



DIRECTORATE MONETARY POLICY AND FINANCIAL MARKET ANALYSIS  
FINANCIAL MARKET ANALYSIS DEPARTMENT

**CHART-PACK ON RECENT  
ECONOMIC AND FINANCIAL  
MARKET DEVELOPMENTS**

**2019**

DECEMBER



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

16 December 2019

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.

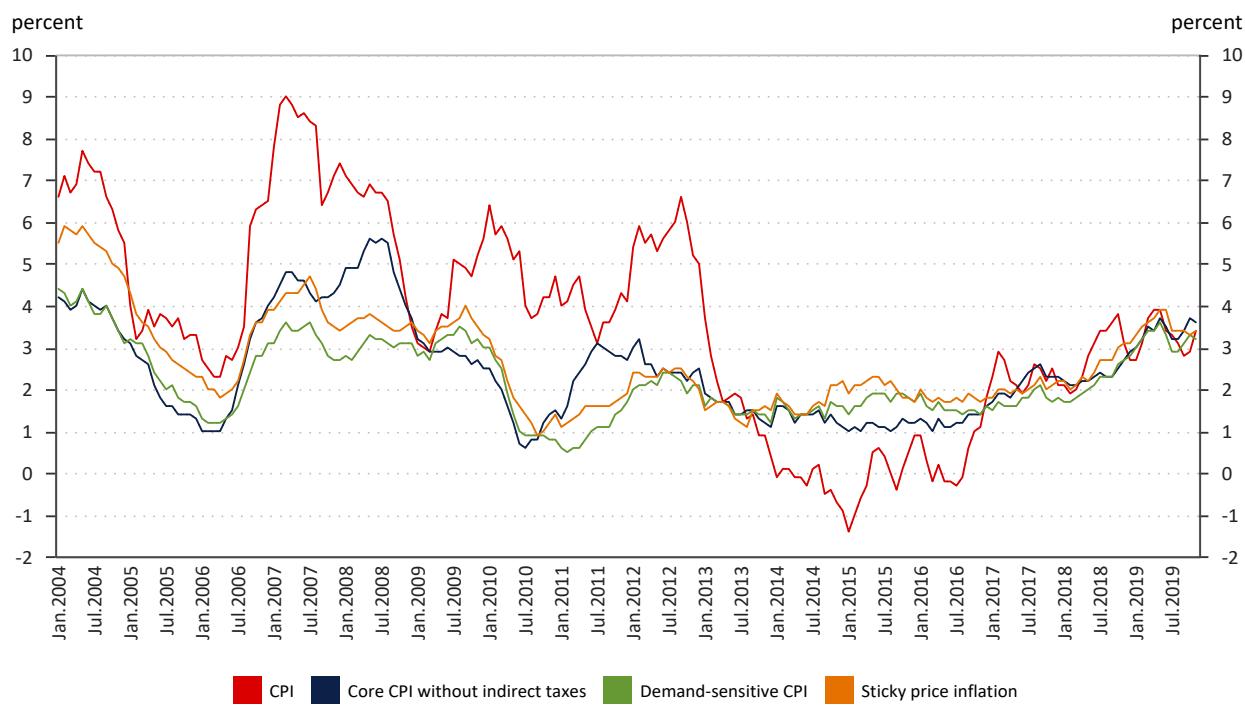
Earlier versions of the chart-pack are accessible on the website of Magyar Nemzeti Bank via the following address.

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

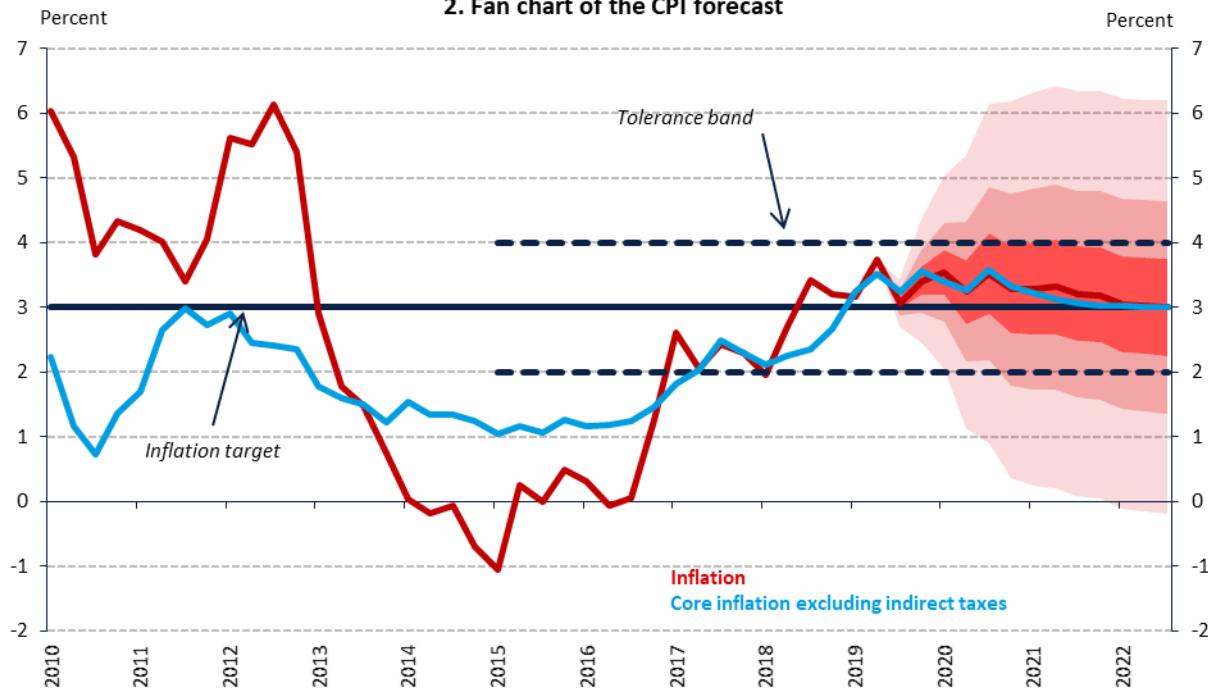
Questions and comments are welcome, and should be addressed to [info@mnb.hu](mailto:info@mnb.hu).

\* 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

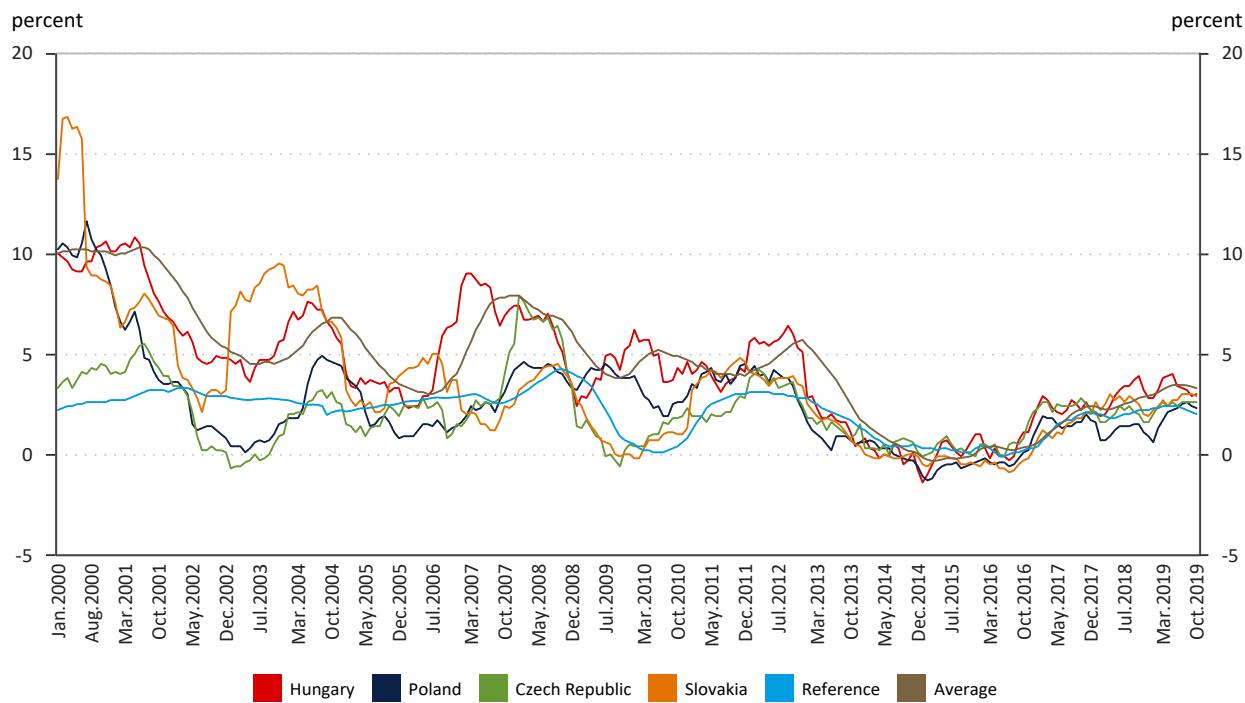


### 2. Fan chart of the CPI forecast



Source: MNB, HSCO. 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. Harmonised index of consumer prices



Source: Eurostat

Note: annual growth rate.

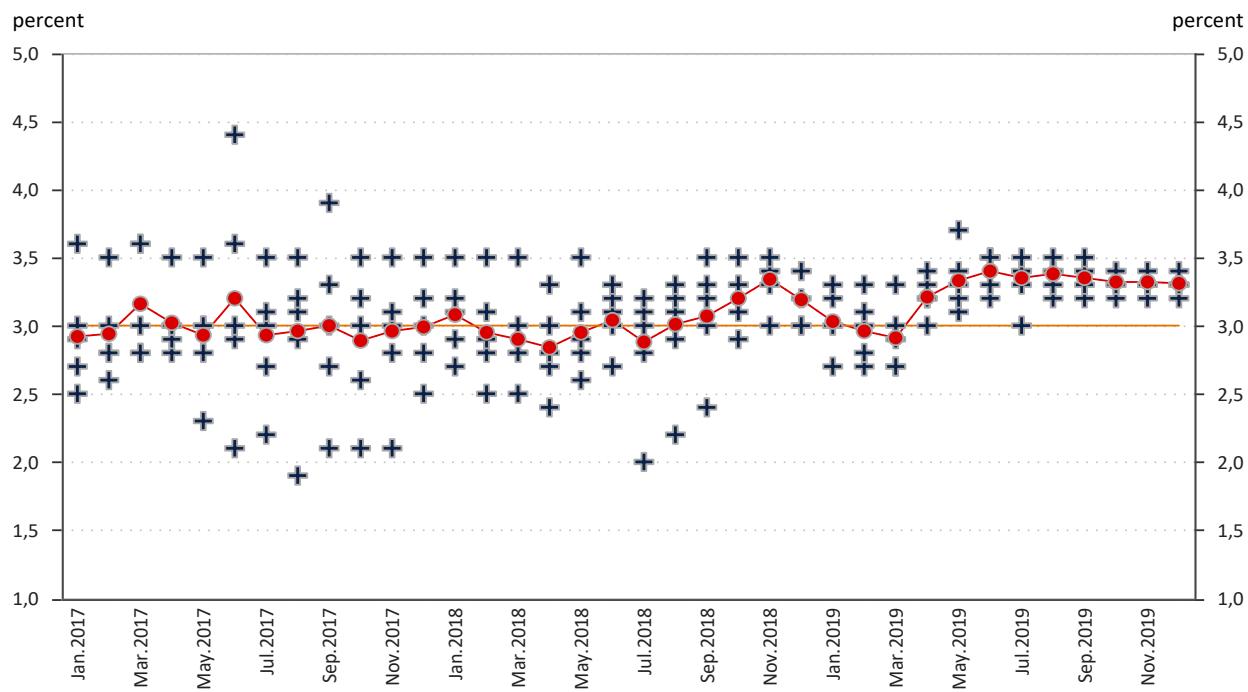
### 4. Decomposition of the Consumer Price Index

	Weight 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019
Consumer Price Index	100.0	3.1	2.8	2.9	3.4
Thereof:					
- Unprocessed food	6.2	9.2	6.4	6.2	7.8
- Processed food	13.1	4.0	4.2	4.8	4.8
- Manufactured goods	23.0	1.0	1.0	0.9	0.7
- Market services	23.3	4.2	4.8	4.9	5.0
- Non-regulated household energy	0.9	7.6	5.6	5.2	5.3
- Alcohol, tobacco	9.6	8.8	8.4	8.4	8.3
- Gasoline prices	7.2	-2.5	-4.7	-4.1	0.0
- Regulated prices	16.7	0.8	0.7	0.6	0.6
Core Consumer Price Index	69.0	3.7	3.9	4.0	4.0
CPI without tax changes	100.0	2.9	2.7	2.8	3.2

Source HCSO, MNB decomposition

Notes: annual growth rates (%). Seasonally not adjusted data.

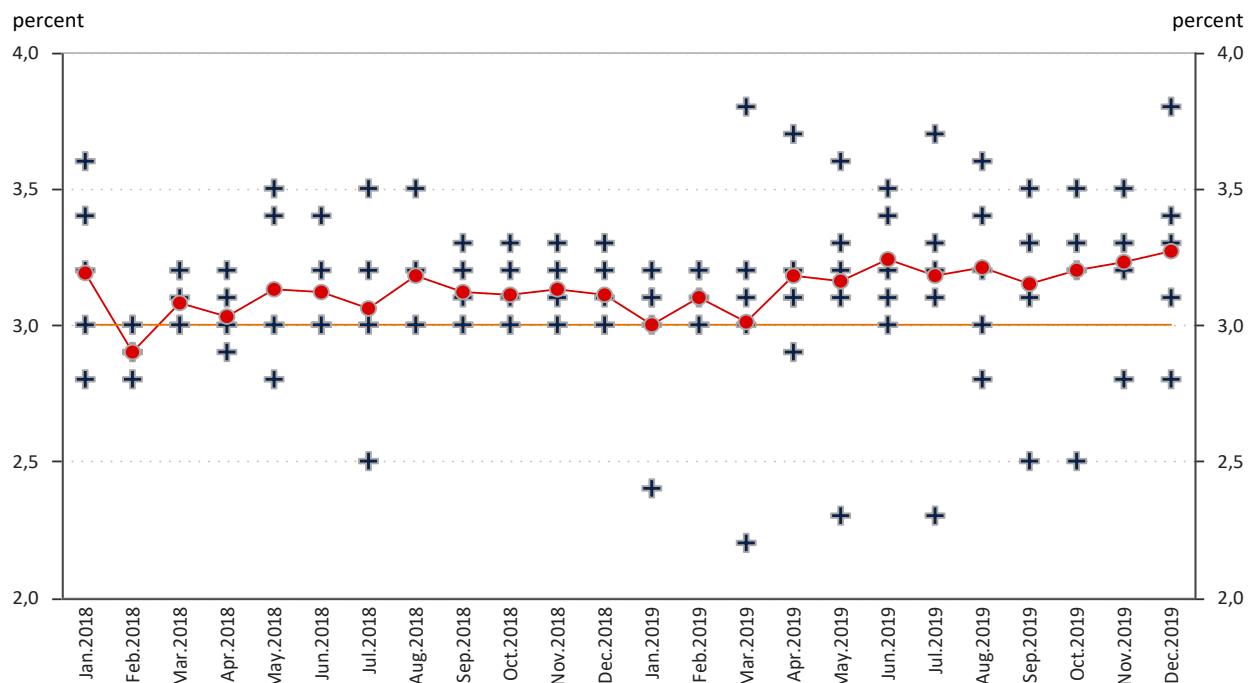
### 5. Market expectations for the inflation rate in current year



Source: Thomson Reuters

Note: crosses mark the quartiles of the analyst forecasts and the minimum and maximum values, the red continuous line represents the mean calculated by values, the brown line shows the inflation target of MNB.

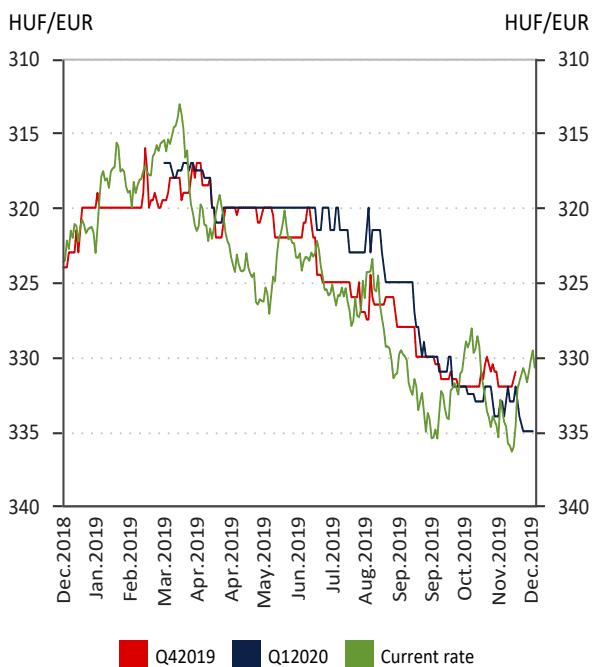
### 6. Market expectations for the inflation rate next year



Source: Thomson Reuters

Note: crosses mark the quartiles of the analyst forecasts and the minimum and maximum values, the red continuous line represents the mean calculated by values, the brown line shows the inflation target of MNB.

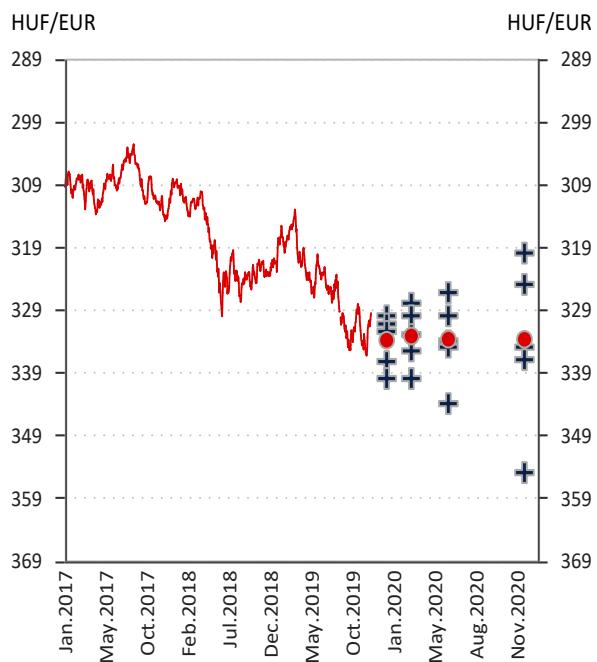
### 7. Expectations for HUF/EUR exchange rate (Bloomberg collection)



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.

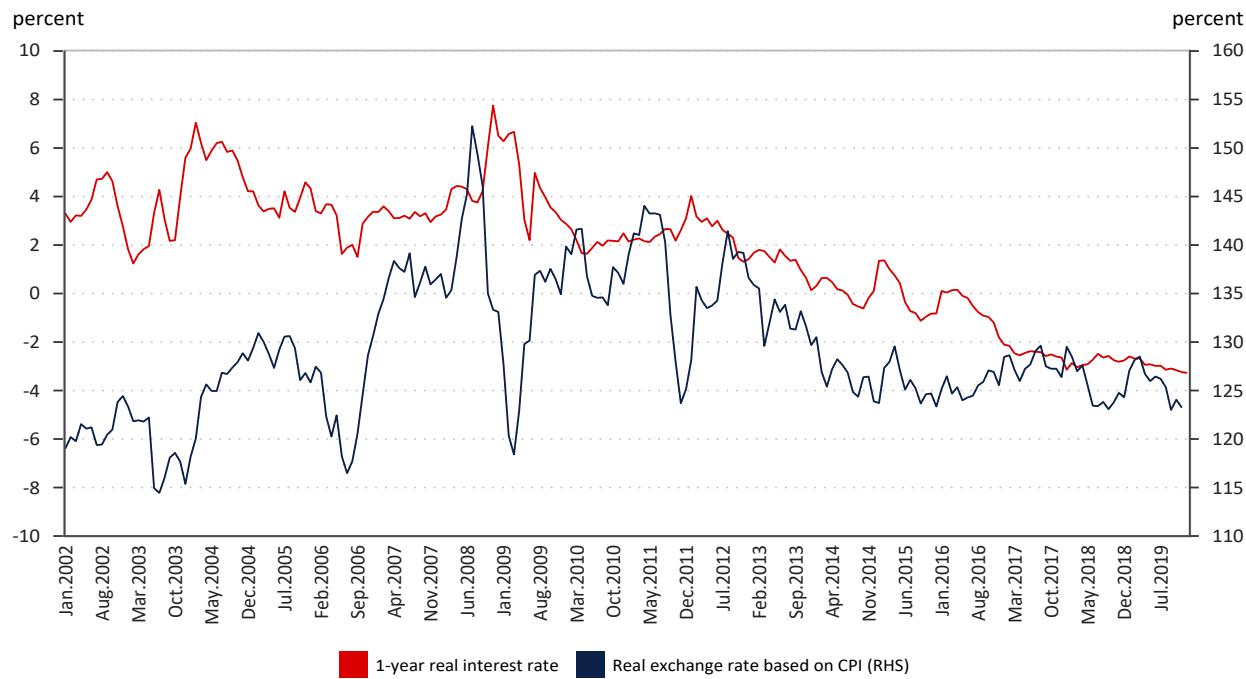
### 9. Spot and futures Brent crude oil price



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 Inflation Report

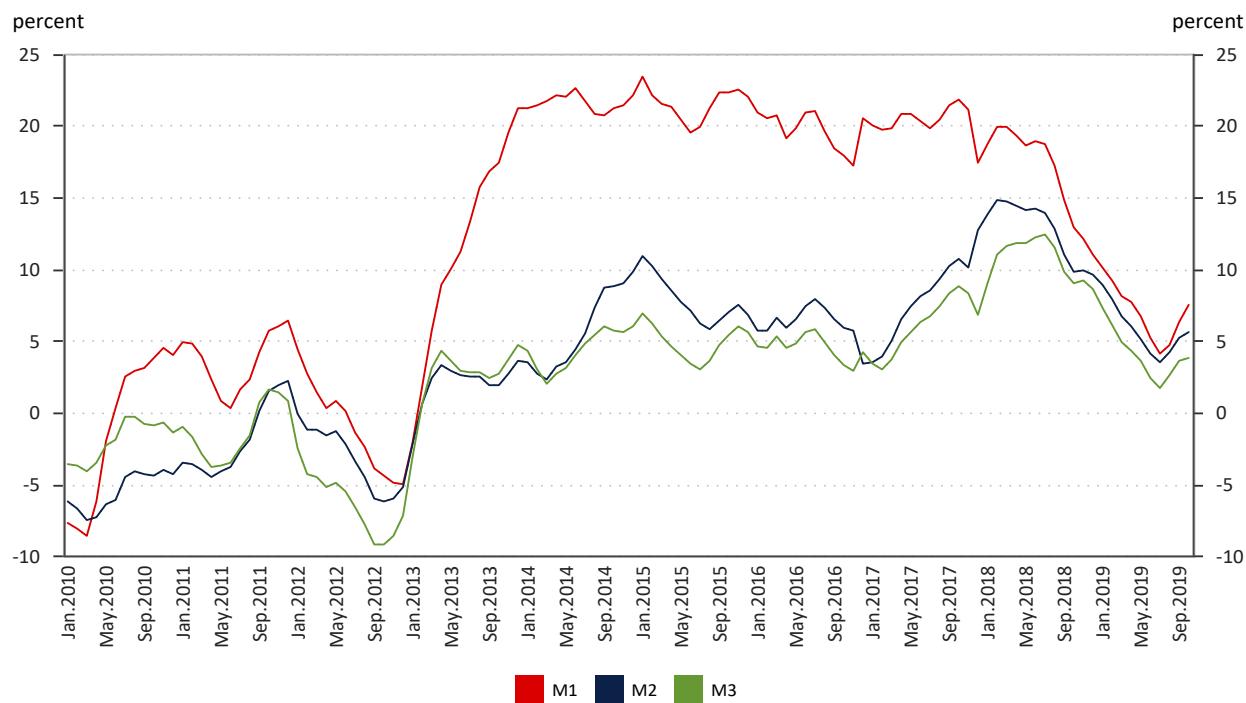
### 10. Monetary conditions



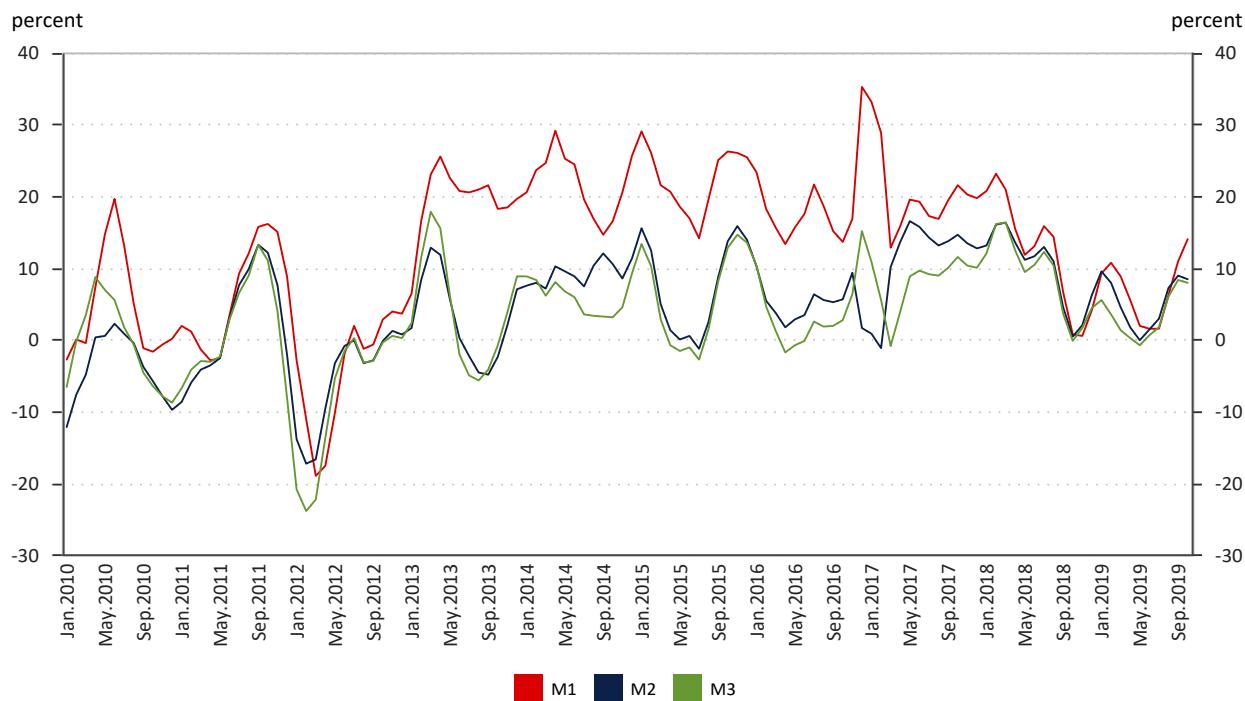
Source: Reuters, HCSO, Eurostat, ÁKK, MNB

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 2000=100%, increase represents appreciation)

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



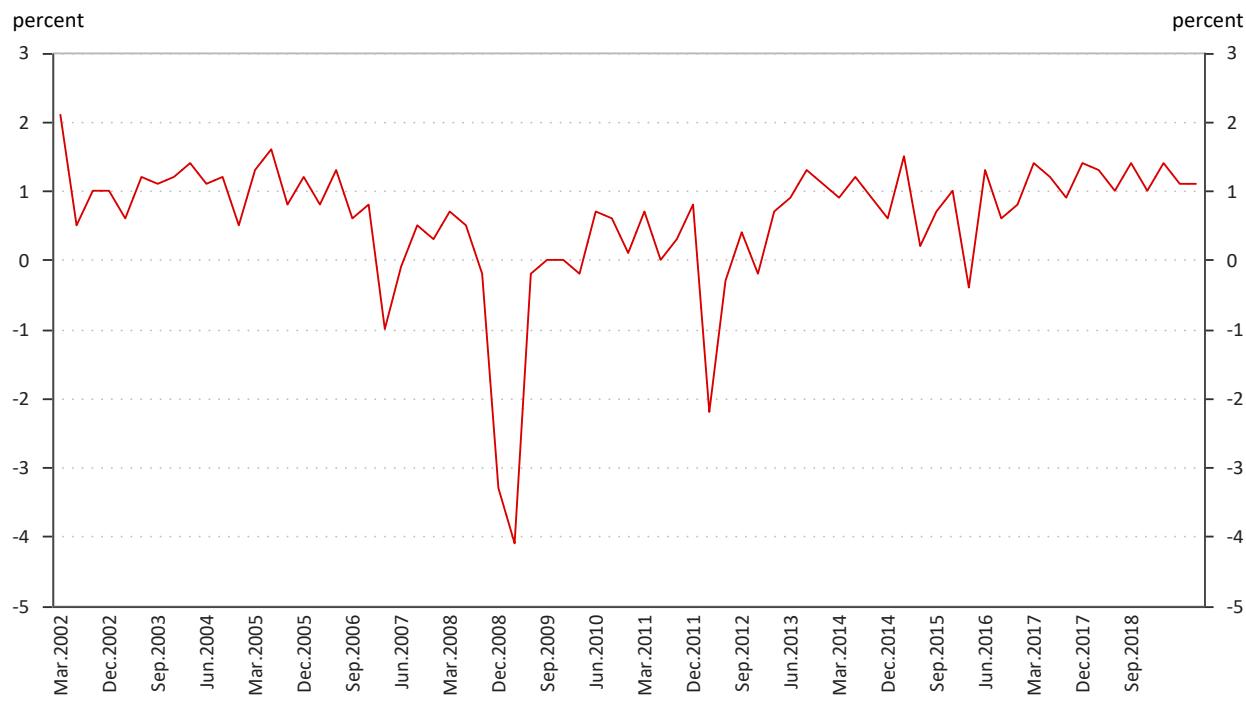
Source: MNB.

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

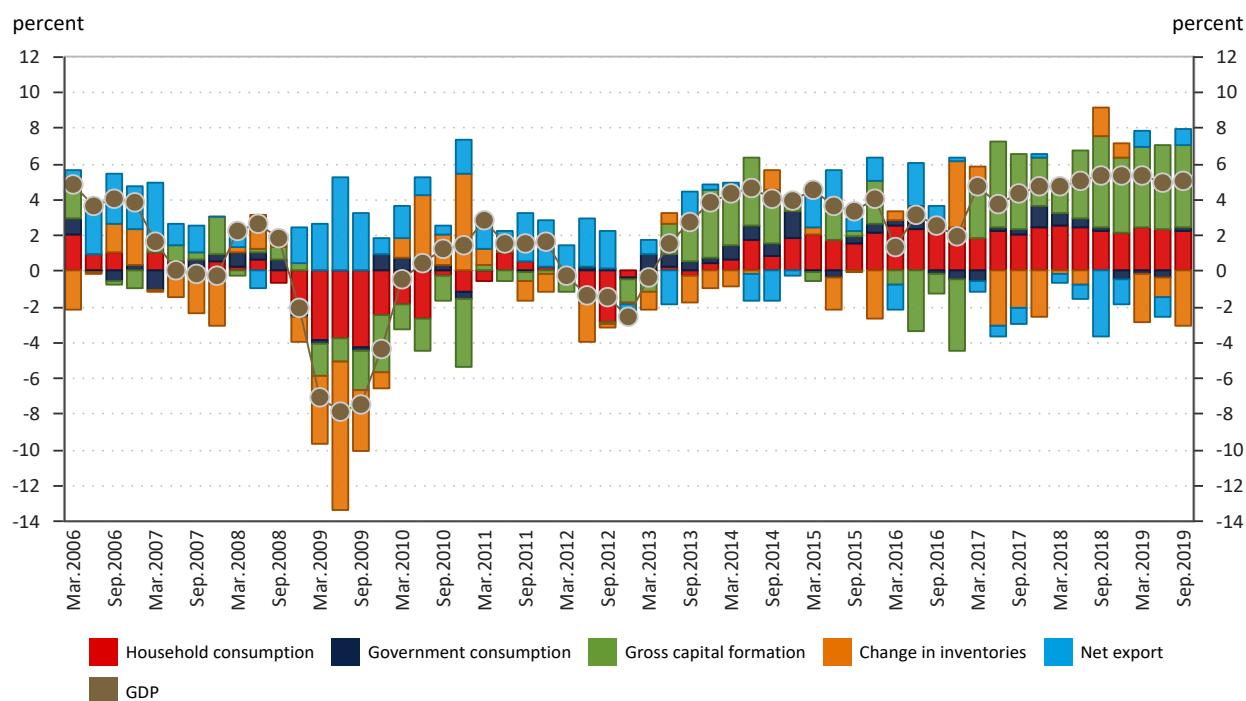
Source: MNB.

**13. Change in annual GDP**

Source: HSCO

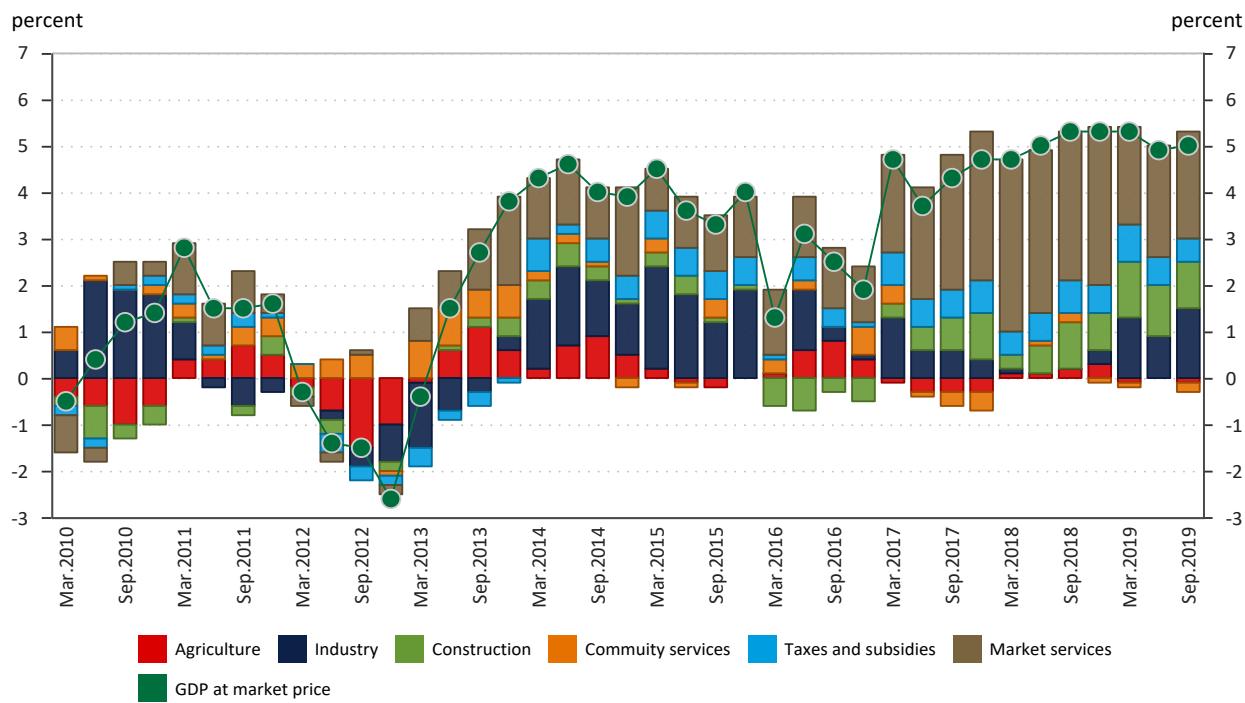
**14. Quarterly GDP change**

Source: MNB, HSCO.

**15. Contribution to annual GDP growth**

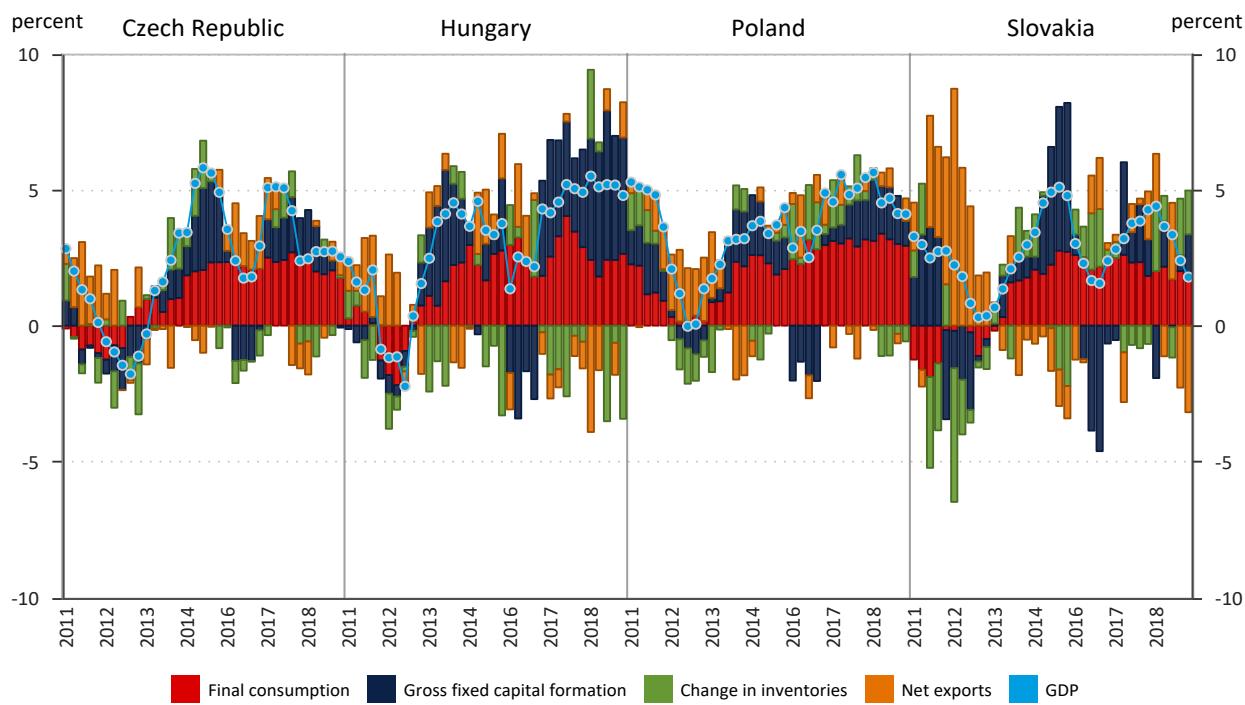
Source: MNB, HSCO.

### 16. Decomposition of GDP growth

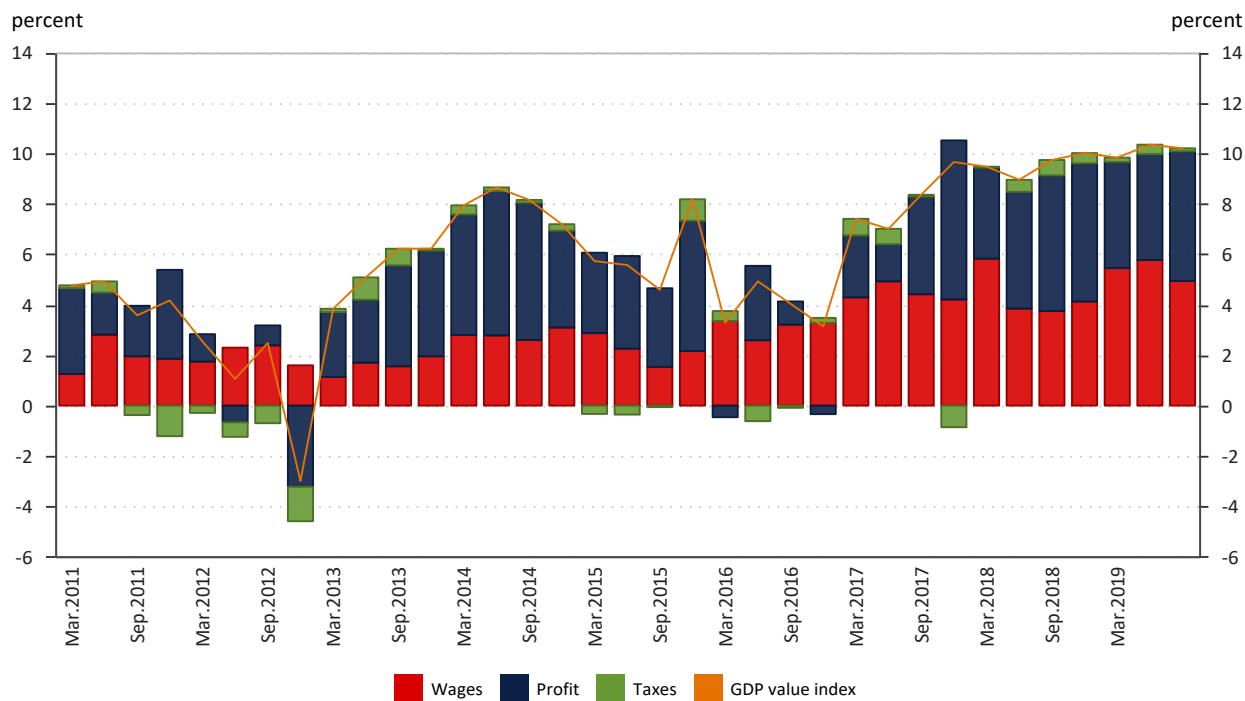


Source: HSCO.

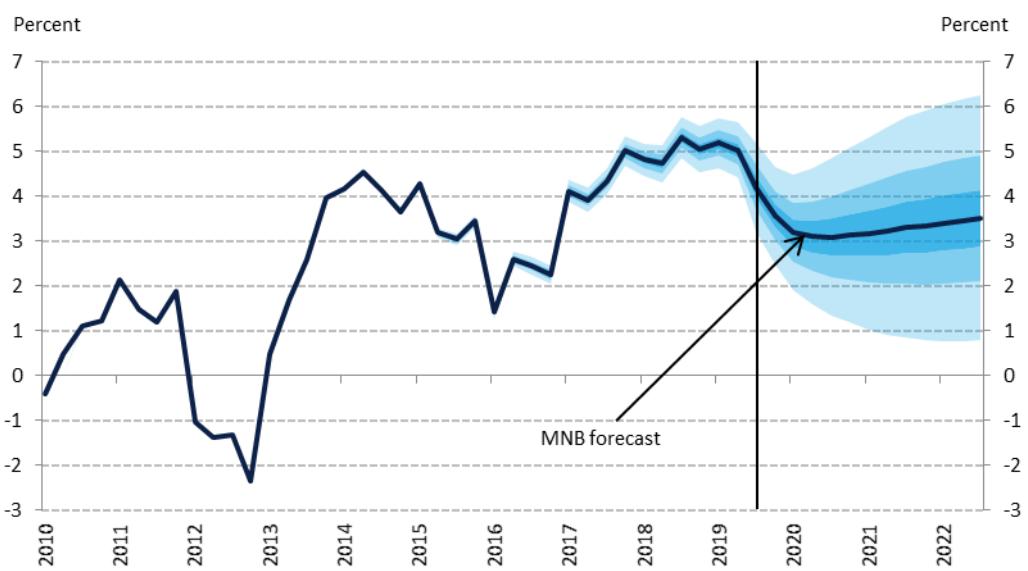
### 17. Contribution to annual GDP growth in the region



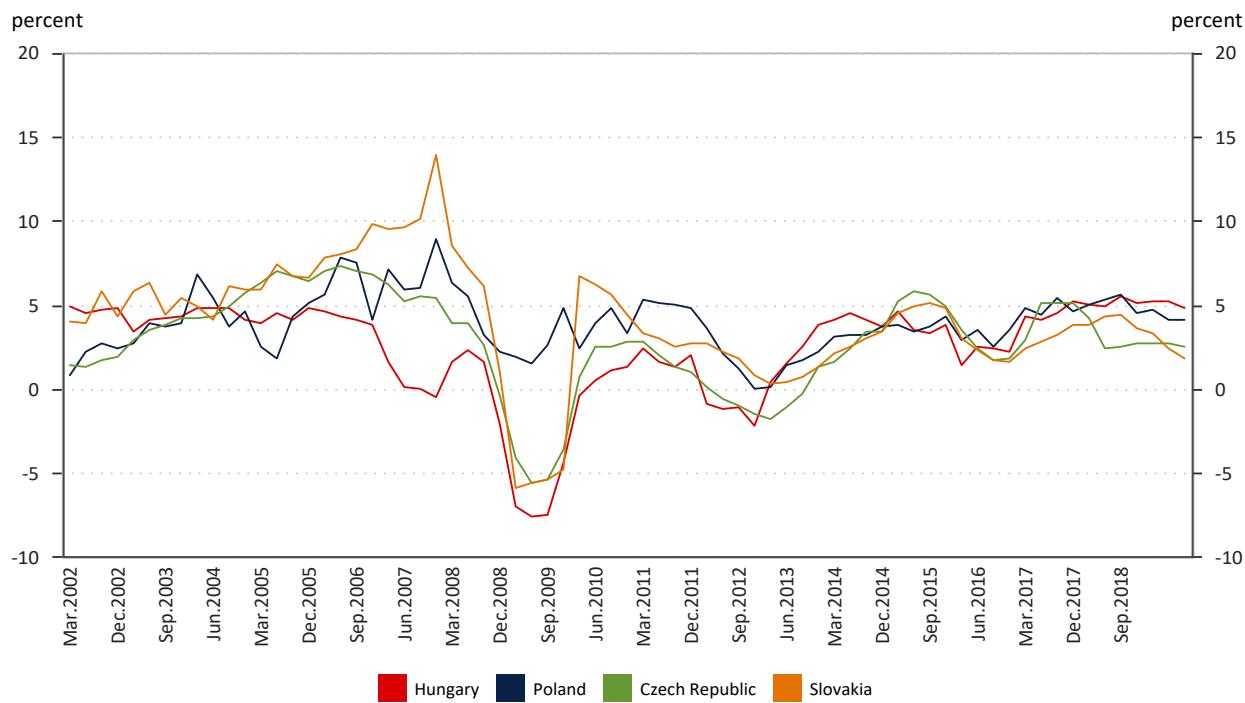
Source: MNB, HSCO. Note: based on seasonally and calendar adjusted and reconciled data

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

Source: MNB, HSCO Note: contribution in percentage points

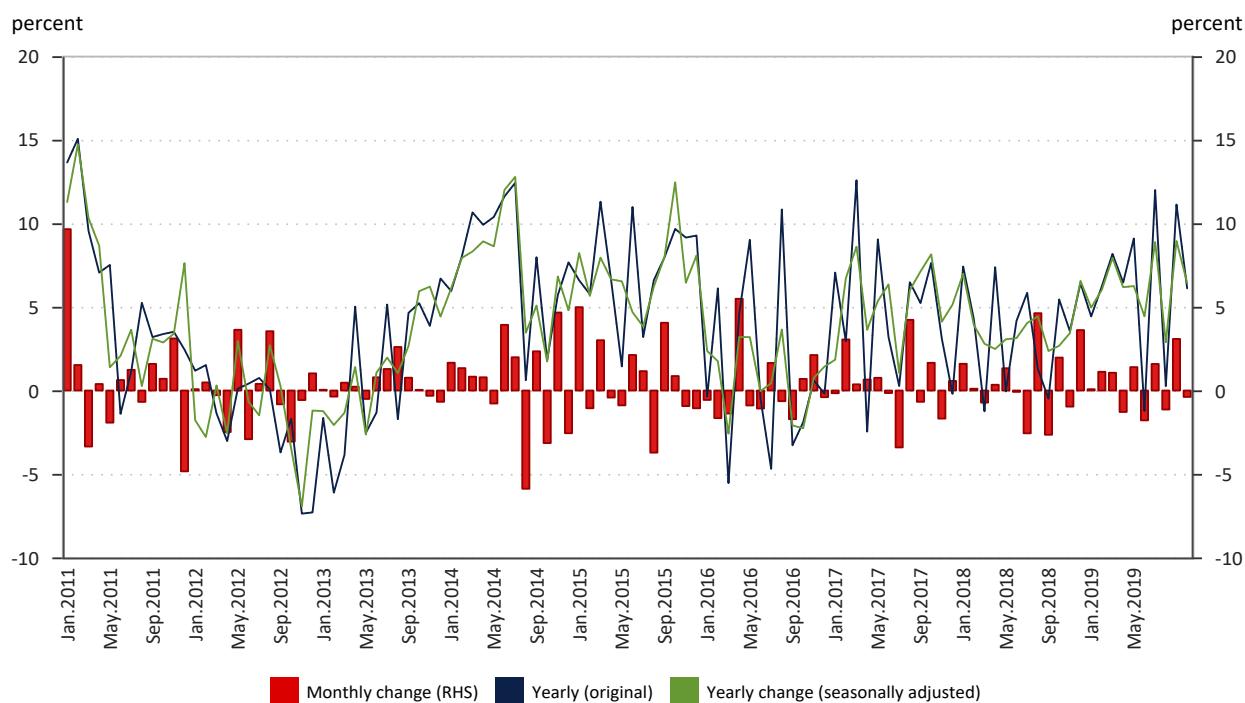
**19. Fan chart of the GDP forecast**

Source: HCSO, MNB

**20. GDP growth rate in CEE**

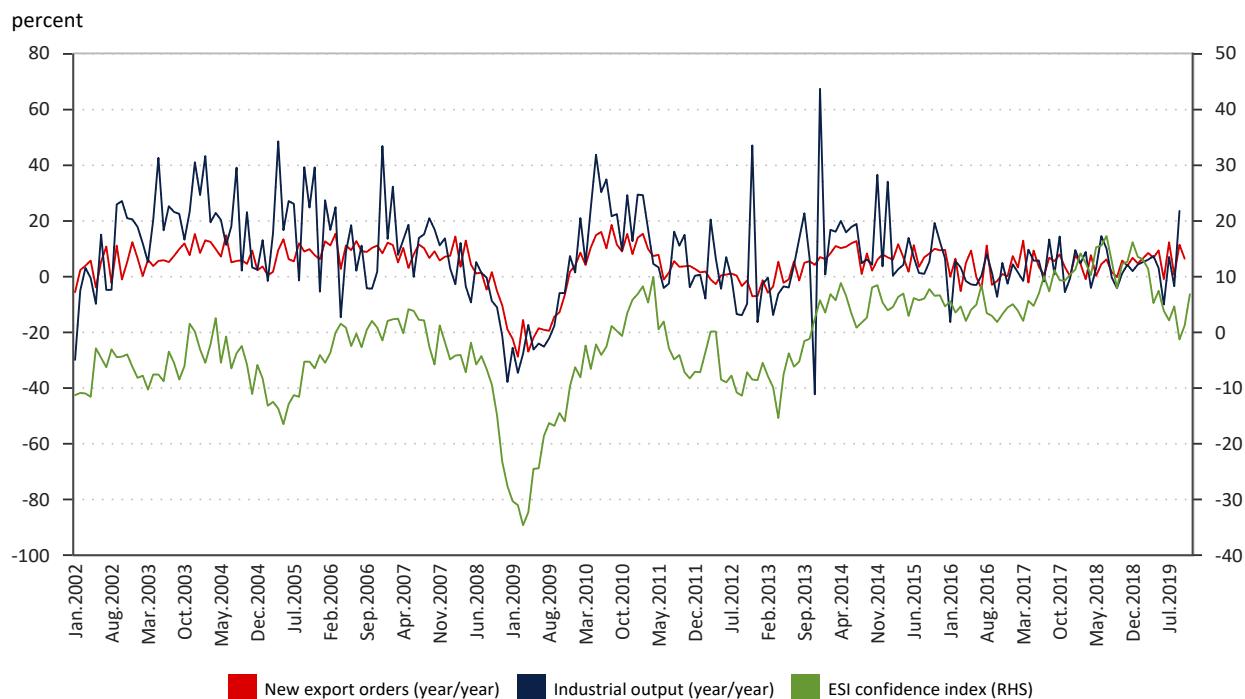
Source: Eurostat

Note: annual growth rate.

**21. Change in industrial production**

Source: MNB, HCSO.

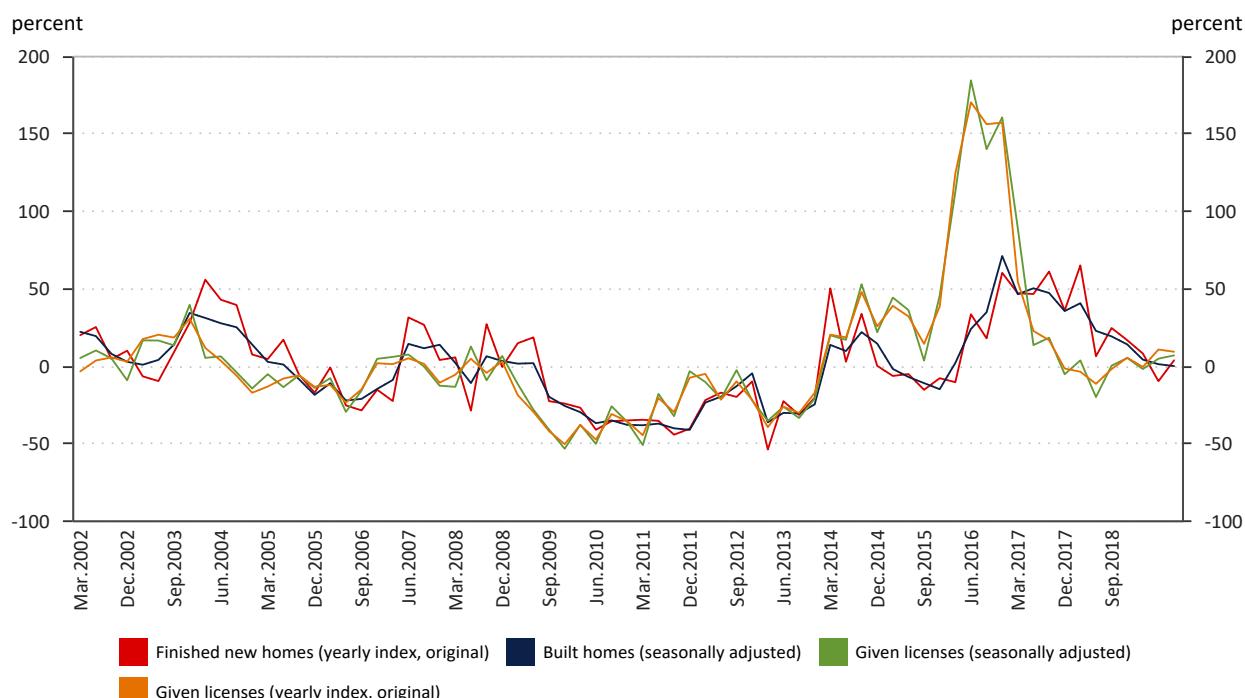
## 22. Industrial production and new export orders



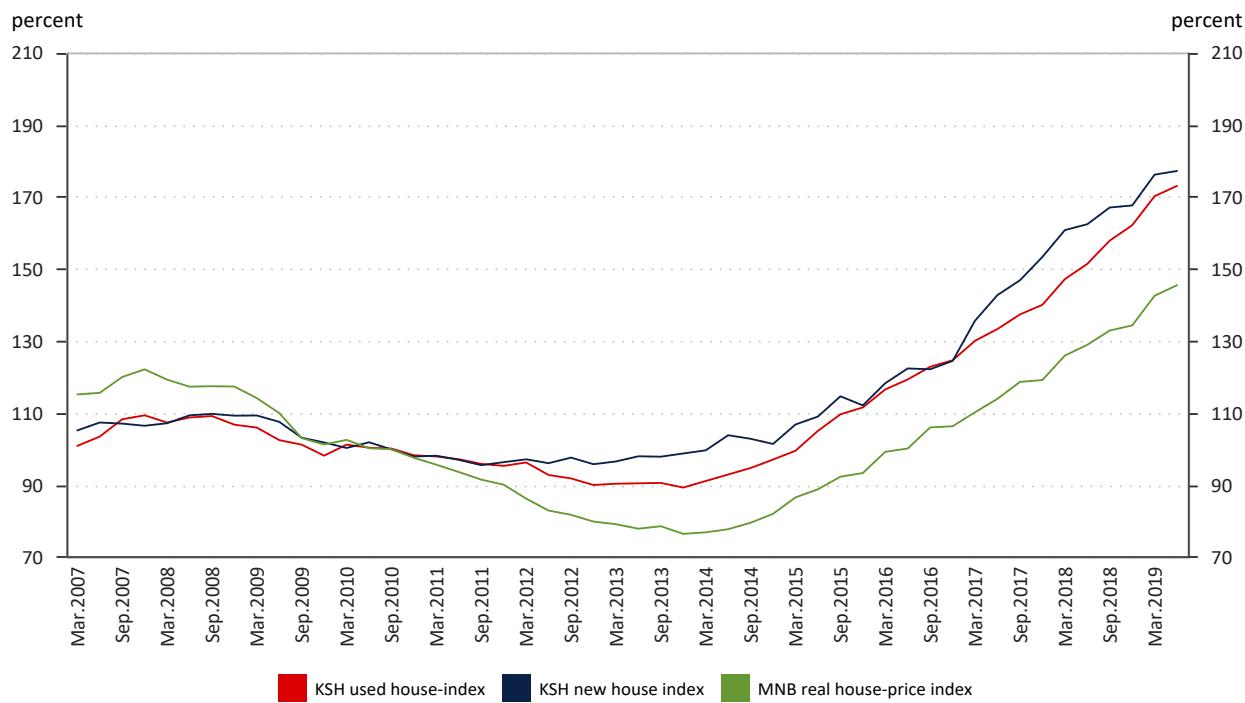
Source: HSCO, European Commission.

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

## 23. Developments on the real estate market

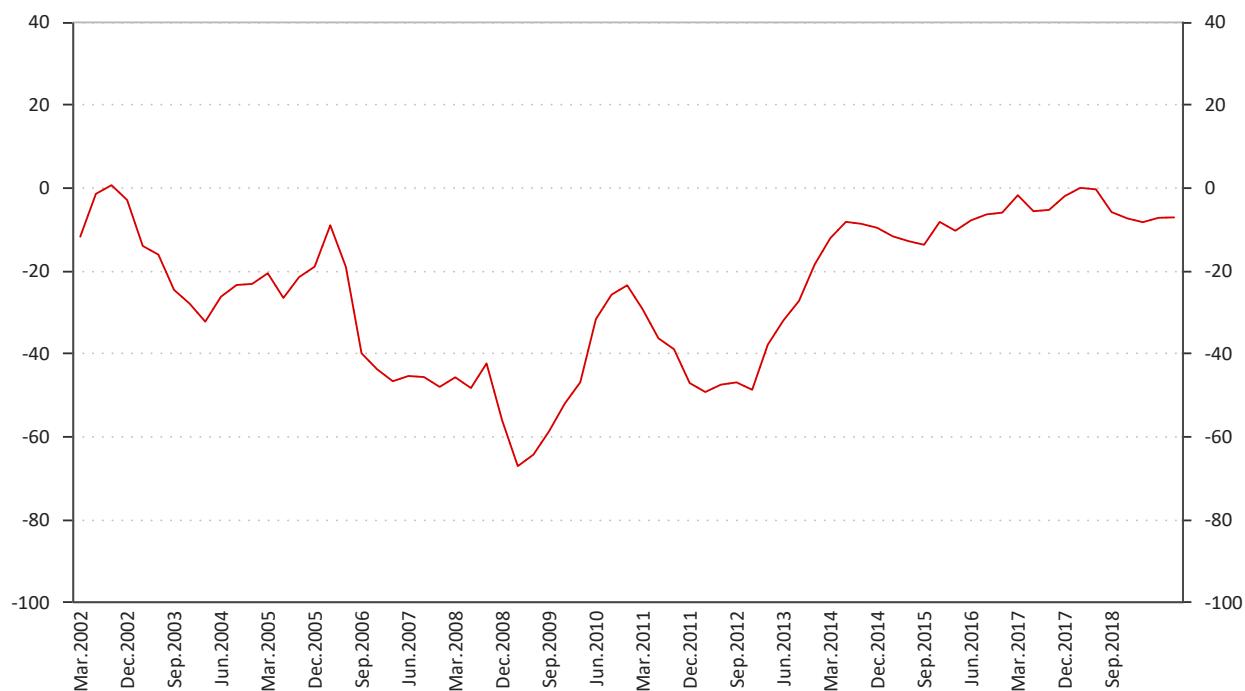


Source: MNB, HSCO.

**24. Development of house prices**

Source: HCSO

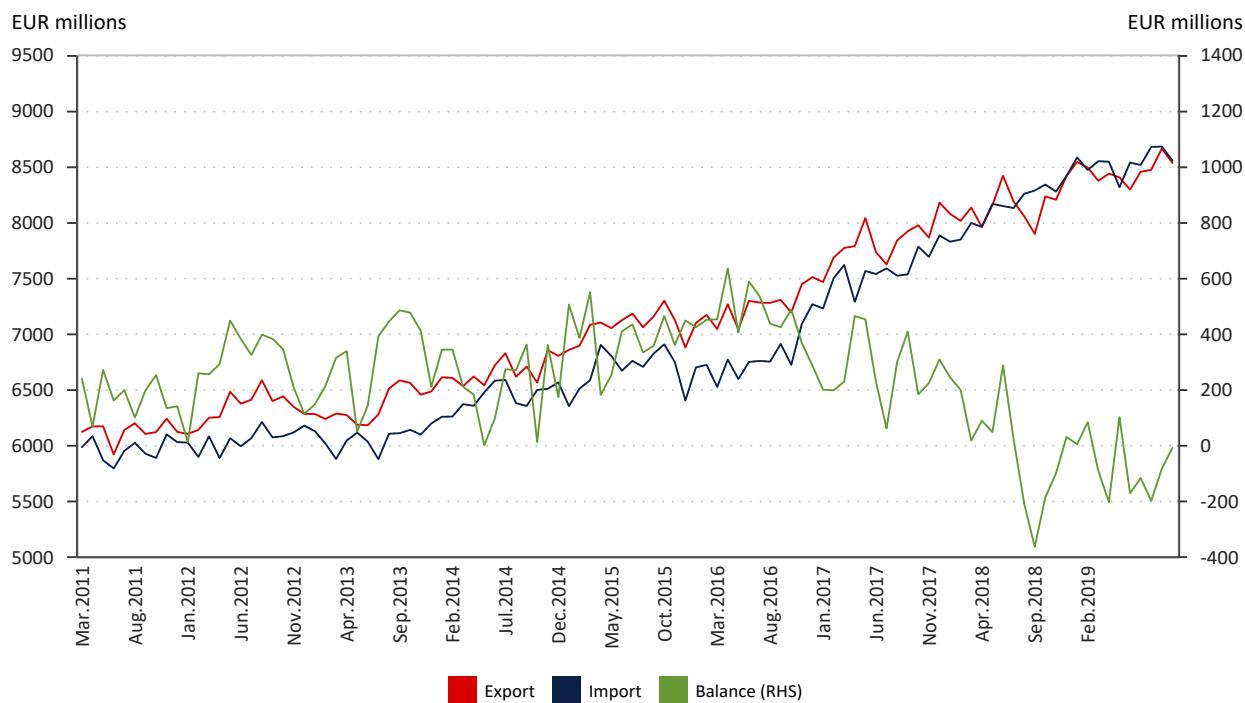
Note: 2010=100, inflation adjusted indices.

**25. Household confidence index (reweighted)**

Source: European Commission.

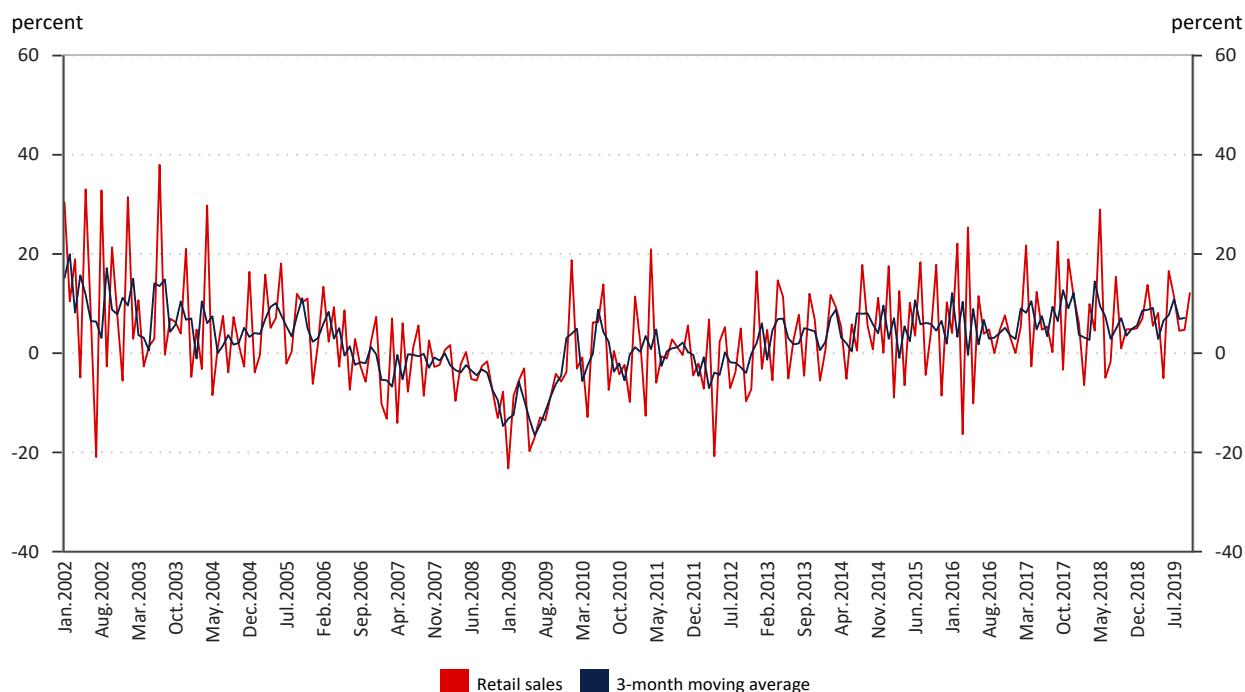
Note: Household confidence indicator is a composite indicator based on the ESI survey

### 26. Change in export and import volumes



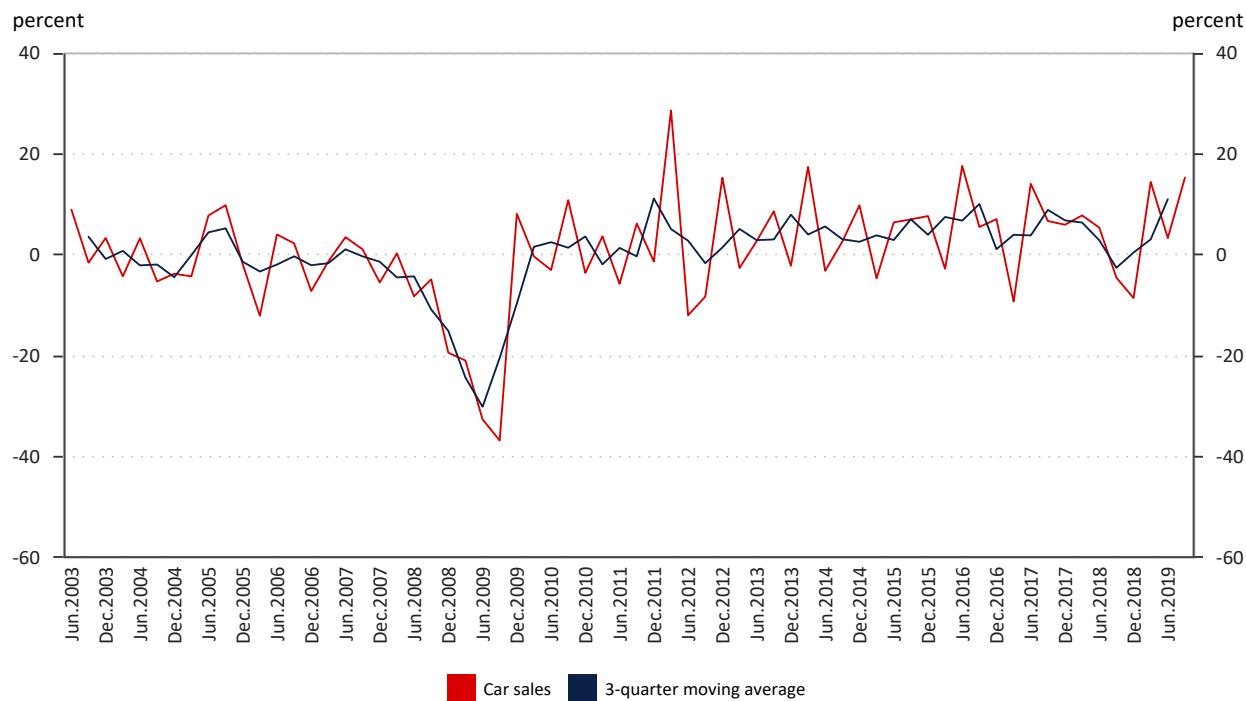
Source: HCSO, MNB calculation. Comment: Foreign trade was corrected due to slippage and missing items between specific months and the activity of VAT resident companies. The seasonal adjustment of the trade balance was done directly by MNB

### 27. Total volume of retail trade

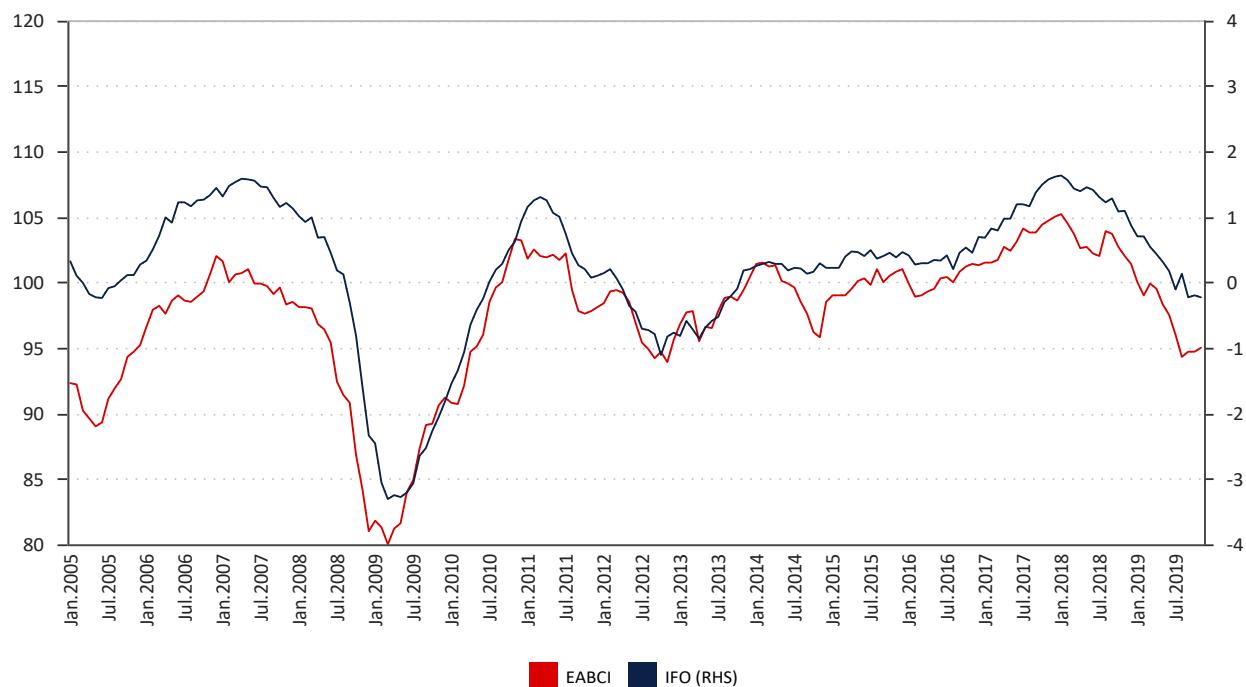


Source: HCSO.

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

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

Source: ACEA.

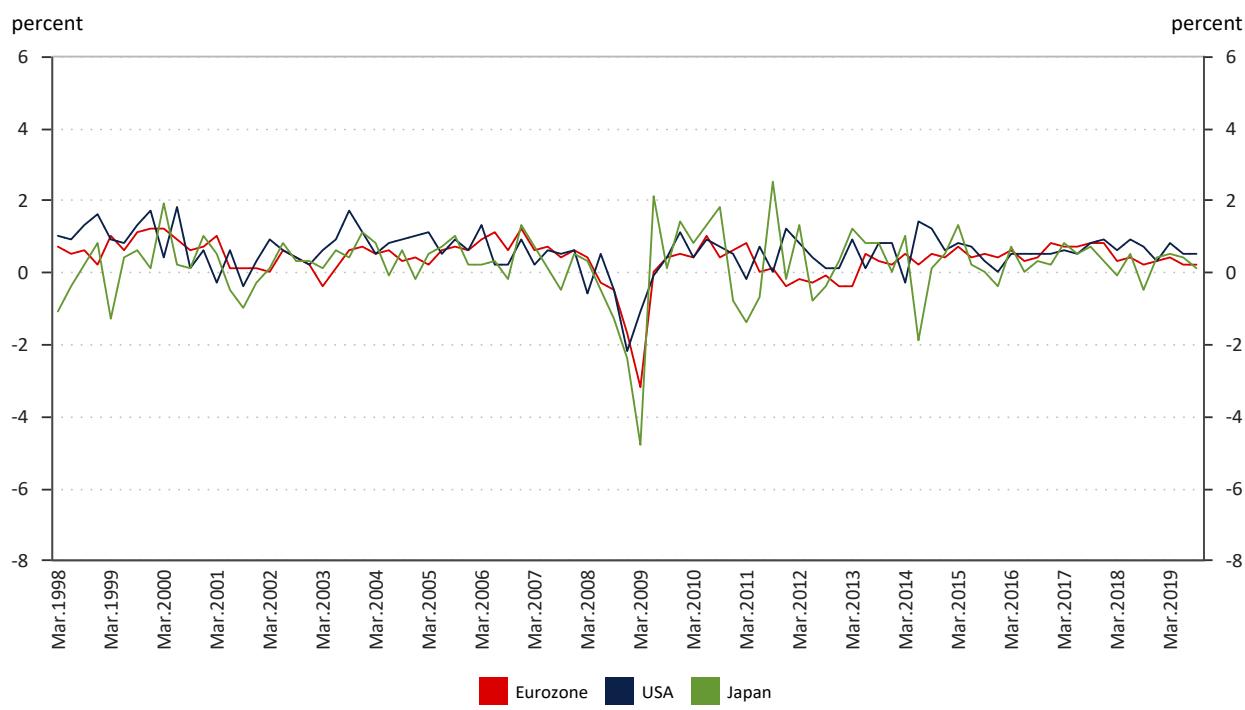
**29. Business climate indices in the EMU**

Source: IFO; European Committee.

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

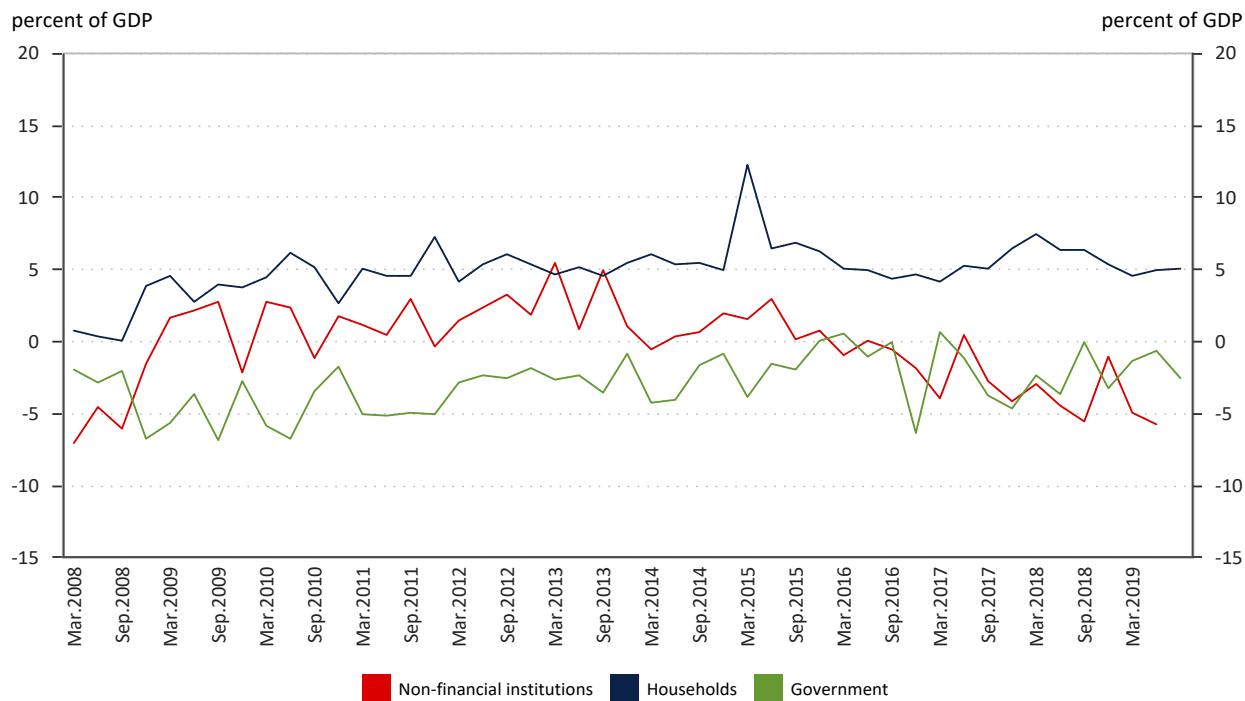
**30. The annual growth rate of the volume of imported goods and services**

Source: Eurostat.

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

Source: Eurostat

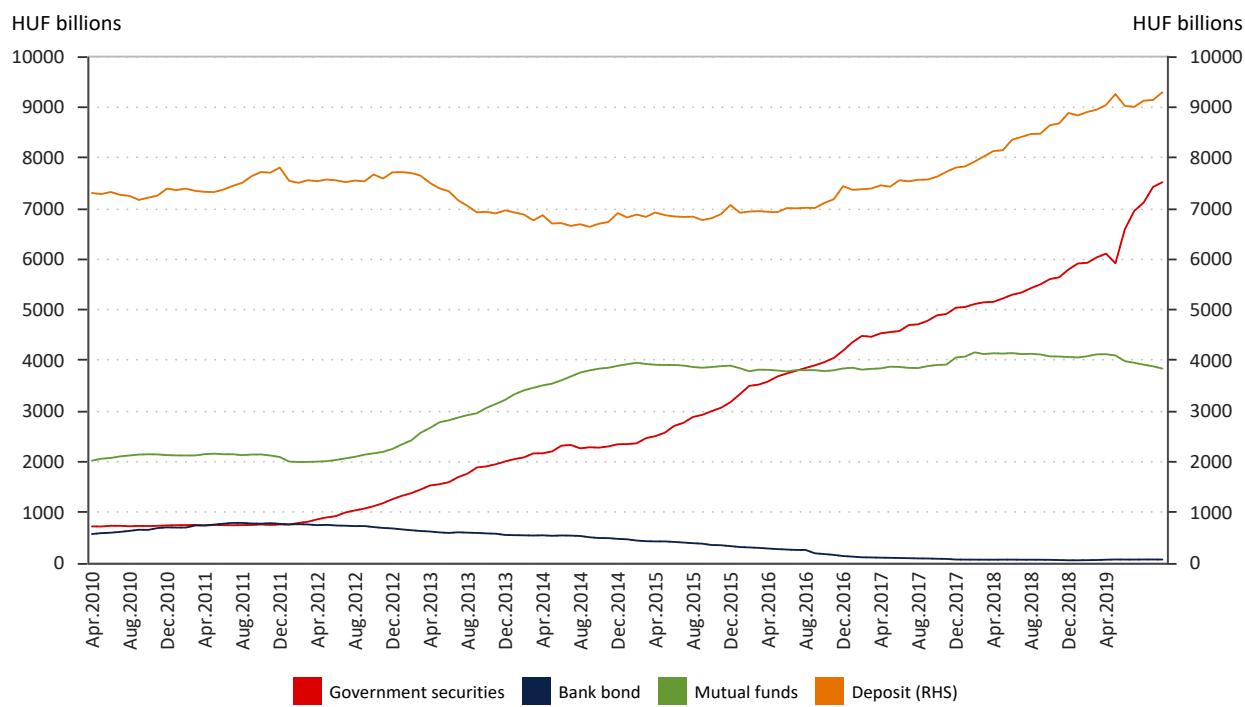
### 32. Net lending of domestic sectors



Source: MNB.

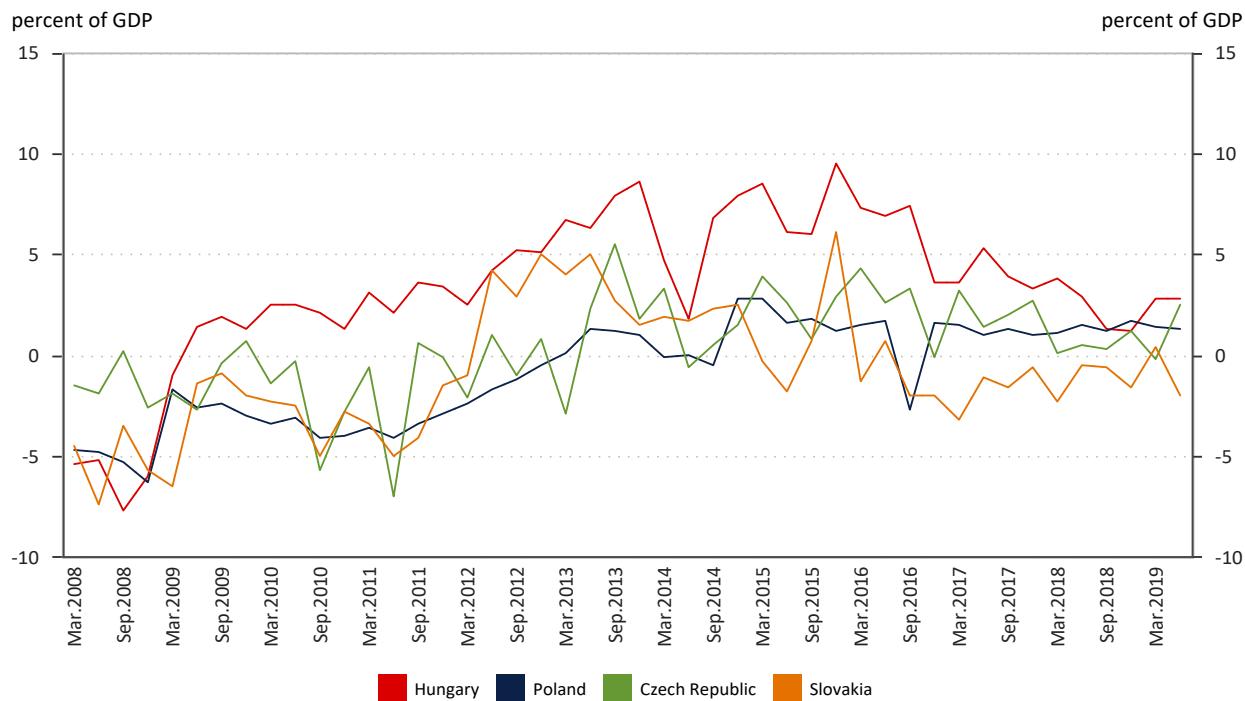
Note: Seasonally adjusted by MNB.

### 33. Main financial assets held by households



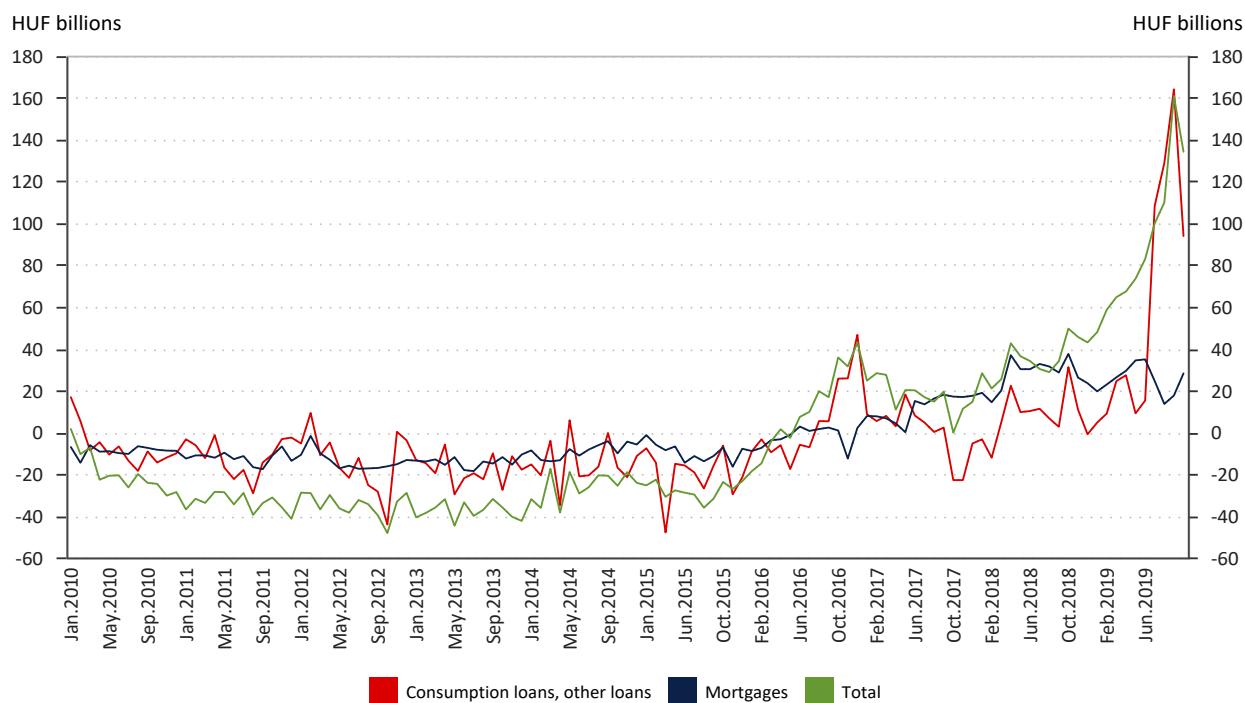
Source: MNB.

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



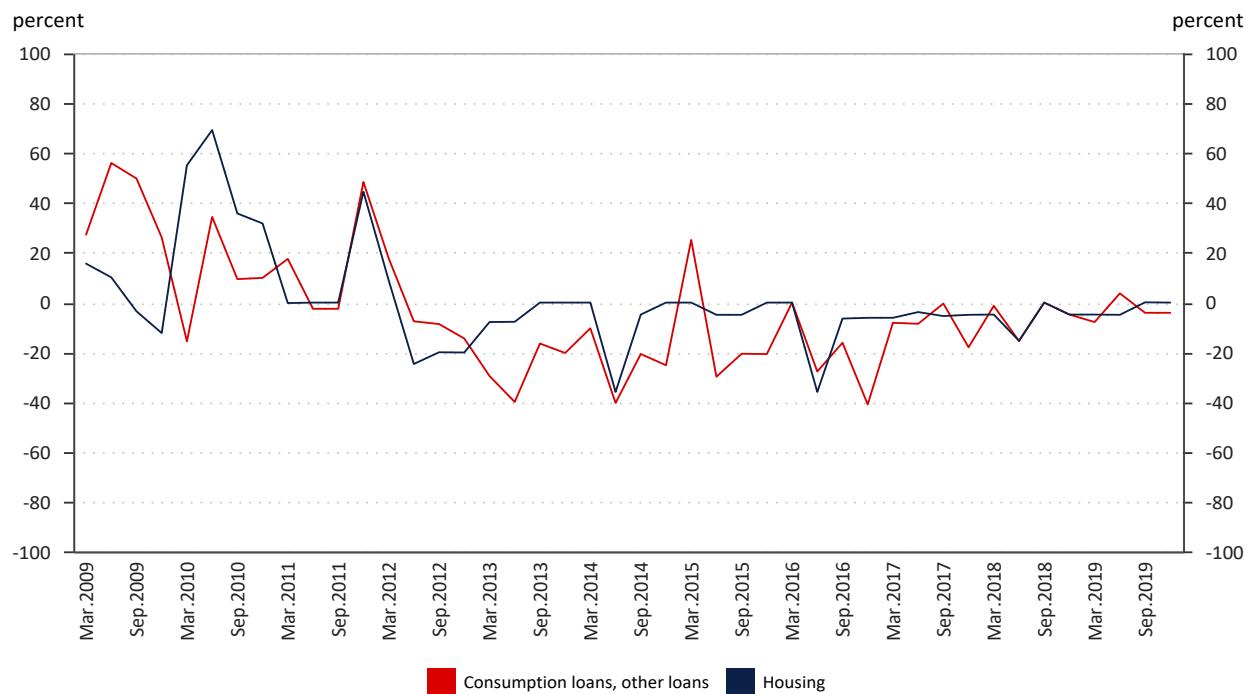
Source: MNB, Eurostat.

### 35. Net borrowing of the households



Source: MNB.

Notes: Figure showing underlying trends, adjusted for the impact of the forint conversion and settlement.

**36. Creditworthiness standards and credit conditions in the household sector**

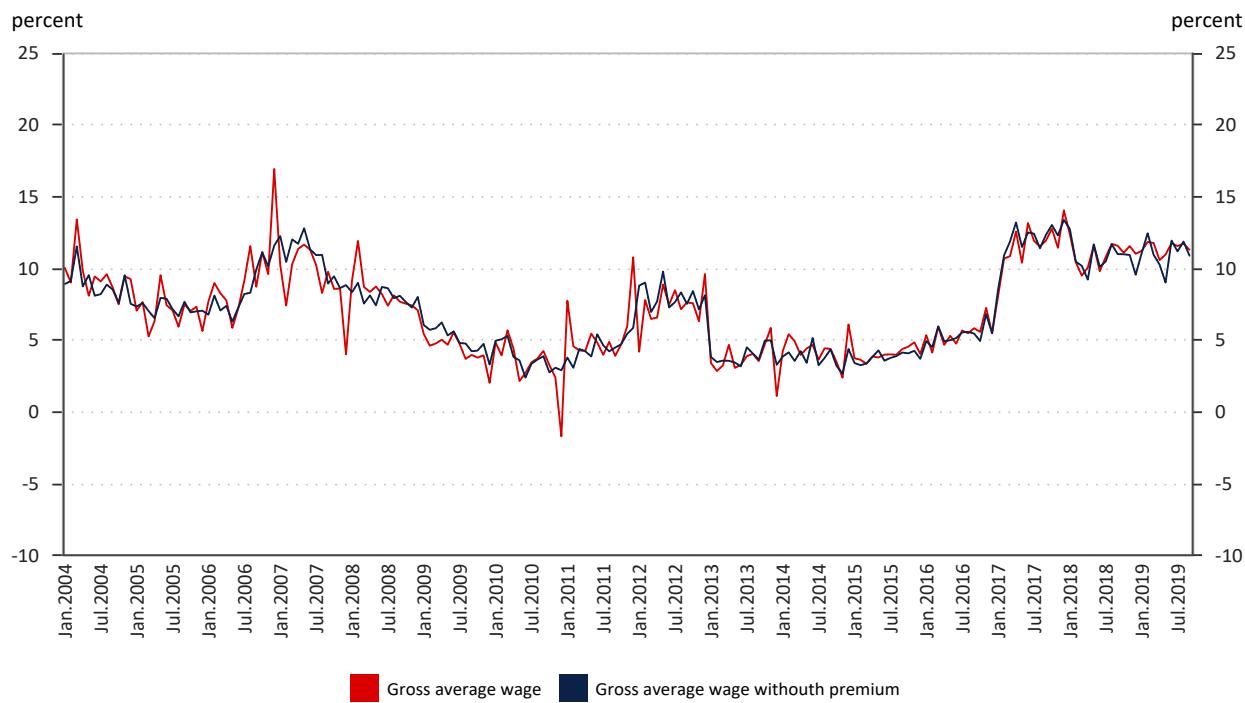
Source: MNB

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

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

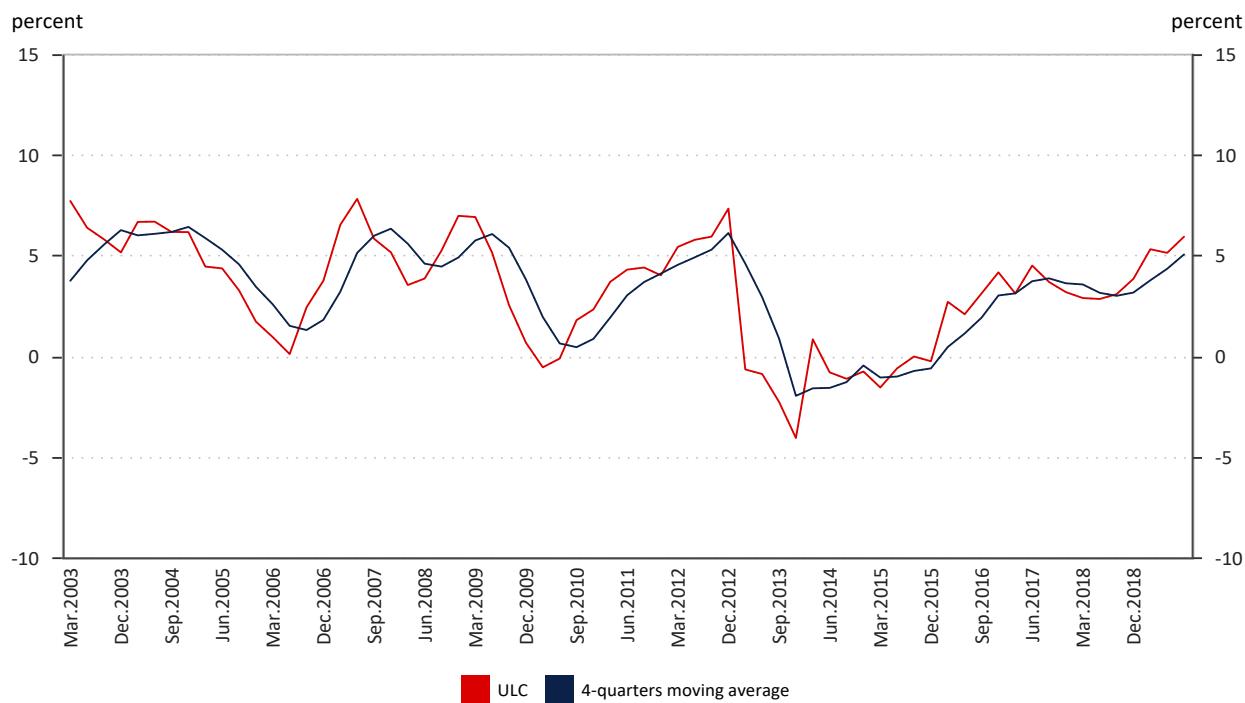
Source: MNB

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

**38. Wage growth in private sector**

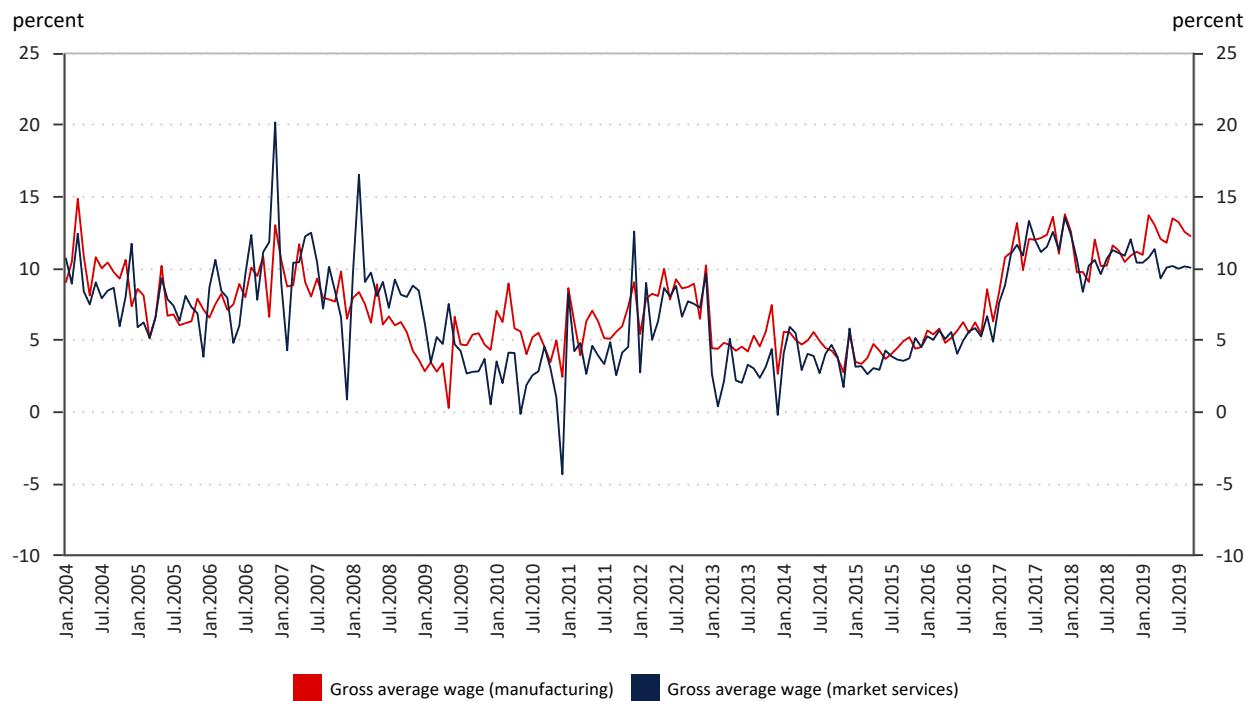
Source: HCSO, seasonally adjusted by MNB

Note: annual growth rates.

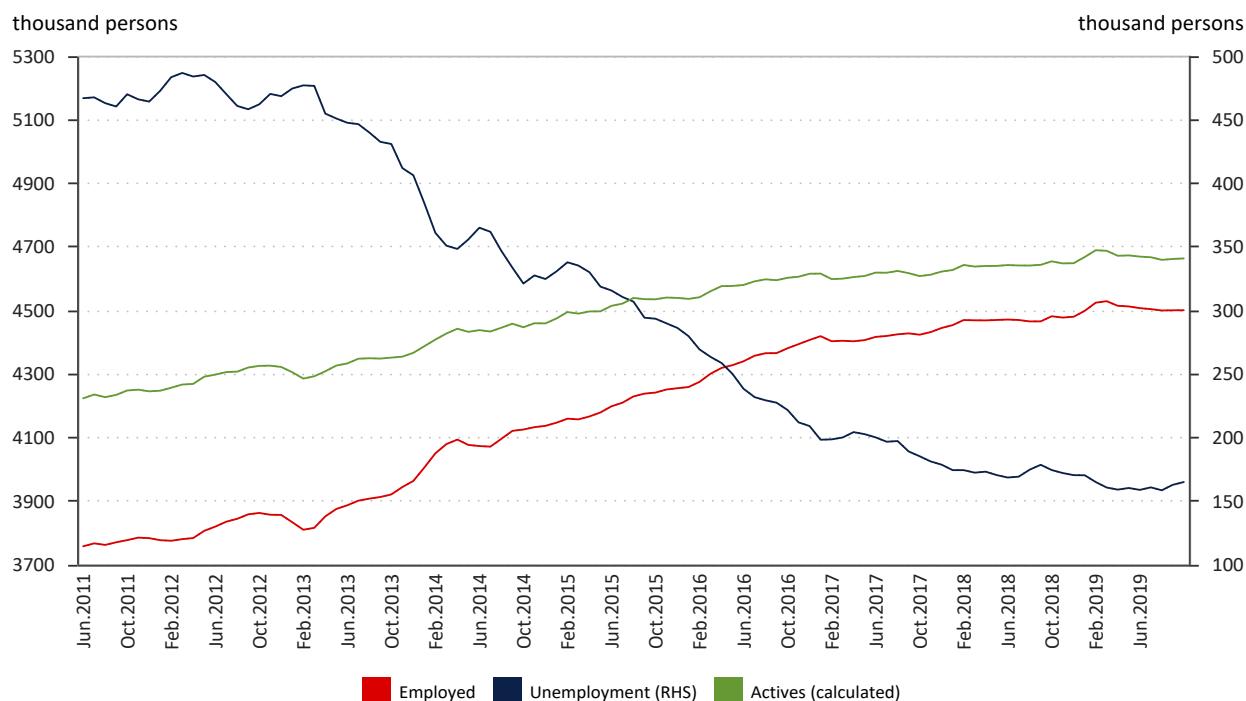
**39. Unit labour cost in the private sector**

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**

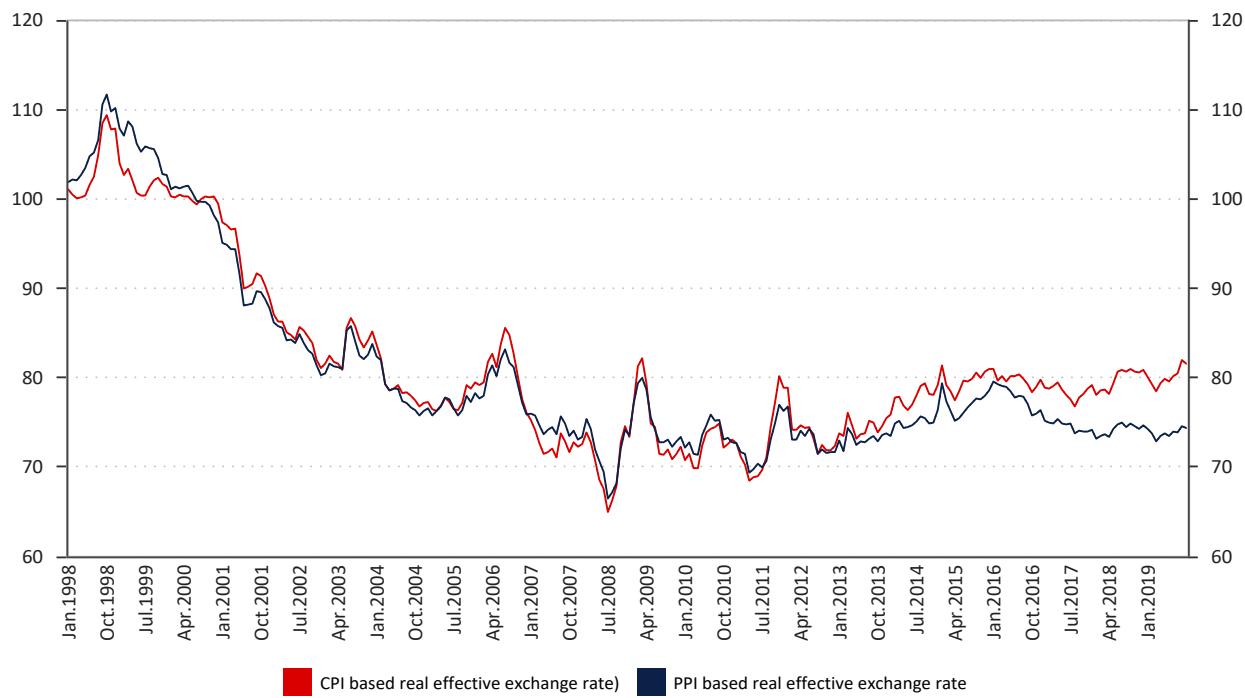
Source: HCSO.

Notes: levels, seasonally adjusted.

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

Source: Eurostat.

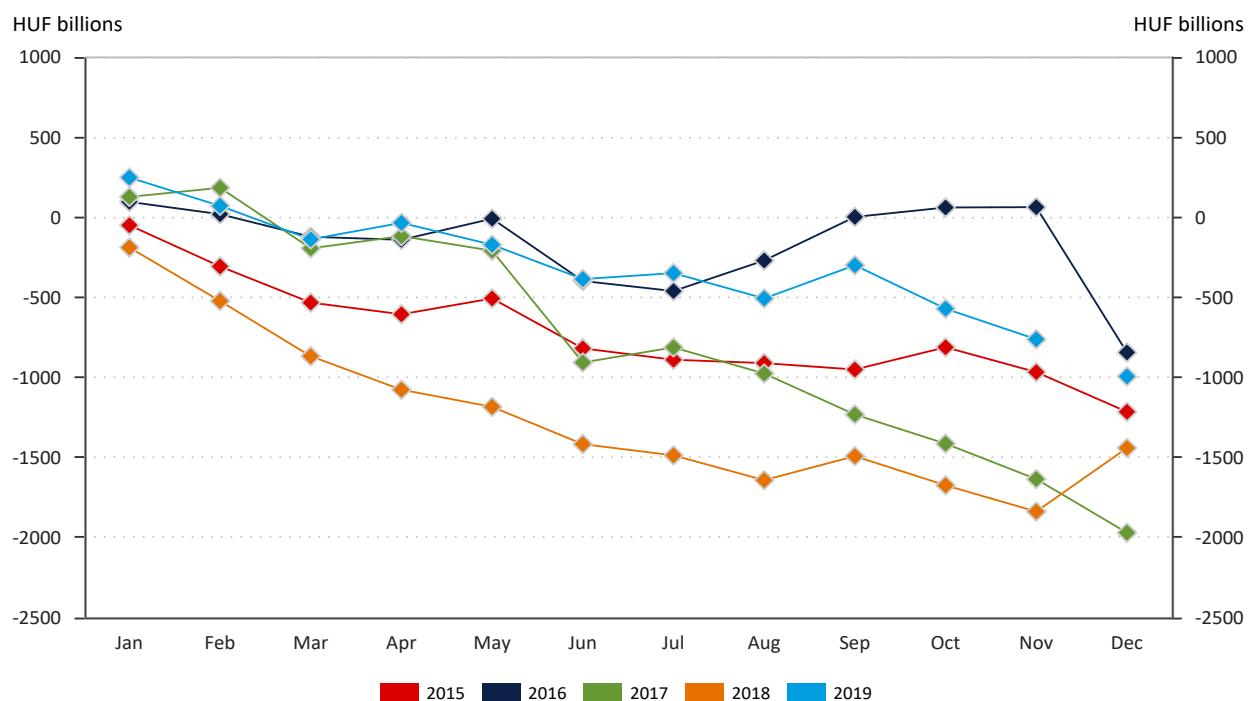
Note: average of year 2000 = 100%. Increase means real-effective appreciation of HUF.

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

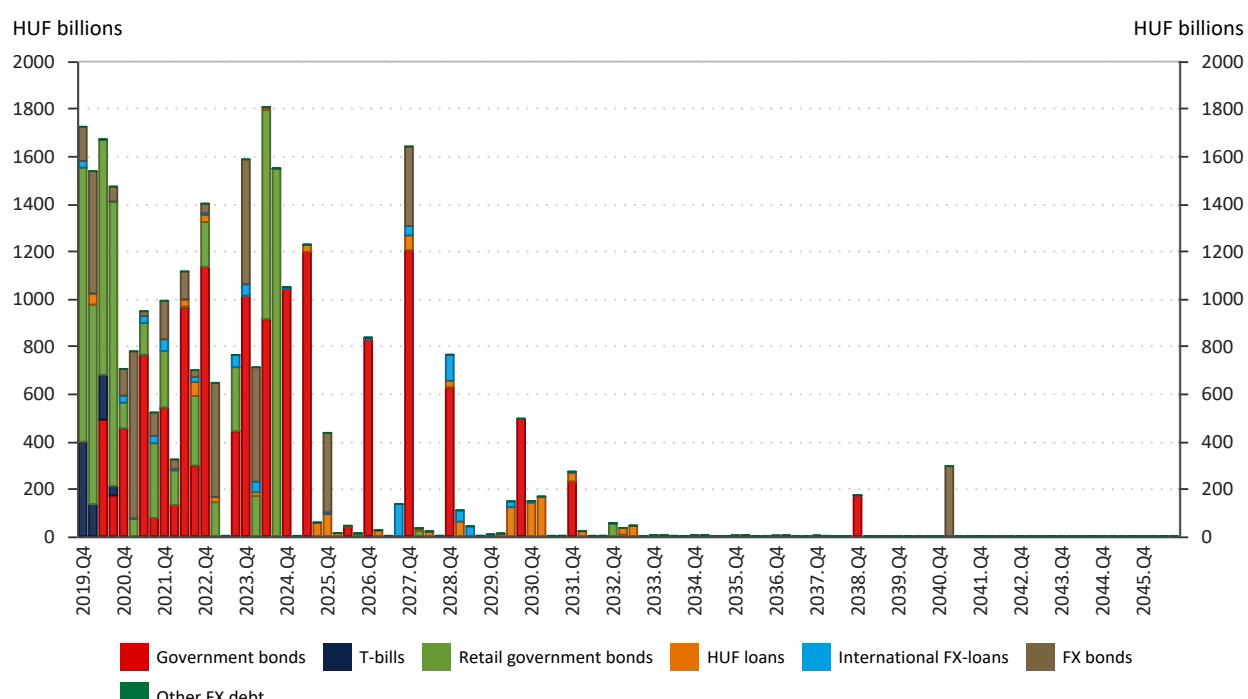
Source: HCSO.

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

## 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

	2019	2020	2021	2022
<b>Consumer Price Index (annual average growth rate, %)</b>				
MNB (September 2019)	3.3	3.4	3.3	
Consensus Economics (November 2019) <sup>1</sup>	3.2 - 3.3 - 3.6	2.5 - 3.2 - 4.4		
European Commission (November 2019)	3.4	3.1	3.0	
IMF (October 2019)	3.4	3.4	3.3	
OECD (November 2019)	3.3	3.4	4.1	
Reuters survey (December 2019) <sup>1</sup>	3.2 - 3.3 - 3.4	2.8 - 3.3 - 3.8	2.8 - 3.2 - 3.5	2.8 - 3.0 - 3.3
<b>GDP (annual growth rate, %)</b>				
MNB (September 2019)	4.5	3.3	3.3	
Consensus Economics (November 2019) <sup>1</sup>	4.2 - 4.6 - 5.2	2.5 - 3.2 - 3.8		
European Commission (November 2019)	4.6	2.8	2.8	
IMF (October 2019)	4.6	3.3	2.9	
OECD (November 2019)	4.8	3.3	3.1	
Reuters survey (December 2019) <sup>1</sup>	4.5 - 4.8 - 5.0	2.8 - 3.4 - 3.9	2.5 - 3.0 - 3.7	2.1 - 2.9 - 3.6
<b>Current account balance<sup>3</sup></b>				
MNB (September 2019)	-0.9	-0.7	-0.4	
European Commission (November 2019)	-1.2	-0.8	-0.7	
IMF (October 2019)	-0.9	-0.6	-0.5	
OECD (November 2019)	-0.7	-0.9	-1.0	
<b>Budget balance (ESA 2010 method)<sup>3,4</sup></b>				
MNB (September 2019)	(-1.8) - (-1.7)	(-1.4) - (-0.6)	(-1.3) - (-0.5)	
Consensus Economics (November 2019) <sup>1</sup>	(-2.5) - (-1.7) - (-0.5)	(-2.4) - (-1.4) - (-0.3)		
European Commission (November 2019)	-1.8	-1.0	-0.8	
IMF (October 2019)	-1.8	-1.6	-1.5	
OECD (November 2019)	-1.8	-1.7	-1.4	
Reuters survey (December 2019) <sup>1</sup>	(-2.3) - (-1.7) - (-0.9)	(-2.0) - (-1.2) - (-0.8)	(-2.3) - (-1.3) - (-0.5)	(-2.5) - (-1.0) - (0.0)
<b>Forecasts on the size of Hungary's export markets (annual growth rate, %)</b>				
MNB (September 2019)	3.2	3.4	3.4	
European Commission (November 2019) <sup>2</sup>	2.8	3.0	3.0	
IMF (October 2019) <sup>2</sup>	2.9	3.4	4.0	3.8
OECD (November 2019) <sup>2</sup>	2.2	1.7	2.4	
<b>Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)</b>				
MNB (September 2019)	1.7	1.9	1.9	
Consensus Economics (November 2019) <sup>2</sup>	1.6	1.5		
European Commission (November 2019) <sup>2</sup>	1.6	1.7	1.7	
IMF (October 2019) <sup>2</sup>	1.6	1.8	1.9	1.8
OECD (November 2019) <sup>2</sup>	1.5	1.4	1.5	

<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

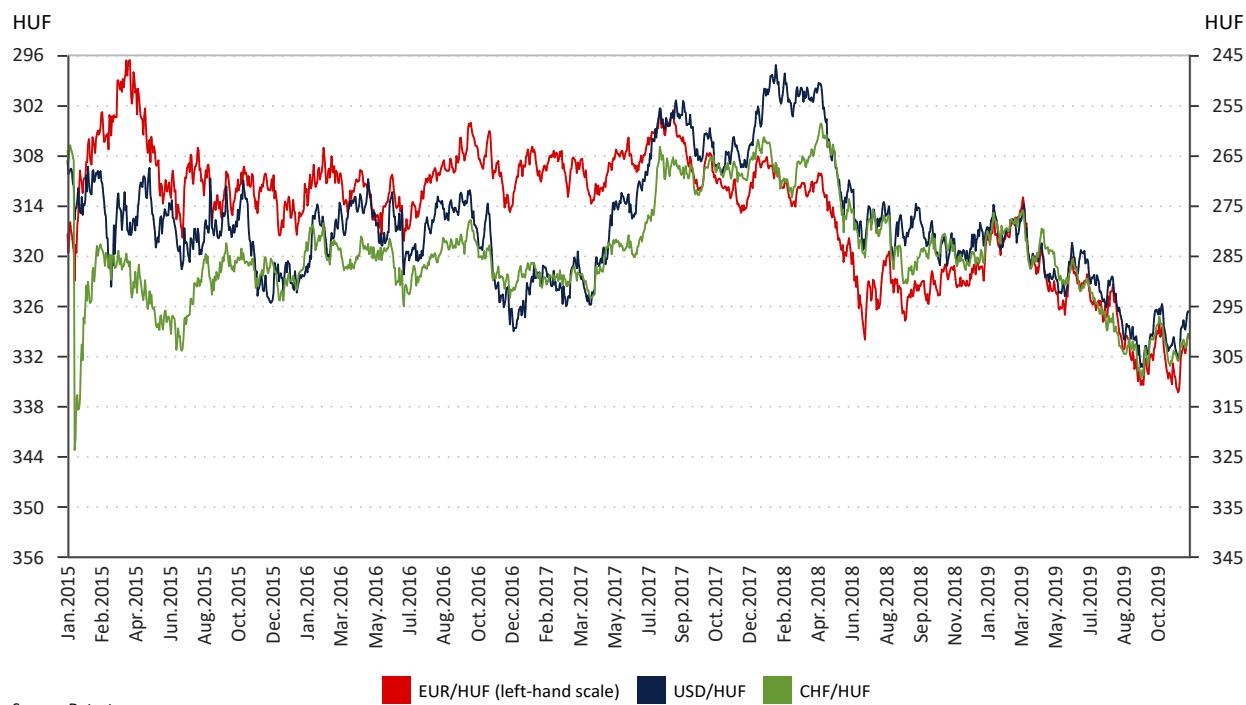
**47. Domestic financial developments**  
*Overview*

Indicator	One month ago	One week ago	Current
HUF/EUR spot exchange rate	334.8	330.6	328.9
Skewness of expectations on HUF/EUR exchange rate	0.78	0.72	0.72
HUF-positions of foreign investors (HUF billions)	-3165	-3122	-3095
Forward positions of domestic investors (HUF billions)	1979	1846	1750
MNB base rate (%)	0.90	0.90	0.90
Expected short-term interbank rate at the end of the year (%)*	0.21	0.22	0.21
3-months interbank rate (%)	0.20	0.19	0.20
3x6 FRA rate (%)	0.23	0.23	0.23
3 month T-bill yield (%)	-0.10	-0.05	-0.02
5 year T-bond yield (%)	0.91	1.09	1.08
Slope of yield curve (10Y-1Y, bp)	204	186	183
O/N FX-swap spread (bp)	-4	-5	1
3-month FX-swap spread (bp)	9	-4	-8
5-year FX-swap spread (bp)	0	-7	-7
5-year CDS spread (bp)	74	72	72
5x5 government bond spread (bp)**	171	156	167
Average spread of USD-denominated government bonds (bp)	49	50	52
Foreign holdings of HUF-government securities (HUF billion)	4377	4144	4196

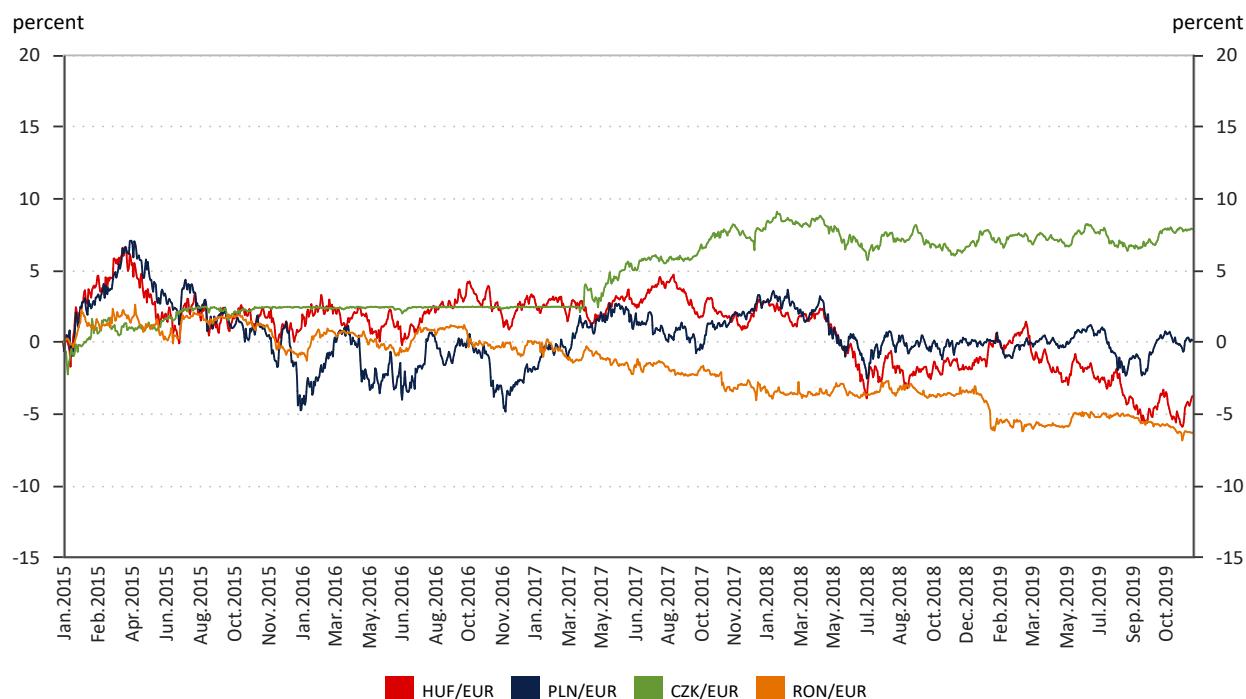
Notes:

\* Based on forward yield curve.

\*\* Over German yield.

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

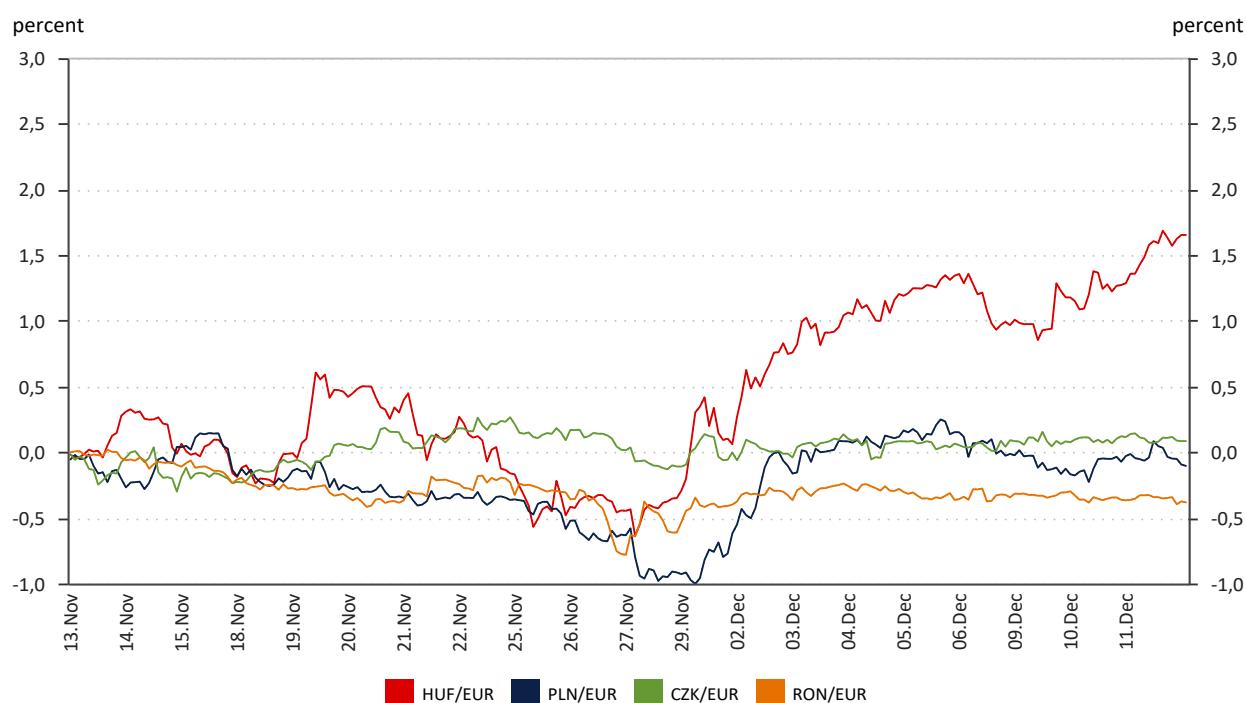
### 50. Emerging markets exchange rate



Source: Thomson Reuters

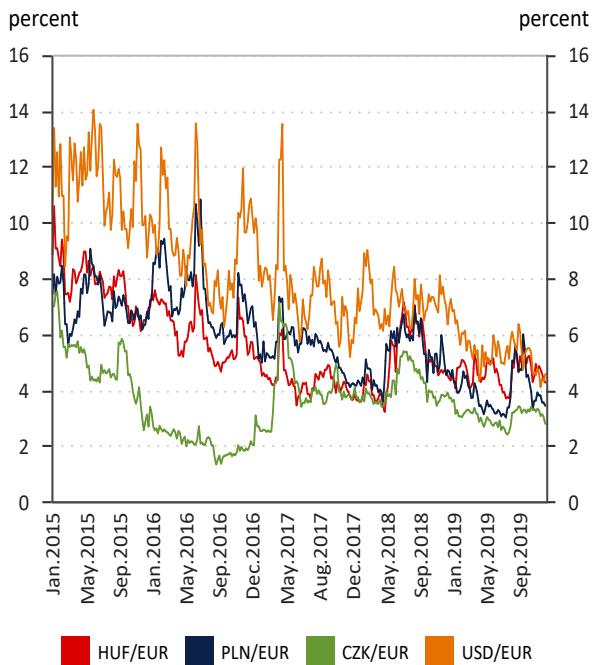
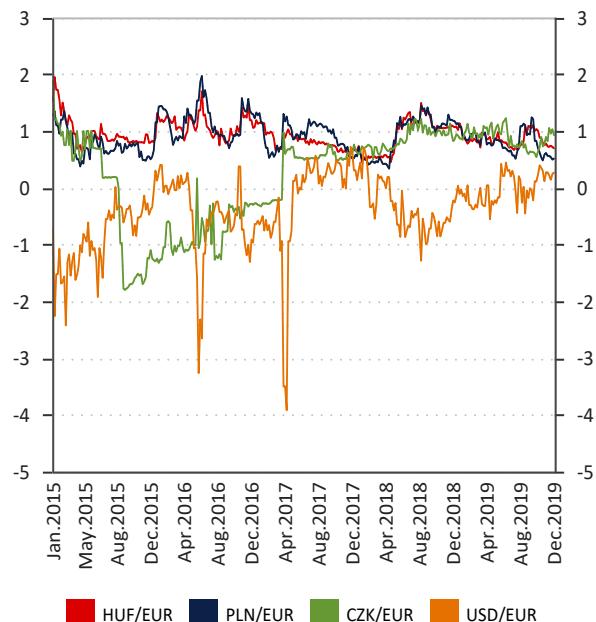
Note: cumulative change. Positive values mean appreciation.

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

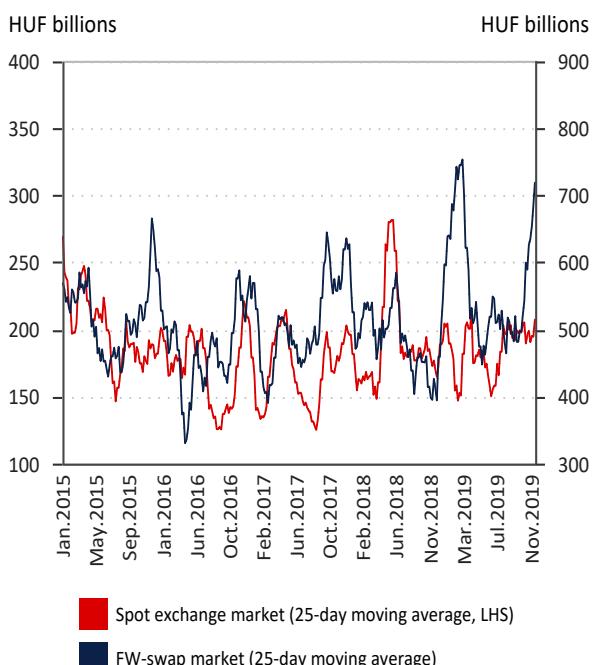
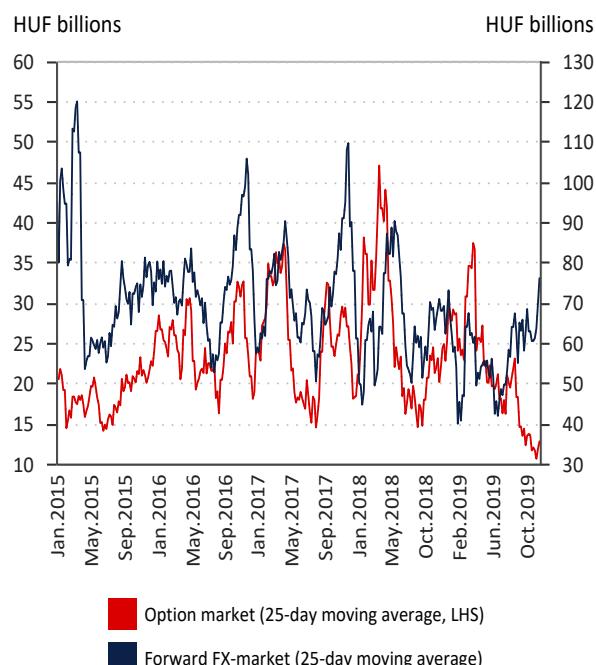


Source: Thomson Reuters.

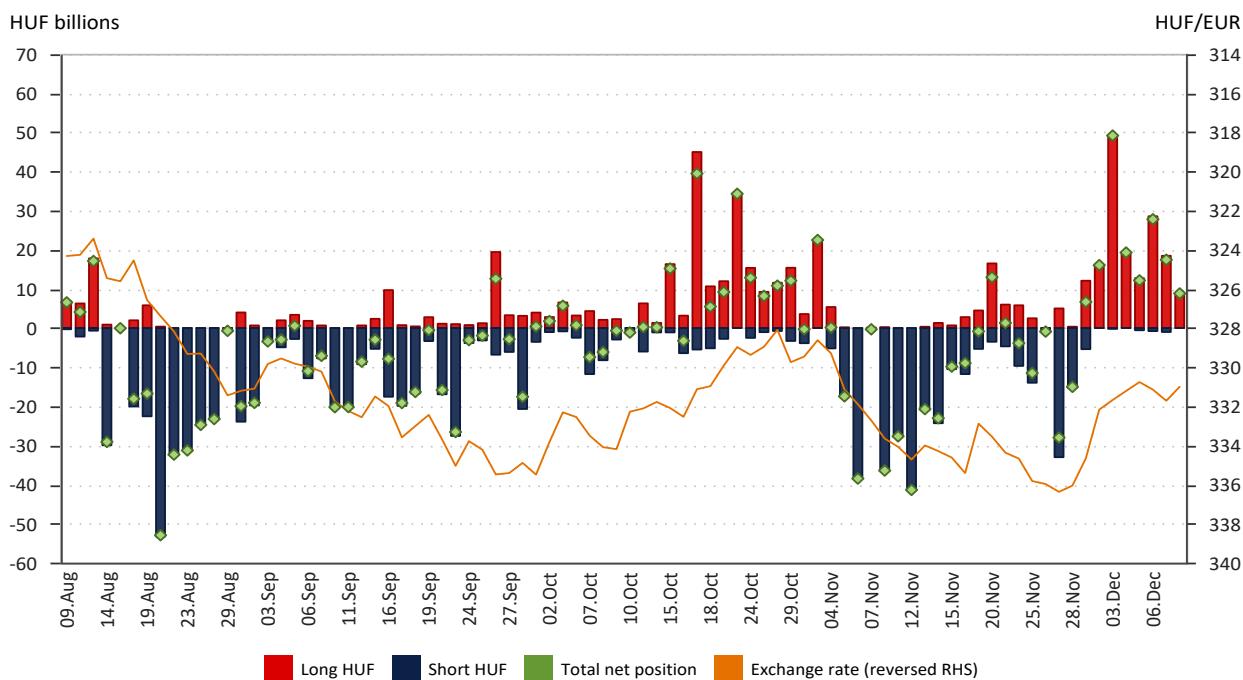
Note: cumulative change, negative value means depreciation of the local currency.

**52. Volatility of exchange rate expectations****53. Skewness of exchange rate expectations**

Source: Bloomberg  
Notes: based on option quotes for 1-month 2SD 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****55. Turnover on the forward and option market**

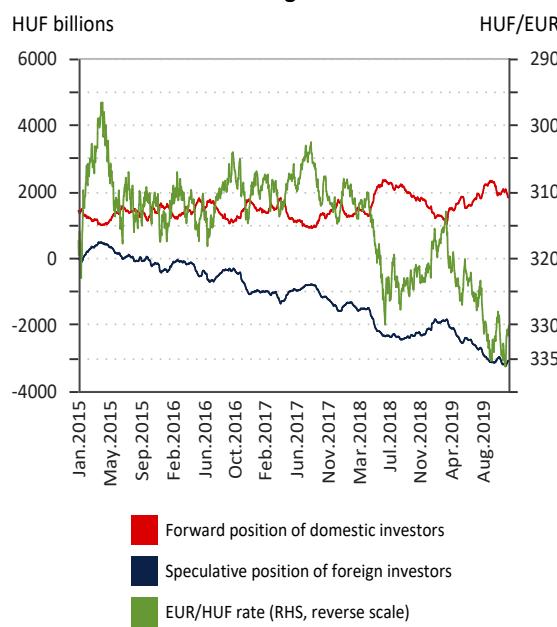
### 56. Open FX-positions of non-residents in HUF



Source: MNB.

Note: Based on the daily FX reports of the transactions with non-residents of credit institutions. Net HUF positions are calculated based on the change of cumulative FX-swap stocks and spot positions of non-resident market participants. In case of positive value non-resident market participants extended long HUF positions, while in case of negative value short HUF positions were dominant. Positions are presented on spot deal dates.

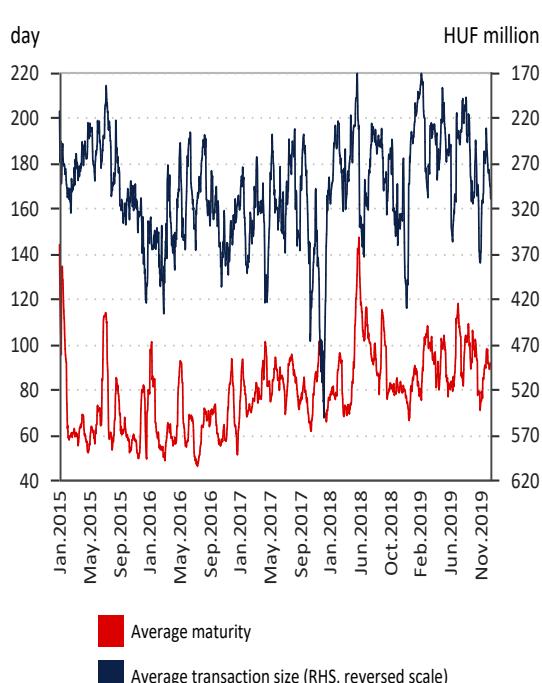
### 57. Cumulated positions of non-residents in HUF and the EURHUF exchange rate



Source: MNB

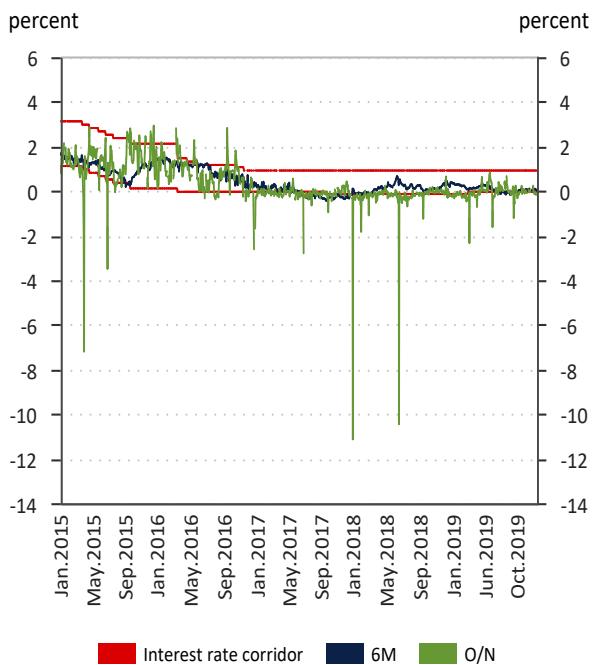
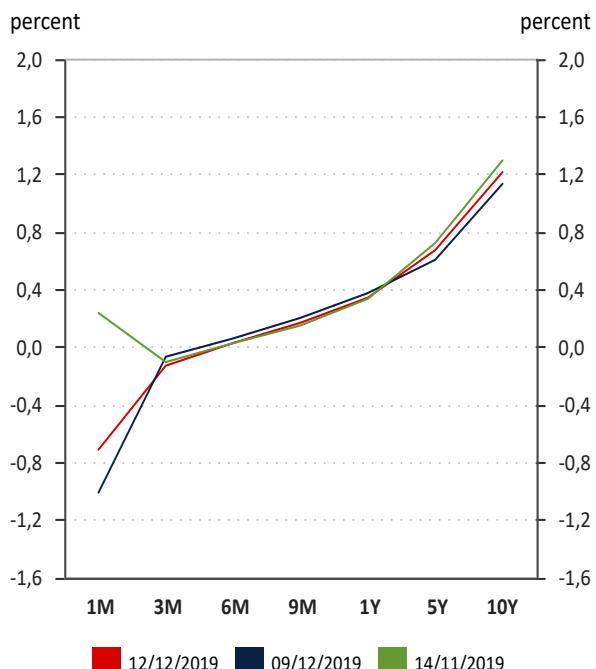
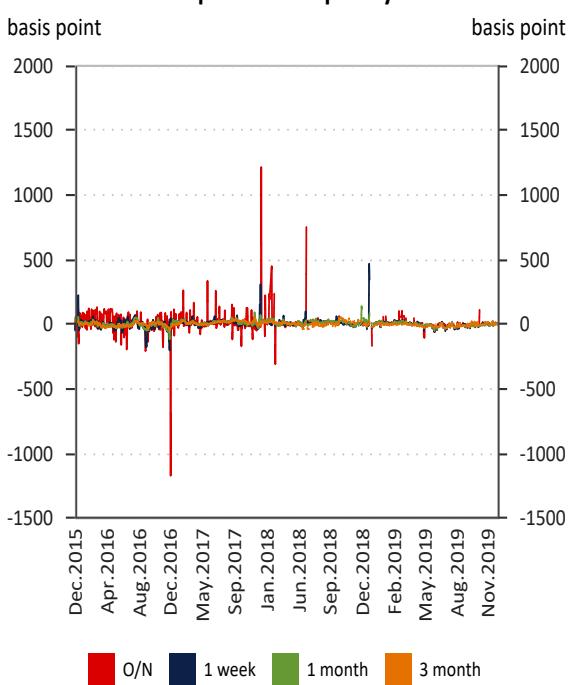
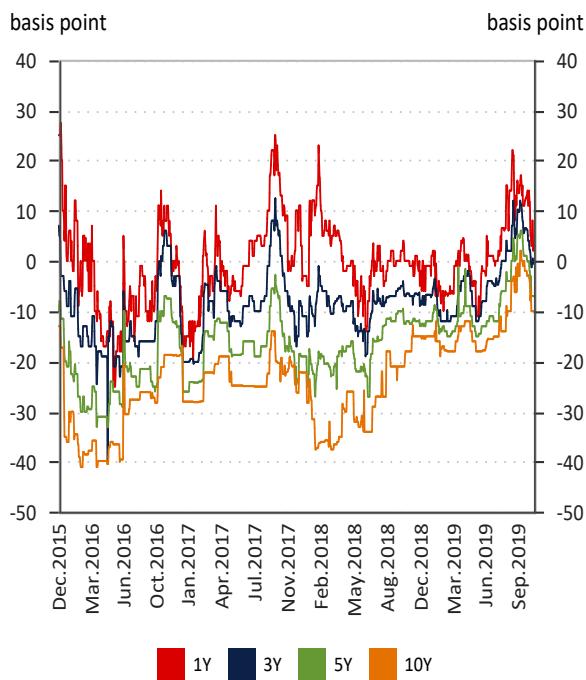
Note: Cumulative position, based on the daily FX reports of the transactions with non-residents of credit institutions. Net HUF positions are calculated based on the change of cumulative FX-swap stocks and spot positions of non-resident market participants. Due to the characteristics of the reports the change in the stocks is relevant mainly to evaluate the direction of short-term fluctuations.

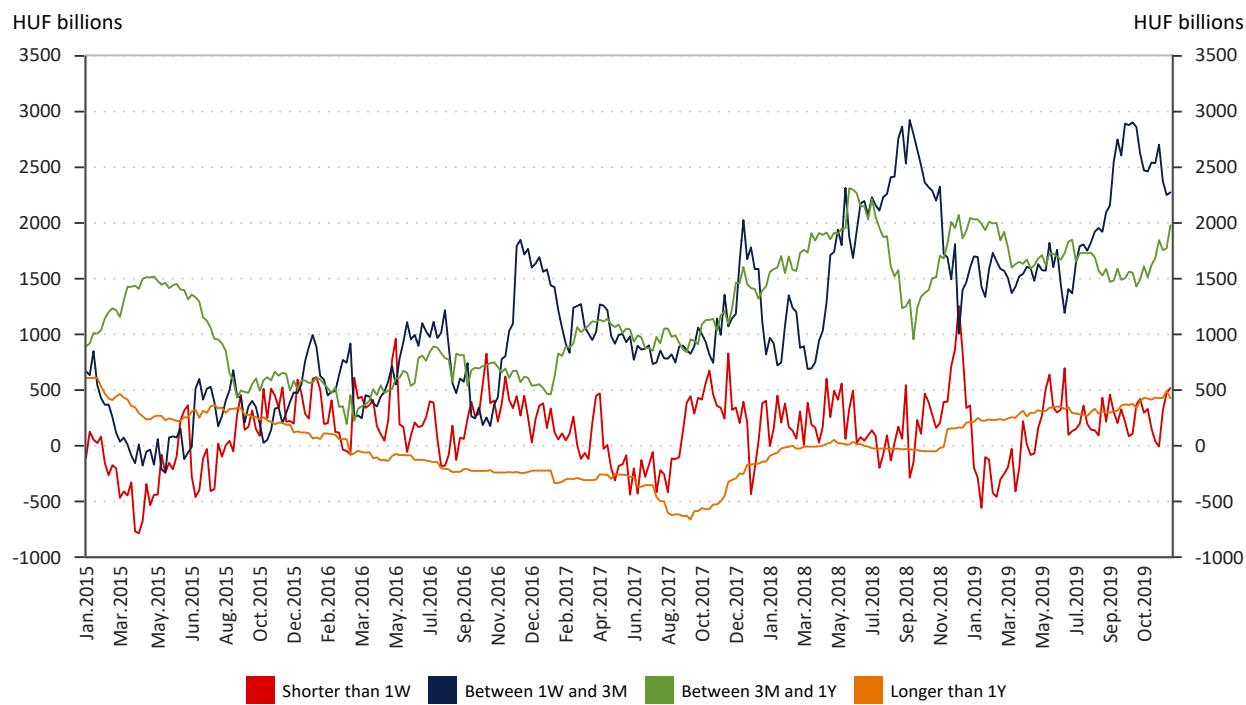
### 58. Forward agreements of non-financial institutions



Source: MNB

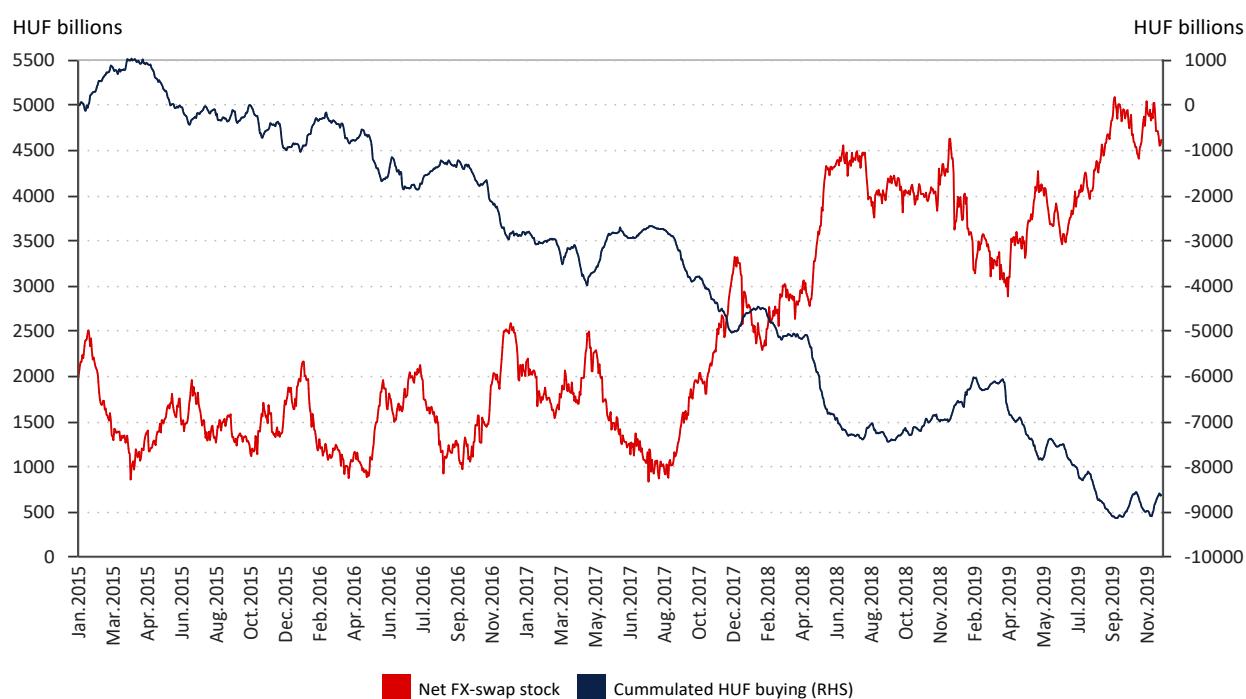
Note: 20-day moving averages.

**59. Implied HUF rates on FX-swap market****60. Implied yield curve on FX-swap markets****61. Difference between short-term interbank yields and FX-swap market implied yields****62. Development of the EUR/HUF basis swap spread**

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

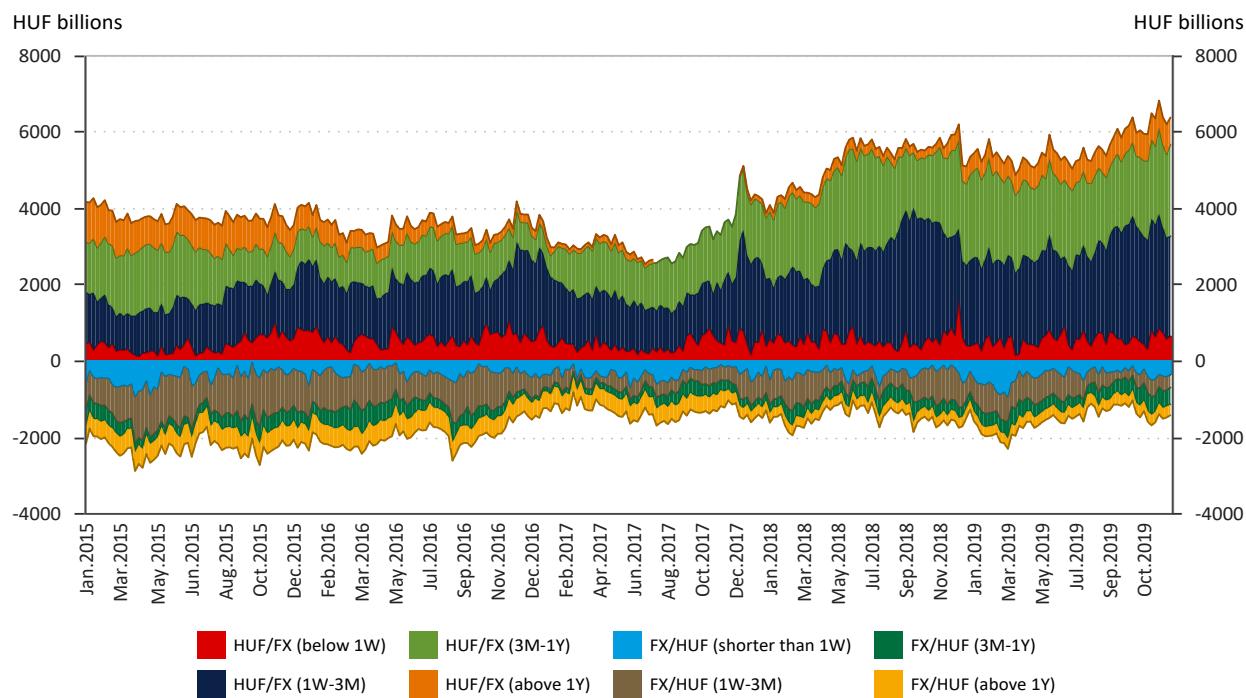
Source: MNB

Note: net FX-swap stock is defined as a difference of HUF-buying and FX-buying transactions.

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

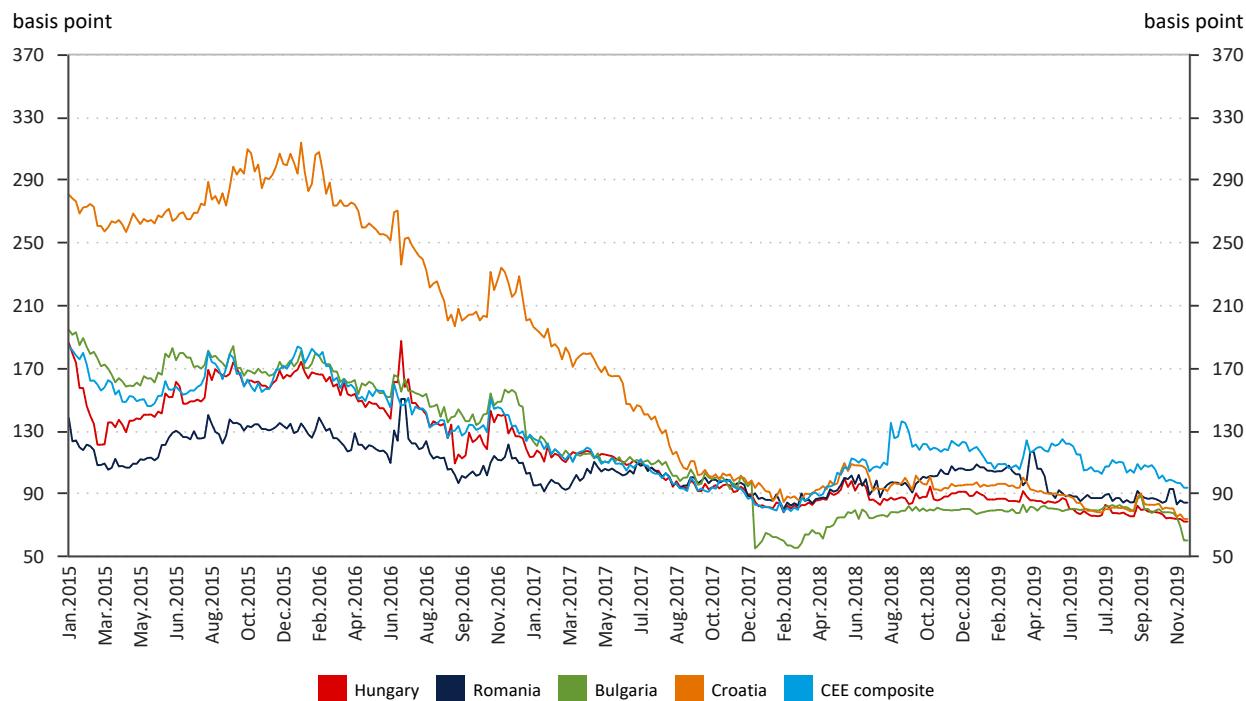
Source: MNB

Notes: Based on the daily FX reports of the transactions with non-residents of credit institutions. An increase in the net swap stock stands for swaps with an excess of swap transactions with long forint spot leg, while a decrease stands for swaps with an excess of swap stock with short forint spot leg.

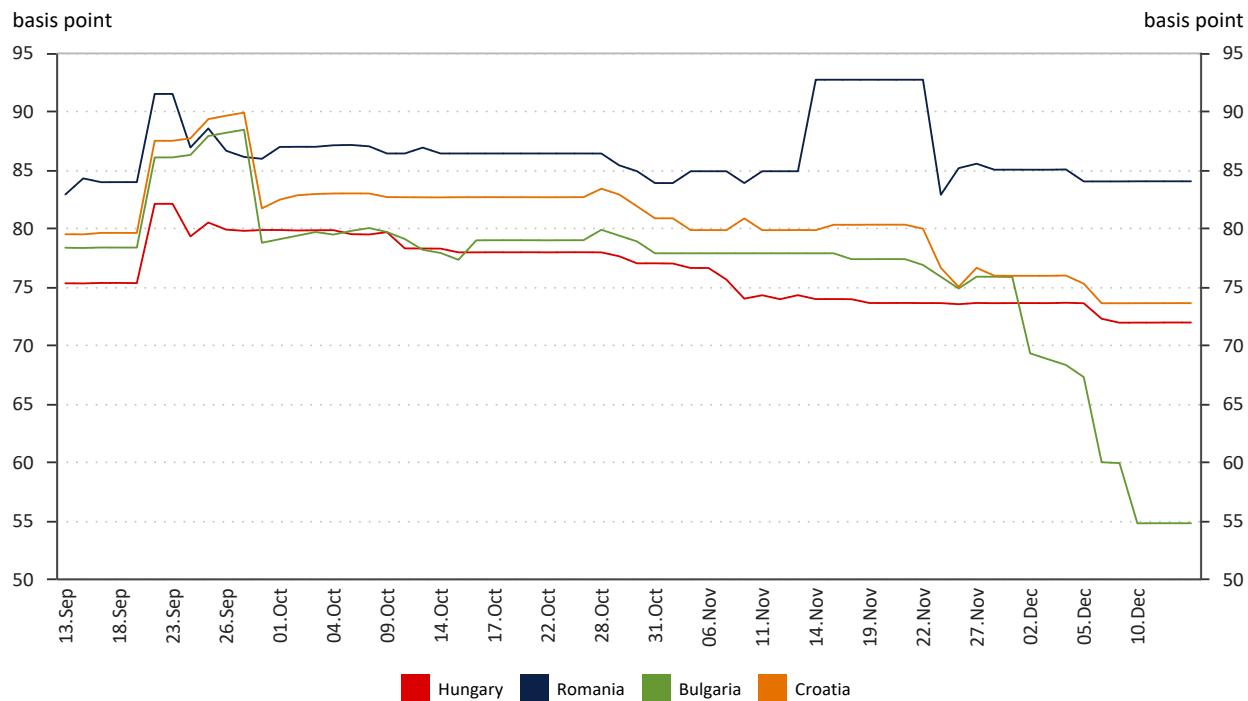
**65. Gross FX-swap stocks of foreign investors by maturity**

Source: MNB

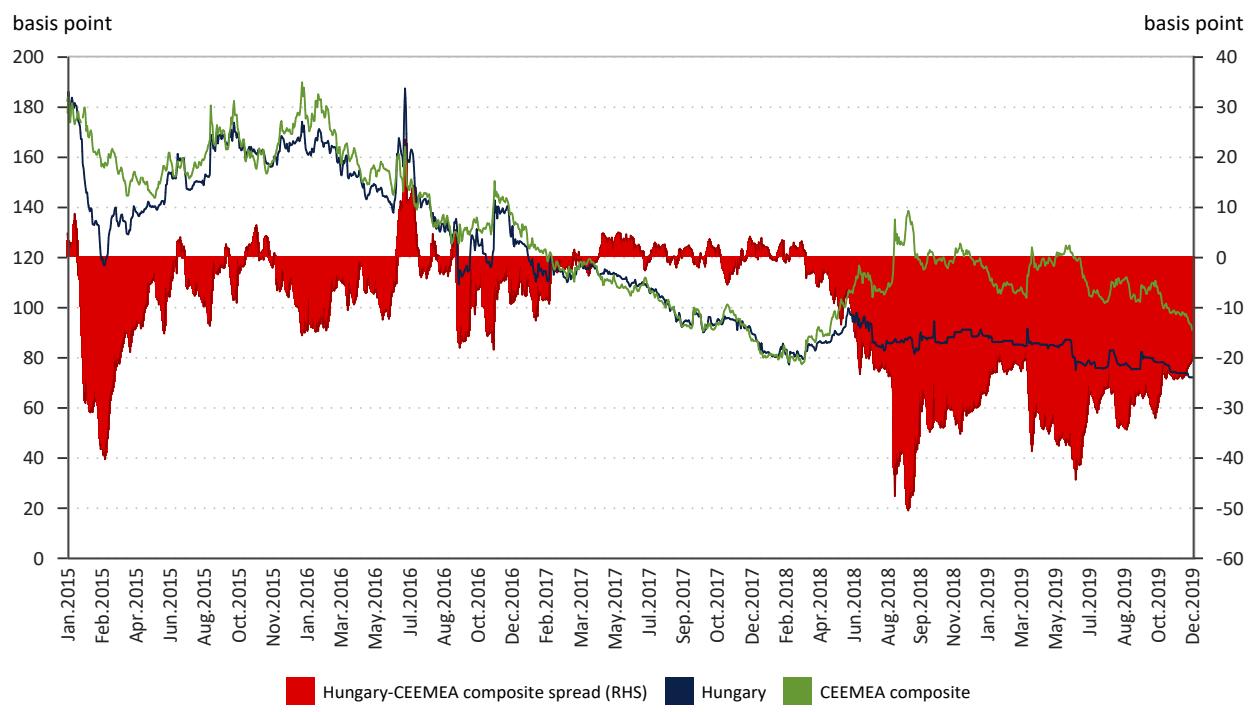
Note: Based on the daily FX reports of the transactions with non-residents of credit institutions. Positive values stand for swap stock with long forint spot leg, while negative values stand for swap stock with short forint spot leg.

**66. 5 year sovereign CDS spreads in CEE**

Source: Thomson Reuters.

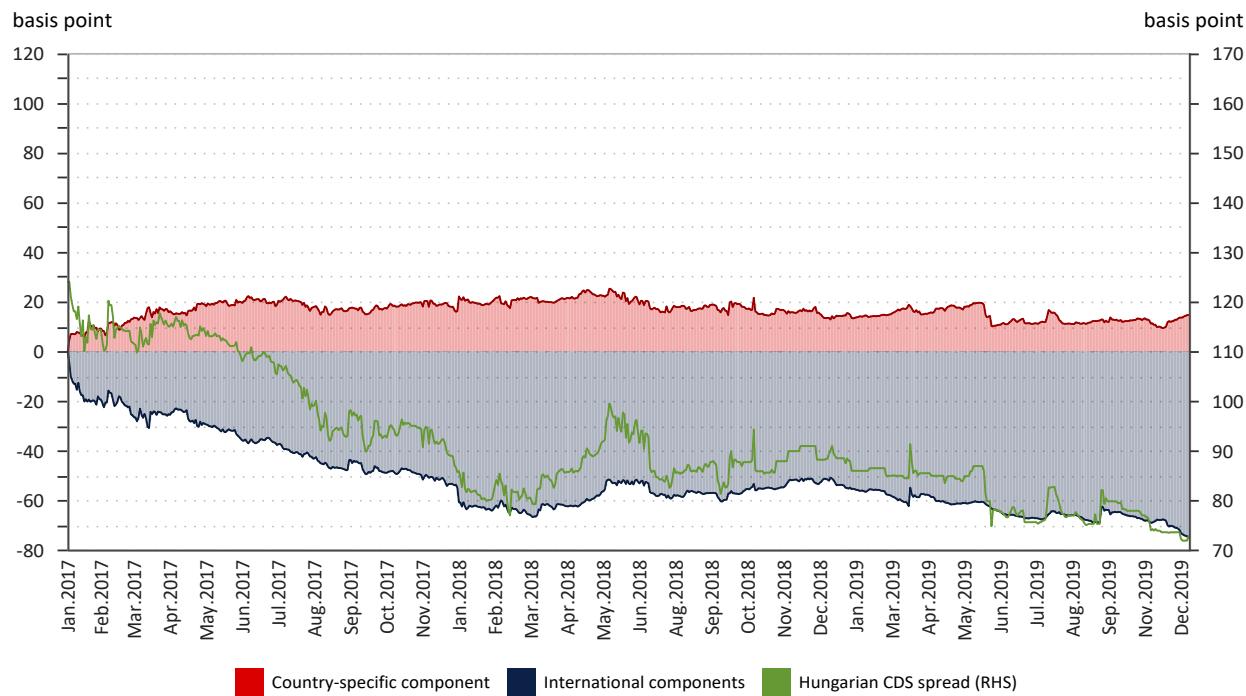
**67. 5 year sovereign CDS spreads in emerging markets (last month)**

Source: Thomson Reuters

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

Source: Thomson Reuters.

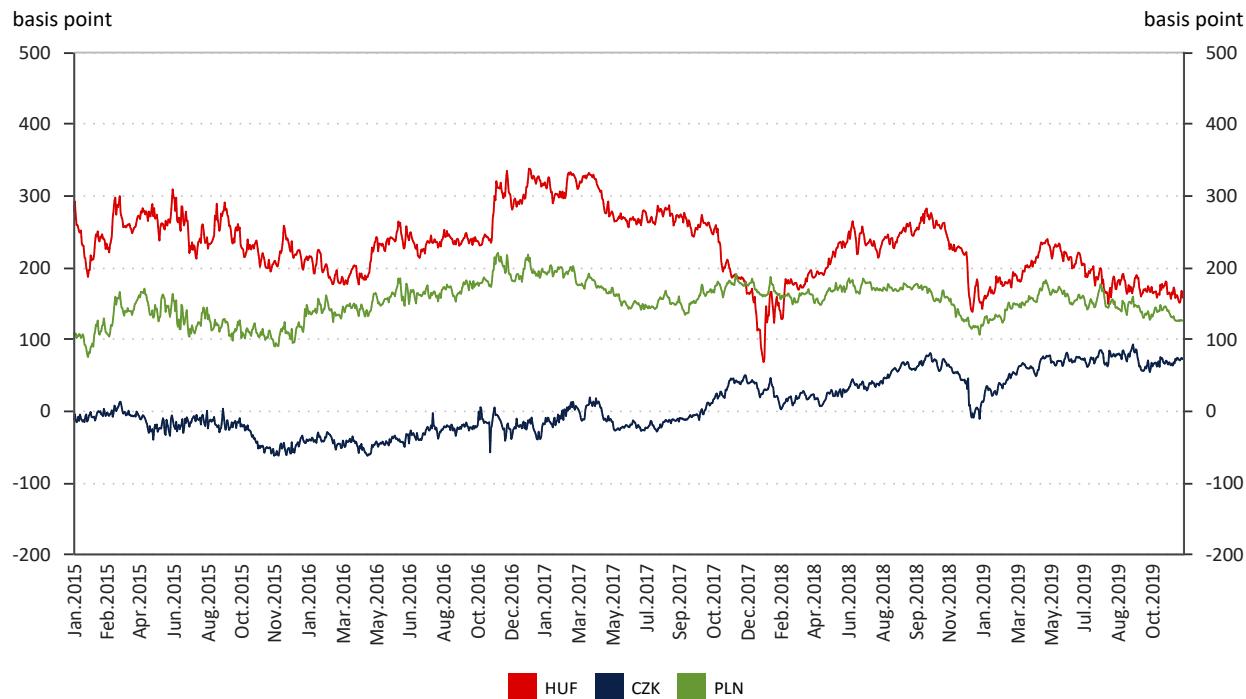
### 69. Components of Hungarian 5 year sovereign CDS



Source: Bloomberg

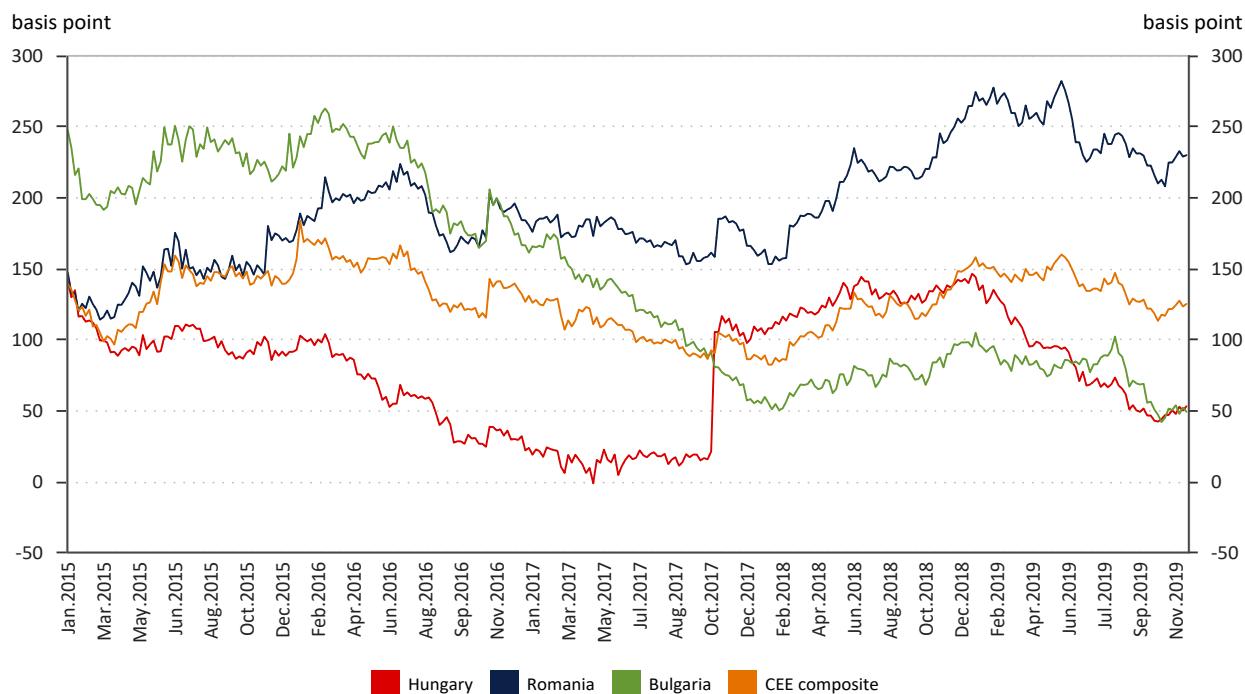
Note: based on factor analysis on daily CDS spread changes with volatility calculated on half-year windows. Cumulated series. Increases/decreases of component time series denote contributions to CDS spread increases/decreases.

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



Note: Based on swap rates by Reuters

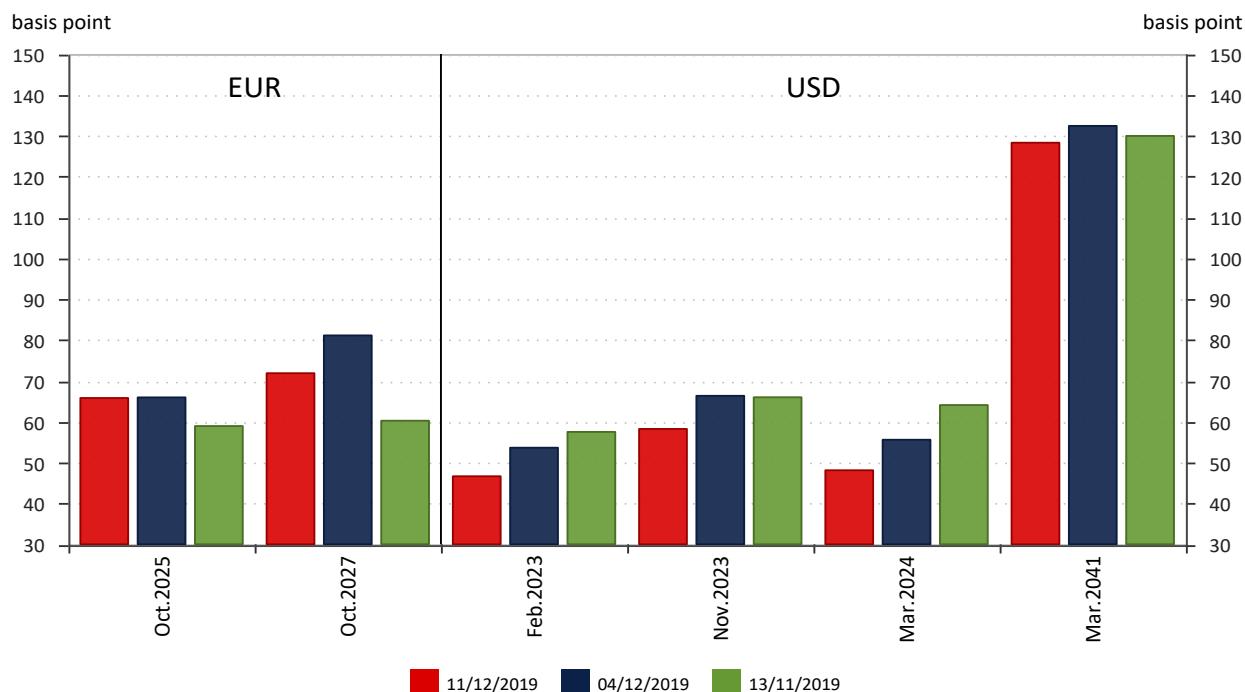
### 71. Emerging markets FX denominated government bond spreads



Source: Thomson Datastream.

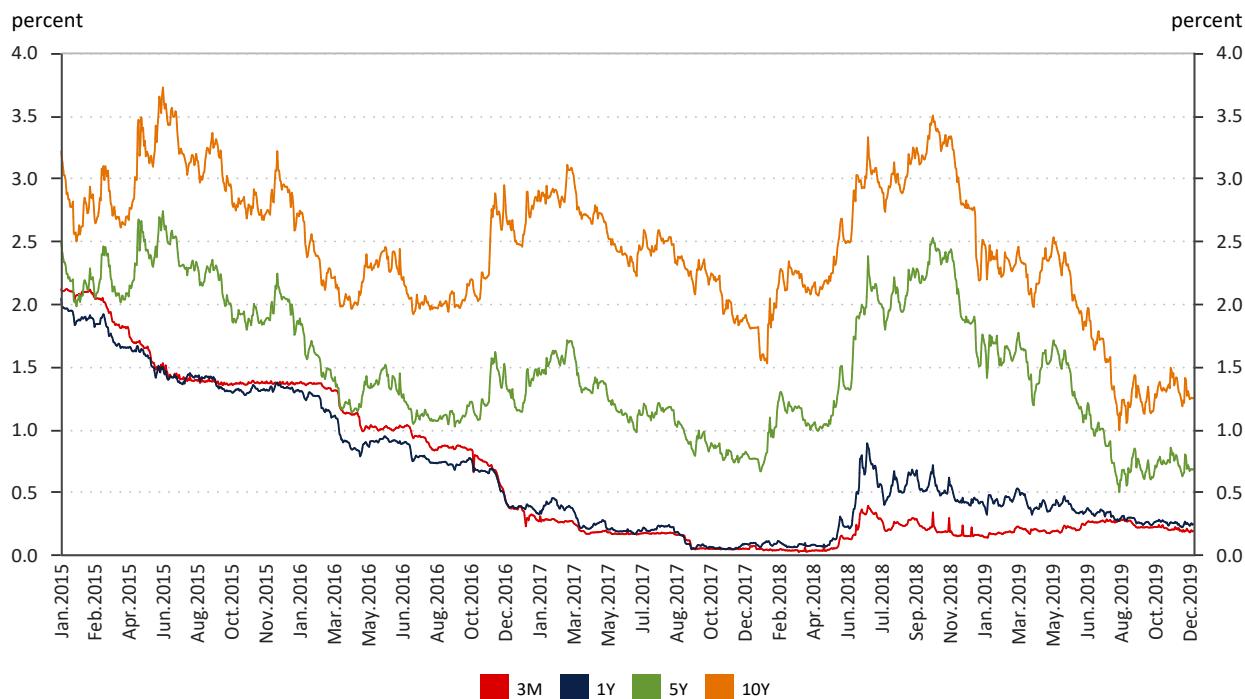
Notes: calculated from JP Morgan Euro EMBI data. The series are differences between euro denominated (liquid) foreign currency bond yields and euro zero coupon yields of the corresponding maturities. Different durations may result in significant difference in the level of spreads.

### 72. Domestic FX-government bond

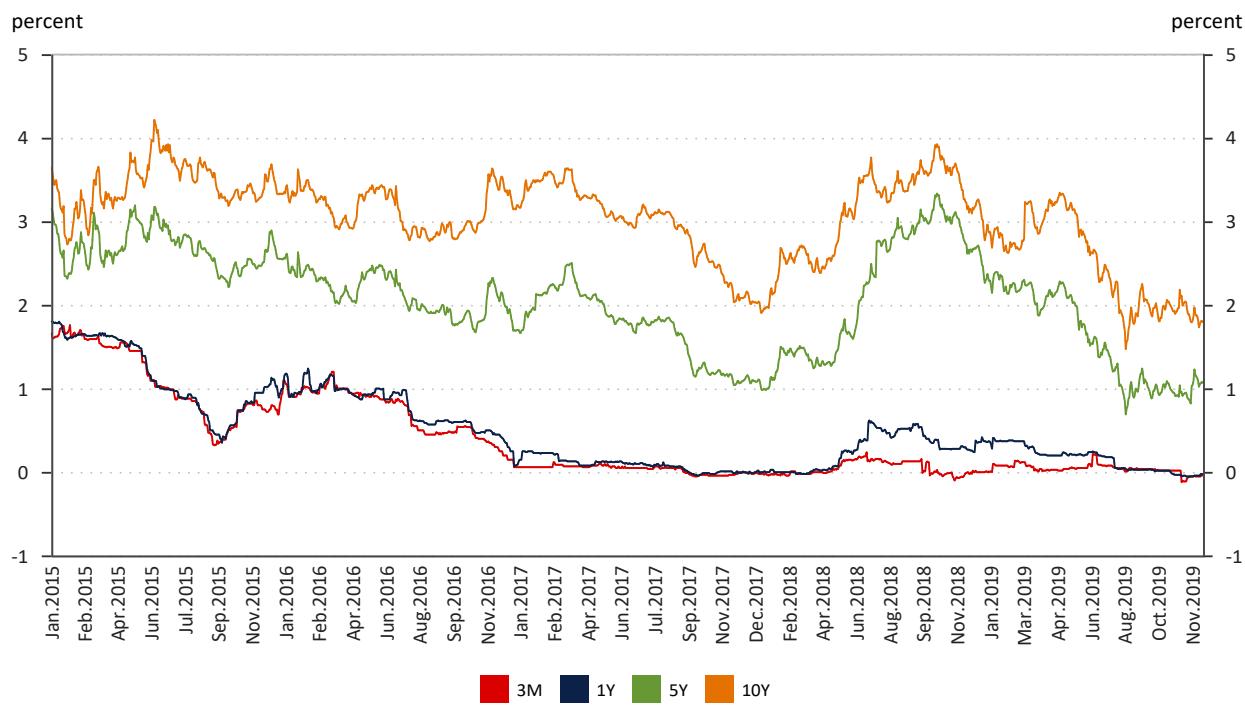


Source: Bloomberg.

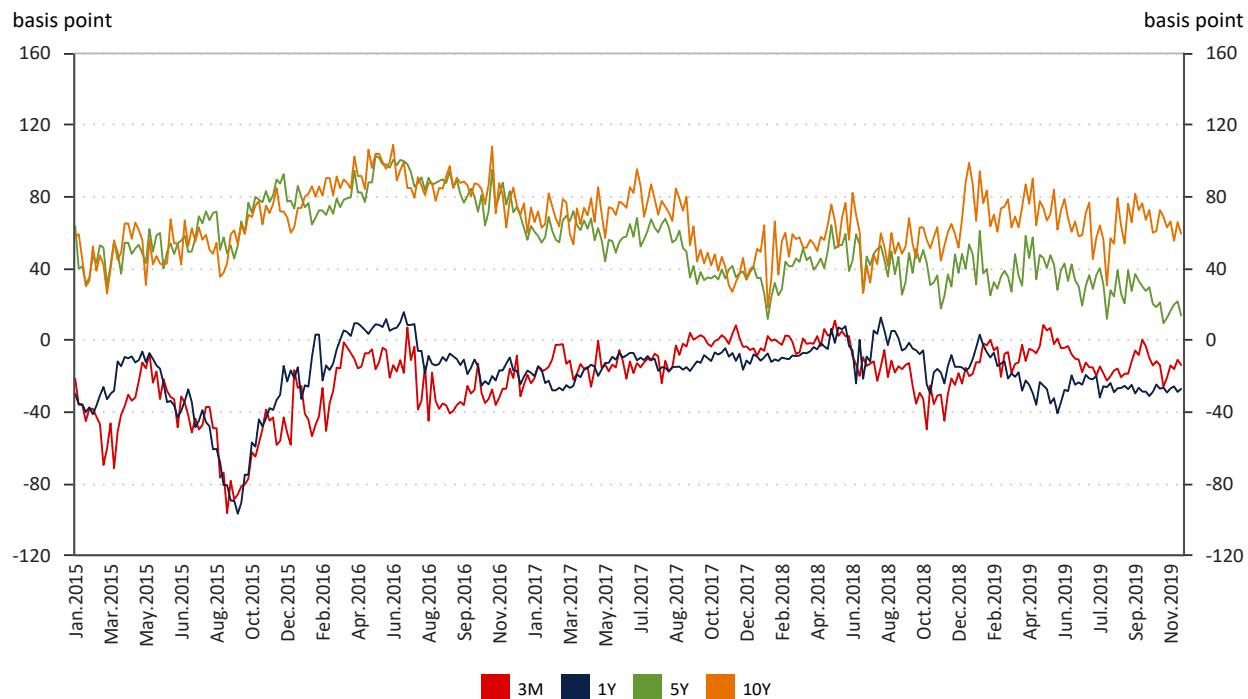
Notes: Spread between EUR and USD denominated FX-bonds and the equivalent US T-bond or euro yields chosen by Bloomberg. We present bonds grouped by currency in order of maturity.

**73. Interbank yields**

Source: Thomson Reuters

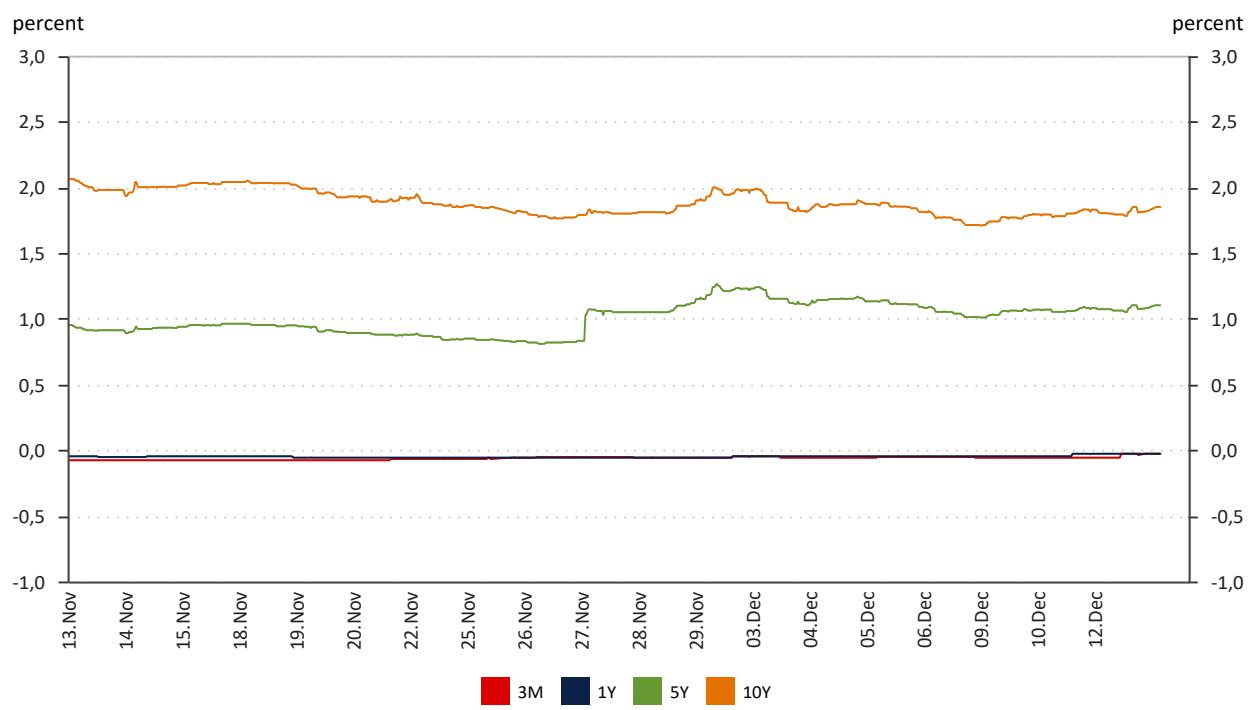
**74. Yields of benchmark government securities**

Source: Thomson Reuters.

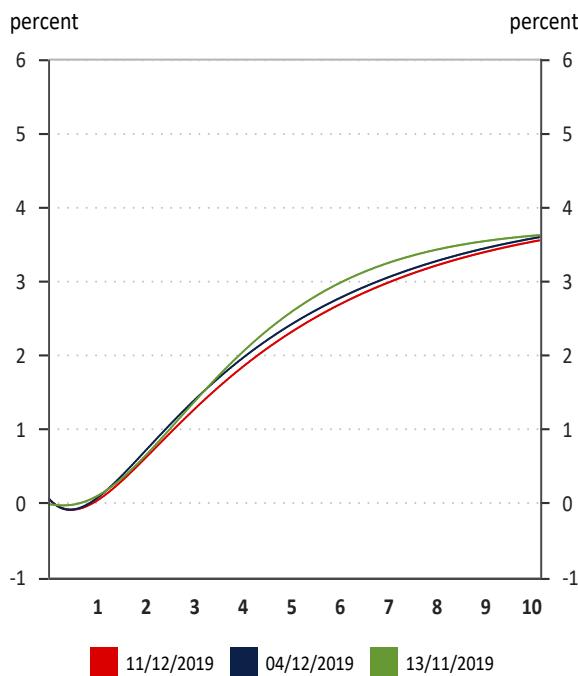
**75. Government securities - interbank yield spreads**

Source: Thomson Reuters

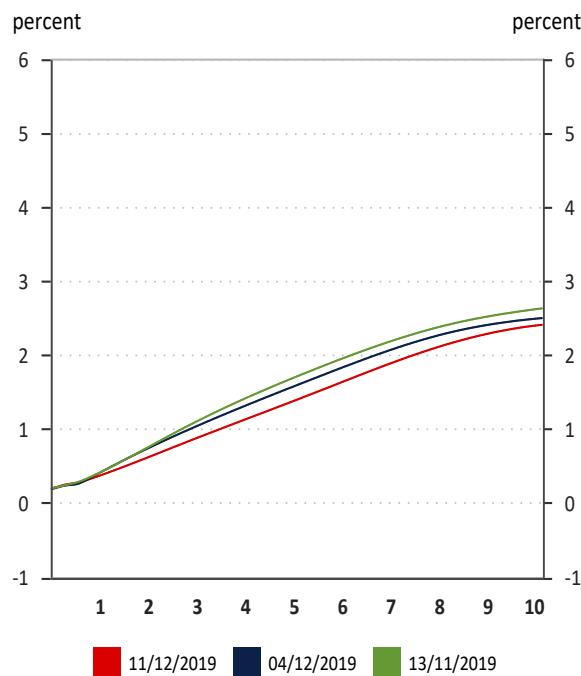
Note: Spread between the benchmark government bond yield of the given maturity and the interbank rates.

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

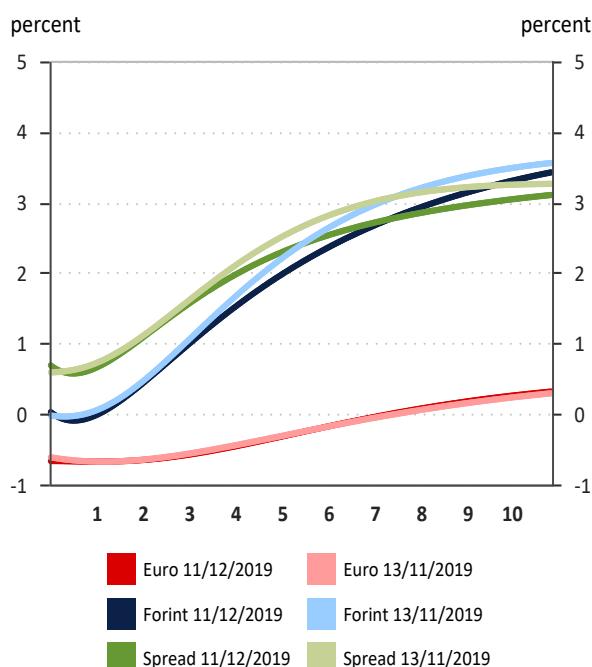
Source: Thomson Reuters.

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


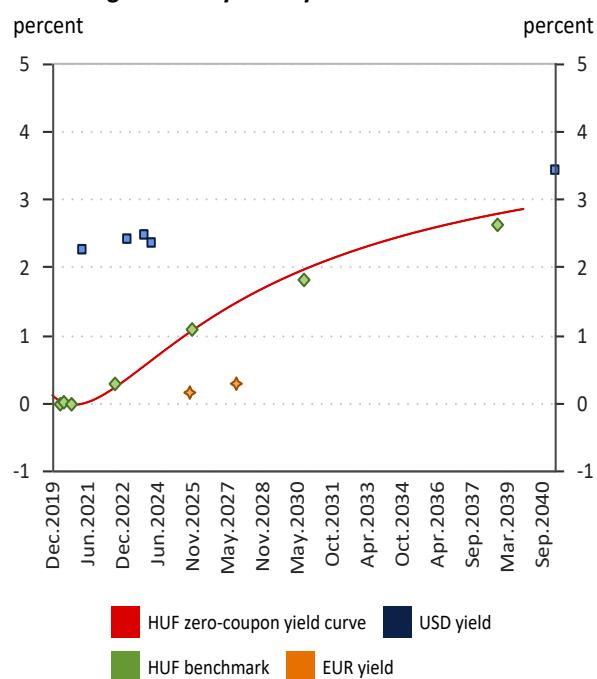
Source: MNB, ÁKK. Note: calculated by Svensson method by MNB. X axis shows maturities, in years.

**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.

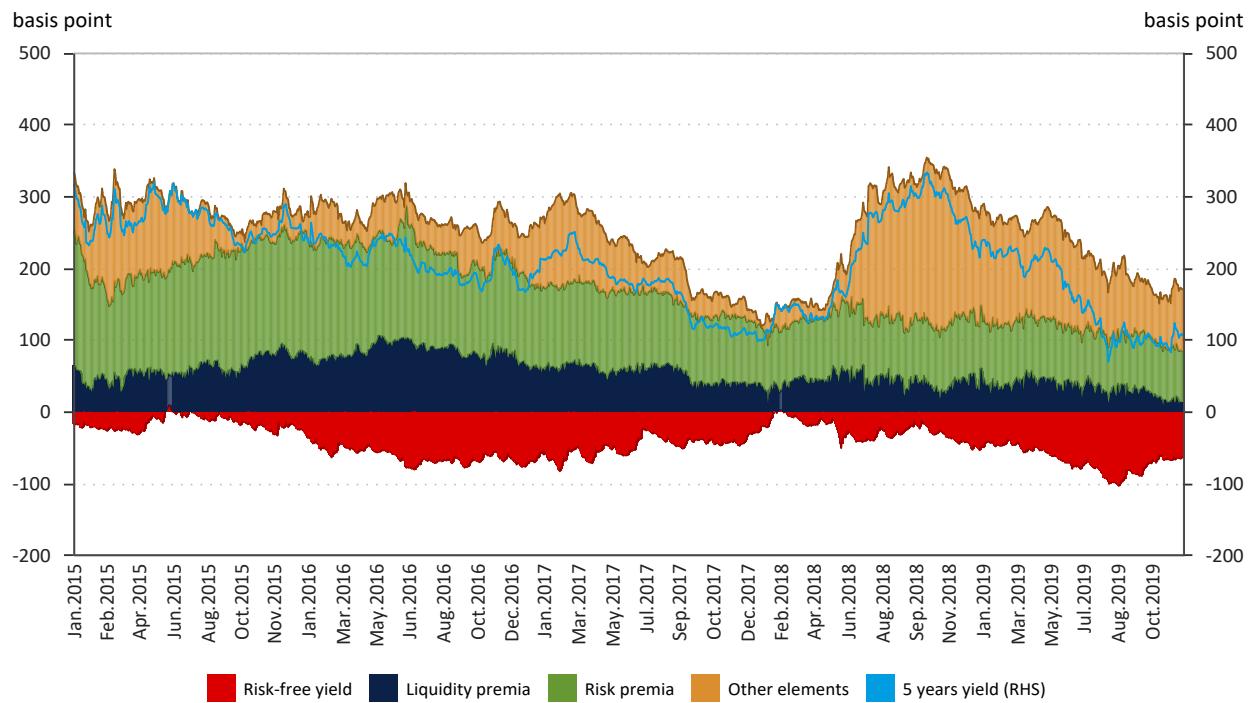
**79. Spread between 3-month forward yields in EUR and HUF**


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.

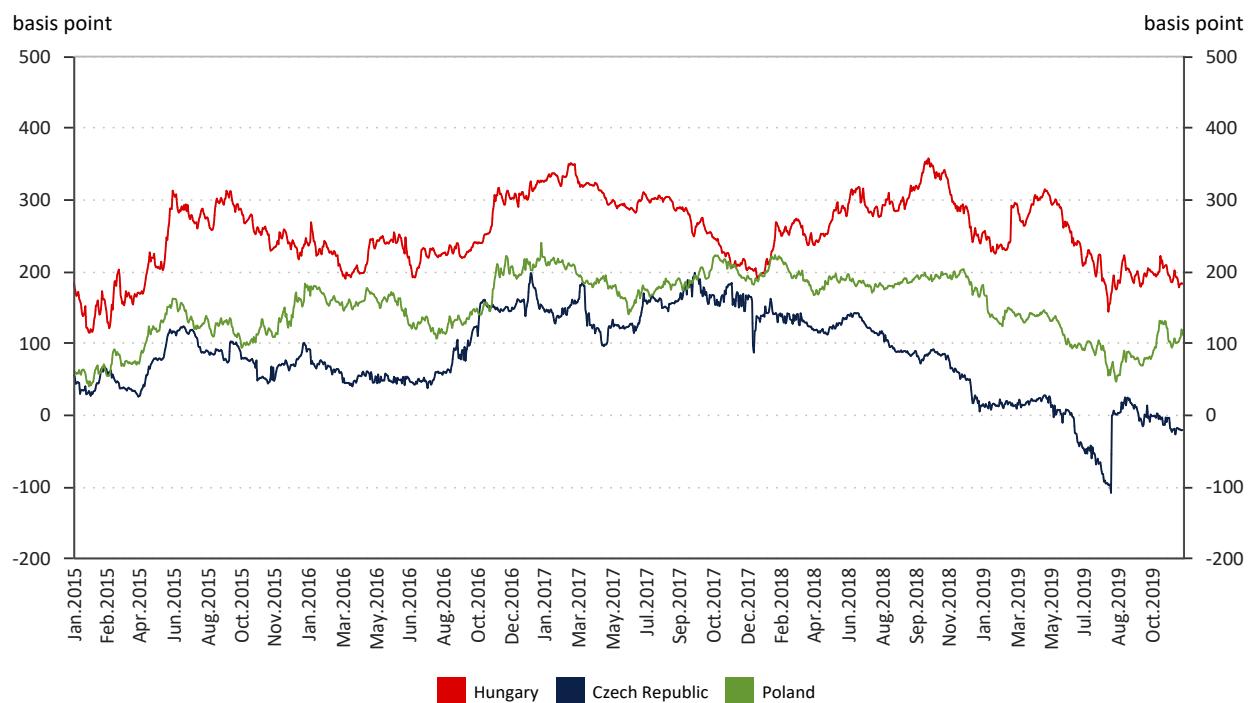
### 81. Decomposition of 5 year government bond yield



Source: Thomson Reuters, MNB

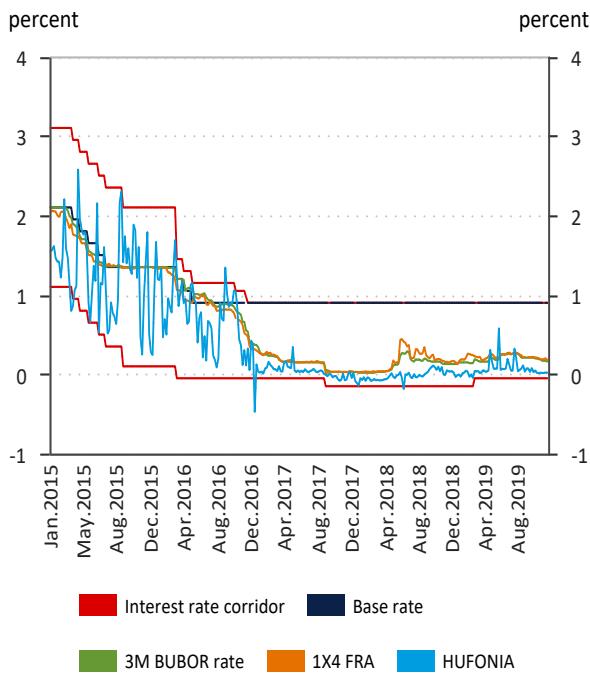
Note: Risk-free rate: German 5-year rate; Credit risk premium: 5-year Hungarian CDS spread; Liquidity premium: 5-year interest rate swap spread; others: based on residuals.

### 82. Slope of yield curve in CEE

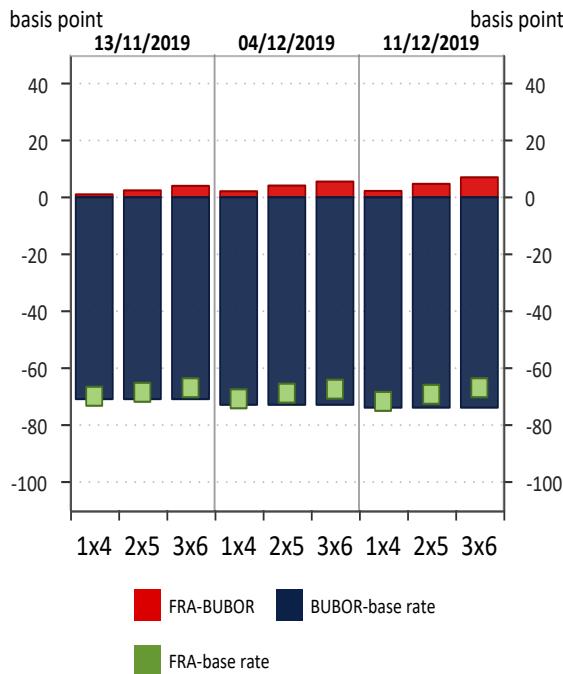


Source: Bloomberg

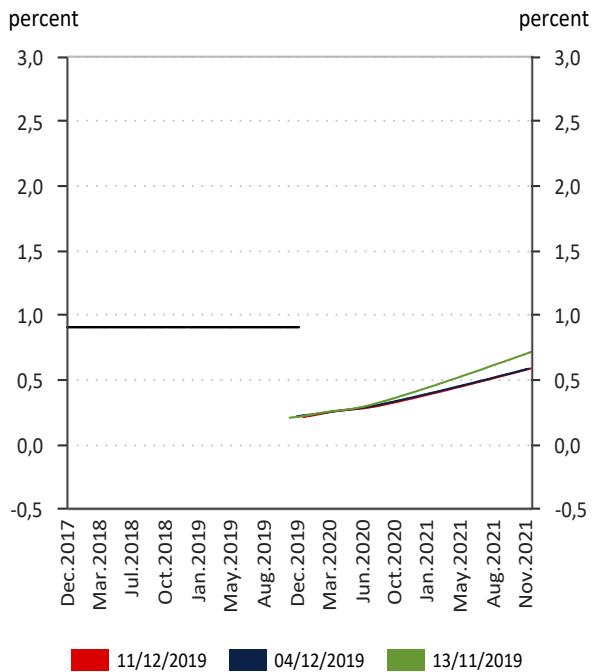
Note: Spread between 10 and 1 year local currency benchmark government bond yield.

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

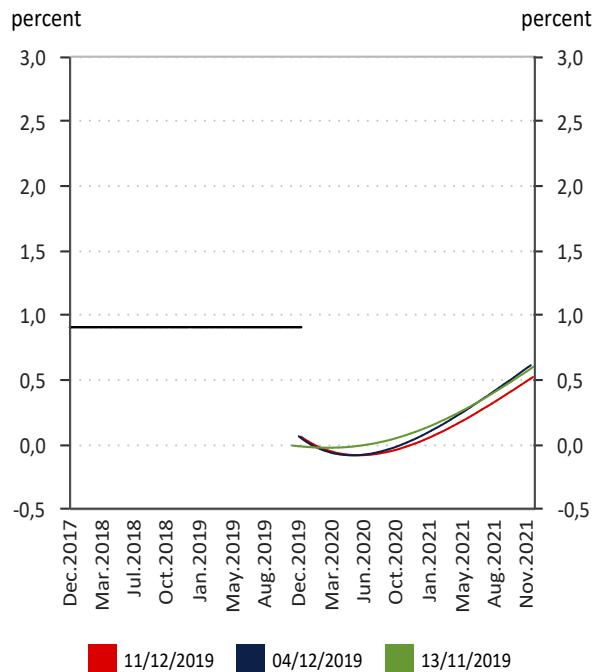
Source: Thomson Reuters, MNB

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

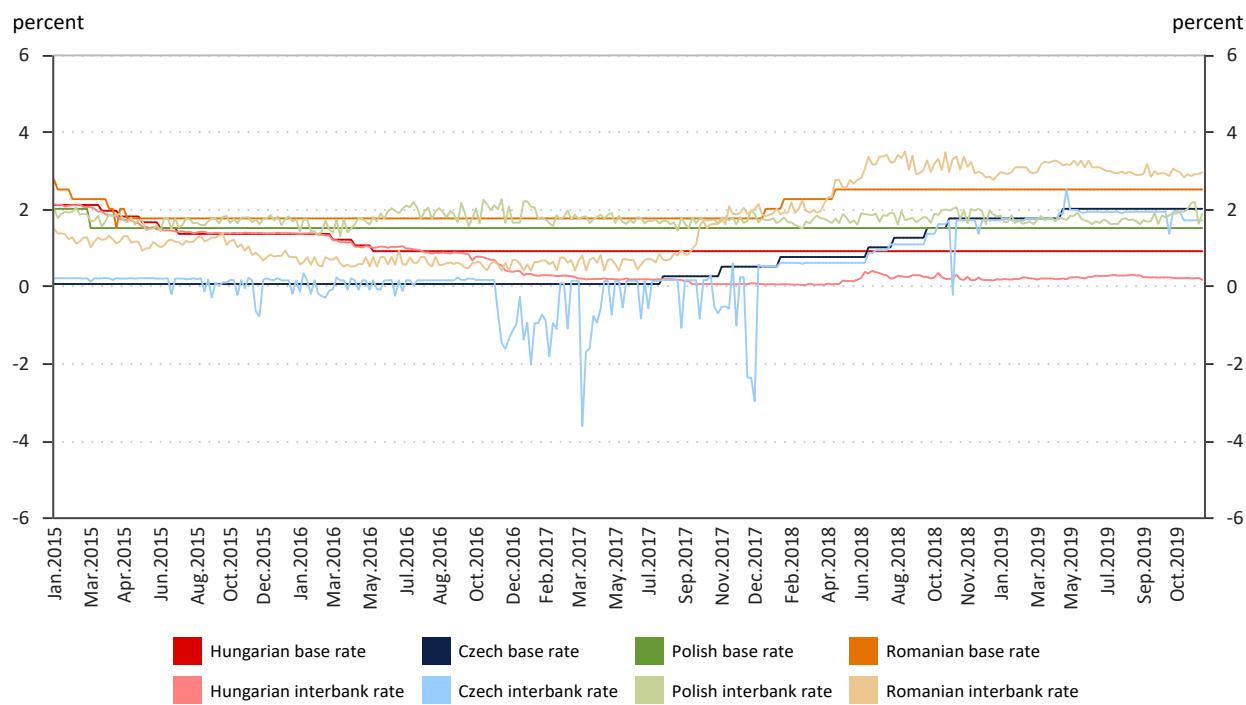
Source: Thomson Reuters, MNB.

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

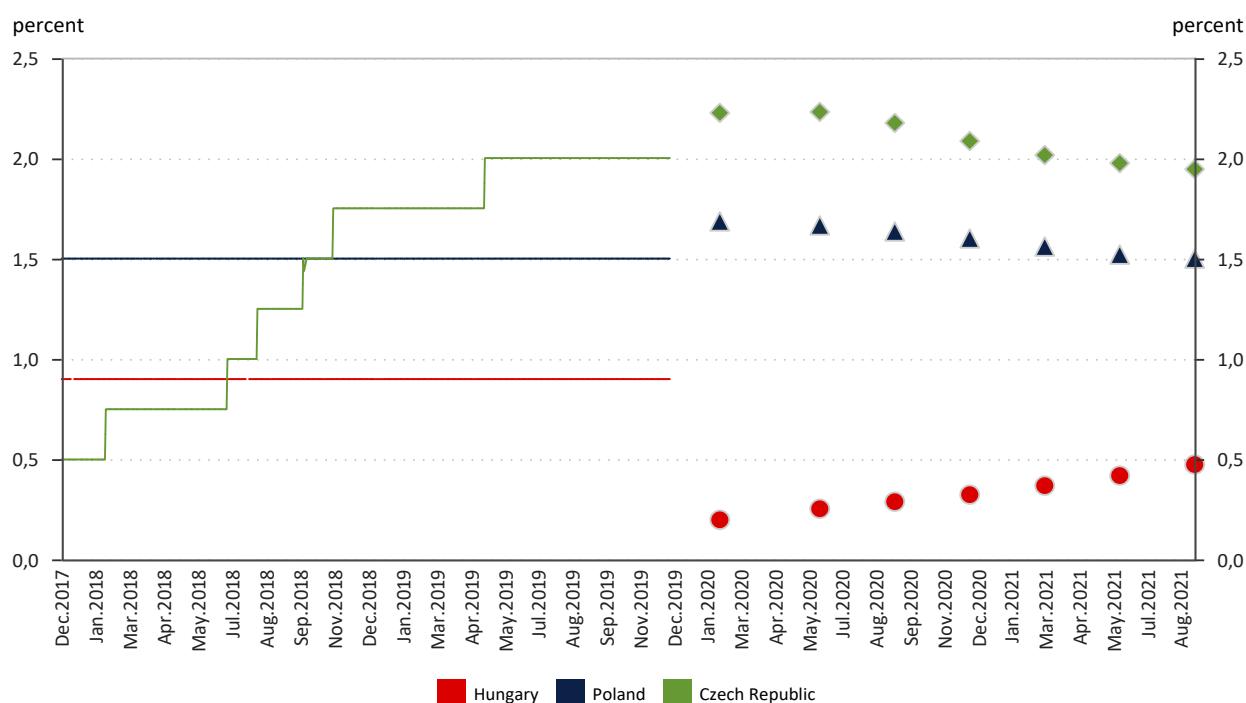
Source: MNB.

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

Source: MNB.

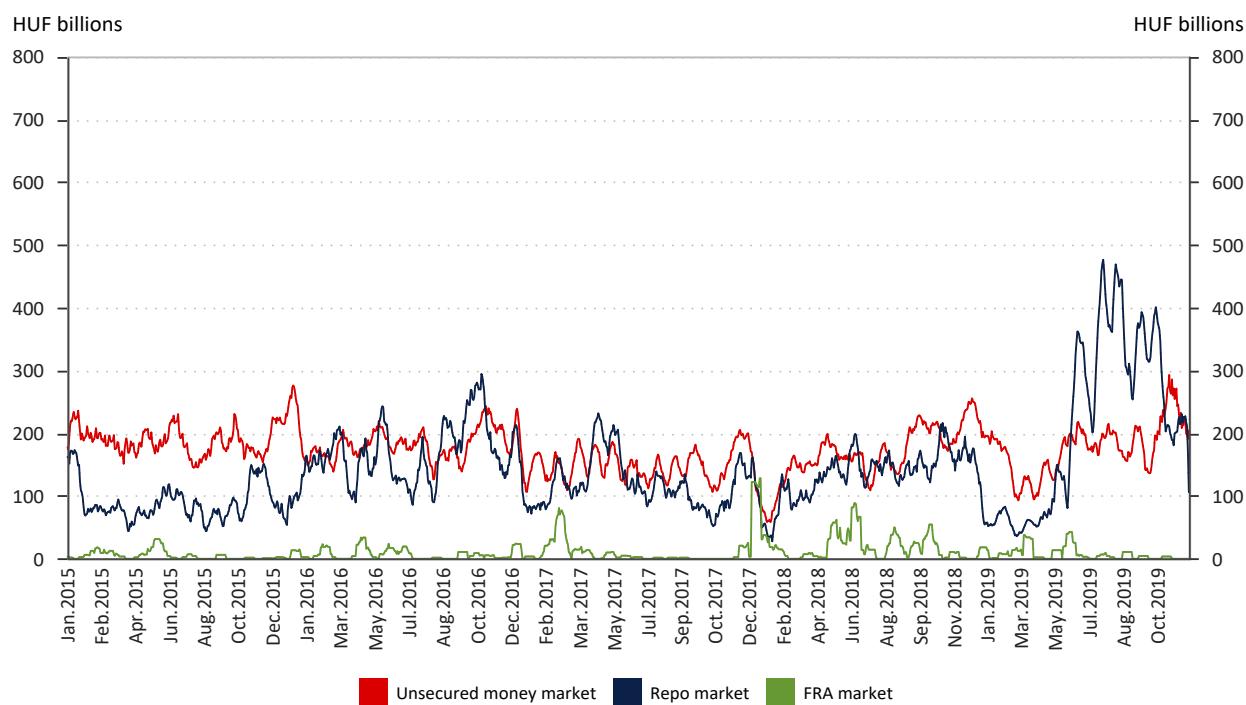
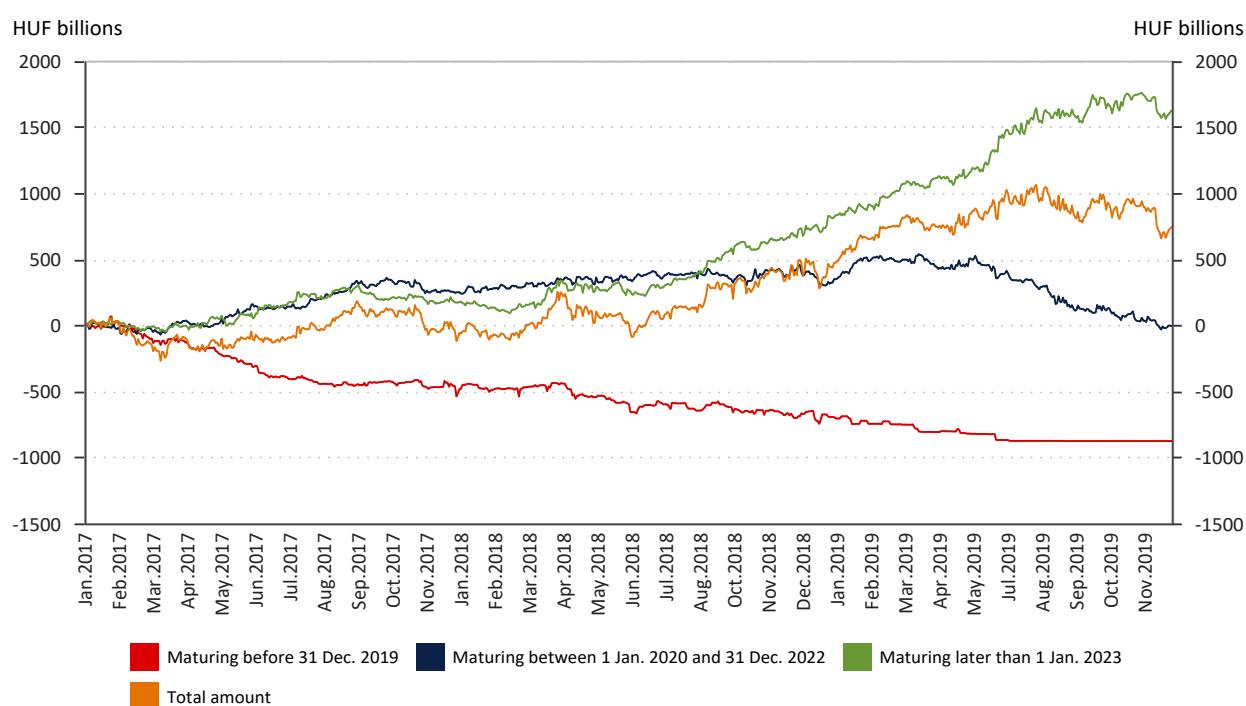
**87. Base rates and short term interbank rates in the region**

Source: Thomson Reuters.

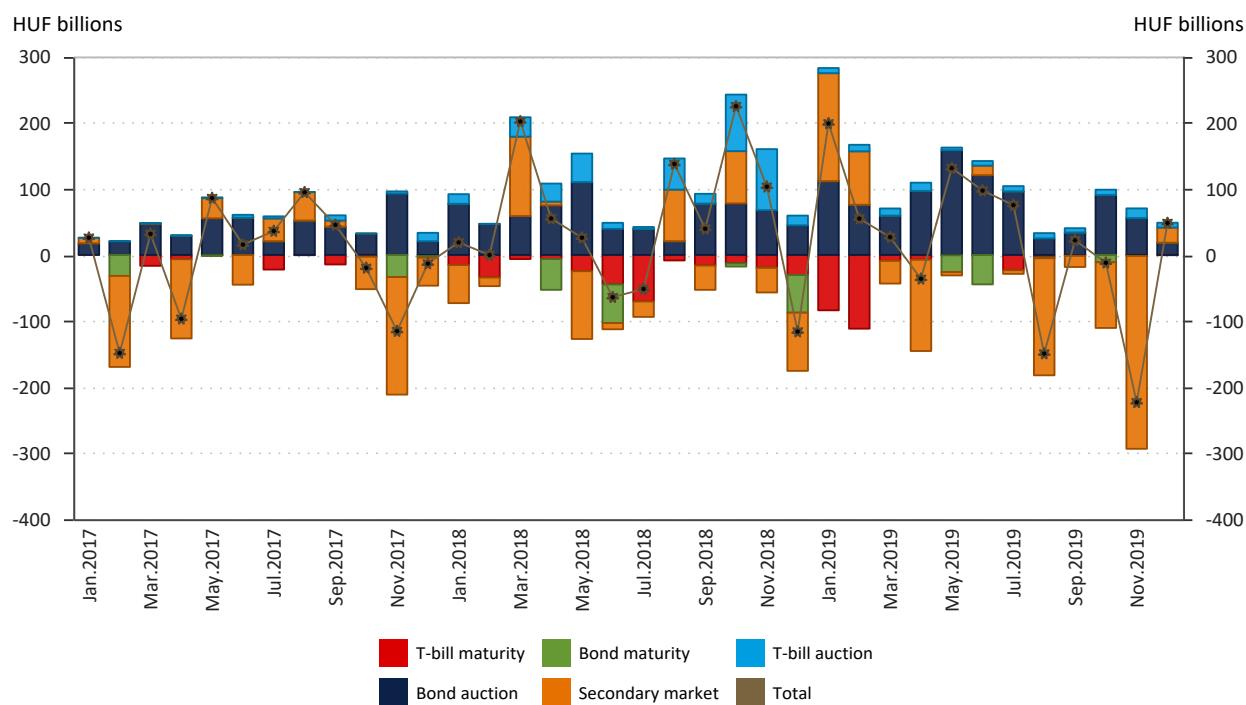
**88. CEE base rates and forward rate agreements**

Source: Bloomberg

Note: Based on FRA transactions. Last update: (11/12/2019).

**89. Turnover on the interbank, HUF repo, and FRA markets (25 day moving average)****90. Change in government bonds of non-residents by tenor**

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



Source: MNB

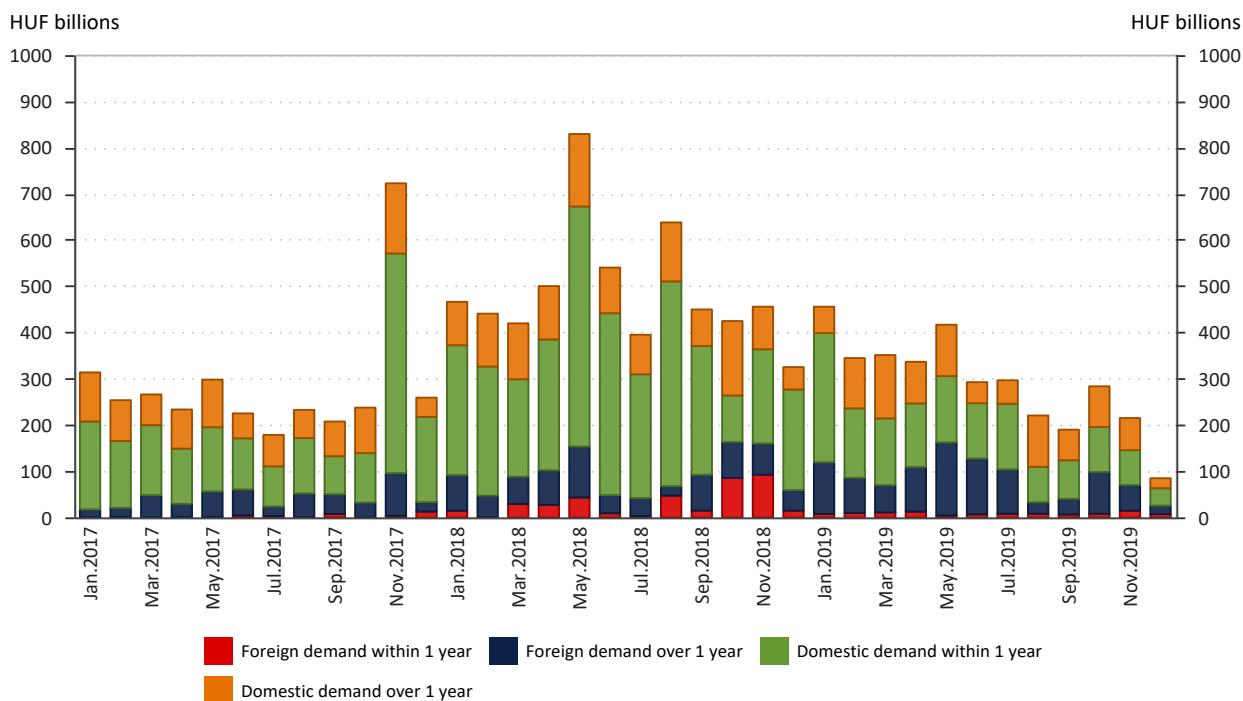
Note: Last month is incomplete.

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



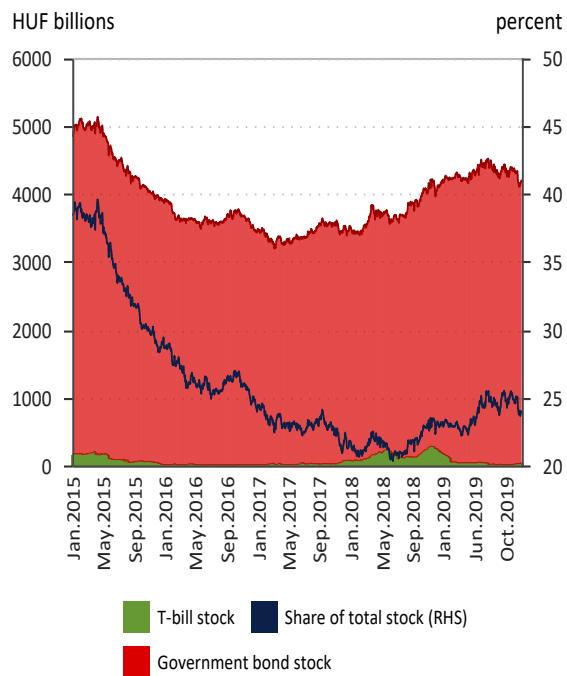
Source: MNB, KELER

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

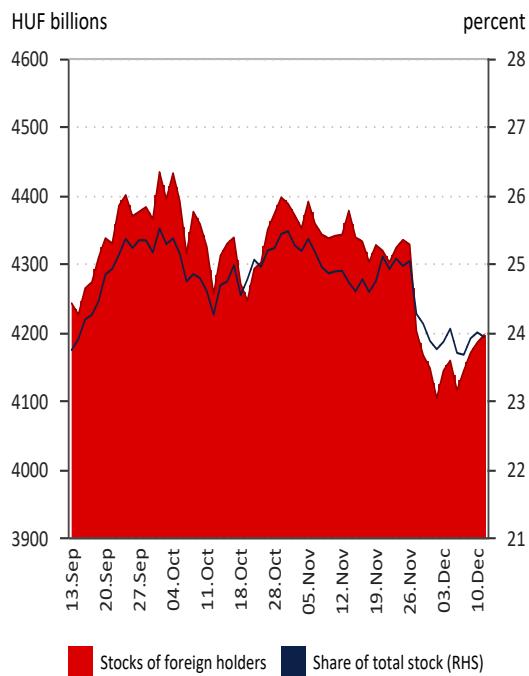
**93. Primary market government security purchase of domestic and non-resident investors**

Source: MNB

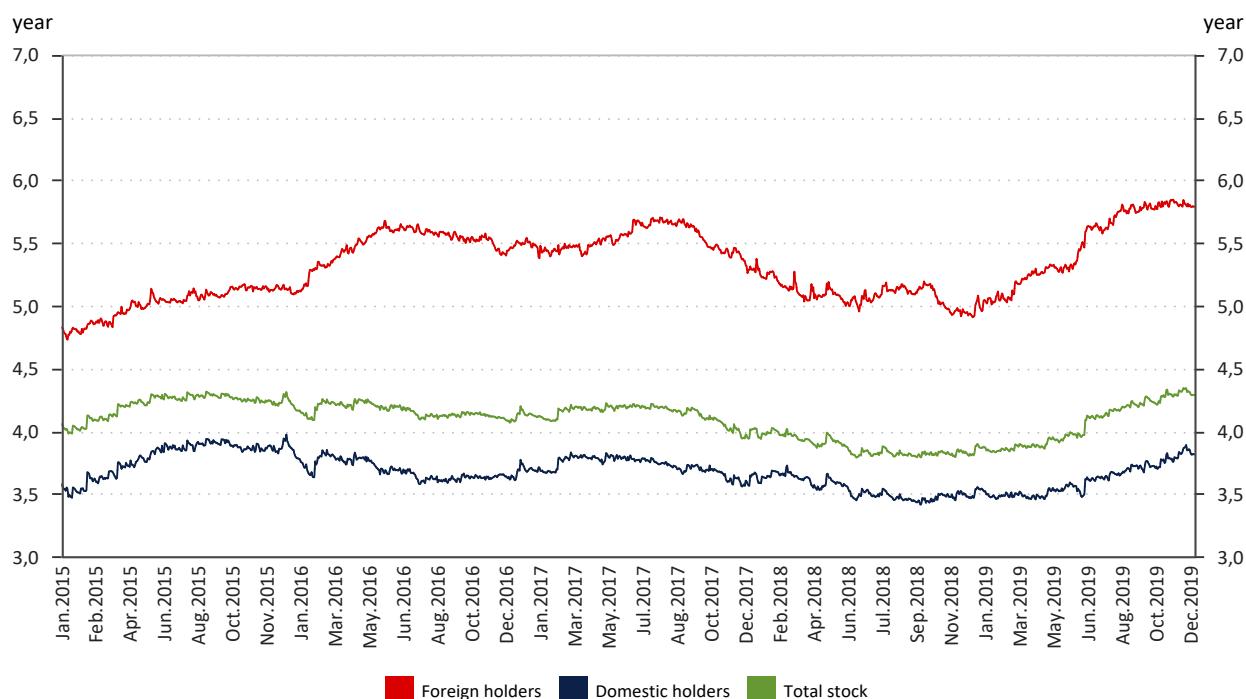
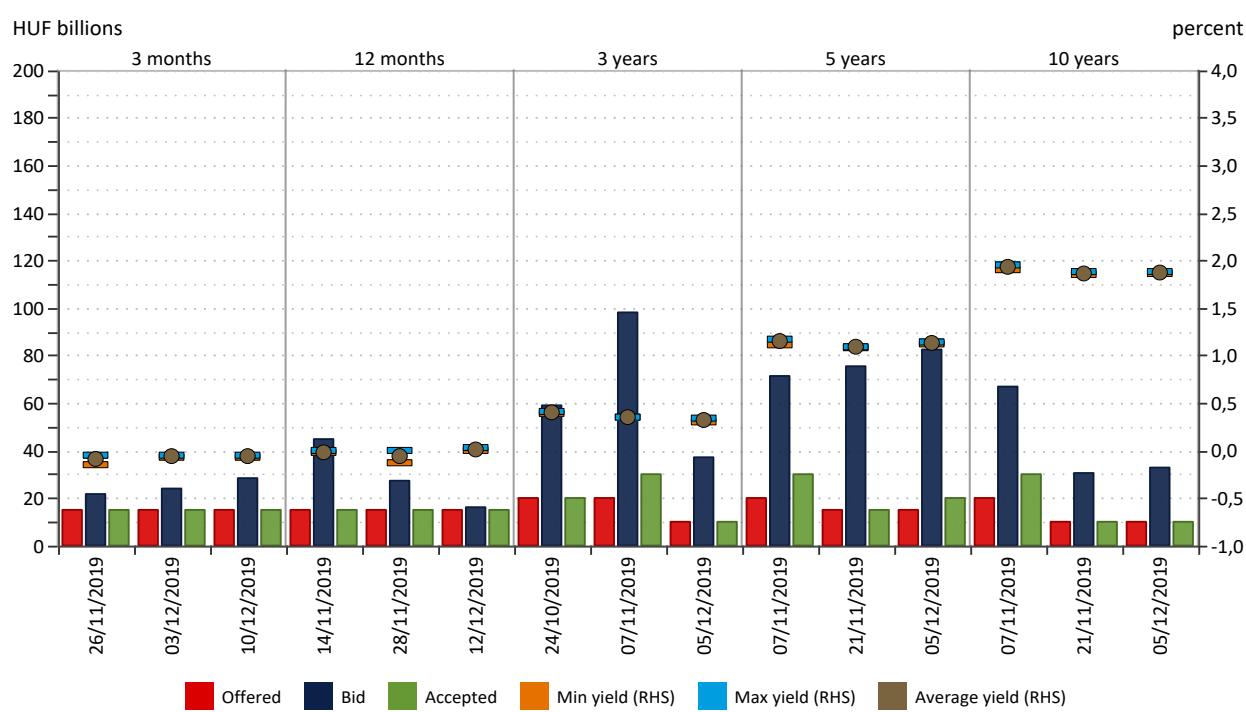
Note: Last month is incomplete.

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

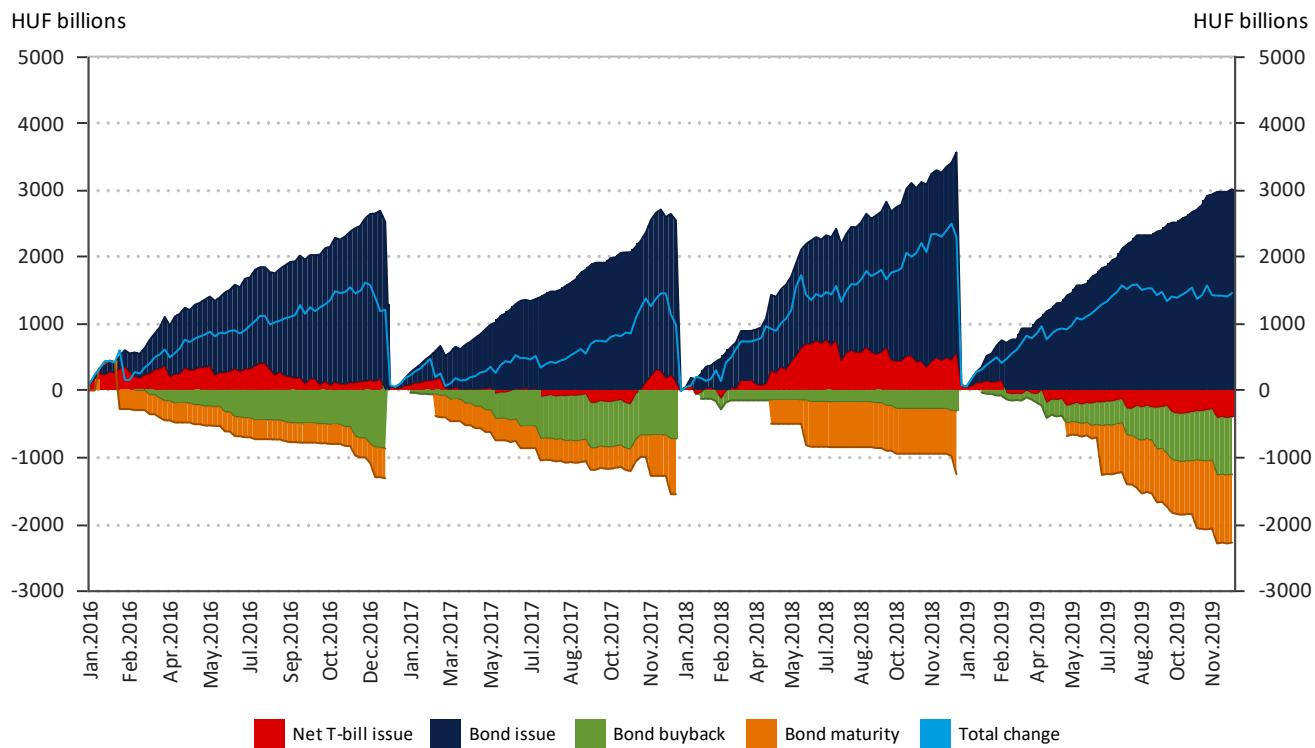
Source: MNB.

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

Source: MNB.

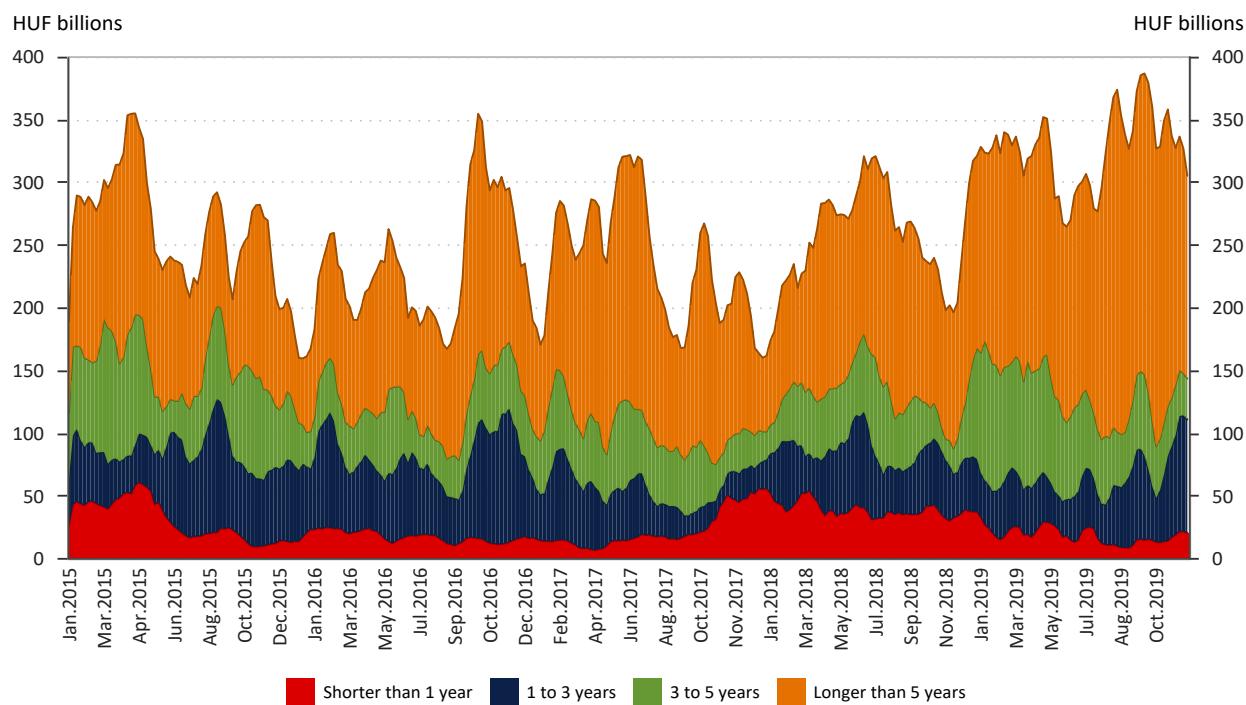
**96. The average time to maturity of government security portfolio of residents and non-residents****97. The turnover and yield data of the Hungarian primary T-bill and T-bond issues**

## 98. Government securities issues, buybacks, redemptions

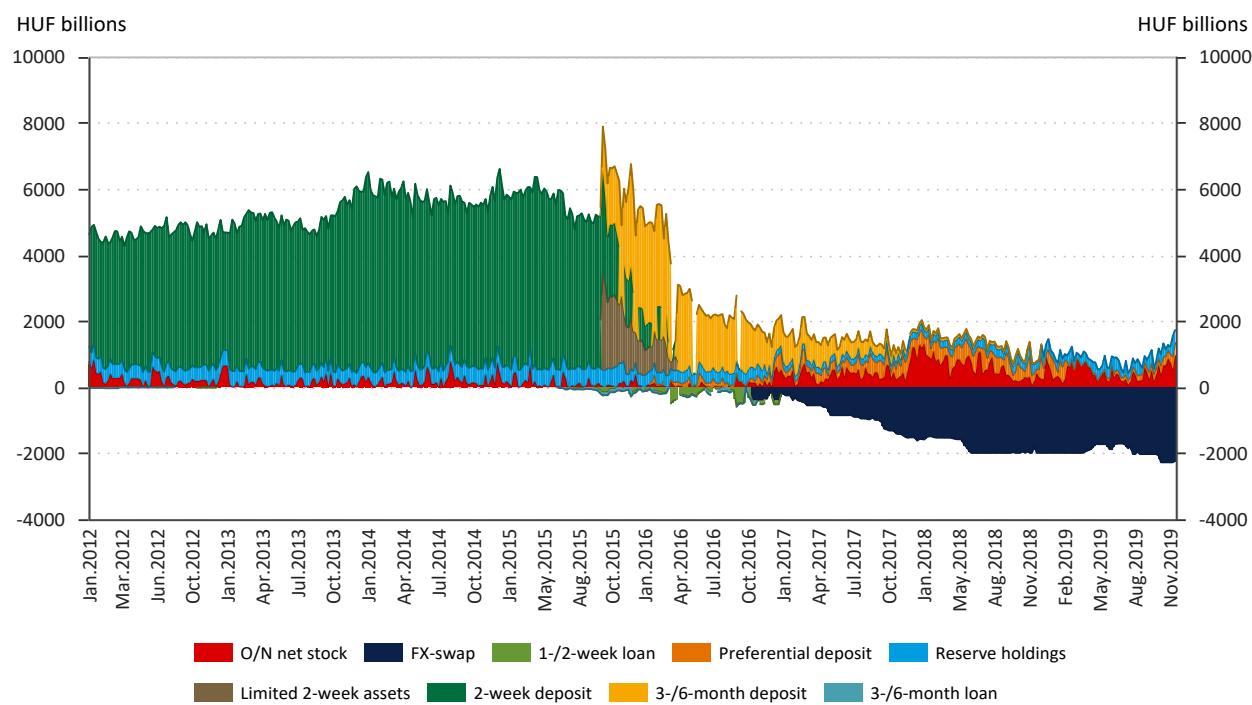


Source: MNB.

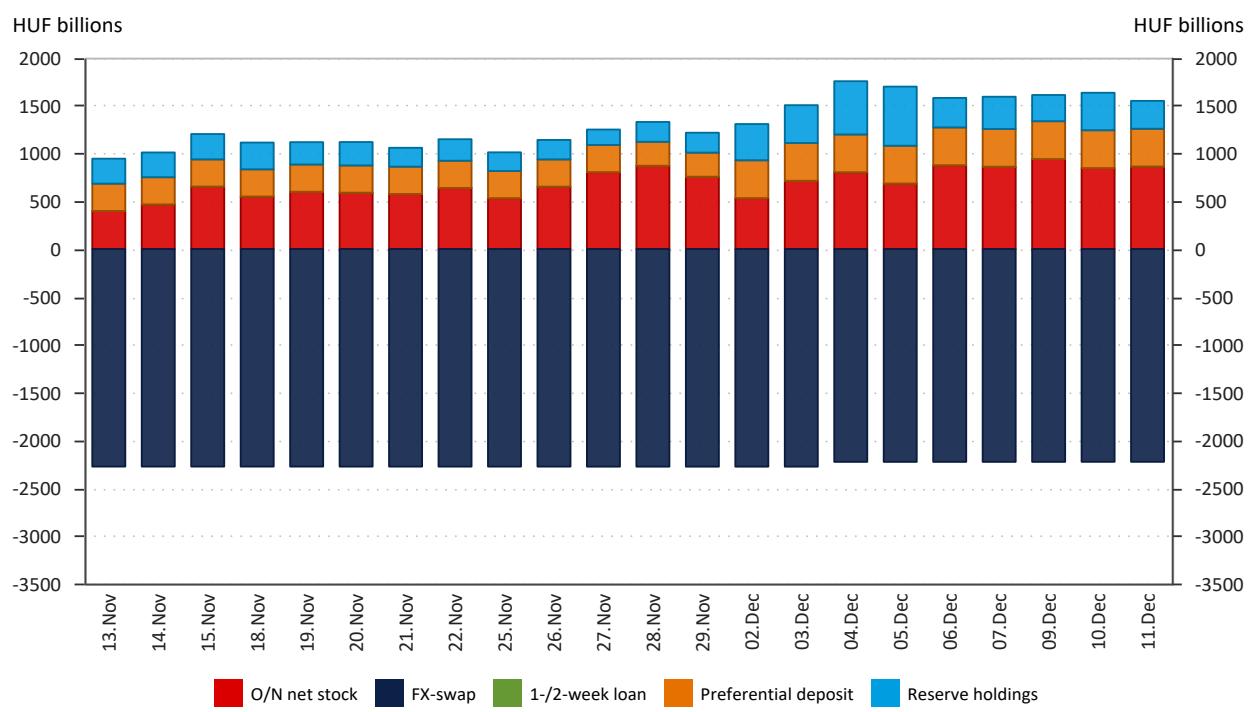
## 99. Turnover on the secondary market of government securities



Source: MNB, KELER.

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

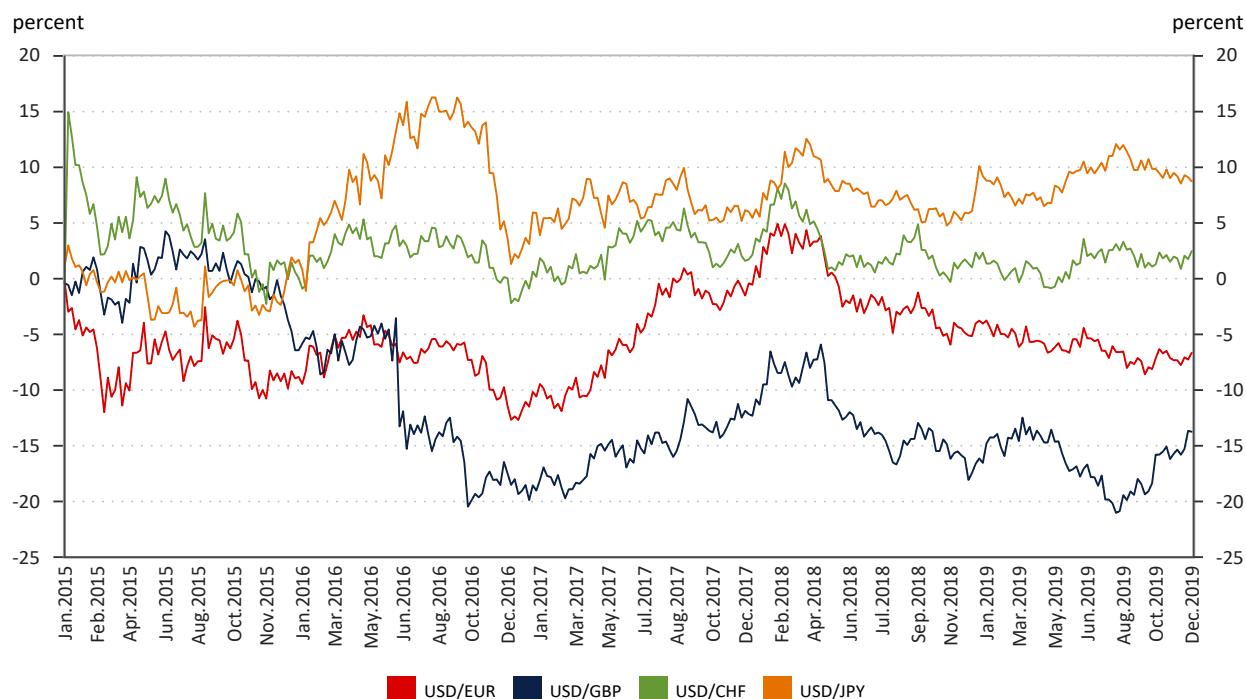
Source: MNB.

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

Source: MNB.

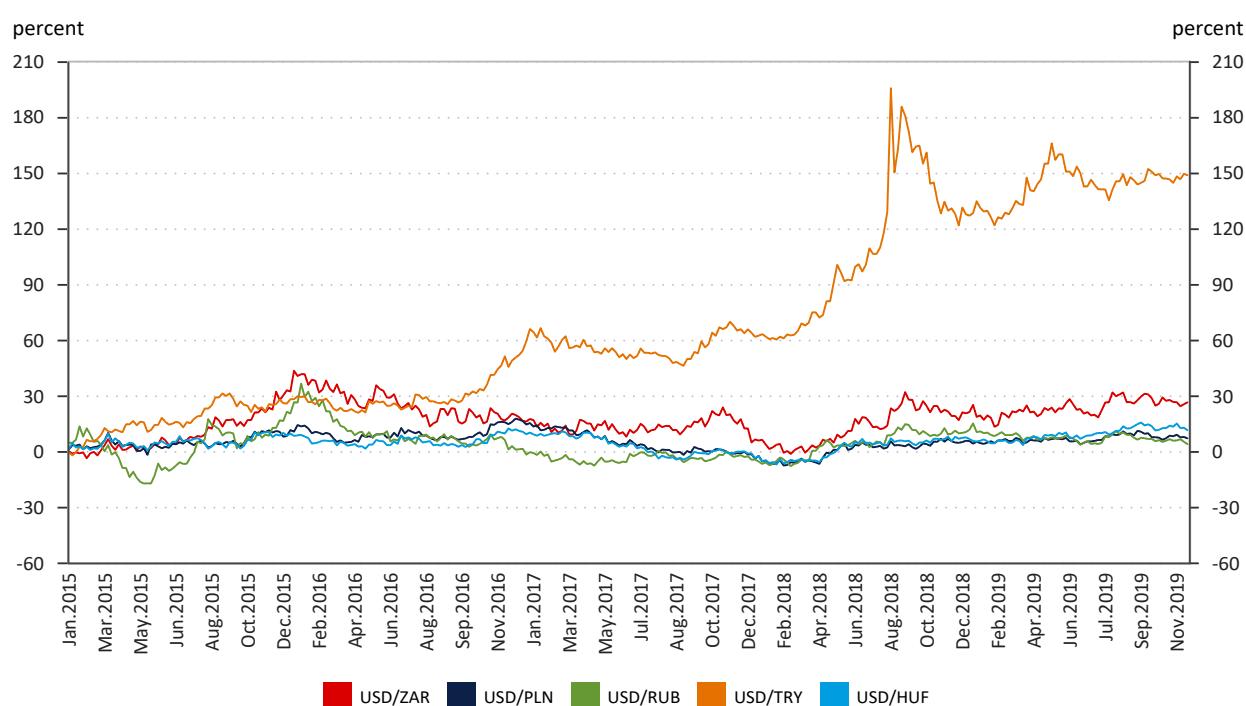
**102. International developments***Overview*

<b>Indicator</b>	<b>1 month ago</b>	<b>1 week ago</b>	<b>Current</b>
Fed base rate (%)	1.75	1.75	1.75
ECB base rate (%)	0.00	0.00	0.00
10-year T-bond yield (%)	1.89	1.84	1.89
10-year euro yield (%)	-0.30	-0.29	-0.27
VIX Index (%)	13.0	13.6	14.9
EMBI Global spread (bp)	317	303	288
SP 500 Index	3094	3146	3142
DAX Index	13230	13167	13222
NIKKEI Index	23520	23300	23392
USD/EUR exchange rate	1.10	1.11	1.11
USD/JPY exchange rate	108.83	108.61	109.31
CHF/EUR exchange rate	1.09	1.10	1.10
Brent oil (USD per barrel)	62.4	64.3	63.5

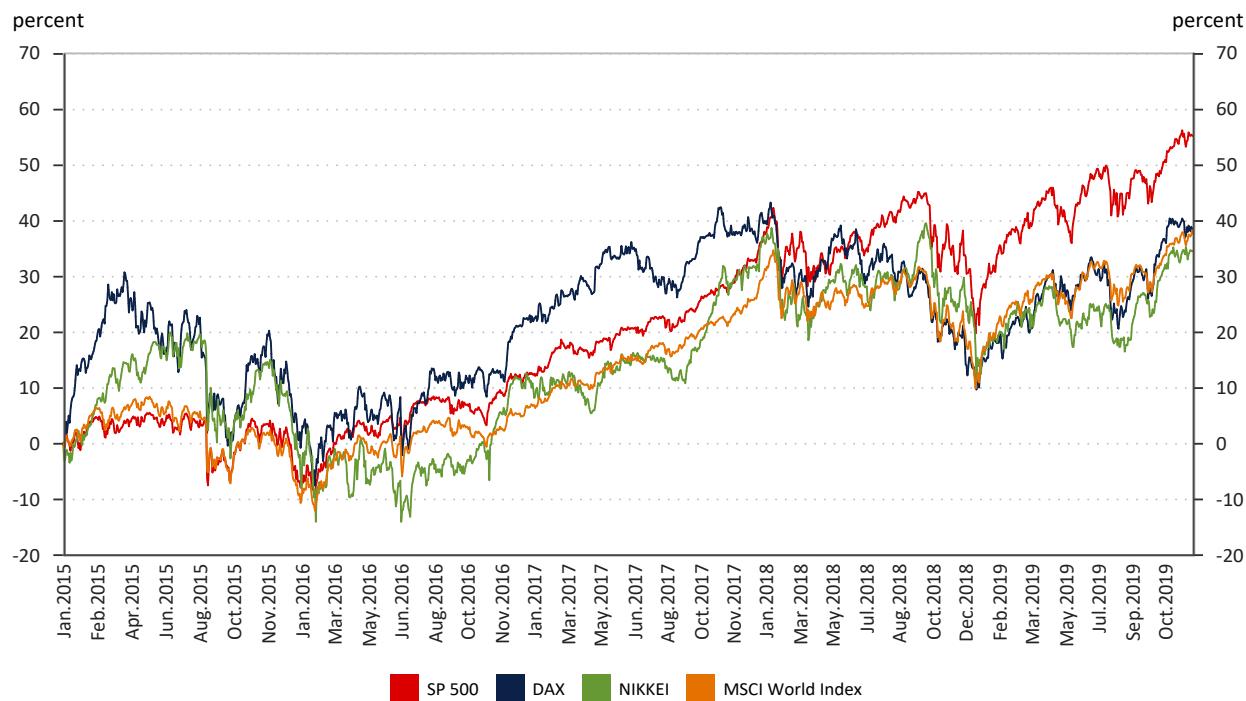
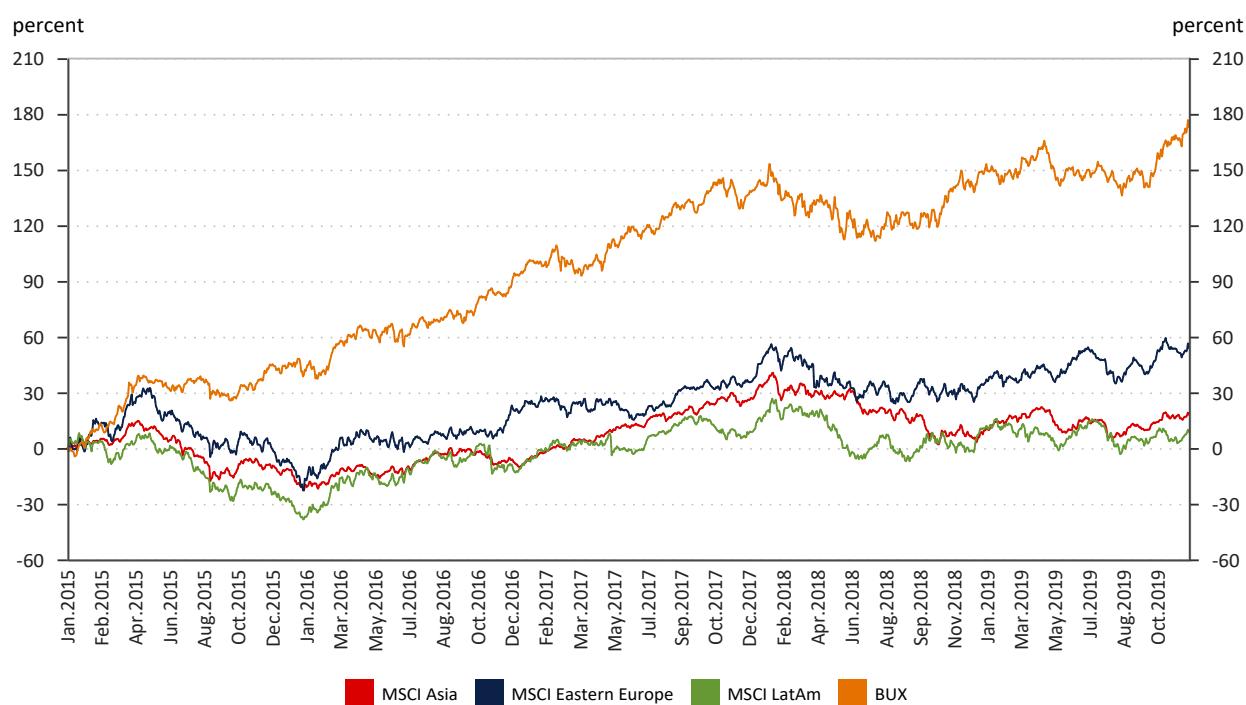
**103. Major currencies versus the dollar**

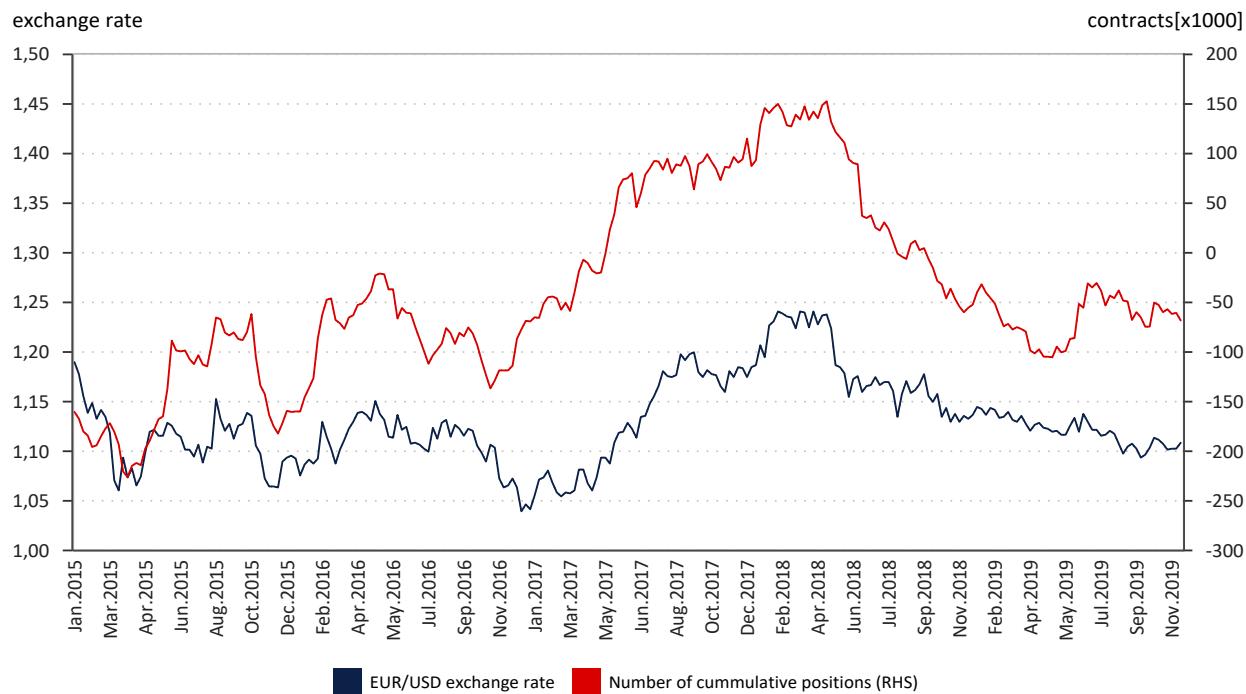
Source: Thomson Reuters

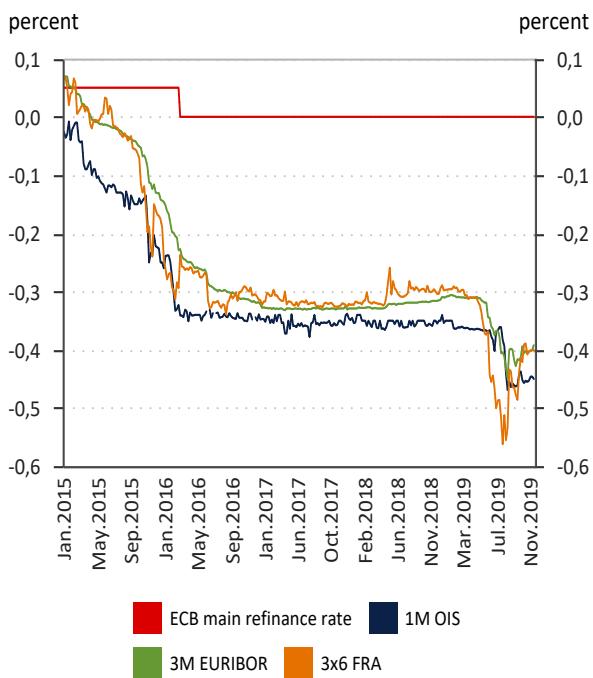
Note: cumulative change. Positive values indicate USD depreciation.

**104. Emerging currencies versus the dollar**

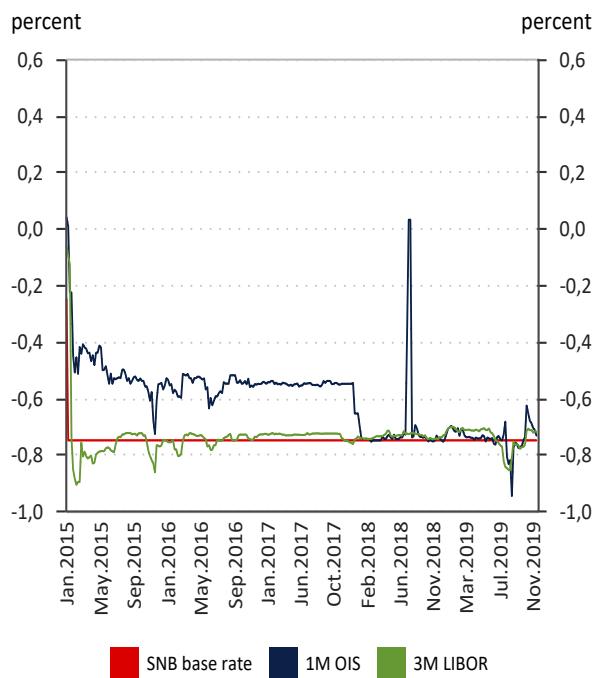
Source: Thomson Reuters Notes: positive value means depreciation of the emerging currency. Cumulative change.

**105. Developed market stock indices****106. Emerging stock exchange markets**

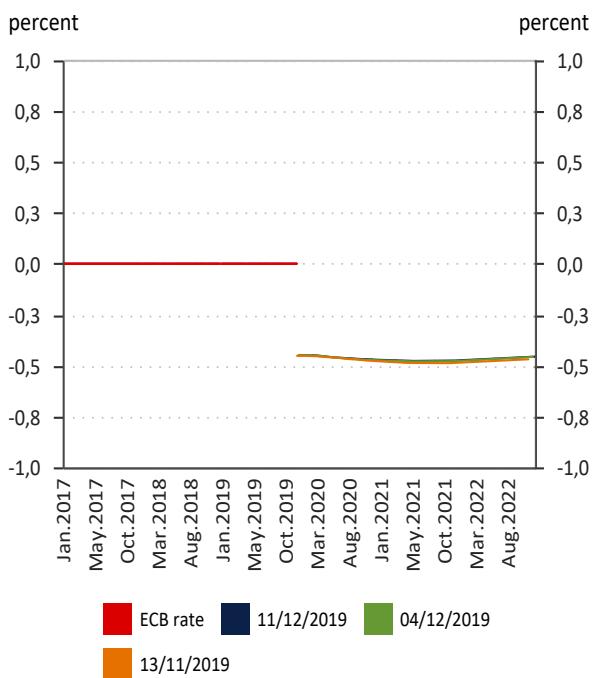
**107. EUR/USD exchange rate and speculative positions**

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

Source: Thomson Reuters.

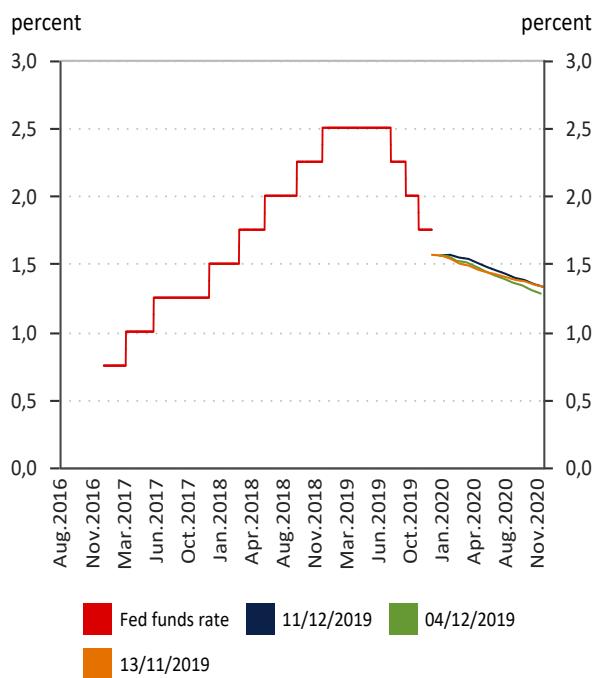
**110. Short term interbank rates in Switzerland**

Source: Thomson Reuters.

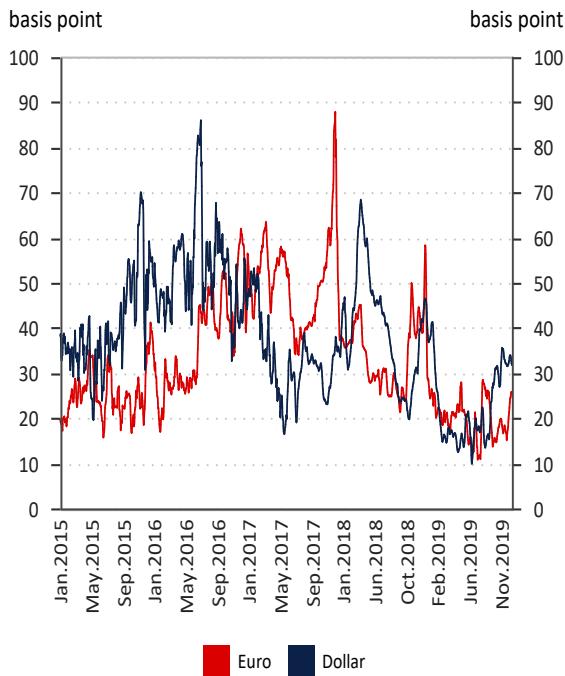
**111. Forecasts on ECB policy rate**

Source: ECB.

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

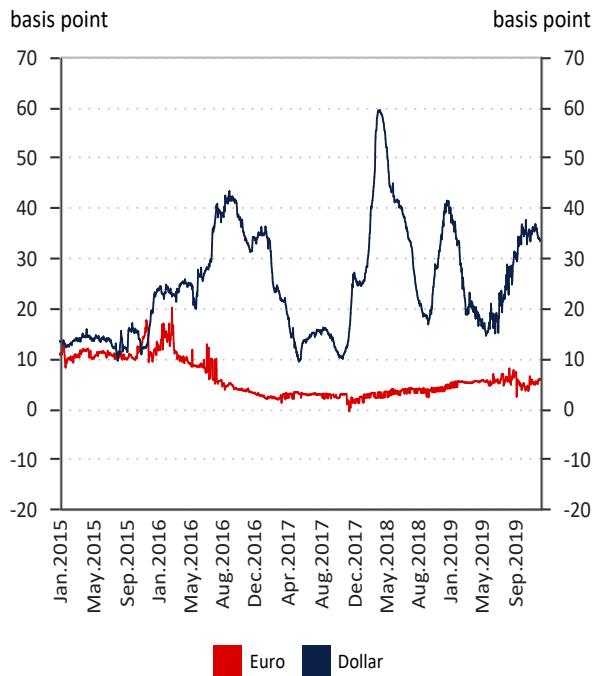
**112. Forecasts on Fed policy rate**

Source: Bloomberg.

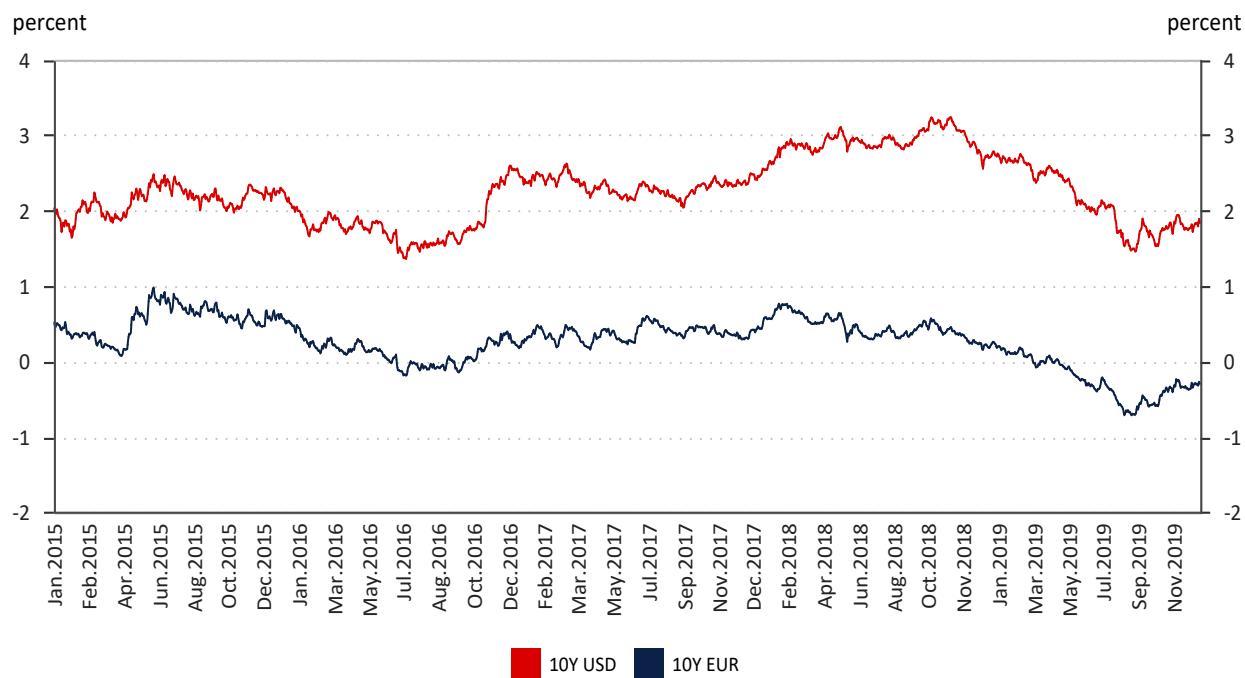
**113. 3M interbank and government bond yield spread**

Source: Thomson Reuters.

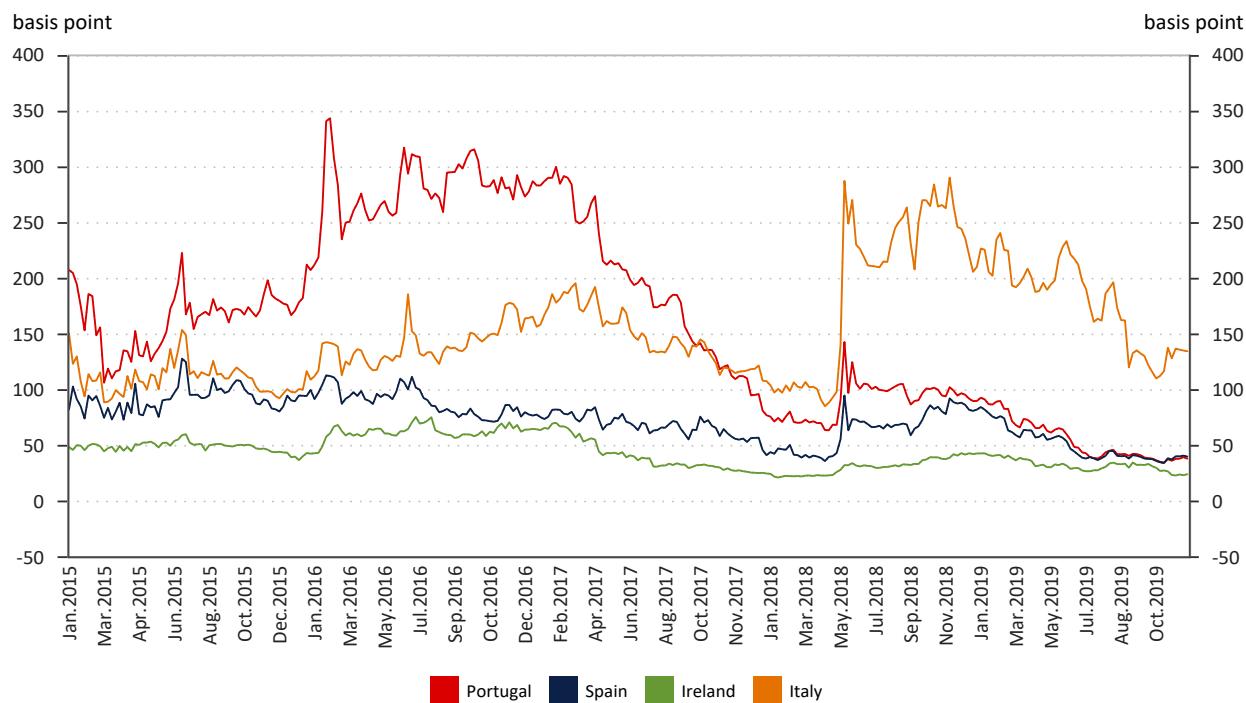
Notes: Spread between 3-month interbank rates and 3-month T-bill yield.

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

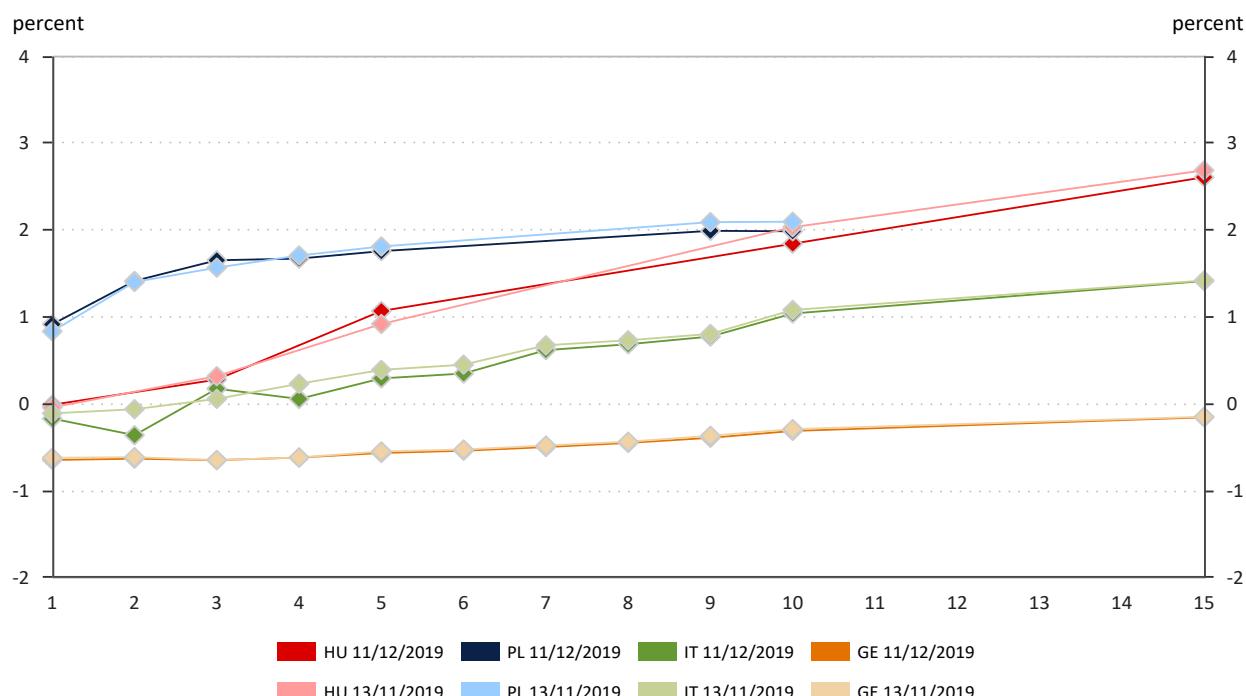
Source: Thomson Reuters

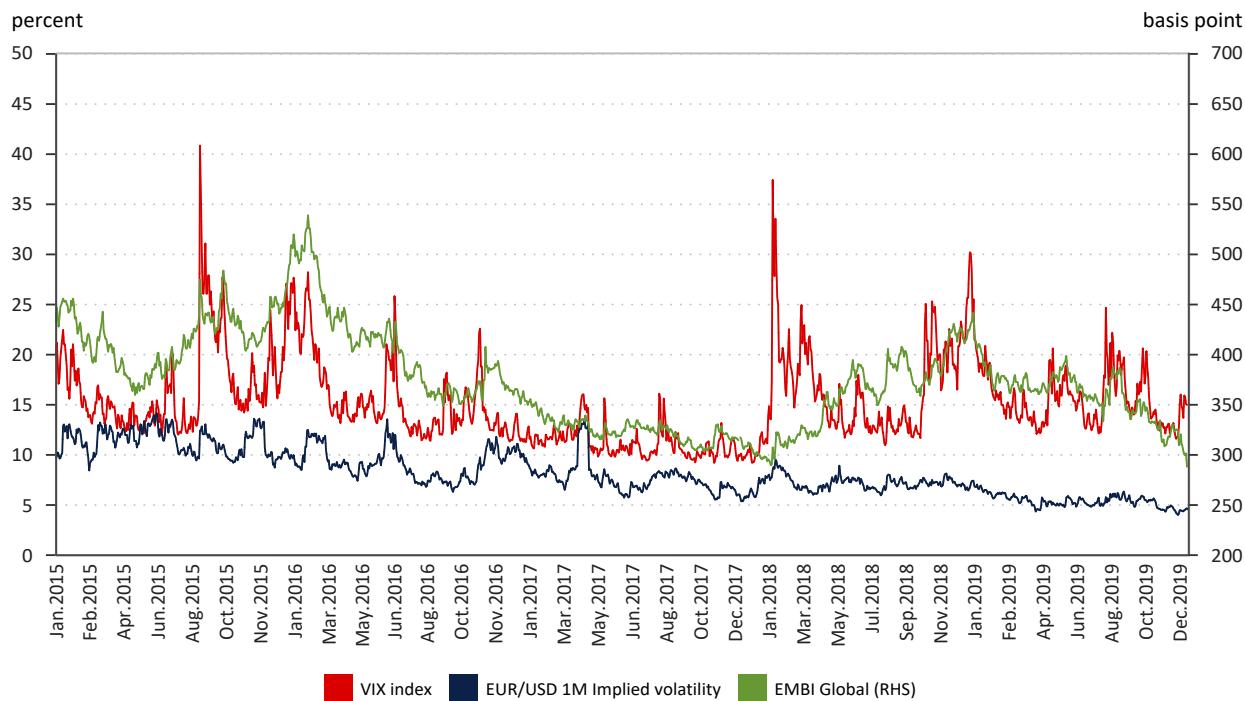
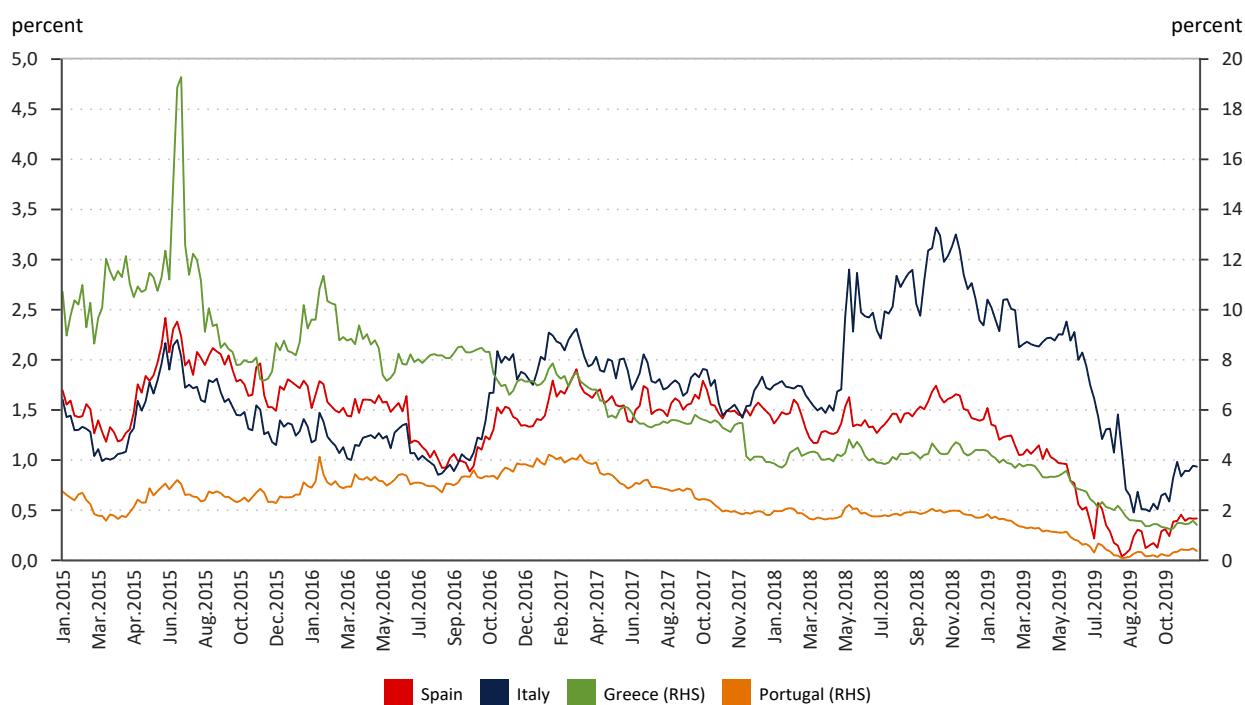
**115. Long term euro and dollar benchmark yields**

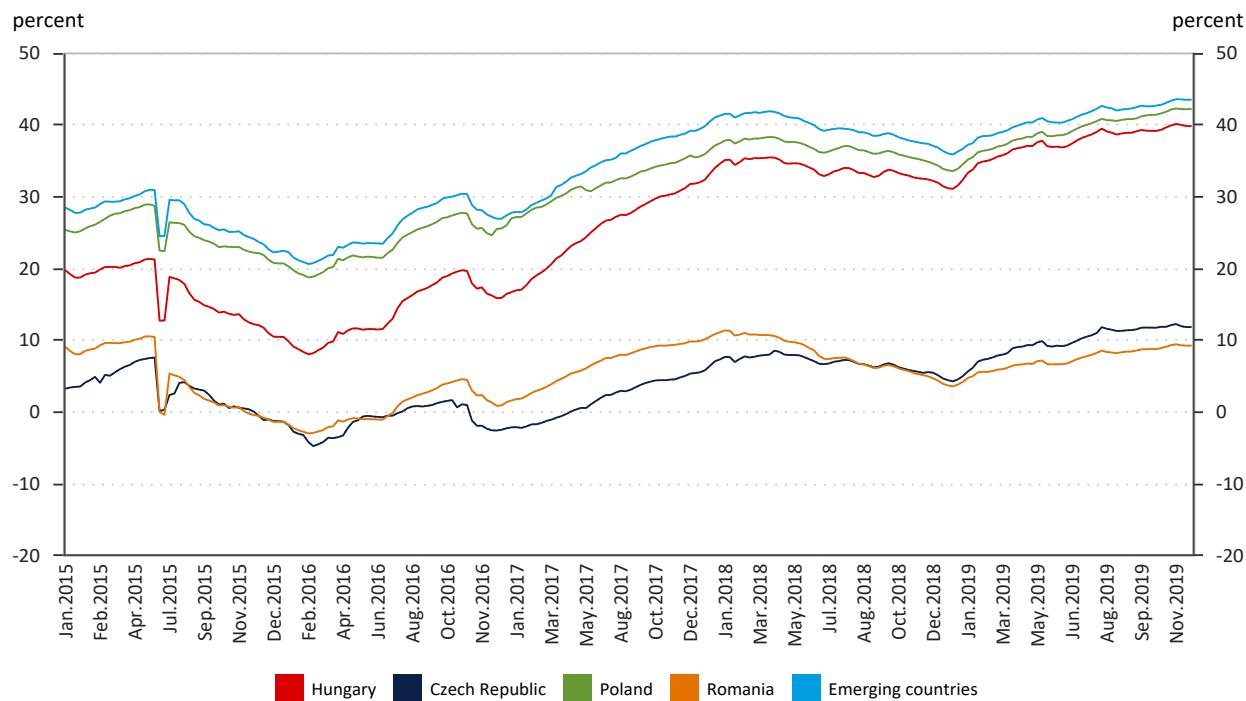
Source: Thomson Reuters.

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

Source: Thomson Reuters.

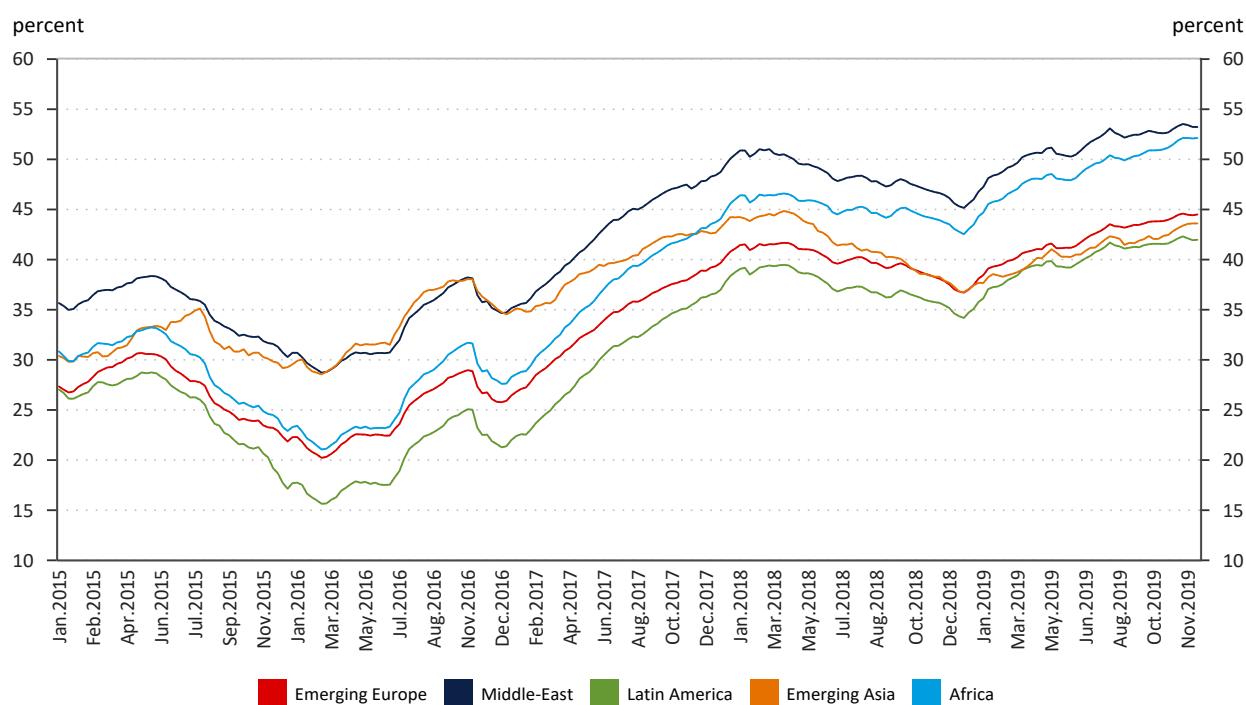
**117. Benchmark yield curves of Hungary, Poland, Italy and Germany**Source: Bloomberg  
Note: X axis is displayed in years.

**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