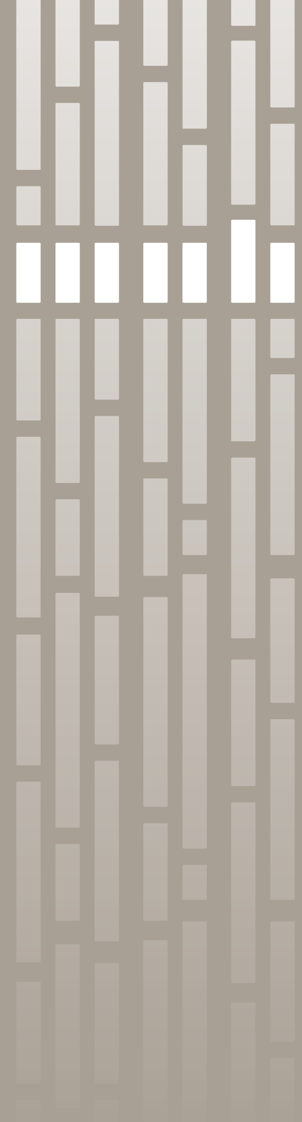

TRENDS IN LENDING
May 2013

MAGYAR NEMZETI BANK

TRENDS IN LENDING
May 2013

Trends in lending

(May 2013)

Analysis prepared by Bálint Dancsik, Gergely Fábián, Zsolt Oláh

(Directorate Financial System Analysis)

This publication was approved by Dr Ádám Balog

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The objective of the publication Trends in Lending is to present a detailed picture of the latest trends in lending and to facilitate the appropriate interpretation of these developments. To this end, it elaborates on the developments in credit aggregates, the demand for loans perceived by banks and credit conditions. Within credit conditions, price and non-price conditions are distinguished: non-price conditions influence changes in the clientele considered creditworthy by banks and the conditions of access to credit. Price conditions, in turn, show the price of borrowing for creditworthy companies. In addition, with the help of the Financial Conditions Index (FCI), the analysis summarises the impact of the financial intermediary system on the economy. In particular, the key statistics examined in the analysis are the following:

- *The credit aggregates present quantitative developments in economic agents' loans outstanding on the basis of banking sector (banks and branches of foreign banks) balance sheet statistics. Both the volume of new loans and net changes in banking sector loans outstanding (net of exchange rate effects) are presented.*

- *Changes in non-price credit conditions are presented in a qualitative manner based on the Lending Survey, in which the banks that are active in the given segment and jointly cover 85–95 per cent of the credit market indicate the direction of change compared to the reference period. The Lending Survey includes price conditions in a qualitative manner as well, in the form of the spread on the cost of funds, the premium on risky loans and the fees charged.*

- *The interest rate statistics contain the price conditions, i.e. aggregate interest rates on credit institutions' new loans realised, weighted by the contract amounts. The lending rate can be decomposed into the reference rate and the spread on the reference rate.*

- *Banks active in the given segment provide qualitative responses in the Lending Survey in respect of their expectations and the changes in demand for loans they perceive. Similarly to credit conditions, banks indicate the direction of the change.*

Detailed information on the indicators describing developments in lending and the methodology of the Financial Conditions Index is presented in the Annex at the end of the analysis. Within the publication, the findings of the Lending Survey are presented in condensed form, but the responses to the questions and the set of charts based on the findings are published in full on the Lending Survey page of the MNB's website.

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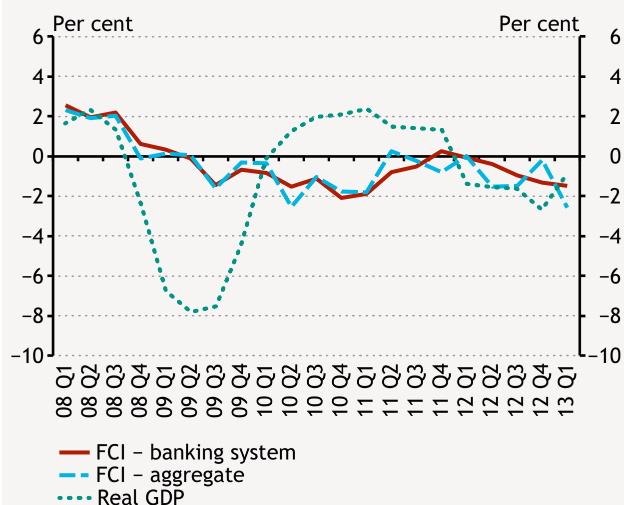
1 Executive summary

Corporate loans outstanding continued to shrink in 2013 Q1, declining by 6.3 per cent on a year-on-year basis. According to banks' responses, there has been no material change in corporate credit conditions, and no shift is expected in the period covering 2013 Q2 and Q3 either, i.e. the broad-based tightening implemented in previous years will remain in place. The decline in interest rates on new corporate loans continued; overall, the cuts in the central bank policy rate starting in August passed through entirely into forint lending rates, hence the nominal interest rates of forint loans was around 8 per cent at the end of 2013 Q1. At the same time, due to the tightness of non-price credit conditions, only a narrow range of enterprises benefit from the more favourable lending rates.

Banks' outstanding loans continued to decline in the household segment as well in 2013 Q1: the year-on-year change amounts to 5 per cent in the period under review. According to banks' responses, the easing of household credit conditions is unbroken in the case of both housing and consumer loans; accordingly, further adjustment has taken place and can be expected in the broad-based tightening carried out at the end of 2011. Within new loans extended, only the annual percentage rate charged (APRC) of housing loans tracked the policy rate cuts, thus the average market interest rate of housing loans declined to 10.5 per cent to the end of Q1. At the same time, in the case of new lending the interest rate spread continues to be extremely high (in excess of 5 per cent), which is also reflected in the historically low new loan volumes.

The contractionary behaviour of the banking sector is reflected in the developments in lending in both the corporate and household segments: the overall tightness of credit conditions continues to hinder a recovery in lending and the closing of the output gap.

Financial Conditions Index (FCI) and annual real GDP growth



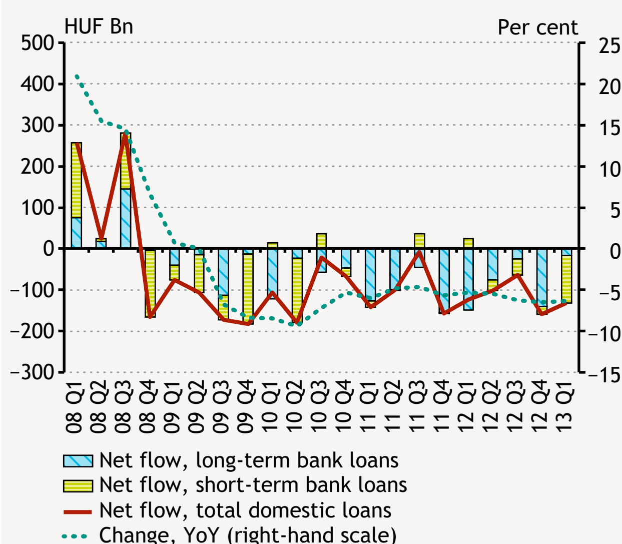
Note: The annual increase in the FCI shows the contribution of the financial intermediary system (banking sector) to the annual growth rate of real GDP. While the banking sector sub-index only comprises the variables related to lending, the 'total' index contains monetary conditions, i.e. the interbank rate and the exchange rate as well.
Source: MNB.

2 Developments in lending in the corporate segment

In 2013 Q1, loans outstanding in the corporate segment declined by 6.3 per cent (HUF 148 billion) on a year-on-year basis, which – in contrast to the previous period – primarily occurred in short-term forint loans. There has been no material change in corporate credit conditions, and none can be expected in Q2 or Q3 either. At the same time, it is important to emphasise that, as a result of the steady tightening seen in previous years, the range of creditworthy companies has narrowed considerably. Consequently, the decline in lending rates observed in new forint and euro-denominated corporate loans may also affect only a limited range of enterprises. Based on the Financial Conditions Index, the banking sector continues to be contractionary in corporate lending, thus restraining an economic recovery.

Continued contraction in corporate loans outstanding, primarily in short-term forint loans. Similarly to previous quarters, in 2013 Q1 the banking sector's non-financial corporate loans outstanding declined by 6.3 per cent on a year-on-year basis, i.e. dropping by a total HUF 148 billion in the quarter under review (Chart 1). This decline mainly took place in short-term loans, contrary to the experiences of previous quarters. Another substantial difference is that only forint loans outstanding declined in the quarter under review, while foreign currency-denominated (FX) loans outstanding somewhat increased. In 2012, in turn, FX loans declined, while forint loans outstanding slightly increased.

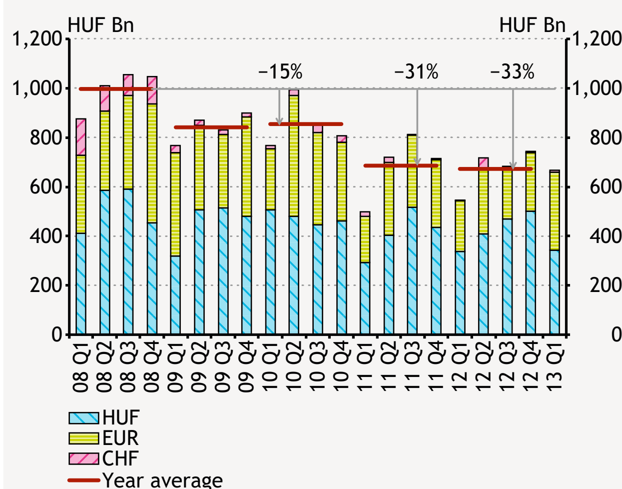
Chart 1
Net quarterly change in outstanding domestic loans to corporations; breakdown by maturity



Note: Seasonally unadjusted change in outstanding amounts, with rolling exchange rate adjustment. Mergers of financial enterprises into banks are excluded from the data.
Source: MNB.

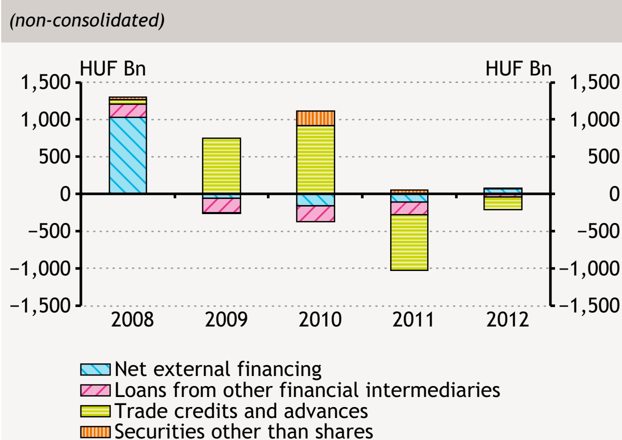
New loan volumes developed relatively favourably early in the year. The change in loans outstanding is the balance of new lending, principal repayments, and receivables sold and written off. New corporate loans (gross lending) amounted to HUF 666.3 billion. Its magnitude is broadly equal to average quarterly lending in 2012, but it is much higher than lending in 2011 Q1 or 2012 Q1 (Chart 2). In line with developments in loans outstanding, in terms of the volume of forint lending the quarter under review was a weak one, while new FX loans reached the highest level in the last two years. Regarding principal repayments as well

Chart 2
New corporate lending volumes



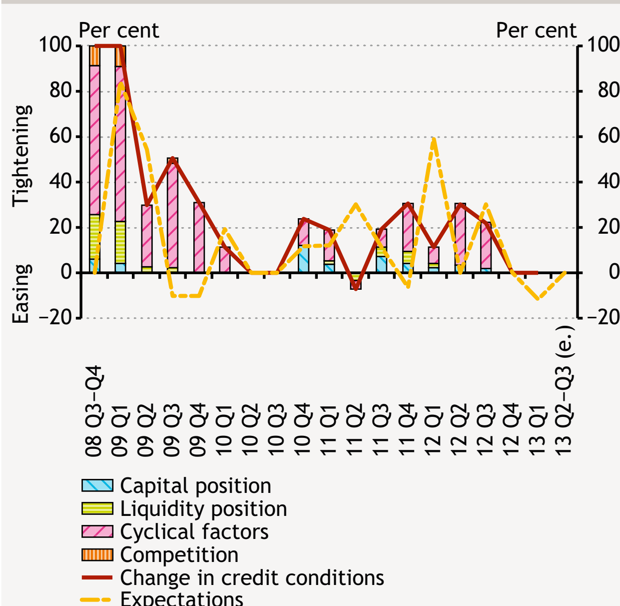
Source: MNB.

Chart 3
Transactions of non-financial corporation liabilities other than bank loans
(non-consolidated)



Source: MNB.

Chart 4
Contribution of individual factors to changes in banks' credit conditions in the corporate segment



Note: The difference between tightening and easing banks, weighted by the market share. Contribution of given factors to the tightening/easing that took place, normalised to the net percentage balance of respondents reporting tightening/easing.
Source: MNB, based on banks' responses.

as receivables sold and written off, the magnitude of their volume also equalled the quarterly average of the last two years, but exceeded the volumes seen at the beginning of previous years.

Alternative forms of funding play a marginal role. Substituting bank loans with other sources of funding is still not typical of companies (Chart 3). Only a limited number of large companies are able to issue debt securities, which account for some 5 per cent of companies' external funds. Cross-border lending may also be a real alternative only for a very limited number of large companies or for enterprises with parent companies. Since 2011, a decline – or only a marginal increase – has been observed in all alternative corporate liabilities. In addition, it has to be mentioned that in relation to trade credit the increase in gridlocks is also reflected in the earlier years of the crisis.

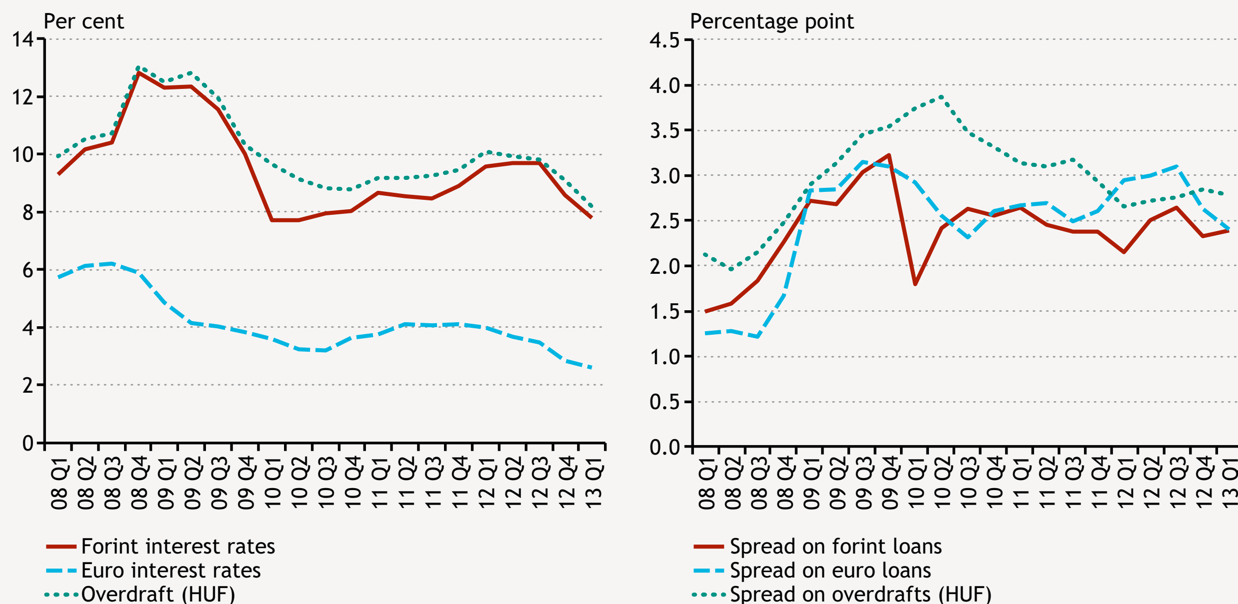
Based on the Lending Survey, corporate credit conditions have remained broadly unchanged. Although banks envisaged easing in net terms in the previous survey, credit conditions in the corporate segment were reported to have remained practically[1] unchanged in Q1 (Chart 4). Banks' responses suggest that unchanged credit conditions is the result of contrasting effects: in the case of 18 per cent of banks in net terms economic outlook and sector-specific problems as well as the capital position pointed to tightening conditions, while in the case of a net 34 per cent of respondents the liquidity position pointed to easing conditions. Banks' forward-looking expectations indicate that no changes can be anticipated in corporate credit conditions over the coming half year.

Lending rates on forint loans continue to decrease. Based on transactions, the average interest rate on forint loans declined from 8.6 per cent in the previous quarter to 7.8 per cent (Chart 5). The reference rate (3-month BUBOR) declined to a somewhat greater extent, and thus the interest rate spread increased from 2.2 percentage points to 2.3 percentage points.

The interest rate spread also declined in the case of EUR-denominated loans. The lending rate continued to decrease in the case of EUR-denominated loans as well, as the average interest rate fell from 2.8 per cent to 2.6 per cent in Q1. At the same time, a considerable difference compared to forint loans is that the euro reference rate (3-month EURIBOR) remained broadly unchanged in 2013 Q1. Accordingly, the interest rate spread moved together with the interest rate level, declining from 2.6 percentage points observed in the last quarter of 2012 to 2.4 percentage points. Thus the interest rate spread sank close to the level observed in early 2010.

[1] In parallel with the unchanged aggregate conditions, some banks tightened their collateral requirements and eased the spread between the lending rate and the cost of funds. Nevertheless, they were of the opinion that there had been no major change in credit conditions.

Chart 5
Lending rates and interest rate spreads of new corporate loans

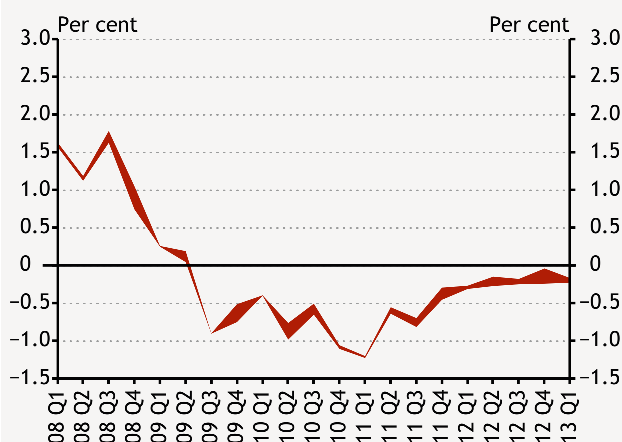


Note: Interest rates on granted loans other than overdraft to non-financial corporates (up to 1 year fixation). Spread on the 3-month BUBOR and EURIBOR.
Source: MNB.

The banking sector continues to be contractionary in the corporate segment. Both the Lending Survey and interest rate statistics on actual transactions are needed for the assessment of enterprises' credit market situation. The Lending Survey shows developments in credit supply constraints, which determine whether the given company is creditworthy, whereas interest rate statistics contain the conditions for creditworthy companies. Due to the tight credit conditions, only a narrower range of enterprises may benefit from the lower lending rates. In 2013 Q1, the corporate sub-index of the Financial Condition Index amounted to −0.2 per cent similarly to 2012, i.e. real GDP deteriorated this much due to credit supply constraints between 2012 and 2013 Q1 (Chart 6).

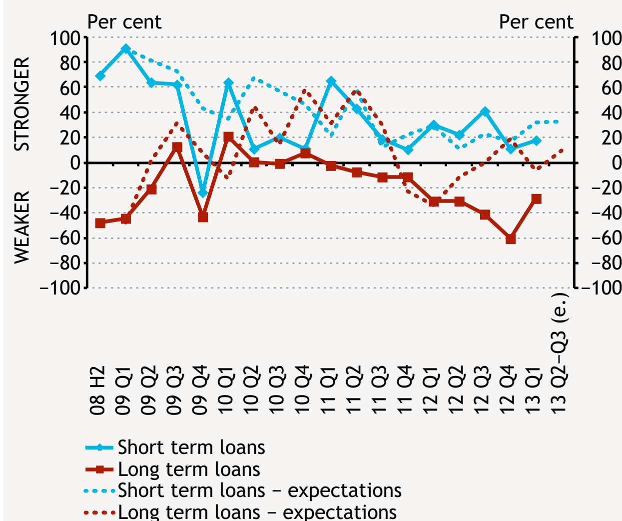
Banks expect an upswing in demand for long-term loans. Looking at the demand perceived by banks, according to

Chart 6
Sub-index of the FCI for corporate lending



Note: The index quantifies the impact of financial conditions on annual GDP growth through corporate lending. The band illustrates the methodological uncertainty.
Source: MNB.

Chart 7
Credit demand perceived by banks in the corporate segment



Source: MNB, based on banks' responses.

the Lending Survey, the trend observed in the past several quarters continued: demand for short-term loans increased, while demand for long-term ones declined. Based on banks' expectations, this trend may break in the period covering 2013 Q2 and Q3, as, in parallel with a further increase in demand for short-term loans, a net 10 per cent of respondents expect a strengthening in demand for long-term loans as well (Chart 7).

International outlook in corporate lending

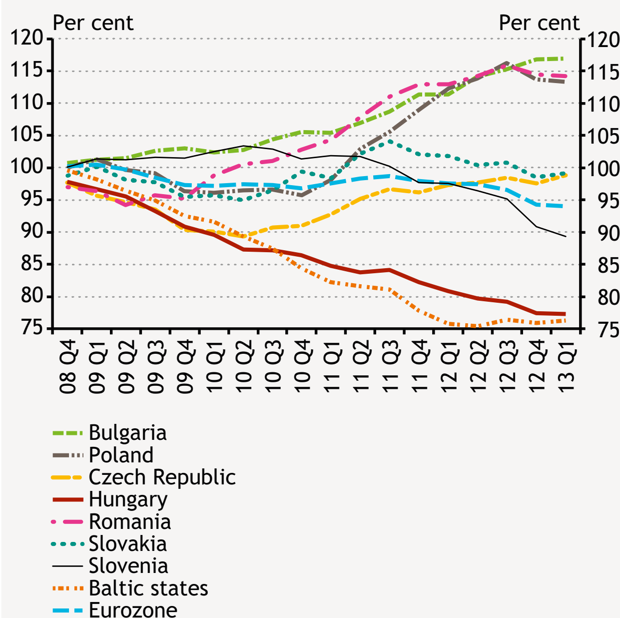
Hungary continued to deviate from the Visegrád countries in corporate lending. The international situation is mixed in terms of developments in corporate loans outstanding. Loans outstanding increased in the Czech Republic and Slovakia, contracted in Slovenia, but remained practically unchanged in the other countries of the region in Q1. As a result of the earlier dynamic growth, loans outstanding are at or above pre-crisis levels in the countries of the region, except for the Baltic states. Corporate loans outstanding continued to decline in the euro area (Chart 8), although the aggregate figure conceals considerable heterogeneity: the decline is significant in the countries hit by the debt crisis, while corporate loans outstanding increased in the core countries.

No further tightening in corporate credit conditions in the majority of countries of the region. Based on lending surveys, in 2013 Q1, of the countries in the region corporate credit conditions tightened only in Slovenia, which is struggling with tensions in its banking sector, while in the other countries under review – similarly to Hungary – credit conditions remained broadly unchanged. Euro-area banks reported tightening in conditions in net terms, which mainly pertained to debt-ridden countries. Similarly to Hungary, respondents indicated the economic and sectoral outlook as the main factors pointing to tightening. Looking ahead, banks' responses suggest that conditions may continue to tighten in 2013 Q2 (Chart 9). However, in contrast to Hungary, a narrower range of banks tightened in these regions during the crisis.

The region is characterised by decreasing lending rates. In the case of new corporate loans denominated in domestic currency, interest rates fell considerably not only in Hungary, but in Poland and the Czech Republic as well, where interest rate spreads also declined. By contrast, there was no major change in Slovakia or Romania (Chart 10). The Hungarian interest rate spread can be considered average in the region, which is true for EUR-denominated corporate loans as well.

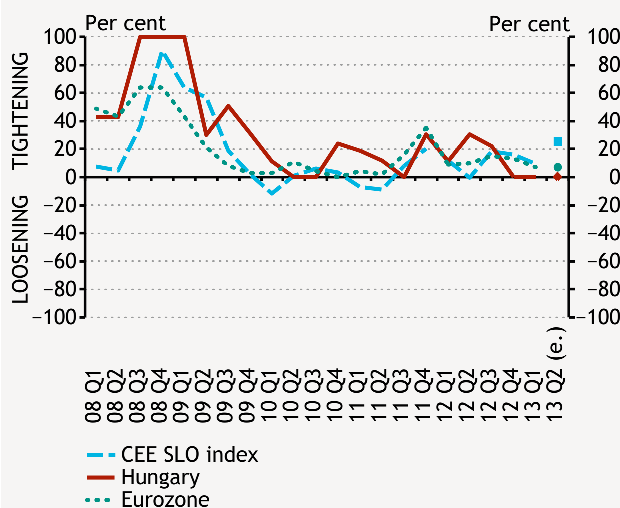
Chart 8
Changes in corporate loans outstanding in an international comparison

(October 2008 = 100, exchange rate adjusted)



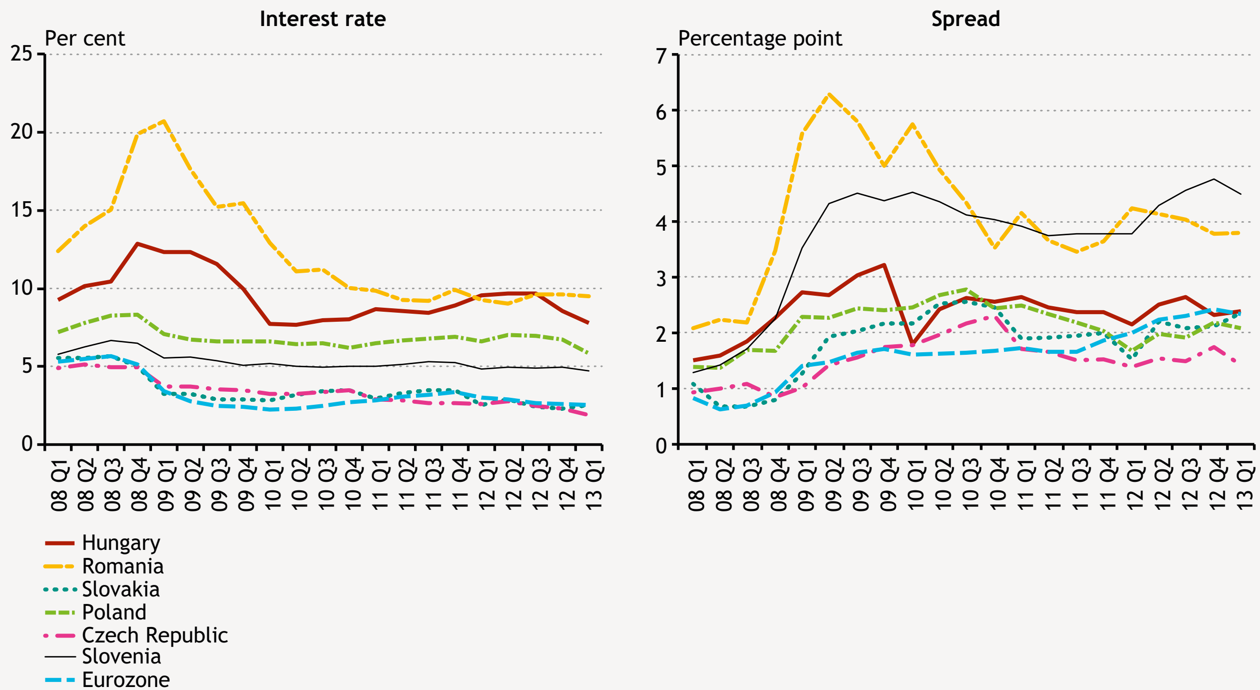
Sources: MNB, ECB, national central banks.

Chart 9
Corporate credit conditions in international comparison



Note: CEE index: data for the Czech Republic, Poland, Slovakia, Slovenia and Romania weighted on the basis of outstanding loans to residents. Only half-year data are available for Slovakia; they were applied for two quarters. The data indicate directions and not degrees.
Sources: ECB, individual central banks and MNB.

Chart 10
International comparison of interest rate conditions of corporate loans extended in domestic currency



Sources: ECB, individual central banks and MNB.

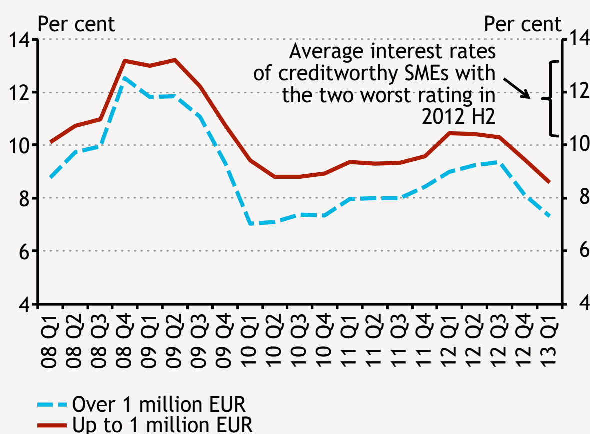
Box 1
Developments in lending to the SME segment

Since the outbreak of the crisis, contractionary bank lending and the tighter credit supply have affected the segment of micro, small and medium-sized enterprises particularly severely. The underlying reason is that – for lack of alternative funding sources – this group is highly reliant on bank funding, but at the same time they are riskier as well for banks. Therefore, the decline in banks' willingness to take risks is reflected in the credit supply of the segment to a greater extent. The reason for the higher risk is that the majority of SMEs are less resistant to the cyclicality of the economy, and typically they have fewer assets that can be used as collateral, thus mitigating banks' risks to a lesser extent.

Banks' credit supply can be restrained through the tightening of price conditions, which primarily means higher lending rates. However, demand is falling with the increase in spreads and interest to be paid, while the proportion of risky loan applicants may also rise within demand. Therefore, banks are striving to use non-price conditions in screening companies. In an extreme case, this is how the phenomenon of credit rationing evolves: at a given interest rate level, fewer companies receive loans than the number of those willing to borrow.

Since the outbreak of the crisis, due to rising risks and funding costs, banks have raised lending rates on corporate loans. However, an examination of transactions by loan amounts reveals significant differences in interest rate data: the interest rate level, and thus the spread, is 1–1.5 percentage points lower in the case of transactions exceeding EUR 1 million as compared to the case of loans below EUR 1 million. There is a composition effect behind the difference: it is more likely that lower-amount loans are used by smaller companies, which can have access to loans only with a higher spread. However, aggregate interest rate data conceal significant heterogeneity: according to a survey conducted in early 2013 within the framework of the Lending Survey, in the two worst but still

Interest rates of forint-denominated loans over and up to 1 million EUR (new business)



Source: MNB.

creditworthy credit rating categories, SME customers groups can receive loans only with an interest rate spread of some 475–700 basis points, which is much higher than the market average. Two main factors play a prominent role in the determination of interest rate spreads. One of them is the liquidity premium, which depends on the maturity of the loan, whereas the other one is the risk premium, which represents a greater proportion and is closely correlated with the expected loan losses.

Looking at non-price conditions, based on the responses in the Lending Survey, an average net 32 per cent of respondents have tightened the premiums of riskier loans every quarter since 2008, 33 per cent of them have tightened monitoring, and roughly 22 per cent of them have tightened the collateral requirements and the minimum required credit score. Partly in view of credit supply constraints, outstanding loans of the SME segment have been declining steadily since the crisis.

The Funding for Growth Scheme (FGS) of the Magyar Nemzeti Bank starting in June will markedly ease interest rate conditions. Feeding through into the costs of funds of small and medium-sized enterprises, the interest-free central bank financing with 2.5 percentage points spread will have a positive effect on their profitability and liquidity position, translating into an overall improvement in corporate creditworthiness. Therefore, the access to credit of SMEs will improve without the loosening of credit conditions by banks, however, due to the decreasing risk of banks and changing competition, banks may ease their credit conditions. The main framework of the FGS announced in April had been known during the fill-out of the Lending survey. Thus the expectations concerning the FGS may have appeared in the responses to the Lending Survey as well: in net terms 15 per cent of banks already forecast easing in credit conditions, predominantly the spread over funding costs, of the SME segment over the coming half year.

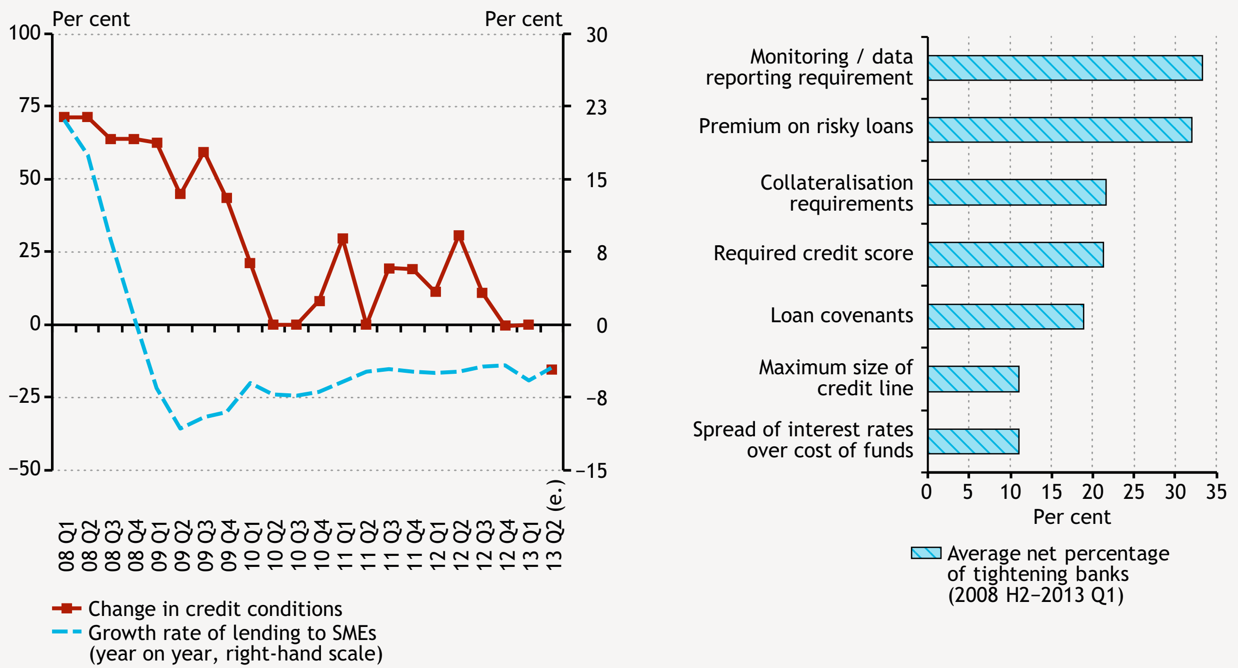
Spreads on SME loans

(based on bank survey)

Basis point		Average spreads in 2012 H2 (based on actual transactions)	Average spread of SMEs with the two best rating (median)	Average spread of SMEs with the two worst rating (median)	Average liquidity premium (compared to loans with a maturity of up to one year)		
					1-2 years	2-5 years	over 5 years
HUF (without overdraft)	Micro- and small enterprises	308	236	700	39	86	142
	Medium enterprises	235	200	475	23	60	104
HUF overdraft	Micro- and small enterprises	465	230	730			
	Medium enterprises	254	150	475			
EUR	Micro- and small enterprises	410	370	800	70	120	208
	Medium enterprises	~300	~270	600	64	110	173

Source: MNB.

Change in lending to SMEs and their credit conditions



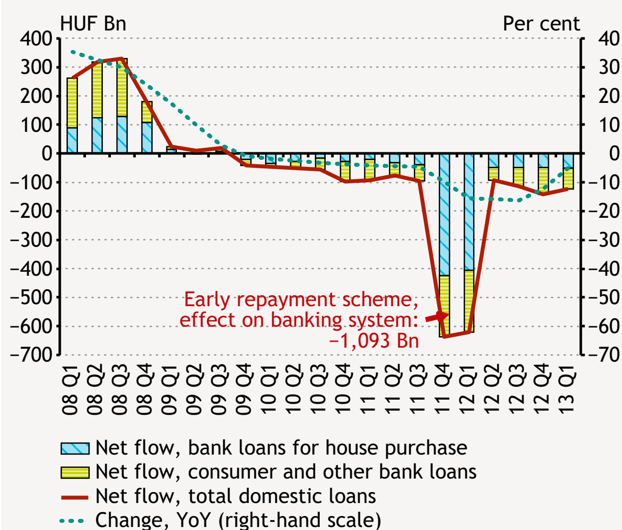
Source: MNB.

3 Developments in lending in the household segment

Loans outstanding continued to contract in the household segment, falling by HUF 123 billion in Q1 or 5 per cent on a year-on-year basis. This is partly attributable to the considerable principal repayment due to the strong indebtedness prior to the crisis, and partly to the fact that the volume of new loans is at an all-time low. Easing in household credit conditions continued, and banks expect further easing in the coming half year. The APRC on transactions continued to fall, tracking the policy rate cuts in the case of housing loans completely, and only to a limited extent in the case of other products. However, the interest rate level is still high in international comparison, as the interest rate spread is over 5 per cent, and the average loan-to-value (LTV) ratio is around 50 per cent. In spite of the easing, based on the Financial Conditions Index, the banking sector continues to be contractionary in household lending.

Loans outstanding continued to contract in the household segment as well. The household loan portfolio of the Hungarian banking sector declined by HUF 123 billion (1.6 per cent) compared to the last quarter of 2012 (Chart 11). Loans outstanding declined by 5 per cent on a year-on-year basis, which represents an improvement, but only because of base effects (the effect of the early repayment scheme fell out from the reference period).

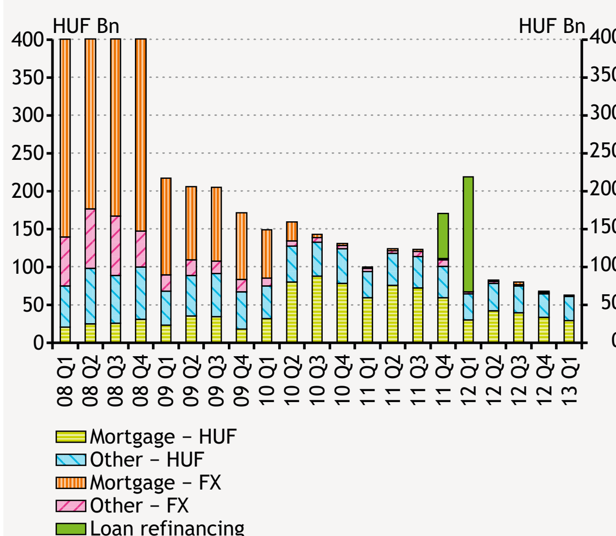
Chart 11
Net quarterly change in household loans outstanding



Note: Seasonally unadjusted change in outstanding amounts, with rolling exchange rate adjustment. Mergers of financial enterprises into banks are excluded from the data.
Source: MNB.

The volume of new loans is historically low. The steady decline in loans outstanding is due to significant household deleveraging, following the strong borrowing prior to the crisis. Thus, principal repayments also significantly exceed new borrowings. In addition, record low new lending also play a major role in the contraction. In 2013 Q1, new loans amounted to a total of HUF 62 billion (some HUF 30 billion of mortgage loans and HUF 32 billion of unsecured consumer loans), which hardly amounts to half of the average quarterly new loans extended during the crisis (Chart 12).

Chart 12
New loans in the household segment



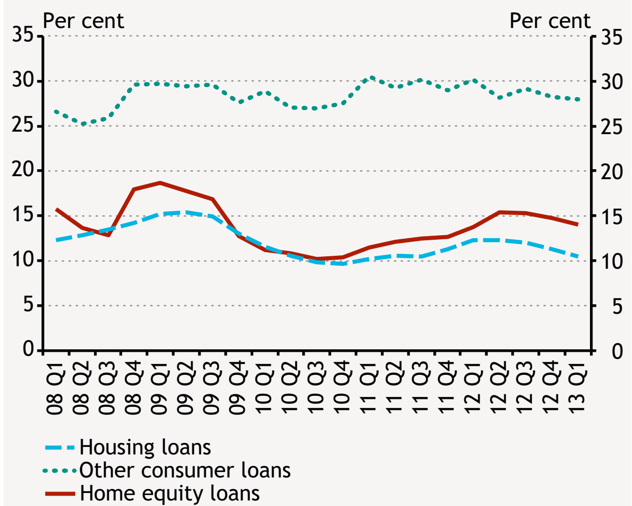
Source: MNB.

The decline in new loans is largely attributable to mortgage loans. Compared to the average levels typical of the crisis, the amount of new loans (HUF 24 billion) is some 60 per cent lower, while home equity loans have practically disappeared, with a decline of 80 per cent. By contrast, the decline in unsecured consumer loans was much lower: the quarterly volume of personal and hire purchase loans fell by 20 per cent compared to average pre-crisis levels.

The Lending Survey shows further easing in household credit conditions. In net terms, 8 and 29 per cent of banks reported that they had eased their credit conditions on housing loans and consumer loans, respectively (Chart 13). The latter included home equity loans and other consumer loans as well. This easing was reflected in price conditions in both segments (loan origination fees, spread on the cost of funds, risk premium), whereas in the case of consumer loans easing took place in non-price conditions as well. With this easing, the correction continued in the wake of the broad-based tightening seen at end-2011. Banks' responses suggest that the easing of conditions may continue over the next half year as well.

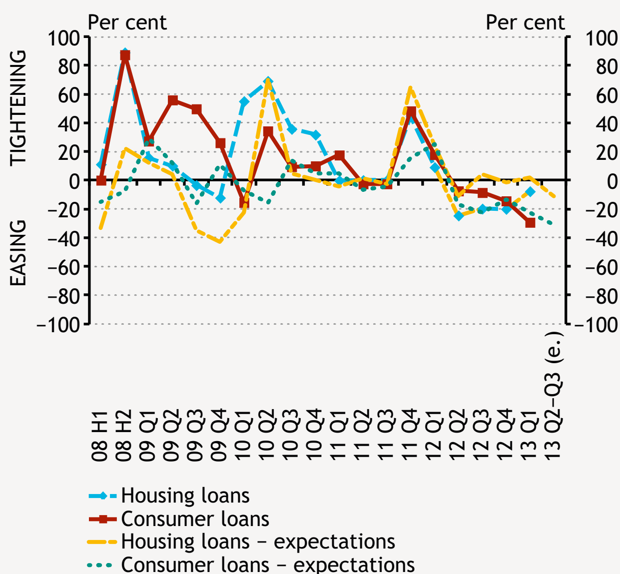
The APRC on realised housing mortgage loan transactions declined. The Q1 average for the annual percentage rate of charge (APRC) on housing loans declined to 10.5 per cent (Chart 14), corresponding to an average interest rate spread of some 5 percentage points (Chart 15). The fall in the average interest rate level roughly corresponds to the decline in the reference rate; accordingly, there was no major change in the interest rate spread compared to the value in the previous quarter. At the same time, home savings and loan associations, which offer a special scheme, continue to account for one third of the depressed lending market. Thus, the average APRC at home savings and loan associations reduces the aggregate interest rate data by some 0.8 percentage points. Accordingly, the APRC on traditional commercial bank transactions was around 11.3

Chart 14
Lending rate of new household loans
(APRC)



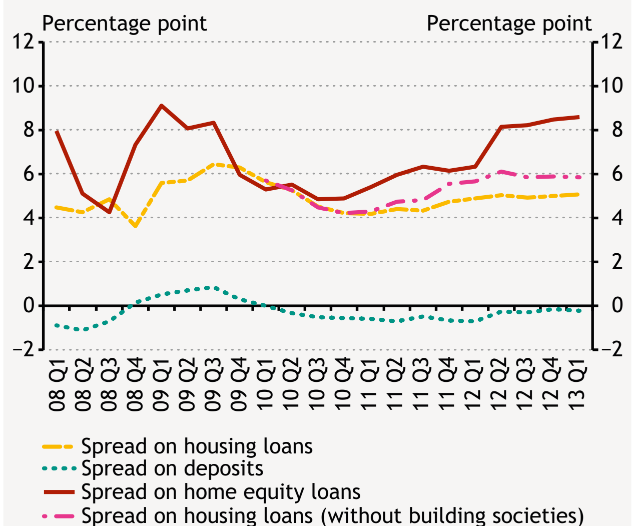
Note: Quarterly average of interest rates (APRC) on granted loans.
Source: MNB.

Chart 13
Changes in credit conditions



Note: The net proportion is the difference between tightening and easing banks, weighted by the market share.
Source: MNB, based on banks' responses.

Chart 15
Interest rate spread on new household loans
(based on APRC)



Note: Quarterly average of interest rate spreads over the 3-month BUBOR.
Source: MNB.

per cent, corresponding to an interest rate spread of 5.8 percentage points.

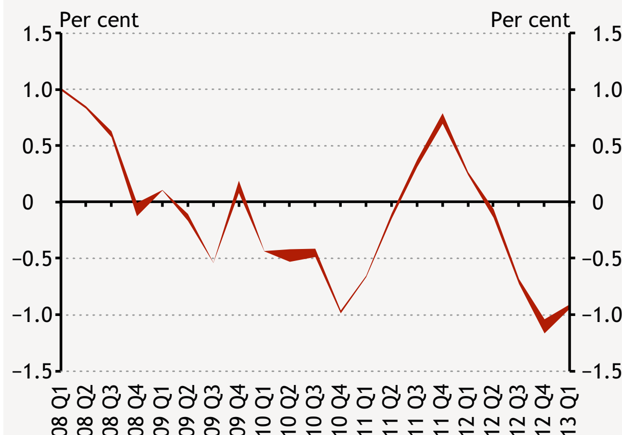
The APRC on home equity loans also fell. Within consumer loans, the APRC on home equity loans declined from the 14.7 per cent average in the previous quarter to 14 per cent in Q1. During the period, the reference rate declined to a greater extent. Accordingly, compared to the last quarter of 2012 the spread increased slightly, amounting to 8.6 percentage points in 2013 Q1. The average APRC on unsecured consumer loans hardly declined in 2013 Q1, moving to 28 per cent, from 28.2 per cent at the end of the previous year (Chart 14).

The composition effect is strong due to the low volume, and therefore, there could easily be a difference between the offered bank conditions and the conditions of realised transactions. Although some banks reported an easing in price conditions in the Lending Survey in a qualitative manner, for the time being it is not seen in the actual transactions. There may be two underlying reasons: firstly, against the background of low new lending, the composition effect among customers with different riskiness may be strong; secondly, the household segment continues to be characterised by strong concentration, and thus the aggregate position of the market is determined by the behaviour of certain market participants.

Overall, the banking sector is contractionary in the household segment. In spite of the easing, the interest rate spread on new mortgage loans is above 5 per cent, whereas the loan-to-value ratio (LTV) is 50 per cent on average, while it was above 60 per cent before the early repayment, and the regulation allows as much as 80 per cent. The household sub-index of the FCI amounted to –1 per cent, a small improvement compared to the end of 2012, i.e. this is the extent to which the banking sector's restrained credit supply exacerbated the recession between 2012 Q1 and 2013 Q1 (Chart 16).[2]

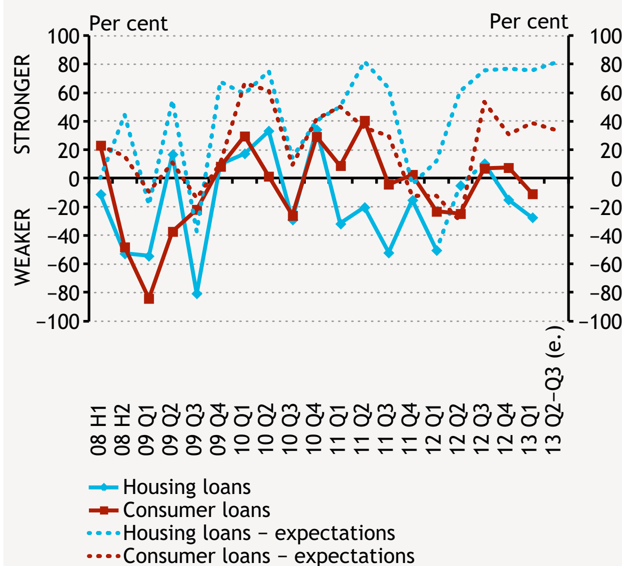
Banks continue to expect an upswing in demand for household loans. Based on the previous Lending Survey, most of the banks had been expecting an upturn in demand for both housing and consumer loans. By contrast, for 2013 Q1 in net terms 27 per cent of banks indicated weakening demand for housing loans, and 11 per cent for consumer loans. Looking ahead, banks continue to expect stronger credit demand: a net 81 per cent of banks expect an upturn in demand in the case of housing loans and a net 34 per cent in the case of consumer loans (Chart 17).

Chart 16
Sub-index of the FCI for household lending



Note: The index quantifies the impact of financial conditions on annual GDP growth through household lending. The band illustrates the methodological uncertainty.
Source: MNB.

Chart 17
Credit demand perceived by banks in the household segment



Source: MNB, based on banks' responses.

Expectations regarding housing loans may be supported by the changes in the state interest rate subsidy scheme. Following the January amendment of the interest subsidy scheme, it now provides a fixed annual interest rate subsidy to the debtor for five years. This may reduce the lending rate markedly, resulting in a 6.5–7 per cent APRC for the period of the subsidy. The resulting more favourable and

[2] The positive value at end-2011 was a result of a temporary, mostly base effect, as the deteriorations that took place in the annual FCI sub-index in 2010 became excluded from the four-quarter cumulation.

simpler programme may confirm banks' expectations regarding an increase in demand. The interest shown in the state interest rate subsidy scheme is growing steadily: during 2013 Q1, the amount of new subsidised loans exceeded the end-2012 value by 35 per cent; as a result, some 20 per cent of new forint-denominated housing loans is now subsidised.

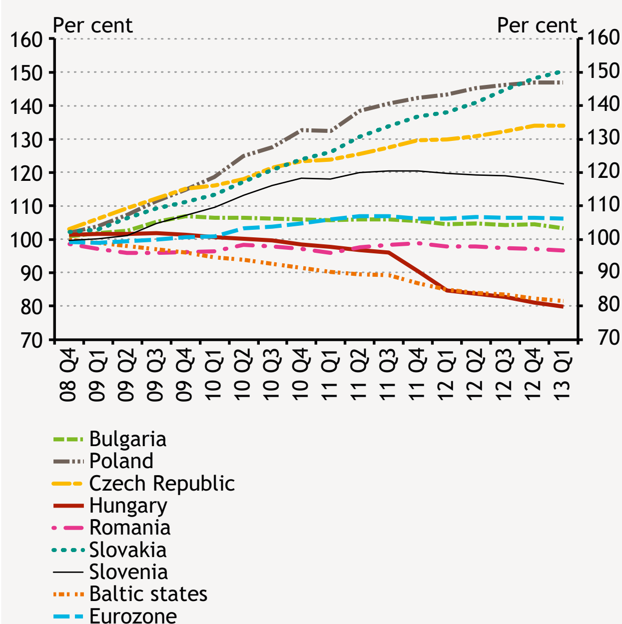
International outlook in household lending

Household loans outstanding are contracting in the region. In Q1, the contraction in household loans outstanding was observed both in the countries of the region and in the euro area, even in Poland and the Czech Republic, where dynamic increases had previously been typical (Chart 18). The only exception is Slovakia, where loans outstanding continued to increase.

There was no further tightening in household credit conditions in the region. Household credit conditions were reported to have eased or remained unchanged in the region (with the exception of Slovenia), while credit conditions were reported to have tightened further in the euro area. Looking ahead, further easing in conditions is expected in the region and continued tightening in the euro area (Chart 19). At the same time, compared to the region and the euro area, a wider range of banks tightened their conditions in Hungary.

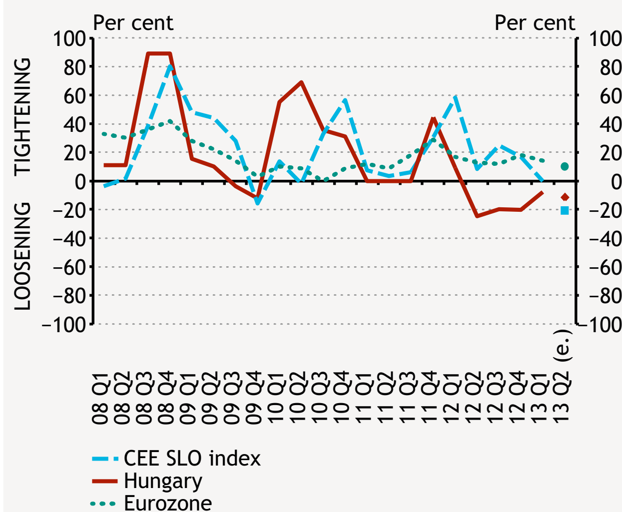
The APRC is declining, but the picture of spreads is mixed. The APRC on housing loans declined in the euro area and in the region (excluding Romania and Slovenia) in Q1. At the same time, similarly to Hungary, spreads increased in the Czech Republic and Poland, as the decline in reference rates exceeded the decline in APRC. Interest rate spreads declined slightly in the euro area, and within that in Slovakia, although they continue to fluctuate around their all-time high seen in 2009. In international comparison (apart from Slovakia) the spread, and thus the interest rate, are significantly higher in Hungary, in which an important part was played by the increase in spreads at end-2011 and in early 2012 (in the period of the early repayment scheme of FX mortgage loans), which proved to be persistent.

Chart 18
Changes in household loans outstanding in an international comparison
(October 2008 = 100, exchange rate adjusted)



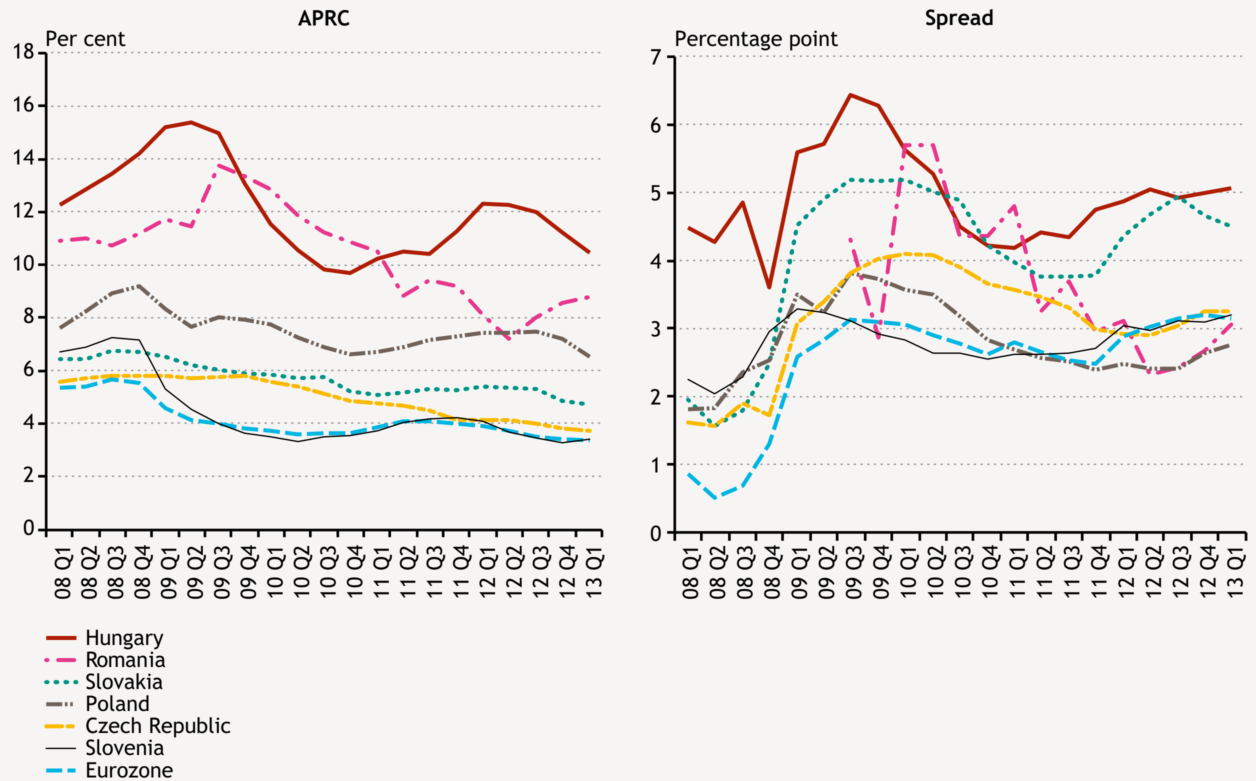
Sources: ECB, individual central banks and MNB.

Chart 19
Household credit conditions in international comparison



Note: CEE index: data for the Czech Republic, Poland, Slovakia, Slovenia and Romania weighted on the basis of outstanding loans to residents. Only half-year data are available for Slovakia; they were applied for two quarters. The data indicate directions and not degrees.
Sources: ECB, individual central banks and MNB.

Chart 20
International comparison of APRC of housing loans granted in domestic currency



Sources: ECB, individual central banks and MNB.

Annex: Methodological notes

The analysis is based on statistical data and the findings of the Lending Survey.

1. Credit aggregates and lending rate data

A statutory task of the Magyar Nemzeti Bank is to publish statistical data on the functioning of the system of credit institutions and the financial position of the country. The statistics compiled, press releases presenting the main data as well as the methodological descriptions of preparing the statistics are available on the MNB's website at:
http://english.mnb.hu/Statisztika

2. Lending Survey

The Lending Survey facilitates the analysis of how major banks perceive and evaluate market developments and how they develop their respective strategies, in particular their lending policies. In the case of the household segment, a total 14 banks were involved in the interviews. 10 banks responded to questions related to housing loans, while 14 banks and 6 financial enterprises answered questions on consumer loans. Based on data from the end of 2013 Q1, the surveyed institutions accounted for 92 per cent of the banking sector in the case of housing loans outstanding and 94 per cent in the case of consumer loans outstanding. The corporate questionnaire was completed by 8 banks, with a total market share of 84 per cent and 94 per cent of the corporate loan and commercial real estate loan markets, respectively. A total 7 banks were interviewed on the subject of loans extended to municipalities. Based on the data from the end of 2013 Q1, the institutions surveyed covered 97 per cent of total municipal exposure by banks.

The survey consists of a standard questionnaire for each segment, and since the survey conducted in January 2010 we have also asked ad-hoc questions about current issues related to the credit markets. The retrospective questions refer to 2013 Q1 (compared to 2012 Q4), whereas the forward-looking questions concern the next half-year period, i.e. the one covering 2013 Q2 and Q3 (relative to 2013 Q1). The current questionnaire was completed by senior loan officers between 1 and 17 April 2013.

To indicate changes, the survey uses the so-called net change indicator, expressed as a percentage of respondents. This indicator is calculated as follows: market share-weighted ratio of respondents projecting a change (tightening/increasing/strengthening) minus market share-weighted ratio of respondents projecting a change in the opposite direction (easing/decreasing/weakening).

The detailed findings of the Lending Survey and the set of charts are available at:
http://english.mnb.hu/Penzugyi_stabilitas/publications/hitelezesi_felmeres

3. The Financial Conditions Index (FCI)

In addition to short-term interest rates and the nominal exchange rate, which represent the behaviour of money markets, the FCI condenses the information contained in other price, quantitative and qualitative variables characterising the financial intermediary system into one indicator. The FCI gauges the impact of the financial sector on the real economy. The annual change in the FCI mentioned in the survey shows the contribution of the financial system and the banking sector to the annual real GDP growth rate.

The weights of the variables that determine the FCI are derived from a VAR (vector autoregressive) model based on the Bayesian structural VAR model developed by Tamási and Világi (2011). In the VAR model, the use of the so-called sign restriction method allows the identification of monetary policy shocks as well as the supply shocks of financial markets and the banking sector. The identified shocks allow for the calculation of how unexpected changes in individual financial variables affect GDP growth. The advantage of the

[3] Tamási, B. and B. Világi (2011), "Identification of Credit Supply Shocks in a Bayesian SVAR Model of the Hungarian Economy", *MNB Working Papers*, 2011/7.

method is that it is possible to exclude the endogenous reaction of financial variables on the developments in economic activity, i.e. a real cause and effect relationship can be identified.

The FCI is based on the following variables:

- 3-month interbank rate (BUBOR),
- nominal effective exchange rate,
- corporate loans outstanding,
- household (consumer and home equity) loans outstanding,
- interest margin on corporate loans,
- interest margin on household (consumer and home equity) loans.

In addition to the overall FCI, sub-indices may also be calculated. Accordingly, for example, the 'banking sector' FCI net of money market effects is prepared with the weighting of credit aggregates and interest margins. At the same time, the VAR model serving as the basis for the FCI does not provide information on the size of the effect of the interbank rate through household and corporate loans. Only rough estimates can be given for this, based on the shares of household and corporate forint lending in the private sector lending. This uncertainty is expressed by the fact that the effect of household and corporate loans on GDP is illustrated in banded charts. One of the limits of the band only measures the effect of credit quantity and interest margin calculated on the basis of the VAR model. For the calculation of the other limit of the band, the effect of money market interest rates is also taken into account, but this calculation is already based on the aforementioned estimate, and not on the VAR model.

Trends in lending

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