



HOUSING MARKET REPORT



OCTOBER
2016

*‘Using our skills, we may be able to build stairs
out of the stones which block our way.’*

Count István Széchenyi



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(October 2016)

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The housing market represents a key area at the level of individual economic agents (households, financial institutions), as well as at the level of the national economy. Housing market developments are closely related to financial stability issues and also fundamentally determine the short and long-term prospects for economic activity. Overall, it can be stated that the housing market is intrinsically linked to all areas of the national economy. Housing market developments, in particular the volatility of housing prices, influence the savings and consumption decisions of the household sector through their financial position, and also influence the portfolio, profitability and lending activity of financial institutions through the stock of mortgage loan collateral.

The publication ‘Housing Market Report’ aims to provide a comprehensive view of current trends on the Hungarian housing market and to identify and present the macroeconomic processes which influence housing market supply and demand. With this publication, the Magyar Nemzeti Bank will regularly present the relevant developments on the Hungarian housing market on a semi-annual basis.

The real estate market and within that the housing market is of key importance for the Magyar Nemzeti Bank in relation to fulfilling its primary tasks, based on inflation and economic considerations as well as financial stability aspects. The development of real estate market supply directly influences economic growth, while oversupply and inadequate supply can also have serious financial stability consequences. Housing price appreciation improves the financial position of households, prompting them to increase consumption, which influences both economic growth and inflation. Price appreciation also boosts the lending capacity of financial institutions by reducing their expected losses, which again invigorates the economy through lending growth. The correlation between the mortgage loan market and housing prices deserves particular attention: during business cycles, a mutually reinforcing relationship can develop between bank lending and housing prices.

The ‘Housing Market Report’ provides deeper insight into the reasons behind market developments and the system of interactions between individual market agents by presenting a complex, wide-ranging set of information. The housing market already features in central banks’ publications, both in Hungary and at the international level, but typically from the point of view of the main topic of the respective publication. Consequently, the ‘Housing Market Report’ represents a unique central bank publication at the international level as well, due to its integrated presentation of the macroeconomic and financial stability aspects of the real estate market. The set of information used by the publication includes the following:

- *The presentation of the macroeconomic environment influencing the housing market is based on the information contained in the MNB’s Inflation Report.¹ Key statistical variables relating to the housing market include changes in the volume of gross value added, developments in real income and unemployment, and changes in the yield environment.*
- *The analysis of current housing market processes relies primarily on the information provided by the Hungarian Central Statistical Office. Information on changes in housing market turnover and housing prices can be split into the differences between new and used housing market developments. In addition to this, data on the regional heterogeneity of the housing market are also used.*
- *The analysis of the housing mortgage loan market relies primarily on the balance sheet data of credit institutions and the interest statistics collected by the MNB; information on the qualitative features of lending processes collected in the Lending Survey² is also used.*

¹ Magyar Nemzeti Bank, Inflation Report: <http://www.mnb.hu/en/publications/reports/inflation-report>

² Magyar Nemzeti Bank, Lending Survey: <https://www.mnb.hu/en/financial-stability/publications/lending-survey>

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1. EXECUTIVE SUMMARY

In the first half of 2016, the macroeconomic environment broadly supported the continuing housing market rebound that has been under way since 2014. The improving income and labour market prospects and household's improving net financial wealth all contributed to boosting housing market demand. The low interest rate environment also has a boosting effect through the pick-up in lending for house purchase and through the increasing investment purpose demand. However, the housing market stimulus afforded by the Home Purchase Subsidy scheme for families (HPS) has been slower than previously expected. The majority of the subsidies can be linked to used homes for now.

The supply side of the housing market has also started to adjust, as the number of construction permits issued doubled compared to the first half of last year. Constructions are below the necessary level, while the lead time between the issuance of construction permits and the completion of new developments has increased compared to the earlier housing market recovery. One of the reasons for this is that the work of construction companies is becoming more and more difficult due to the shortage of suitable labour. New developments are highly concentrated in the capital and its vicinity.

The upturn on the housing market shows a heterogeneous picture. On the one hand, market expansion is concentrated in used houses, with supply frictions making a significant contribution to this. Housing market turnover in 2016 H1 expanded by 10% in year-on-year terms, with that the approximately 140,000 transactions concluded over the past year already approaches the annual long-term average of roughly 160,000 sales transactions.

In order to track house prices, the MNB has constructed its own house price index, which is more capable of reflecting changes in house prices and does this using a long time series which also shows regional differences. The national MNB house price index rose by 3.8% in 2016 Q1, while nominal housing prices increased by 14.4% in year-on-year terms. According to our forecast, we expect a continued rise in housing prices although at a slightly slower rate, with a 9% increase in nominal housing prices in annual terms in the third quarter of 2016. The housing market also exhibits strong heterogeneity in geographic terms. The Budapest house price index rose by over 50% between 2014 Q1 and 2016 Q1, while the index for rural cities only increased by 20%, and the sub-index for smaller municipalities only rose by 15% over the same period.

In 2016 H1, the housing market recovery was coupled with a significant credit expansion, and the volume of newly granted loans rose by 47% in year-on-year terms. The differences between new and used home market trends are also reflected in lending: loan contracts for new homes only finance 10% of new home purchases or construction during the half-year period under review.

On the whole, the appreciation of house prices is not considered to be excessive. According to our estimates the level of house prices is below the level justified by economic fundamentals. Moreover, the volume of new housing loans should not be considered to be excessive either, and the debt cap rules ensure that lending for house purchase remains in a prudent framework. However, because of the dynamic growth rate of house prices (primarily in Budapest) the housing market should be followed closely.

BOX 1: NOVELTIES OF THE HOUSING MARKET REPORT'S ANALYTICAL FRAMEWORK

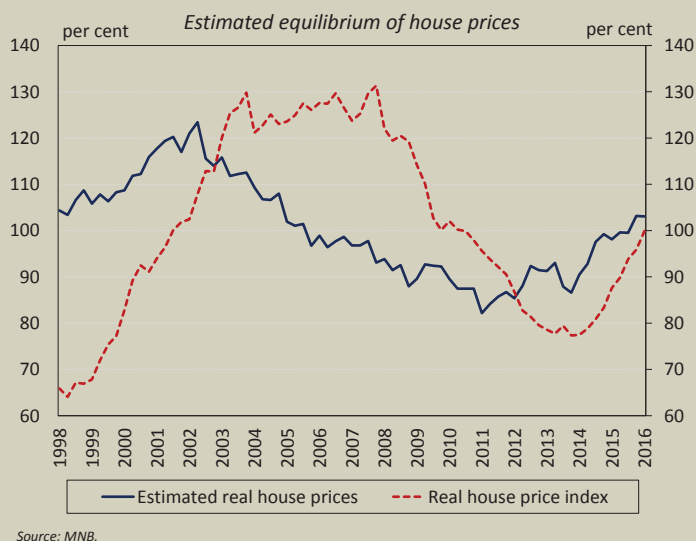
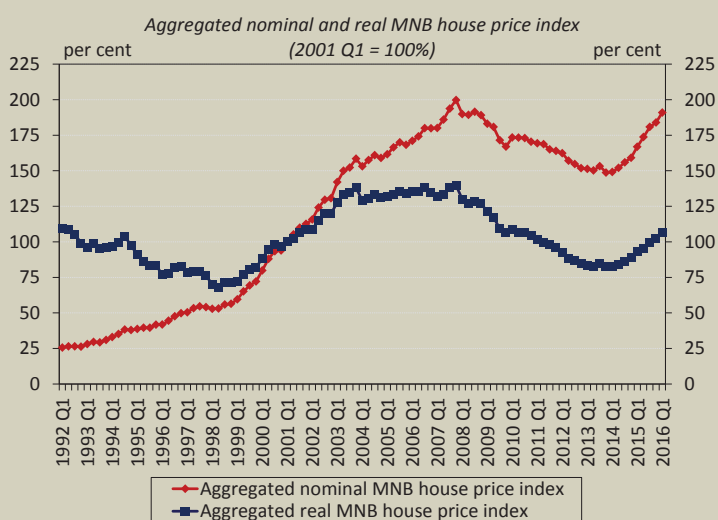
It is essential to keep track of housing price developments for a number of reasons. Housing represents a significant proportion of households' assets, and accordingly changes in the value of housing has a strong impact on households' consumption and savings decisions. In addition, housing also serves as collateral backing mortgages, and thus changes in house prices are closely correlated with matters of financial stability. Finally, developments in housing prices also have a significant impact on the construction industry's situation and prospects. Up to now, developments in Hungarian housing prices were only publicly disclosed as aggregate housing price indexes pertaining to the entire country, and the indexes were only published with a significant lag. Housing market trends exhibit great heterogeneity in terms of both geography and settlement type, making it difficult to draw conclusions from aggregate national-level data. As a result, the MNB launched a key project in the spring of 2016 with the primary focus of preparing housing price indices in a detailed breakdown by geographic location and settlement type, and the secondary intention of establishing a forecasting framework for housing prices and identifying the housing market's cyclical position.

1. MNB housing price index

In preparing the new housing price index, the National Tax and Customs Administration (NAV) disclosed transaction data on residential property sales from 1990, which was supplemented by broad settlement-level characteristics (e.g. location in municipal agglomerations or seasonal property areas, distance from geographically key areas and nodes, earned income per capita within the settlement or settlement population). The MNB's housing price index was created using hedonic regression³ in the context of which property prices were modelled as a function of the different characteristics. According to the MNB's aggregate housing price index starting from 1990, housing prices grew by nearly tenfold in nominal terms until 2008 and are now once again exhibiting dynamic growth following the continuous decline in the wake of the crisis. The findings of the MNB's housing price index broadly indicate similar house price dynamics for the past years as the public housing price indices available until now, but the price index broken down by settlement type and region introduces a major novelty for housing market statistics.

2. The housing price forecasting framework

Due to the delayed availability of data sources, the MNB housing price index would only be able to provide information on pricing trends with a delay of several quarters. In view of the foregoing, the MNB will also regularly publish a short-horizon forecast of housing prices in the Housing Market Report. After identifying the fundamental macroeconomic long-term determinants of housing prices in Hungary, an estimate of the long-term trend in domestic housing prices and the resulting cyclical position is prepared using a statistical method, and the forecast for the short term



³ We plan to present the precise methodology of the MNB housing price index in the form of an MNB Working Paper.

pricing trends on the housing market is compiled using these correlations. To determine the long-term trend of housing prices, we use real income per household, which describes demographic and income trends, and long-term unemployment, and then provide an actual forecast of short-term housing price developments based on changes in the economy's cyclical position, construction permits and unemployment adjusted for workers in public work programmes. The forecast regularly published in the Housing Market Report and the information used for the forecast will be created consistently with the forecasts and variables used in the Inflation Report.

3. Determining the equilibrium of housing prices

We assessed to the cyclical position of the Hungarian housing market, and more specifically the deviation of housing prices from the equilibrium level, using the common outcome of three different methodologies. These methodologies are:

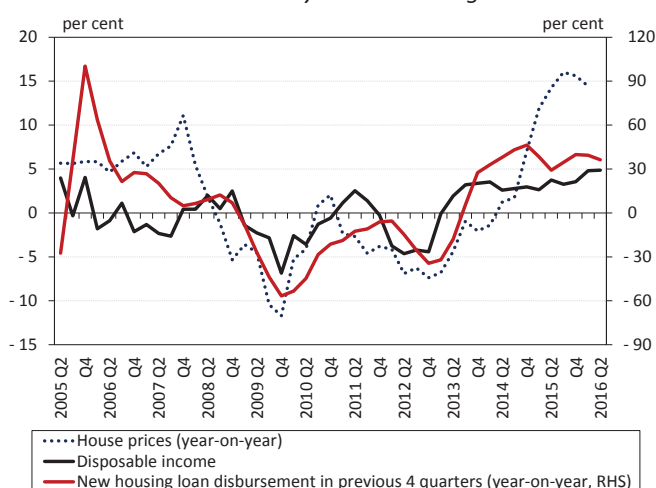
1. Deviation of the housing price/GDP per capita from the indicator's long-term average, expressed as a percentage.
2. Model-based estimate of equilibrium housing prices, using a broad range of variables – capturing housing market demand – to define the long-term equilibrium correlation between housing prices and macroeconomic fundamentals.⁴
3. A structural model-based estimate that defines the trend of housing prices based on the equation describing the long-term correlation used to forecast housing prices.

⁴ For more on the methodology, see: Magyar Nemzeti Bank: Financial Stability Report, May 2014

2. MACROECONOMIC ENVIRONMENT

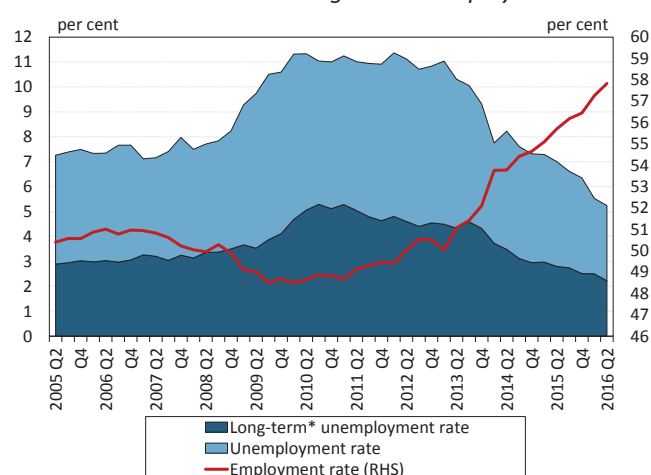
In the past year, the domestic housing market recovery was fostered by several demand-side factors, while frictions persist on the supply side, in part owing to the crisis. Households' income position and labour market prospects show an improving trend. The substantial gains in employment and real income have contributed greatly to rising housing market demand this year. Households' net financial worth has continued to expand this year, while over the past quarters, deleveraging has progressed so much that households' debt relative to their income has sunk below pre-crisis levels. However, rising demand continued to be geographically differentiated in light of domestic demographic trends. The housing market recovery is restricted on the supply side by its typically late adjustment and by the subdued credit supply. In terms of property development projects, which represent a key segment of gradually expanding housing market demand, developer activity is mainly concentrated in Budapest for the time being. In recent quarters, the labour shortage characterising most of the sectors in the national economy has increasingly hindered production, and this phenomenon has also affected the construction industry. The restrictive impact of base material shortages did not increase this year, and the negative impact of financial constraints has gradually eased. Due to the quality shortfalls of the stock of dwellings in Hungary, the emergence of new housing market capacities and the development of the existing housing remain essential from a macroeconomic perspective.

Chart 1: Annual dynamics of housing prices, disposable income and newly issued housing loans



Source: MNB.

Chart 2: Short and long term unemployment



Note: * unemployed for more than 1 year.

Source: HCSO.

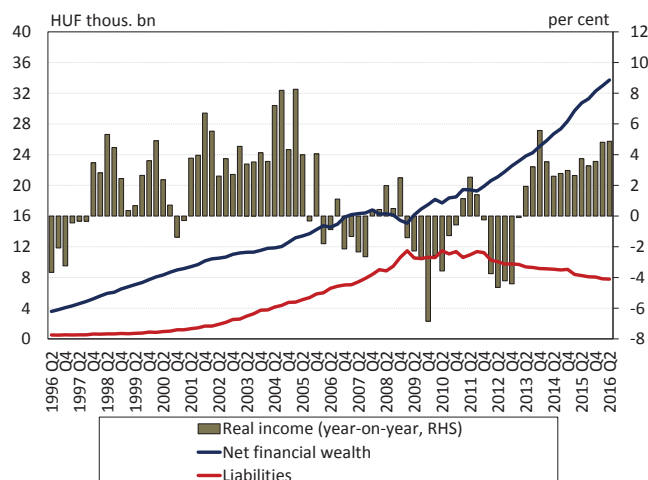
2.1. Housing market demand

Housing market demand and households' investment decisions are primarily shaped by their income position in the broader sense. Along with developments in long-term income prospects, the net financial position and credit market conditions also have a fundamental impact on households' willingness to invest. In addition to these factors, demographic developments – specifically the number of households – also shape housing market demand. The housing market thus co-varies closely with developments in households' income position and with credit market developments (Chart 1).

The growth rate of real household income rose substantially this year in the wake of higher-than-average wage dynamics and significant improvements in employment. Household income in real terms exhibits a growth rate of around 5 per cent this year, compared to 3.3 per cent growth last year. Growth in real incomes was driven by both the low tax burdens and moderate inflation. Housing market trends may be most strongly defined by labour market prospects. Positive employment developments were primarily driven by the pick-up in private-sector labour demand. The sustained decline in total unemployment has been coupled with shrinking long-term unemployment since 2013, which may also improve households' longer-term income prospects through their willingness to invest (Chart 2). Employment has continued to rise this year and markedly rising real incomes positively shape longer-term income expectations, which are decisive in terms of home purchases, and in turn further improve the fundamentals of housing market demand.

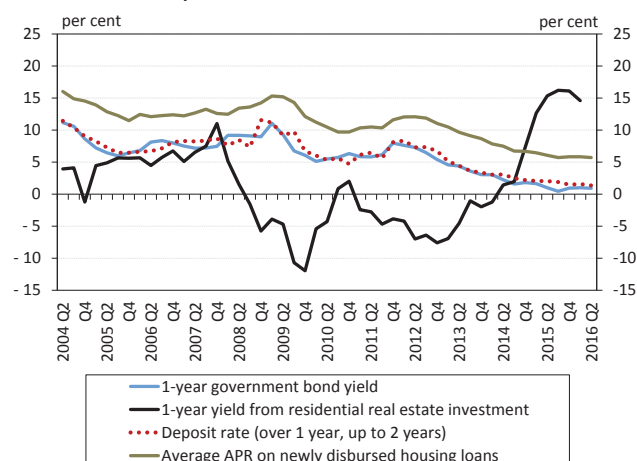
The protracted reduction of foreign currency debt accumulated before the crisis was a strong demand constraint on the real estate market in earlier years. Over the

Chart 3: *Changes in households' financial assets and liabilities, and real income*



Source: HCSO, MNB.

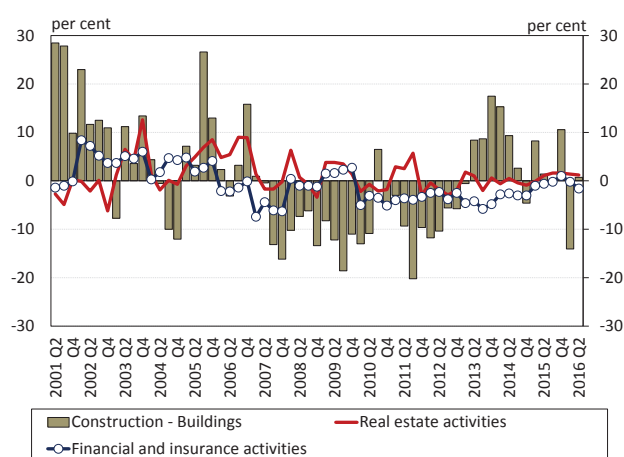
Chart 4 *Retrospective yield realisable from home purchase and yields on alternative investments*



Note: The yield realisable from home investment is calculated exclusively based on the growth rate of the MNB's housing price index.

Source: ÁKK, MNB.

Chart 5 *Changes in the performance of the Hungarian real estate sector and related industries*



Source: HCSO, MNB.

past quarters, however, deleveraging has progressed so much that households' debt relative to their income has sunk to below pre-crisis levels, while households' net financial worth has increased to a historically high level if financial assets are also factored in (Chart 3). The gradual easing of balance sheet adjustment pressure and the sector's sounder balance sheet structure also contribute to continued real estate market expansion.

The historically low interest rate environment led to an easing of price lending conditions and boosted the attractiveness of investing in the housing market. In the wake of the declining cost of finance in parallel with the contracting base rate, forint housing loans not only became more attractive, but demand for real estate as a means of investment also increased as yields on risk-free instruments dwindled. The channelling of household savings into real estate was also bolstered by the retrospective yield premium arising from housing price changes that could be realised on housing market investments, which has been steadily situated well in the positive range over the past quarters (compared to short-term discount treasury bills and deposit yields) (Chart 4).

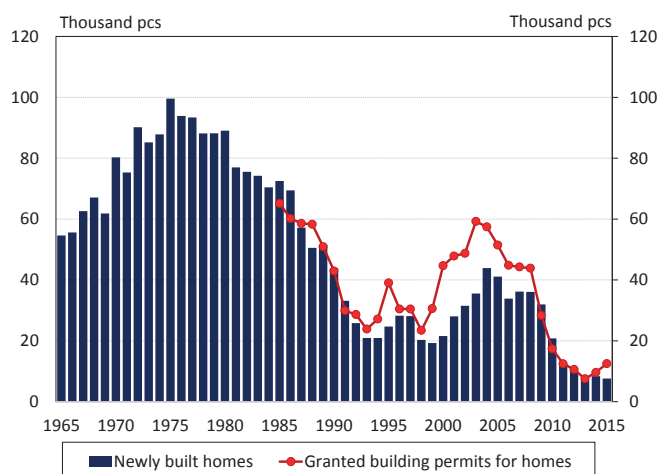
Over the past two and half years, the average interest rate on newly disbursed housing loans has fallen by 2 percentage points on average. With the exception of short interest period loans, the decline in interest rates has slowed over the past six months, with only a 0.1 percentage point decrease in the average interest rate on new housing loans since the beginning of the year. Household interest rate spreads, which remain elevated by regional standards, may continue to impose a limit on or restrain a pick-up on the housing market from the side of the financing environment.

2.2. Housing market supply

Housing market supply is primarily determined by the quantity and quality of the existing amount of available housing, the reaction of property developers to perceived or actual demand dynamics (increases in capacity) and the situation of the construction industry (Chart 5). The cost of construction and the real estate sector's financing situation are also key determinants.

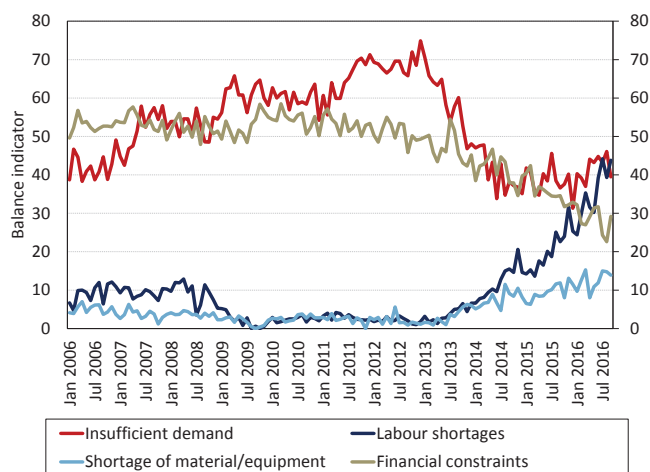
Restrictive factors still prevail on the supply side, preventing a housing market recovery. Based on the factors presented in the previous chapter, demand conditions have improved further over recent quarters and numerous factors are fostering a recovery. However, real estate market supply conditions tend to react with a delay (Chart 6). In addition, as a legacy of pre-crisis lending, the considerable stock of dwellings associated with commercial bank balance sheet collateral on

Chart 6: Historic evolution of home building in Hungary



Source: HCSO.

Chart 7: Constraints to production in the Hungarian construction industry (ESI)



Source: European Commission.

non-performing mortgage loans, and the high number of unoccupied properties may continue to be a potential factor of uncertainty. After the crisis, the financial system restrained the financing of real estate sector to a great extent and significantly tightened financing conditions, and thus there remained considerable room to ease supply barriers.

In terms of property development projects, which represent a key segment of gradually expanding housing market demand, developer activity is mainly concentrated in Budapest for the time being. The key areas attracting property developments are the perimeter districts of the capital and towns in the agglomeration easily accessible from the Budapest. Along with a pick-up in housing market projects in response to rising demand, the easing of the eligibility conditions for the Home Purchase Subsidy scheme for families (HPS) also contributes positively to multi-dwelling residential building projects already sold in the design phase.

The pace of housing market recovery and supply adjustment is also significantly shaped by the supply of skilled labour. Strict lending conditions still prevail in the sector's financing, which may hold back a market recovery. Even in a positive demand environment, the construction industry has been plagued in past years by the shortage of labour and materials, as the primary obstacles to production, which significantly restrained the housing market recovery from the supply side. In recent quarters, the labour shortage characterising most of the sectors in the national economy has increasingly hindered production, and this phenomenon has also affected the construction industry. The restrictive impact of material shortages did not increase this year, and the negative impact of financial constraints has gradually eased (Chart 7). With the relaunch of the investment cycle financed from EU funds, the aforementioned resource bottlenecks may be felt increasingly by the construction industry, representing a negative risk for a continued housing market recovery.

BOX 2: FINDINGS OF STUDIES ON THE EQUILIBRIUM HOME CONSTRUCTION FIGURE

This box presents an overview of the demographic developments shaping home construction trends in Hungary and gives an estimate of the equilibrium level of home construction.

The latter is defined as the home construction figure that stabilises the stock of dwellings per household. Housing investment is mainly shaped by demographic trends and the amortisation of existing housing, so this correlation forms the basis for determining equilibrium home construction.

$$H_t = I_t + (1 - \delta)H_{t-1}; \quad h_t = i_t + \frac{1-\delta}{1+n} h_{t-1}$$

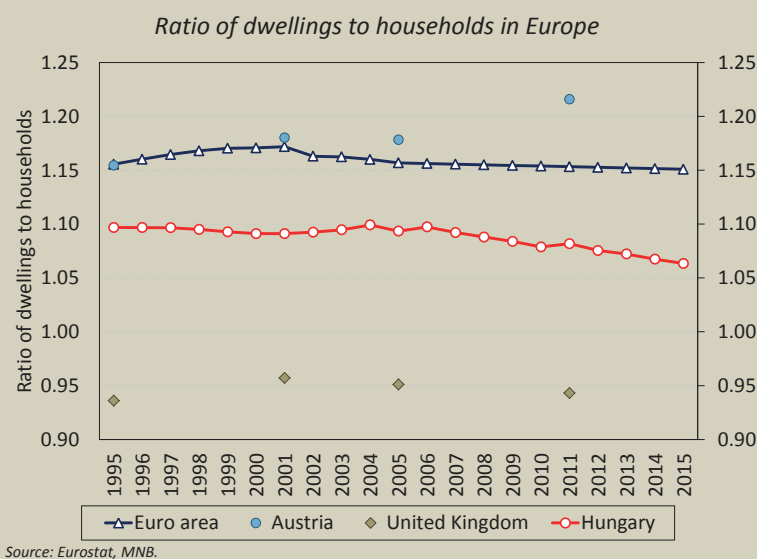
H_t , H_{t-1} is the stock of dwellings at t and $t-1$, I_t is housing investment, δ is the amortization rate. The stock of dwellings per capita is defined as $h_t = H_t/N_t$, and housing investment per capita is $i_t = I_t/N_t$. If the stock of dwellings per capita is at equilibrium, $h_t = h_{t-1} = h$, and demand for housing investment at t is:

$$i_t = \left(1 - \frac{1-\delta}{1+n}\right) h; \quad I_t = N_t \left(1 - \frac{1-\delta}{1+n}\right) h$$

In terms of the stock of dwellings per household, it is important that the indicator remain stable above 1, meaning that each household has access to at least one dwelling. In addition, if housing exceeds the number of households, it contributes to housing market transactions, creates negotiation positions and generally positive supply conditions.

The equilibrium housing construction figure is determined by the population's growth rate (demographics), the average household size (family structure), the current amount of housing and the rate of amortisation. In terms of the demographic trends fundamentally shaping home construction, in spite of the sustained decline of the population at an annual rate of roughly 0.2 per cent, the number of households has increased over the past period. The increase in the number of households may be linked to shrinking household size and changed family models, coupled with the ageing of the population.

The ratio of dwellings to households in Hungary was 1.06 in 2015. This figure falls somewhat short of the euro area average (1.15), but the latter exhibits significant variation (in 2011, the UK value was 0.94, meaning that there were more households than dwellings, and 1.21 in Austria). Over the past 10 years, the indicator for Hungary has decreased, and thus home construction has fallen short of the rate of increase in the number of households and the level warranted by amortisation.



Our assumption is that the increase in the number of households will continue, albeit at a slowing pace in the years to come.

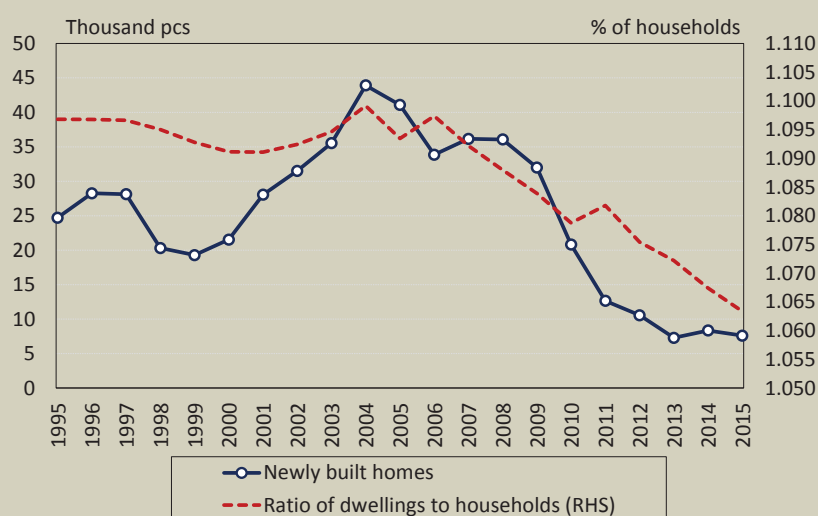
In addition, we expect the government's family support policies to stem the further decline in average household size. We assume the amortisation of the stock of dwellings to be 1 per cent, which corresponds to the household capital stock amortisation used in a macroeconomic modelling and estimated based on input-output tables, but the figure derived from the lifespan of houses and dwellings in Hungary is also around 1-2 per cent. Table 1 contains the equilibrium home construction levels calculated based on the average household size defined based on the calculations of the HCSO's Hungarian Demographic Research Institute and our alternative assumptions.

Table 1: *Equilibrium home construction based on various assumptions*
(according to the changes in the population and average household size)

		Change in the population		
		-0.1%	-0.3%	-0.4%
Change in average household size	-0.2%	32,756	27,750	21,356
	-0.5%	44,598	39,613	33,237
	-0.9%	61,744	56,778	51,439

According to our estimate, the annual equilibrium home construction figure is close to 40,000, which means that the home construction in the past decade has fallen significantly short of the volume warranted by demographic trends and necessary for offsetting the amortisation of existing housing.

Newly built homes and the ratio of dwellings to households



Source: HCSO, MNB.

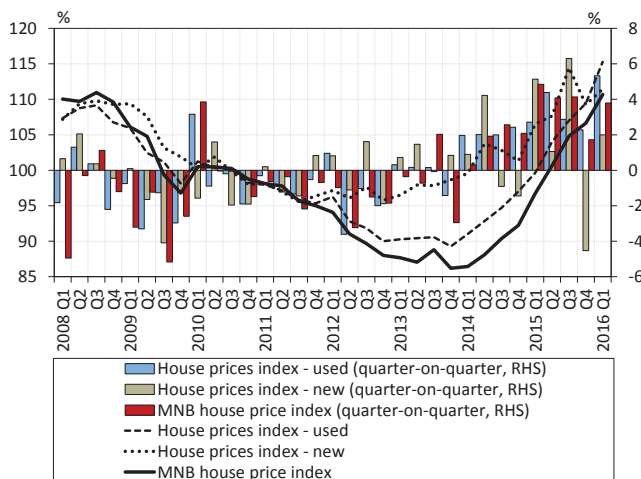
Based on the housing market trends in developed Western countries, the level of annual home construction is between 0.5 per cent and 1 per cent of existing housing; applied to a stock of dwellings of 4.4 million in Hungary, this amounts to a home construction volume of 24,000-42,000, and thus our estimate is close to the construction volume of a sound, developed housing market. All other things being equal, a faster deterioration of demographic trends would decrease the equilibrium number of dwellings, while a decrease in the average household size would increase the figure. If we assume that over the upcoming 20 years, alongside real economic convergence – and the demographic developments assumed in the baseline scenario – the ratio of dwellings to households also reaches the euro-area average (of 1.15 dwellings per household), then 57,000 dwellings would need to be built every year.

On the whole, home construction in Hungary is characterised by a low level and significant potential based on demographic trends, and more home construction would be needed to stabilise the amount of dwellings to households.

3. CURRENT HOUSING MARKET TRENDS

In 2016 H1, the improving demand environment and increasing supply adjustment led to further recovery on the housing market. A market upswing and a continuous, dynamic rise in housing prices were observed, coupled with a growing number of sales transactions, although the pace of the latter has slowed somewhat. The housing market recovery remains concentrated in the used housing submarket. Strong expansion of the new housing market is restricted by the late adjustment of demand, and moreover new developments are highly concentrated geographically, mainly in Budapest and its agglomeration. Underlying housing market trends, and specifically the sufficient convergence of the new housing market, may be largely fostered by the government measures announced in early 2016 and their recent amendments. However, the recovery of the housing market shows a broadly heterogeneous picture based on geographical location. Based on the MNB housing price index broken down by region and type of settlement, housing prices have risen by over 50 per cent in Budapest over the past two years, but only by 20 per cent in cities located outside Budapest. There are also marked regional differences in housing price developments over the longer term. While housing prices already exceed the 2008 level in the cities of Western Hungary, in Northern Hungary they not only fall significantly short of this level, but the rise in prices also commenced later than the market turnaround of early 2014.

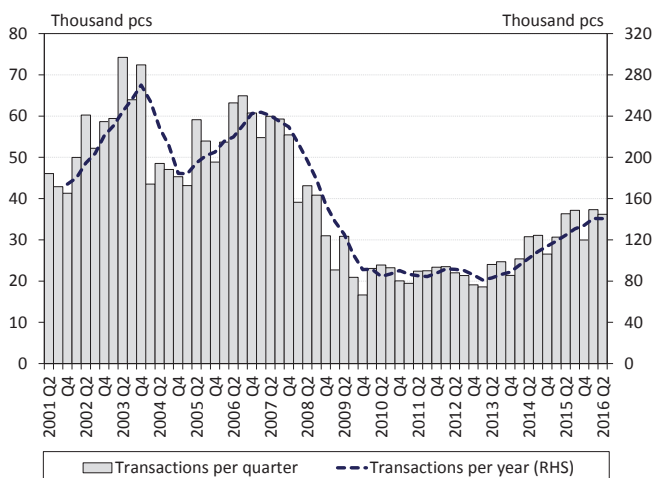
Chart 8: Housing price developments



Note: 2016 Q1 based on preliminary data.

Source: HCSO, MNB.

Chart 9: Number of housing market transactions



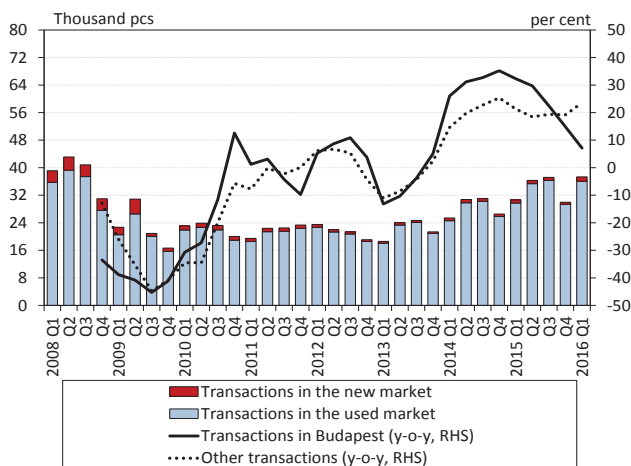
Source: National Tax and Customs Administration, HCSO, Duna House, MNB.

3.1. Domestic housing market developments

The Hungarian housing market continued to recover in early 2016, reflected in the steady rise in housing prices. In 2016 Q1, the MNB's aggregated housing price index rose by 3.8 per cent, with this rate of increase exceeding the rate observed in the previous two quarters (Chart 8). Over the past two years, housing prices in Hungary typically grew at a rate of slightly above 3 per cent on average per quarter, resulting in nominal prices that were some 30 per cent higher on average at the end of 2016 Q1 compared to the end of 2013. According to the Hungarian Central Statistical Office's (HCSO) calculations, the price of used housing increased at a far greater rate compared to the price of new housing. The HCSO's used housing price index has risen by 15.7 per cent over the past year, while the new housing price index has risen by 4.6 per cent. If one compares the price appreciation to the trough prevailing in late 2013, the rates of price appreciation are 29.1 per cent for used housing and 12.9 per cent for new housing.

The housing market recovery is also reflected in the continuous expansion in the number of sales transactions, in addition to the price appreciation. In 2016 H1, housing market turnover amounted to slightly over 73,000 transactions, representing a 10 per cent increase in year-on-year terms (Chart 9). Housing market turnover has expanded at an annual rate of approximately 20 per cent and 30 per cent over the past two years, but by 2016 the rate of growth had slowed and was approaching nearly zero in 2016 Q2, according to estimated data. The average annual market turnover over the past 15 years was 160,000 transactions, whereas the past four quarters have seen 140,000 transactions. This suggests that there is still room for further market growth, but the sudden and pronounced rise in

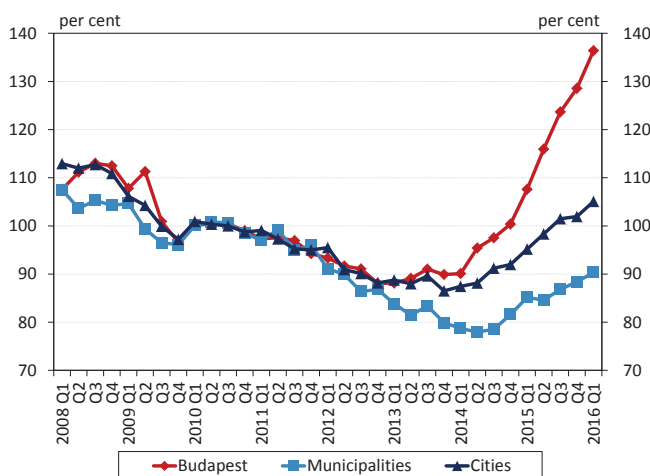
Chart 10: Number of housing market transactions and its annual change



Note: 2016 Q1 based on estimated preliminary data.

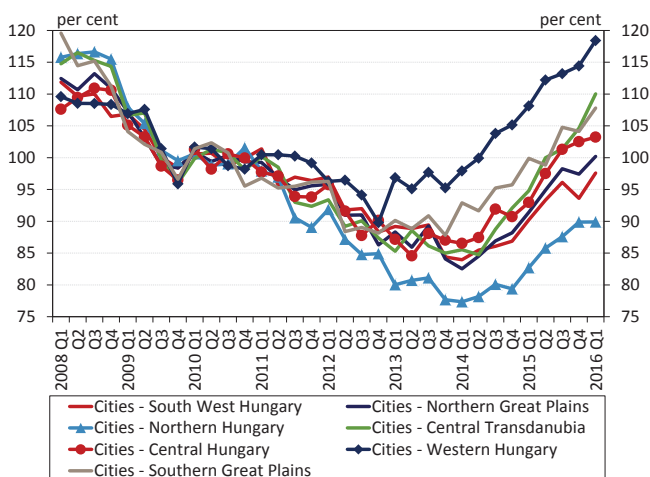
Source: HCSO.

Chart 11: MNB house price index by settlement type (2010=100%)



Source: MNB.

Chart 12: MNB housing price index for cities by region (2010=100%)



Source: MNB.

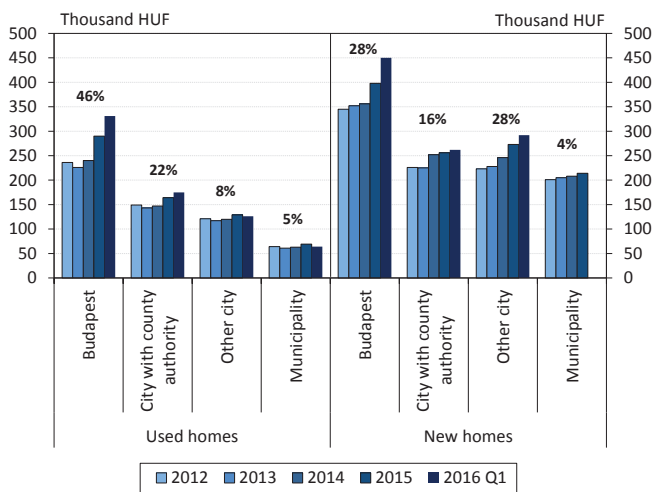
housing price levels may somewhat cool a further rise in market turnover.

Increasing turnover was concentrated in the Budapest used housing market after the housing market turnaround. The recently observed and currently ongoing housing market recovery is segmented in several regards. First, the increase is almost entirely concentrated in the used home submarket, and second, the recovery is also fragmented in geographic terms: Budapest has exhibited both the largest increase in prices and sales transactions. Transactions on the new home market have not increased substantially in recent years, and only accounted for 3 per cent of the total quarterly turnover in 2016 Q1, compared to over 10 per cent in 2008 (Chart 10:). In addition, while Budapest grew at a faster pace than rural areas based on housing market transactions following the market rebound in late 2013, this relationship had reversed by 2016, and the Budapest market is now growing at a far slower pace. This is presumably a result of the significantly higher housing prices currently prevailing in the capital.

The housing market recovery shows a varied picture, with Budapest dominating the market. The new MNB housing price index presented in this report provides an overview of housing market trends and more specifically, changes in housing prices in a breakdown by settlement type and region. According to the MNB housing price index broken down by settlement type, the housing price increase observed over the past two years was mainly driven by the large rise in Budapest housing prices, while other cities and municipalities only exhibited more restrained growth. The Budapest housing price index rose by 6.1 per cent in 2016 Q1, compared to 4 per cent for the aggregated housing price index, and 3.1 per cent and 2.2 per cent for rural cities and municipalities based on quarterly dynamics (Chart 11). The sharp rise in Budapest housing price levels is even more conspicuous over a two-year time horizon: between 2014 Q1 and 2016 Q1, the Budapest housing price index advanced by 51.4 per cent, compared to only 20.3 per cent in rural cities and 14.8 per cent in municipalities. Nevertheless, the housing price dynamics of rural cities and municipalities has shown a similar picture over the past two years, with a tangible increase in smaller municipalities only materialising later, starting from late 2014.

Domestic housing price trends also differ in a regional breakdown. Although every region in Hungary has seen a continuous increase in urban housing prices over the past two years, there are major differences between the various regions in terms of both the short-term and medium-term

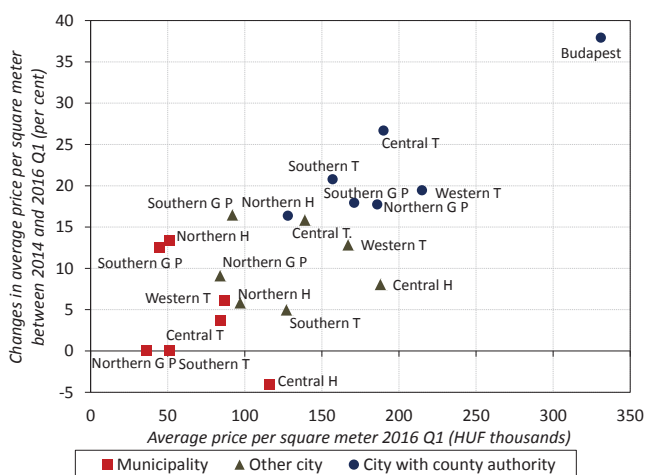
Chart 13: Average per square meter price of dwellings by settlement type



Note: 2016 Q1 based on preliminary data. The numbers above the columns refer to the increase in the average price per square meter between 2013 and 2016 Q1.

Source: HCSO.

Chart 14: Level of and changes to the average square meter price of used dwellings by regions and settlement types



Note: H – Hungary, T – Transdanubia, G P – Great Plain. 2016 Q1 based on preliminary data.

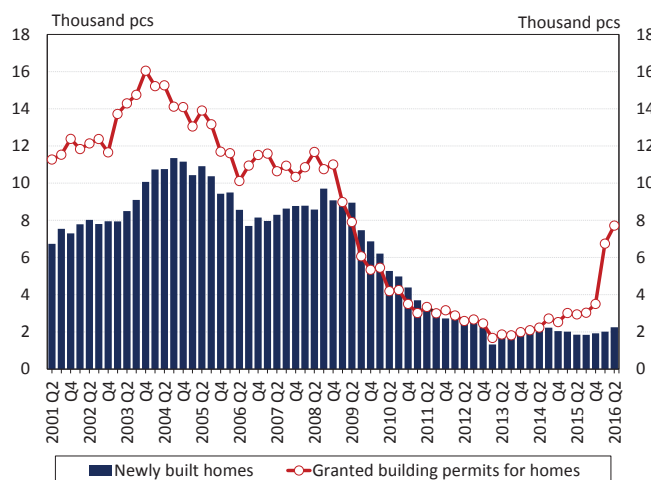
Source: HCSO.

trends. While in 2016 Q1 the rise in prices slowed in the cities of Northern Hungary and Central Hungary, they continued to climb in other regions. However, a notable difference in the longer run is that after a protracted declining trend, Northern Hungary only experienced a substantial increase in urban housing prices relatively late, from early 2015 onwards, and the price level of urban dwellings only exceeded the 2008 price level in the Western Transdanubian region in early 2016 (Chart 12).

The unit price of used homes located in Budapest has now reached that of new homes located in rural areas. The average unit price of used homes located in Budapest increased by 38 per cent between 2014 and 2016 Q1 to HUF 331,000, which far exceeds the average square meter prices in cities with county authority and other cities, of HUF 262,000 and 292,000 respectively. The unit prices of new and used homes exhibit major differences within settlement types, and there are also significant differences by settlement type in terms of both new and used homes. The average unit price of new homes located in Budapest increased to HUF 450,000 from HUF 398,000 in 2015, which is almost 72 per cent higher than the new home prices per square meter observed in cities with county authority, while the unit price of used homes located in Budapest was nearly double the prices observed in the cities with county authority by 2016 Q1 (Chart 13). On the whole, square meter prices are still tending to rise in larger settlements and areas where they were already elevated (Chart 14). All of this shows that the housing market recovery is concentrated in the more expensive areas presumably featuring higher-quality properties.

New home construction picked up again in the first half of this year, in line with the dynamically rising number of construction permits issued in previous quarters. 2016 Q1 was still characterised by the trend prevailing in the preceding period. A significant rise in the number of issued construction permits was coupled with a continued decline in new home construction, which may have been shaped by the volatile seasonality of home construction beside the subdued household demand. The expected turnaround in home construction materialised in 2016 Q2: the number of newly completed dwellings exceeded 2,000 and grew by 33.2 per cent in year-on-year terms, while the number of construction permits (approaching 8,500) exhibited a 164.7 per cent rise (Chart 15). Thus overall, the construction of dwellings grew by 10.9 per cent in the first half of this year, while the number of construction permits issued saw a 137.2 per cent increase (Chart 16).

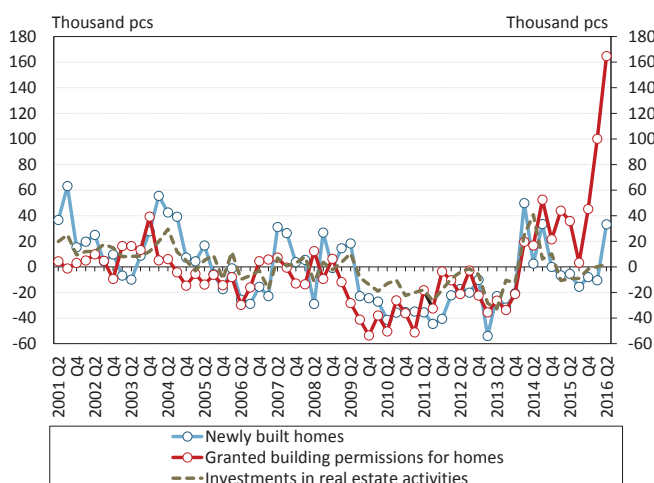
Chart 15: Number of home building permits issued and number of homes built



Note: Seasonally adjusted data.

Source: HCSO, MNB.

Chart 16: Annual dynamics of the number of construction permits issued, number of new dwellings completed and real estate sector investments



Source: HCSO, MNB.

Stemming from the real estate market's method of operation and based on its historical cycles, the rise in newly issued home construction permits precedes an expansion of new construction by approximately 4 to 6 quarters in the context of an upward trend. The size of the gap between the number of construction permits issued and the number of housing completions observed in recent quarters may suggest that the lead time between the issuance of permits and housing completions has increased, which may stem from changes in the regulatory environment, property developers' wait-and-see attitude and a slower response to government schemes. Box 3 addresses the change in the lead time of home construction in greater depth.

The dual trends of subdued construction and rising construction permit issuance also applied in Budapest, and the turnaround observed at the national level in the second quarter was even more pronounced in the capital.

The number of completions rose by 45.2 per cent in Budapest in Q2, while the number of construction permits issued increased by 190.5 per cent in year-on-year terms. The rise in the number of construction permits issued continues to exhibit geographic heterogeneity at the regional level (Chart 17). In line with this, population-proportionate home construction is the highest in Pest county and in the Western regions of Hungary. Moderate home construction and the aforementioned regional differences could collectively warrant government action to introduce housing market stimulus measures.

The government measures announced in early 2016 may provide a substantial boost to the housing market.

According to the currently available bank surveys and fiscal data, the housing market stimulus afforded by the Home Purchase Subsidy scheme for families (HPS) has been slower than previously expected, but 2016 H2 started to see a rise in mortgage applications and fiscal disbursements linked to the HPS, which is expected to further boost underlying housing market trends. As additional upside news for home construction and purchases partially or fully funded by the HPS, the scheme's eligibility conditions have been eased. As of 2016, the subsidy can be applied for even if the dwelling to be purchased is not yet complete, so this regulatory change may boost the rate of completion of property development projects.

BOX 3: EXAMINATION OF THE THE GAP BETWEEN HOME CONSTRUCTION AND CONSTRUCTION PERMITS

Following the 2013 reversal of the negative trend prevailing on the Hungarian housing market since 2008, improving underlying housing market trends were reflected primarily in the used home market, while new homes continued to account for only a small portion of housing market turnover. Home construction was still characterised by persistently subdued dynamics, while the number of construction permits issued rose at an increasingly faster pace. The gap between construction volume and the number of construction permits issued characterised the new home market for a long time, but the number of dwellings built exhibited an increase in Q2 along with the continued rise in construction permit issuance. More than 2,000 new dwellings were completed, which means a 33.2 per cent increase in year-on-year terms.

According to our empirical estimates based on earlier housing market cycles, construction permit lead times may have been between 5 and 7 quarters. Current housing market trends indicate a change in the correlation between home construction and permit issuance. The lag in home construction relative to the number of permits was most conspicuous last year, stemming from several factors. On one hand, in the context of economic policy strategy, the transformation and extension of the Home Purchase Subsidy scheme for families triggered wait-and-see behaviour among households and market participants in terms of starting construction, and also the market's regulatory environment changed, contributing to a rise in permit applications not linked to construction.

As of 1 January 2016, the government amended its decree on the energy certification of buildings. Under the decree, from 2021 onwards, buildings must meet the energy specifications valid at the time of occupation instead of at the time of construction permit issuance, and as a near-zero energy demand will be mandatory for residential buildings from 1 January 2021, this will form a condition for the issuance of occupation permits. Based on the above, it is probable that the change in the regulation effective from 2016 spurred participants with construction plans to obtain construction permits as soon as possible, which may have partially contributed to the phenomenon.

We investigated the phenomenon by analysing an error-correction model applied to the variables, which allowed us to study the temporal adjustment and the pace of adjustment between the number of issued construction permits and the number of dwellings built. The estimate of the error-correction model for the pre-crisis period and a period encompassing the current period reveals that the pace of adjustment has slowed since the pre-crisis housing market boom, with the current rate of adjustment being nearly 12 per cent on a quarterly basis compared to roughly 15-20 per cent in the cycle leading up to the crisis, corresponding to a lead time of 5 to 7 quarters. In other words, the lead times between construction permit issuance and home construction in the current housing market cycle has grown to 8-9 quarters, as reflected in the comparison of the two periods under review.

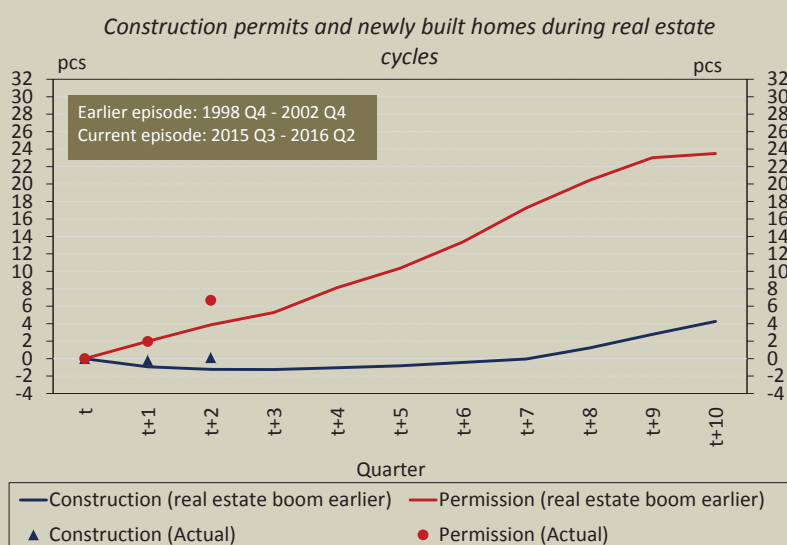
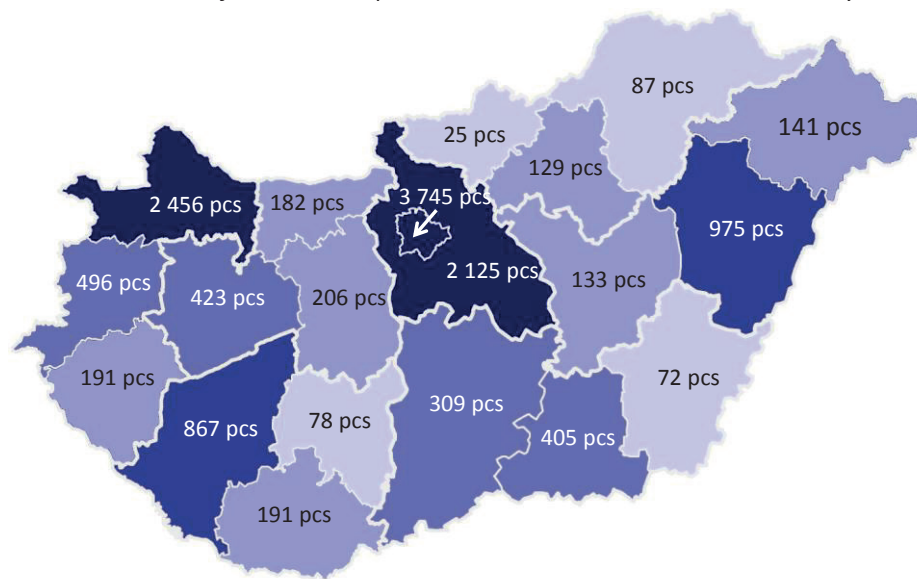
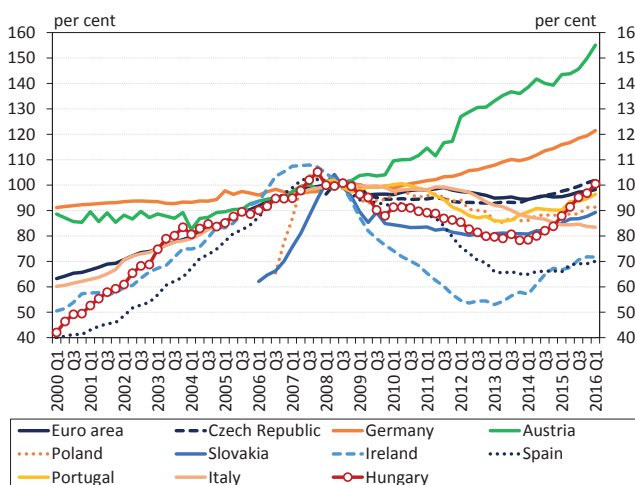


Chart 17: Number of construction permits issued in 2016 H1 in a breakdown by county



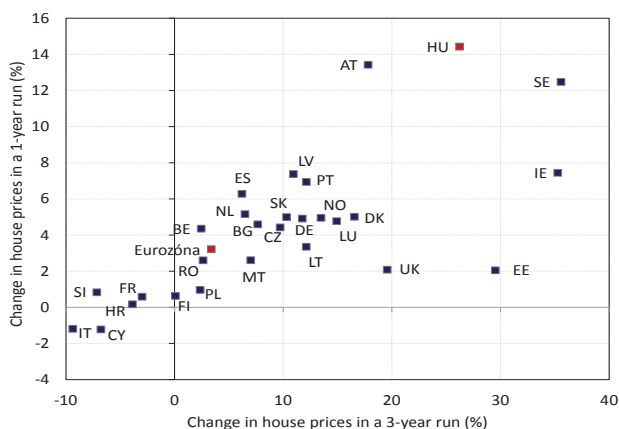
Source: HCSO.

Chart 18: Trends in house prices in Europe, average of 2008 = 100%



Source: Eurostat, BIS, MNB.

Chart 19: Changes in nominal housing prices over a 1-year and a 3-year horizon in a European comparison



Source: ECB, BIS.

3.2. International outlook

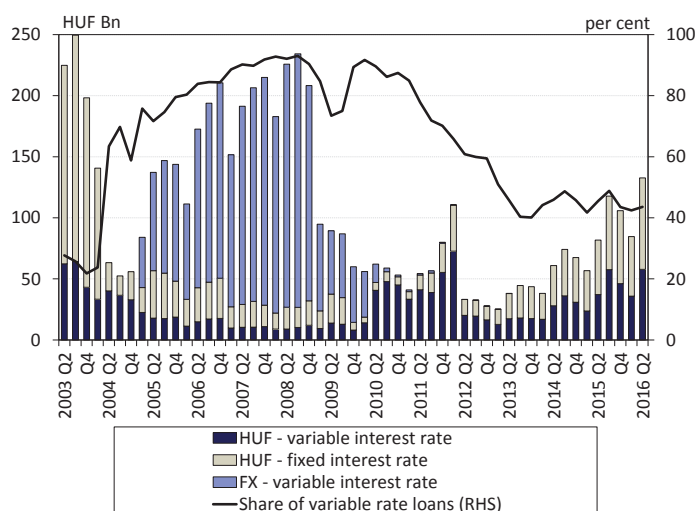
Most European housing markets were characterised by an increase in prices in the past year. Housing prices rose by a nominal 3 per cent on average in the European Union between 2015 Q1 and 2016 Q1. Within the Visegrád Group, the Czech Republic, Poland and Slovakia saw increases of 4.5 per cent, 3.2 per cent and 5 per cent in housing prices during this period. In comparison, the 15 per cent annual rise in housing prices in Hungary is elevated, but according to the MNB's housing price index, nominal housing prices in Hungary still fall short of the peak prevailing in late 2007. Among the European countries under review, Austria and Germany are notable based on the long-standing continuous increase in housing prices. Since 2008, housing prices have not declined in either of the latter two countries, increasing by 22 per cent in Germany and by 56 per cent in Austria since 2008 Q1 (Chart 18).

The rise in Hungarian housing prices has been among the highest in a European comparison over the short term. In 2016 Q1, housing prices in Hungary increased by 14.4 per cent over the course of one year, and by nearly 27 per cent over the course of three years (Chart 19). The change in housing prices is one of the highest in Europe based on both the 1-year and the 3-year horizon. However, it should be added that housing prices dipped significantly and for a sustained period in the aftermath of the crisis, so the current upward trend may also be a necessary reversal.

4. FEATURES OF THE HOUSING MORTGAGE LOAN MARKET

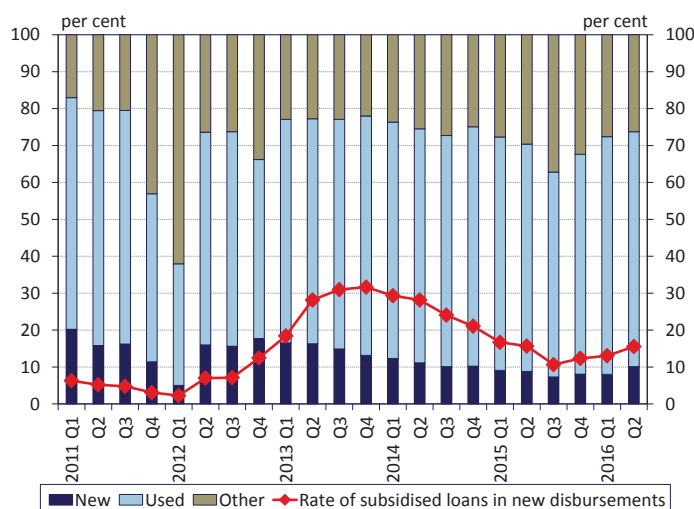
In 2016 Q1, the extension of new housing loans grew substantially, rising by 47 per cent in an annual comparison. This occurred despite the fact that loan contracts concluded in 2015 were already bound by the restrictions of the debt cap rules governing the loan-to-value (LTV) ratio and the payment-to-income (PTI) ratio. The proportion of loans contracted for new home construction shifted slightly from last year's trough in 2016 Q1, but the majority of borrowing is still absorbed by the used housing market. The financing costs of housing loans have decreased slightly, and with the easing of lending standards, a broad range of banks experienced a pick-up in demand. The rise in new lending is therefore driven by demand. Housing affordability from credit deteriorated slightly in 2016 Q1, mainly due to the failure of the loosening of credit terms to offset rising housing prices.

Chart 20: Volume of new housing loans by interest rate fixation and denomination



Source: MNB.

Chart 21: Distribution of housing loan disbursements by loan purpose



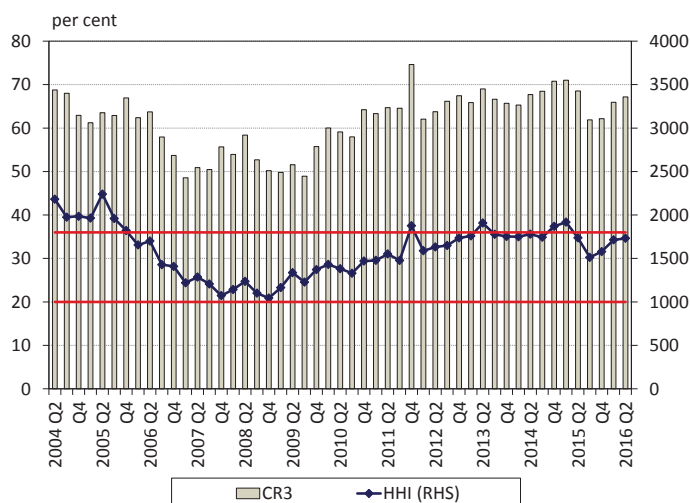
Source: MNB.

The volume of newly granted housing loans continued to rise in 2016 H1. The extension of housing loans has exhibited a cautious increase since the historical low of 2012 (Chart 20). In 2016 H1, the value of contracted transactions amounted to HUF 215 billion, a 47 per cent increase in year-on-year terms. The ratio of variable interest loan products declined significantly, compared to the period directly preceding the crisis: while in 2008 Q3, at its historic high, 93 per cent of new placements were variable or unilaterally changeable, in 2016 Q2 the interest rate of 56 per cent of new housing loans was already fixed for at least one year.

The ratio of loans used for purchasing newly built homes remains low. The ratio of loans used for purchasing newly built homes rose by two percentage points within new transactions, but nevertheless remains low: new contracts amounted to only 10 per cent in 2016 Q2, while some two-thirds of housing loans are used to purchase used housing (Chart 21). The low supply of new dwellings plays a key role in this. The ratio of state subsidised HUF loans (which are currently equal to the home purchase interest subsidy) increased somewhat over the past six months: they accounted for 16 per cent of newly contracted housing loans at the end of the period under review. The low utilisation of subsidy can be explained mostly by the fact that the average level of market interest rates reached the interest rate available with the interest subsidisation.

The biggest market participants were able to increase their market share on the new housing market. The Herfindahl-Hirschman Index (HHI) increased on the market of newly extended loans in 2016 Q1, and although it remained broadly unchanged in Q2, it approached the upper threshold of moderate concentration by the end of Q2 (Chart 22). However, the ratio quantifying the market share of the three largest credit institutions (CR3) warns of significant concentration in terms of loan extension. On the market of newly extended mortgage loans, the 3 largest market participants account for 67 per cent of the entire

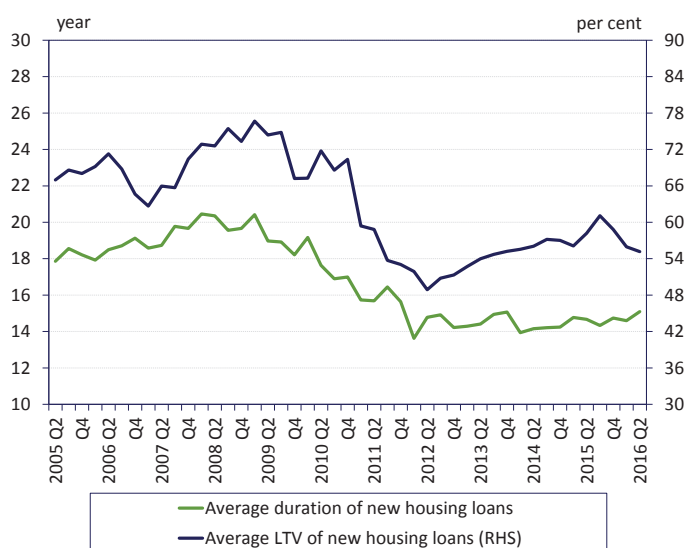
Chart 22: Concentration on new housing lending market



Note: The red lines indicate the HHI thresholds. Market concentration is low below 1,000, moderate between 1,000-1,800 and high above 1,800.

Source: MNB.

Chart 23: Average initial maturity and LTV ratio of new housing loans



Note: LTV is calculated based on the market value of the collateral from 2011, while before that it is calculated by using the mortgage lending value.

Source: MNB.

market and have managed to increase their market share by 5 percentage points over the past six months. In the segment of newly extended loans for new home construction, the three largest market participants increased to their share by 3 percentage points to 63 per cent, and market concentration was high by the end of Q2 based on the HHI. As a result, the credit conditions and debtor preferences of the largest lenders of the new issuance may be decisive in terms of households' access to housing loans.

The average loan-to-value ratio of new housing loans has decreased. The average LTV ratio of new housing loans has decreased in H1 (Chart 23). The LTV ratio for the issued volume shrank by 3.7 percentage points to 55.2 per cent by the end of June. The decrease partly stems from the fact that in 2015, the no-charge loan refinancing following the FX-conversion and appearing as new loans in the statistical sense resulted in a greater rise in the LTV ratio, leading to a reversal in 2016 H1 as this scheme terminated. In the period under review, the average initial maturity of the extended housing loans was 15 years, which represents no significant change compared to late 2015.

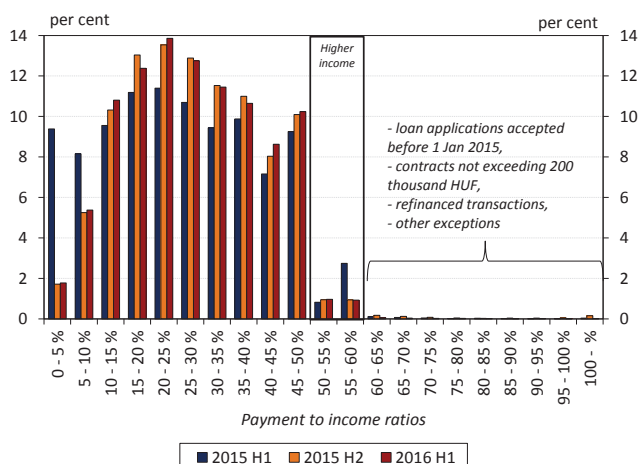
Macroprudential regulation does not restrict housing lending, which is seeing a recovery after the crisis. 98 per cent of the retail transactions concluded between January and June 2016 feature a payment to income ratio of less than 50 per cent. The relative majority of these contracts feature a ratio between 20 and 25 per cent. On this basis, the expansion of the new lending since January 2015 has not been restricted by the debt cap rules (Chart 24).

The average APR on housing loans has decreased slightly. The average annual percentage rate of charge (APR) on the newly issued volume decreased in 2016 H1 by 0.1 percentage point to 5.7 per cent (Chart 25). This resulted from a decline in the reference interest rate in the wake of a base rate cut and a rise in spreads. The average interest level of the schemes provided by home savings associations continues to exceed the market average. In addition to the significant demand stimulation effect, the low interest rate environment may represent an interest rate risk in the debt servicing performance of households with variable interest mortgage loans over the long term.

Housing loan conditions eased in Q2, while credit demand continued to intensify. The Lending Survey reveals that a net one-third of banks⁶ eased their credit terms on housing

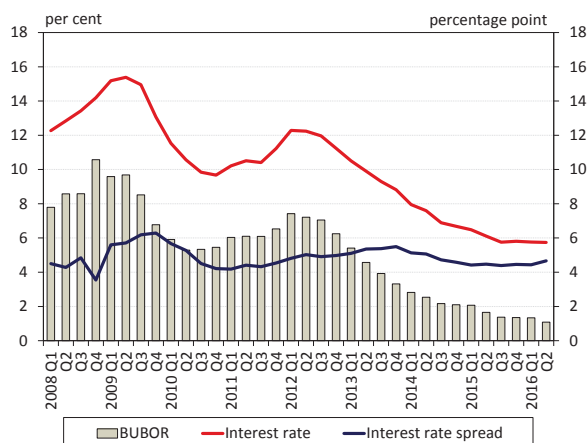
⁶Difference between tightening and easing bank weighted by market share.

Chart 24: *Distribution of the PTI of new loans since the entry into force of debt cap rules*



Source: MNB.

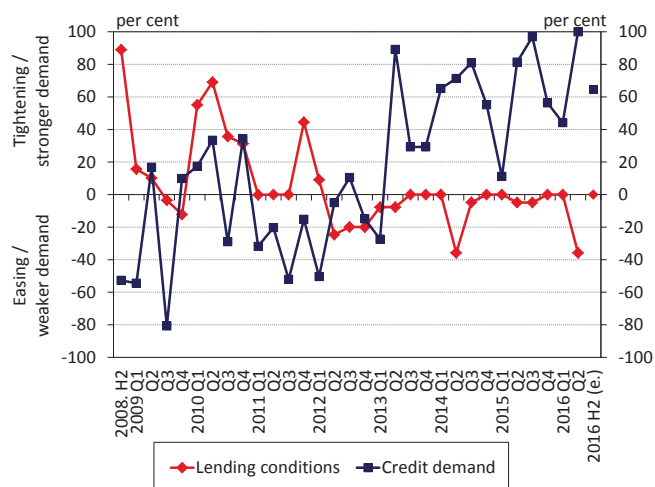
Chart 25: *Financing costs of new housing loan contracts*



Note: Smoothed quarterly data. APR-based spreads on 3-month BUBOR.

Source: MNB.

Chart 26: *Changes in credit conditions and demand in housing loans*



Note: The net ratio in conditions is the difference between tightening and easing banks, weighted by market share.

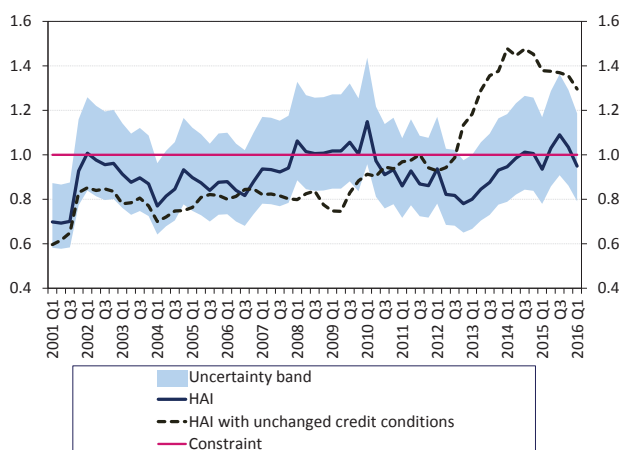
Source: MNB based on banks' responses.

loans in Q2, while the standards remained unchanged in Q1 (Chart 26). Respondent banks mentioned developments in housing market trends as the primary and market share objectives as the secondary motive for the easing. In terms of sub-conditions, easing mainly took place in price conditions, with minimal easing in the required creditworthiness level. This explains the apparent contradiction between the rise in spreads and the easing of price conditions: banks presumably lent to riskier customers as well in Q2. Demand continues to rise in parallel, with all of the respondent banks having perceived a pick-up in Q2. Looking ahead, banks do not intend to ease conditions in the coming six months and expect a broad continuation of the recovery in demand.

The Home Purchase Subsidy scheme for families (HPS) available in its actual form since February 2016 has stimulated demand. In 2016 H1, 61,000 individuals expressed interest in this scheme and 12,000 applications were submitted to banks by the end of June in a total value of HUF 32 billion, and the 9,401 concluded contracts reached HUF 21.5 billion in value. In Q2, roughly 12 per cent of the newly extended housing loans were linked to applications for the HPS, and the scheme's role in lending may grow further: nearly 60 per cent of the individuals having expressed interest in the subsidy also plan to borrow, according to the MNB's survey.

Housing affordability deteriorated in 2016 Q1. The HAI index decreased in early 2016 (Chart 27). According to the MNB's calculations, a household with 2 average incomes has an income 5 per cent less than required to take out a typical mortgage loan needed to purchase an average home. The index has changed as a result of several factors: the spike in housing prices pushed the index upwards, and this effect could not be offset by the easing credit standards, while financing costs remained unchanged at a low level in the period under review. Calculating the index using a 30 per cent payment-to-income (PTI) ratio and 20-year maturity, we get a significantly higher value. This indicates that concluded transactions are characterised by relatively tight lending conditions. The reasons include prudent credit supply and the composition of loan demand.

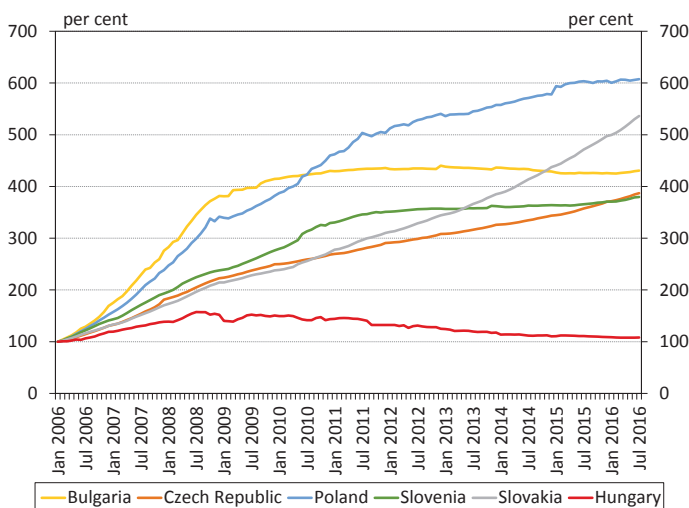
The stock of housing loans in Hungary decreased to late-2005 levels on a transaction basis. While positive housing loan transactions were typical within the region during the crisis, the Hungarian volume decreased relative to the pre-crisis level following a slight upward drift. As a result, in mid-2016, the stock of loans sank to the 2006 levels on a transaction basis, while the Visegrád Group saw the stock

Chart 27: Housing Affordability Index, HAI⁵

Source: MNB.

of household housing loans more than triple based on the balance of disbursements and repayments (Chart 28). Housing lending in Hungary also dipped significantly relative to households' disposable income, and fell disproportionately relative to the rise preceding the crisis by international standards. Households' improving income position and postponed housing demand foster a pick-up in housing lending; however the central bank must monitor this development to ensure that lending remains prudent without accumulating substantial risks.

Chart 28: Trends in the stock of housing loans within the region



Note: Transaction-based calculation; January 2006 = 100%; Hungarian data adjusted for the impact of the early repayment scheme and the settlement.

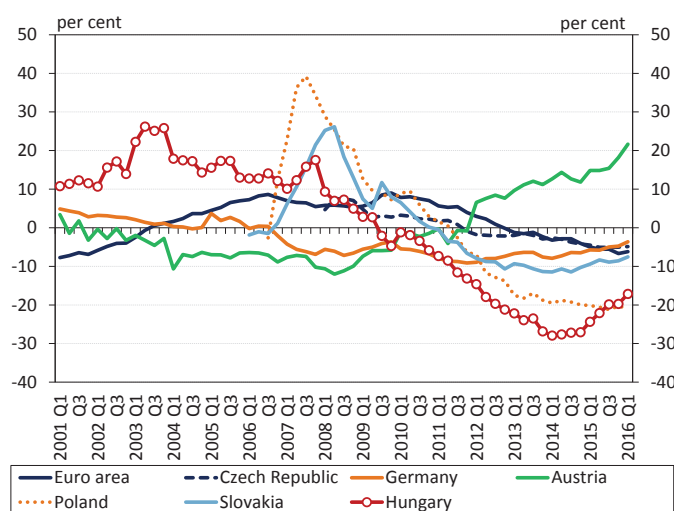
Source: MNB, ECB.

⁵A rising index represents the easier home purchases financed from credit. The uncertainty band stems from the modification of LTV used for the calculation. The index calculated with unchanged loan conditions suggest a PTI and maturity values that are throughout constant. The methodology of the index is described in detail in the November 2013 issue of Financial Stability Report (text in Box 3).

5. CYCLICAL POSITION OF THE HOUSING MARKET

The housing market recovery seen over the past two years, and specifically the dynamic growth in housing prices, is fostered by numerous macroeconomic fundamentals shaping the underlying housing market trends. The improvement in households' income position, better labour market prospects, including longer-term structural prospects, falling indebtedness within the sector and the positive credit market situation all warrant the rise in housing prices through a pick-up in housing market demand. According to our calculations, based on the above, average housing prices in Hungary are still in line with the underlying macroeconomic trends, despite the dynamic increase observed over the past years. According to our forecast, housing prices may continue to climb in 2016, albeit at a slower rate.

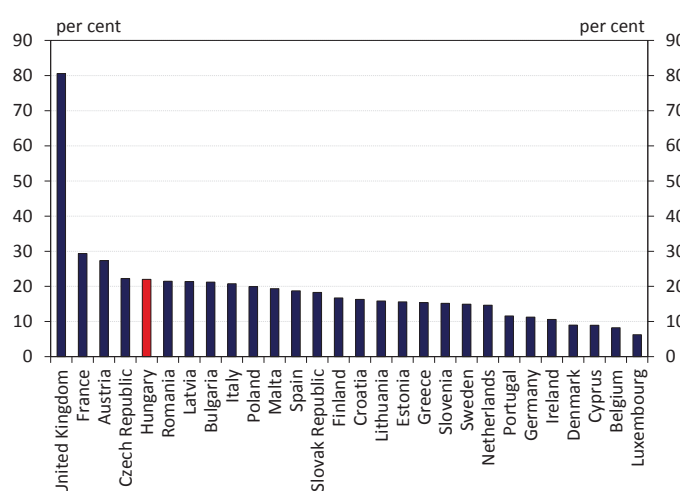
Chart 29: Percentage deviation of nominal housing prices/nominal GDP per capita from the long-term average



Note: The long-term average of the house price index/GDP per capita was calculated between 1995 and 2016 Q1.

Source: Eurostat, BIS, MNB.

Chart 30: Average square meter prices to per capita income in an international comparison



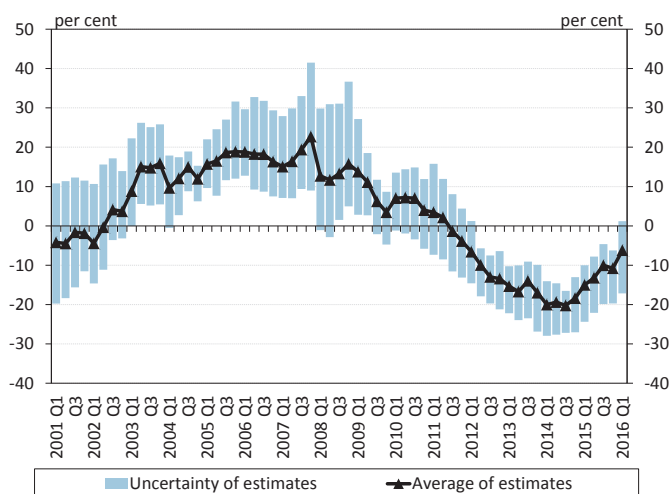
Note: Data from 2014-2016.

Source: Global Property Guide.

The dynamic rise in domestic housing prices is not excessive relative to incomes, despite this trend lasting for more than two years. The house price-to-income ratio is the simplest indicator used to evaluate housing price levels. The indicator shows the level of house prices relative to income per capita. In the longer run, intuition suggests that house purchases will represent the same portion of income, so we investigate the indicators deviation from the long-term average. Housing prices were relatively elevated until 2009, after which the house price-to-income indicator dipped significantly below its long-term average as housing prices saw a sustained decline. From 2014 onwards, the Hungarian housing market underwent a turnaround and housing prices started climbing at a faster rate relative to per capita income, but the indicator still remains below its long-term average (Chart 29). In addition, the average square meter prices relative to the per capita income are considered to be comparatively high in an international comparison (Chart 30).

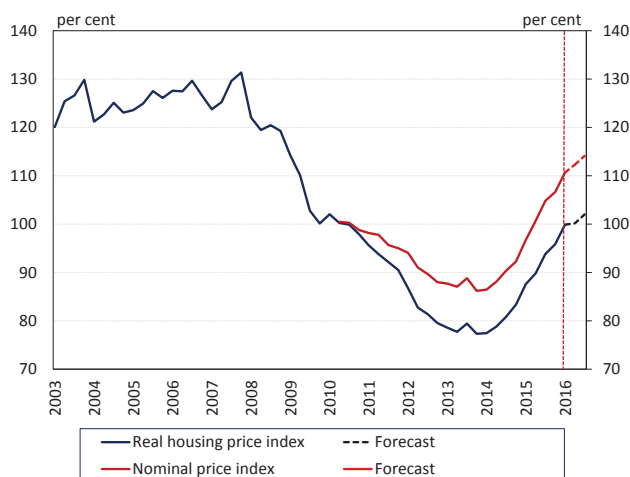
According to our estimate, the level of housing prices in Hungary still does not exceed the level warranted by the macroeconomic fundamentals shaping the housing market. Falling unemployment (and in this context, gradually declining long-term structural unemployment), improving household income position, household indebtedness and credit market conditions all warrant an increase in housing prices. Based on our calculations, the current real housing price increase is in line with the level warranted by macroeconomic fundamentals. It should be noted that there are significant variations between the individual estimates, and the bottom of the uncertainty interval for equilibrium housing price estimates is close to the actual price level, which means that the real level of housing prices is on par with the level warranted by macroeconomic fundamentals. Moreover, as the uncertainty of the estimates rejects the current overvalued character of the real housing price level, broadly speaking, the price increase observed over the

Chart 31: Divergence of housing prices from the estimated equilibrium level



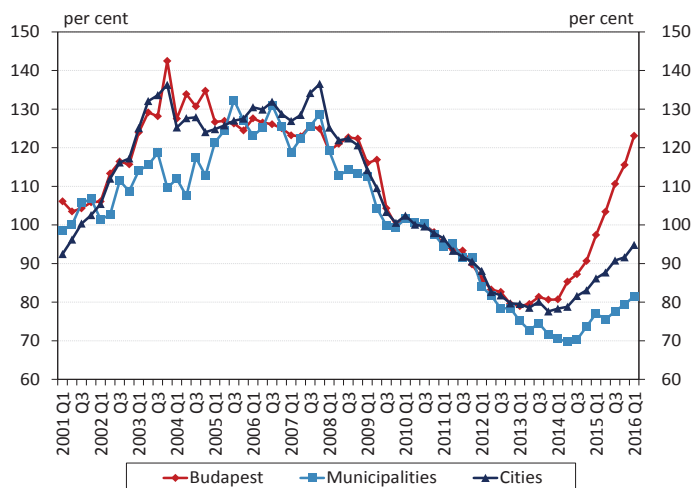
Source: MNB.

Chart 32: The MNB's nominal and real housing price index and the forecasted index



Source: MNB.

Chart 33: The MNB's real housing price index in a breakdown by settlement type



Source: MNB.

past two years is in line with macroeconomic developments according to our calculations (Chart 31).

According to our forecast, Hungarian housing prices may continue to rise in 2016, but we expect a slowdown in the dynamics of growth. Based on our estimate, the short-term developments of housing prices are closely correlated with the position of the economic cycle, construction permits and changes in unemployment adjusted for workers in public work programmes. In the short run, we expect further improvements on the labour market and a gradual rise in the number of construction permits issued, coupled with a gradual narrowing of the output gap over our forecast horizon. Based on the forecast prepared using the estimated correlations, real housing prices may continue to increase over the course of this year, but due to the proximity of housing prices to the long-term trend, the dynamics of the growth in prices may slow over the coming quarters: in annual terms we expect an 8.7 per cent increase in real housing prices and an 8.8 per cent increase in nominal housing prices in 2016 Q3 (Chart 32).

The sharp rise in housing prices in Budapest only carries moderate risks for the time being. While average housing price increases at the national level are on par with changes in the macroeconomic fundamental shaping the housing market, the question arises whether the intense spike in housing prices in Budapest can be regarded as a fundamentally warranted trend or if the spike carries risks. The underlying trend shaping the housing market exhibit a more positive picture in Budapest. More positive labour market conditions and demographic trends that show a positive balance of internal migration towards the capital warrant higher housing market demand compared to the national average, which may partially explain the higher-than-average rise in housing prices relative to the national figure. In addition, the number of construction permits issued in 2016 grew at a faster rate in Budapest compared to the rest of the country, and adjusting supply may help alleviate the pressure on increasing housing prices. Finally, the Budapest sub-index of the MNB's housing price index is only now approaching its 2008 level and still remains below the historical peak (Chart 33).

Count István Széchenyi

(21 September 1791 – 8 April 1860)

Politician, writer, economist, minister for transport in the Batthyány government whom Lajos Kossuth referred to as ‘the greatest Hungarian’. His father, Count Ferenc Széchenyi established the Hungarian National Museum and Library; his mother, Julianna Festetich was the daughter of Count György Festetich, the founder of Georgikon, an institution for the teaching of agricultural sciences.

With his ideas – whose message remains relevant even today – and his activities both as a writer and a politician, István Széchenyi laid the foundation for modern Hungary. He is one of the most eminent and significant figures in Hungarian politics whose name is associated with reforms in the Hungarian economy, transportation and sports. He is also known as the founder and eponym of numerous public benefit institutions, a traveller all across Europe and an explorer of England as well as the champion of economic and political development at the time. István Széchenyi recognised that Hungary needed reforms in order to rise, and considered paving the way for a Hungary set on the path of industrialisation and embourgeoisement to be his calling in life.

Published in 1830, his *Credit* outlined the embourgeoisement of Hungary and summarised its economic and social programme. Count Széchenyi intended this writing to make the nobility aware of the importance of the country’s desperate need for a social and economic transformation. Another work of his, *Stádium* [Stage of Development] (1833) listed the cornerstones of his reform programme in 12 points, including the voluntary and compulsory liberation of serfs; the abrogation of *avicitas* (inalienable status of noble property); the right of possession for the peasantry; and the freedom of industry and commerce. This work of Széchenyi already conveyed the idea of equality before the law and the general and proportionate sharing of taxation.

After the revolution in 1848 István Széchenyi joined the Batthyány government and as minister embarked vigorously on implementing his transportation programme.

HOUSING MARKET REPORT

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