

Table of contents	Page
1 Runtime instructions	2
2 Statistics	5
3 Inputs	6
4 Config File Creation	7
5 Control SiteReports	8

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1 Runtime instructions

The Exchange-rates should be collected manually from the Swedish-RiksBank for each date required.

Before anything has been presented to the user:

The program has been configured based on the HQ config file which dictates the names of the sites from which we expect to get reports. The current folders have been searched and all available information containing the exchange-rates, currencies required and the dates for this information have been mapped.

Choose between running statistics on the reports found in the database or wether you want to create a configuration file containing the currencies and amounts of these for future days.

```
Welcome to HQ
Log name set to: HQlog2021-05-07
Log level set to: text
Log level set to: FINE

Main Menu:
1 Statistics
2 Configure
3 Control SiteReports
0 Exit
```

After "Statistics" is chosen, you are presented with the site-choice menu. Enter the number corresponding to the name of the Site you want to analyse. If "ALL" is chosen, each site will be printed.

The reports contains a number of transactions.

Choose Site

```
1
  NORTH
                 contains: 20 reports
2
  SOUTH
                 contains: 5 reports
3
                 contains: 5 reports
  EAST
  WEST
                 contains: 1 reports
4
5
  CENTER
                 contains: 5 reports
6
  ALL
                 contains: 36 reports
  Exit
```

After the choice of Site has been made, you will be promted to choose the period for which you want to create the statistics.

Please choose a Period

- 1 Day
- 2 Week
- 3 Month
- 0 Exit

The choice made will create different outputs depending on which Currencies are included chosen.

DAY will present one output for the chosen currency.

WEEK will present each DAY output in the week chosen and a summary of for the week. MONTH will present the total for the period.

The next promt is for entering the chosen date.

If the WEEK option was chosen, then the program finds the corresponding period in which the chosen date is situated. For example, if the entered date is a wednesday, the period treated is the week starting from the previous monday to the next friday.

For choice MONTH the period is adjusted to including the days between and including the first and last days of the entered month.

Input start date: yyyy-mm-dd, write "BACK" to return

Input control is in place, thus you can not enter a date which is a weekend day (Saturday and Sunday).

This date is a weekend, it's Sunday
Please choose another date:
Input start date: yyyy-mm-dd, write "BACK" to return

The program will also refuse to register a date for which is has no data. This will promt the user to enter a new date.

No data found for the chosen date, please try again. Input start date: yyyy-mm-dd, write "BACK" to return

Depending on which currencies is present in the database for the chosen period, you will be presented with a list much like the one below.



If no currencies are available, this will be promted, and the program will be re-run, allowing for another period to be entered.

2 Statistics

After the choices have been made, the statistics output is presented as per the examples below. This is the output from chosing a WEEK, and the USD currency for site NORTH note that each day is printed during the period, and that the final presentations contains the WEEK summary.

```
|-----
Statistics for Site: NORTH Currency: USD Period: DAY.
Now showing: 2021-04-19
                  117,0 SEK Transactions: 2
[SELL] Profit:
       Profit: 125,0 SEK
[BUY]
                              Transactions: 3
[SUMMARY] Period profit: 242,0 SEK
                              Transactions: 5
______
Statistics for Site:NORTH Currency:USD Period:DAY.
Now showing: 2021-04-20
                   12,0 SEK Transactions: 1
[SELL]
       Profit:
       Profit: 25,0 SEK
[BUY]
                             Transactions: 1
[SUMMARY] Period profit: 37,0 SEK
                              Transactions: 2
______
Statistics for Site:NORTH Currency:USD Period:DAY.
Now showing: 2021-04-21
       rrofit:
Profit:
                  54,0 SEK Transactions: 1
[SELL]
      Profit:
                            Transactions: 0
[BUY]
                   0,0 SEK
[SUMMARY] Period profit: 54,0 SEK
                             Transactions: 1
______
Statistics for Site:NORTH Currency:USD Period:DAY.
Now showing: 2021-04-22
                   54,0 SEK Transactions: 1
     Profit: 54,0 SEK
Profit: 0,0 SEK
[SELL] Profit:
[BUY]
                             Transactions: 0
[SUMMARY] Period profit: 54,0 SEK
                             Transactions: 1
______
Statistics for Site: NORTH Currency: USD Period: DAY.
Now showing: 2021-04-23
[SELL] Profit:
                   88,0 SEK
                             Transactions: 1
       Profit: 106,0 SEK
[BUY]
                              Transactions: 3
[SUMMARY] Period profit: 194,0 SEK
                              Transactions: 4
-----
Statistics for Site:NORTH Currency:USD Period:WEEK.
[SELL] Profit: 325,0 SEK Transactions: 6
[BUY] Profit: 256,0 SEK Transactions: 7
                  256,0 SEK
[SUMMARY] Period profit: 581,0 SEK Transactions: 13
```

3 Inputs

The file-structure for the program is as follows:

Paths:

Configs
DailyRates
Orders
SiteReports
Transactions

Several SiteNames

Files

Contained in:

HQ Configuration files.ConfigsCurrencyConfigurationDailyRatesProjectConfigurationConfigsHQLogTransactions

SiteReports (Transactions) Transactions /SiteName.

SiteReports SiteReports

Files:

HQ-configuration file has the following syntax, is used to configure the HQ based on the following parameters.

```
1 SITENAMES=NORTH, SOUTH, EAST, WEST, CENTER, ALL
2 BUYMARGIN = 0.995
3 SELLMARGIN = 1.005
4 YEAR = 2021
5 logLevel = FINE
6 logFormat = text
7 logName = HQLog
```

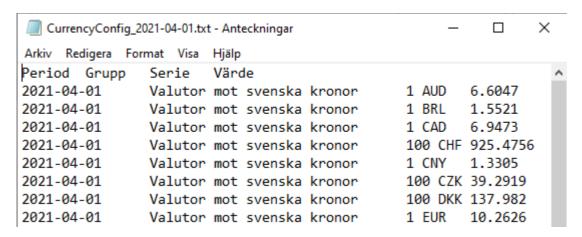
ProjectConfiguration file (Can be generated from HQ), shows what information about the specified sites and what combination of currencies, amounts and reference-currencies are found in each money-box.

```
×
ProjectConfig_2021-04-01.txt - Anteckningar
                                                           Arkiv Redigera Format Visa Hjälp
CurrencyConfig = CurrencyConfig 2021-04-01.txt
Box0fCash
AUD = 1500
CHF = 1500
EUR = 5000
DKK = 10000
GBP = 2500
JPY = 20000
NOK = 10000
RUB = 30000
USD = 2000
SEK = 50000
CNY = 0
End
ReferenceCurrency = SEK
```

CurrencyConfiguration (Retrieved from the Swedish-RiksBank, with a name-change).

The **Reports** contains serialized (non-viewable when clicked) information and is interpreted as a list of transactions when collected by the program. See Exchange-Site for further details.

The **log-files** are stored as HQLog + **current date** and can be found in the root map.



4 Config File Creation

The program allows for the creation of customized configuration files to be transmitted to each Site in the system.

You will be promted for entering the information as described below.

```
Create ProjectConfig files
Enter date for currency search YYYY-MM-DD
2021-04-19
What reference currency do you want?
SEK
Enter currency to add to the file.
AUD
Enter amount of currency;
2500
Do you want to add more currencies? y/n
```

5 Control SiteReports

When the third choice is selected, you are promted to input the date for which you'd like analyze.

The method will attempt to read the site-report detailing the status of the moneybox for the chosen date for all sites.

The difference between the outgoing values of each currency and the incomming reported currencies are calculated and reported on a TOTAL basis. Statistics are run to verify the validity of the values in the transactions to aid in the comparison of the found information.

```
Enter date to control:
2021-04-19
Found a difference CHF is wrong
The difference is: -500.0 CHF
Found a difference USD is wrong
The difference is: 3000.0 USD
Found a difference SEK is wrong
The difference is: -717.0 SEK
Found a difference RUB is wrong
The difference is: -500.0 RUB
Found a difference CNY is wrong
The difference is: 600.0 CNY
Presenting statistics for ALL sites. The period Profit is the sum of the difference in SEK:
______
Statistics for Site:NORTH Currency:ALL Period:DAY.
Now showing: 2021-04-19
[SELL] Profit: 217,0 SEK Transactions: 8
[BUY] Profit: 376,0 SEK Transactions: 17
[SUMMARY] Period profit: 593,0 SEK Transactions: 25
   -----
Statistics for Site:SOUTH Currency:ALL Period:DAY.
Now showing: 2021-04-19
[SELL] Profit: 107,0 SEK Transactions: 10 [BUY] Profit: 295,0 SEK Transactions: 15 [SUMMARY] Period profit: 402,0 SEK Transactions: 25
```