

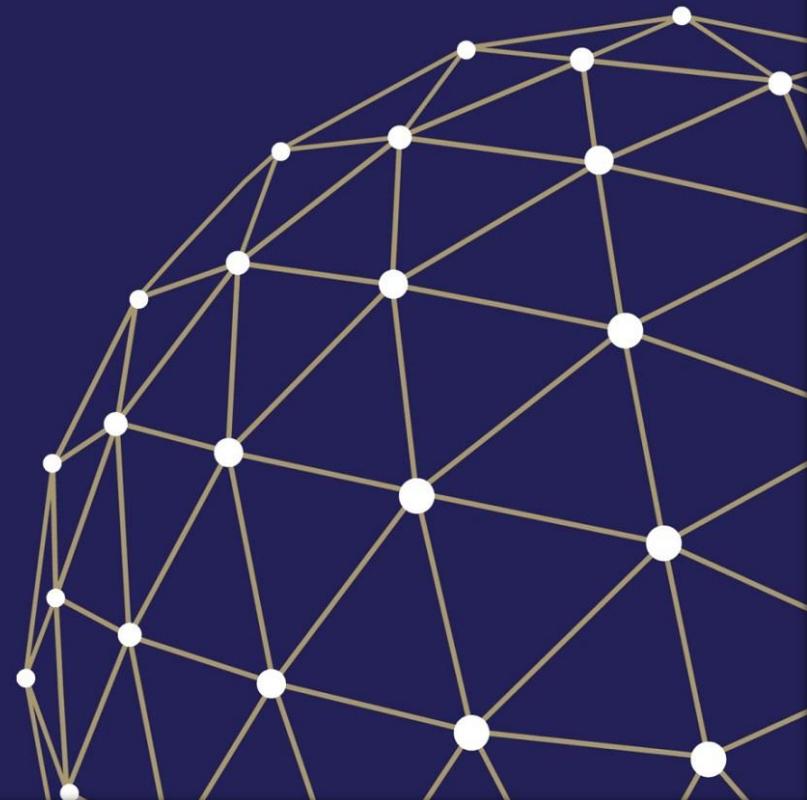


# Chart-pack on recent economic and financial market developments

Directorate Monetary Policy and Financial Market Analysis

Financial Market Analysis Department

August 2016





## Chart-pack on recent economic and financial market developments \*

22 August 2016

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.

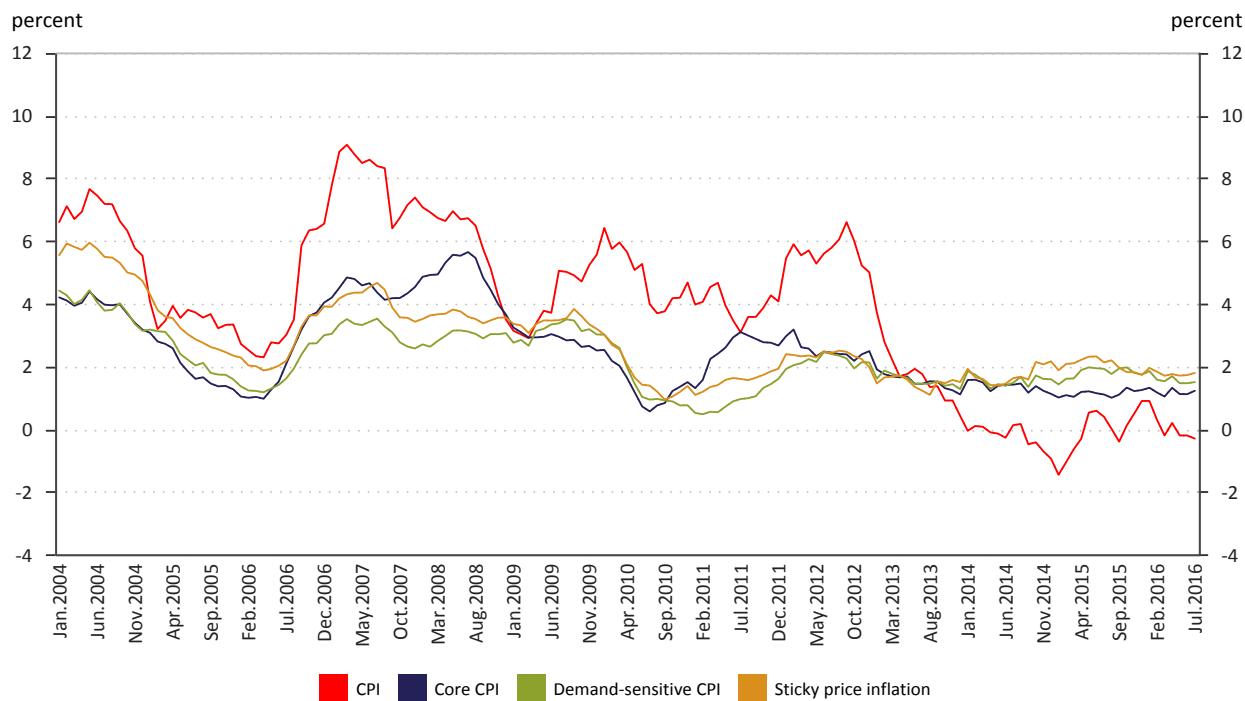
Earlier versions of the chart-pack are accessible on the website of Magyar Nemzeti Bank via the following address.

<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](mailto: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



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.

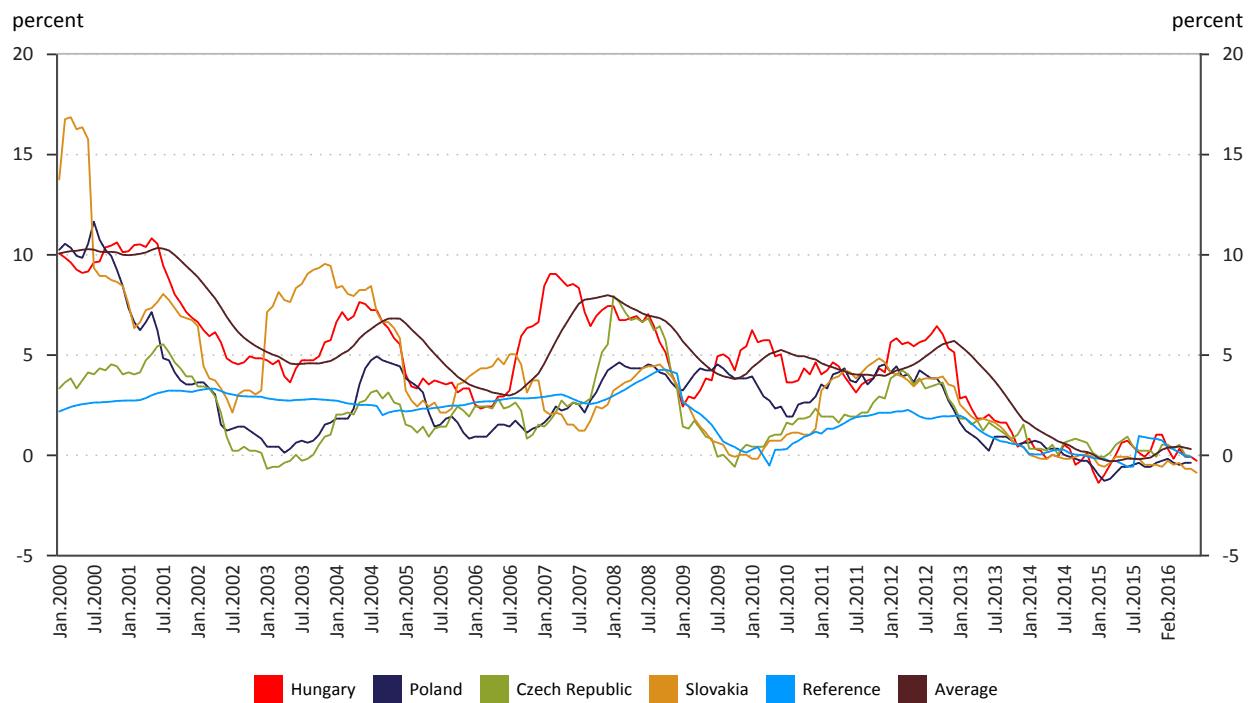
### 3. Decomposition of the Consumer Price Index

	Weight - Weight 2016	APR 2016	MAY 2016	JUN 2016	JUL 2016
Consumer Price Index	100.0	0.2	-0.2	-0.2	-0.3
Thereof:					
Unprocessed food	6.2	1.8	-0.8	-2.1	-1.0
Processed food	12.9	-0.2	-0.3	-0.3	0.1
Manufactured goods	22.5	1.6	1.1	0.9	1.2
Market services	22.6	2.0	2.0	2.2	1.8
Non-regulated household energy	1.0	-0.7	-0.9	-0.7	-0.6
Alcohol, tobacco	9.9	2.3	2.1	1.8	1.9
Gasoline prices	8.3	-10.8	-11.9	-10.4	-13.0
Regulated prices	16.6	0.2	0.2	0.2	0.1
Core Consumer Price Index	67.9	1.5	1.3	1.2	1.2
CPI without tax changes	100.0	0.4	-0.1	0.0	-0.1

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.

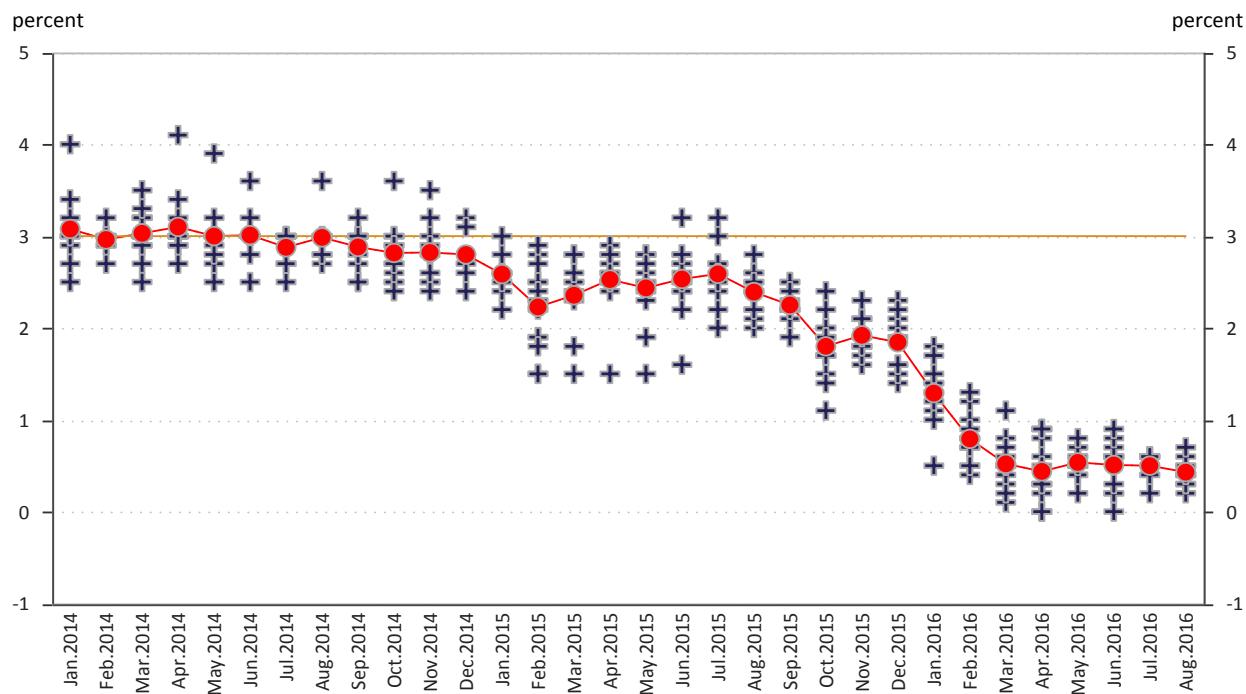
### 4. Harmonised index of consumer prices



Source: Eurostat

Note: annual growth rate.

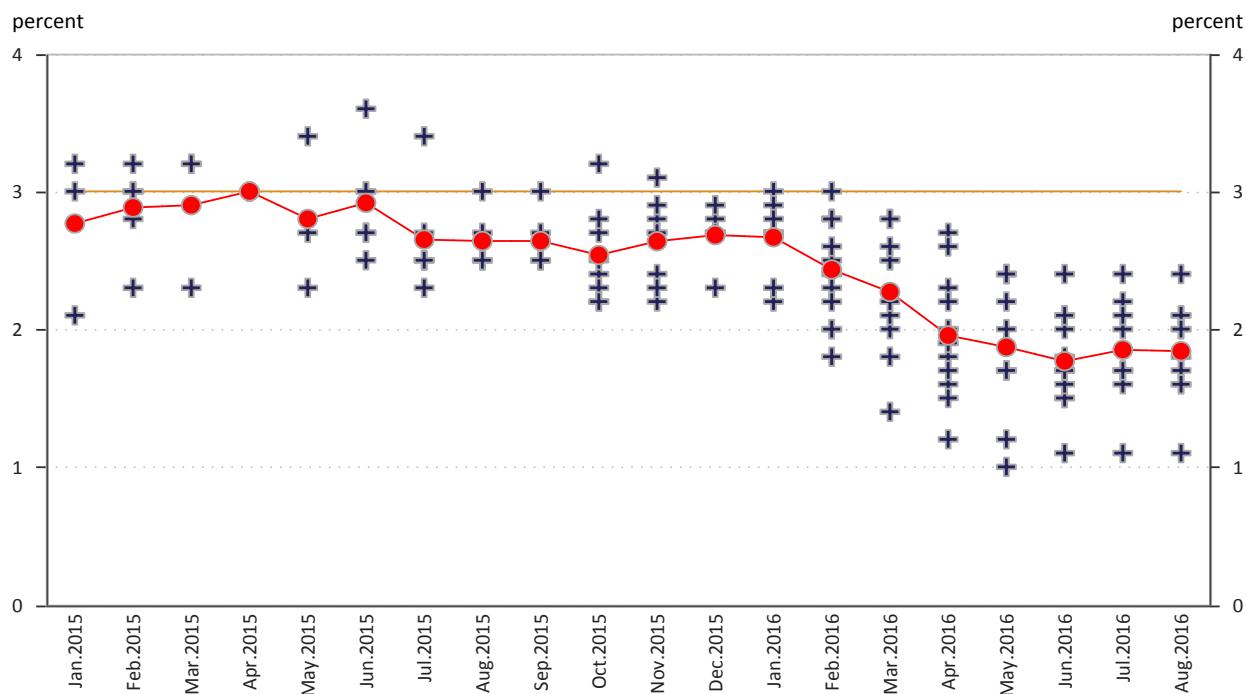
### 5. Market expectations for the inflation rate in current year



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.

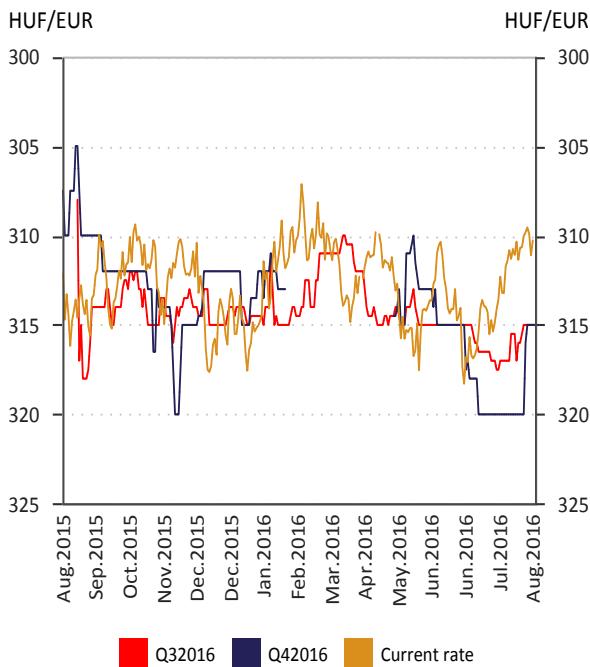
### 6. Market expectations for the inflation rate next year



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.

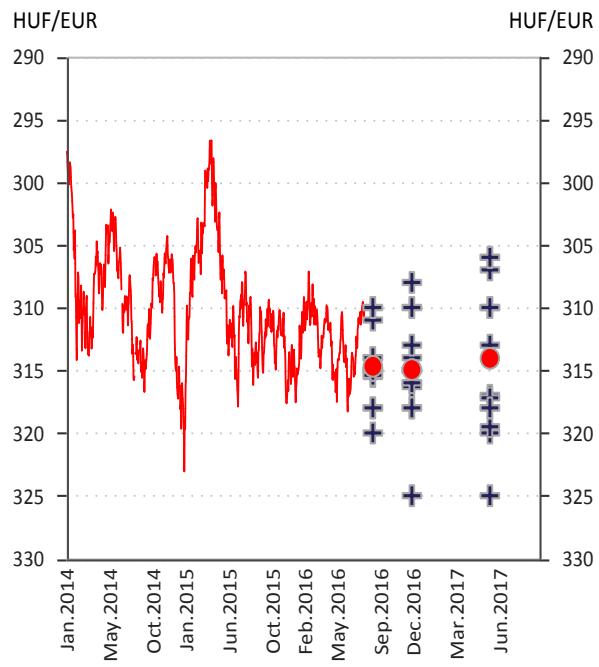
### 7. Expectations for HUF/EUR exchange rate (Bloomberg collection)



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.

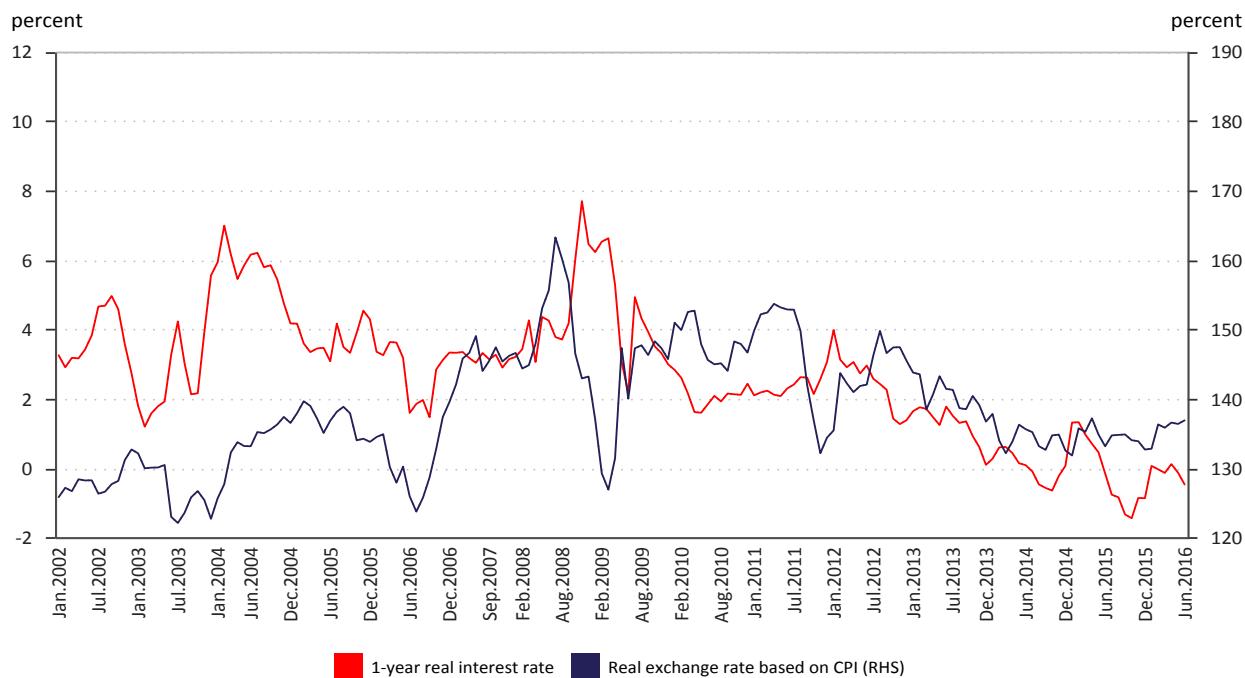
### 9. Spot and futures Brent crude oil price



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.

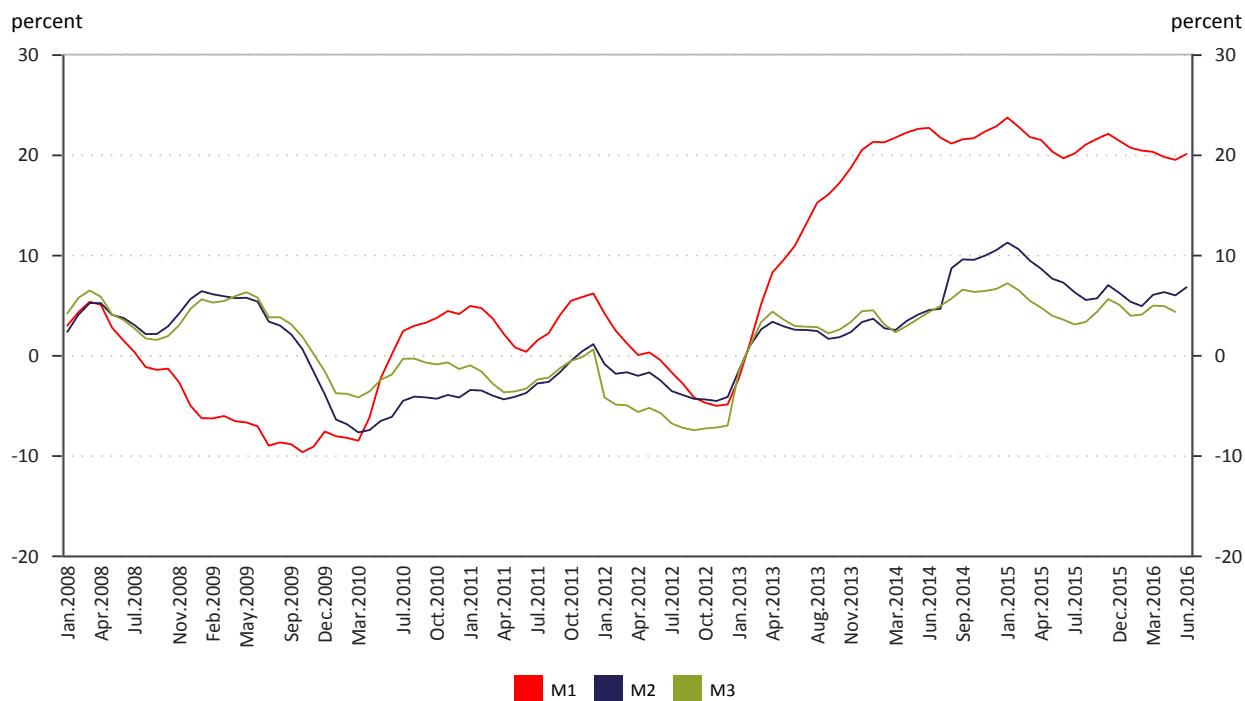
### 10. Monetary conditions



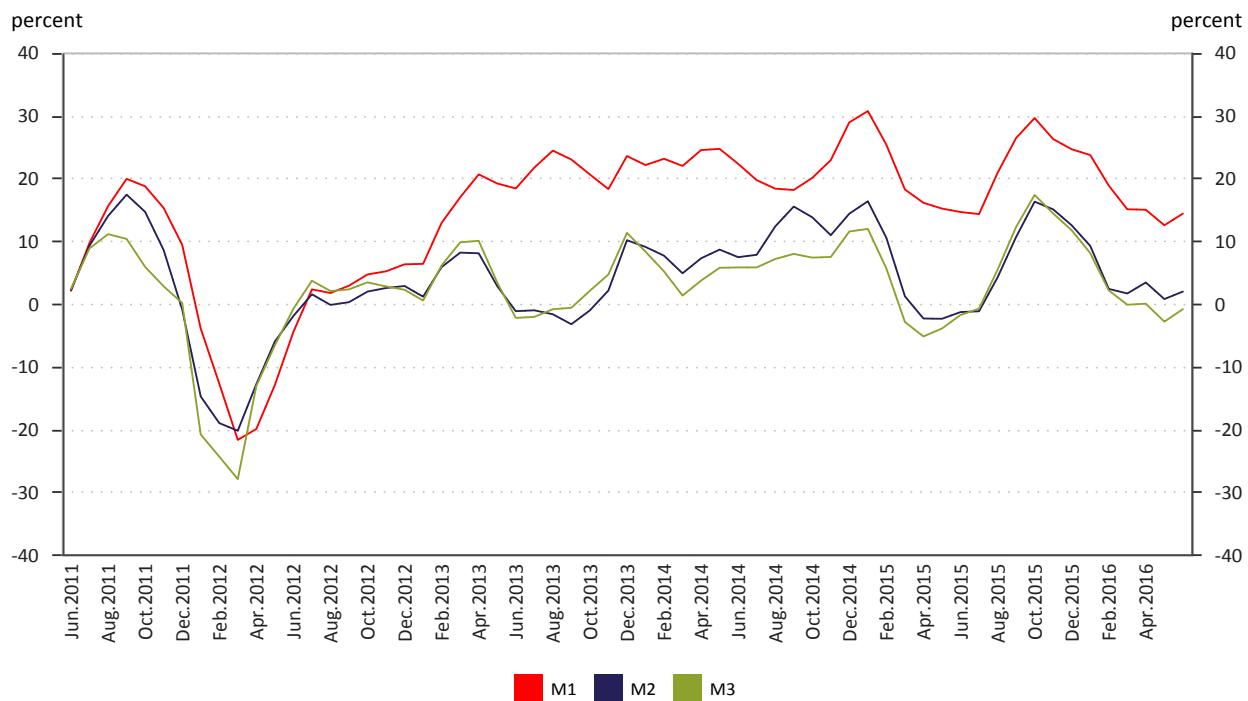
Source: Reuters, HCSO, Eurostat, ÁKK, MNB

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)

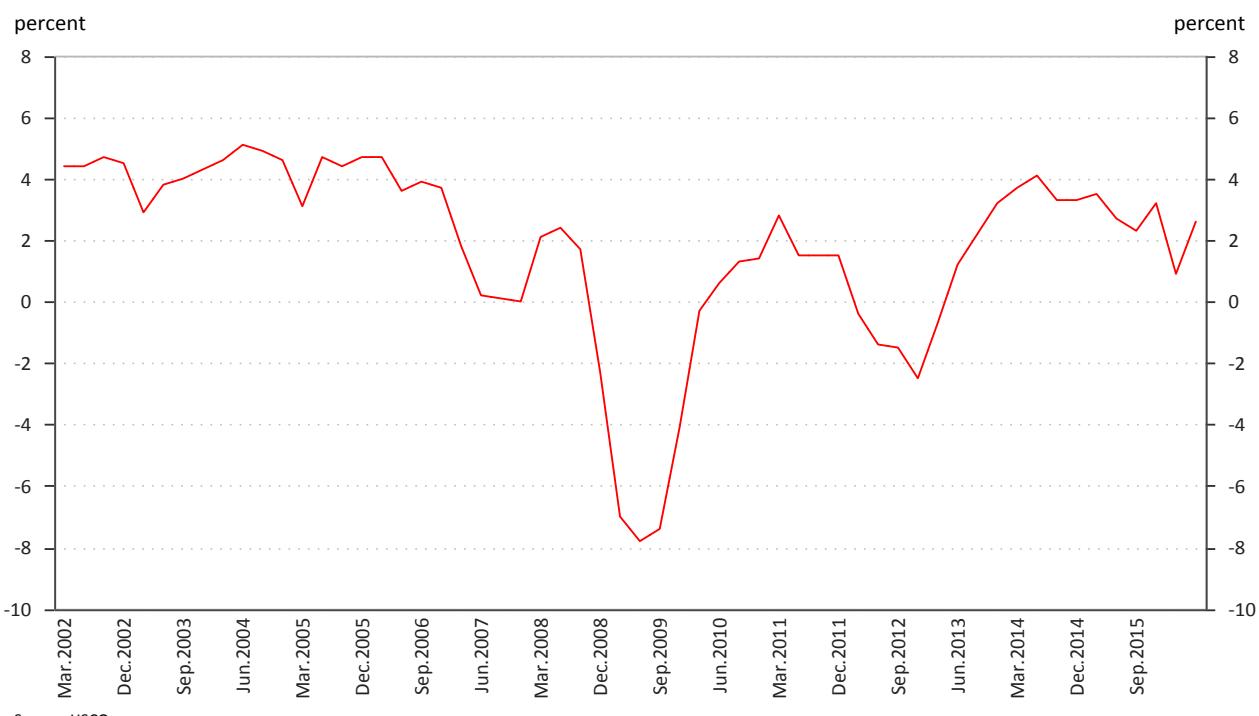
### 11. Real growth rate of monetary aggregates (year-on-year basis)



Source: MNB.

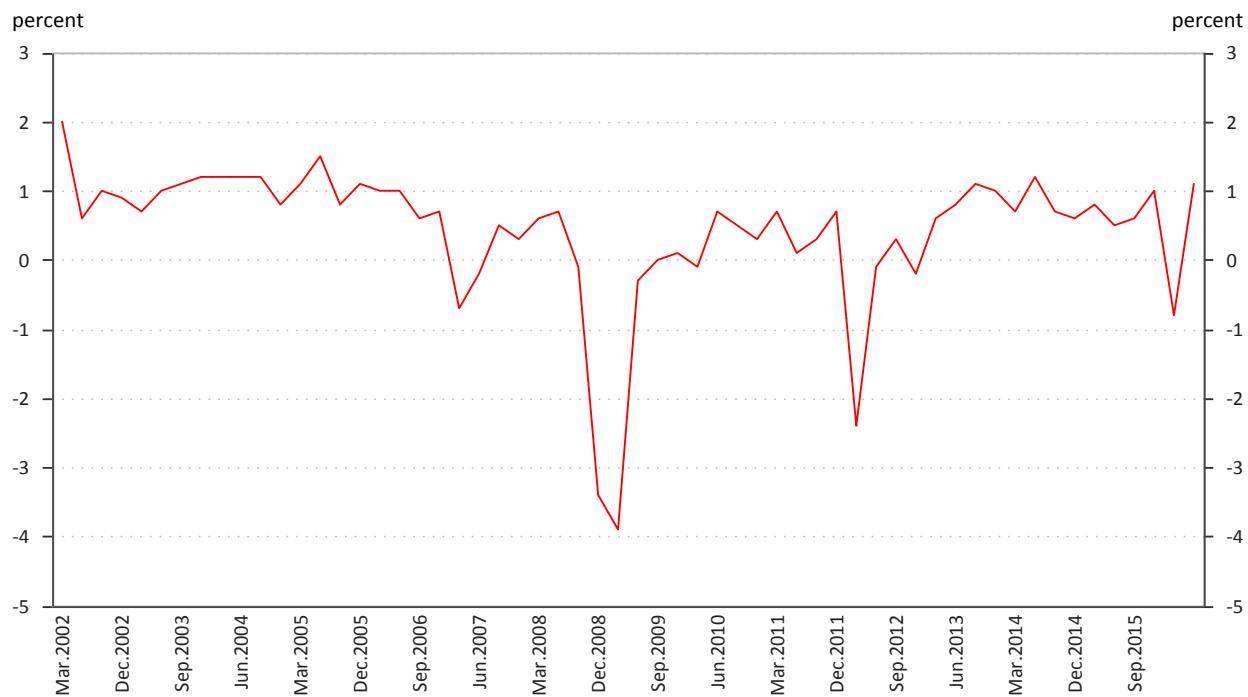
**12. Real growth rate of monetary aggregates (annualized from quarterly rates)**

Source: MNB.

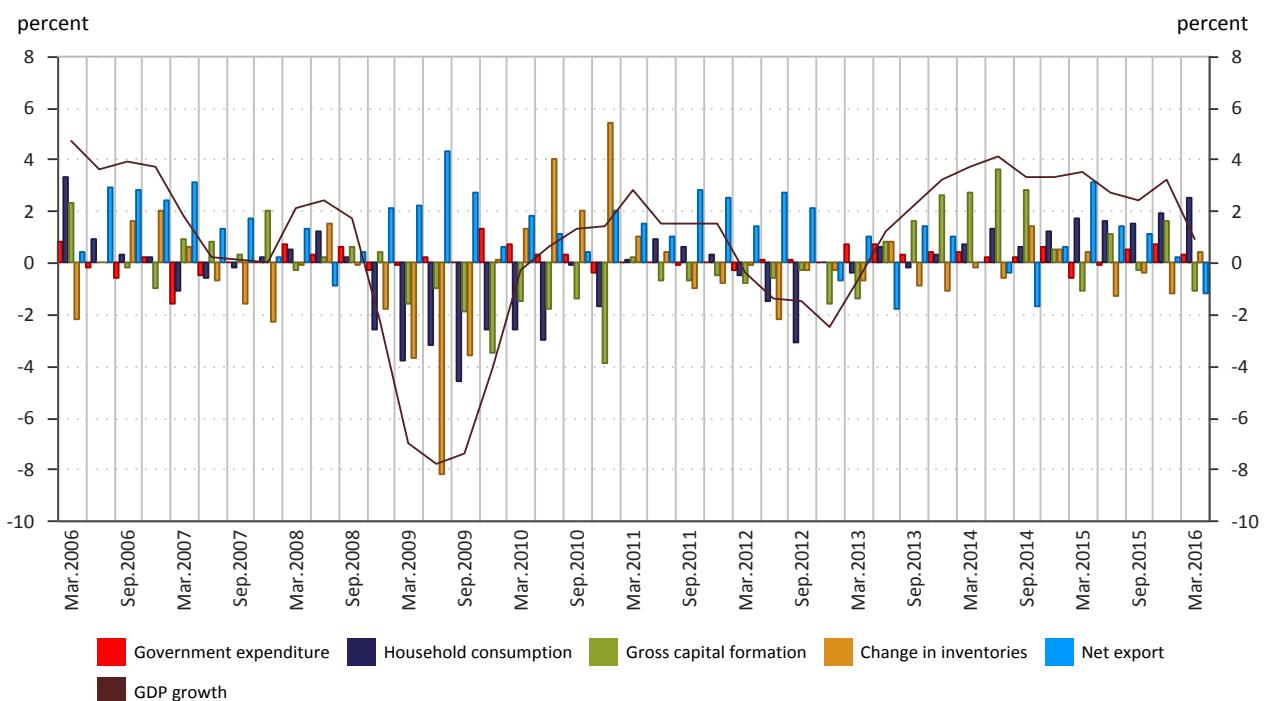
**13. Annual GDP growth**

Source: HSCO

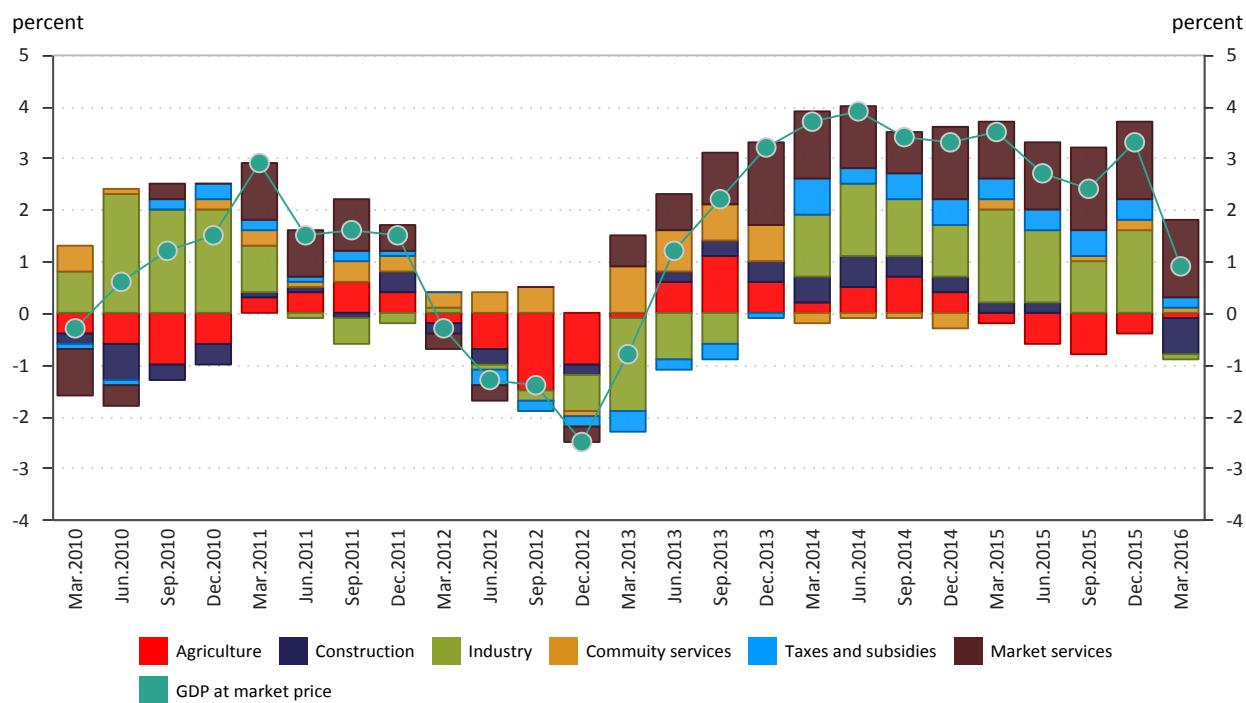
Note: year-on-year change.

**14. Quarterly GDP growth**

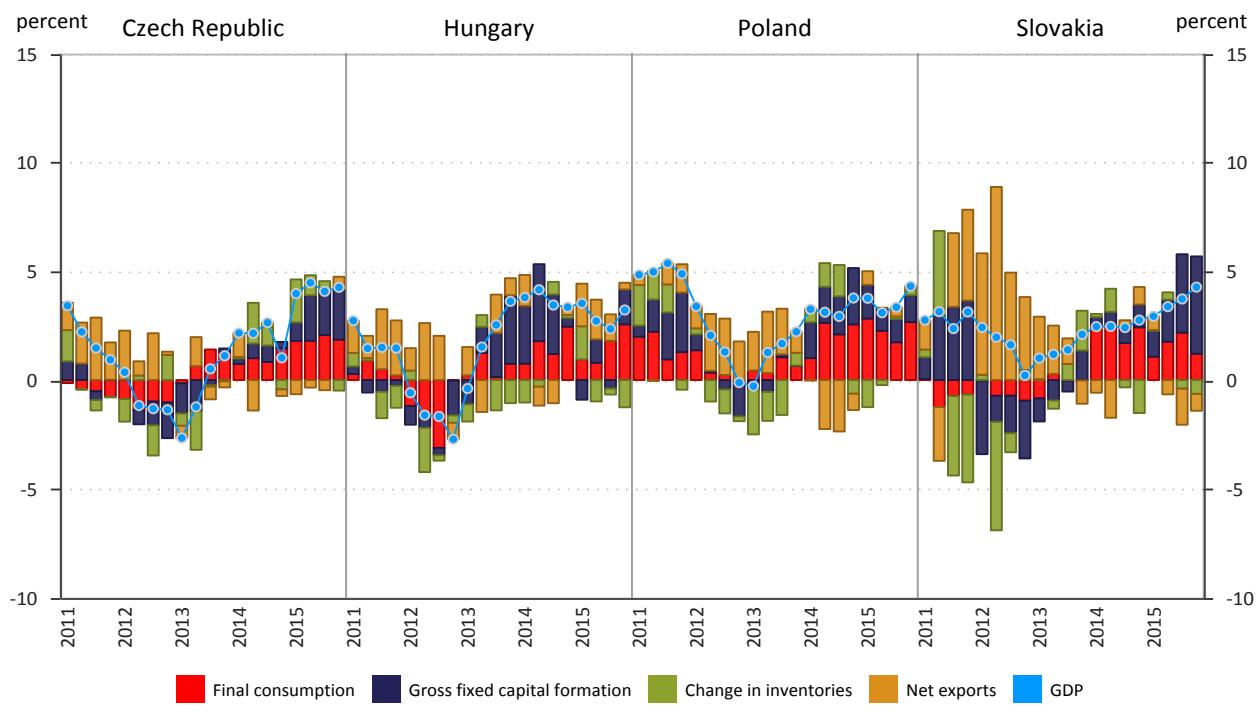
Source: MNB, HSCO.

**15. Contribution to annual GDP growth**

Source: MNB, HSCO.

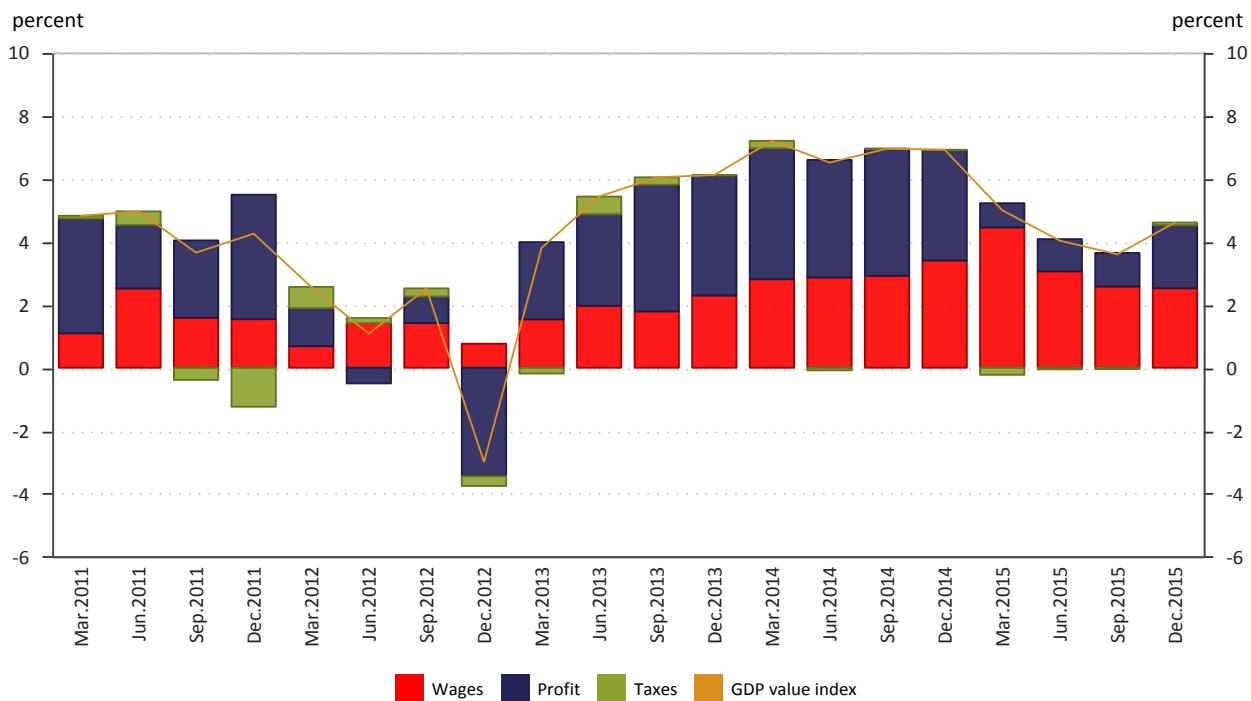
**16. Decomposition of GDP growth**

Source: HSCO.

**17. Contribution to annual GDP growth in the region**

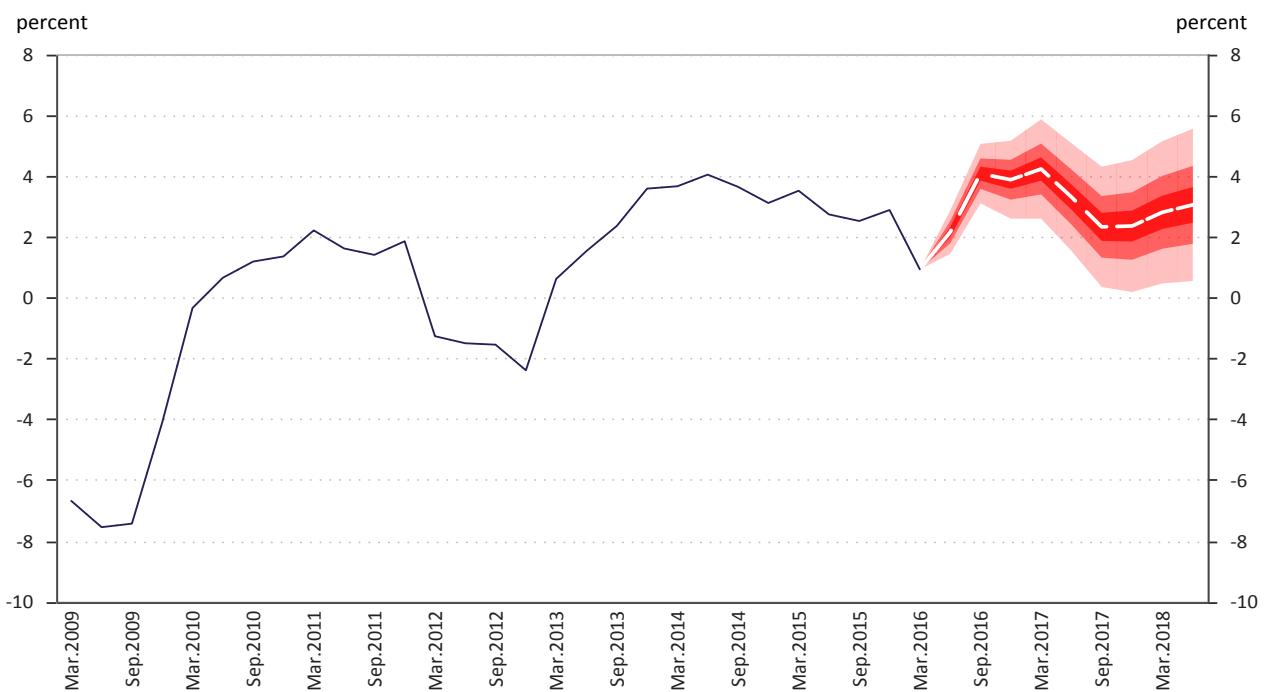
Source: MNB, HSCO.

### 18. Decomposition of GDP growth (income approach)



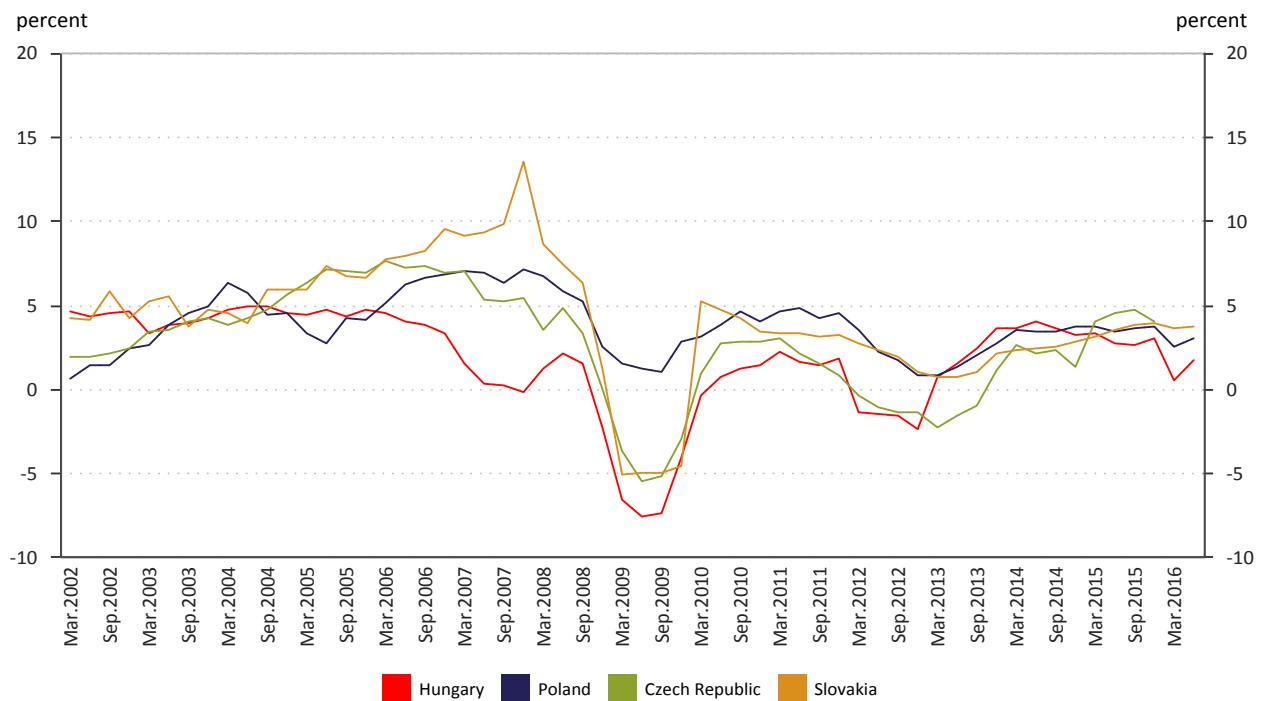
Source: MNB, HSCO Note: contribution in percentage points

### 19. Fanchart of the GDP forecast



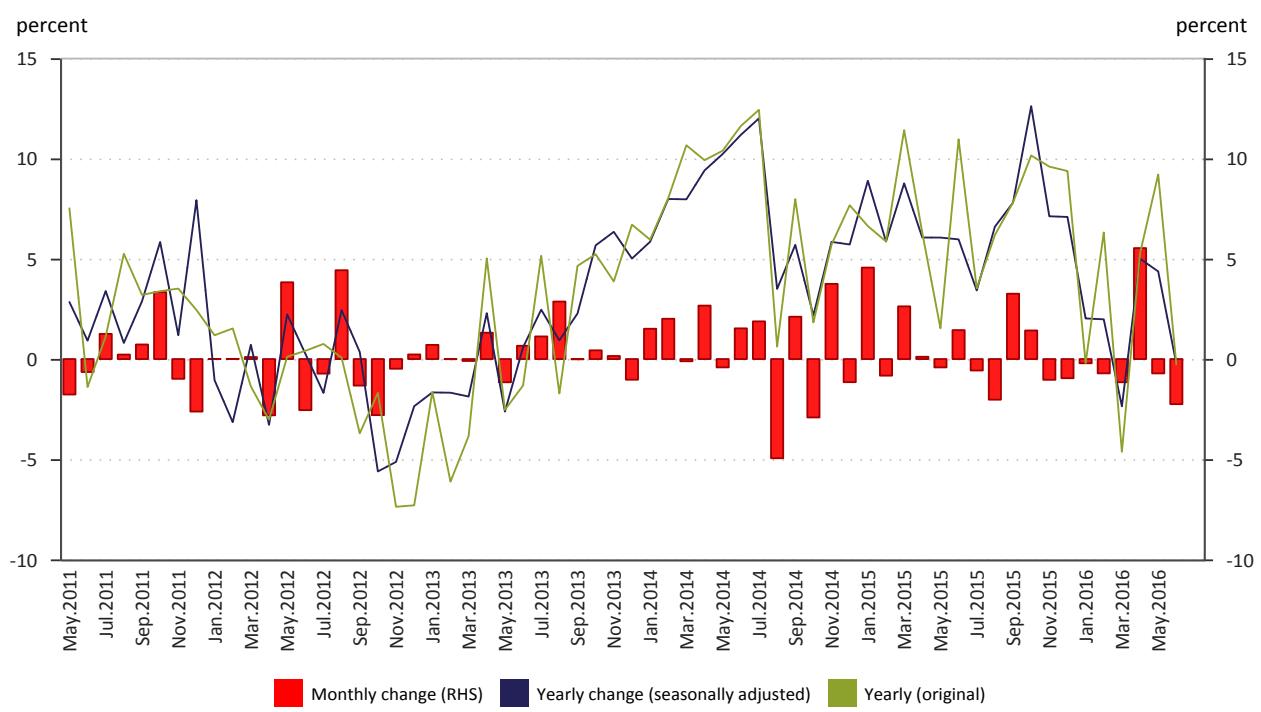
Source: MNB, HCSO.

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.

**20. GDP growth rate in CEE**

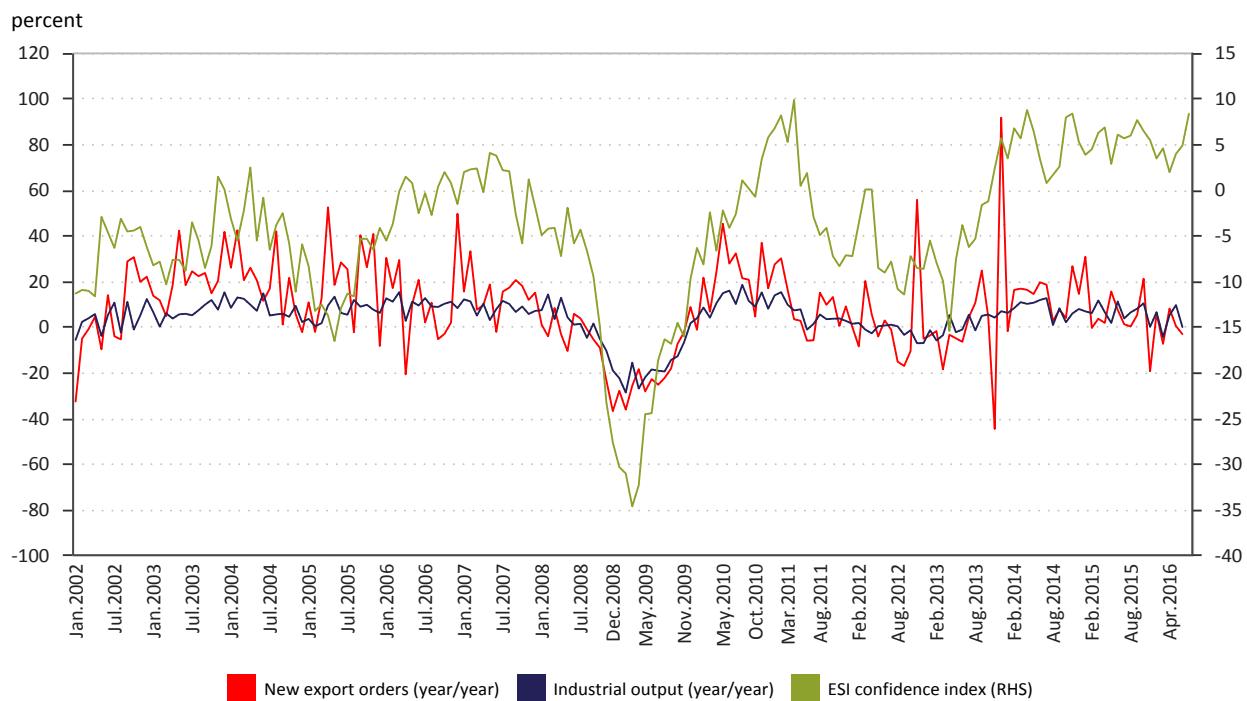
Source: Eurostat

Note: annual growth rate.

**21. Change in industrial production**

Source: MNB, HCSO.

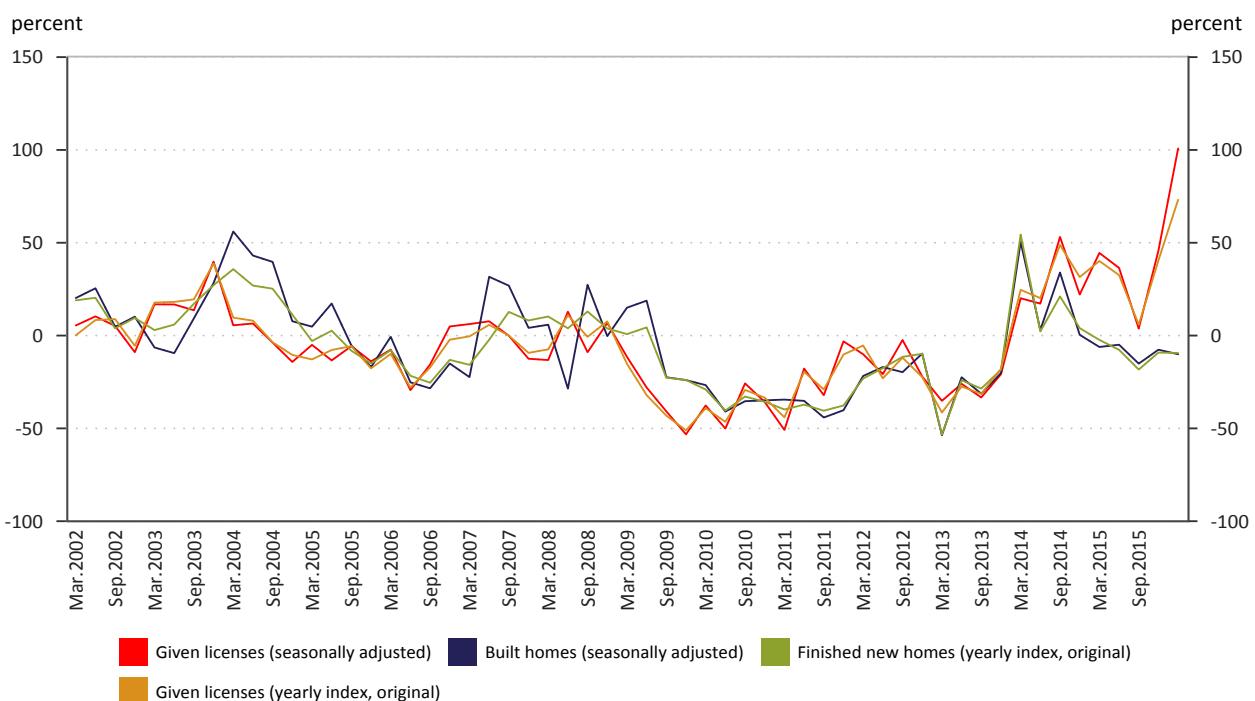
## 22. Industrial production and new export orders



Source: HSCO, European Commission.

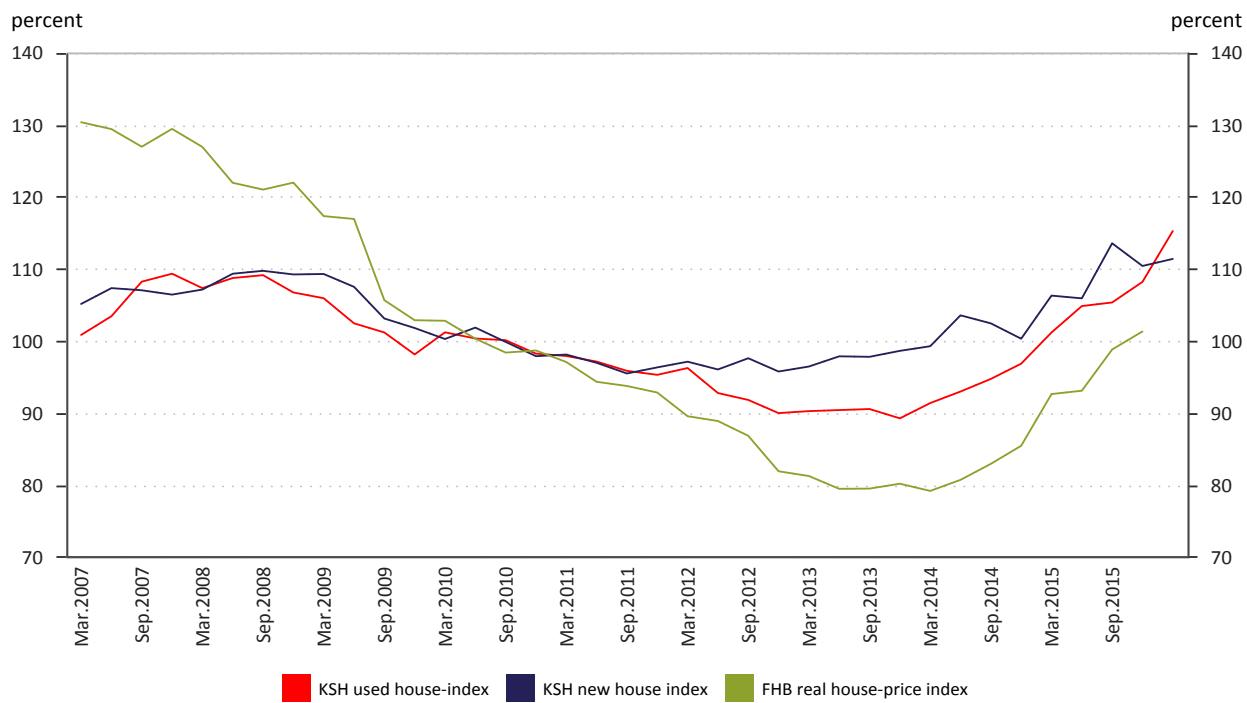
Note: ESI Index is a survey on business confidence by the European Commission. Chart represents the industrial sub-index.

## 23. Developments on the real estate market

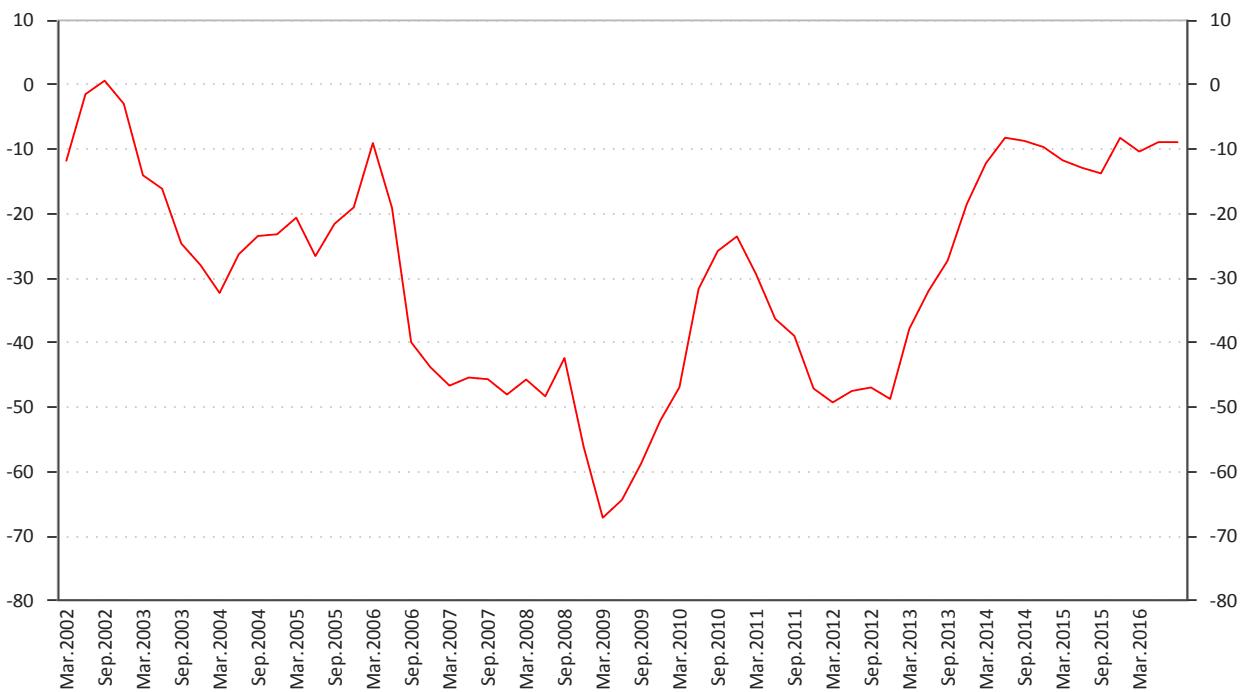


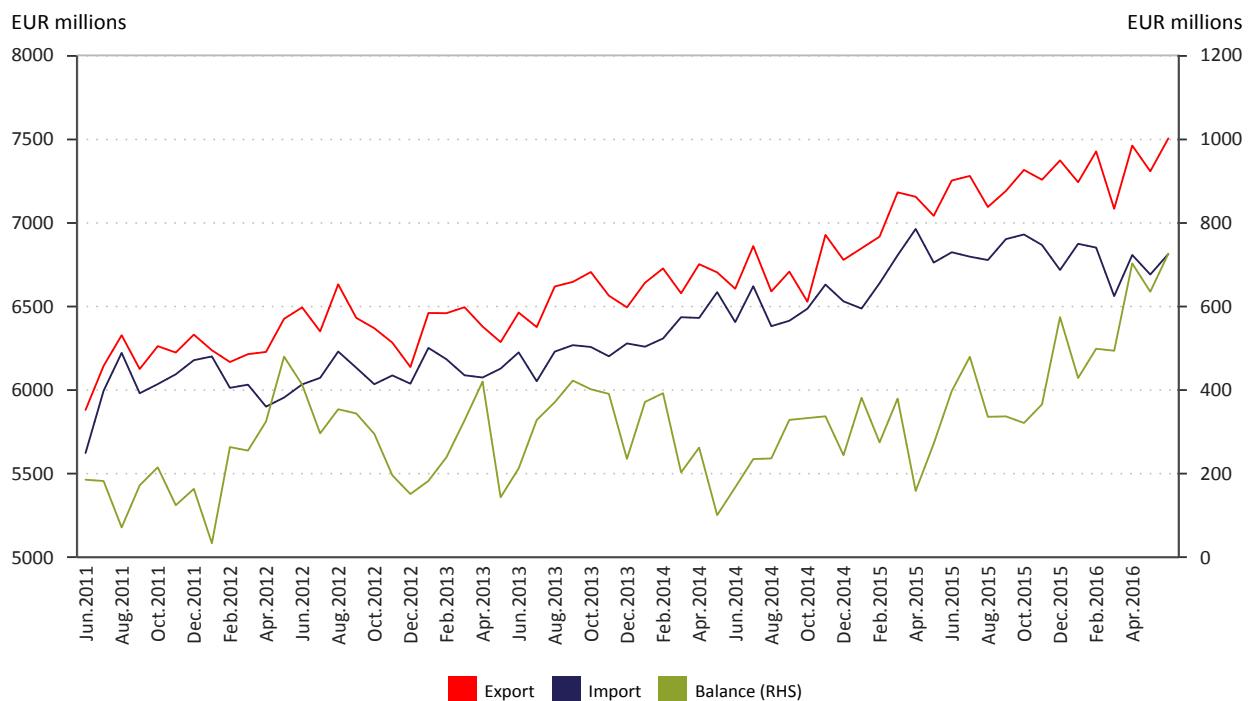
Source: MNB, HSCO.

### 24. Developement of house prices

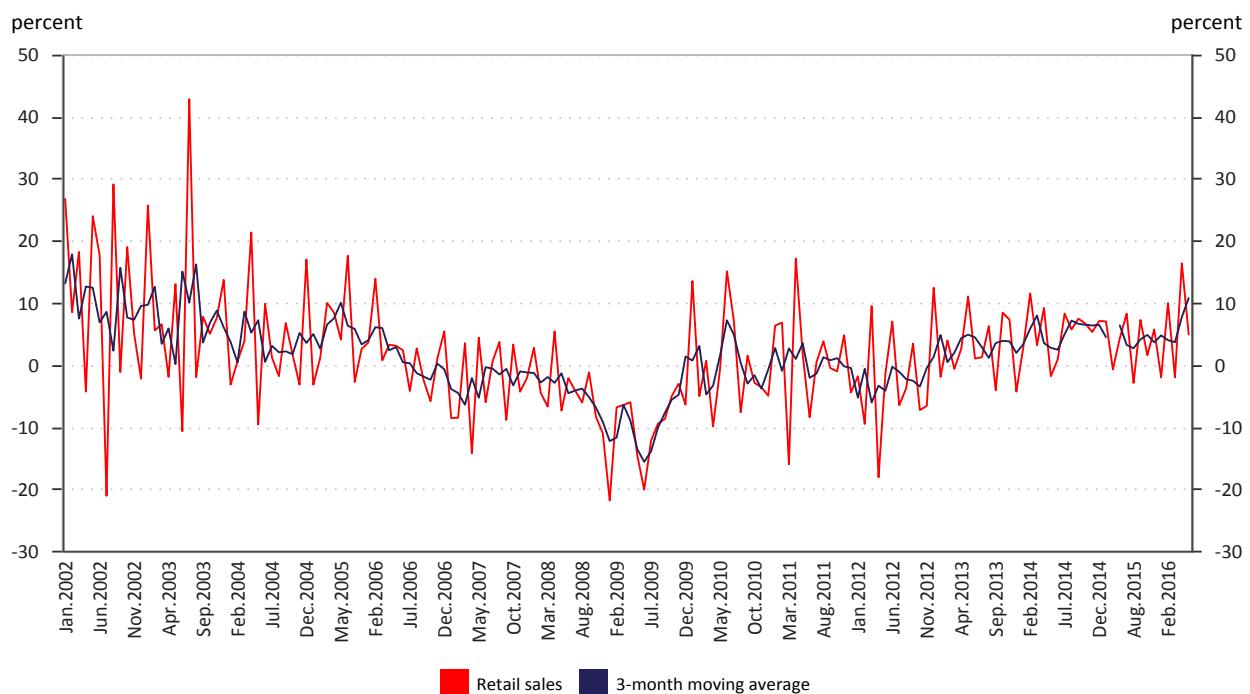


### 25. Household confidence index (reweighted)



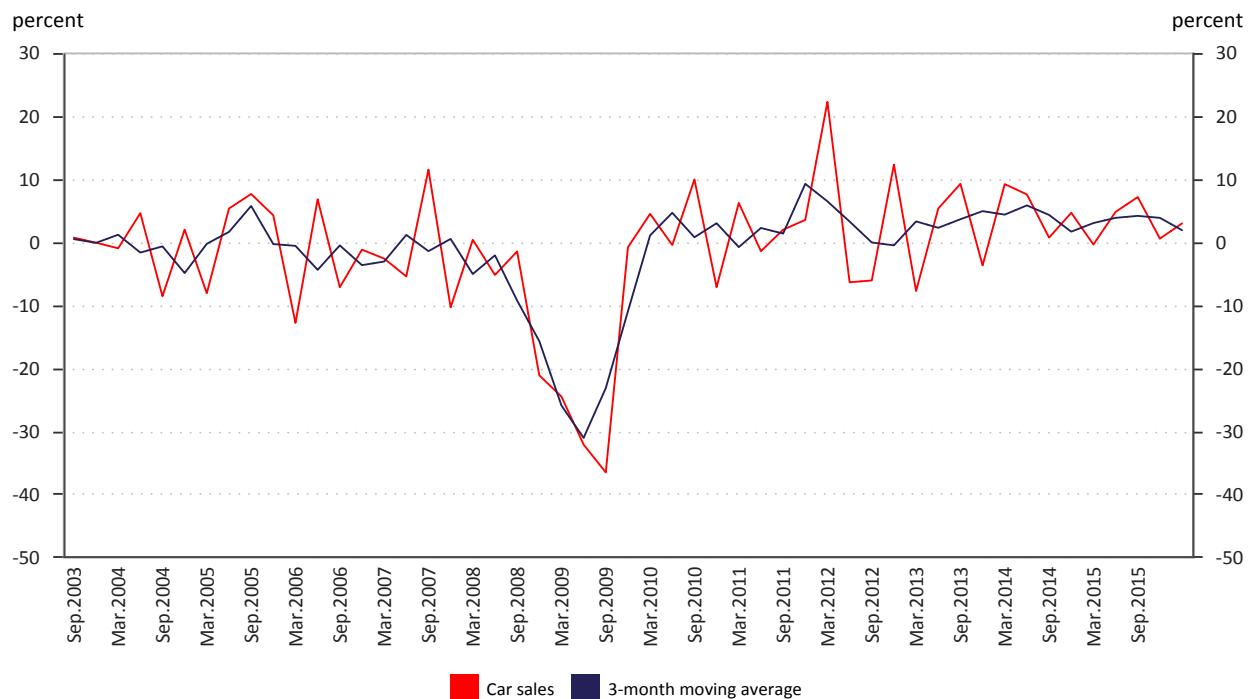
**26. Change in export and import volumes**

Source: MNB, HCSO.

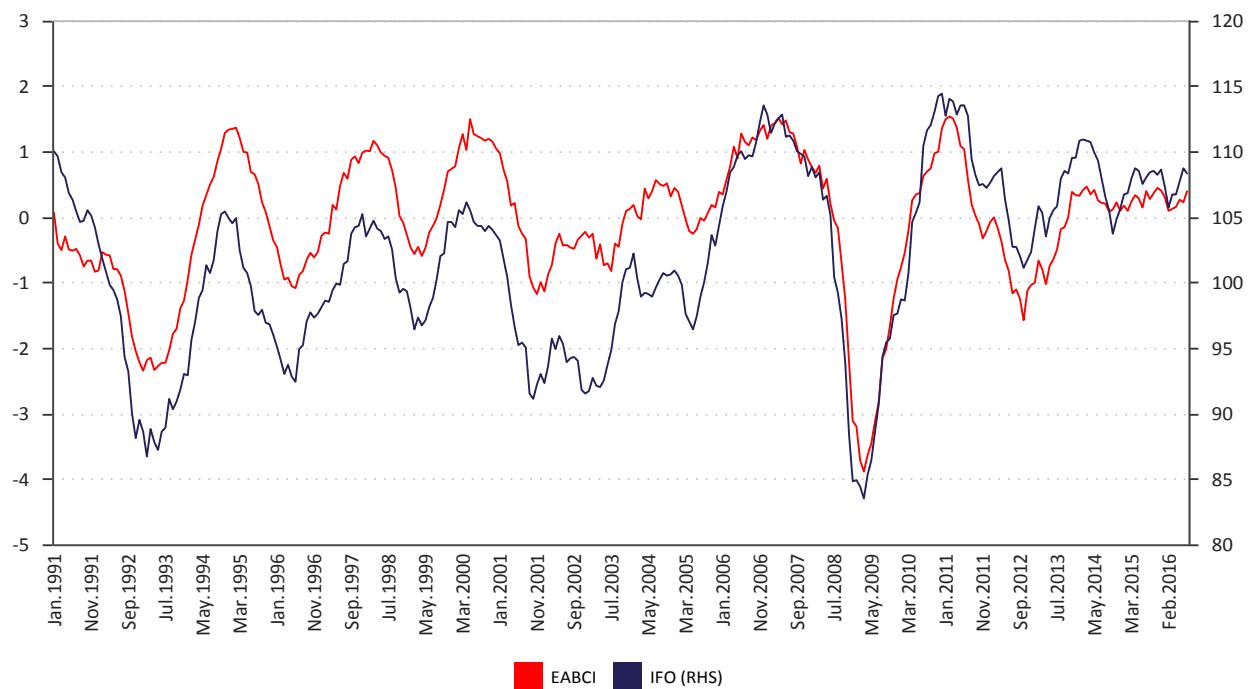
**27. Total volume of retail trade**

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.

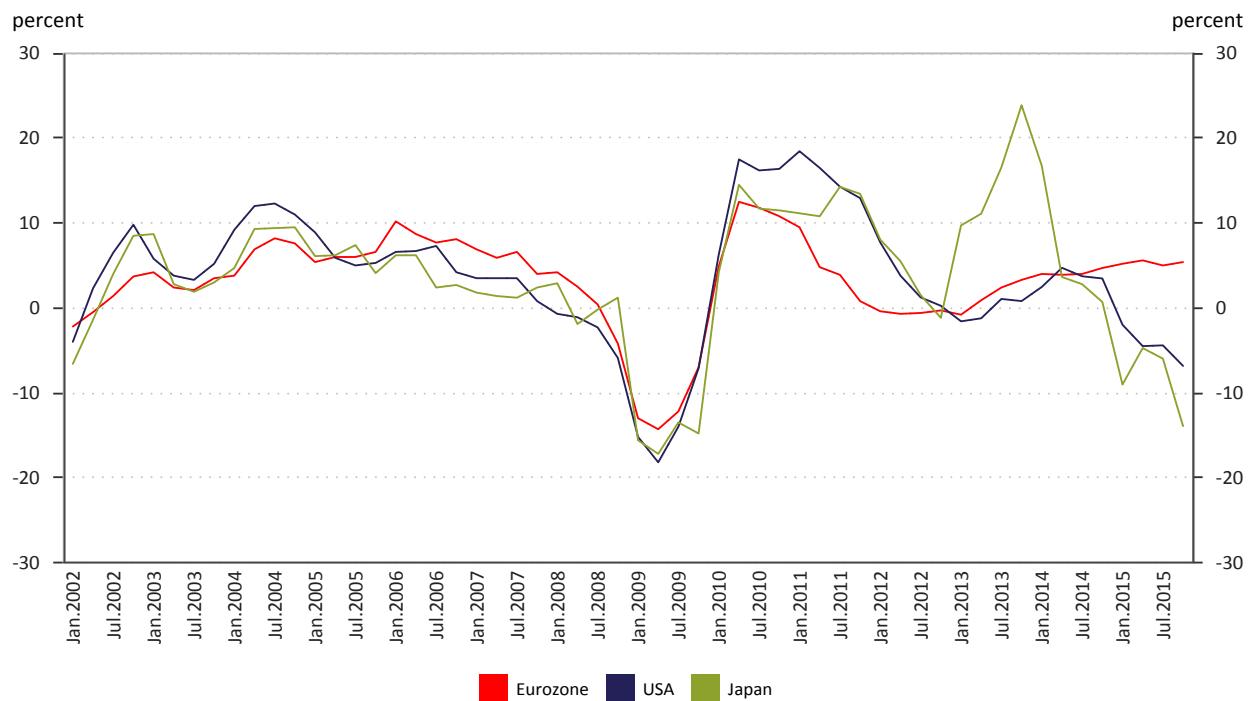
**28. Quarterly growth rates of automobile sales**

Source: ACEA.

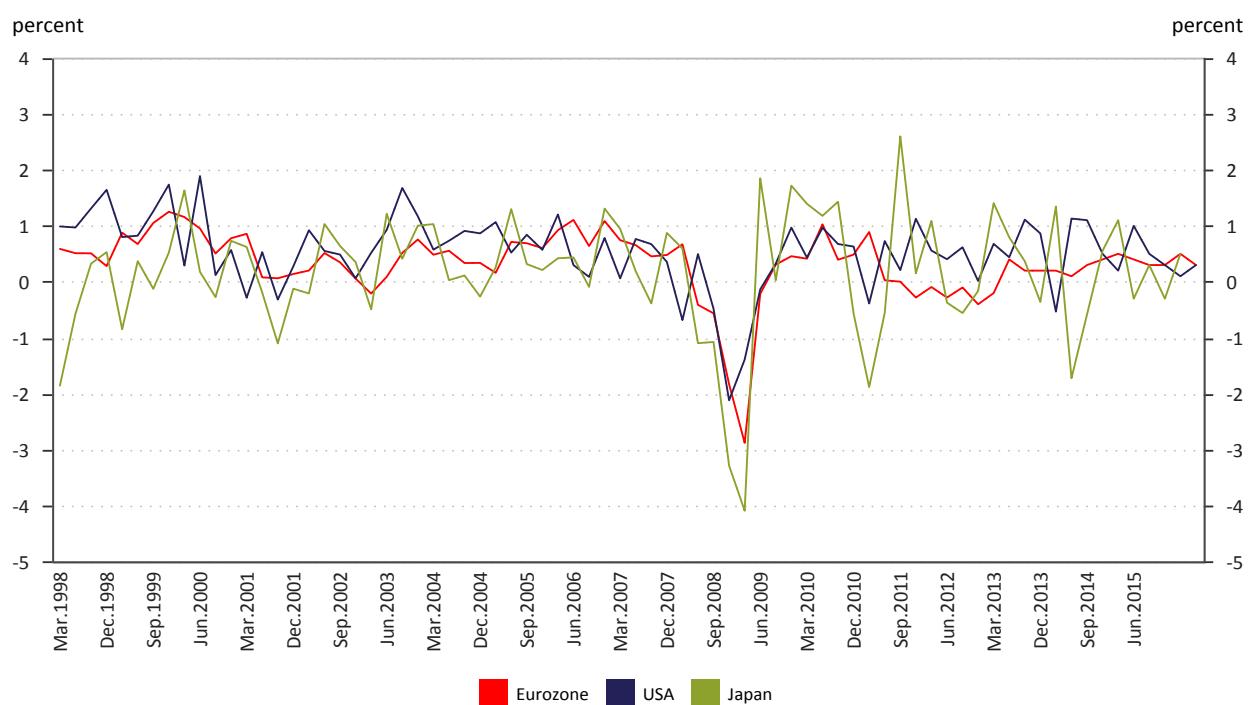
**29. Business climate indices in the EMU**

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.

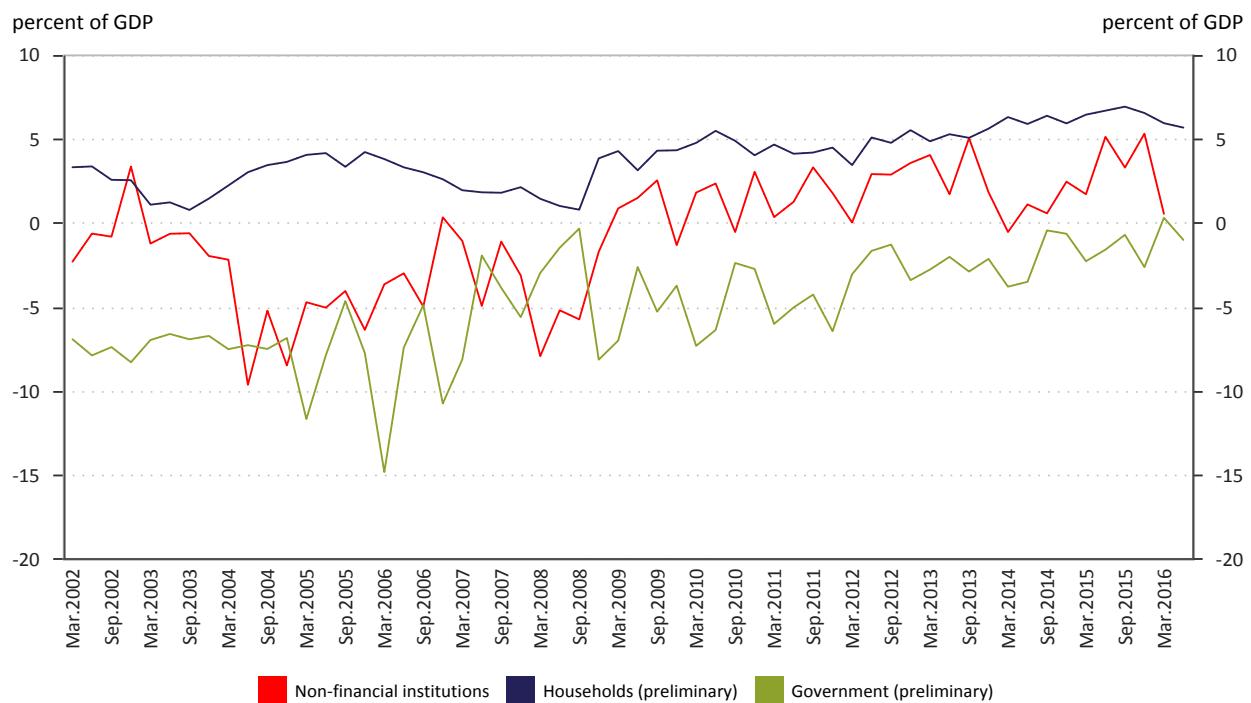
**30. The annual growth rate of the volume of imported goods and services**

Source: Eurostat.

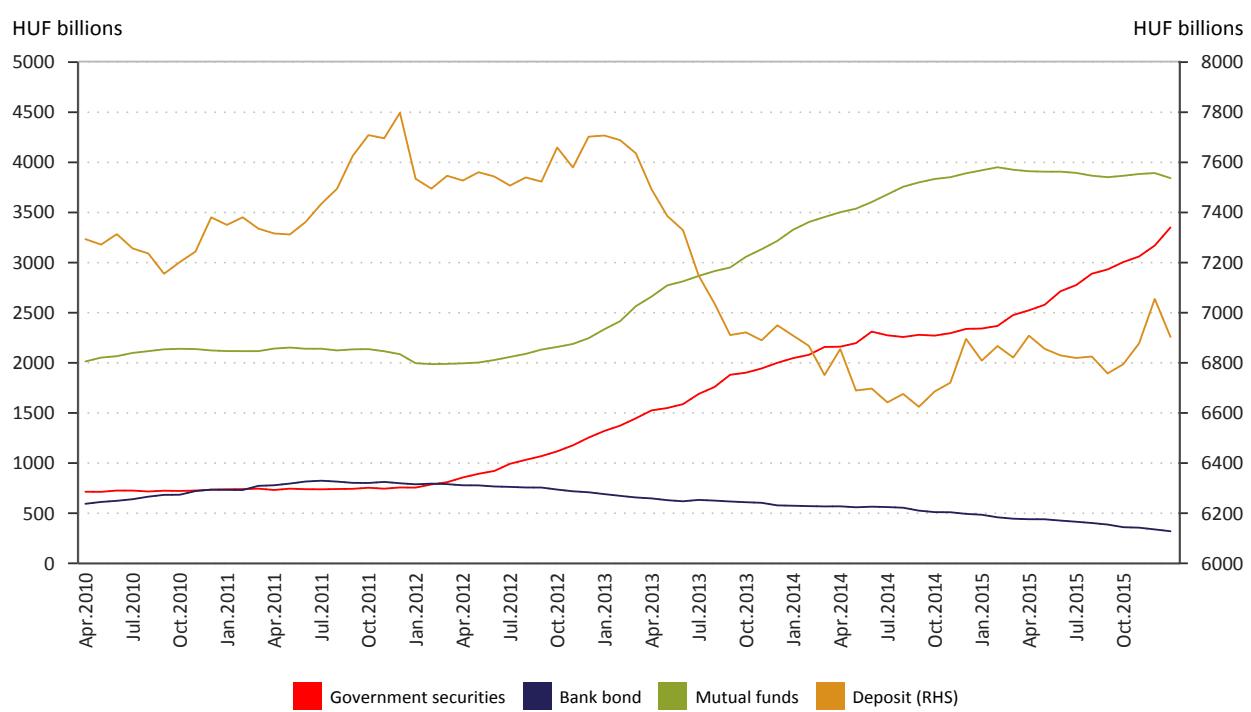
**31. GDP growth rate in the EMU, US and Japan**

Source: Eurostat

Note: quarterly growth rate.

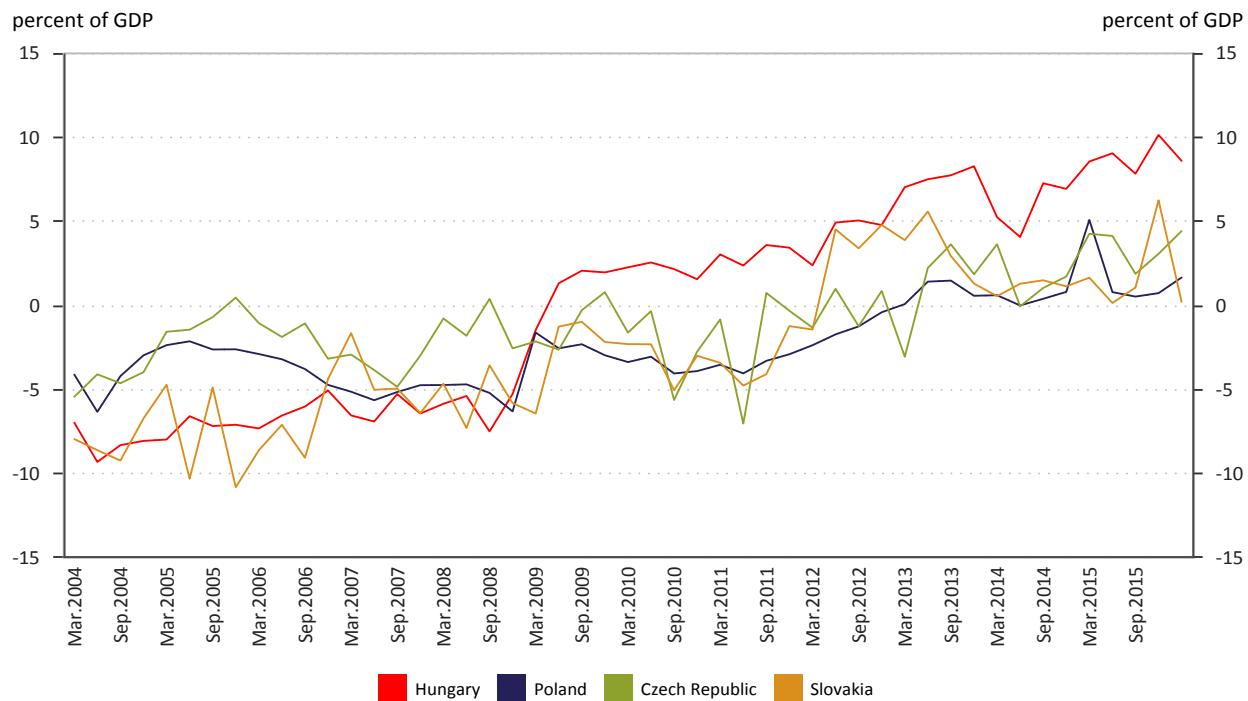
**32. Net lending of domestic sectors**

Source: MNB.

**33. Main financial assets held by households**

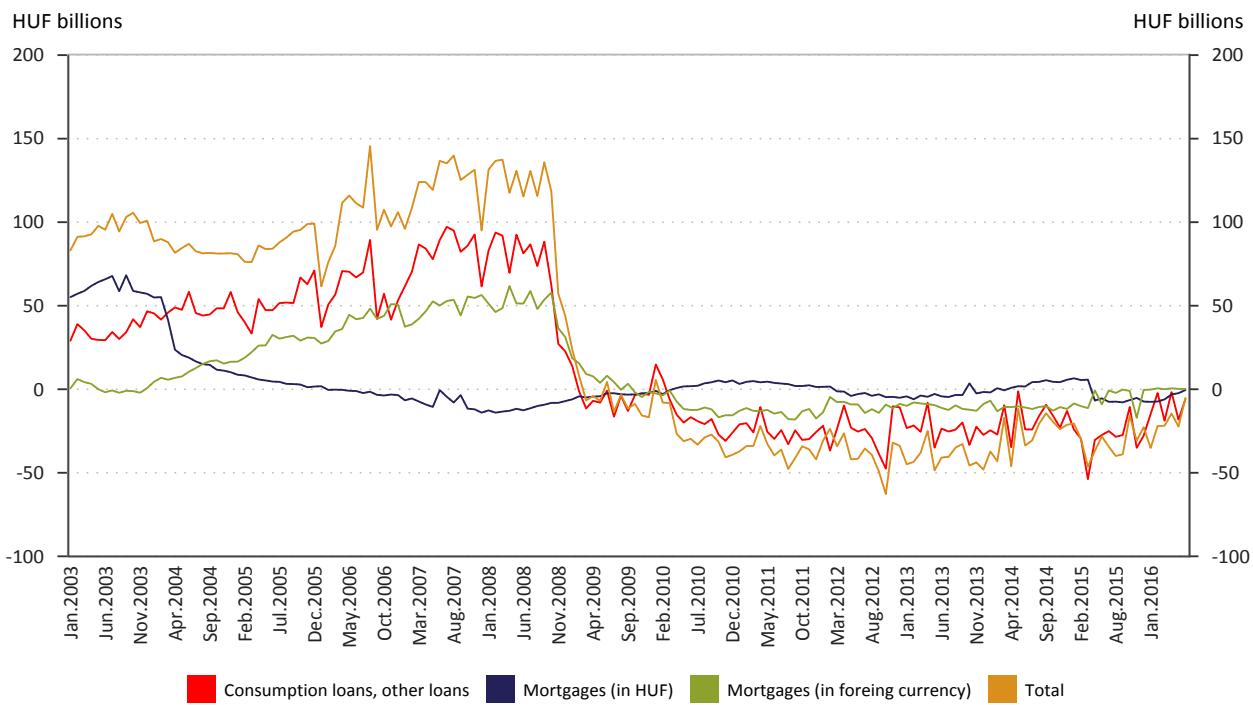
Source: MNB.

### 34. External financing capacity in the CEE countries



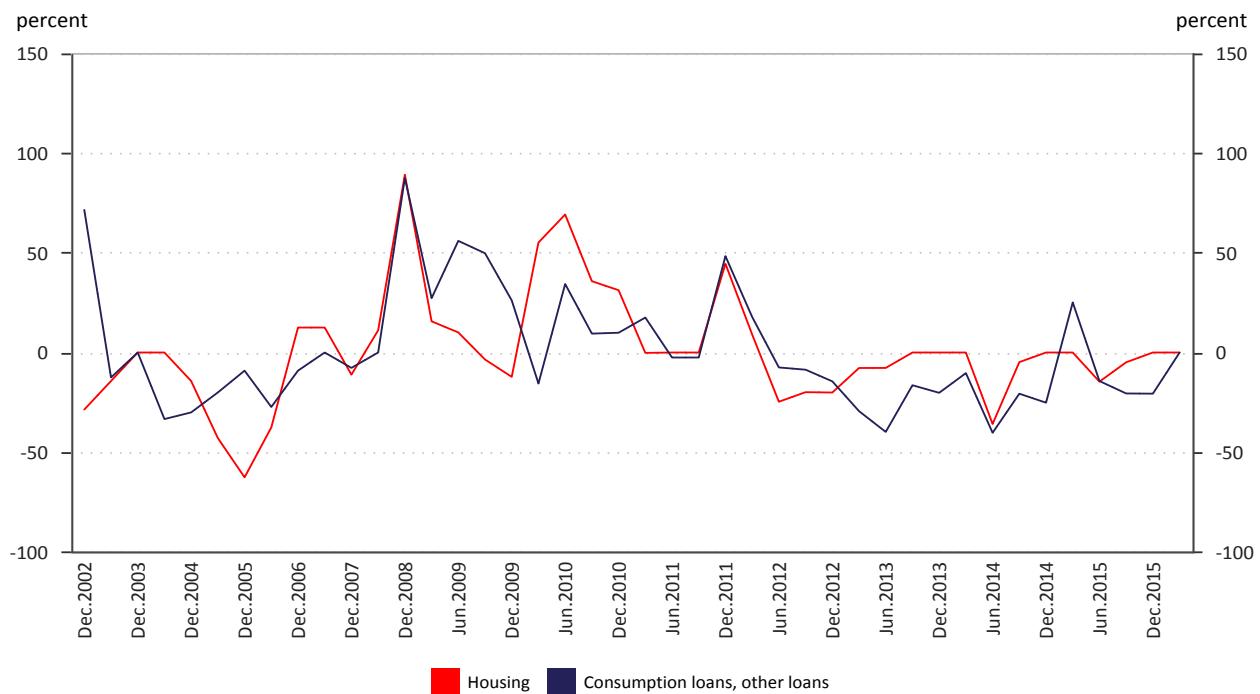
Source: MNB.

### 35. Net borrowing of the households



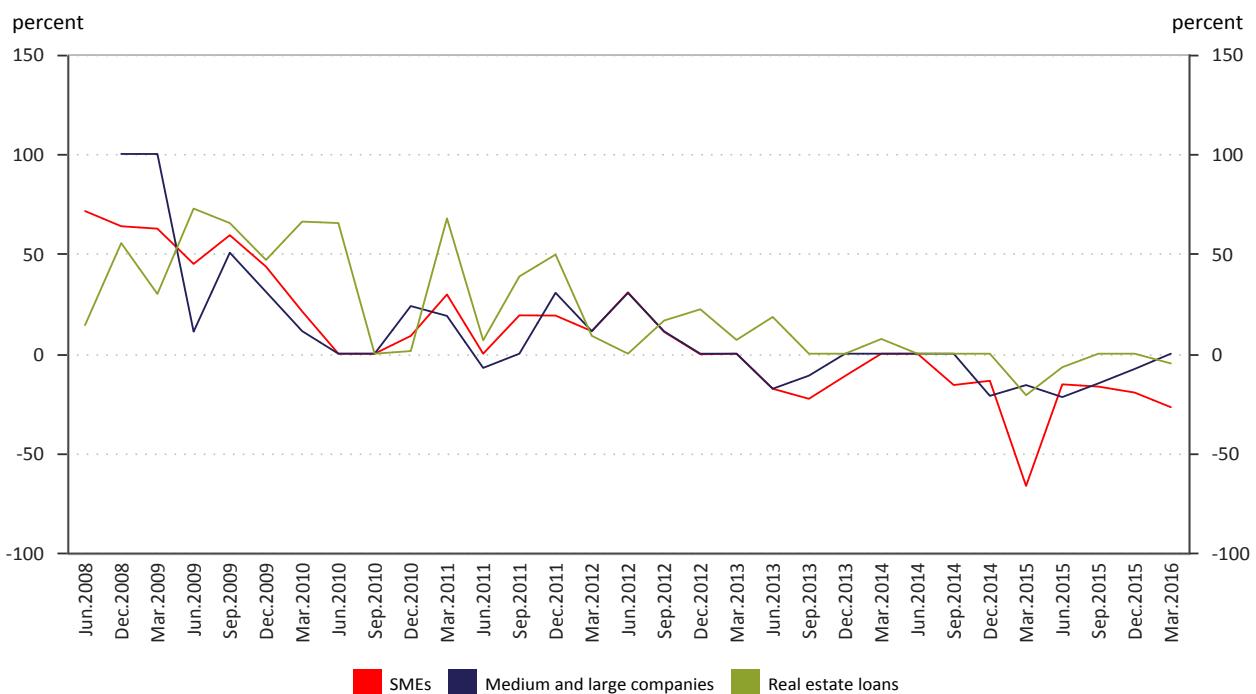
Source: MNB

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**

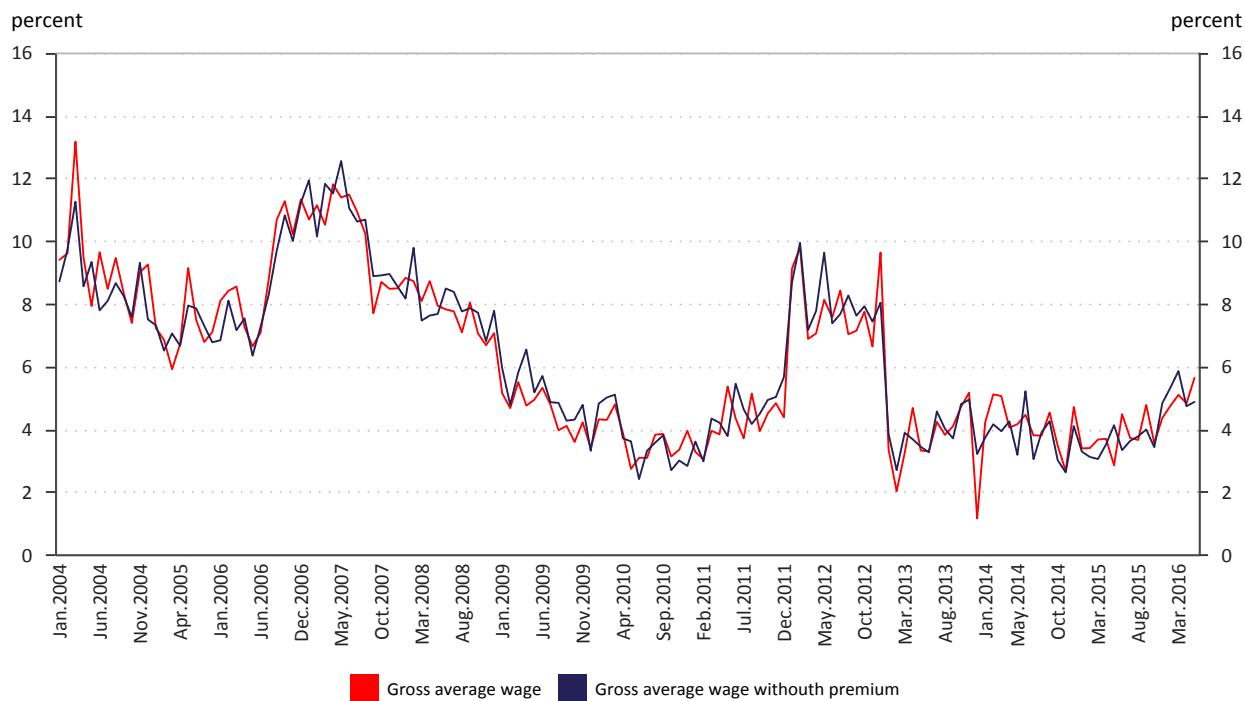
Source: MNB

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).

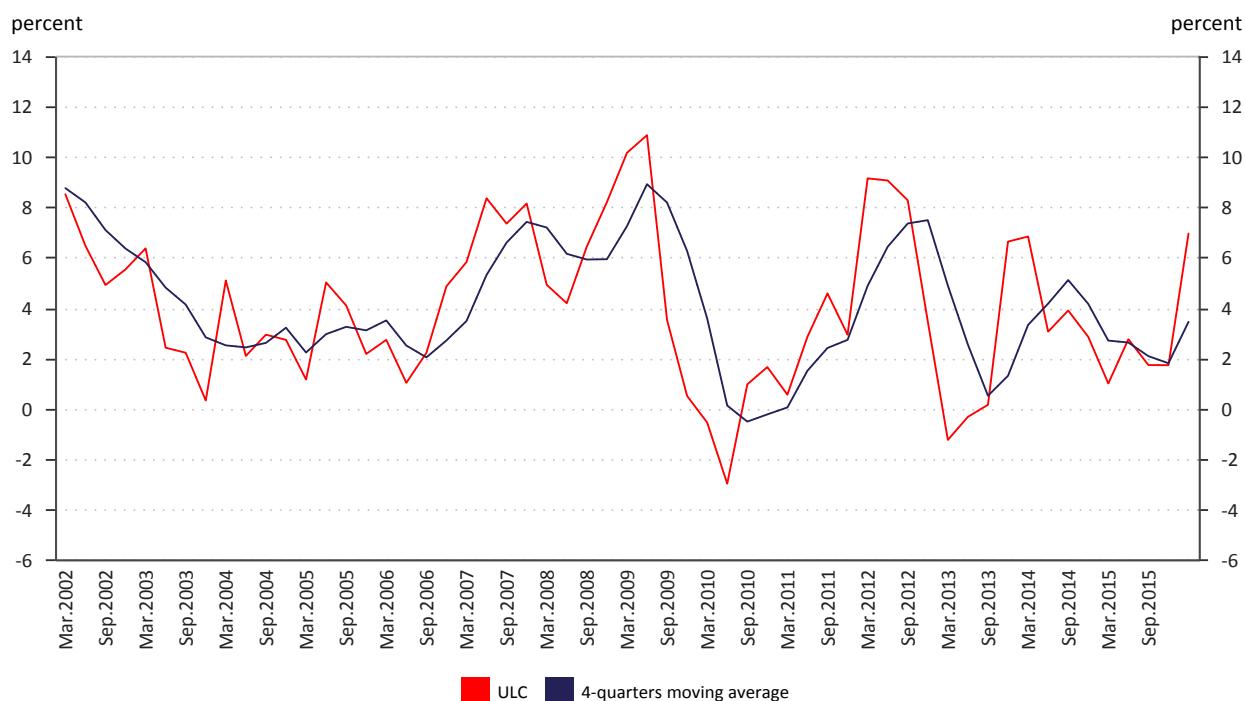
**37. Creditworthiness standards and credit conditions in the corporate sector**

Source: MNB

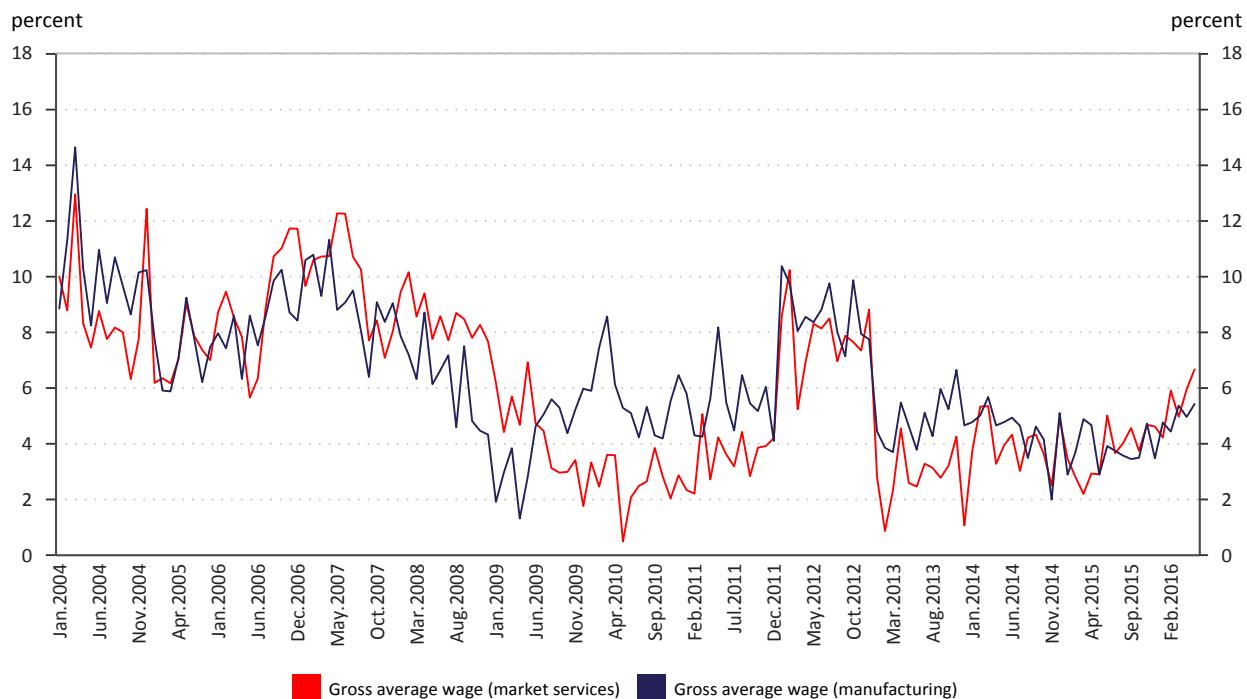
Note: credit conditions estimated by lending officers. Negative value indicates easing, positive indicates tightening compared to the last quarter (before 2009 to previous half a year).

**38. Wage growth in private sector**

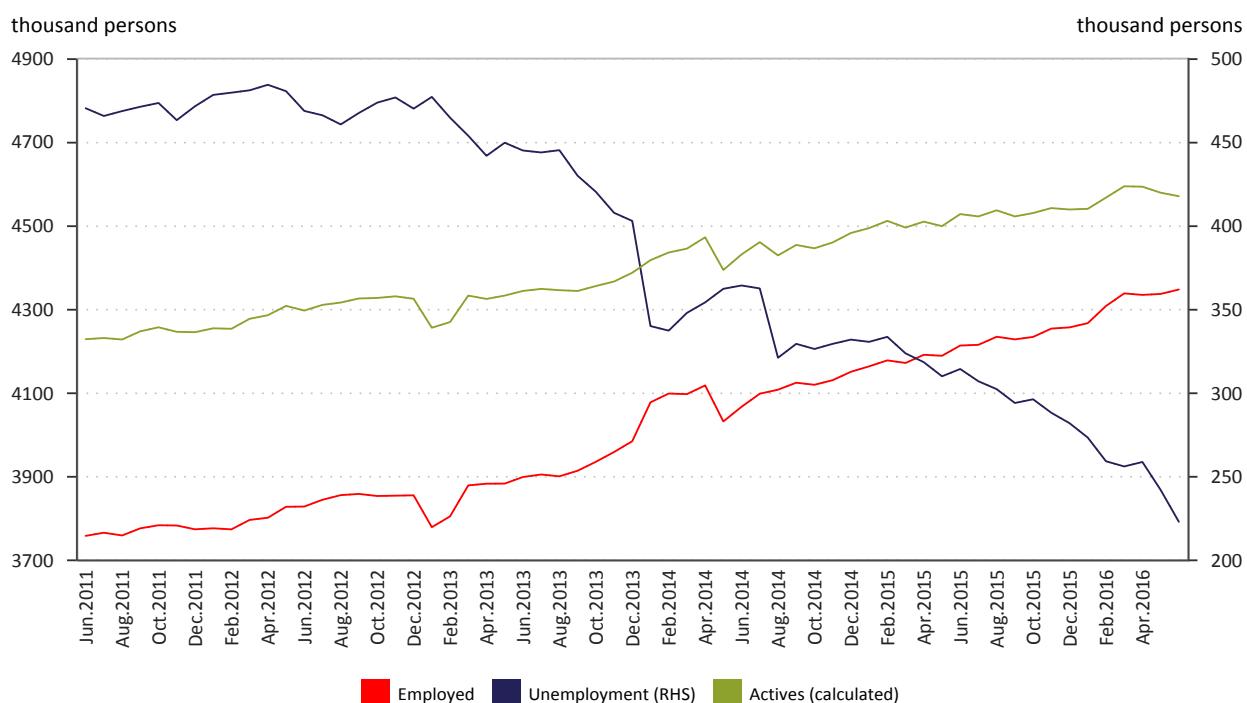
Source: HCSO, seasonally adjusted by MNB  
Note: annual growth rates.

**39. Unit labour cost in the private sector**

Source: HCSO, seasonally adjusted by MNB  
Note: annual growth rates.

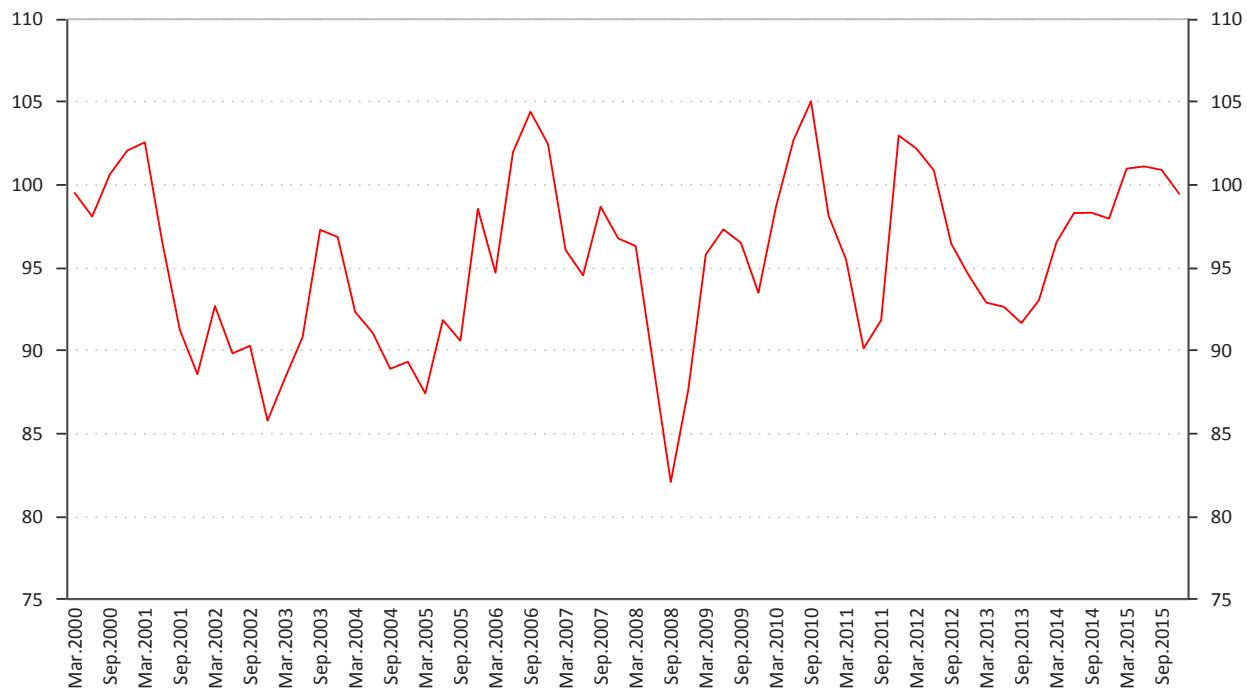
**40. Wage growth in the manufacturing and market service sector**

Source: MNB, HSCO.

**41. Activity and unemployment**

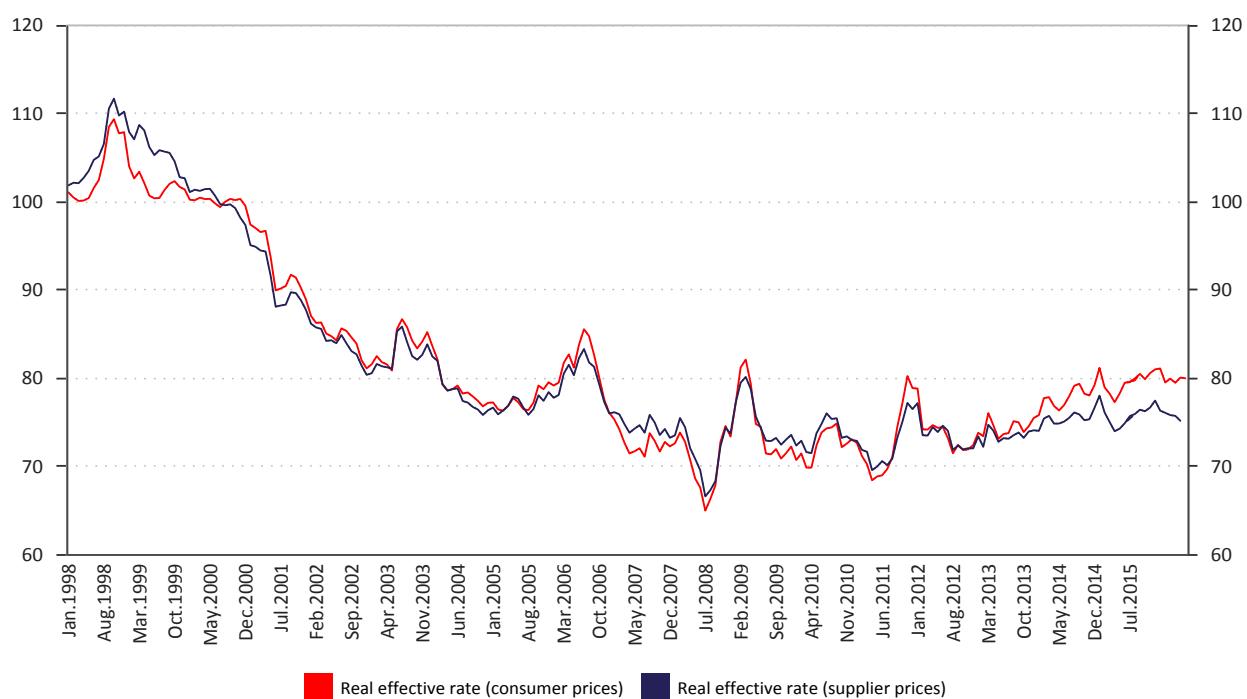
Source: HSCO.

Notes: levels, seasonally adjusted.

**42. ULC based real effective exchange rate of the HUF**

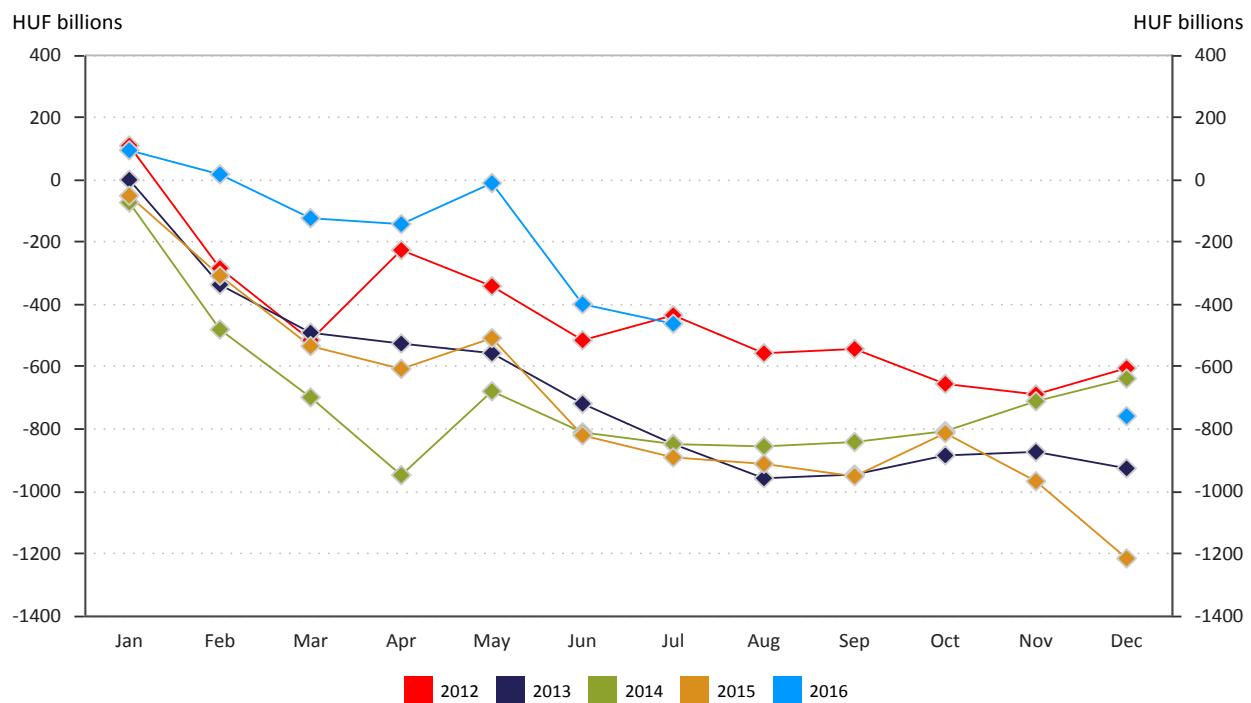
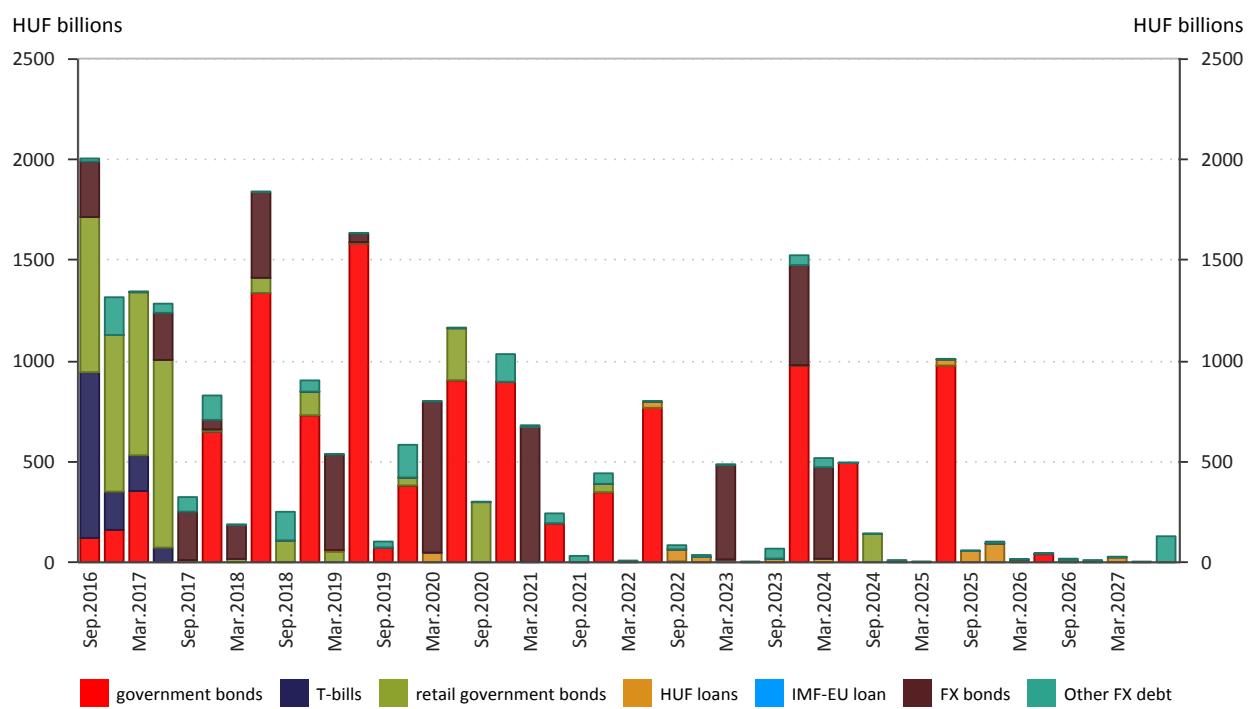
Source: HCSO.

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%.

**44. Monthly evolution of budget deficit****45. Quarterly maturity structure of the government debt**

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

	2015	2016	2017
CPI (annual average growth rate, %)			
MNB (JUN 2016)	-0.1	0.5	2.6
Consensus Economics (AUG 2016) <sup>1</sup>	-0.1	0.1 - 0.5 - 0.8	1.2 - 1.9 - 2.8
European Commission (MAY 2016)	0.1	0.4	2.3
IMF (APR 2016)	-0.1	0.5	2.4
OECD (JUN 2016)	0.1	0.1	1.7
Reuters survey (AUG 2016) <sup>1</sup>		0.2 - 0.4 - 0.7	1.1 - 1.9 - 2.4
GDP (annual growth rate, %)			
MNB (JUN 2016)	2.9	2.8	3.0
Consensus Economics (AUG 2016) <sup>1</sup>	2.9	1.2 - 1.9 - 2.4	1.2 - 2.5 - 3.3
European Commission (MAY 2016)	2.9	2.5	2.8
IMF (APR 2016)	2.9	2.3	2.5
OECD (JUN 2016)	3.0	1.6	3.1
Reuters-felmérés (AUG 2016) <sup>1</sup>		2.0 - 2.1 - 2.3	2.5 - 2.9 - 3.3
Current account balance <sup>3</sup>			
MNB (JUN 2016)	4.4	5.6	5.2
European Commission (MAY 2016)	5.0	5.6	6.3
IMF (APR 2016)	5.1	5.4	5.2
OECD(JUN 2016)	4.3	4.9	4.6
Budget deficit (ESA-95 method) <sup>3,4</sup>			
MNB (JUN 2016)	-2.0	(-1.8) - (-1.6)	-2.4
Consensus Economics (AUG 2016) <sup>1</sup>	-2.0	(-2.8) - (-2.1) - (-1.2)	(-2.9) - (-2.5) - (-2.0)
European Commission (MAY 2016)	-2.0	-2.0	-2.0
IMF (APR 2016)	-2.2	-2.1	-2.2
OECD (JUN 2016)	-2.3	-1.9	-2.6
Reuters survey (AUG 2016) <sup>1</sup>		(-2.2) - (-1.9) - (-1.8)	(-2.7) - (-2.4) - (-2.1)
Forecasts on the size of Hungary's export markets (annual growth rate, %)			
MNB (JUN 2016)	3.1	3.2	3.6
European Commission (MAY 2016) <sup>2</sup>	5.4	4.6	5.5
IMF (APR 2016) <sup>2</sup>	4.6	4.2	4.9
OECD (JUN 2016) <sup>2</sup>	5.0	5.0	4.0
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (JUN 2016)	1.9	1.9	2.1
Consensus Economics (AUG 2016) <sup>2</sup>	2.0	2.0	1.8
European Commission (AUG 2016) <sup>2</sup>	2.2	2.1	2.2
IMF (MAY 2016) <sup>2</sup>	1.9	2.1	1.9
OECD (JUL 2016) <sup>2</sup>	2.0	1.9	2.1

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> As a percentage of GDP.

<sup>4</sup> With complete cancellation of free reserves.

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

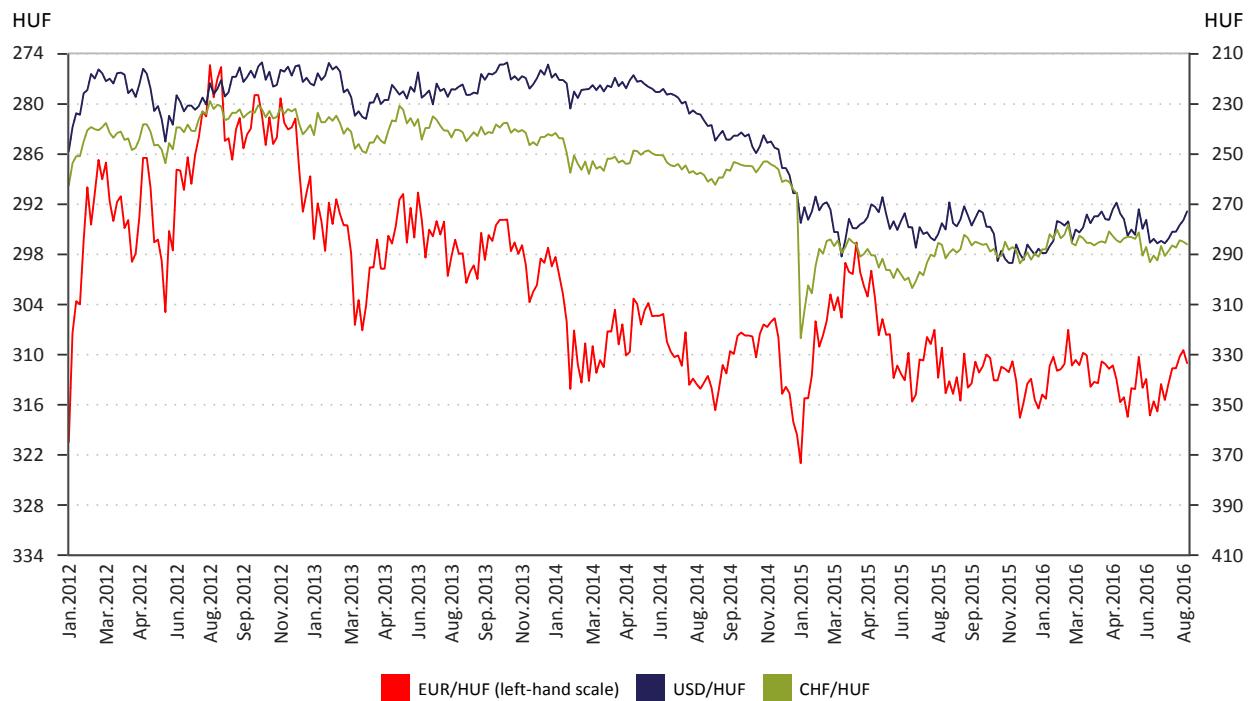
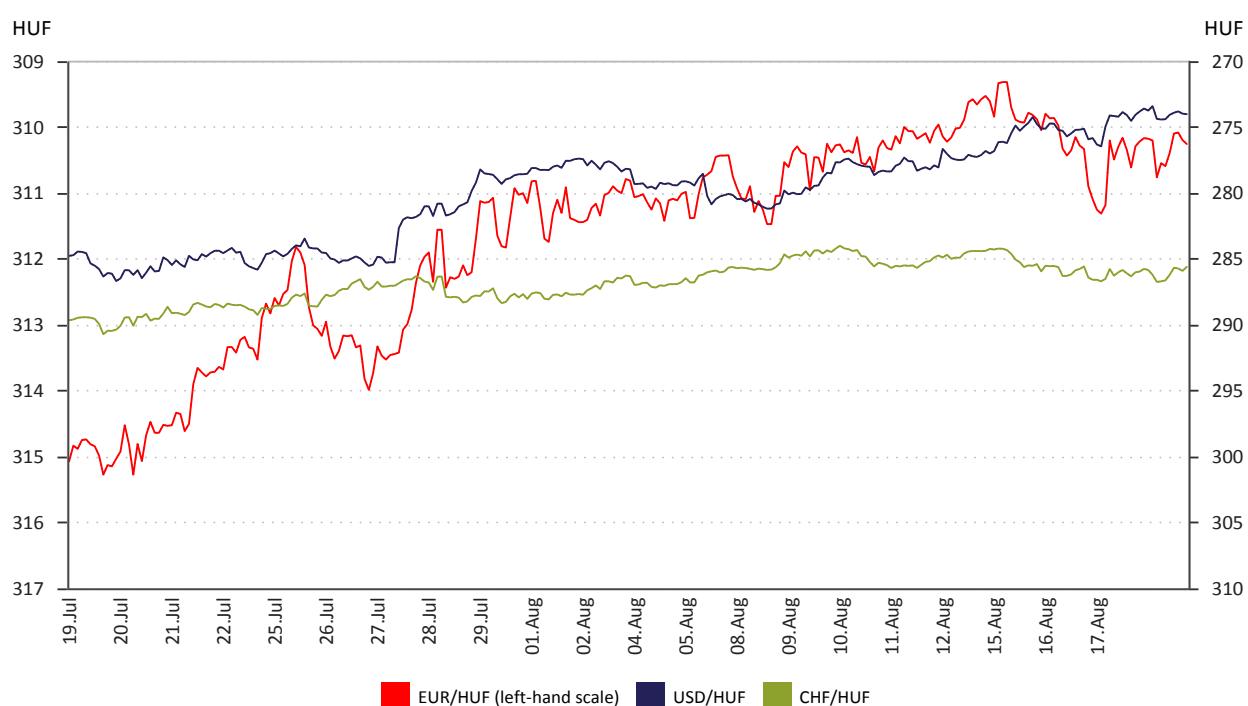
**47. Domestic financial developments**  
*Overview*

Indicator	One month ago	One week ago	Current
HUF/EUR spot exchange rate	314.7	310.0	310.1
Skewness of expectations on HUF/EUR exchange rate	1.00	1.00	0.92
HUF-positions of foreign investors (HUF billions)	-966	-810	-759
Forward positions of domestic investors (HUF billions)	1447	1096	1045
MNB base rate (%)	0.90	0.90	0.90
Expected short-term interbank rate at the end of the year (%)*	0.72	0.70	0.71
3-months interbank rate (%)	0.95	0.85	0.83
3x6 FRA rate (%)	0.78	0.72	0.72
3 month T-bill yield (%)	0.57	0.45	0.45
5 year T-bond yield (%)	2.08	1.91	1.90
Slope of yield curve (10Y-1Y, bp)	229	222	221
O/N FX-swap spread (bp)	-11	29	24
3-month FX-swap spread (bp)	-27	17	10
5-year FX-swap spread (bp)	-23	-25	-22
5-year CDS spread (bp)	142	135	131
5x5 government bond spread (bp)**	224	235	235
Average spread of USD-denominated government bonds (bp)	59	57	55
Foreign holdings of HUF-government bonds (HUF billion)	3551	3586	3586

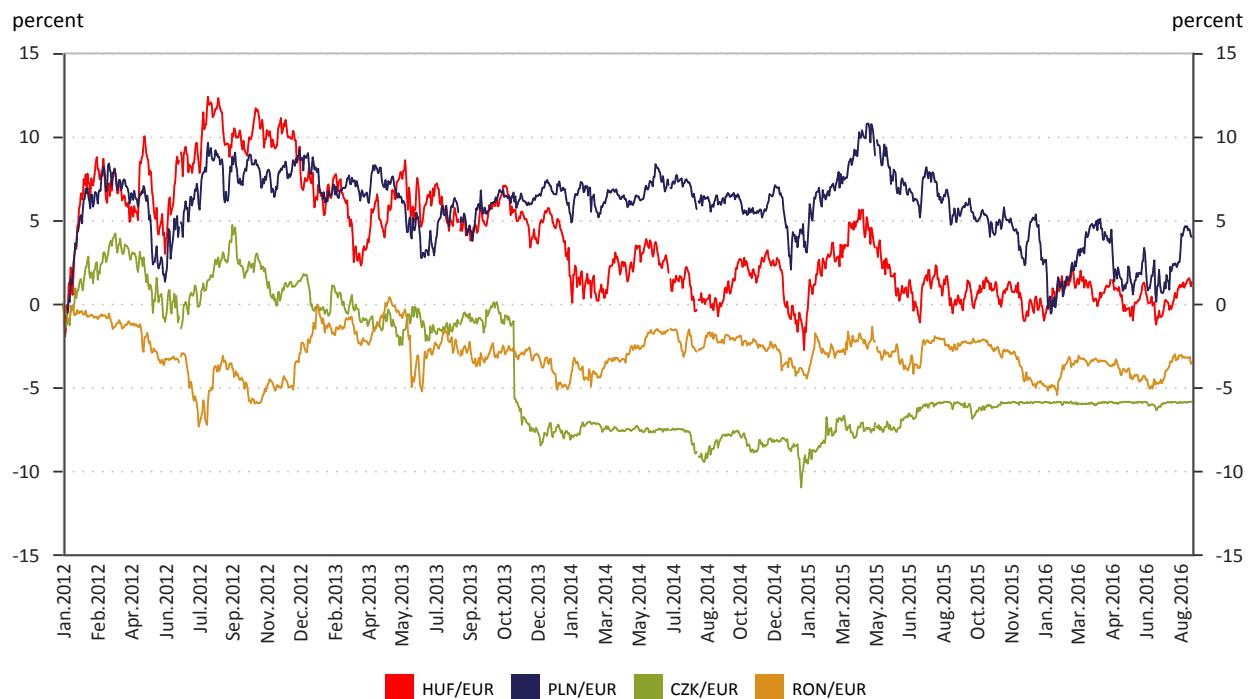
Notes:

\* Based on forward yield curve.

\*\* Over Germany yield.

**48. Developments in HUF exchange rate****49. Developments in HUF exchange rate (last month)**

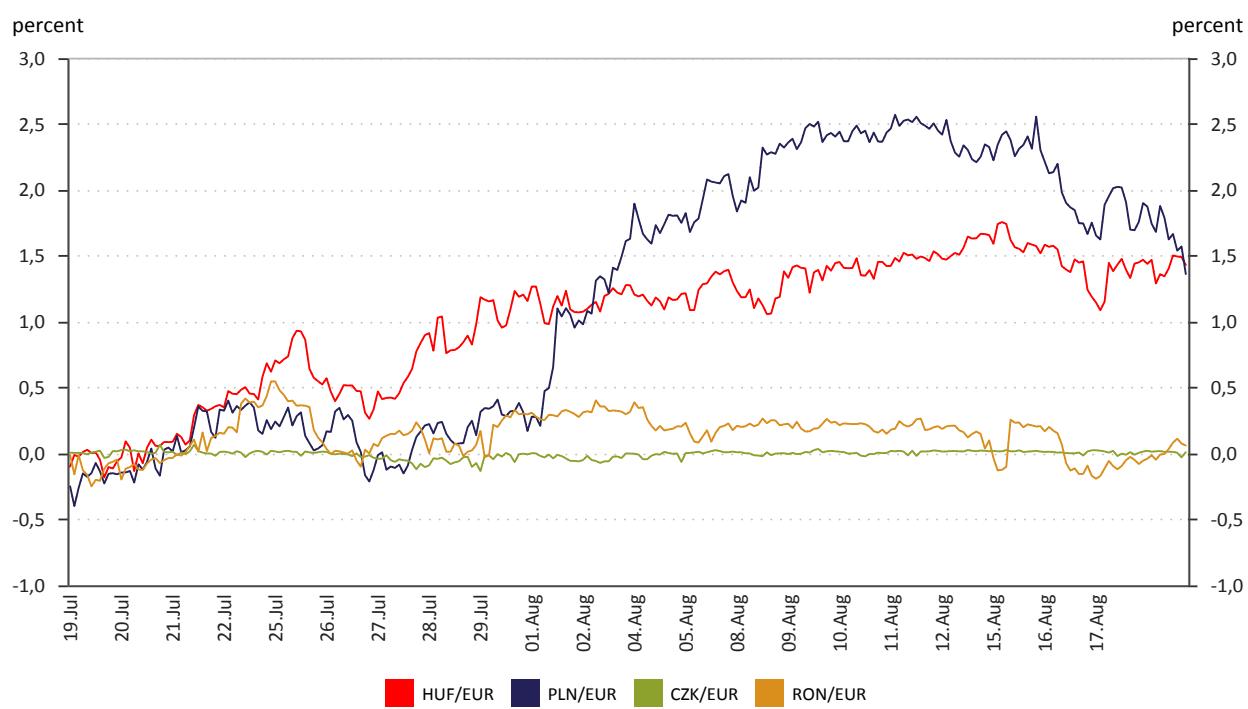
### 50. Emerging markets exchange rate



Source: Thomson Reuters

Note: cumulative change. Positive values mean appreciation.

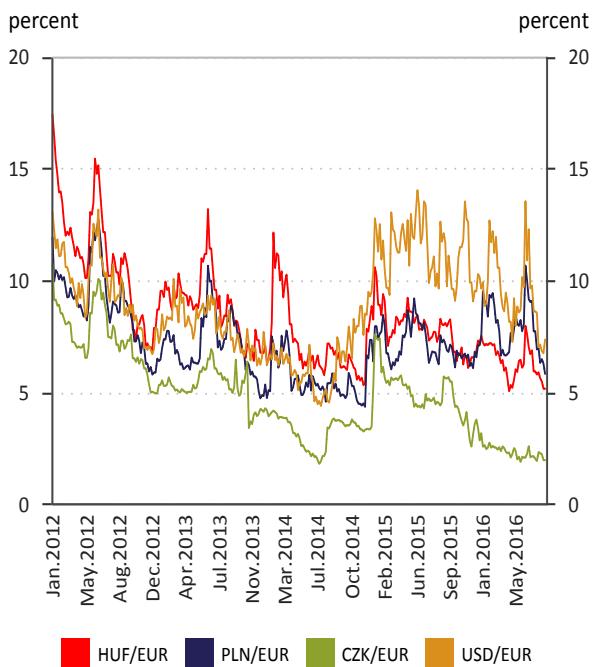
### 51. Emerging markets exchange rate (last month)



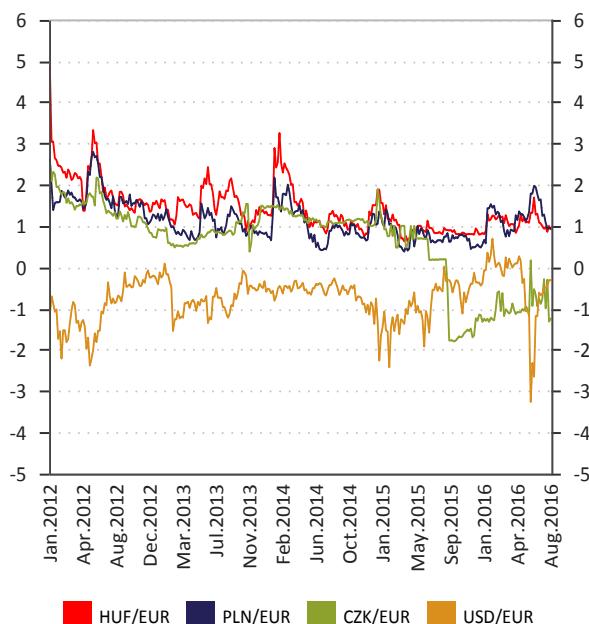
Source: Thomson Reuters.

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

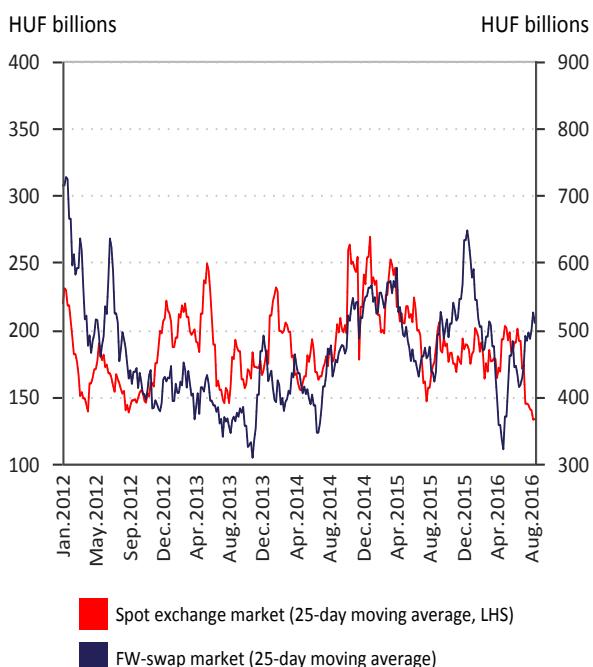
## 52. Volatility of exchange rate expectations



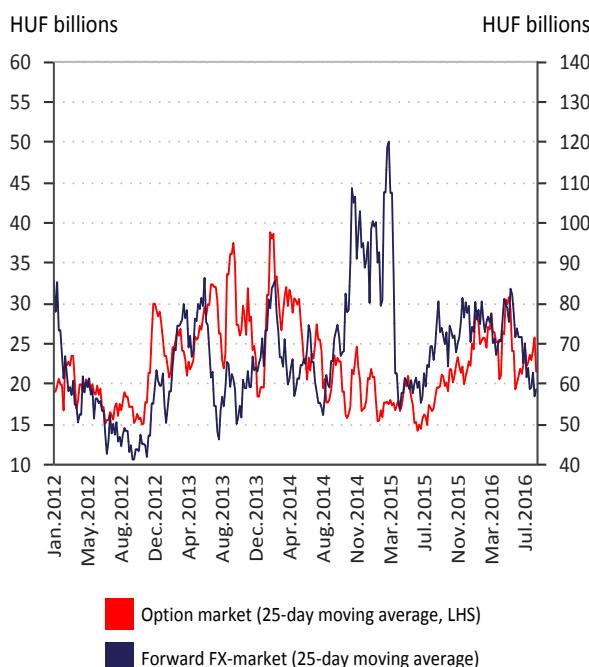
## 53. Skewness of exchange rate expectations

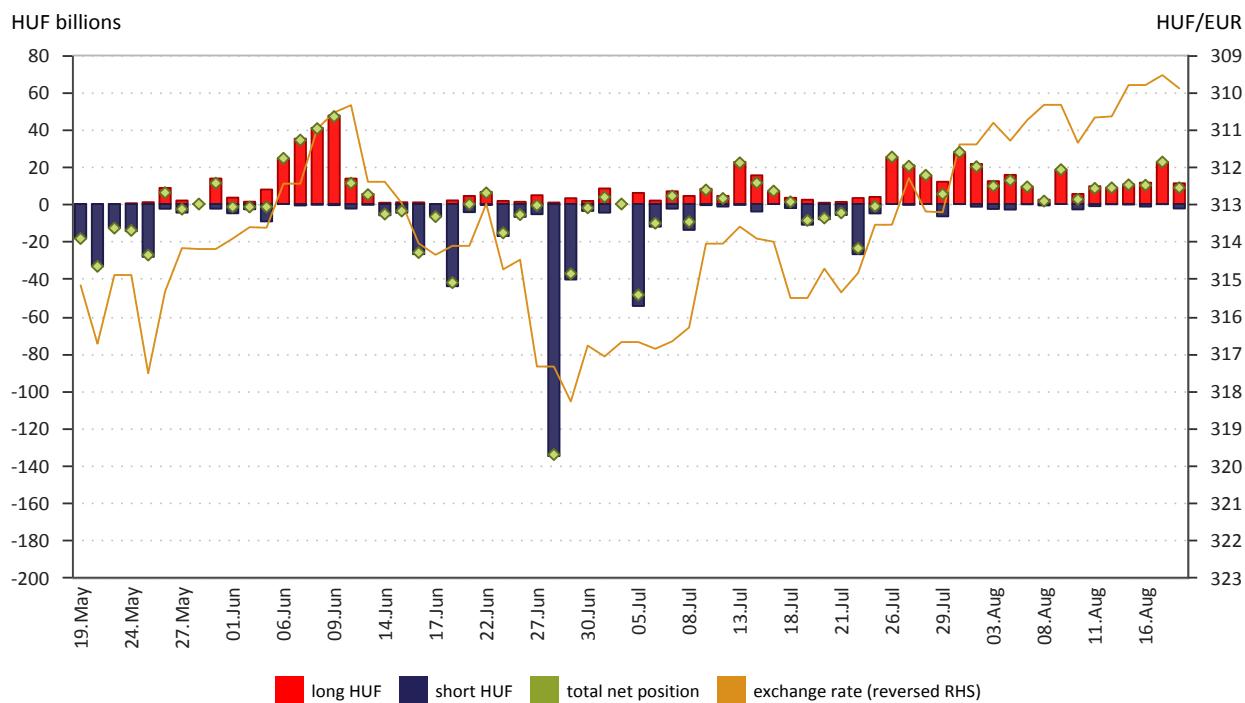
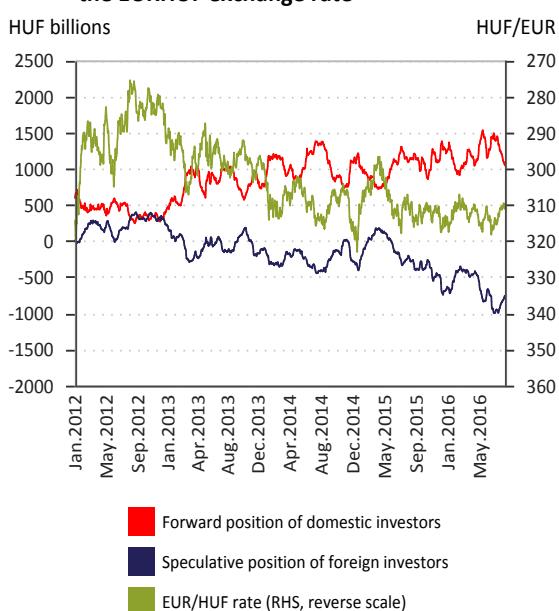


## 54. Turnover on the spot and the FX-swap market



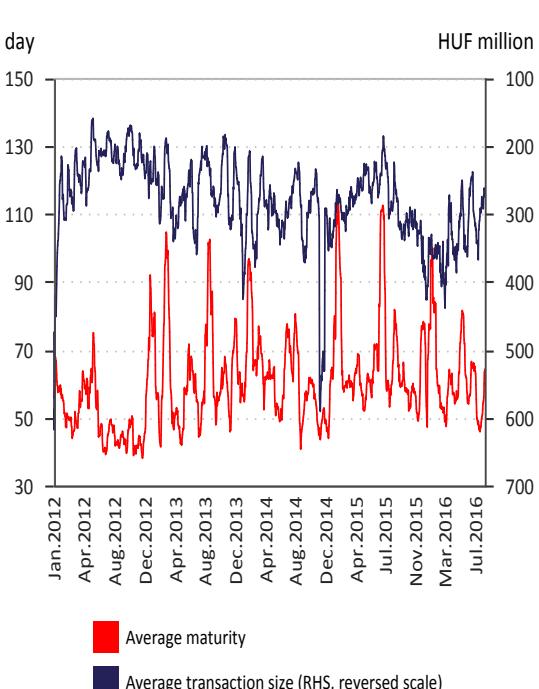
## 55. Turnover on the forward and option market



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

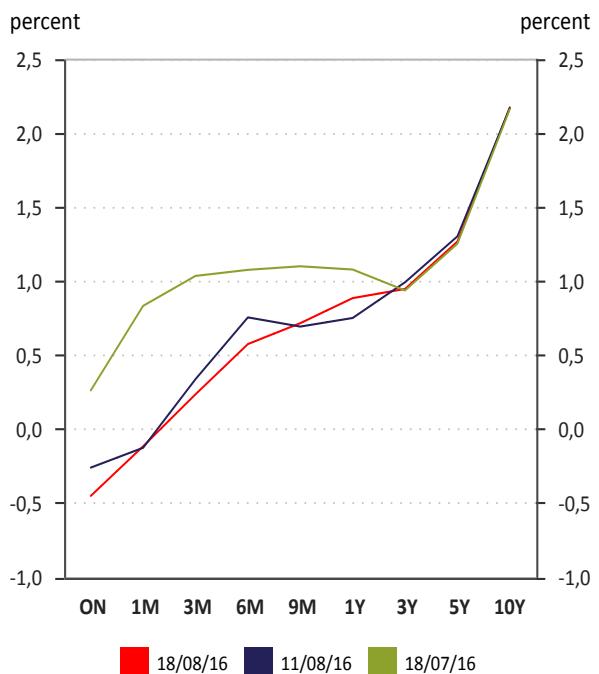
Source: MNB

Note: 20-day moving averages.

**59. Implied HUF rates on FX-swap market**

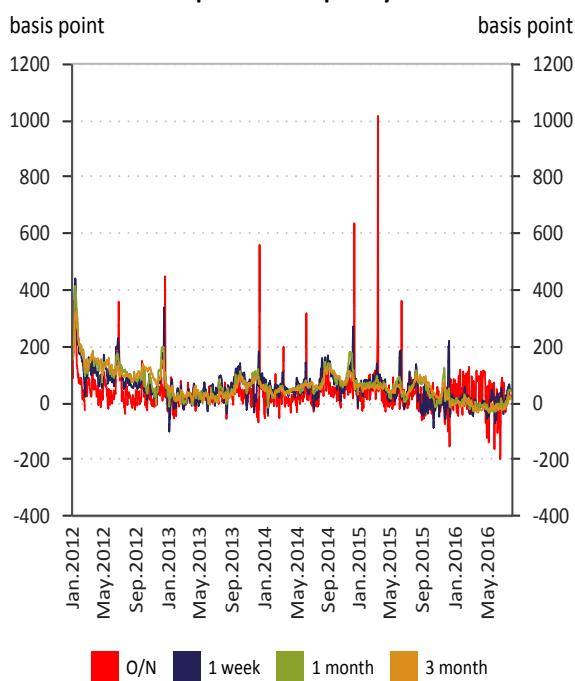
Source: MNB, Thomson Reuters

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.

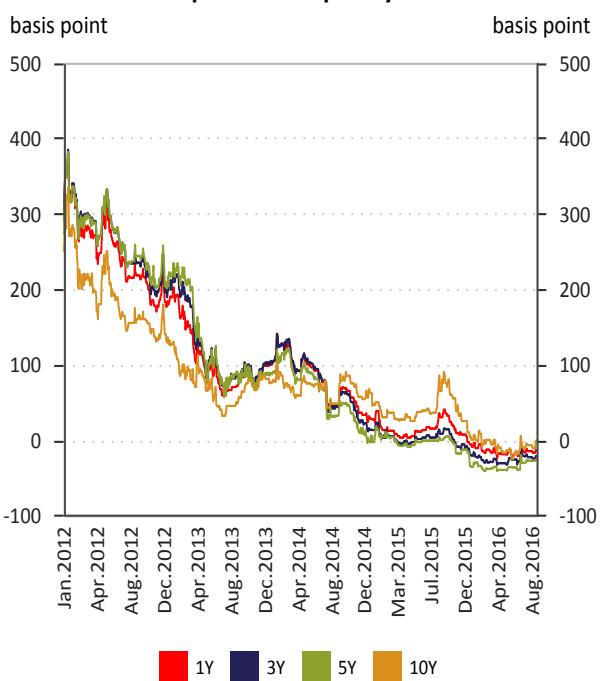
**60. Implied yield curve on FX-swap markets**

Source: MNB, Thomson Reuters.

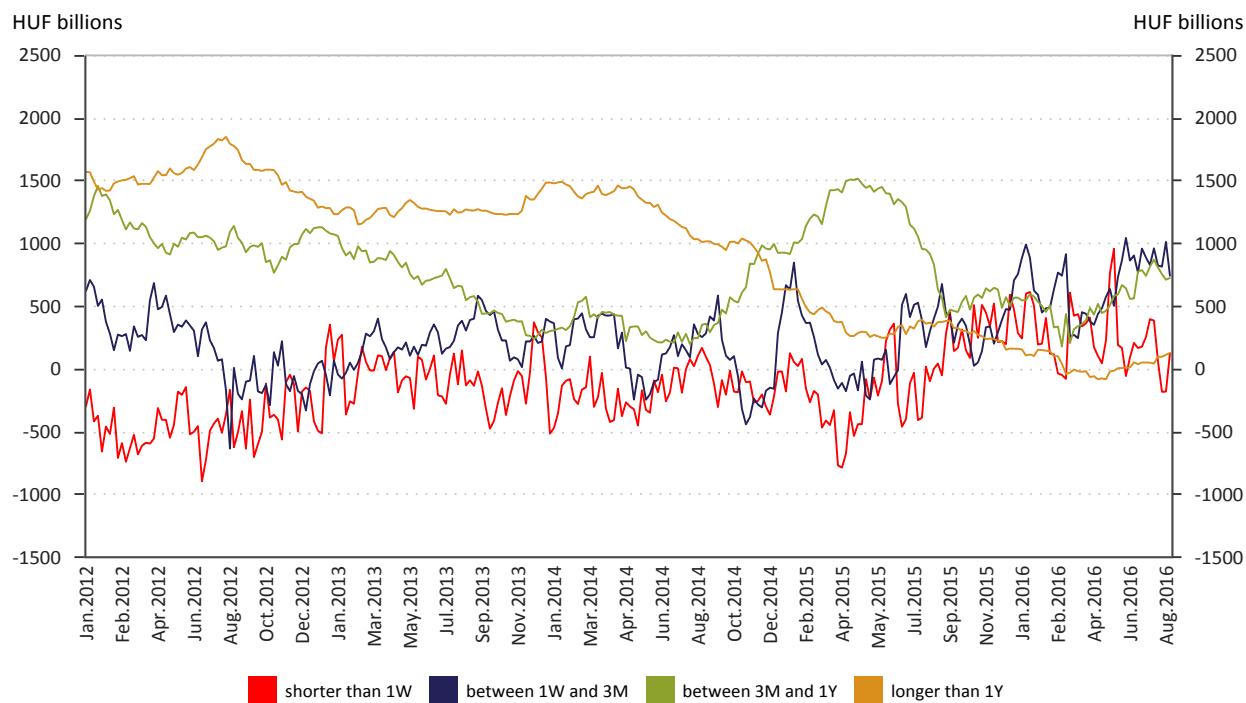
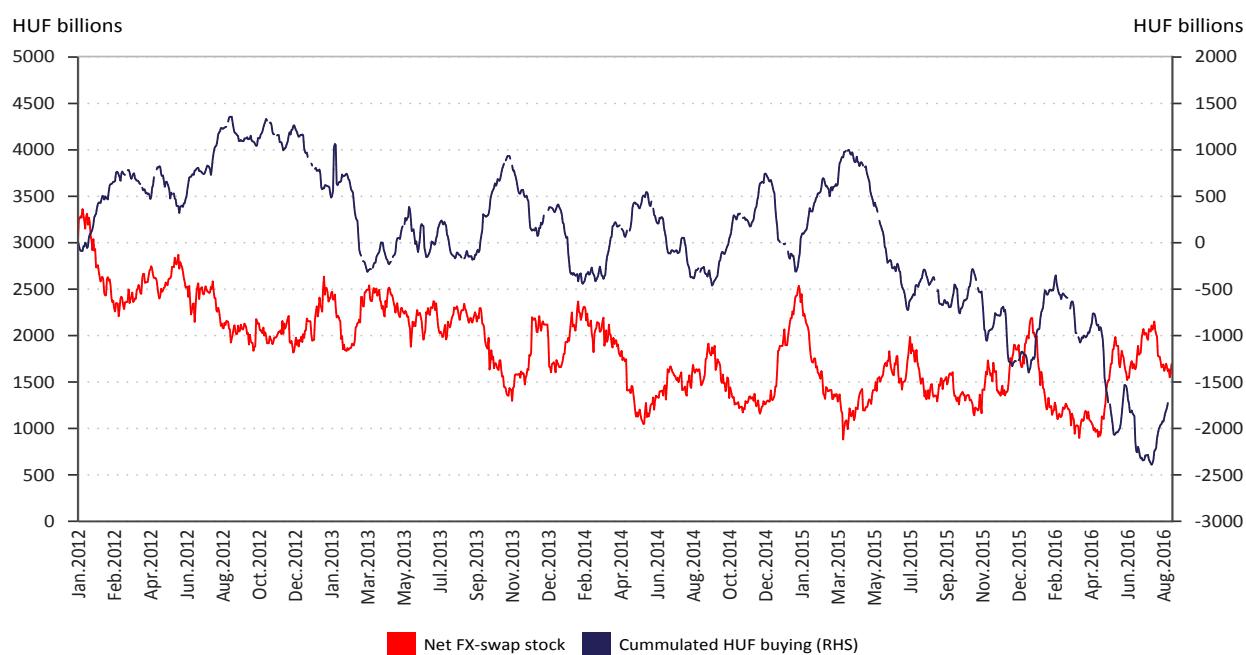
Notes: Based on USD/HUF swap quotes.

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

Source: Thomson Reuters.

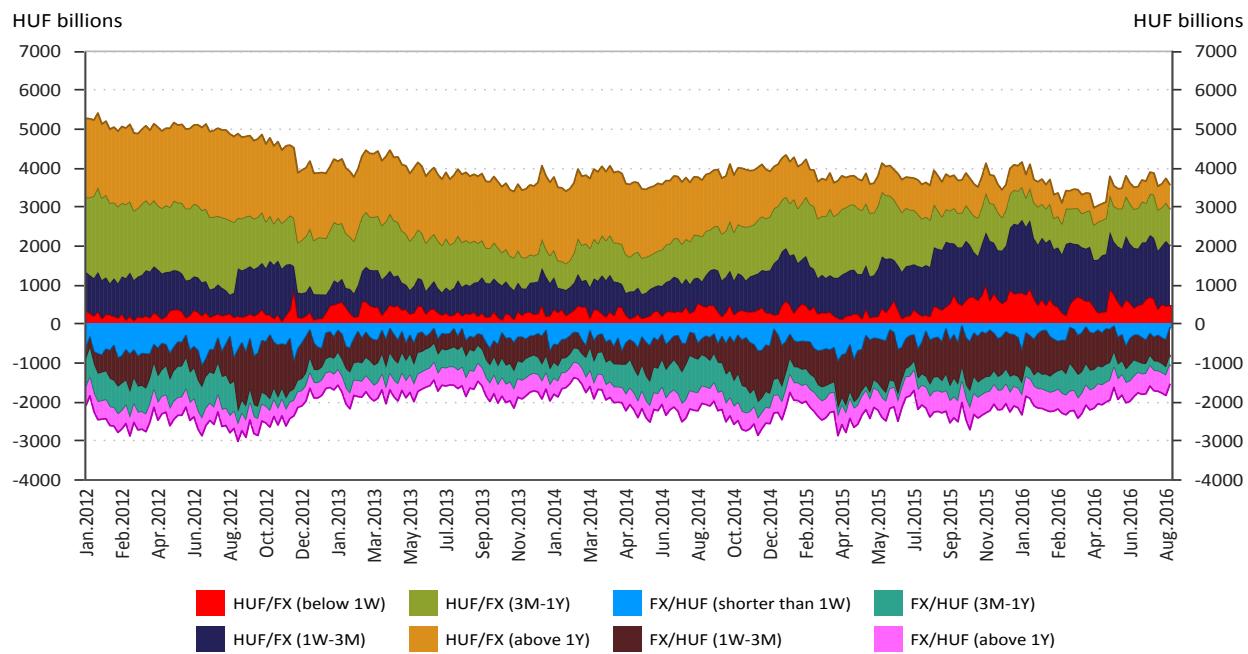
**62. Difference between long-term interbank yields and FX-swap market implied yields**

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**

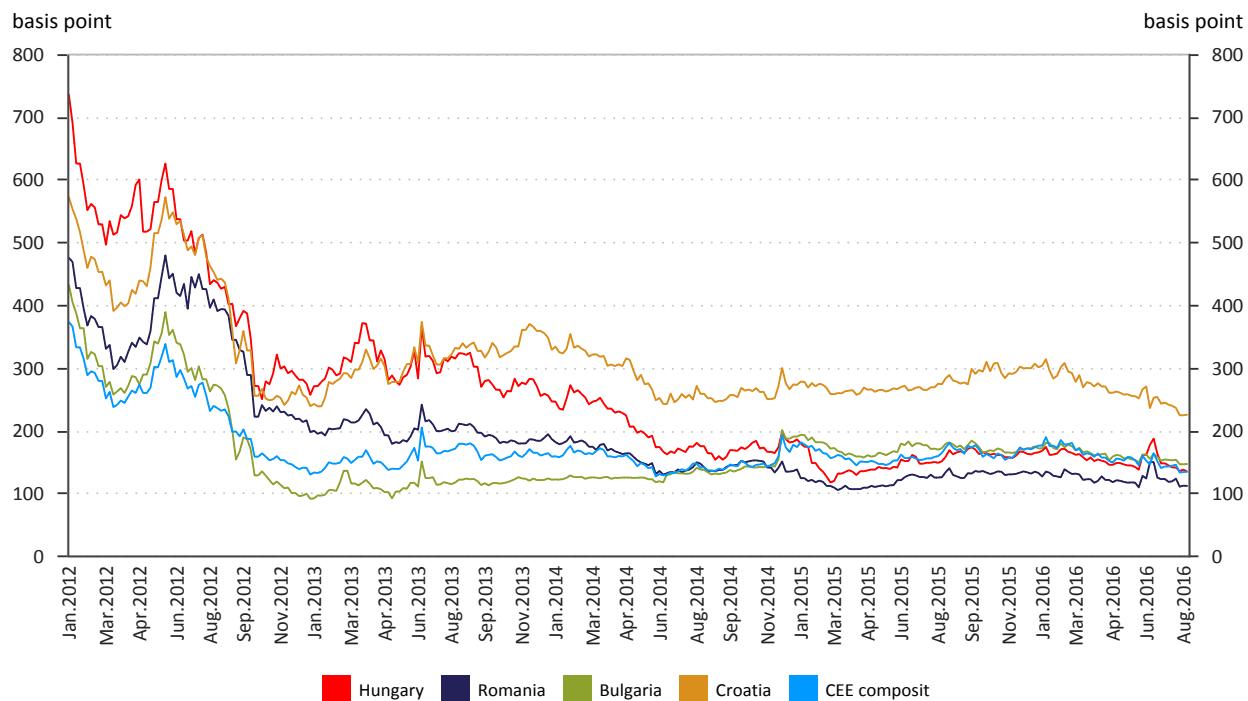
Source: MNB

Notes: due to the nature of the daily reports of the 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.

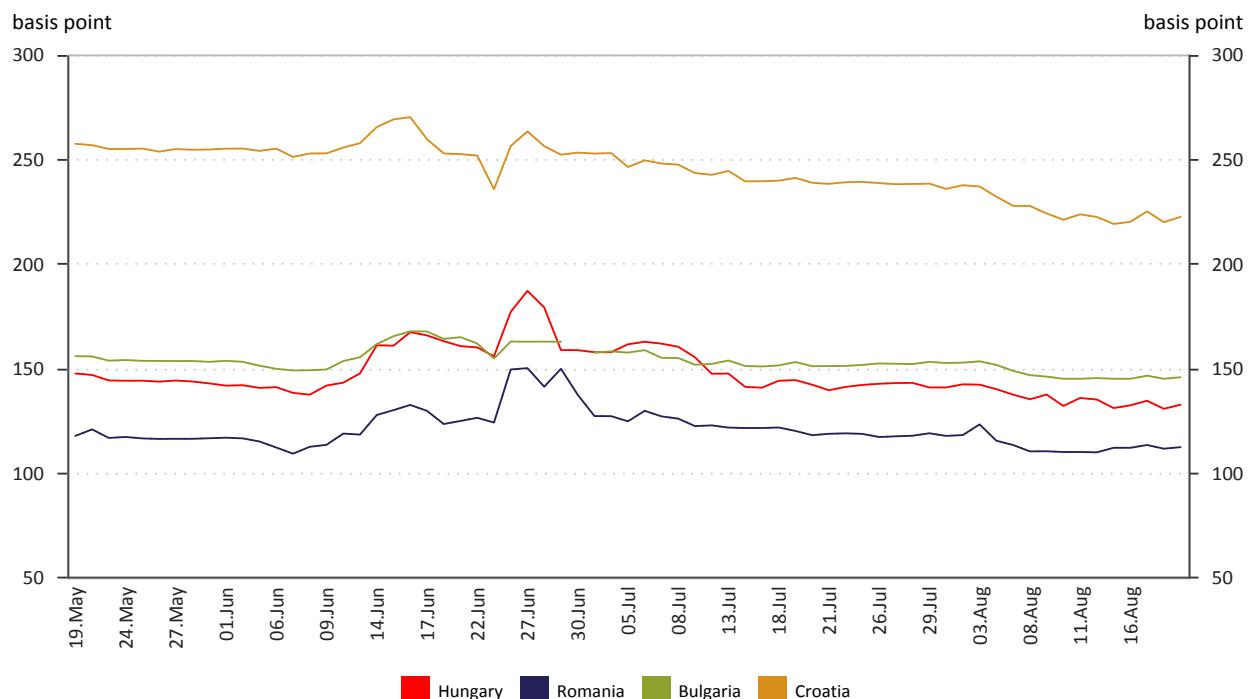
**65. Gross FX-swap stocks of foreign investors by maturity**

Source: MNB

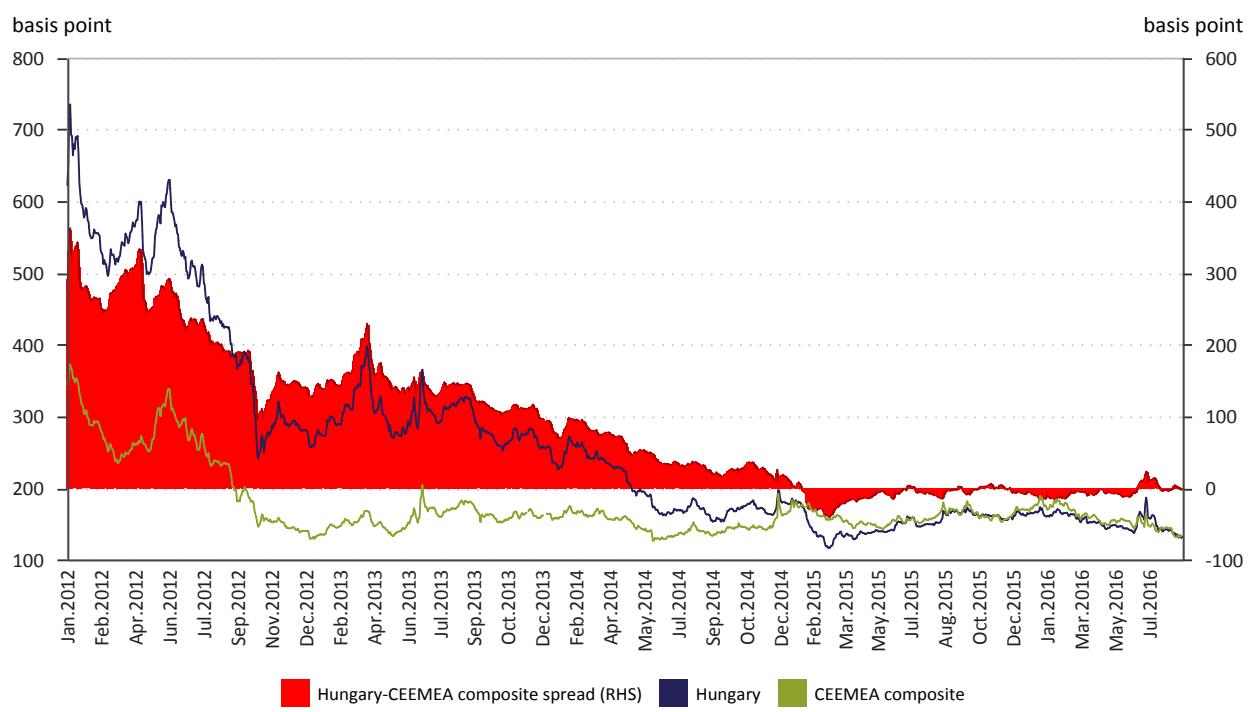
Note: due to the nature of daily reports by banks on FX transactions, the components of the FX transactions statistic do not close to zero. As a result, the information contained in the data series on net forint purchase of non-resident investors - and its components - is relevant mainly to evaluate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

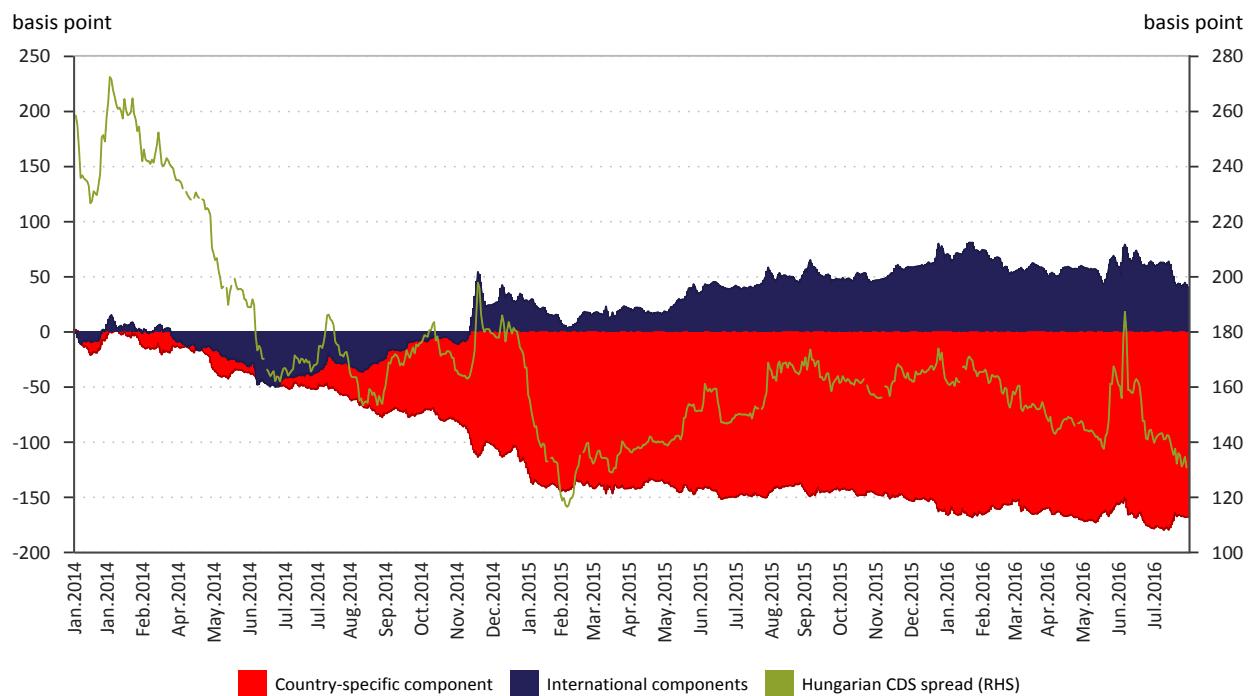
Source: Thomson Reuters.

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

Source: Thomson Reuters

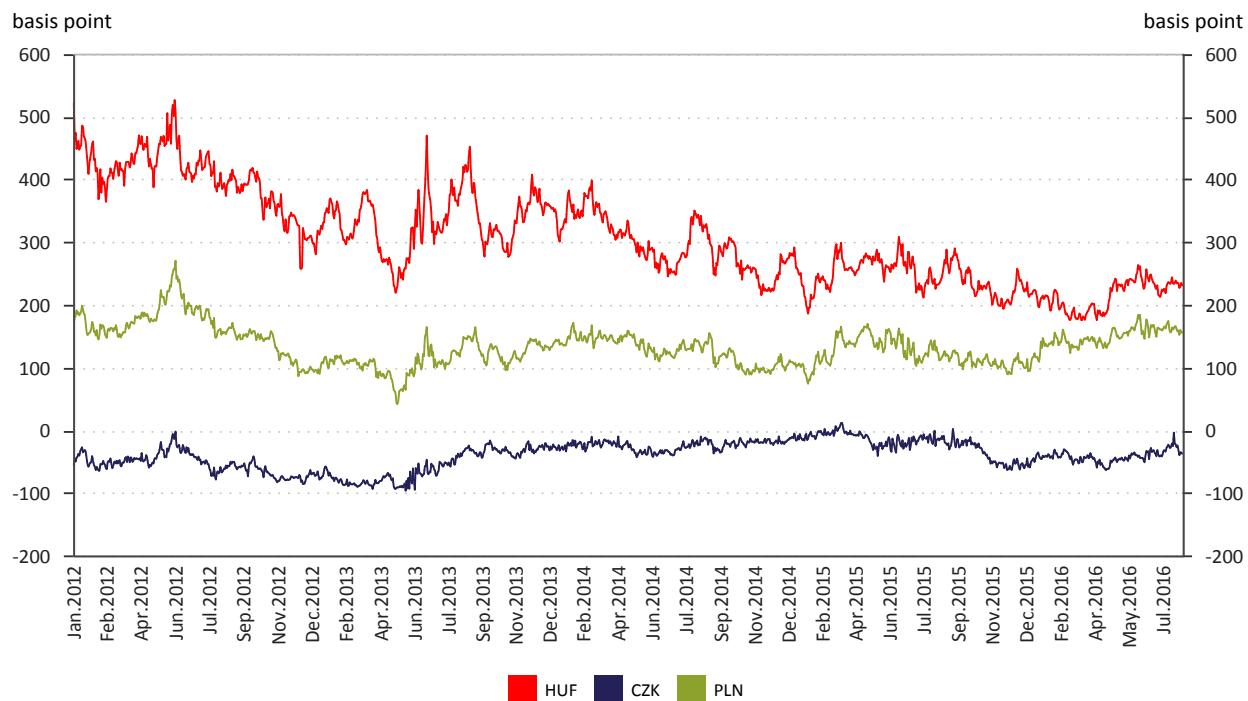
**68. 5 year sovereign CDS spread in Hungary versus CEEMEA composite index**

Source: Thomson Reuters.

**69. Components of Hungarian 5 year sovereign CDS**

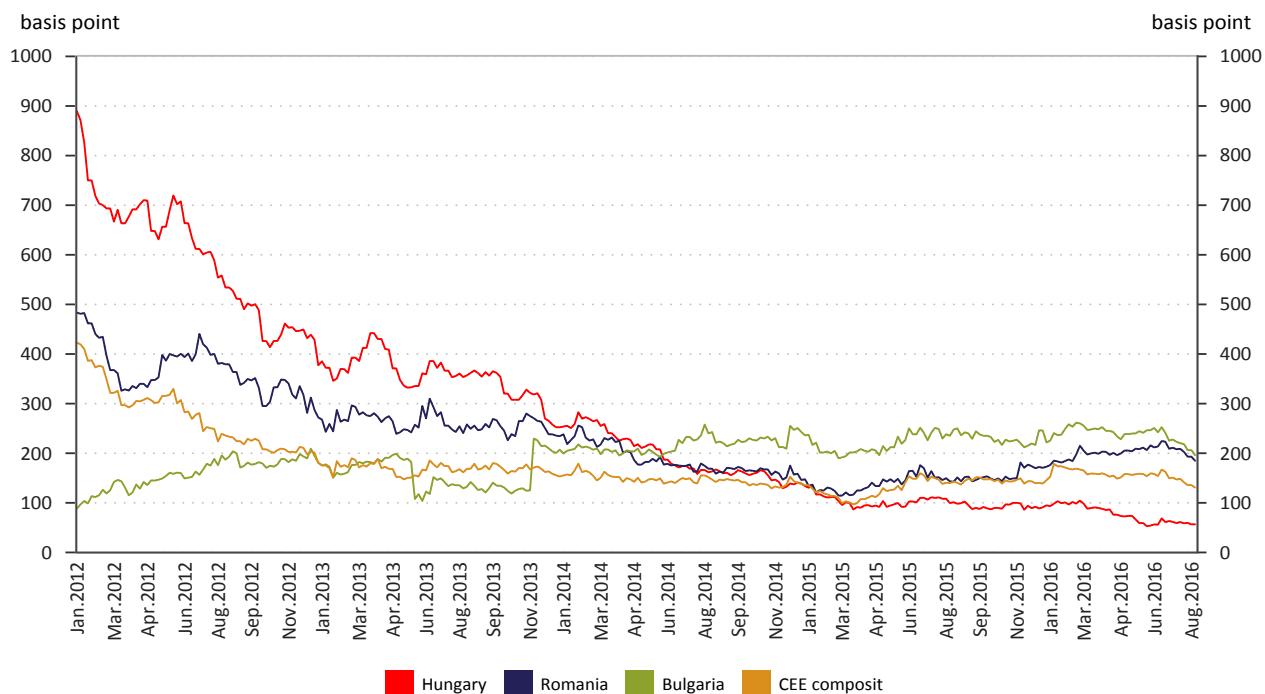
Source: Bloomberg

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

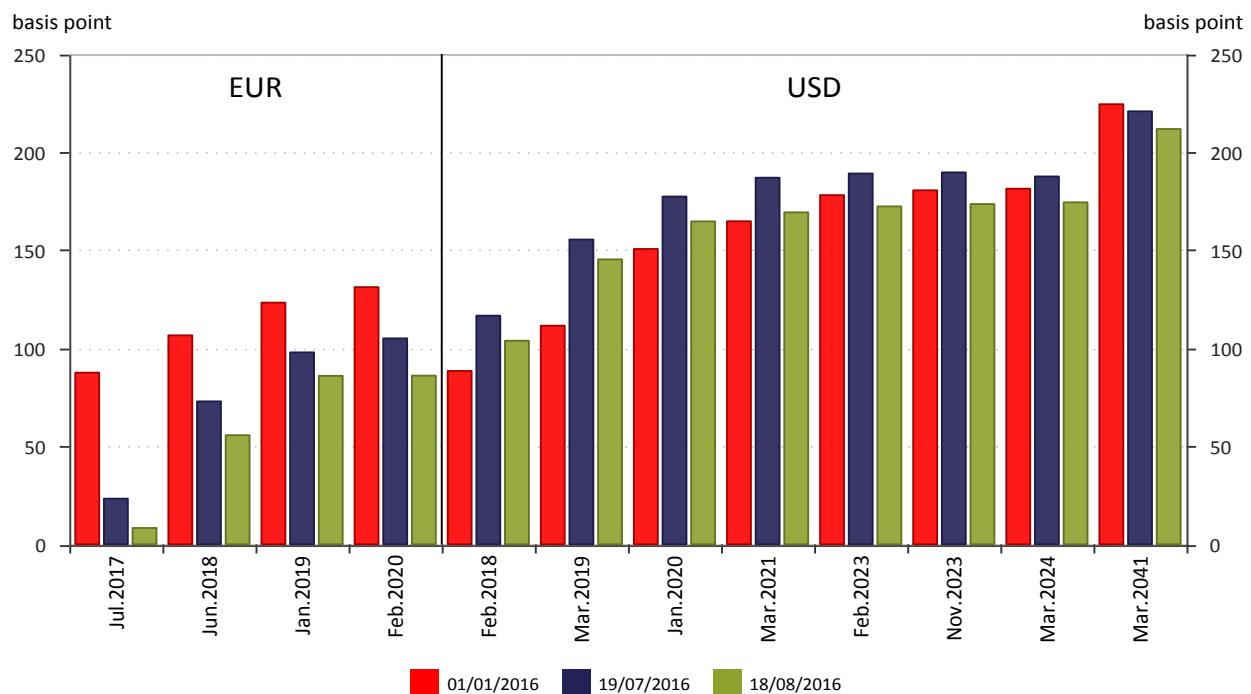
### 71. Emerging markets FX denominated government bond spreads



Source: Thomson Datastream.

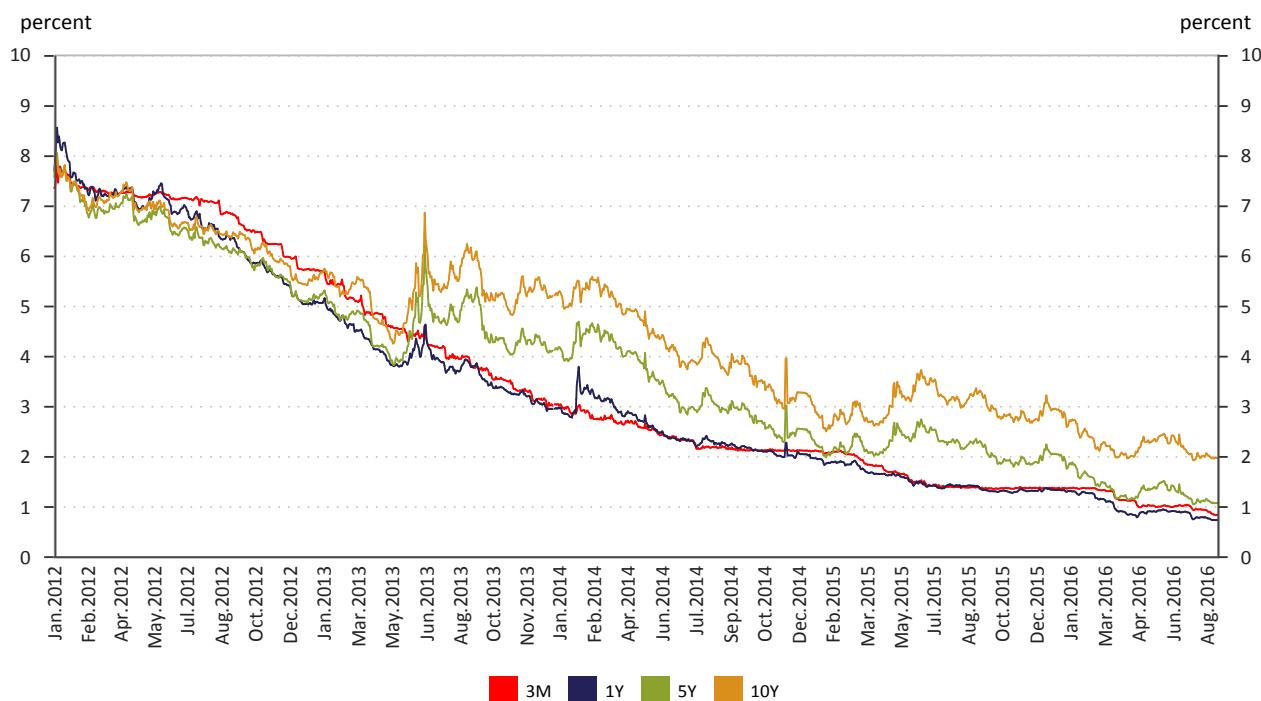
Notes: calculated from JP Morgan Euro EMBI data. The series are differences between euro denominated (liquid) foreign currency bond yields and euro zero coupon yields of the corresponding maturities. Different durations may result in significant difference in the level of spreads.

### 72. Domestic FX-government bond

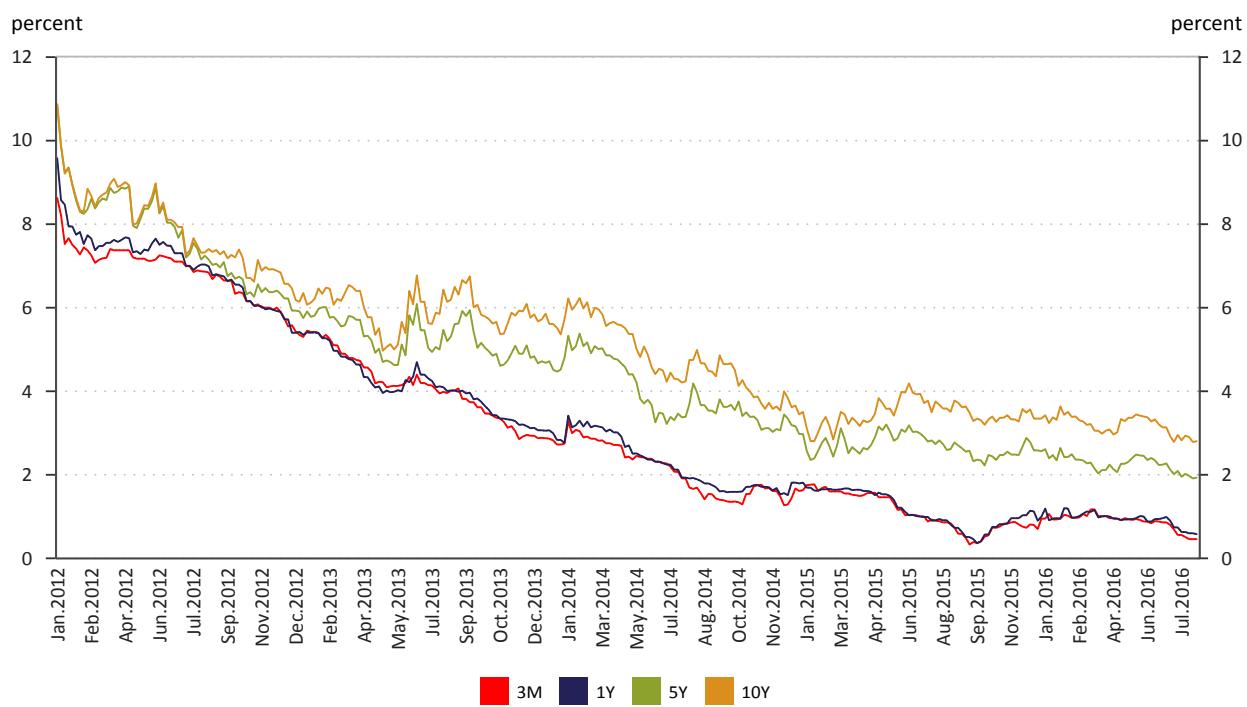


Source: Bloomberg.

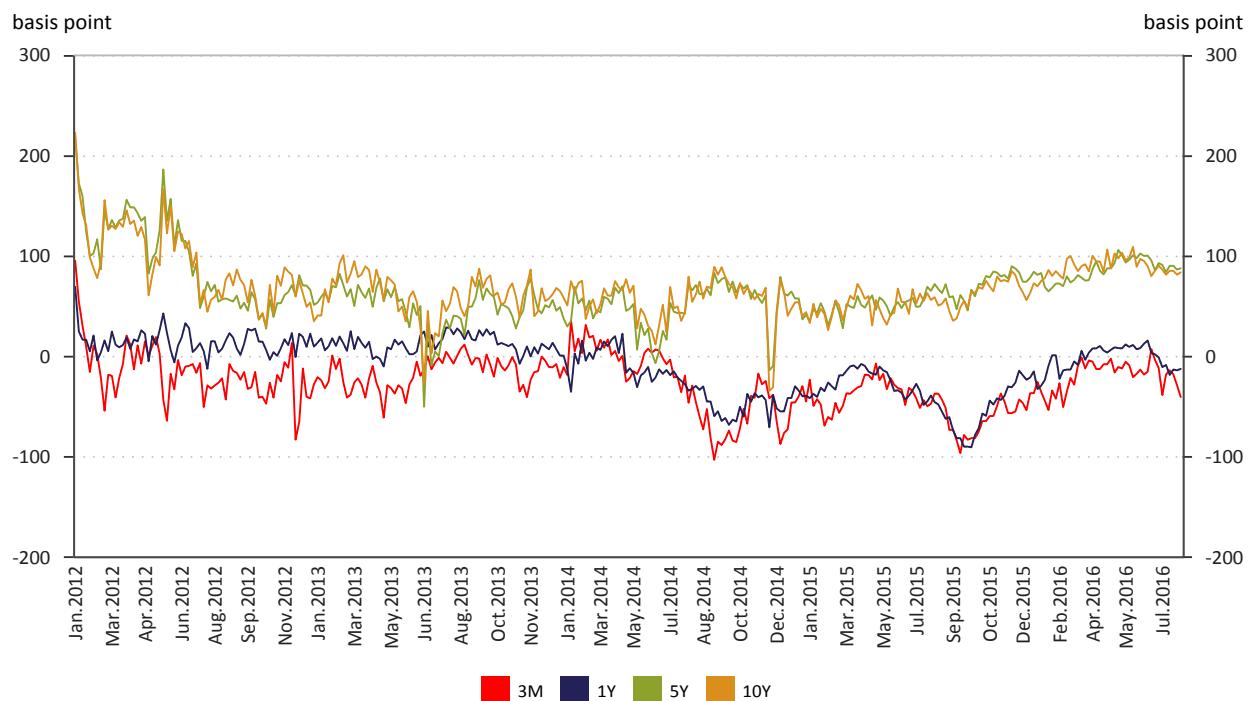
Notes: Spread between EUR and USD denominated FX-bonds and the equivalent US T-bond or euro yields chosen by Bloomberg. We present bonds grouped by currency in order of maturity.

**73. Interbank yields**

Source: Thomson Reuters

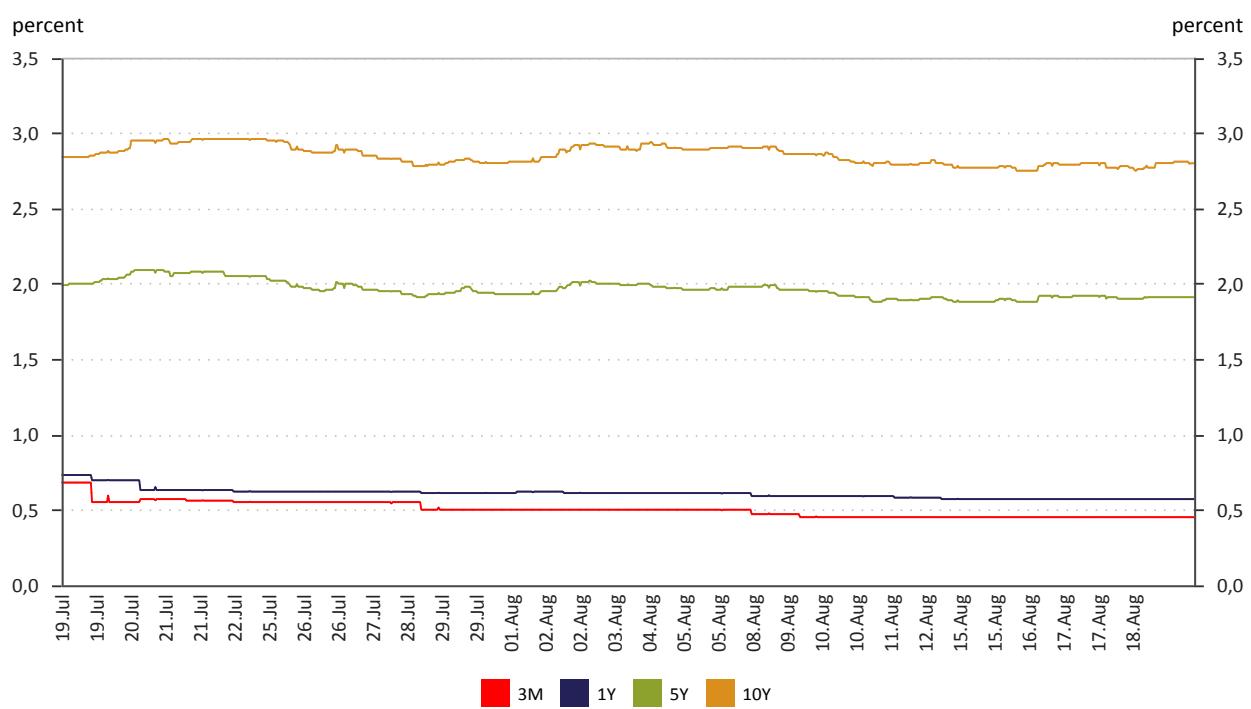
**74. Yields of benchmark government securities**

Source: Thomson Reuters.

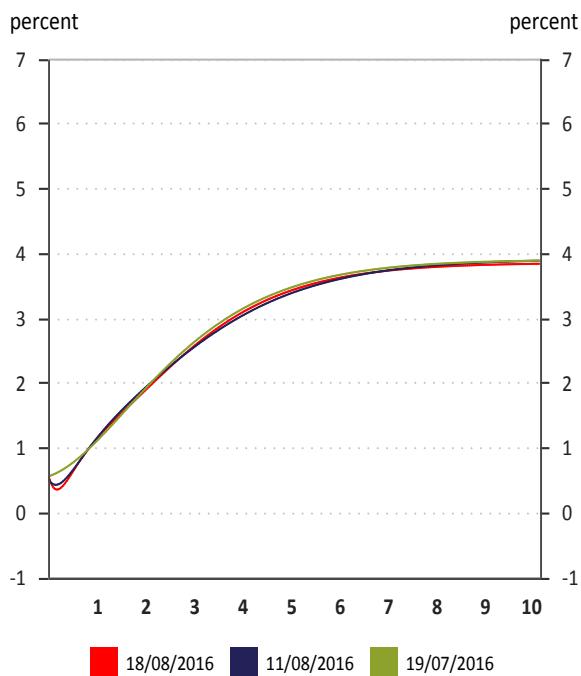
**75. Government securities - interbank yield spreads**

Source: Thomson Reuters

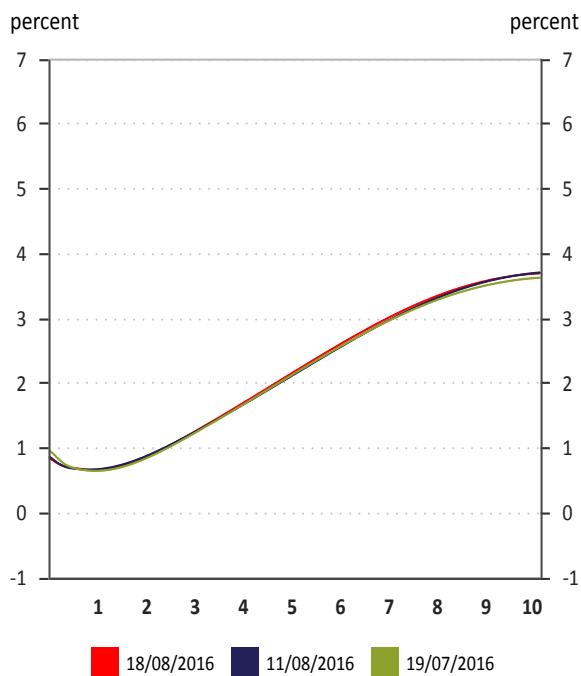
Note: Spread between the benchmark government bond yield of the given maturity and the interbank rates.

**76. Yields of benchmark government securities (last month)**

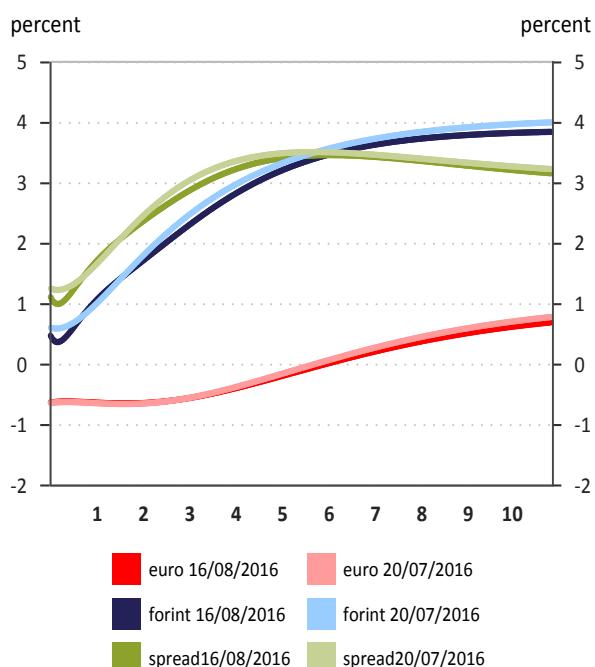
Source: Thomson Reuters.

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


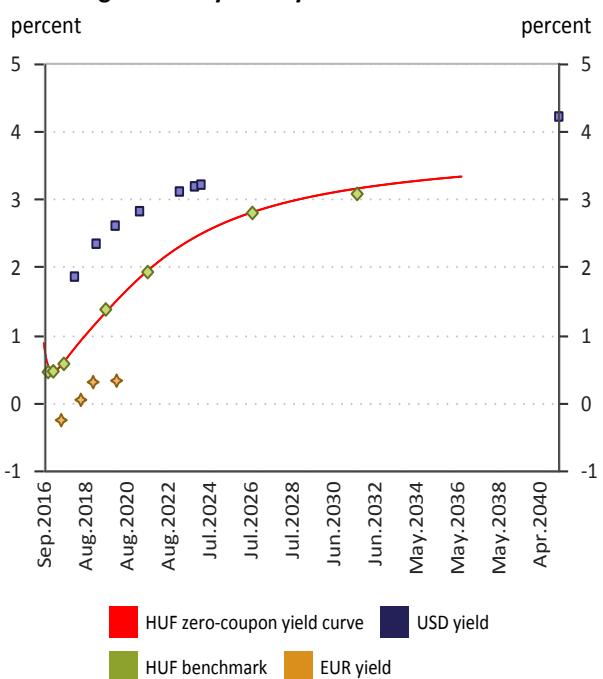
Source: MNB, ÁKK. Note: calculated by Svensson method by MNB. X axis shows maturities, in years.

**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.

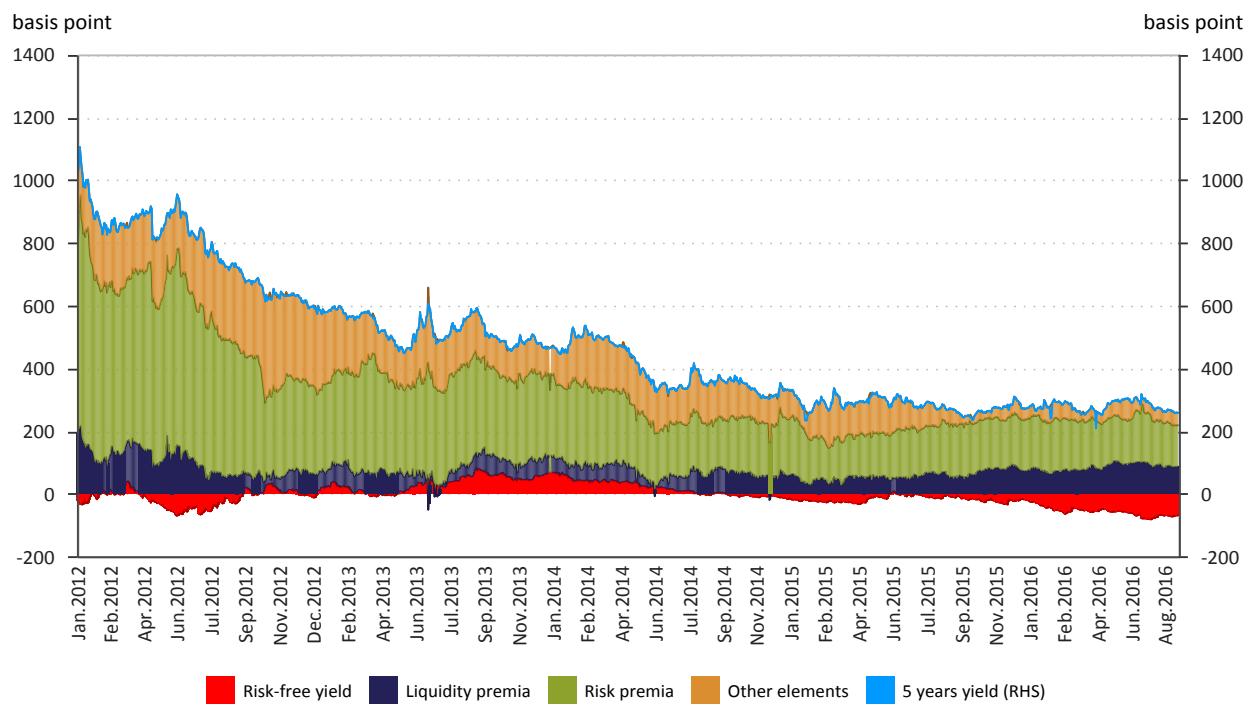
**79. Spread between 3-month forward yields in EUR and HUF**


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.

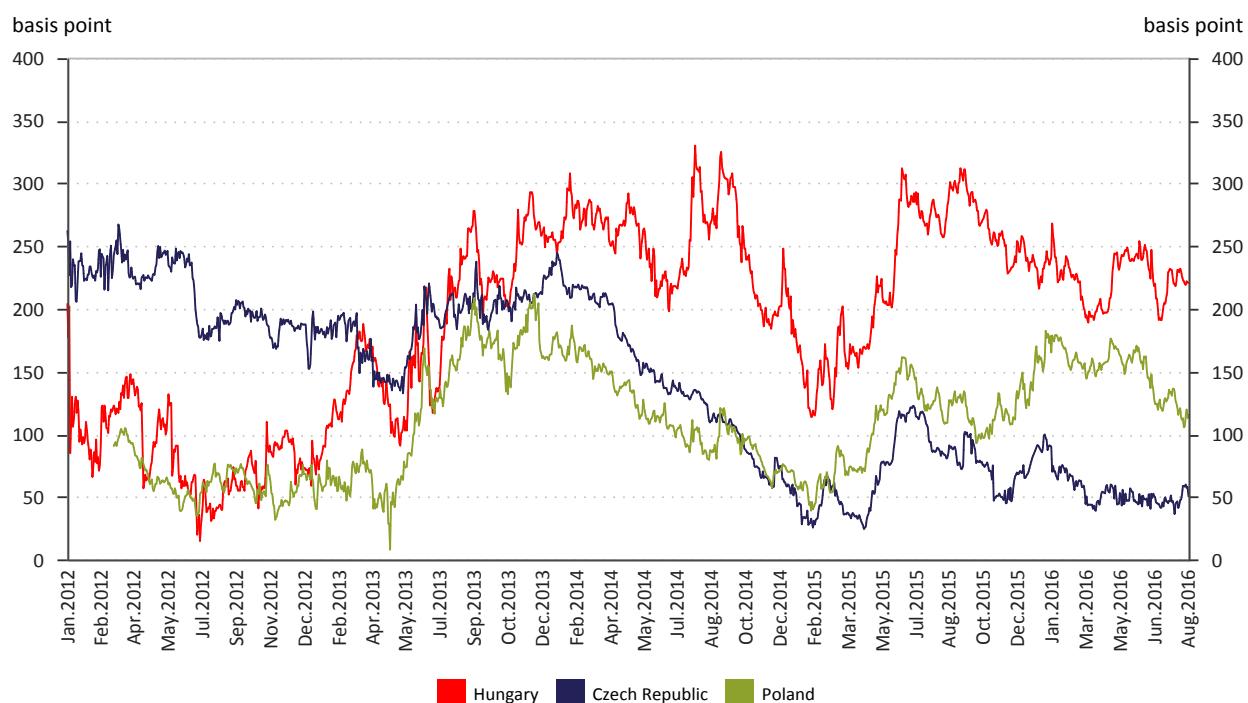
**80. Hungarian government bond yield curve and foreign currency bond yields**


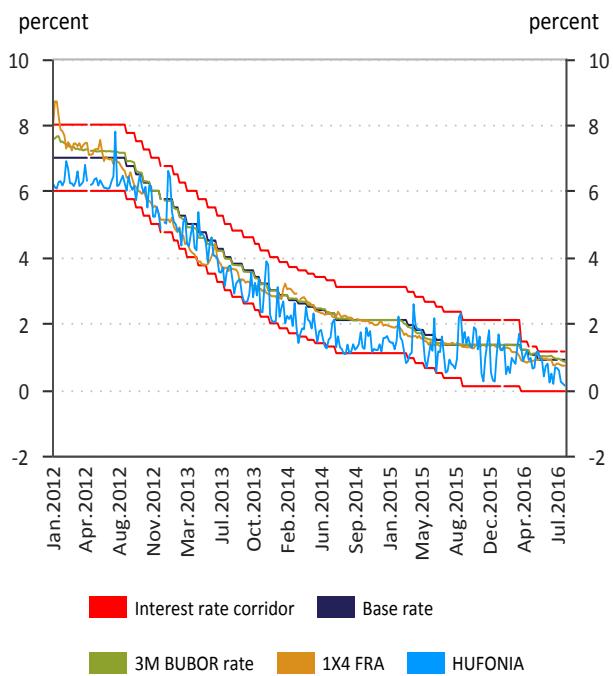
Source: MNB, Bloomberg.

### 81. Decomposition of 5 year government bond yield

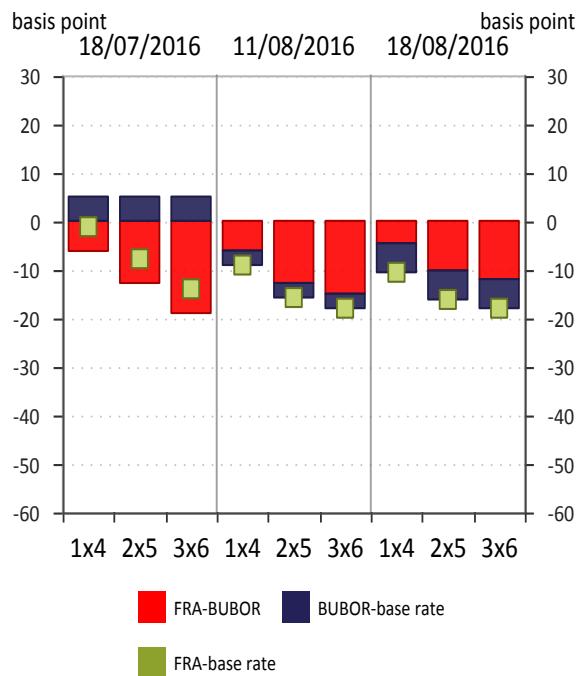


### 82. Slope of yield curve in CEE

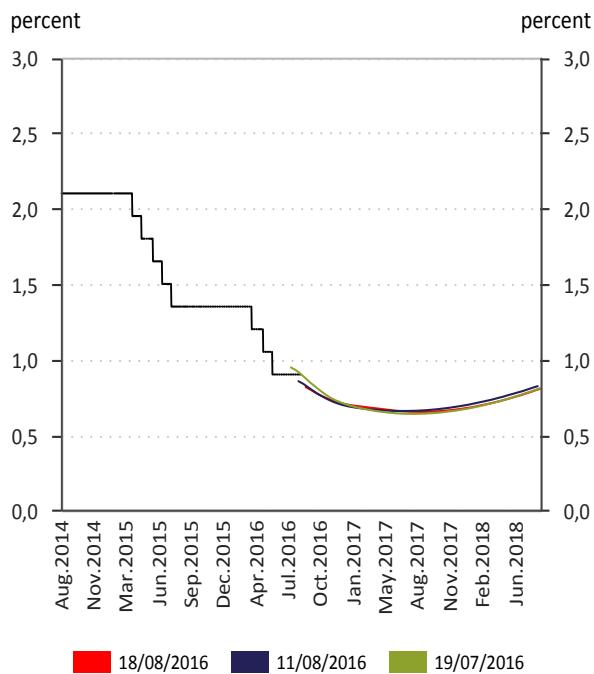


**83. MNB base rate and money market rates**

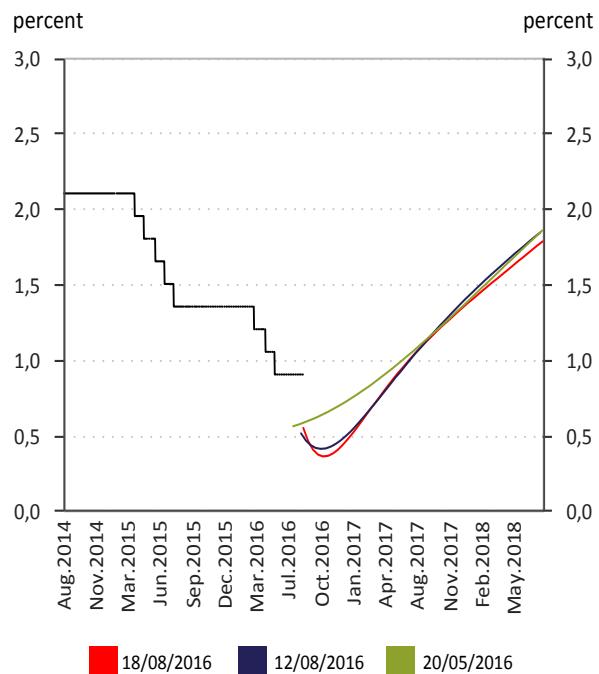
Source: Thomson Reuters, MNB

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

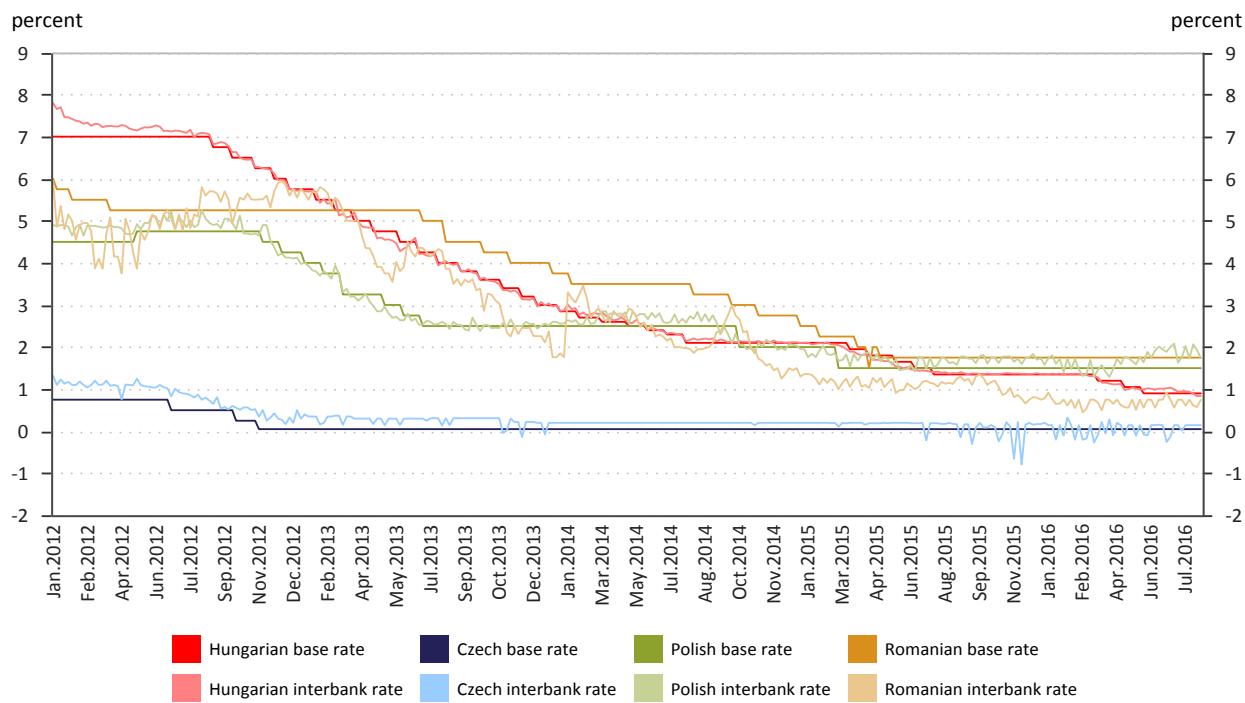
Source: Thomson Reuters, MNB.

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

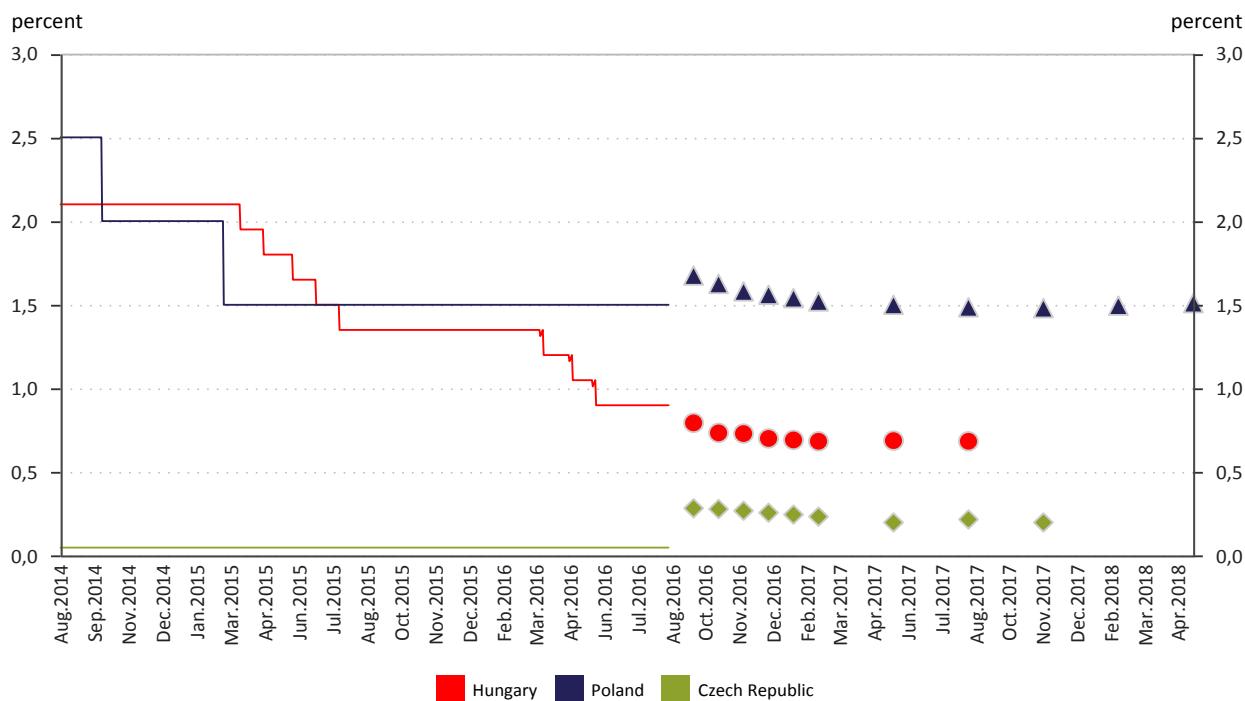
Source: MNB.

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

Source: MNB.

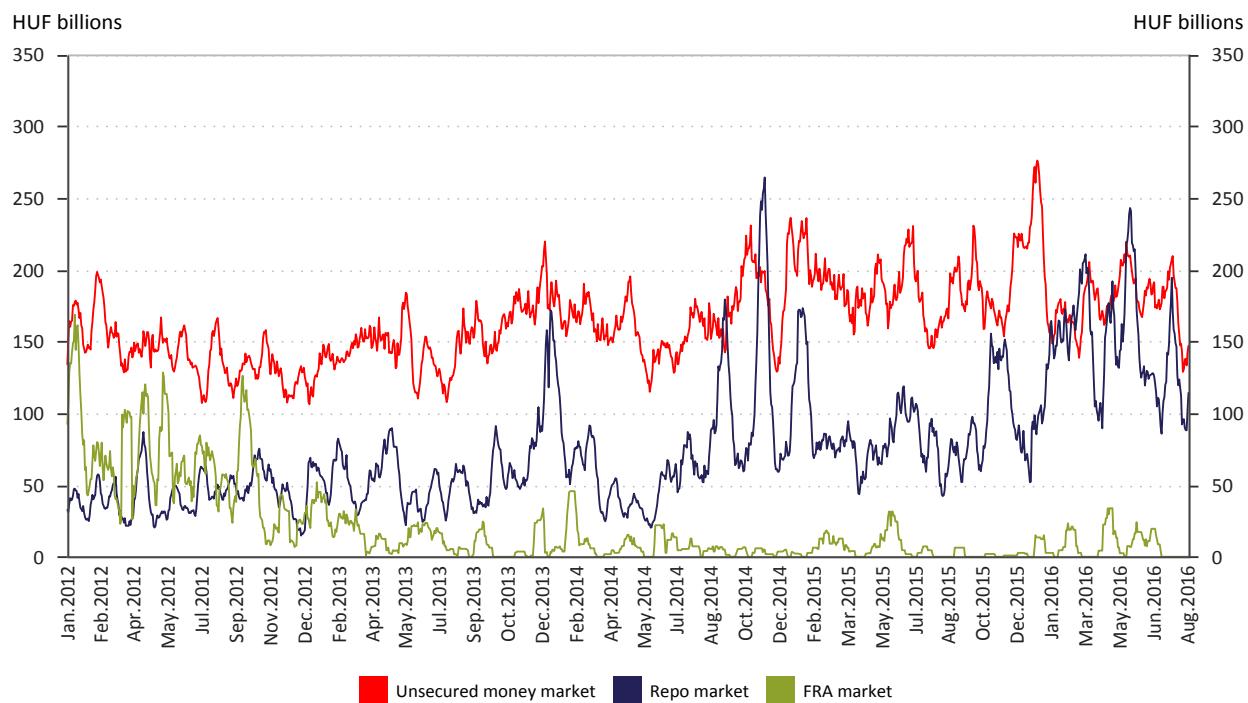
**87. Base rates and short term interbank rates in the region**

Source: Thomson Reuters.

**88. CEE base rates and forward rate agreements**

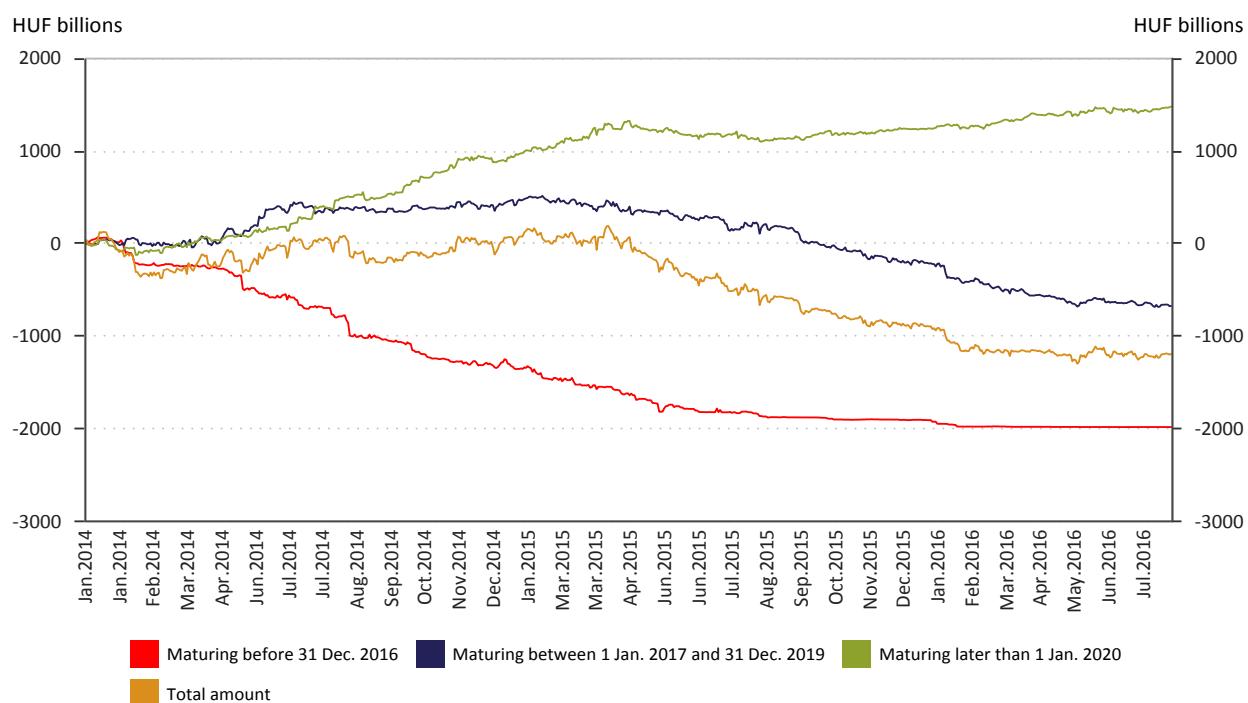
Source: Bloomberg

Note: Based on FRA transactions. Last update: (19/08/2016).

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

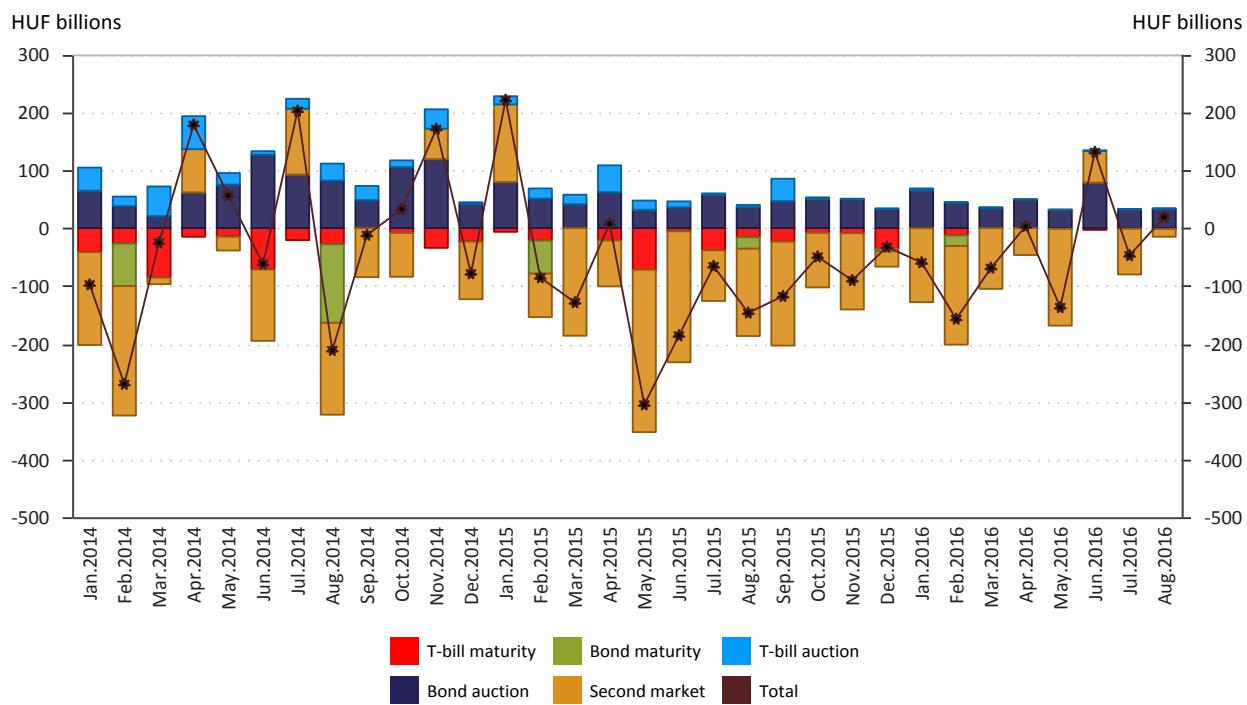
Source: MNB

Note: Based on reporting by domestic banks.

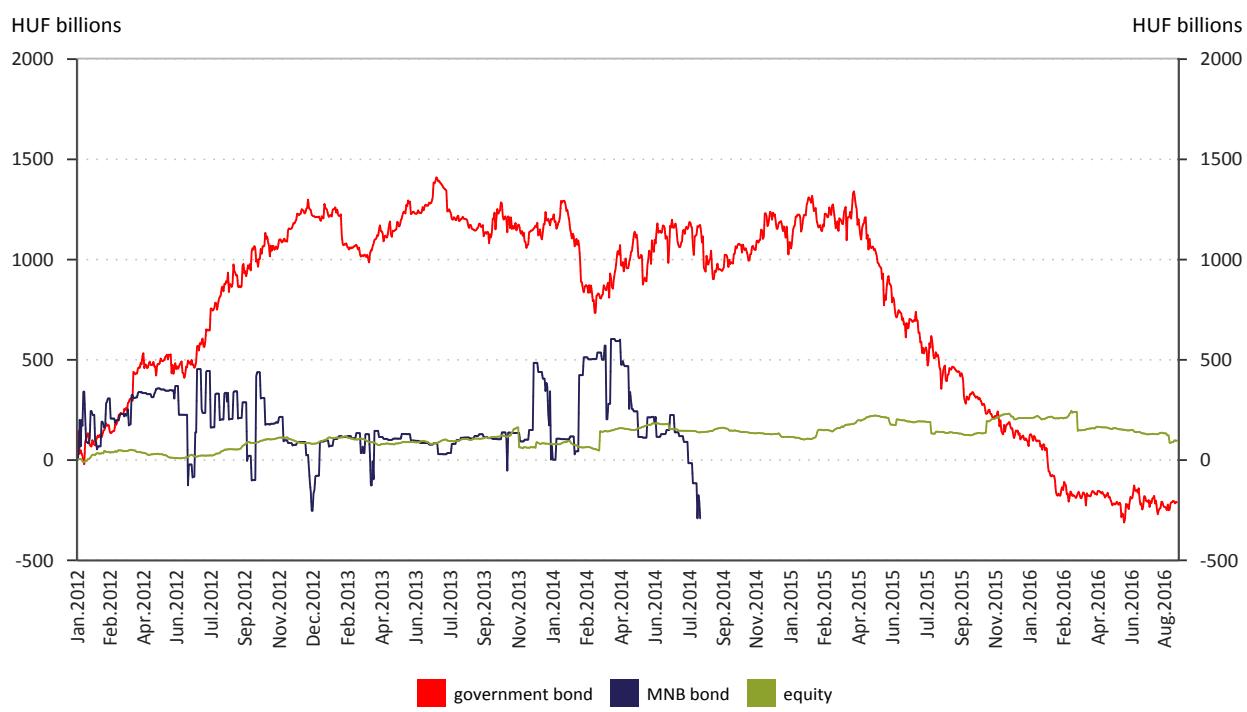
**90. Change in government securities of non-residents by tenor**

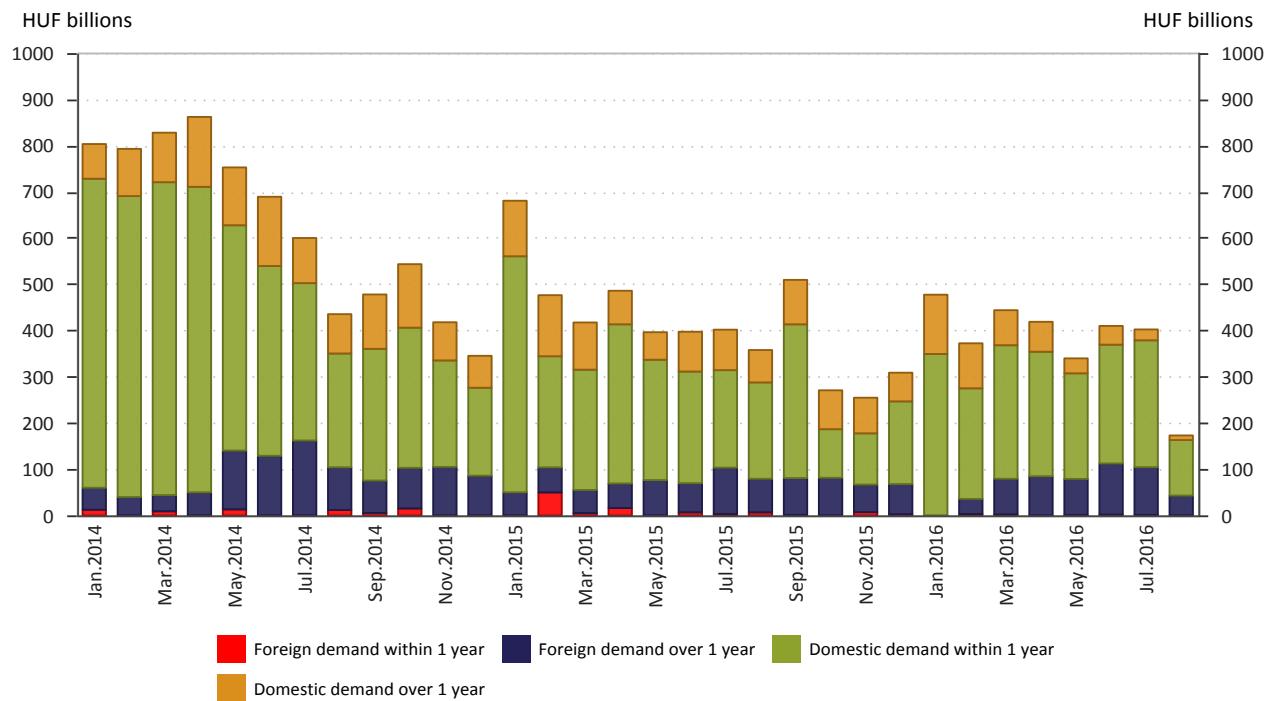
Source: MNB.

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



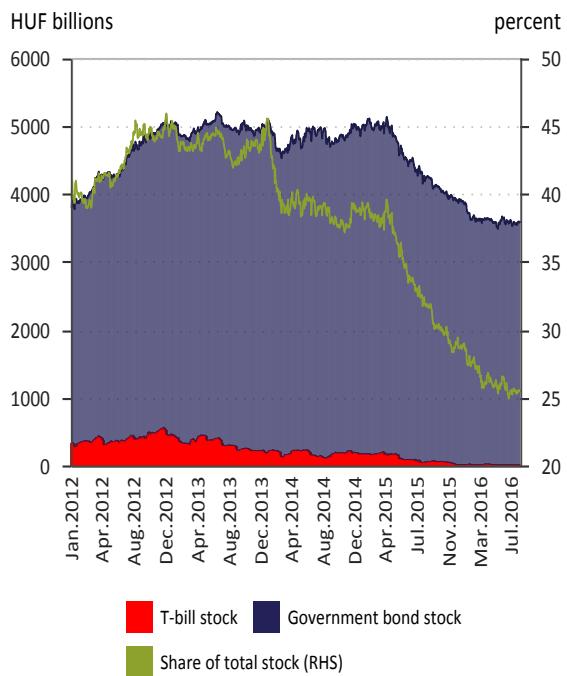
### 92. Forint financial assets held by non-residents



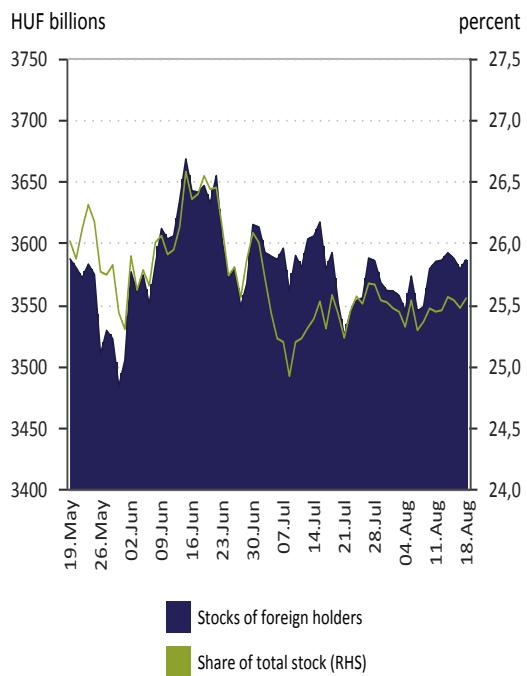
**93. Primary market government security purchase of domestic and non-resident investors**

Source: MNB

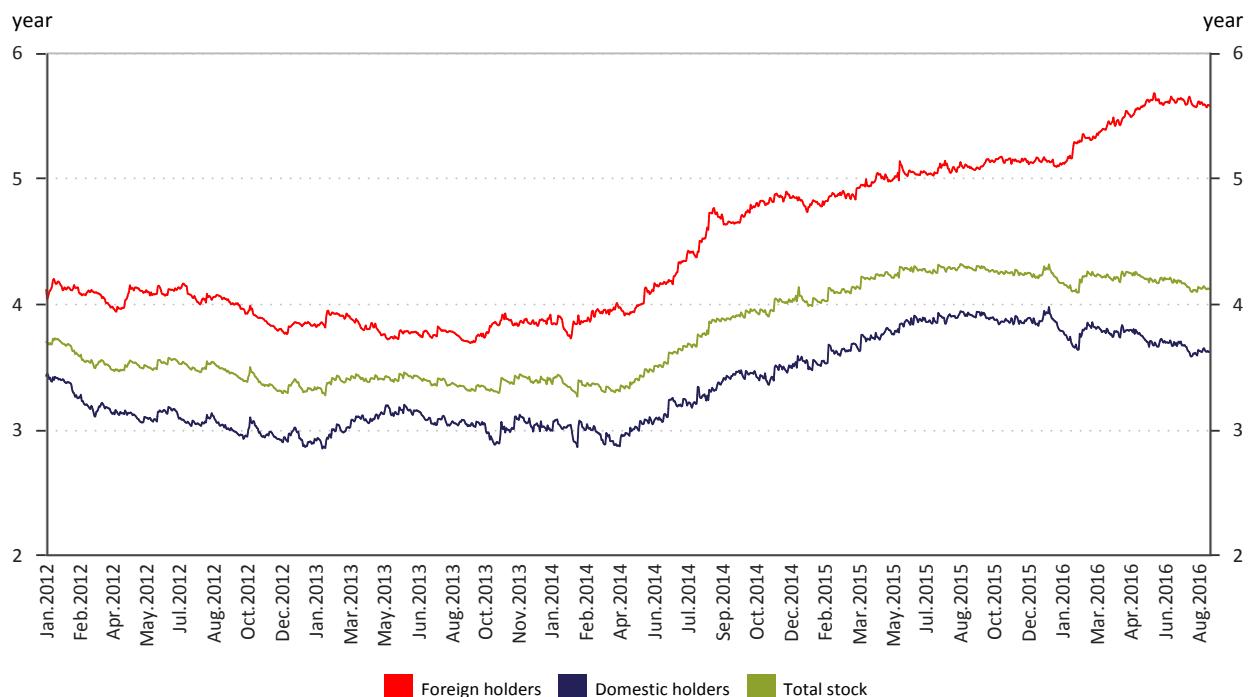
Note: Last month is incomplete.

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

Source: MNB.

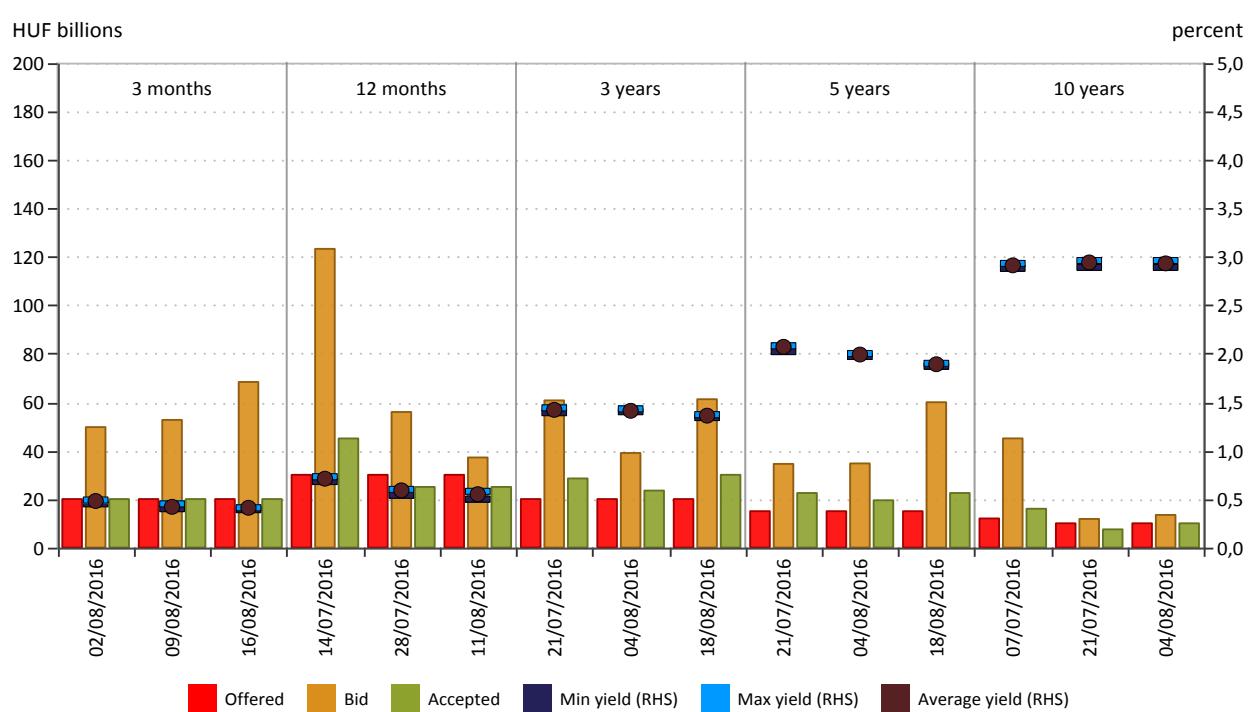
**95. Government bonds held by non-residents and the share of the total amount outstanding (last months)**

Source: MNB.

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

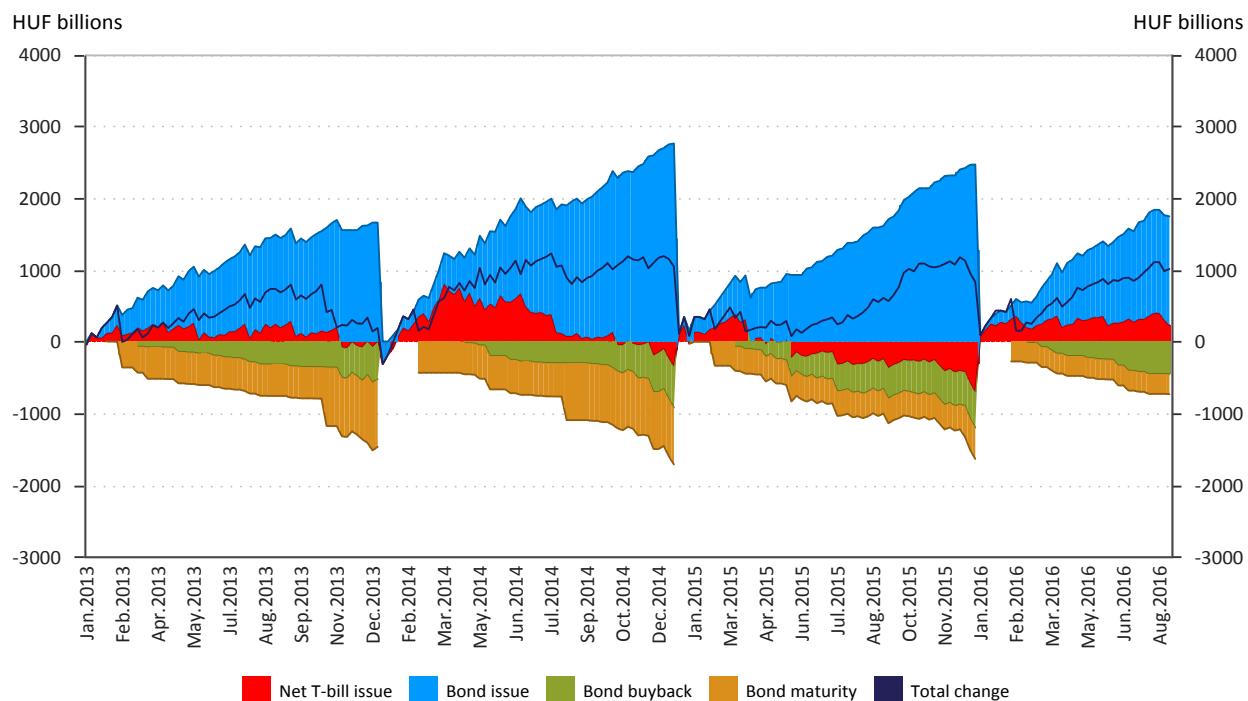
Source: MNB

Note: Based on HUF government bonds and T-bills.

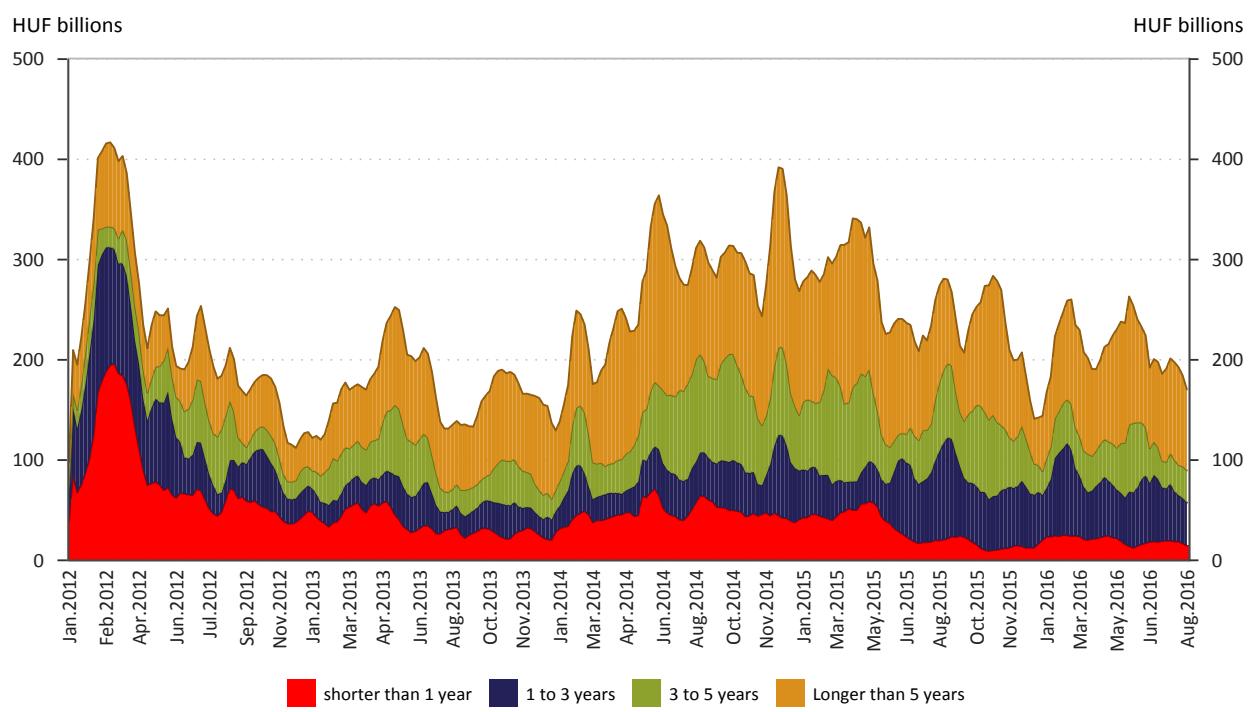
**97. The turnover and yield data of the Hungarian primary T-bill and T-bond issues**

Source: ÁKK

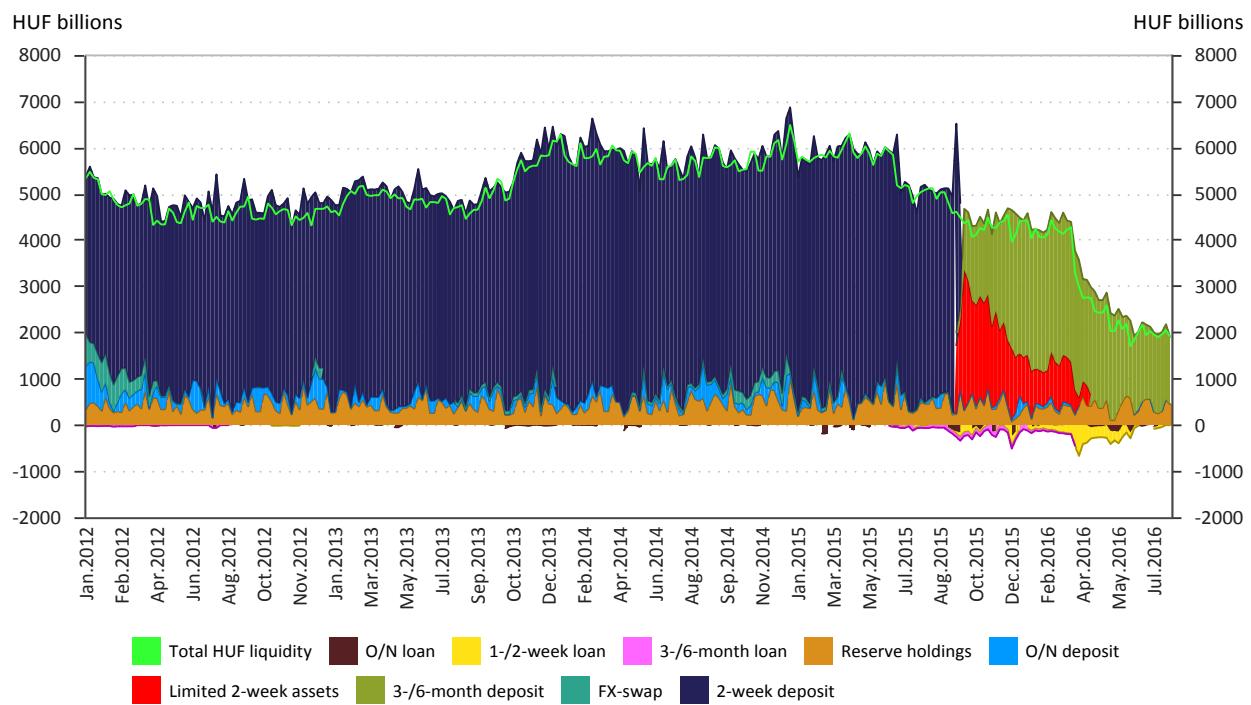
Notes: the turnover and yield data of the Hungarian primary t-bill and t-bond issues. In case of floating rate bonds the yield data are not be plotted.

**98. Government securities issues, buybacks, redemptions**

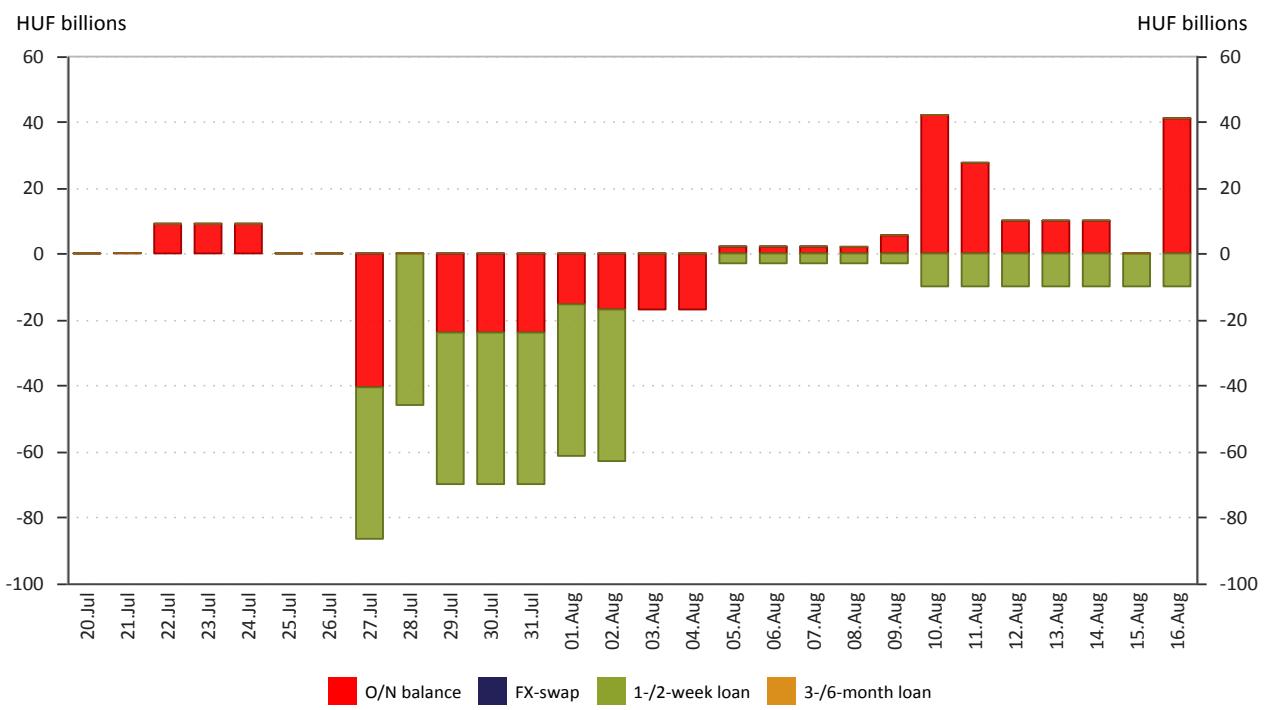
Source: MNB.

**99. Turnover on the secondary market of government securities**

Source: MNB, KELER.

**100. Selected assets and liabilities of the MNB**

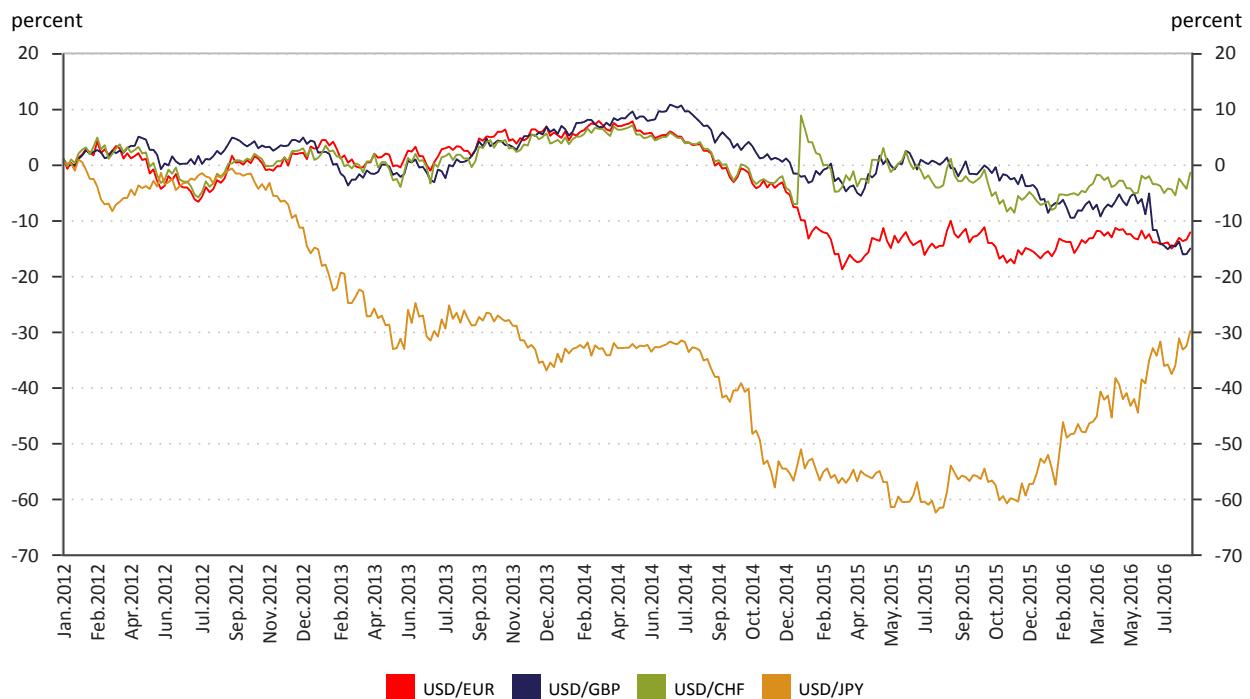
Source: MNB.

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

Source: MNB.

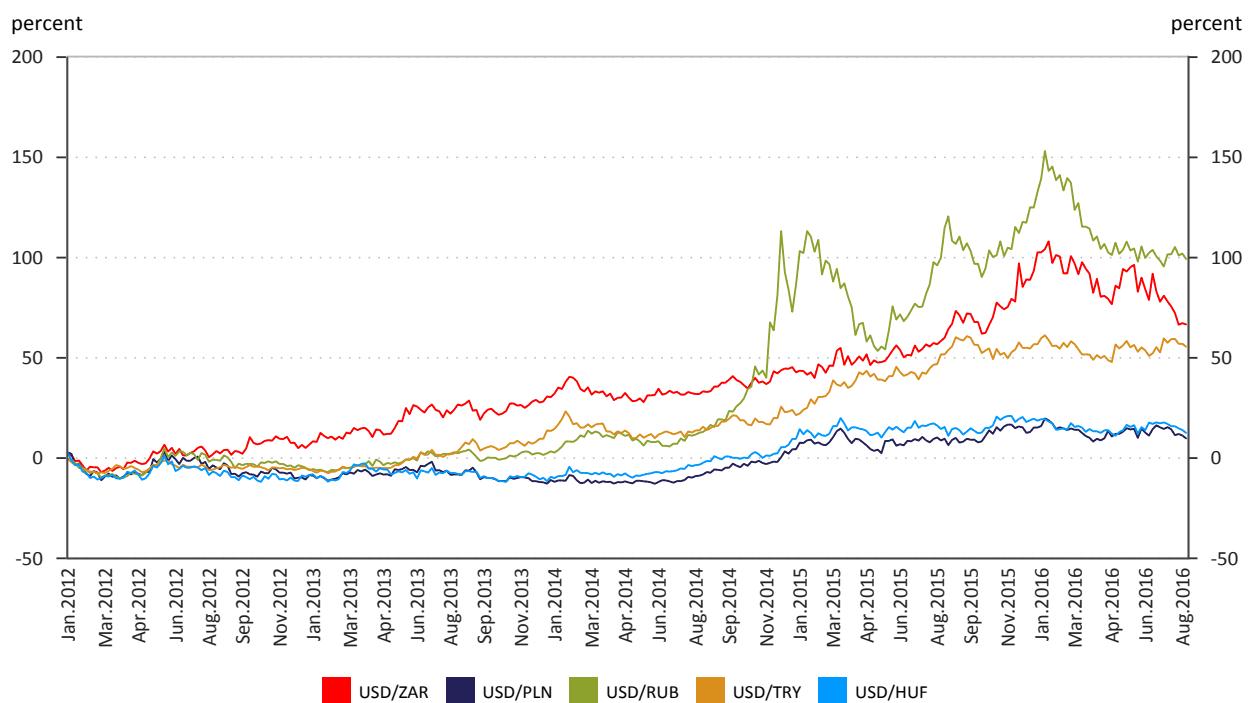
**102. International developments***Overview*

Indicator	1 month ago	1 week ago	Current
Fed base rate (%)	0.50	0.50	0.50
ECB base rate (%)	0.00	0.00	0.00
10-year T-bond yield (%)	1.58	1.51	1.54
10-year euro yield (%)	-0.01	-0.11	-0.08
VIX Index (%)	11.8	11.6	11.4
EMBI Global spread (bp)	375	368	360
SP 500 Index	2173	2186	2182
DAX Index	10142	10713	10603
NIKKEI Index	16682	16920	16486
USD/EUR exchange rate	1.10	1.12	1.14
USD/JPY exchange rate	106.85	101.31	99.89
CHF/EUR exchange rate	1.12	1.15	1.19
Brent oil (USD per barrel)	47.2	46.8	50.6

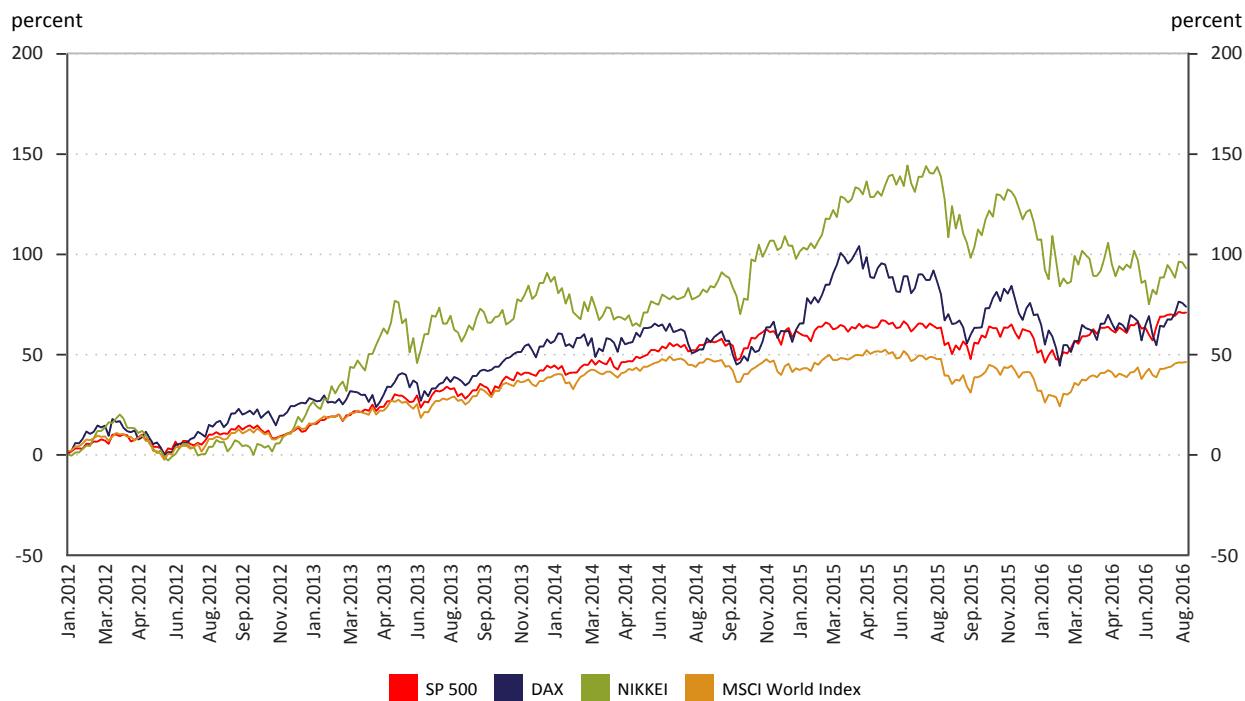
**103. Major currencies versus the dollar**

Source: Thomson Reuters

Note: cumulative change. Positive values indicate USD depreciation.

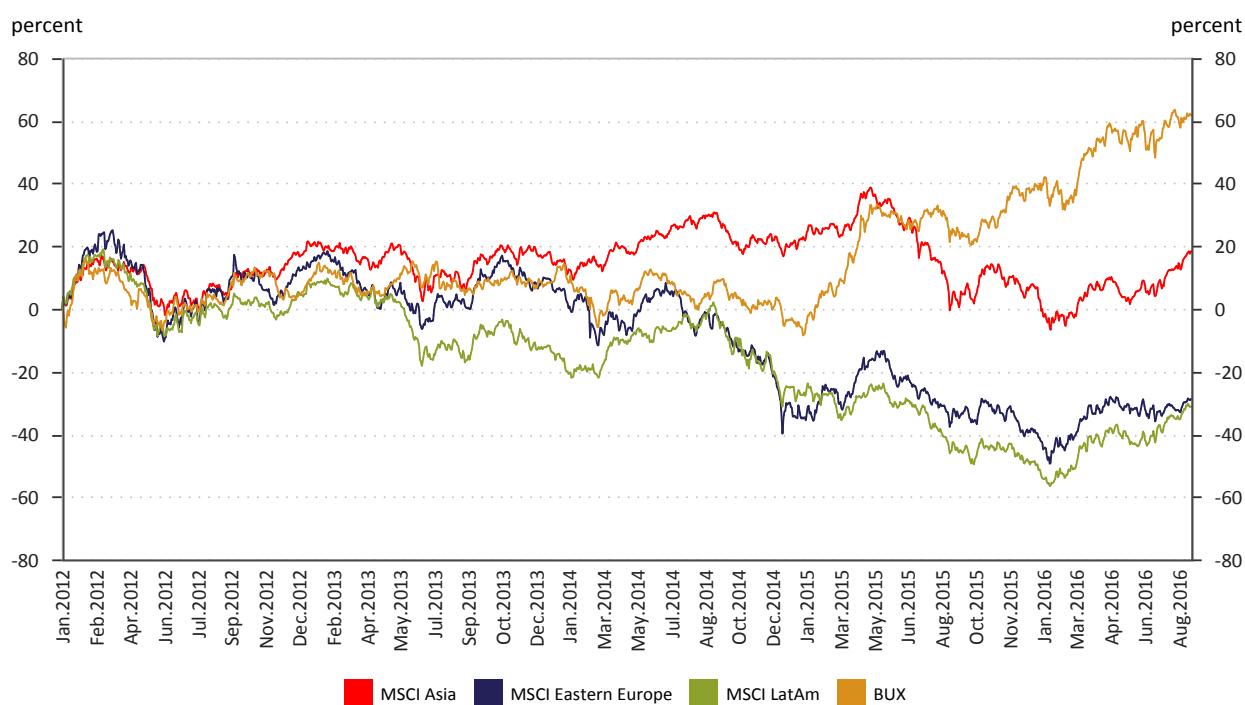
**104. Emerging currencies versus the dollar**

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

**105. Developed market stock indices**

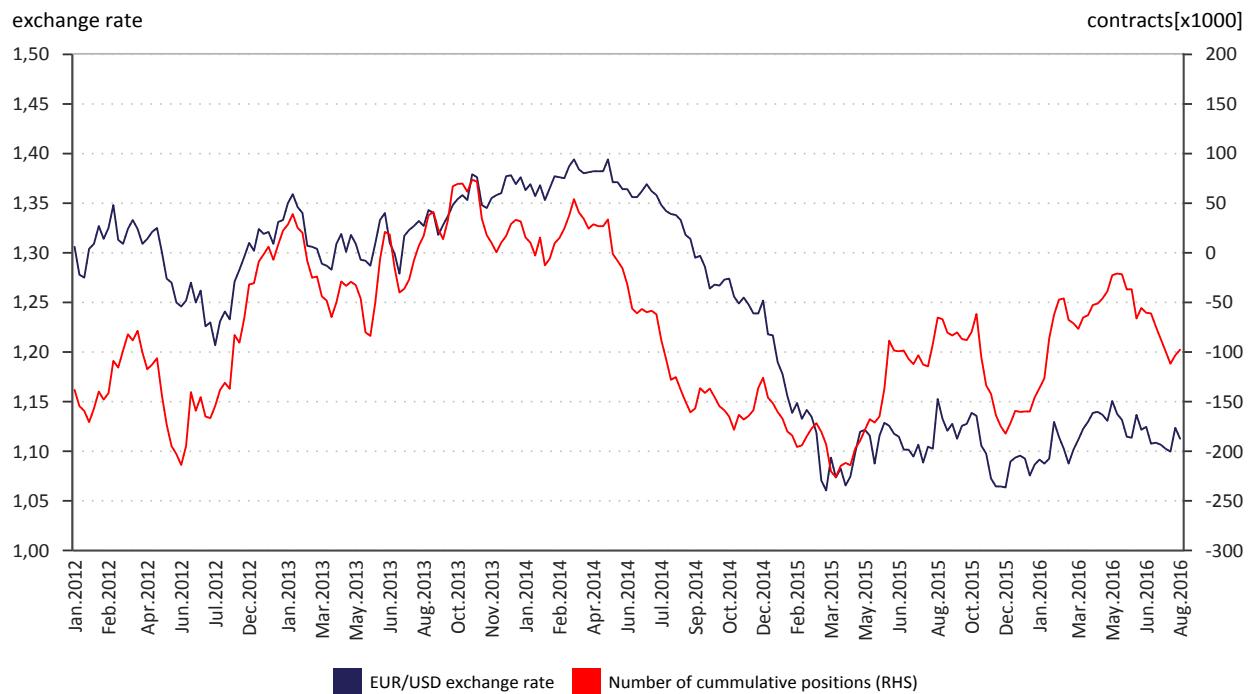
Source: Thomson Reuters

Notes: cumulative change.

**106. Emerging stock exchange markets**

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

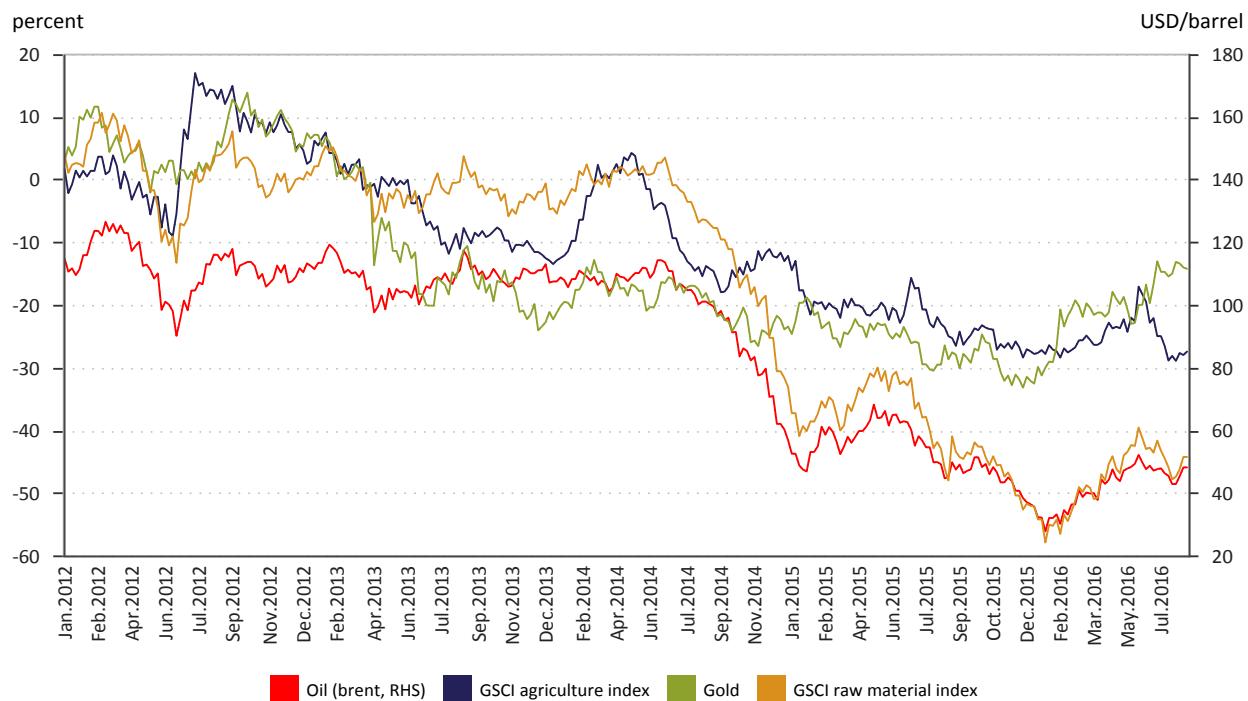
### 107. EUR/USD exchange rate and speculative positions



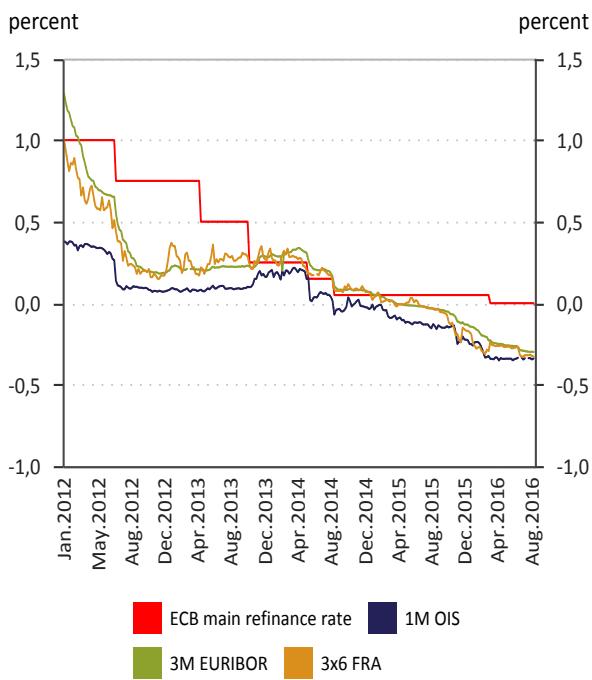
Source: Bloomberg, CFTC.

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.

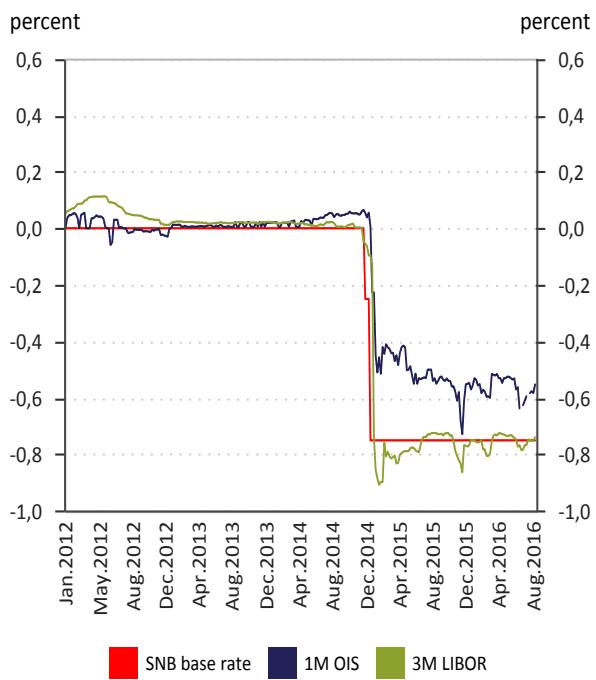
### 108. Price of raw materials



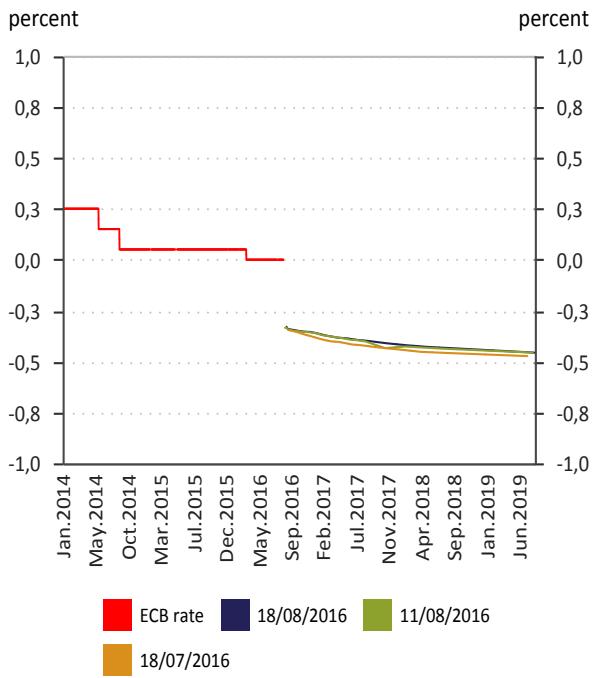
Source: Thomson Reuters Note: cumulative change except the Brent oil where the scale is nominal.

**109. Short term interbank rates in the eurozone**

Source: Thomson Reuters.

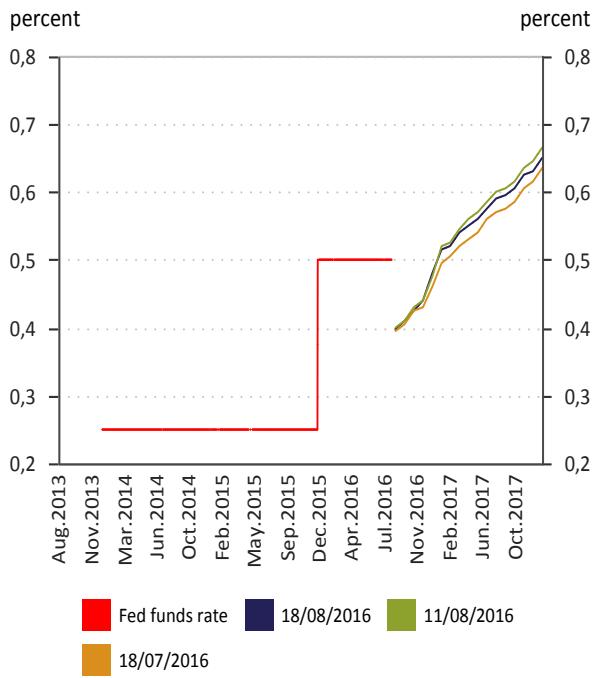
**110. Short term interbank rates in Switzerland**

Source: Thomson Reuters.

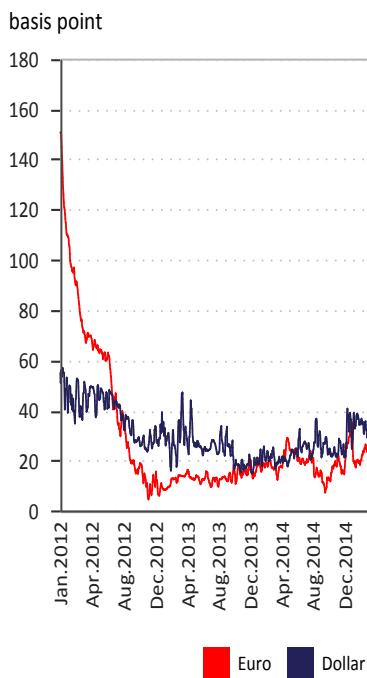
**111. Forecasts on ECB policy rate**

Source: ECB.

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

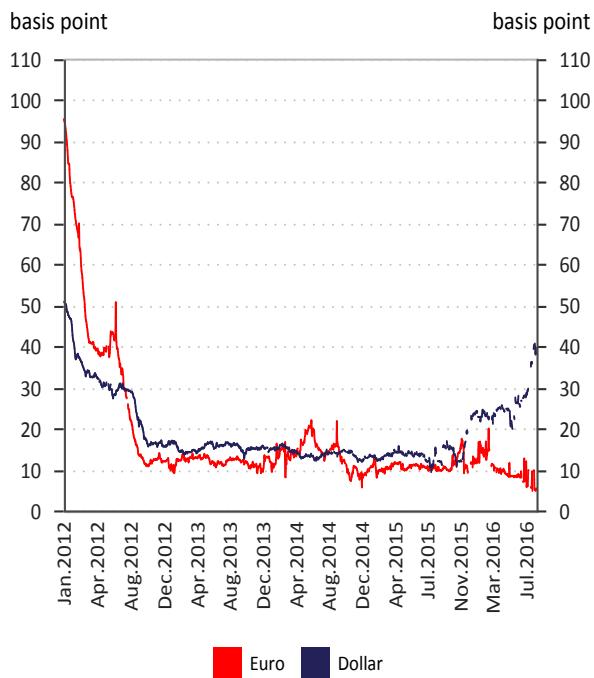
**112. Forecasts on Fed policy rate**

Source: Bloomberg.

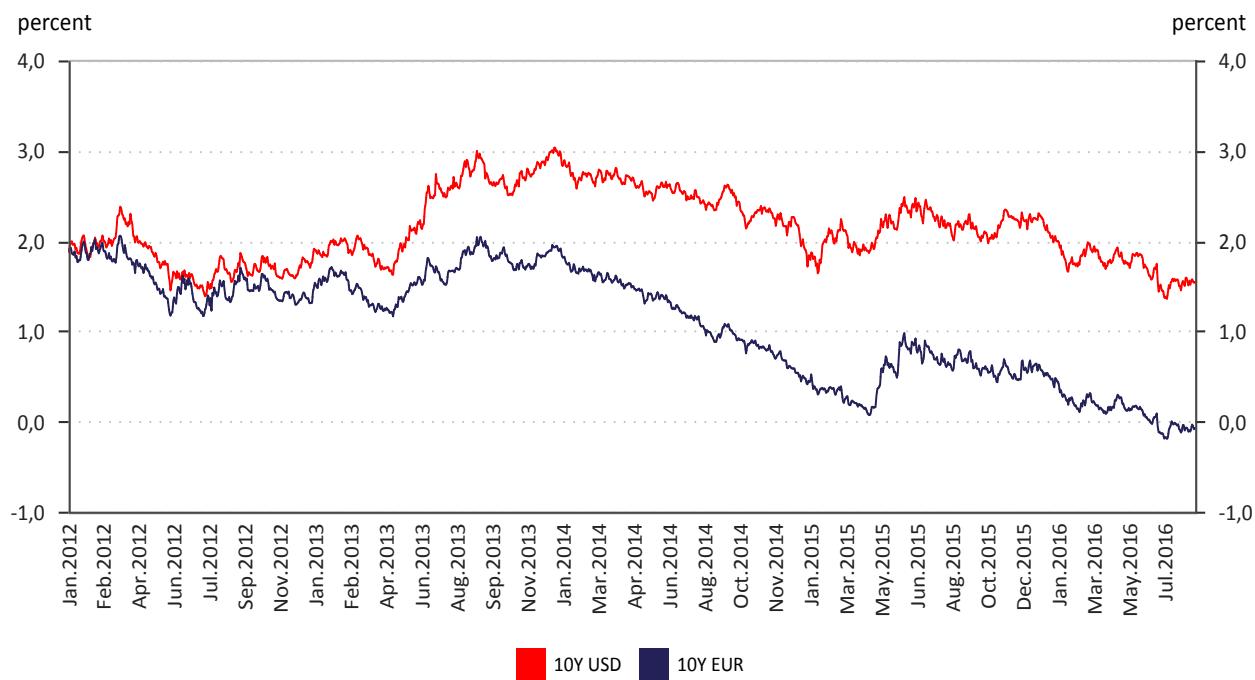
**113. 3M interbank and government bond yield spread**

Source: Thomson Reuters.

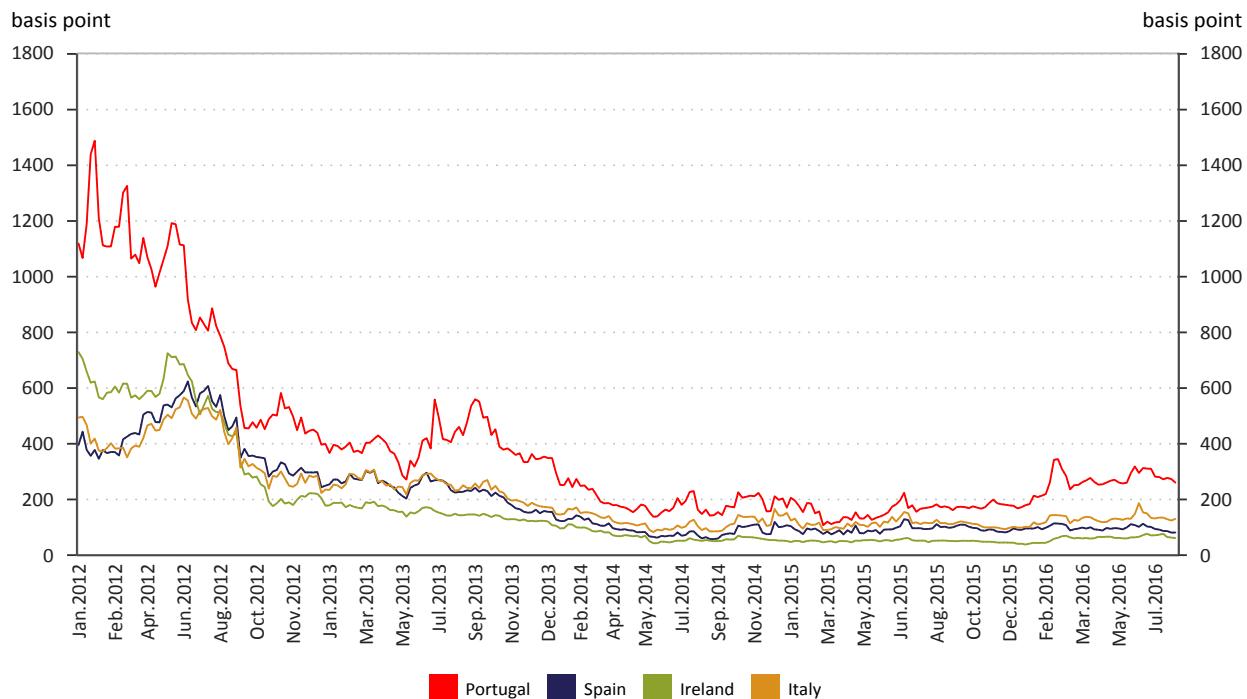
Notes: Spread between 3-month interbank rates and 3-month T-bill yield.

**114. 3M interbank and OIS yield spread**

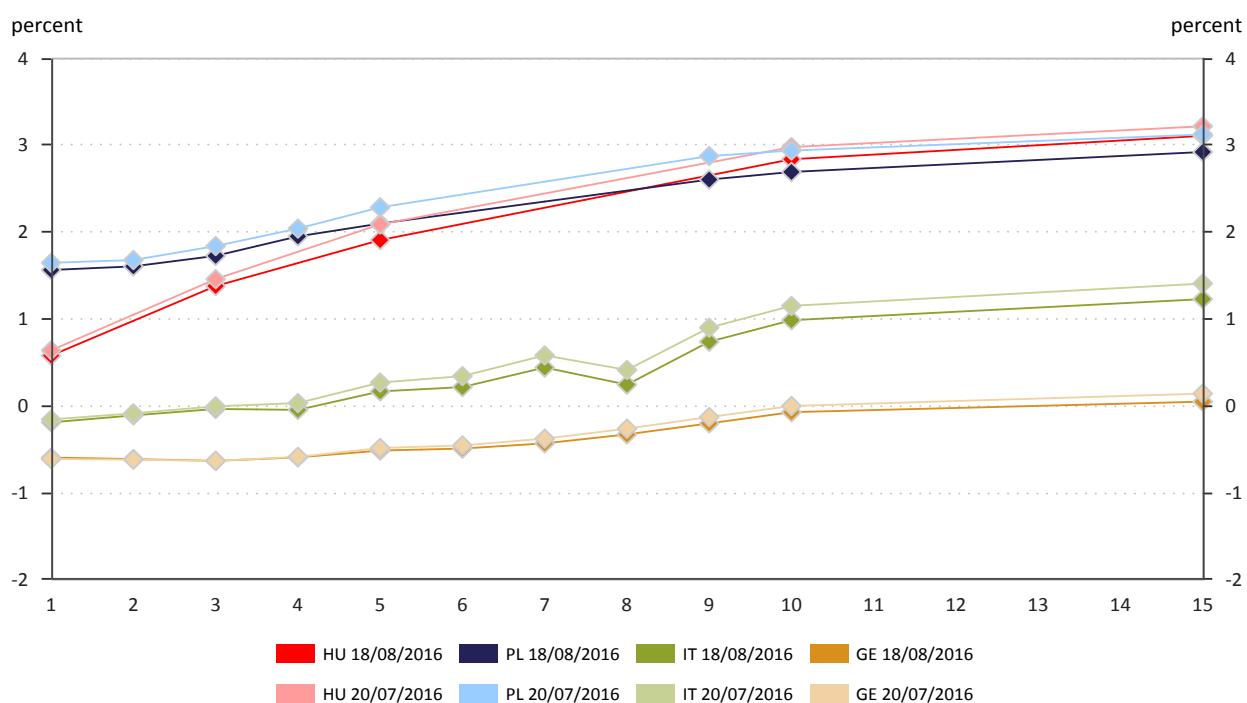
Source: Thomson Reuters

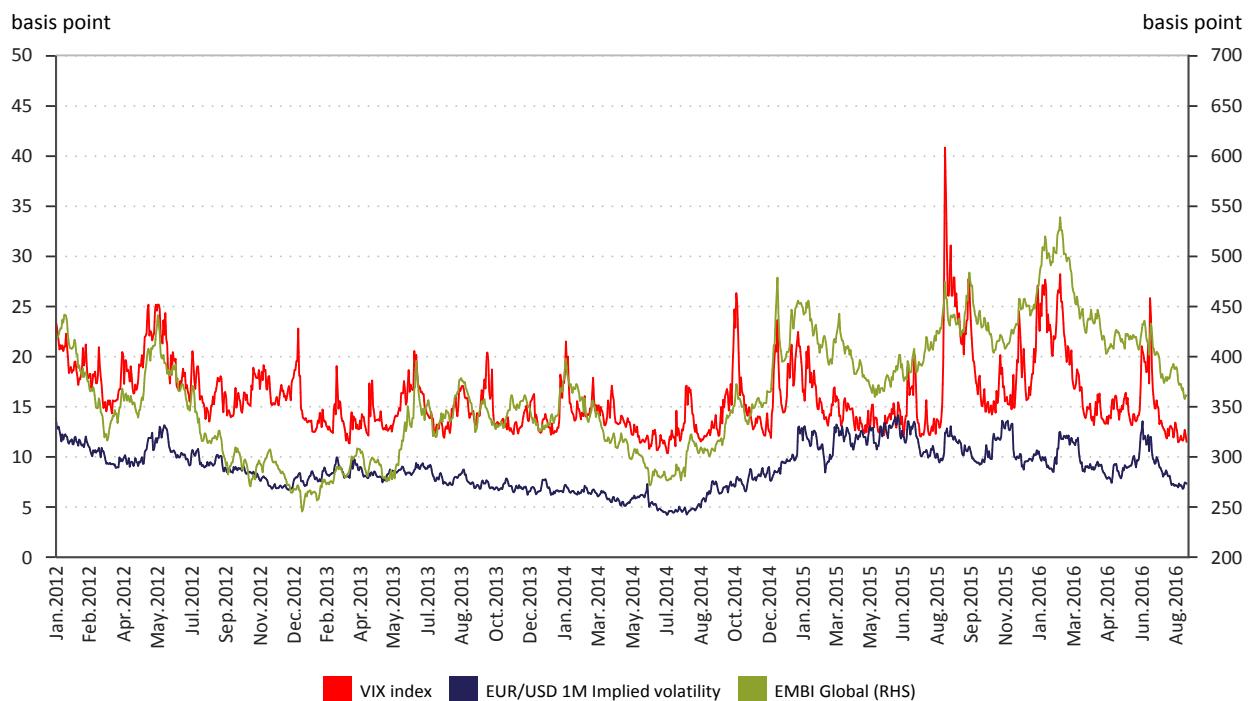
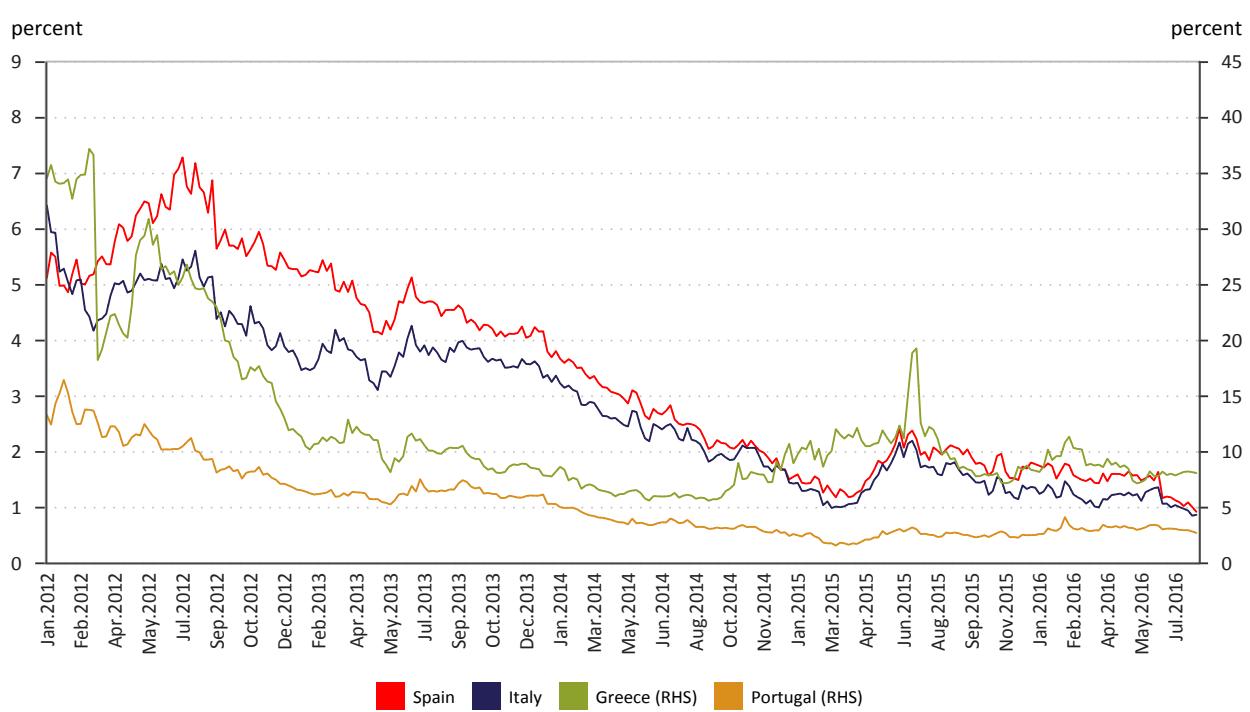
**115. Long term euro and dollar benchmark yields**

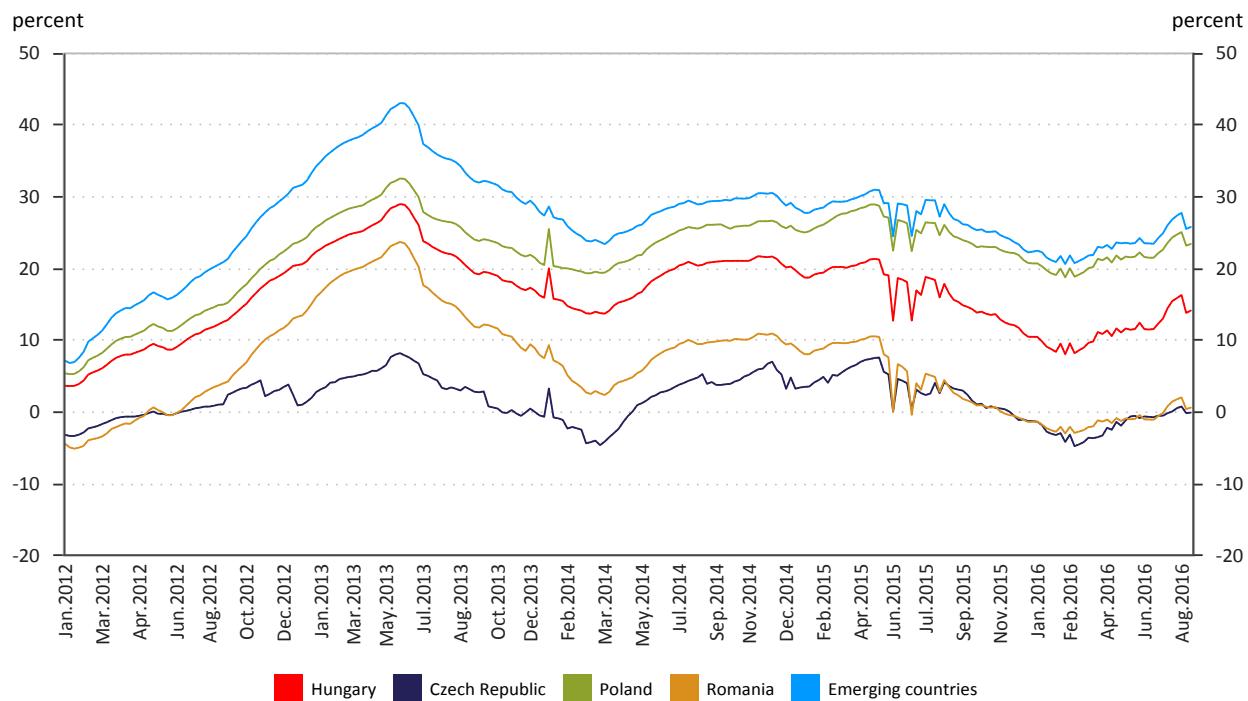
Source: Thomson Reuters.

**116. 5Y sovereign CDS in the eurozone periphery**

Source: Thomson Reuters.

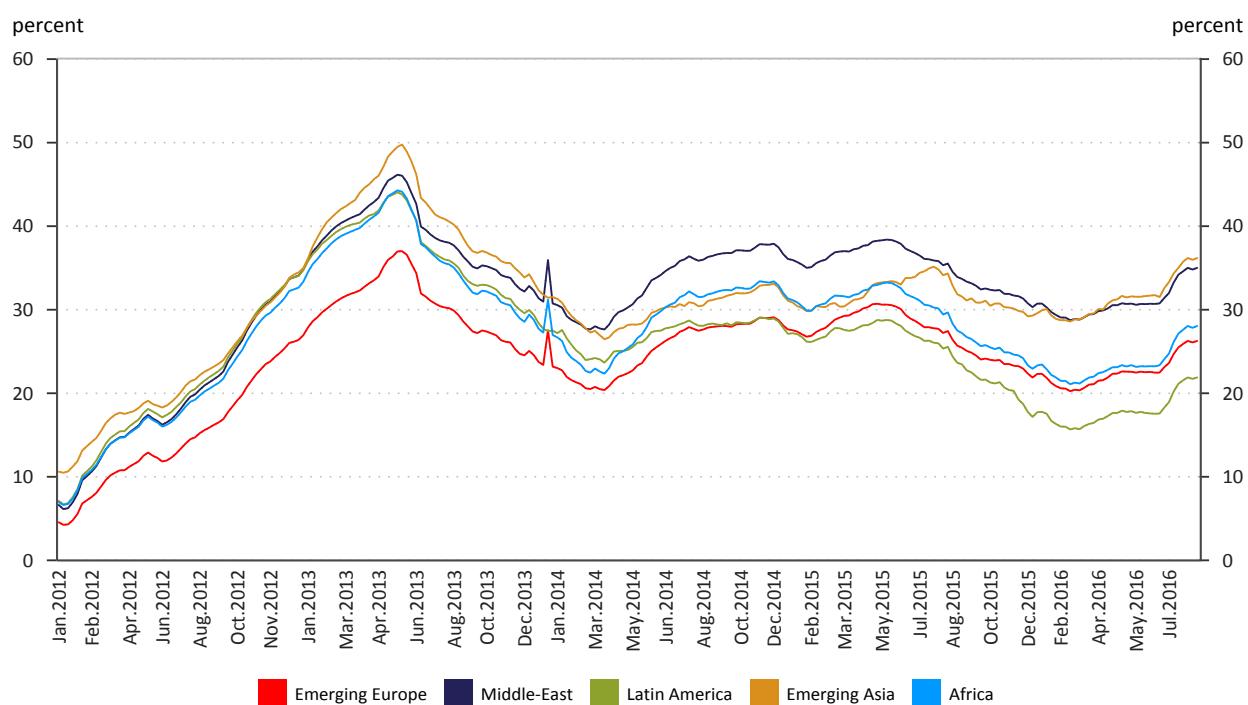
**117. Benchmark yield curves of Hungary, Poland, Italy and Germany**Source: Bloomberg  
Note: X axis is displayed in years.

**118. Main risk indicators****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