



Chart-pack on recent economic and financial market developments

Directorate Monetary Policy and Financial Market Analysis

Financial Market Analysis Department

November 2017

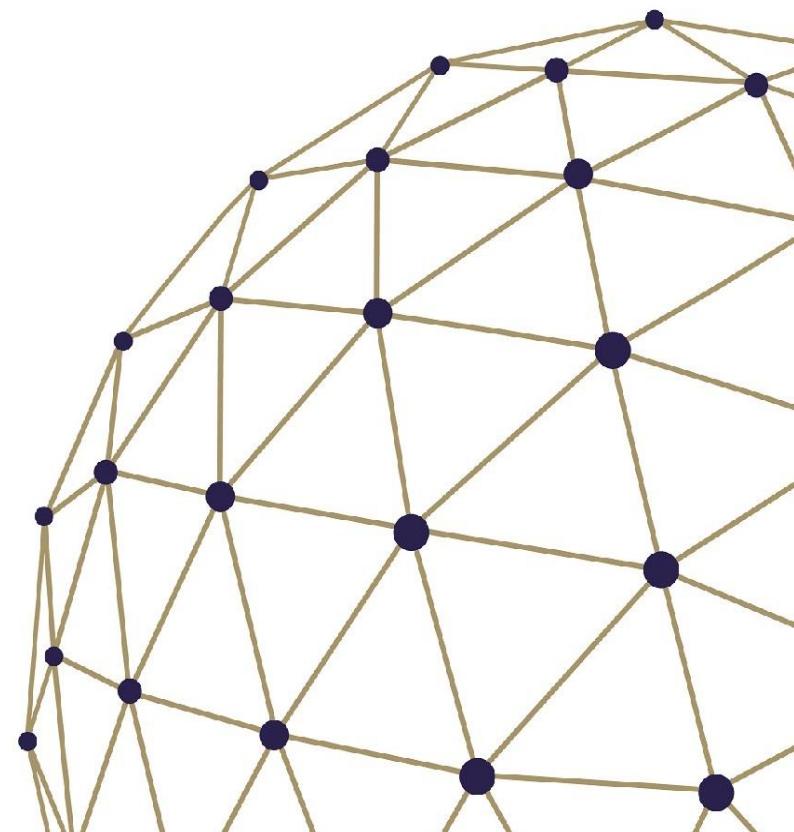




Chart-pack on recent economic and financial market developments *

21 November 2017

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.

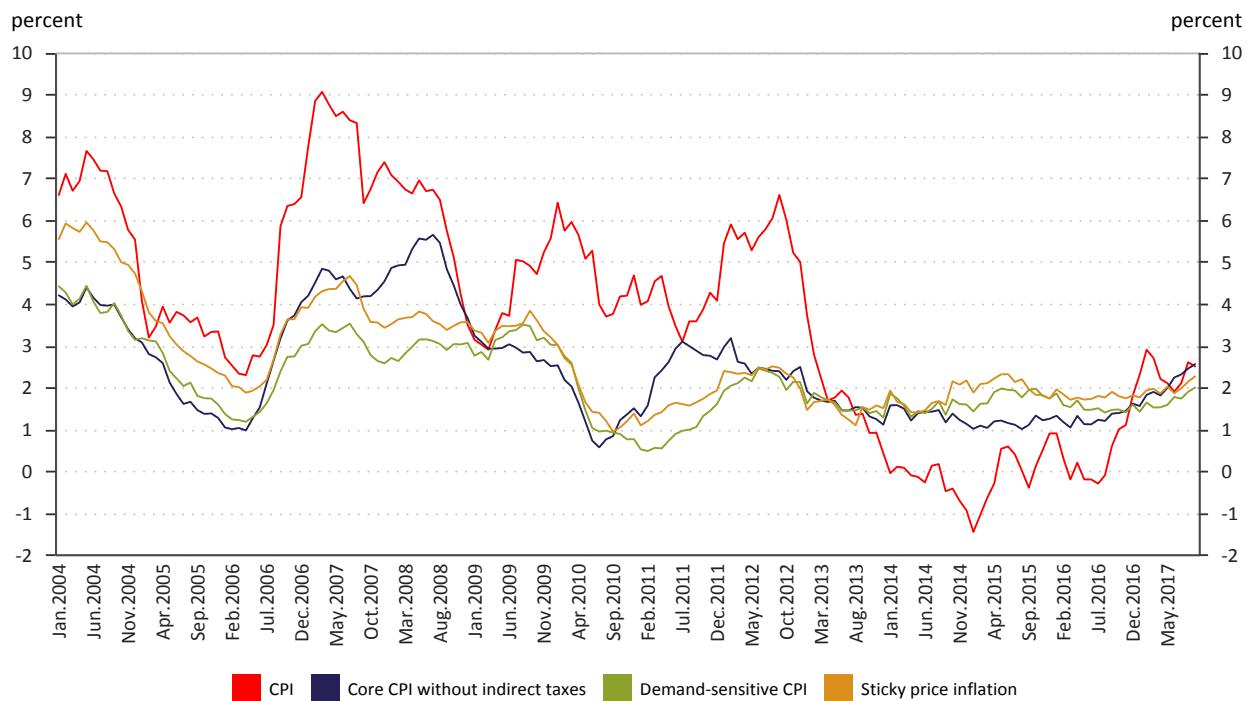
Earlier versions of the chart-pack are accessible on the website of Magyar Nemzeti Bank via the following address.

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

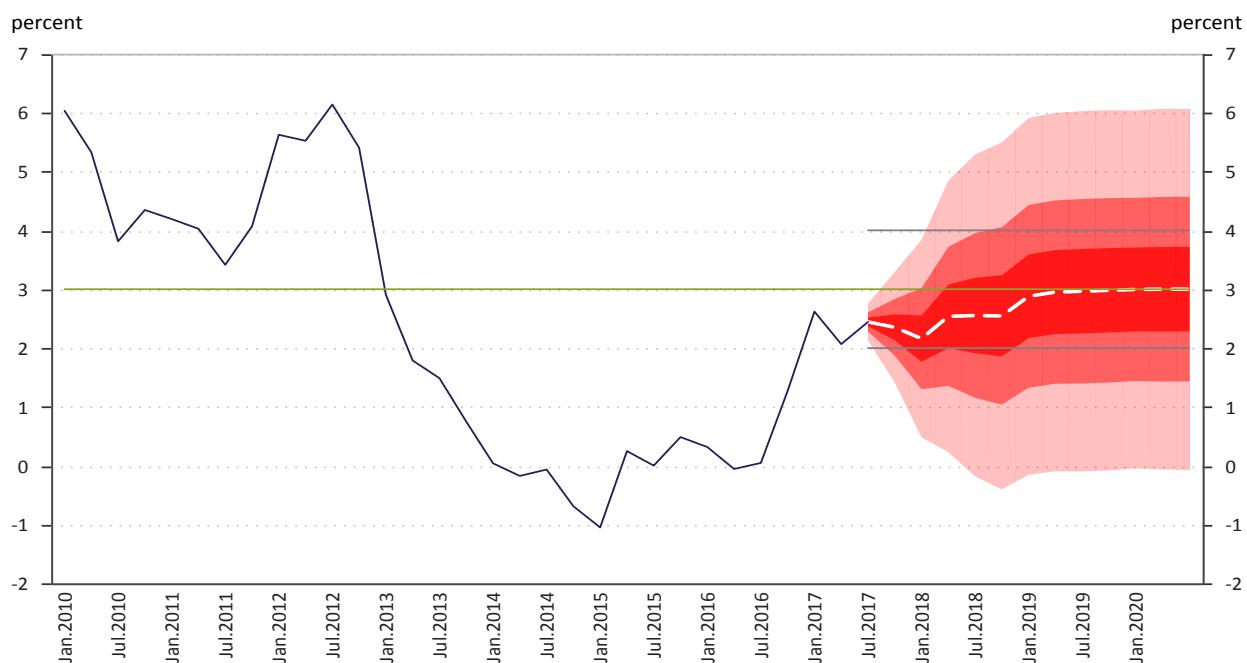
Questions and comments are welcome, and should be addressed to info@mnb.hu.

* 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



2. Fanchart of the inflation forecast



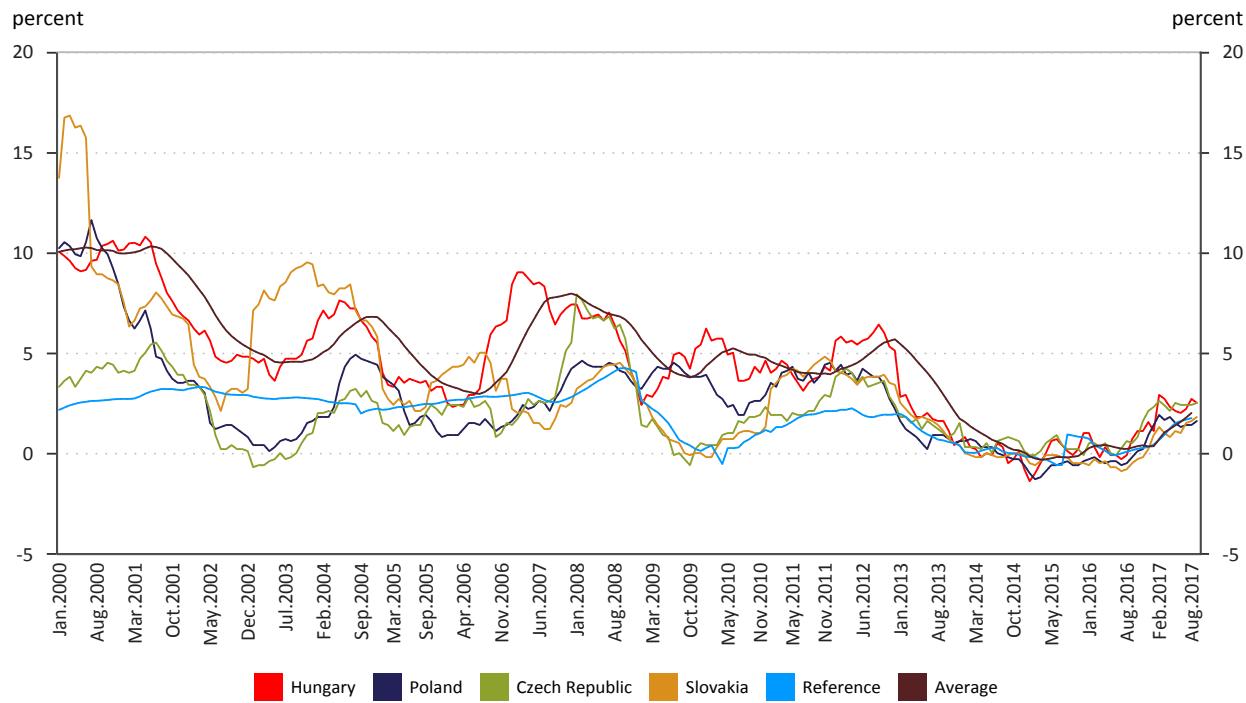
3. Decomposition of the Consumer Price Index

	Weight 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017
Consumer Price Index	100.0	2.1	2.6	2.5	2.2
Thereof:					
Unprocessed food	6.2	1.6	0.4	-0.4	1.5
Processed food	13.1	4.3	4.3	4.5	4.1
Manufactured goods	22.9	0.6	0.9	1.1	0.5
Market services	23.0	2.5	2.5	2.5	2.3
Non-regulated household energy	1.0	5.1	5.2	7.5	10.0
Alcohol, tobacco	9.9	5.1	5.8	6.0	6.8
Gasoline prices	7.5	0.4	5.7	5.4	1.3
Regulated prices	16.4	0.7	0.6	0.2	0.2
Core Consumer Price Index	68.9	2.6	2.8	2.9	2.7
CPI without tax changes	100.0	2.5	2.9	2.9	2.7

Source HCSO, MNB decomposition

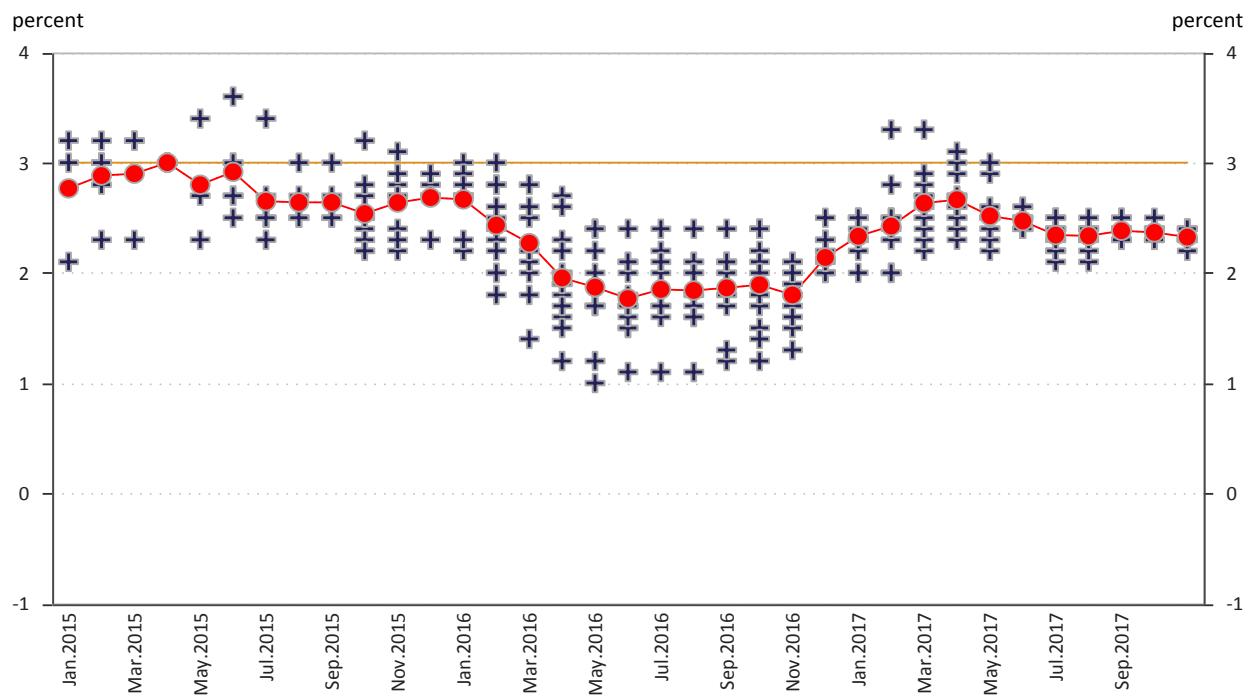
Notes: annual growth rates (%); The time series of industrial products, market services, regulated prices have changed because the method of the core inflation developed by the CSO and the NBH has broken down several items (like pharmaceutical products, the telephone, the other travels, the TV fee) from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

4. Harmonised index of consumer prices



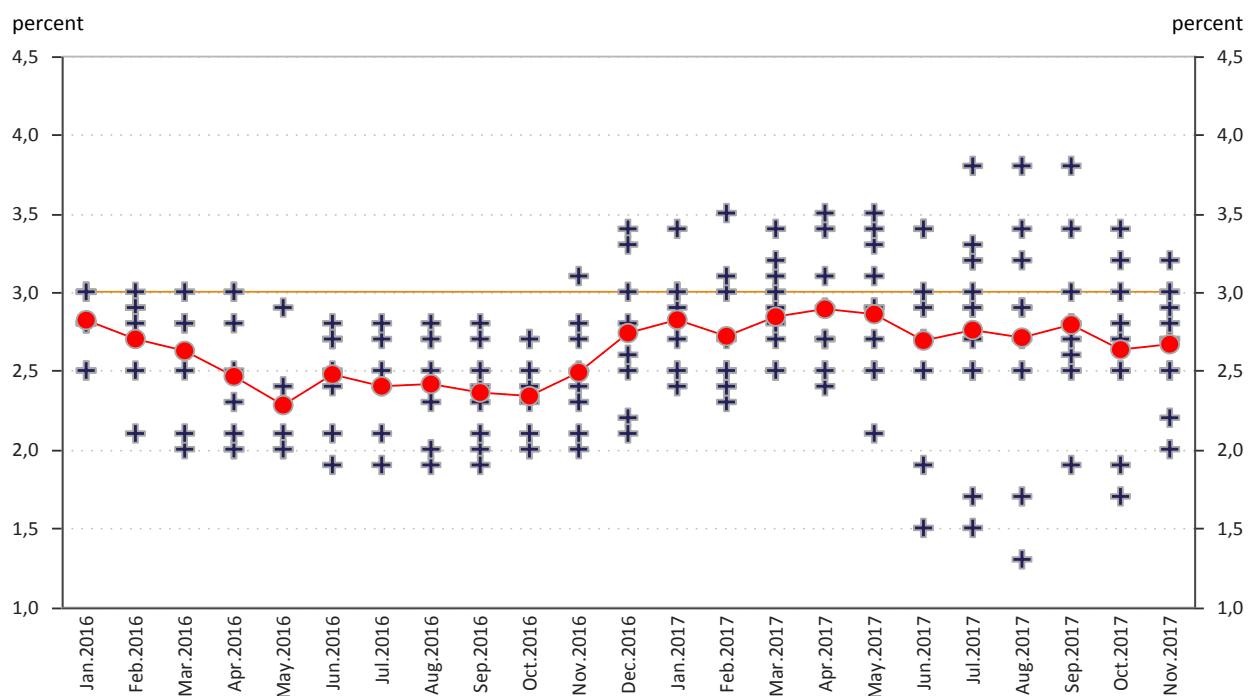
Source: Eurostat

Note: annual growth rate.

5. Market expectations for the inflation rate in current year

Source: Thomson Reuters

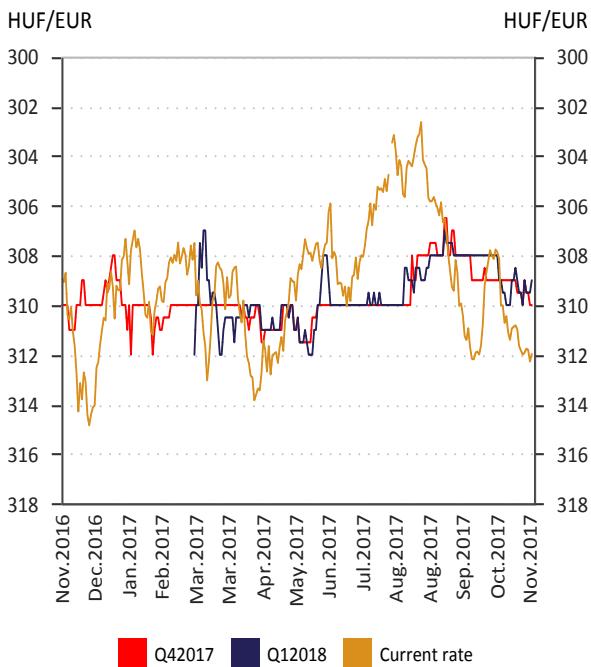
Note: the red continuous line represents the trimmed mean calculated by cutting off the lowest and the highest value, the brown line shows the inflation target of MNB.

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.

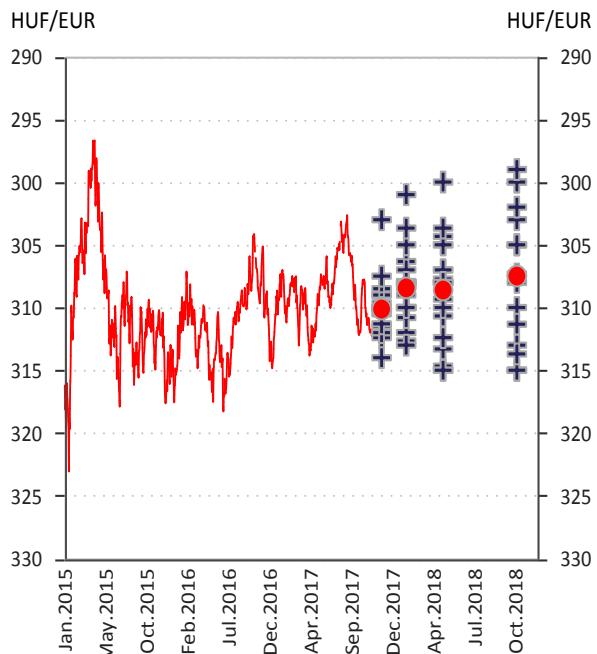
7. Expectations for HUF/EUR exchange rate (Bloomberg collection)



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.

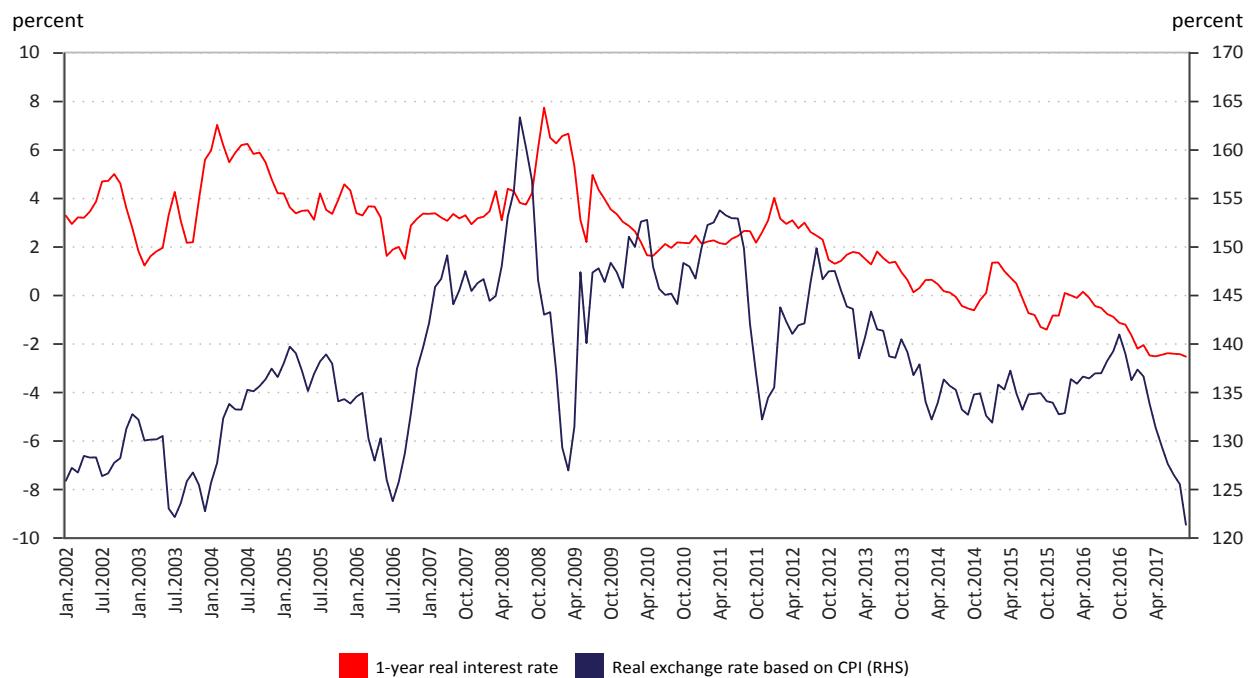
9. Spot and futures Brent crude oil price



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.

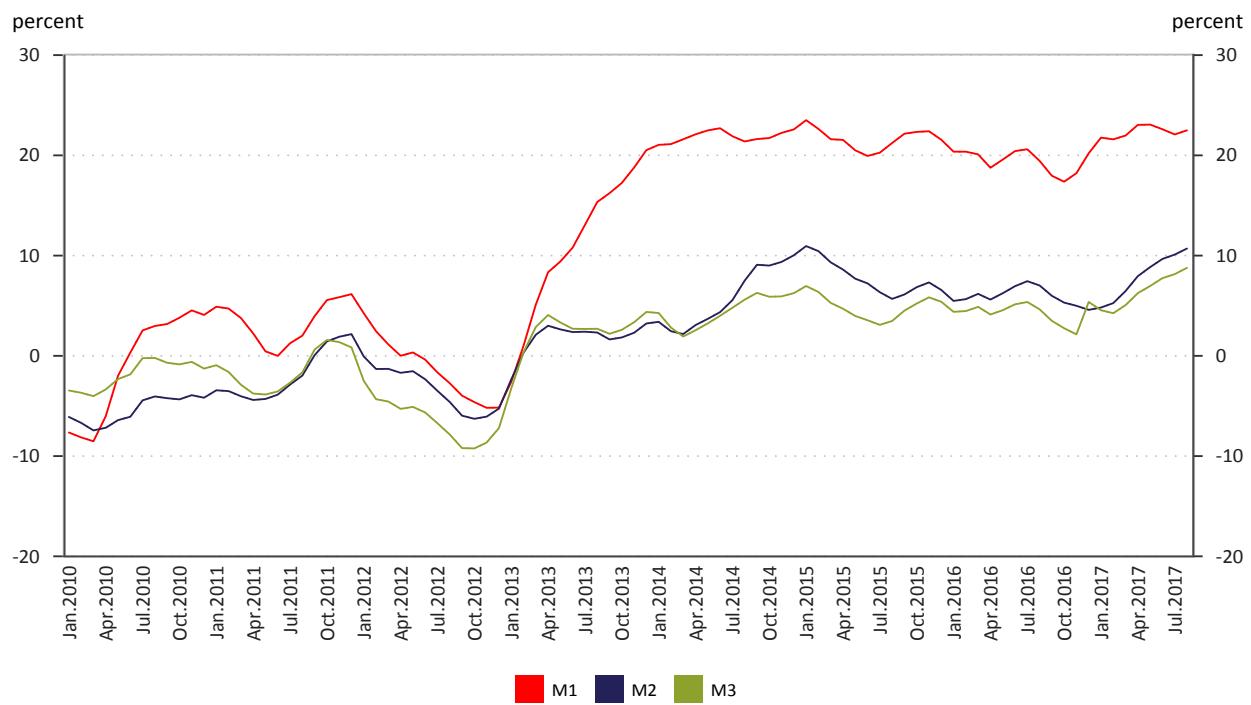
10. Monetary conditions



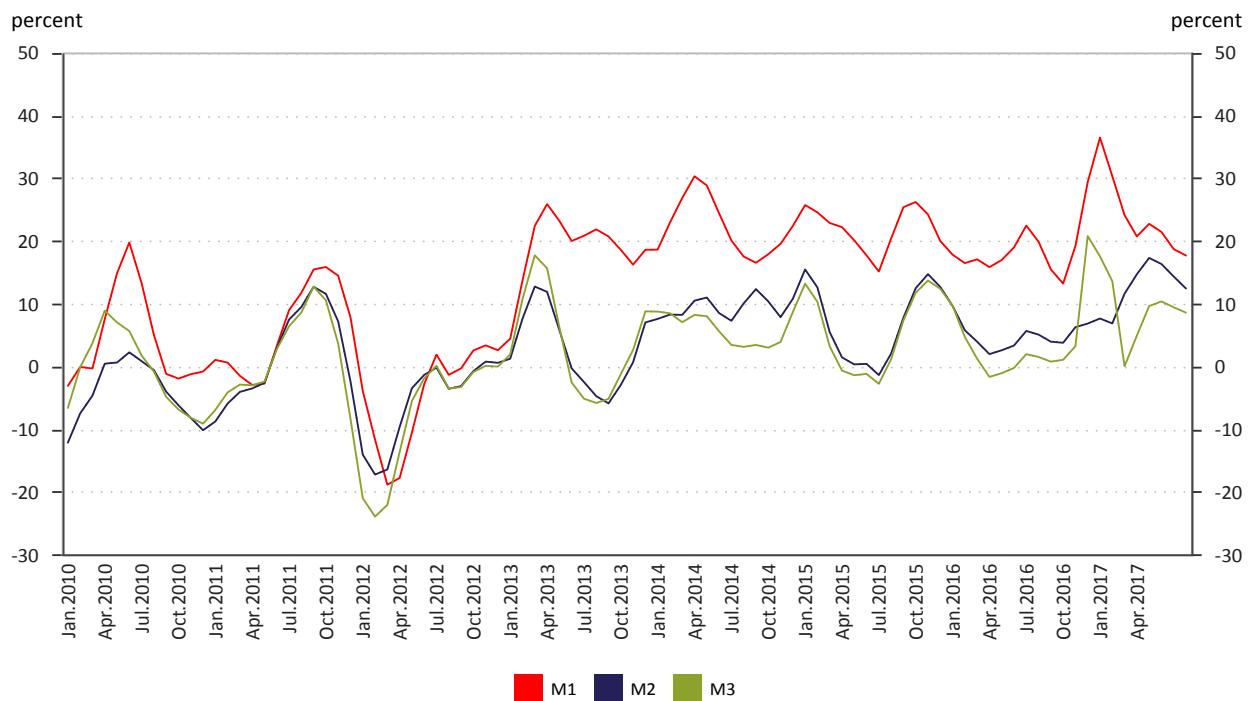
Source: Reuters, HCSO, Eurostat, ÁKK, MNB

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)

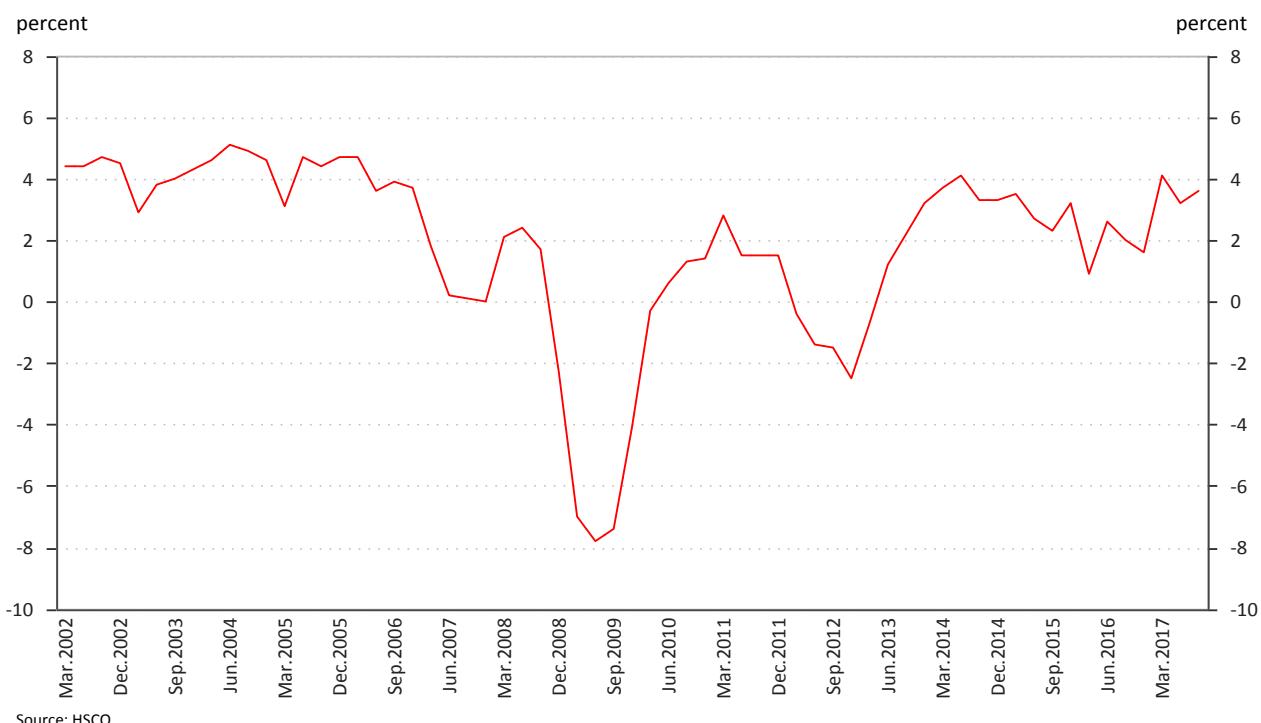
11. Real growth rate of monetary aggregates (year-on-year basis)



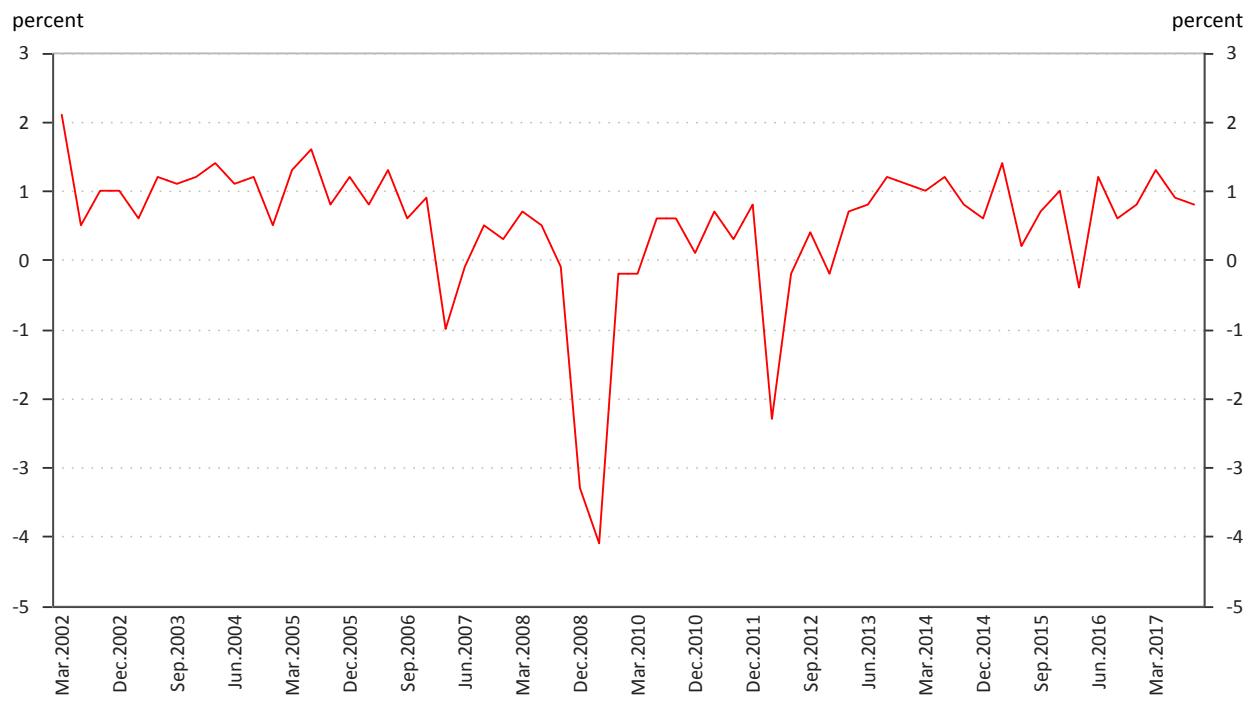
Source: MNB.

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

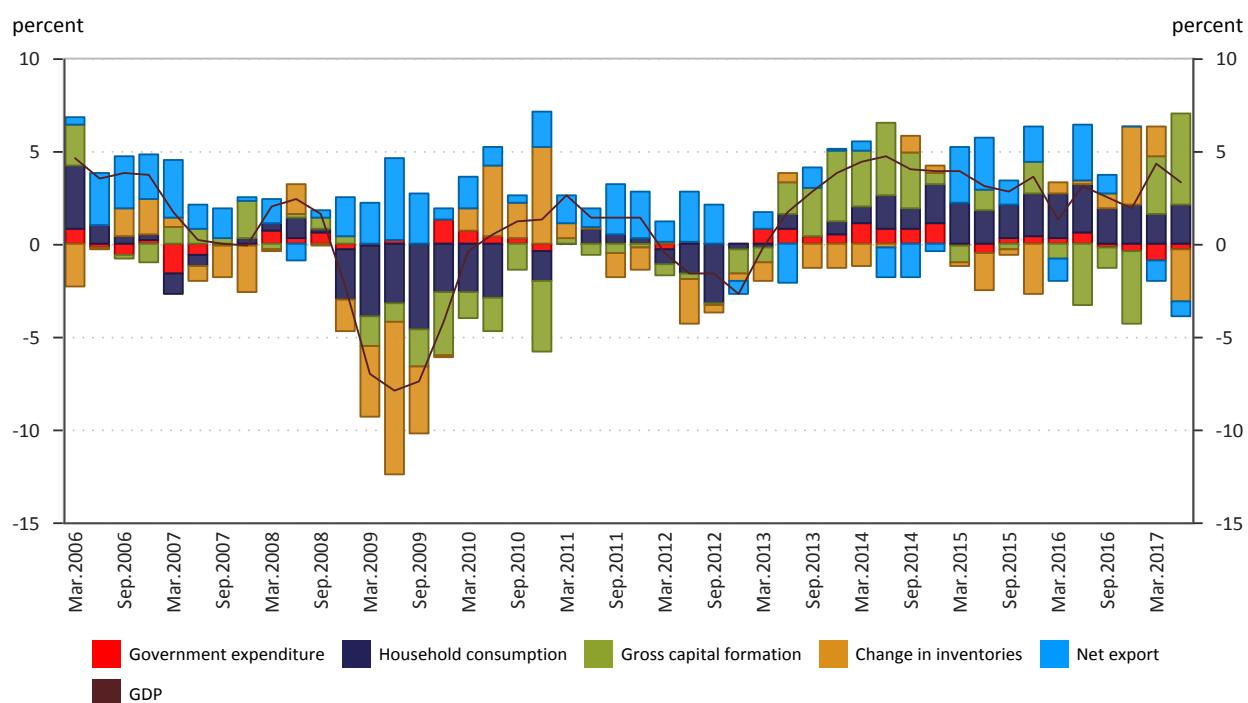
Source: MNB.

13. Change in annual GDP

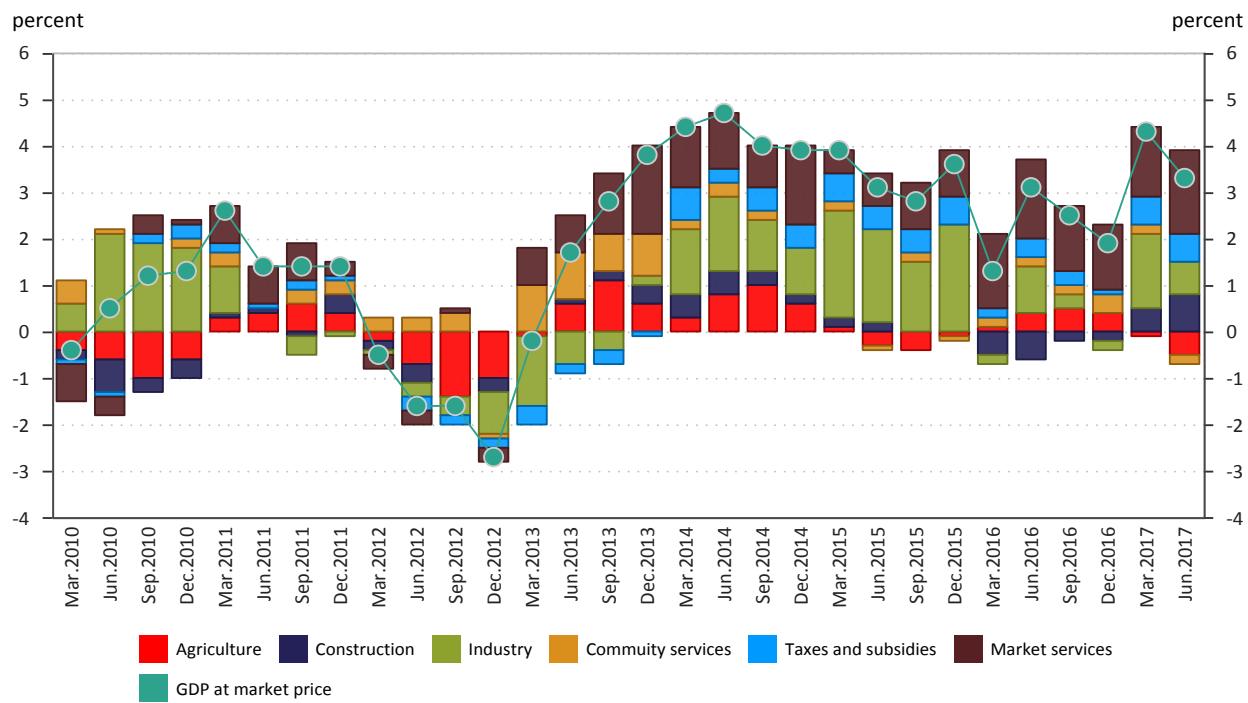
Source: HSCO

14. Quarterly GDP change

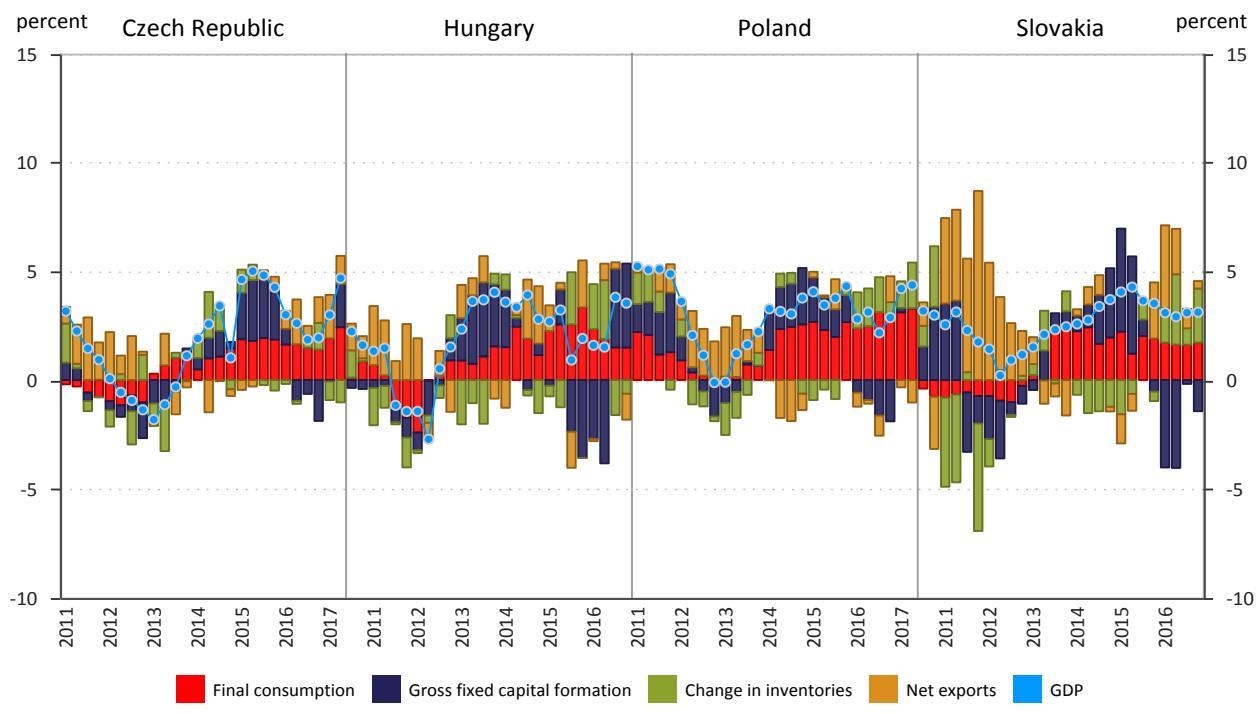
Source: MNB, HSCO.

15. Contribution to annual GDP growth

Source: MNB, HSCO.

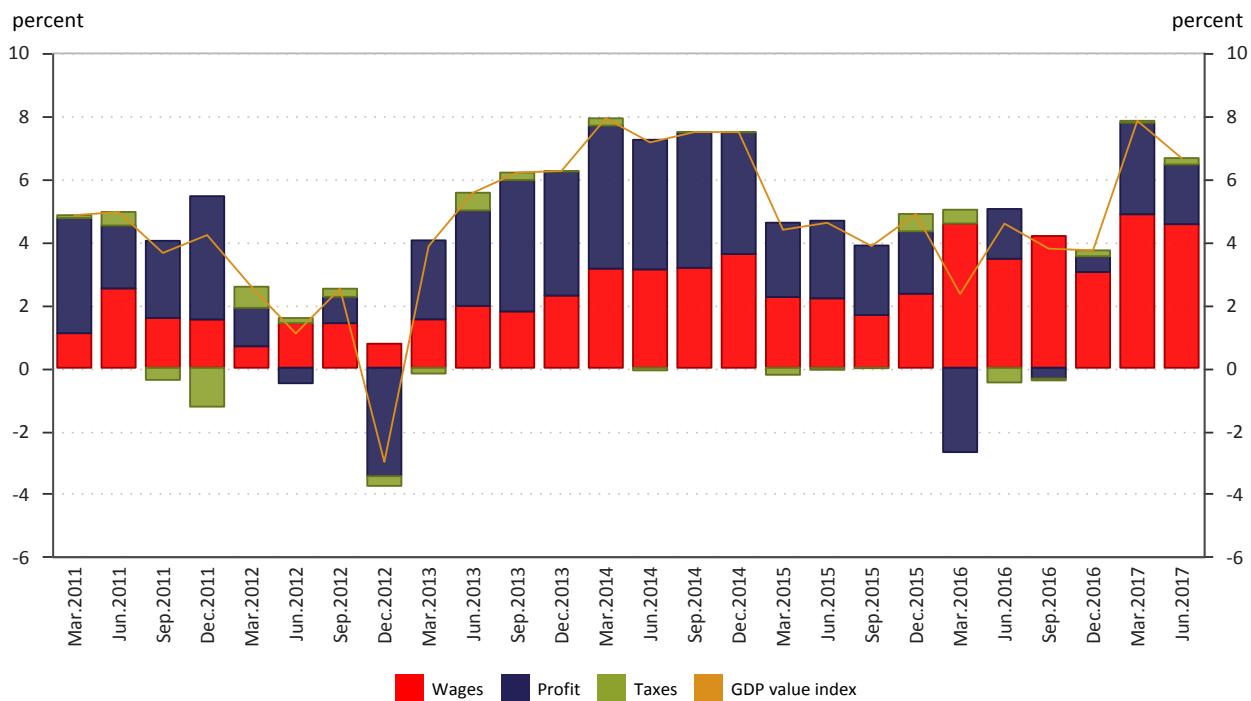
16. Decomposition of GDP growth

Source: HSCO.

17. Contribution to annual GDP growth in the region

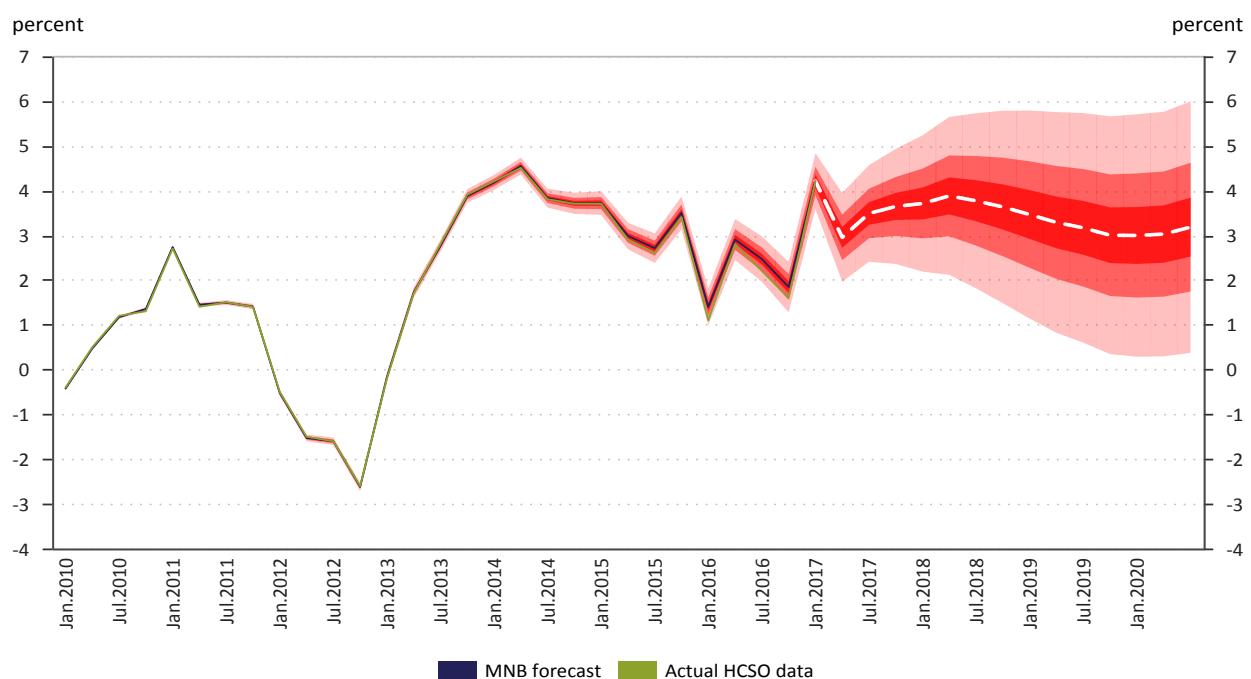
Source: MNB, HSCO.

18. Decomposition of GDP growth (income approach)



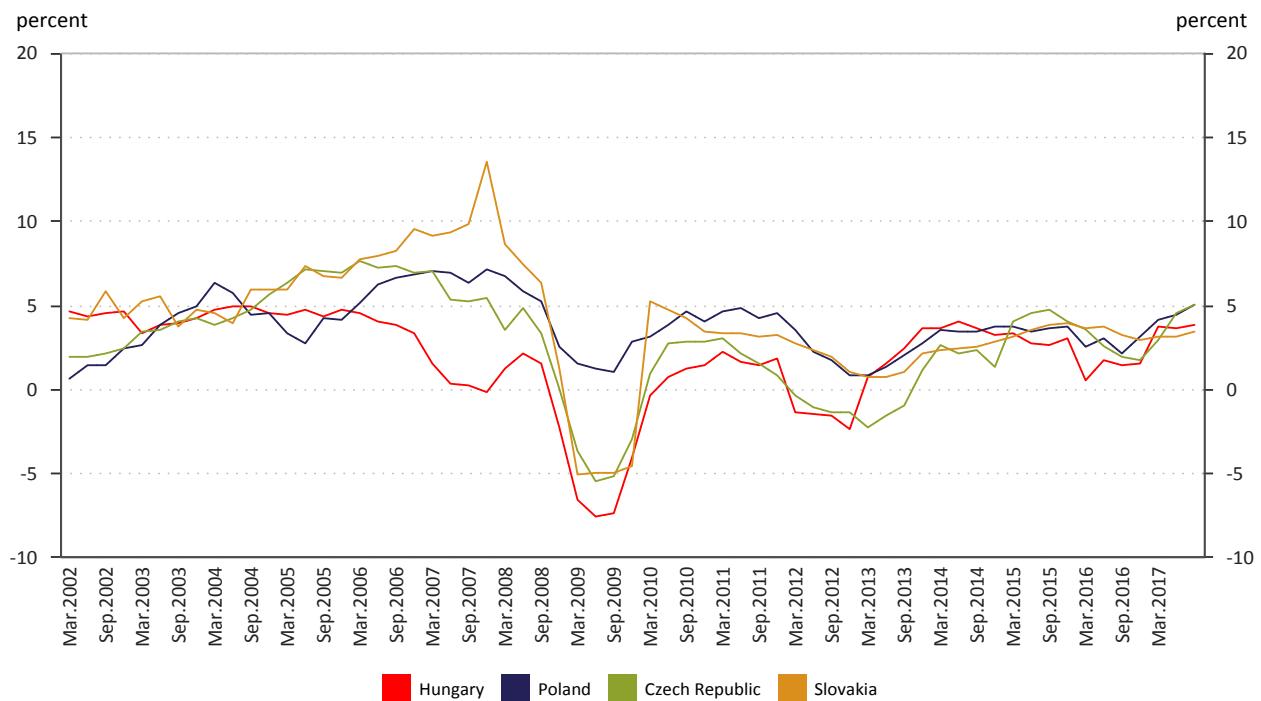
Source: MNB, HSCO Note: contribution in percentage points

19. Fanchart of the GDP forecast



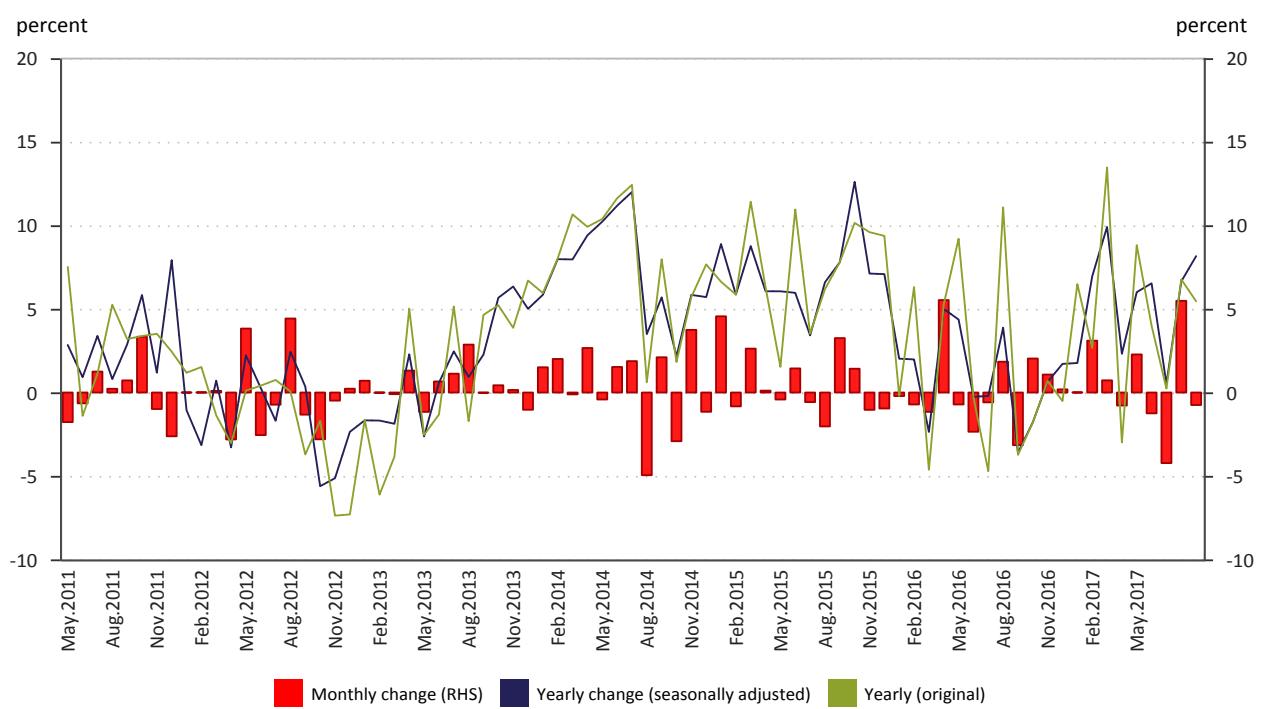
Source: MNB, HSCO.

Note: the fan chart represents 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 GDP illustrated by the dotted line (as the mode of distribution) refers to 30 per cent of the probability. Seasonally adjusted and reconciled data. The baseline forecast is based on backcast and nowcast adjusted by anticipated revisions.

20. GDP growth rate in CEE

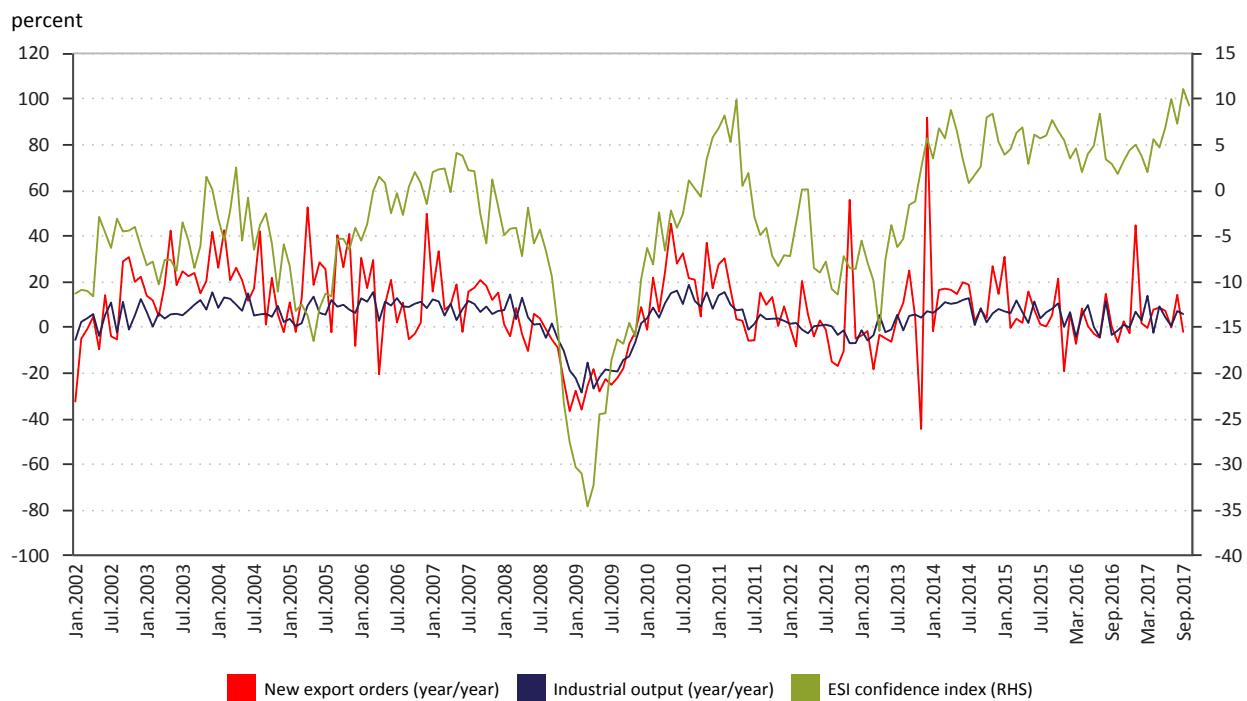
Source: Eurostat

Note: annual growth rate.

21. Change in industrial production

Source: MNB, HCSO.

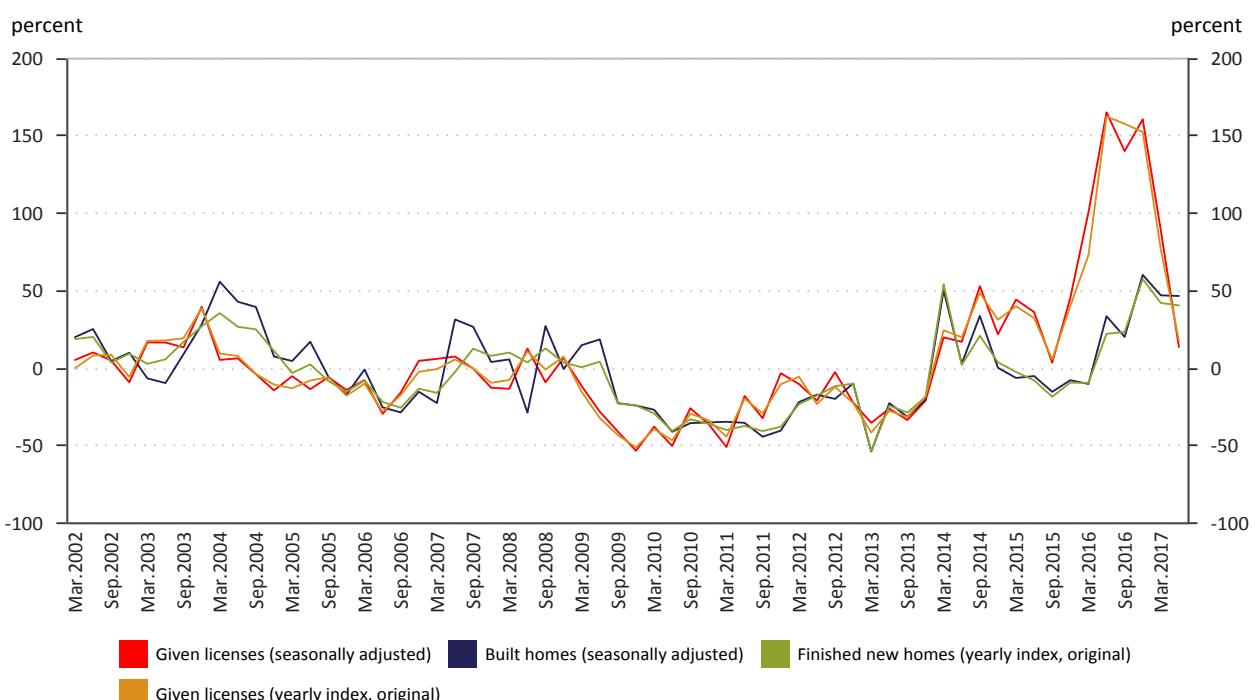
22. Industrial production and new export orders



Source: HSCO, European Commission.

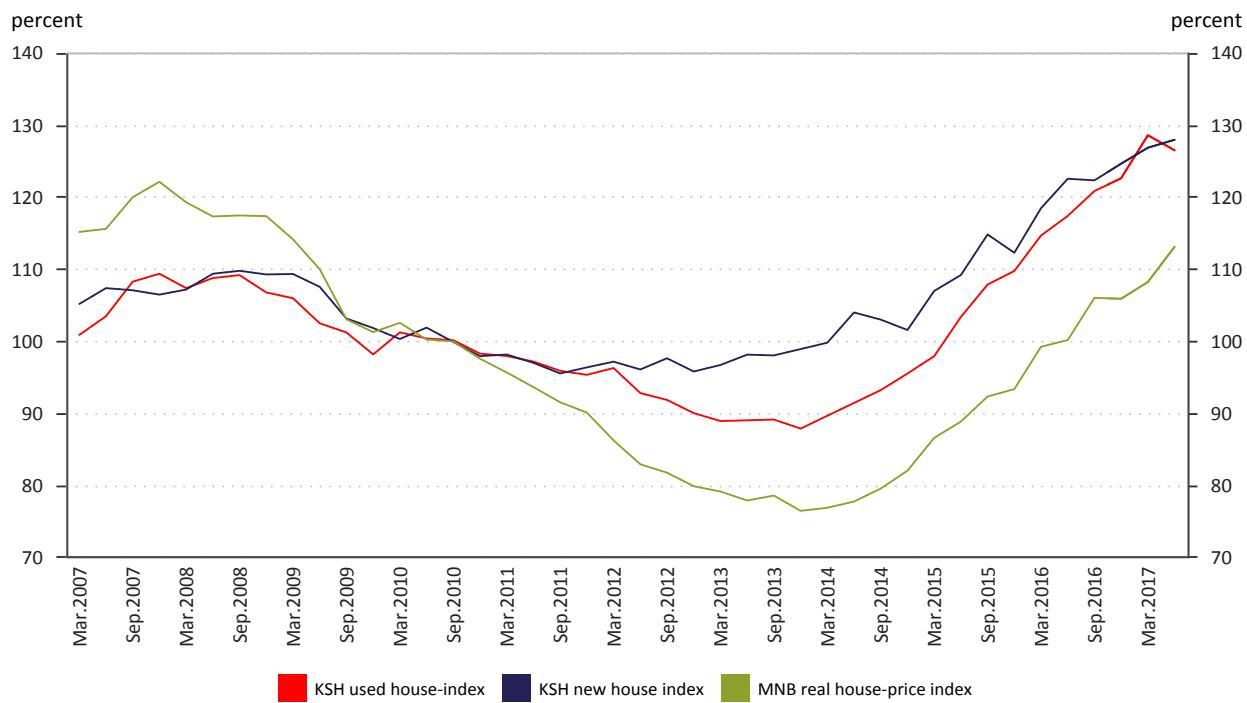
Note: ESI Index is a survey on business confidence by the European Commission. Chart represents the industrial sub-index.

23. Developments on the real estate market



Source: MNB, HCSO.

24. Developement of house prices

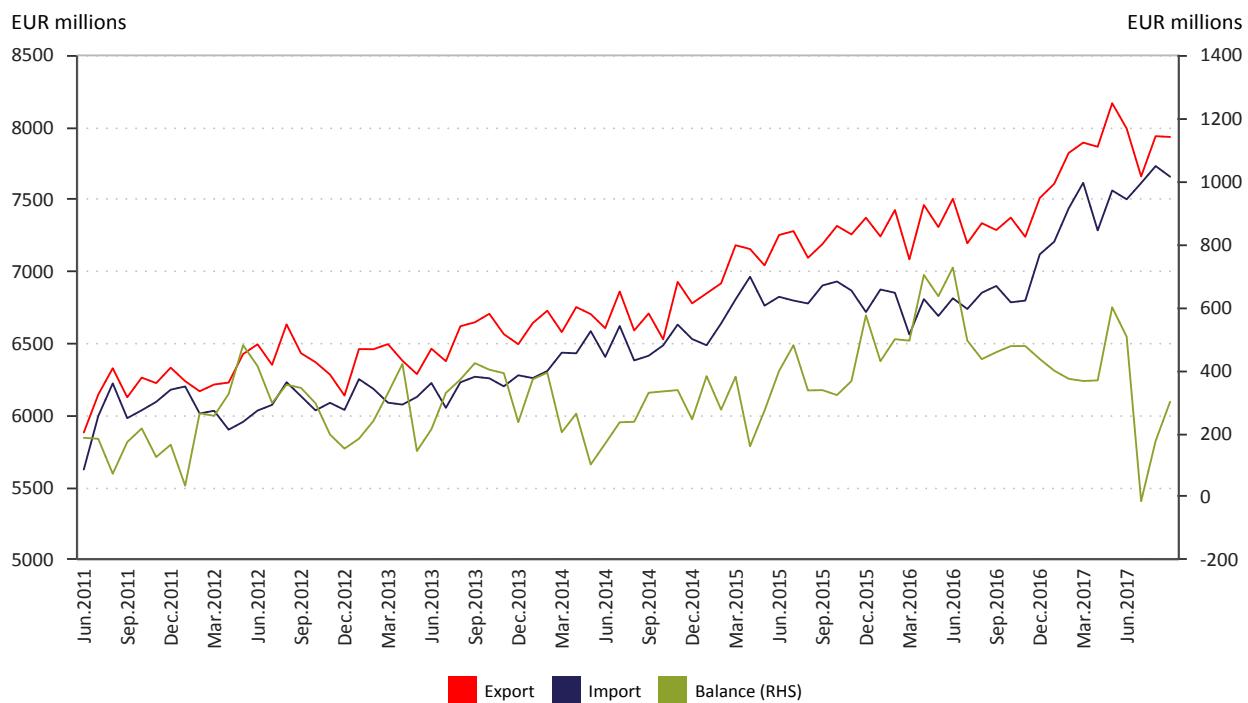


25. Household confidence index (reweighted)

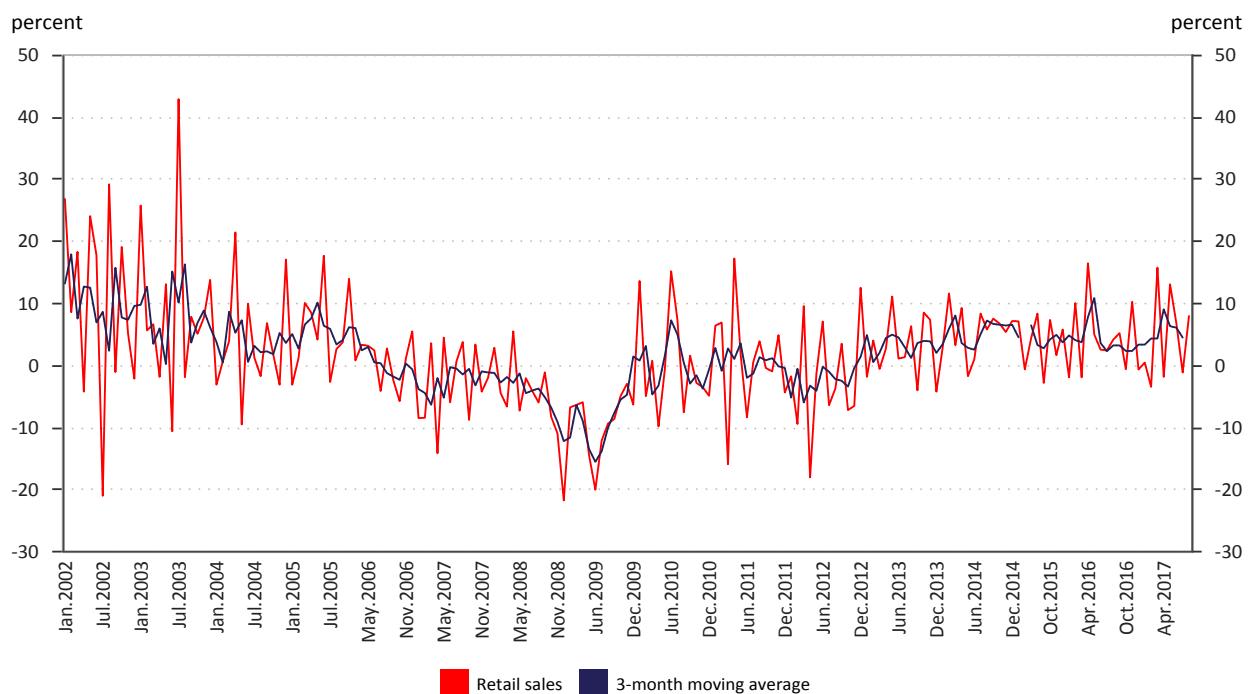


Source: European Commission.

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

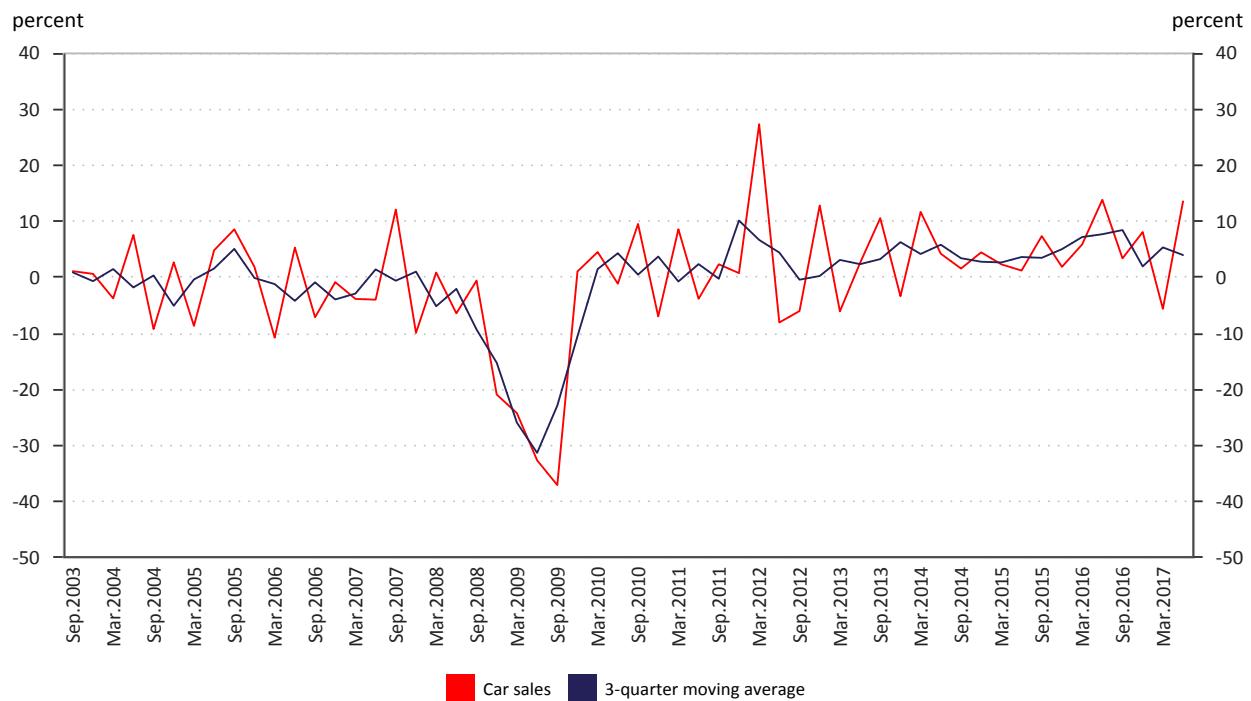
26. Change in export and import volumes

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

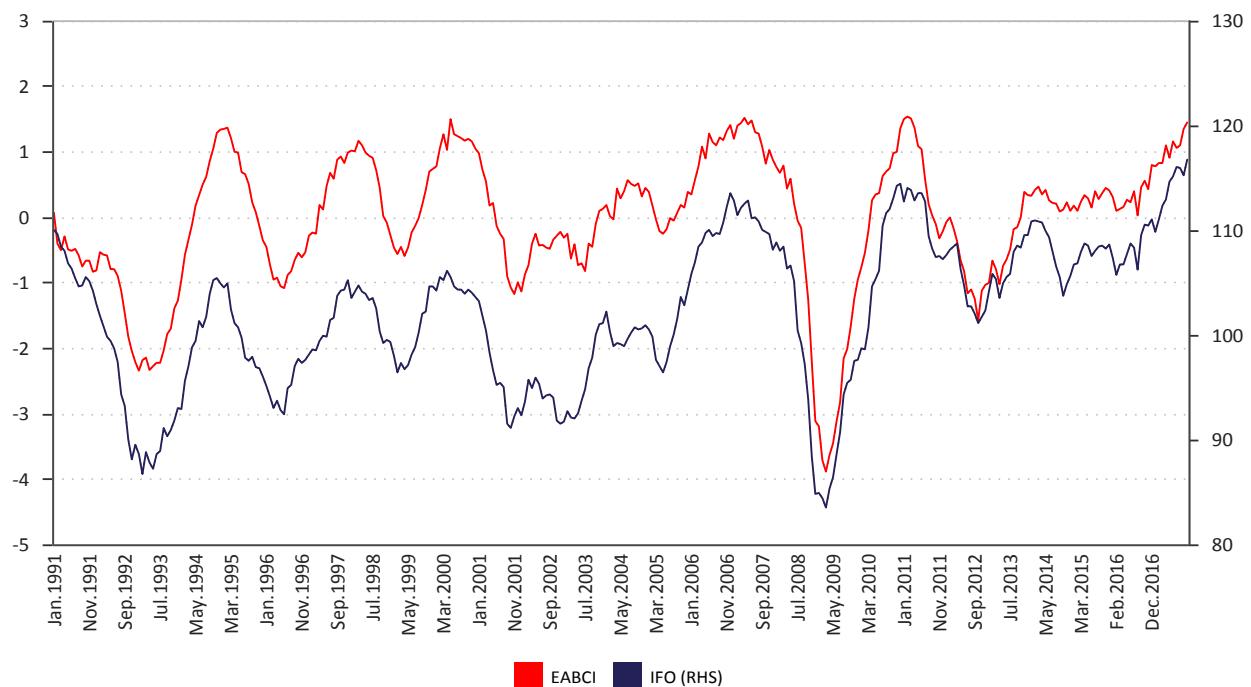
27. Total volume of retail trade

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.

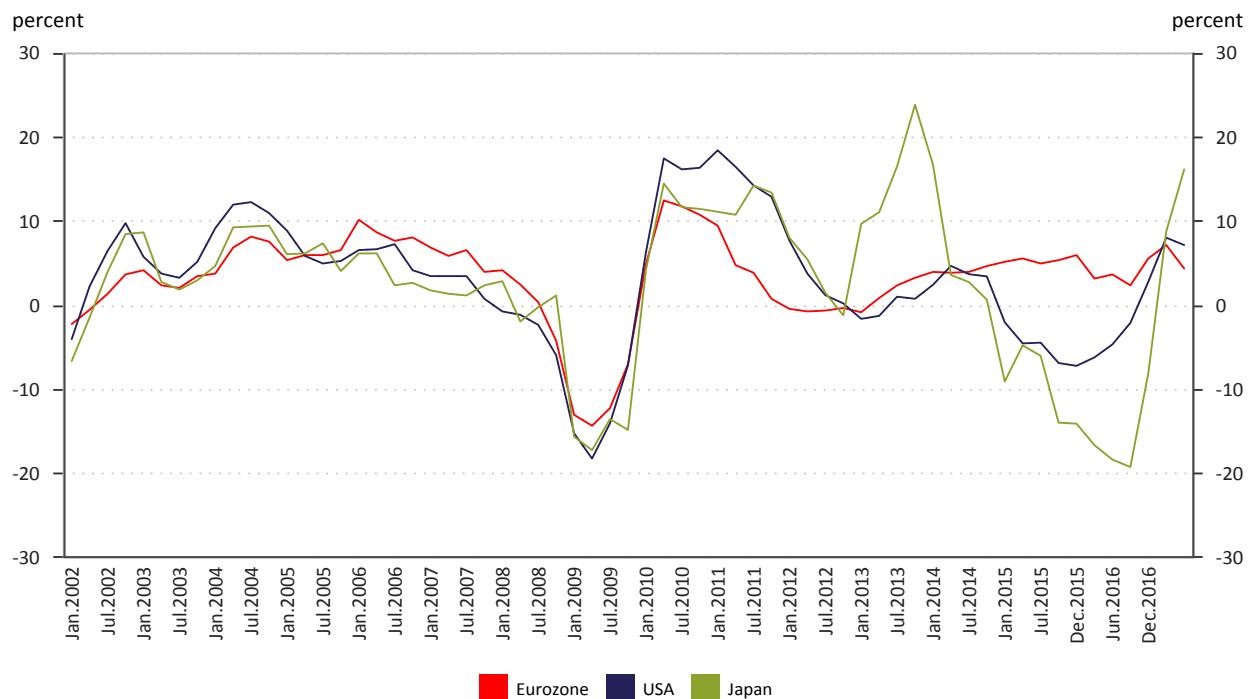
28. Quarterly growth rates of automobile sales

Source: ACEA.

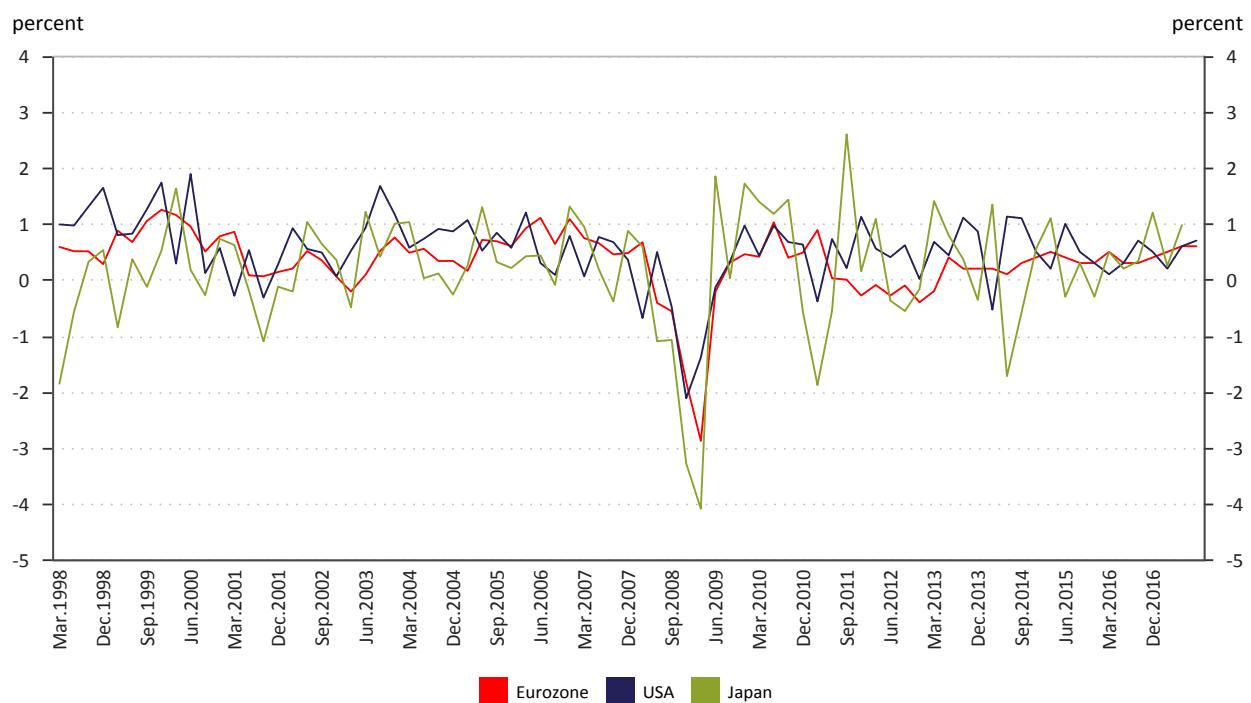
29. Business climate indices in the EMU

Source: IFO; European Committee.

Note: IFO: Business Climate Index of the German Institut für Wirtschaftsforschung (Average of year 2000 = 100); EBCI: 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

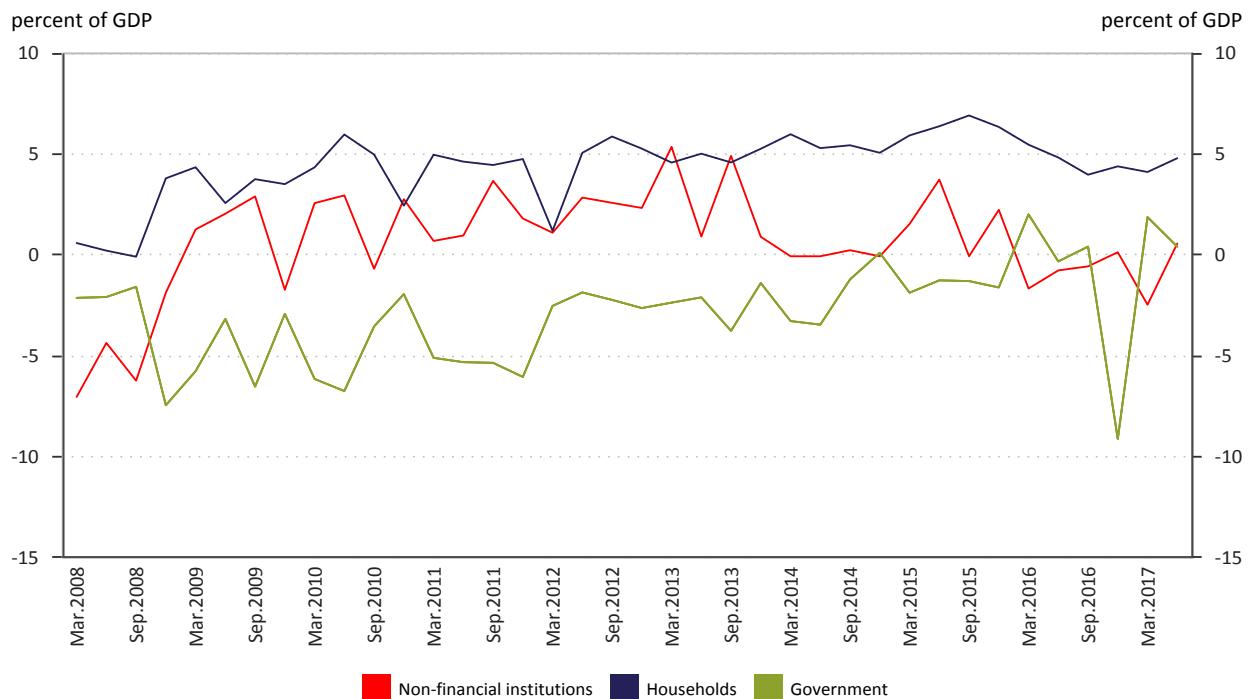
Source: Eurostat.

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

Source: Eurostat.

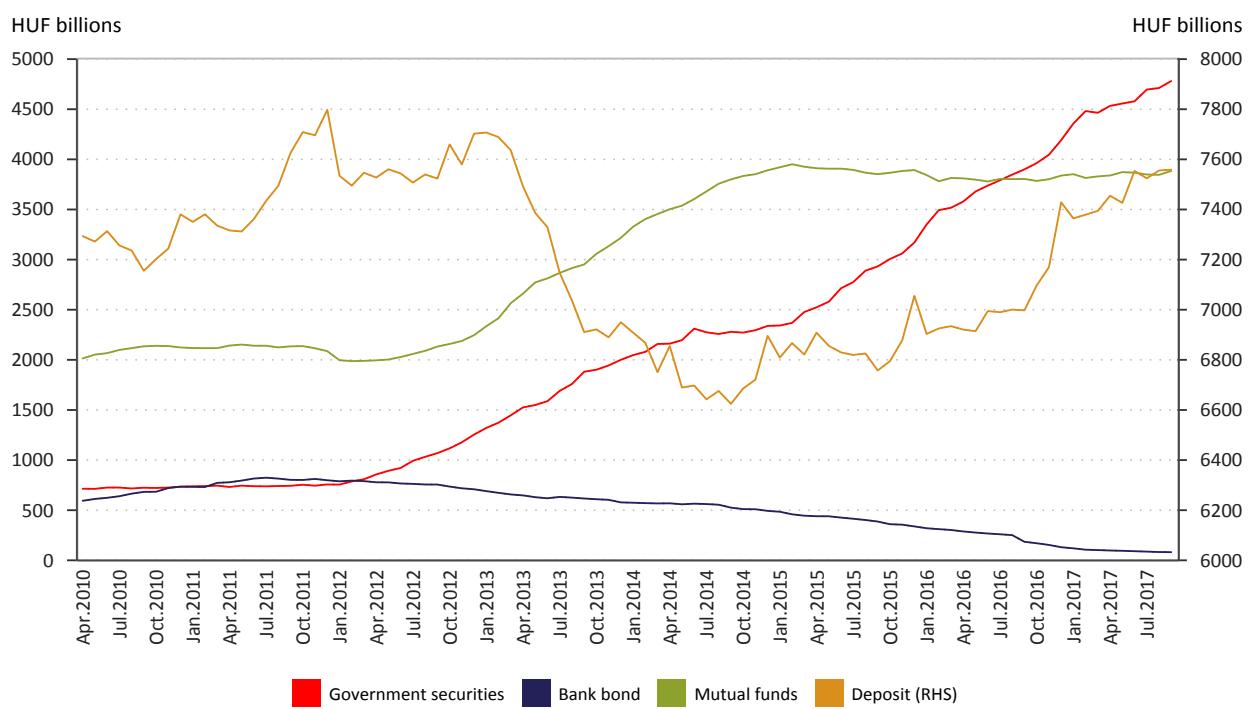
Note: quarterly growth rate.

32. Net lending of domestic sectors

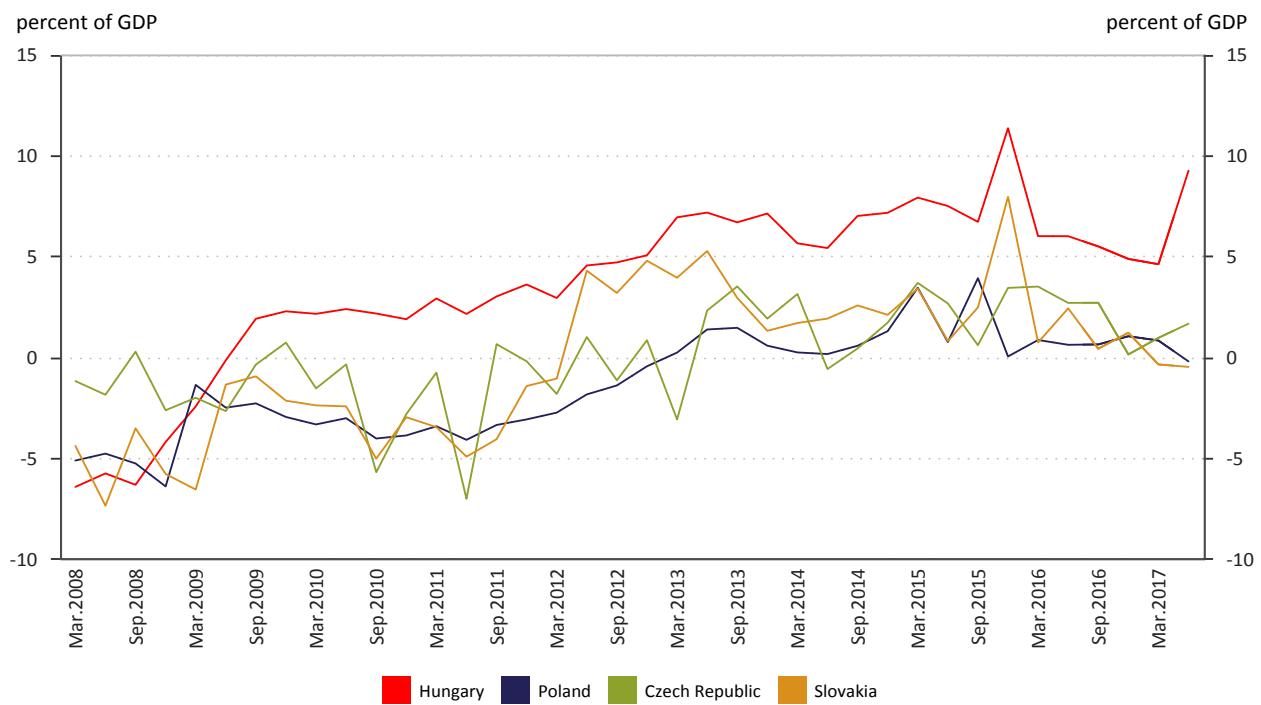


Source: MNB.

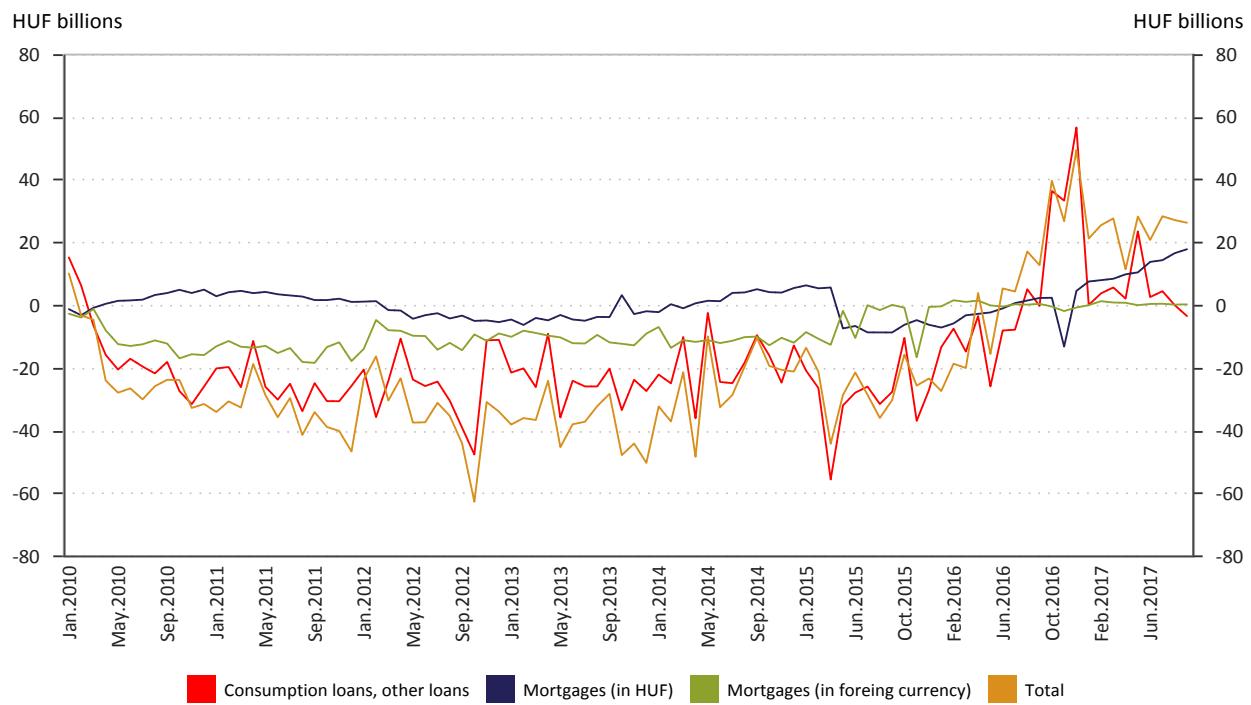
33. Main financial assets held by households



Source: MNB.

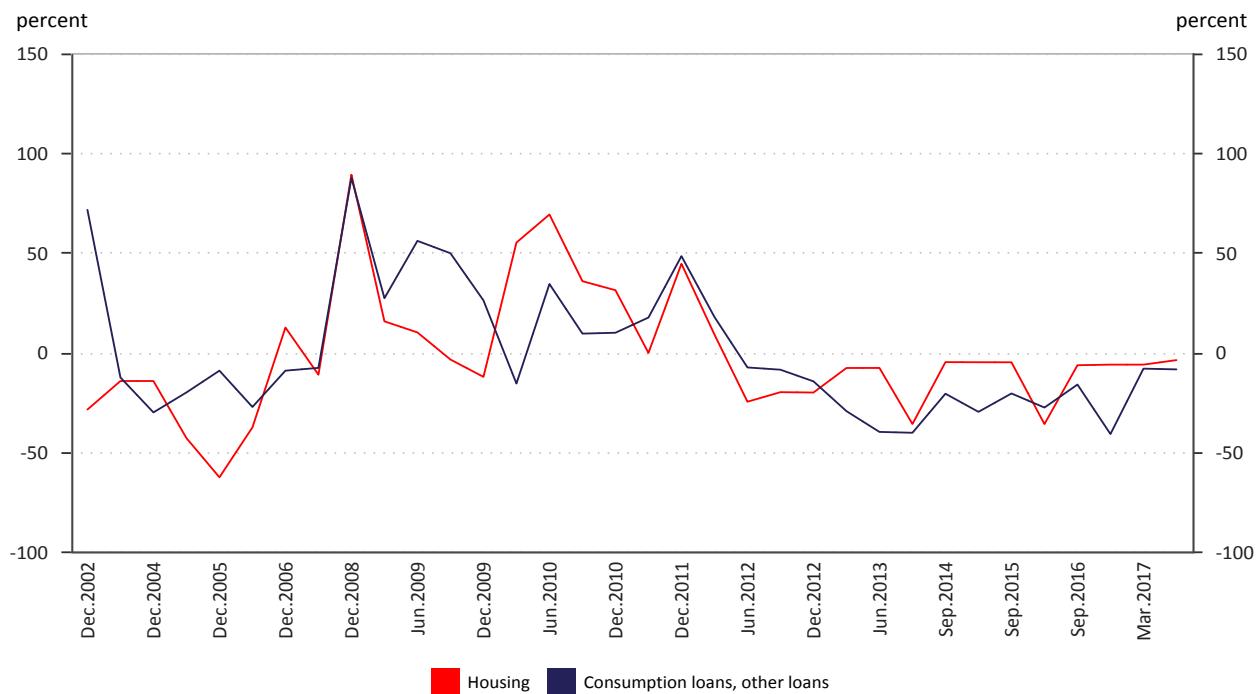
34. External financing capacity in the CEE countries

Source: MNB.

35. Net borrowing of the households

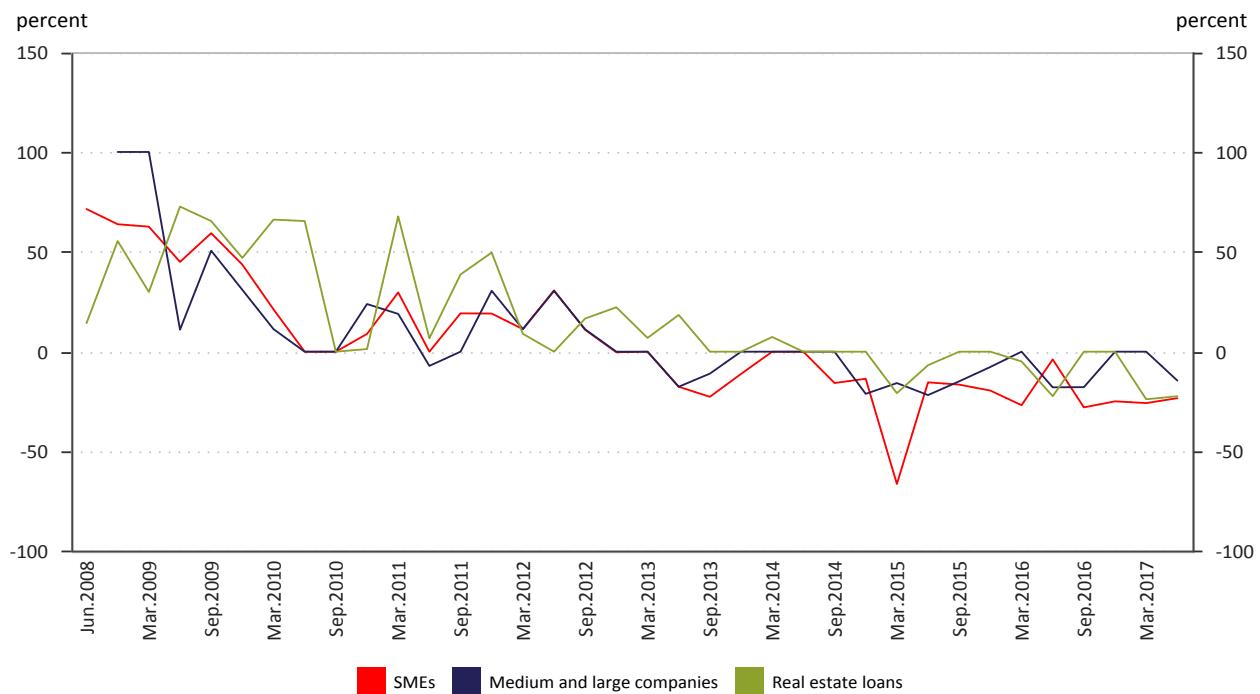
Source: MNB

Note: Data on 31/03/2015 in display order: -394; 1473; -1808; -40 (FX-loan conversion).

36. Creditworthiness standards and credit conditions in the household sector

Source: MNB

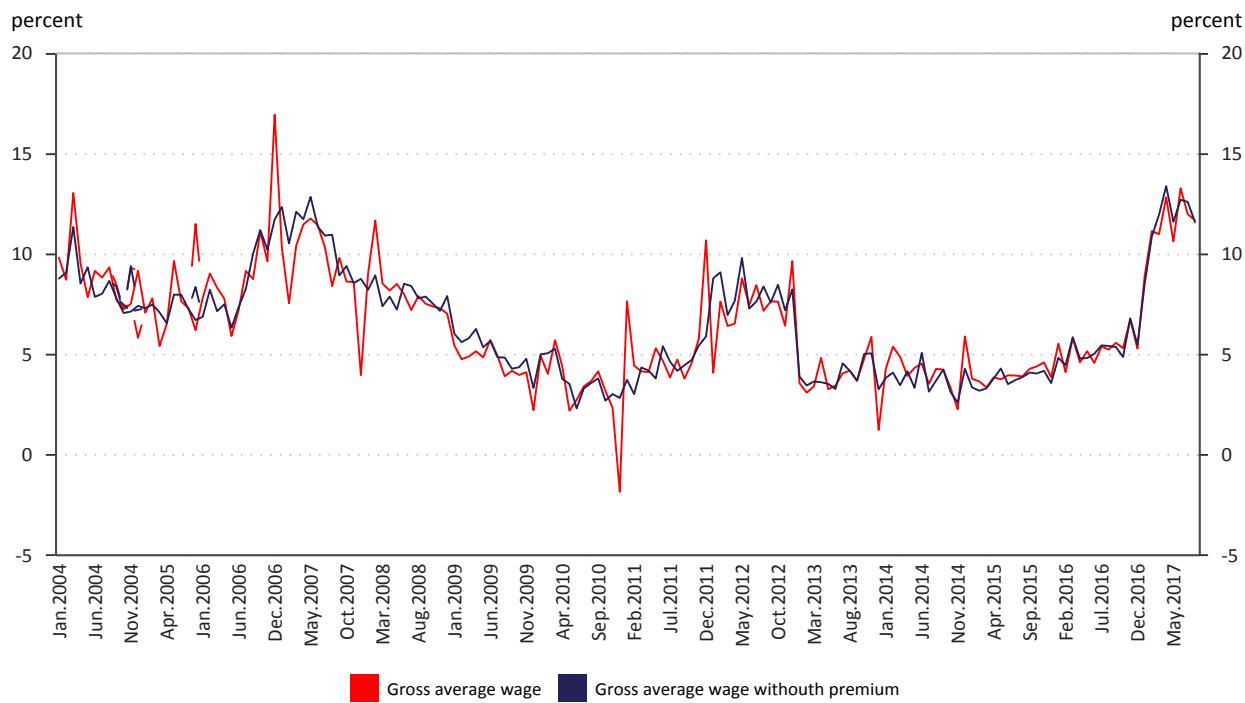
Note: credit conditions estimated by lending officers. Negative value indicates easing, positive indicates tightening compared to the last quarter (before 2009 to previous half a year).

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).

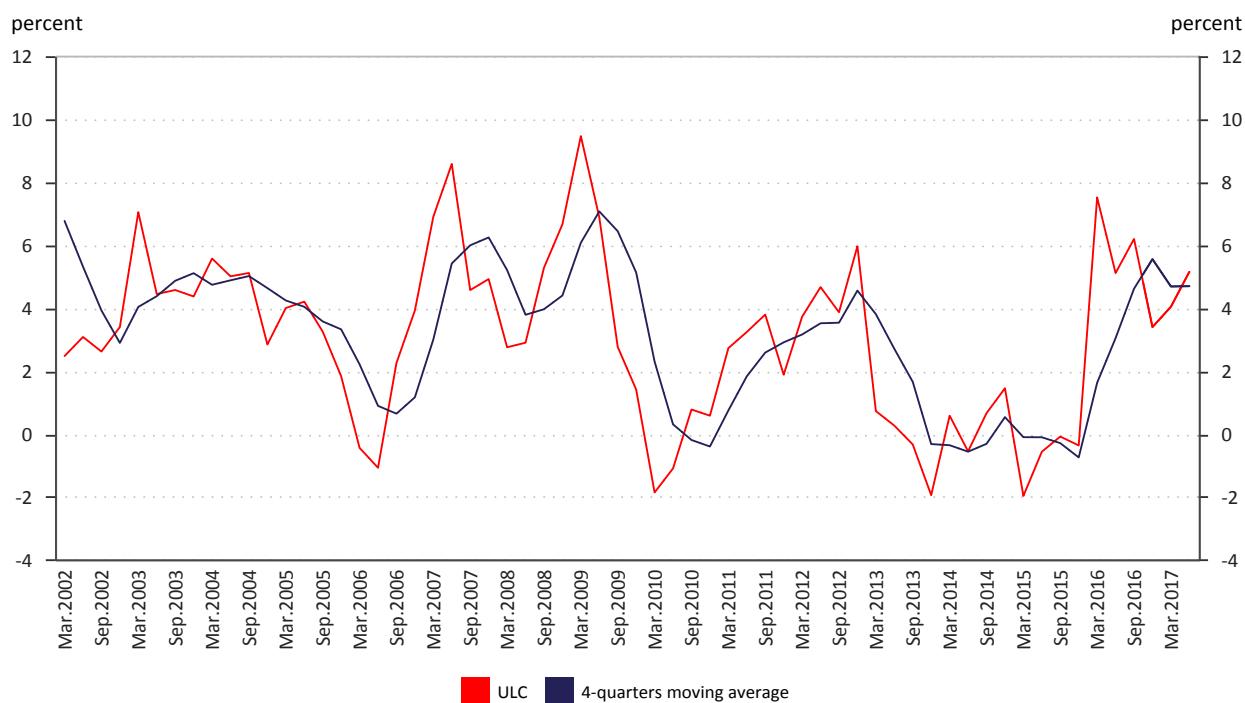
38. Wage growth in private sector



Source: HCSO, seasonally adjusted by MNB

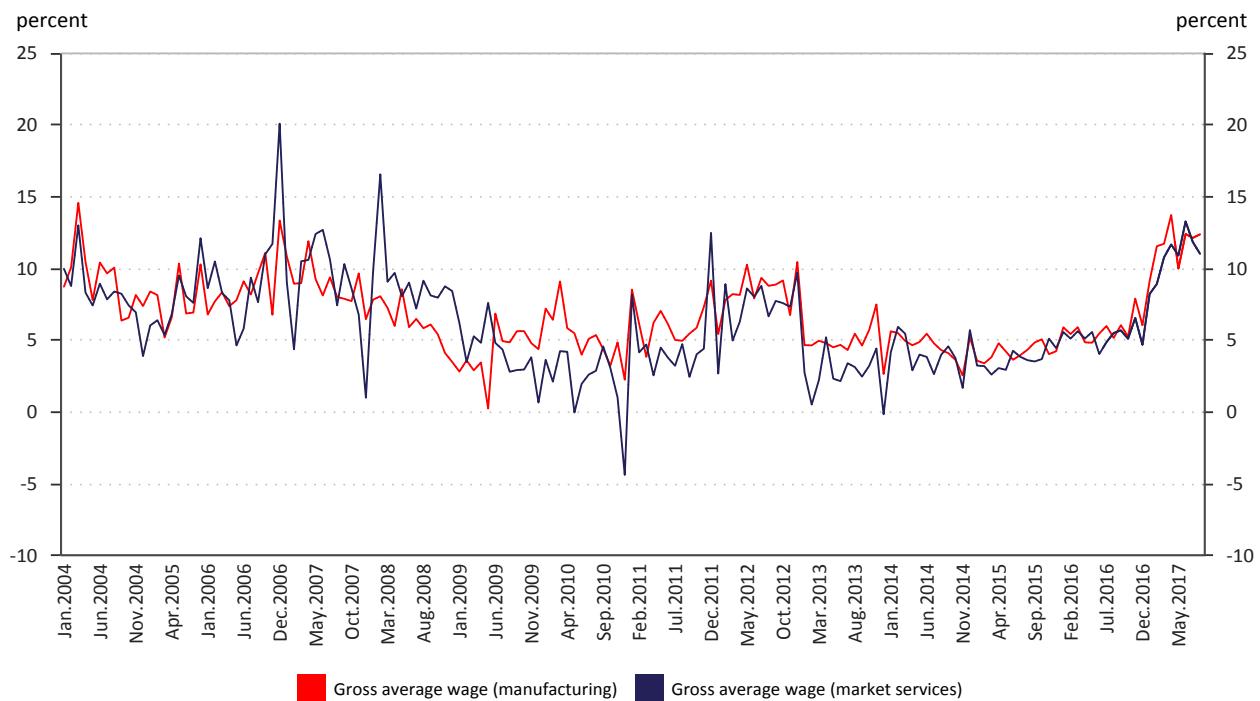
Note: annual growth rates.

39. Unit labour cost in the private sector

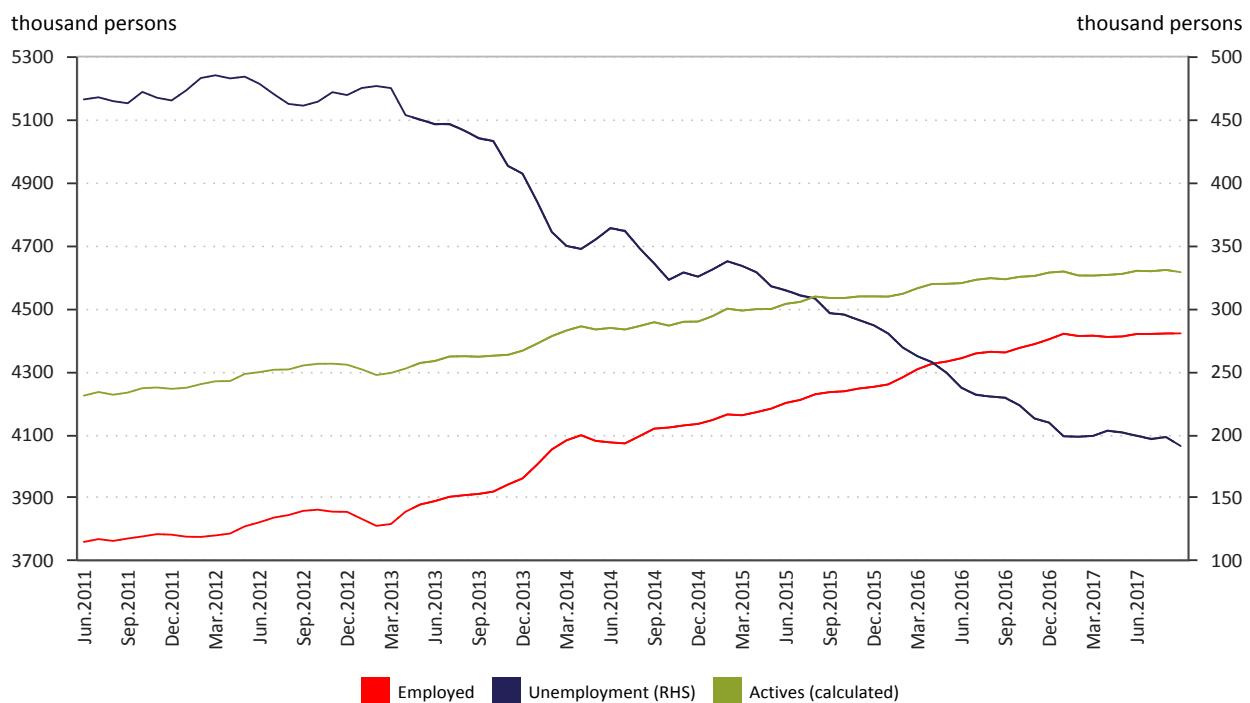


Source: HCSO, seasonally adjusted by MNB

Note: annual growth rates.

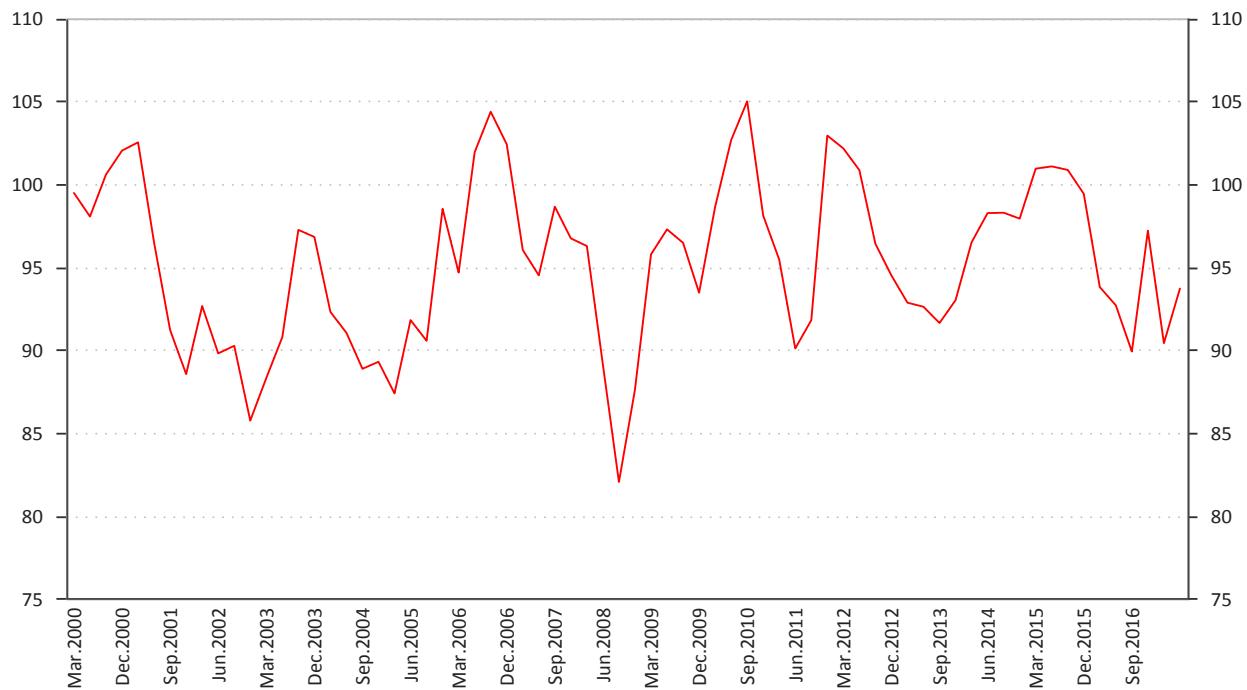
40. Wage growth in the manufacturing and market service sector

Source: MNB, HCSO.

41. Activity and unemployment

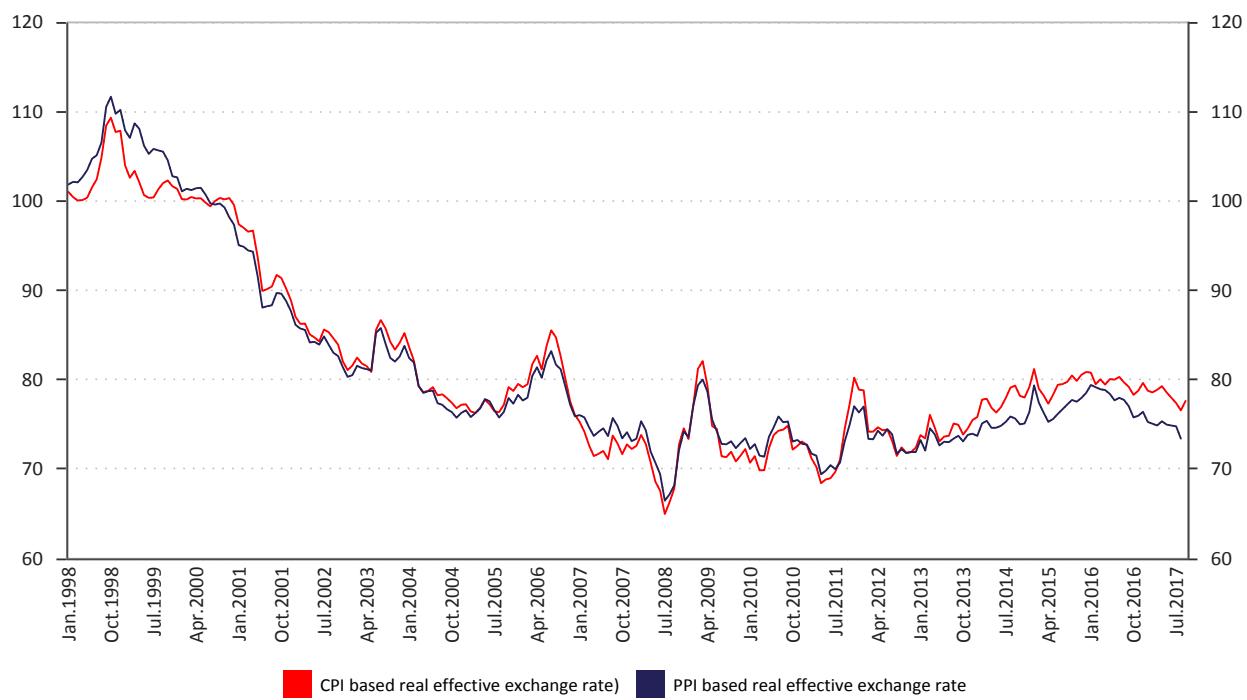
Source: HCSO.

Notes: levels, seasonally adjusted.

42. ULC based real effective exchange rate of the HUF

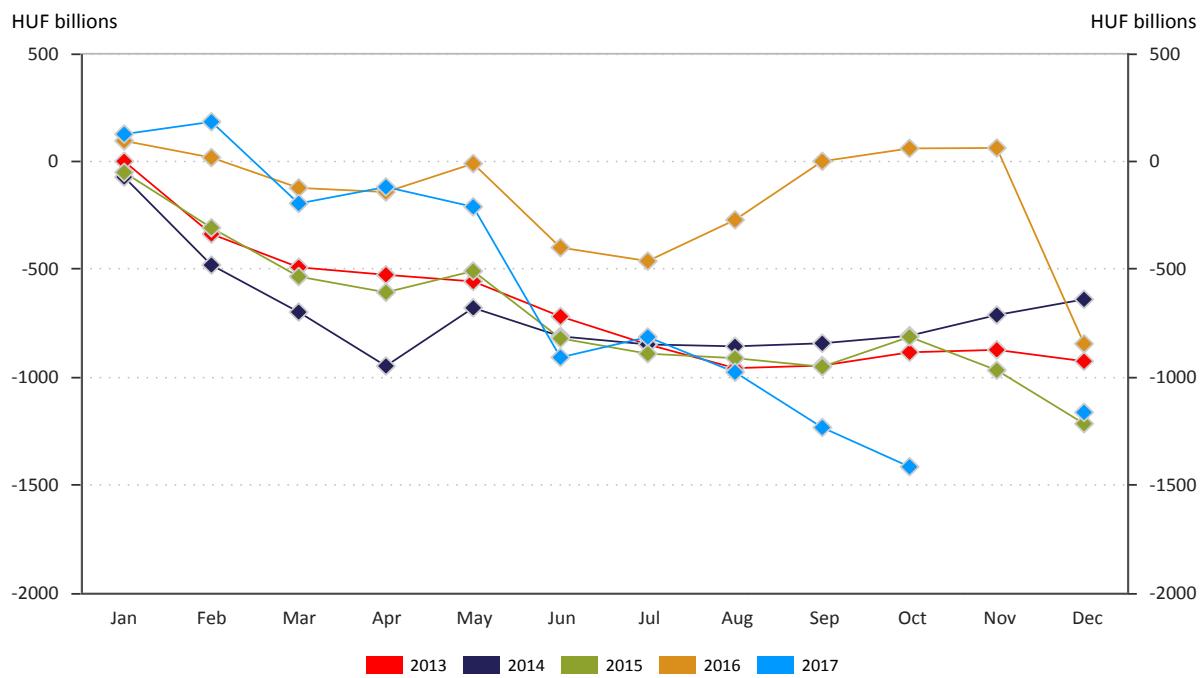
Source: HCSO.

Note: average of year 2000 = 100%.

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

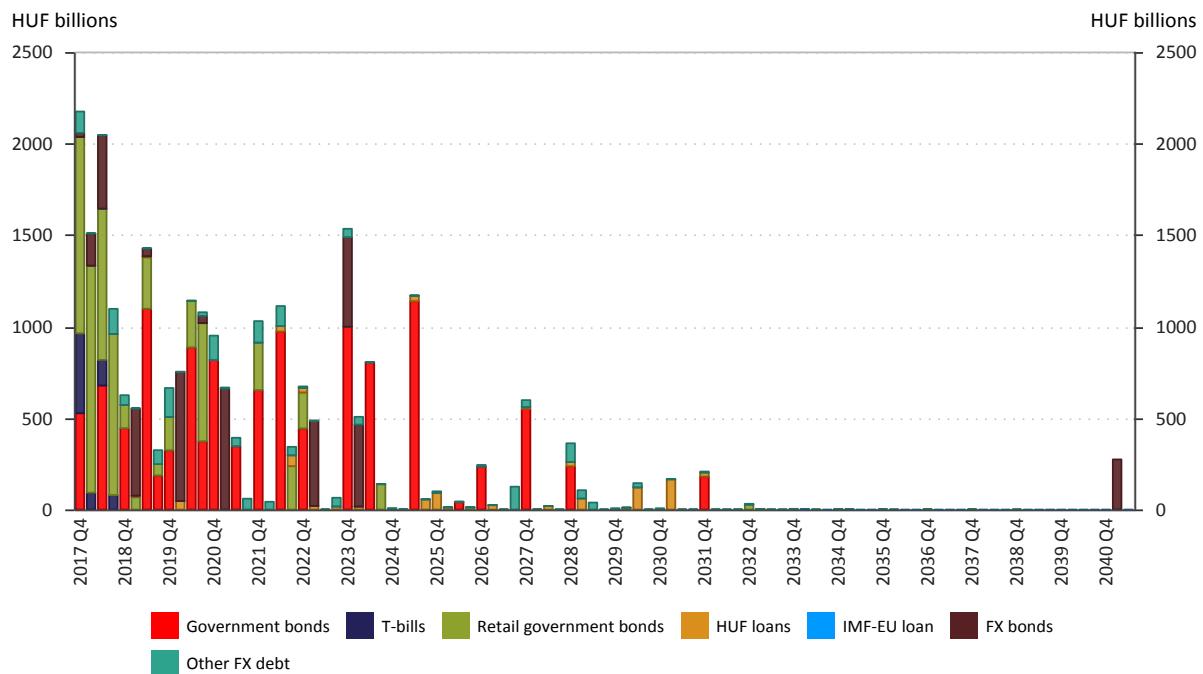
Source: HCSO.

Note: average of year 2000 = 100%. PPI based effective rates changed due to statistical revision on 24th March 2017.

44. Monthly evolution of budget deficit

Source: Hungarian State Treasury

Note: Individual dot shows the budget forecast. Cumulated balance.

45. Quarterly maturity structure of the government debt

Source: MNB, ÁKK.

Note: Redemptions 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 (SEP 2017)	0.4	2.4	2.5	2.9
Consensus Economics (OCT 2017) ¹	0.4	2.2 - 2.4 - 2.9	1.7 - 2.8 - 3.8	
European Commission (NOV 2017)	0.4	2.3	2.6	3.0
IMF (OCT 2017)	0.4	2.5	3.2	3.0
OECD (JUN 2017)	0.4	3.0	3.0	
Reuters survey (OCT 2017) ¹		2.3 - 2.4 - 2.5	1.7 - 2.6 - 3.4	2.1 - 2.9 - 3.5
GDP (annual growth rate, %)				
MNB (SEP 2017)	2.2 (2.0)	3.6	3.7	3.2
Consensus Economics (OCT 2017) ¹	2.0	3.4 - 3.8 - 4.2	2.5 - 3.4 - 4.2	
European Commission (NOV 2017)	2.2	3.7	3.6	3.1
IMF (OCT 2017)	2.0	3.2	3.4	2.8
OECD (JUN 2017)	1.9	3.8	3.4	
Reuters survey (OCT 2017) ¹		3.5 - 3.8 - 4.0	3.0 - 3.7 - 4.2	
Current account balance³				
MNB (SEP 2017)	5.5	3.5	2.5	3.1
European Commission (NOV 2017)	6.1	4.3	3.3	3.2
IMF (OCT 2017)	5.5	4.8	4.2	3.2
OECD(JUN 2017)	4.9	3.6	2.1	
Budget deficit (ESA-95 method)^{3,4}				
MNB (SEP 2017)	-1.8	(-1.6) - (-1.8)	(-2.2) - (-2.4)	(-1.8) - (-2.0)
Consensus Economics (OCT 2017) ¹	-1.8	(-0.8) - (-2.3) - (-3.0)	(-1.6) - (-2.5) - (-3.0)	
European Commission (NOV 2017)	-1.9	-2.1	-2.6	-2.3
IMF (OCT 2017)	-1.6	-2.8	-2.9	-2.7
OECD (JUN 2017)	-1.8	-2.6	-2.7	
Reuters survey (OCT 2017) ¹		(-0.8) - (-2.0) - (-2.7)	(-1.6) - (-2.3) - (-2.8)	
Forecasts on the size of Hungary's export markets (annual growth rate, %)				
MNB (SEP 2017)	4.4	4.2	4.1	4.0
European Commission (NOV 2017) ²	4.3	5.4	5.2	4.8
IMF (OCT 2017) ²	4.3	5.0	4.9	4.6
OECD (JUN 2017) ²	3.6	4.8	4.4	
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)				
MNB (SEP 2017)	2.4	2.3	2.4	2.5
Consensus Economics(OCT 2017) ¹	2.3	2.7	2.4	
European Commission (NOV 2017) ²	2.3	2.8	2.6	2.4
IMF (OCT 2017) ²	2.3	2.7	2.4	2.1
OECD (SEP 2017) ²	2.0	2.4	2.3	

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

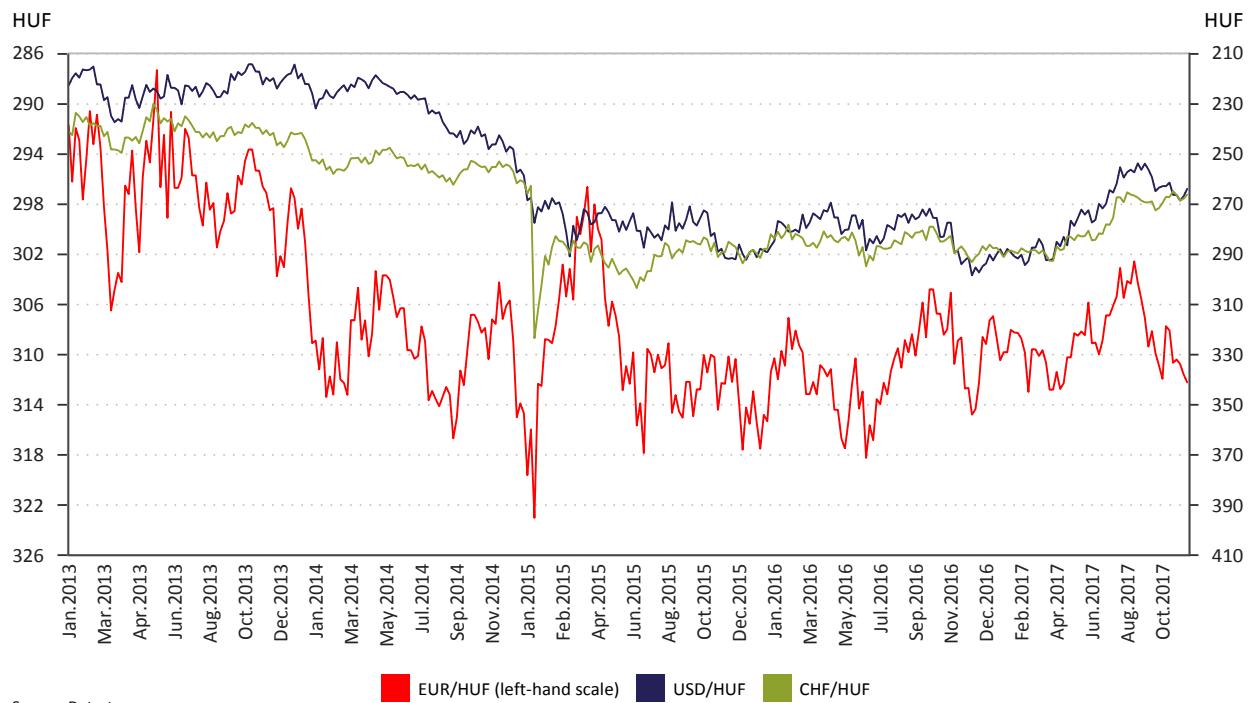
47. Domestic financial developments
Overview

Indicator	One month ago	One week ago	Current
HUF/EUR spot exchange rate	307.8	311.9	312.00
Skewness of expectations on HUF/EUR exchange rate	0.63	0.64	0.63
HUF-positions of foreign investors (HUF billions)	-1727	-1850	-1889
Forward positions of domestic investors (HUF billions)	972	1187	1154
MNB base rate (%)	0.90	0.90	0.90
Expected short-term interbank rate at the end of the year (%)*	0.05	0.05	0.05
3-months interbank rate (%)	0.05	0.05	0.05
3x6 FRA rate (%)	0.04	0.03	0.03
3 month T-bill yield (%)	-0.04	-0.04	-0.03
5 year T-bond yield (%)	1.16	1.16	1.17
Slope of yield curve (10Y-1Y, bp)	253	226	224
O/N FX-swap spread (bp)	-5	-11	-19
3-month FX-swap spread (bp)	25	5	6
5-year FX-swap spread (bp)	-16	-17	-18
5-year CDS spread (bp)	93	96	95
5x5 government bond spread (bp)**	262	193	207
Average spread of USD-denominated government bonds (bp)	18	118	118
Foreign holdings of HUF-government bonds (HUF billion)	3574	3556	3529

Notes:

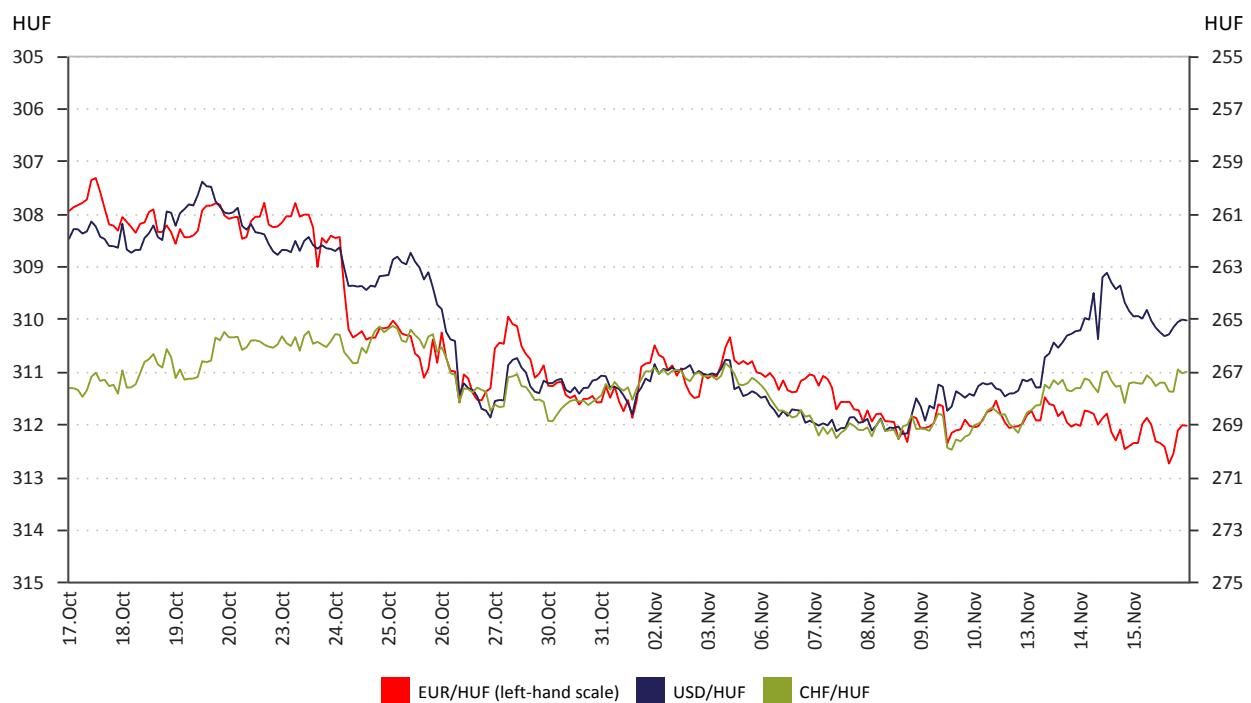
* Based on forward yield curve.

** Over Germany yield.

48. Developments in HUF exchange rate

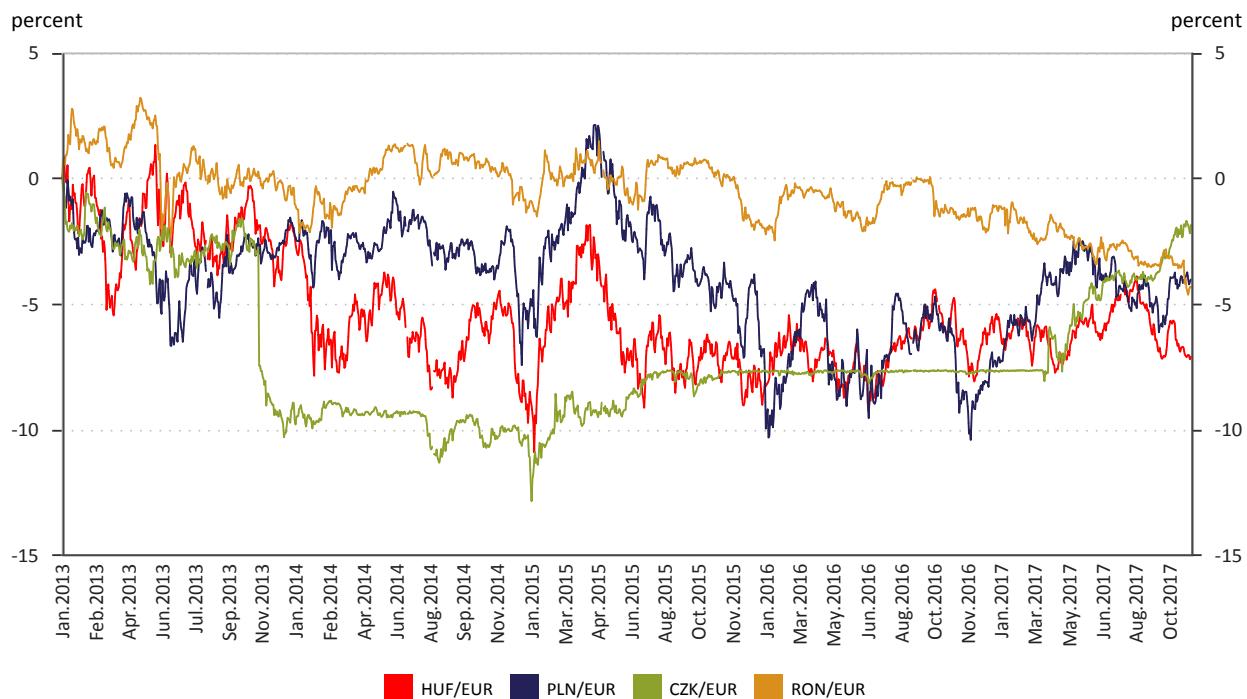
Source: Datastream

Note: reverse scale, daily observations.

49. Developments in HUF exchange rate (last month)

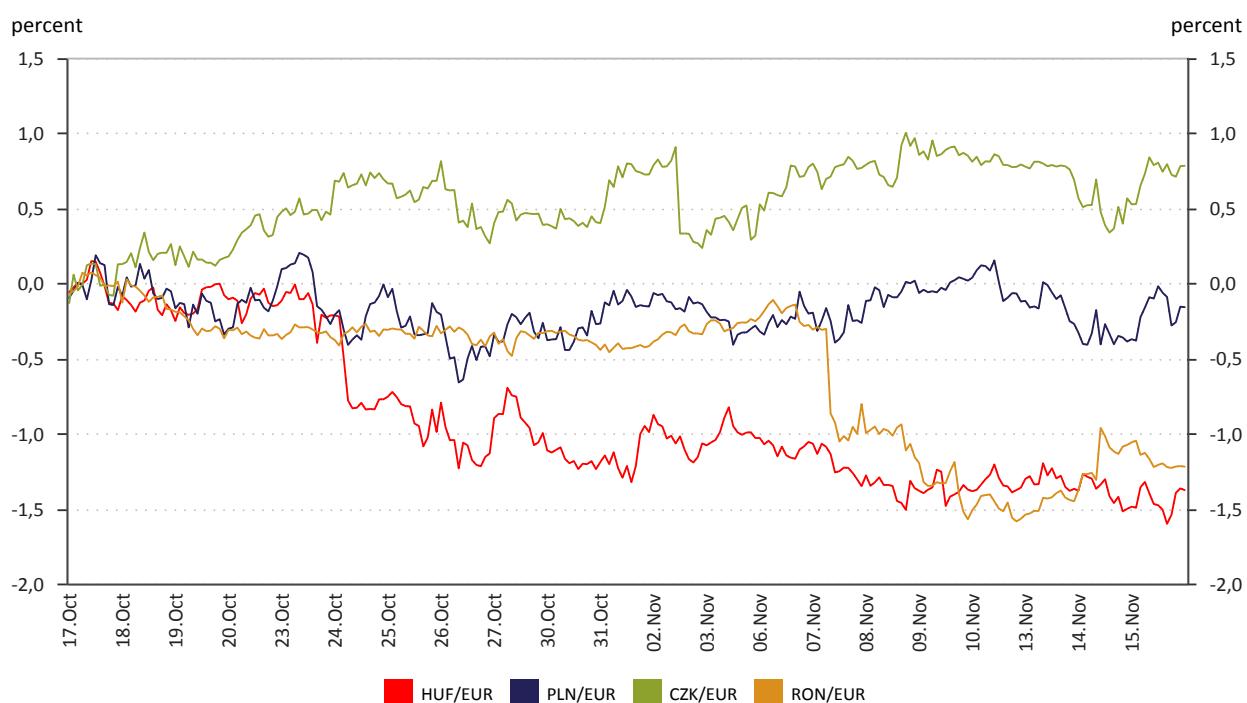
Source: Thomson Reuters

Note: reverse scale.

50. Emerging markets exchange rate

Source: Thomson Reuters

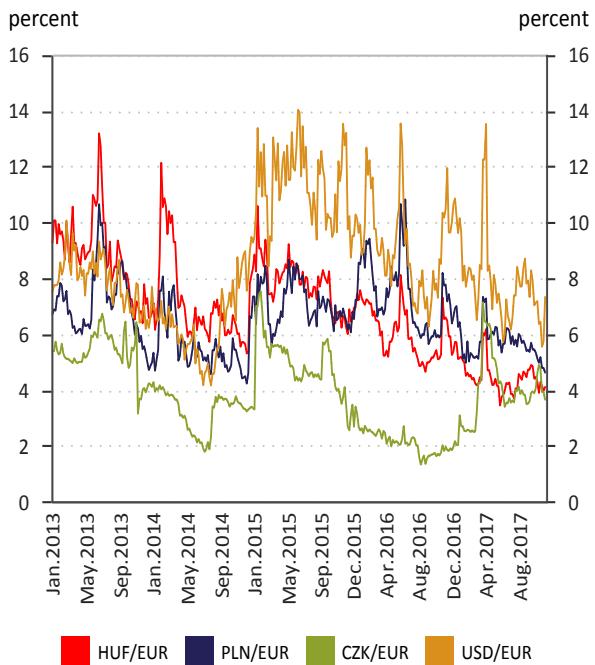
Note: cumulative change. Positive values mean appreciation.

51. Emerging markets exchange rate (last month)

Source: Thomson Reuters.

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

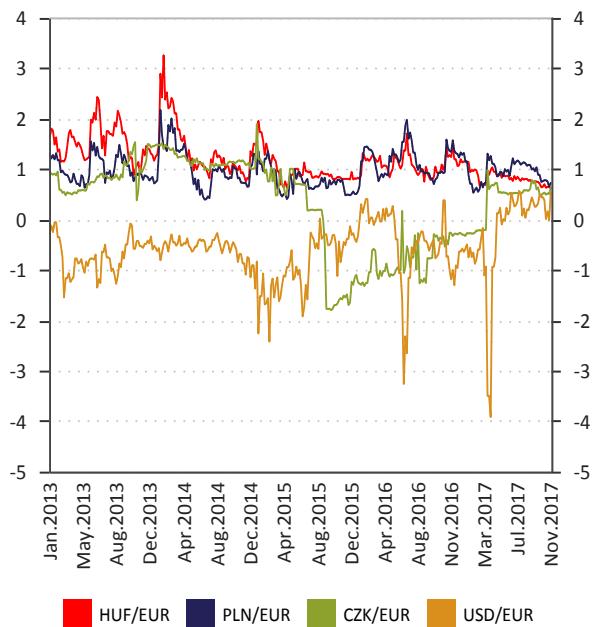
52. Volatility of exchange rate expectations



Source: Bloomberg

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

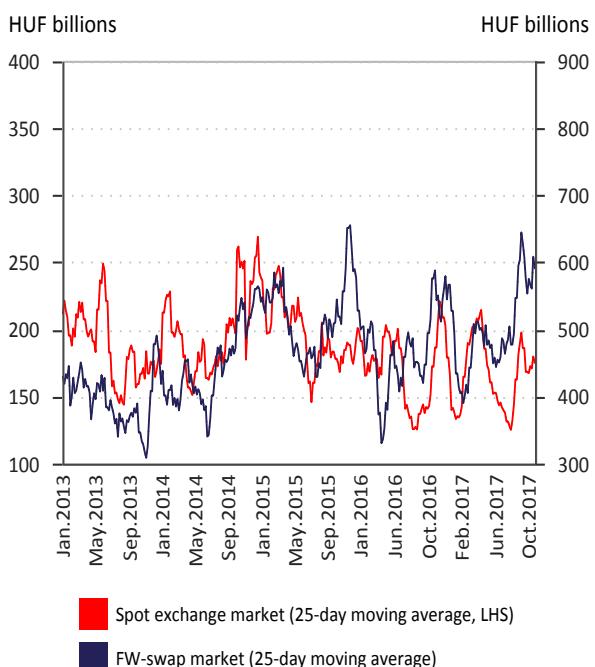
53. Skewness of exchange rate expectations



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.

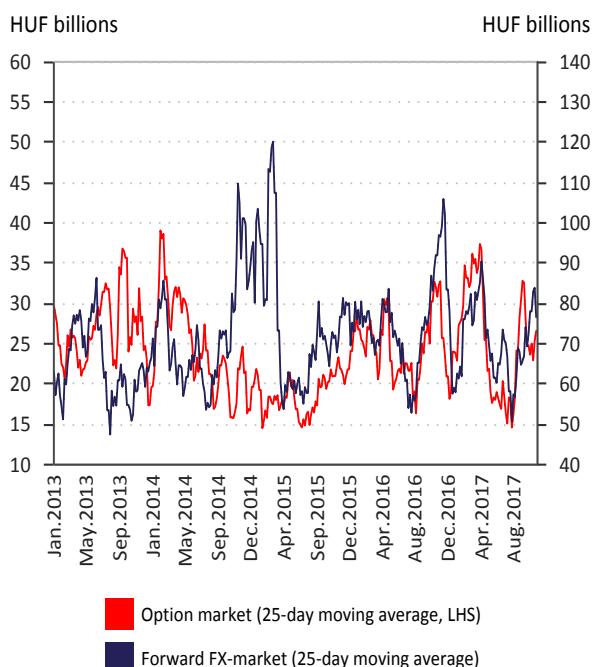
54. Turnover on the spot and the FX-swap market



Source: MNB

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

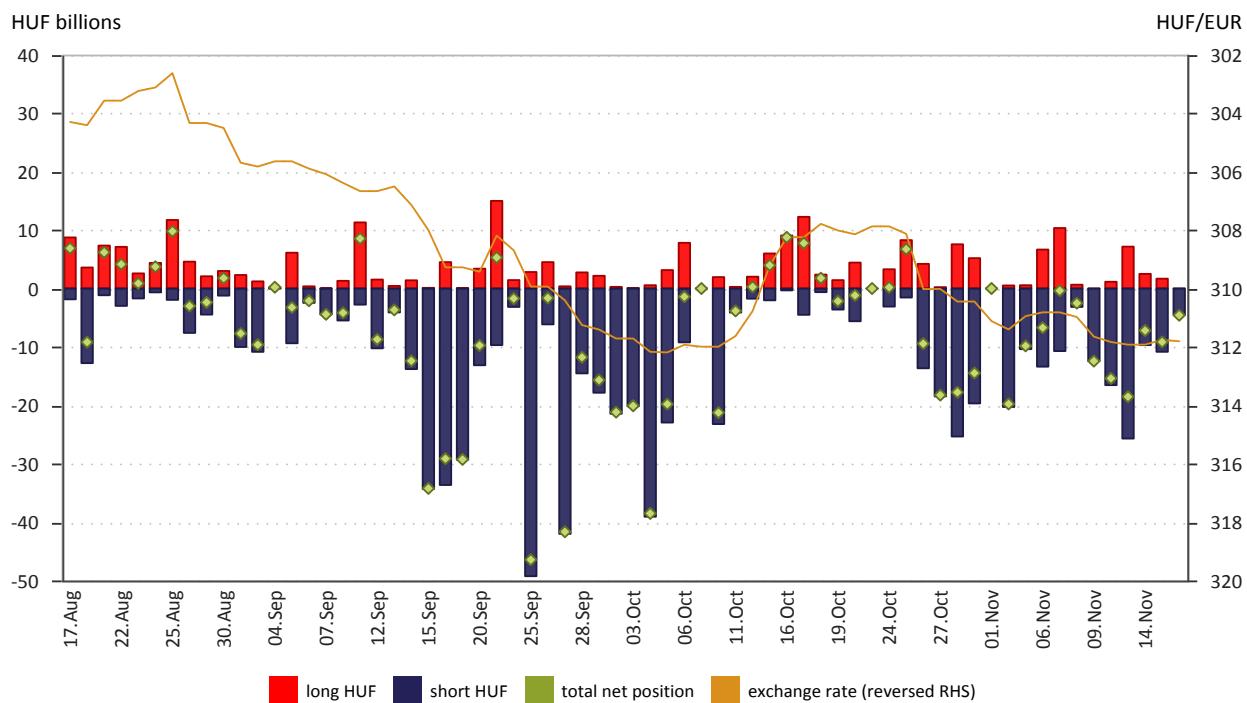
55. Turnover on the forward and option market



Source: MNB

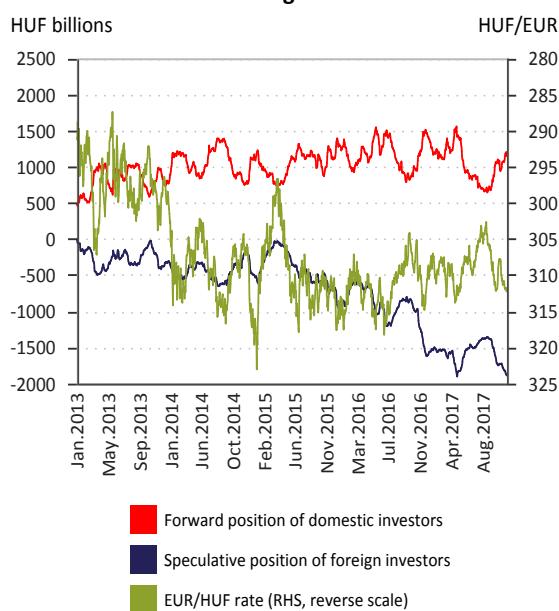
Note: forint against foreign exchange deals by domestic banks; moving averages calculated based on deal date data.

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



Source: MNB.

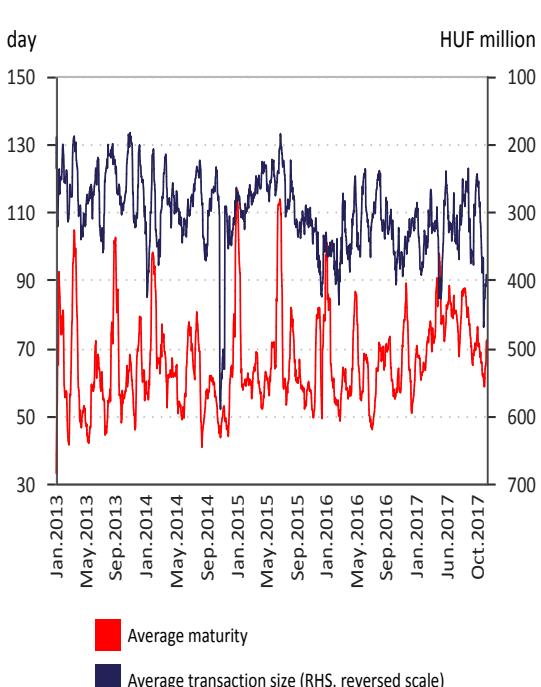
57. Cumulated positions of non-residents in HUF and the EURHUF exchange rate



Source: MNB

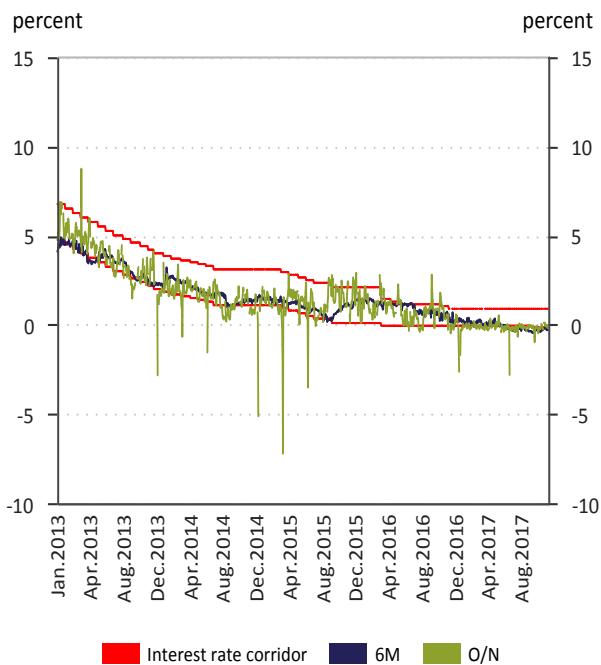
Note: Based on daily reports of credit institutions. Due to the nature of the daily reports of banks on FX transactions the components of the statistic do not close to zero. As a result information contained in the data series is relevant mainly to evaluate the direction of short-term fluctuation. The 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



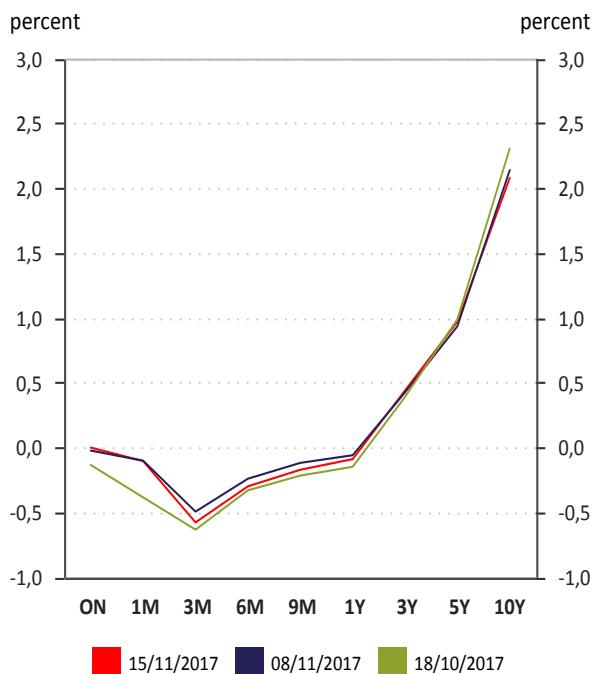
Source: MNB

Note: 20-day moving averages.

59. Implied HUF rates on FX-swap market

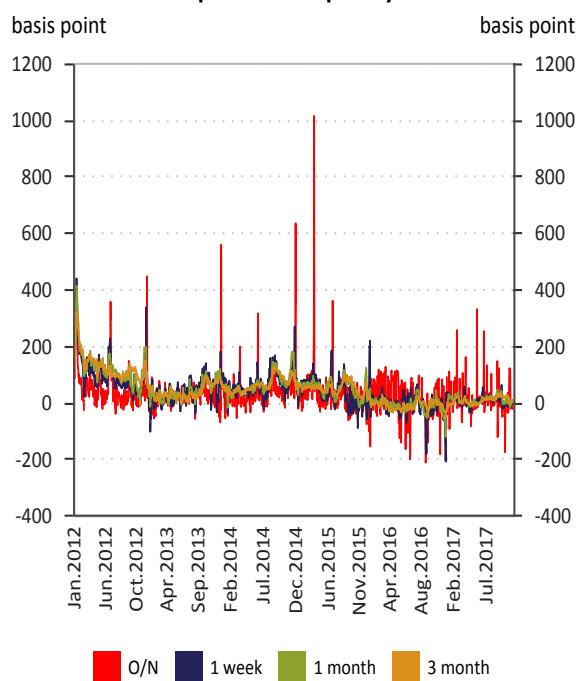
Source: MNB, Thomson Reuters

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.

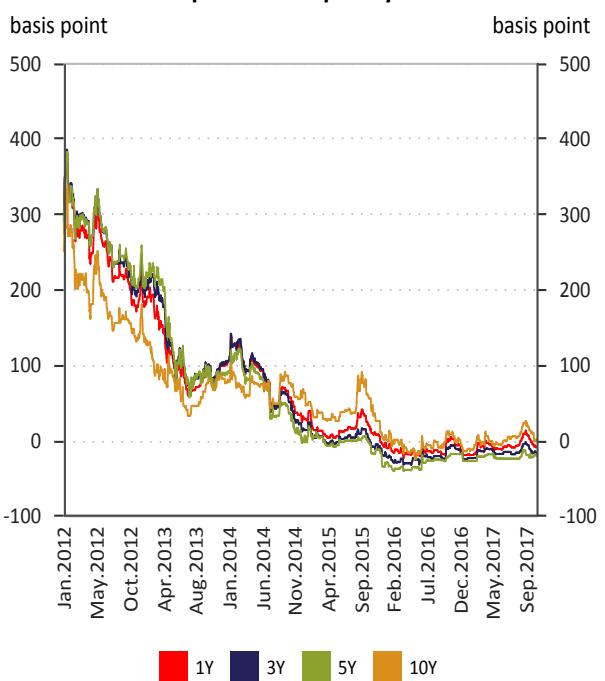
60. Implied yield curve on FX-swap markets

Source: MNB, Thomson Reuters.

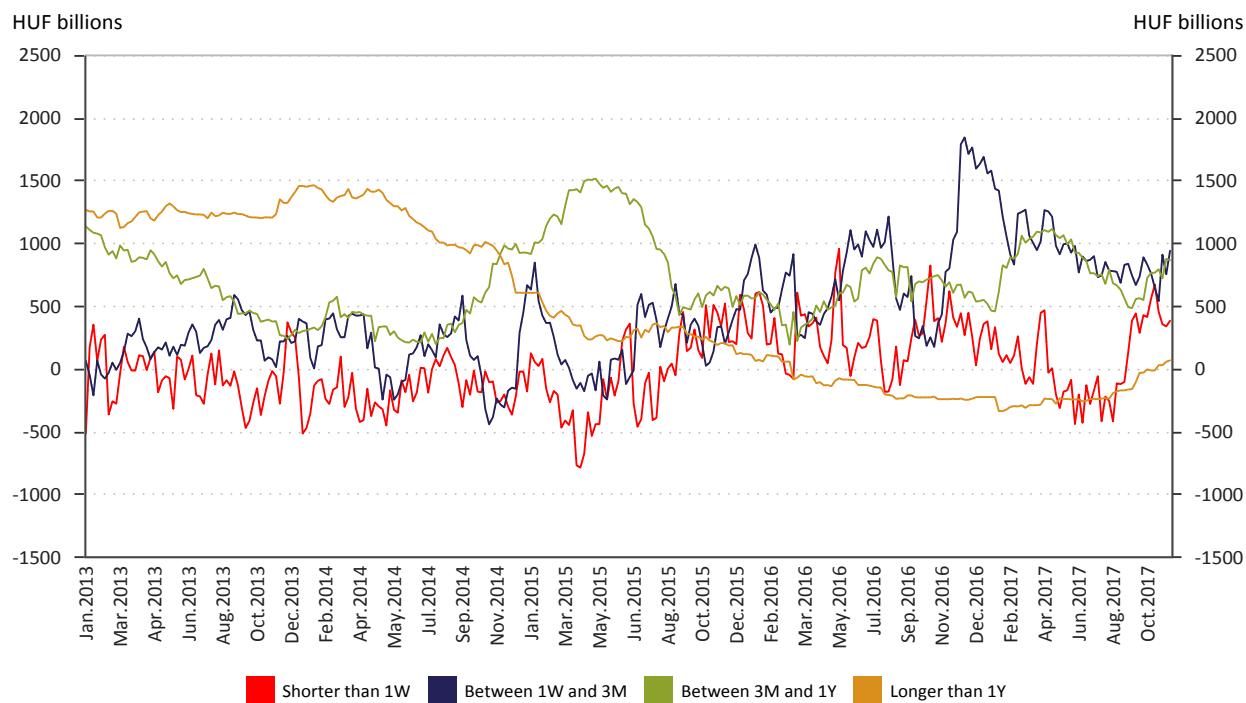
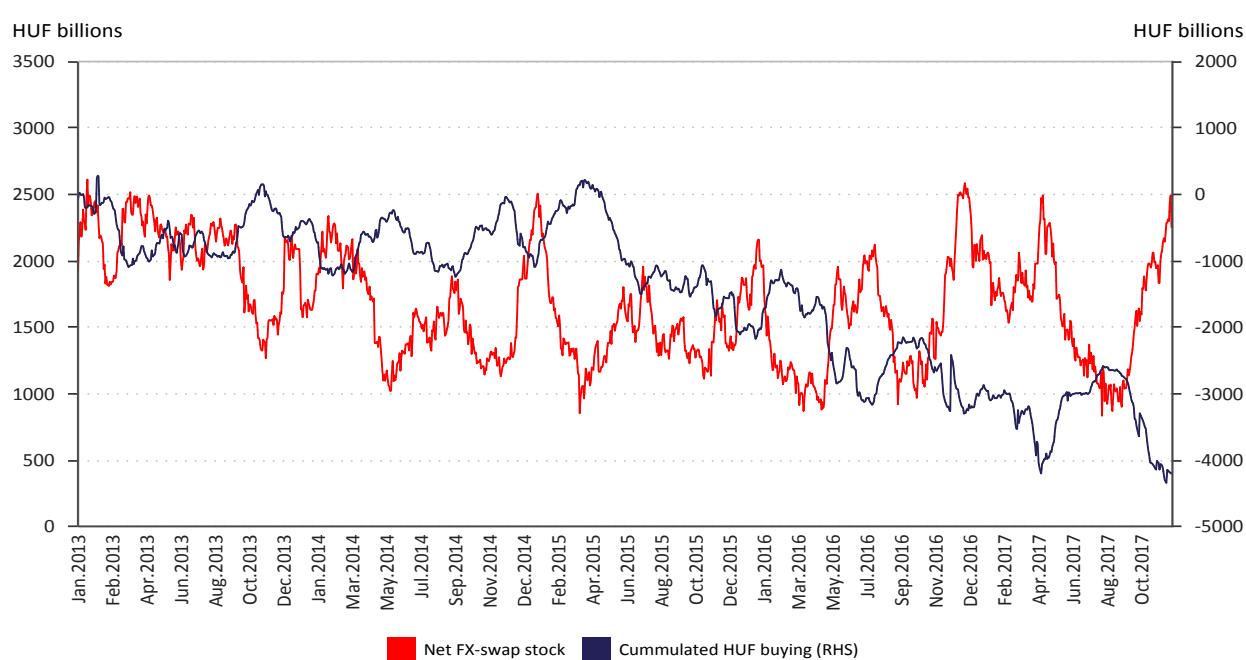
Notes: Based on USD/HUF swap quotes.

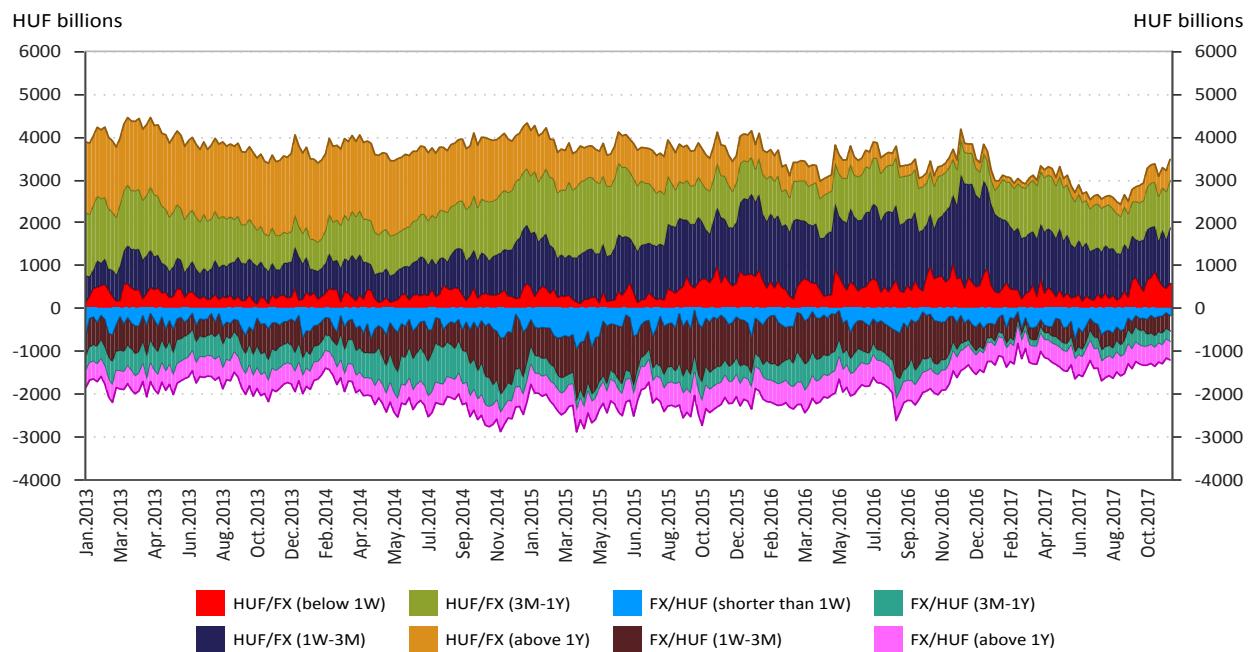
61. Difference between short-term interbank yields and FX-swap market implied yields

Source: Thomson Reuters.

62. Difference between long-term interbank yields and FX-swap market implied yields

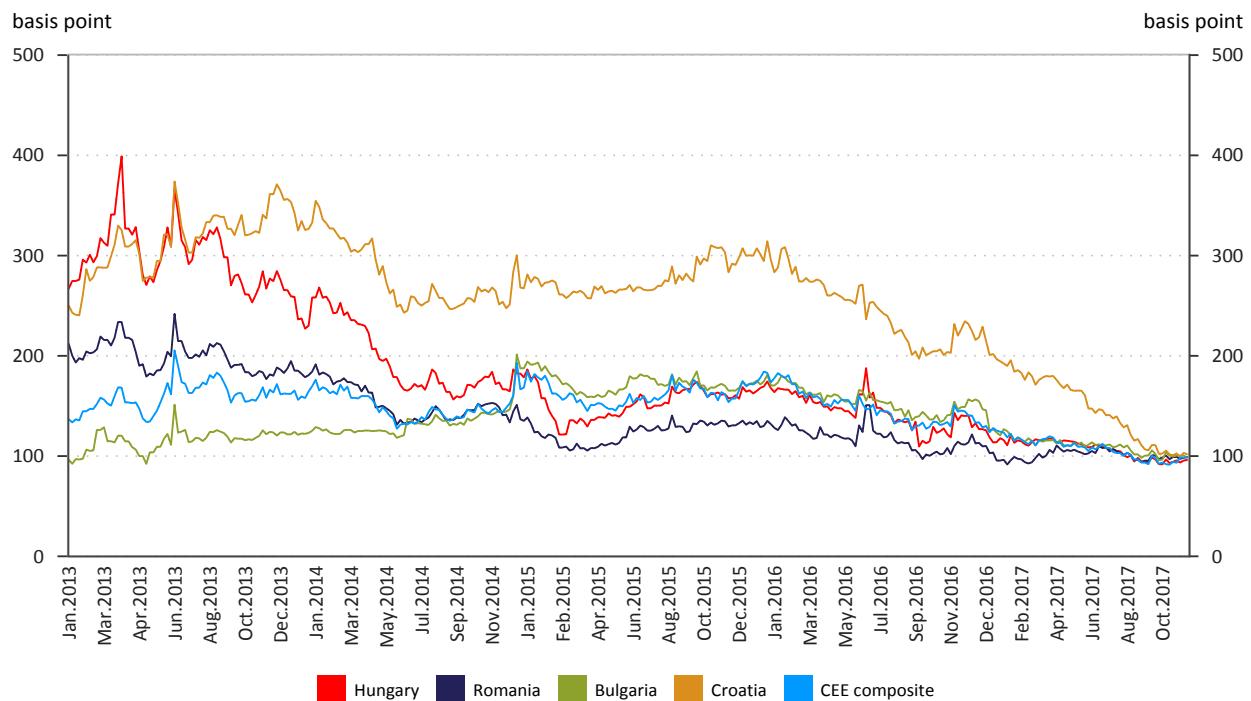
Source: Thomson Reuters.

63. Net FX-swap stock of non-residents by maturity**64. Forint FX-swap stock and cumulated HUF purchase of non-residents**

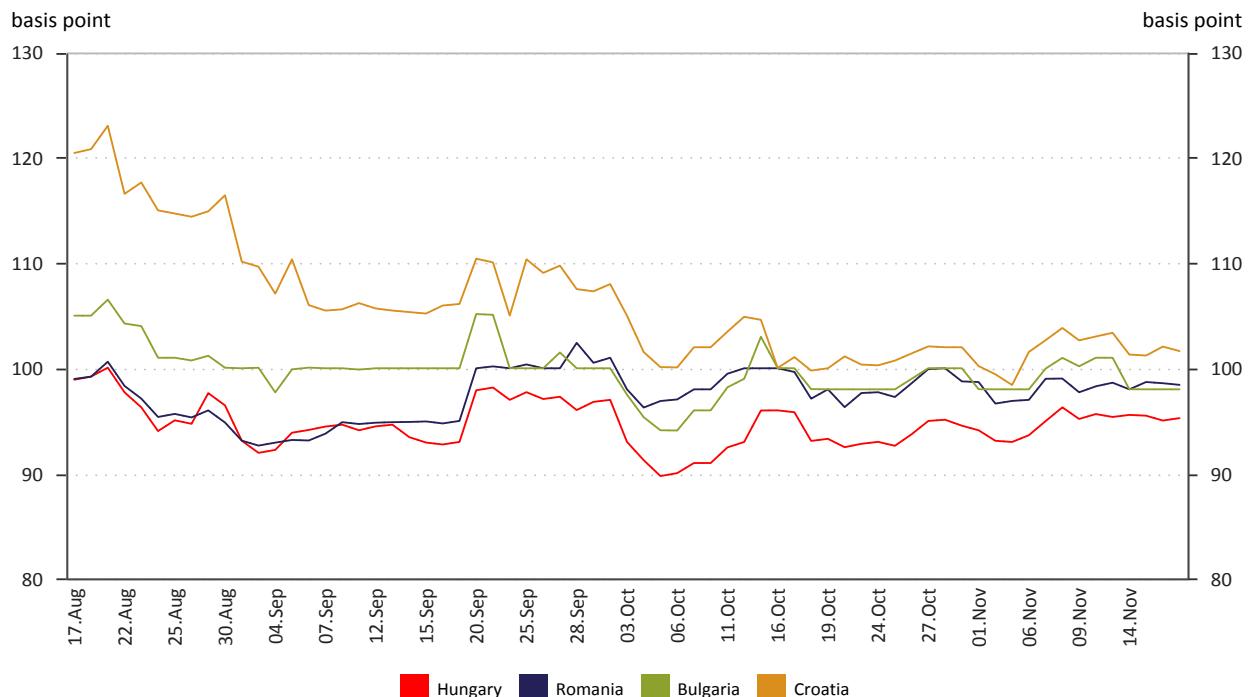
65. Gross FX-swap stocks of foreign investors by maturity

Source: MNB

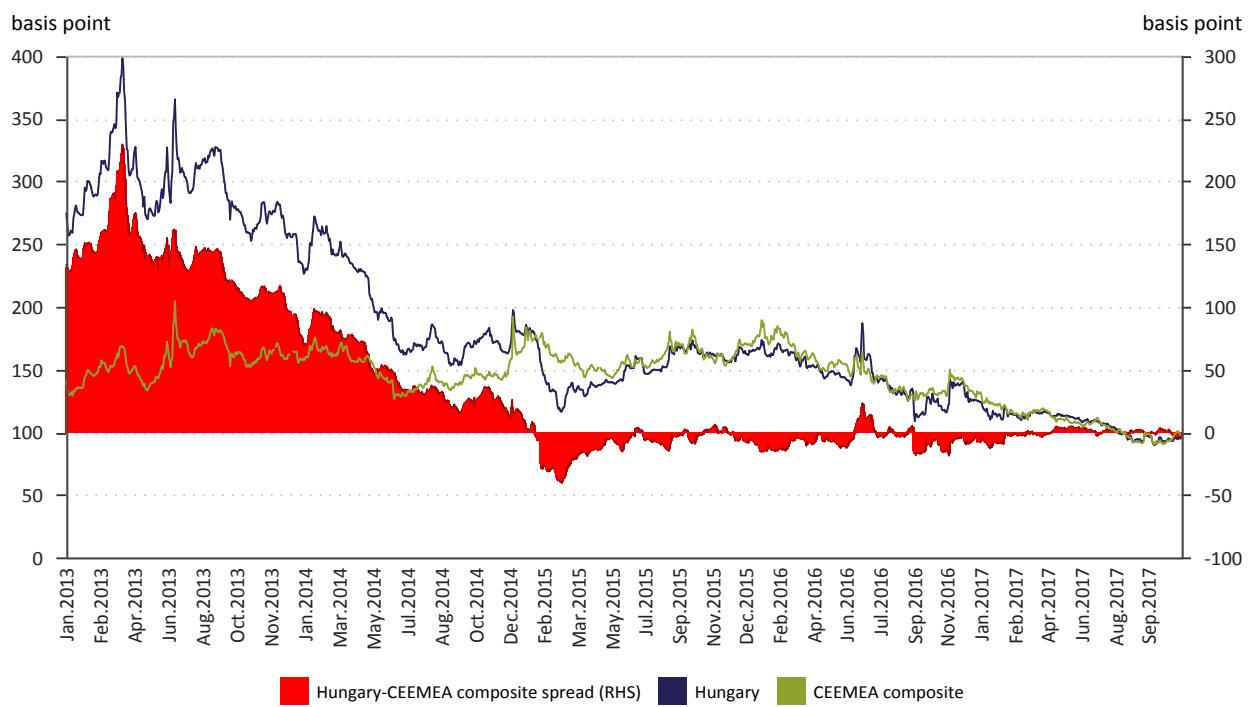
Note: due to the nature of daily reports by banks on FX transactions, the components of the FX transactions statistic do not close to zero. As a result, the information contained in the data series on net forint purchase of non-resident investors - and its components - is relevant mainly to evaluate 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

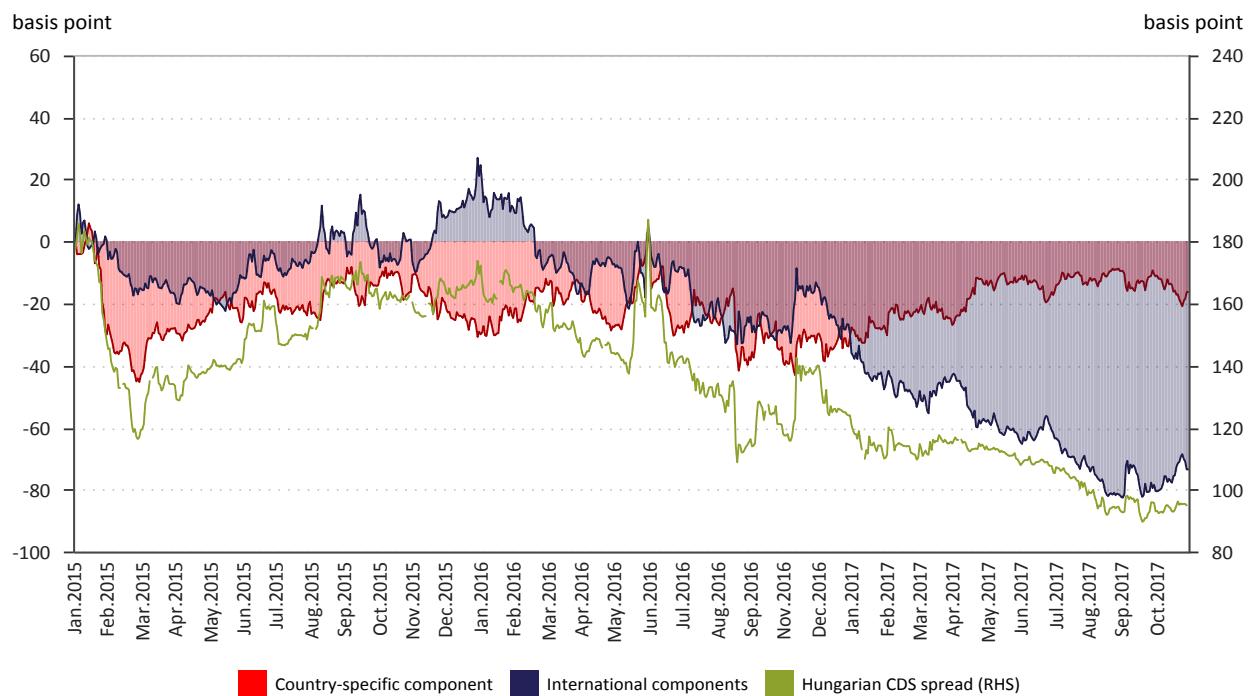
Source: Thomson Reuters.

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

Source: Thomson Reuters

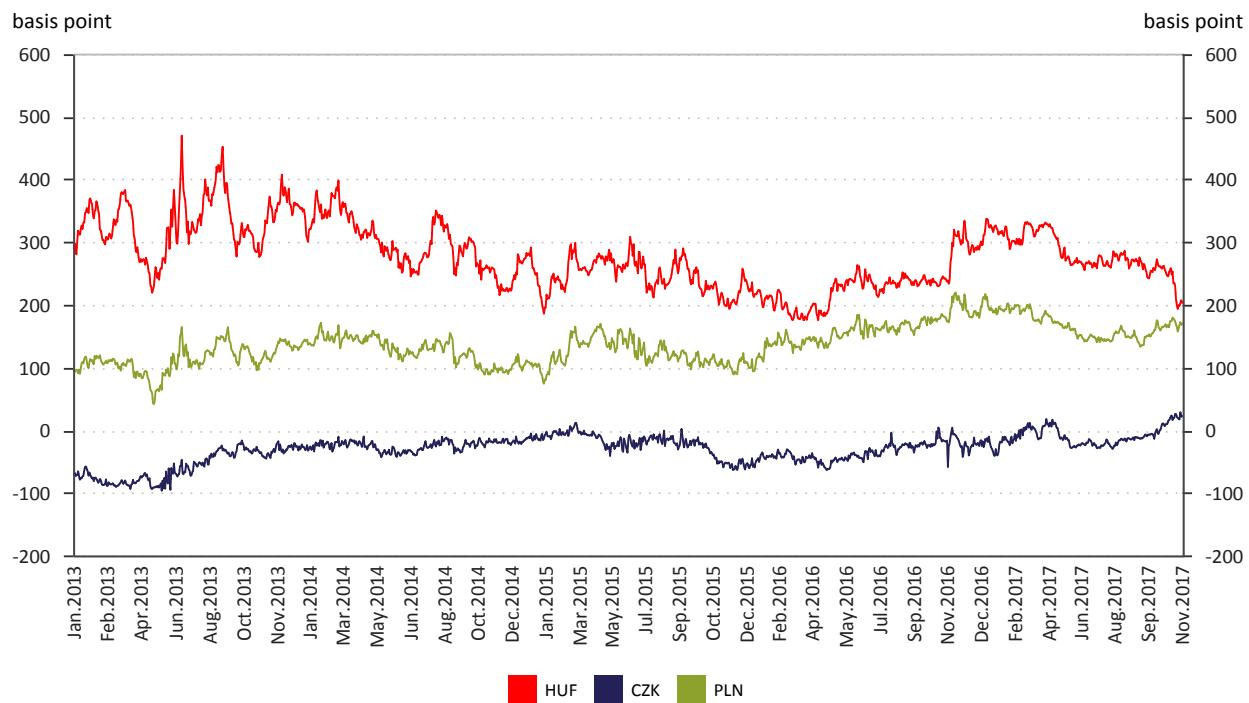
68. 5 year sovereign CDS spread in Hungary versus CEEMEA composite index

Source: Thomson Reuters.

69. Components of Hungarian 5 year sovereign CDS

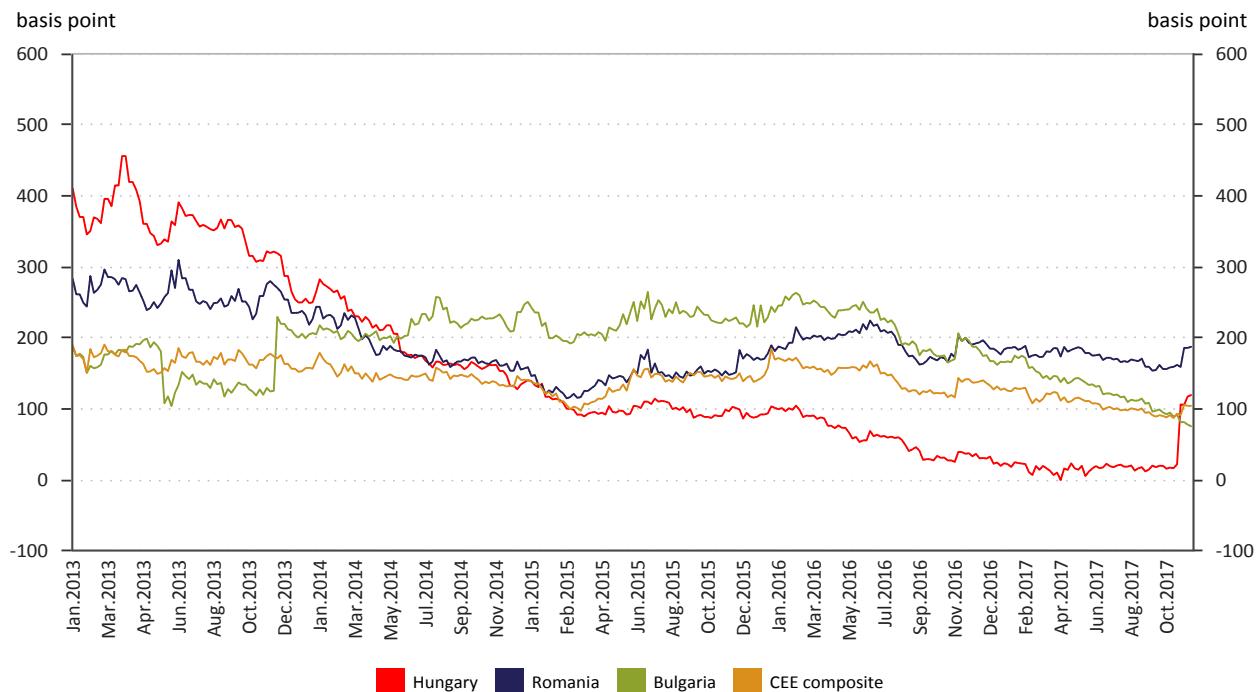
Source: Bloomberg

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

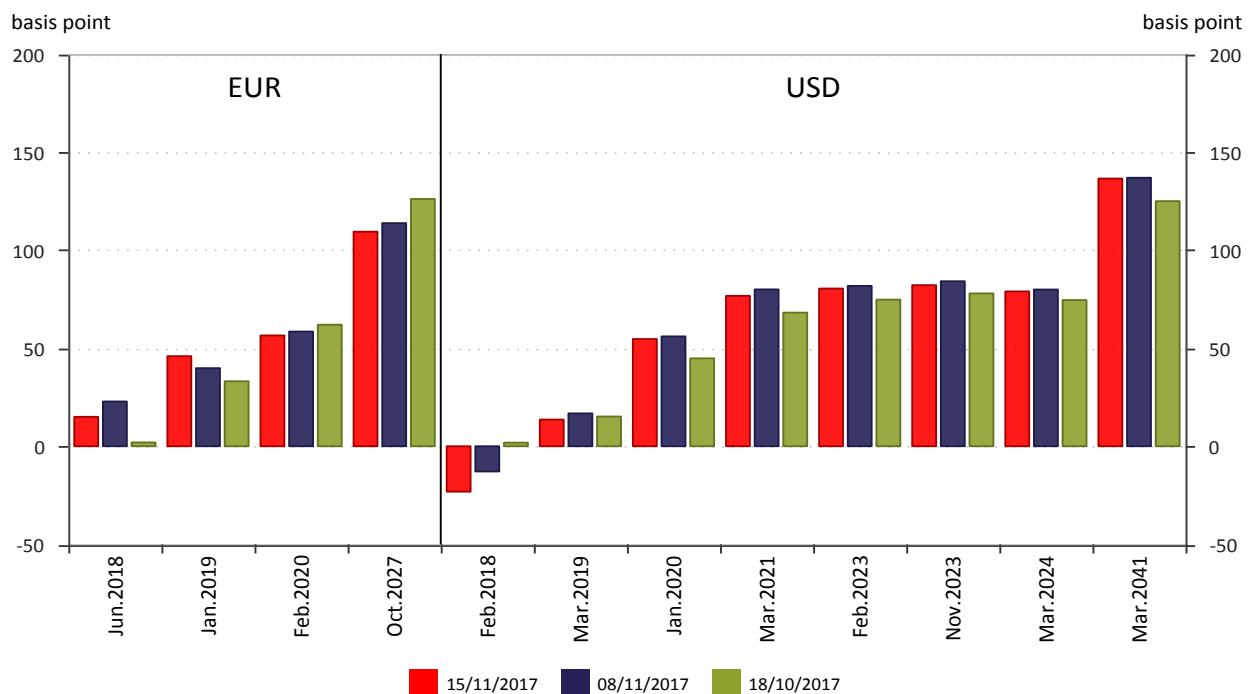
71. Emerging markets FX denominated government bond spreads



Source: Thomson Datastream.

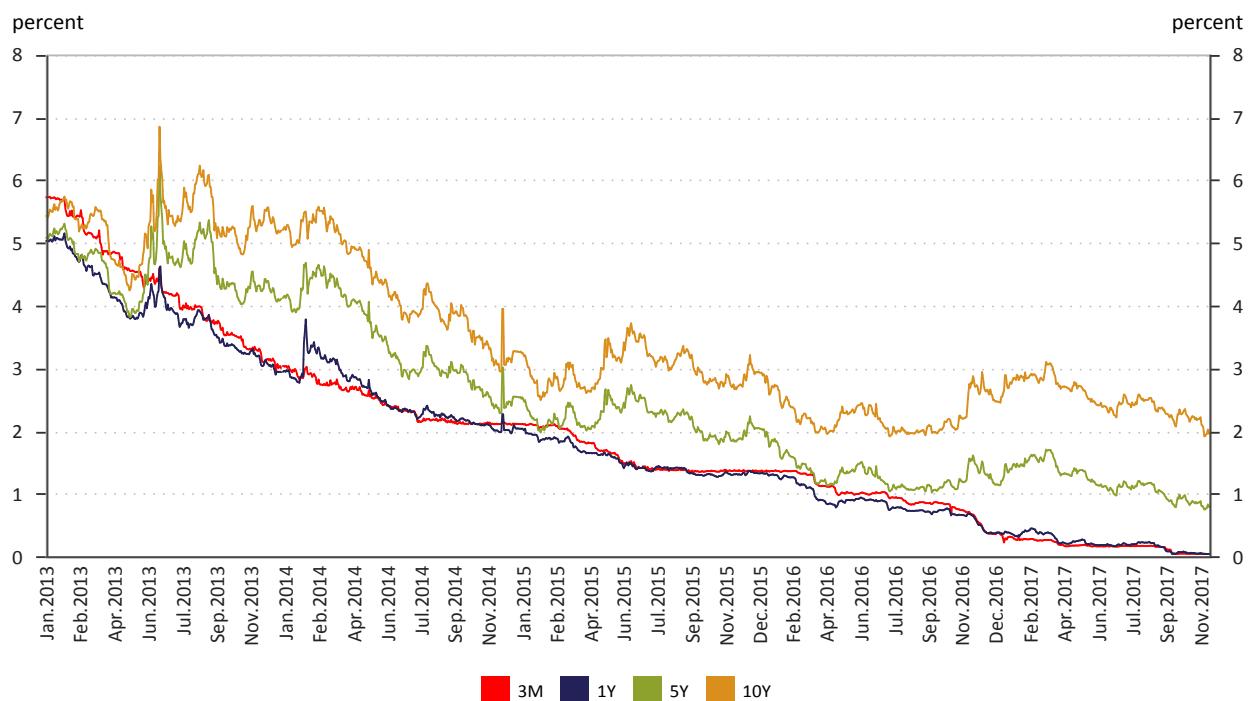
Notes: calculated from JP Morgan Euro EMBI data. The series are differences between euro denominated (liquid) foreign currency bond yields and euro zero coupon yields of the corresponding maturities. Different durations may result in significant difference in the level of spreads.

72. Domestic FX-government bond

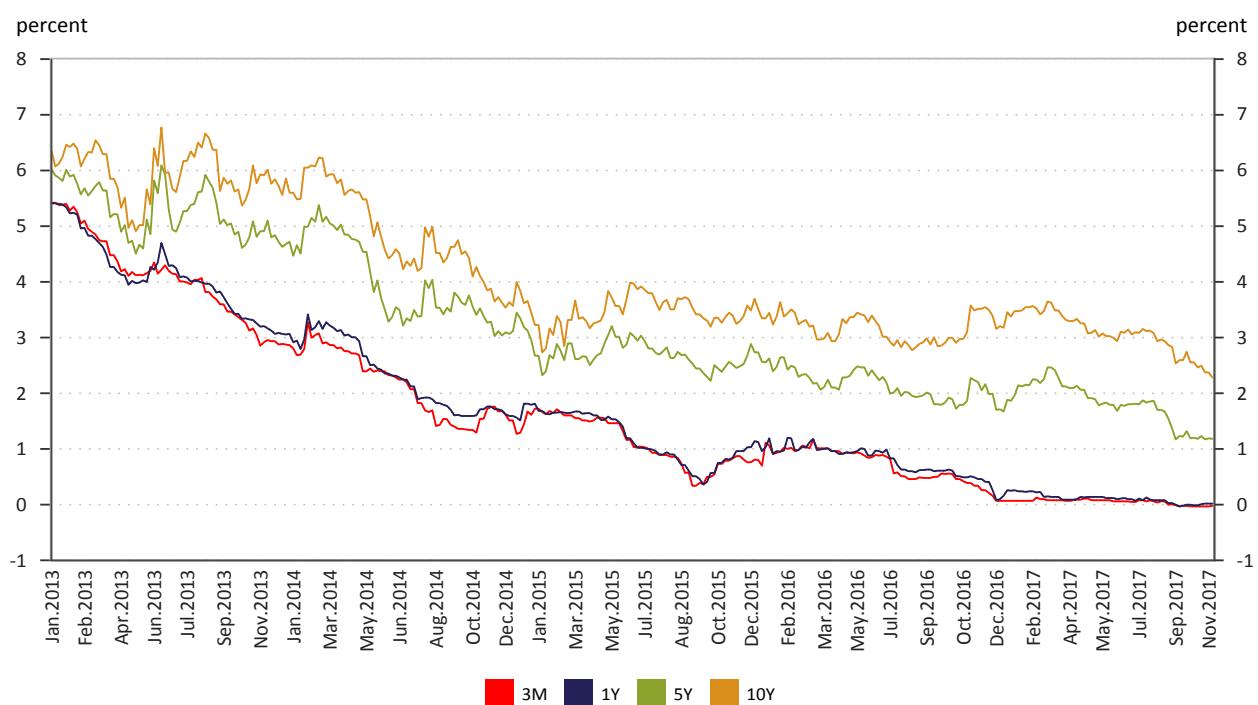


Source: Bloomberg.

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.

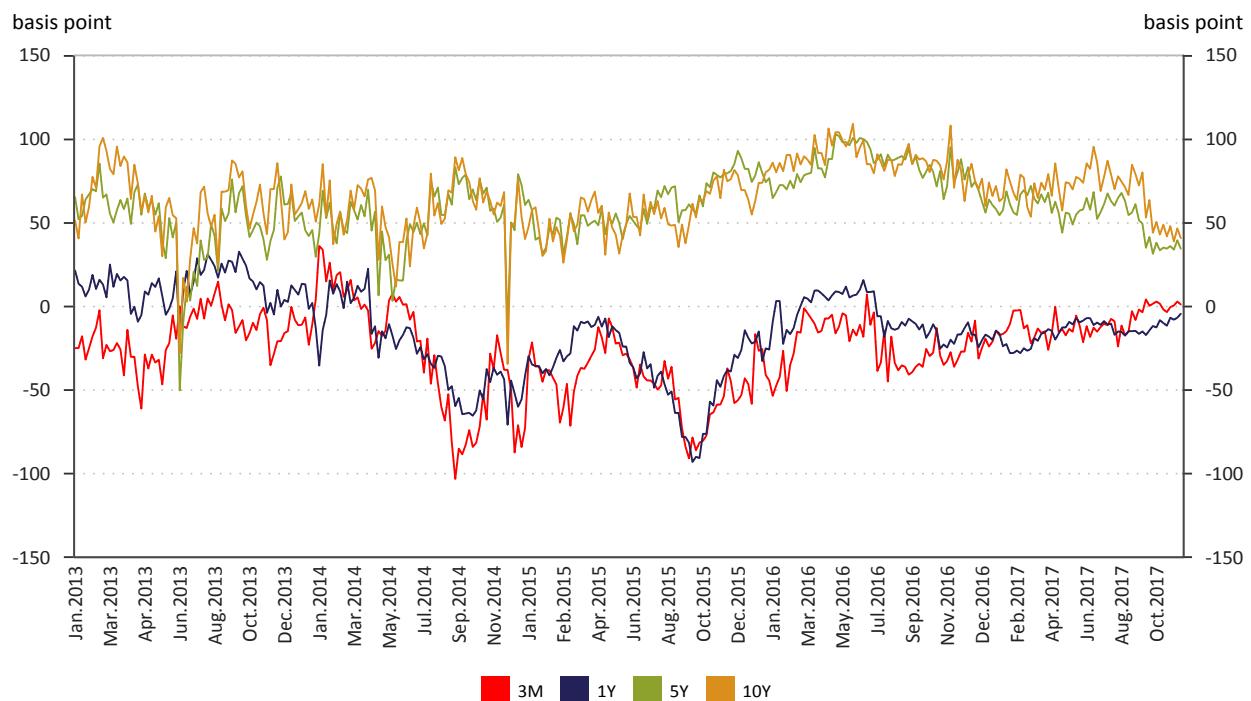
73. Interbank yields

Source: Thomson Reuters

74. Yields of benchmark government securities

Source: Thomson Reuters.

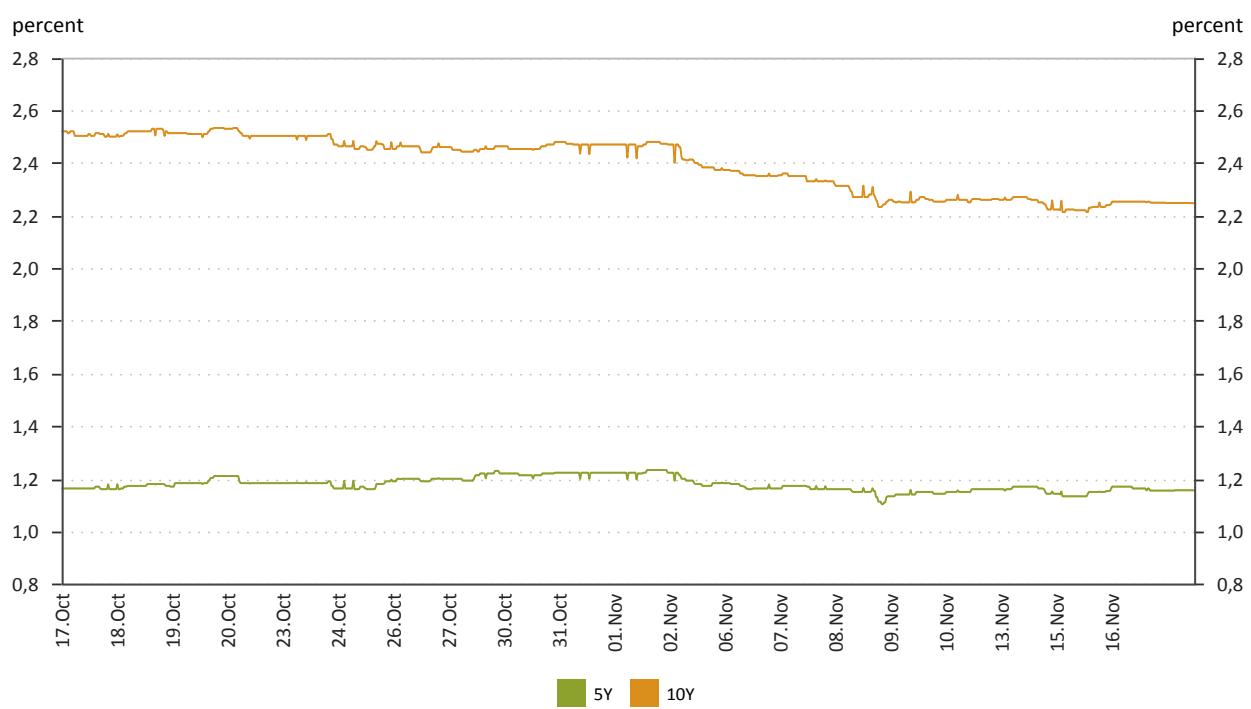
75. Government securities - interbank yield spreads



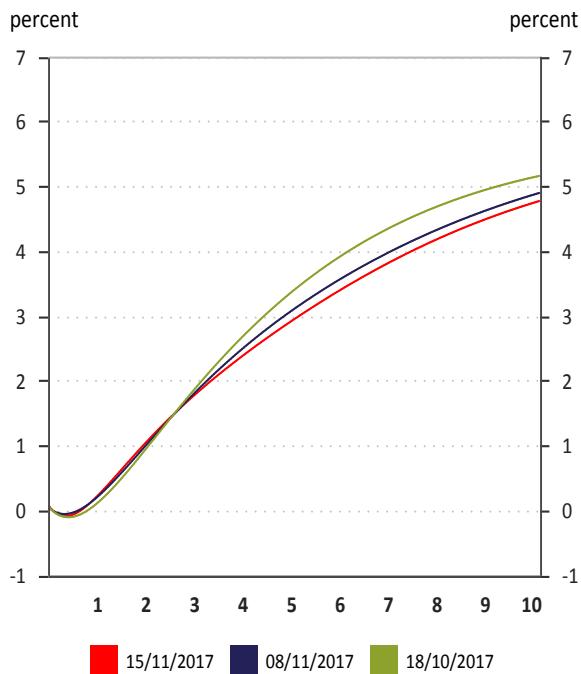
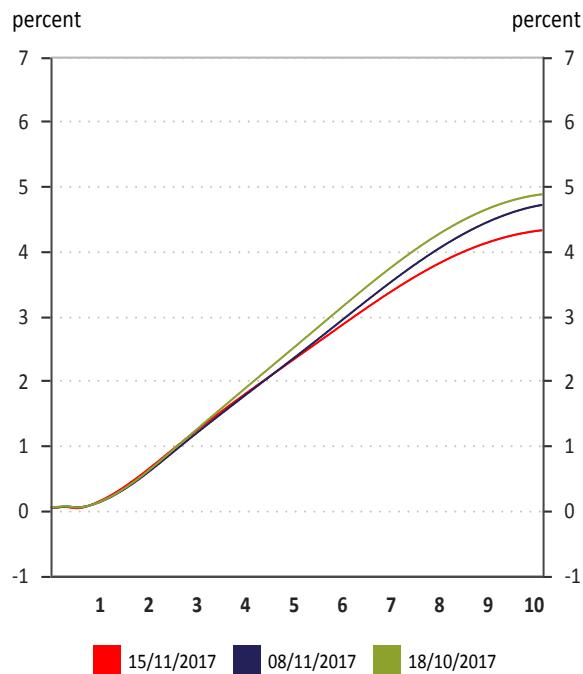
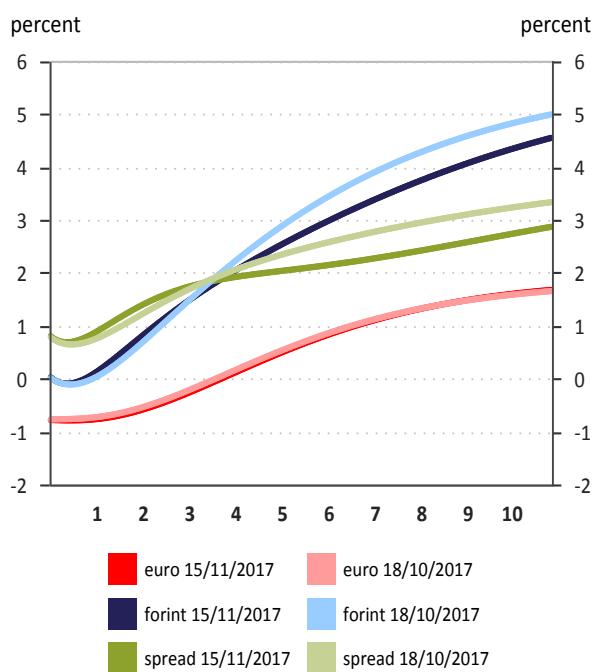
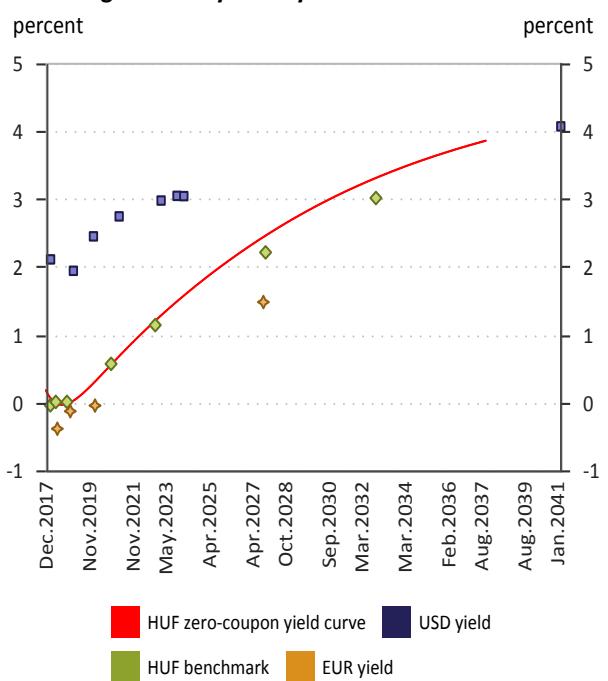
Source: Thomson Reuters

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

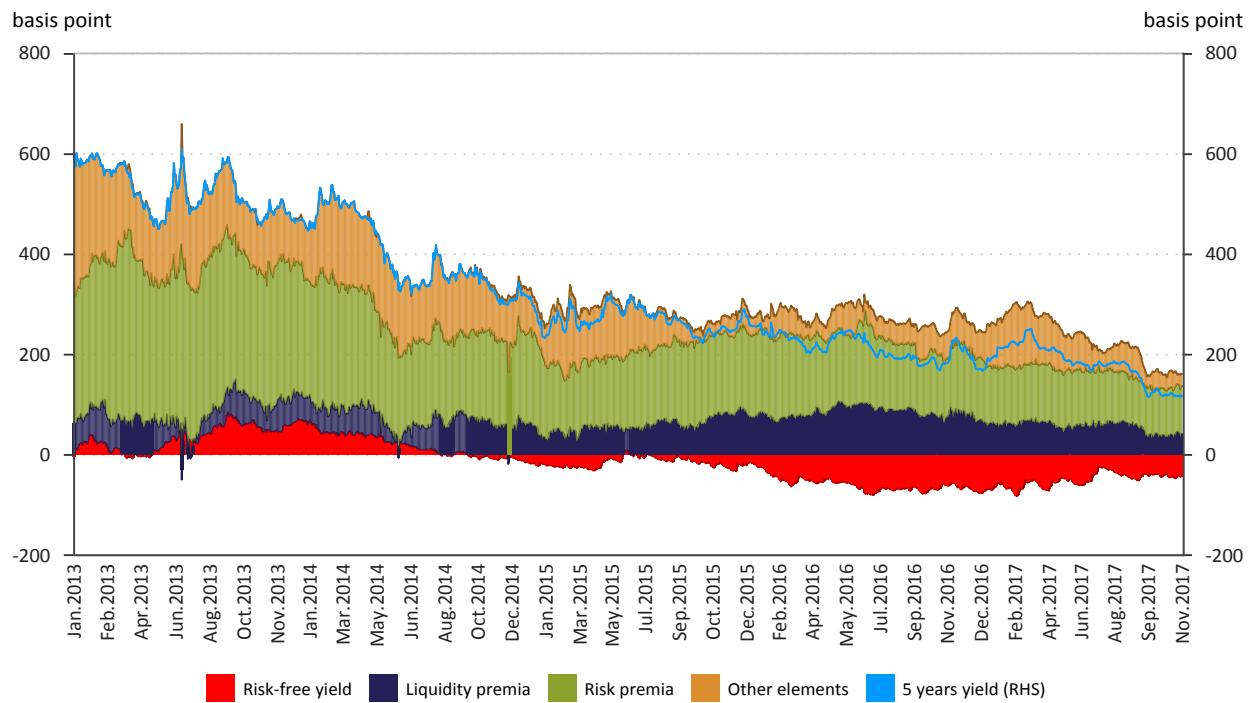
76. Yields of benchmark government securities (last month)



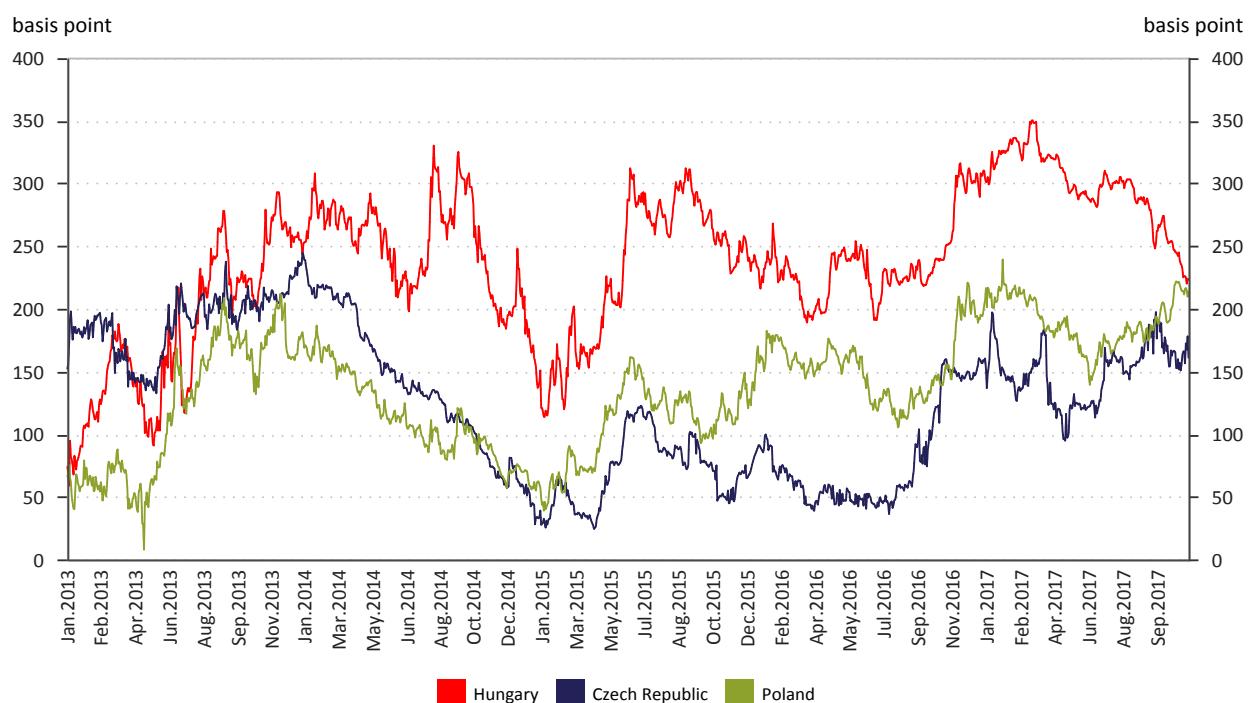
Source: Thomson Reuters.

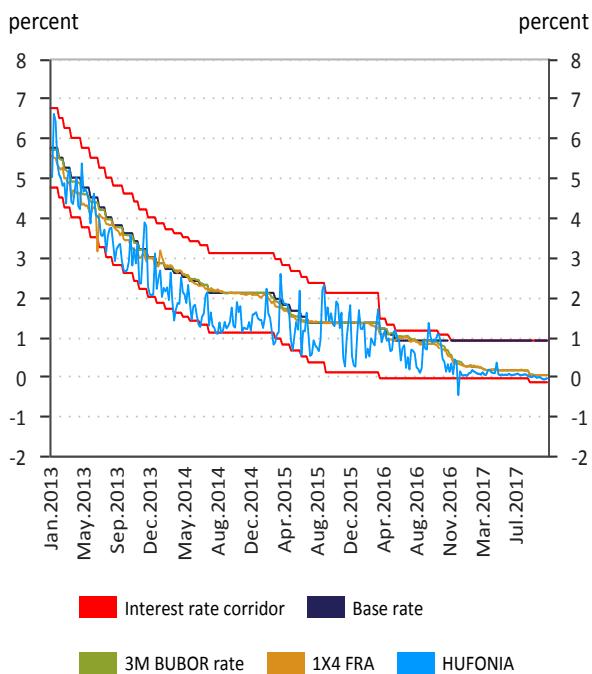
**77. Implied 3 month forward interest rate yield curve
(based on government securities yields)**

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

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

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


81. Decomposition of 5 year government bond yield

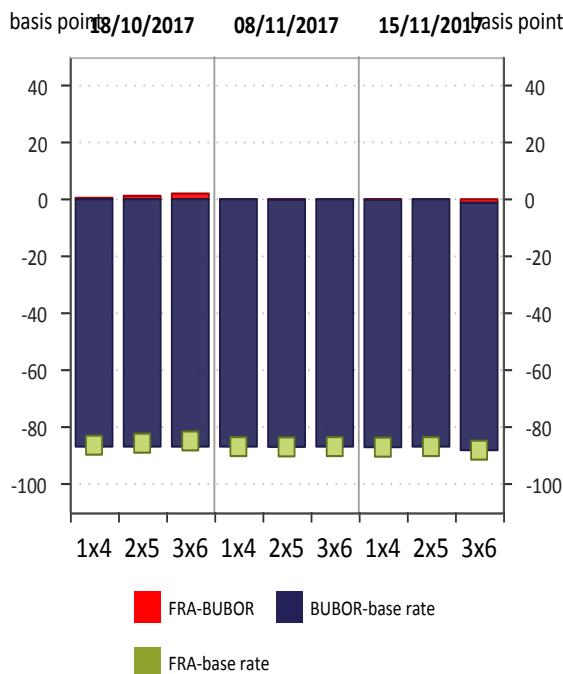


82. Slope of yield curve in CEE

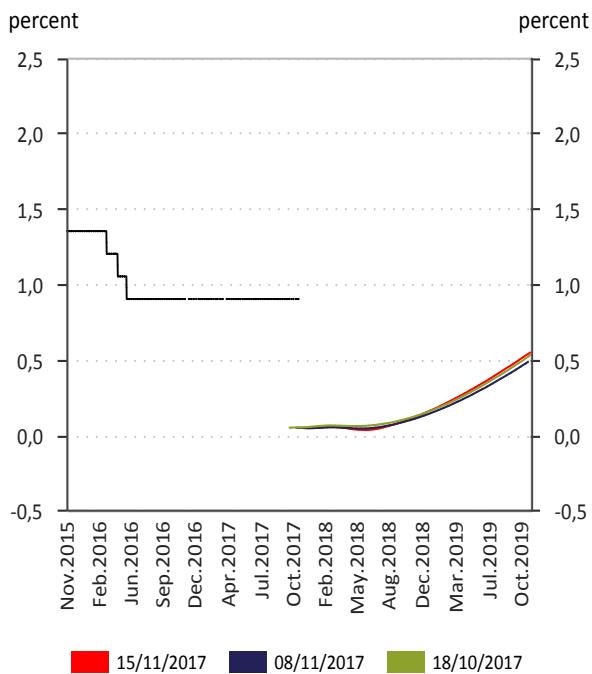


83. MNB base rate and money market rates

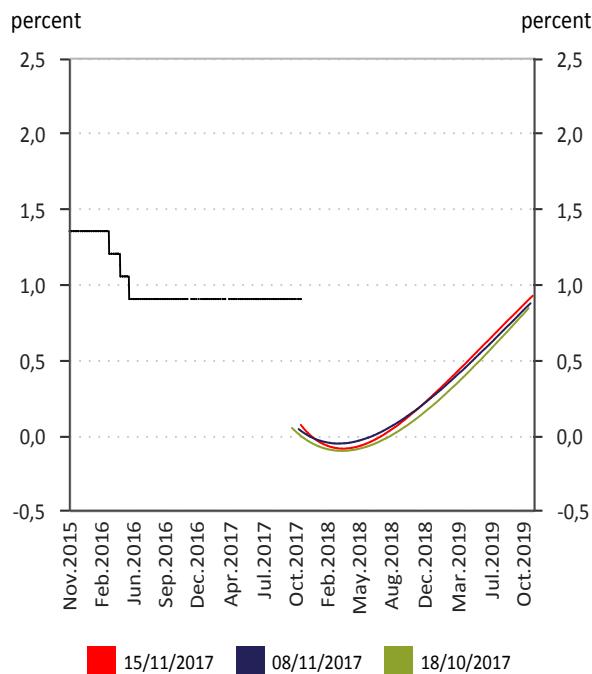
Source: Thomson Reuters, MNB

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

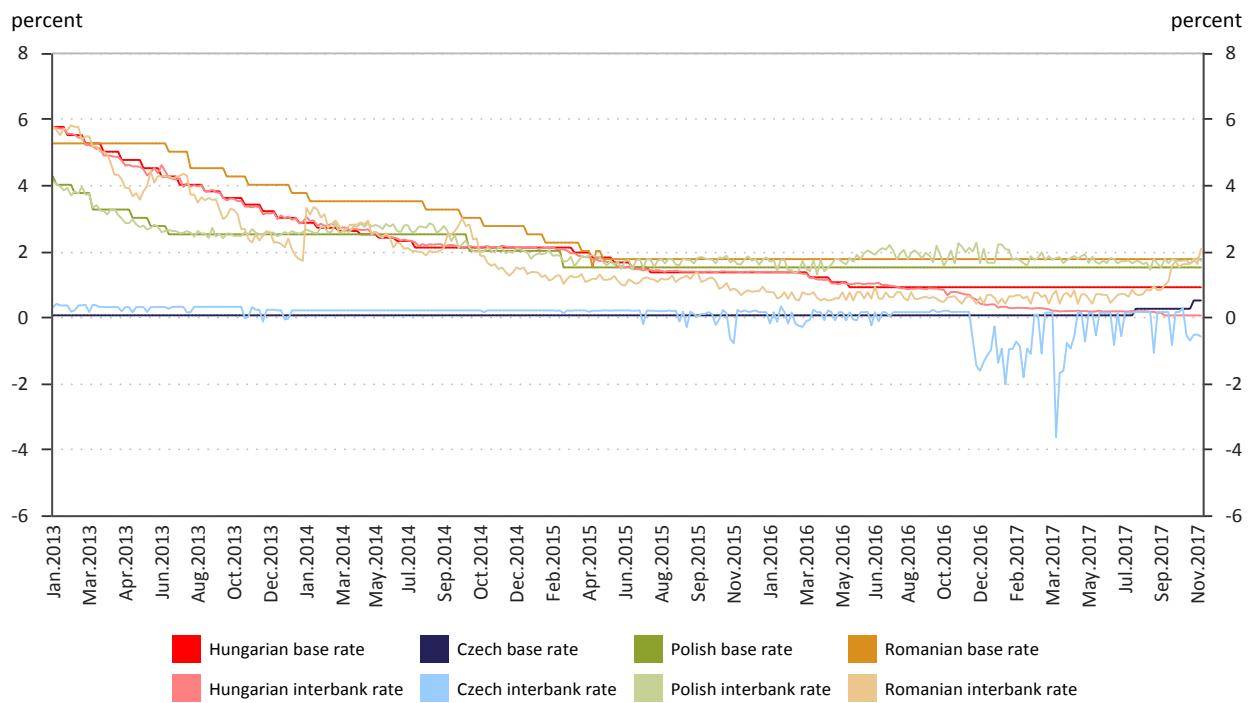
Source: Thomson Reuters, MNB.

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

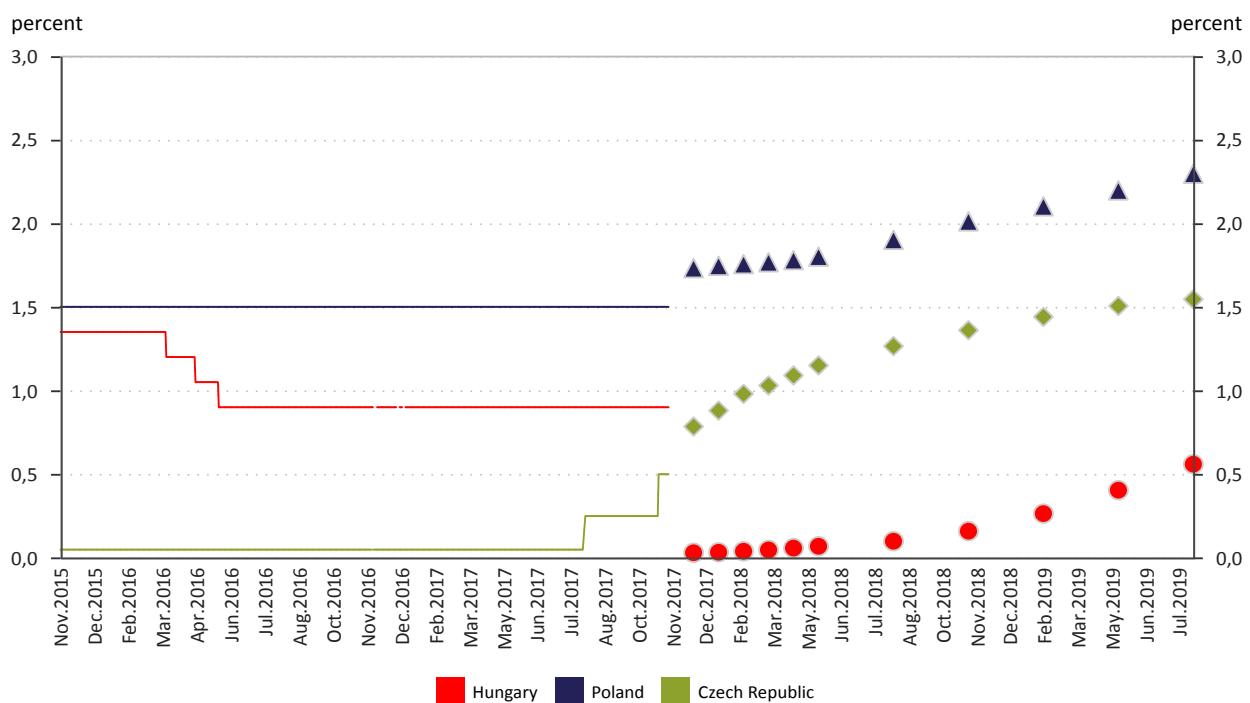
Source: MNB.

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

Source: MNB.

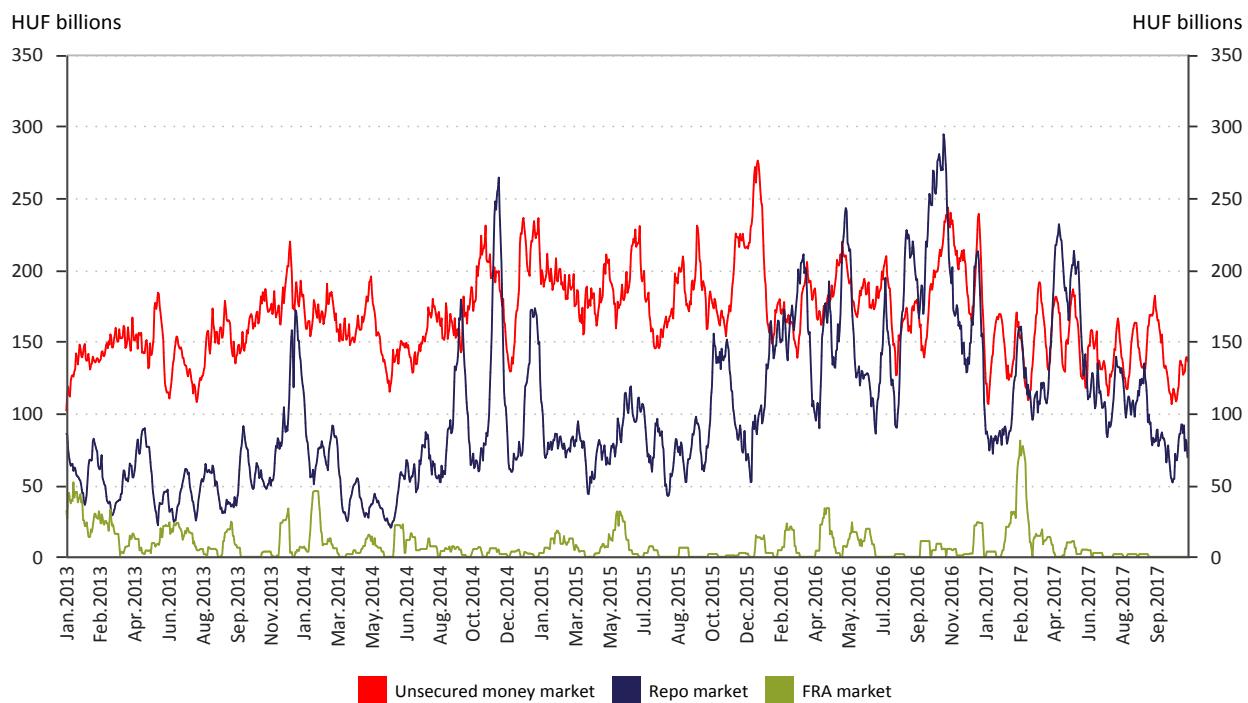
87. Base rates and short term interbank rates in the region

Source: Thomson Reuters.

88. CEE base rates and forward rate agreements

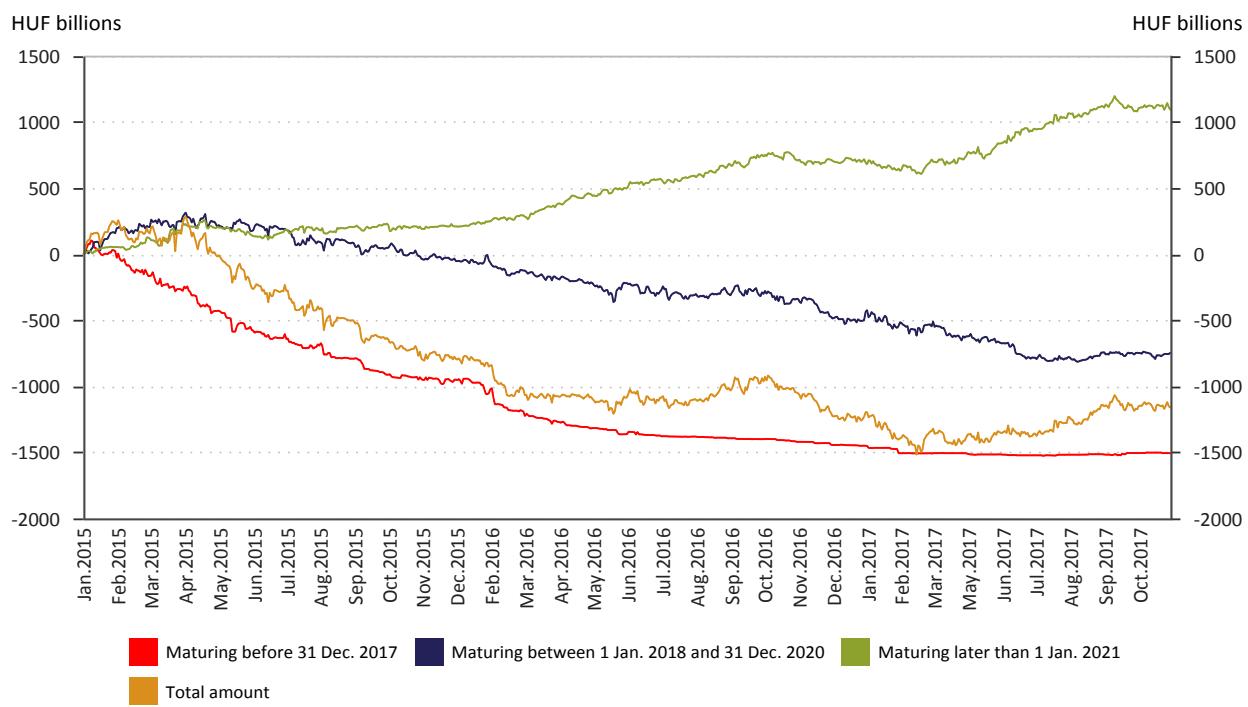
Source: Bloomberg

Note: Based on FRA transactions. Last update: (15/11/2017).

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

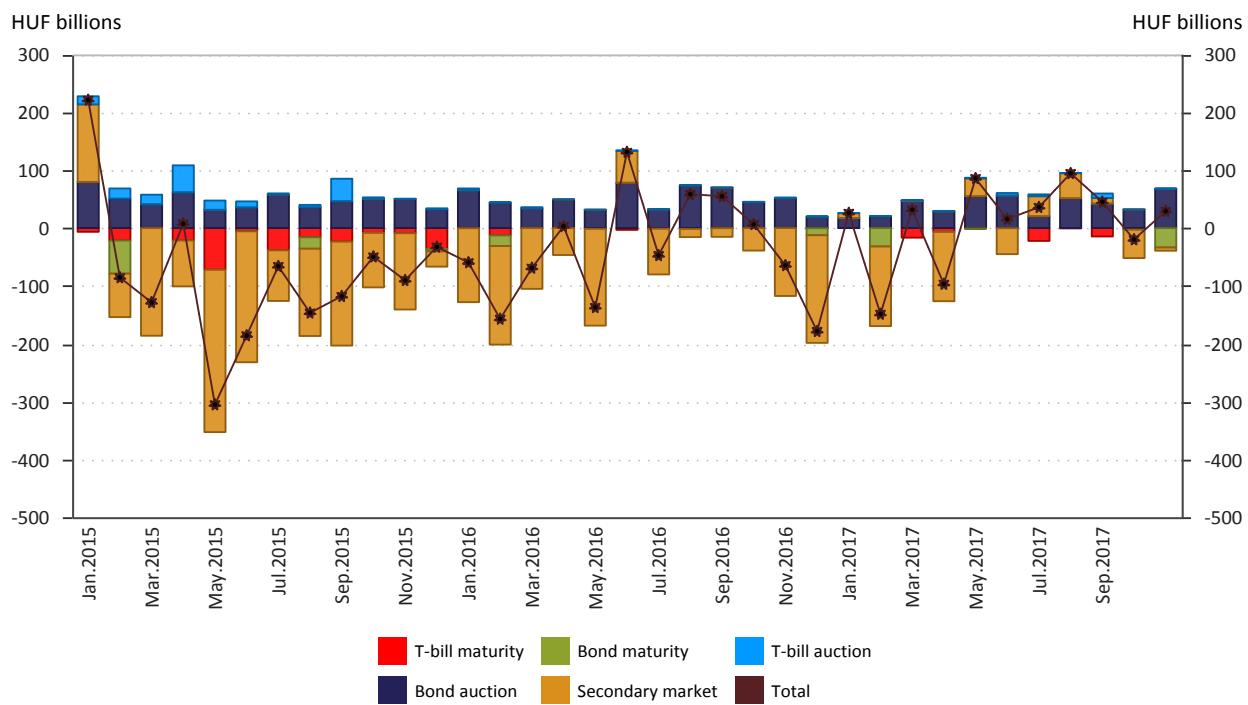
Source: MNB

Note: Based on reporting by domestic banks.

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

Source: MNB.

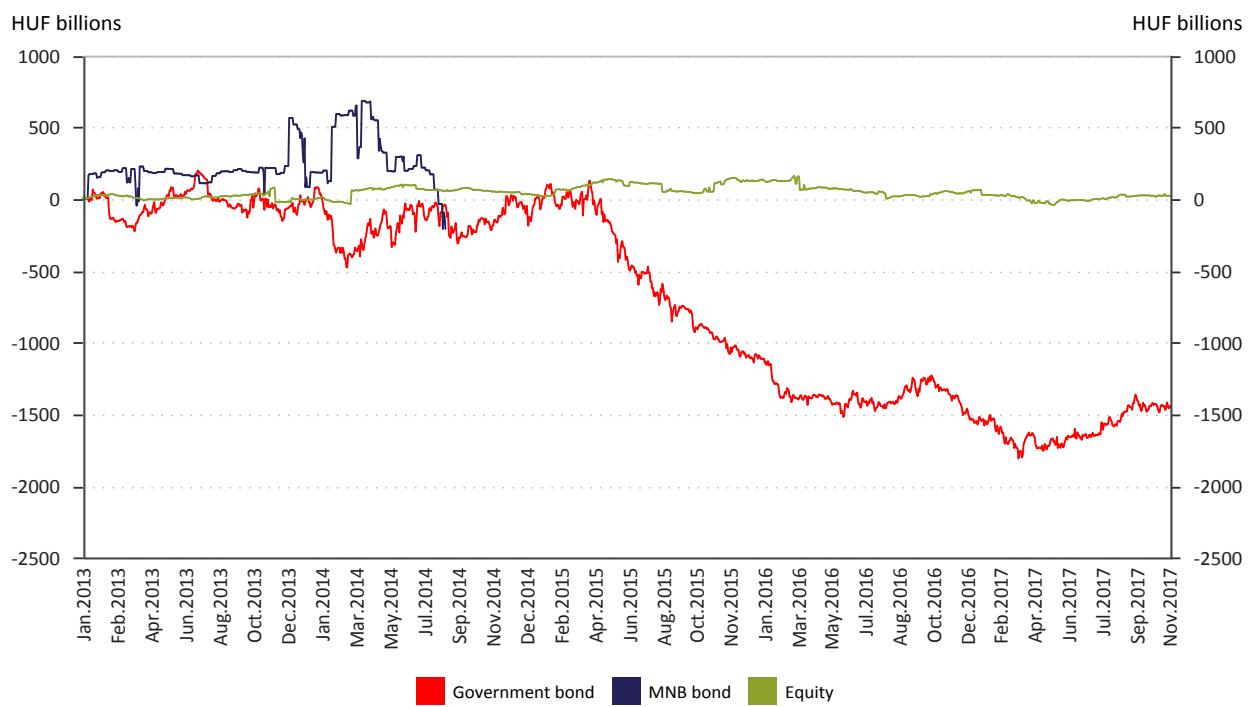
91. Decomposition of change in government securities held by non-residents (last months)



Source: MNB

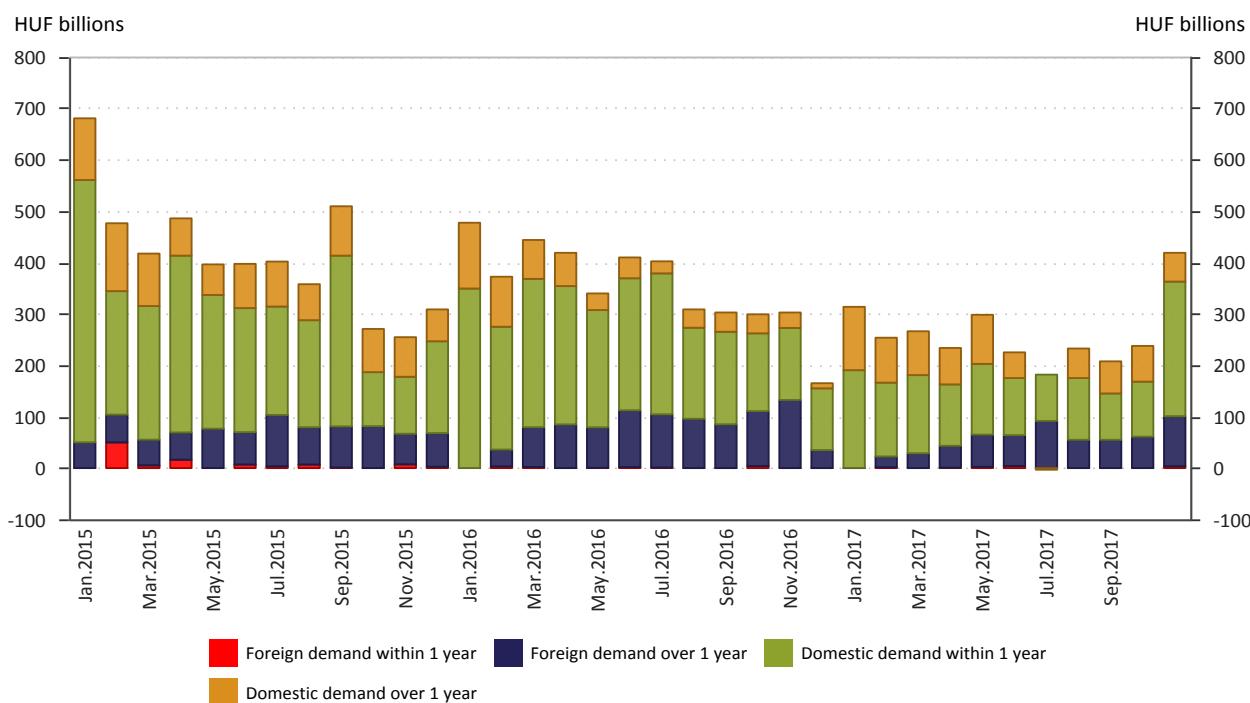
Note: Last month is incomplete.

92. Forint financial assets held by non-residents



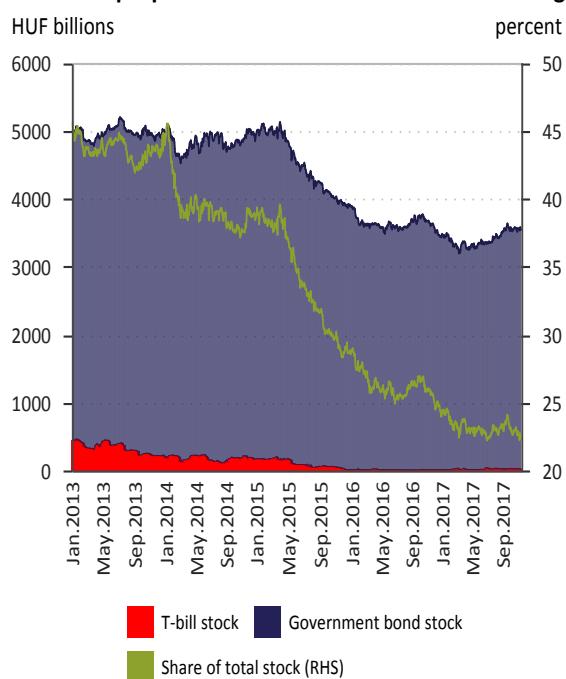
Source: MNB, KELER

Note: Cumulative change. Equity data are not comprehensive, it contains data for large- and mid-cap stocks quoted on the Budapest Stock Exchange.

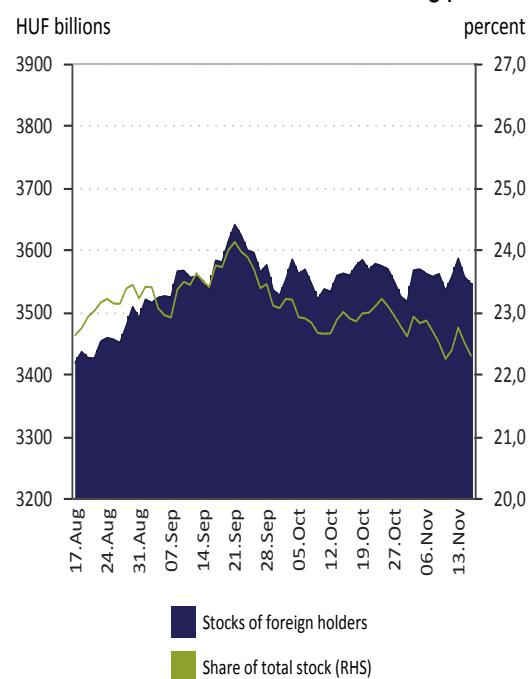
93. Primary market government security purchase of domestic and non-resident investors

Source: MNB

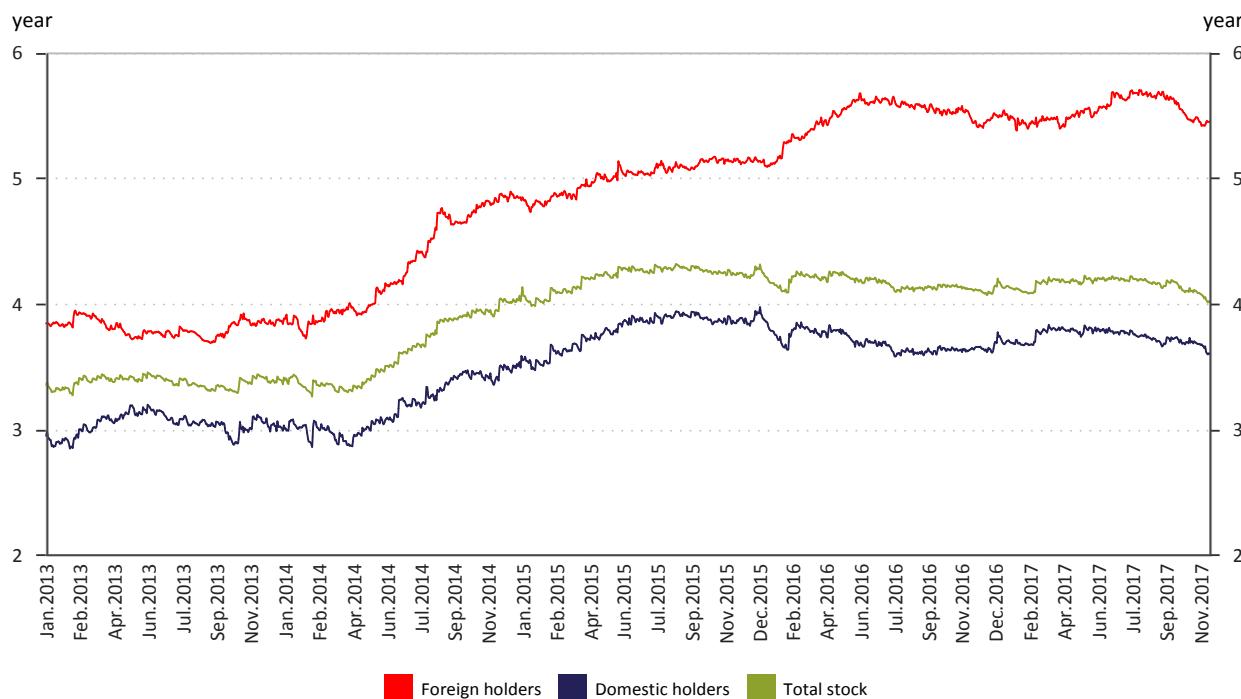
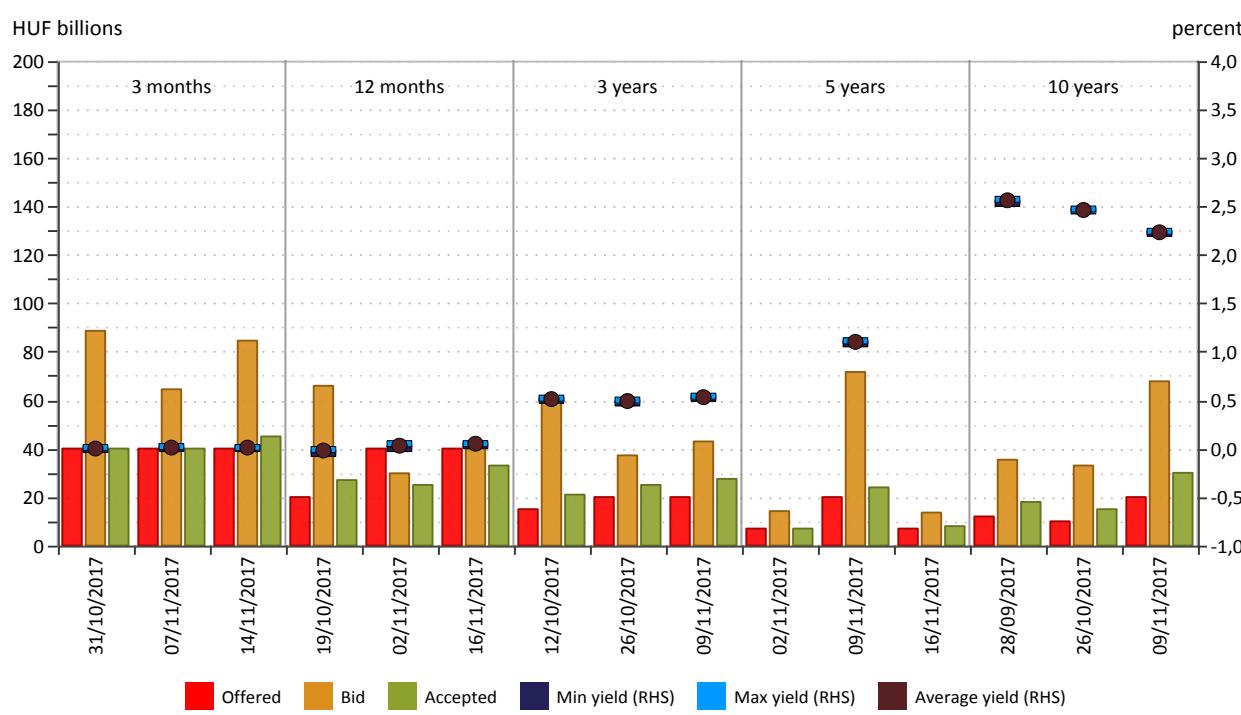
Note: Last month is incomplete.

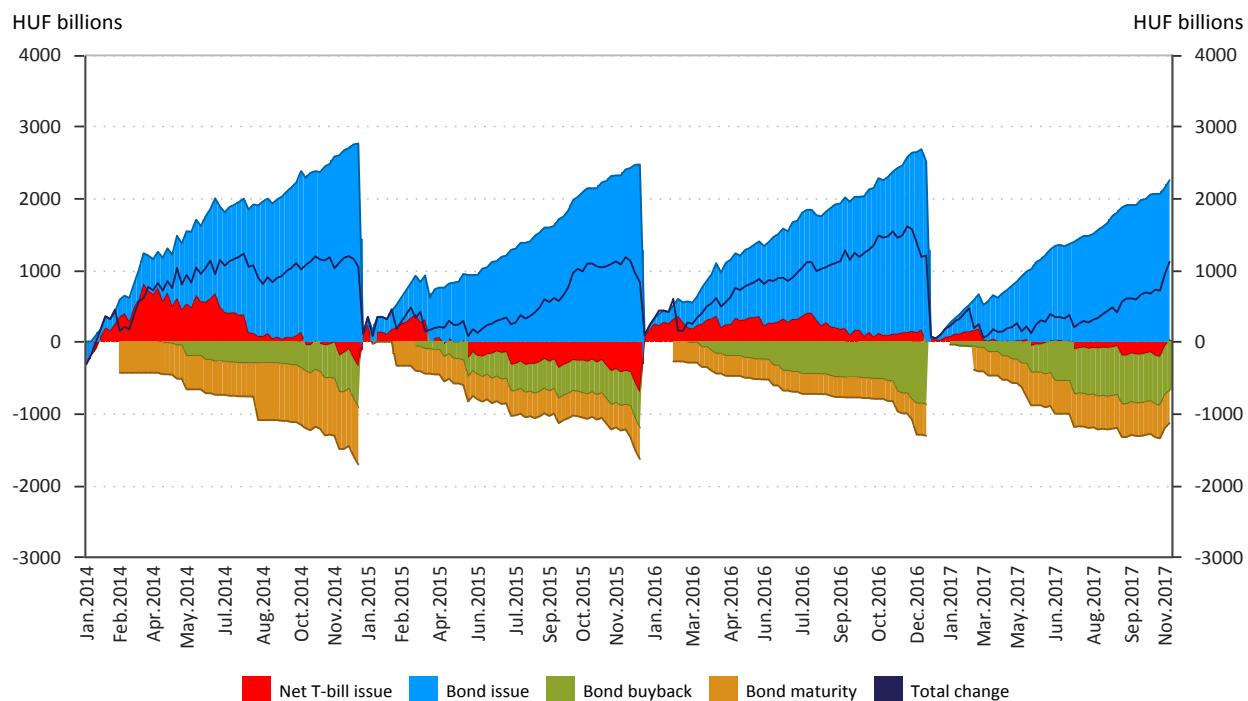
94. Government securities held by non-residents and the proportion to the total amount outstanding

Source: MNB.

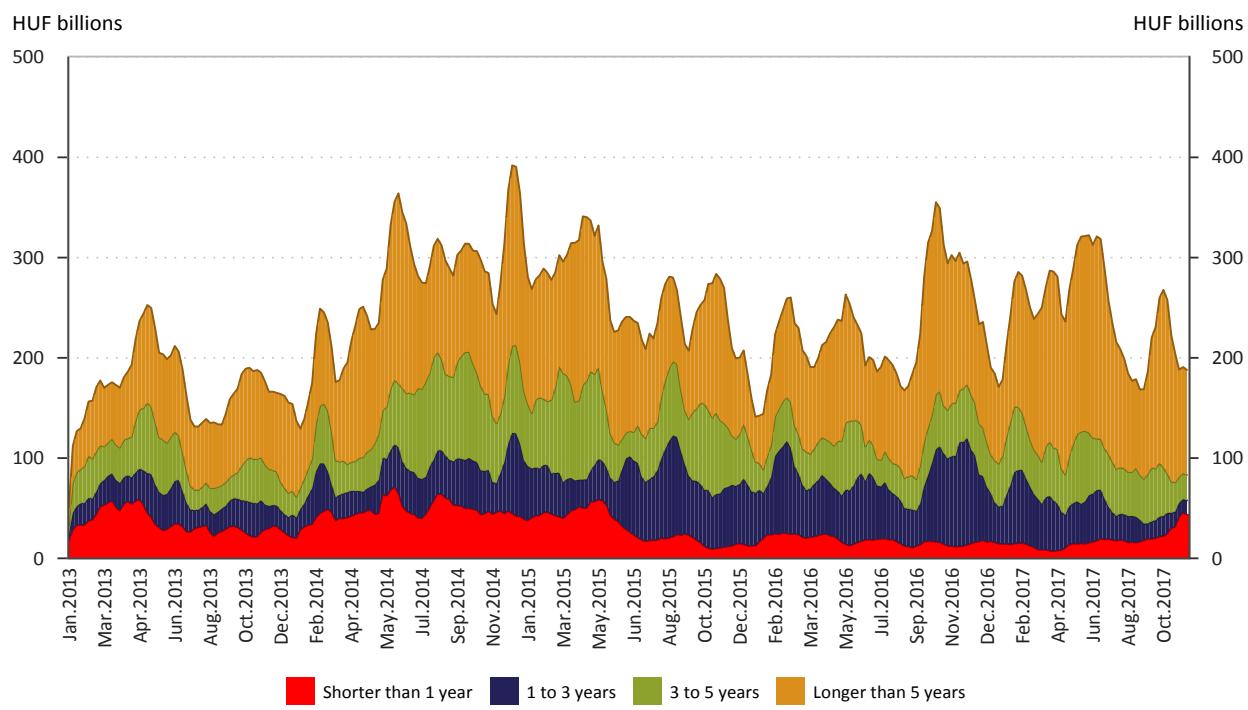
95. Government bonds held by non-residents and the share of the total amount outstanding (last months)

Source: MNB.

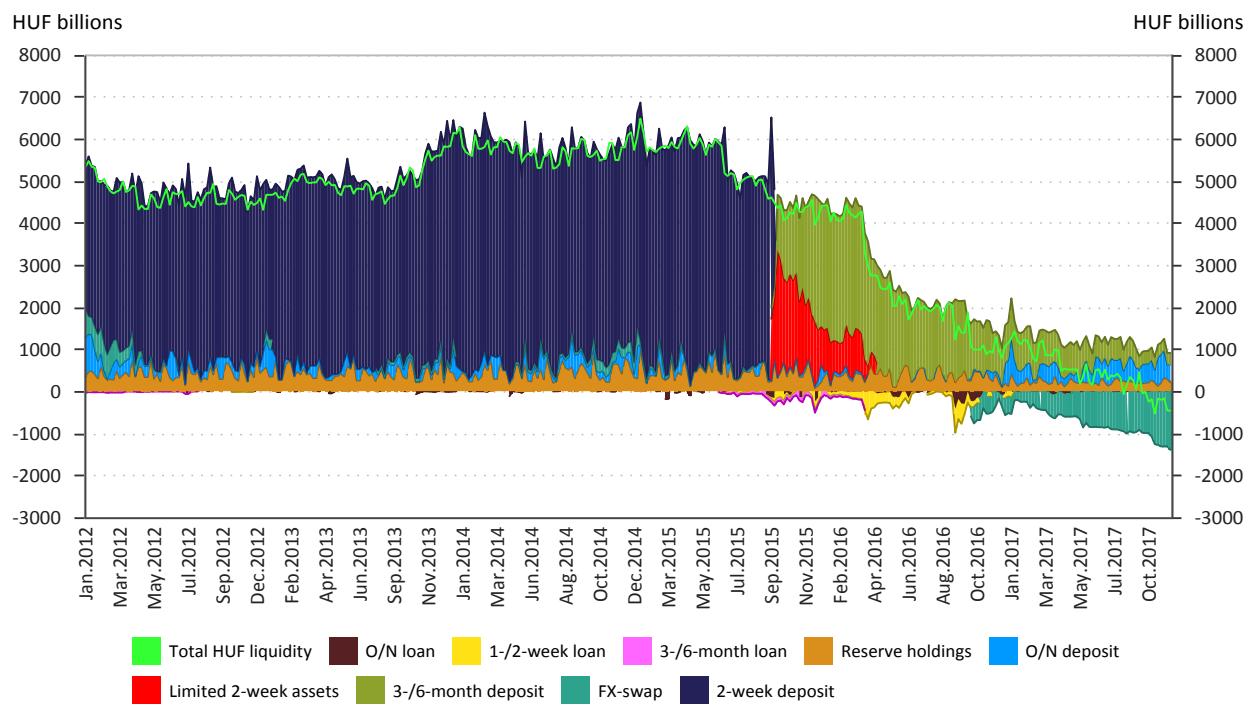
96. The average time to maturity of government security portfolio of residents and non-residents**97. The turnover and yield data of the Hungarian primary T-bill and T-bond issues**

98. Government securities issues, buybacks, redemptions

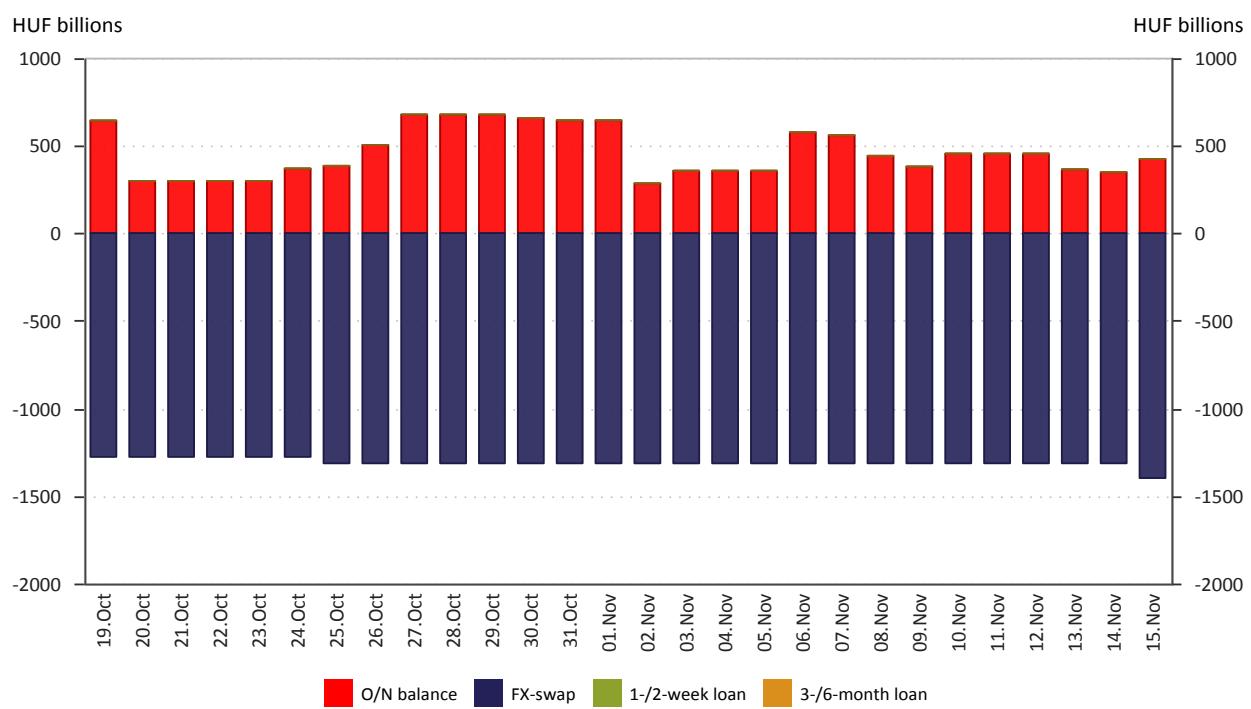
Source: MNB.

99. Turnover on the secondary market of government securities

Source: MNB, KELER.

100. Selected assets and liabilities of the MNB

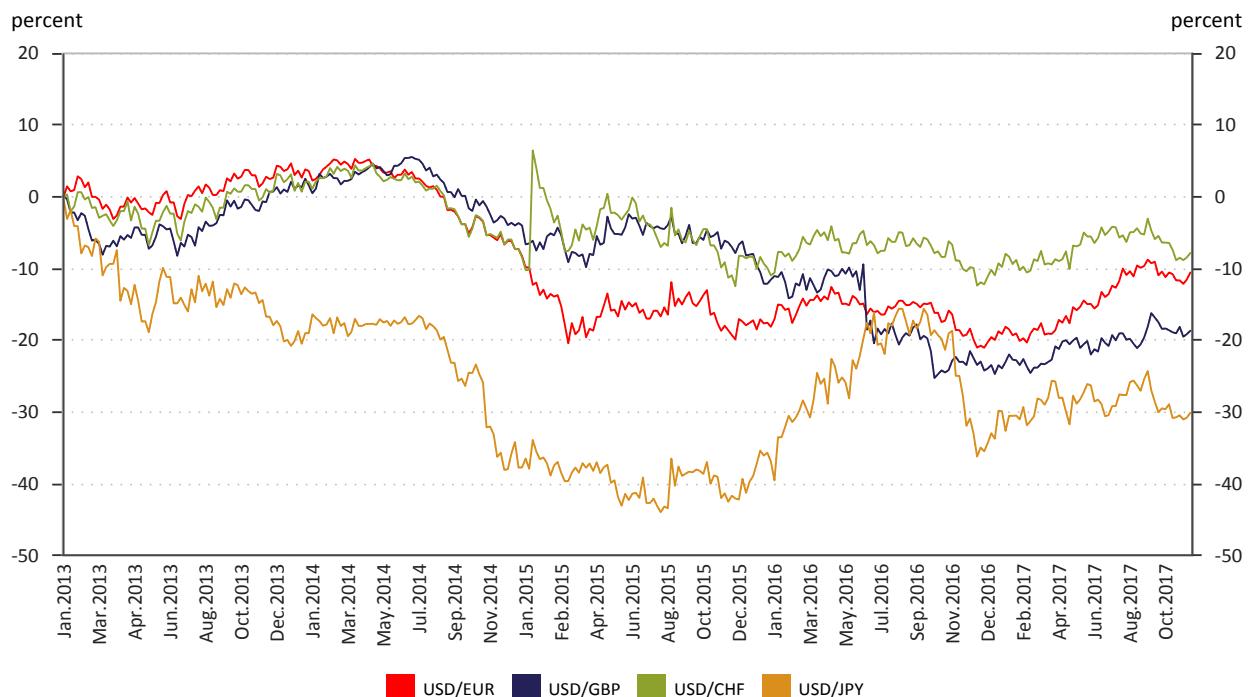
Source: MNB.

101. Use of facilities of the MNB beside the main instrument

Source: MNB.

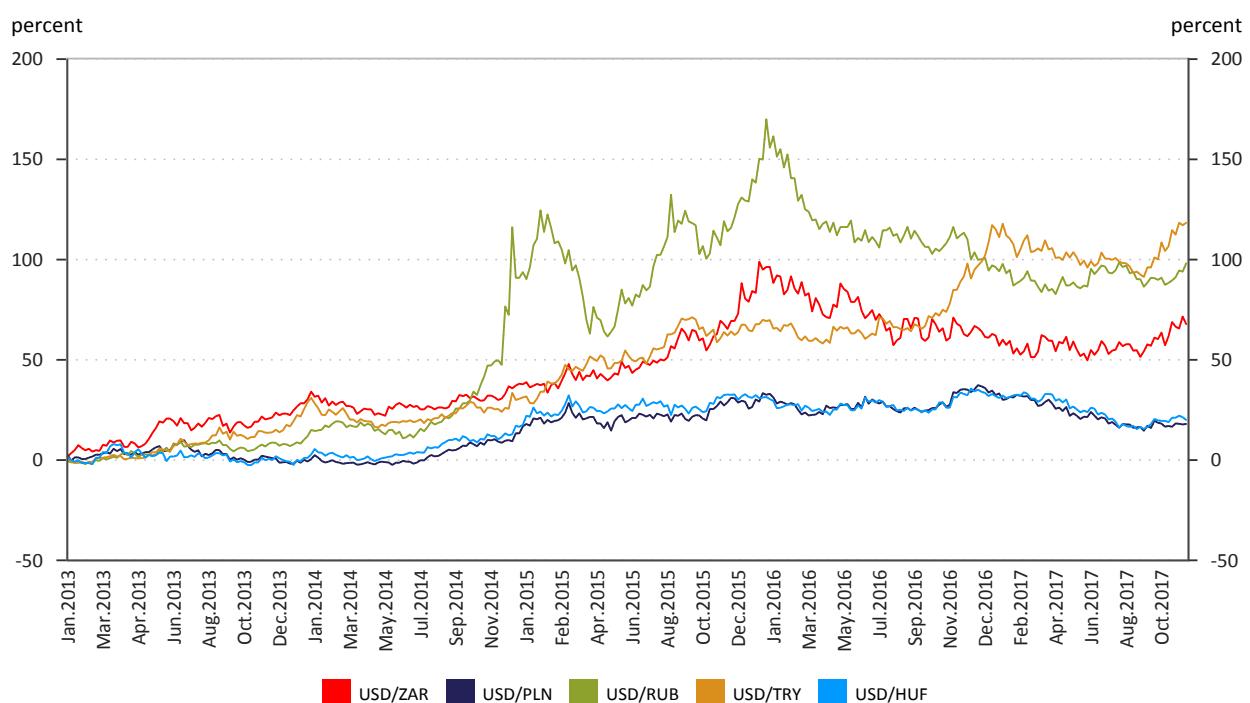
102. International developments*Overview*

Indicator	1 month ago	1 week ago	Current
Fed base rate (%)	1.25	1.25	1.25
ECB base rate (%)	0.00	0.00	0.00
10-year T-bond yield (%)	2.39	2.37	2.37
10-year euro yield (%)	0.45	0.40	0.36
VIX Index (%)	10.0	11.6	10.7
EMBI Global spread (bp)	304	325	320
SP 500 Index	2575	2579	2579
DAX Index	12991	13074	13059
NIKKEI Index	21449	22381	22262
USD/EUR exchange rate	1.18	1.18	1.17
USD/JPY exchange rate	113.52	113.46	112.63
CHF/EUR exchange rate	1.16	1.17	1.17
Brent oil (USD per barrel)	57.7	63.5	62.6

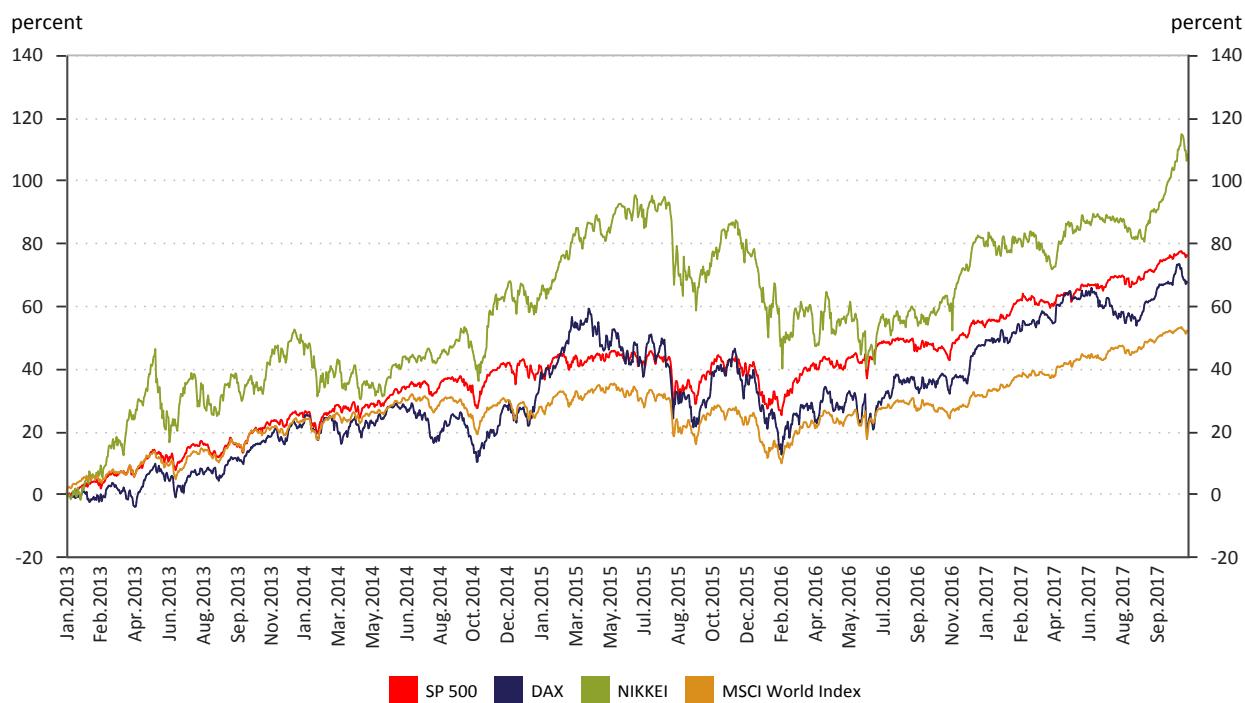
103. Major currencies versus the dollar

Source: Thomson Reuters

Note: cumulative change. Positive values indicate USD depreciation.

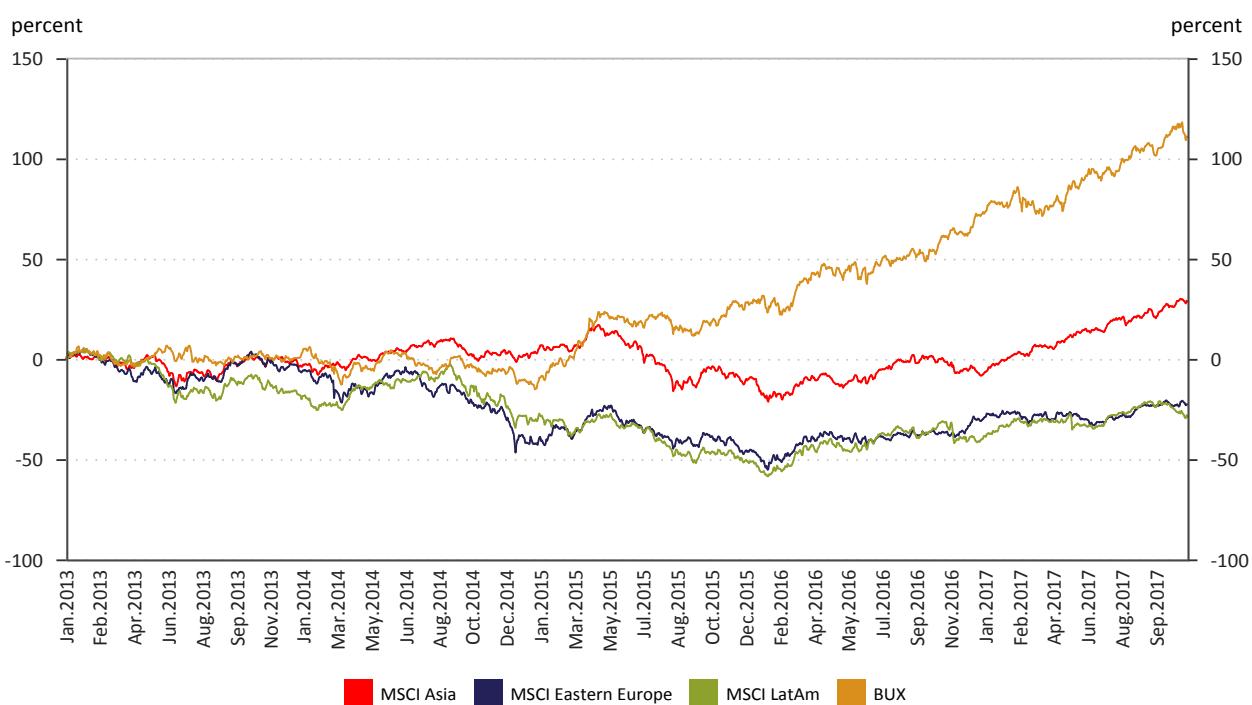
104. Emerging currencies versus the dollar

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

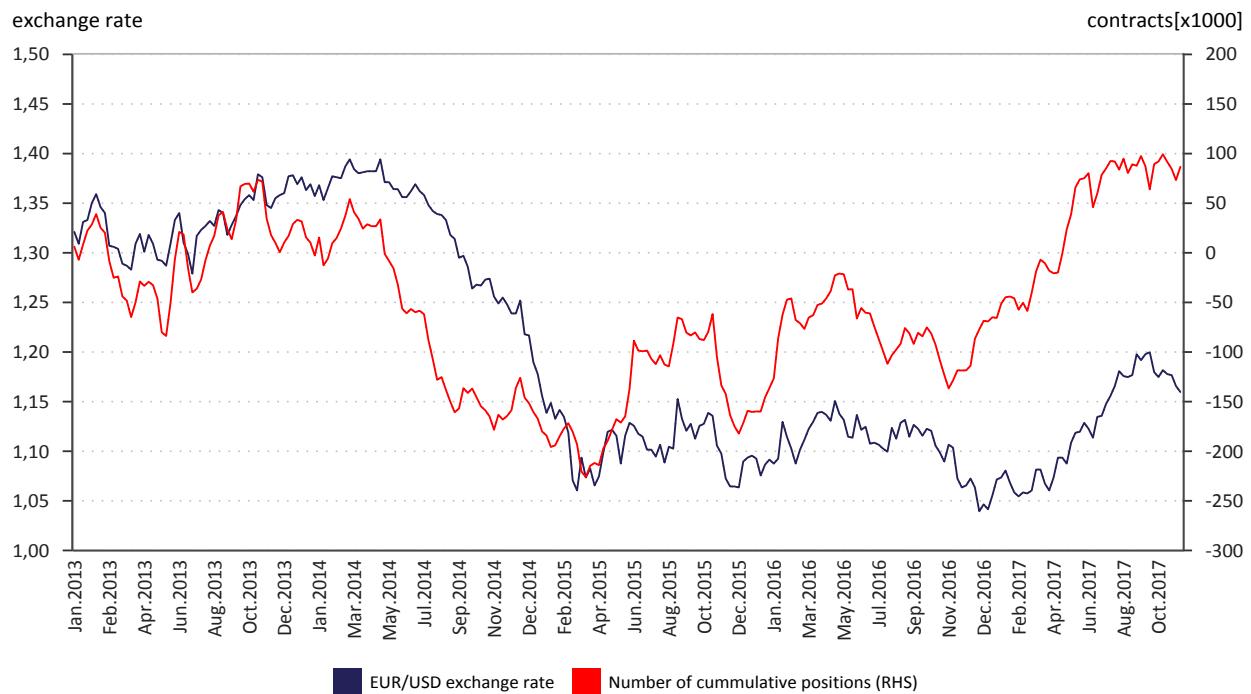
105. Developed market stock indices

Source: Thomson Reuters

Notes: cumulative change.

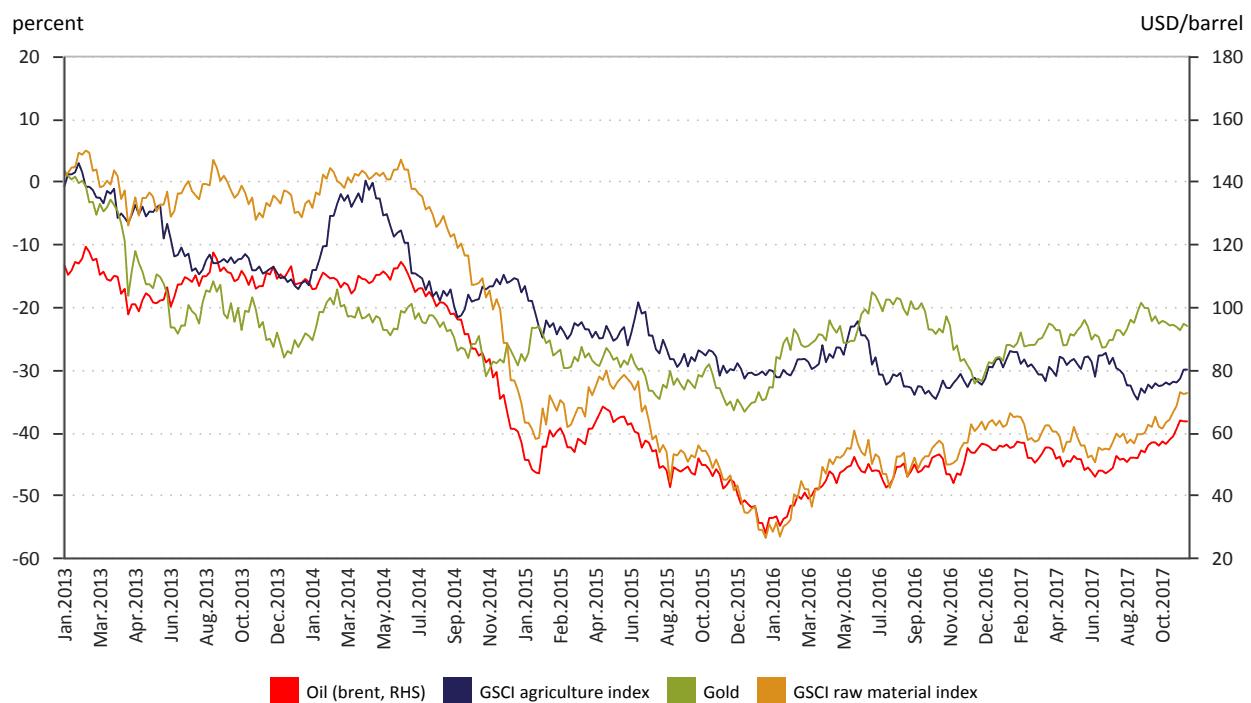
106. Emerging stock exchange markets

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

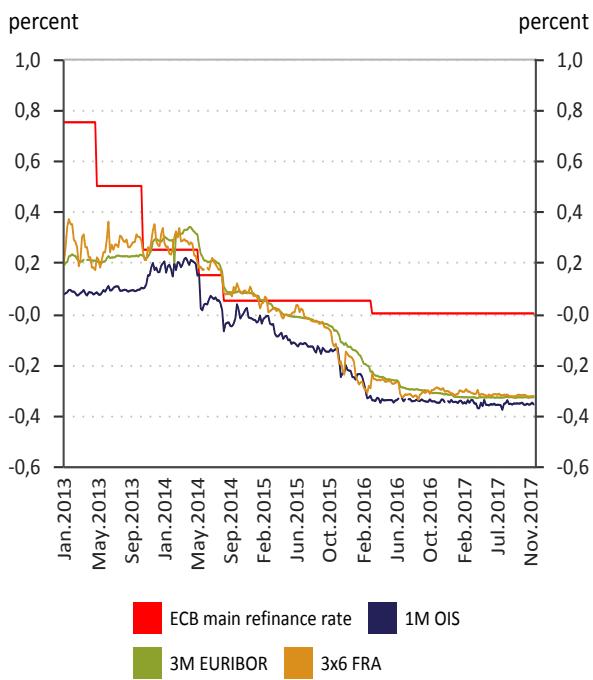
107. EUR/USD exchange rate and speculative positions

Source: Bloomberg, CFTC.

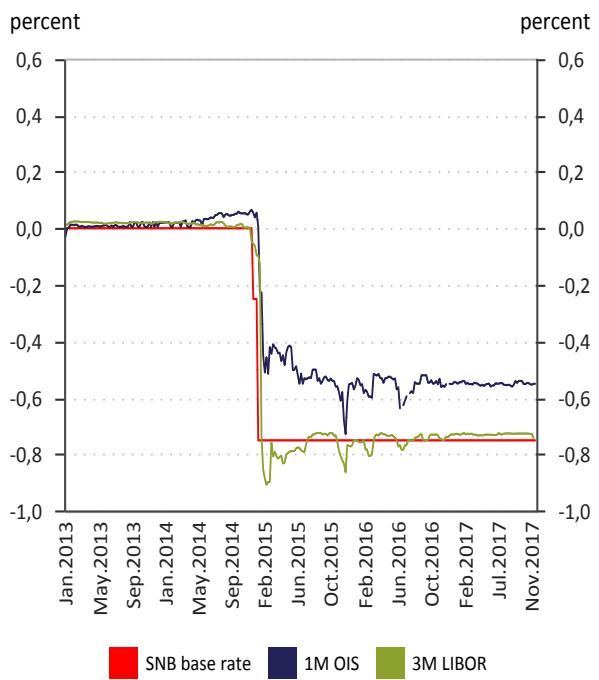
Notes: Speculative position is defined as a net of long and short transactions. Positive value means the majority of open positions on euro strengthening. Weekly data by Commodity Futures Trading Commission.

108. Price of raw materials

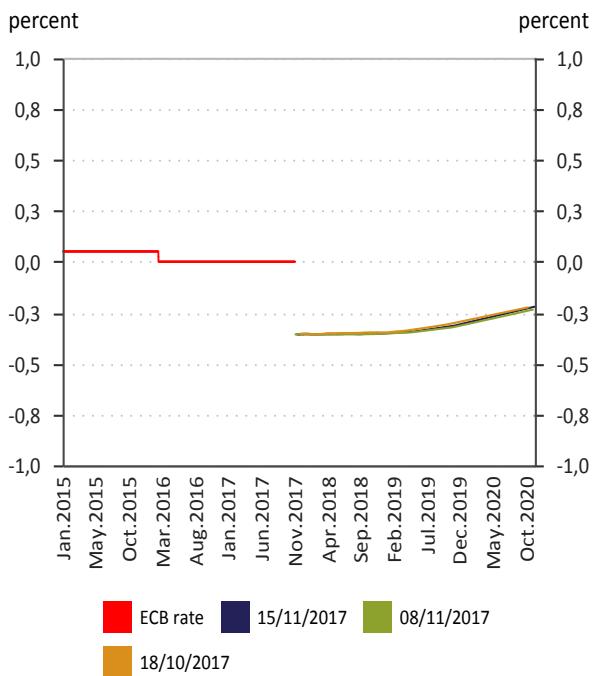
Source: Thomson Reuters Note: cumulative change except the Brent oil where the scale is nominal.

109. Short term interbank rates in the eurozone

Source: Thomson Reuters.

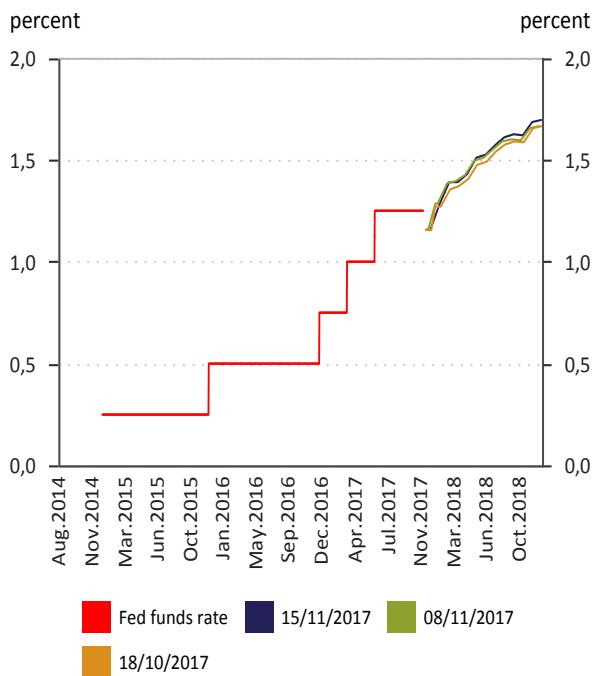
110. Short term interbank rates in Switzerland

Source: Thomson Reuters.

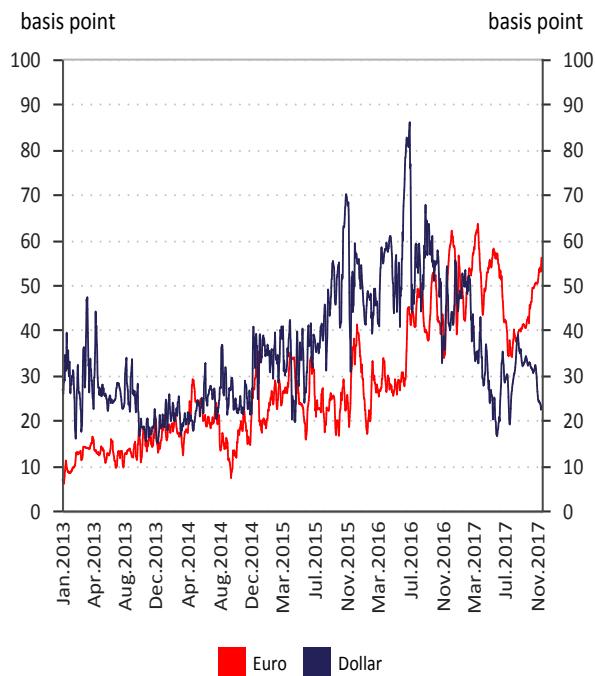
111. Forecasts on ECB policy rate

Source: ECB.

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

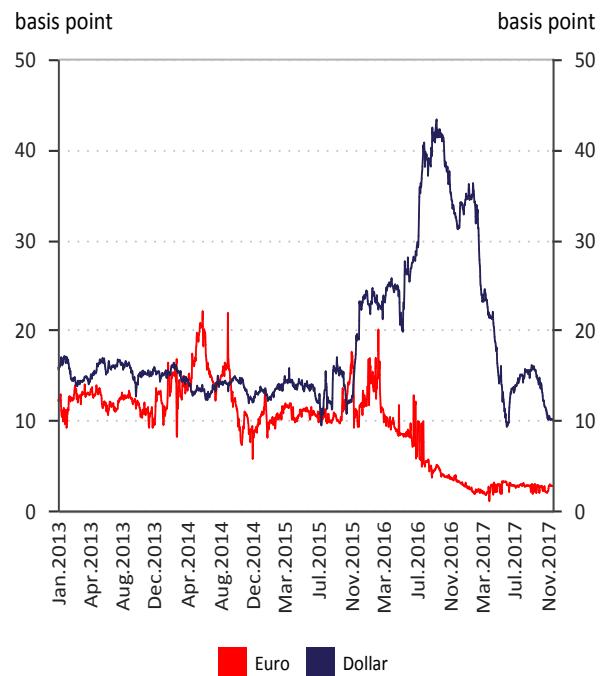
112. Forecasts on Fed policy rate

Source: Bloomberg.

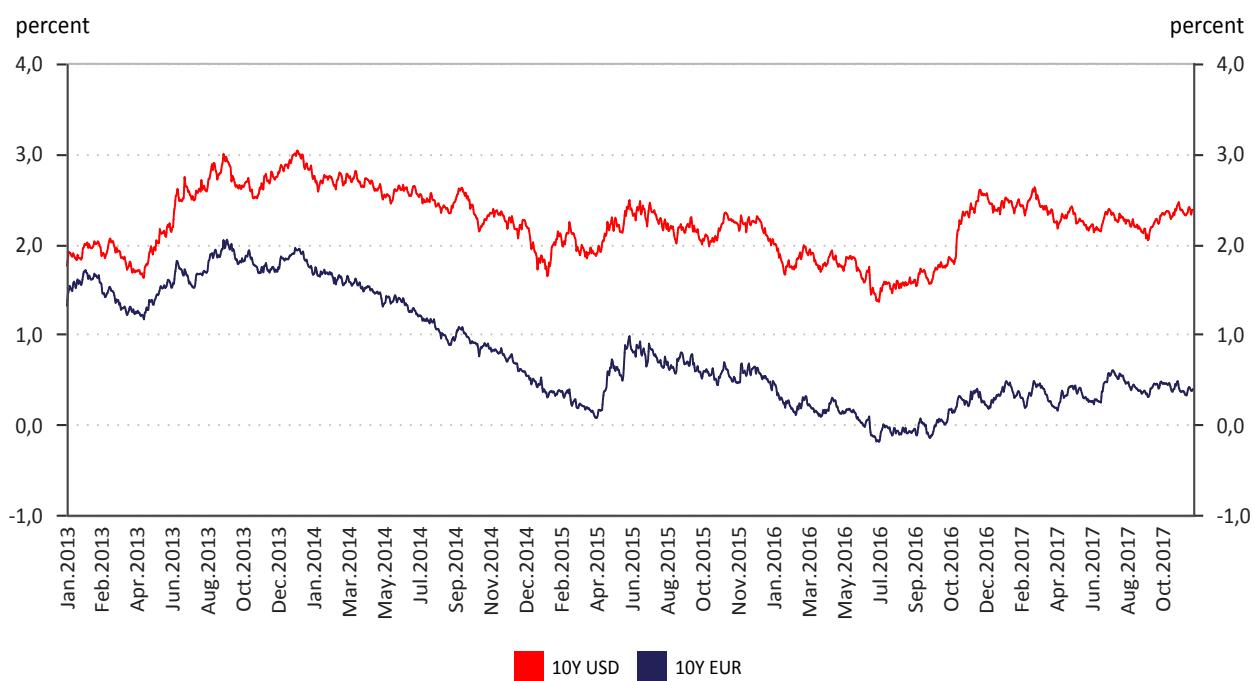
113. 3M interbank and government bond yield spread

Source: Thomson Reuters.

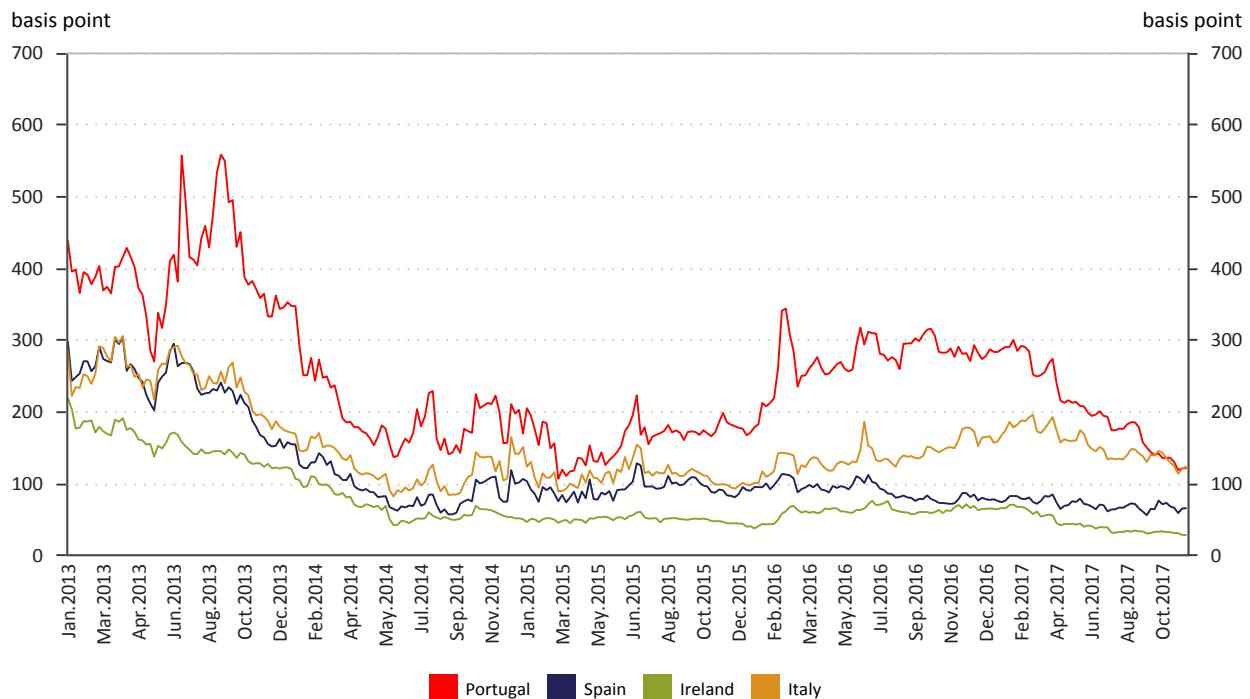
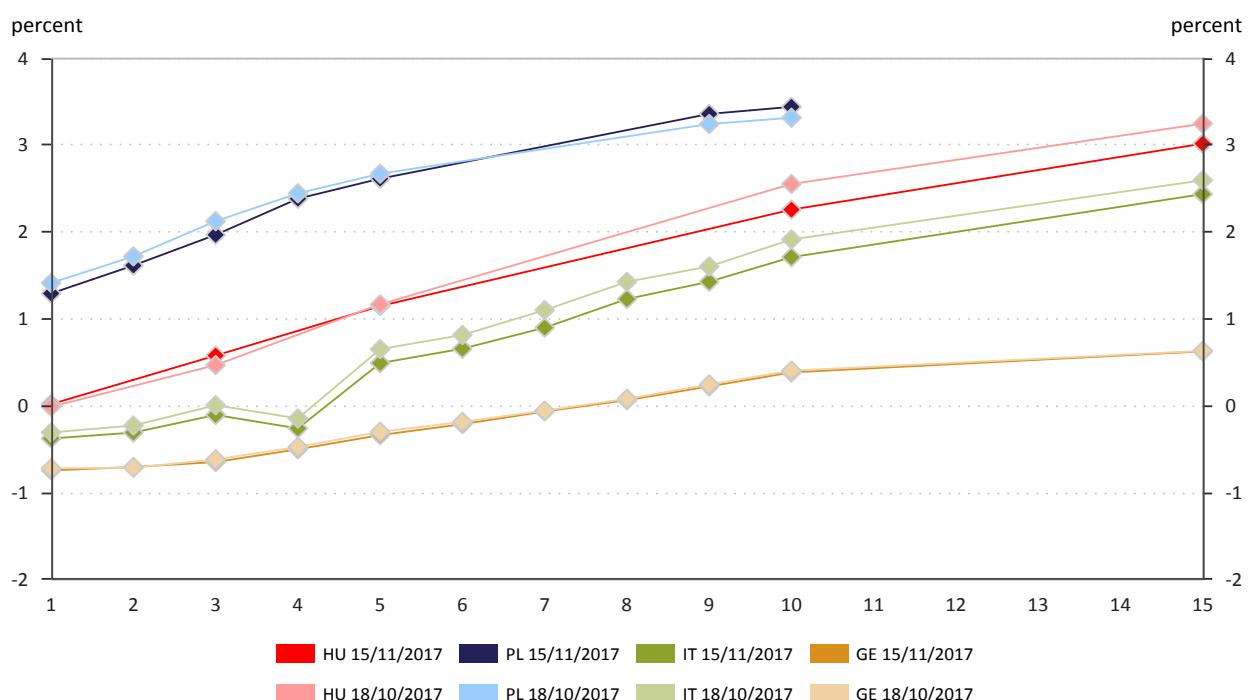
Notes: Spread between 3-month interbank rates and 3-month T-bill yield.

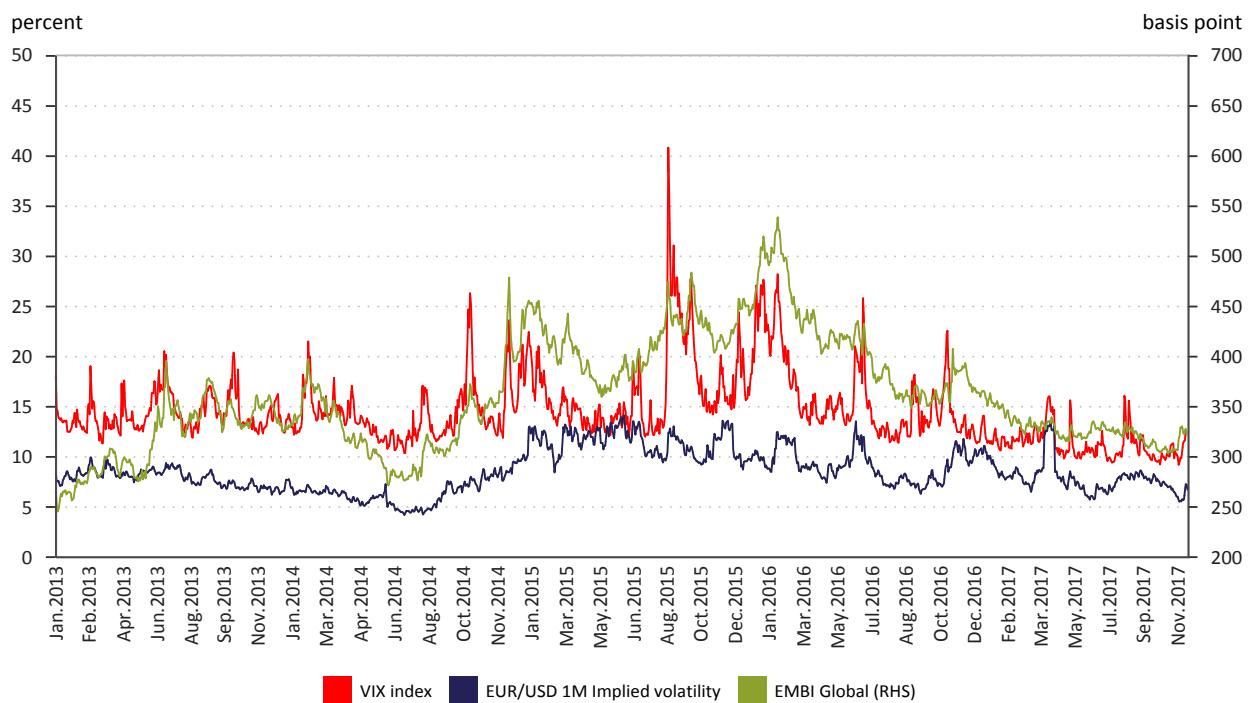
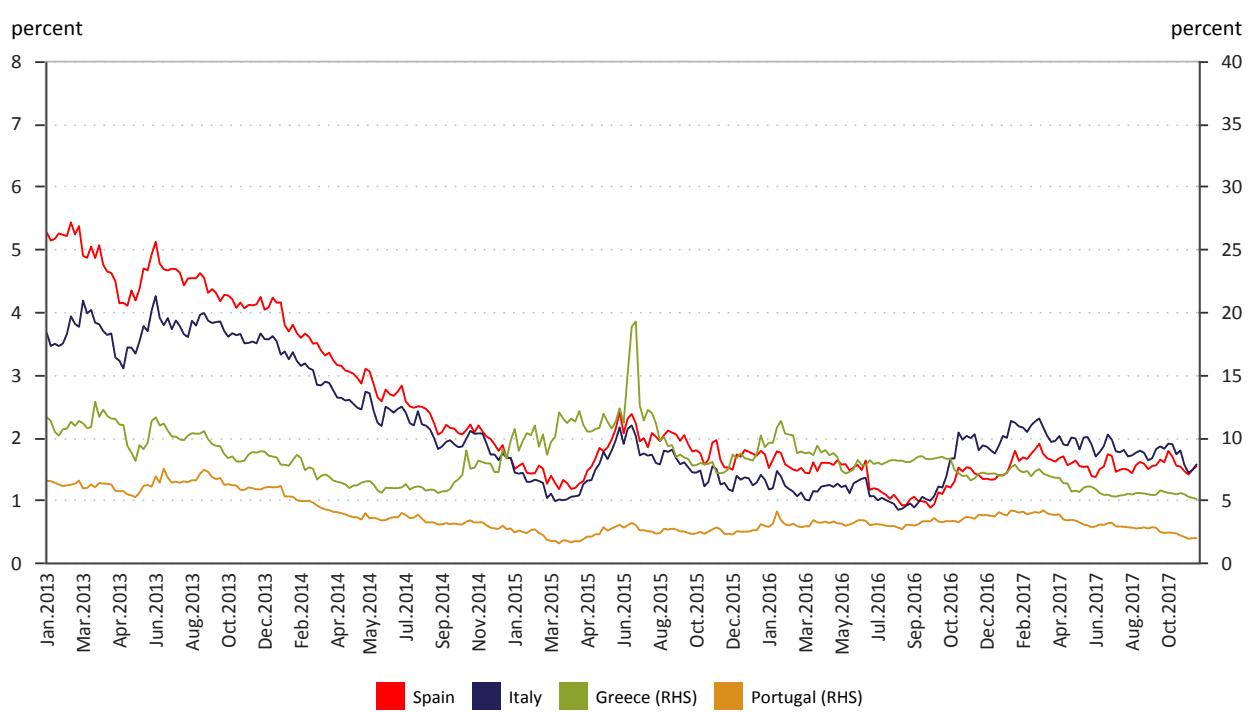
114. 3M interbank and OIS yield spread

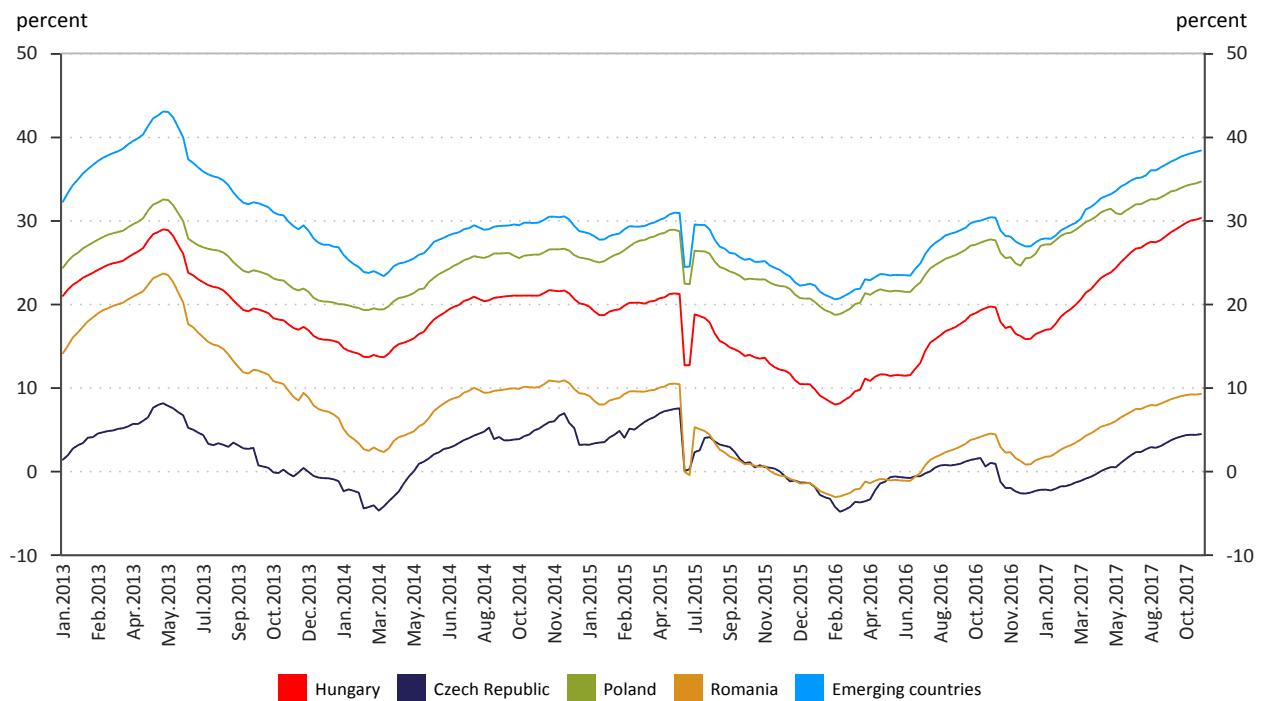
Source: Thomson Reuters

115. Long term euro and dollar benchmark yields

Source: Thomson Reuters.

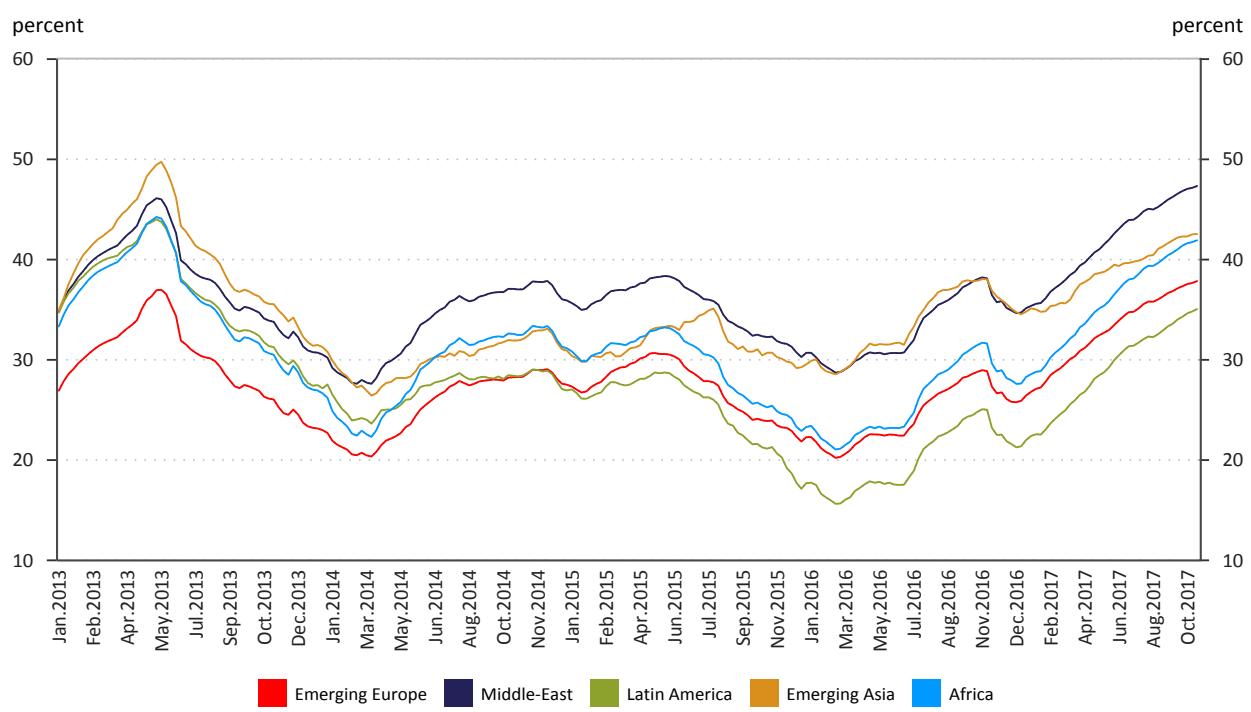
116. 5Y sovereign CDS in the eurozone periphery**117. Benchmark yield curves of Hungary, Poland, Italy and Germany**

118. Main risk indicators**119. Long term government bond yields in the Eurozone periphery**

120. Emerging bond-market flows

Source:EPFR

Note: Percentage change of asset under management, 1/1/2011=0

121. Global bond-market flows

Source:EPFR

Note: Percentage change of asset under management, 1/1/2011=1