

CNB_FX Quickstart

Daily Czech National Bank exchange rates in Excel and Power BI, for any period, with weekends and holidays filled in.

Install (2 minutes)

1. Excel: **Data** → **Get Data** → **From Other Sources** → **Blank Query**. Power BI: **Home** → **Get Data** → **Blank Query**.
2. Open **Advanced Editor**, delete what is there, paste the whole content of `CNB_FX.pq`, click **Done**.
3. Rename the query to `CNB_FX` (right-click → Rename).
4. If asked about data source access: `www.cnb.cz` → **Anonymous** → **Connect**, privacy level **Public**.

Call it

Call	Returns
<code>CNB_FX(#date(2026,1,1))</code>	All currencies, 1 January 2026 to today
<code>CNB_FX(#date(2025,1,1), #date(2025,12,31), {"EUR", "USD"})</code>	EUR and USD for 2025
<code>CNB_FX(#date(2026,1,1), null, null, false)</code>	Only the days ČNB actually published

Column	Meaning
Date	Calendar day
CurrencyCode	ISO code: EUR, USD, HUF ...
Amount	ČNB quotation unit: 1, 100 or 1000
Rate	CZK per Amount, as published
RatePerUnit	CZK per 1 unit. Use this for conversion.
RateDate	Day the rate was published. On weekends and holidays, the last working day.

ČNB quotes HUF, JPY, INR, PHP, THB, TRY, ISK and KRW per 100 units and IDR per 1000. Multiplying by `Rate` instead of `RatePerUnit` overstates those amounts 100×.

Convert a transaction table to CZK

Your table needs the columns `Date`, `Currency` and `Amount`, formatted as an Excel table named `Transactions`. Set the date range to the years in your table.

```
let
    Tx = Excel.CurrentWorkbook()[{Name = "Transactions"}][Content],
    Typed = Table.TransformColumnTypes(Tx, {"Date", type date}, {"Amount", type number}),
    // fixed range, all currencies: no value from your table is sent to cnb.cz
    FX = CNB_FX(#date(2026, 1, 1), #date(2026, 12, 31)),
    J = Table.NestedJoin(Typed, {"Date", "Currency"}, FX, {"Date", "CurrencyCode"},
        "FX", JoinKind.LeftOuter),
    E = Table.ExpandTableColumn(J, "FX", {"RatePerUnit"}),
    CZK = Table.AddColumn(E, "AmountCZK",
        each if [Currency] = "CZK" then [Amount] else [Amount] * [RatePerUnit], type number)
in
    CZK
```

Power BI Service

The function uses a fixed base address with a relative path, so it is designed to refresh in the Power BI Service without a gateway (not yet tested there). Set the data source credentials for **www.cnb.cz** to **Anonymous** in the dataset settings.

If something goes wrong

Message	Fix
Formula.Firewall ... references other queries	Keep each source at the privacy level that fits its sensitivity and your company policy; do not switch the checks off. Load the rates in their own query with fixed dates (e.g. the whole year) instead of dates read from your table, then merge. If it persists, ask your administrator.
Expression.Error: CNB_FX wasn't recognized	The query is not named exactly <code>CNB_FX</code> .
Empty rows for a currency	ČNB doesn't publish it, or not for the whole period. Check its code on cnb.cz .