
  e ± 60 %.
  .range ex

- :Source trust (reliability, 0–1, recomputed every day over the last 30 days)

  accuracy*
  e

- / the shared shift itself is published with the day as basis_gap_pct = (multi-source mid

  transactio
  ate to the
  rket and t
  ;is adjuste

- cleanliness* = 1 − share of outliers; *stability* = max(0, 1 − dispersion / 3 %), dispersion =*
median

  within-da
  ;most 1

- .reliability = 0.5·accuracy + 0.2·cleanliness + 0.15·stability + 0.15·regularity, within [0.05, 1]

A source
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- The day (GET /v1/street-index/{cur}/history): mid = reliability-weighted median of post mids (the
  buy and s
  he respec
  otes from
  m the nur
  of mids is
  ≥ 3 sourc
  .≥ 3 quot
- Access. Free keys: the free-tier currencies with a 1-day delay; Pro: all currencies; Enterprise: also the
  quotes be
  .omputed
- Limitations. Posts are what sources chose to publish; a source may be late, wrong or promotional — that
  .is what th

Currency pages and site statistics

- Each currency has a public page (/rates/{CUR}): the rate of the latest hour, changes, the last 24 hours
  day and 1
  y, the last
  llms-full.tx
  ."eet FX In
- The website keeps first-party visit statistics without cookies or external trackers: page views, countries and
  referrers a
  visitors an
  om the IP
  .icence CC

City boards and exchangers' cards

- A city page (/rates/{CUR}/{city}) shows the country-wide index and, below it, the boards of the exchange
  offices of
  f those bo
  than three
  .an three
- Every exchanger with a public board gets a card built from that board: the public name of the business, its
  city, its si
  .ers or do
- A business claims its card without any human step: a code placed in a file or a meta tag on its site, in a post
  of its char
  a link in a
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Own rates are shown apart from the index, marked as the exchanger's own. They enter the ind • ex only as one more

source wi
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Corridors (`GET /v1/corridors/{a}/{b}`, `/corridors/{A}-{B}`, Pro and Enterprise)

Many emerging-market currencies are exchanged against each other directly — som for tenge, h ryvnia for dirhams, rupees for riyals — in public forums, channels and classified boards, without a dollar leg. The index reads those public listings in the languages of the countries and publishes .the corridor rate of a pair next to the cross rate its own dollar legs imply

A listing is one public post that names two non-dollar currencies and a price or two amounts (" • куплю сумы

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e amount
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Plausibility. A listing is checked against the rate implied by the two dollar legs of the index •

60 %: an
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The day (rate) is the trust-weighted median of the day's valid listings of the pair, with the day' • s

low and h
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implied_cross is the same rate computed from the two dollar rates of the index on the same da • y

corridor_p
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Currencies without a dollar market. When a currency has no dollar component of its own but is • quoted

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Access. Public pages show the latest day; Pro and Enterprise keys also get the current day in t • ,he API

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Limitations

- Street rates reflect what people actually pay on the street market; they are not official, central-bank or .interbank
- Series with confidence = limited have gaps (days without a value or without a mid) and higher noise. Check .confidenc
- Coverage starts at different dates for different currencies (coverage_since in GET /v1/currencies), and .a currenc
- .The index is provided for information purposes only and is not investment advice