



## Chart-pack on recent economic and financial market developments<sup>†</sup>

26 February 2013

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.

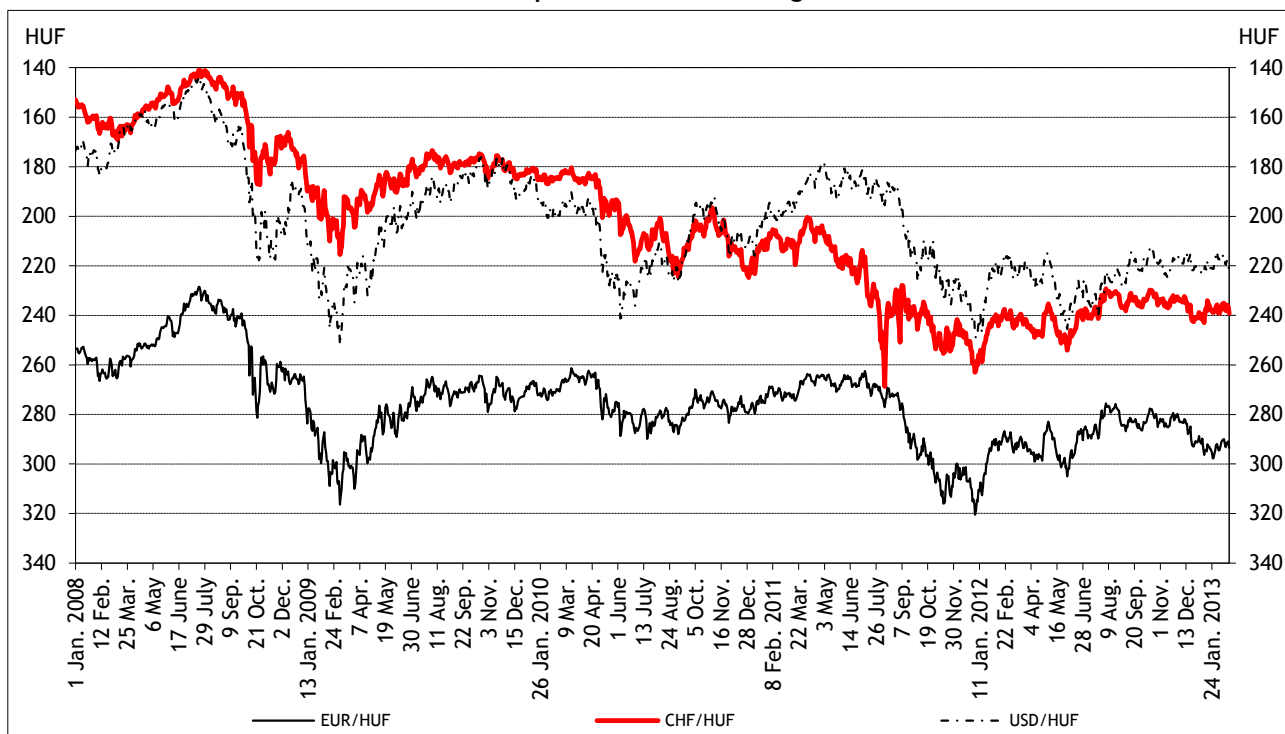
Earlier versions of the chart-pack are accessible on the website of Magyar Nemzeti Bank via the following address.

<http://english.mnb.hu/Kiadvanyok/chartpack>

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

<sup>†</sup> 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.

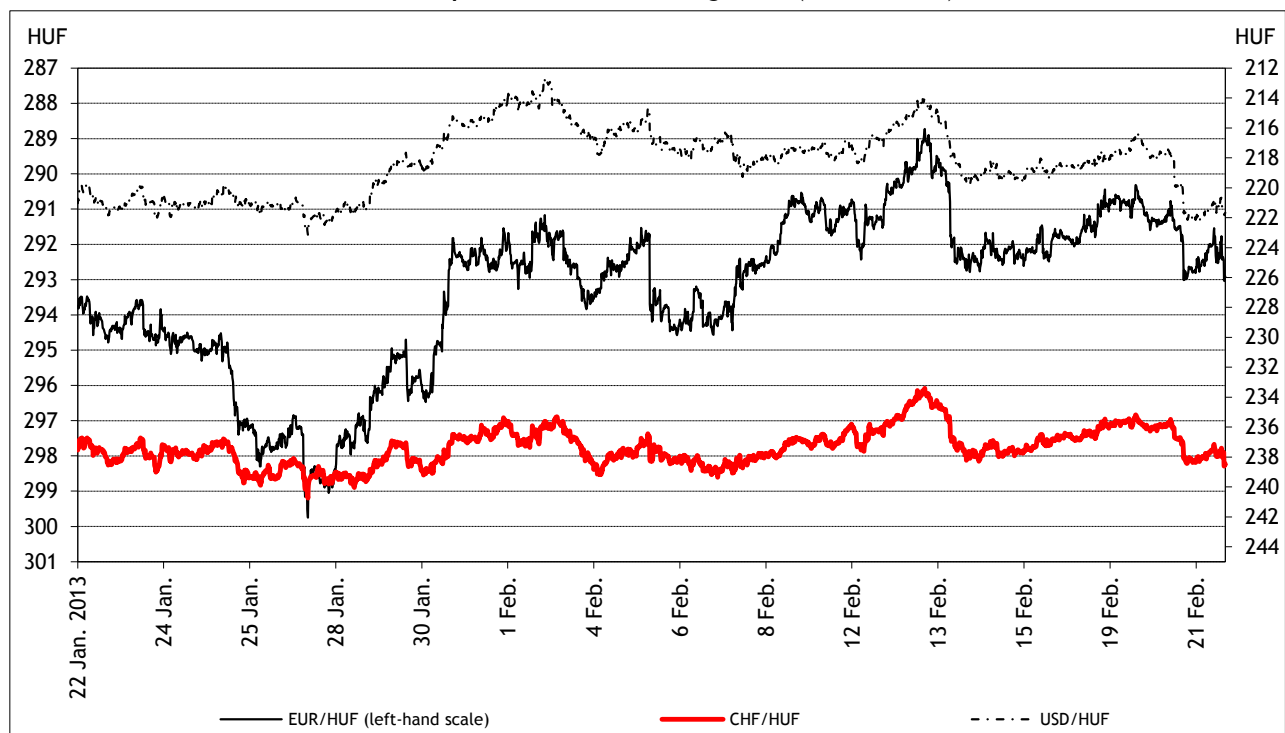
## 1. Developments in HUF exchange rate



Source: Thomson Reuters.

Notes: reverse scale, daily observations.

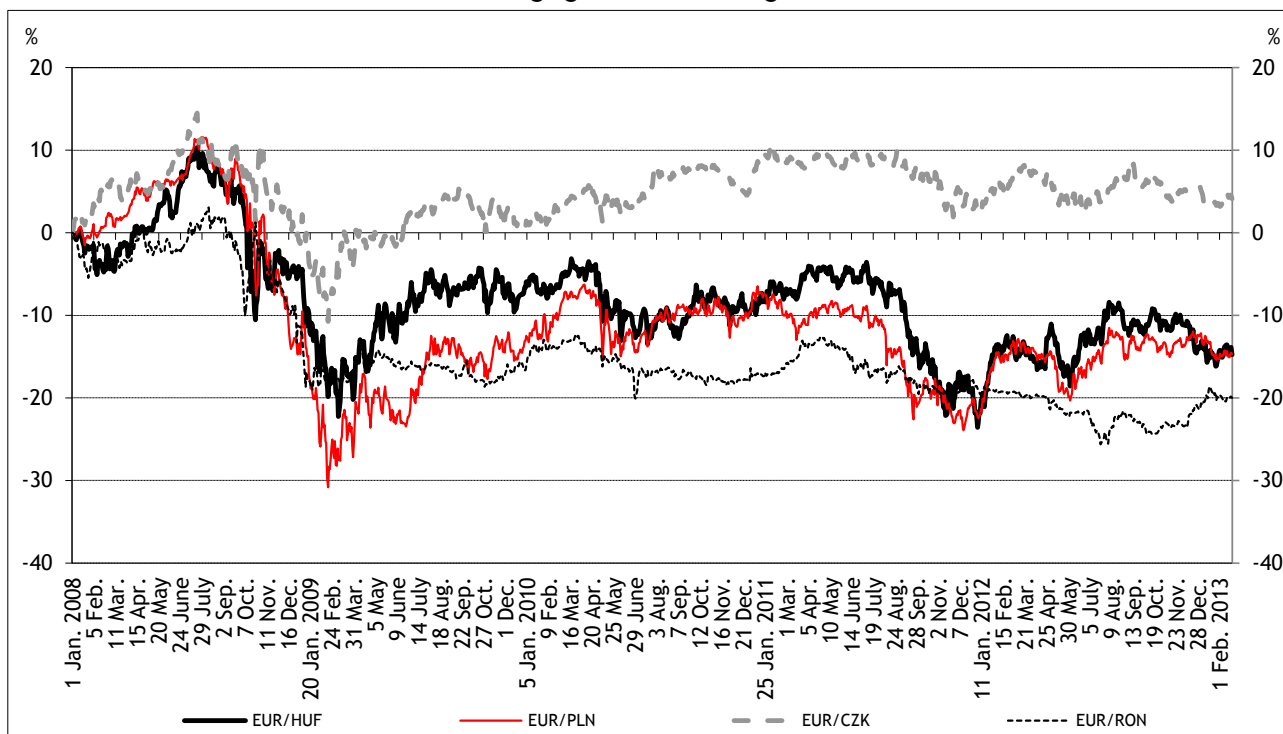
## 2. Developments in HUF exchange rate (last 1 month)



Source: Thomson Reuters.

Notes: reverse scale.

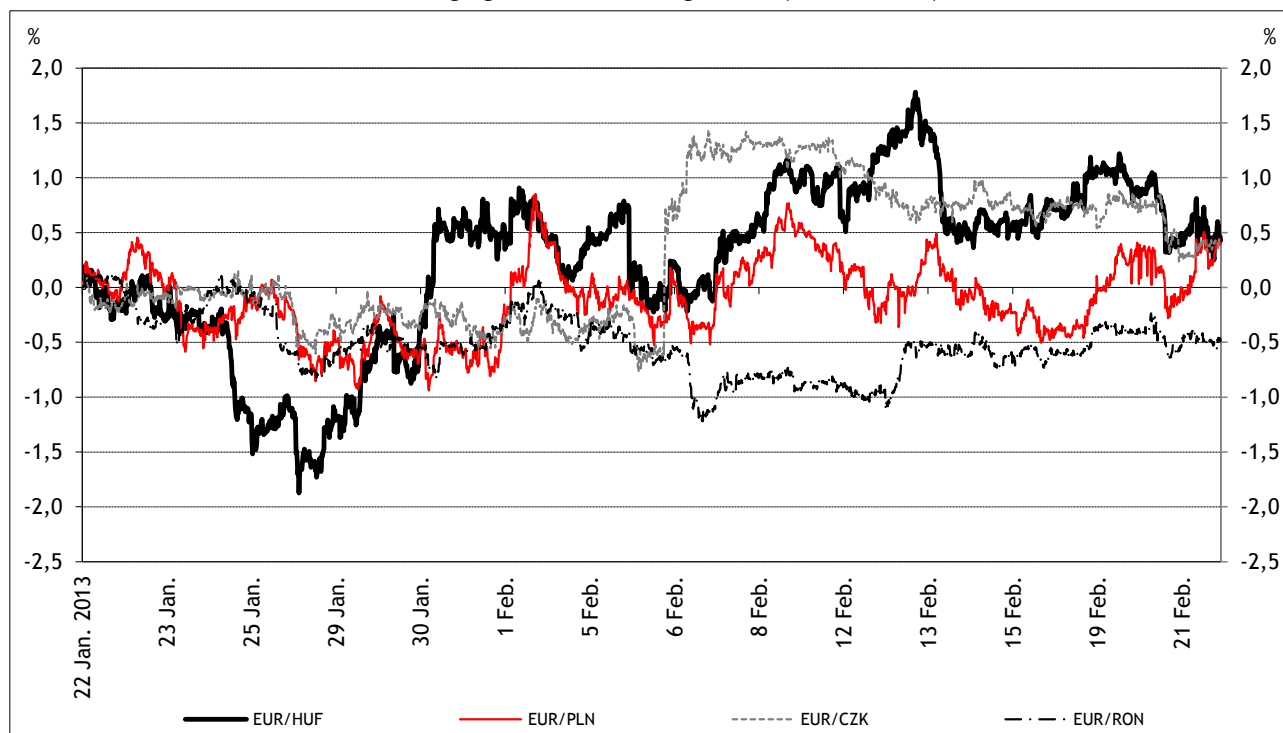
## 3. Emerging markets exchange rates



Source: Thomson Reuters.

Notes: 2 January 2008 = 0; cumulative change. Positive values mean appreciation.

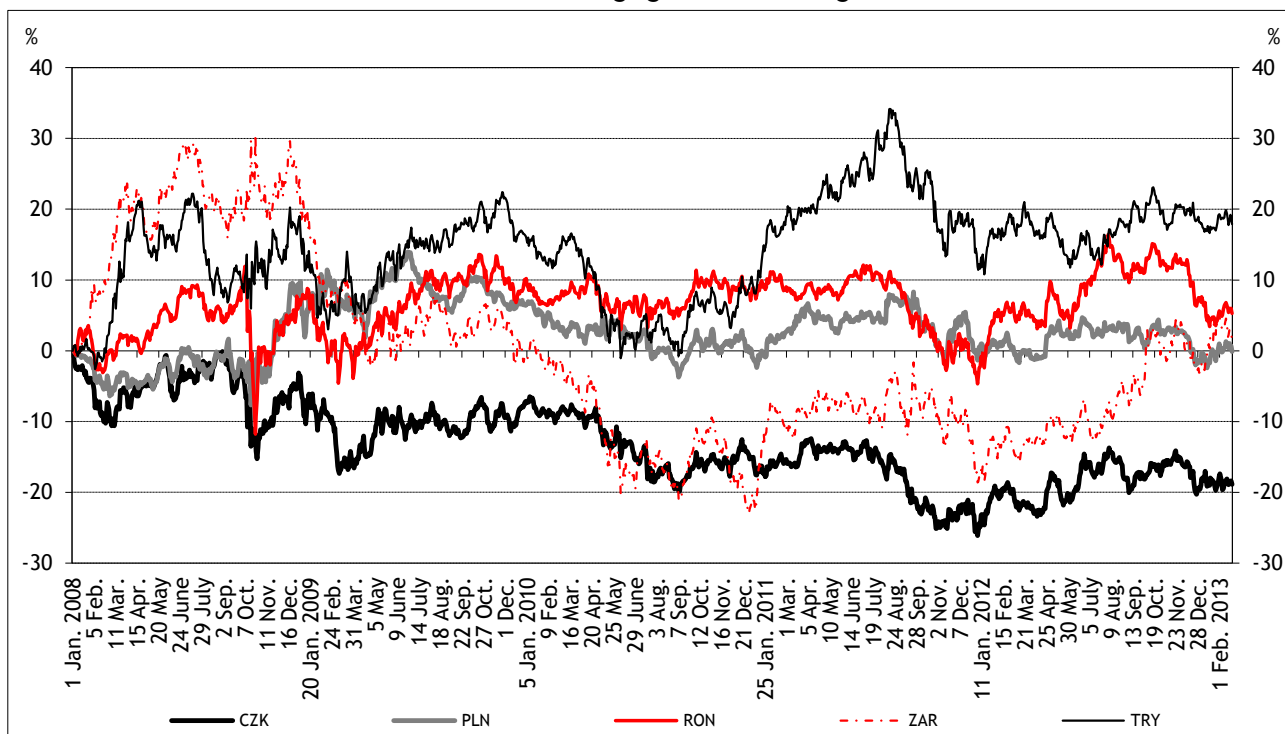
## 4. Emerging markets exchange rates (last 1 month)



Source: Thomson Reuters.

Notes: cumulative change, 5-minute frequency. Positive values mean appreciation.

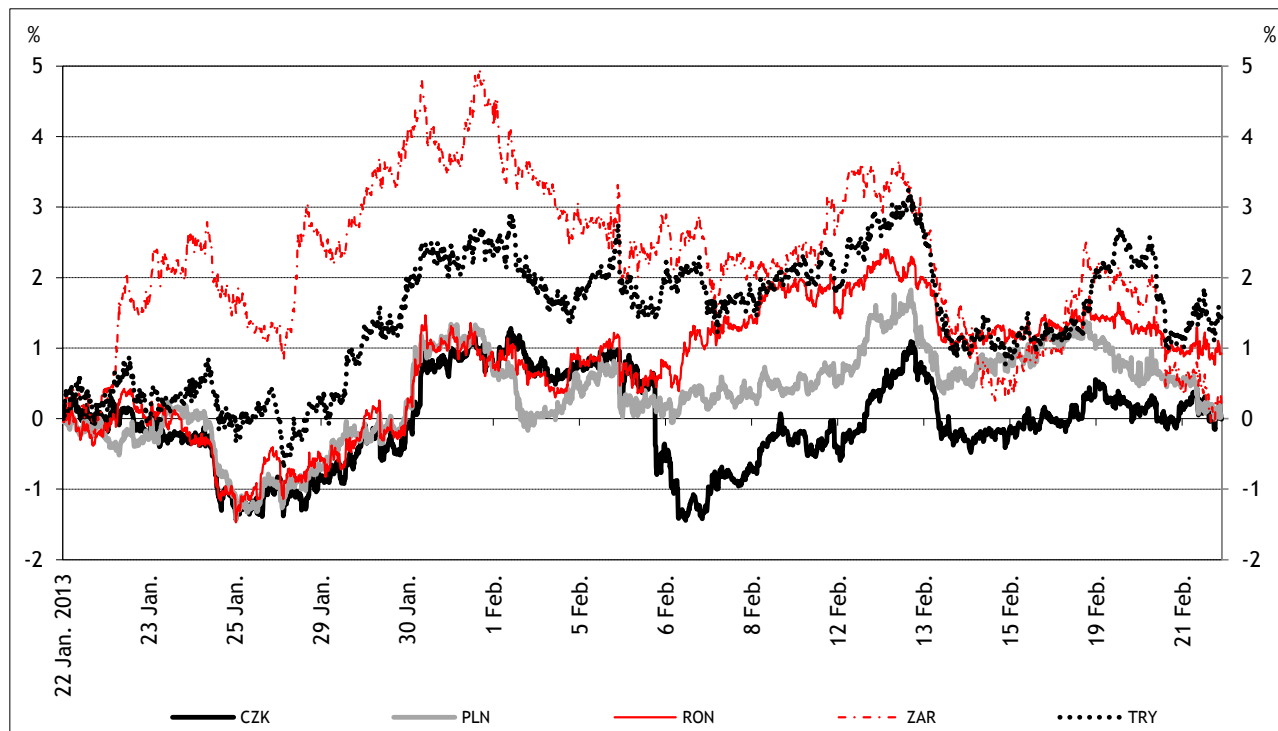
## 5. HUF vis-à-vis emerging market exchange rates



Source: Thomson Reuters.

Notes: 2 January 2008 = 0; cumulative change. Positive values mean HUF appreciation.

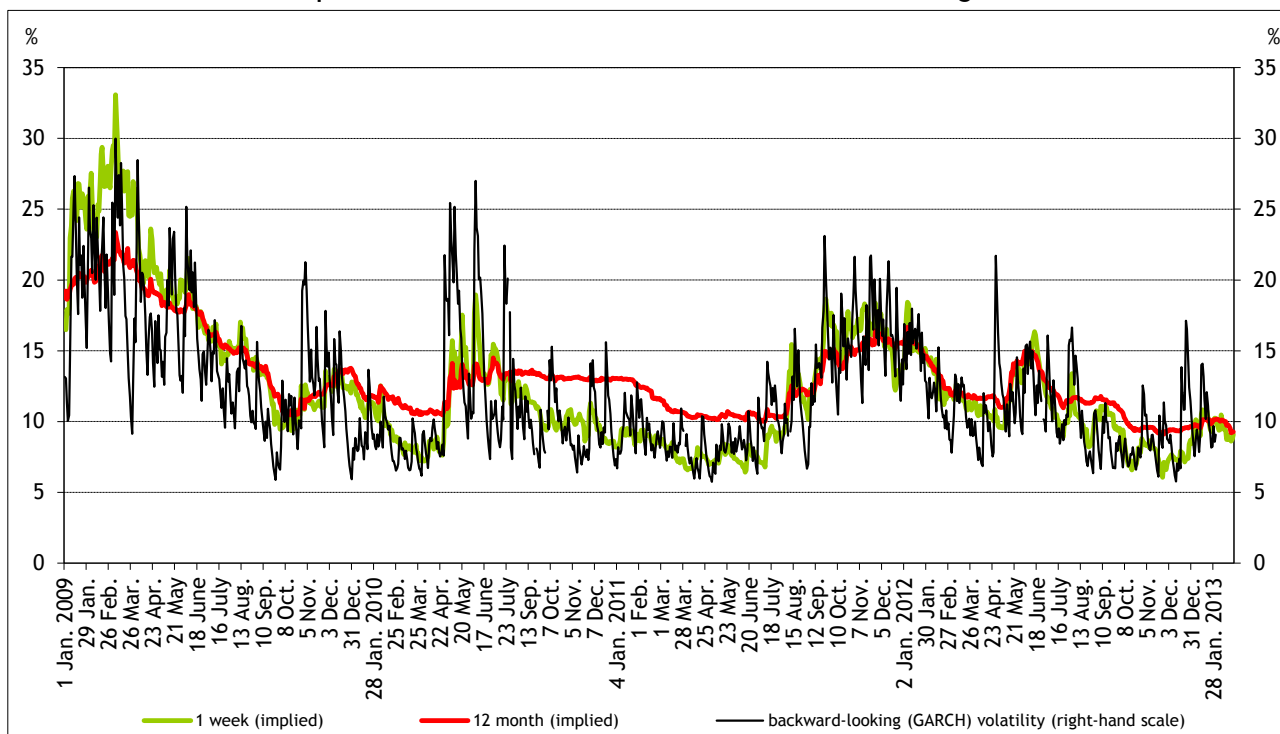
## 6. HUF vis-à-vis emerging market exchange rates (last 1 month)



Source: Thomson Reuters.

Notes: cumulative change, 5-minute frequency. Positive values mean HUF appreciation.

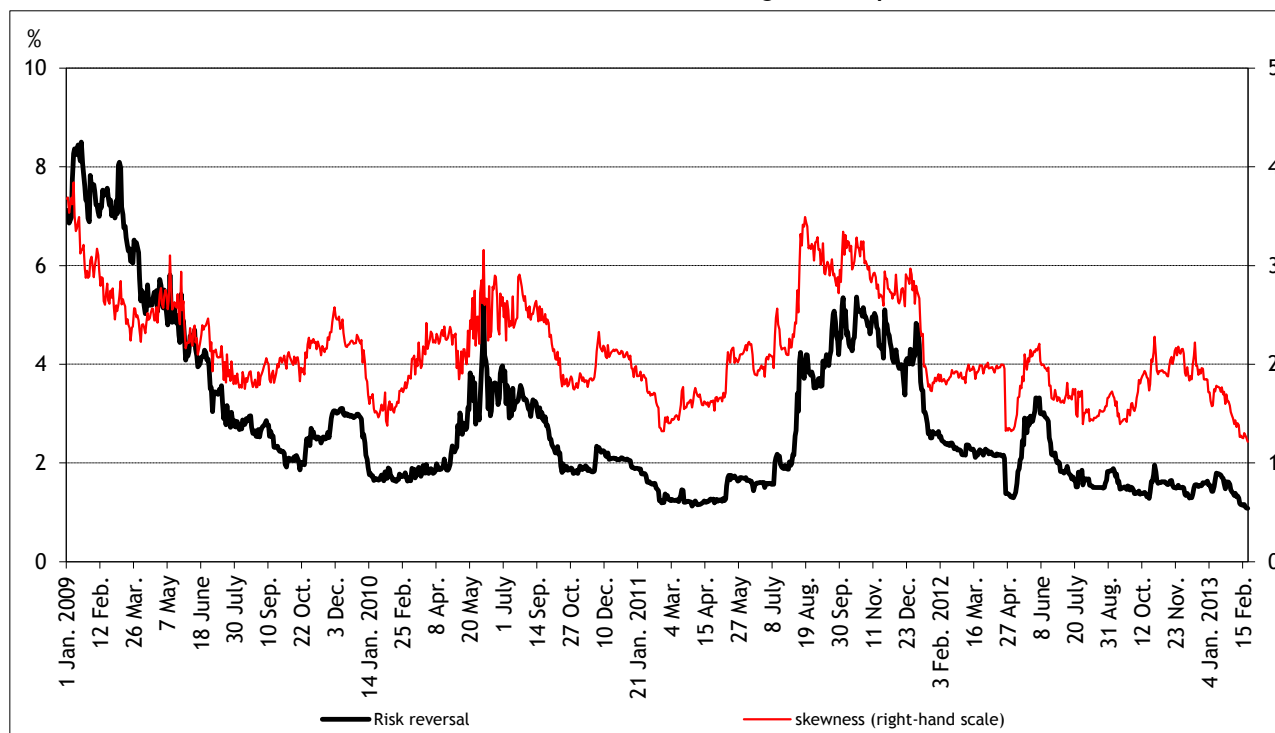
## 7. Implied and historical volatilities of the forint-euro exchange rate



Source: Bloomberg.

Notes: GARCH is weighted volatility calculated using historical data; implied volatility (based on foreign exchange option quotes) can be interpreted as an indicator of risk perceived by the market.

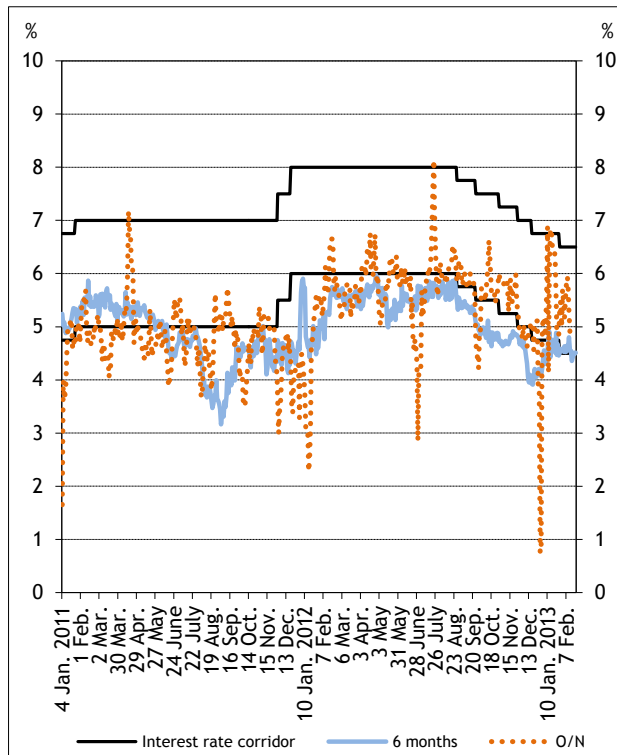
## 8. Risk reversal and skewness of exchange rate expectations



Source: Bloomberg.

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

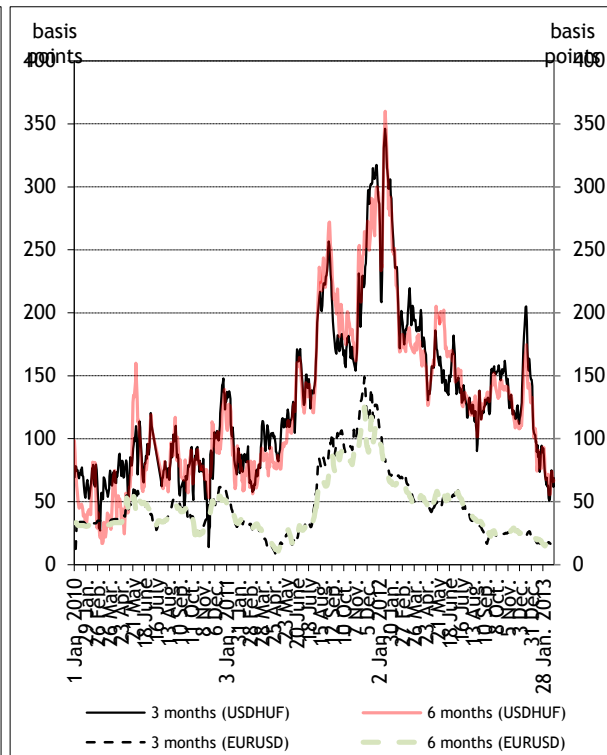
### 9. Implied HUF yields based on FX-swap market trades and quotes



Source: MNB, Thomson Reuters.

Notes: implied forint yields based on USDHUF FX-swap trades in the case of O/N maturity, and based on USDHUF FX-swap quotes provided by Thomson Reuters in the cases of 6-month maturity.

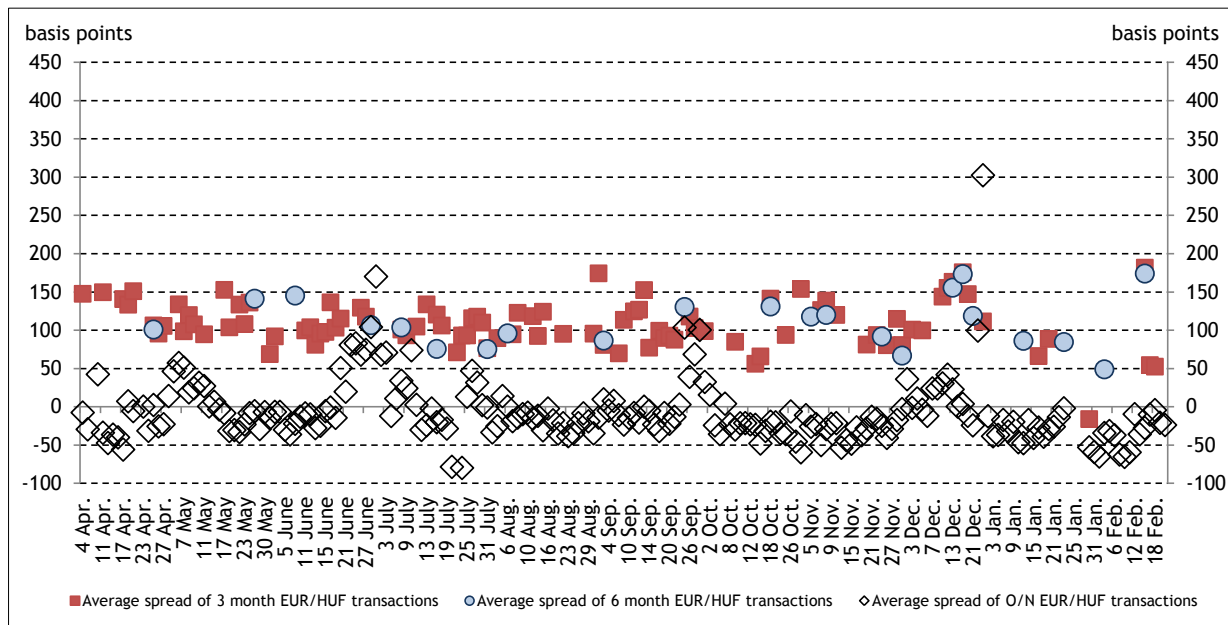
### 10. Difference between interbank yields and implied yields based on FX-swap markets



Source: MNB, Thomson Reuters, Bloomberg.

Notes: implied yields based on USDHUF and EURUSD FX-swap quotes provided by Thomson Reuters; interbank HUF yields are estimated via spline method based on BUBOR, FRA, IRS data.

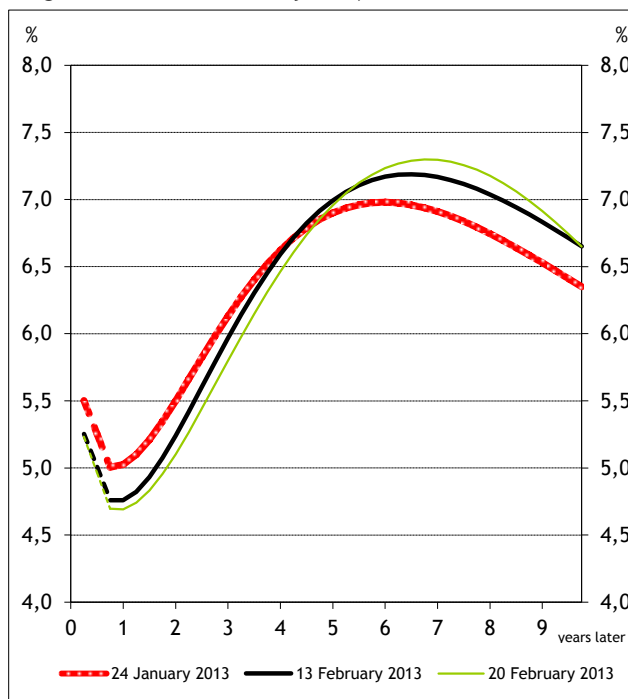
### 11. Difference between interbank yields and implied yields based on FX-swap markets



Source: MNB, Thomson Reuters.

Notes: implied forint yields based on EURHUF FX-swap quotes provided by Thomson Reuters; interbank yields are estimated via spline method based on BUBOR, FRA, IRS data.

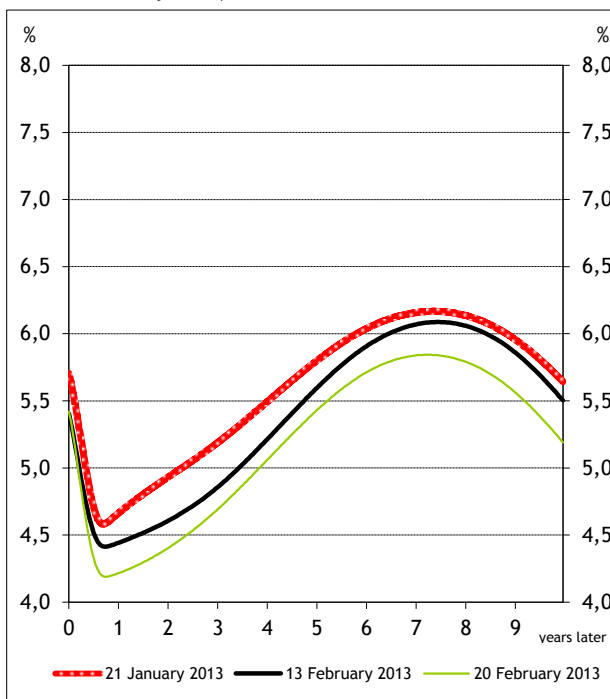
### 12. Implied 3 month forward interest rate curves (based on government securities yields)



Source: MNB, ÁKK.

Notes: estimated by the MNB using the Svensson-technique.

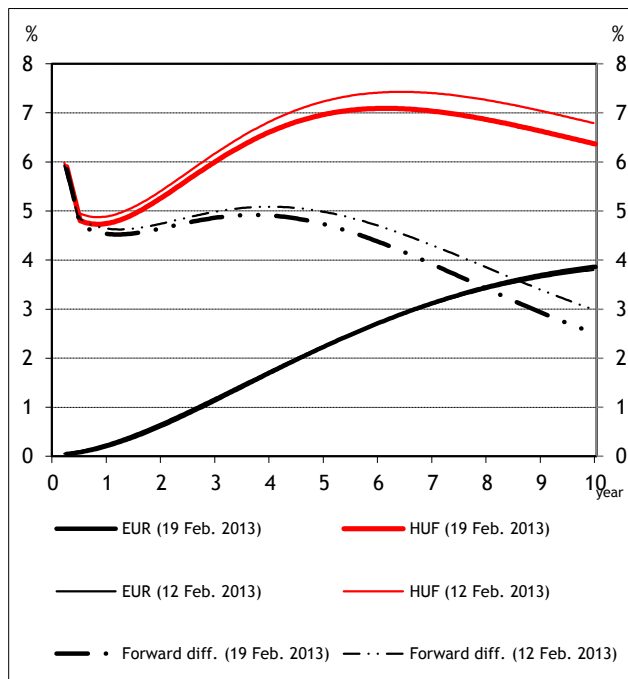
### 13. Implied 3 month forward interest rate curve (based on interbank yields)



Source: MNB, Thomson Reuters.

Notes: estimated by the MNB from interbank money market (FRA) and interest rate swap quotes using the spline technique.

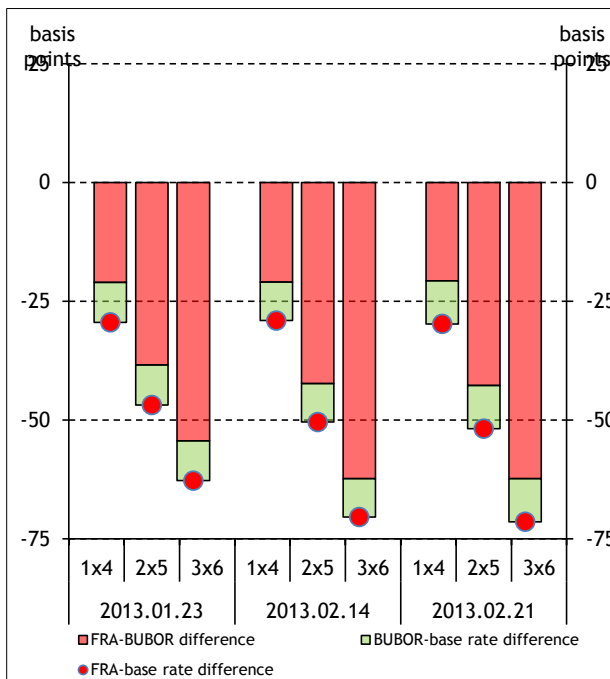
### 14. Spread between 3-month forward yields in EUR and HUF



Source: ÁKK, ECB, MNB.

Notes: estimated by the ECB using the Svensson-technique, based on AAA-rated euro area central government bonds.

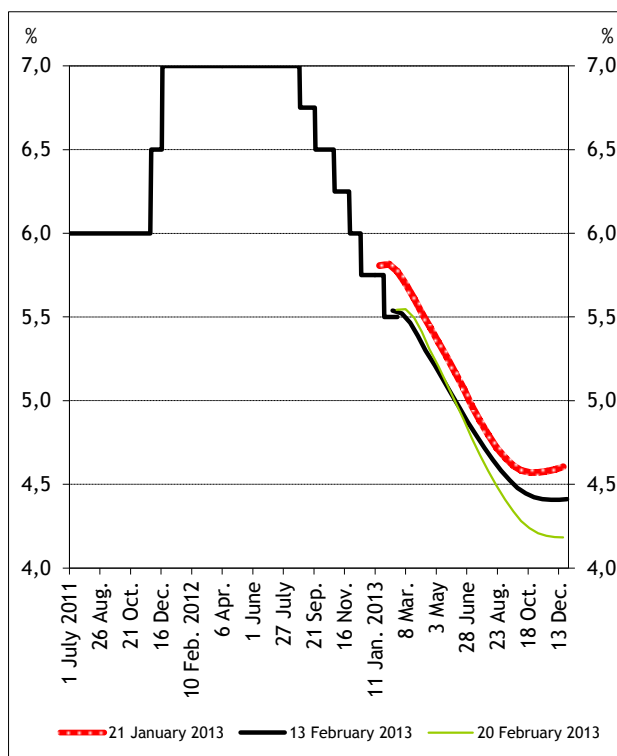
### 15. Segmentation of the difference between the quoted rate of the 3 month FRA and the current base rate



Source: Thomson Reuters.

Notes: based on FRA quotes provided by Tullett &amp; Tokio Liberty on Reuters. Columns represent the difference between the quoted rate of the 3 month forward rate agreement starting from the given date and the base rate.

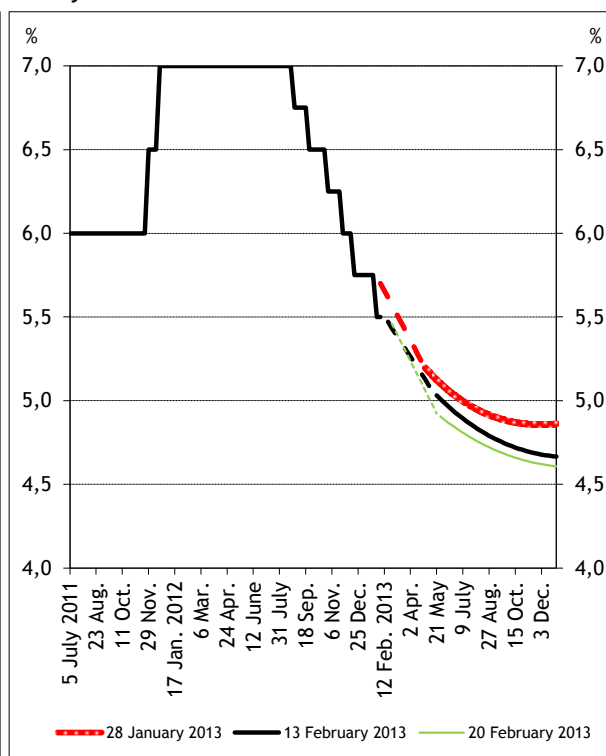
### 16. Policy rate expectations derived from money market rates



Source: MNB, Thomson Reuters.

Notes: estimated by the MNB from interbank interest rates using the spline-technique.

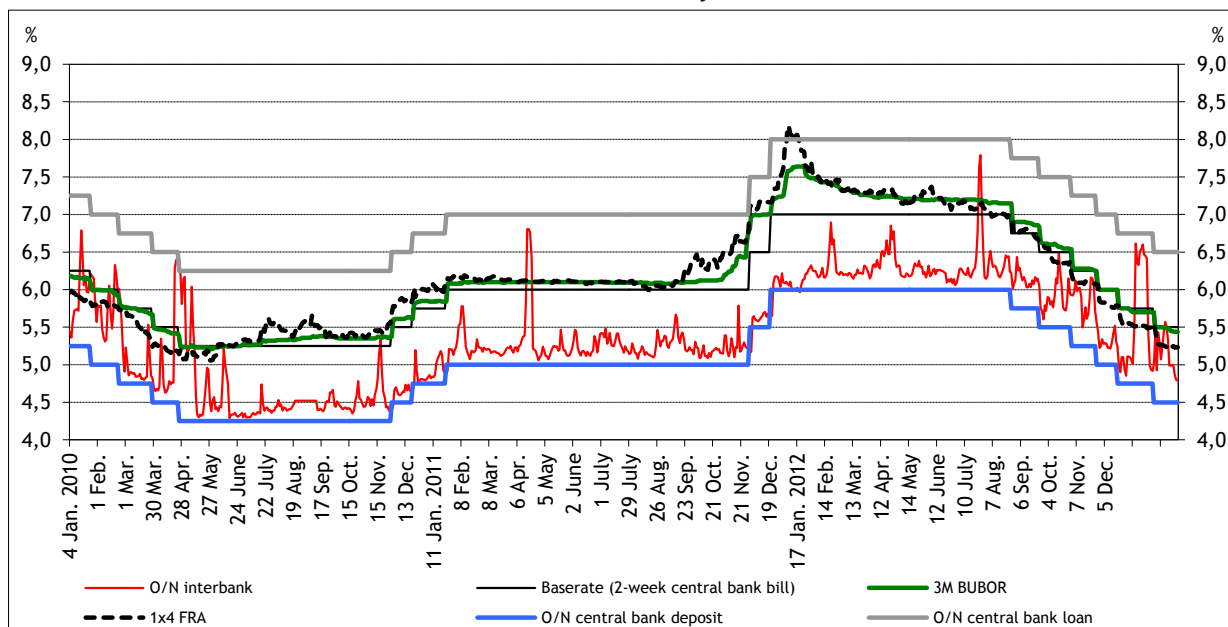
### 17. Policy rate expectations derived from government bond yields



Source: MNB, Thomson Reuters.

Notes: estimated by the MNB using the Svensson-technique.

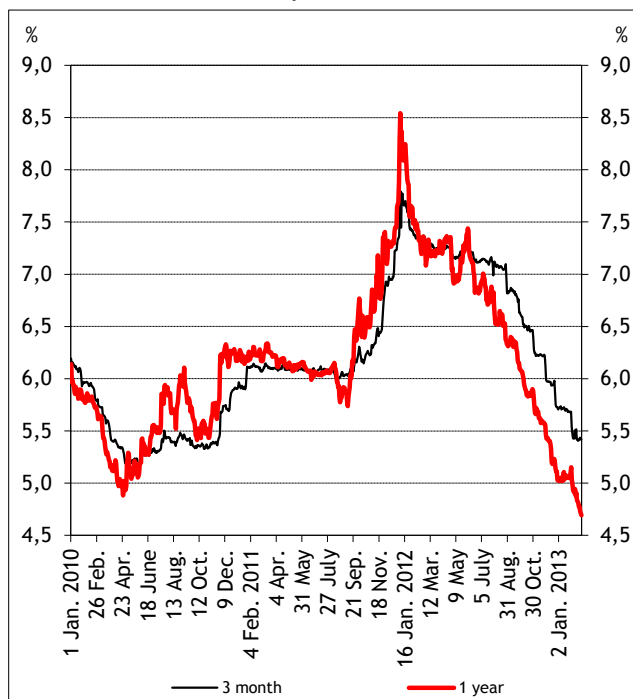
### 18. MNB base rate and money market rates



Source: MNB, ÁKK, Thomson Reuters.

Notes: O/N interbank yield is the calculated average yield weighted by turnover data, FRA yield is the close mid-quote provided by Thomson Reuters.

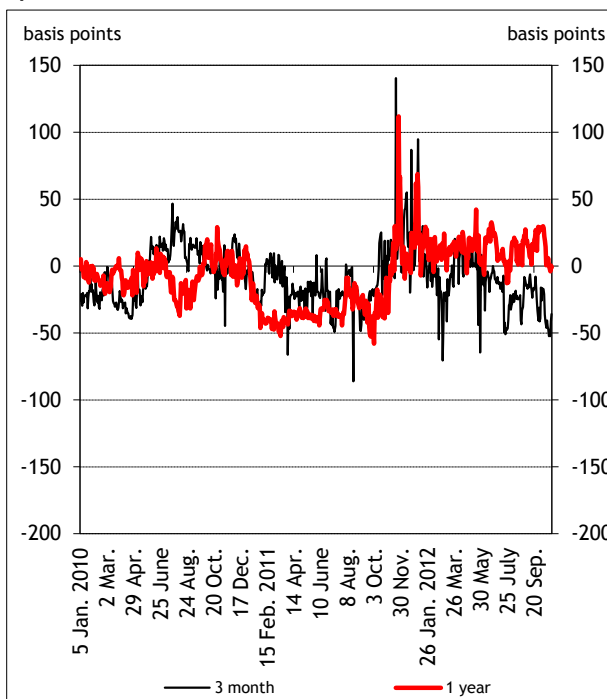
## 19. Short-term interbank yields



Source: MNB, Thomson Reuters.

Notes: swap yields are estimated via spline method based on BUBOR, FRA, IRS data.

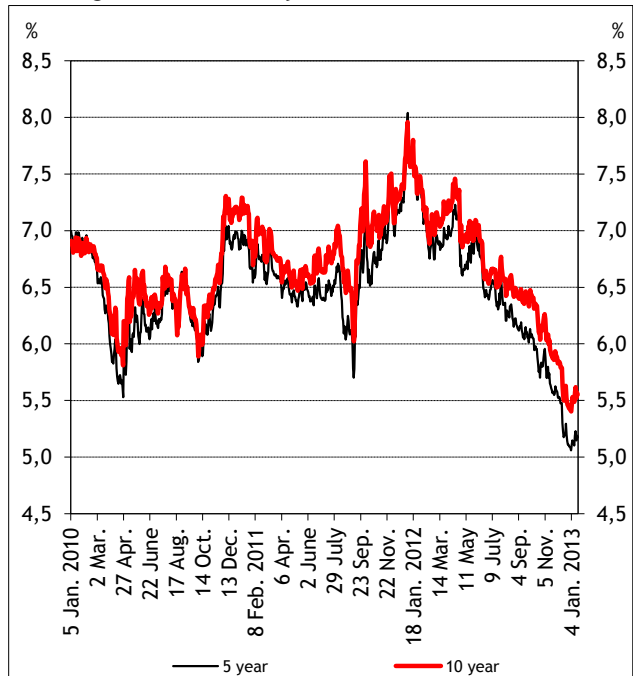
## 20. Short-term government securities - interbank yield spreads



Source: ÁKK, Thomson Reuters.

Notes: the bond yields are estimated via Svensson-, swap yields via spline method.

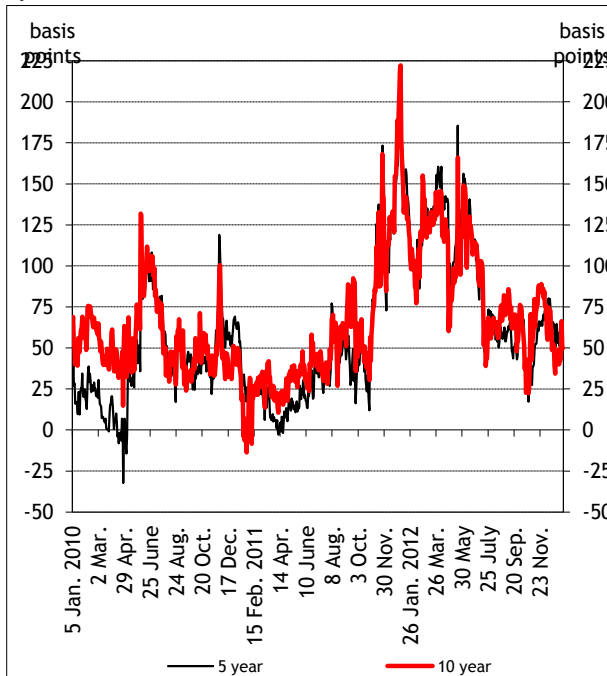
## 21. Long-term interbank yields



Source: MNB, Thomson Reuters.

Notes: swap yields are estimated via spline method based on BUBOR, FRA, IRS data.

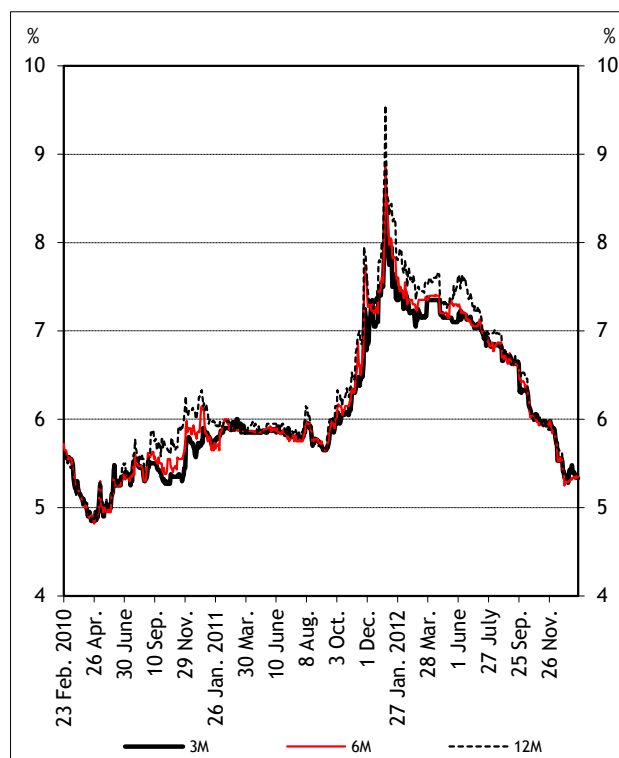
## 22. Long-term government security - interbank yield spreads



Source: ÁKK, Thomson Reuters.

Notes: the bond yields are estimated via Svensson-, swap yields via spline method.

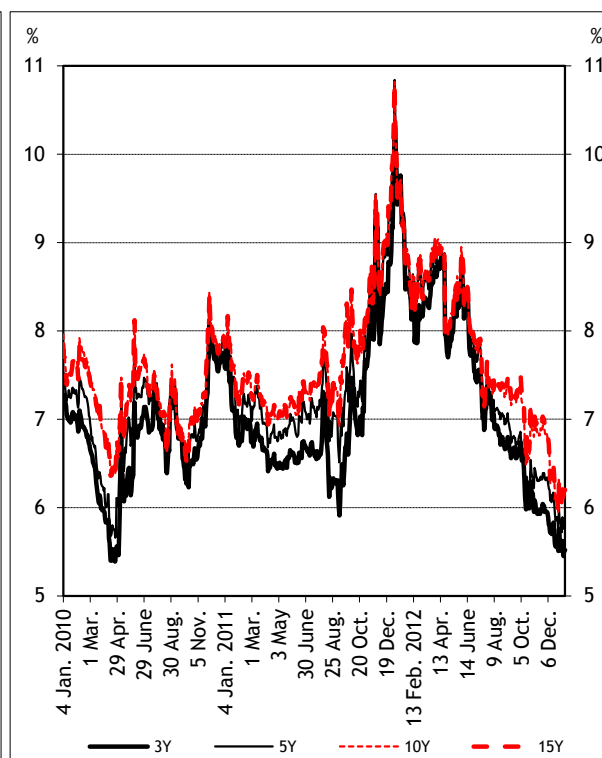
### 23. Short-term yields of benchmark government securities



Source: ÁKK.

Notes: daily reference yields provided by Government Debt Agency.

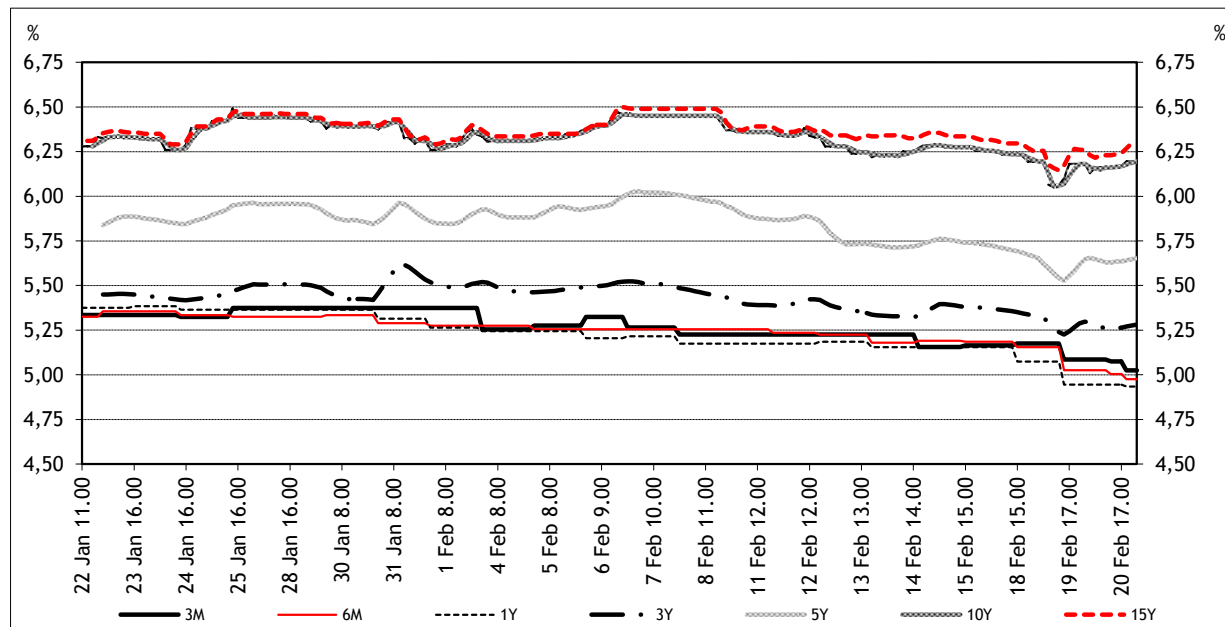
### 24. Long-term yields of benchmark government securities



Source: ÁKK.

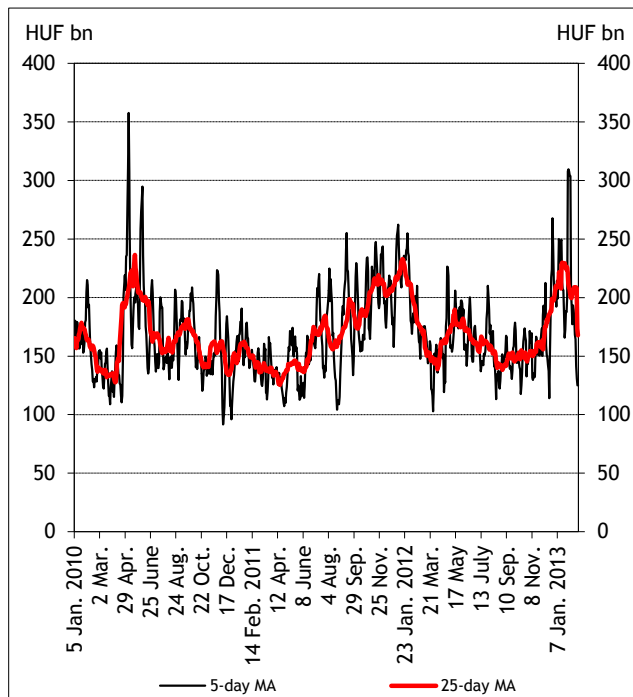
Notes: daily reference yields provided by Government Debt Agency.

### 25. Yields of benchmark government securities



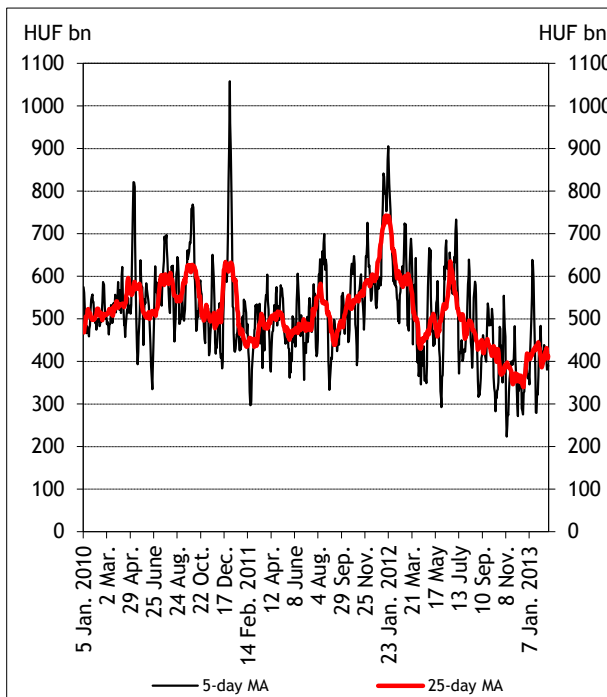
Source: Thomson Reuters, FTSE.

Notes: intraday 15-minute frequency data.

**26. Spot turnover on the forint currency market**

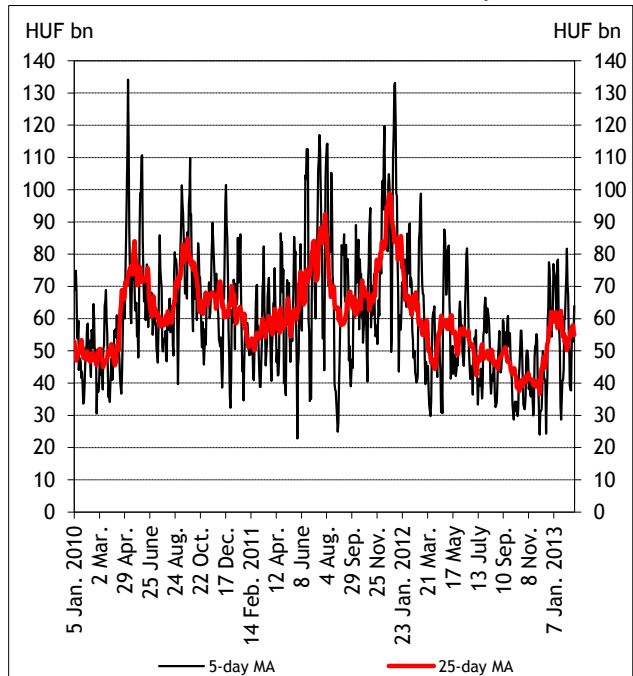
Source: MNB.

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

**27. Swap turnover on the forint currency market**

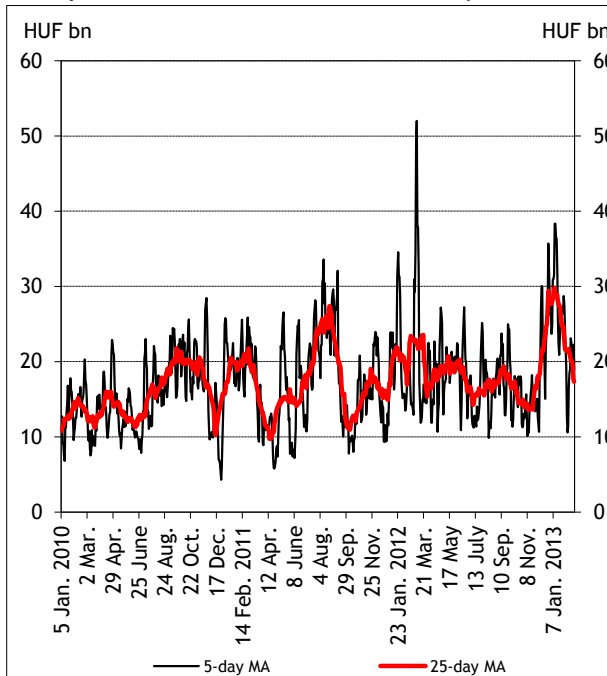
Source: MNB.

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

**28. Forward turnover on the forint currency market**

Source: MNB.

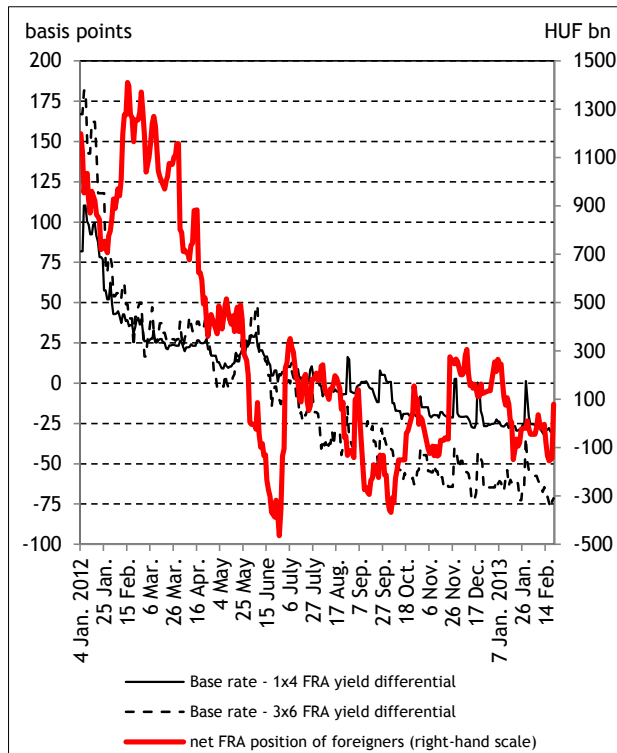
Notes: forint against foreign exchange deals by domestic banks; moving averages calculated based on deal date data.

**29. Option turnover on the forint currency market**

Source: MNB.

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

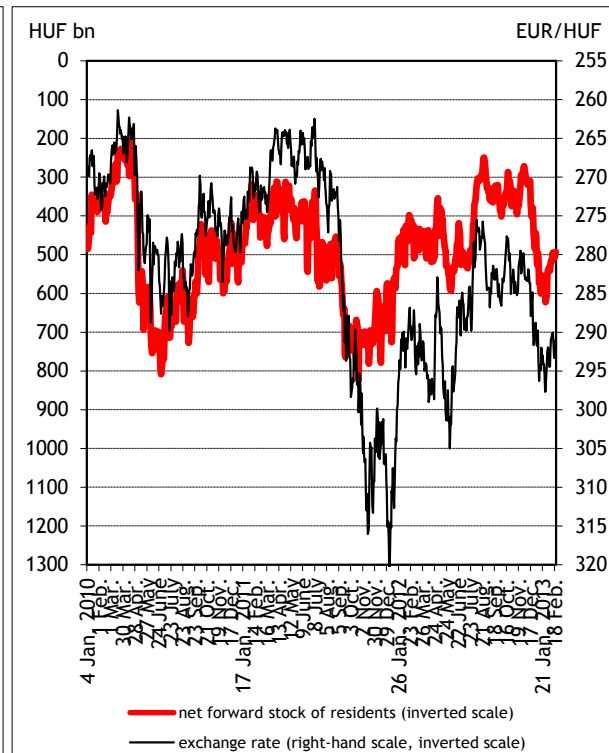
### 30. Net FRA position of non-residents and FRA-base rate spreads



Source: MNB, Thomson Reuters.

Notes: based on FRA quotes provided by Tullett & Tokio Liberty on Reuters.

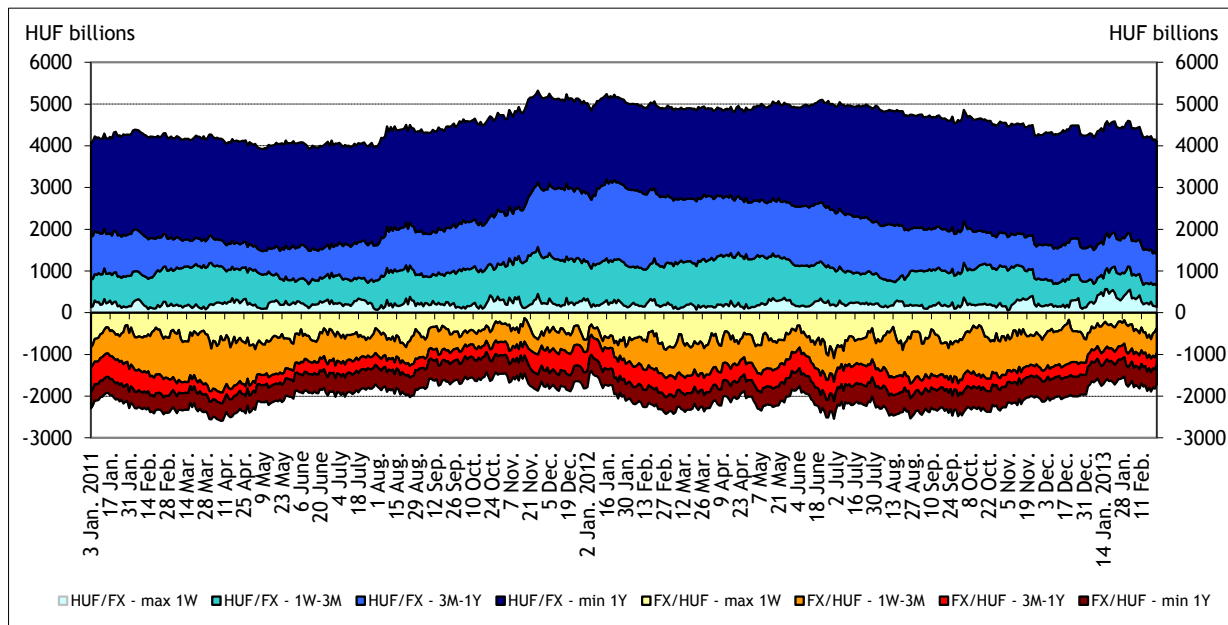
### 31. Net Forint forward stock of residents and the exchange rate



Source: MNB.

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

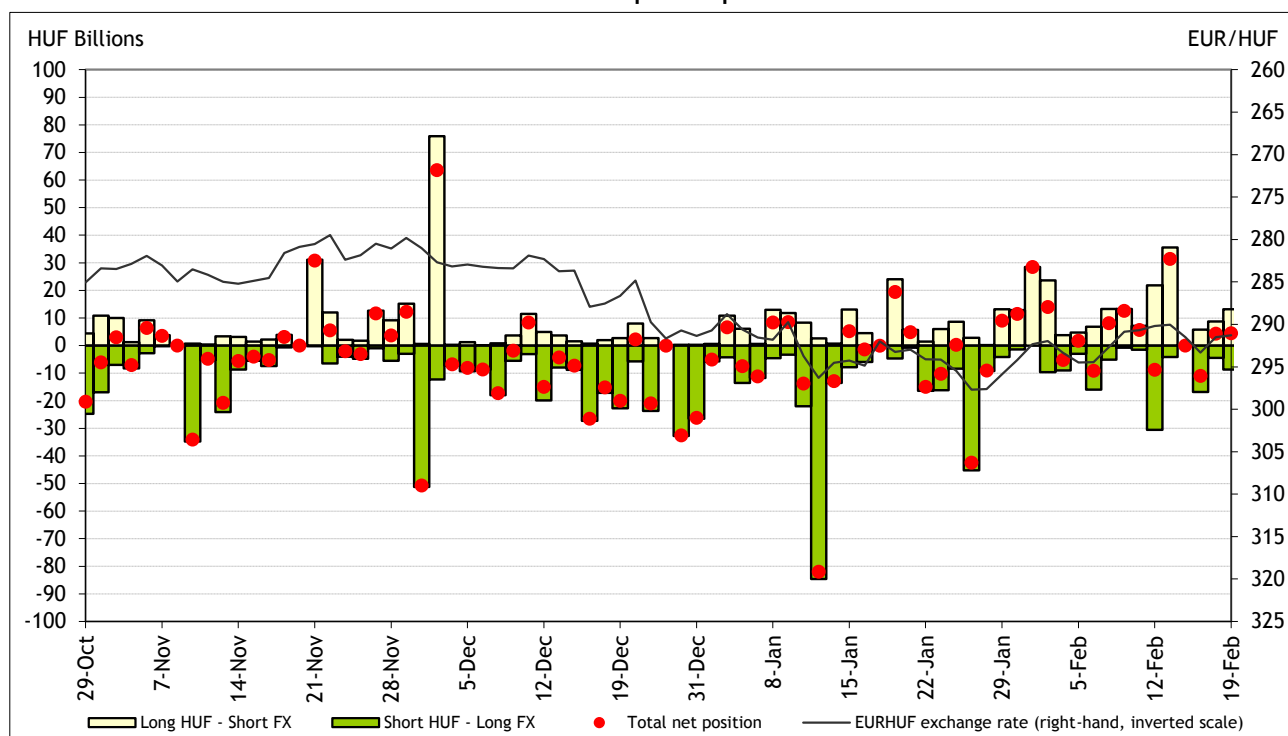
### 32. Forint FX Swap stock of non-residents



Source: MNB.

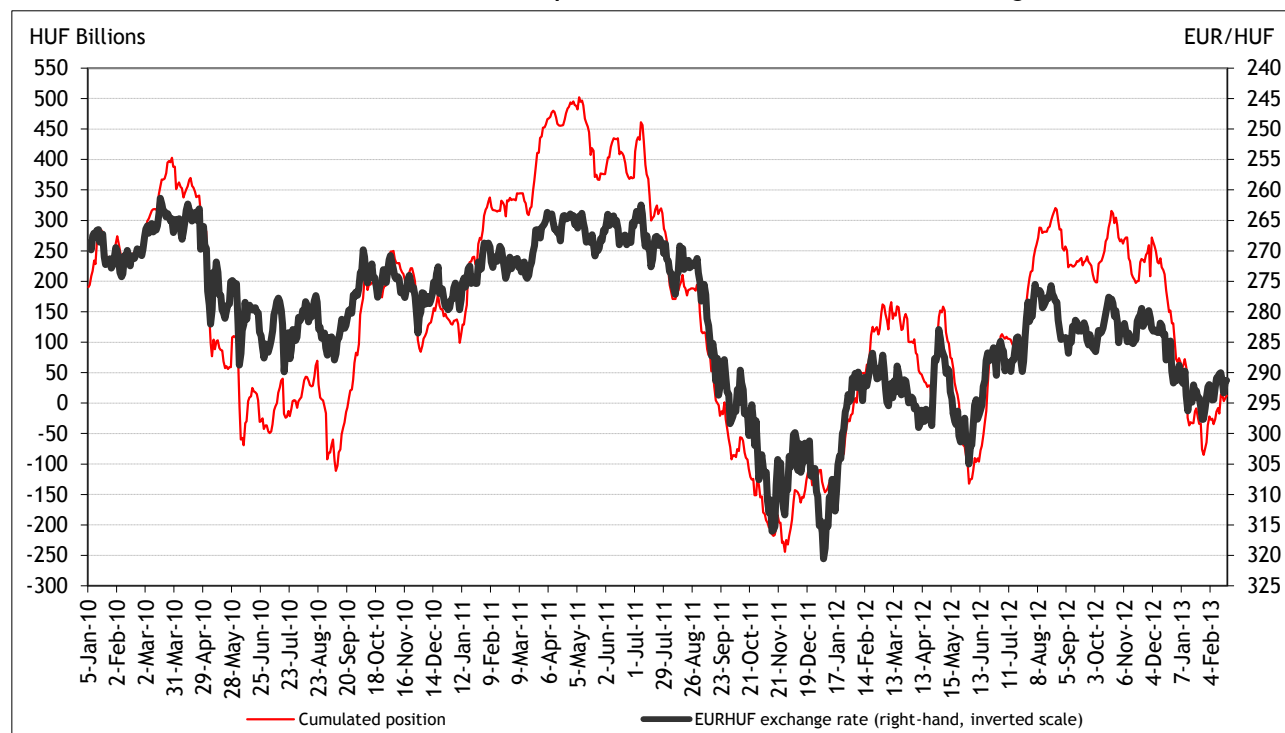
Notes: due to the nature of the banks' daily report on FX transactions, the components of the FX transactions statistic do not close to zero. As a result, the information contained in the data series on net forint purchase of non-resident investors - and its components - is relevant mainly to evaluate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

## 33. Non-residents' open FX-position in HUF



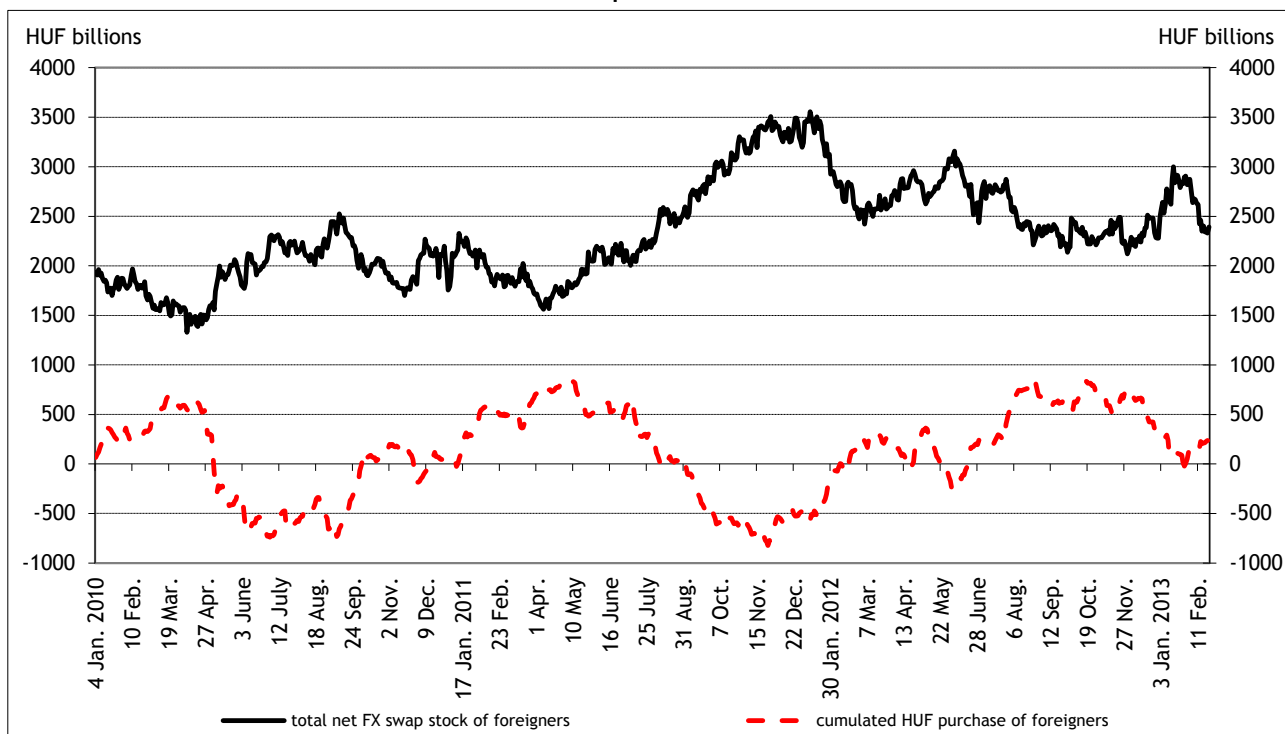
Source: MNB.

## 34. Non-residents' cumulated position in HUF and the EURHUF exchange rate



Source: MNB.

## 35. Forint FX Swap stock of non-residents

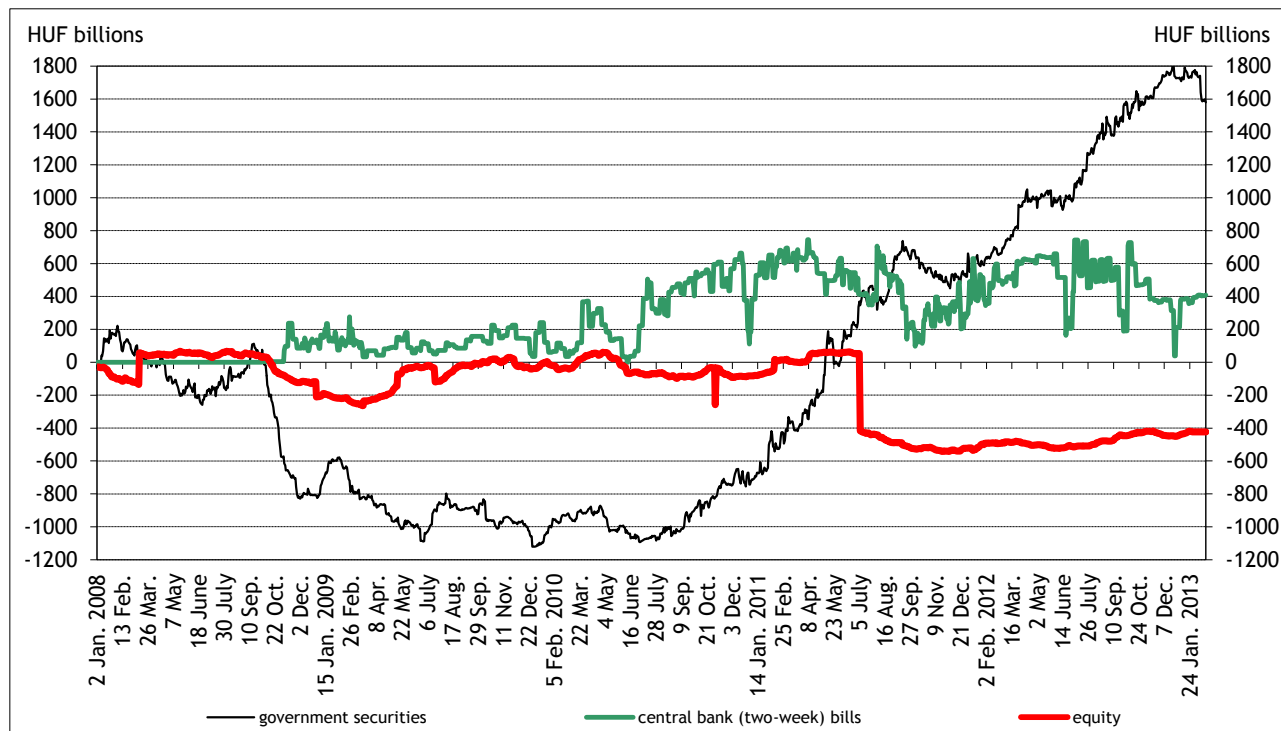


Source: MNB.

Notes: due to the nature of the banks' daily report 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.

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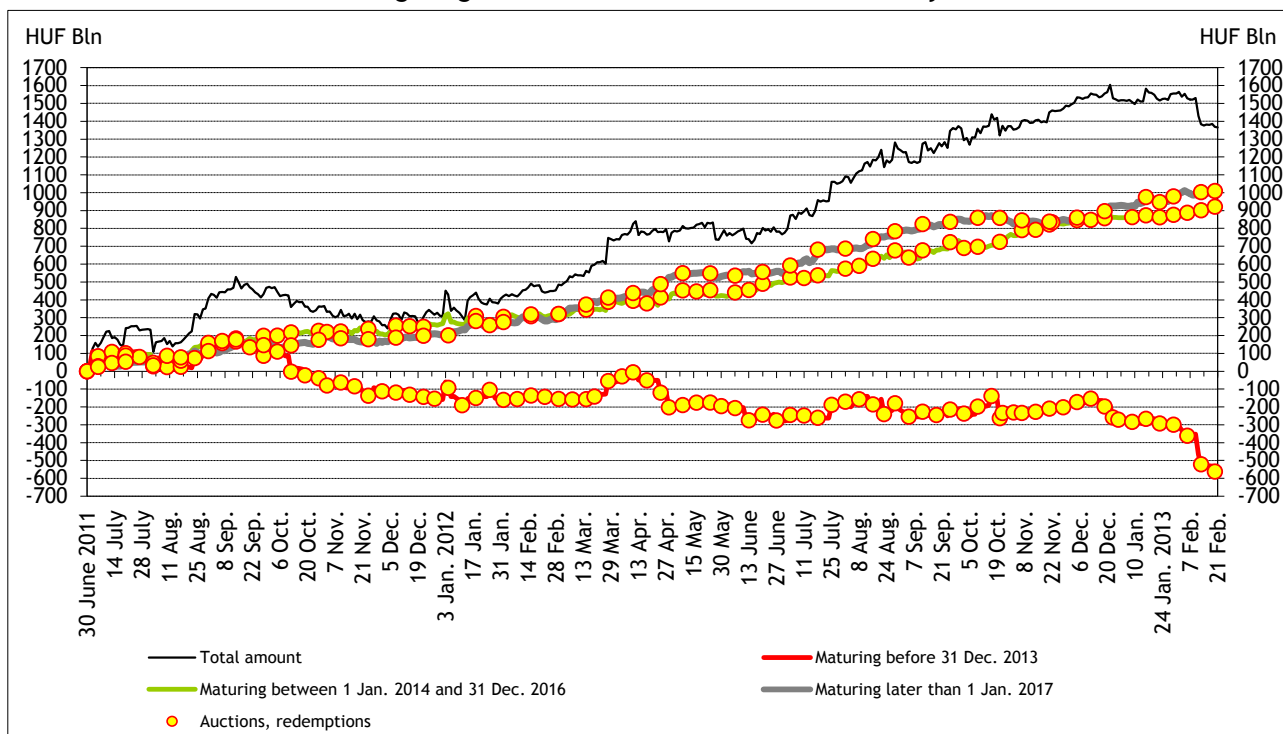
## 36. Forint financial assets held by non-residents



Source: MNB, KELER.

Notes: 2 January 2008 = 0; cumulative change. Equity data are not comprehensive, it contains data for large- and mid-cap stocks quoted on the Budapest Stock Exchange.

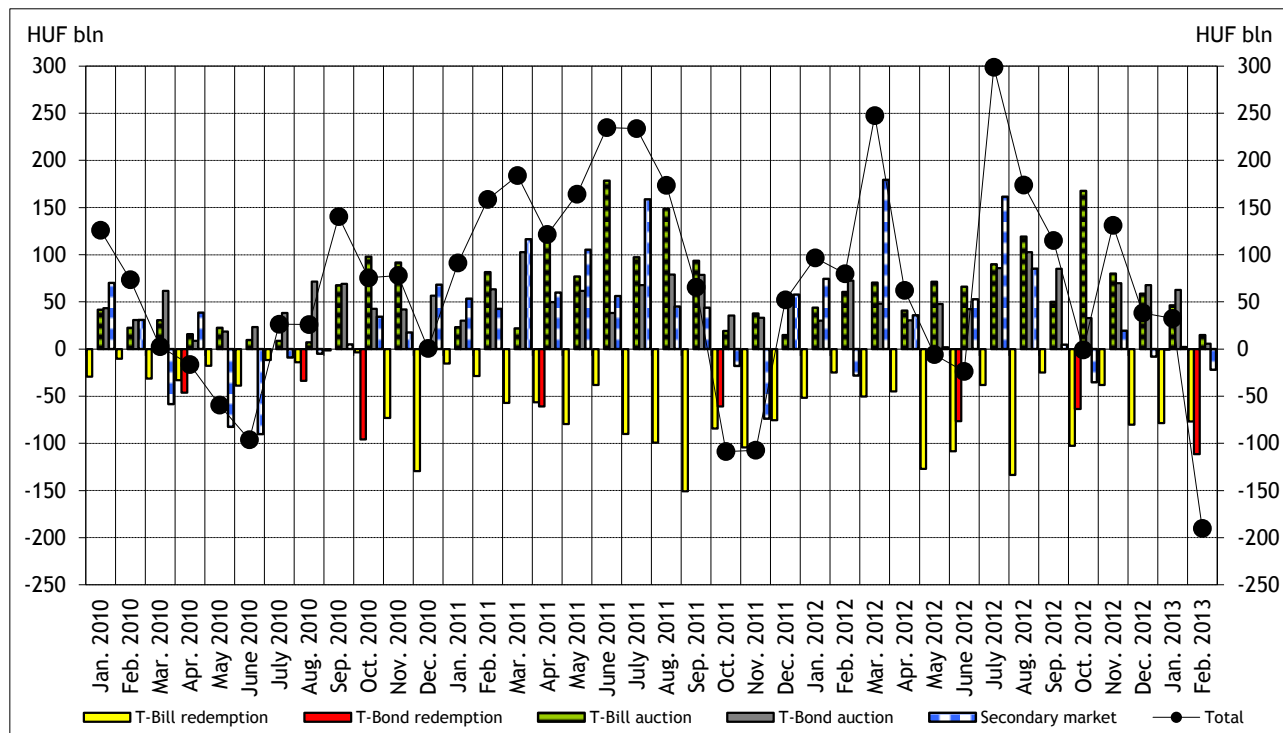
## 37. Change in government securities of non-residents by tenor



Source: MNB.

Notes: 1 June 2010 = 0; cumulative change without central bank bills.

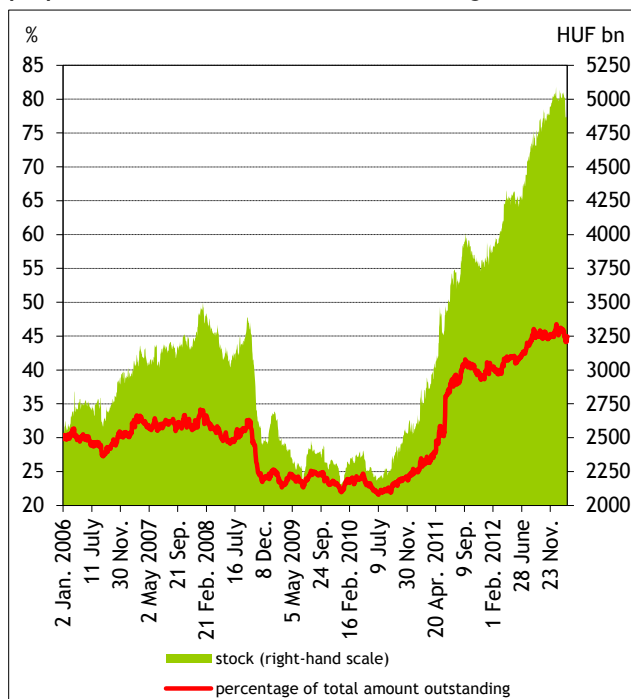
## 38. Government securities held by non-residents



Source: MNB.

Notes: monthly change. The last month contains information on available data.

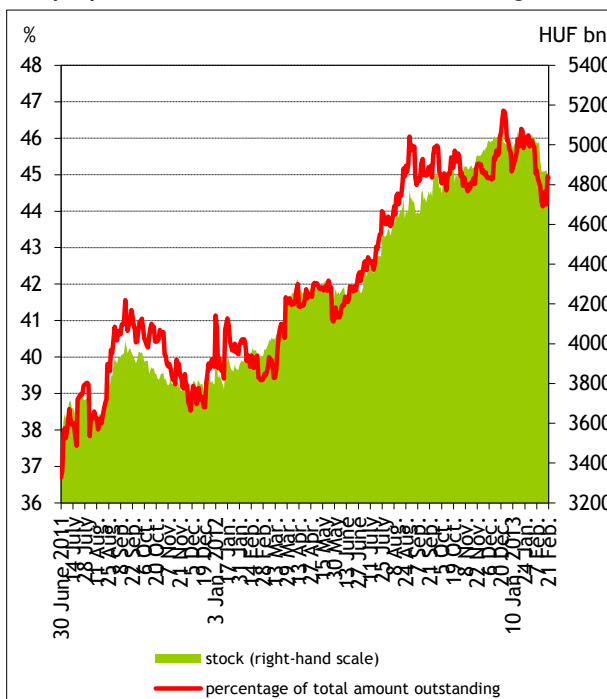
### 39. Government securities held by non-residents and the proportion to the total amount outstanding



Source: MNB.

Notes: MNB calculations excluding central bank bills.

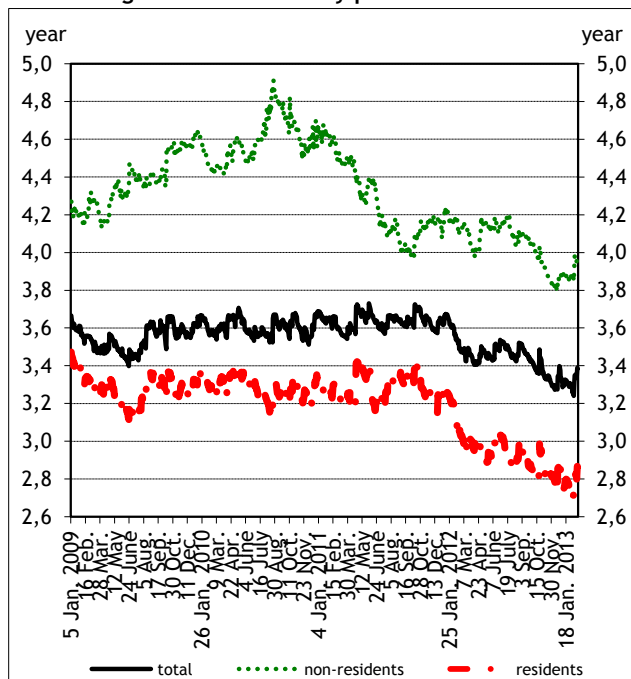
### 40. Government securities held by non-residents and the proportion to the total amount outstanding



Source: MNB.

Notes: MNB calculations excluding central bank bills.

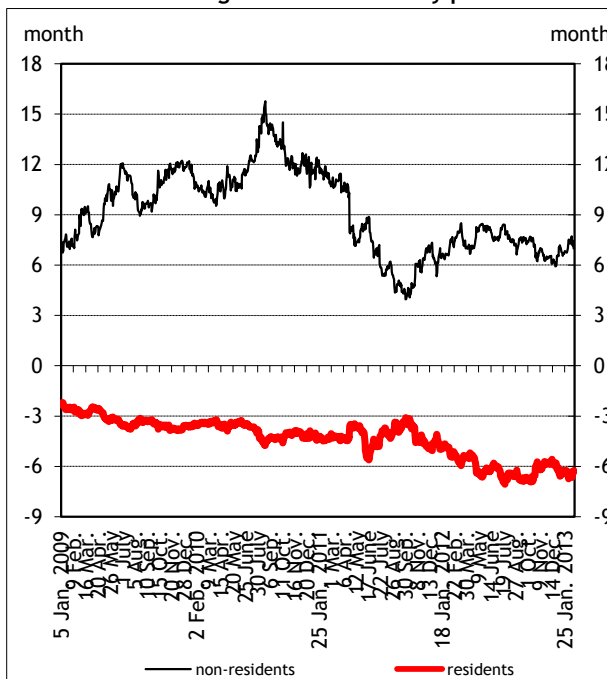
### 41. The average time to maturity of residents' and non-residents' government security portfolio



Source: MNB.

Notes: MNB calculations including T-Bonds and T-Bills and excluding central bank (two-week) bills.

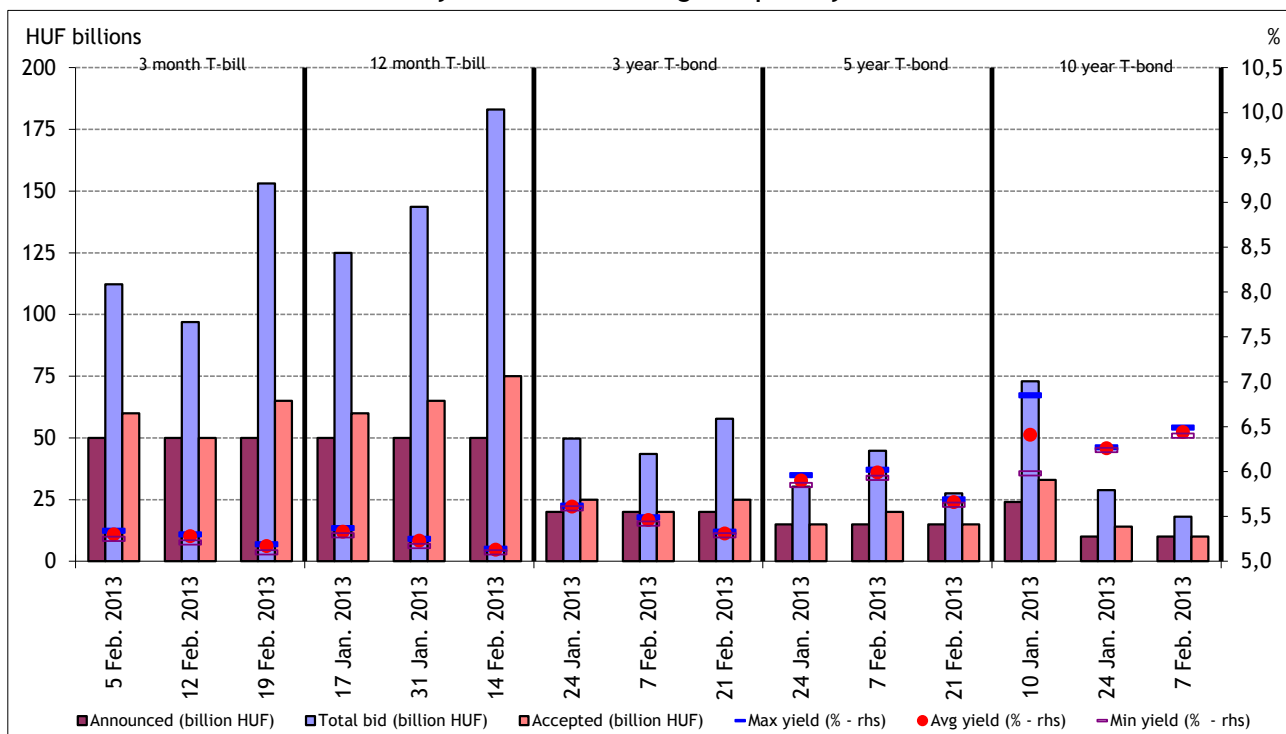
### 42. The relative average time to maturity of residents' and non-residents' government security portfolio



Source: MNB.

Notes: MNB calculations; including T-Bonds and T-Bills, and excluding central bank (two week) bills.

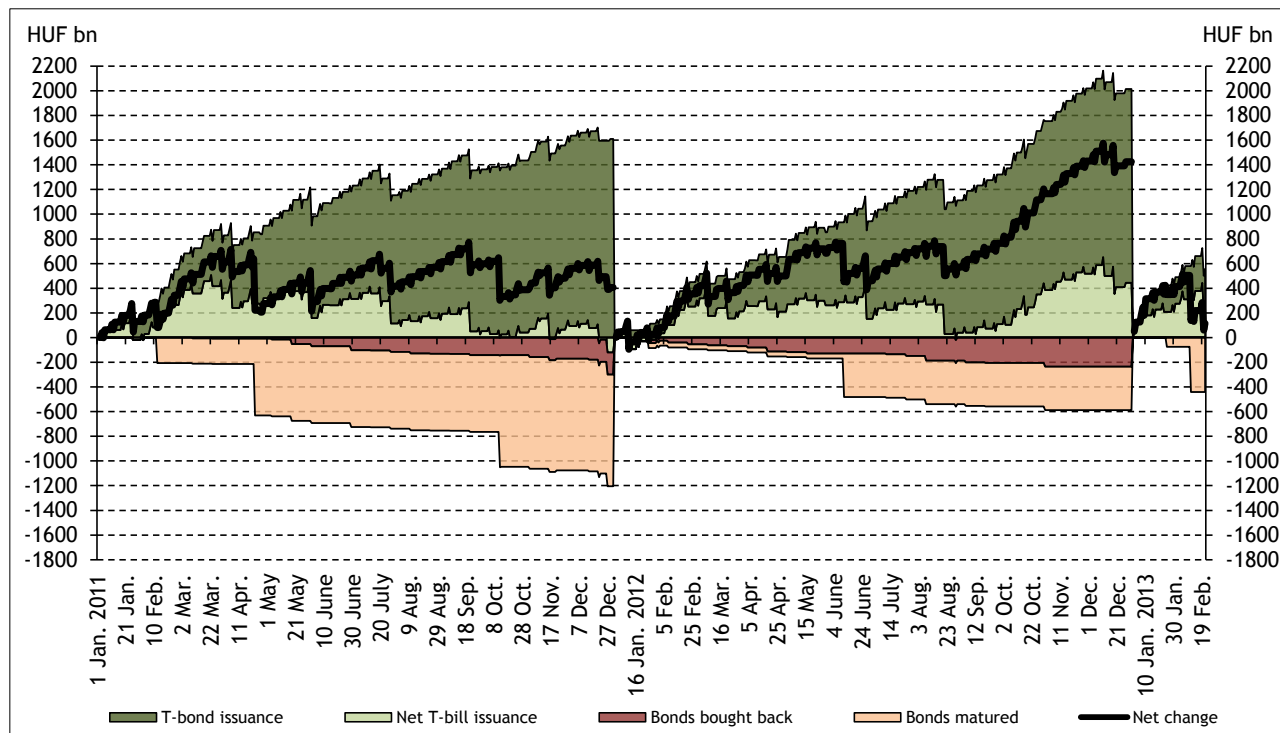
## 43. The turnover and yield data of the Hungarian primary t-bill and t-bond issues



Source: ÁKK.

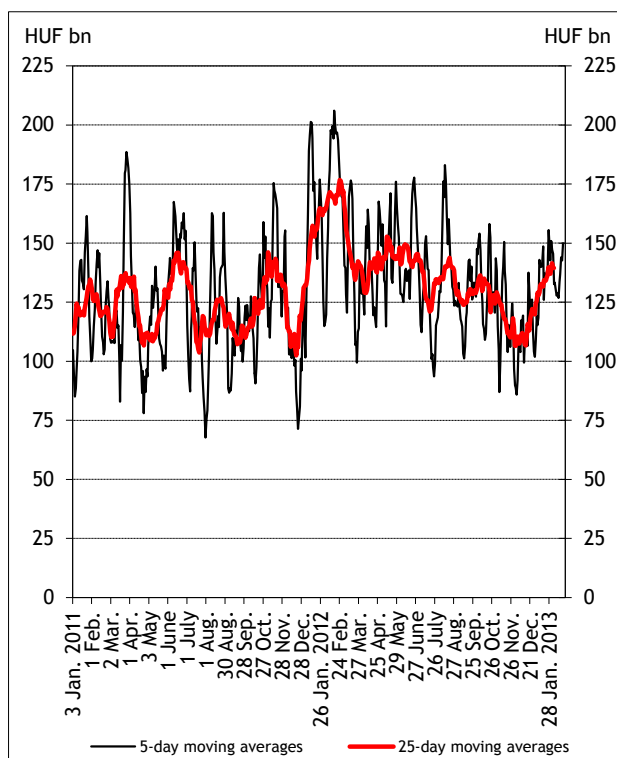
Notes: the turnover and yield data of the Hungarian primary t-bill and t-bond issues. In case of floating rate bonds the yield data are not be plotted.

## 44. Government securities issues, buybacks, redemptions



Source: ÁKK.

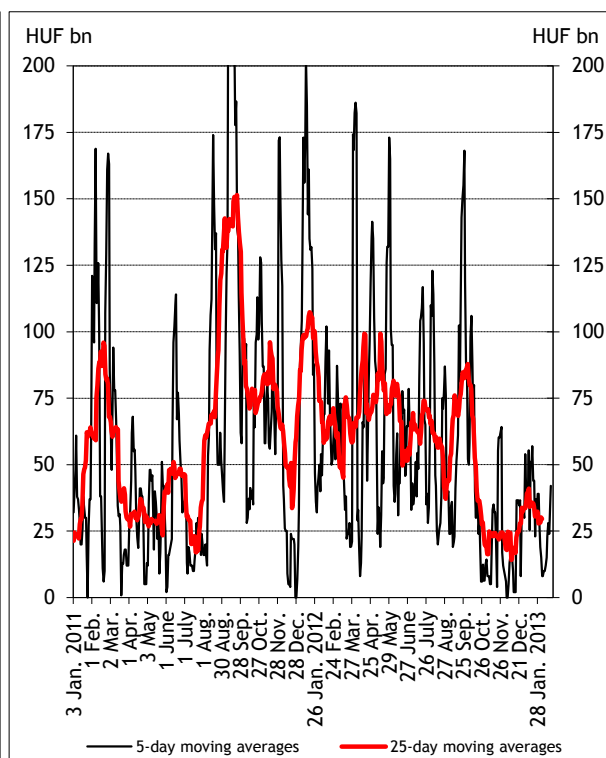
#### 45. Turnover on the forint unsecured interbank market



Source: MNB.

Notes: deal dates, based on reporting by domestic banks; central moving averages.

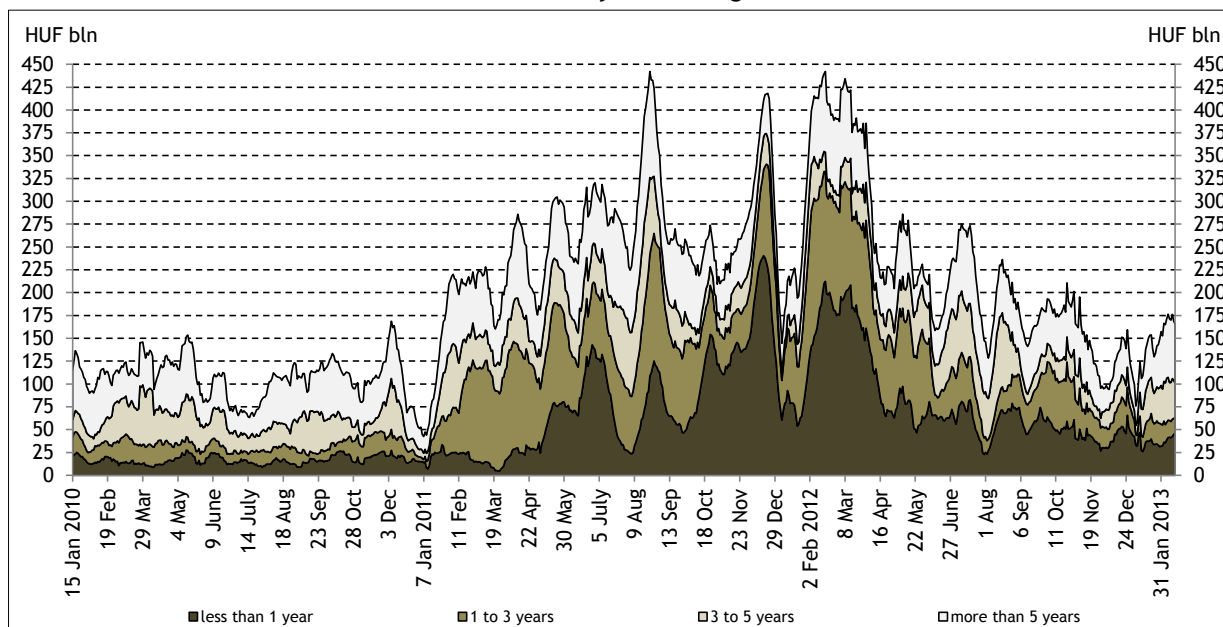
#### 46. Turnover on the forint FRA market



Source: MNB.

Notes: deal dates, based on reporting by domestic banks; central moving averages.

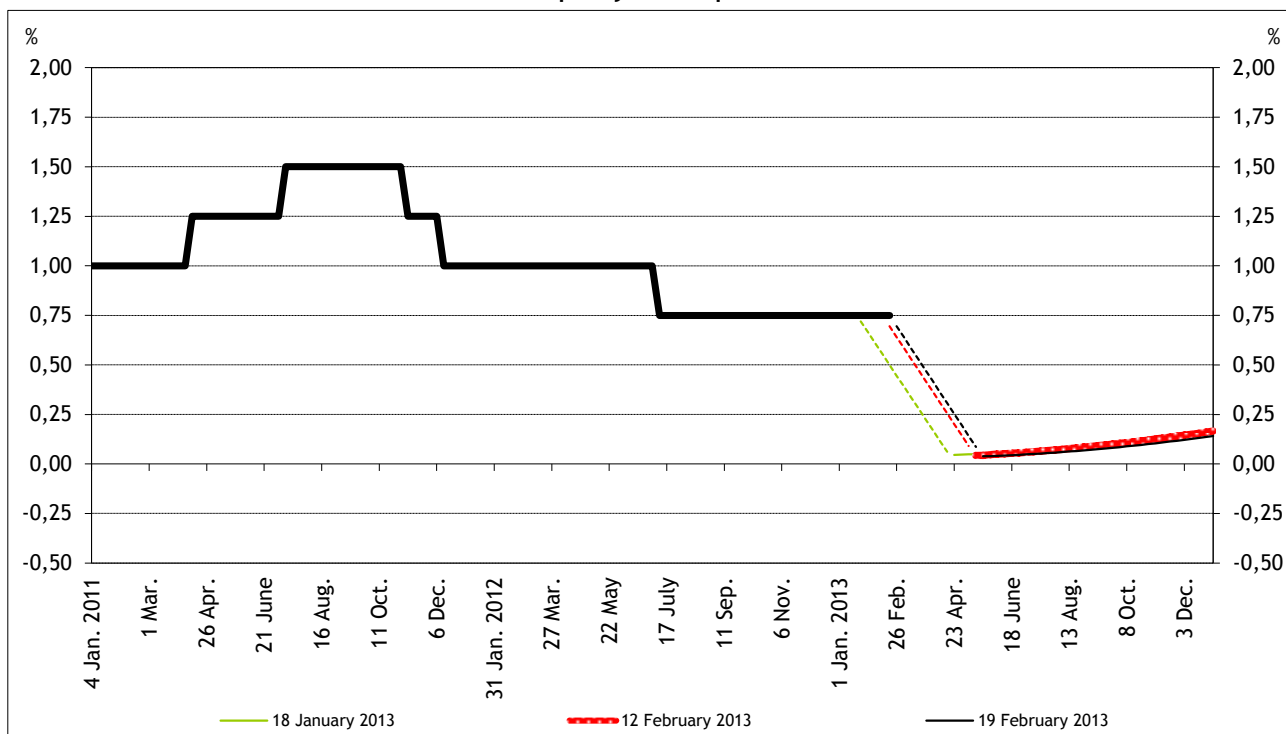
#### 47. Turnover on the secondary market of government securities



Source: KELER

Notes: 10-day moving averages.

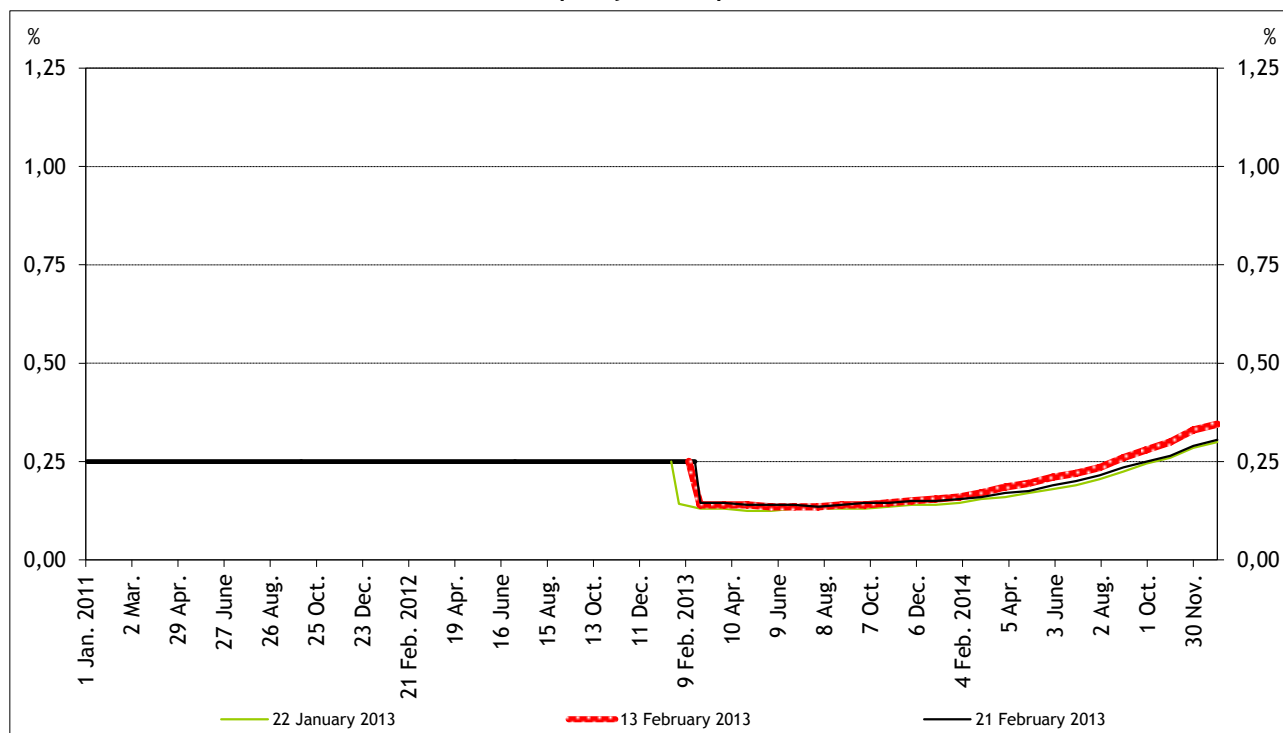
## 48. ECB policy rate expectations



Source: ECB.

Notes: estimated by the ECB using the Svensson-technique, based on AAA-rated euro area central government bonds.

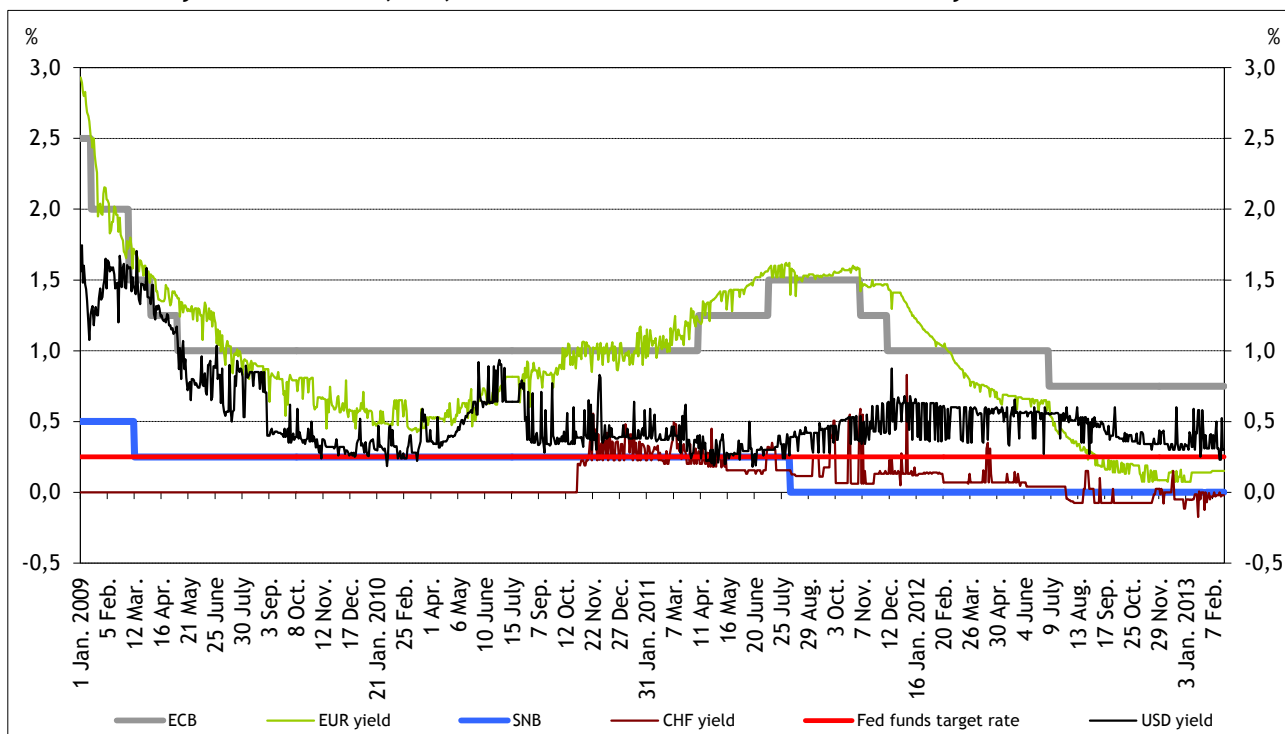
## 49. Fed policy rate expectations



Source: Thomson Reuters.

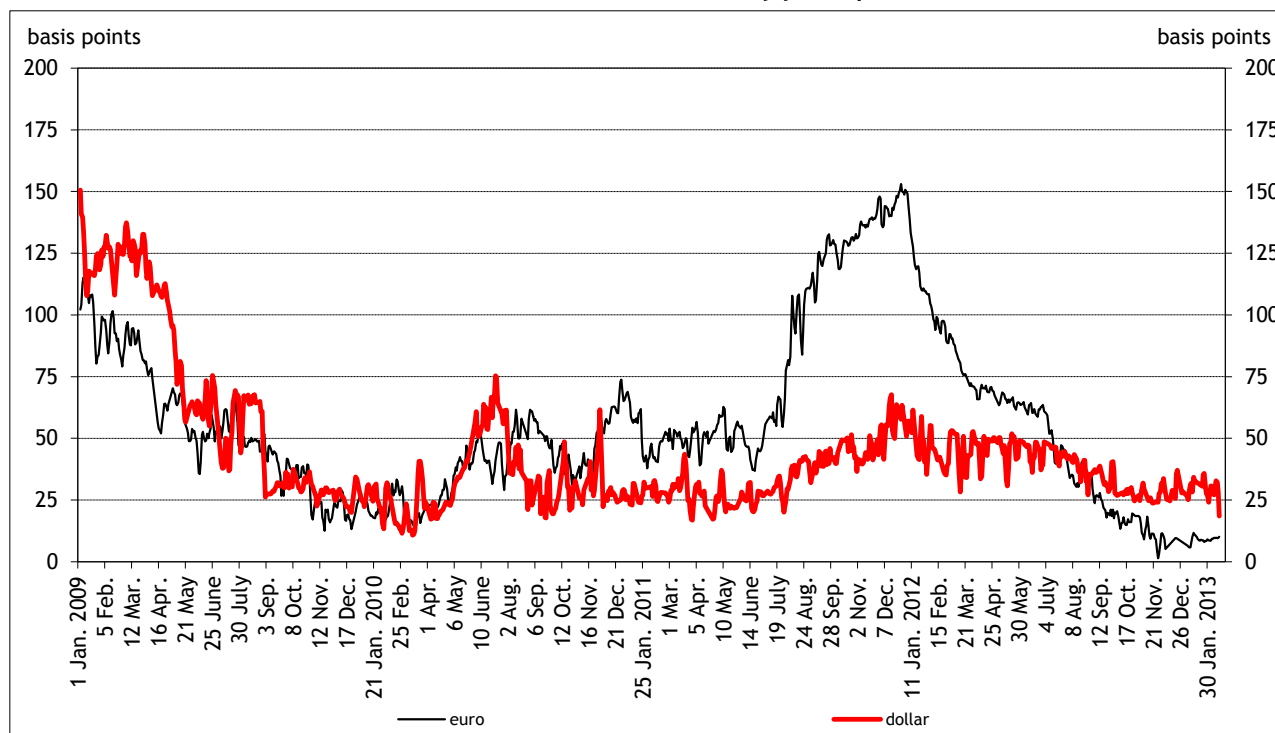
Notes: derived from Fed funds futures contracts.

## 50. Policy rates of the ECB, Fed, Swiss National Bank and the 3-month money market interest rates



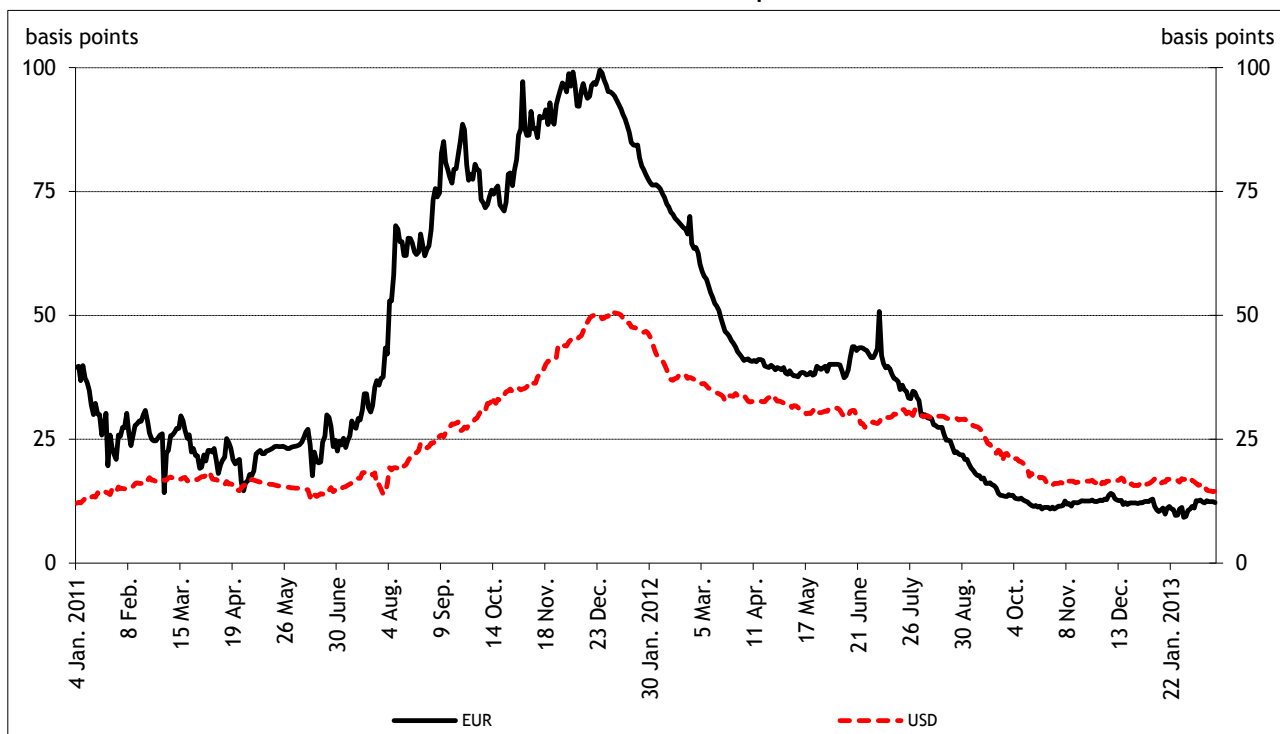
Source: Thomson Reuters.

## 51. 3 month interbank and treasury yield spreads



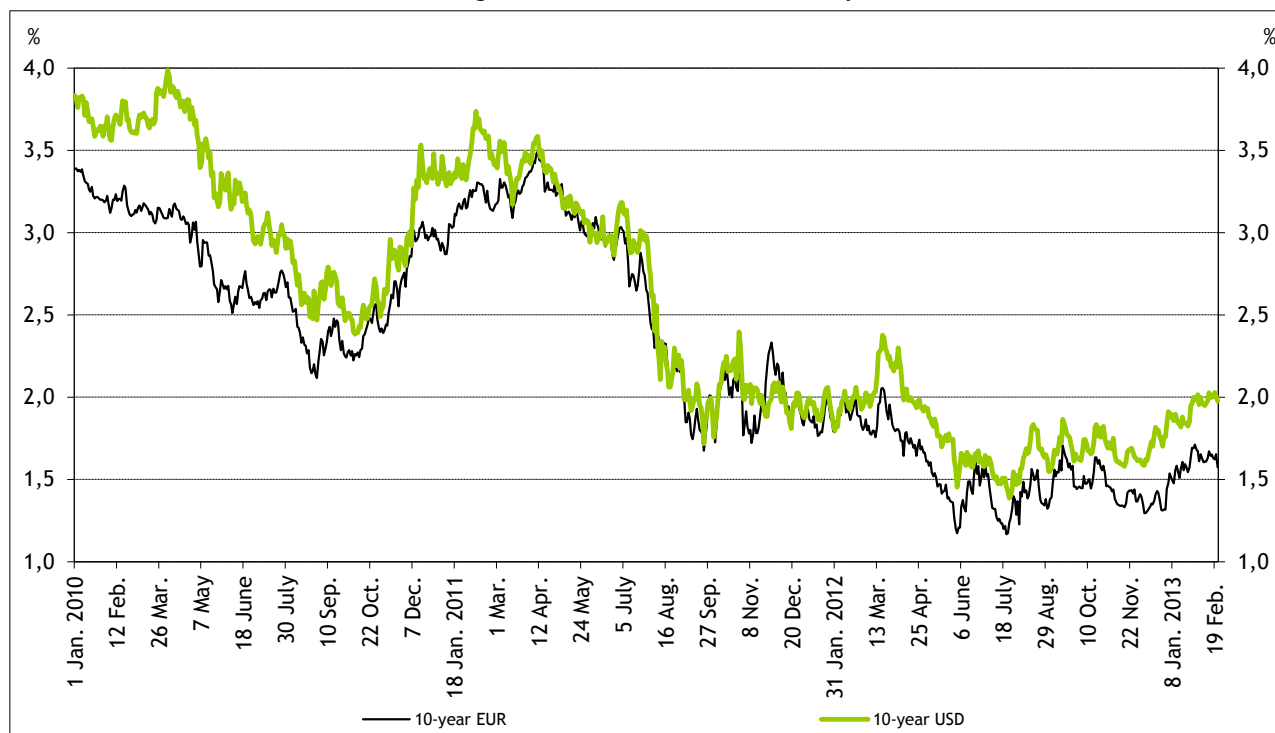
Source: Thomson Reuters.

52. 3 month LIBOR - OIS spreads



Source: Thomson Reuters.

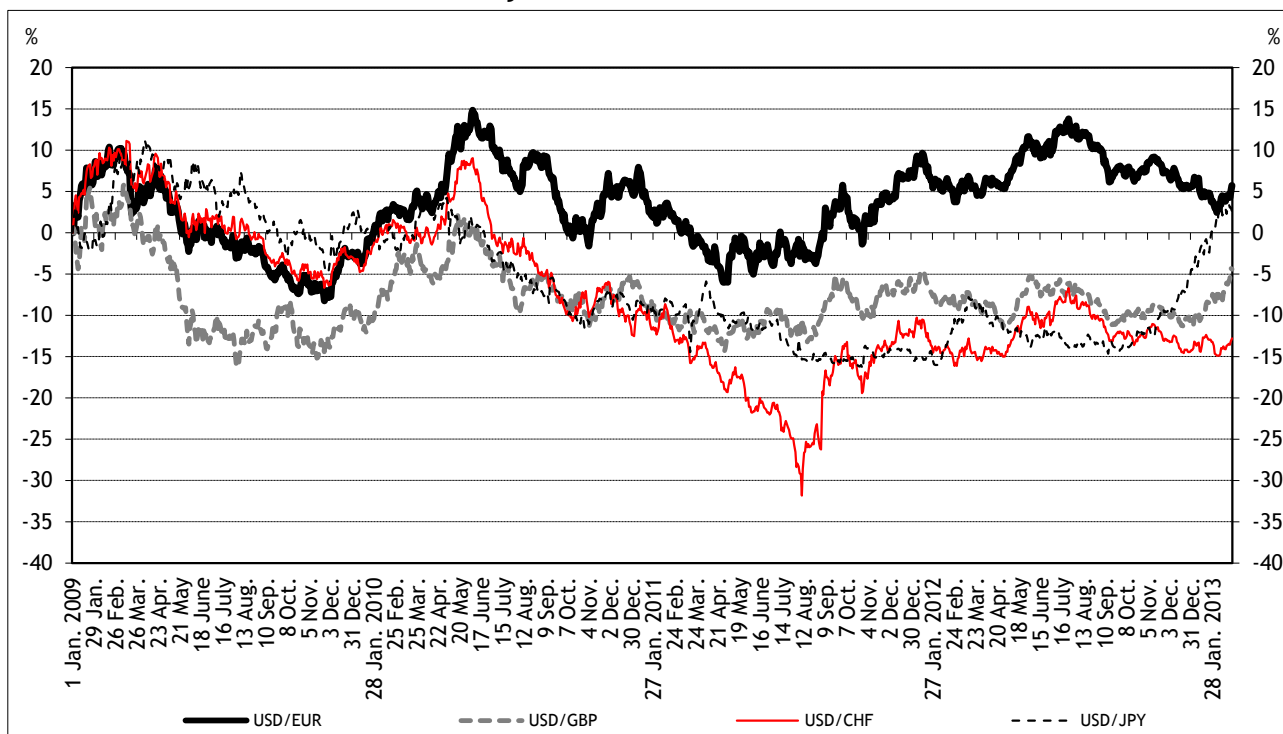
53. Long-term EUR and USD benchmark yields



Source: Thomson Reuters.

Notes: based on benchmark yield data provided by Thomson Reuters.

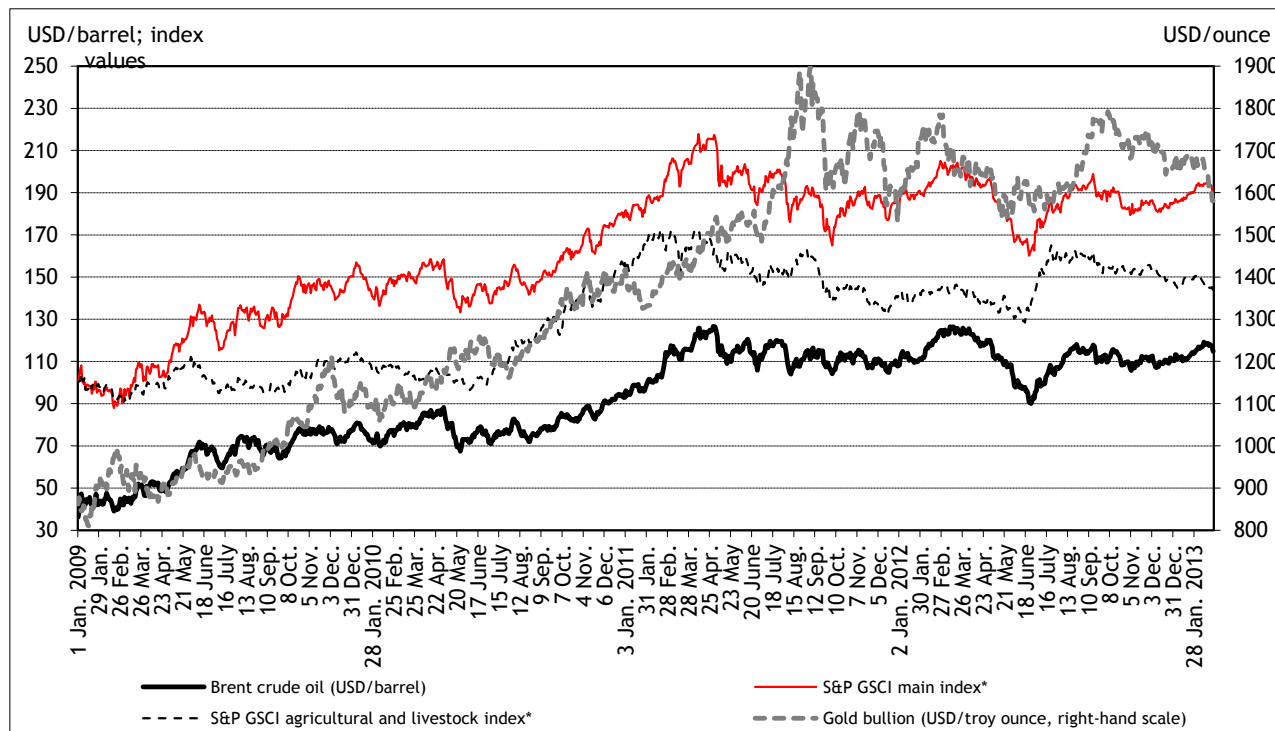
## 54. Major currencies versus the dollar



Source: Thomson Reuters.

Notes: 1 January 2009 = 0; cumulative change. Positive values indicate USD appreciation.

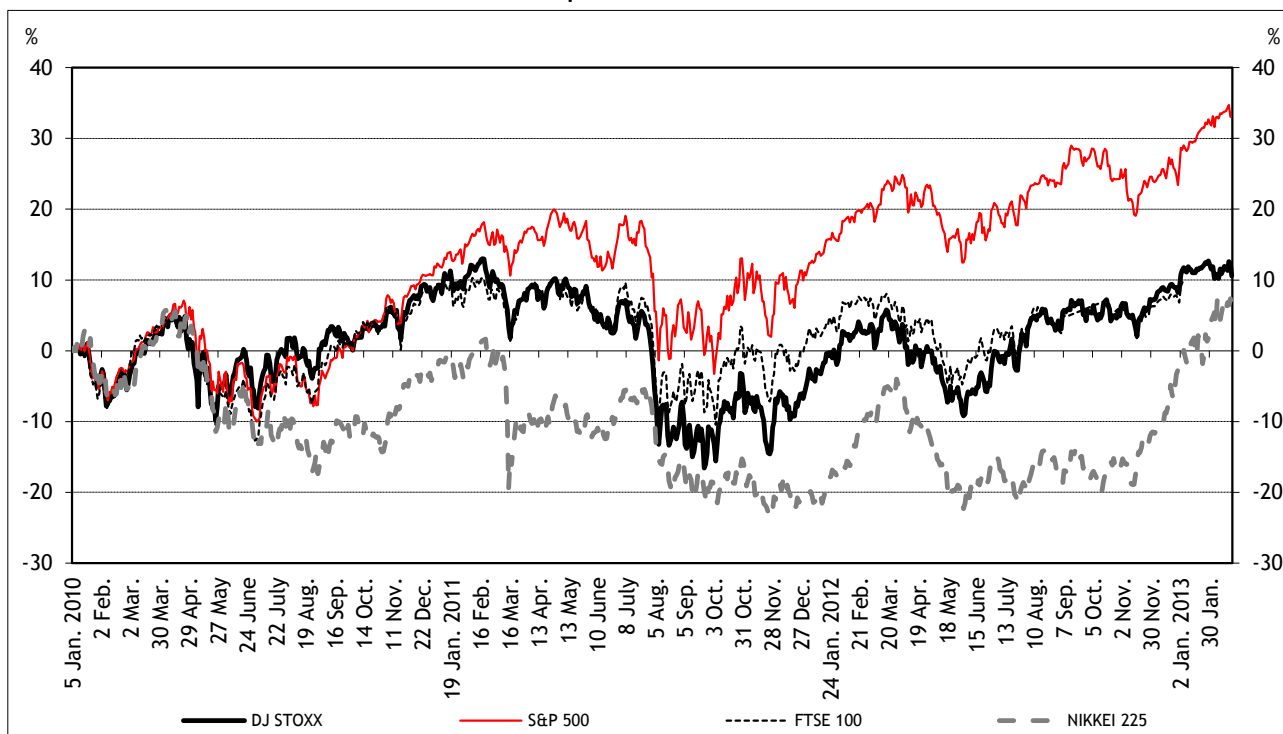
## 55. Commodity benchmarks



Source: Thomson Reuters.

Notes: Brent crude oil and gold bullion: nominal values, \*Standard&Poor's Goldman Sachs Commodity index: 1 January 2009=100.

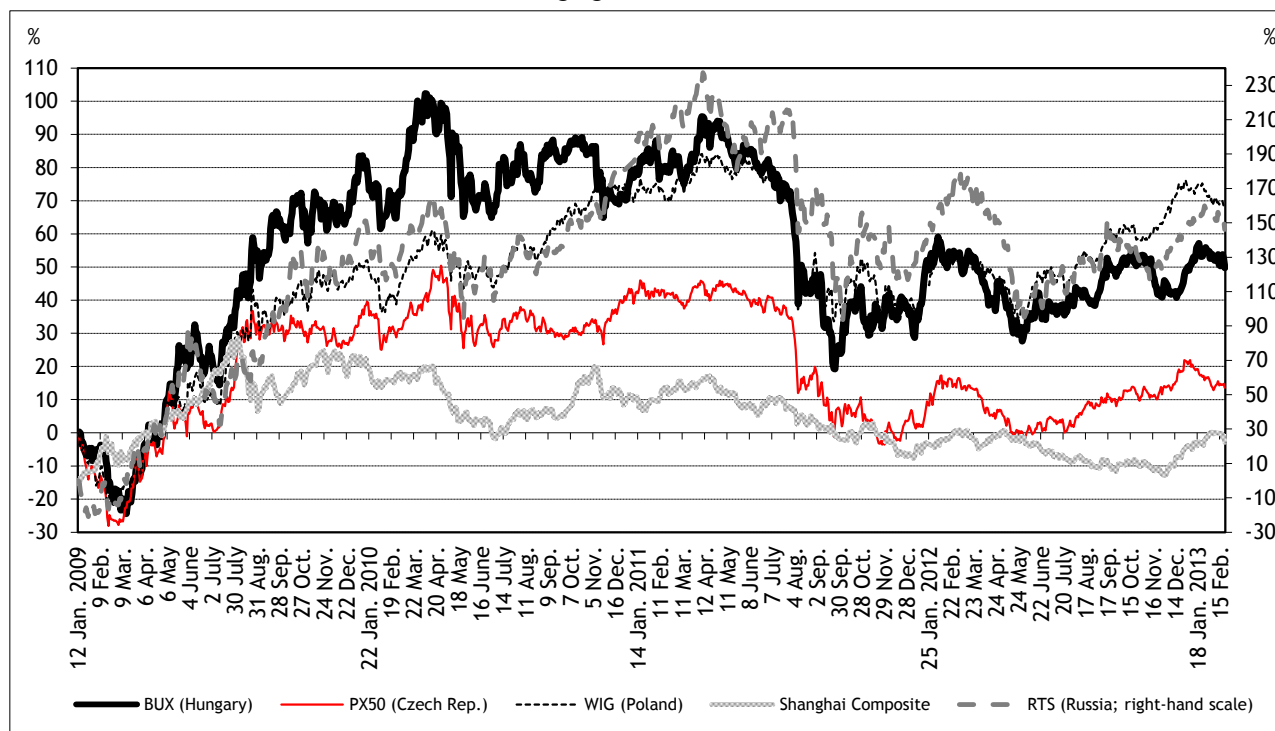
## 56. Developed market stock indices



Source: Thomson Reuters.

Notes: 5 January 2009 = 0; cumulative change.

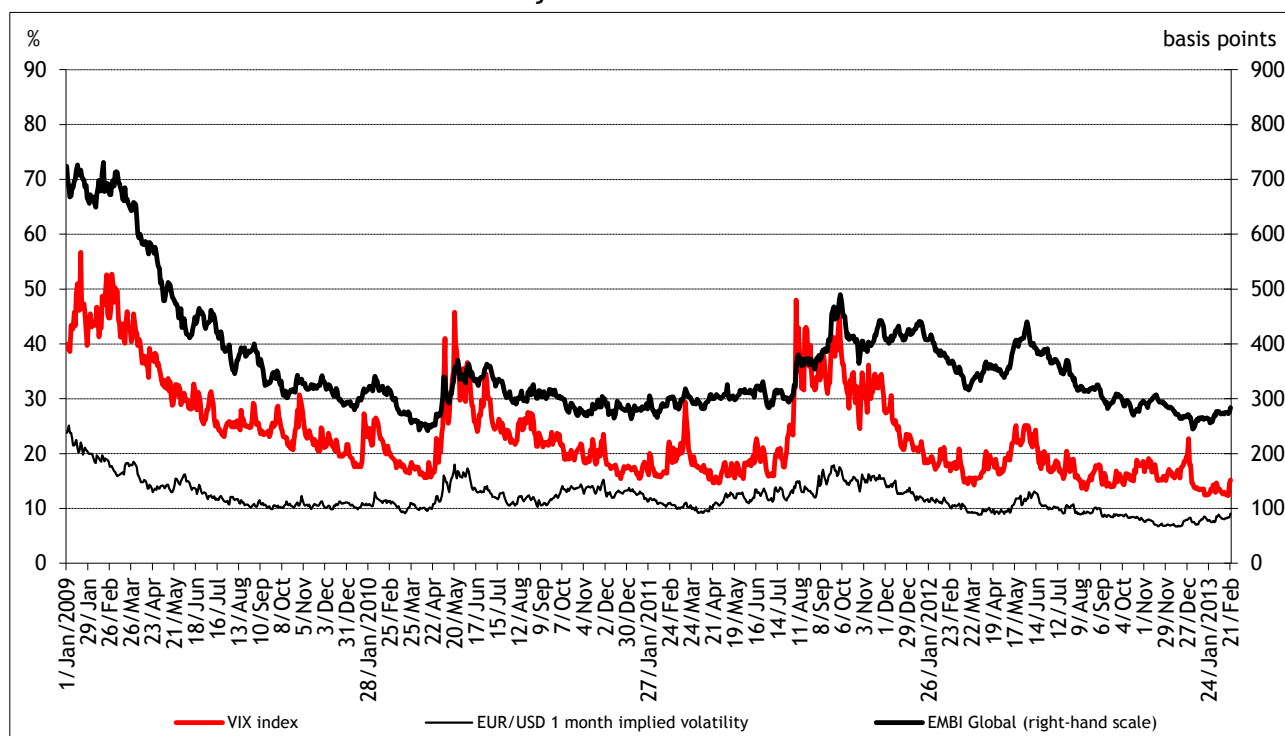
## 57. Emerging market stock indices



Source: Thomson Reuters.

Notes: 12 January 2009 = 0; cumulative change.

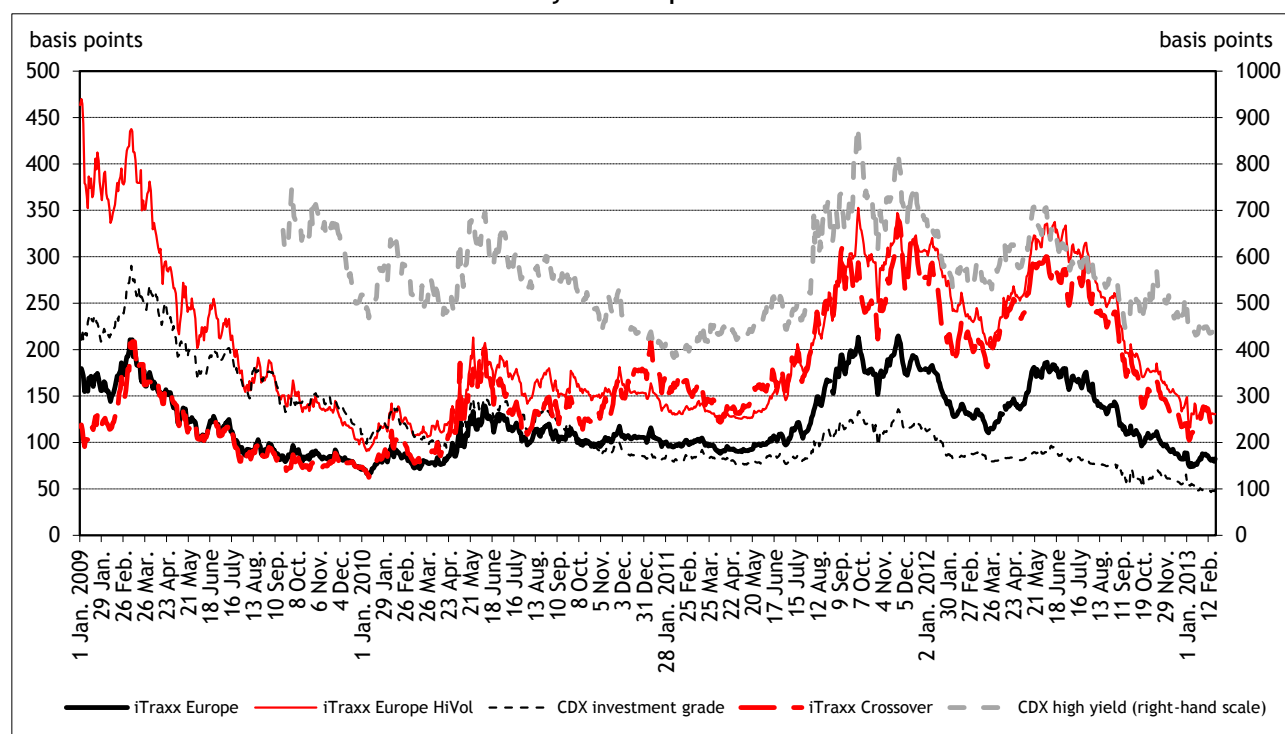
## 58. Major risk aversion indicators



Source: Thomson Reuters; JP Morgan.

Notes: increases indicate declining risk appetite or increasing risk aversion. VIX is the implied volatility of S&P500 index.

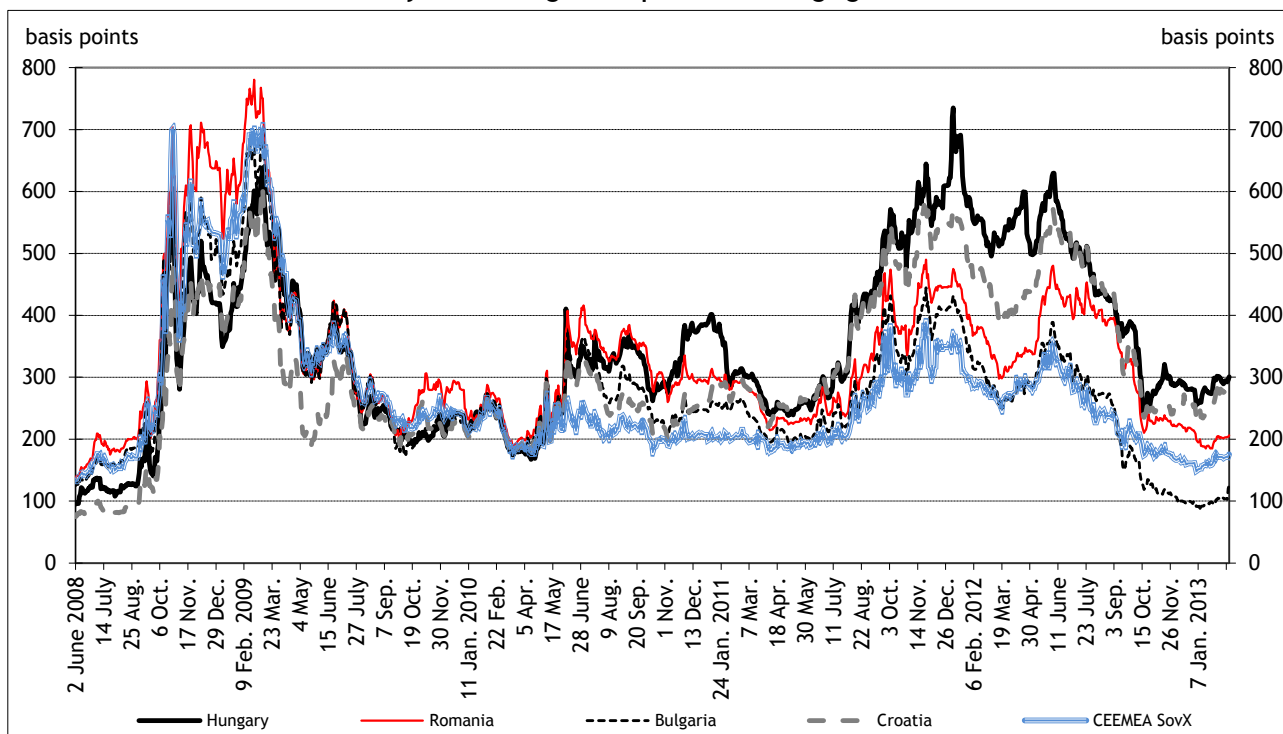
## 59. Key CDS composite indices



Source: Thomson Reuters.

Notes: iTraxx Europe index is composed of the most liquid 125 CDS referencing European investment grade names. iTraxx HiVol is a subset of the main index consisting of the 30 most risky constituents. Crossover index comprises the 45 most liquid sub-investment grade entities. CDX North American Investment Grade index consists of 125 names, CDX North American High Yield index comprises 100 names.

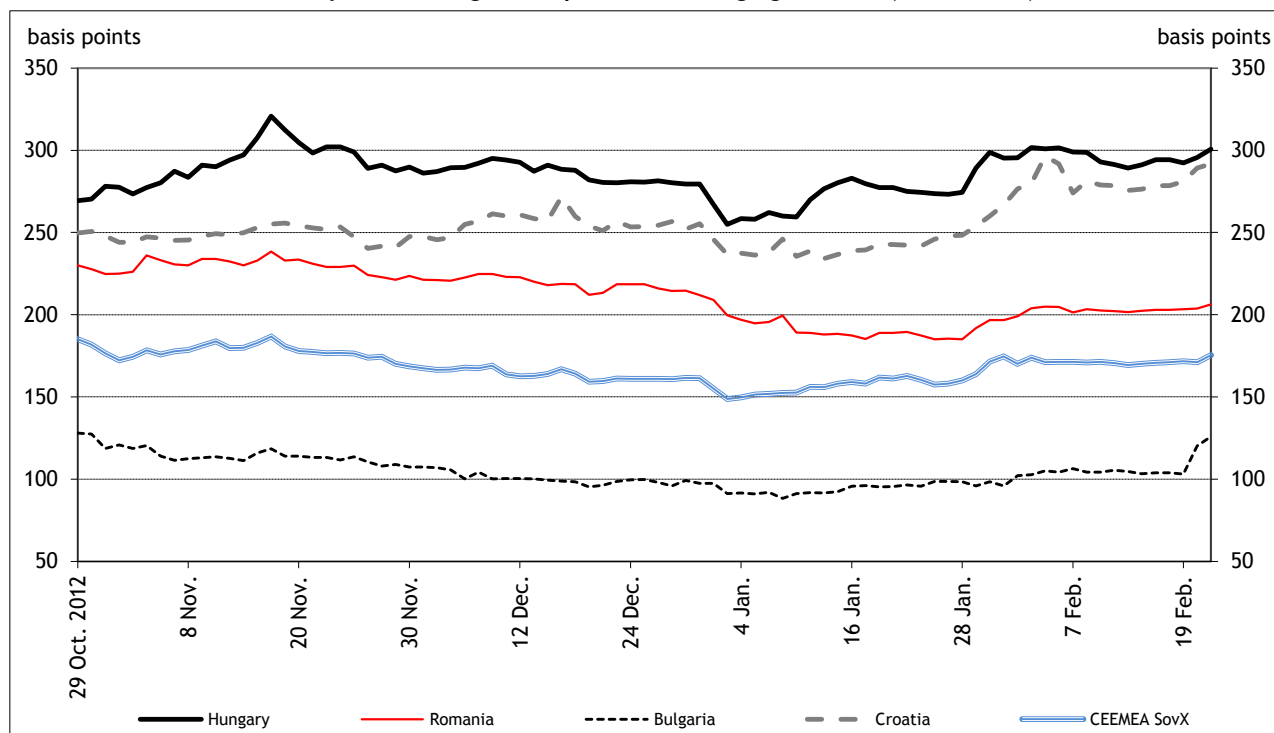
## 60. 5 year sovereign CDS spreads in emerging markets



Source: Thomson Reuters.

Notes: CEEMEA is a composite index calculated from the 15 most liquid sovereign CDS-spreads in the CEEMEA region.

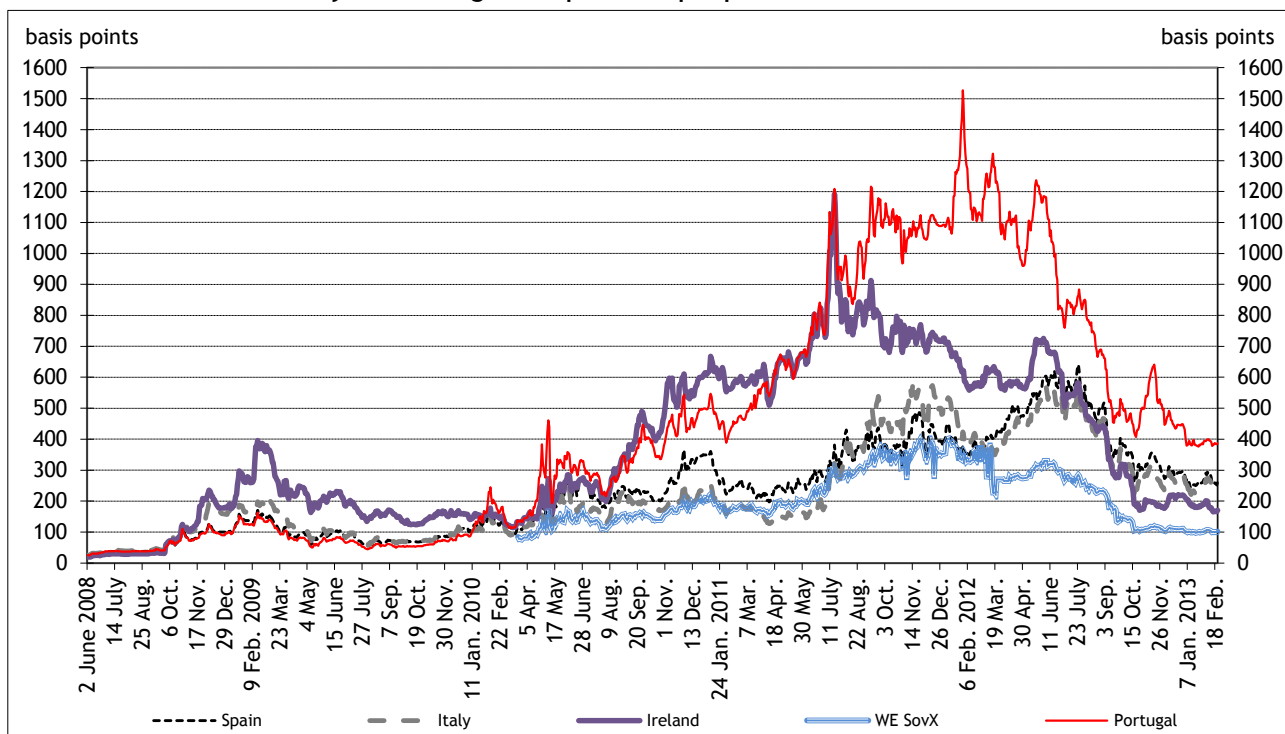
## 61. 5 year sovereign CDS spreads in emerging markets (last months)



Source: Thomson Reuters.

Notes: CEEMEA is a composite index calculated from the 15 most liquid sovereign CDS-spreads in the CEEMEA region.

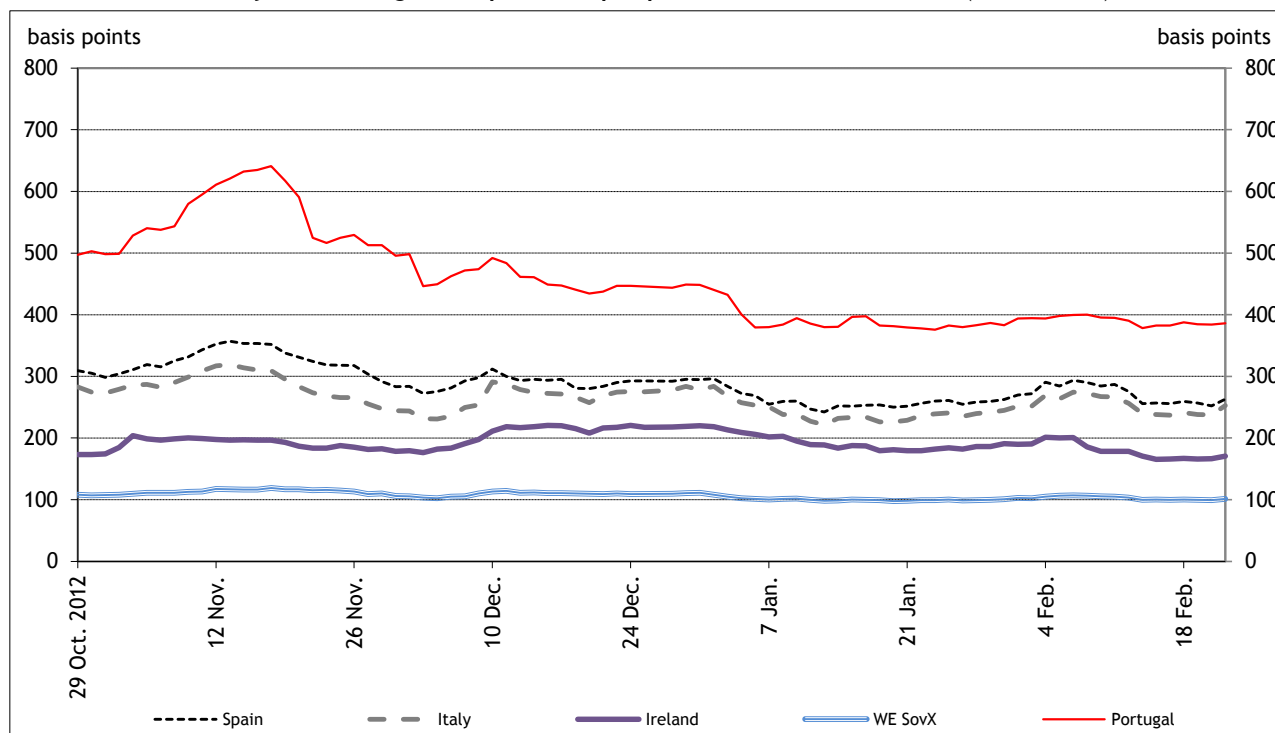
## 62. 5 year sovereign CDS spreads in peripheral eurozone countries



Source: Thomson Reuters.

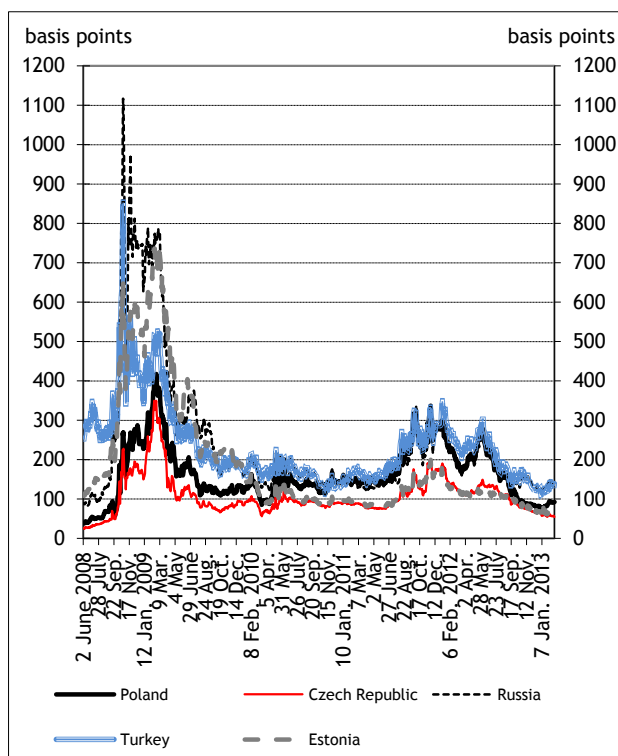
WE SovX is a composite index calculated from the 15 most liquid sovereign CDS-spreads in the Western European region.

## 63. 5 year sovereign CDS spreads in peripheral eurozone countries (last months)

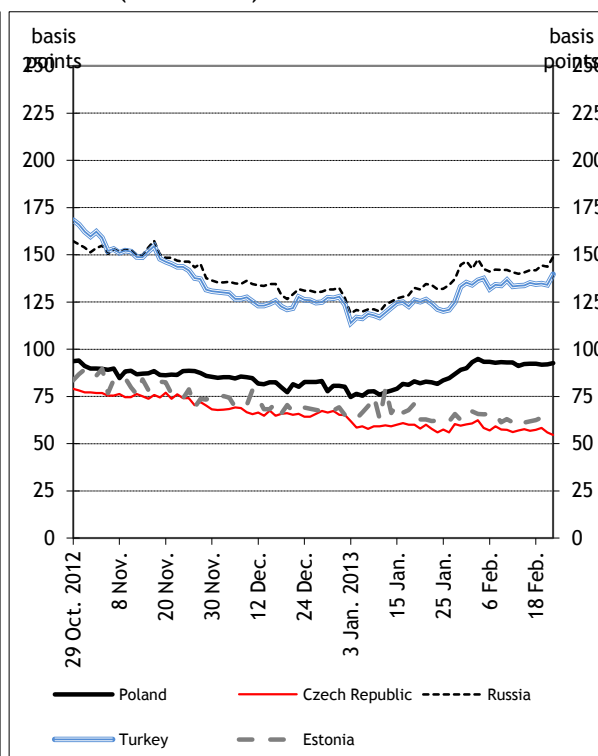


Source: Thomson Reuters.

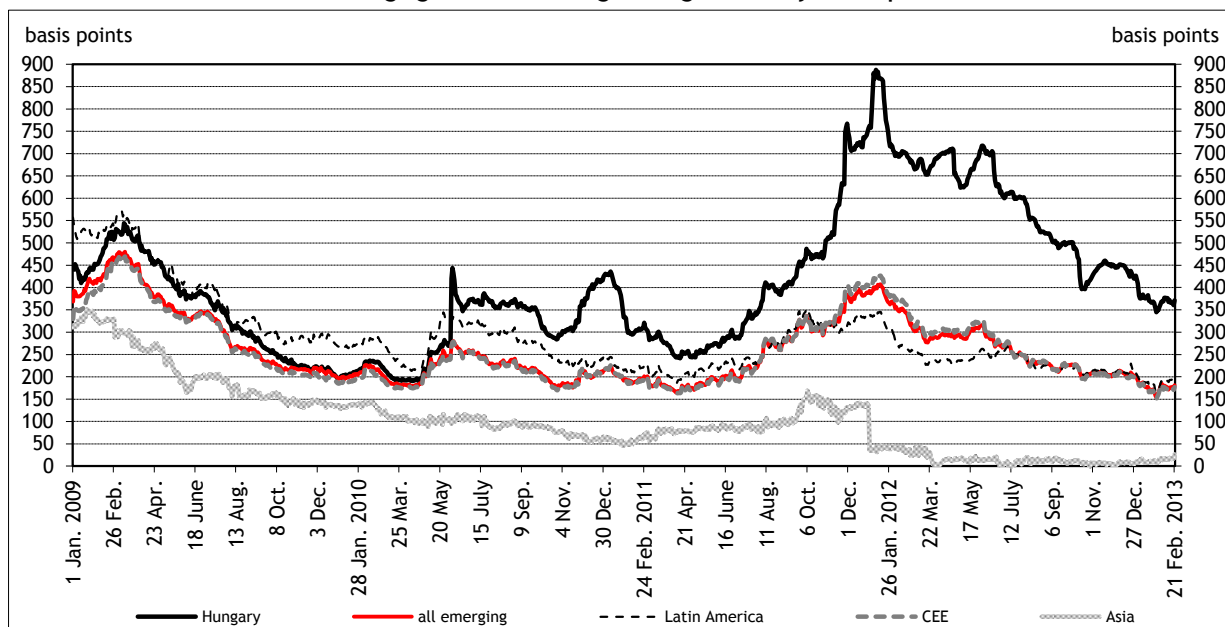
WE SovX is a composite index calculated from the 15 most liquid sovereign CDS-spreads in the Western European region.

**64. 5 year sovereign CDS spreads in emerging European countries**

Source: Thomson Reuters.

**65. 5 year sovereign CDS spreads in emerging European countries (last months)**

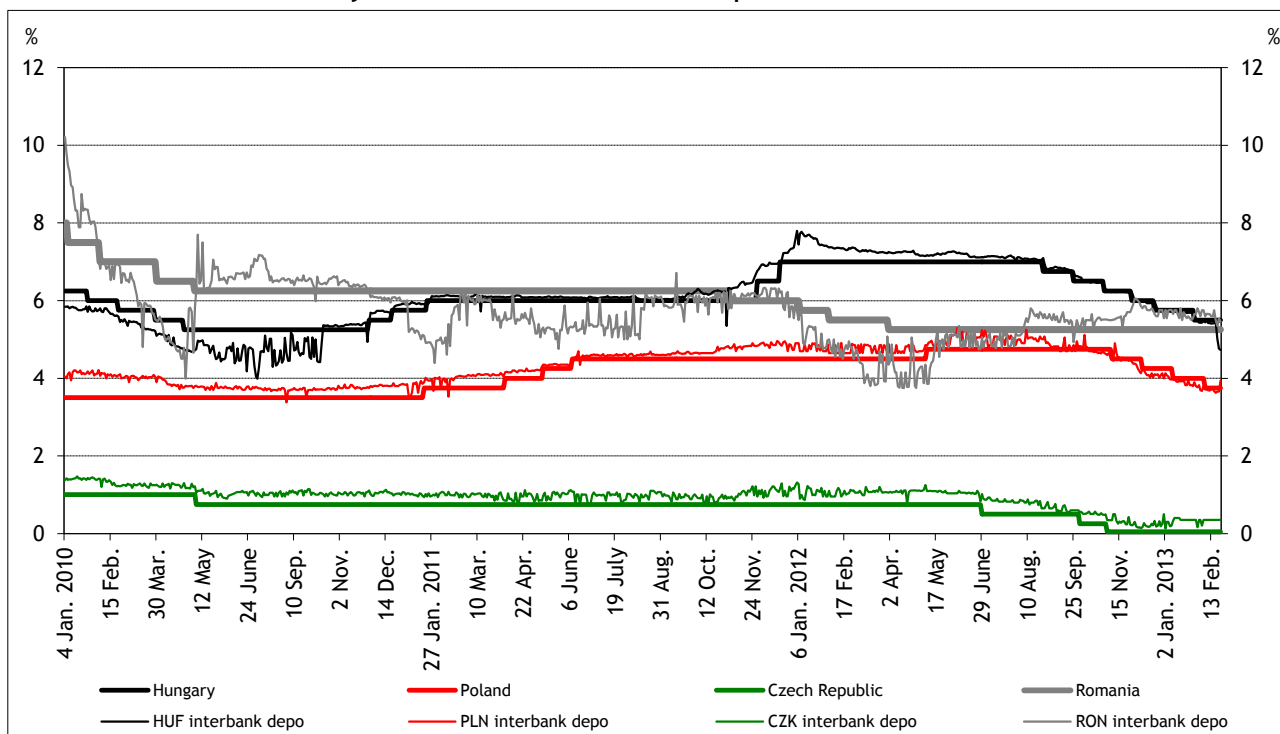
Source: Thomson Reuters.

**66. Emerging market sovereign foreign currency bond spreads**

Source: Thomson Reuters.

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.

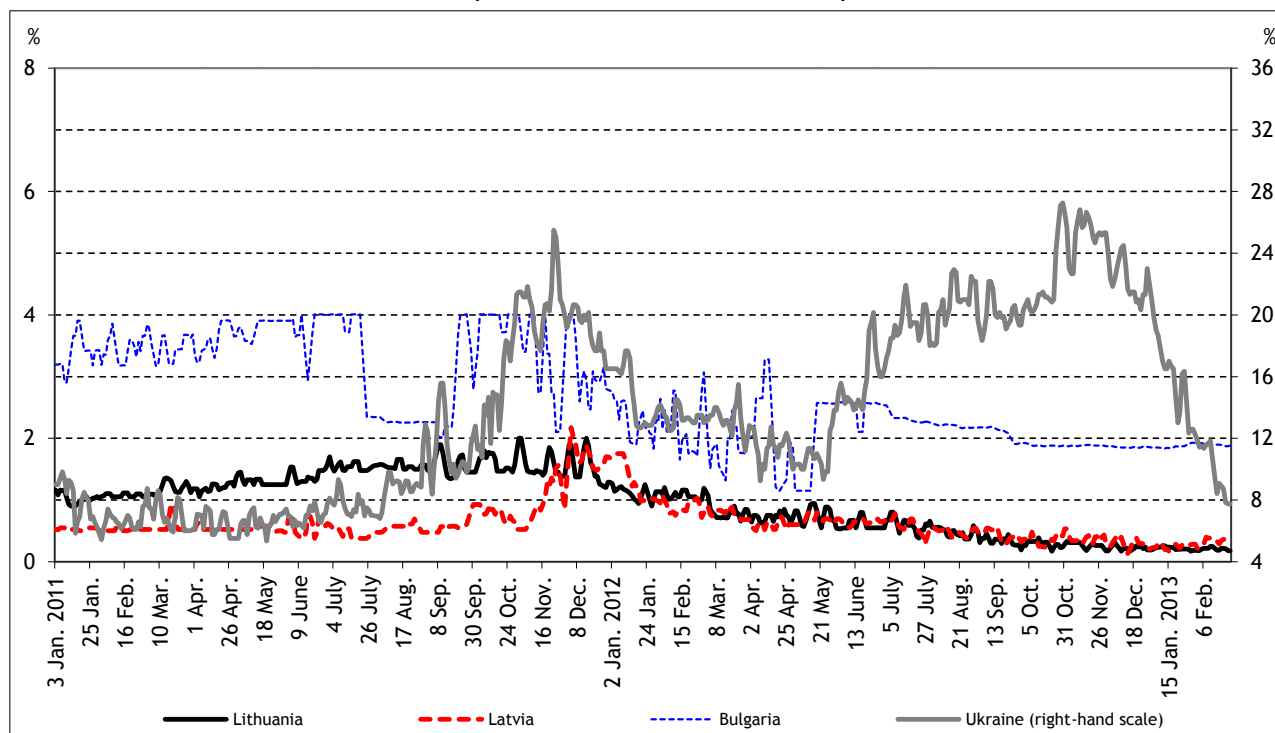
## 67. Policy rates and 3-month interbank deposit rates in CEE countries



Source: Thomson Reuters.

Notes: interbank deposit rates based on Reuters quotes.

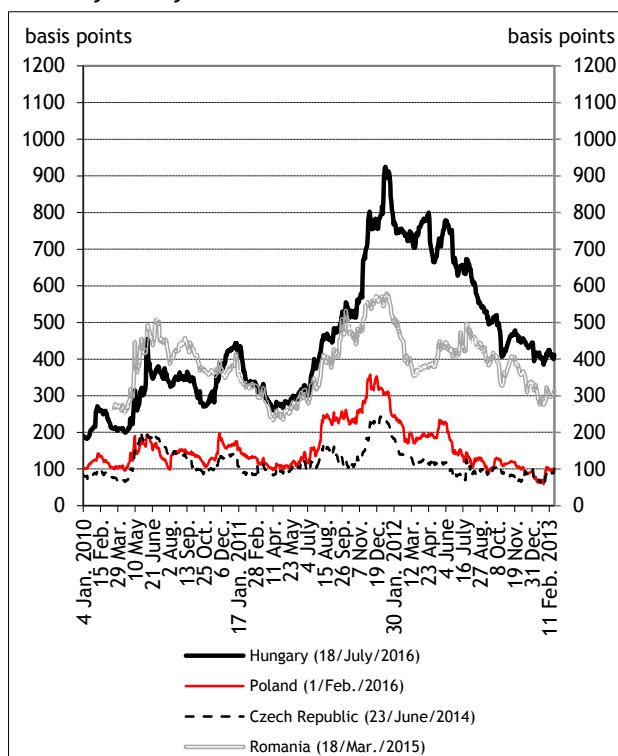
## 68. 3-month interbank deposit rates in some Central European and Baltic counties



Source: Thomson Reuters.

Notes: 3-day moving averages.

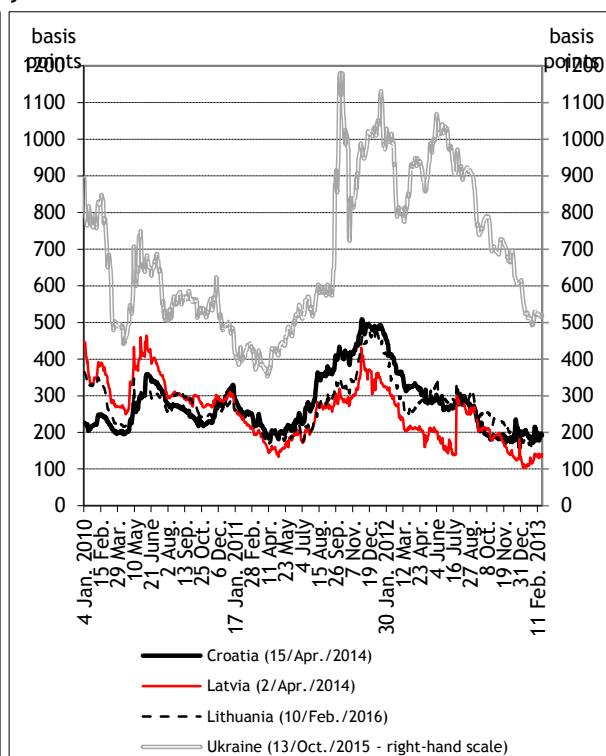
### 69. Spreads of 5-year Eastern European foreign currency bond yields over benchmarks



Source: Thomson Reuters.

Notes: spreads of 5-year Eastern European foreign currency bond yields over the appropriate German benchmark yields.

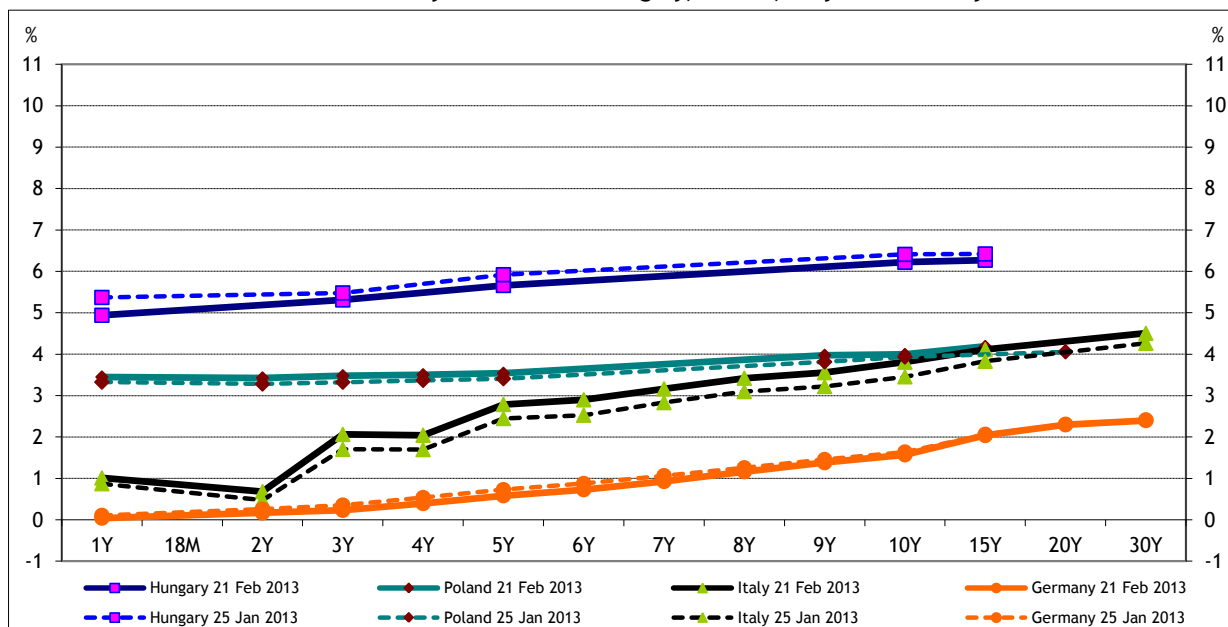
### 70. Spreads of Eastern European foreign currency bond yields over benchmarks



Source: Thomson Reuters.

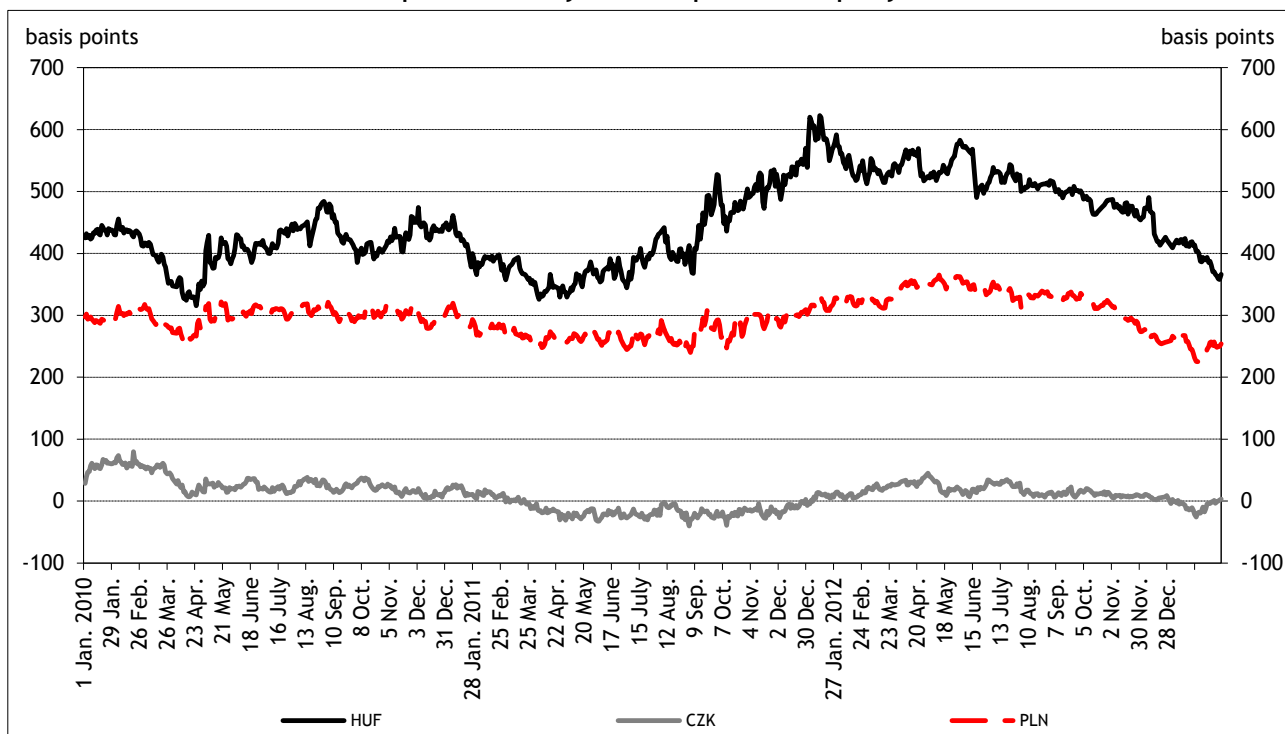
Notes: spreads of 5-year Eastern European foreign currency bond yields over the appropriate German benchmark yields.

### 71. Benchmark yield curves of Hungary, Poland, Italy and Germany



Source: Thomson Reuters.

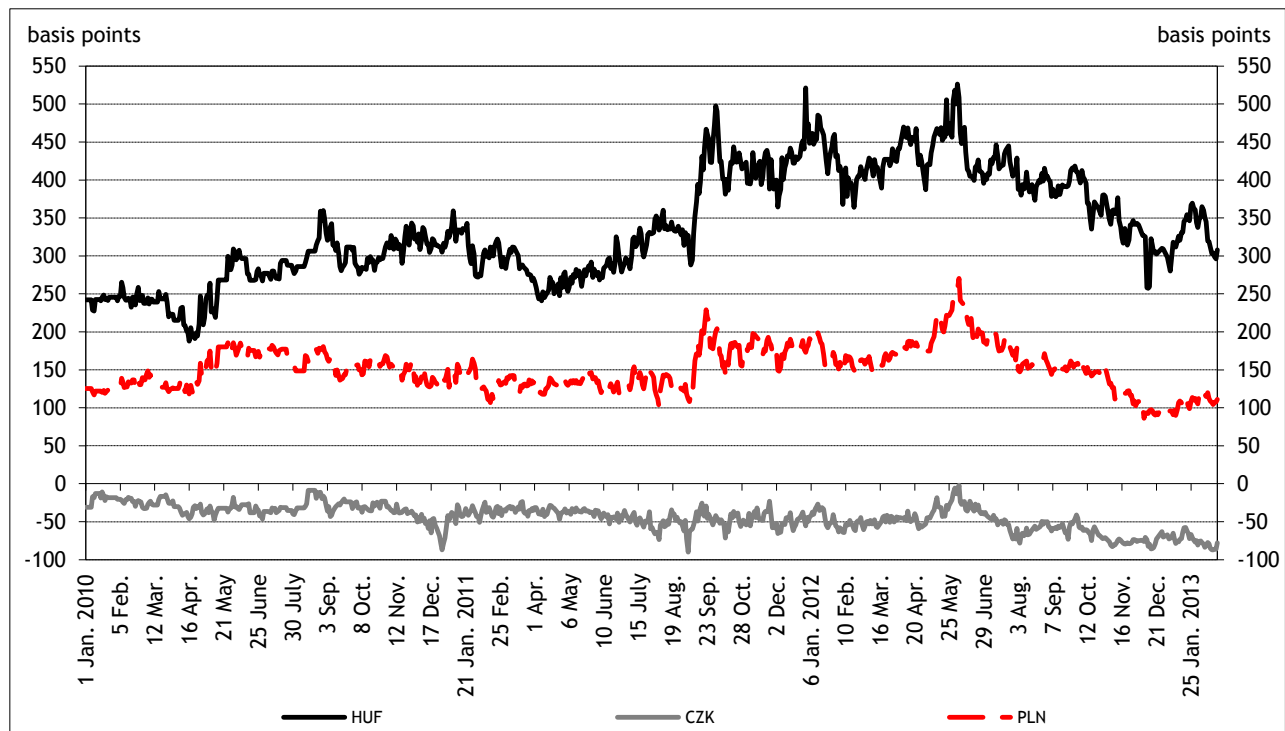
## 72. Spreads over 5 year euro spot zero coupon yields



Source: Thomson Reuters.

Notes: zero-coupon yields provided by Reuters.

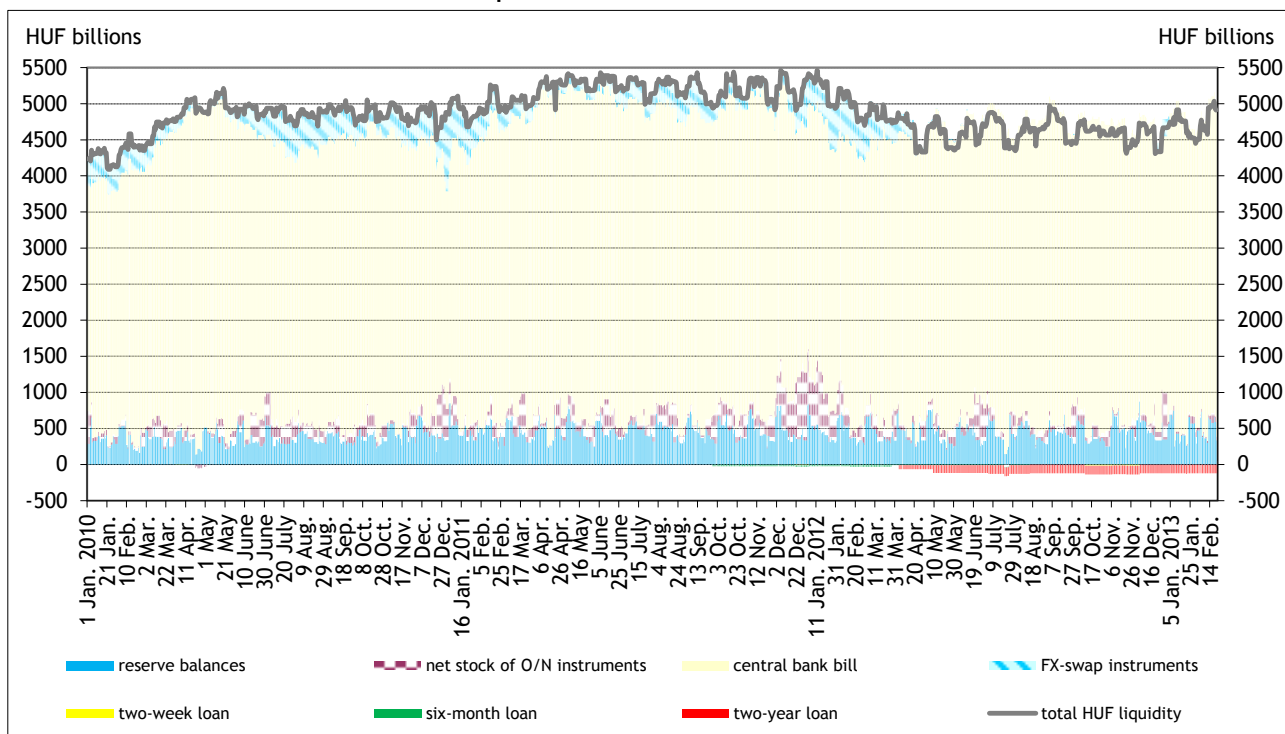
## 73. 5 year implied spreads over euro rates in 5 year's time



Source: Thomson Reuters.

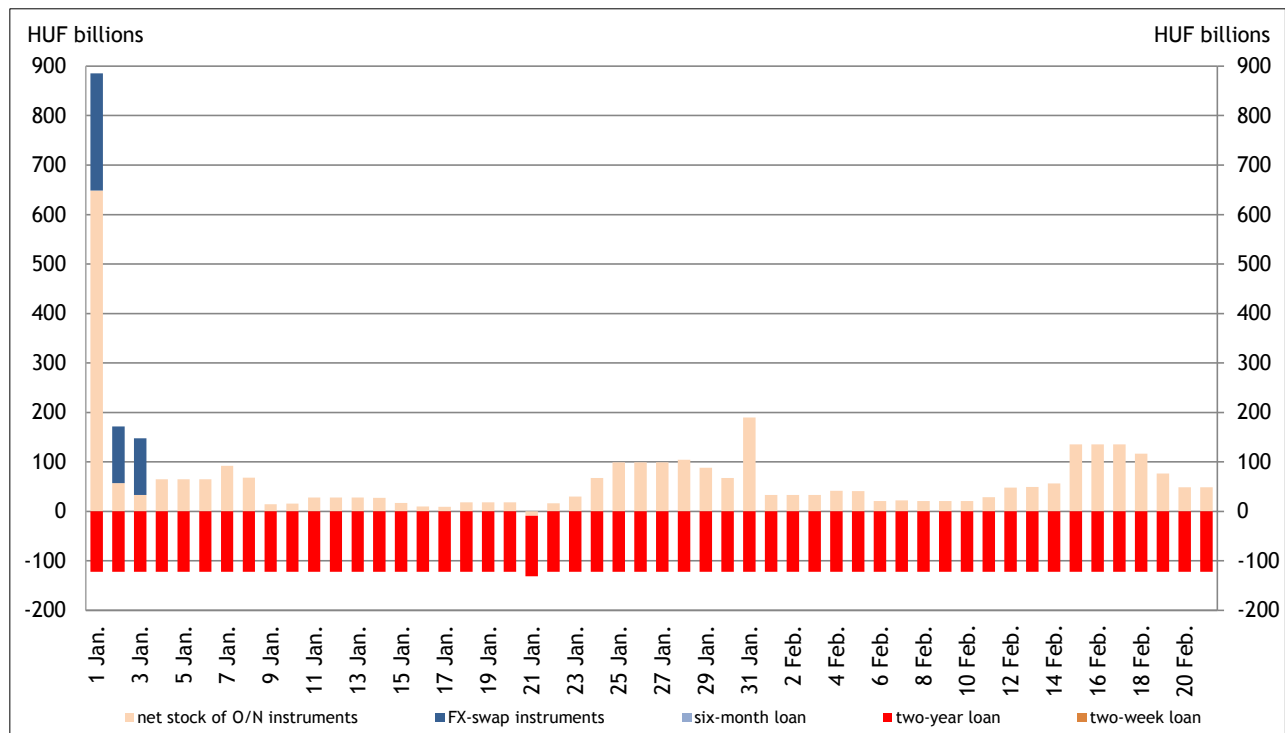
Notes: based on swap rates provided by Reuters.

## 74. Developments in central bank balance sheet



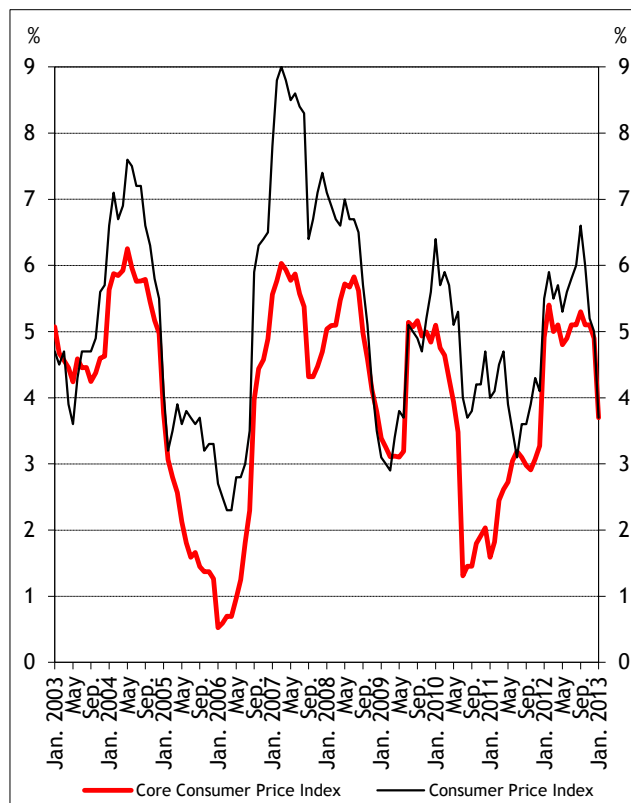
Source: MNB.

## 75. Recourse to central bank instruments



Source: MNB.

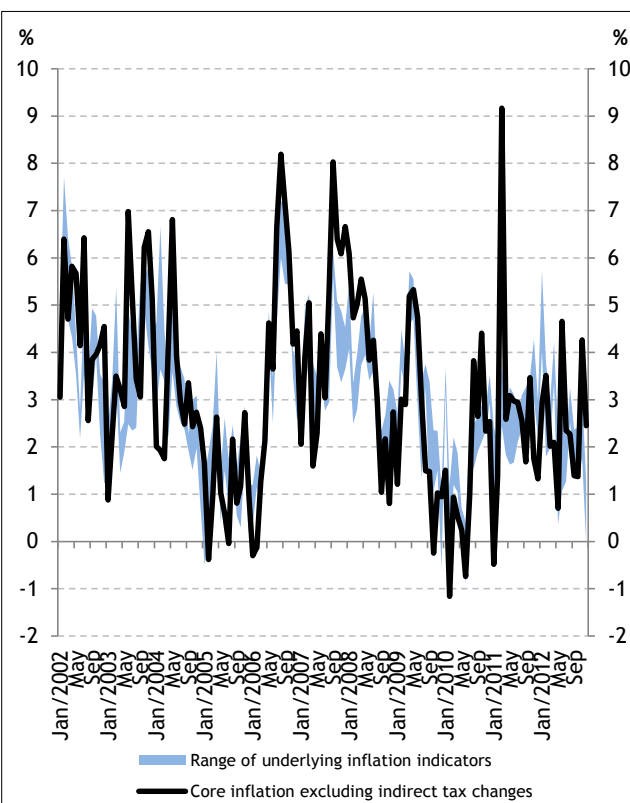
## 76. The CPI and the Core CPI



Source: HCSO, MNB

Notes: seasonally adjusted year-on-year growth rates (HCSO adjustments); The time series of core inflation have changed due to the change in the calculation method.

## 77. Developments in underlying inflation indicators



Source: HCSO, MNB.

Notes: The range is constructed of the median, weighted median, trimmed mean and Edgeworth-index indicators.

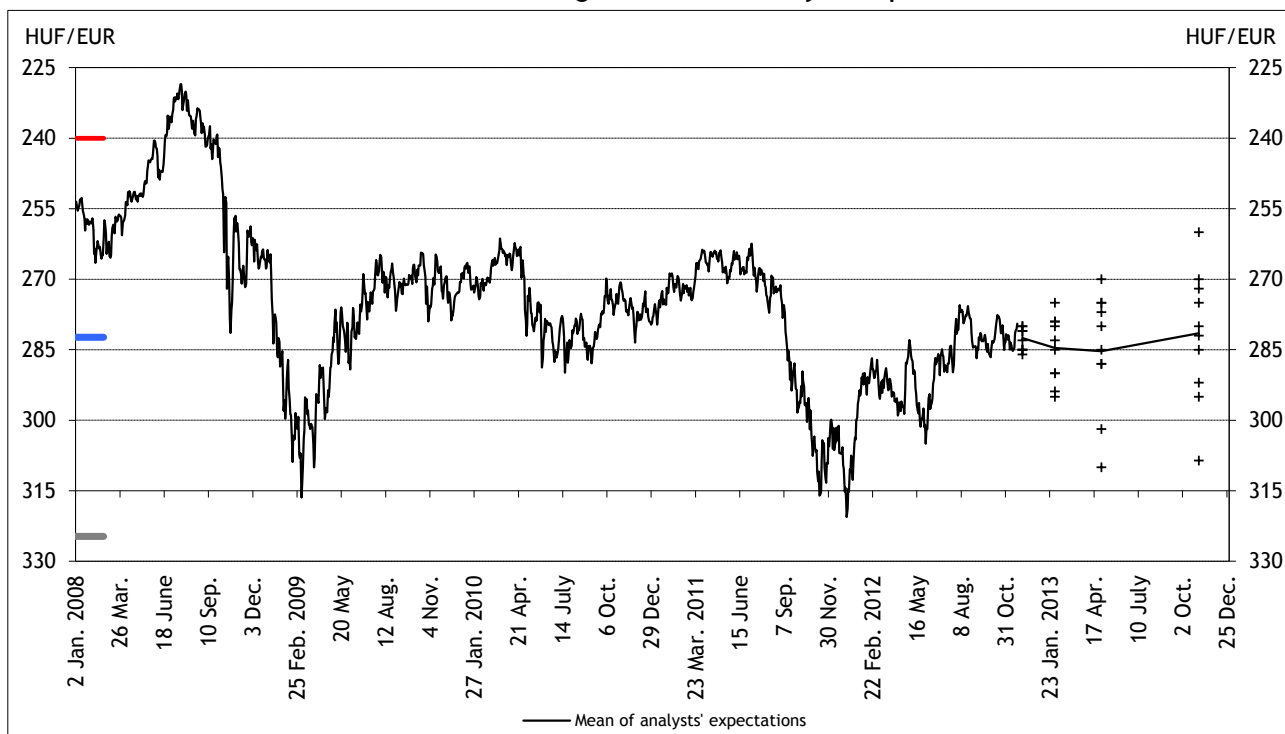
## 78. Decomposition of the Consumer Price Index

|                                | Weight - 2012 | Weight - 2013 | Nov-12 | Dec-12 | Jan-13 |
|--------------------------------|---------------|---------------|--------|--------|--------|
| Consumer Price Index           | 100,0         | 100,0         | 5,2    | 5,0    | 3,7    |
| thereof                        |               |               |        |        |        |
| Unprocessed food               | 6,1           | 5,8           | 13,7   | 12,3   | 13,2   |
| Processed food                 | 11,8          | 12,5          | 4,7    | 5,1    | 3,2    |
| Manufactured goods             | 23,7          | 22,7          | 1,9    | 2,0    | 0,6    |
| Market services                | 21,3          | 21,7          | 4,8    | 4,5    | 3,5    |
| Non-regulated household energy | 1,6           | 1,2           | 10,5   | 10,9   | 9,3    |
| Alcohol, tobacco               | 8,7           | 8,9           | 15,1   | 13,5   | 13,1   |
| Gasoline prices                | 7,7           | 8,1           | 1,7    | 1,1    | -1,3   |
| Regulated prices               | 19,1          | 19,2          | 4,0    | 4,0    | 2,4    |
| Core Consumer Price Index      | 65,5          | 65,8          | 5,1    | 4,9    | 3,7    |
| CPI without Tax Changes        | 100,0         | 100,0         | 3,2    | 3,2    | 2,8    |

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.

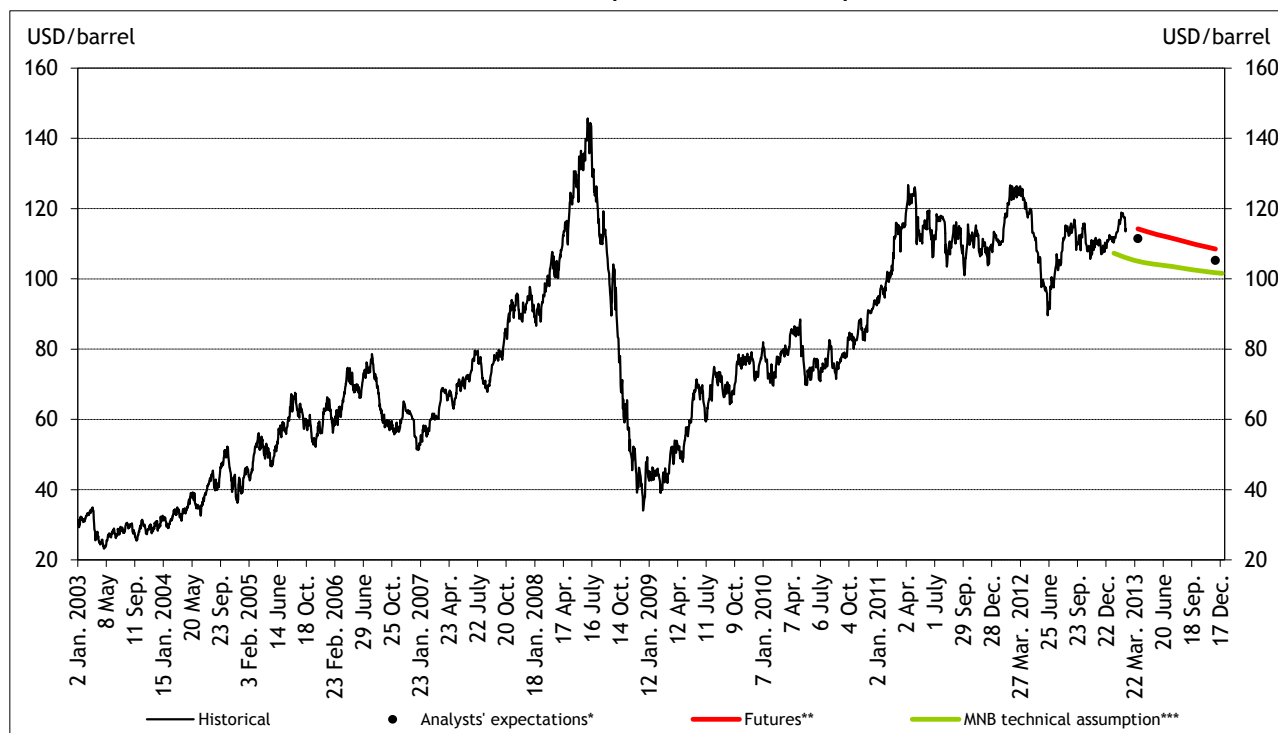
## 79. The HUF/EUR exchange rate and the analysts' expectations



Source: Thomson Reuters, MNB.

Notes: inverted scale, projected band with a central exchange rate taken to be fixed at 276,1 from October 1 2001, and at 282,36 from June 4 2003. The thin continuous line represents analysts' average exchange rate expectations according to the most recent Reuters CEE FX Poll.

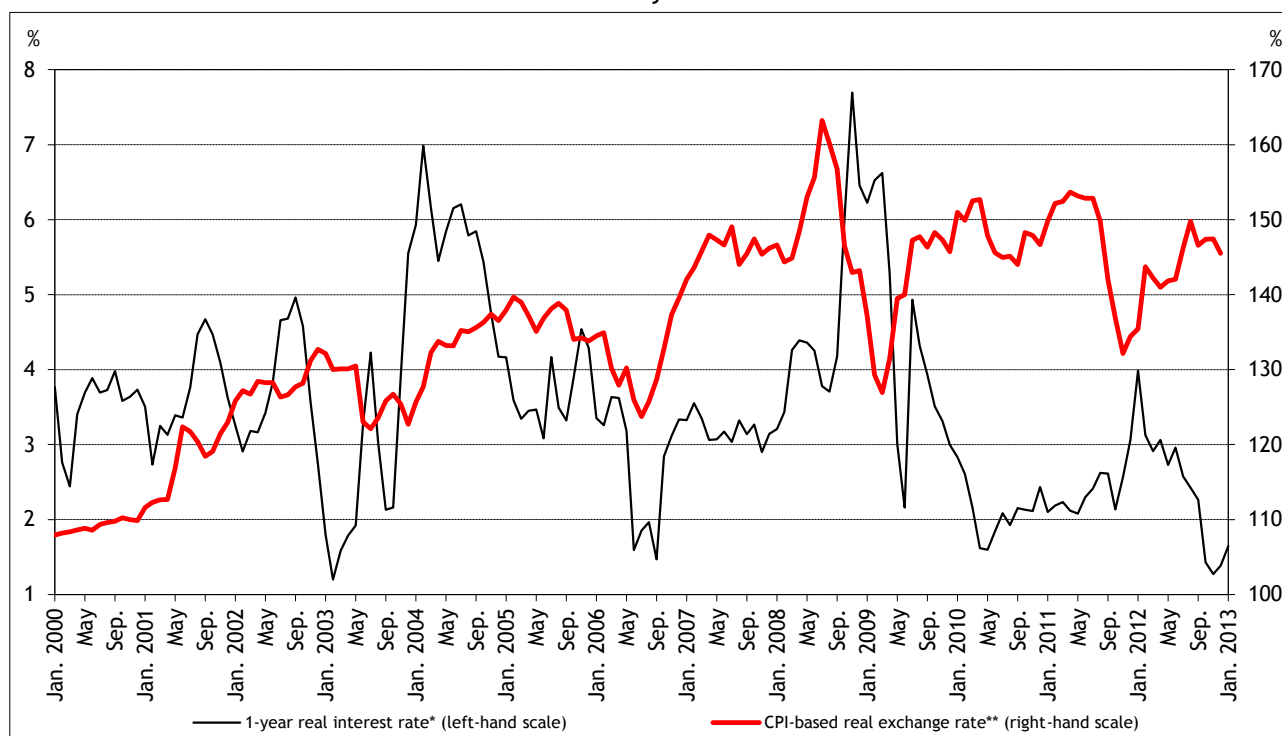
## 80. The Brent crude oil price and market expectations



Source: Bloomberg, Consensus Economics.

Notes: Consensus Economics Forecast (latest survey); the original forecasts refer to the WTI crude oil, and were corrected by the average difference between WTI and Brent to derive figures for the Brent crude oil; \*\* Based on the latest available futures prices \*\*\*Technical assumption underlying the MNB's inflation forecast published in the most recent Quarterly Report on Inflation.

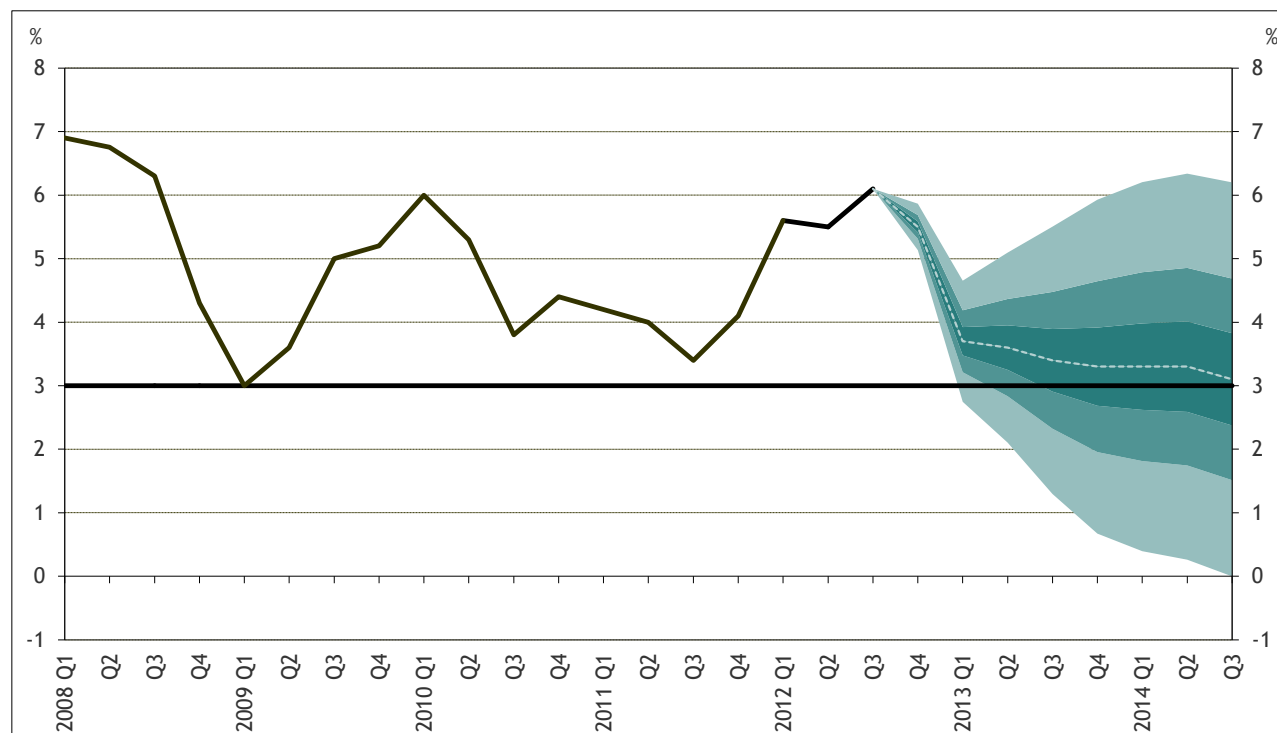
## 81. Monetary conditions



Source: Reuters, KSH, Eurostat, ÁKK, MNB.

Notes: \* calculated from the 1-year zero-coupon yield and analysts' corresponding 1-year forward inflation expectations derived from the Reuters-poll by the MNB. \*\* Monthly depreciation of the forint relative to the euro (until April 2001 the pre-announced rate of devaluation), adjusted by the corresponding Hungarian CPI and the EMU's HICP (1 January 1997 = 100%; increase represents appreciation).

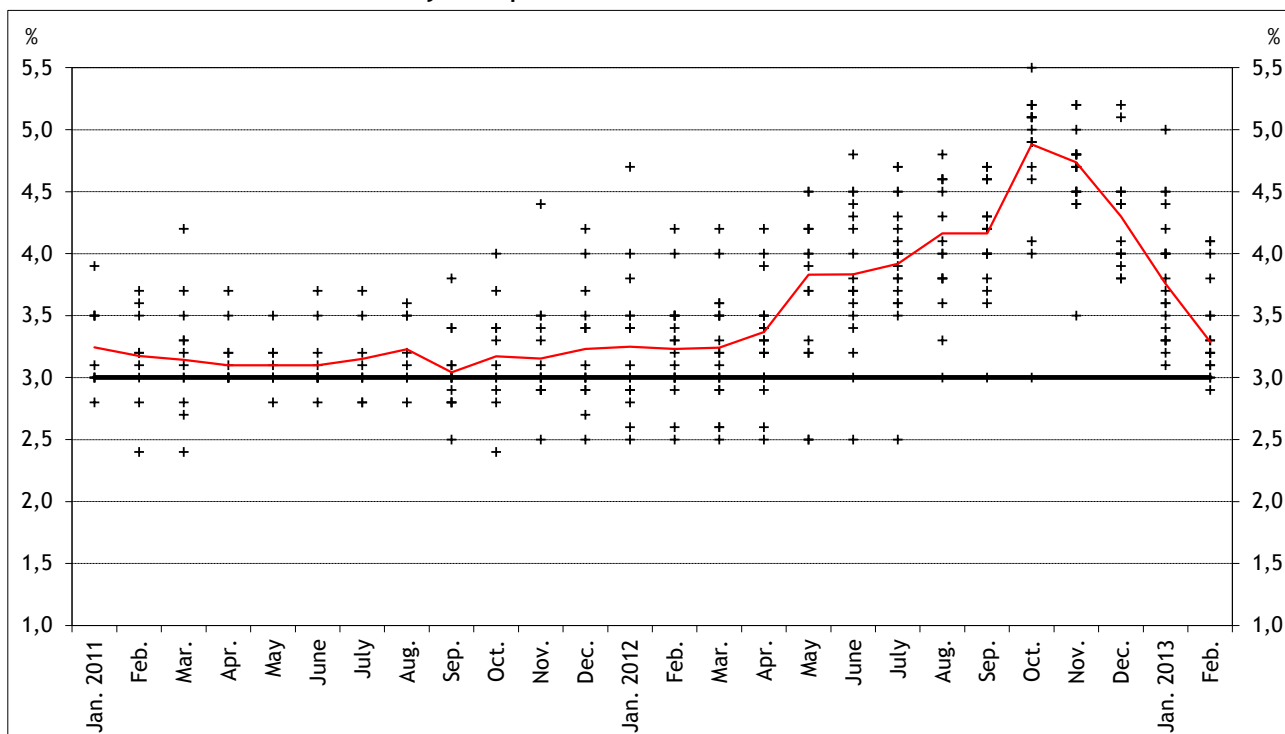
## 82. Fan chart of the inflation forecast



Source: MNB, HCSO.

Notes: 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 consumer price index illustrated by the dotted line (as the mode of distribution) refers to 30 per cent of the probability. The horizontal line shows the value of the announced inflation target.

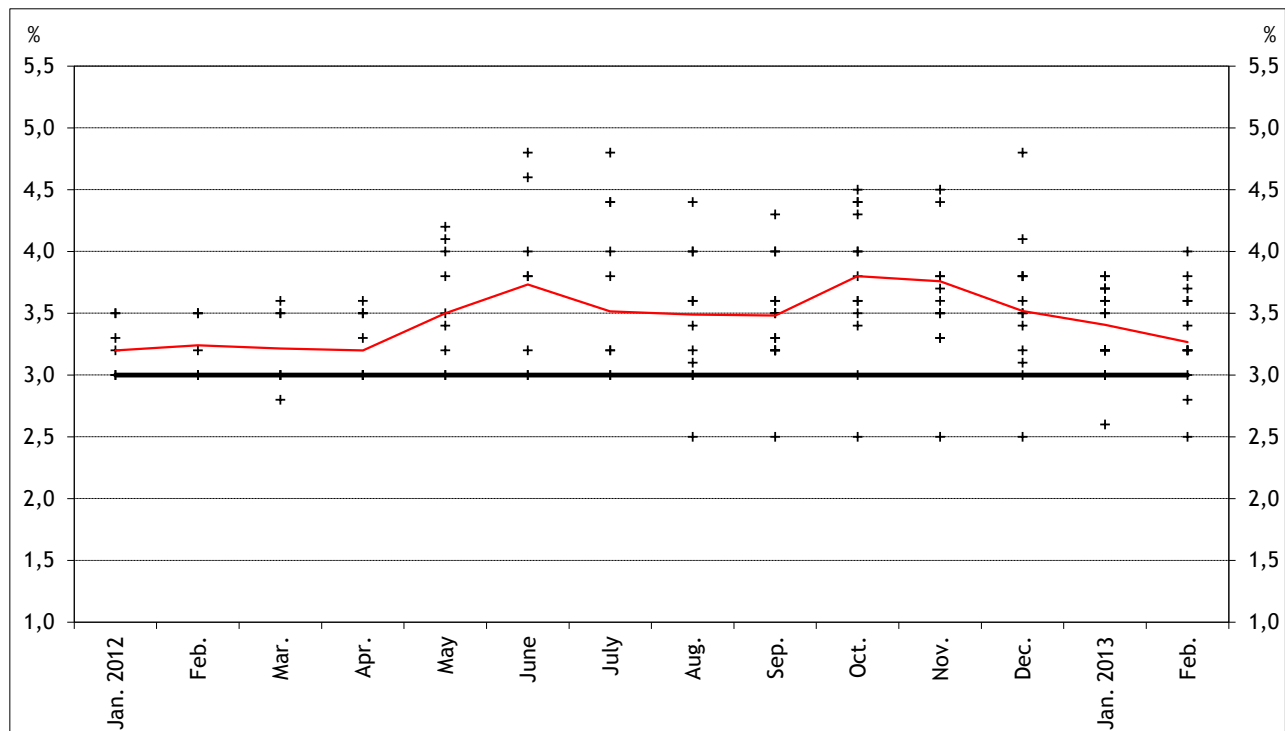
## 83. Analysts' expectations for the inflation rate in 2013



Source: Thomson Reuters.

Notes: the thin continuous line represents the trimmed mean calculated by cutting off the lowest and the highest value. The flat line indicates the medium-term inflation target.

## 84. Analysts' expectations for the inflation rate in 2014



Source: Thomson Reuters.

Notes: the thin continuous line represents the trimmed mean calculated by cutting off the lowest and the highest value. The flat line indicates the medium-term inflation target.

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

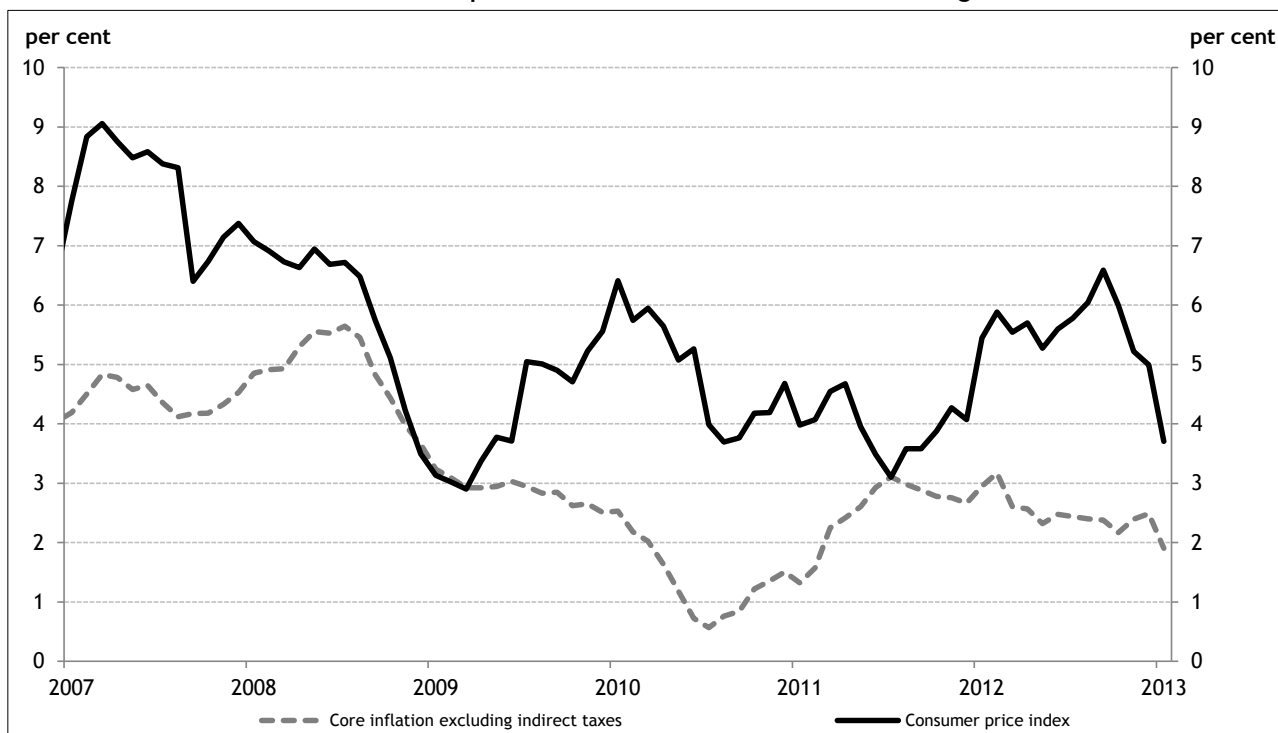
|                                                                                             | 2012            | 2013              | 2014            |
|---------------------------------------------------------------------------------------------|-----------------|-------------------|-----------------|
| <b>Consumer Price Index (annual average growth rate, %)</b>                                 |                 |                   |                 |
| MNB (December 2012)                                                                         | 5,7             | 3,5               | 3,2             |
| Consensus Economics (February 2013) <sup>1</sup>                                            | 5,7             | 2.9 - 3.6 - 5.0   | 2.9 - 3.4 - 4.0 |
| European Commission (November 2012)                                                         | 5,6             | 5,3               | 3,9             |
| IMF (October 2012)                                                                          | 5,6             | 3,5               | 3,0             |
| OECD (November 2012)                                                                        | 5,8             | 4,8               | 3,9             |
| Reuters survey (February 2013) <sup>1</sup>                                                 | 5,7             | 2.9 - 3.3 - 4.1   | 2.5 - 3.3 - 4.0 |
| <b>GDP (annual growth rate, %)</b>                                                          |                 |                   |                 |
| MNB (December 2012)                                                                         | -1,4            | 0,5               | 1,5             |
| Consensus Economics (February 2013) <sup>1</sup>                                            | -1,7            | -0.6 - -0.0 - 0.8 | 0.9 - 1.3 - 1.5 |
| European Commission (November 2012)                                                         | -1.2            | 0.3               | 1,3             |
| IMF (October 2012)                                                                          | -1.0            | 0,8               | 1,6             |
| OECD (November 2012)                                                                        | -1.6            | -0,1              | 1,2             |
| Reuters survey (February 2013) <sup>1</sup>                                                 | 1,7             | -0.8 - 0.0 - 0.8  | 0.9 - 1.3 - 1.9 |
| <b>Current account balance (percent of GDP)</b>                                             |                 |                   |                 |
| MNB (December 2012)                                                                         | 2,0             | 3,7               | 4,3             |
| European Commission (Nov 2012)                                                              | 2,2             | 3,7               | -               |
| IMF (October 2012)                                                                          | 2,6             | 2,7               | 0,7             |
| OECD (November 2012)                                                                        | 1,7             | 3,4               | 4,4             |
| <b>Budget deficit (ESA-95 method, percent of GDP)</b>                                       |                 |                   |                 |
| MNB (December 2012)                                                                         | 2,7             | 3,0               | 3,8             |
| Consensus Economics (February 2013) <sup>1</sup>                                            | 2.6 - 2.9 - 3.4 | 2.8 - 3.0 - 3.5   | 2.5 - 3.2 - 4.0 |
| European Commission (November 2012)                                                         | 2,5             | 2,9               | 3,5             |
| IMF (October 2012)                                                                          | 2,9             | 3,7               | 3,8             |
| OECD (November 2012)                                                                        | 3.0             | 2,7               | 2,7             |
| Reuters survey (February 2013) <sup>1</sup>                                                 | 2.7 - 2.9 - 3.8 | 2.6 - 2.9 - 3.2   | 2.7 - 3.1 - 4.0 |
| <b>Forecasts on the size of Hungary's export markets (annual growth rate, %)</b>            |                 |                   |                 |
| MNB (December 2012)                                                                         | 1,0             | 2,2               | 4,6             |
| European Commission (November 2012) <sup>2</sup>                                            | 1,3             | 3,4               | 5,6             |
| IMF (October 2012) <sup>2</sup>                                                             | 1,8             | 3,5               | 4,5             |
| OECD (November 2012) <sup>2</sup>                                                           | 1,1             | 3,2               | 5,5             |
| <b>Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)</b> |                 |                   |                 |
| MNB (December 2012)                                                                         | 0,7             | 0,8               | 2,1             |
| European Commission (November 2012) <sup>2</sup>                                            | 0,7             | 1,1               | 2,1             |
| IMF (October 2012) <sup>2</sup>                                                             | 0,8             | 1,4               | 2,1             |
| OECD (November 2012) <sup>2</sup>                                                           | 0,7             | 0,9               | 2,1             |

<sup>1</sup> In addition to the averages of polled analysts' responses (the values in the middle), the smallest and largest values are also indicated for the Reuters and Consensus Economics surveys in order to illustrate distribution.

<sup>2</sup> MNB calculations. The projections of the named institutions for trade partners are aggregated with the weights used in MNB's own external demand indicators. Some institutions do not publish forecasts for all trade partners.

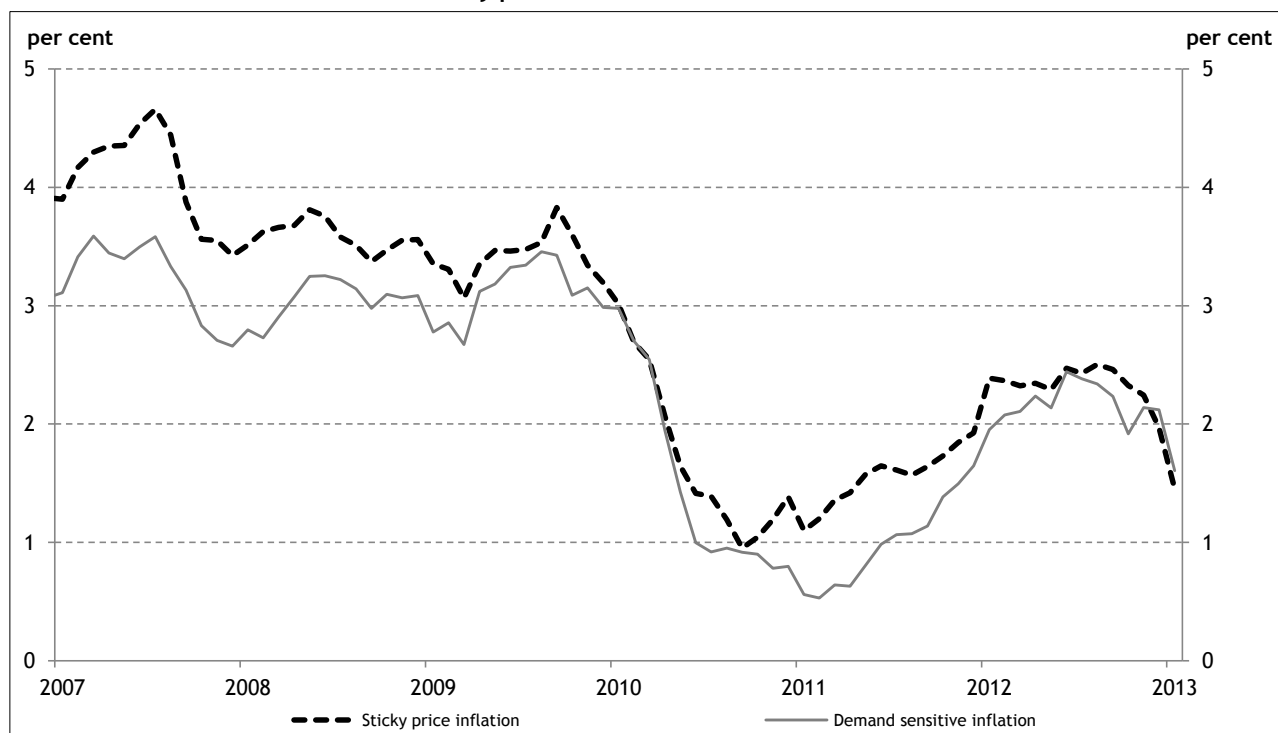
Sources: Eastern Europe Consensus Forecasts (Consensus Economics Inc. (London), February 2013); European Commission Economic Forecast (November 012); IMF World Economic Outlook Database (October 2012); Reuters survey (February 2013); OECD Economic Outlook No.91 (November 2012).

86. Chart of the consumer price index and the core inflation excluding indirect taxes



Source: HCSO and MNB calculation

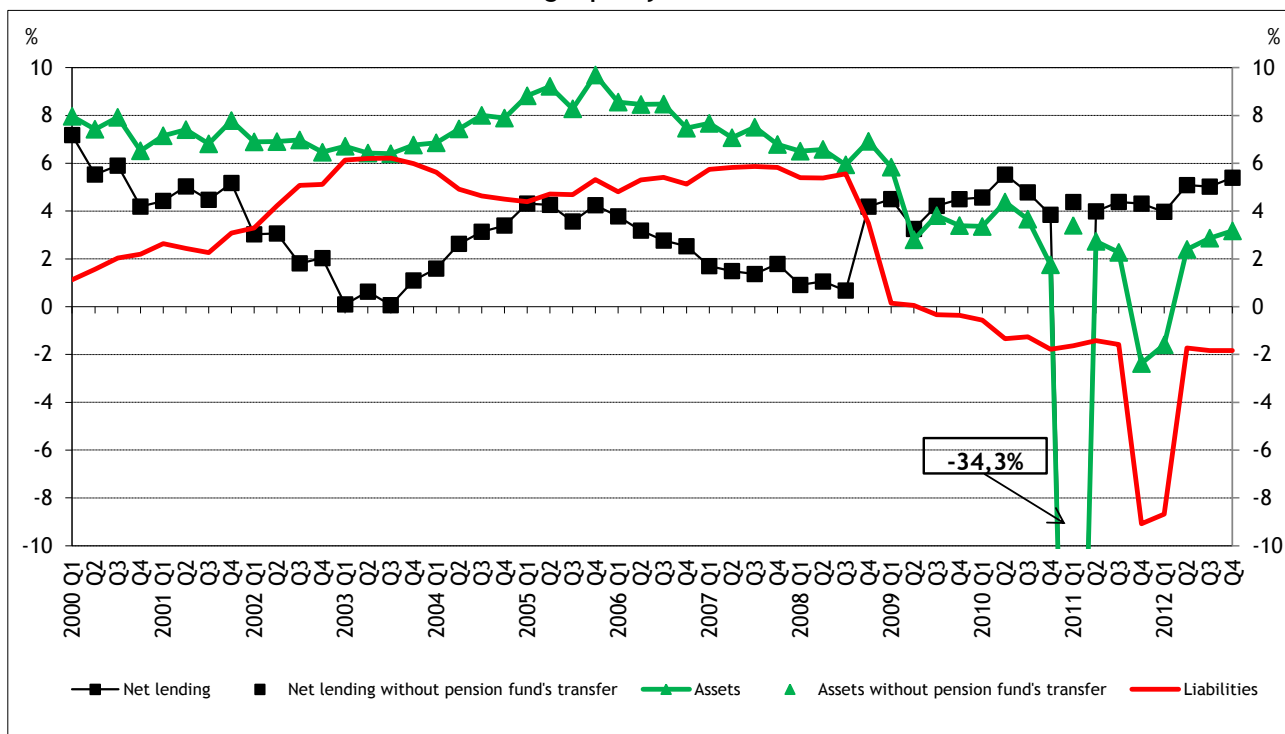
87. Chart of the sticky price inflation and the demand sensitive inflation



Source: HCSO and MNB calculation

Comment: The demand sensitive inflation is the core inflation excluding processed food. Sticky price inflation is composed of those items of the consumer basket which have shop-level prices that change infrequently. The threshold is 15 per cent per month on average. For details, see the special topic 6.1 in the September 2012 Inflation report.

## 88. Net financing capacity of the household sector

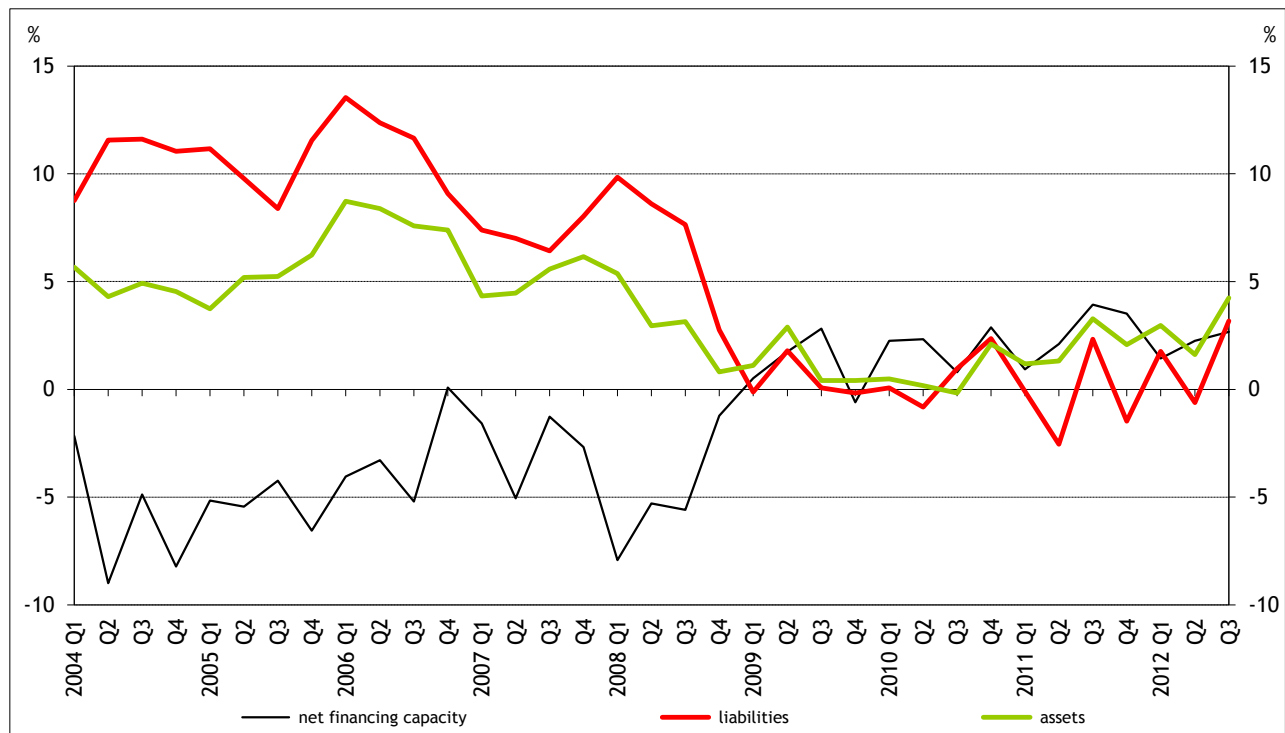


Source: MNB.

Seasonally adjusted, as a percentage of GDP. Time series data displayed above are seasonally adjusted using direct alignment methodology therefore the difference of assets and liabilities is not necessarily equal to the seasonally adjusted value of net savings.

In the first quarter of 2011 separate data points show households' net lending and assets excluding the effect of the capital transfer due to withdrawals from private pension funds. Net lending including the effect of the capital transfer is 34 percent of GDP.

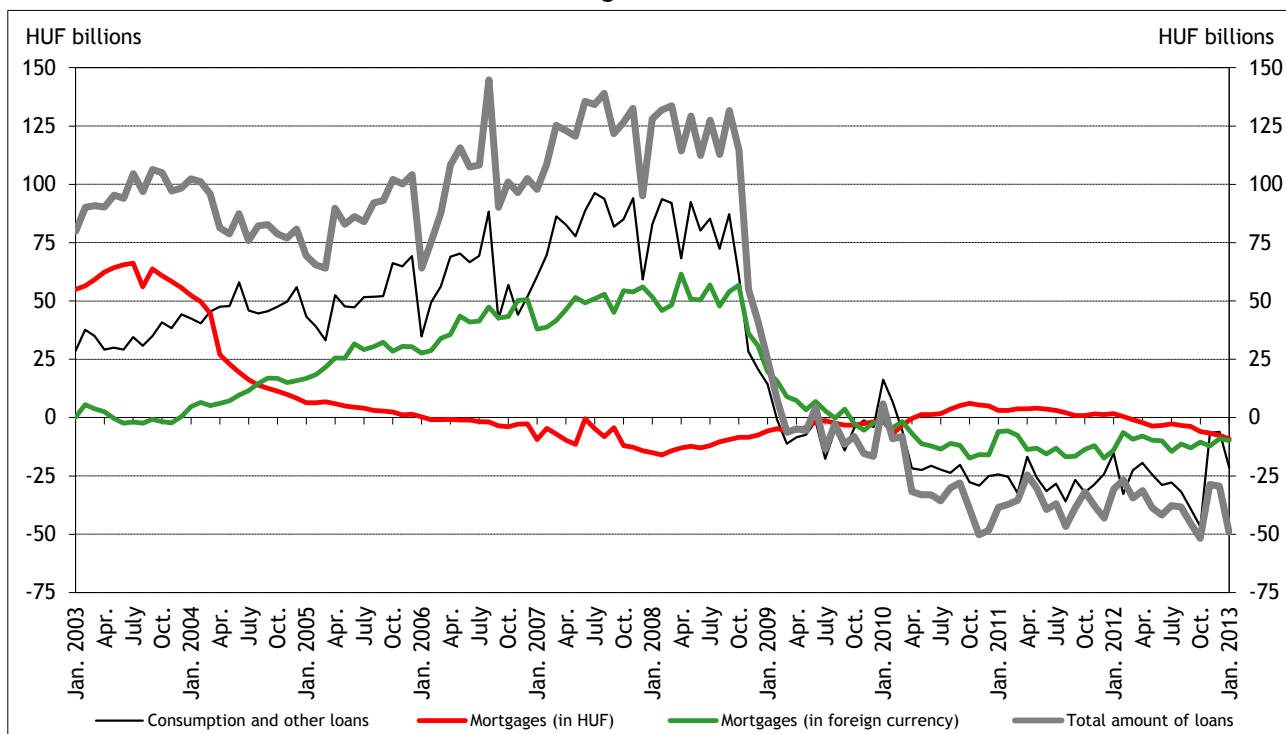
## 89. Net financing capacity of the non-monetary corporate sector



Source: MNB.

Notes: seasonally adjusted; as a percentage of GDP.

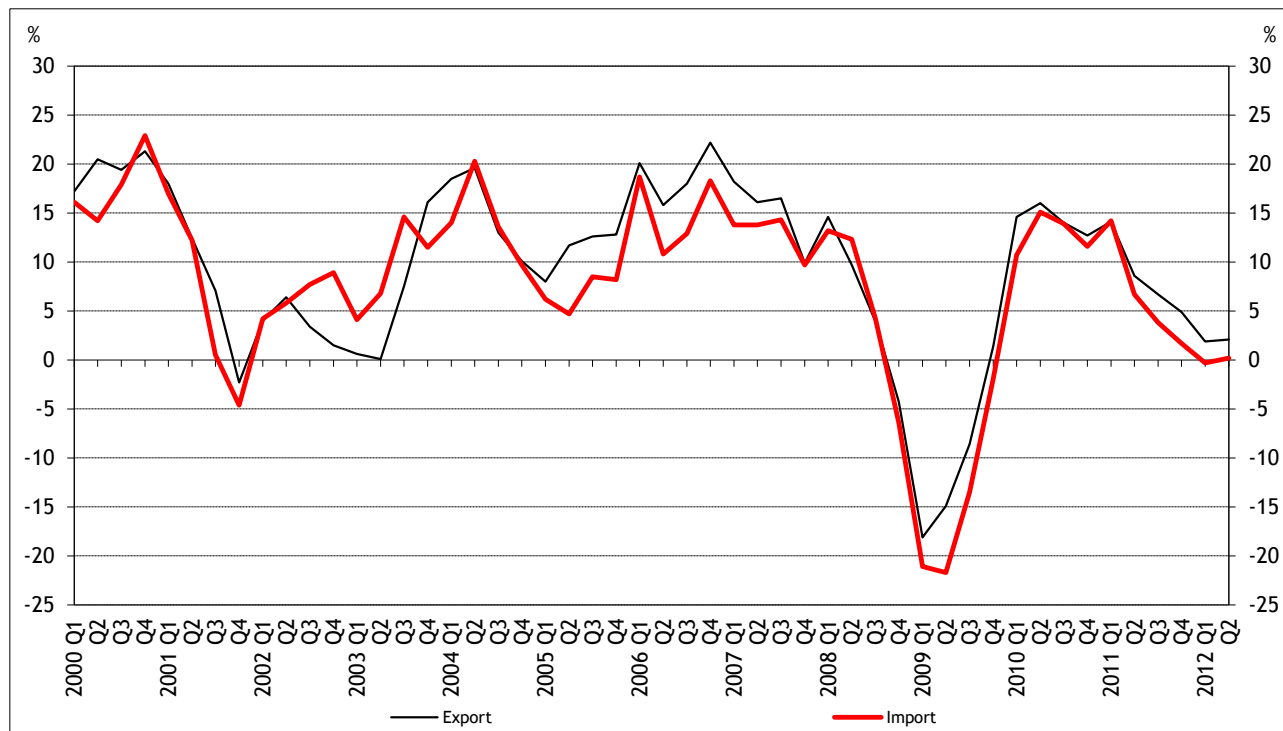
## 90. Net borrowing of the household sector



Source: MNB.

Notes: monthly change, seasonally adjusted data.

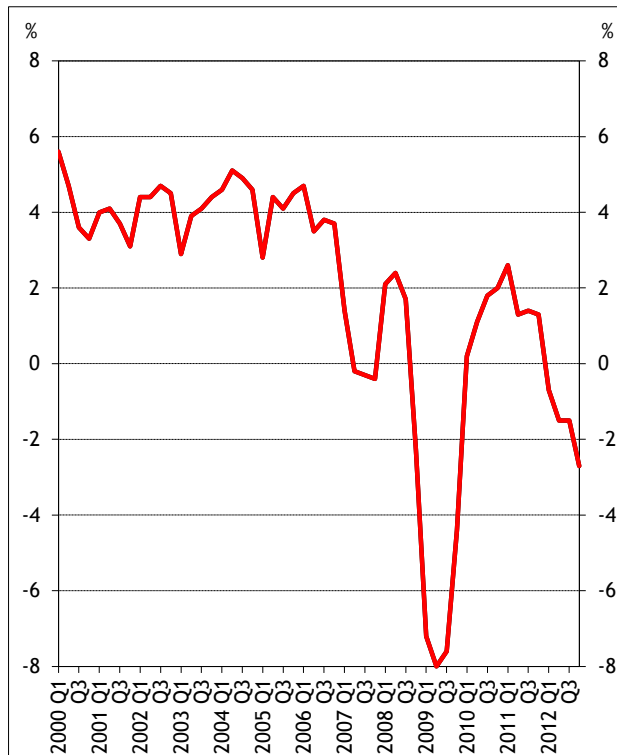
## 91. Change in export and import volumes (goods and services)



Source: MNB.

Notes: annual growth rate.

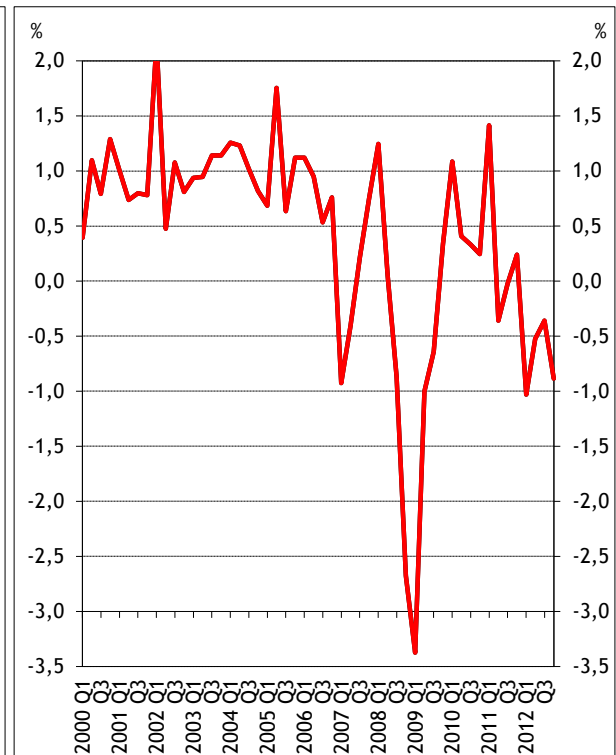
92. Annual GDP growth rate



Source: HCSO.

Notes: annual growth rate.

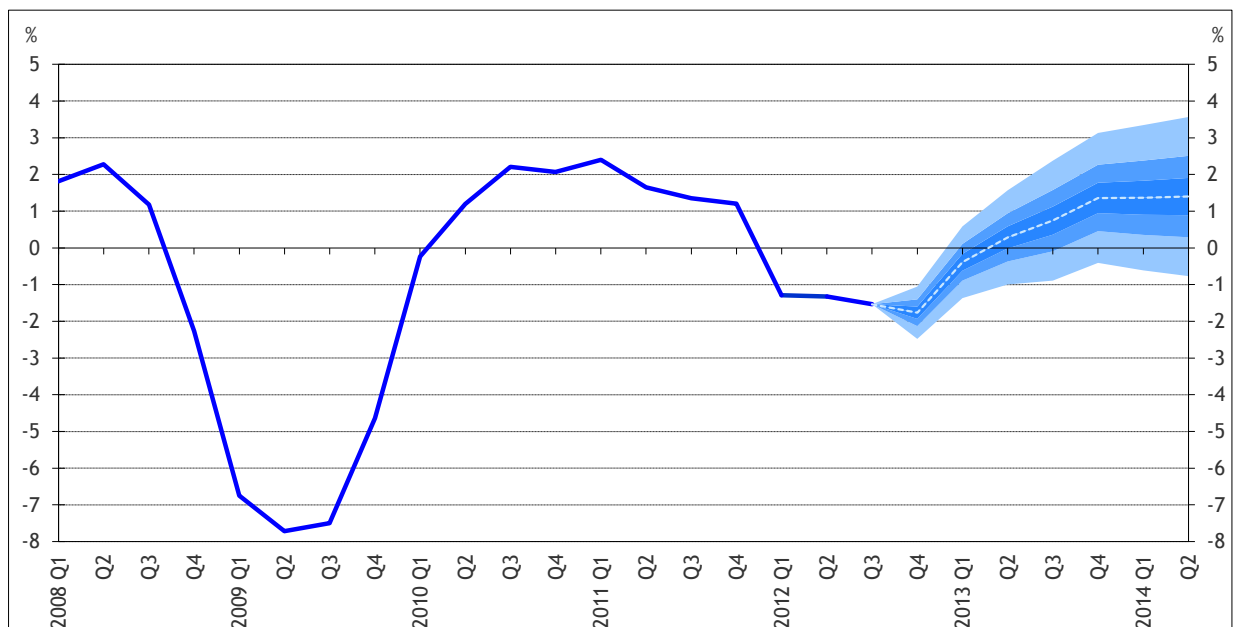
93. Quarterly GDP growth rate



Source: HCSO.

Notes: seasonally adjusted quarterly growth rate.

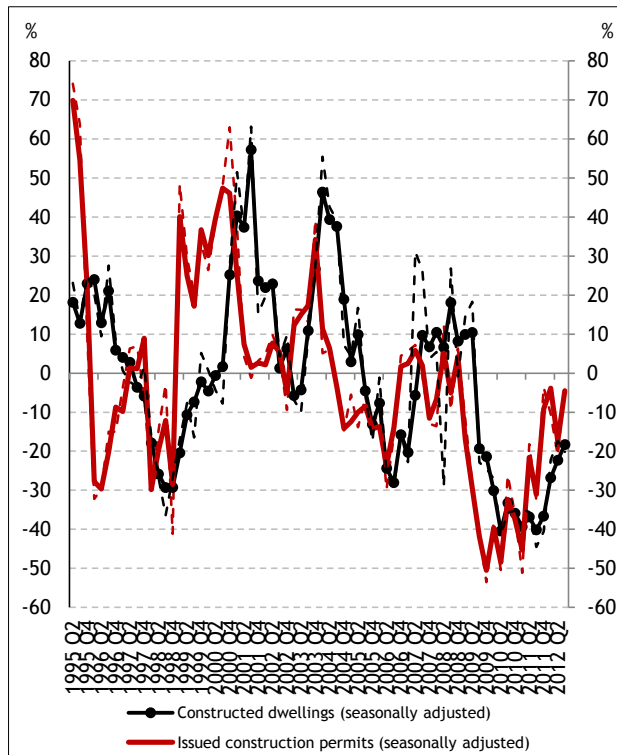
94. Fan chart of the GDP forecast



Source: MNB, HCSO.

Notes: 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.

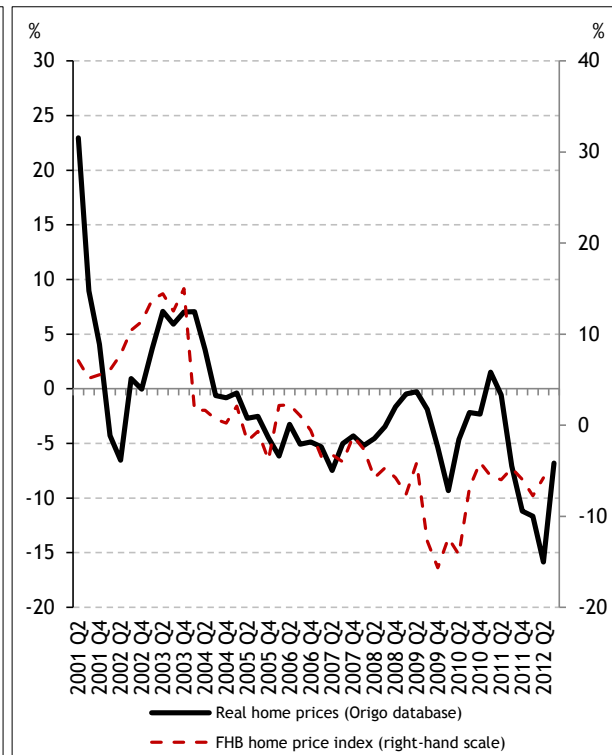
## 95. New dwelling trends



Source: HCSO.

Notes: year-on-year volume indices of trend-estimates.

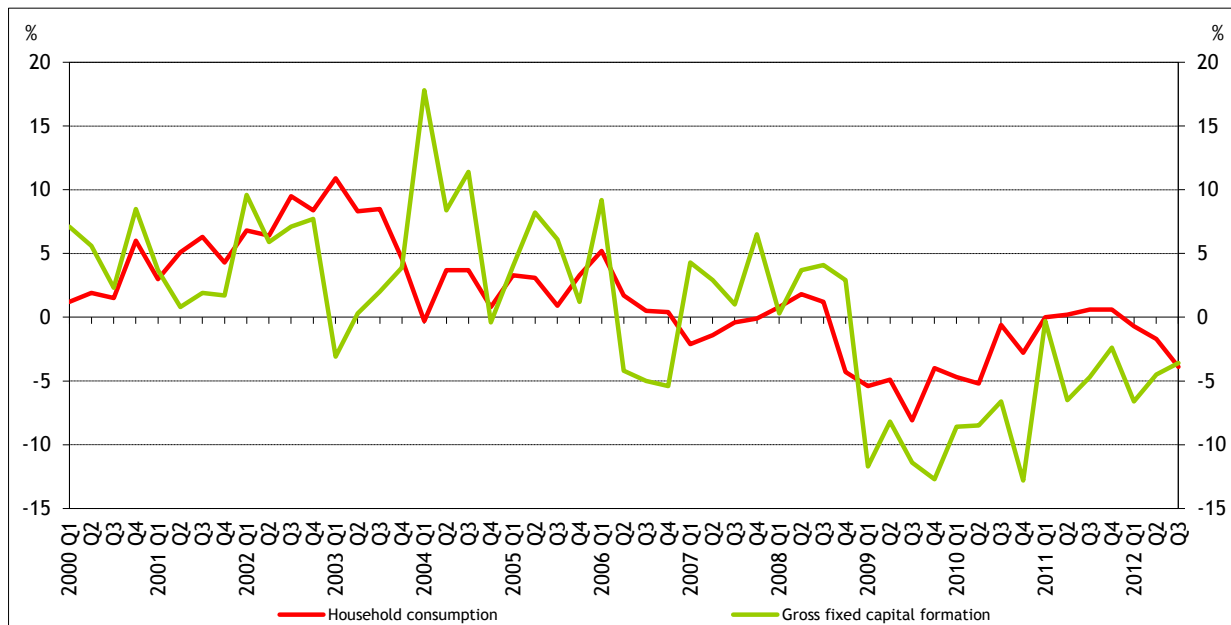
## 96. Developments in home prices



Source: Origo, FHN.

Notes: year-on-year indices of trend-estimates; CPI deflated.

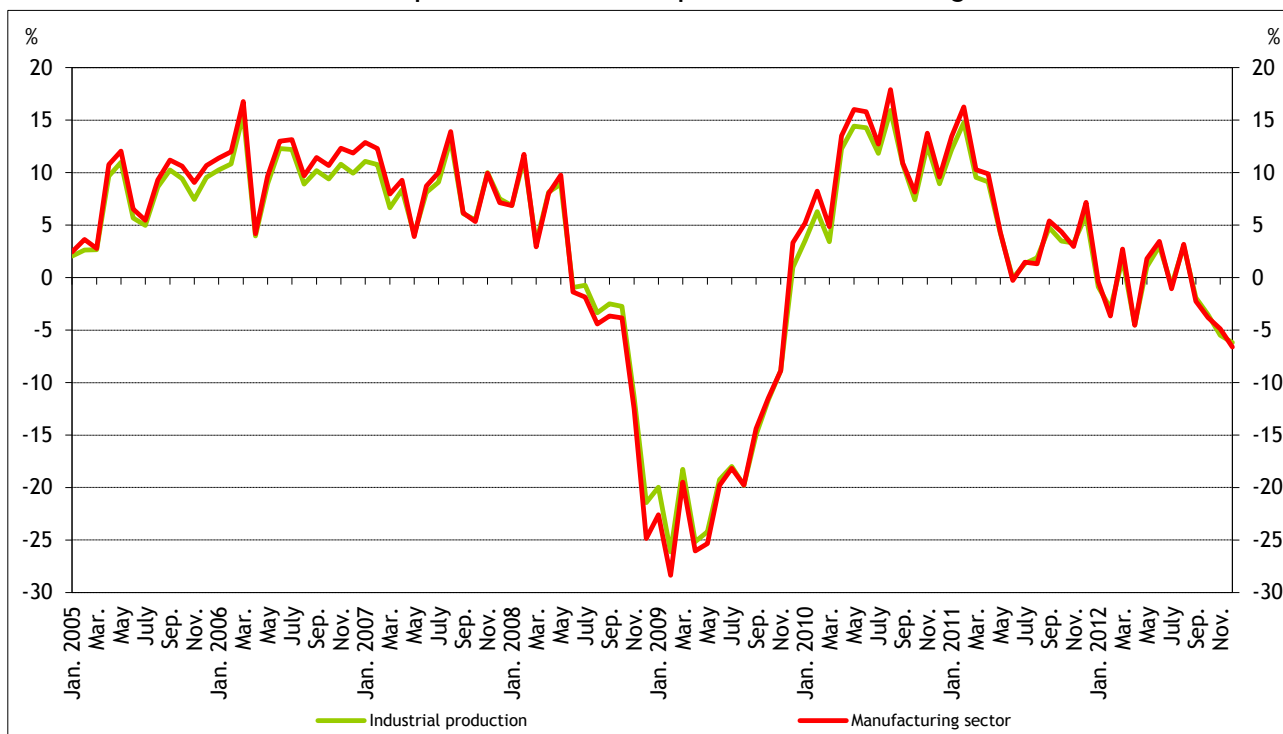
## 97. Household consumption and the accumulation of gross fixed assets



Source: HCSO.

Notes: annual growth rates.

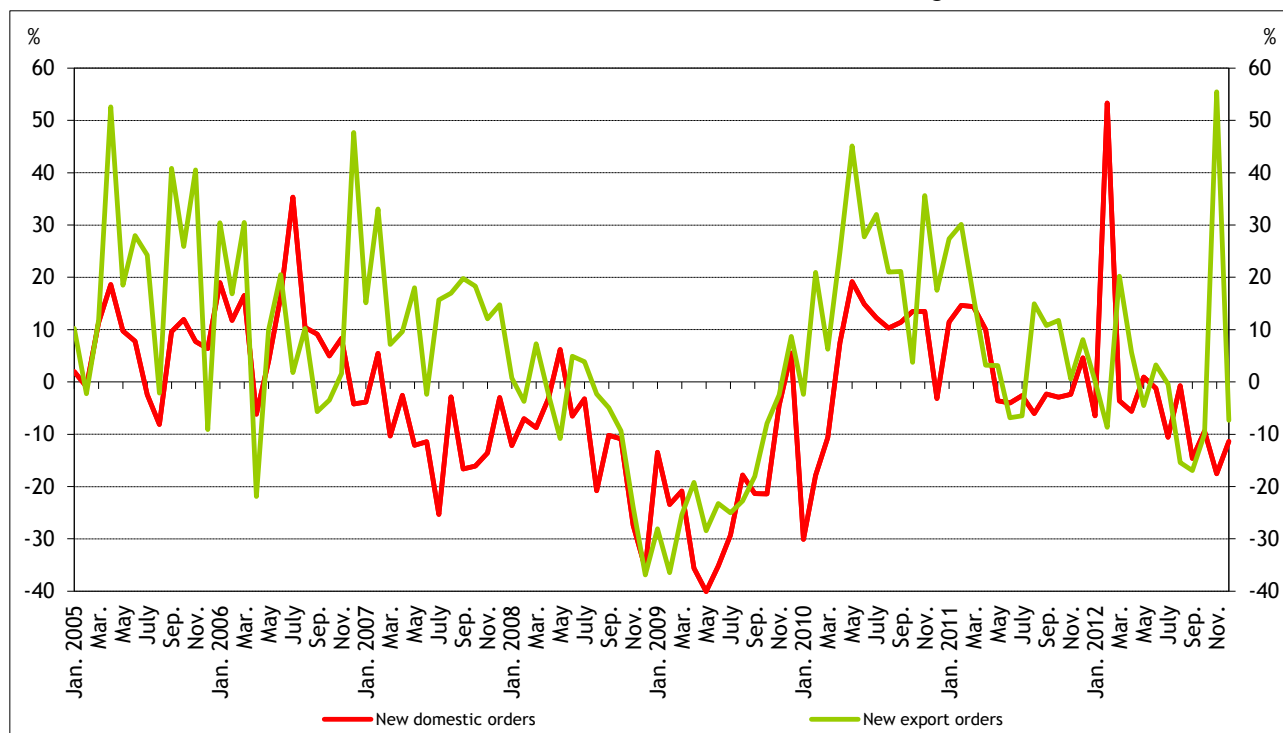
## 98. Industrial production and the output of the manufacturing sector



Source: HCSO.

Notes: year-on-year volume indices of seasonally adjusted data.

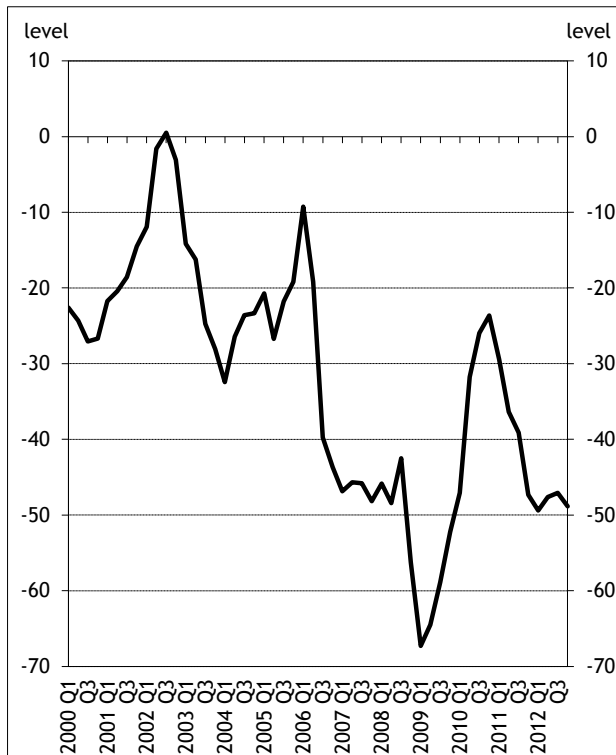
## 99. New orders in selected branches of the manufacturing sector



Source: HCSO, MNB.

Notes: year-on-year volume indices of seasonally adjusted data.

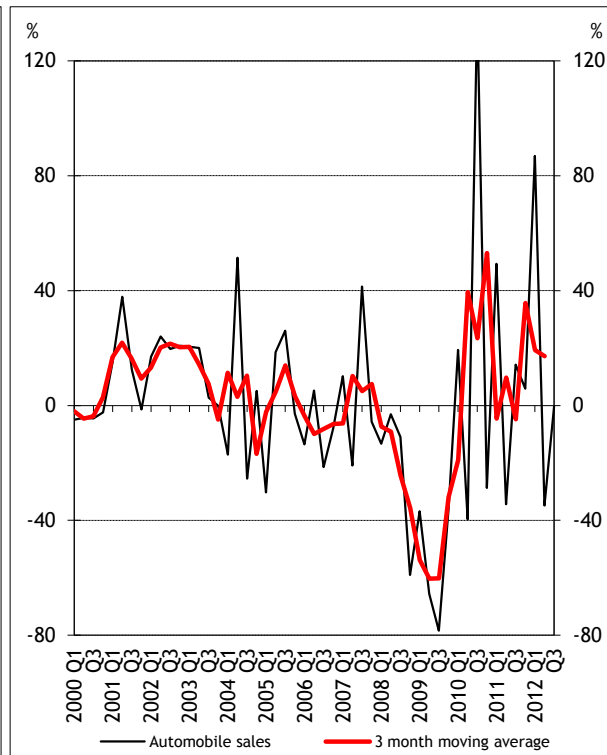
100. GKI household confidence index (reweighted)



Source: GKI.

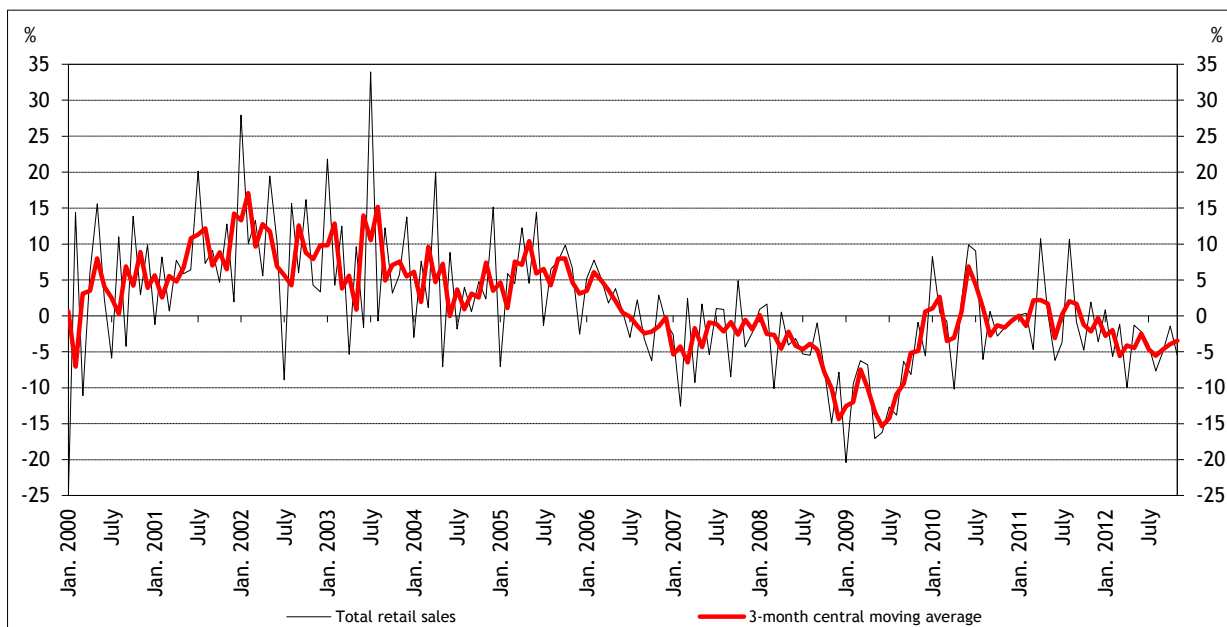
Notes: the re-weighted consumer confidence index takes into account those sub-indices of the GKI survey which are the most highly correlated with the time series of household consumption expenditure. (For more details see: MNB Background Studies 2001/2)

101. Quarterly growth rates of automobile sales



Source: Association of Hungarian Motor Vehicle Importers.

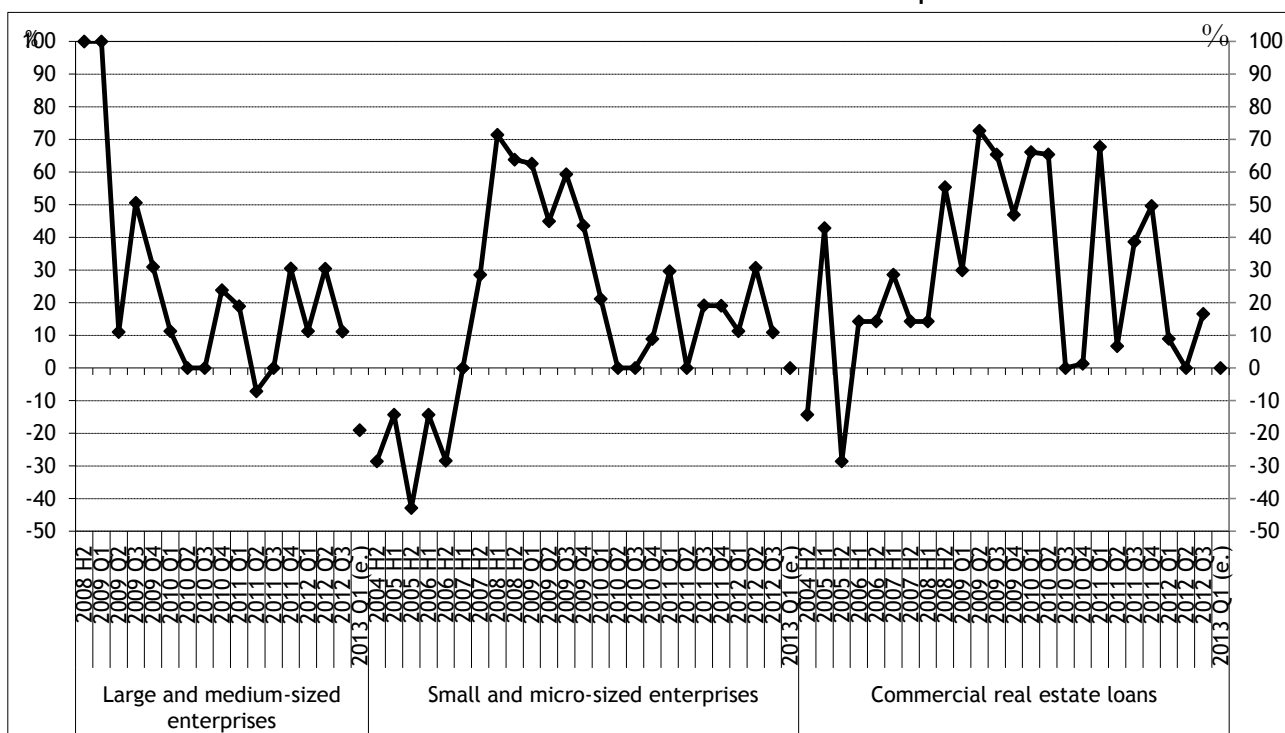
102. Total volume of retail trade



Source: HCSO.

Notes: 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.

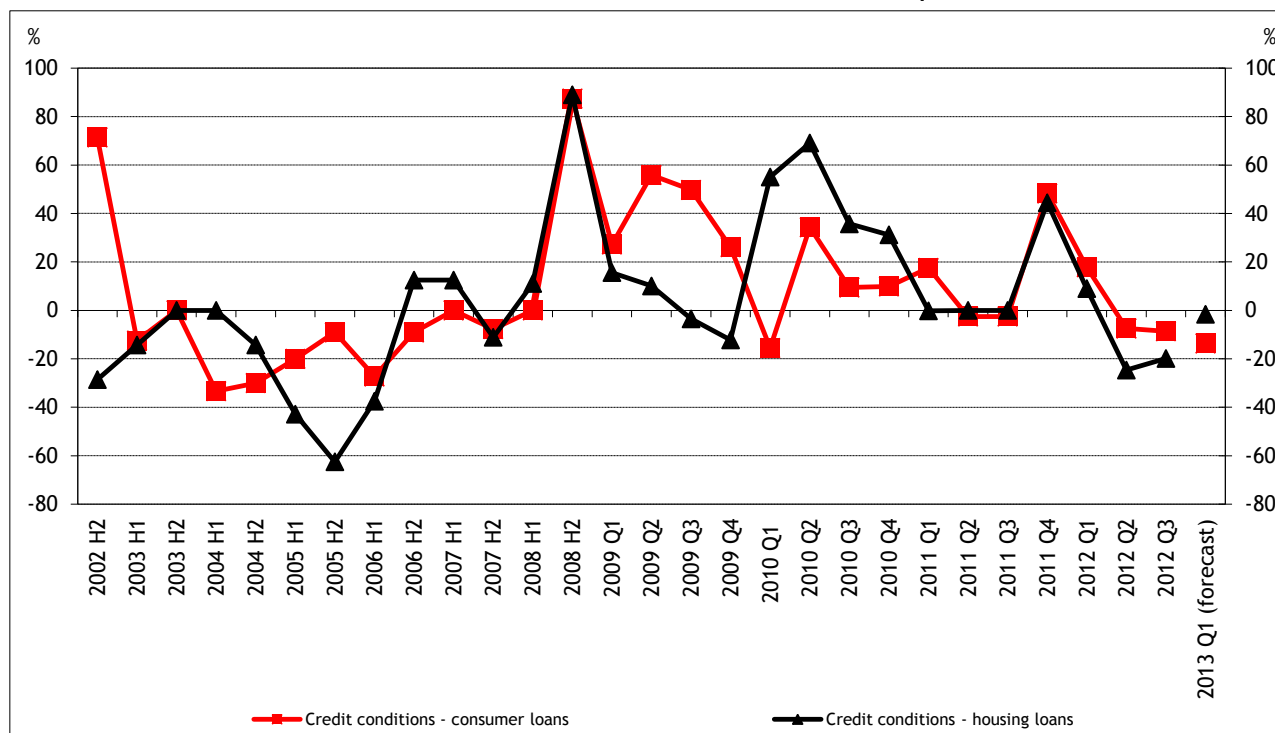
## 103. Creditworthiness standards and credit conditions in corporate sector



Source: MNB.

Notes: 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).

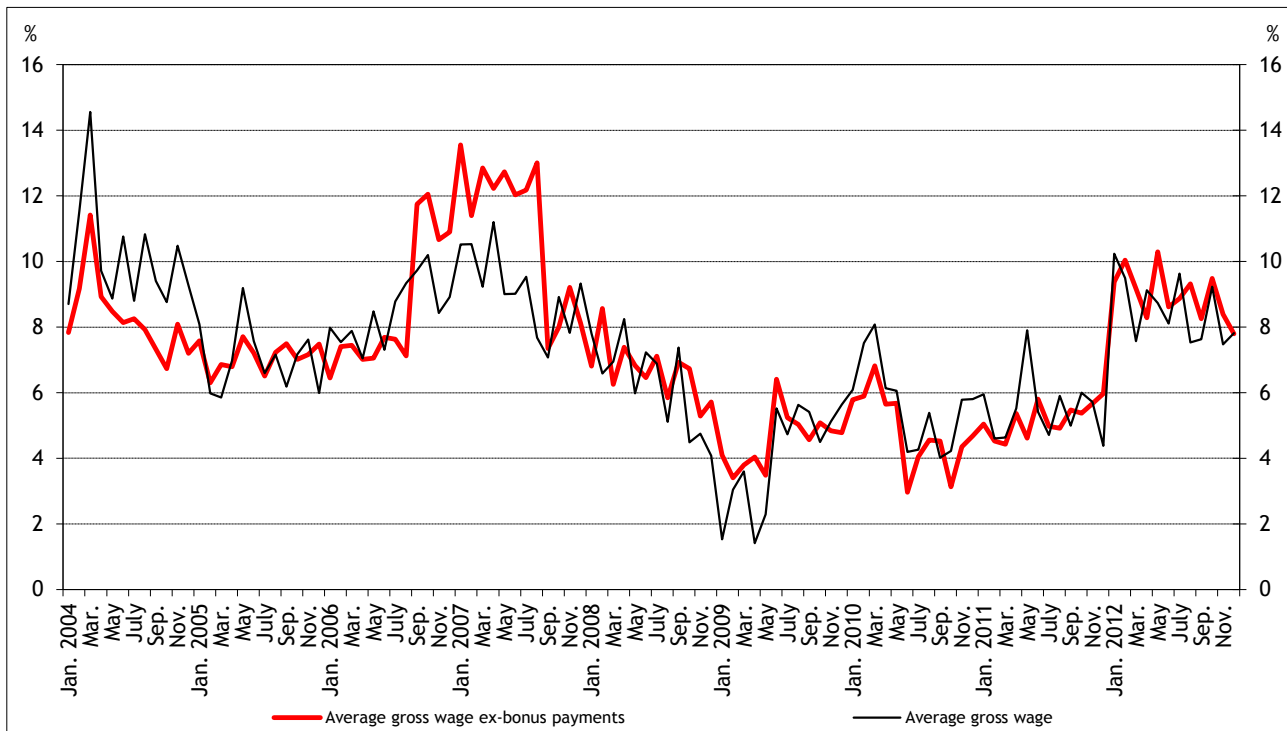
## 104. Creditworthiness standards and credit conditions in corporate sector



Source: MNB.

Notes: 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).

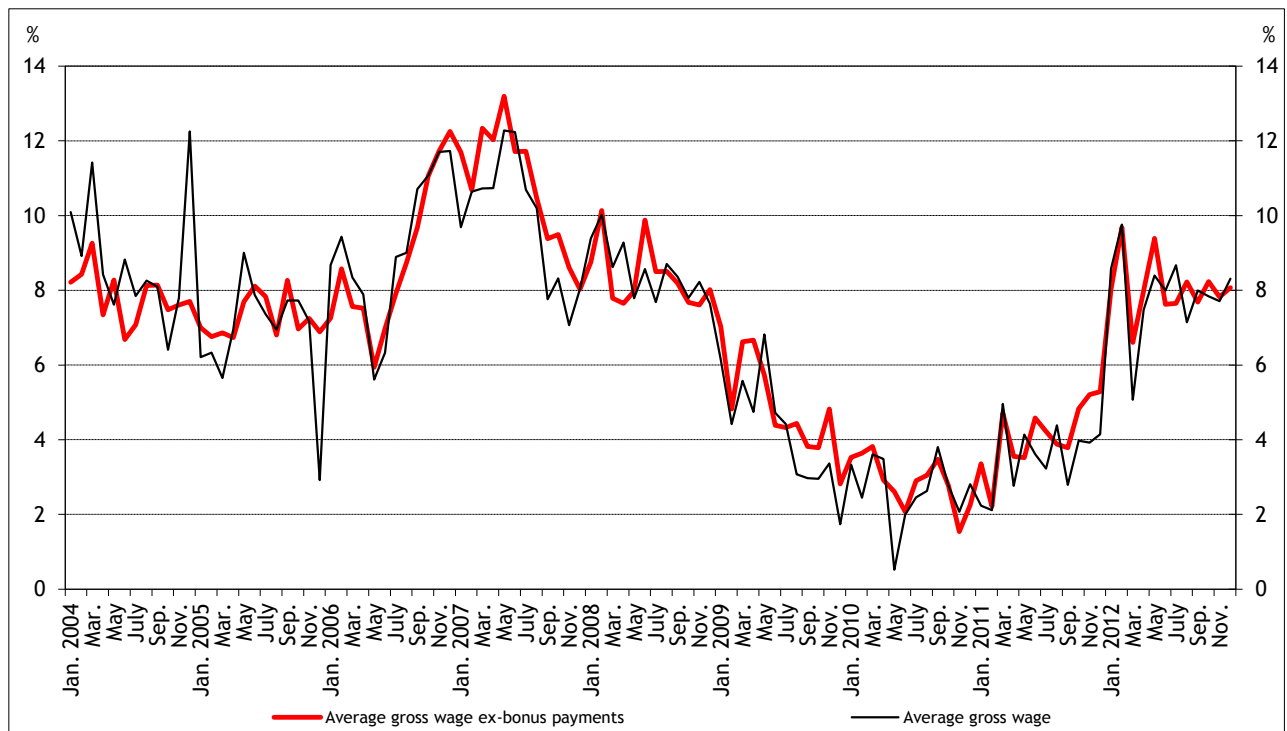
## 105. Wage growth in the manufacturing sector



Source: HCSO, seasonally adjusted by NBH

Notes: annual growth rates.

## 106. Wage growth in the market service sector



Source: HCSO, seasonally adjusted by NBH.

Notes: annual growth rates.

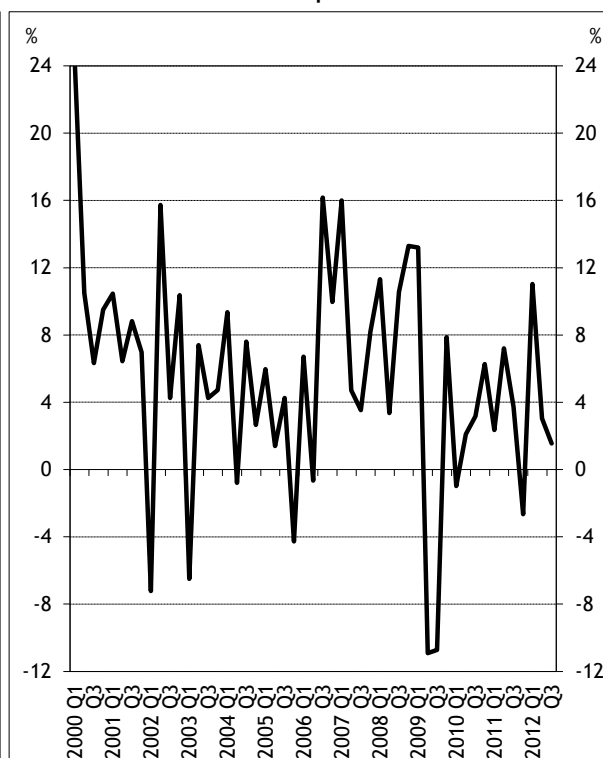
107. Wage growth in the private sector



Source: HCSO, seasonally adjusted by NBH.

Notes: annual growth rates.

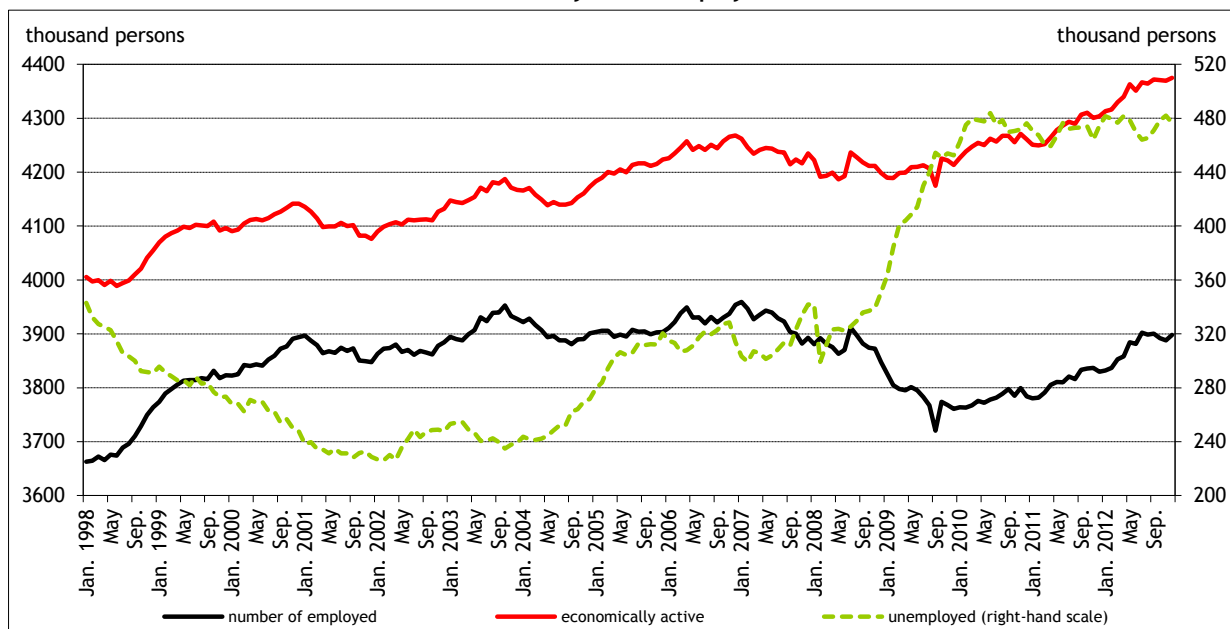
108. Unit labour cost in the private sector



Source: HCSO.

Notes: seasonally adjusted, annualised quarterly growth rates.

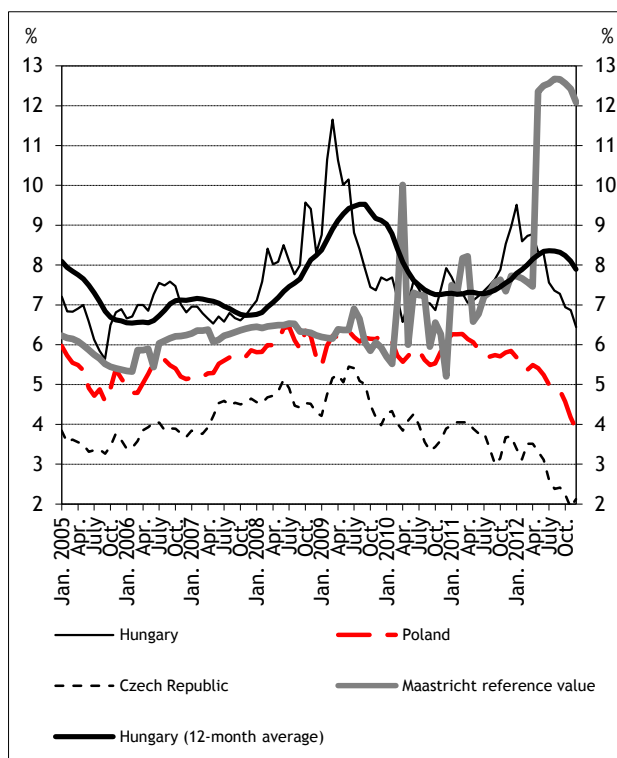
109. Activity and unemployment



Source: HCSO.

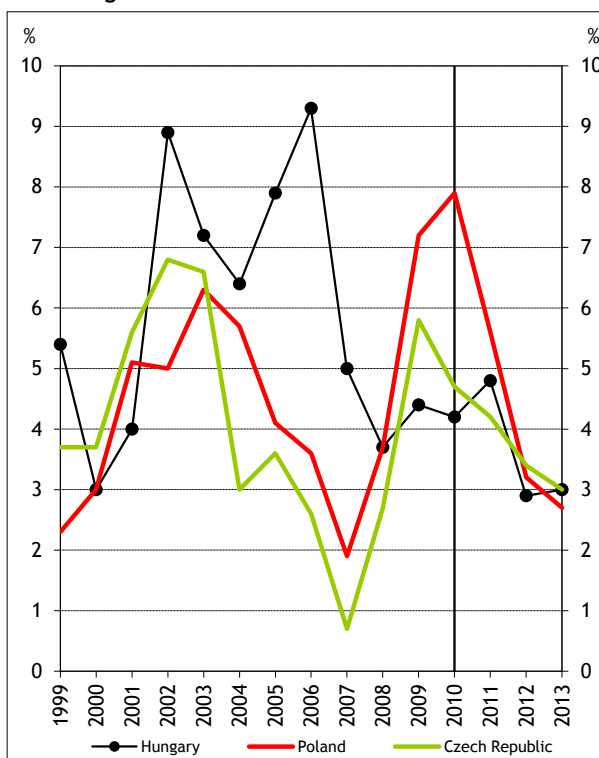
Notes: levels, seasonally adjusted.

### 110. 10-year government benchmark yields in CEE countries



Source: Eurostat.

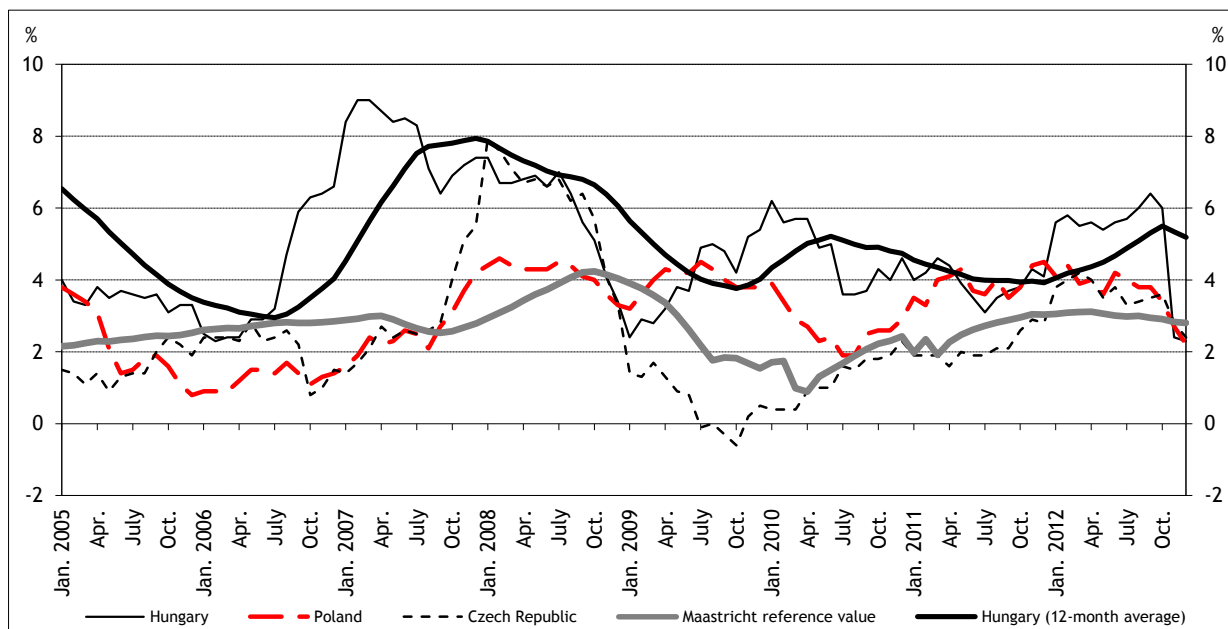
### 111. Budget deficit in the CEE countries



Source: Consensus Economics.

Notes: as a percentage of GDP. In the case of Poland and the Czech Republic privatisation revenues are not included.

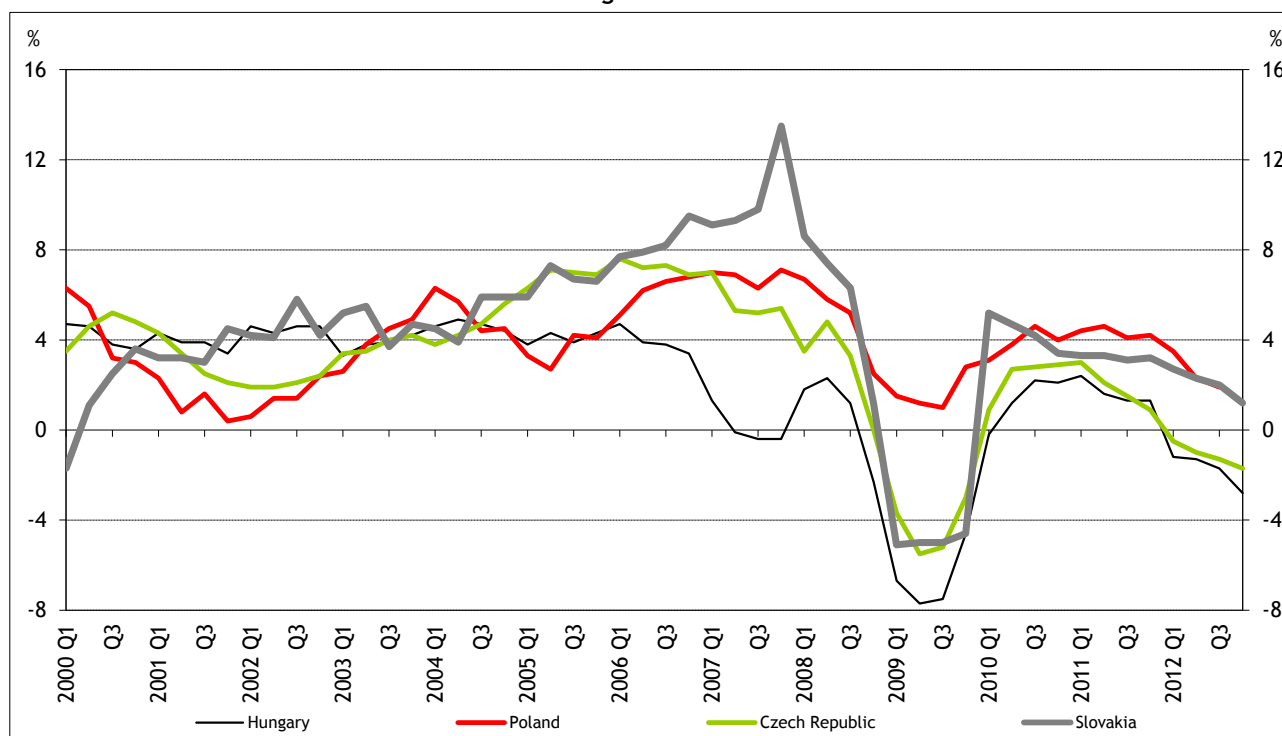
### 112. Harmonised Index of Consumer Prices



Source: Eurostat

Notes: annual growth rate.

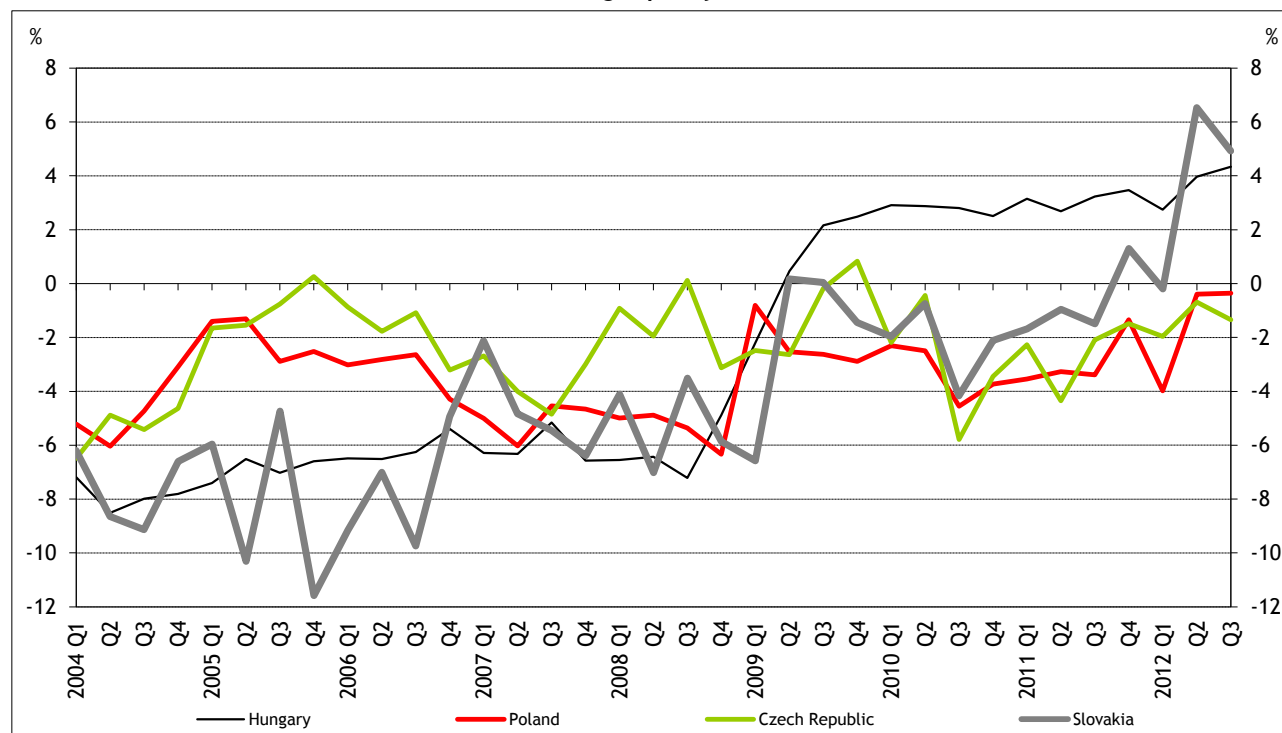
113. GDP growth rate in CEE



Source: Eurostat.

Notes: same period of previous year = 100; seasonally adjusted data.

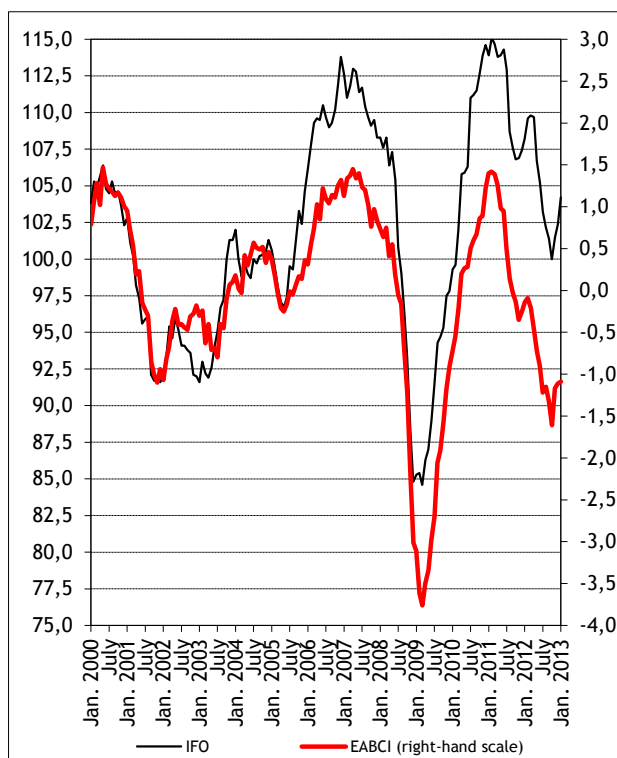
114. External financing capacity in the CEE countries



Source: Eurostat, MNB, CNB, NBP.

Notes: seasonally adjusted, as a percentage of GDP.

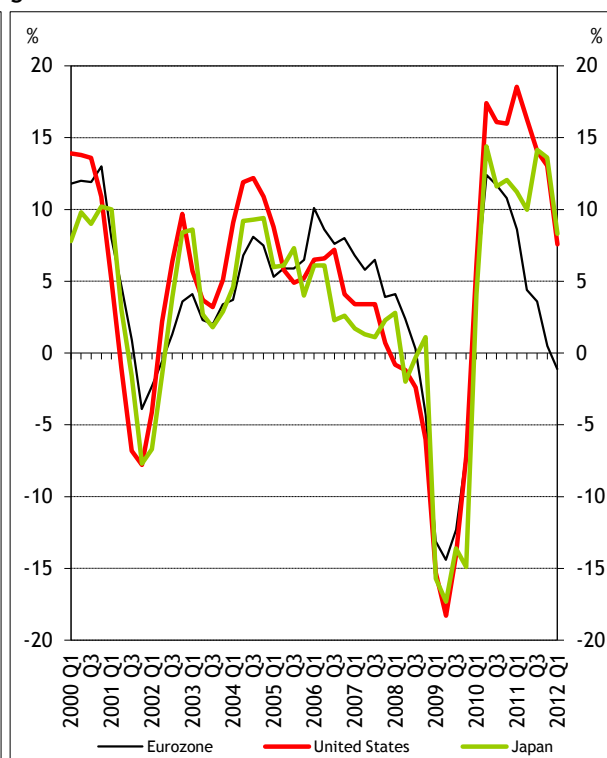
## 115. Business climate indices in the EMU



Source: IFO; European Committee.

Notes: 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.

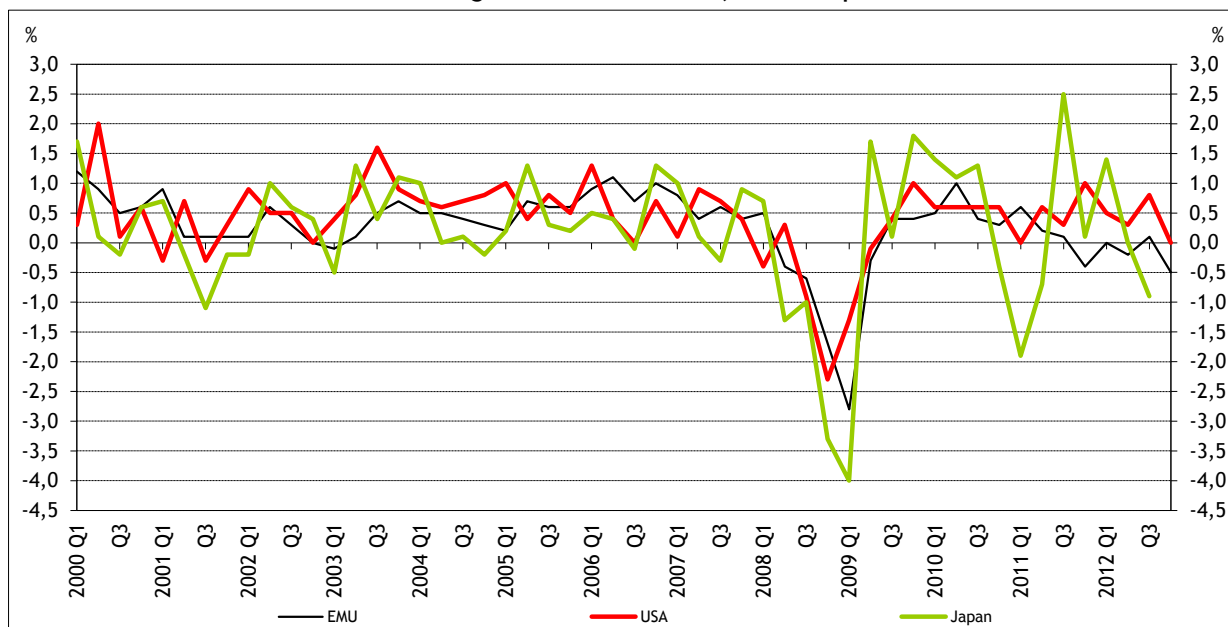
## 116. The annual growth rate of the volume of imported goods and services



Source: Thomson Reuters.

Notes: seasonally adjusted data.

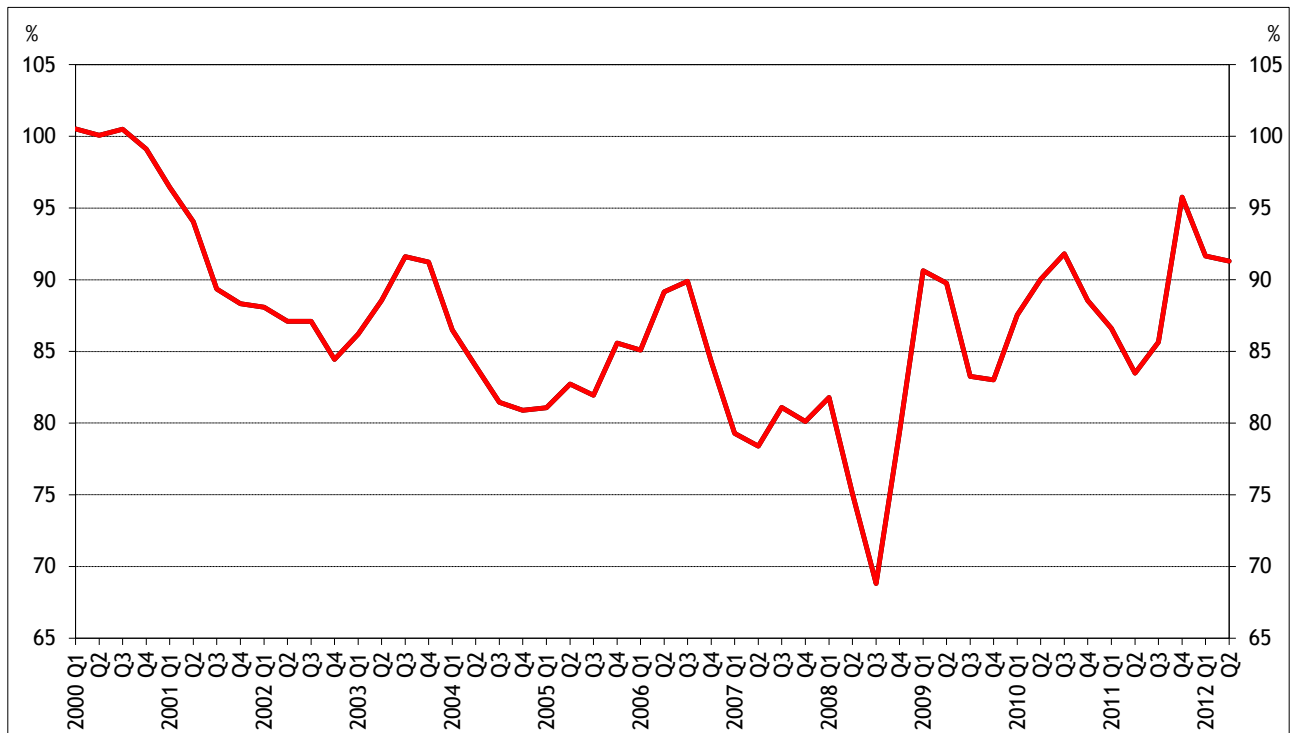
## 117. GDP growth rate in the EMU, US and Japan



Source: EUROSTAT.

Notes: seasonally adjusted quarterly growth rates

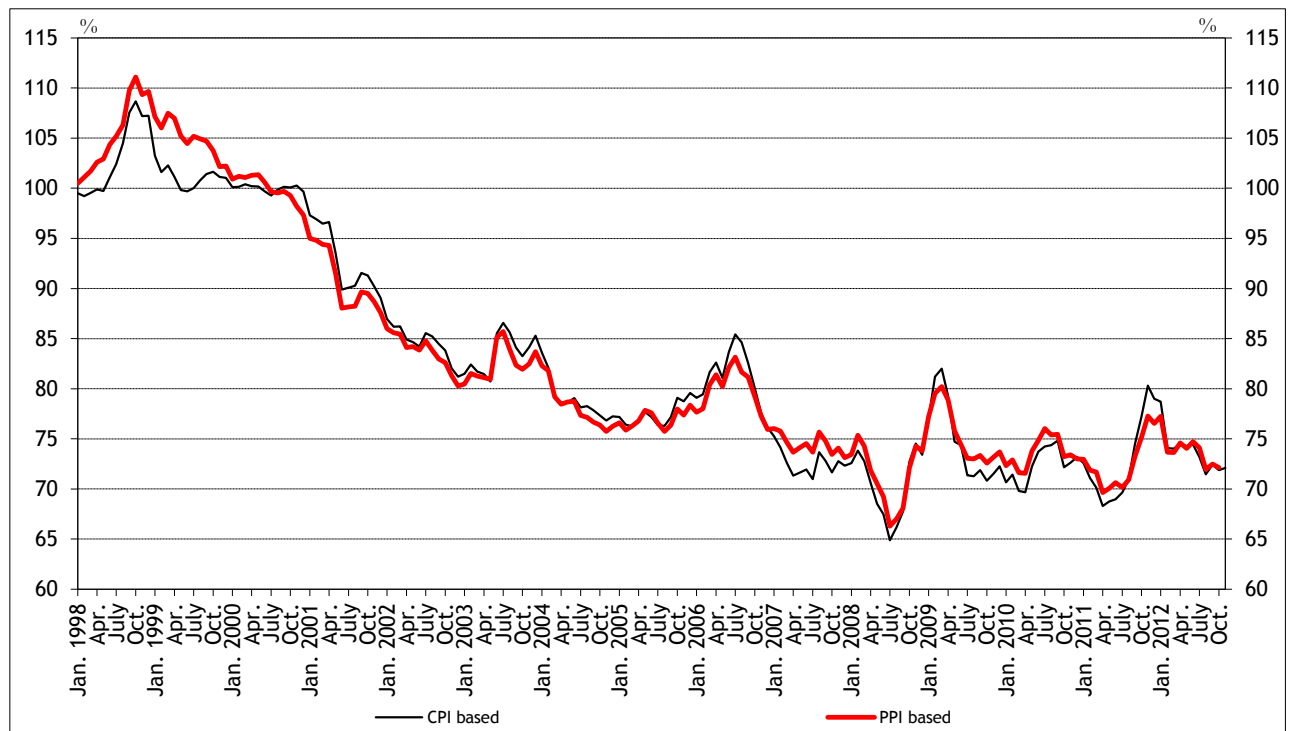
118. ULC based real effective exchange rate of the HUF



Source: HCSO.

Notes: average of year 2000 = 100%.

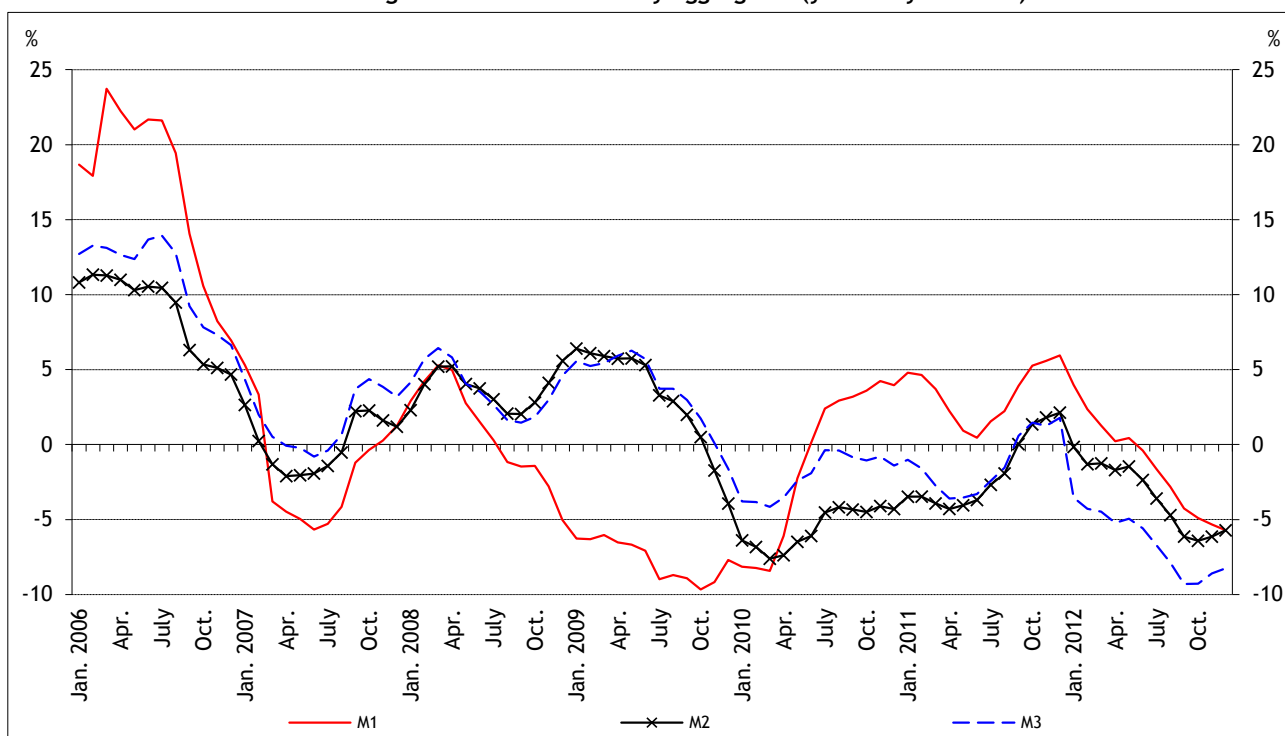
119. CPI and PPI based real effective exchange rates of the HUF



Source: HCSO, MNB, ECB

Notes: average of year 2000 = 100.

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



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

