



DIRECTORATE MONETARY POLICY AND FINANCIAL MARKET ANALYSIS

FINANCIAL MARKET ANALYSIS DEPARTMENT

CHART-PACK ON RECENT ECONOMIC AND FINANCIAL MARKET DEVELOPMENTS

2018

MAY



Chart-pack on recent economic and financial market developments *

22 May 2018

As of the 30th of June, 2005 the Magyar Nemzeti Bank (the central bank of Hungary) publishes a comprehensive chart-pack about the latest information in financial markets and the macro-economy. Our aim is to provide analysts and the public with a frequently updated, easy-to-use, clear-cut data set, in order to promote better knowledge and understanding of the current economic and financial market situation. The updated chart-pack is published on the day of each rate-setting meeting at 5 pm.

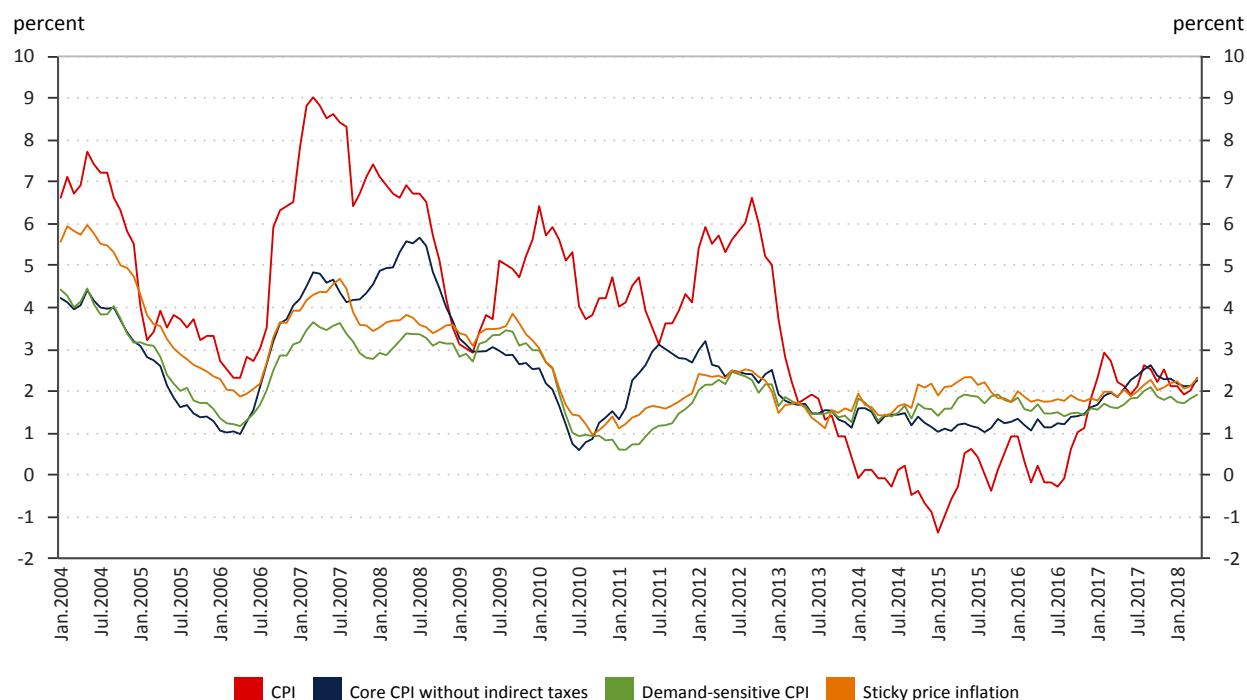
Earlier versions of the chart-pack are accessible on the website of Magyar Nemzeti Bank via the following address.

<http://www.mnb.hu/en/publications/studies-publications-statistics/chart-pack-on-recent-economic-and-financial-market-developments>

Questions and comments are welcome, and should be addressed to info@mnb.hu.

* The data sources of this document, in whole or in part, do not fall within the scope of Act XLVI of 1993 on statistics, therefore the data contained in the tables and charts are not to be considered as official statistical data. Magyar Nemzeti Bank excludes all liability for any damage caused by the usage of the herein published non-official statistical data.

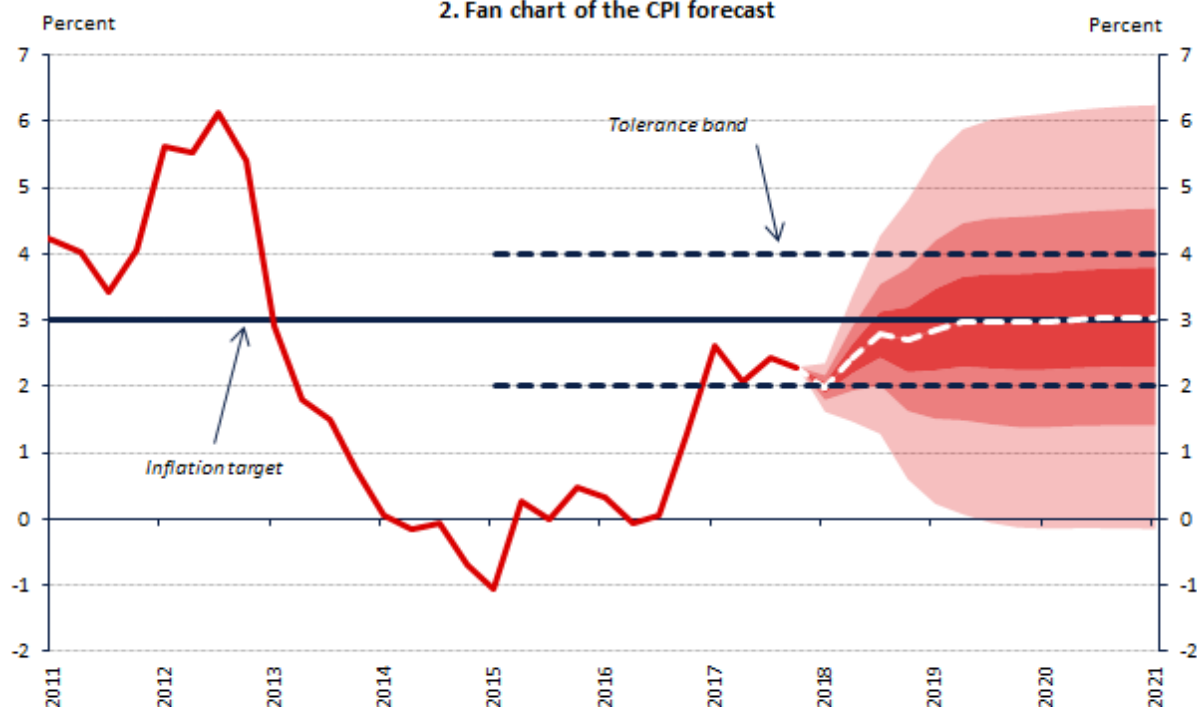
1. Development of inflation and underlying inflation indicators



Source: HSCO, MNB

Note: Seasonally adjusted year-on-year growth rates.

2. Fan chart of the CPI forecast



Source: MNB, HCSO. Note: the fan chart represent the uncertainty around the central projection. Overall, the coloured area represents a 90 per cent probability. The central area containing the central projection for the consumer price index illustrated by the dotted line (as the mode of distribution) refers to 30 per cent of the probability. The horizontal lines show the value of the announced inflation target and the tolerance band.

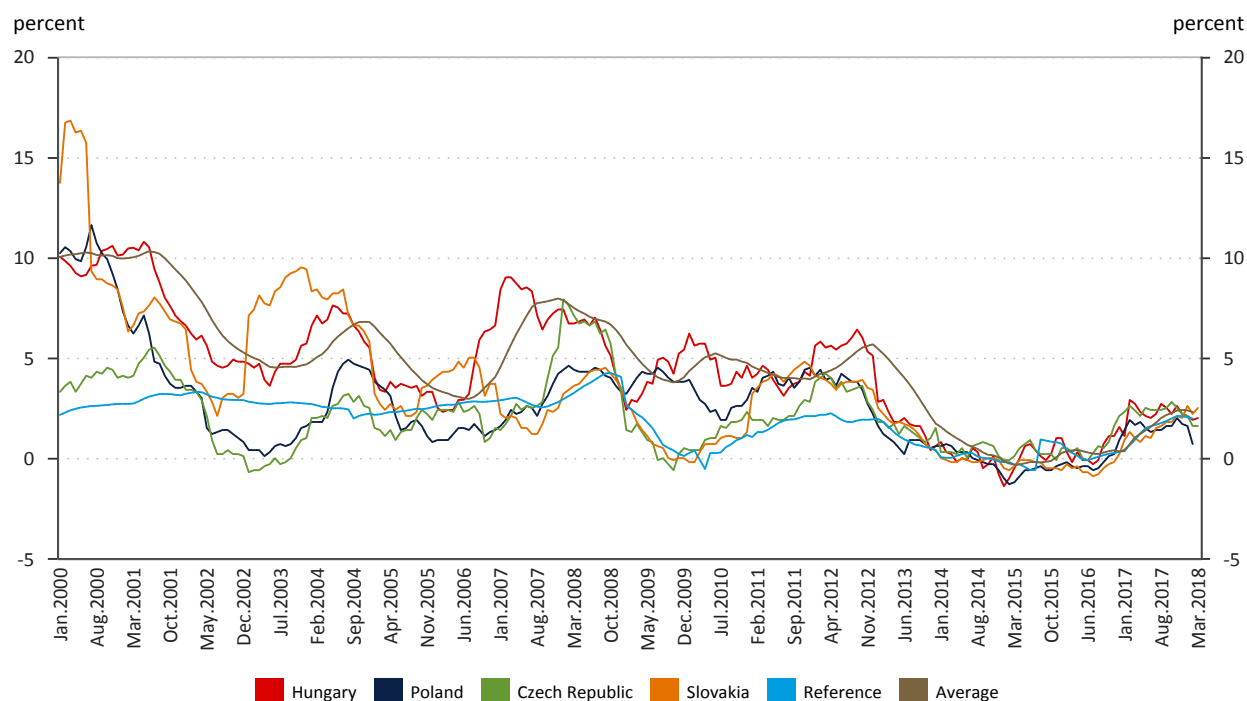
3. Decomposition of the Consumer Price Index

	Weight 2018	JAN 2018	FEB 2018	MAR 2018	APR 2018
Consumer Price Index	100.0	2.1	1.9	2.0	2.3
Thereof:					
Unprocessed food	6.1	5.6	4.3	6.2	5.9
Processed food	12.7	4.2	3.9	3.4	3.7
Manufactured goods	23.4	0.7	0.5	0.6	0.6
Market services	23.4	1.7	1.8	1.8	2.0
Non-regulated household energy	1.0	12.1	11.9	10.4	9.9
Alcohol, tobacco	9.8	6.5	6.5	6.8	6.3
Gasoline prices	7.5	-1.3	-1.9	-1.9	2.1
Regulated prices	16.1	-0.2	-0.2	-0.2	-0.1
Core Consumer Price Index	69.3	2.5	2.4	2.4	2.5
CPI without tax changes	100.0	2.4	2.3	2.4	2.6

Source HCSO, MNB decomposition

Notes: annual growth rates (%); The time series of industrial products, market services, regulated prices have changed because the method of the core inflation developed by the CSO and the NBH has broken down several items (like pharmaceutical products, the telephone, the other travels, the TV fee) from 2009.

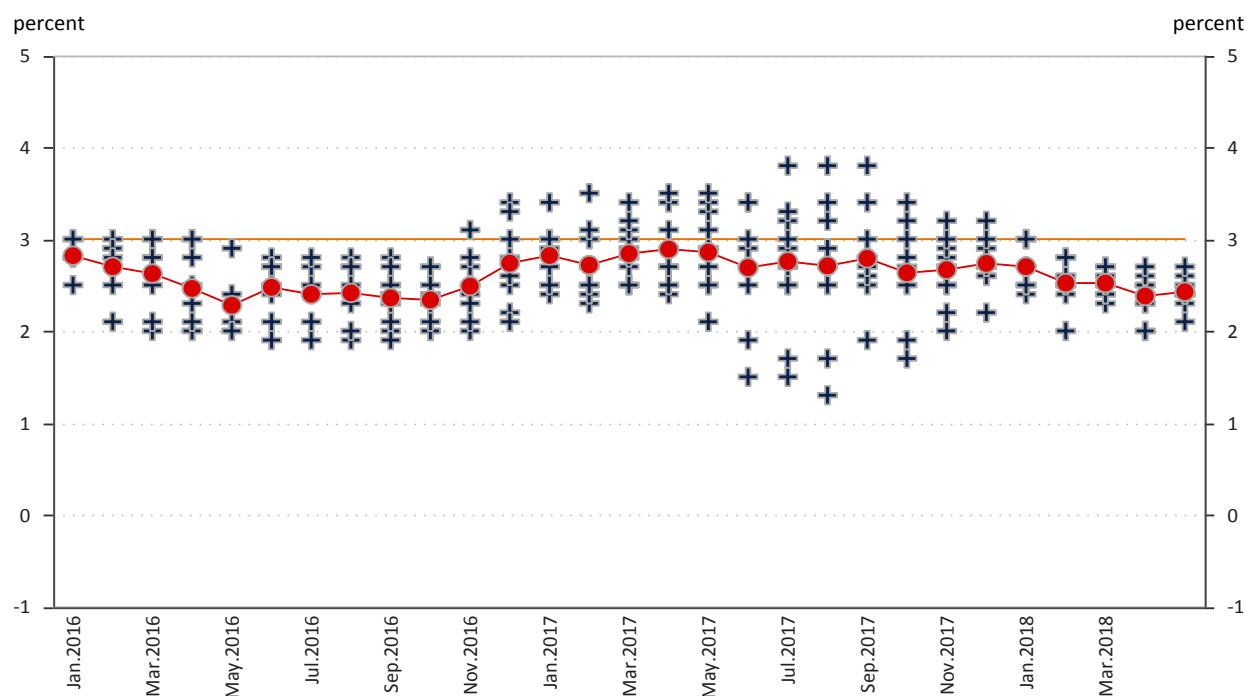
4. Harmonised index of consumer prices



Source: Eurostat

Note: annual growth rate.

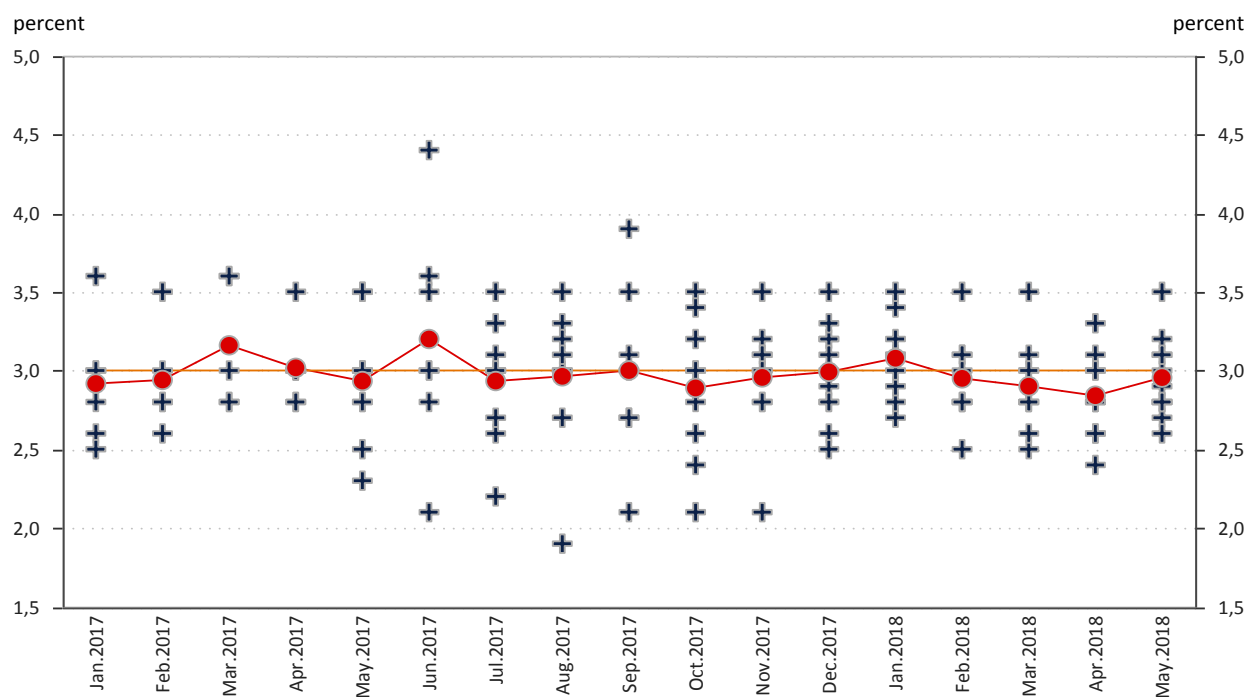
5. Market expectations for the inflation rate in current year



Source: Thomson Reuters

Note: the red continuous line represents the trimmed mean calculated by cutting off the lowest and the highest value, the brown line shows the inflation target of MNB.

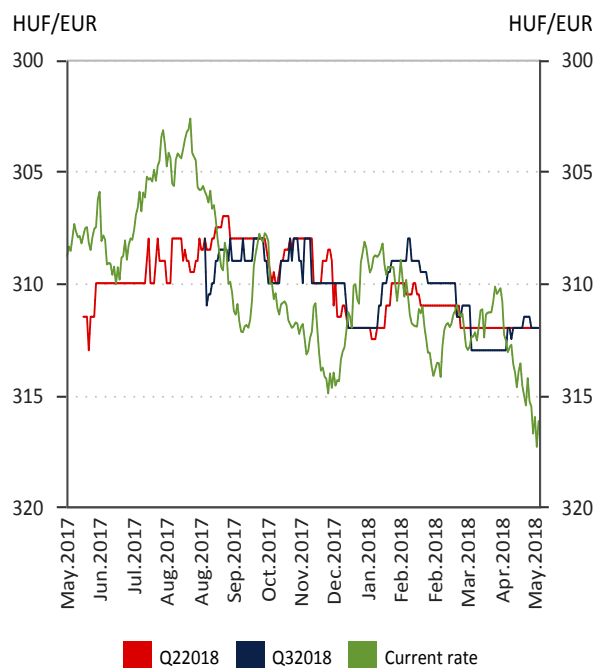
6. Market expectations for the inflation rate next year



Source: Thomson Reuters

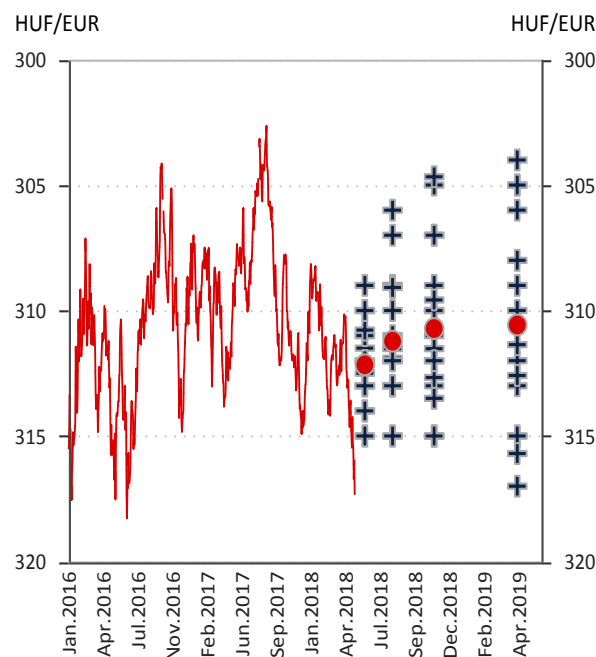
Note: the red continuous line represents the trimmed mean calculated by cutting off the lowest and the highest value, the brown line shows the inflation target of MNB.

7. Expectations for HUF/EUR exchange rate (Bloomberg collection)



Source: Bloomberg
Note: Bloomberg collection; based on new FX forecasts. 2-weeks moving average, reverse scale.

8. Expectations for HUF/EUR exchange rate



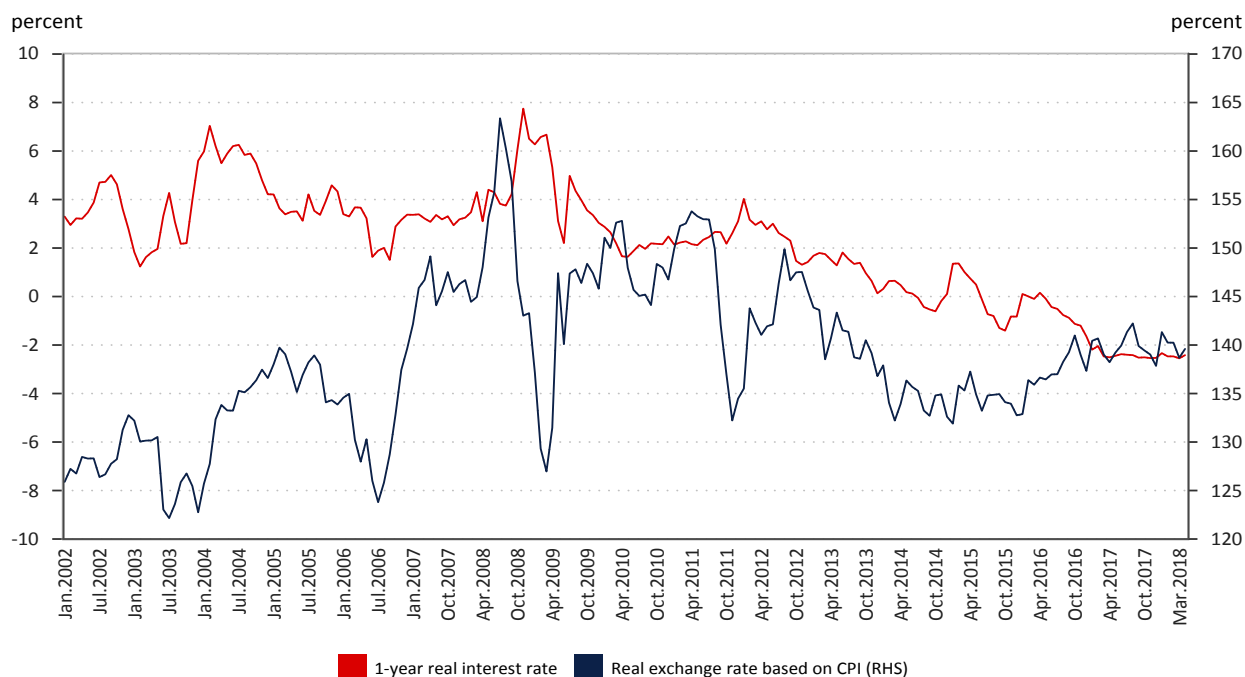
Source: Thomson Reuters, MNB.
Note: reverse scale, the red dots represent analysts average exchange rate expectations according to the most recent Reuters FX Poll.

9. Spot and futures Brent crude oil price



Source: Bloomberg, MNB.
Futures are based on the latest available futures prices. Technical assumption underlying is used in our inflation forecast published in the most recent Quarterly Report on inflation.

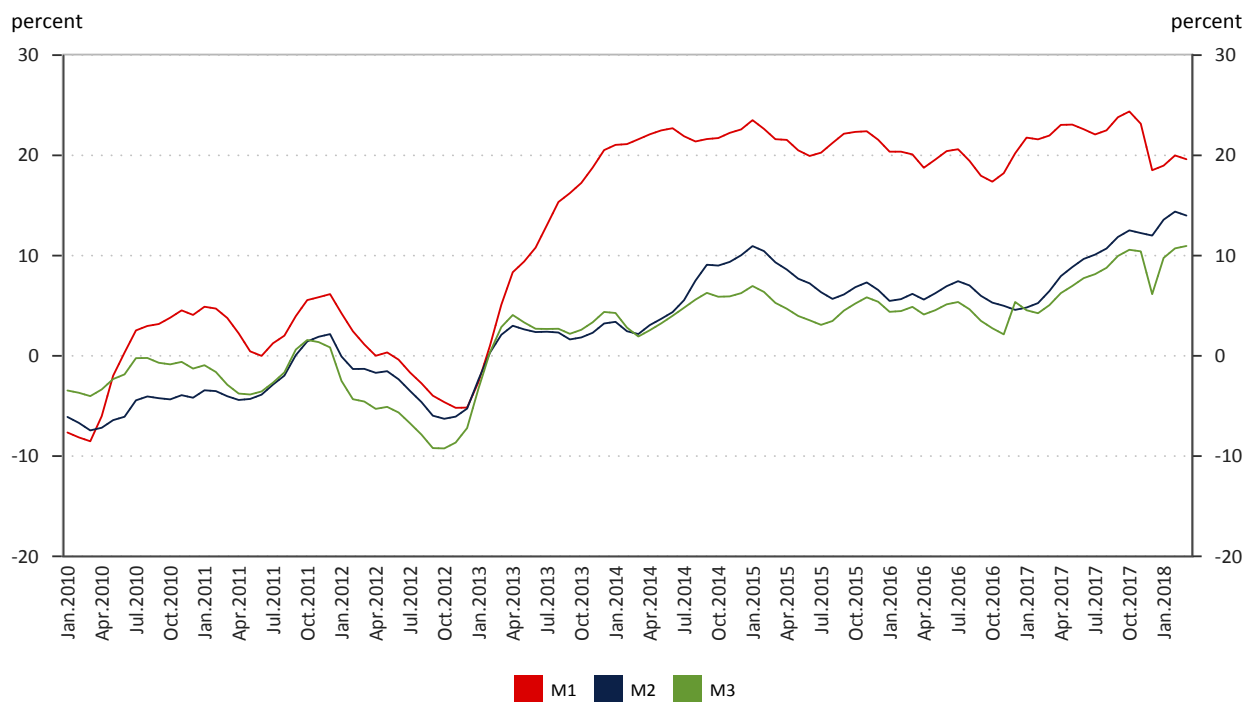
10. Monetary conditions



Source: Reuters, HCSO, Eurostat, ÁKK, MNB

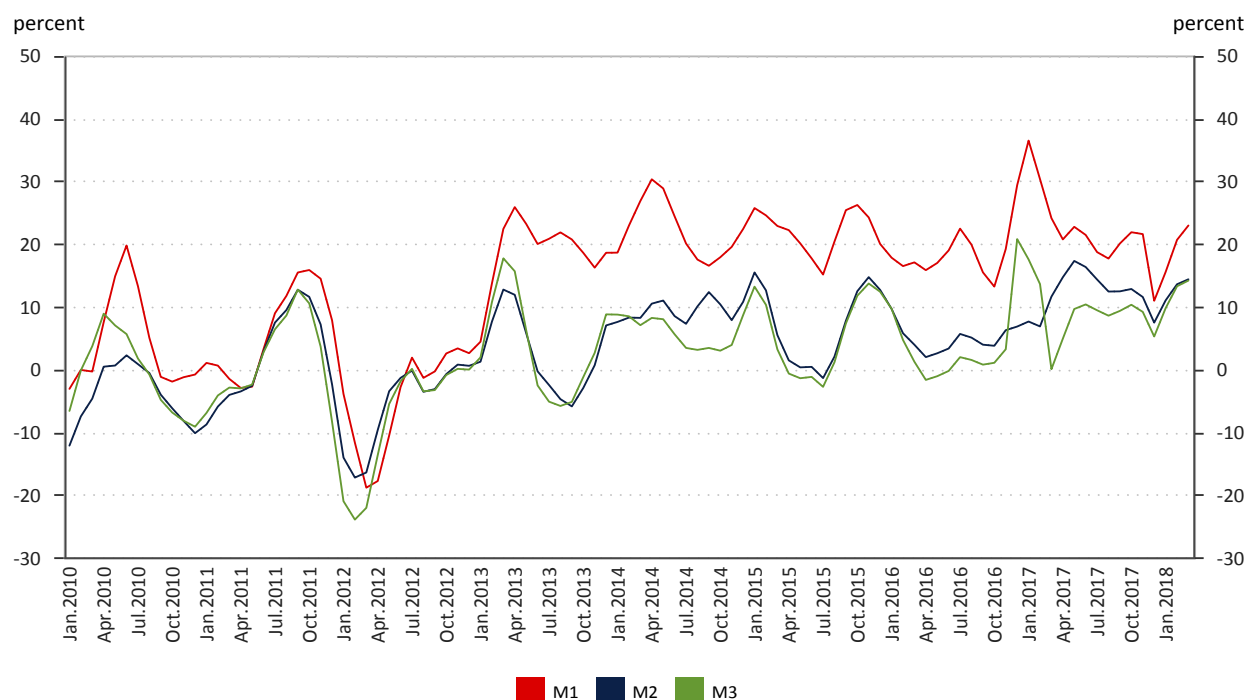
Note: Real interest rate is calculated from 1-year zero coupon yield and analysts corresponding 1-year forward inflation expectations derived from the Reuters-poll by the MNB. Real exchange rate is calculated from the change of the forint relative to euro, adjusted by the corresponding Hungarian CPI and the EMU is HICP. (1 January 1997=100%, increase represents appreciation)

11. Real growth rate of monetary aggregates (year-on-year basis)

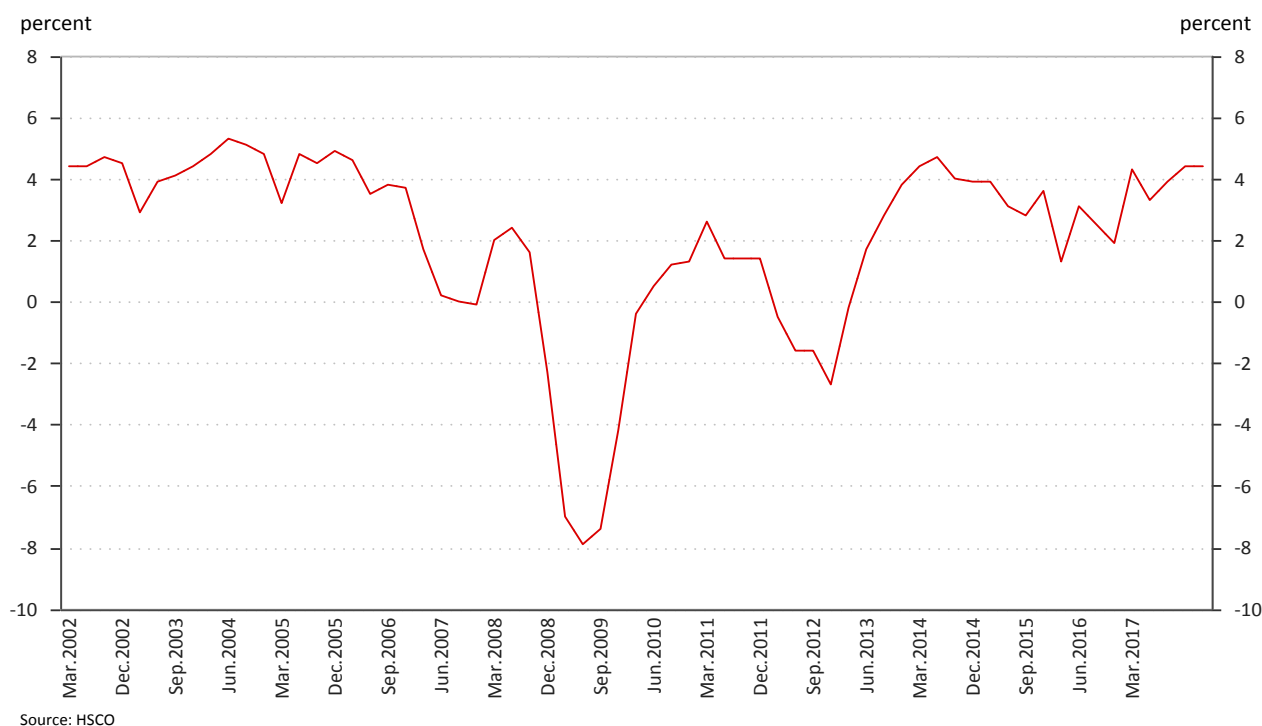


Source: MNB.

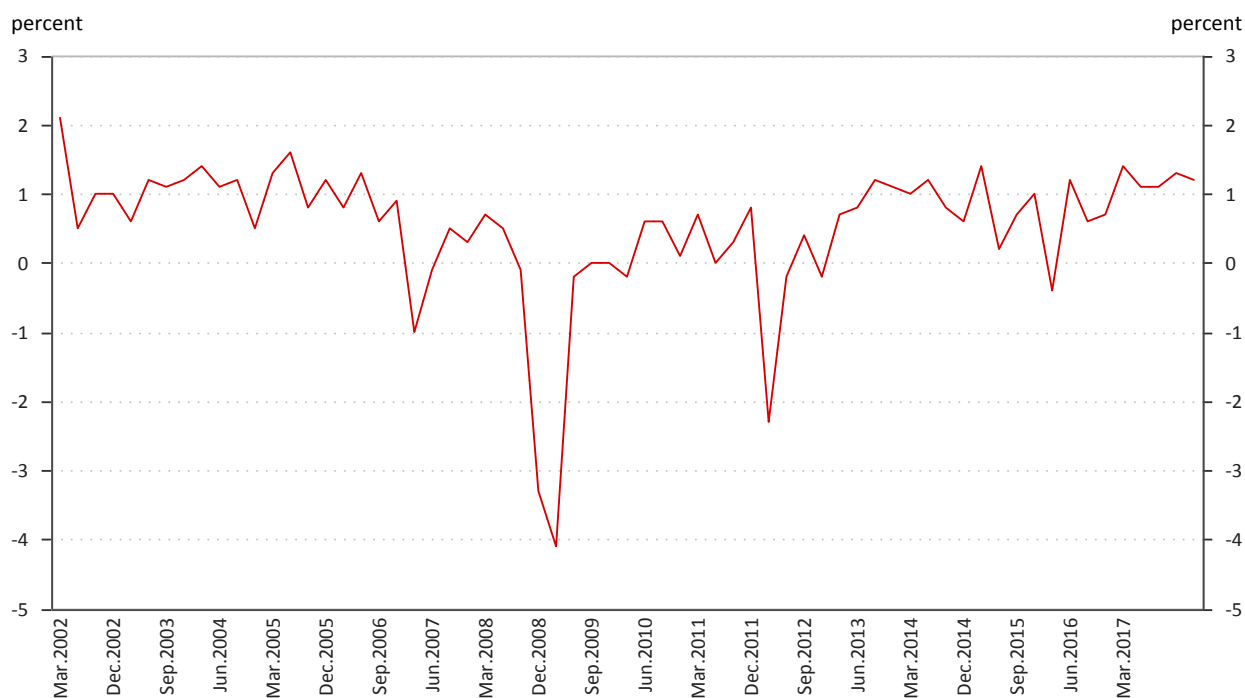
12. Real growth rate of monetary aggregates (annualized from quarterly rates)



13. Change in annual GDP

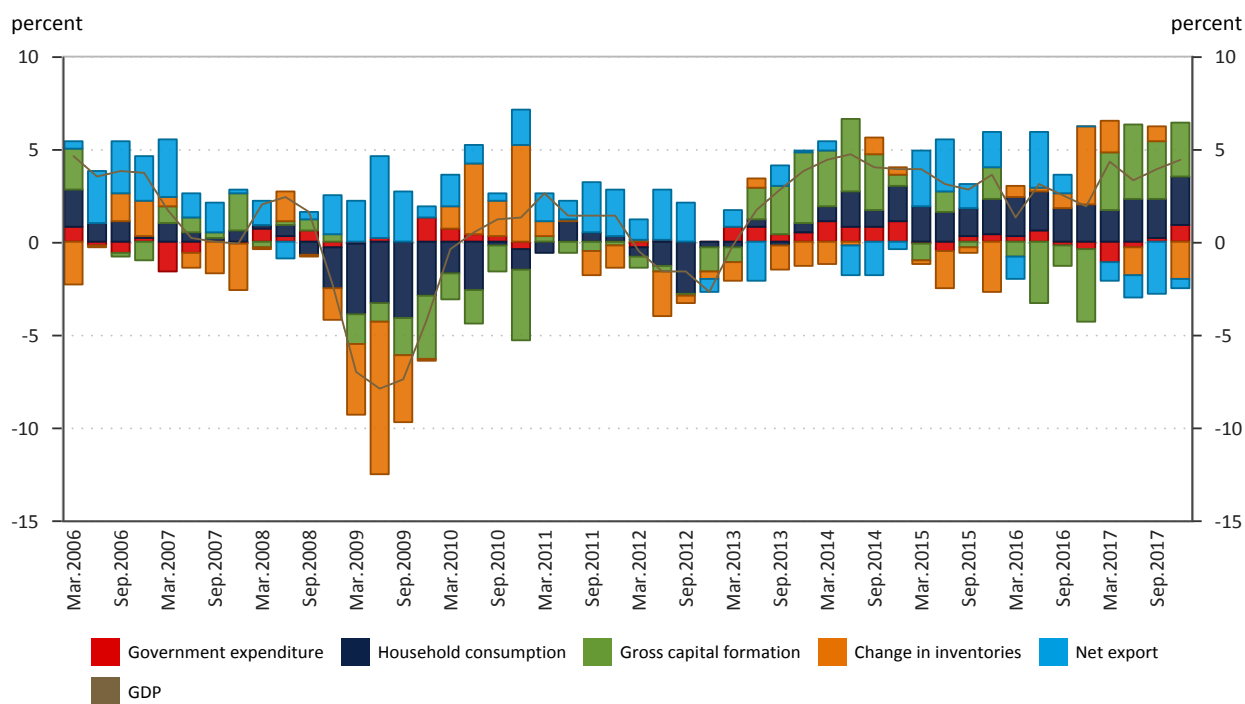


14. Quarterly GDP change



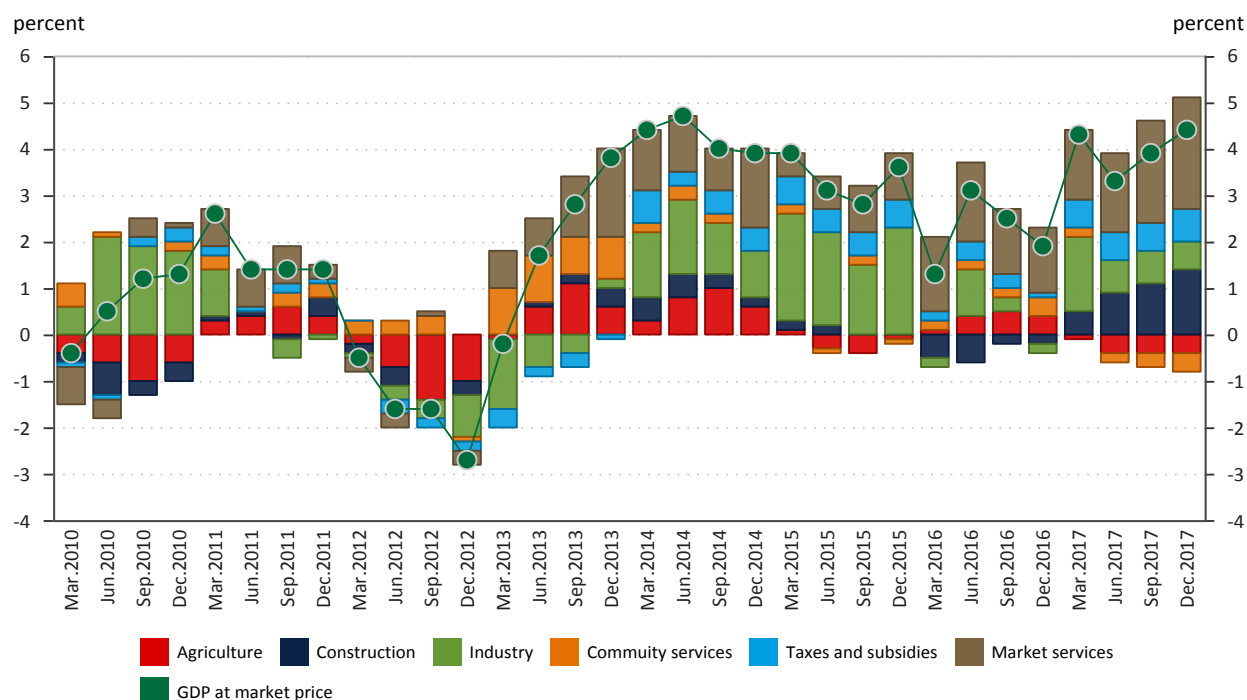
Source: MNB, HSCO.

15. Contribution to annual GDP growth

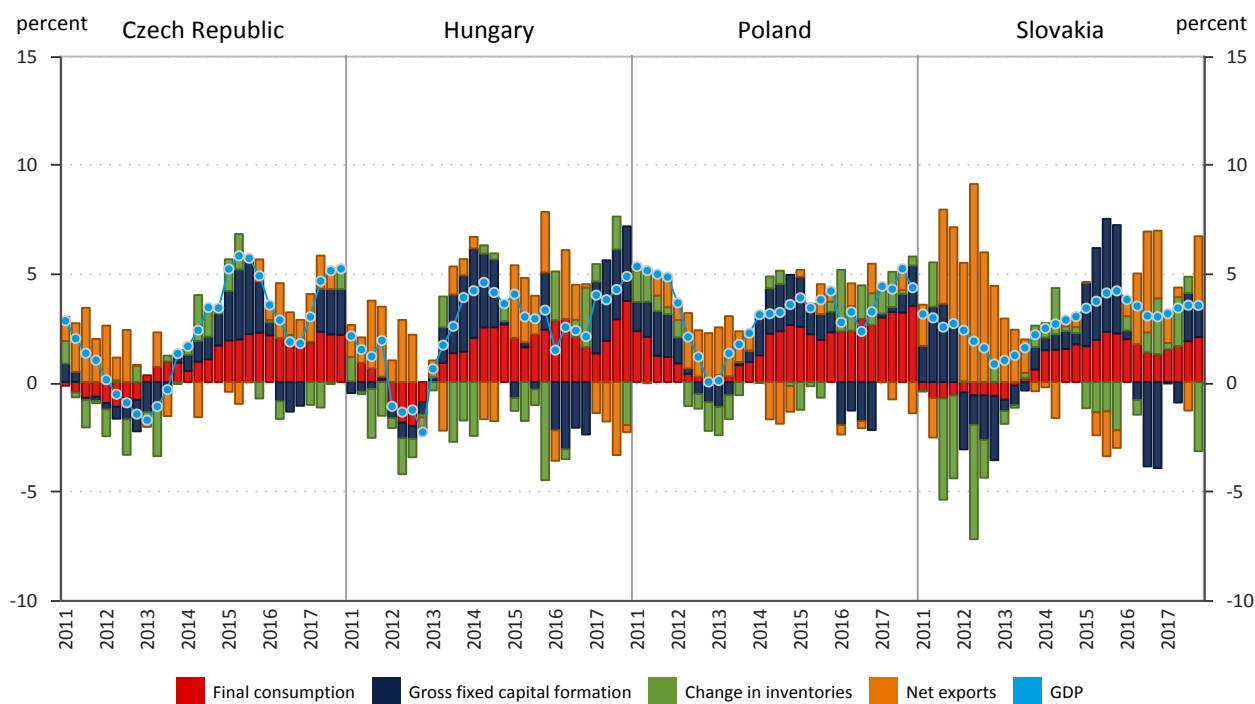


Source: MNB, HSCO.

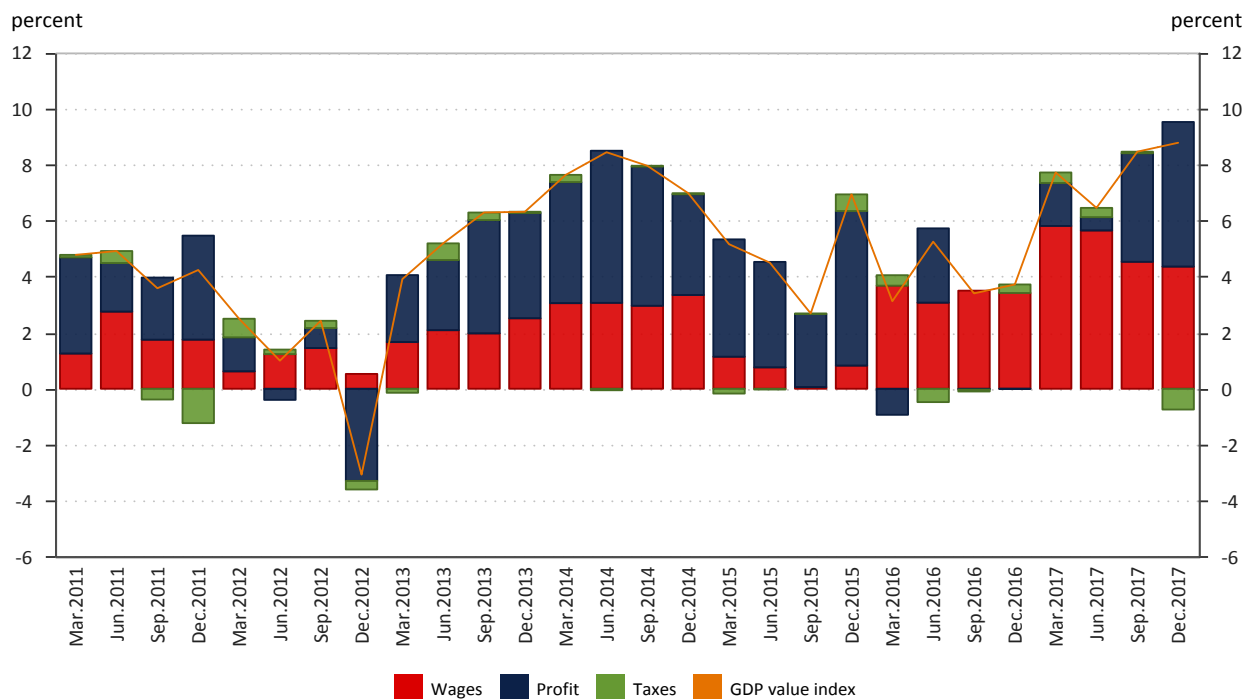
16. Decomposition of GDP growth



17. Contribution to annual GDP growth in the region

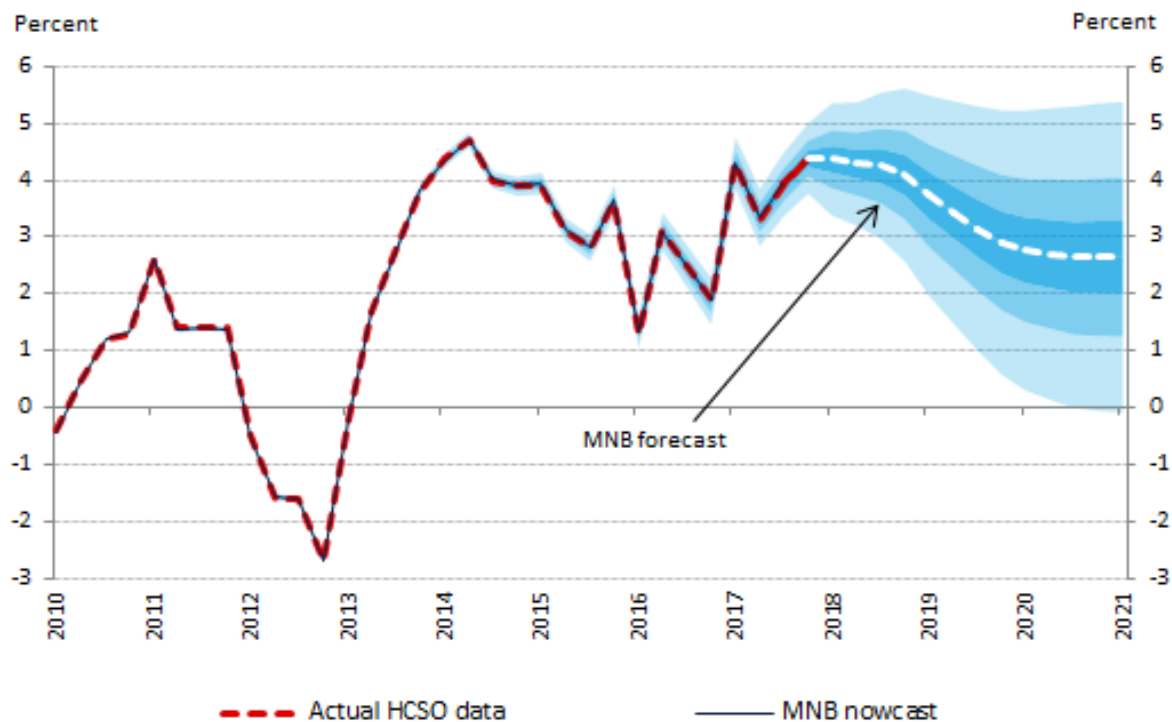


18. Decomposition of GDP growth (income approach)



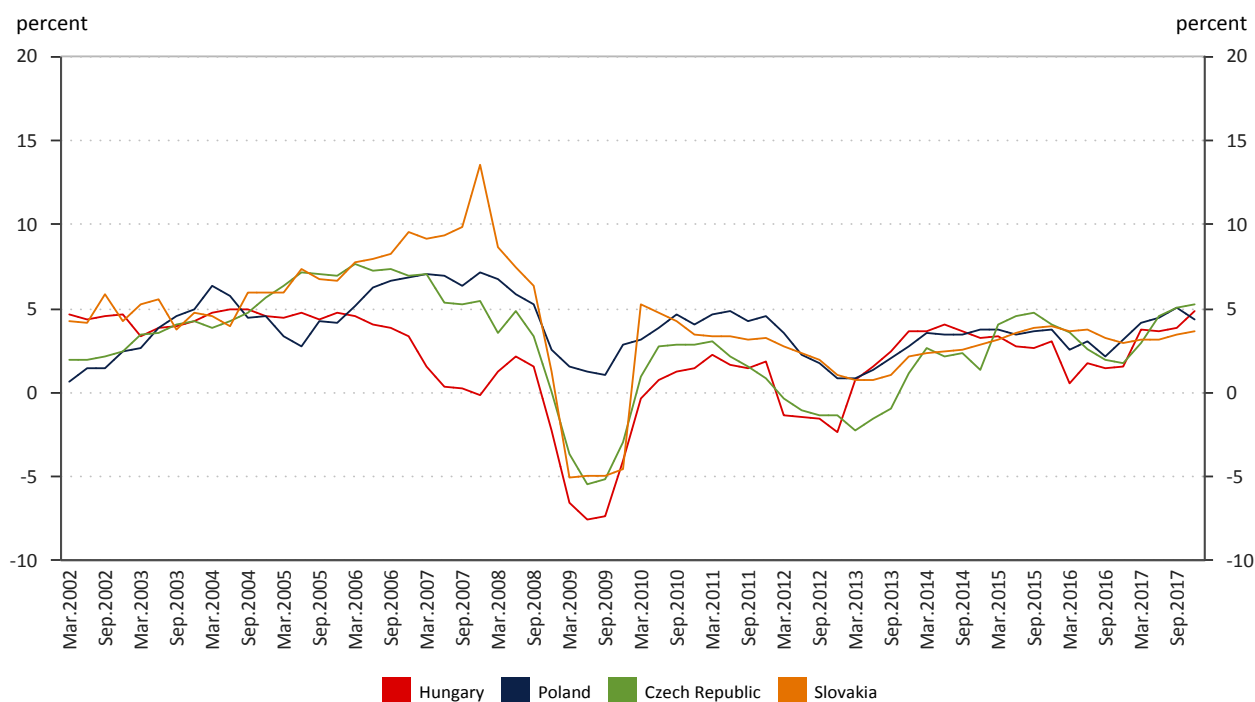
Source: MNB, HSCO Note: contribution in percentage points

19. Fan chart of the GDP forecast



Source: HCSO, MNB

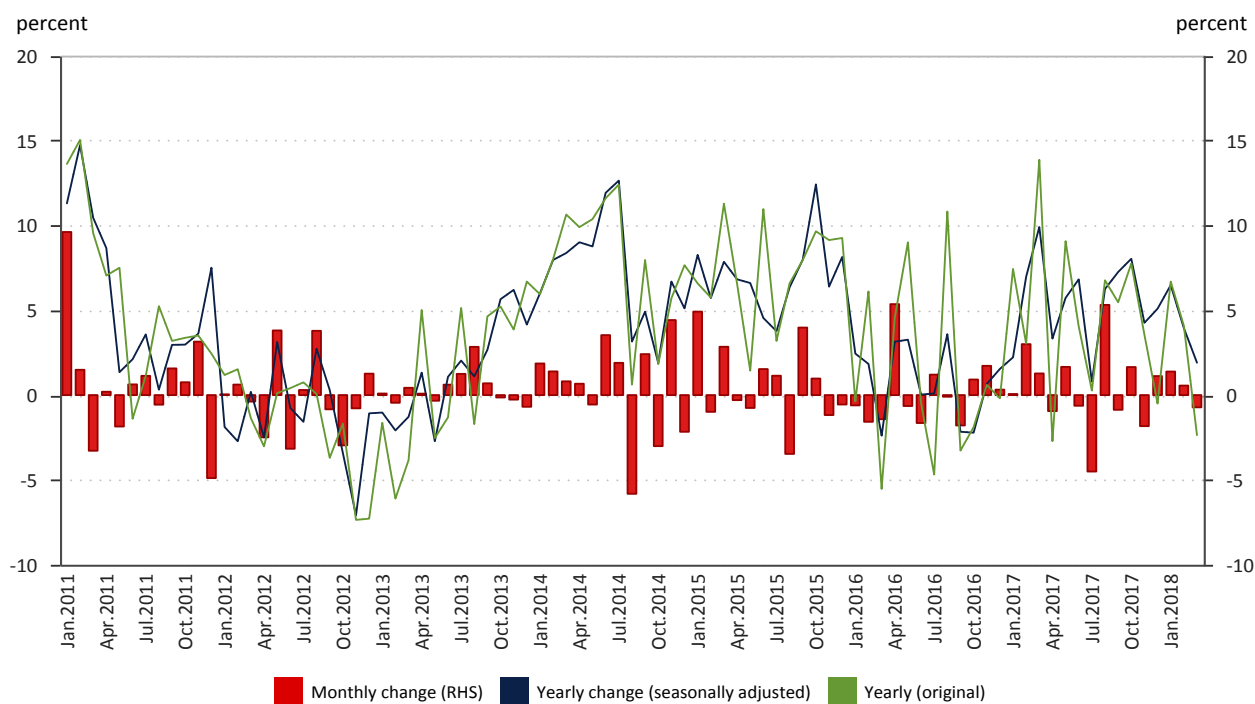
20. GDP growth rate in CEE



Source: Eurostat

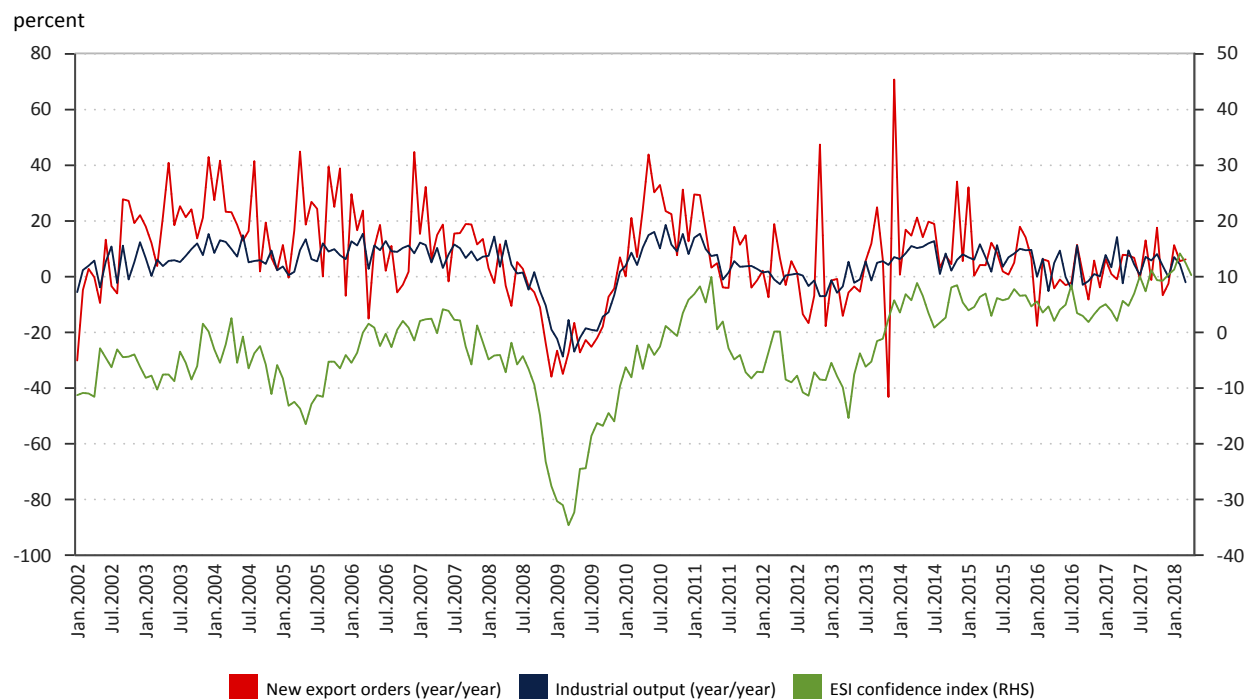
Note: annual growth rate.

21. Change in industrial production



Source: MNB, HCSO.

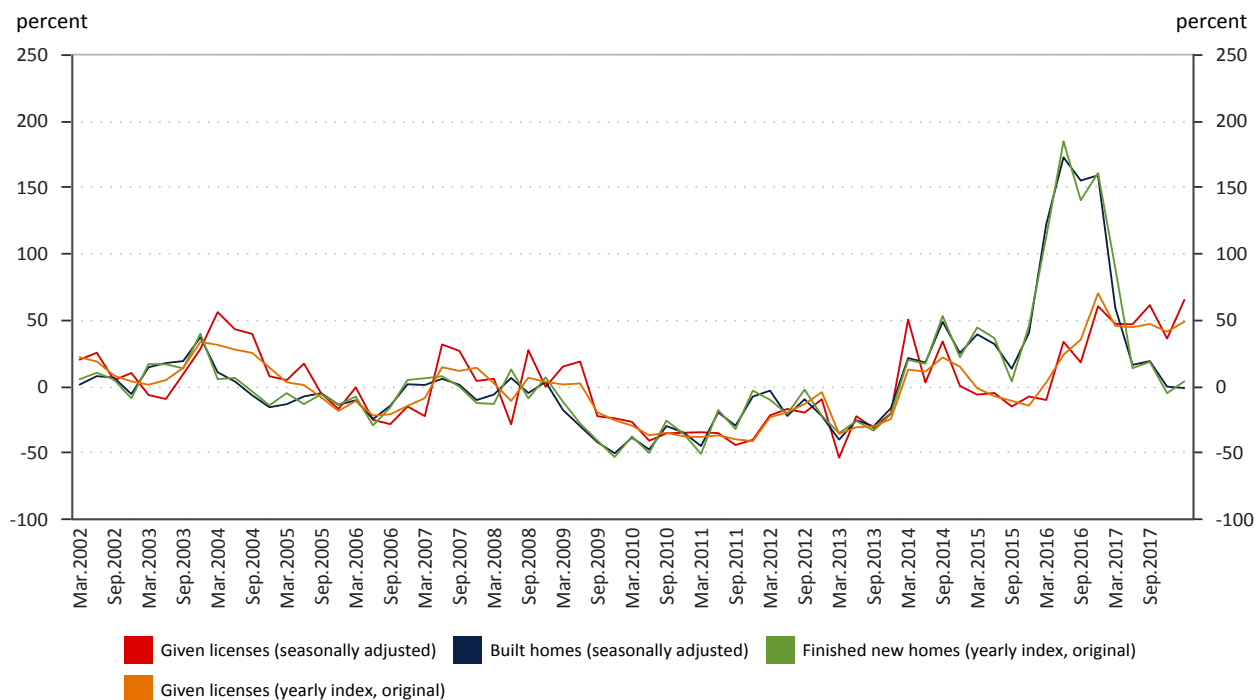
22. Industrial production and new export orders



Source: HSCO, European Commission.

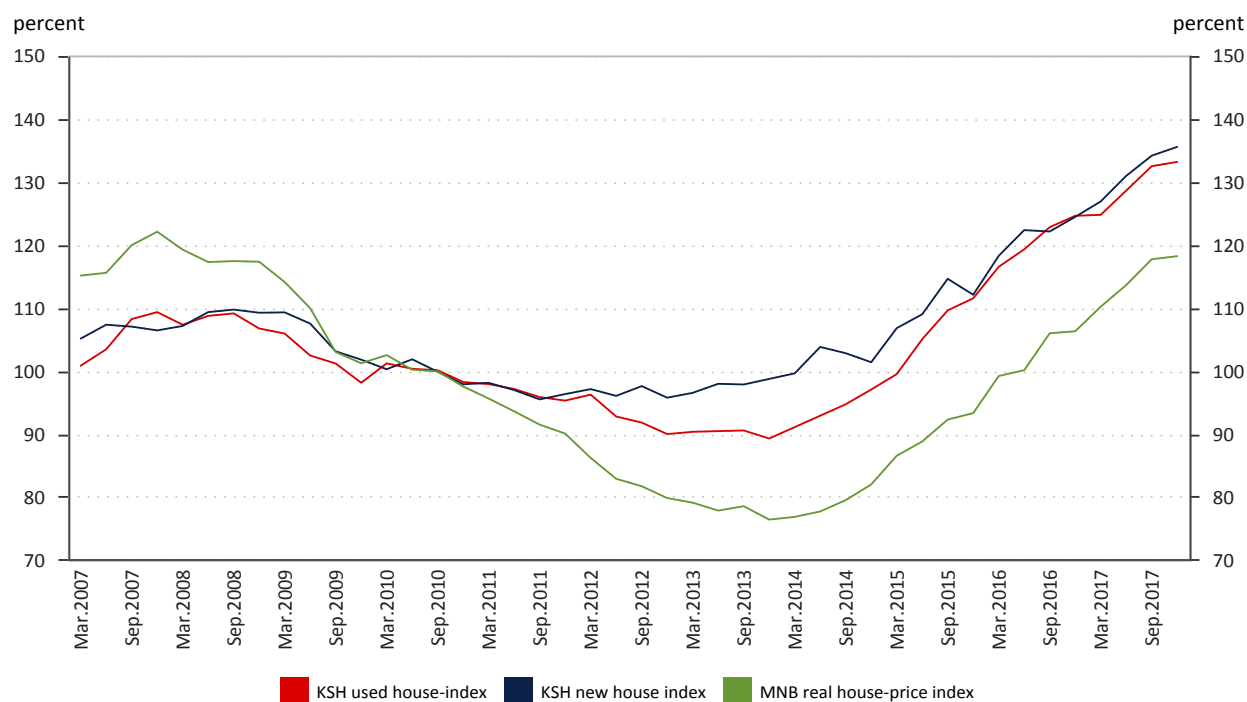
Note: ESI Index is a survey on business confidence by the European Commission. Chart represents the industrial sub-index.

23. Developments on the real estate market



Source: MNB, HCSO.

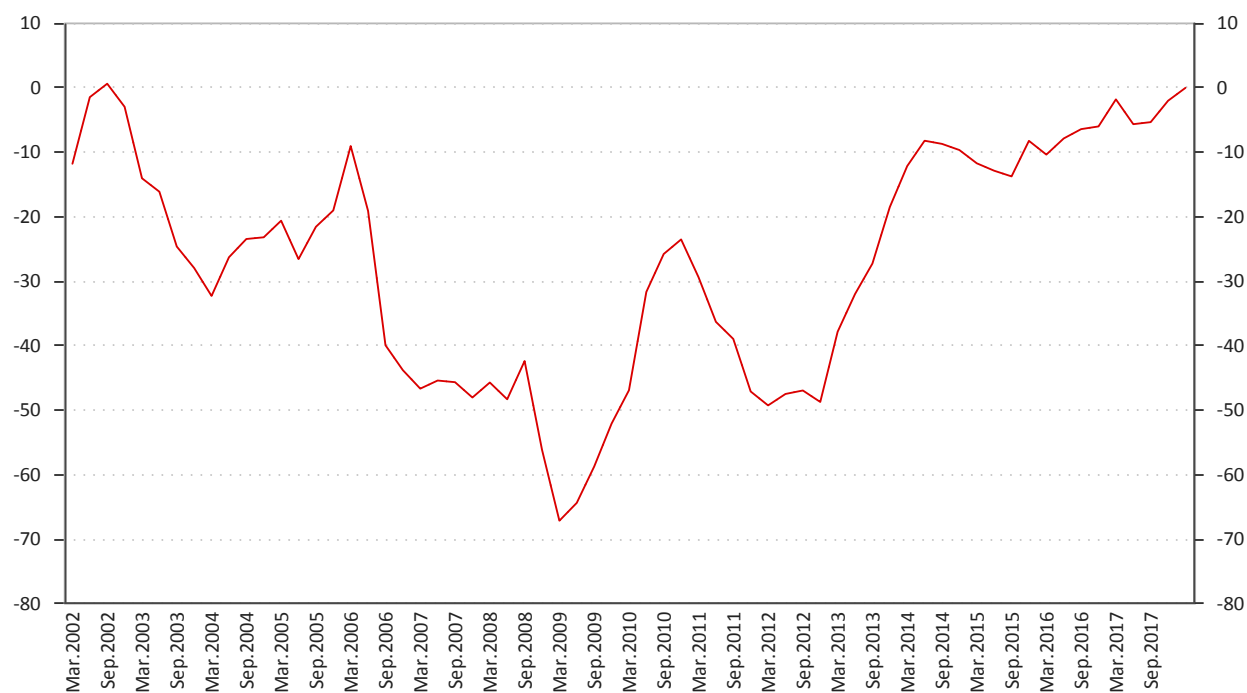
24. Development of house prices



Source: HCSO

Note: 2010=100, inflation adjusted indices.

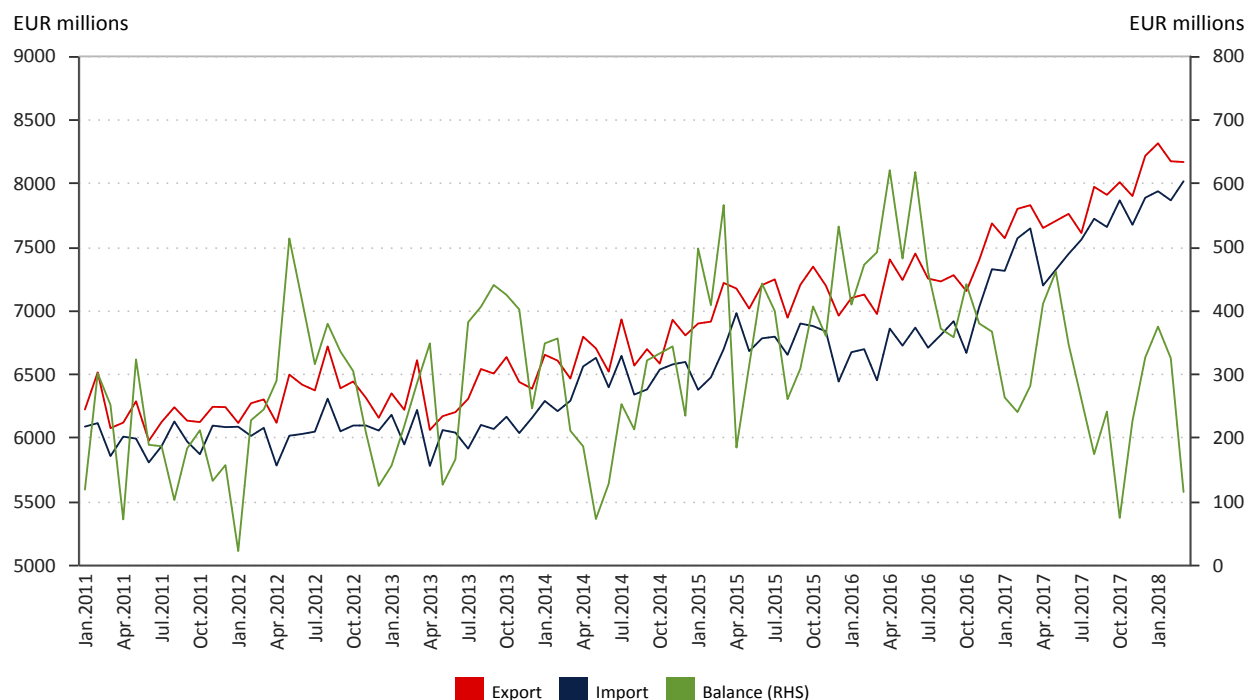
25. Household confidence index (reweighted)



Source: European Commission.

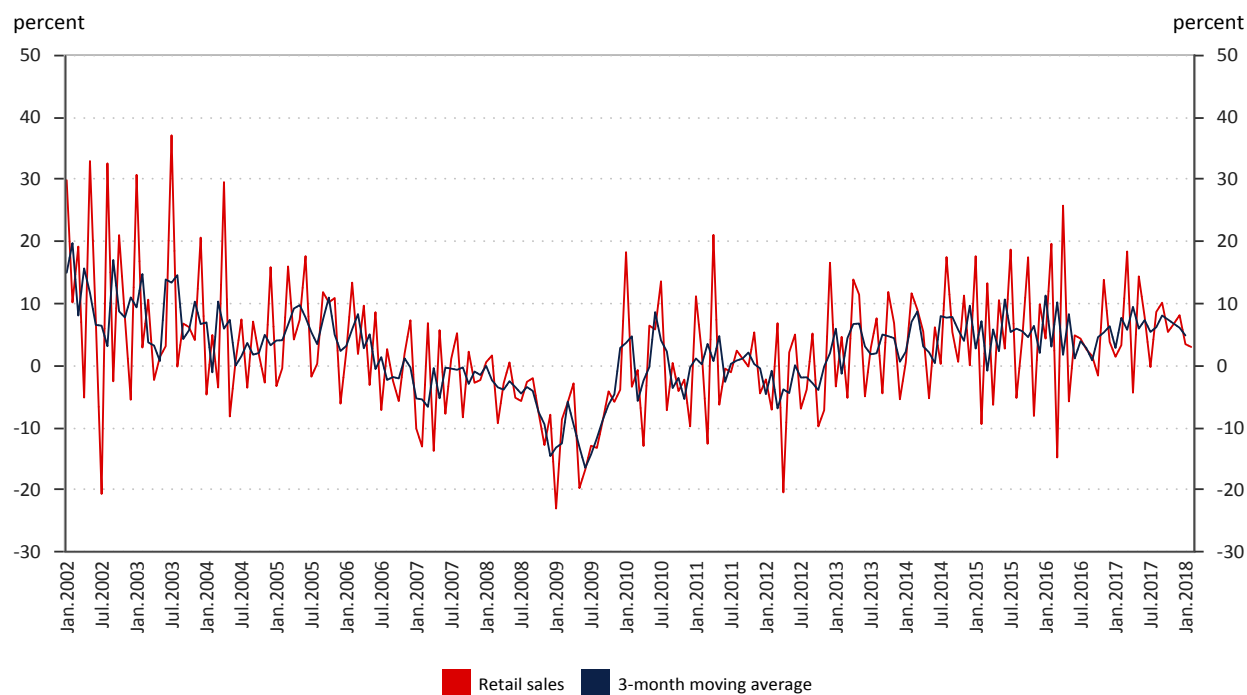
Note: Household confidence indicator is a composite indicator based on the ESI survey

26. Change in export and import volumes



Source: HCSO, MNB calculation. Comment: Foreign trade was corrected due to slippage and missing items between specific months and the activity of VAT resident companies. The seasonal adjustment of the trade balance was done directly by MNB

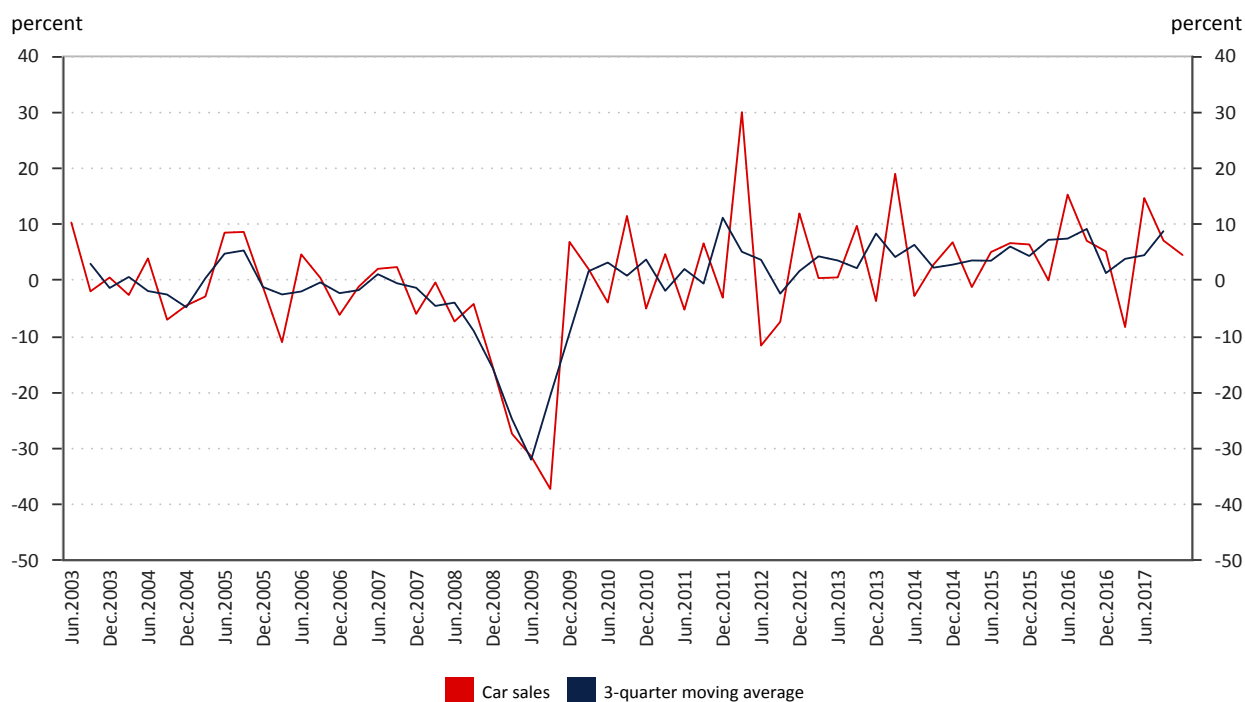
27. Total volume of retail trade



Source: HCSO.

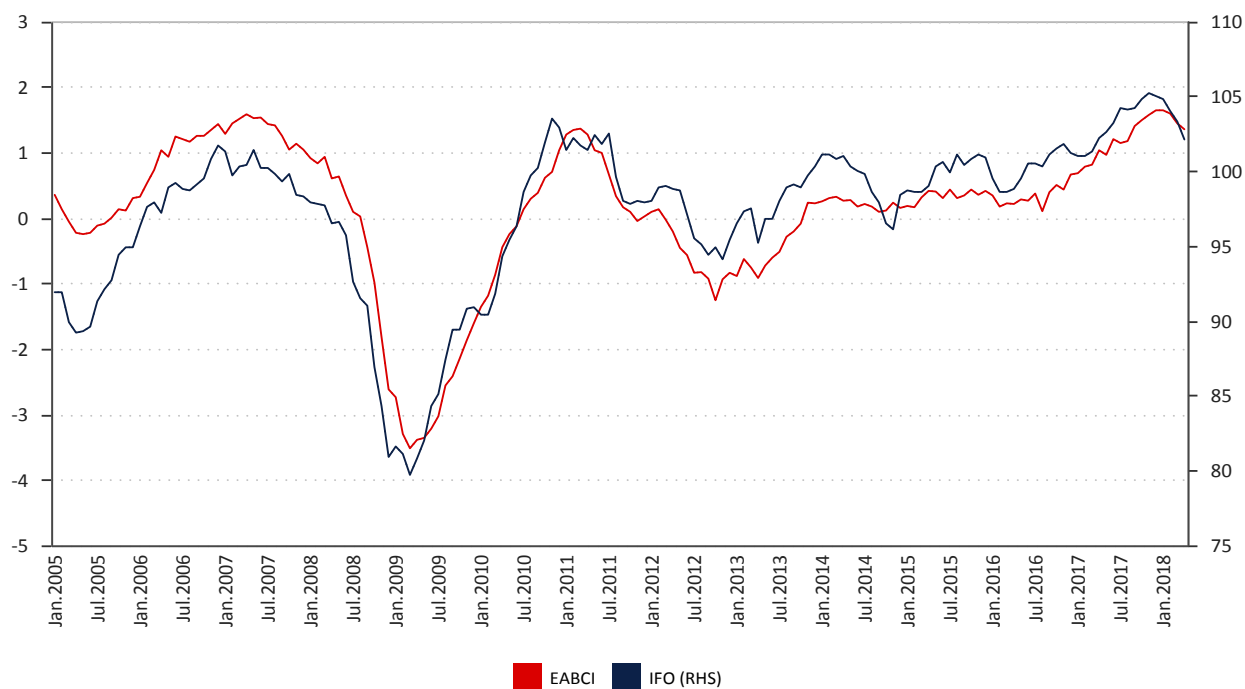
Note: seasonally adjusted annualised monthly growth rates. The data of total retail sales contain beyond the narrow retail sales the turnover of motor vehicles and automotive fuel as well.

28. Quarterly growth rates of automobile sales



Source: ACEA.

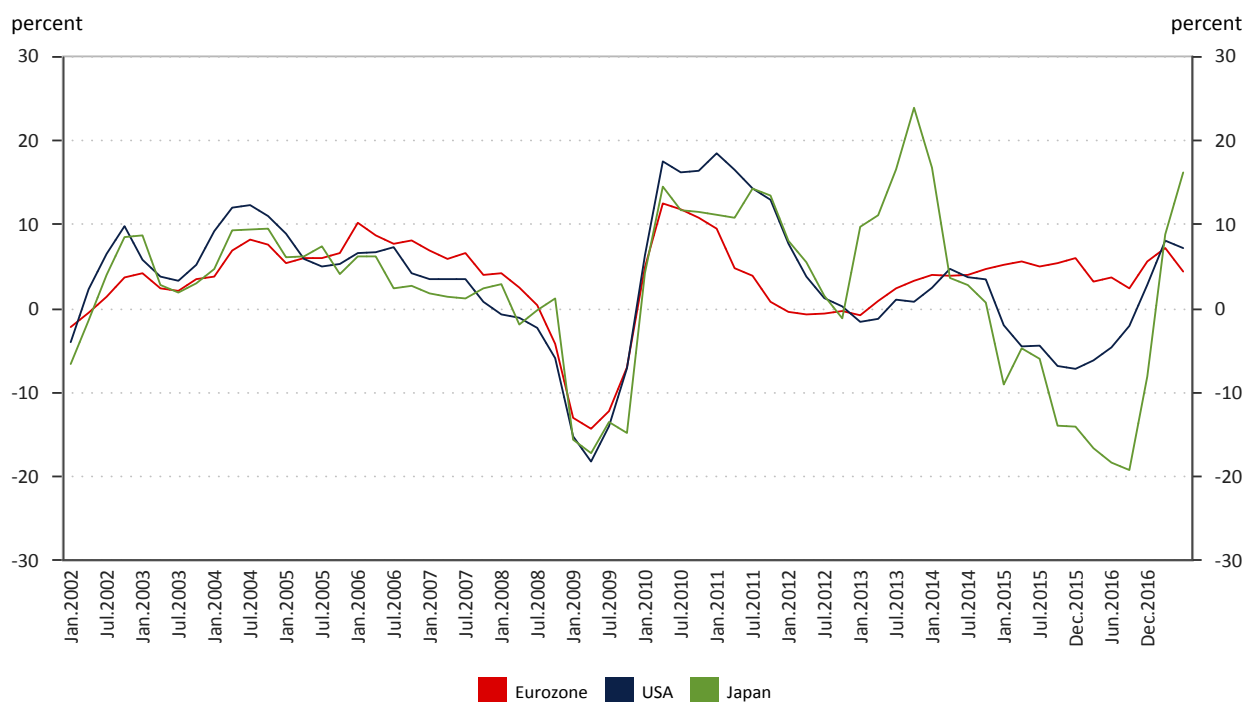
29. Business climate indices in the EMU



Source: IFO; European Committee.

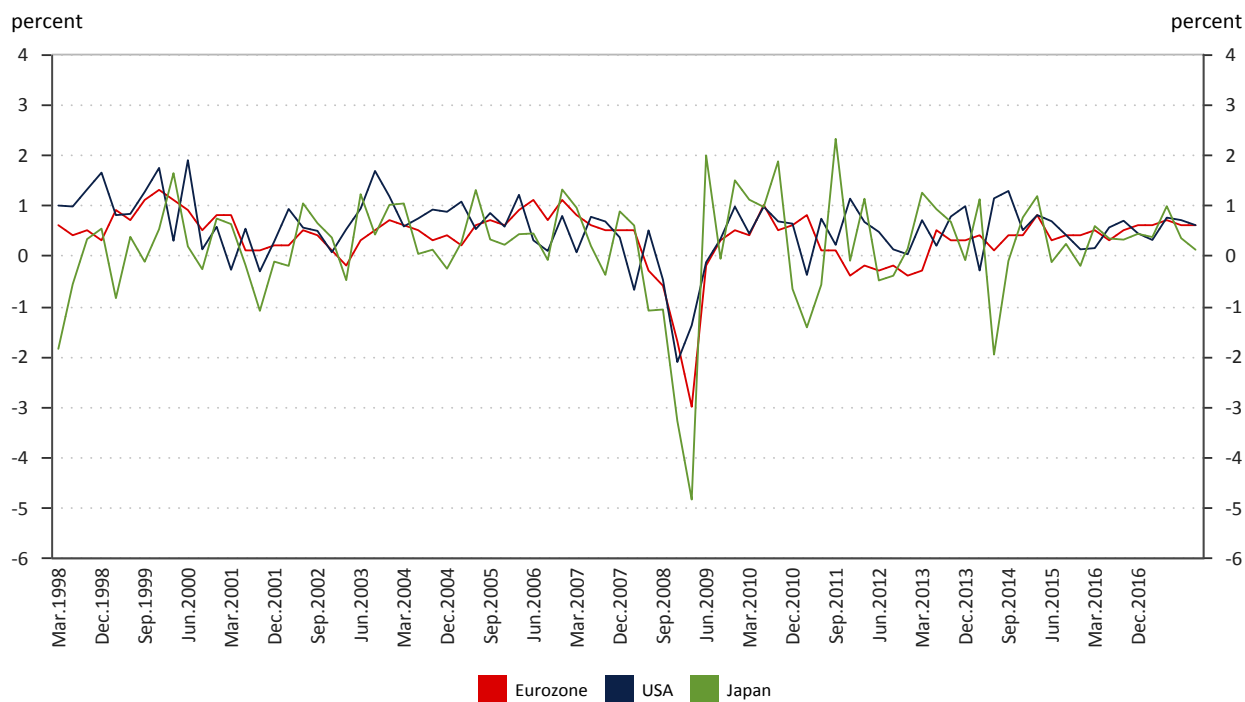
Note: IFO: Business Climate Index of the German Institut für Wirtschaftsforschung (Average of year 2000 = 100); EABCI: Business Climate Index of the European Committee (deviations from the long-run average), seasonally adjusted.

30. The annual growth rate of the volume of imported goods and services



Source: Eurostat.

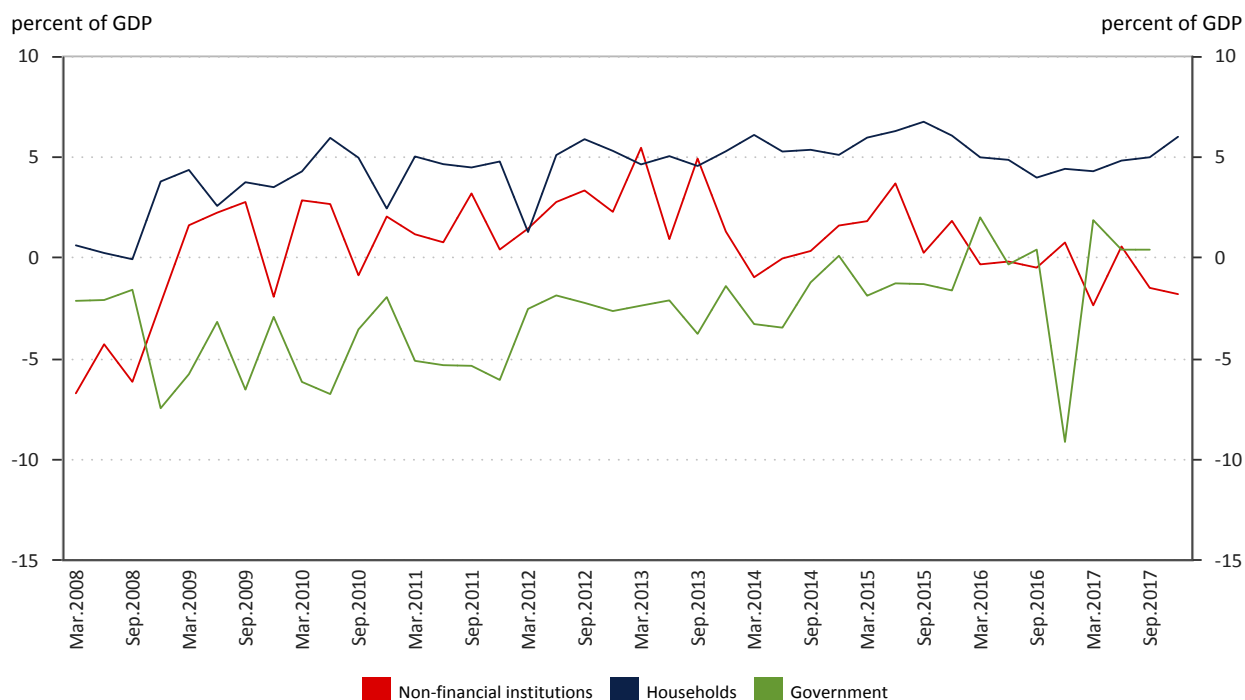
31. GDP growth rate in the EMU, US and Japan



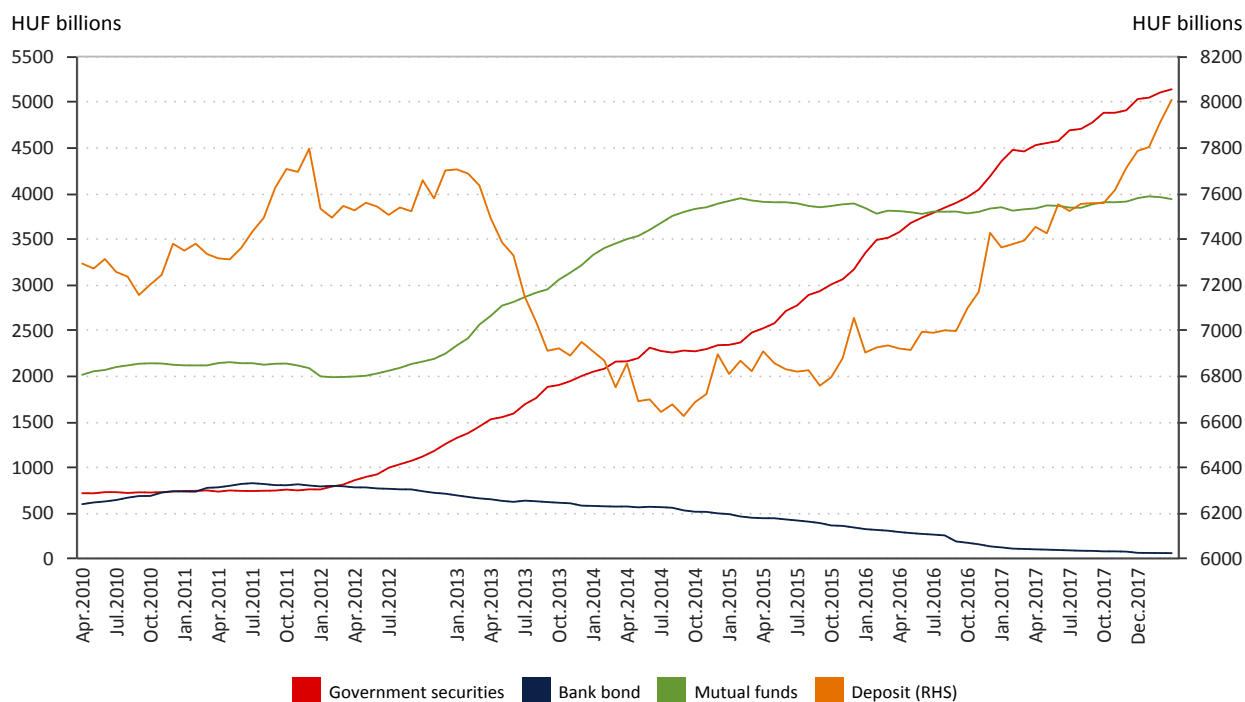
Source: Eurostat

Note: quarterly growth rate.

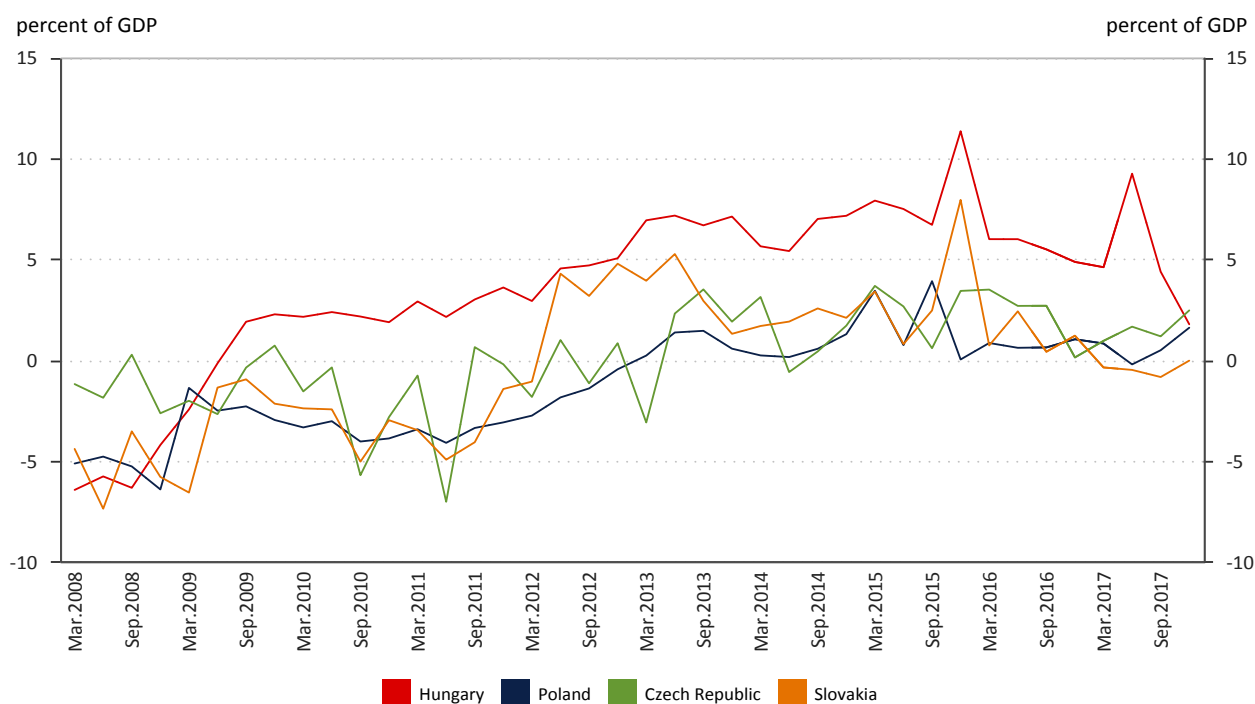
32. Net lending of domestic sectors



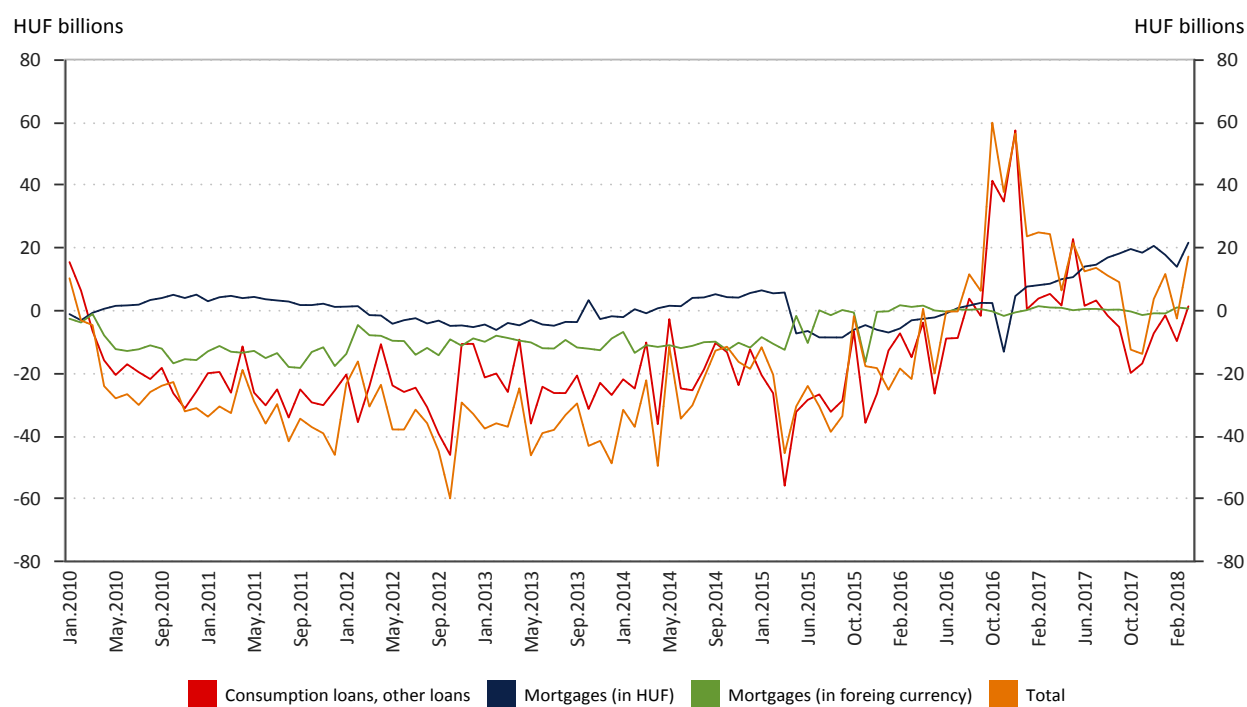
33. Main financial assets held by households

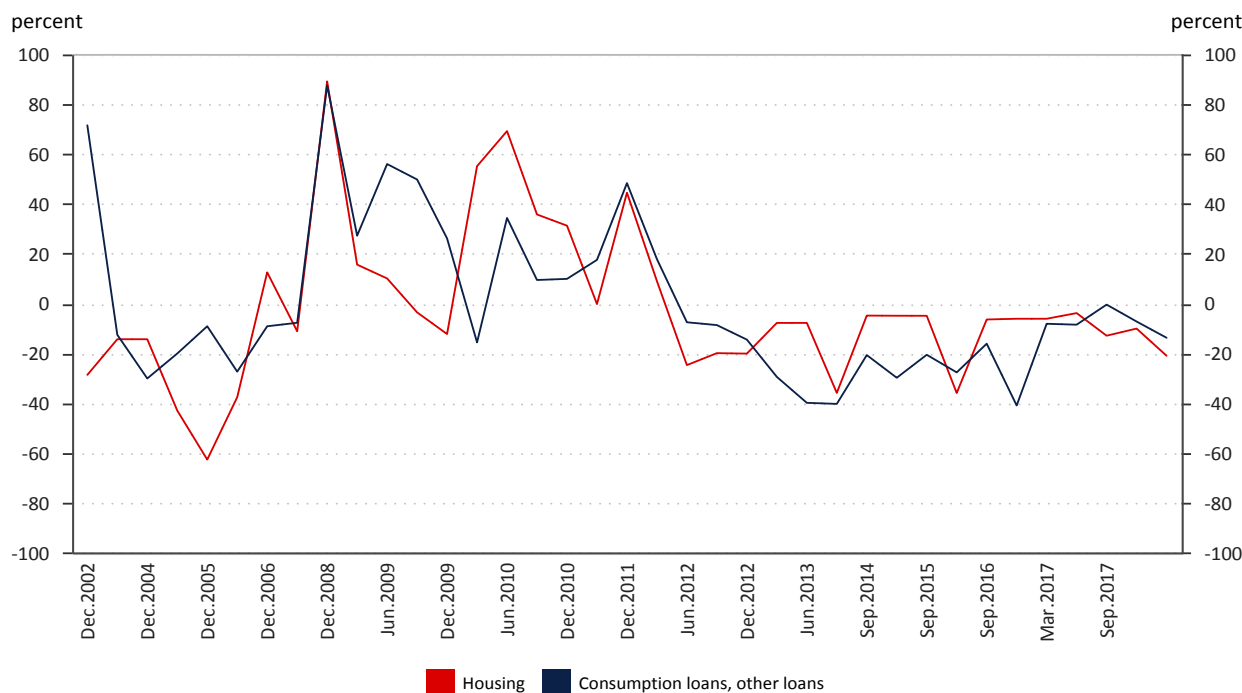


34. External financing capacity in the CEE countries



35. Net borrowing of the households



36. Creditworthiness standards and credit conditions in the household sector

Source: MNB

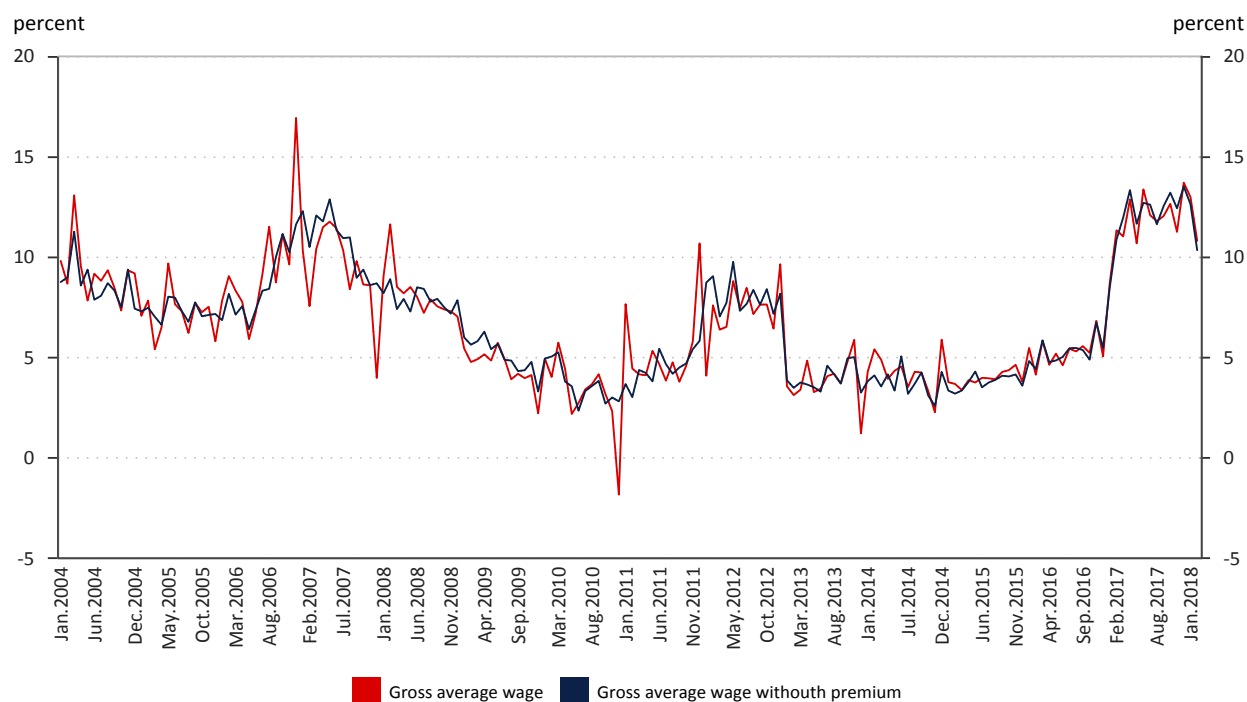
Note: credit conditions estimated by lending officers. Negative value indicates easing, positive indicates tightening compared to the last quarter (before 2009 to previous half a year). Last data is a forecast by MNB.

37. Creditworthiness standards and credit conditions in the corporate sector

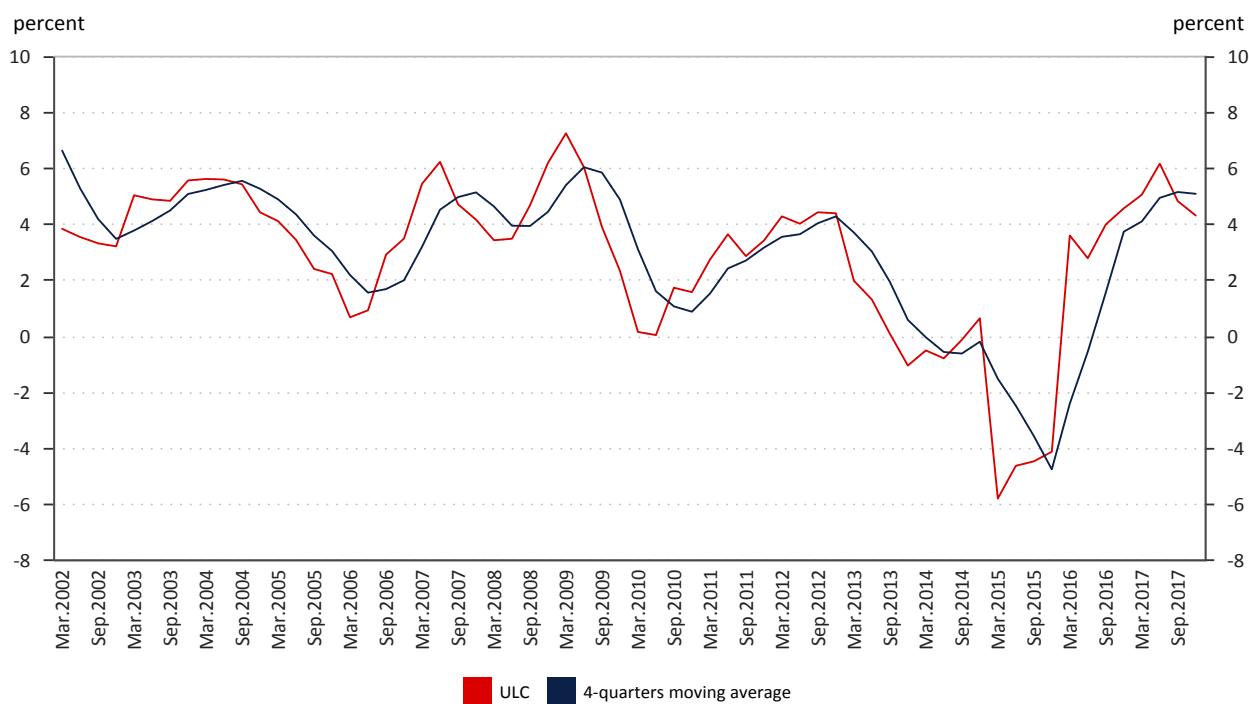
Source: MNB

Note: credit conditions estimated by lending officers. Negative value indicates easing, positive indicates tightening compared to the last quarter (before 2009 to previous half a year). Last data is a forecast by MNB.

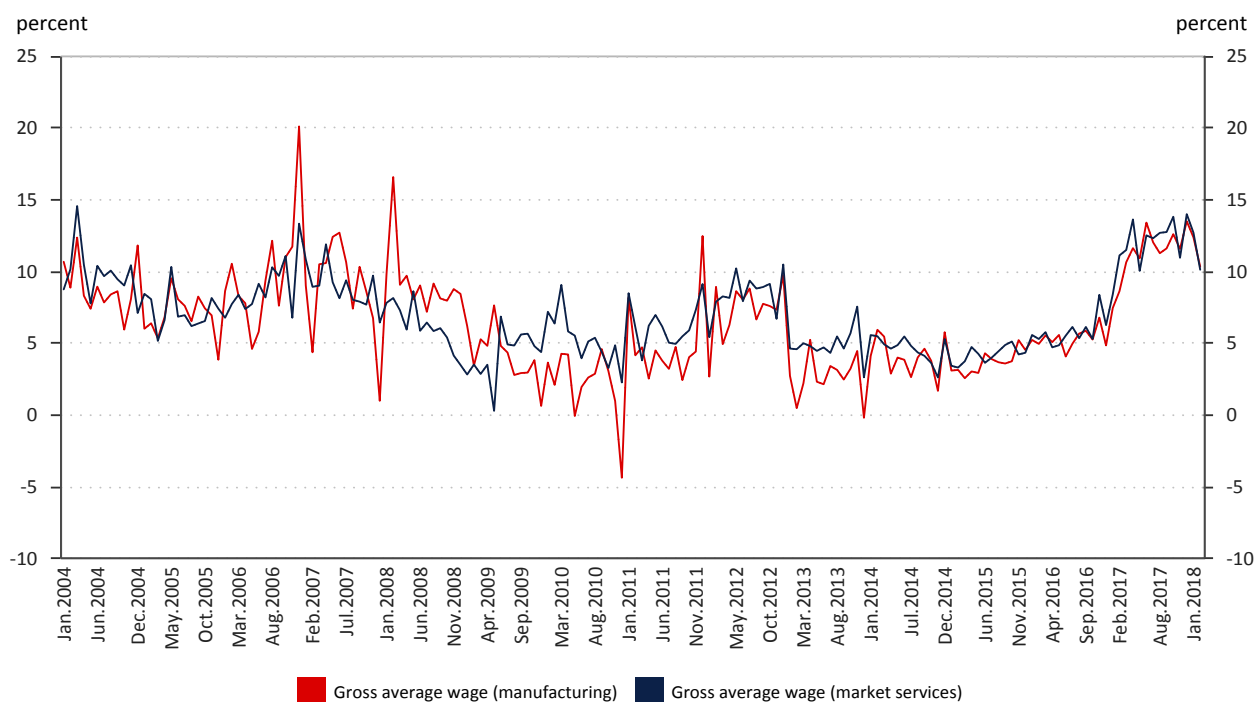
38. Wage growth in private sector



39. Unit labour cost in the private sector

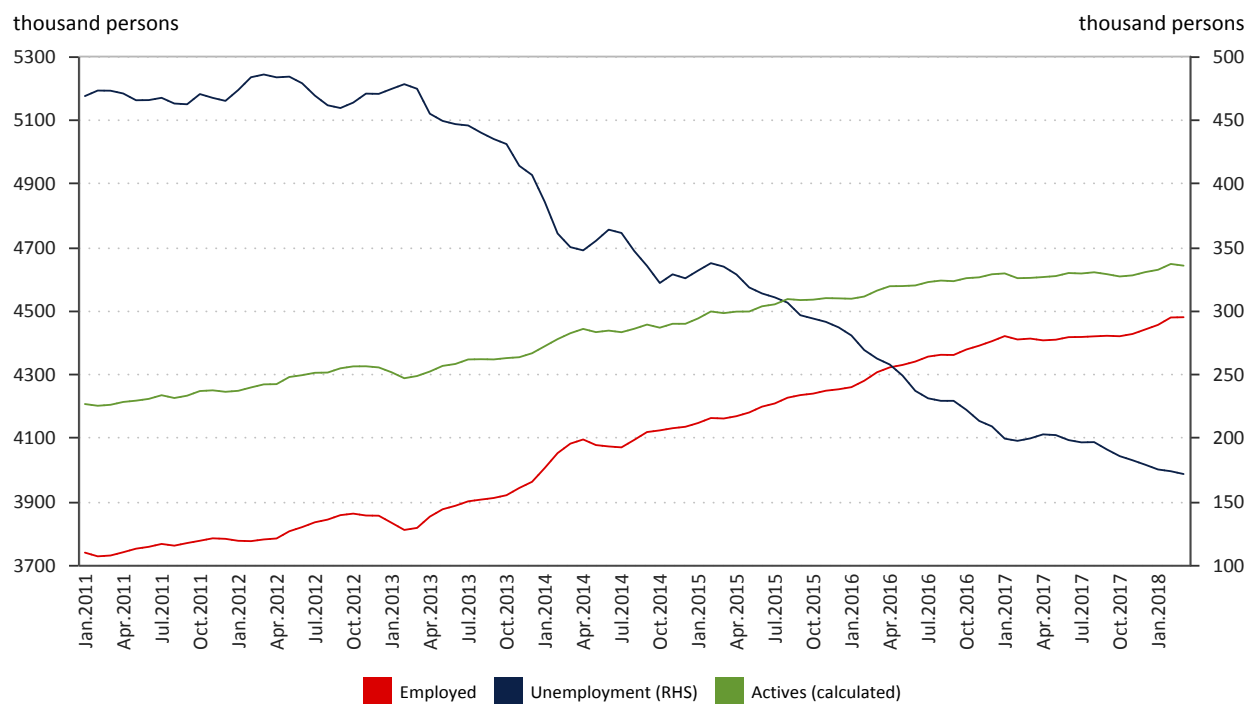


40. Wage growth in the manufacturing and market service sector



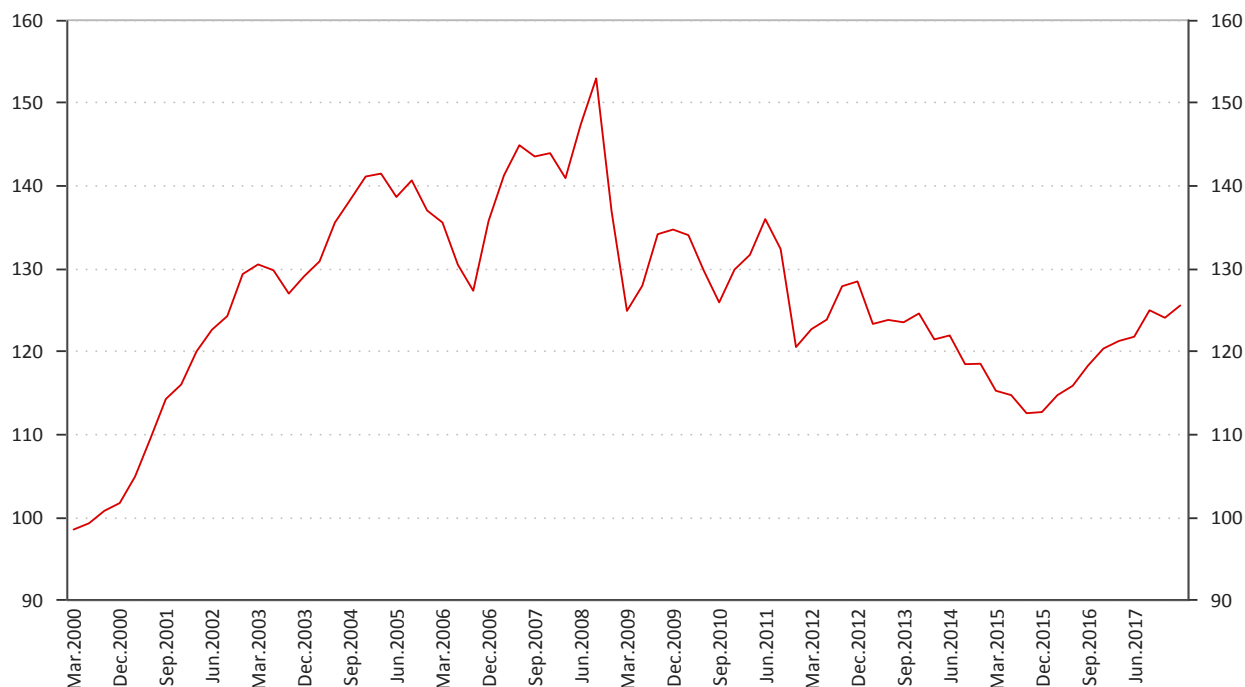
Source: MNB, HCSO.

41. Activity and unemployment



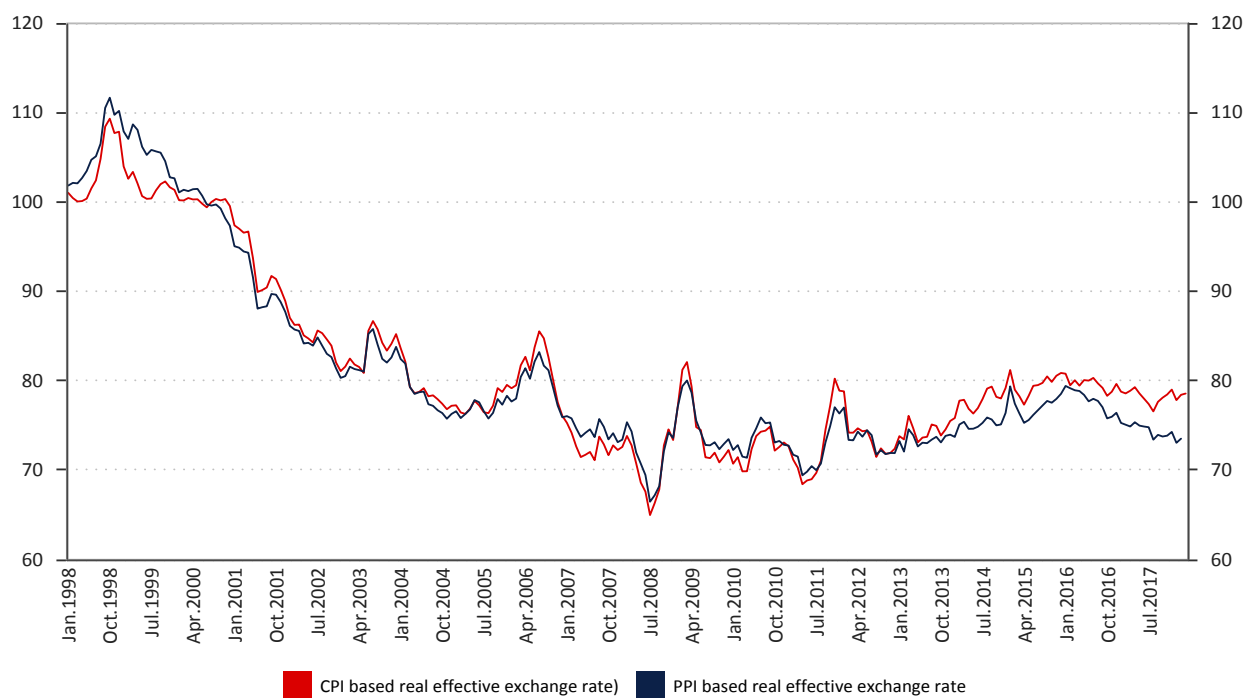
Source: HCSO.

Notes: levels, seasonally adjusted.

42. ULC based real effective exchange rate of the HUF

Source: Eurostat.

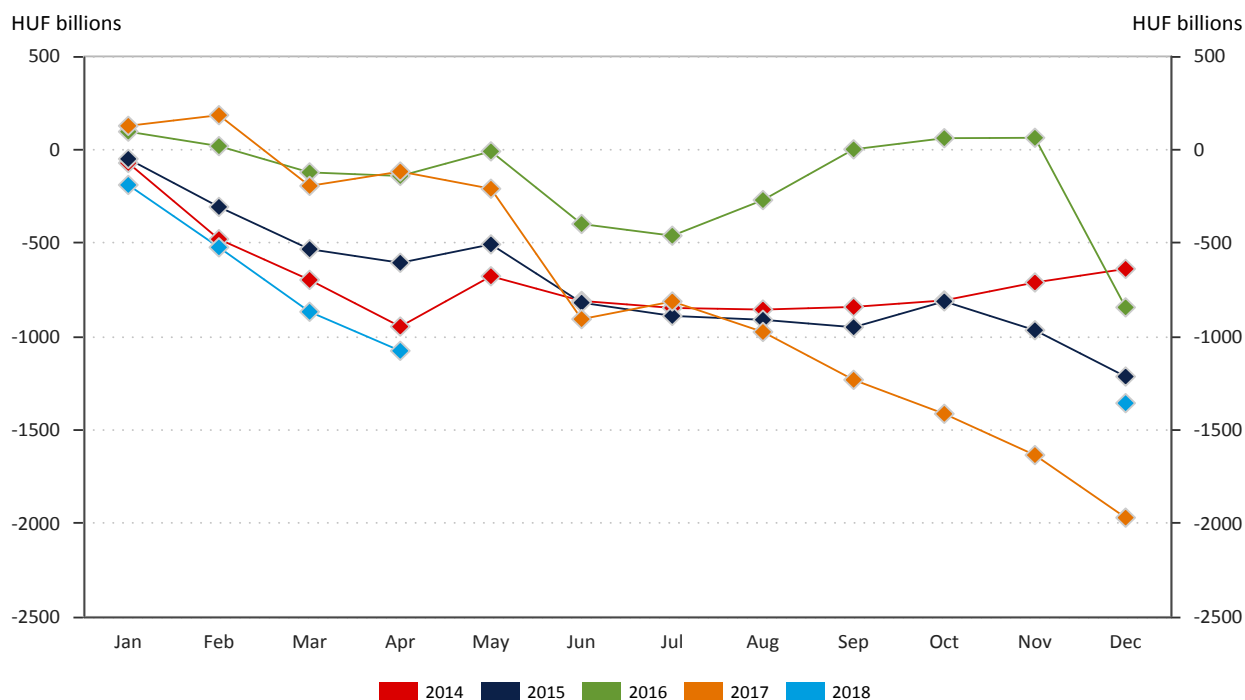
Note: average of year 2000 = 100%. Increase means real-effective appreciation of HUF.

43. CPI and PPI based real effective exchange rates of the HUF

Source: HCSO, MNB, ECB.

Note: average of year 2000 = 100%. Increase means real-effective depreciation of HUF.

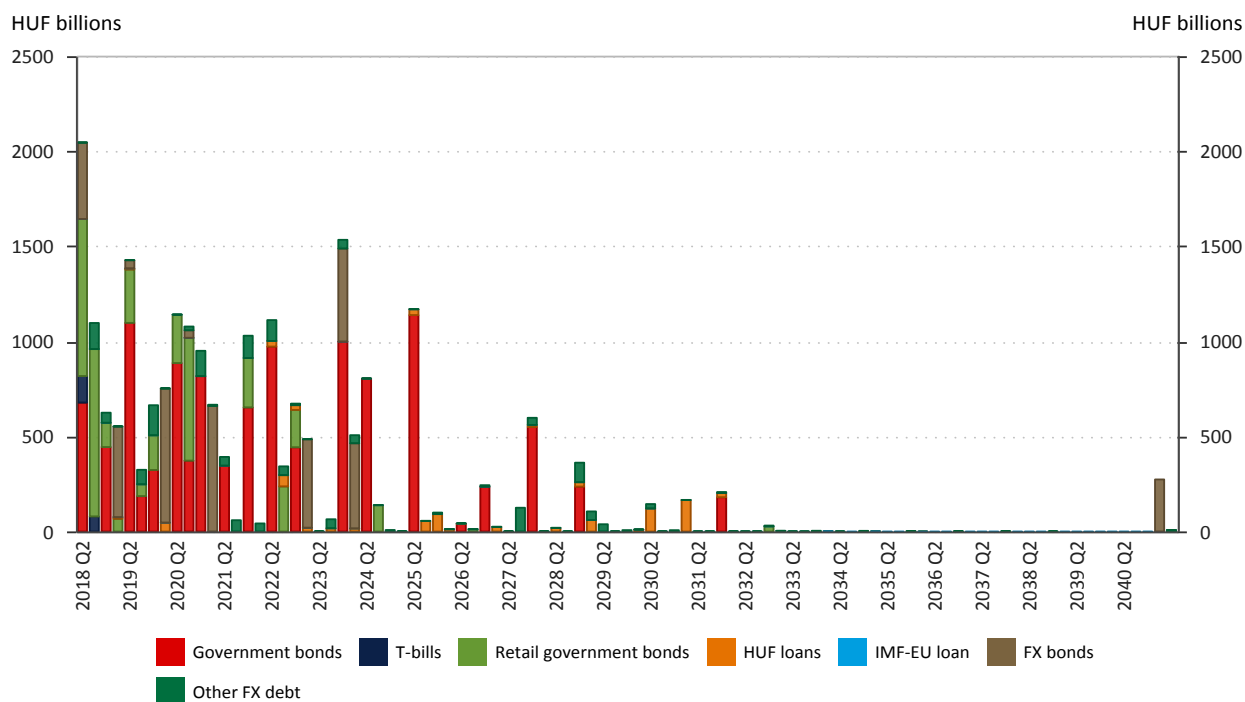
44. Monthly evolution of budget deficit



Source: Hungarian State Treasury

Note: Individual dot shows the budget forecast for the current year. Cumulated balance.

45. Quarterly maturity structure of the government debt



Source: MNB, ÁKK.

Note: Redumptions in the recent quarter are included.

46. The latest central projection of the MNB compared to other prognoses

	2016	2017	2018	2019
CPI (annual average growth rate, %)				
MNB (MAR 2018)	0.4	2.4	2.5	2.9
Consensus Economics (APR 2018) ¹	0.4	2.4	2.0 - 2.5 - 2.9	2.5 - 3.0 - 3.8
European Commission (MAY 2018)	0.4	2.4	2.3	3.0
IMF (APR 2018)	0.4	2.4	2.7	3.3
OECD (NOV 2017)	0.4	2.3	2.7	3.4
Reuters survey (APR 2018) ¹			2.0 - 2.4 - 2.7	2.4 - 2.8 - 3.3
GDP (annual growth rate, %)				
MNB (MAR 2018)	2.2	4.0	4.2	3.3
Consensus Economics (APR 2018) ¹	2.2	4.0	3.0 - 3.8 - 4.5	2.0 - 3.0 - 3.6
European Commission (MAY 2018)	2.2	4.0	4.0	3.2
IMF (APR 2018)	2.2	4.0	3.8	3.0
OECD (NOV 2017)	2.2	3.9	3.6	2.8
Reuters survey (APR 2018) ¹			3.5 - 3.9 - 4.5	2.8 - 3.3 - 3.6
Current account balance ³				
MNB (MAR 2018)	5.5	2.9	1.5	1.6
European Commission (MAY 2018)	6.1	2.9	1.2	0.9
IMF (APR 2018)	6.0	3.6	2.5	2.4
OECD (NOV 2017)	6.1	4.0	2.5	0.8
Reuters survey (APR 2018)			2.1 - 3.6 - 4.7	1.4 - 3.5 - 5.5
Budget deficit (ESA-95 method) ^{3,4}				
MNB (MAR 2018)	-1.8	-1.9	(-2.2) - (-2.4)	(-1.8) - (-2.0)
Consensus Economics (APR 2018) ¹	-1.9	-1.7	(-1.8) - (-2.4) - (-3.0)	(-1.8) - (-2.3) - (-3.0)
European Commission (MAY 2018)	-1.7	-2.0	-2.4	-2.1
IMF (APR 2018)	-1.8	-2.1	-2.1	-1.9
OECD (NOV 2017)	-1.9	-2.4	-2.7	-2.4
Reuters survey (APR 2018) ¹			(-2.3) - (-2.5) - (-2.8)	(-1.6) - (-2.1) - (-2.8)
Forecasts on the size of Hungary's export markets (annual growth rate, %)				
MNB (MAR 2018)	4.4	4.7	4.8	4.2
European Commission (MAY 2018) ²	4.3	5.9	5.9	5.0
IMF (APR 2018) ²	4.1	5.7	5.7	4.9
OECD (NOV 2017) ²	3.8	5.3	4.8	4.5
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)				
MNB (MAR 2018)	2.4	2.7	2.6	2.5
Consensus Economics (APR 2018) ¹	2.2	2.8	2.7	2.3
European Commission (MAY 2018) ²	2.3	3.0	2.8	2.6
IMF (APR 2018) ²	2.1	2.9	2.8	2.4
OECD (MAR 2018) ²	2.1	2.8	2.6	2.4

1 For Reuters and Consensus Economics surveys, in addition to the average value of the analysed replies (i.e. the median value), we also indicate the lowest and the highest values to illustrate the distribution of the data.

2 Values calculated by the MNB; the projections of the named institutions for the relevant countries are adjusted with the weighting system of the MNB, which is also used for the calculation of the bank's own external demand indices. Certain institutions do not prepare forecast for all partner countries.

3 As a percentage of GDP.

4 With complete cancellation of free reserves.

Source: Consensus Economics, European Commission, IMF, OECD, Reuters poll

47. Domestic financial developments*Overview*

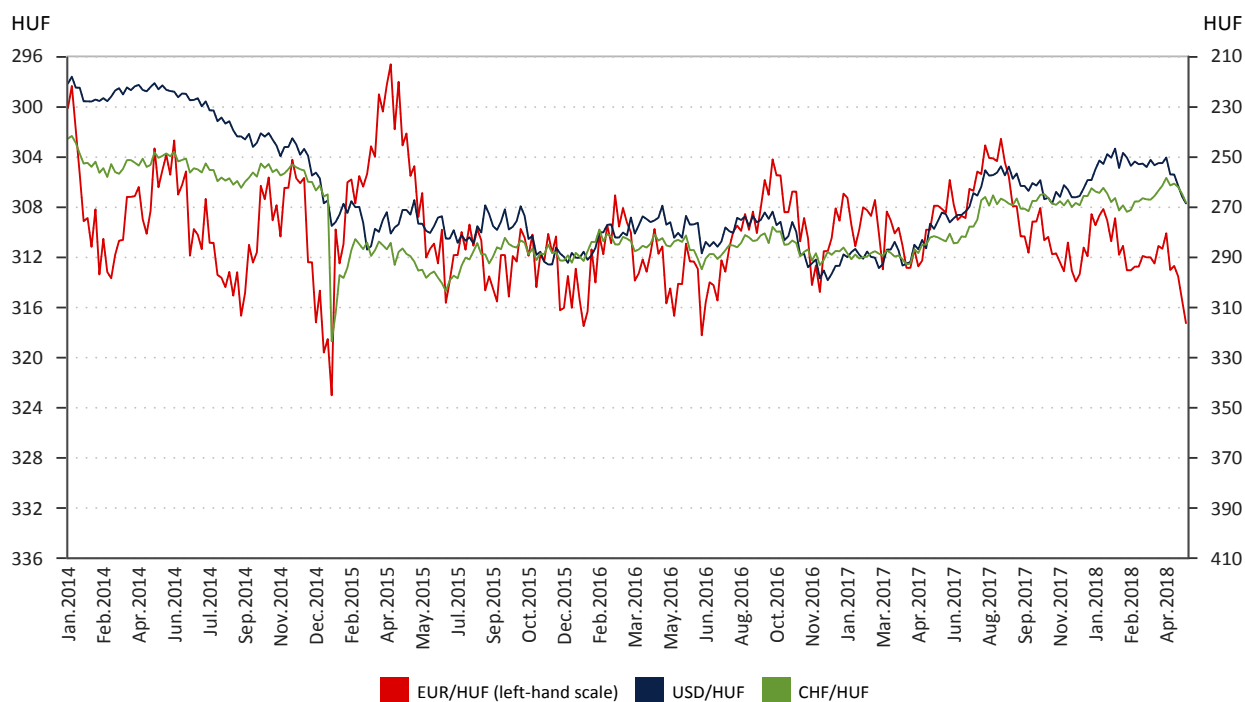
Indicator	One month ago	One week ago	Current
HUF/EUR spot exchange rate	310.2	314.9	317.8
Skewness of expectations on HUF/EUR exchange rate	0.54	0.63	0.92
HUF-positions of foreign investors (HUF billions)	-1767	-2047	-2180
Forward positions of domestic investors (HUF billions)	1014	1430	1596
MNB base rate (%)	0.90	0.90	0.90
Expected short-term interbank rate at the end of the year (%)*	0.10	0.17	0.33
3-months interbank rate (%)	0.03	0.05	0.11
3x6 FRA rate (%)	0.04	0.06	0.13
3 month T-bill yield (%)	-0.01	0.04	0.13
5 year T-bond yield (%)	1.28	1.48	1.71
Slope of yield curve (10Y-1Y, bp)	240	270	285
O/N FX-swap spread (bp)	-4	-9	-5
3-month FX-swap spread (bp)	-0	1	-9
5-year FX-swap spread (bp)	-18	-16	-19
5-year CDS spread (bp)	86	89	89
5x5 government bond spread (bp)**	192	212	214
Average spread of USD-denominated government bonds (bp)	118	127	125
Foreign holdings of HUF-government bonds (HUF billion)	3830	3754	3645

Notes:

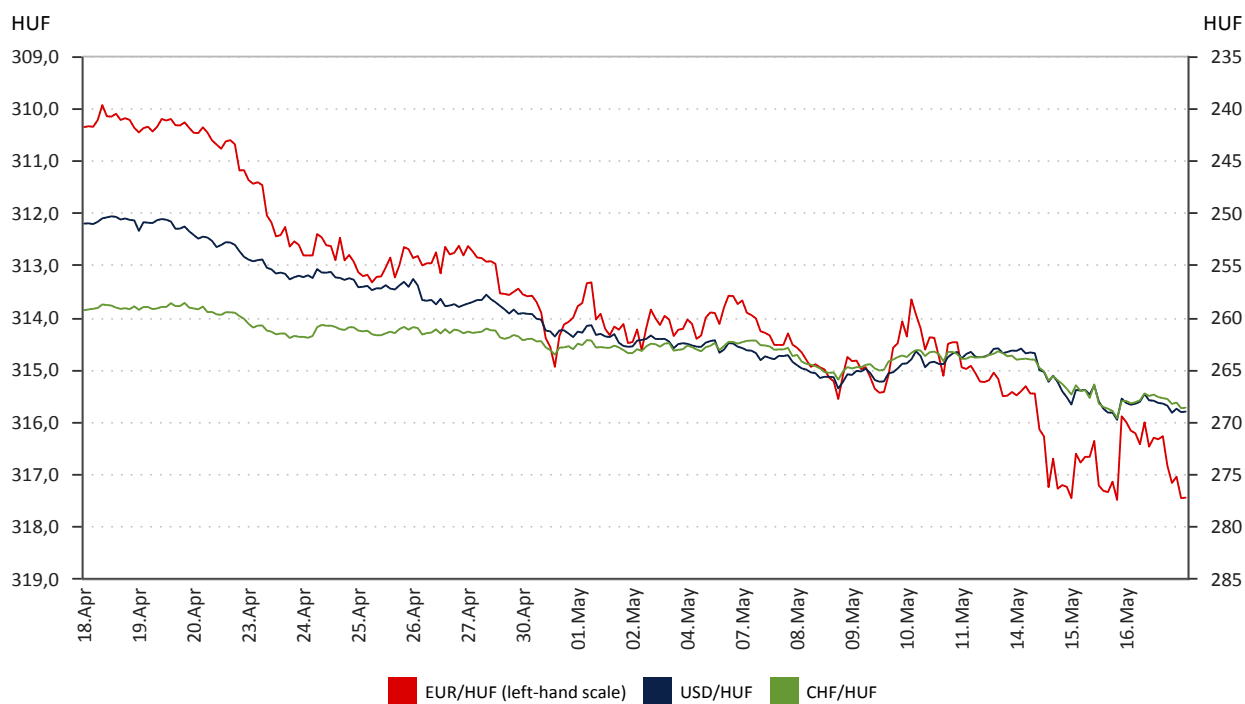
* Based on forward yield curve.

** Over German yield.

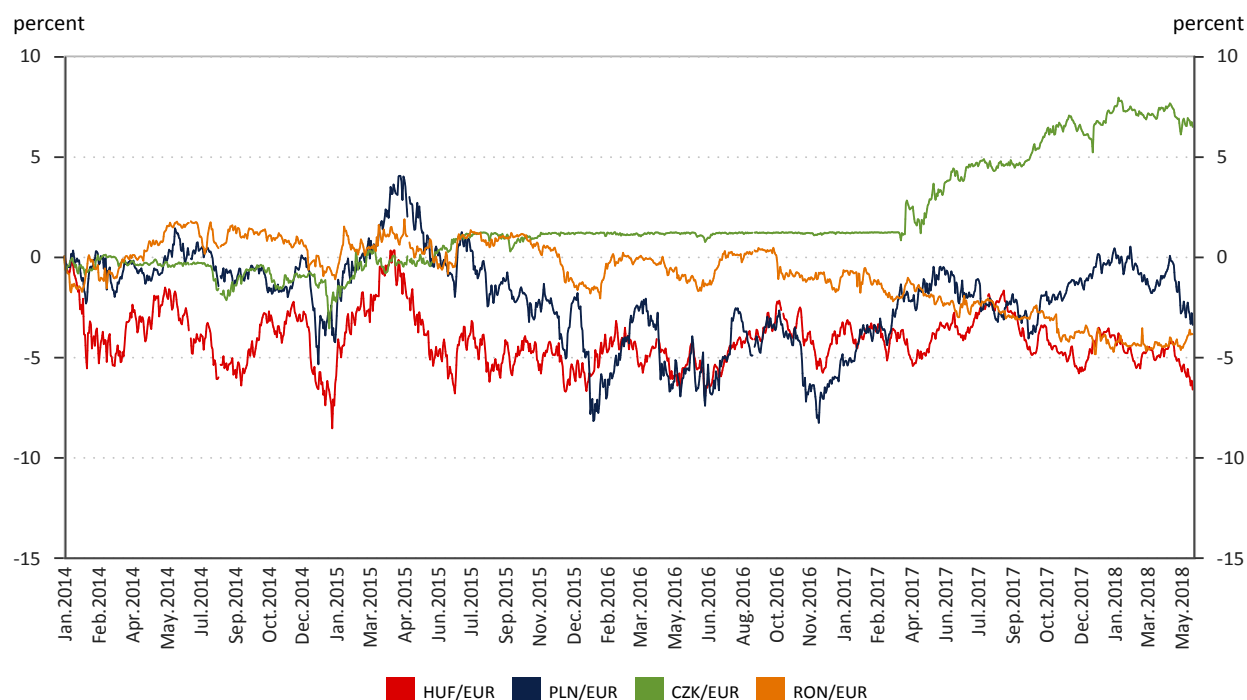
48. Developments in HUF exchange rate



49. Developments in HUF exchange rate (last month)



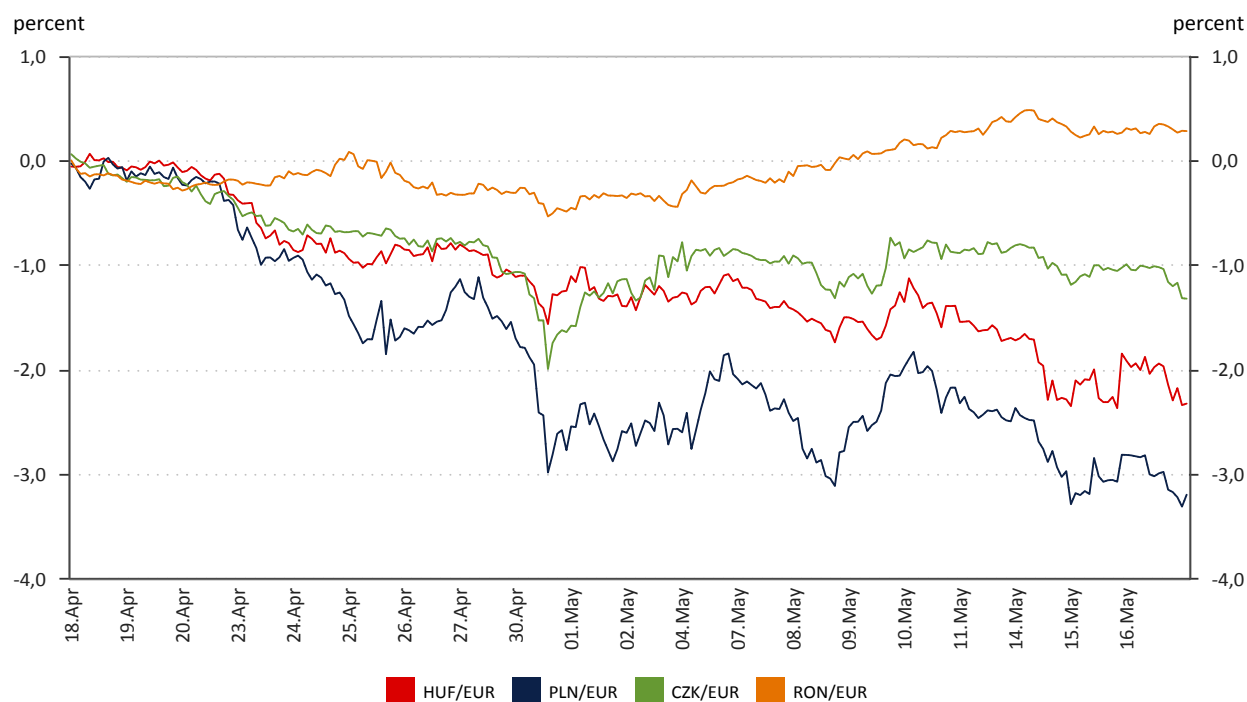
50. Emerging markets exchange rate



Source: Thomson Reuters

Note: cumulative change. Positive values mean appreciation.

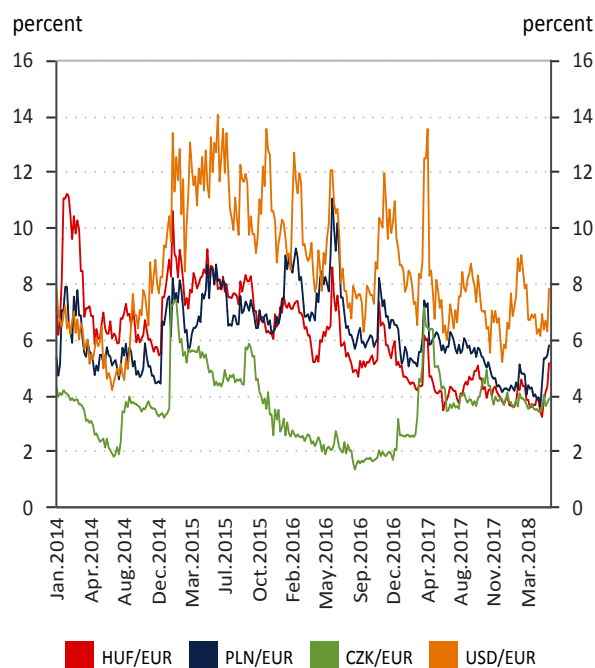
51. Emerging markets exchange rate (last month)



Source: Thomson Reuters.

Note: cumulative change, negative value means depreciation of the local currency.

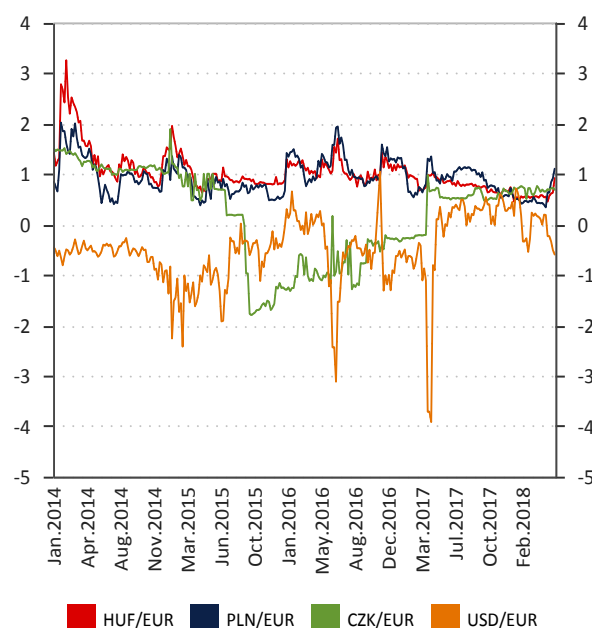
52. Volatility of exchange rate expectations



Source: Bloomberg

Note: implied volatility (based on foreign exchange option quotes) can be interpreted as an indicator of risk perceived by the market.

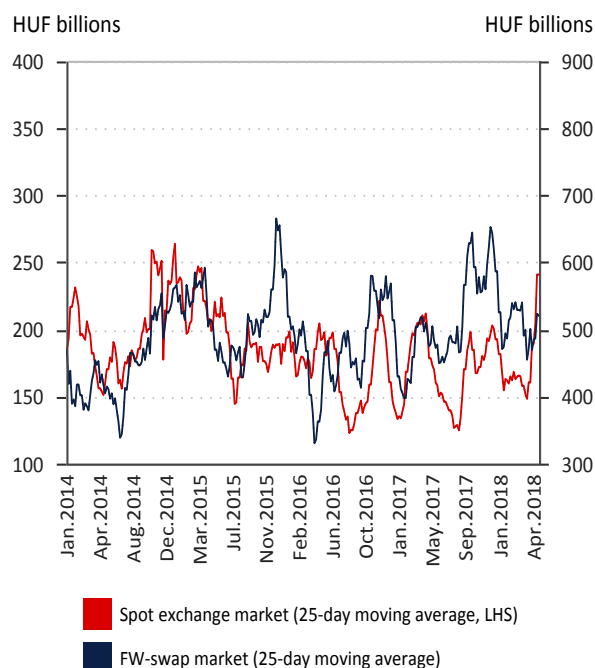
53. Skewness of exchange rate expectations



Source: Bloomberg

Notes: based on option quotes for 1-month 25D risk reversal; skewness=RR/Volatility*10. Risk reversal can be regarded as a nominal indicator for the skewness of the distribution of exchange rate expectations, while skewness eliminates the effect of changes in volatility.

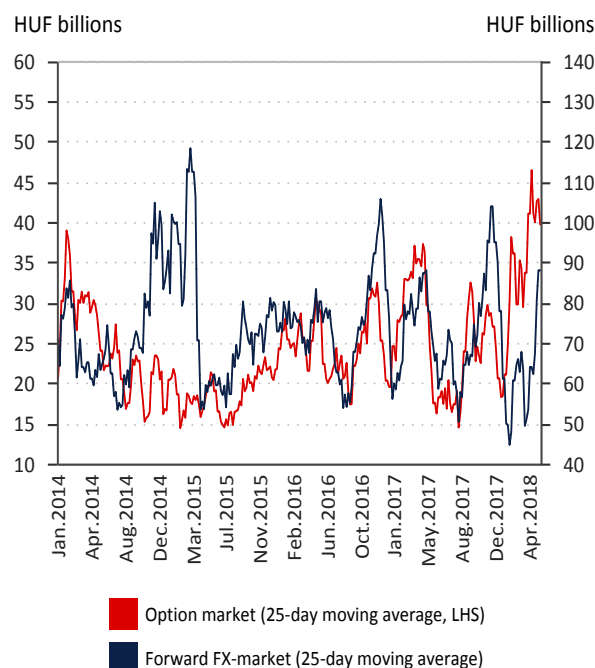
54. Turnover on the spot and the FX-swap market



Source: MNB

Notes: forint against foreign exchange deals by domestic banks; moving averages calculated based on deal date data.

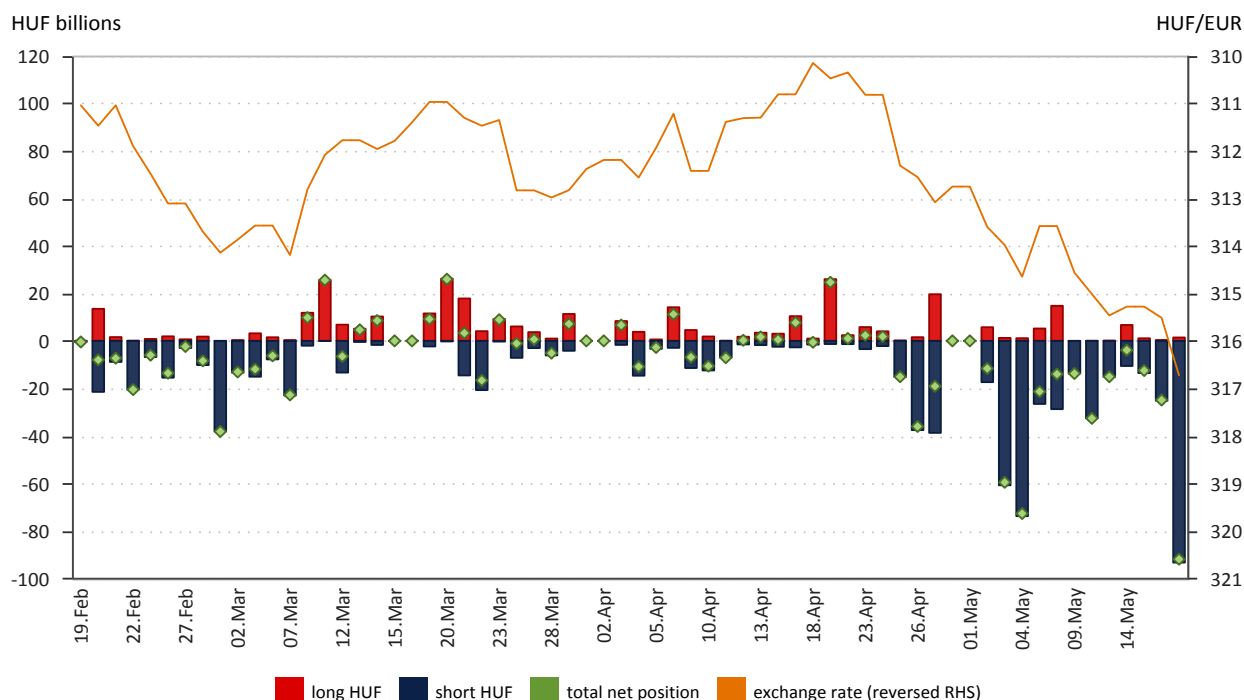
55. Turnover on the forward and option market



Source: MNB

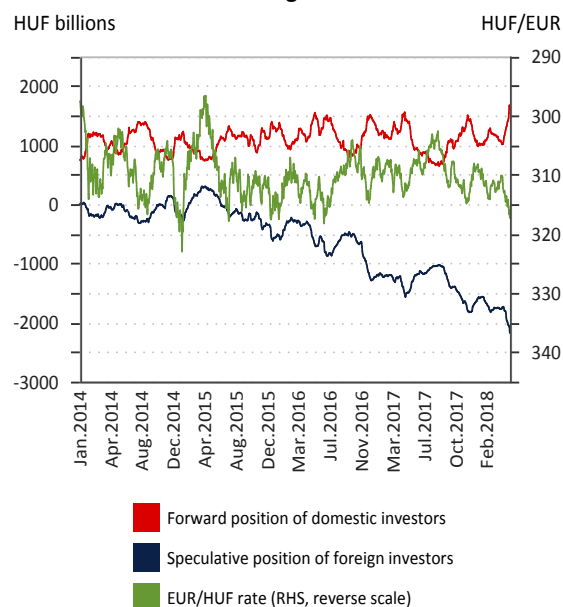
Note: forint against foreign exchange deals by domestic banks; moving averages calculated based on deal date data.

56. Open FX-positions of non-residents in HUF



Source: MNB.

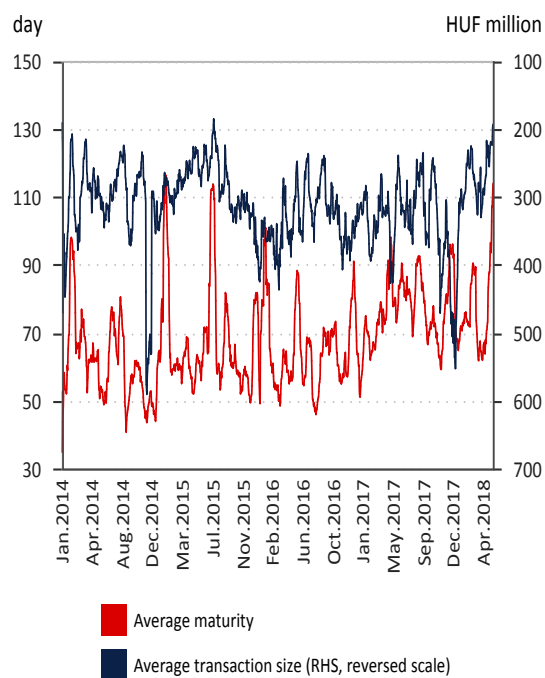
57. Cumulated positions of non-residents in HUF and the EUR/HUF exchange rate



Source: MNB

Note: Based on daily reports of credit institutions. Due to the nature of the daily reports of banks on FX transactions the components of the statistic do not close to zero. As a result information contained in the data series is relevant mainly to evaluate the direction of short-term fluctuation. The MNB does not hold responsibility for the accuracy of the data. Revision due to reporting error and non-standard transactions might lead to subsequent modification of the data series.

58. Forward agreements of non-financial institutions



Source: MNB

Note: 20-day moving averages.

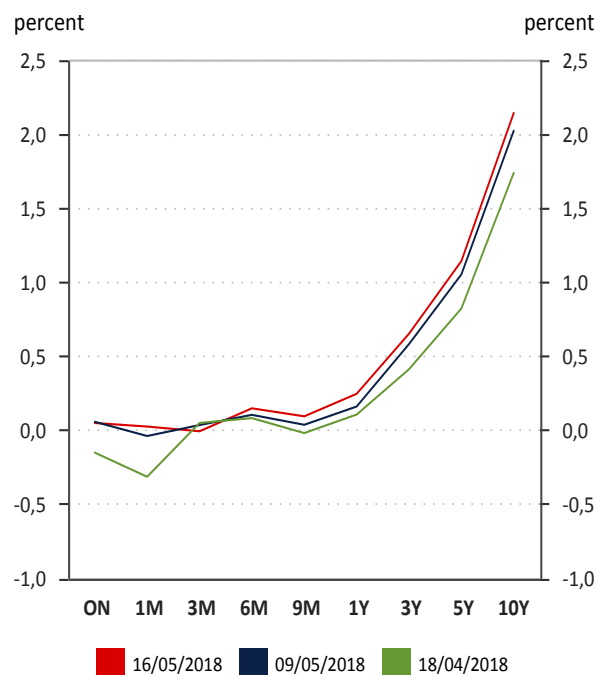
59. Implied HUF rates on FX-swap market



Source: MNB, Thomson Reuters

Note: implied HUF yields based on trades in case of O/N maturity and based on USD/HUF FX-swap quotes provided by Thomson Reuters in the cases of 6-month maturity.

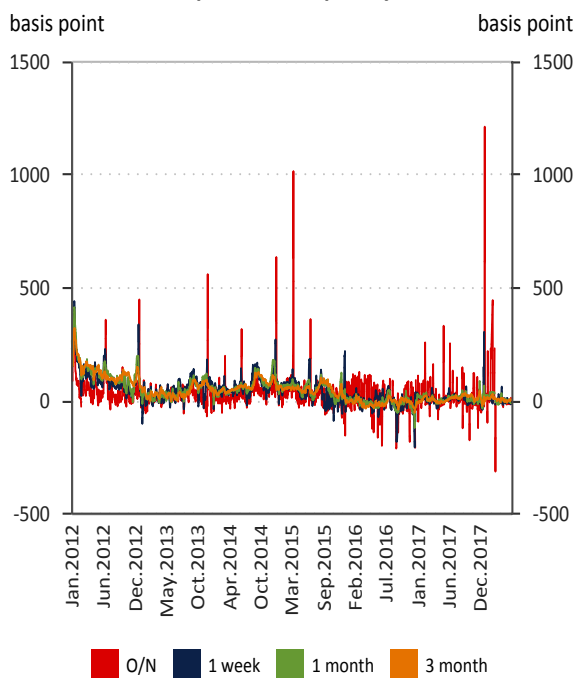
60. Implied yield curve on FX-swap markets



Source: MNB, Thomson Reuters.

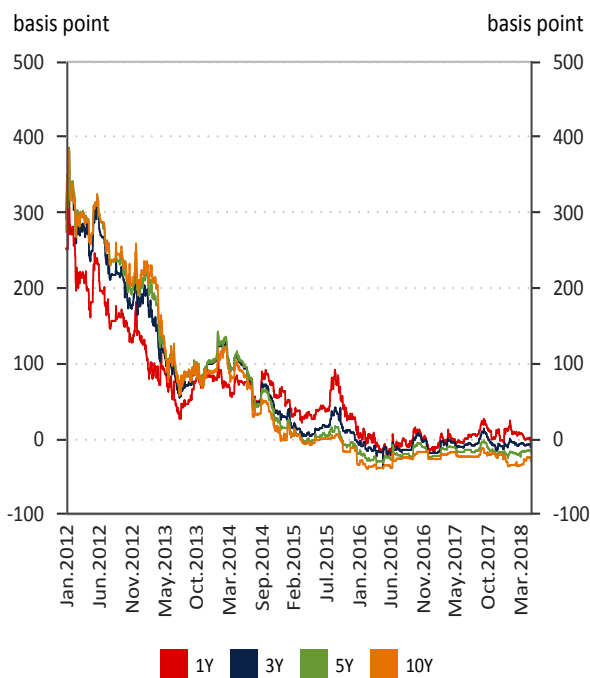
Notes: Based on USD/HUF swap quotes.

61. Difference between short-term interbank yields and FX-swap market implied yields



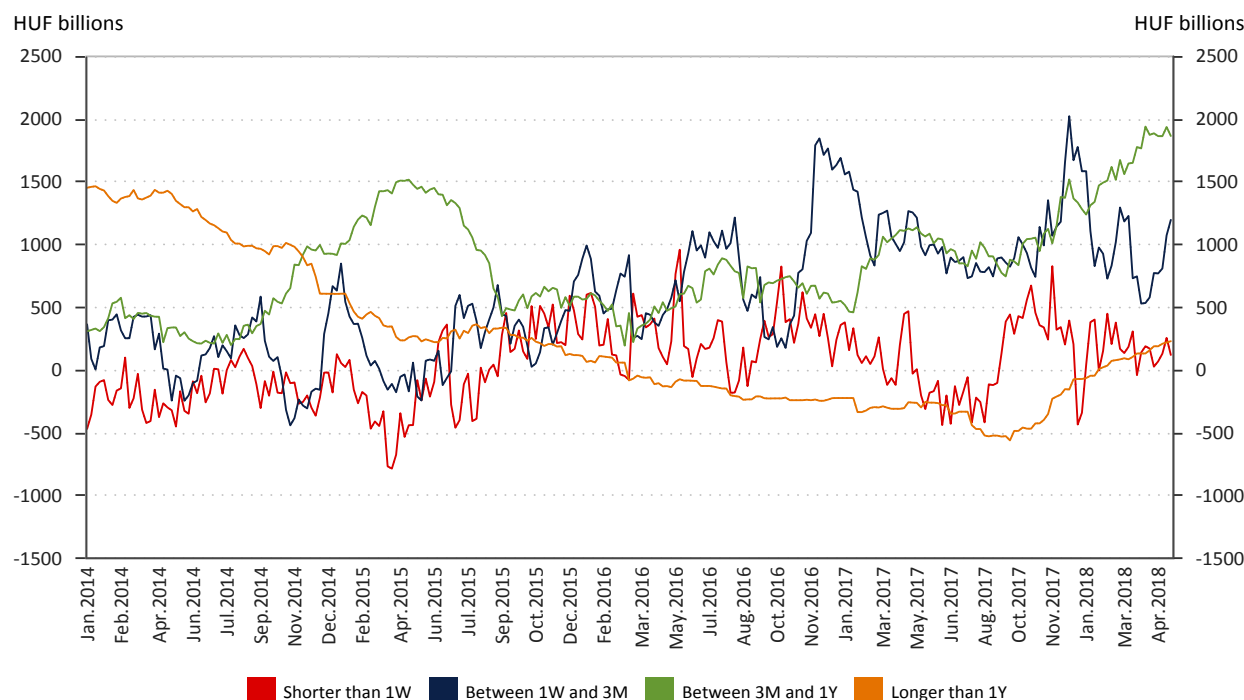
Source: Thomson Reuters.

62. Development of the EUR/HUF basis swap spread

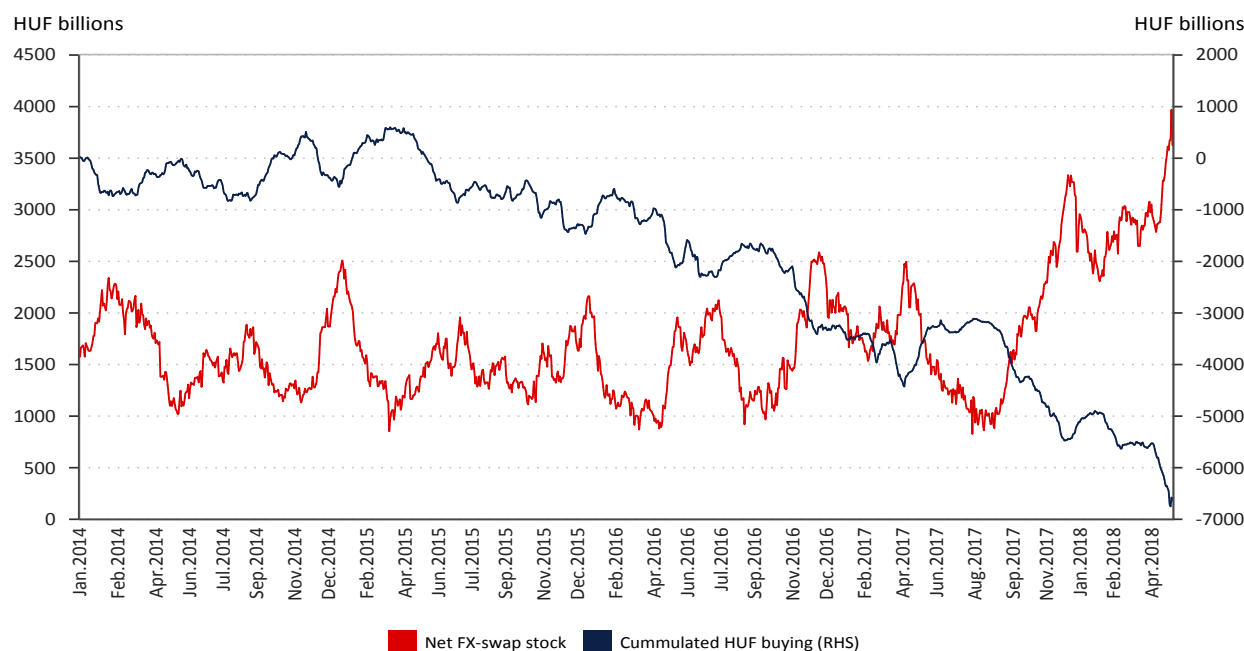


Source: Bloomberg.

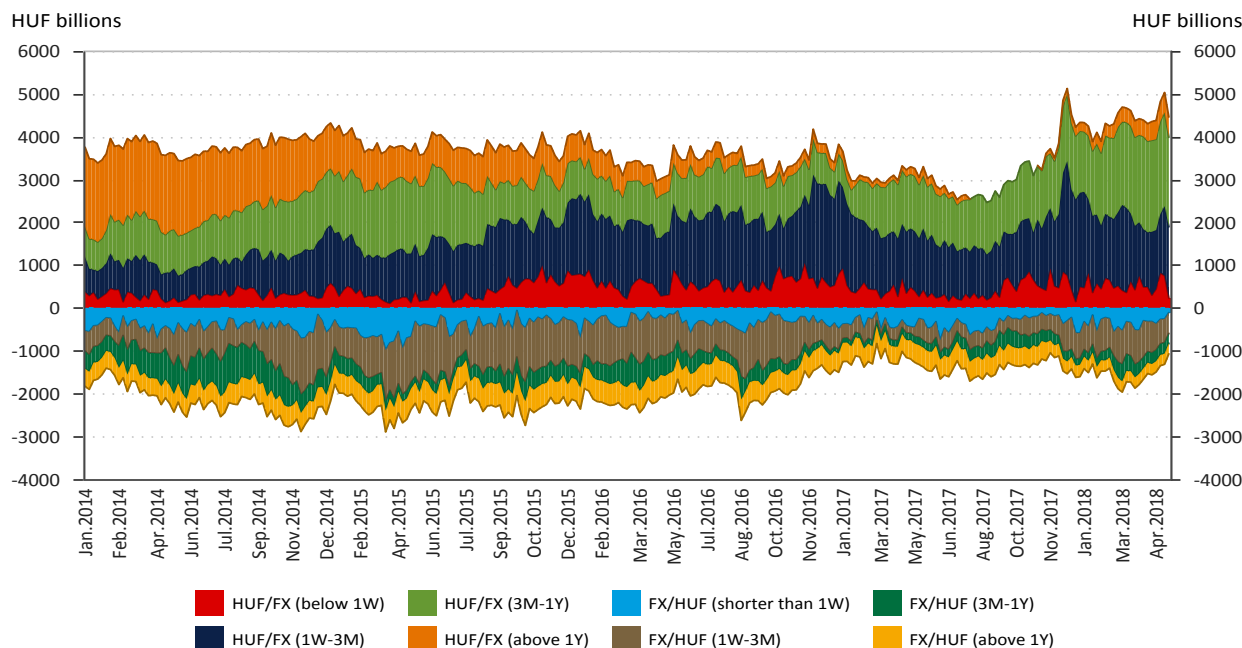
63. Net FX-swap stock of non-residents by maturity



64. Forint FX-swap stock and cumulated HUF purchase of non-residents



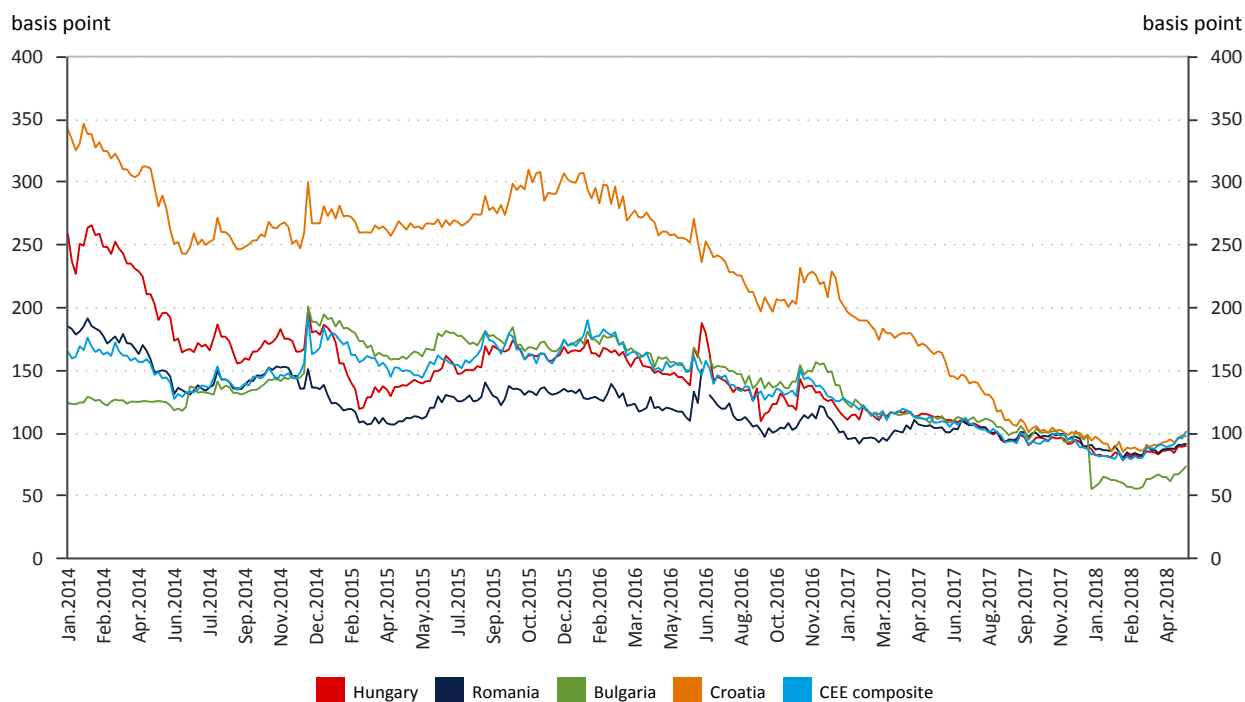
65. Gross FX-swap stocks of foreign investors by maturity



Source: MNB

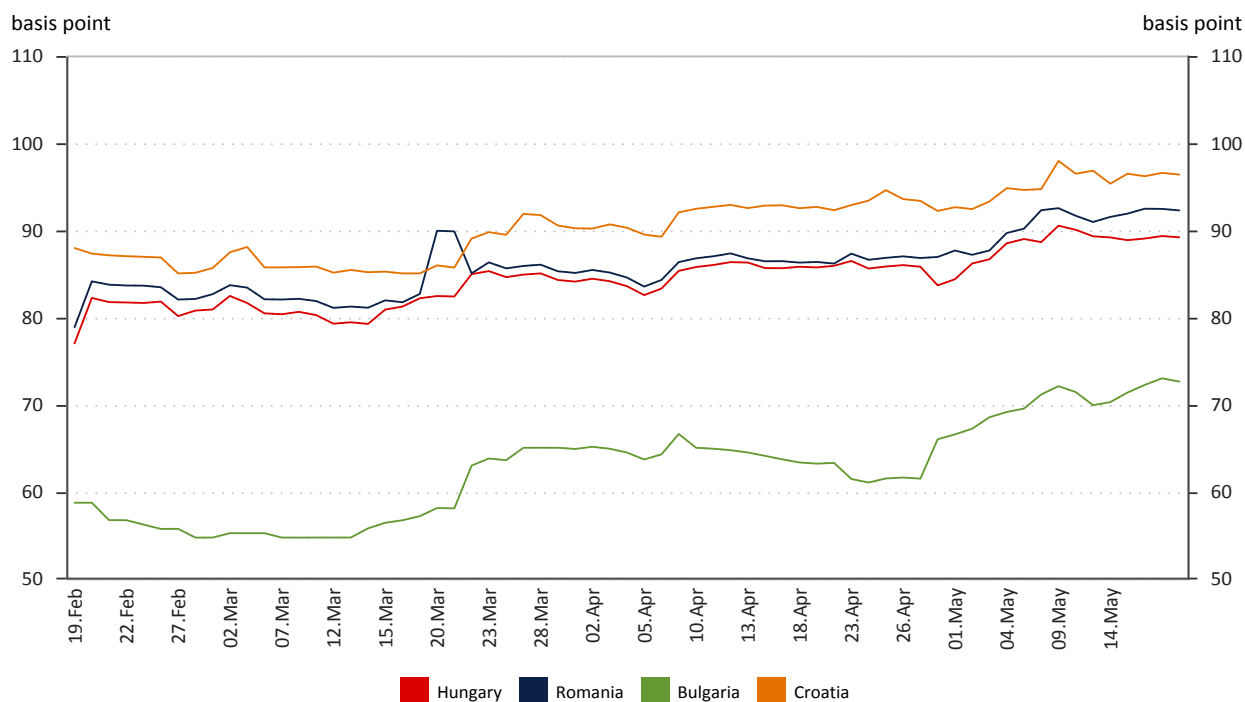
Note: due to the nature of daily reports by banks on FX transactions, the components of the FX transactions statistic do not close to zero. As a result, the information contained in the data series on net forint purchase of non-resident investors - and its components - is relevant mainly to evaluate the direction of short-term fluctuations. An increase in the swap stock stands for swaps with a long forint spot leg. Based on the daily fx-reports of credit institutions. Calculated from swap transactions between credit institutions and non-resident investors. The MNB does not hold responsibility for the accuracy of the data. Revisions due to reporting errors and non-standard transactions might lead to significant subsequent modifications of the data series.

66. 5 year sovereign CDS spreads in CEE



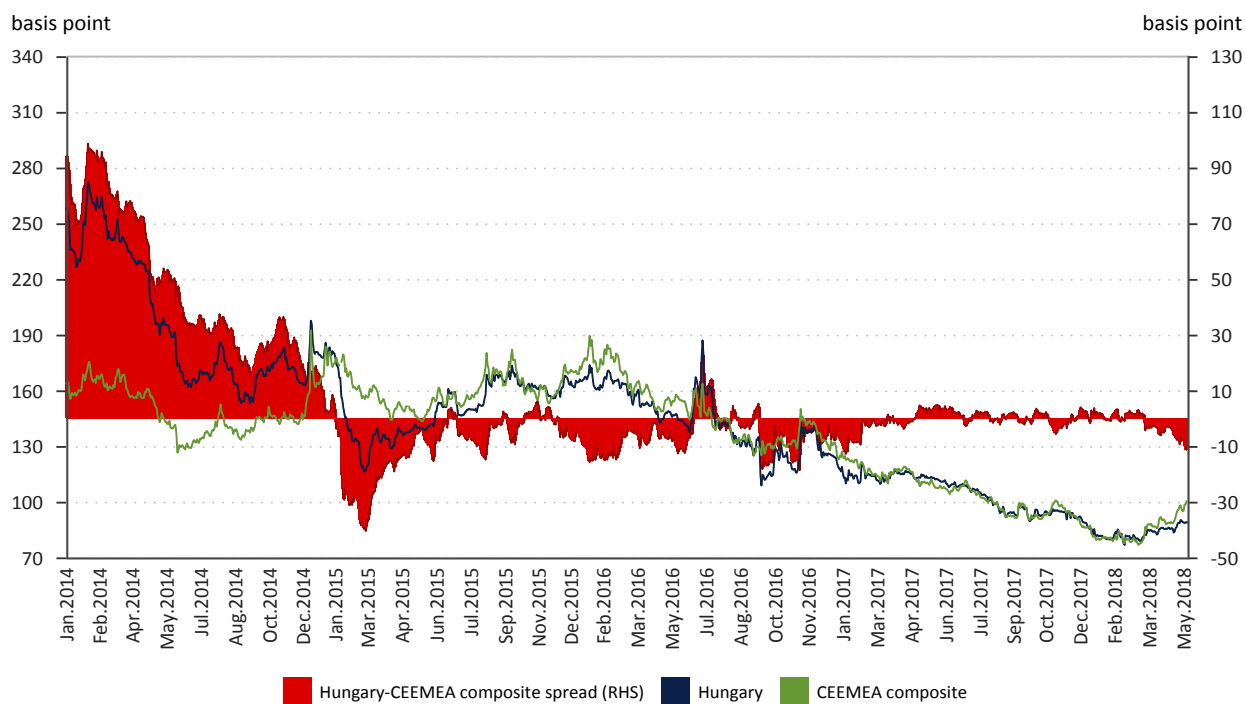
Source: Thomson Reuters.

67. 5 year sovereign CDS spreads in emerging markets (last month)



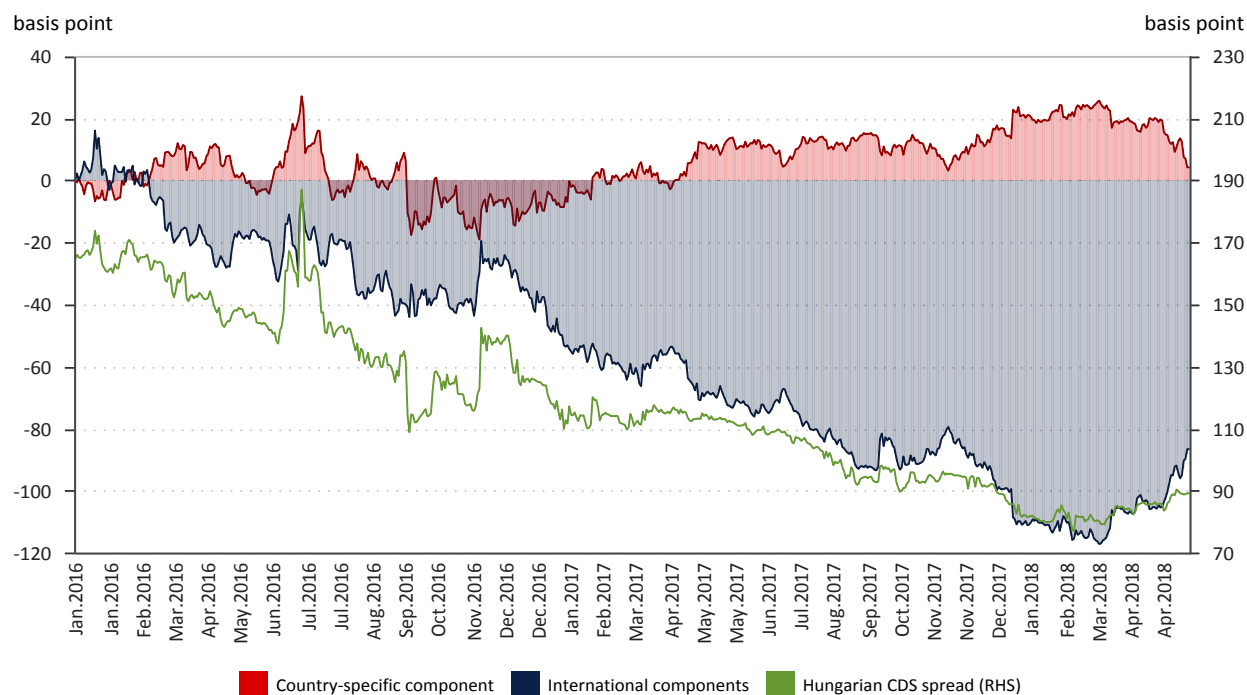
Source: Thomson Reuters

68. 5 year sovereign CDS spread in Hungary versus CEEMEA composite index



Source: Thomson Reuters.

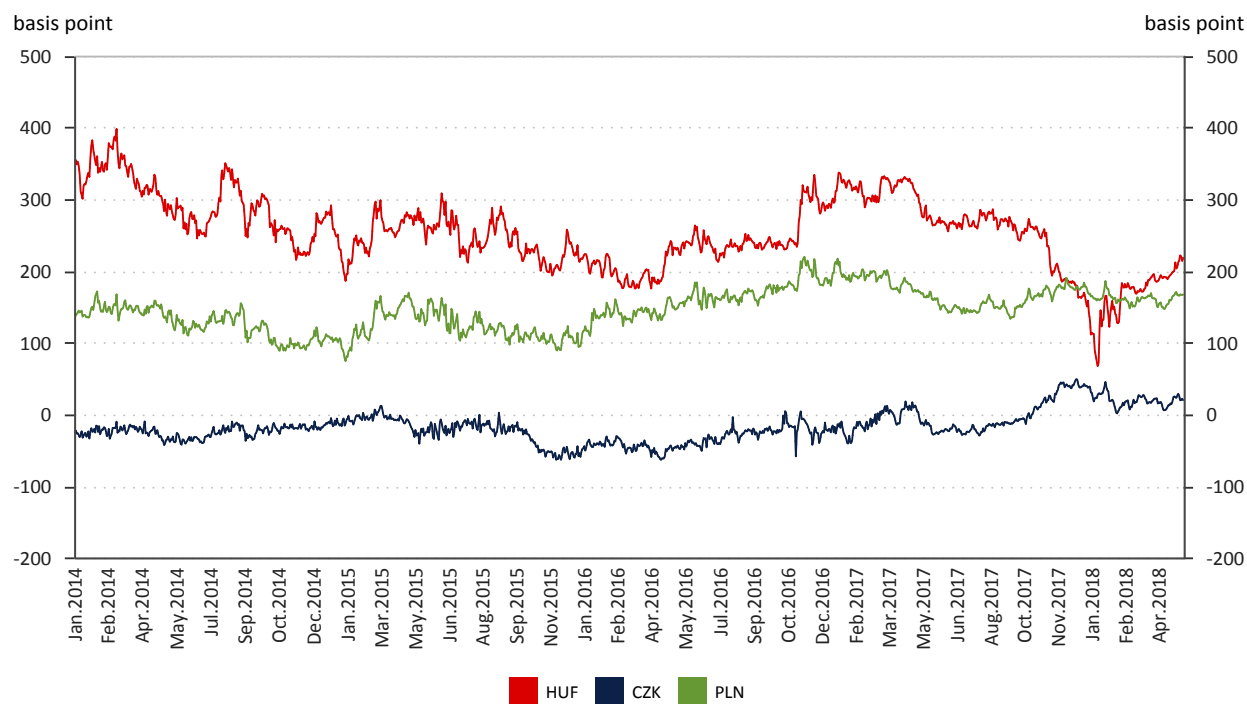
69. Components of Hungarian 5 year sovereign CDS



Source: Bloomberg

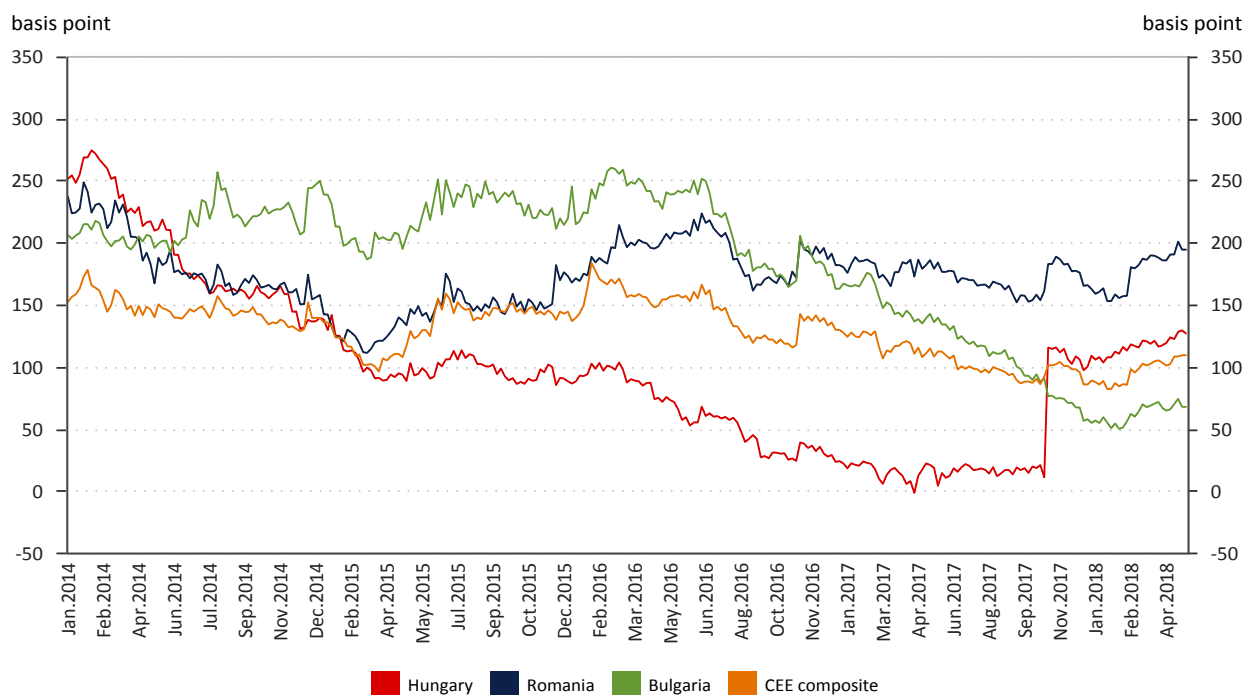
Note: based on factor analysis on daily CDS spread changes. Cumulated series. Increases/decreases of component time series denote contributions to CDS spread increases/decreases.

70. 5 year implied spreads over euro rates in 5 year time



Note: Based on swap rates by Reuters

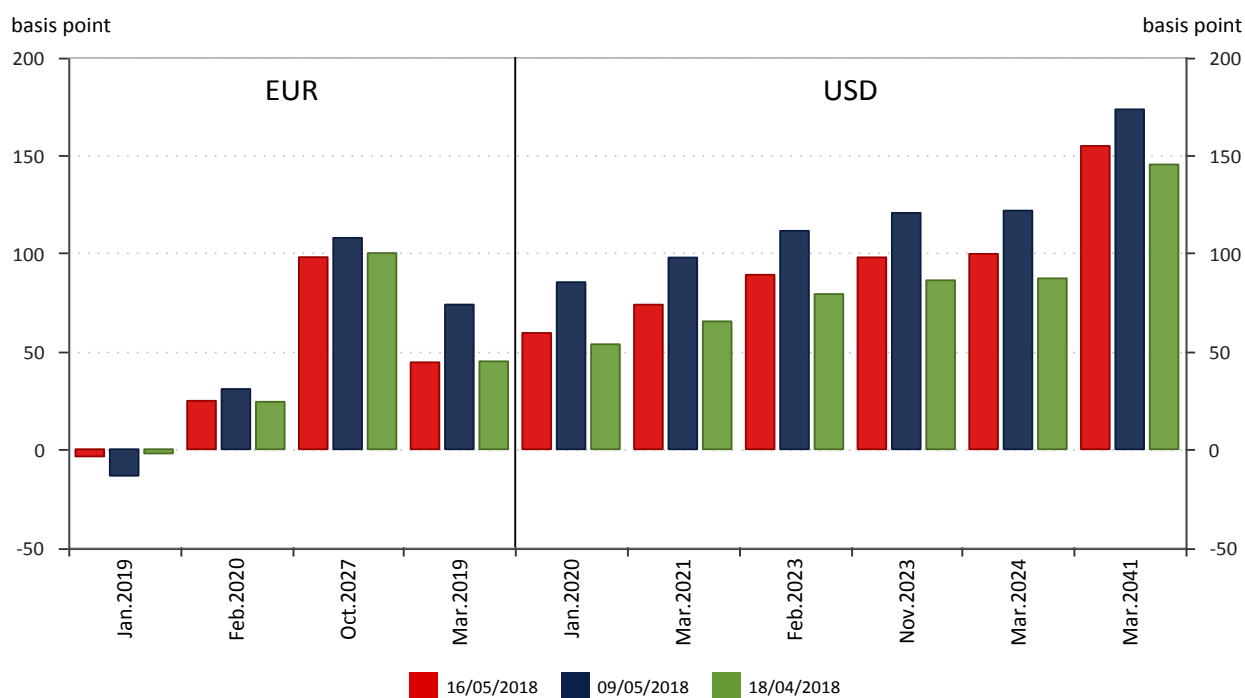
71. Emerging markets FX denominated government bond spreads



Source: Thomson Datastream.

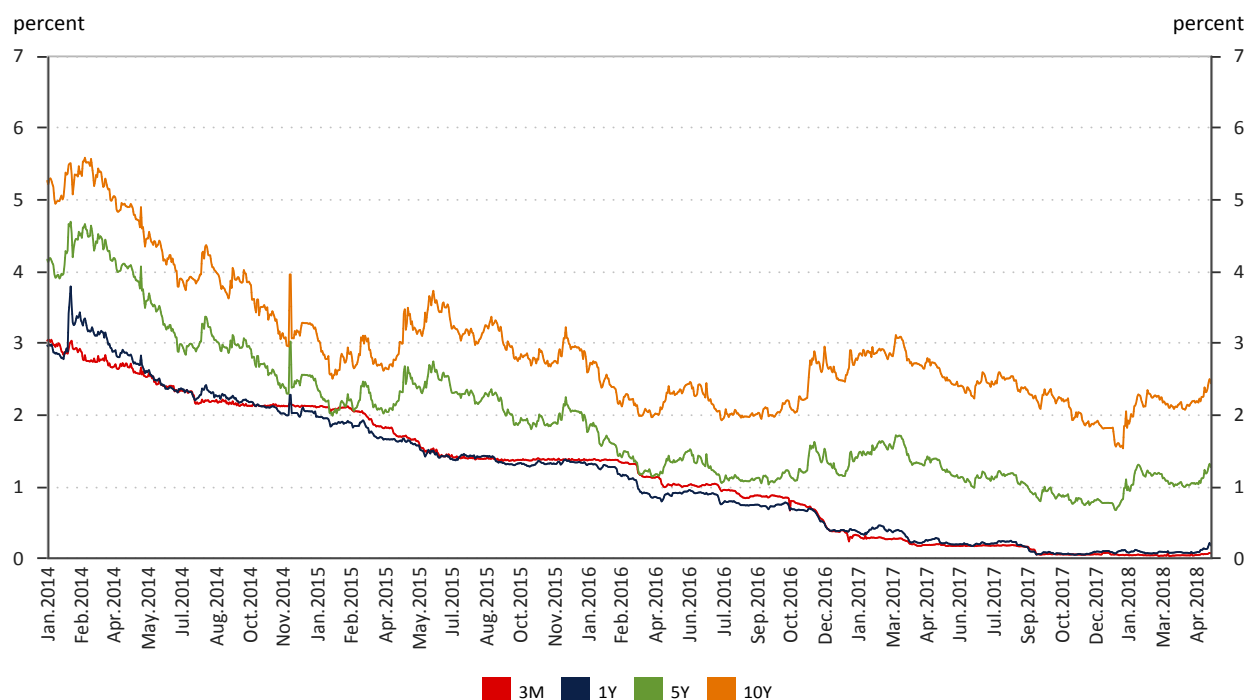
Notes: calculated from JP Morgan Euro EMBI data. The series are differences between euro denominated (liquid) foreign currency bond yields and euro zero coupon yields of the corresponding maturities. Different durations may result in significant difference in the level of spreads.

72. Domestic FX-government bond

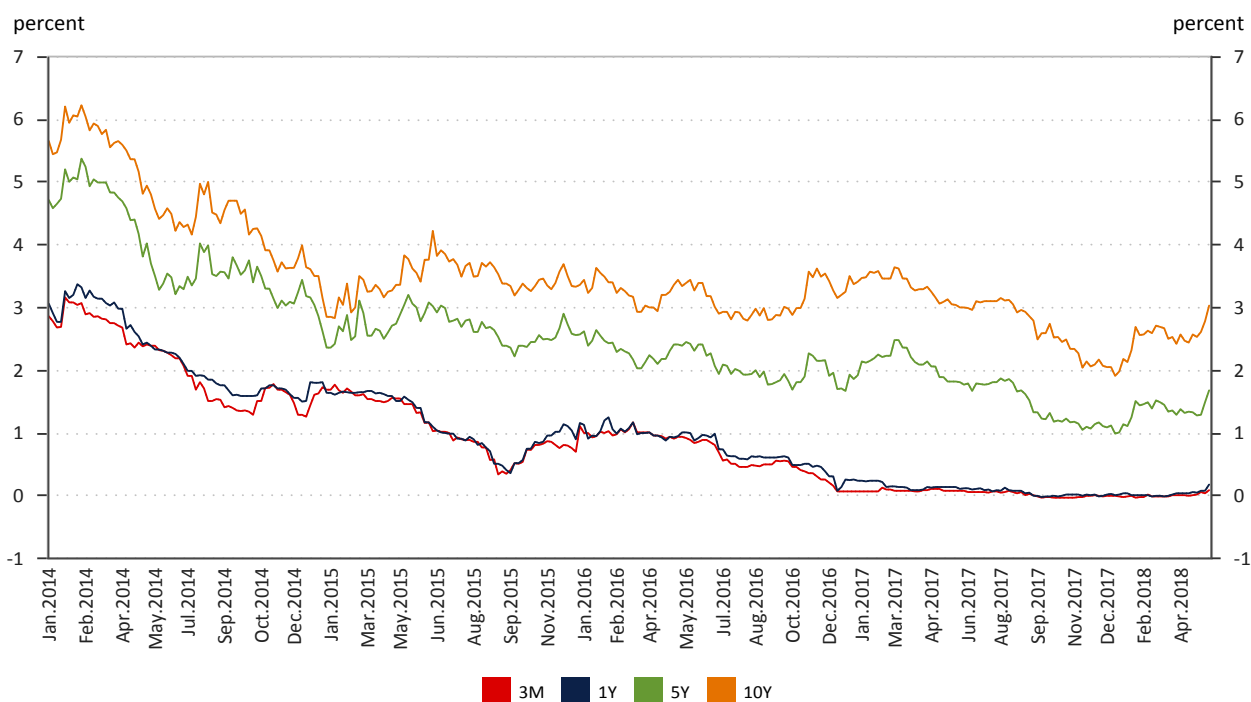


Source: Bloomberg.

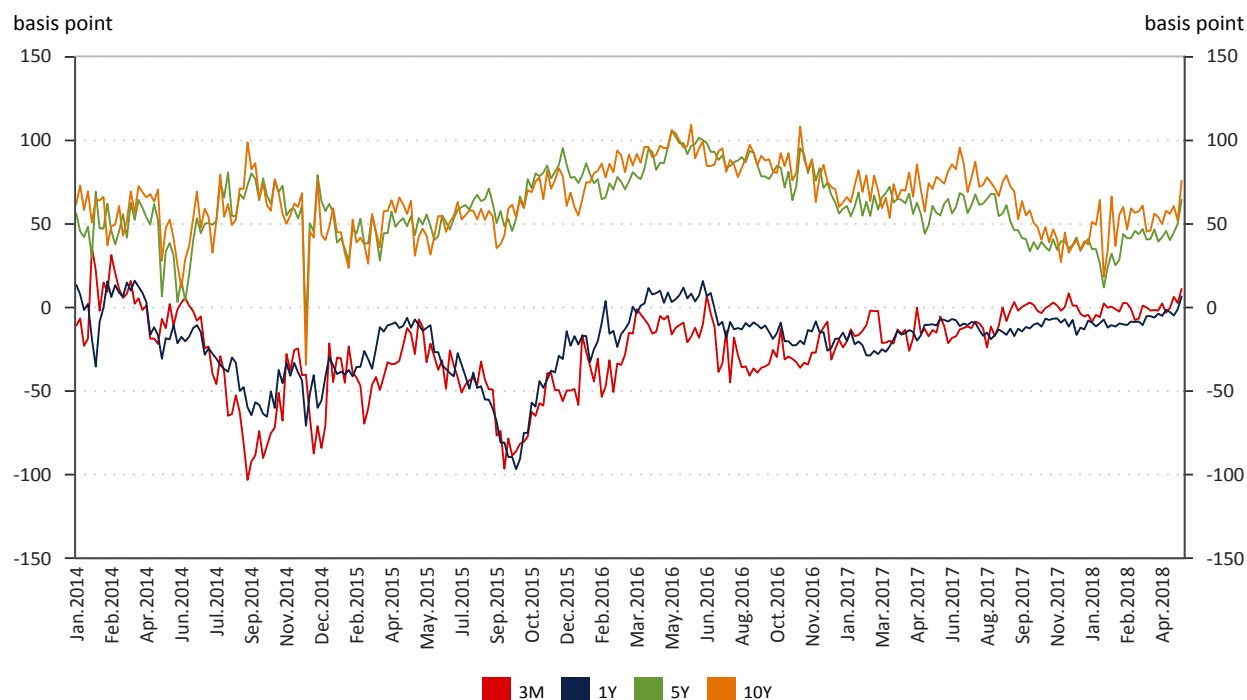
Notes: Spread between EUR and USD denominated FX-bonds and the equivalent US T-bond or euro yields chosen by Bloomberg. We present bonds grouped by currency in order of maturity.

73. Interbank yields

Source: Thomson Reuters

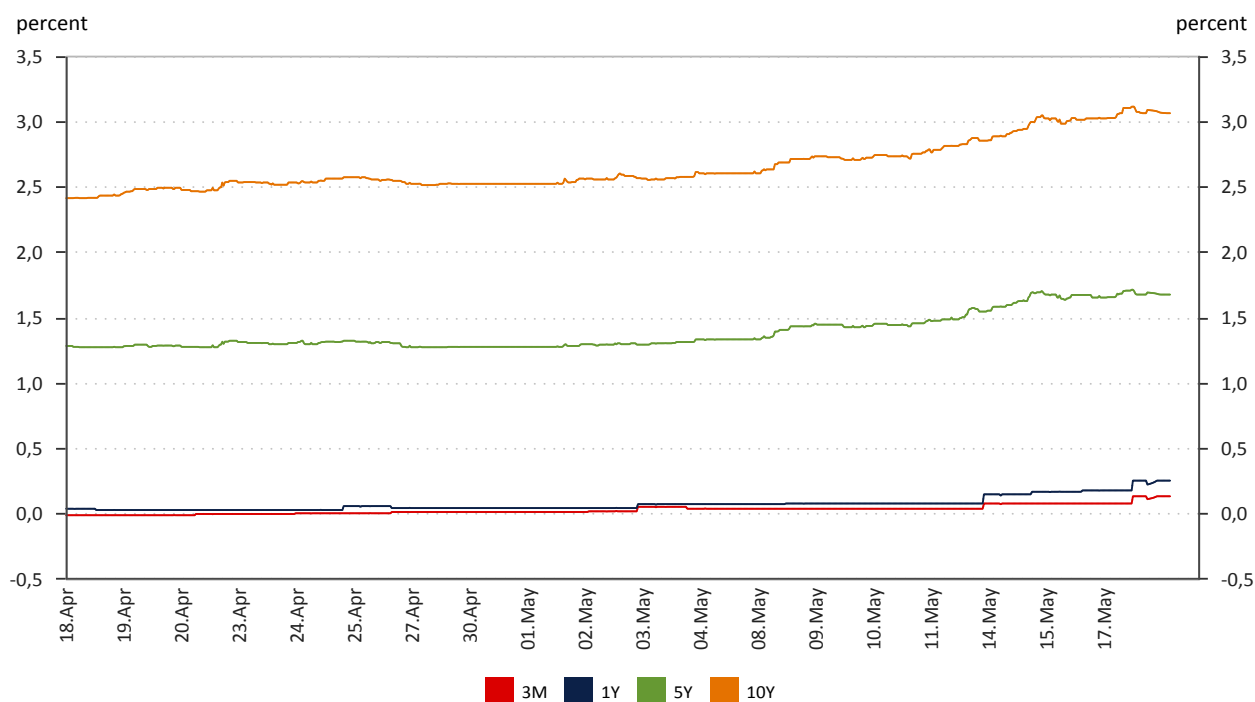
74. Yields of benchmark government securities

Source: Thomson Reuters.

75. Government securities - interbank yield spreads

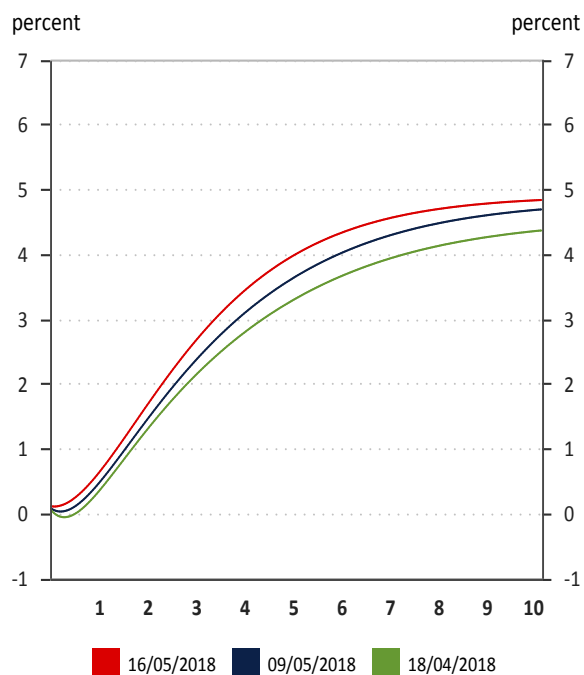
Source: Thomson Reuters

Note: Spread between the benchmark government bond yield of the given maturity and the interbank rates.

76. Yields of benchmark government securities (last month)

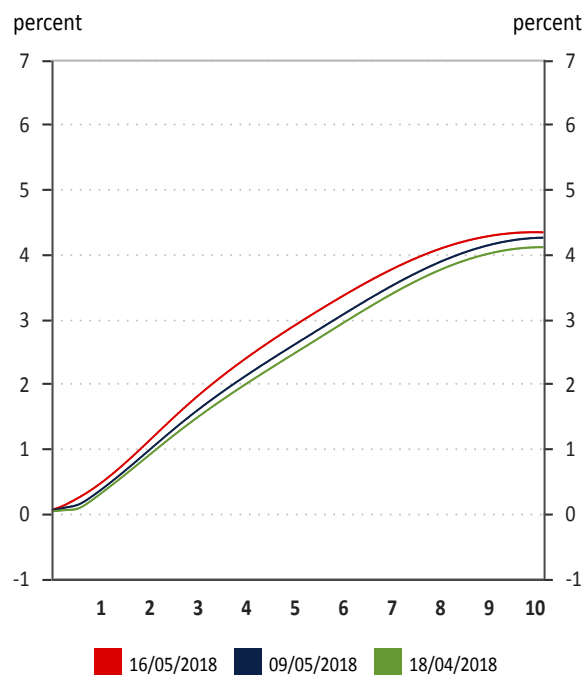
Source: Thomson Reuters.

**77. Implied 3 month forward interest rate yield curve
(based on government securities yields)**



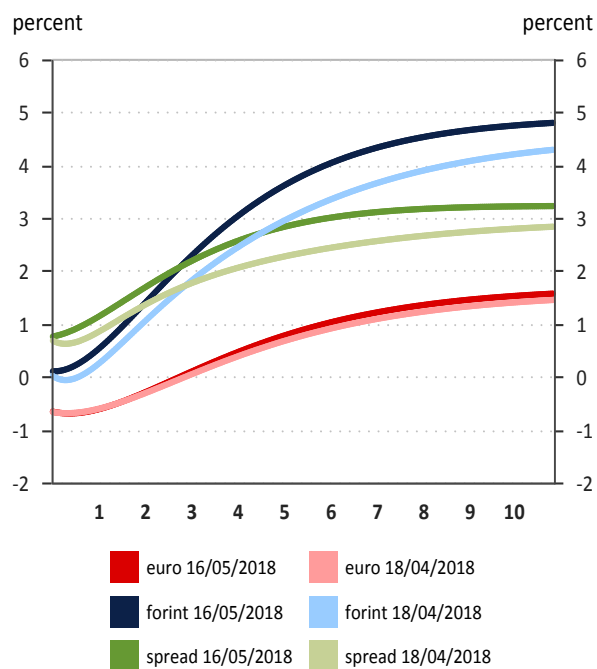
Source: MNB, ÁKK. Note: calculated by Svensson method by MNB. X axis shows maturities, in years.

**78. Implied 3 month forward interest rate yield curve
(based on interbank yields)**



Note: Calculated from FRA-s, and IRS by spline method. X axis shows maturities, in years.

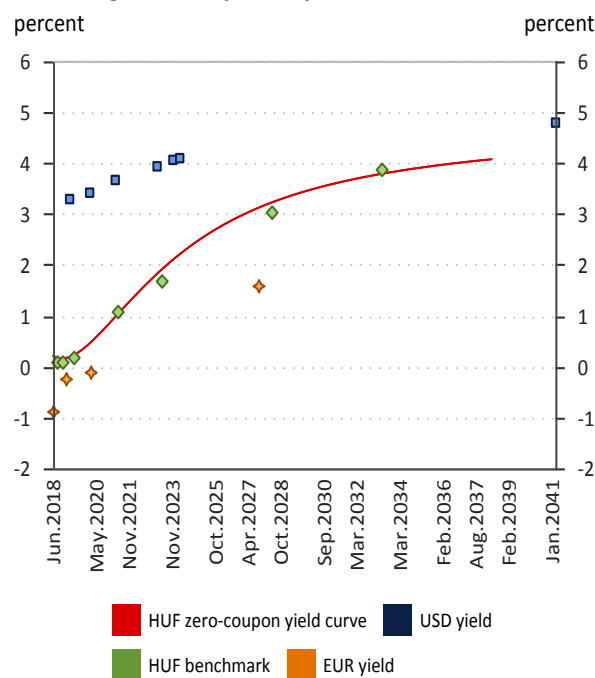
**79. Spread between 3-month forward yields in EUR
and HUF**



Source: Thomson Reuters

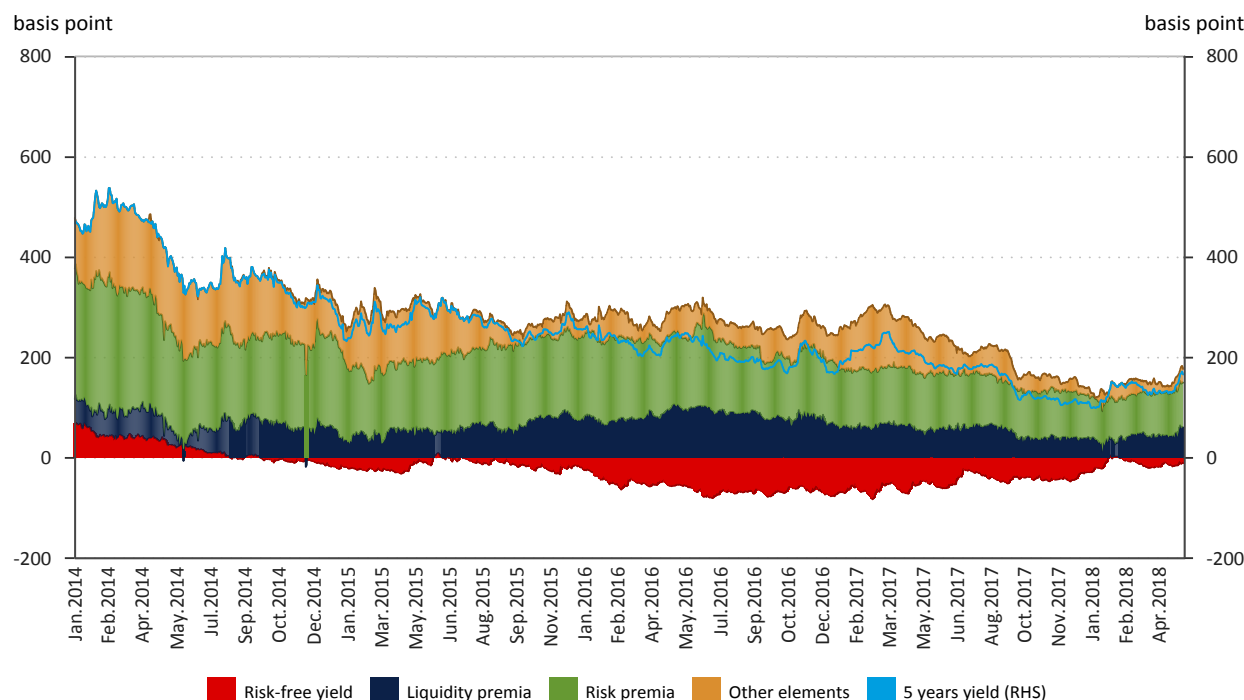
Note: X axis shows maturities, in years. Estimated by the ECB using the Svensson-technique, based on AAA-rated euro area central government bonds.

**80. Hungarian government bond yield curve and
foreign currency bond yields**

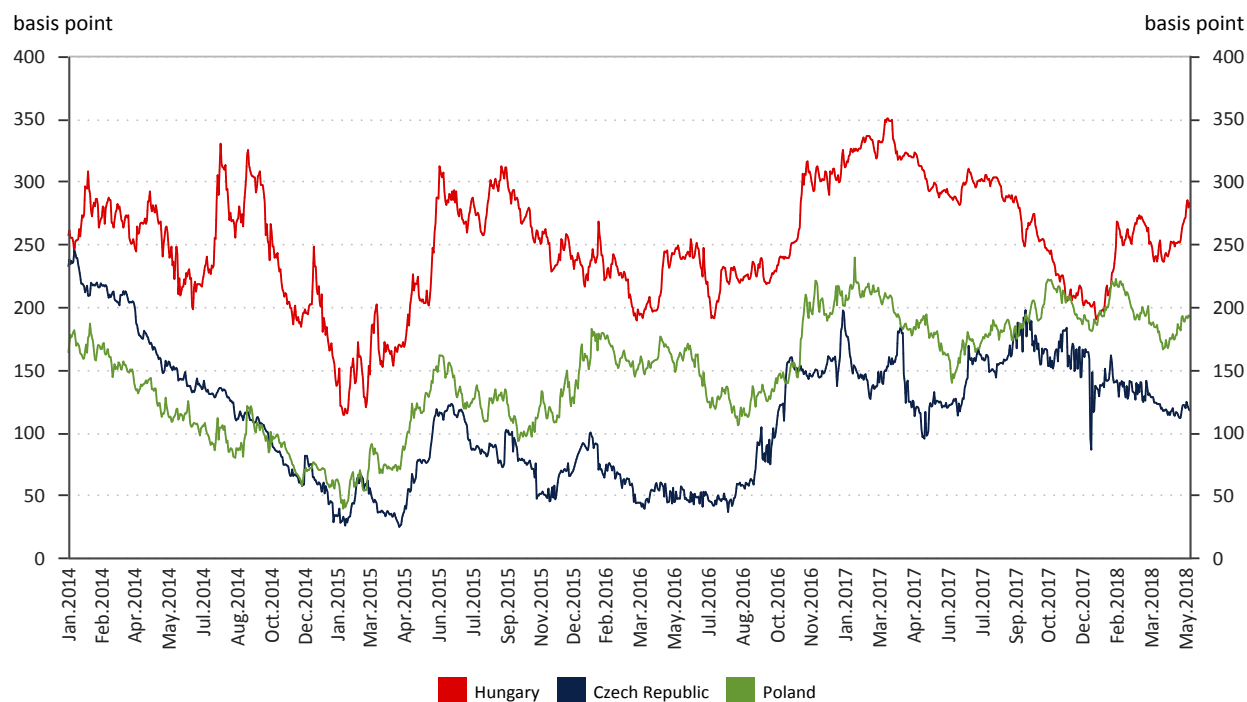


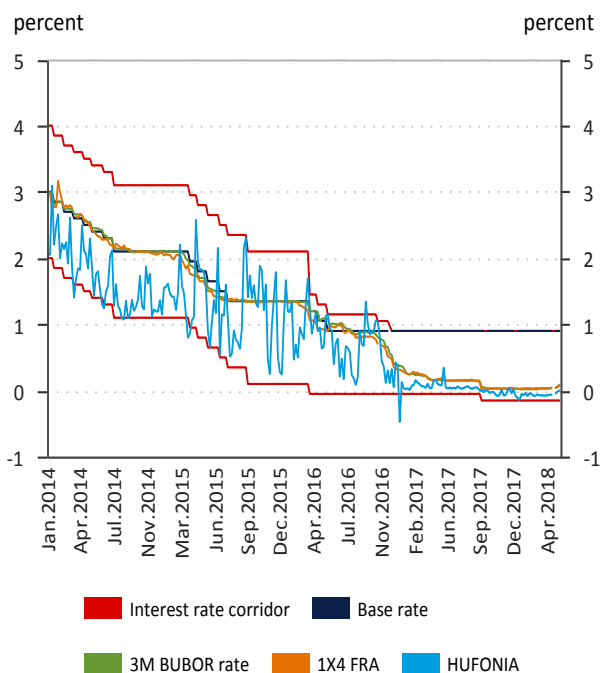
Source: MNB, Bloomberg.

81. Decomposition of 5 year government bond yield

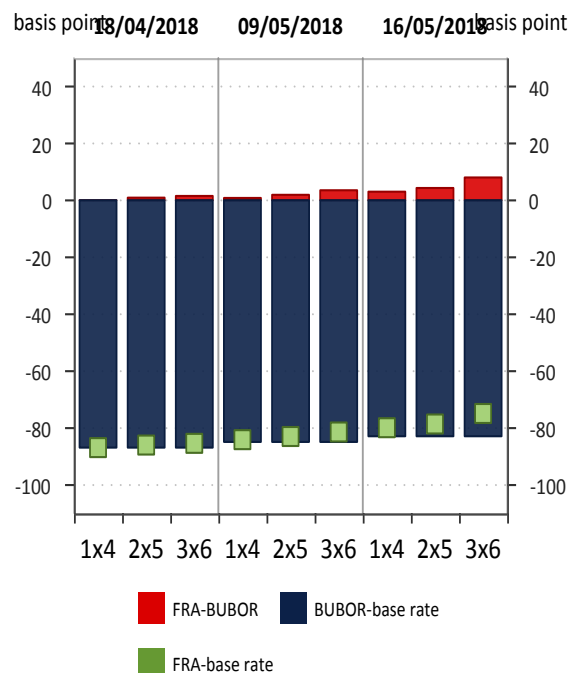


82. Slope of yield curve in CEE

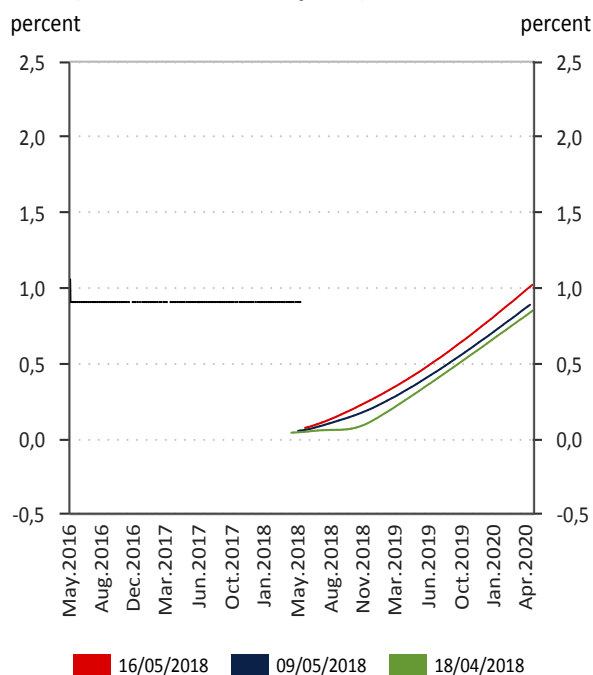


83. MNB base rate and money market rates

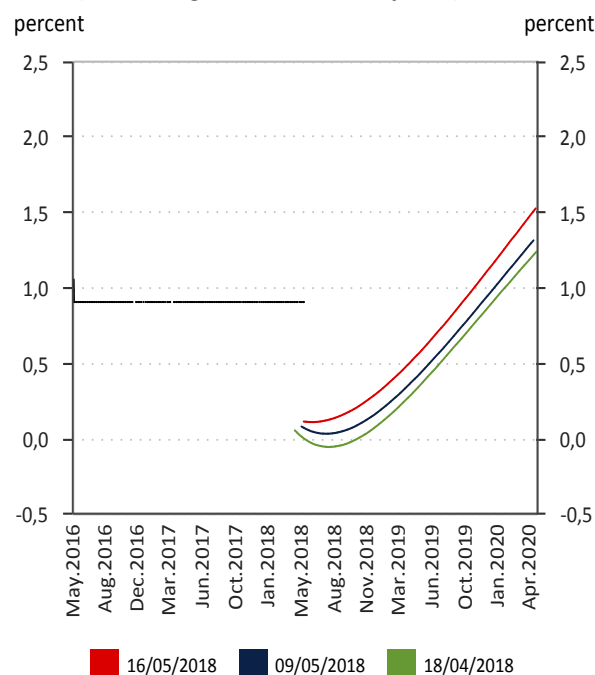
Source: Thomson Reuters, MNB

84. Difference between the 3 month FRA quotes and the current base rate

Source: Thomson Reuters, MNB.

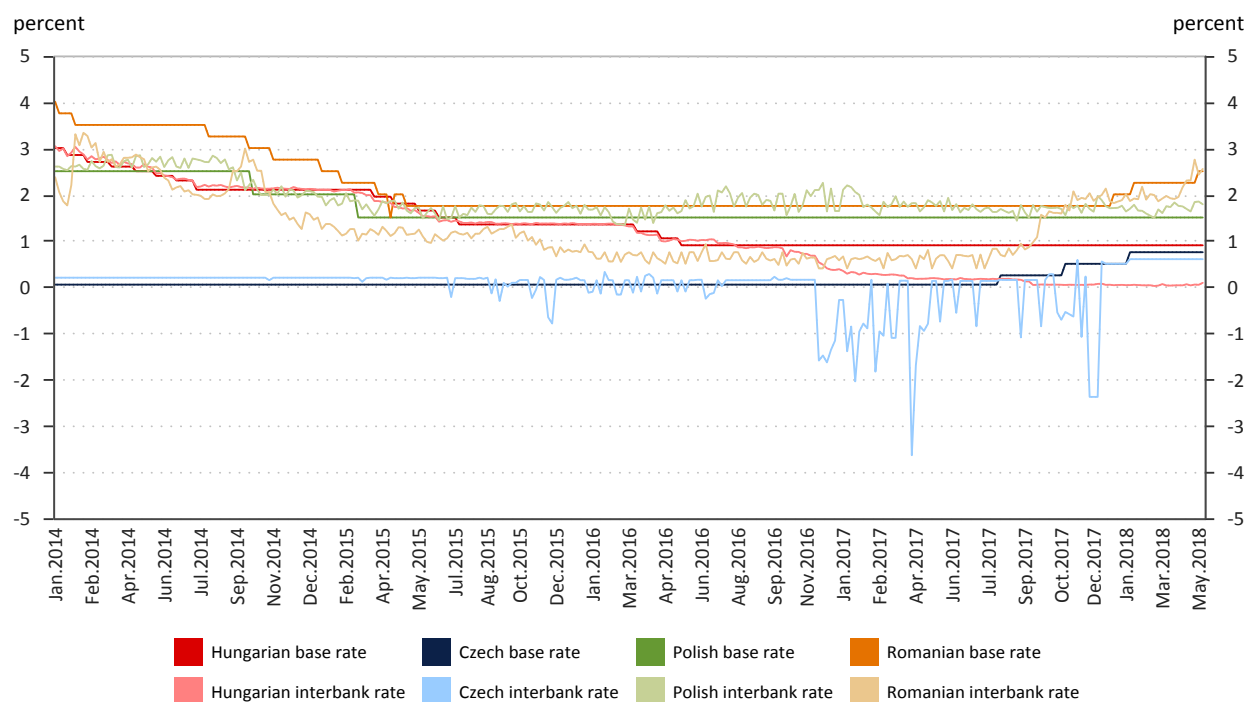
85. Implied 3 month forward interest rate curve (based on interbank yields)

Source: MNB.

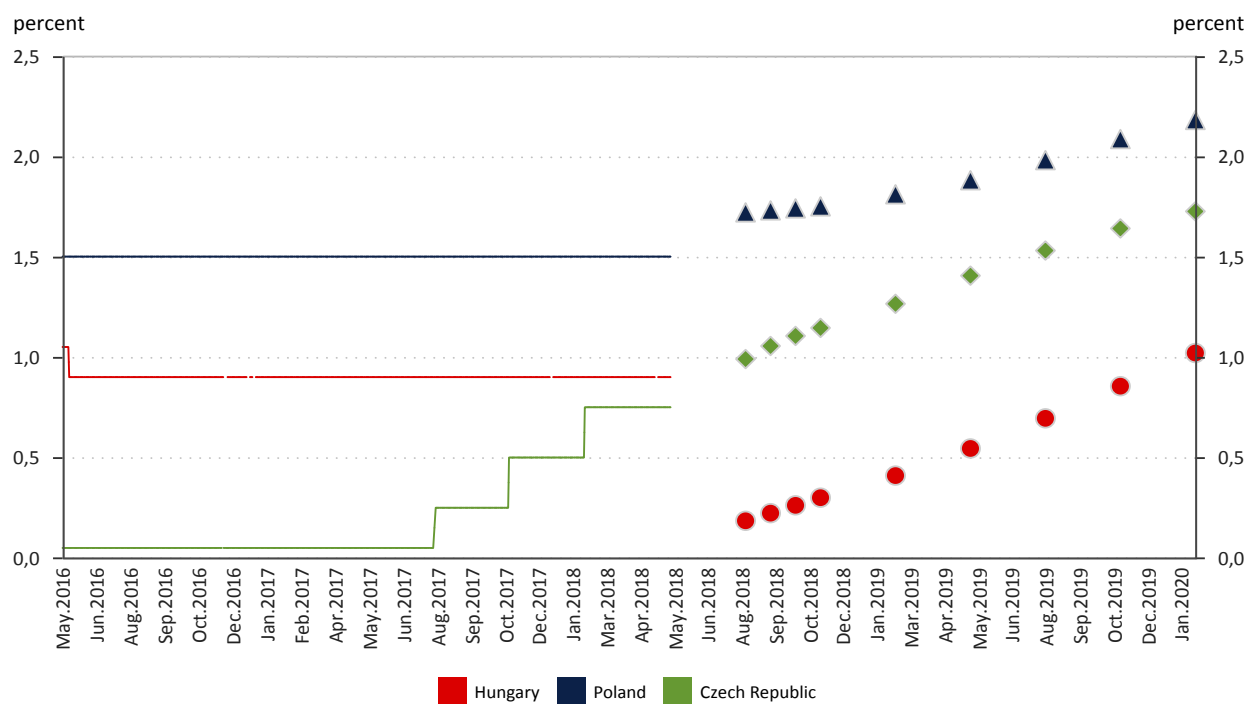
86. Implied 3 month forward interest rate curve (based on government bond yields)

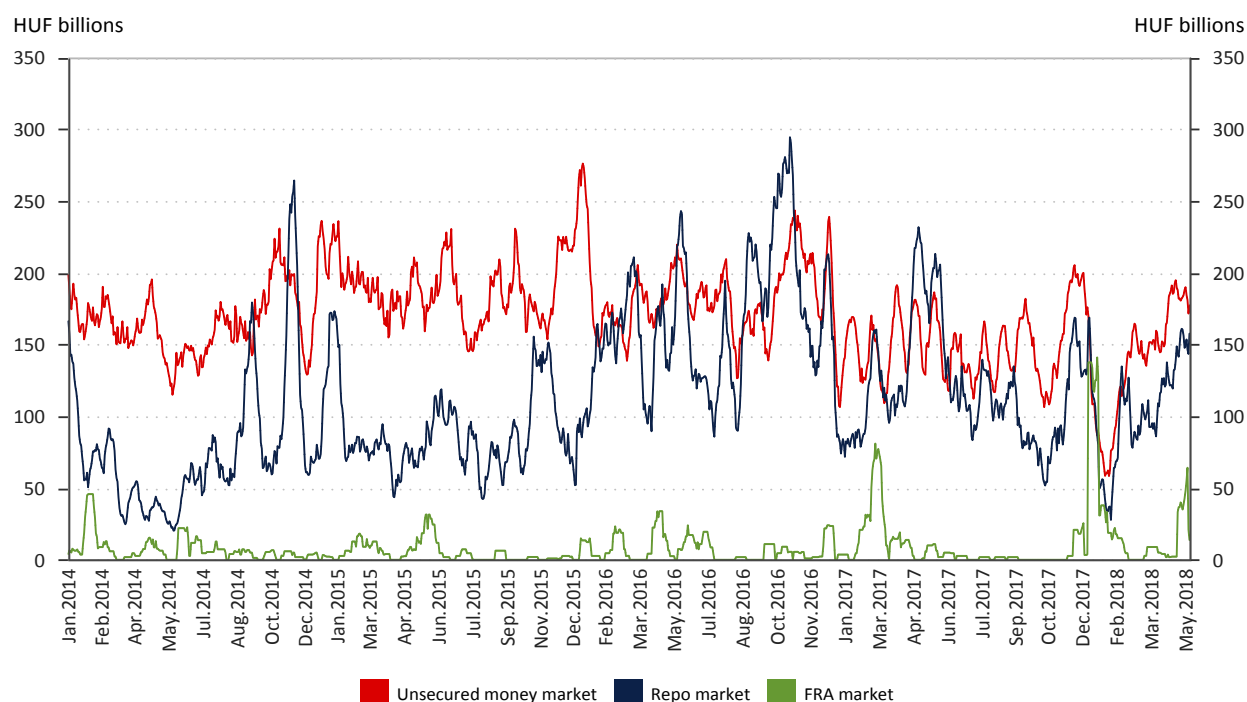
Source: MNB.

87. Base rates and short term interbank rates in the region



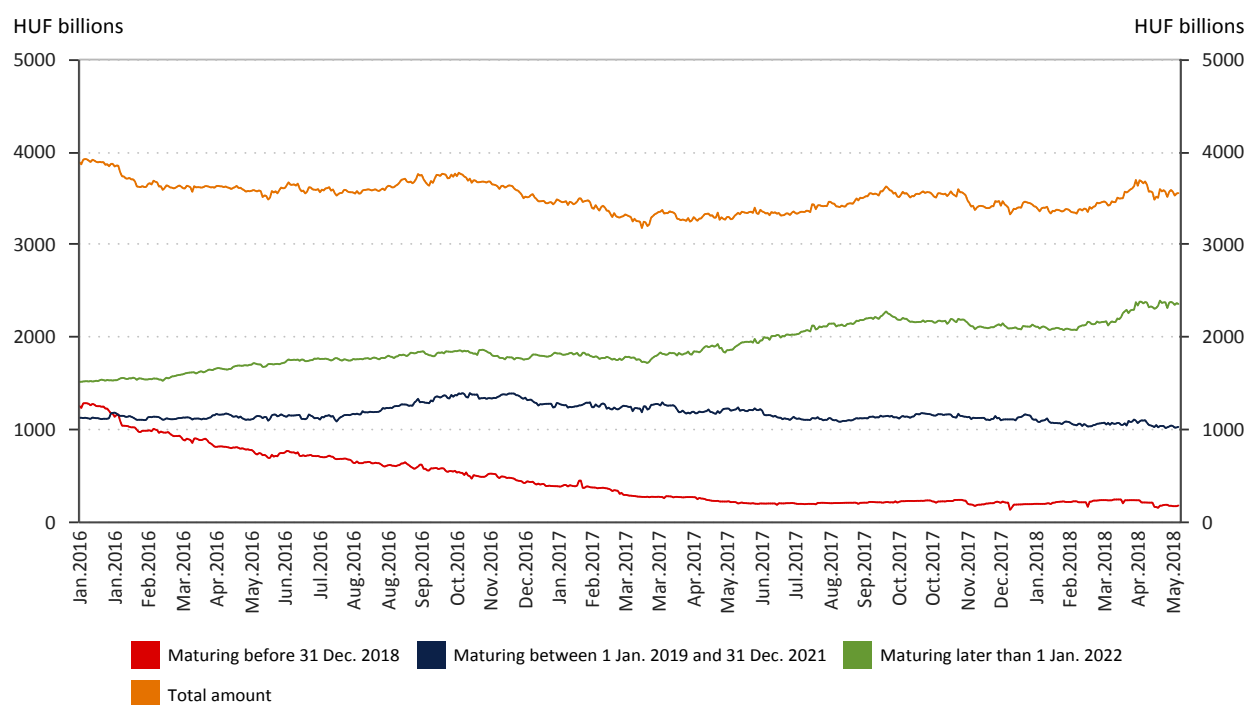
88. CEE base rates and forward rate agreements



89. Turnover on the interbank, HUF repo, and FRA markets (25 day moving average)

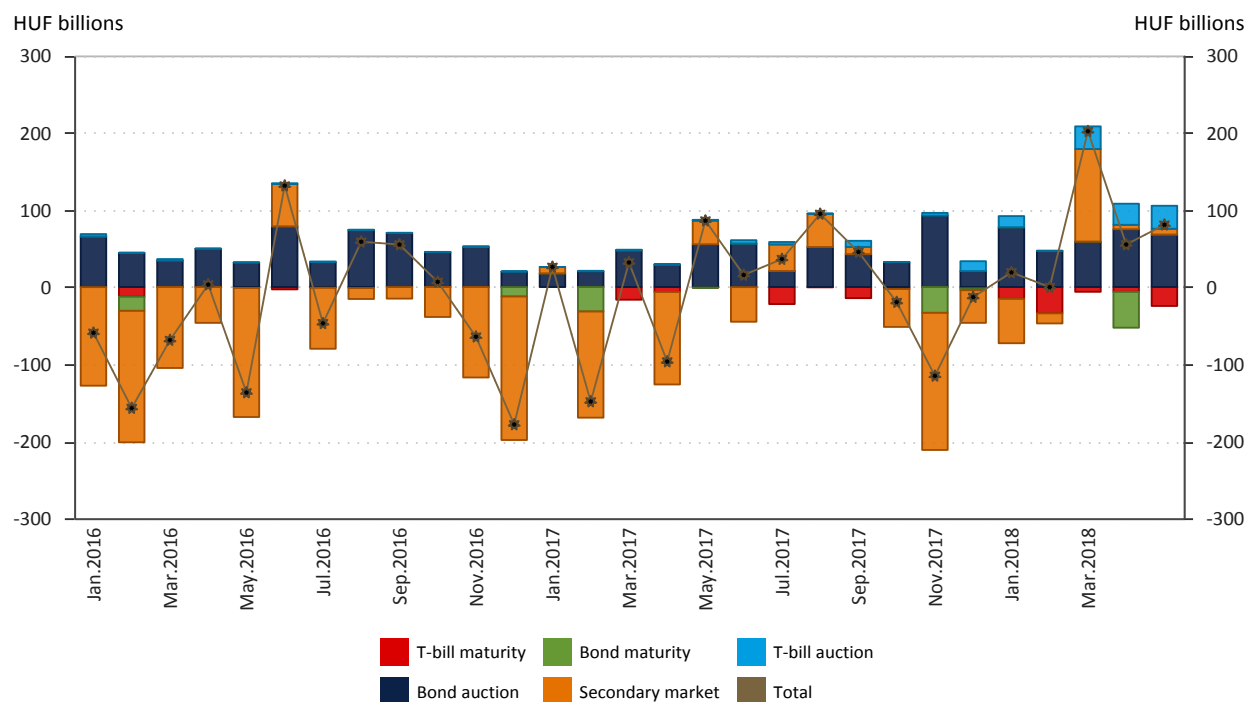
Source: MNB

Note: Based on reporting by domestic banks.

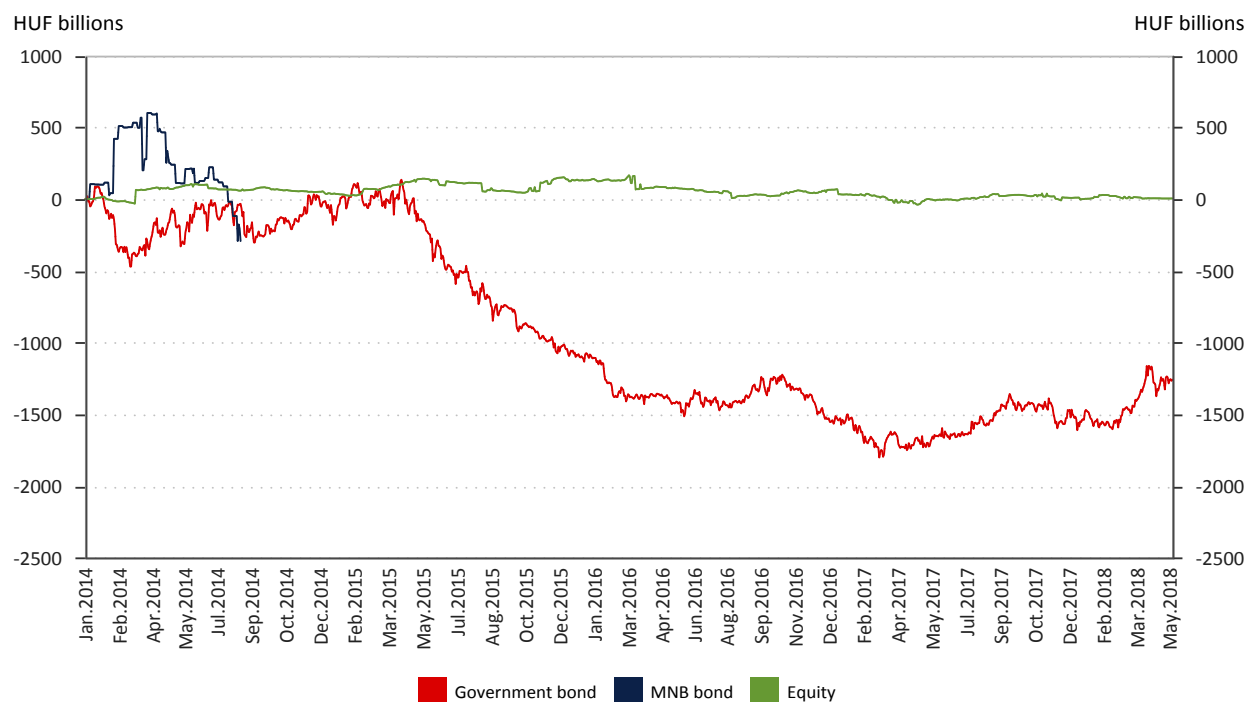
90. Change in government securities of non-residents by tenor

Source: MNB.

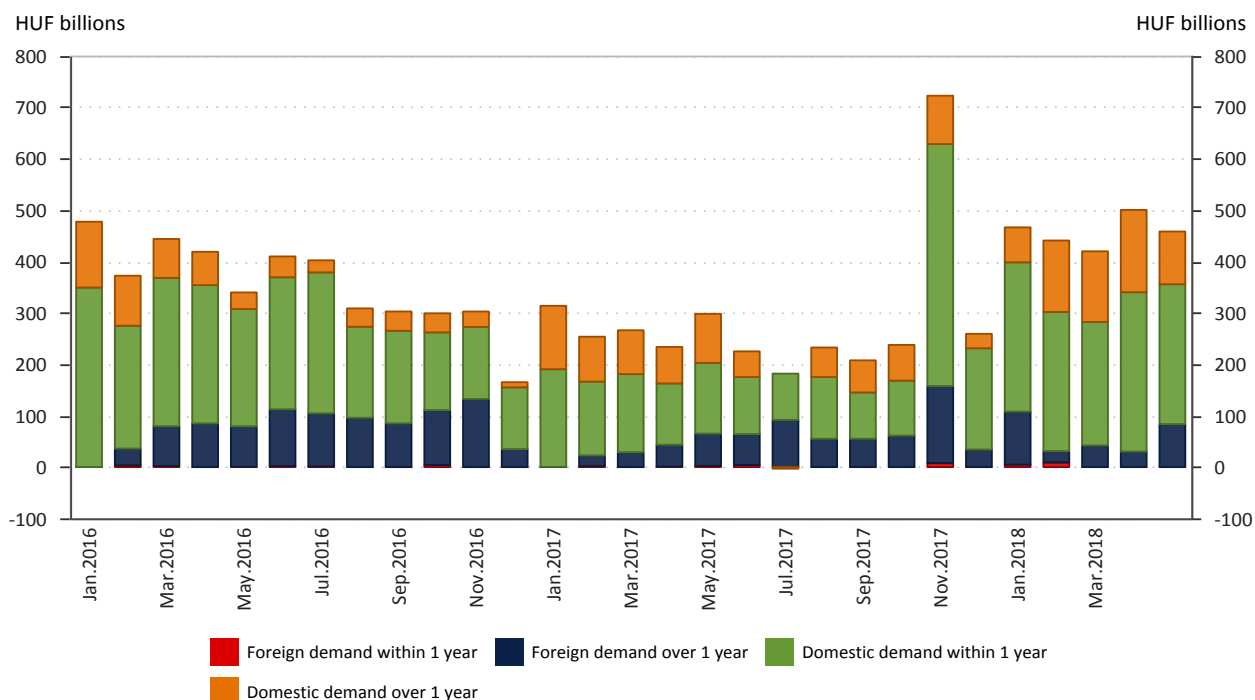
91. Decomposition of change in government securities held by non-residents (last months)



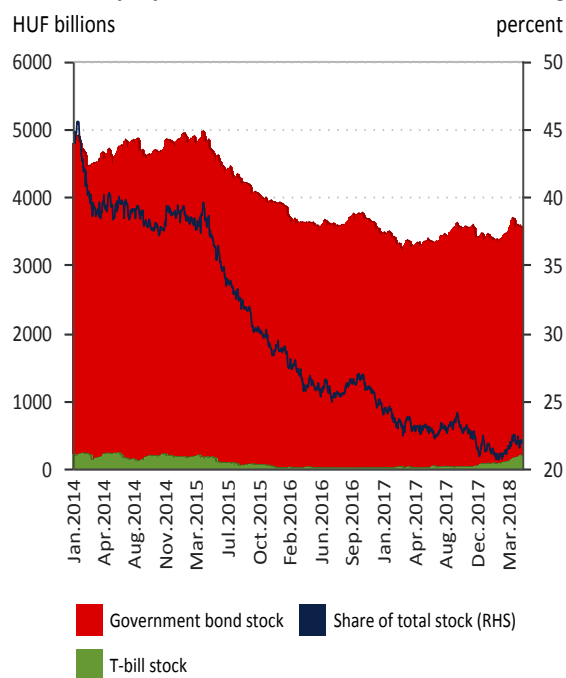
92. Forint financial assets held by non-residents



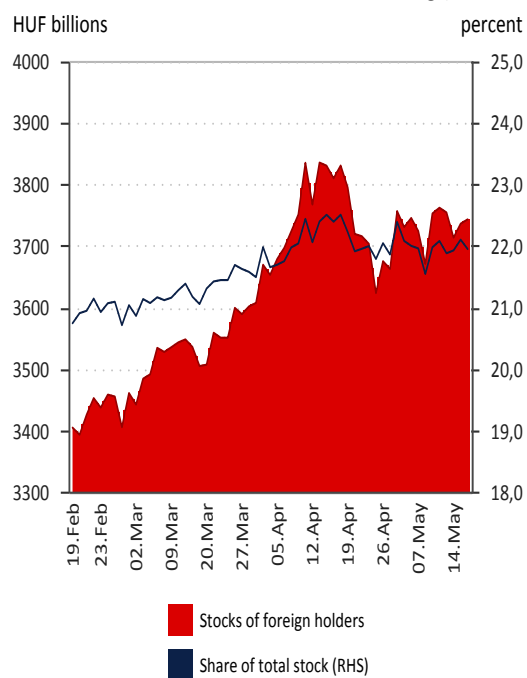
93. Primary market government security purchase of domestic and non-resident investors



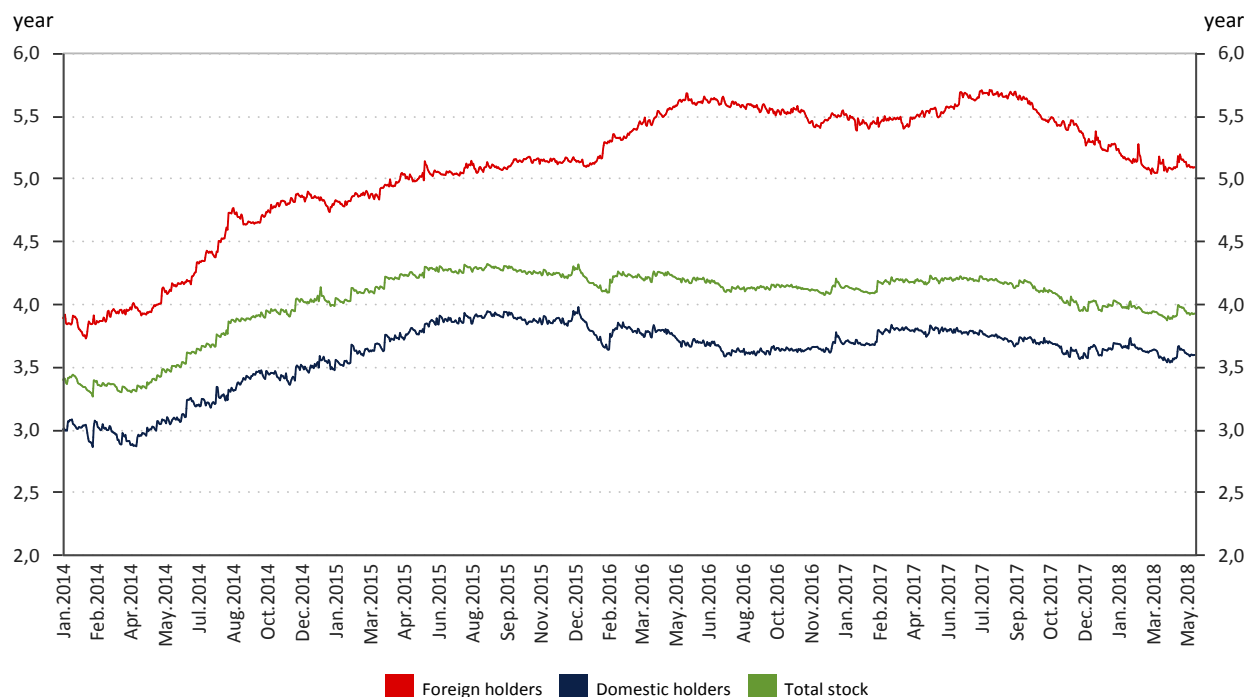
94. Government securities held by non-residents and the proportion to the total amount outstanding



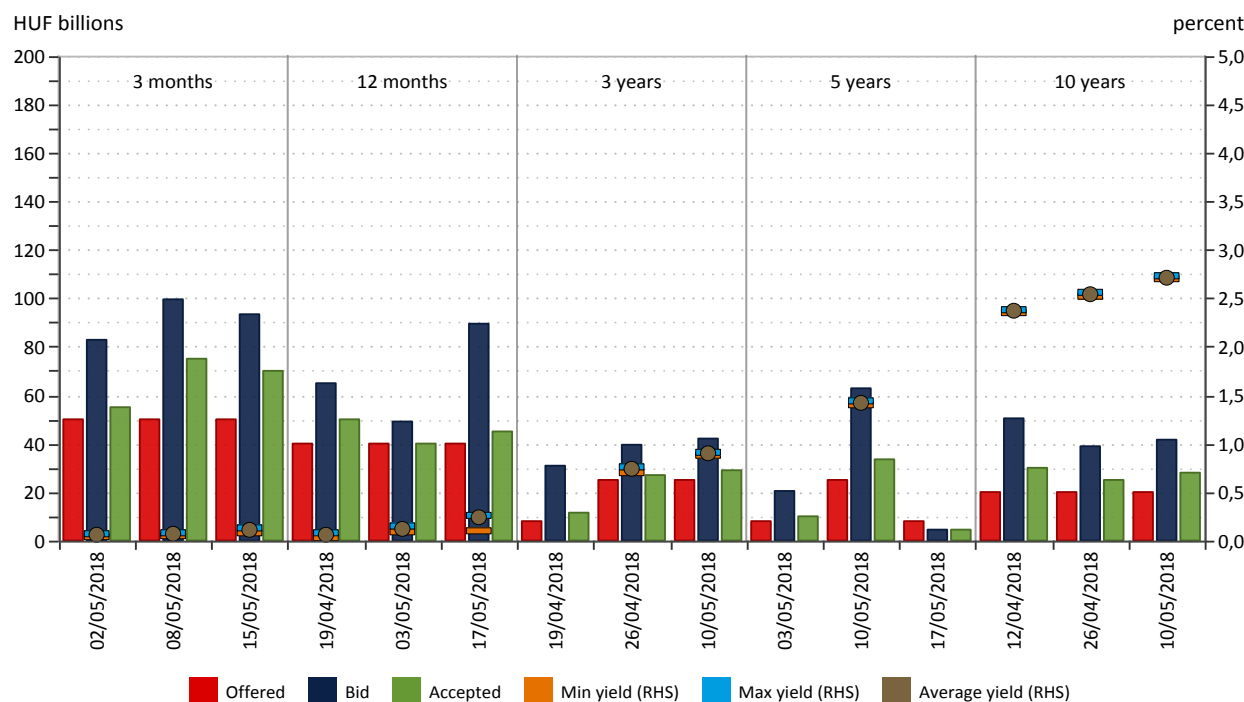
95. Government bonds held by non-residents and the share of the total amount outstanding (last months)



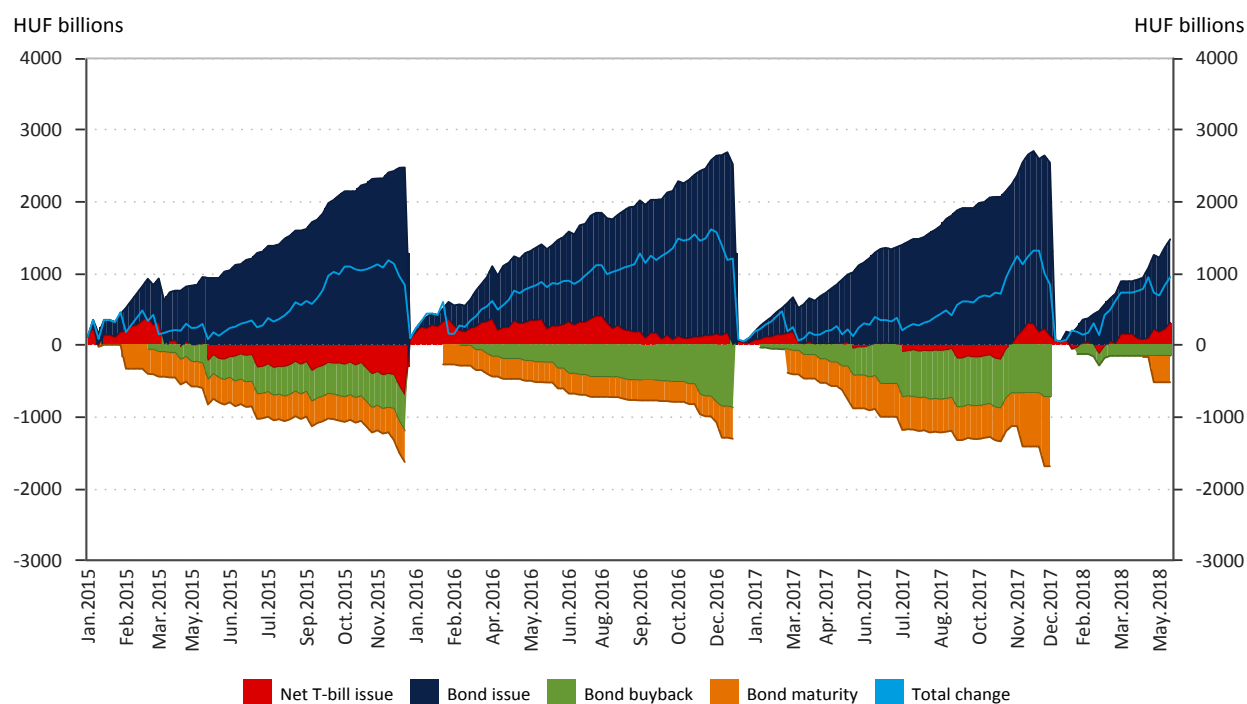
96. The average time to maturity of government security portfolio of residents and non-residents



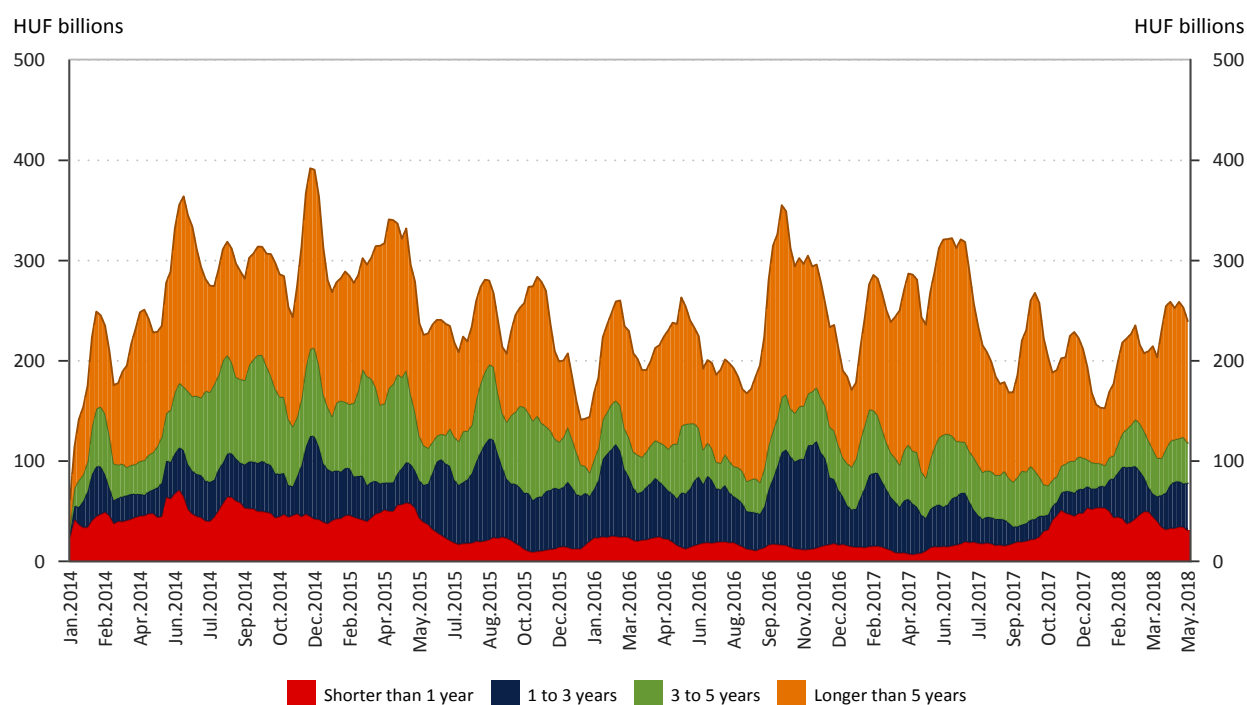
97. The turnover and yield data of the Hungarian primary T-bill and T-bond issues

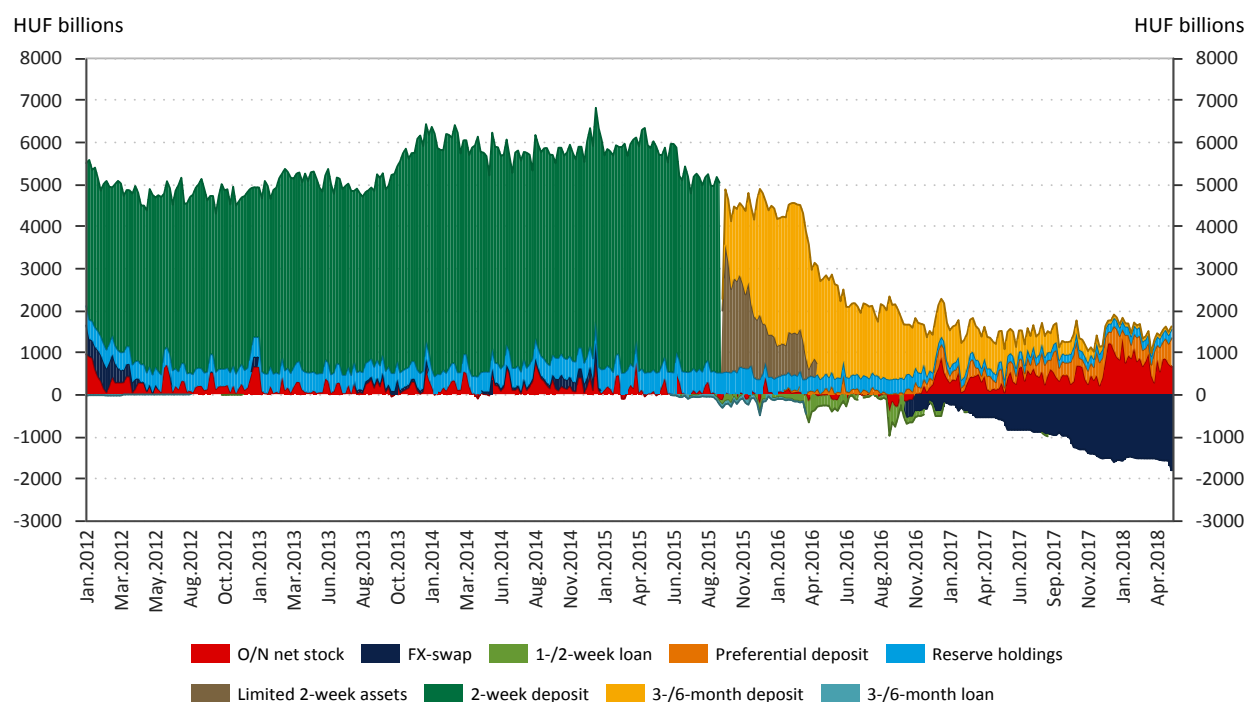
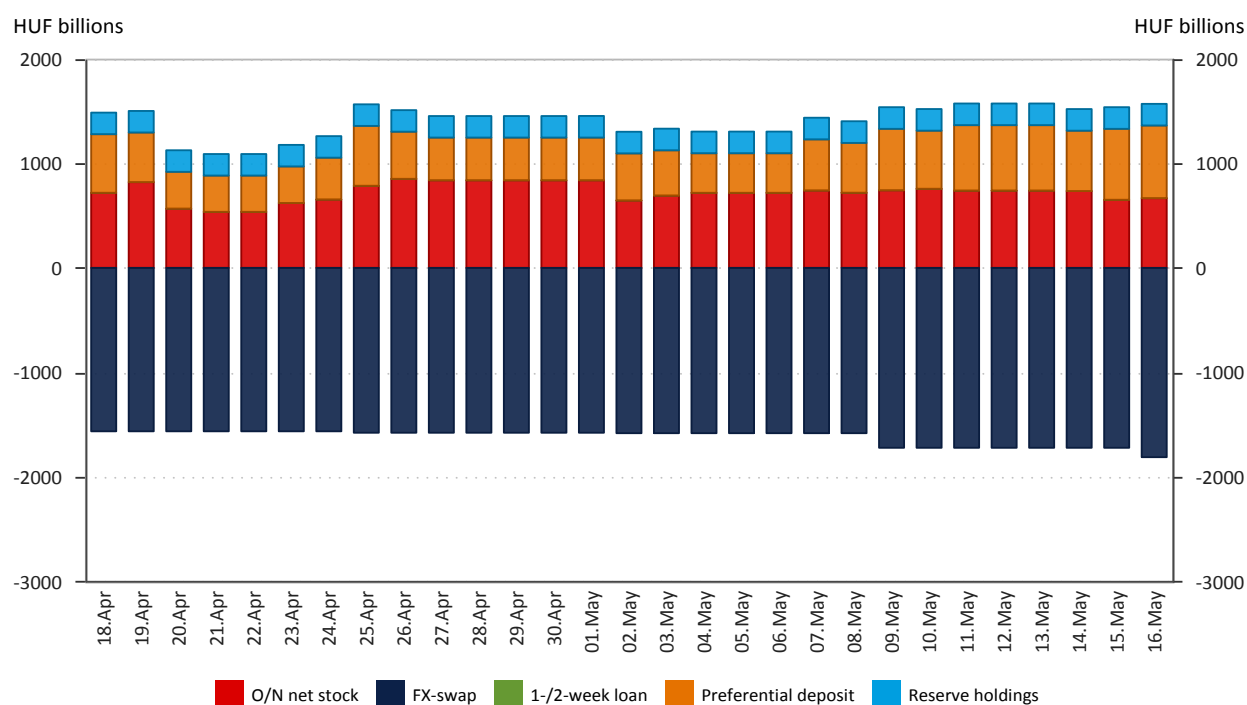


98. Government securities issues, buybacks, redemptions



99. Turnover on the secondary market of government securities

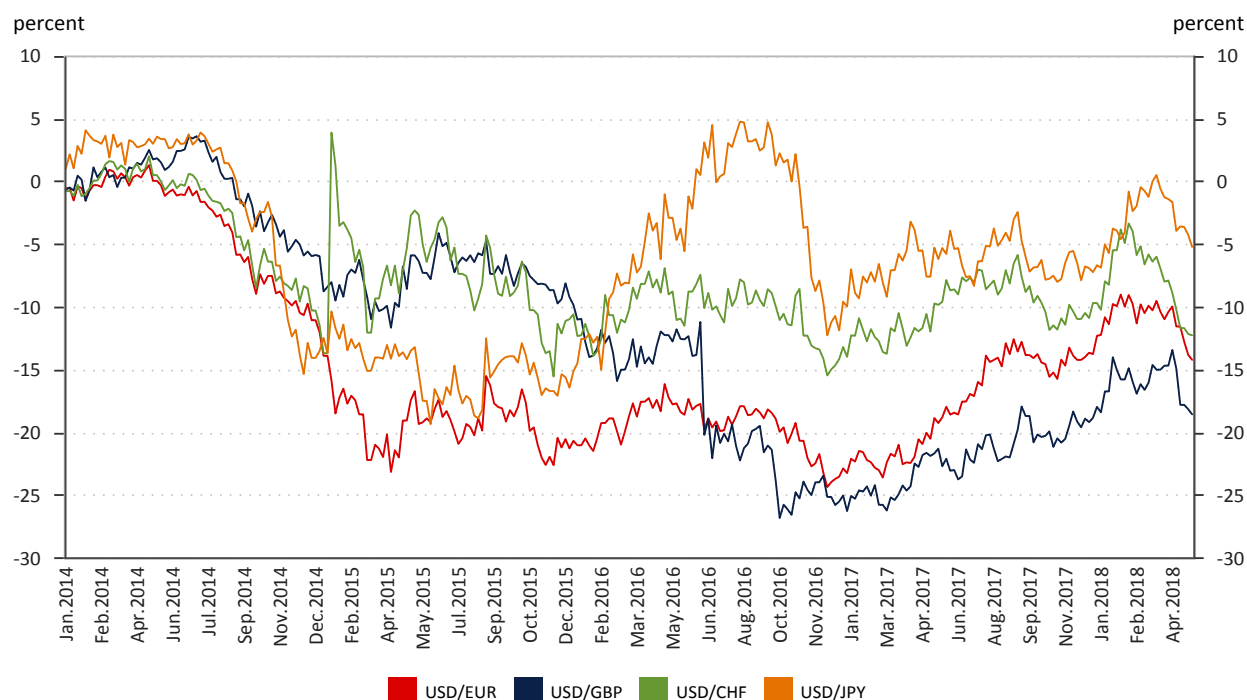


100. 100. Selected assets and liabilities of the MNB**101. 101. Use of selected facilities of the MNB beside the main instrument**

102. International developments*Overview*

Indicator	1 month ago	1 week ago	Current
Fed base rate (%)	1.75	1.75	1.75
ECB base rate (%)	0.00	0.00	0.00
10-year T-bond yield (%)	2.87	2.97	3.11
10-year euro yield (%)	0.53	0.56	0.64
VIX Index (%)	15.6	12.7	13.3
EMBI Global spread (bp)	318	347	348
SP 500 Index	2709	2728	2722
DAX Index	12591	13001	13115
NIKKEI Index	21848	22497	22838
USD/EUR exchange rate	1.24	1.19	1.18
USD/JPY exchange rate	107.24	109.40	110.77
CHF/EUR exchange rate	1.28	1.19	1.18
Brent oil (USD per barrel)	73.2	77.5	78.3

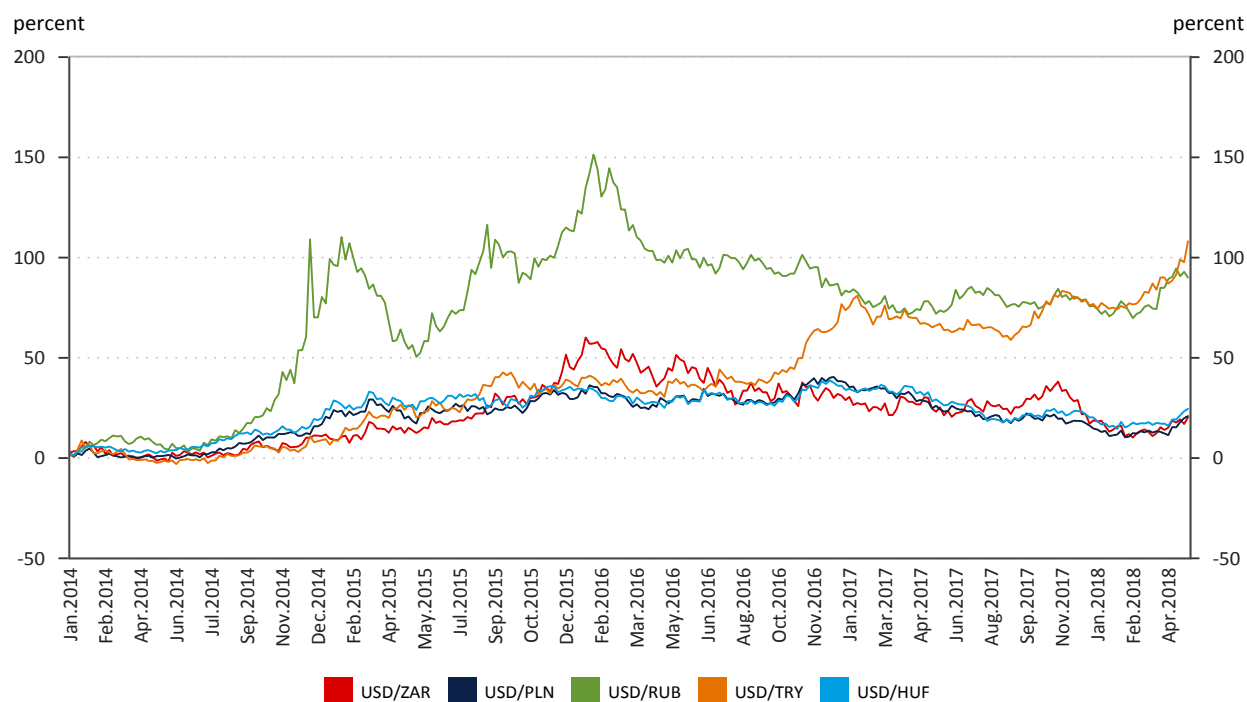
103. Major currencies versus the dollar



Source: Thomson Reuters

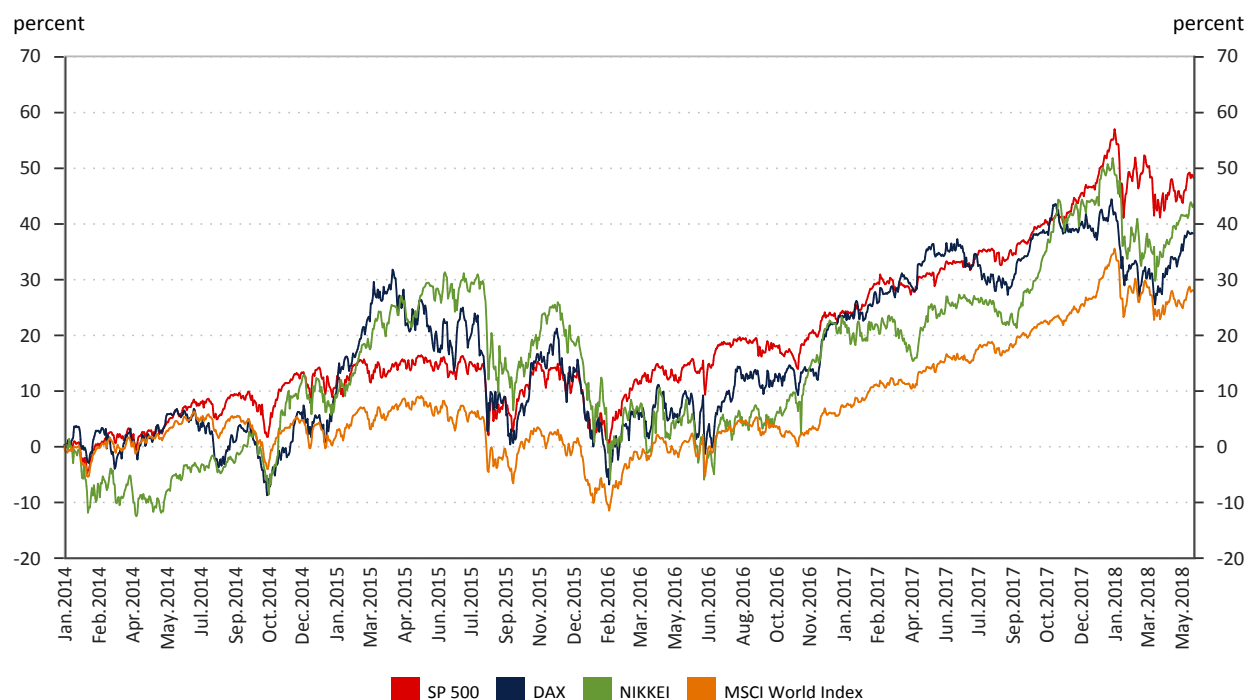
Note: cumulative change. Positive values indicate USD depreciation.

104. Emerging currencies versus the dollar



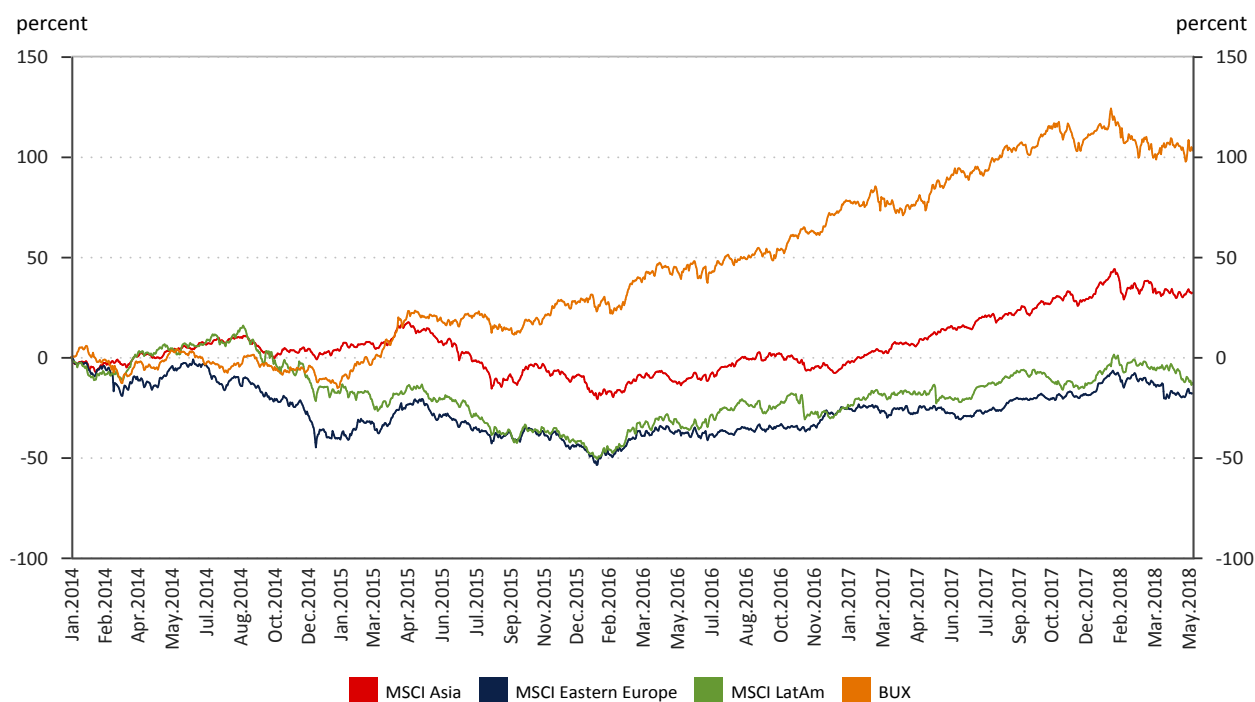
Source: Thomson Reuters Notes: positive value means depreciation of the emerging currency. Cumulative change.

105. Developed market stock indices



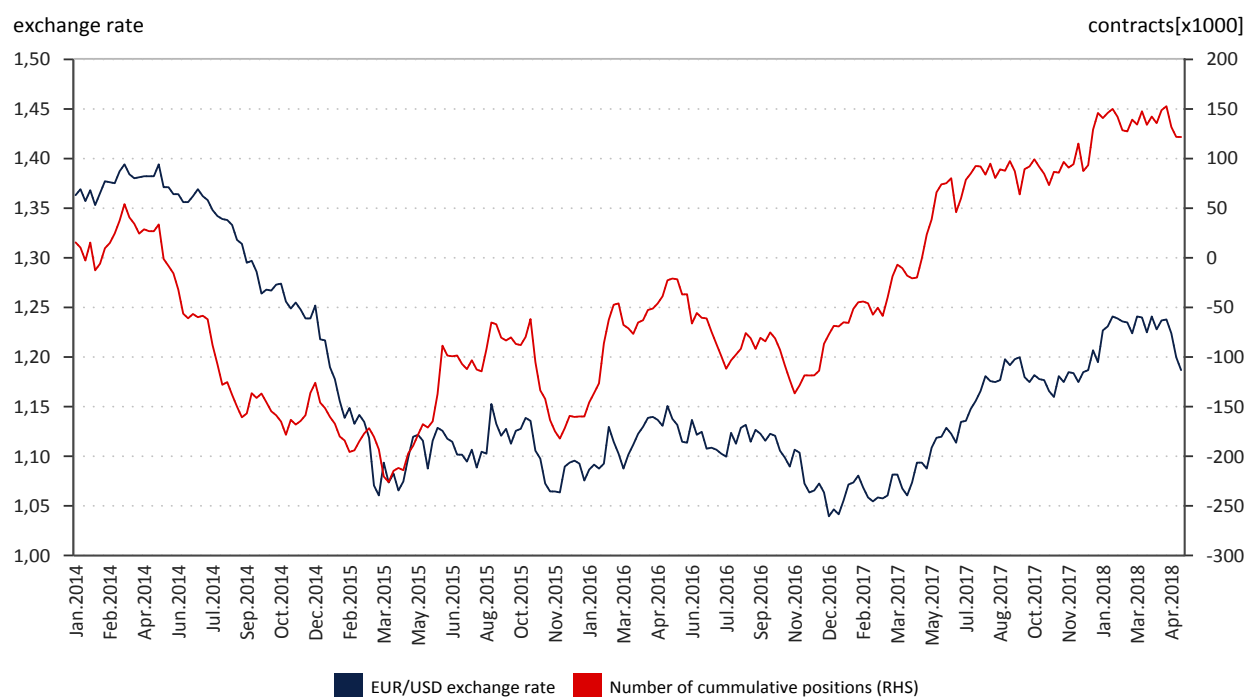
Source: Thomson Reuters
Notes: cumulative change.

106. Emerging stock exchange markets



Source: Thomson Reuters Note: cumulative change, MSCI stock indices.

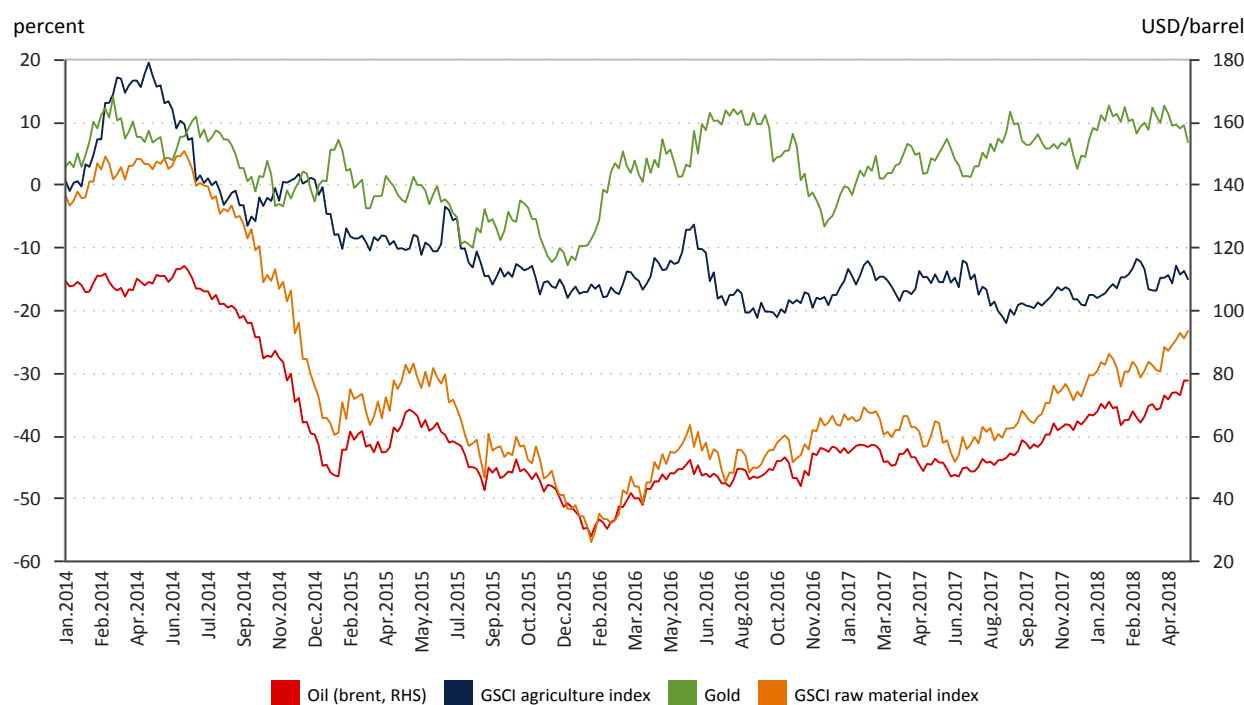
107. EUR/USD exchange rate and speculative positions



Source: Bloomberg, CFTC.

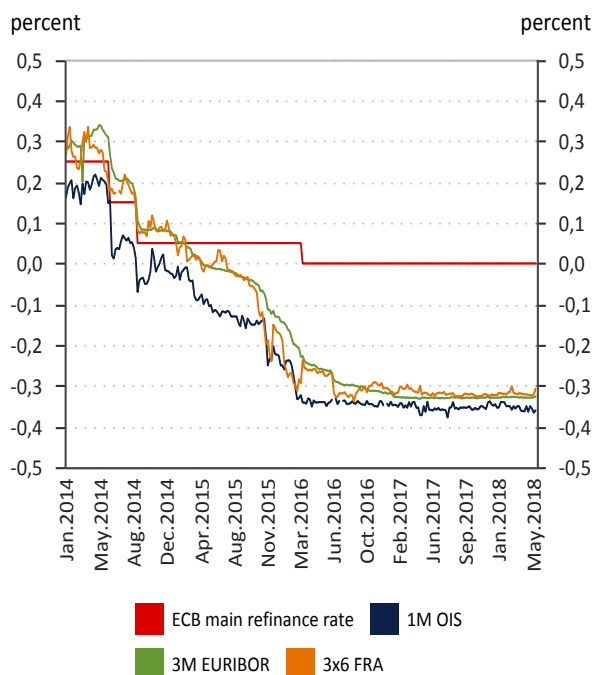
Notes: Speculative position is defined as a net of long and short transactions. Positive value means the majority of open positions on euro strengthening. Weekly databy Commodity Futures Trading Commission.

108. Price of raw materials



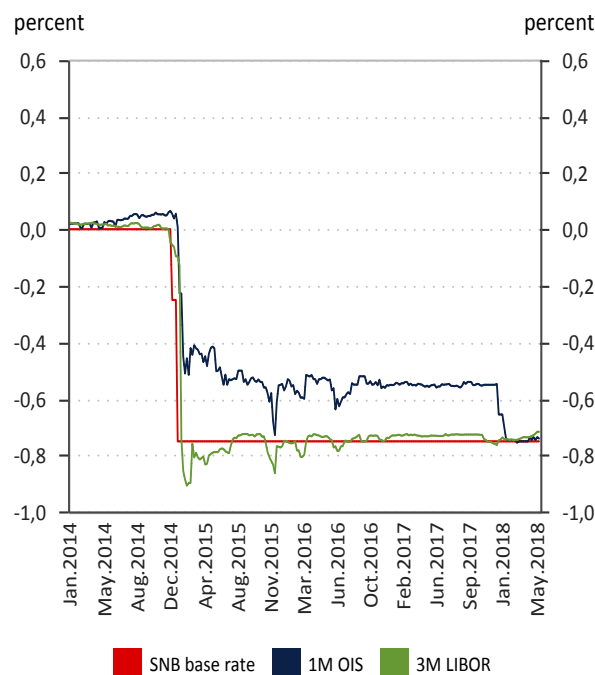
Source: Thomson Reuters Note: cumulative change except the Brent oil where the scale is nominal.

109. Short term interbank rates in the eurozone



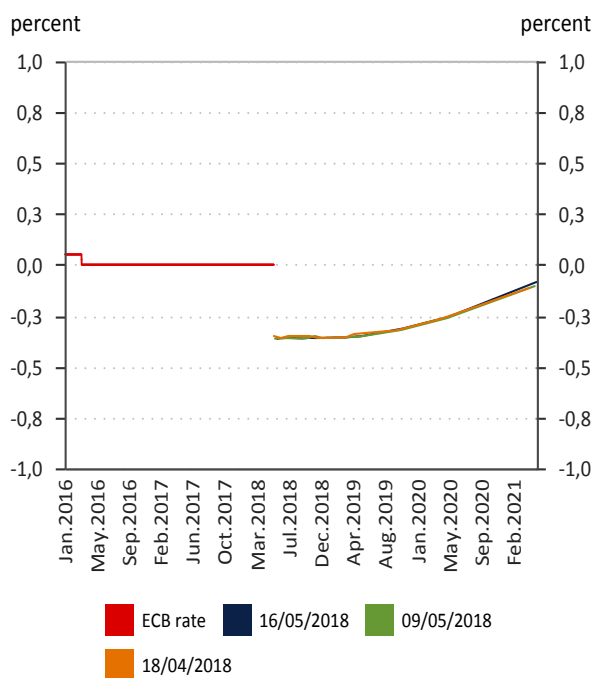
Source: Thomson Reuters.

110. Short term interbank rates in Switzerland



Source: Thomson Reuters.

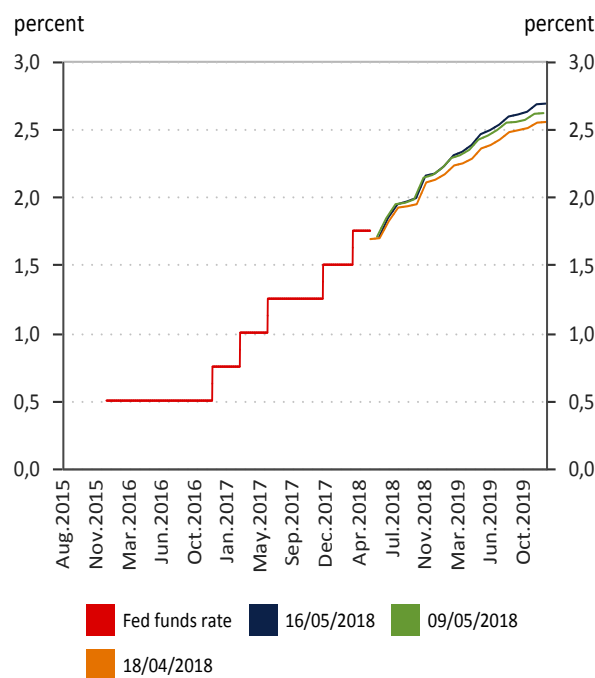
111. Forecasts on ECB policy rate



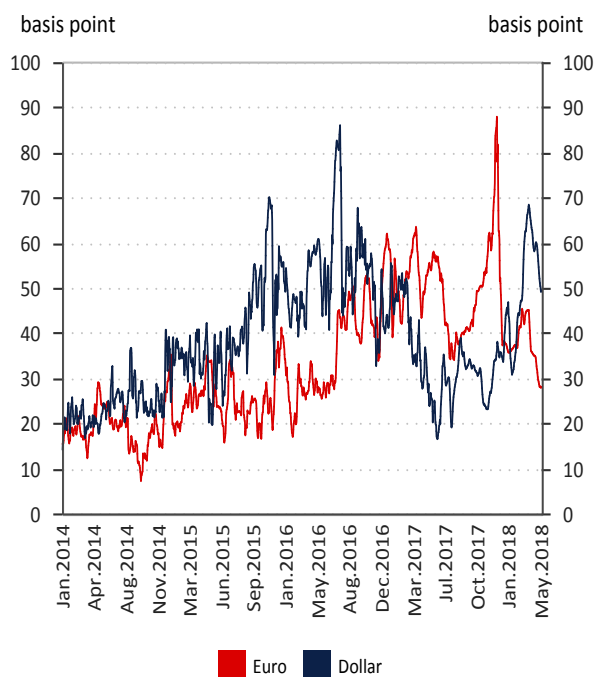
Source: ECB.

Note: Calculated 3-months forward yield curve based on German government bonds.

112. Forecasts on Fed policy rate

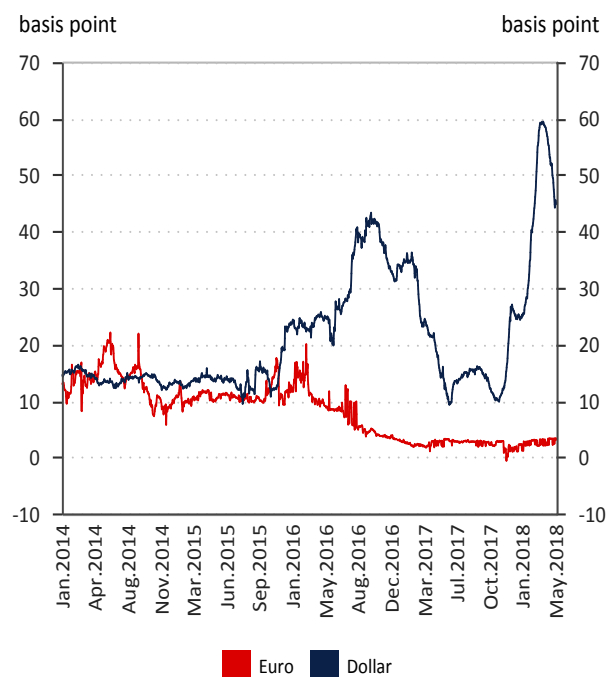


Source: Bloomberg.

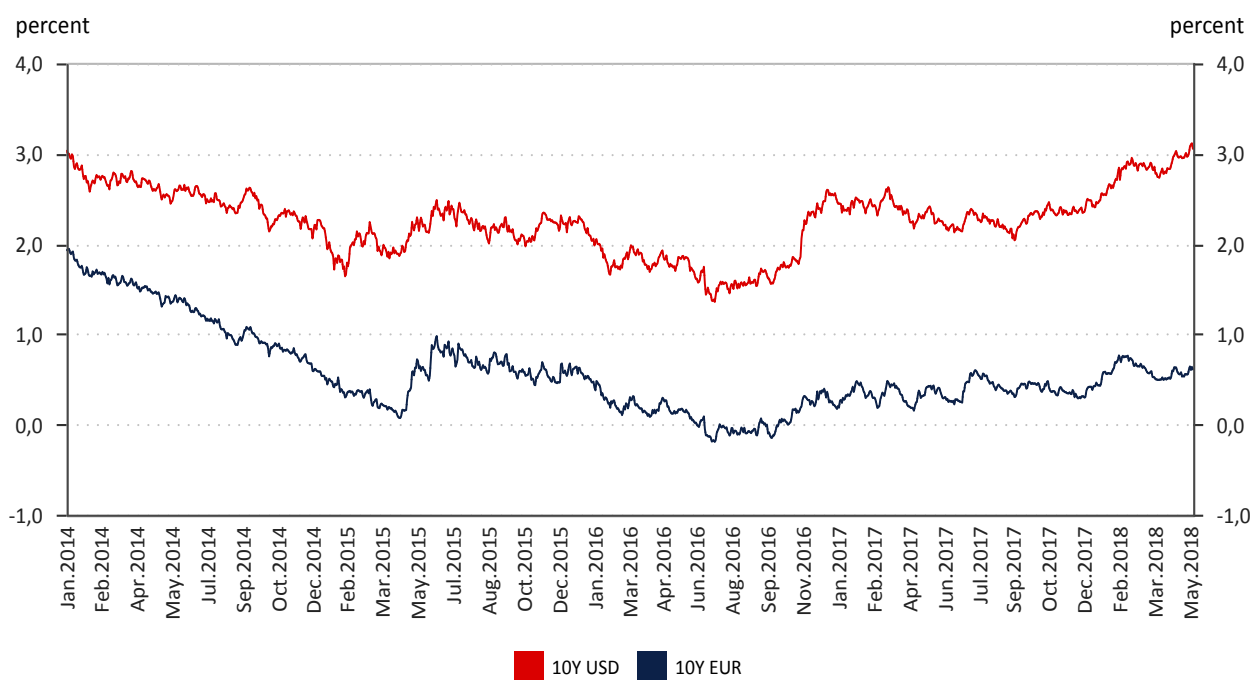
113. 3M interbank and government bond yield spread

Source: Thomson Reuters.

Notes: Spread between 3-month interbank rates and 3-month T-bill yield.

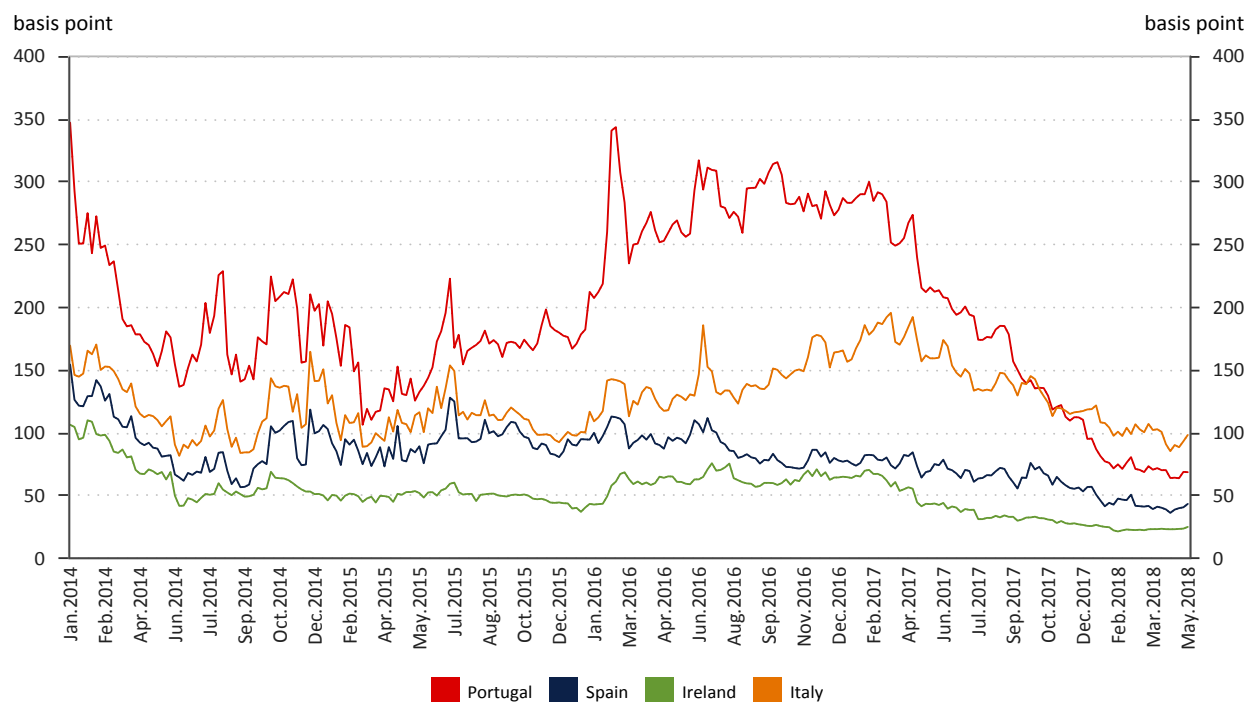
114. 3M interbank and OIS yield spread

Source: Thomson Reuters

115. Long term euro and dollar benchmark yields

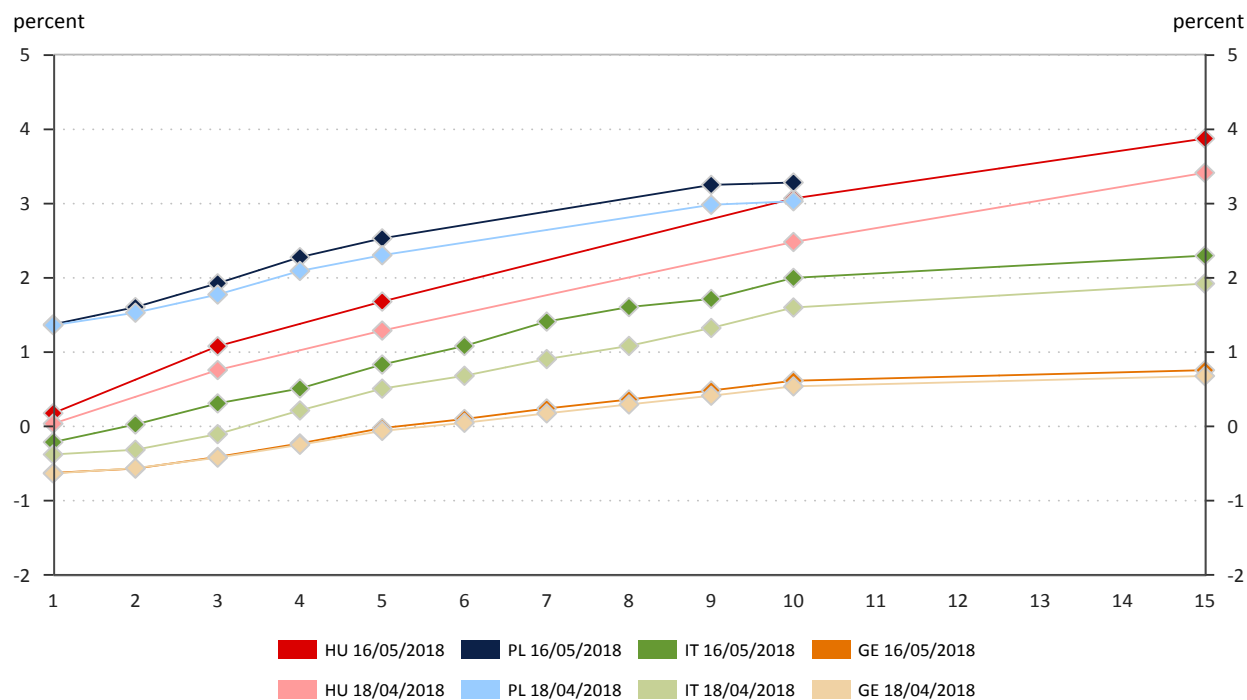
Source: Thomson Reuters.

116. 5Y sovereign CDS in the eurozone periphery



Source: Thomson Reuters.

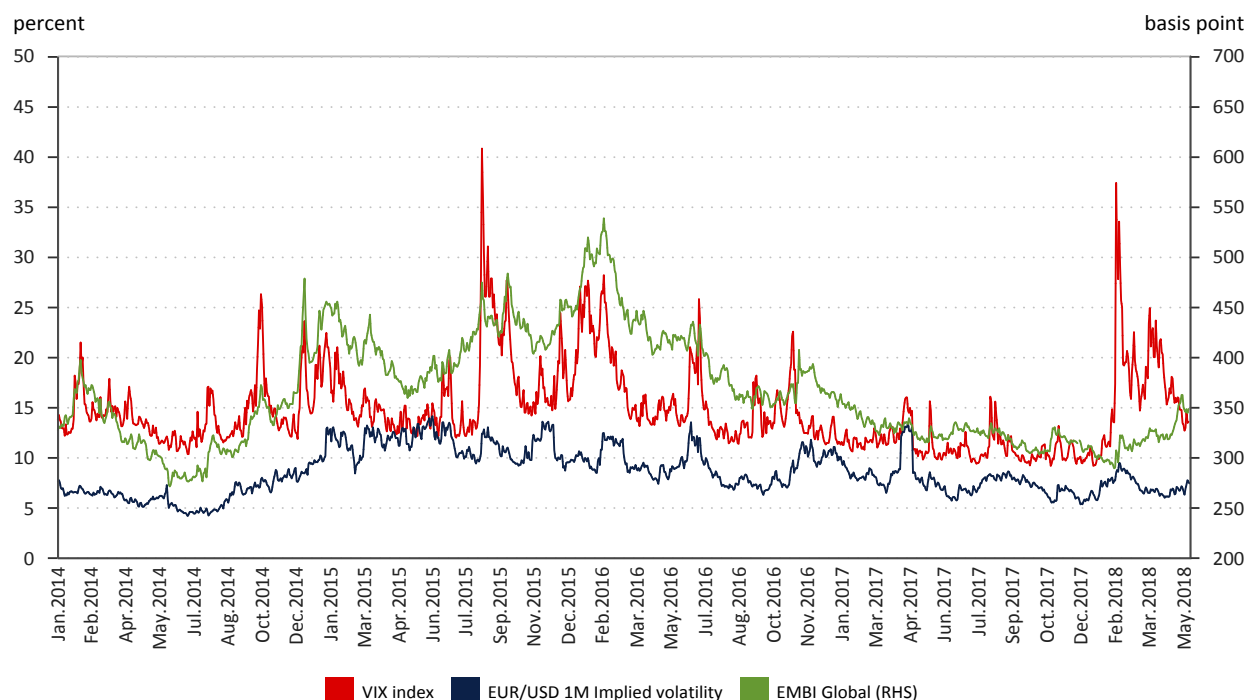
117. Benchmark yield curves of Hungary, Poland, Italy and Germany



Source: Bloomberg

Note: X axis is displayed in years.

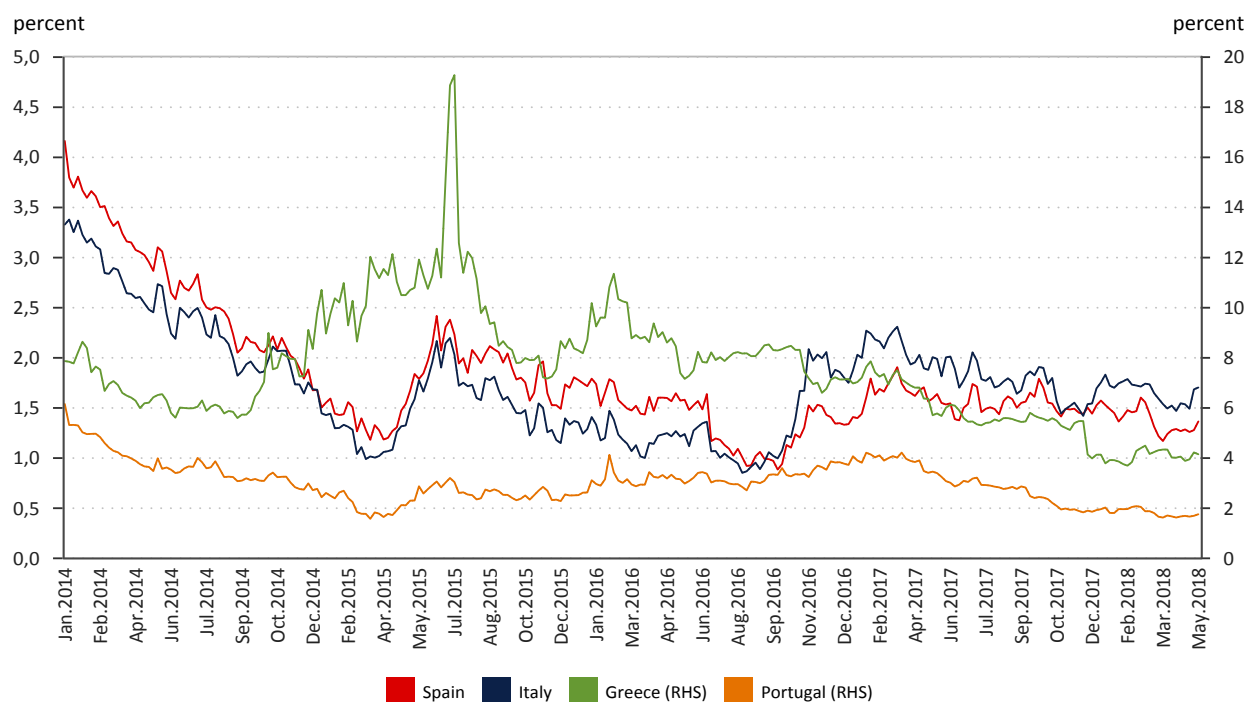
118. Main risk indicators



Source: Thomson Reuters

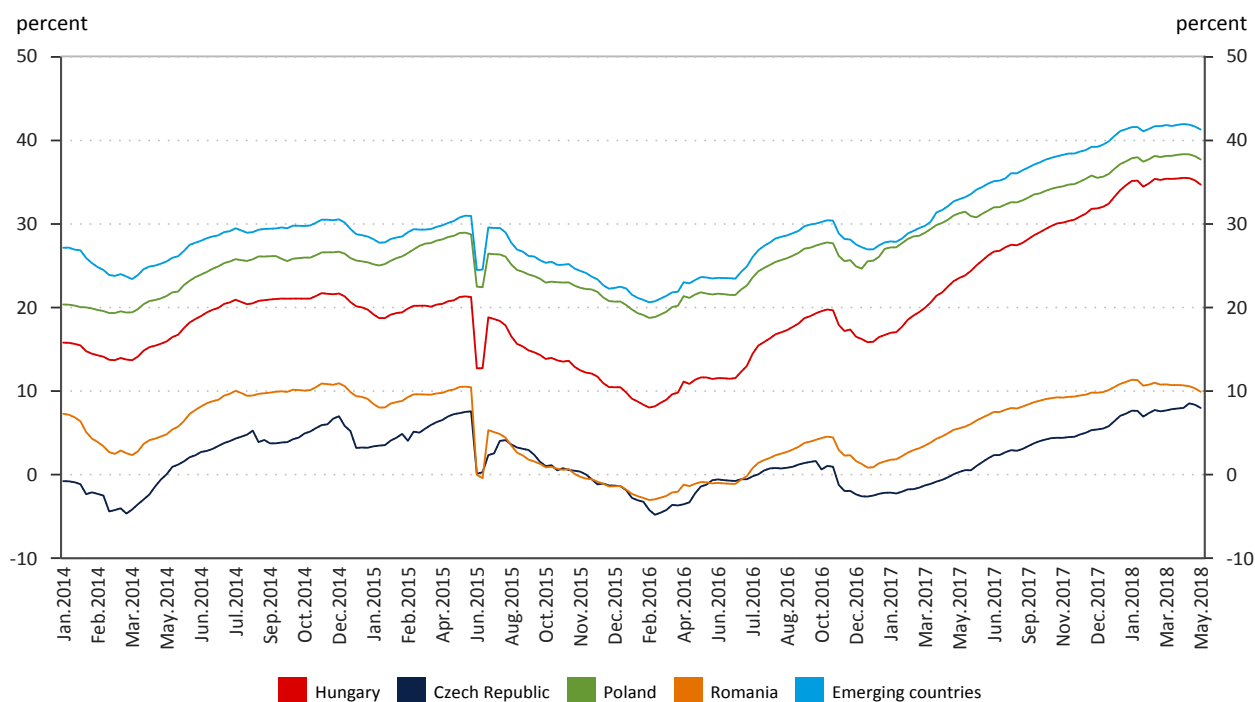
Note: An upward move indicates declining risk appetite or increasing risk aversion. VIX is the implied volatility of SP500 index.

119. Long term government bond yields in the Eurozone periphery



Source: Bloomberg.

120. Emerging bond-market flows



121. Global bond-market flows

