



**The Wolves
Consulting Group**

Featuring

Tommaso Grandi
Luca Tramonti
David Moe
Riccardo Borgo

THE EFFECTS OF ECB MONETARY POLICY ON THE EUROPEAN BANKING SYSTEM

Examining Time Lags and Transmission
Mechanisms since 2014

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Introduction

Research question

Is the ECB conventional monetary policy effective on banks' volumes and banks' rates?

Period

Jan 2014 – Feb 2023

MRO

The main refinancing operations defines the cost at which banks can borrow money from the central bank for a period of one week

TREND CORRELATION TIME-LAG

In our analysis we studied the changes over time of the principal rates and volumes indicators with respect to the changes in MRO.

Data

Sources

Statistical Data Warehouse website affiliated with the ECB

DATA

Monthly records about:

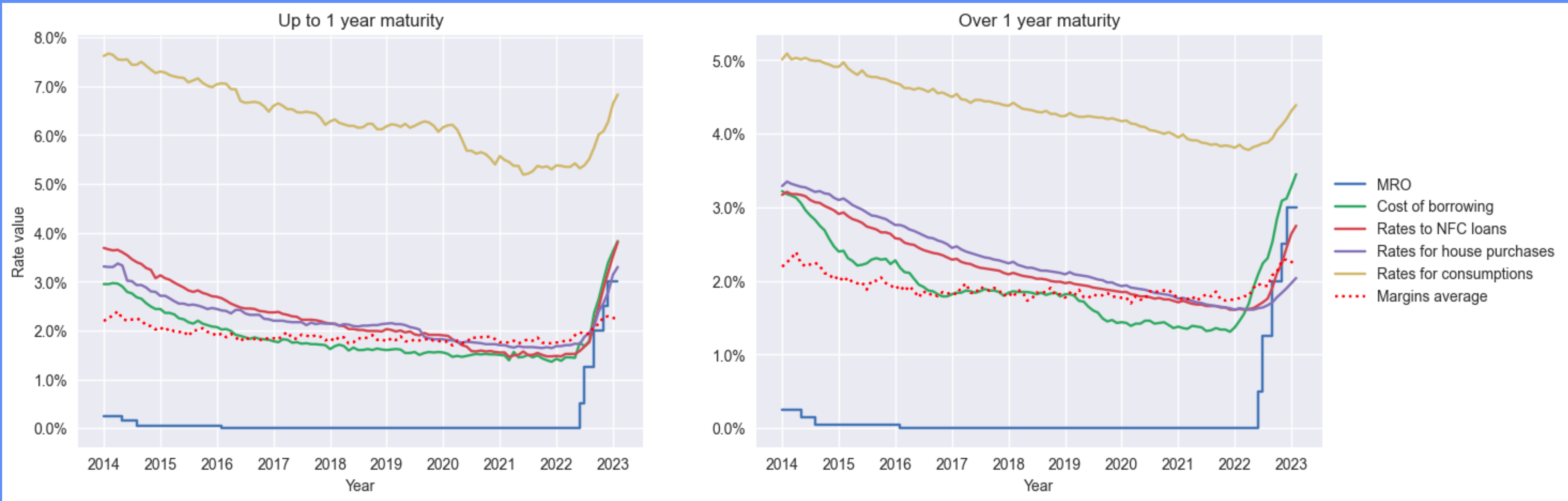
- MRO
- Cost of borrowing
- Lending rates (NFC, households for consumption and for house purchase)
- Banks volumes about loans and deposits
- Banks margins in Europe

TWO CLEANED DATASETS

- one 110 x 21 containing lending rates and volumes
- one 110 x 20 containing the average banks' margins in Europe

Lending rates analysis

Evolution of Lending Rates, Margins and MRO (Jan 2014- Feb 2023)



- All the rates have an initial negative trend (and steady afterwards) in the period 2014-2021 and a positive trend starting from the mid-2022, following as desired the changes in MRO rate.
- There is a higher time lag during the long period of decrease and stagnation of the MRO, and a shorter time lag during the last period of steep increase in the MRO. Why?

However...

Lending rates analysis

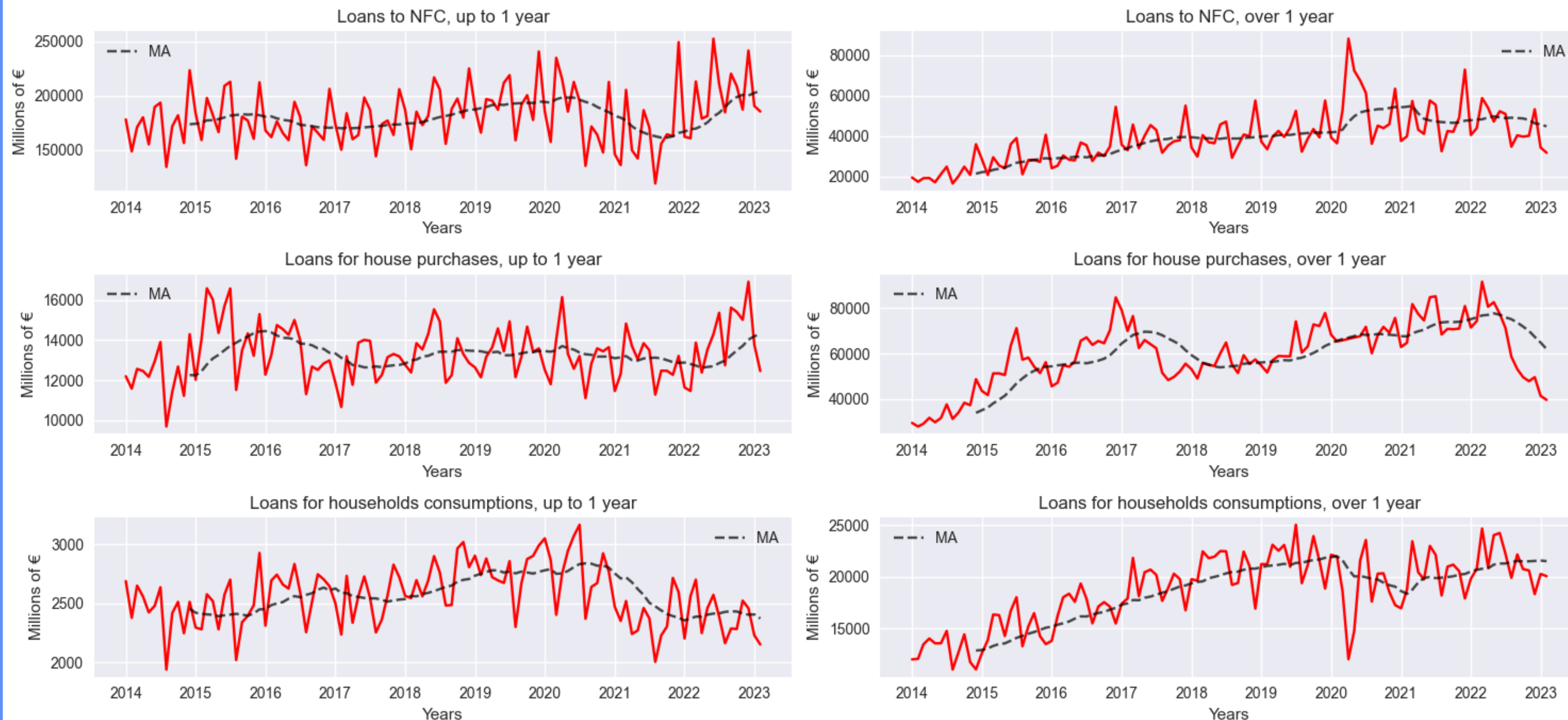
Evolution of Lending Rates, Margins and MRO; Period of Interest (Jan 2022-Feb 2023)



- Rates reacted quickly to the increase in the MRO. However, in our opinion, some indicators with maturity of over 1 year (mainly Rates to NFC and for house purchases) still have room for increasing their values, and probably features a **higher time lag**.
- These indicators, from last quarter of 2022, went below the MRO line, stating that banks are granting these loans at a rate below the one they can borrow money with 1 week maturity from the ECB. What does this mean?

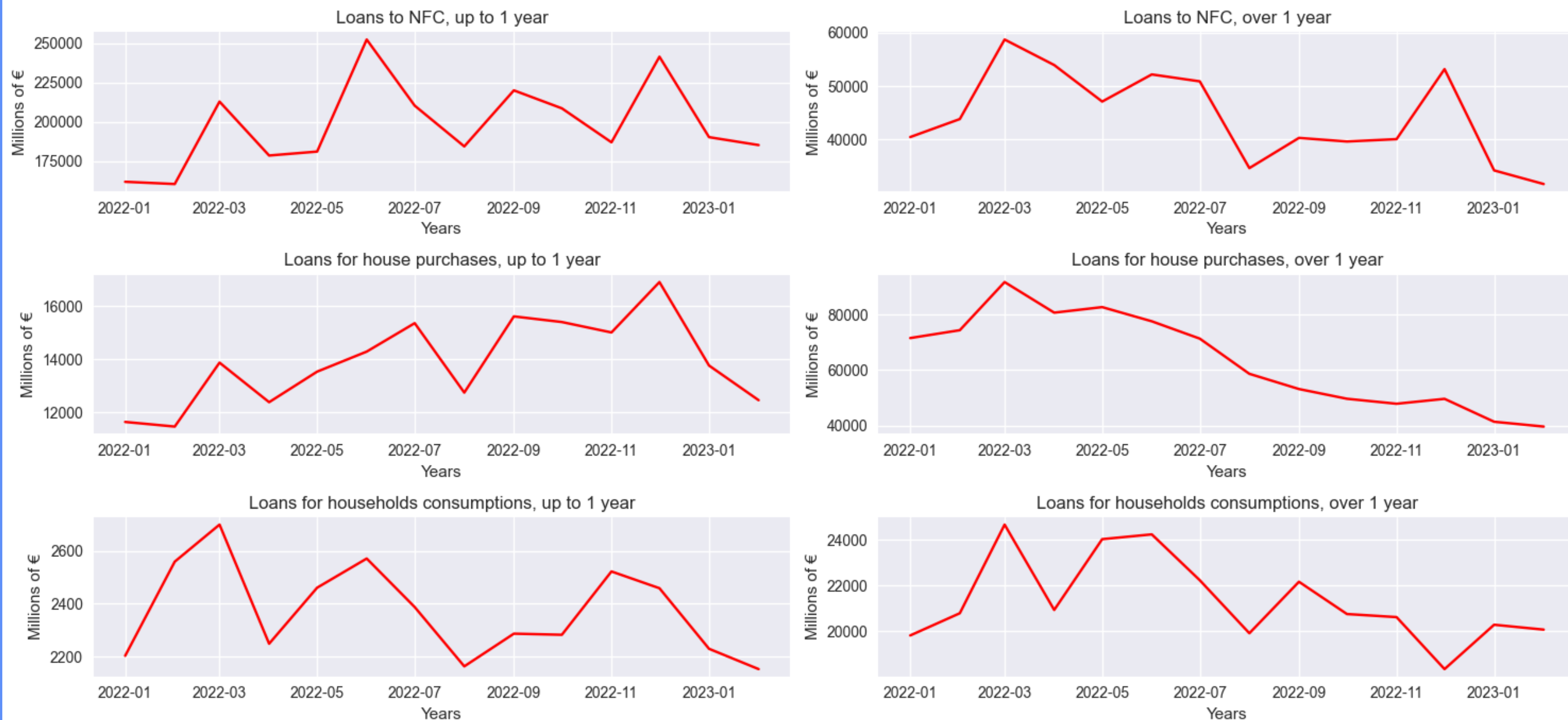
Volumes analysis

Time series of loan volumes



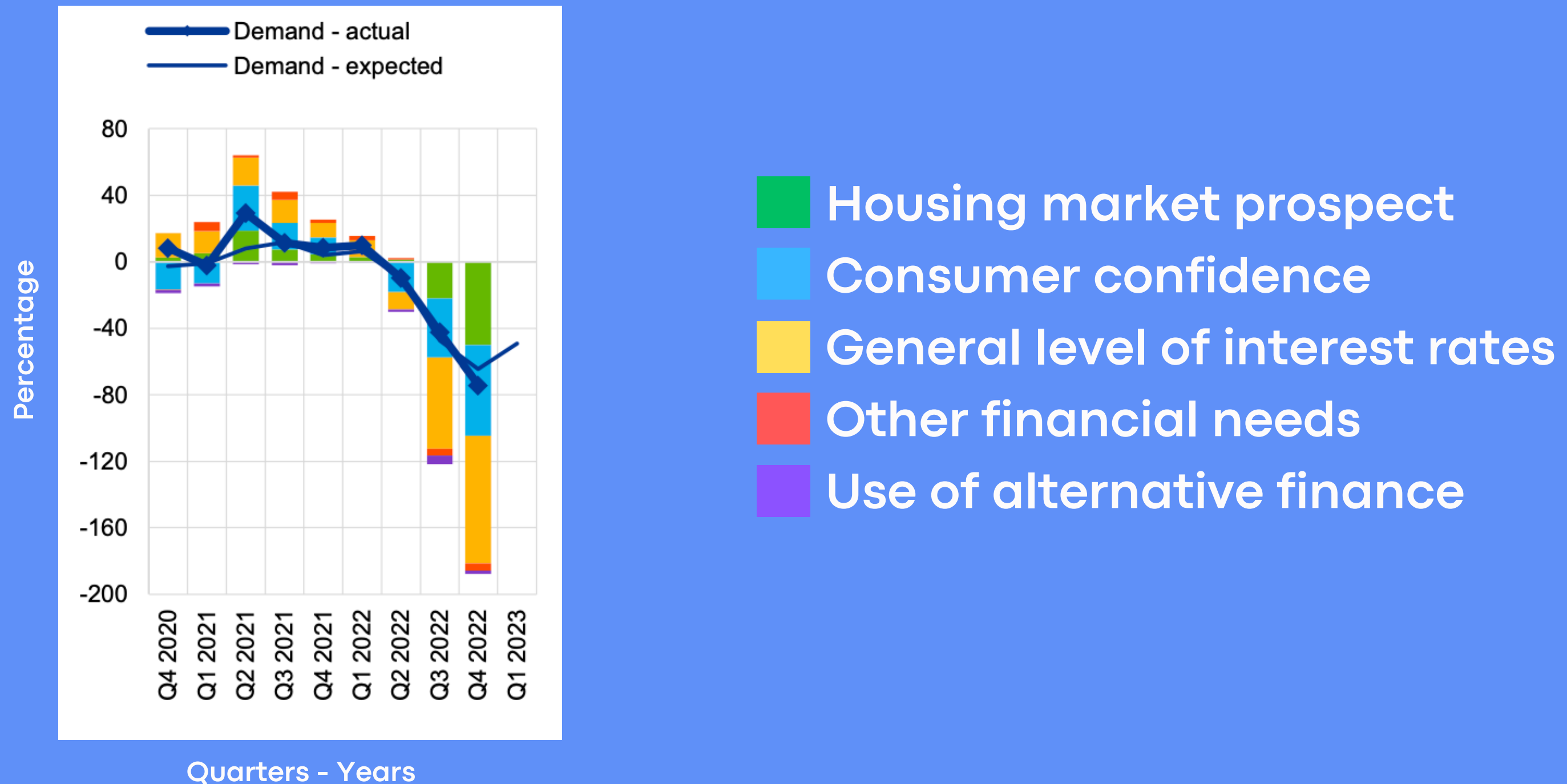
Volumes analysis

Lending volumes evolution, period of interest (Jan 2022 - Feb 2023)



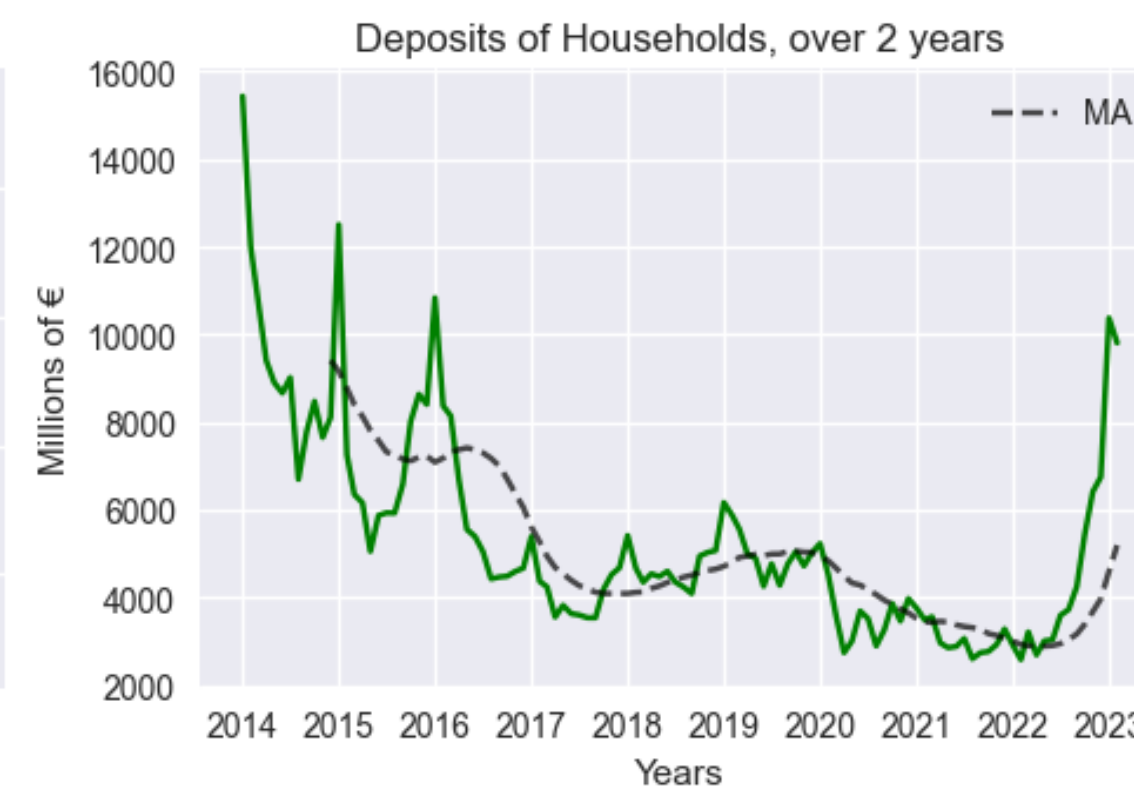
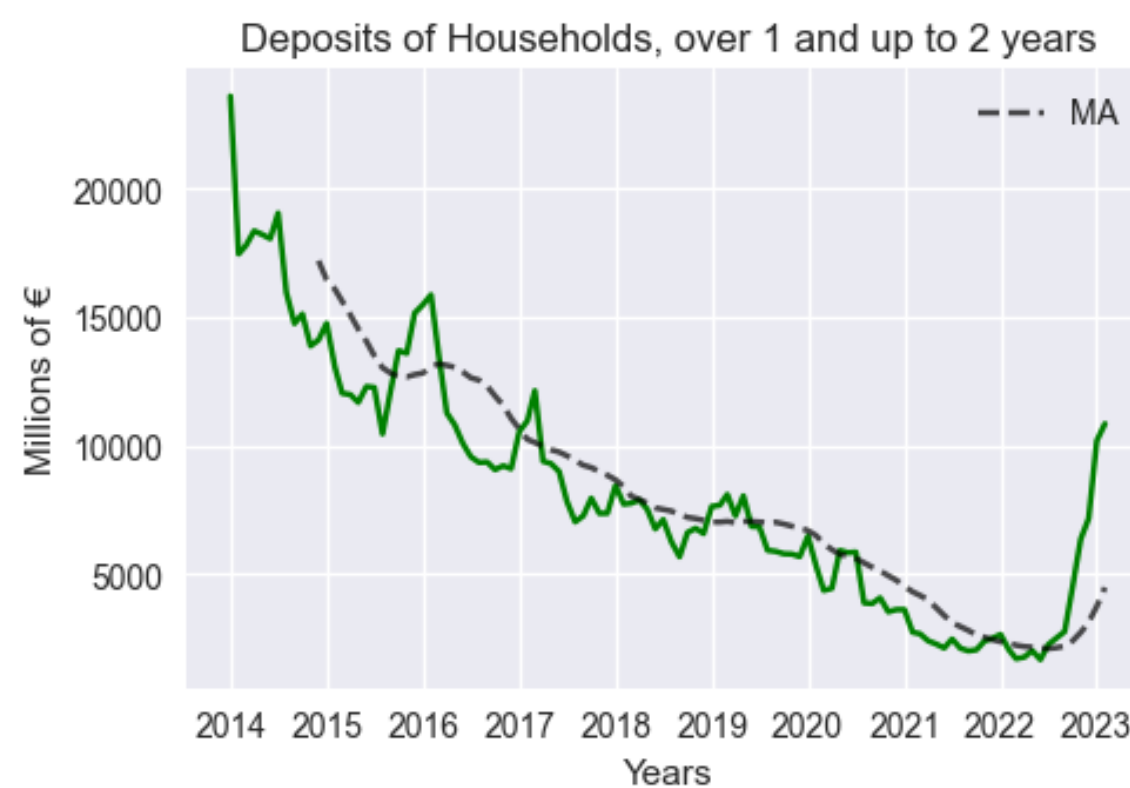
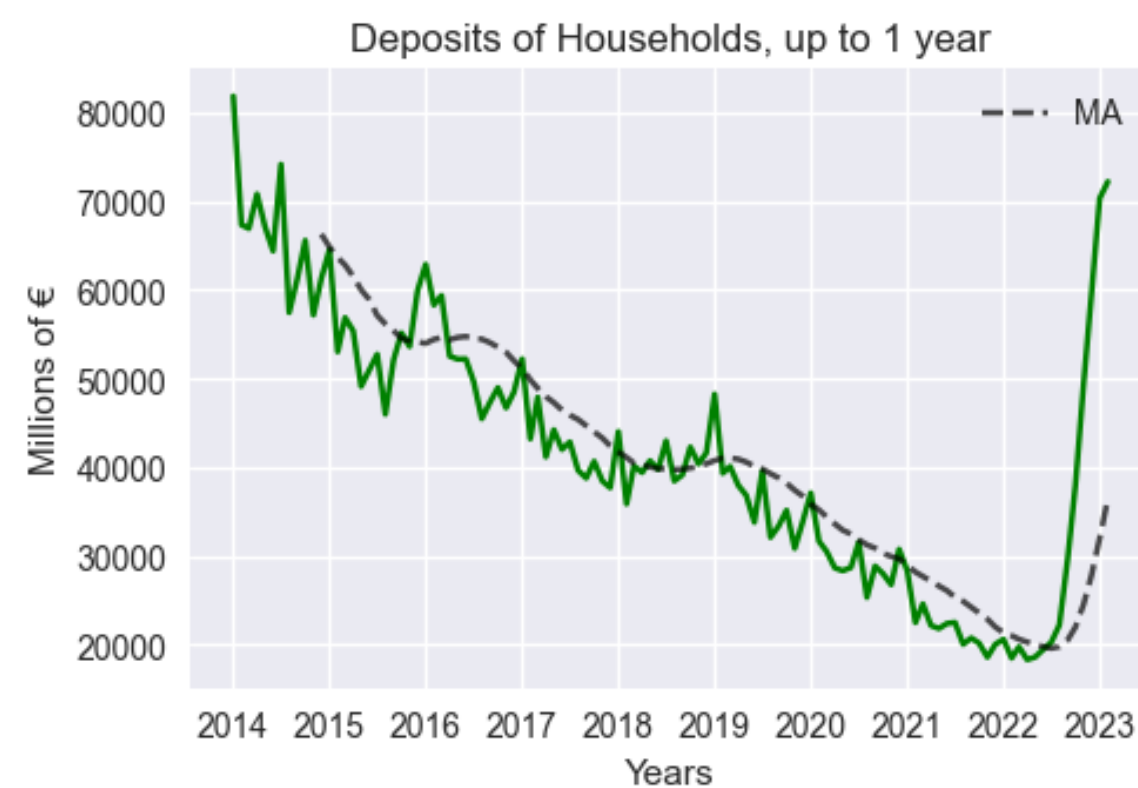
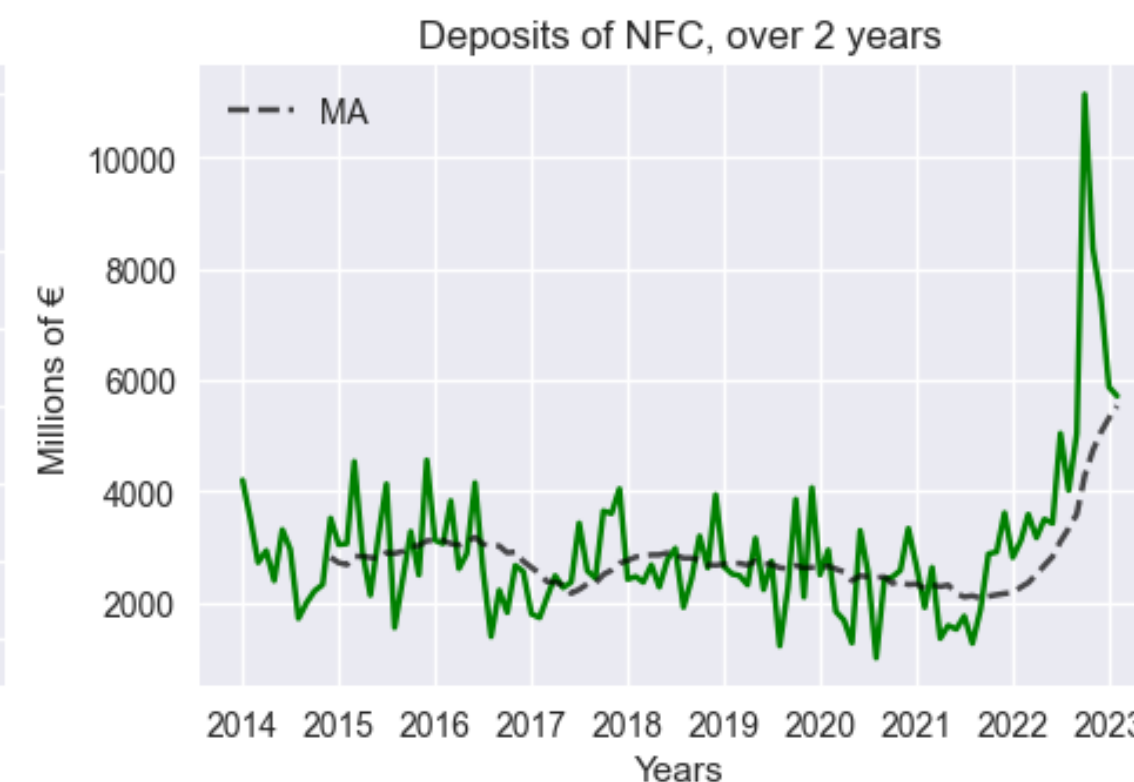
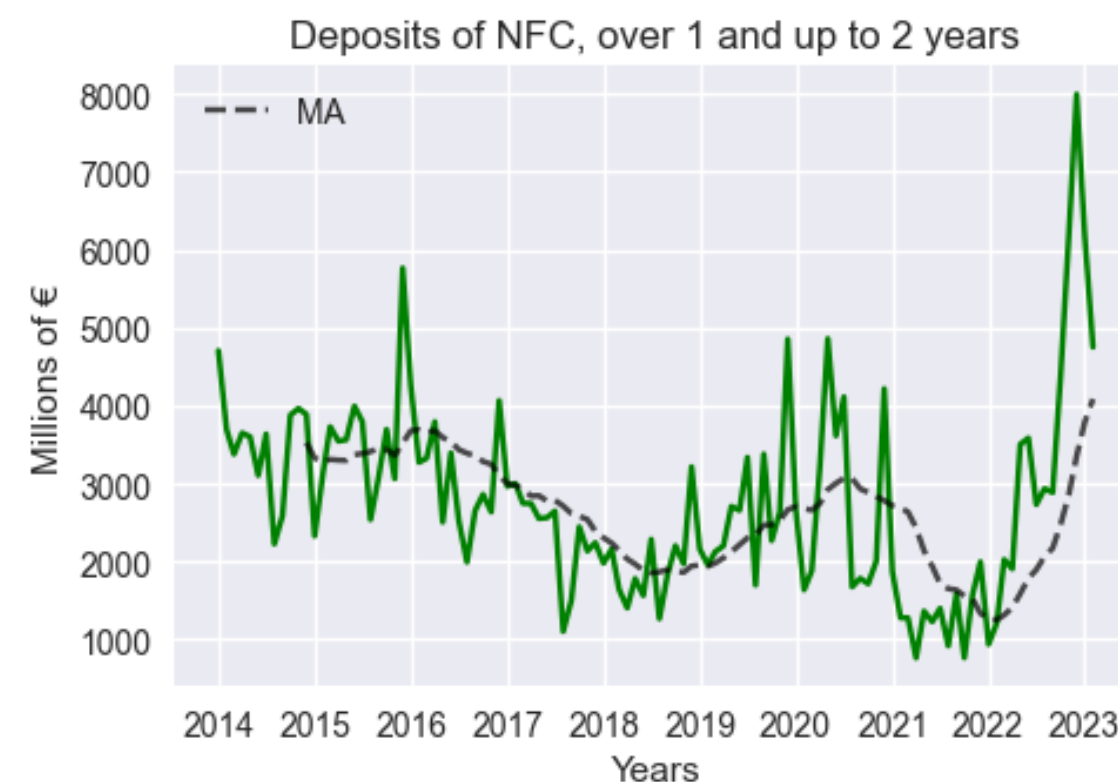
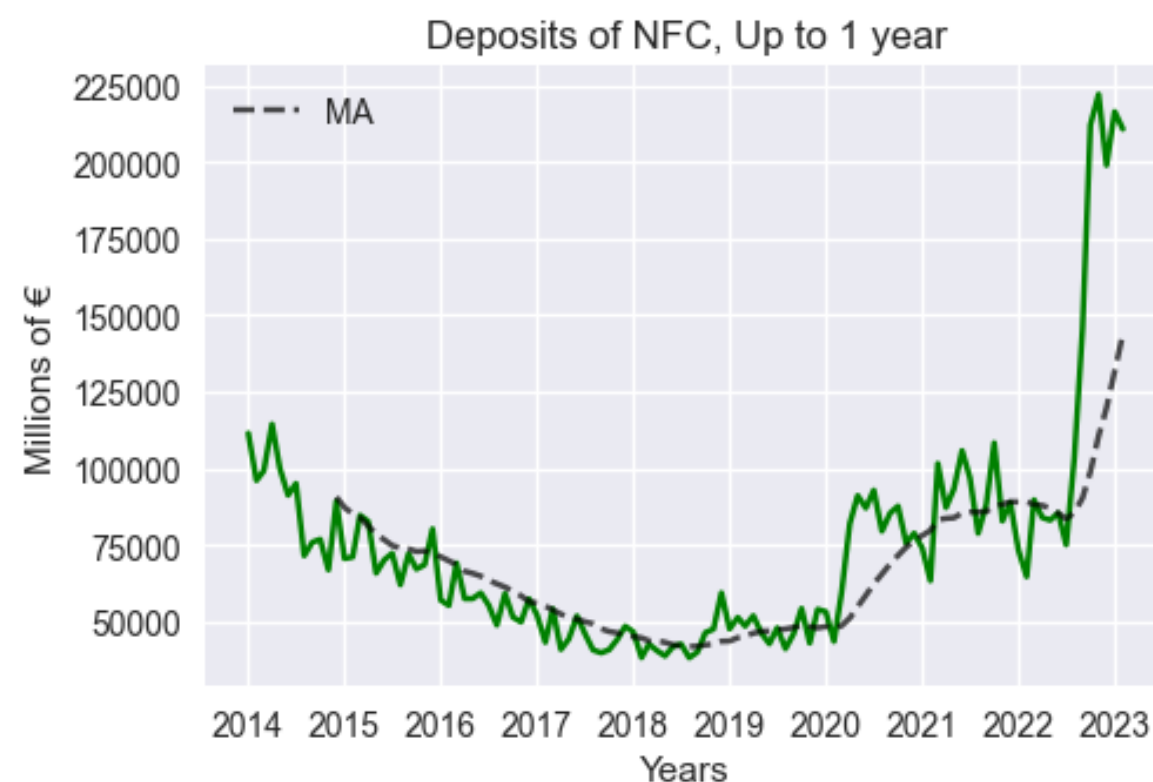
Volumes analysis

Lending volumes reduction, contributing factors



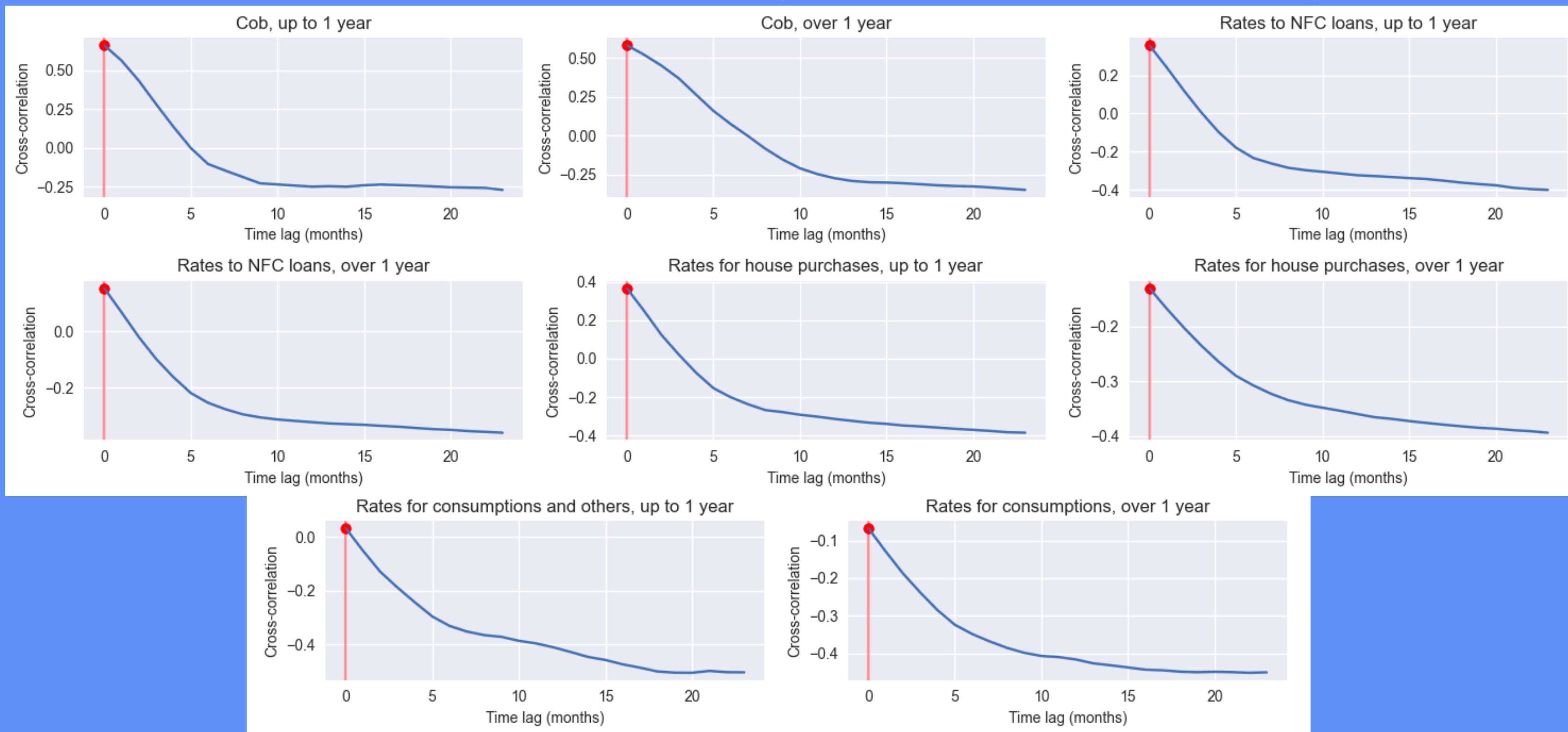
Volumes analysis

Time series of deposit volumes



Time lag analysis

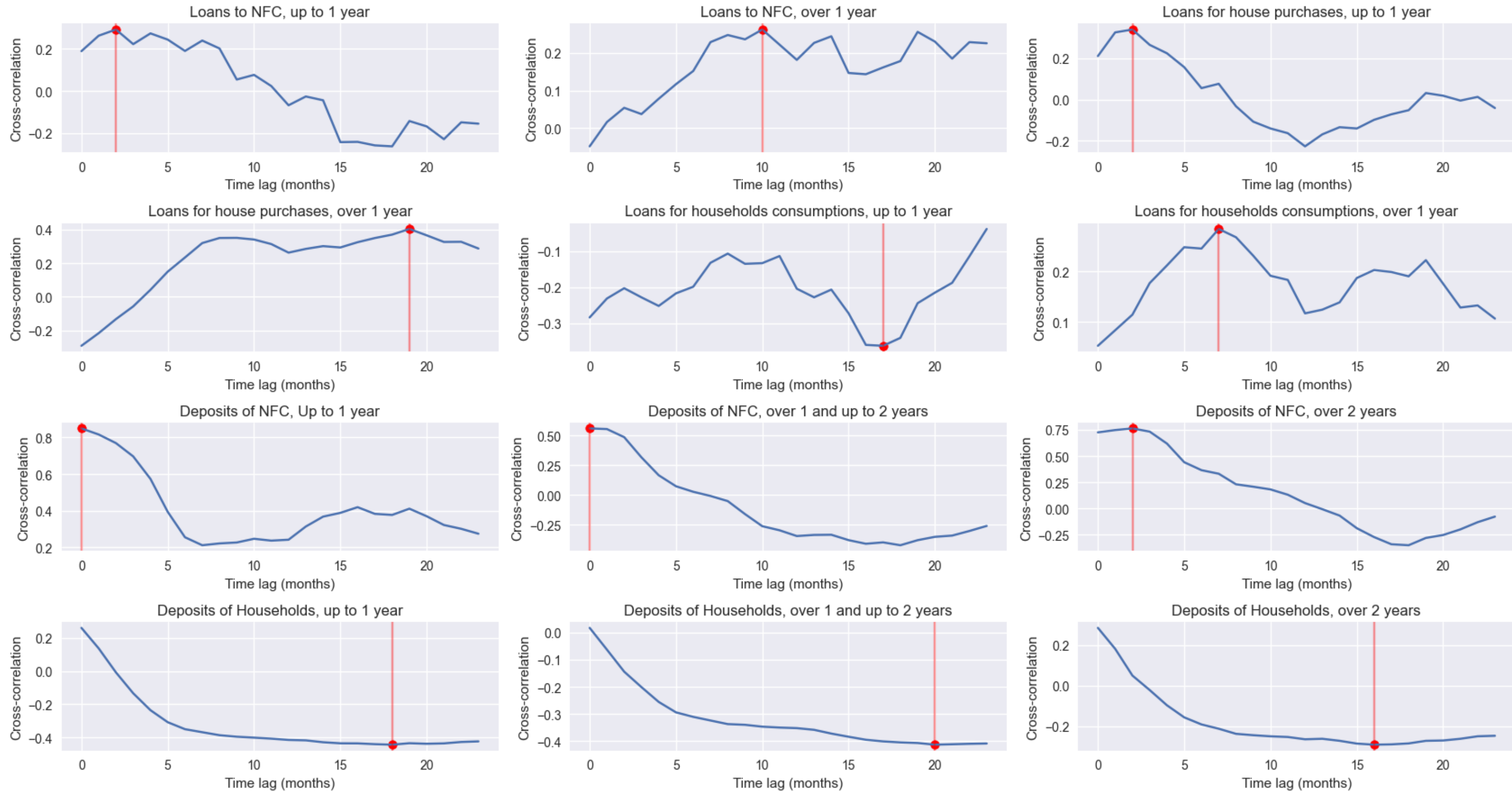
Cross-correlations between Lending Rates and MRO (0-24 months time lag)





Time lag analysis

Cross-correlations between Volumes and MRO (0-24 months time lag)



Regressions Analysis

Linear regressions

Rates	Elasticity
Cob, up to 1 year	0.627766
Cob, over 1 year	0.569589
Rates to NFC loans, up to 1 year	0.421461
Rates to NFC loans, over 1 year	0.132835
Rates for house purchases, up to 1 year	0.303706
Rates for house purchases, over 1 year	-0.124641

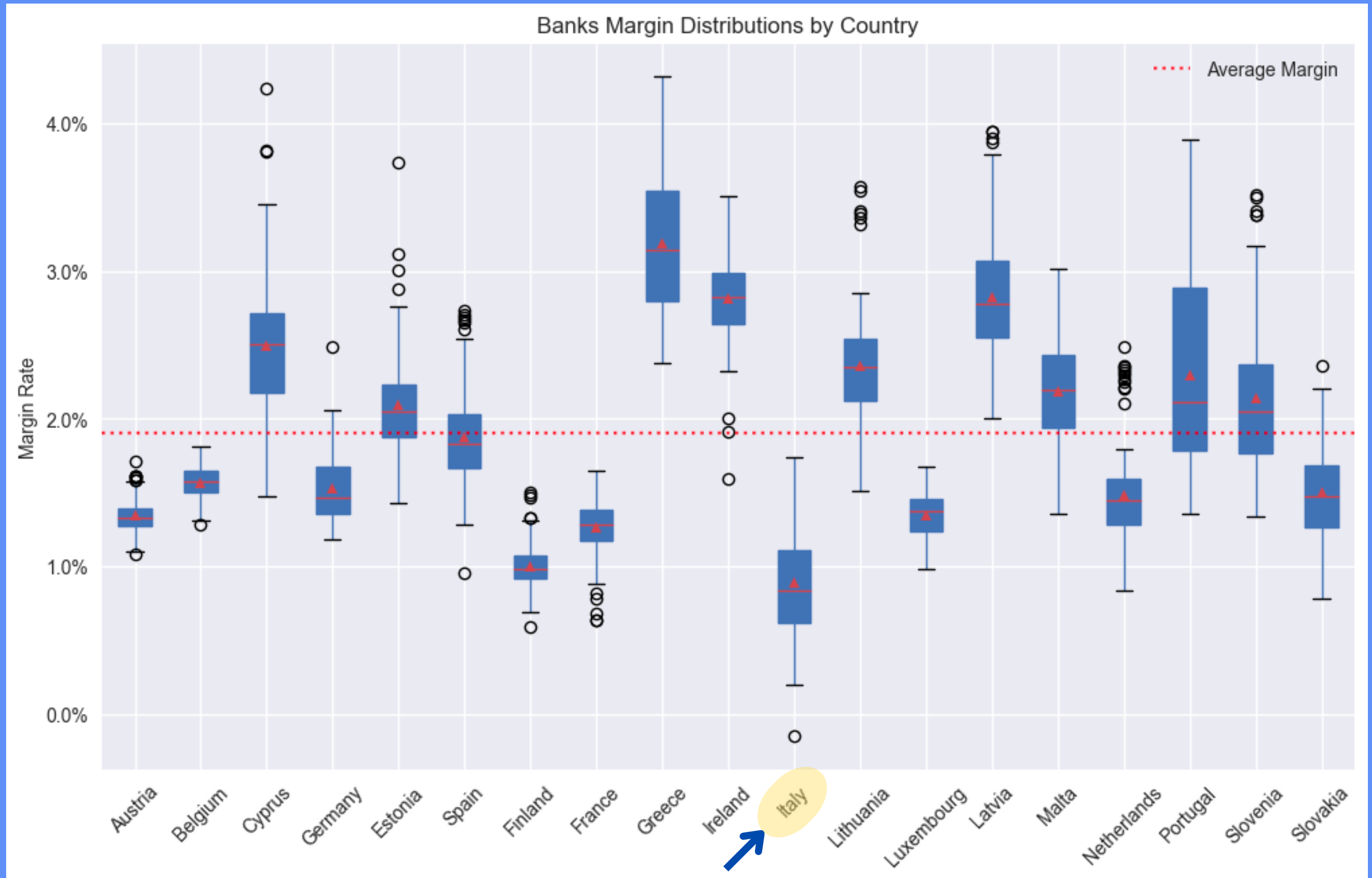
Log-Linear regressions

Volumes	Elasticity
Loans for house purchases, over 1 year	-0.134156
Loans for households consumptions, up to 1 year	-0.051203
Deposits of NFC, Up to 1 year	0.500262
Deposits of Households, up to 1 year	0.151797
Deposits of NFC, over 1 and up to 2 years	0.349387
Deposits of NFC, over 2 years	0.414680
Deposits of Households, over 2 years	0.206522

Profitability
and margins
are a measure
of a bank
efficiency.

Italy on
average had
the lowest
margins in
Europe, so
Italian banks
are less
efficient.

Banks' margins in Europe



Conclusions

Was ECB monetary policy effective?

Rates

ECB conventional monetary policy resulted effective even if there was a certain heterogeneity in the rates and volumes elasticity, variations and time lags.

Deposits

In terms of trend, the rates all behave more or less in the same way and responded quickly to MRO increases (especially in the last period of interest from 2022 on).

Deposits indeed presented in general a noticeable downward trend, with a steep increase during the last period (following the increase in the MRO from mid 2022) and an unclear seasonality.

Lendings

Lending volumes indicators presented on one hand a clear yearly seasonality but on the other, discrepancies in the time lags and in their fluctuations that did not allow us to draw unambiguous conclusions (except for loans volumes related to house purchases and households consumptions).



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Thank you for your attention!

