Foreign Currency Transactions to Home Currency:

→ hm Jis data ko analyze kr rhy ho ye zroori nhi k wo aik hi country me operate ho. The data we have of the company, ye 7 countries me kaam kr rhi, means hmary pas 7 different currencies ha.
→ Hm sb currency ko aoni home currency(Jha company ka head office) me dekhna chahty ha.
→ Hmny assume krna k hamry data me jitni b transactions ha wo sb apni Local currency me .
→ Very important point, and that is we will be converting all the transactions using the exchange rate for the end of the period. So we are not converting every single transaction for their respective days exchange rate. That is not how we do a conversion in financial reporting. We will be converting each transaction at their month end rate or if I am preparing quarterly reports at the quarter end rate and if I am preparing yearly reports at the year end rate.

→ We have to be dynamic in the definition of our measure so that when the measure picks up the exchange rate, it takes care that if the reporting is being done monthly, it should return me the month-end rate. And accordingly, if we are preparing reports for the year end, I mean, we are preparing yearly reports, the system should return me the year end date With that.

→ Currency exchange rate ki files download krni from “investing.com” yha Kahin se b aur kr skty.
→ Hmari is file me US ka b exchange rate ha, no doubt hmari home currency US hi ha but we have to define.
→ EUR ko 2x define kiya ha, Germany aur France, Europe me ha same rate ha but we have to define.
→When we are defining the exchange rate for any country, we can define it two ways. For example, **for the British pound to US dollars, you can say British pounds per US dollar, or alternatively, you can say US dollars per British pound.**
→ Here we are using Us dollars per British pound.

Data Import/ Modeling:

→ First, we imported the tables into power BI Then, I told you that no modeling is required for this TBL reporting currency. You can leave it anywhere in the model.
→ And then I told you that for the table rate, this table should be connected with other tables so that the system can separate different tables that can interact with each other. And there needs to be one common point where they can talk to each other for dates.

→ We said that the TBL calendar would be linked with rates and you know, all other tables in my data model are linked for dates; they are linked for calendar table.

→ And we also know that wherever we were working on time Intelligence, we were using the dates from the calendar table. And now that the calendar table is connected with rates, we can intelligently pick up the date-wise data from the rates table.

→ Here you can see we have connected the territory key with rates, which means that the other table, which can pick the territory key data from this table, can now also pick the exchange rate data for

Conversion:

Important point k hm ne Period end Exchange rate use krna ha, For year, Year end exchange rate, For Month, Month end exchange rate.
Ab msla k ye k how to pick the right value, Agr hm max function use krty tou wo maximum value of exchange rate dega. Which is not right.
We gave 7 currencies, which means each date repeated for 7x.
Also, Euro repeated 2x for Germany and France.

Exchange_Rate_to_be_Used = CALCULATE(AVERAGE(tbl_fx_rates[Exchange_Rate]), Filter(tbl_Calendar, tbl_Calendar[Date] = MAX(tbl_Calendar[Date])))
Average of exchange rate, filter on calendar table, where date = Max

Total_FTP_Converted = [Total_FTP] * [Exchange_Rate_to_be_Used]

Writing measure that can switch values based on Slicer selection:

hm chchty k aik hi matrix ho aur with the help of slicer hm dono values dekh sky. USD me aur local currency me b . tou uskaliye new measure bnnani:

Amount_FTP_Converted_on_Slicer = SWITCH(TRUE,
SELECTEDVALUE(tbl_reporting_currency[Reporting_Currency]) = "Amount in LOcal Currency", [Total_FTP],

SELECTEDVALUE(tbl_reporting_currency[Reporting_Currency]) = "Amount in USD" , [Total_FTP_Converted])

Now, redesign the P&L statement with this converted value:
→ Matrix add, rows me class, subclass, subclass2, Account, Column me Country, Values me Amount_FTP_Converted_on_Slicer add krni. Aur 2 slicers bnany one with reporting value and the other with Year.

Class	Australia	Canada	France	Germany	New Zealand	UK	USA
Trading account							
Sales	2,015,267	1,251,449	2,015,267	2,390,711	2,632,429	1,655,632	5,147,887
Cost of Sales	-998,176	-373,361	-536,874	-833,312	-621,991	-518,639	-1,533,137
Operating account							
Operating Expenses	-995,004	-448,097	-649,637	-919,409	-766,177	-653,108	-1,869,165
Depreciation & Amortization	-197,928	-130,380	-197,928	-237,048	-197,928	-168,288	-524,400
Non-operating							
Interest Income	7,311	4,790	7,311	8,745	7,311	5,776	19,741
Gain/Loss on Sales of Asset	1,843	1,382	1,843	2,257	1,843	1,658	5,460
Exchange Loss/Gain	1,343	822	1,343	1,590	1,343	1,126	3,368
Dividend Income	7,465	5,642	7,465	9,158	7,465	7,503	23,000
Interest & Tax							
Taxation	-74,063	-46,572	-74,063	-88,032	-74,063	-68,120	-189,854
Interest Expense	-6,996	-5,196	-6,996	-8,556	-6,996	-7,104	-21,000

Reporting_Currency
- [x] Amount in Local Currency
- [ ] Amount in USD

Year
- [ ] 2018
- [ ] 2019
- [ ] 2020

We use period end exchange rate to convert currency, but what if we have to use day level approach:

Step 1:

→ hm GL table me jaye gy yha hmny aik new column add krna jismy hm exchange rate fetch kry gy while looking at Territory key, and date. Because the exchange rate is different for each country.

→ Imp point: Jb aik table me new column add kr k dosry column se data fetch krna ho tou related function use krty,, Lkn yha aesa nhi ho ga. Kiun k related function se hmy Fx_Rates table ki access nhi hti. Inshort k GL jin tables se directly connected ha whi show hny.

→ add new column: Max exchange rate find kro filter on rate table, where dates from GL = Rate, and same the territory key.

Exchange_rate = CALCULATE(MAX(tbl_fx_rates[Exchange_Rate]), FILTER(tbl_fx_rates, tbl_fx_rates[Date] = tbl_GL[Date] && tbl_fx_rates[Territory _key] = tbl_GL[Territory_key]))

→ MAX(tbl_fx_rates[Exchange_Rate]), : calculate me direct column nhi hm aesy likhty, single value point krna hta isiliye max use kiya. Territory key aur date combine kaliye exchange rate unique ho ga isliye hm worry nhi hna hm yha koi b function use kr skty, Min, Max, avg.

Step 2:

→ Add new column, jsi me hm exchange rate ko Amount se multiply krna.

→ Convert the currencies:

Amount_USD = tbl_GL[Amount] * tbl_GL[Exchange_rate]

→ Now, we`ll do the same thing but without adding new columns:

Amount_USD_Measure = SUMX(tbl_GL, tbl_GL[Amount]
*** CALCULATE(MAX(tbl_fx_rates[Exchange_Rate]), FILTER(tbl_fx_rates, tbl_fx_rates[Date] = tbl_GL[Date] && tbl_fx_rates[Territory _key] = tbl_GL[Territory_key])))**

→ **SUMX**: agr sum use krty tou wo multiply se phly hi amount aur rates ko sum kr dy ga. Isiliye SumX use krna , ye row by row chly ga. We need to do is convert the values day by day, and for the day-by-day calculation to happen, we need to do it row by row.

→ Ab is measure ko drag krey gy matrix me, aik matrix me ye value aur aik mein Column ki value ha, Dono same tou hmny easily measure se achieve kr lya, No need to add columns.