



HOUSING MARKET REPORT



MAY
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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(May 2016)

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The housing market represents a key area at the level of the 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 recovery. 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.

In fulfilling its primary tasks, the real estate market and within that the housing market is of key importance for the Magyar Nemzeti Bank 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.

'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, 'Housing market developments' 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>

TABLE OF CONTENTS

1. Executive Summary	5
2. Macroeconomic environment.....	6
2.1. Housing market demand.....	6
2.2. Housing market supply	8
3. Current housing market trends	12
3.1. Domestic housing market developments	12
3.2. International comparison	16
4. Features of the housing loan market	19

LIST OF BOXES

Box 1: The quality of the dwelling stock in Hungary in light of the economic recovery	9
Box 2: Ensuring the methodological framework for more extensive monitoring of housing prices.....	17

1. EXECUTIVE SUMMARY

Macroeconomic environment generally acted towards a recovery in the real estate market, thus a strong pick-up was observed on the domestic housing market in 2015. This recovery was supported by a number of demand factors, while at the same time it is also hampered by several supply constraints. The purchasing power of households' income has increased with rising real wages, which influences the demand side of home purchases, and long-term labour market prospects have also improved significantly. The low interest rate environment also has positive effects: on the one hand, it substantially boosts housing market demand thanks to the favourable financing costs, and on the other hand it also supports significant investment demand on the housing market. Furthermore, demand is facilitated by the easing pressures from households' deleveraging and by the elimination of exchange rate risk thanks to the conversion of foreign currency loans. However, the general recovery in housing market demand is also shaped by demographic trends in Hungary. The declining population based on current projections is restricting demand in a longer run, while in and around Budapest, as well as in the north-western counties domestic migration boosts local housing market demand. However, on the supply side of the housing market, obstacles to a healthy recovery may include the large number of properties functioning as collateral for non-performing mortgage loans, banks' moderate loan supply, and shortages of labour and building materials in the construction industry.

Despite the substantial growth of house prices they have only reached yet the level of prices observed before the global financial crises, overall the rise in prices can't yet be deemed to be excessive. The housing market does not show a uniform picture in terms of geographical and sub-segment developments. The recovery was primarily visible in the sub-market of used homes in Budapest and in larger cities, while no significant improvement occurred in the case of new dwellings and smaller settlements. The number of issued building permits rose by 30 per cent in 2015, while the number of new constructions fell in the same period; the reason for this may be a wait-and-see approach on the part of real estate developers. Thus, overall, new supply remains at a low level. The measures introduced by the Government in early 2016 may considerably influence the market of new dwellings, contributing to a more balanced recovery. While the expansion of the home purchase subsidy scheme for families (HPS) may generate significant additional demand on this sub-market, the decrease in the VAT on new dwellings may contribute to the completion of deferred investments, ensuring new supply of adequate quantity and quality.

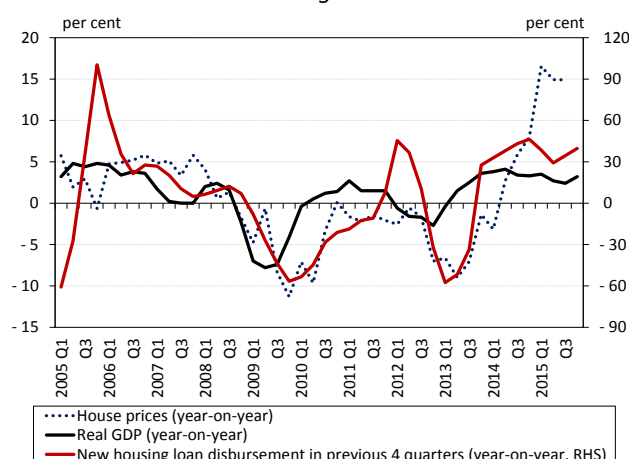
Improving demand conditions on the housing market are reflected also in lending developments. In 2015, on an annual basis, the volume of newly issued housing loans grew by roughly 50 per cent, while the stock of housing loans is still declining with an annual pace of 4,6 percent as a result of transactions. The "debt cap" rules in effect since January 2015 ensure a healthy recovery and prevent excessive burdens for debtors. However, it has also been observed, that the recovery is primarily related to used properties. Based on the Lending Survey, banks did not significantly change conditions on housing loans in 2015, and the majority of banks reported an increase in demand. Home purchases using loans is also supported by the low interest rate environment, while the elimination of households' foreign currency risk as a result of the conversion may also ease banks' loan supply constraints.

Overall, we view the recovery on the housing market as favourable. The dynamic growth of house prices and the expansion of the volume of new housing loans are not considered to be excessive, thus the current risk level is low. However, housing market developments still need to be closely monitored, due to the frictions on the supply side, the significant increase in demand and the external factors affecting the market.

2. MACROECONOMIC ENVIRONMENT

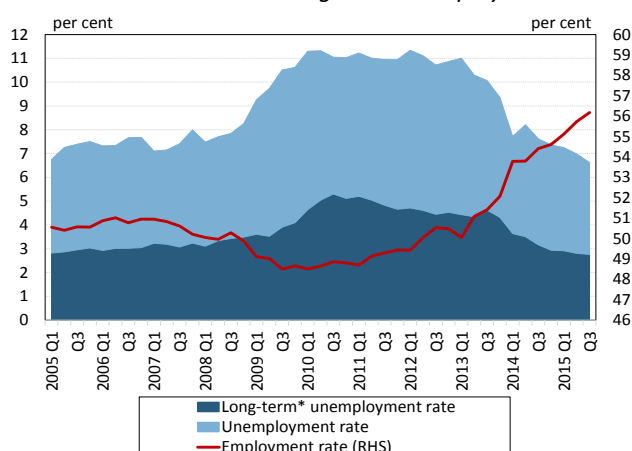
In the past year, the domestic housing market turn was supported by several demand side factors, while frictions have been seen on the supply side of the market, partially as the legacy of the crisis. Households' income position and labour market prospects show an improving trend, and to a large extent rising employment and real income contributed to the growth in housing market demand in 2015. On the one hand, the low interest rate environment increased housing demand via the favourable financing costs, and on the other hand, it revived home purchases for investment purposes due to the low alternative deposit and bond yields, and thus may have also attracted foreign investors. The net financial wealth of the household sector are at a historical high, and easing pressures for deleveraging may also contribute to the housing market recovery. At the same time, the rise in demand may be uneven in geographical terms, in light of demographic trends within Hungary. Domestic migration towards the capital and its environs as well as the north-westerns counties shifts housing demand towards these areas. On the supply side, the recovery on the housing market is constrained on the one hand by the delayed adjustment in supply and on the other hand by the uncertainty stemming from the large number of residential properties functioning as collateral for non-performing mortgage loans, as well as by the subdued loan supply. In addition to the above, shortages of labour and material in the construction industry may also function as an additional restricting factor, while the lack of adequate quality of the domestic dwelling stock currently underlines the importance of new housing construction.

Chart 1: Annual dynamics of house prices, real GDP and new housing loans



Source: MNB, FHB

Chart 2: Short and long term unemployment



Note: * unemployed for more than 1 year.

Source: HCSO

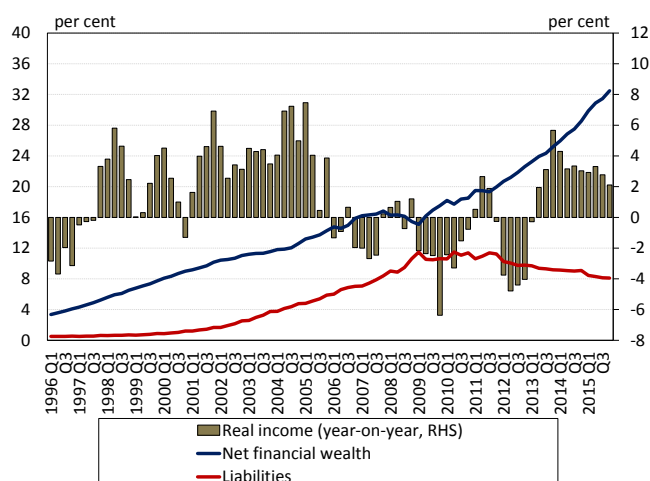
2.1. Housing market demand

Housing market demand and the investment decisions of households are primarily driven by their income position and within this in particular by the long-term income prospects, the net financial wealth position and loan market conditions (Chart 1). In addition to these factors, housing market demand is also strongly influenced by demographic processes.

Households' real income increased gradually in recent quarters. Lower tax burdens, modest inflation and improving employment rates all contributed to increases in real income. Housing market trends may be most strongly driven by labour market prospects. One favourable shift in the past year's figures is that private sector labour demand is growing, in addition to employment in public work schemes. In line with this, long-term unemployment also began to fall, which may improve households' propensity to invest thanks to longer-term income prospects (Chart 2). Improving employment figures and rising real incomes raise longer-term income expectations, which are an important determinant of house purchases.

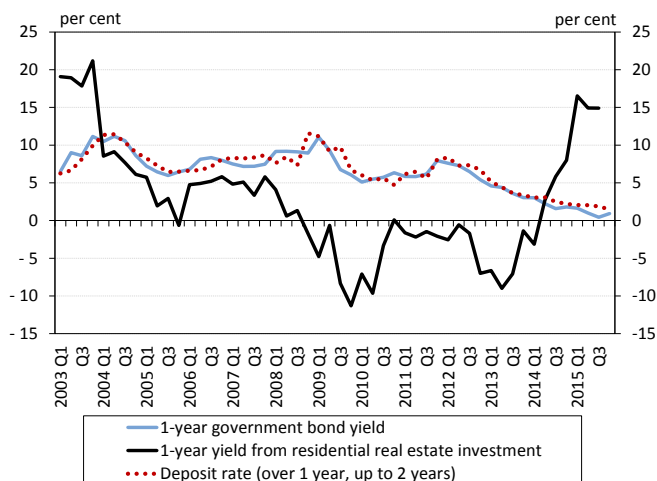
The slow reduction of foreign currency debt accumulated before the crisis may function as a significant obstacle to real estate market demand. Although the process of debt repayment is still underway, the debt-to-income ratio of households has already neared the pre-crisis values, and – also taking into account financial assets – households' net financial worth has increased to a historically high level (Chart 3). The gradual easing of deleveraging pressures and the sector's healthier balance sheet structure may also contribute to a turnaround on the real estate market.

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



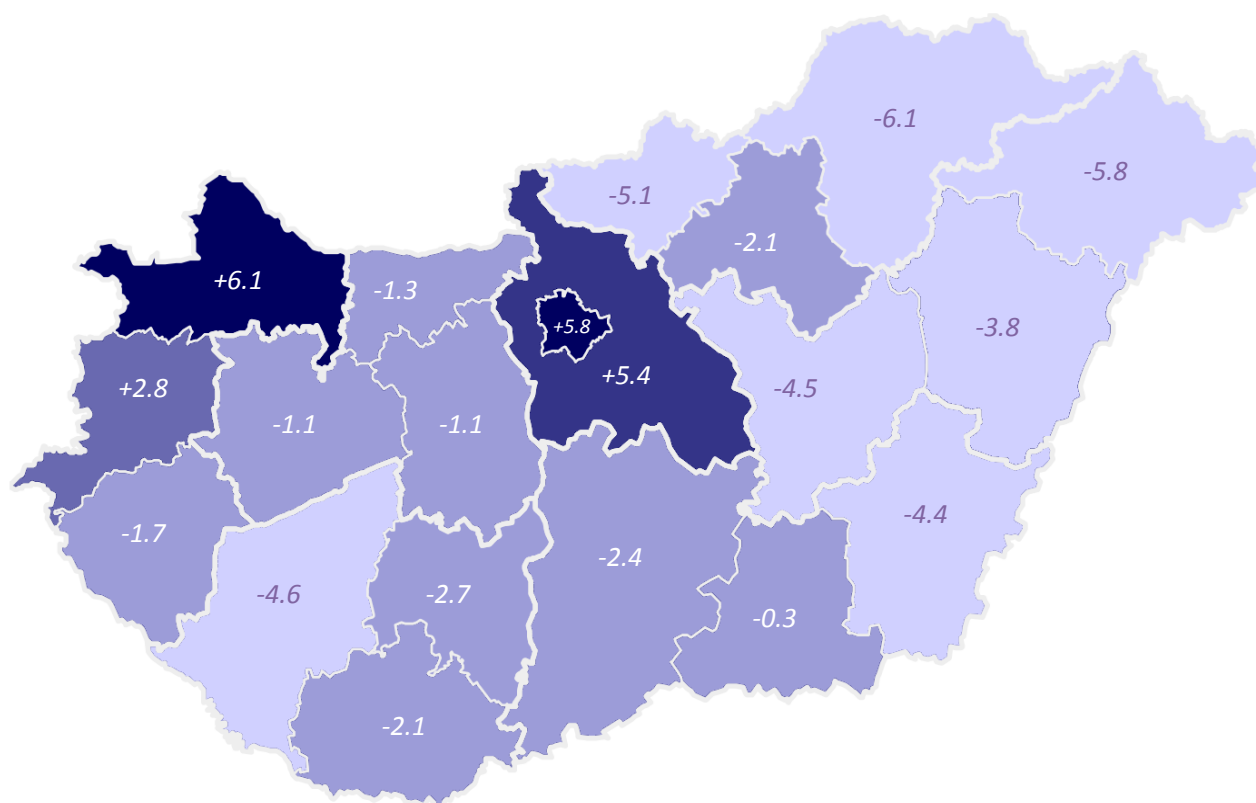
Note: the yield realisable from home investment is calculated exclusively based on changes in housing prices.

Source: ÁKK, FHB, MNB

The historically low interest rate environment has resulted in the easing of price conditions on loans and boosted the attractiveness of housing market investments. Forint-denominated housing loans became more attractive as a result of lower financing costs in line with the reduction of the base rate, and demand for real estate as an investment instrument also rose in conjunction with the reduction of yields on risk-free instruments. This may be strengthened by the fact that – following the historically low level in 2010-2011 – compared to yields on short-term discounted treasury notes and deposits, the retrospective yield premium on real estate market investments calculated exclusively from changes in housing prices seems to have improved, with this indicator continuously moving in a positive range in recent quarters (Chart 4). The interest rate environment is low even by European standards, and the dynamic appreciation of housing prices may result in an increase in demand from non-residents.

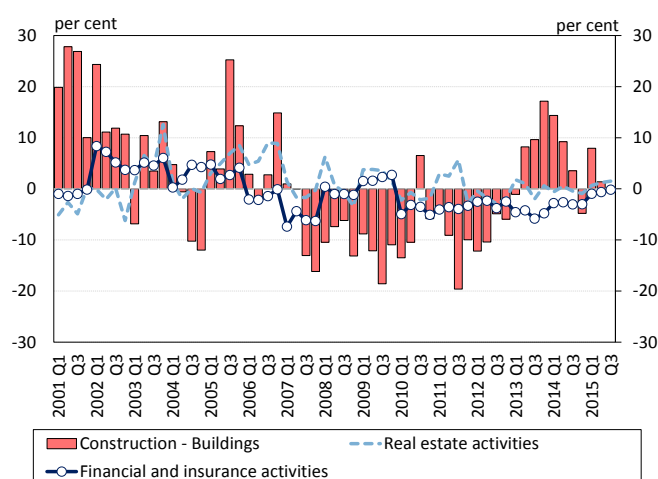
The uneven pattern of domestic migration significantly influences demand in the individual sub-markets. The general recovery in housing market demand is also shaped by domestic demographic processes. Domestic migration is primarily boosting the number of inhabitants in and around Budapest and in the north-western counties (Győr-Moson-Sopron and Vas) (Chart 5). As a result of this process, with the rising housing needs in these counties, additional housing market demand is emerging, to the detriment of other regions.

Chart 5: Net domestic migration per 1,000 inhabitants, 2014



Source: HCSO

Chart 6: Changes in the performance of the Hungarian real estate sector and related industries



Source: HCSO, MNB

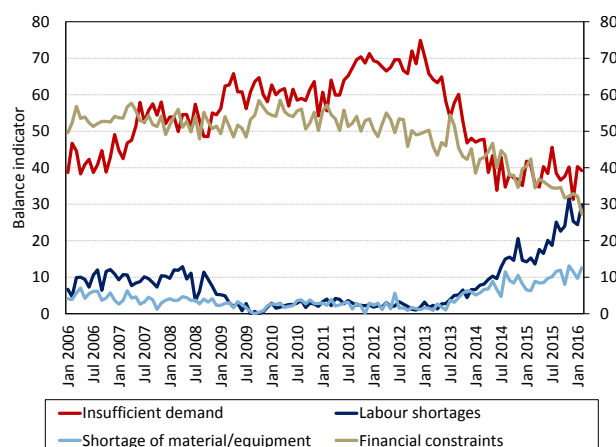
2.2. Housing market supply

Housing market supply is primarily influenced by the quantity and quality of the existing dwelling stock and by the state of the construction industry (Chart 6). Furthermore, the costs of home construction and the financing conditions of the real estate sector also play a major role.

There are still constraints to the housing market recovery on the supply side. Based on what was presented in the previous chapter, a number of factors on the demand side are fostering a recovery. However, supply conditions on the real estate market typically react with some delay. Furthermore, as a legacy of the pre-crisis lending, the large stock of dwellings included in the balance sheets of commercial banks as collateral and the large number of unoccupied dwellings may continue to represent a potential uncertainty factor. Following the crisis, the financial system reduced the financing of the real estate sector to a great degree and significantly tightened lending conditions; consequently, there is still considerable room for lower supply constraints.

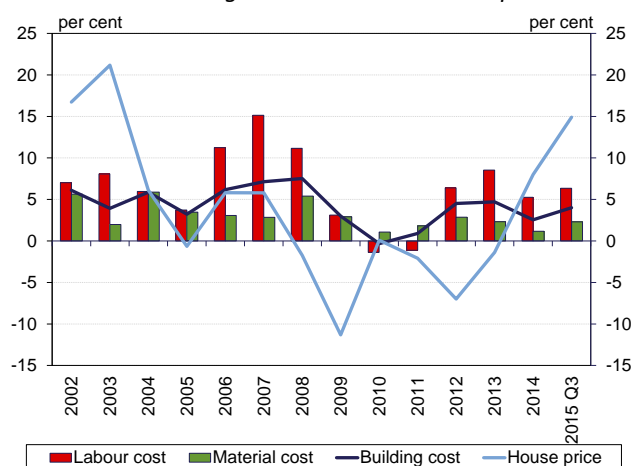
The pace of the housing market recovery may also be significantly influenced by the availability of skilled labour. Strict lending conditions are still characteristic of financing in the sector, which may give rise to constraints hindering the market recovery. Along with favourable demand conditions,

Chart 7: Constraints to production in the Hungarian construction industry



Source: Economic Sentiment Indicator, European Commission

Chart 8: Changes in home construction prices



Note: Construction expenses are the changes to the net costs of home construction without the plot price and VAT.

Source: HCSO

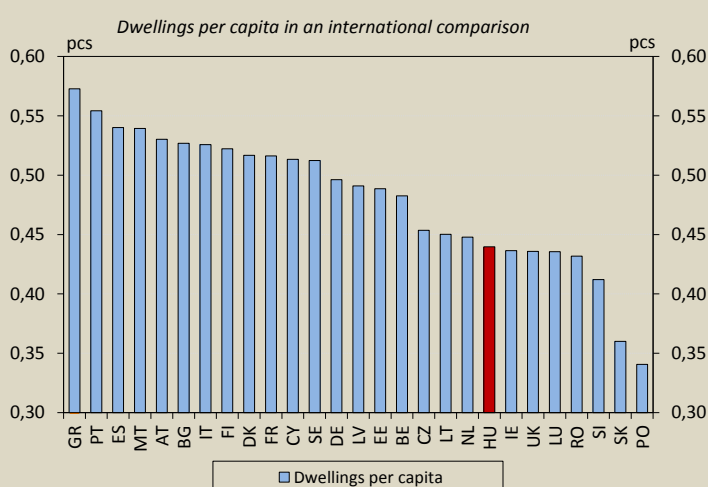
in the past years one increasingly typical feature of the construction industry has been that the lack of labour and materials can be considered as the main factors hindering production; accordingly, the projected pace of expansion on the housing market may be hindered to a great degree by these constraints (Chart 7).

House price appreciation exceeds again the rise in construction costs. While housing prices typically decreased between 2008 and 2013 in annual terms, construction costs have not fallen in parallel with this since 2000 (Chart 8). The continuous increase in construction costs is due primarily to rising labour costs, although material costs also did not decline in annual terms over the period under review. The growth rate of housing prices exceeded again the annual change in costs in 2014, which may contribute to the revival of supply.

BOX 1: THE QUALITY OF THE DWELLING STOCK IN HUNGARY IN LIGHT OF THE ECONOMIC RECOVERY

The quality of a country's dwelling stock fundamentally influences the housing market and thus impacts the national economy as a whole. The quality of the dwelling stock determines the housing conditions of the population, and thus a major part of life quality; therefore, improving the quality of the dwelling stock is also important in social terms. In the case of poor dwelling stock quality, its improvement, the replacement of the amortisation of the portfolio as well as preservation is important due to construction industry investment and thus also for economic considerations. In addition to its economic importance, expansion of the dwelling stock may contribute to the gradual reduction of the number of persons living in overcrowded dwellings.

In Hungary, the dwelling stock is comprised of nearly 4.4 million properties (based on figures from 2011), almost 11 per cent



Note: Based on data from 2011.
Source: Eurostat.

of which is unoccupied. In addition, the stock of dwellings per capita can be considered low in a European comparison. In Hungary, the proportion of the population living in severe housing deprivation and in overcrowded dwellings also lags behind in a European context: regarding these indicators only Romania is characterised by a situation worse than in Hungary. Based on the Eurostat definition, severe housing deprivation means that someone lives in an overcrowded dwelling and faces at least one other aspect of housing deprivation, which includes a leaking roof, lack of a bath or indoor toilet, or a dwelling being too dark. Furthermore, the definition of “overcrowded” is met by any dwelling where the minimum number of rooms are not available, i.e. at least one room and one separate room

- for couples,
- for any person aged 18 or above,
- for at most two persons of the same gender aged 12-17,
- for two children under 12.

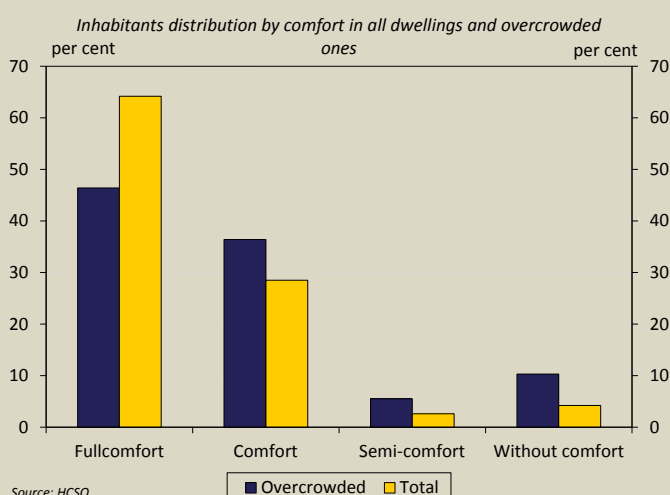
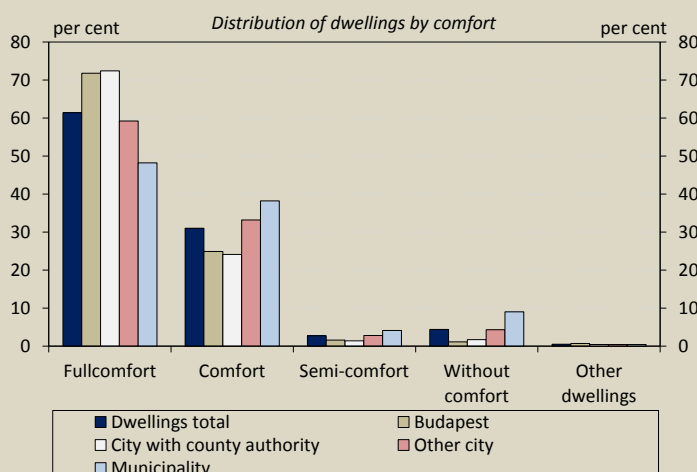
In Hungary, 15.2 per cent of the dwelling stock is overcrowded, and the proportion of population living in overcrowded dwellings is 22 per cent, based on the 2011 census data. These circumstances are however somewhat mitigated by the fact that roughly one third of overcrowded dwellings can be considered as overcrowded because the kitchen – due to its size – is not considered as a separate room (in the calculations of Eurostat a kitchen above 4 square meters can be considered as a room). Additionally, in two thirds of the cases the composition of occupants causes the overcrowding. Some three quarters of the overcrowded dwellings is smaller than what would be adequate by one room.

People live in the most overcrowded dwellings in Borsod-Abaúj-Zemplén, Hajdú-Bihar and Szabolcs-Szatmár-Bereg counties, while the least overcrowded dwelling situation is found in Győr-Moson-Sopron and Tolna counties, although there is significant heterogeneity among the districts in Budapest, by districts within the counties and by settlement types and settlements.

Overcrowding entails a lower degree of comfort. While some two thirds of the population lives in dwellings with all amenities³ in the entire dwelling stock, this is true only for less than half of the overcrowded dwellings.

In overcrowded dwellings, it is a common phenomena that several generations live together. While the ratio of single generation dwellings is 50 per cent within the entire population, it is only 21 per cent among overcrowded dwellings. The ratio of double-generation families is 64 per cent in these households, while that of three-generation families is 15 per cent. We can assume that this part of the population would be the most willing to move into a separate dwelling.

The underdevelopment of the dwelling stock is well



³ Full comfort: the dwelling has at least one room over 12 square meters, a cooking and bathing room, lavatory, can be heated through district-, central or continuous flow heating, electricity, water, hot water and sewage supply is ensured. Comfort: dwellings with individually heated rooms. Semi-comfort: missing bathroom or lavatory, among public utilities only electricity and water supply is ensured. Without comfort: has at least one room and one cooking room, may be heated at least in an individual manner. Dwellings not falling within any of the above comfort categories are emergency accommodations and other dwellings.

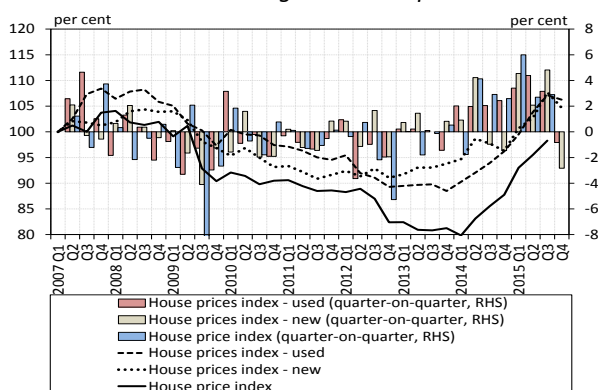
represented by the distribution of residential properties by wall type. A significant proportion, some 15 per cent of dwellings have walls made of adobe or rammed earth according to the 2011 census figures.

Demographic processes themselves would not justify expansion of the dwelling stock in Hungary. However, due to the qualitative and quantitative deficiencies, the building of new dwelling stock of adequate quality and the renovation of the existing stock is necessary. The expansion may not only support the satisfaction of increased demand for new dwellings, but may also help the separation of multiple generation households, and thus to reduce the ratio of the population living in overcrowded dwellings. In addition to all of these aspects, improving the quality of the dwelling stock may also help to improve the general quality of life.

3. CURRENT HOUSING MARKET TRENDS

In 2015, a significant recovery was seen on the domestic housing market, as reflected in both the significant house price appreciation and the expansion of housing market turnover. The market recovery, however, is not uniform in terms of territorial distribution or segments. In the market of new dwellings, a negative trend has been seen since 2008, but this trend now appears to be reversing, albeit only slowly. In 2015, the recovery in new housing constructions came to an end, but the number of building permits issued (which typically precedes the number of new constructions by 4-8 quarters) was nearly 30 per cent higher as compared to 2014. The recovery of the housing market also shows a heterogeneous picture in relation to geographical location. In 2015, the increase in turnover in Budapest exceeded that seen in the settlements outside of the capital, while average square meter prices also increased to the greatest extent in and around the capital and also in the larger settlements and in the Western Transdanubian region. The measures announced by the Government, the expansion of the home purchase subsidy scheme for families and the reduction of VAT on housing market transactions collectively support the improvement of the market of new dwellings and a more balanced recovery in the housing market as a whole. While the former may generate significant demand for newly built residential properties and thus reduce the pressure on the market of used dwellings, as the result of latter the volume of housing investment may increase, thus ensuring a new supply of adequate quantity and quality.

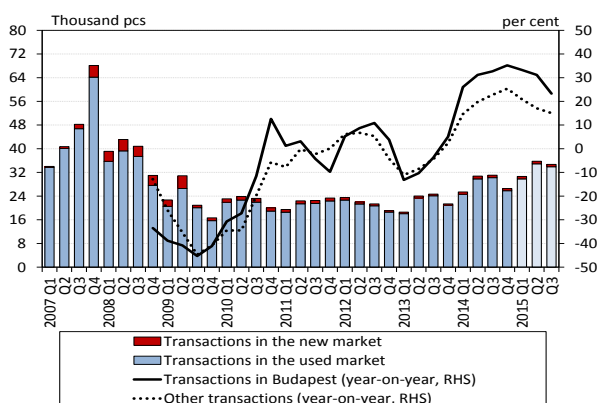
Chart 9: Changes in house prices



Note: Price index of used and new dwellings between 2015 Q1-Q4 are based on preliminary data.

Source: HCSO and FHB

Chart 10: Number and annual changes of the housing market transactions



Note: 2015 Q1-Q3 are based on preliminary, estimated data.

Source: HCSO

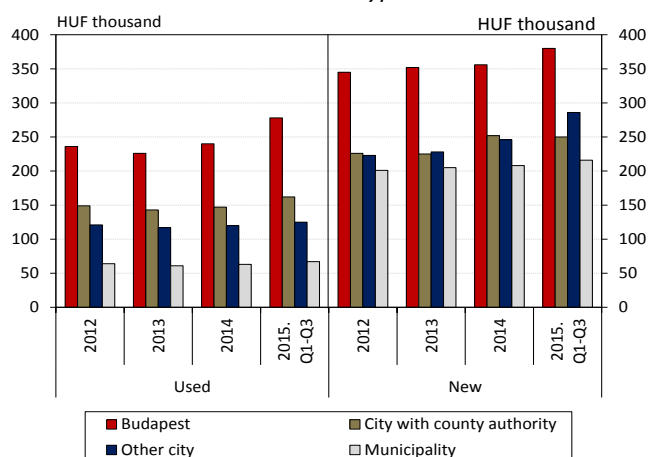
3.1. Domestic housing market developments

In 2015, the extent of house price appreciation reflects a significant housing market recovery. The dynamic appreciation of housing prices seen from the beginning of 2014 continued in 2015. The FHB house price index rose by approximately 12 per cent in the first three quarters of 2015, while the house price indices of the HCSO for used and new dwellings show increases of 10.4 per cent and 8.7 per cent for 2015 as a whole, based on the preliminary data (Chart 9).⁴ According to the FHB house price index, in 2015 on average the price level rose by nearly 4 per cent per quarter. In addition to this, according to the calculations of the HCSO, the price increases for new and used dwellings which had lasted for one and a half years appeared to come to a halt at the end of 2015.

The recovery of housing market is also reflected by the expansion of market turnover. The increase in the number of housing market transactions already seen in 2014 continued in 2015. Based on MNB estimates, in the first three quarters of 2015 the market turnover exceeded the number of transactions observed in the same period of 2014 by around 16 per cent (Chart 10). The number of housing market transactions grew more rapidly in Budapest compared to the other settlements. Most housing market transactions cover the sale and purchase of used dwellings, while new housing market turnover is at a historically low level. In the first three quarters of 2015, in total 2,500 new dwellings were sold, which accounted for only 2.5 per cent of

⁴ Although the housing price indices stemming from different sources reflect a similar picture regarding the price increase of the last one and a half years, over the longer term they show significant differences regarding changes in the price level.

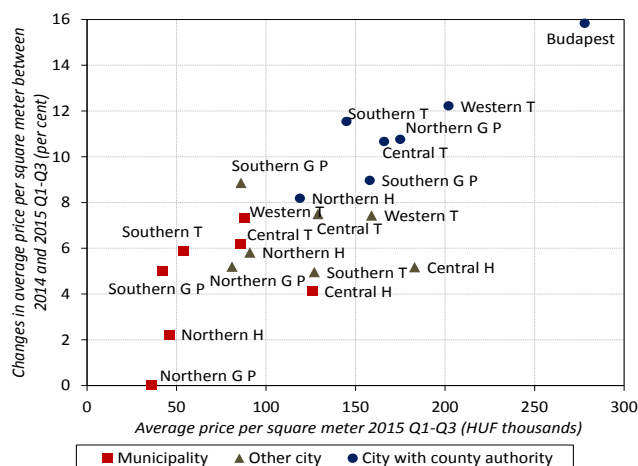
Chart 11: Average square meter price of dwellings by settlement types



Note: 2015 Q1-Q3 are based on preliminary data.

Source: HCSO

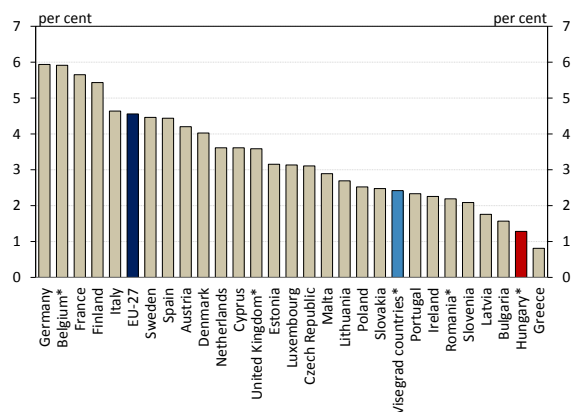
Chart 12: Level of and changes to the average square meter price of used dwellings by regions and settlement types



Note: H – Hungary, T – Transdanubia, G P – Great Plain. 2015 Q1-Q3 are based on preliminary data.

Source: HCSO

Chart 13: Home construction volume in the proportion of the GDP in 2015 Q3



Note: for countries marked with * 2014 figures are shown.

Source: Eurostat

the transactions.

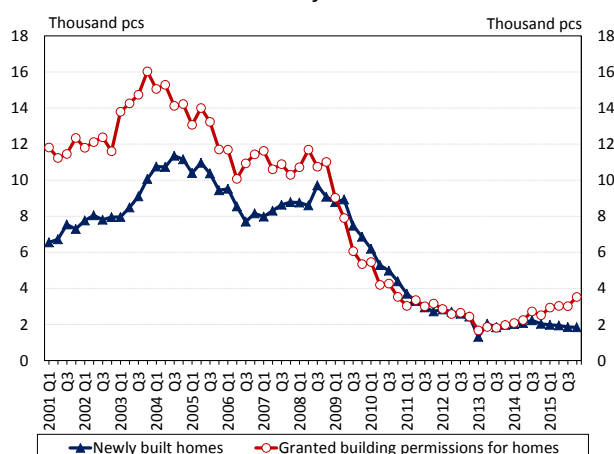
The housing market recovery does not show a uniform picture in numerous aspects. The housing market recovery seen in 2014 and 2015 does not show a uniform picture, neither in geographical terms nor as regards the sub-markets of used and new dwellings. The recovery is limited primarily to used dwellings in Budapest and other larger cities. The market of new dwellings was also characterised by significant price increases in the past two years, but overall market turnover in this segment did not increase, which is mostly attributable to the lack of supply of adequate quantity and quality.

Average square meter prices mainly grew in the case of used dwellings in Budapest. The average square meter price of homes sold/purchased in the transactions also shows the most significant increase in the sub-market of used dwellings in Budapest. The average square meter price of these dwellings rose by 6.2 per cent in 2014 and by 15.8 per cent in the first three quarters of 2015 (Chart 11). Within the sub-market of new dwellings, the increase in square meter prices was observable both in Budapest and in the cities, but these sub-markets only accounted for 1.6 per cent of total housing market turnover in 2015. The increased investment willingness also fostered by the low interest rate environment may largely contribute to the key role of the sub-market of used dwellings in Budapest.

The housing market shows a heterogeneous picture in a regional breakdown as well. Breaking down the changes in average square meter prices by regions and settlement types, it is clearly visible that square meter prices increased the most in settlements where prices were higher previously. Based on this, the recovery can be linked to areas with higher-priced and thus presumably better quality property. Overall, prices increased the most in larger settlements, while in the case of less developed regions (e.g. Northern Hungary) a smaller increase in the square meter price was observable on average (Chart 12).

The negative trend on the market for new dwellings seen since 2008 has determined the situation on the housing market for years. Households' spending on home construction has declined significantly in recent years in Hungary, and can be considered as extremely low even in an international comparison. The average volume of home construction in Hungary only amounted to 1.3 per cent of GDP in 2014, whereas it averaged 4.8 per cent between 2001 and 2004. Considering the Visegrád countries, this ratio was 2.4 per cent, and considering the European Union it was 4.6

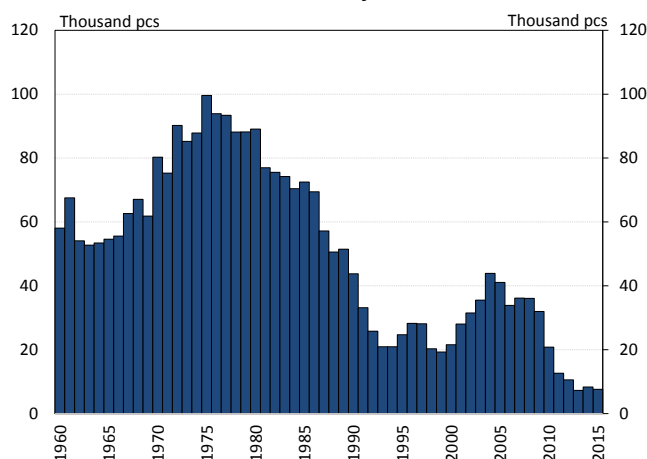
Chart 14: Number of building permits issued for homes and the number of homes built



Note: seasonally adjusted data.

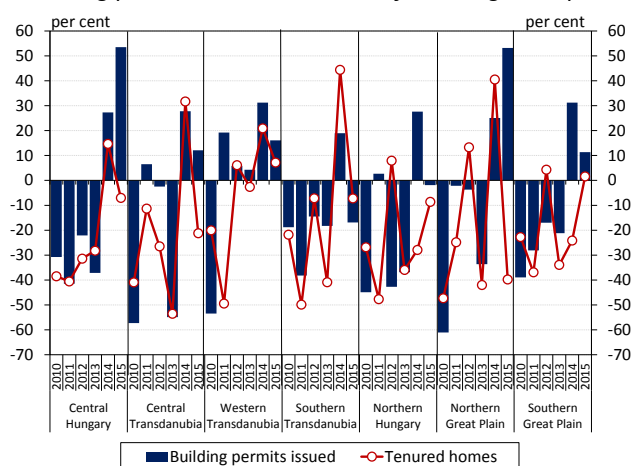
Source: HCSO, MNB

Chart 15: Number of homes built



Source: HCSO

Chart 16: Annual changes to the number of issued home building permits and the number of dwellings occupied



Source: HCSO, MNB

per cent at the end of 2015 Q3 (Chart 13).

The recovery in new housing constructions came to an end in 2015. In 2015, the total number of new dwellings built was by 9 per cent lower than in the previous year (Chart 14). During the same period, the number of building permits issued exceeded the number issued in 2014 as a whole by 30 per cent, which although it represents a significant increase is still historically low (Chart 15). Pursuant to the functioning of the real estate market and based on historical experience, during an upward trend the increase in construction permits precedes the expansion of new construction projects by approximately 4-8 quarters. The widening gap between the number of building permits issued and the number of housing completions in the past quarters may suggest that real estate developers opted for a “wait-and-see” strategy in the past period. The dual trends of moderate housing constructions and rising numbers of building permits shows a more favourable picture in Budapest. The number of dwellings built in Budapest decreased only by 3.9 per cent, and at year-end it already showed signs of recovering, while the number of building permits was up 72.8 per cent on the previous year. The increase in building permits also shows the previously identified regional heterogeneity (Chart 16). The per capita level of housing constructions is highest in Pest county and in the western regions of the country (Chart 18). Together, the moderate home construction activity and the aforementioned regional differences could provide justification for the general government to make a decision on the introduction of housing market stimulus measures.

At the beginning of 2016, the Government announced measures which significantly influence housing market developments. The expansion and stronger differentiation in the home purchase subsidy scheme for families may generate significant additional demand for new home purchases among large families (Table 1). In addition to this, the reduction of VAT on new homes may contribute to the realisation of deferred investments, thus ensuring a new supply of adequate quantity and quality to meet the increased demand.

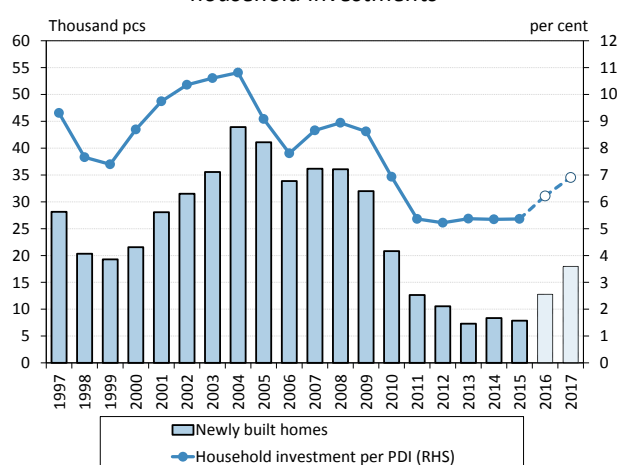
The expanded home purchase programme and the reduction of VAT on new homes substantially improves both supply and demand conditions on the housing market. Following the introduction of the measures, the MNB expects the realisation of deferred investments. Thus, based on the number of building permits already issued, the completion of almost 5,000 additional new homes is expected, which may be followed by the construction of another 5,000 new homes following the running up of the

Table 1: Home purchase subsidy scheme for families from 2016

Number of children	New dwelling: construction or buy		Used dwelling: buy or expand
	Subsidy (HUF)	Requestable loan (HUF)	Requestable subsidy (HUF)
1	600,000	-	600,000
2	2,600,000	-	1,430,000
3	10,000,000	10,000,000	2,200,000
3+	10,000,000	10,000,000	2,750,000

Source: MNB

Chart 17: Expected changes to home constructions and household investments



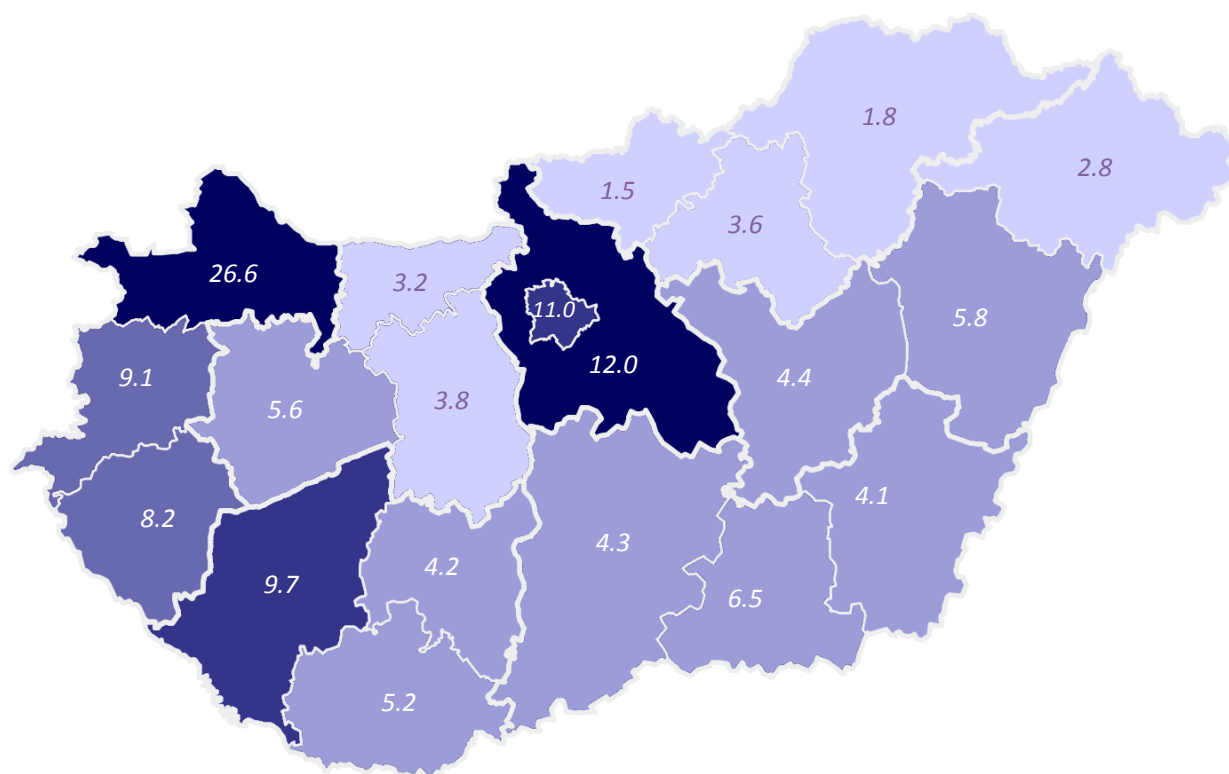
Note: PDI: personal disposable income.

Source: HCSO, MNB

programme⁵ (Chart 17). As the result of the measures, in parallel with the rise in housing market demand, fostering supply suggests an improvement in new housing market developments, which may result in the improvement of Hungary's economic performance and an increase in employment in the construction industry. Measures stimulating the building of new homes influence several sectors of the economy. The new investments realised directly boost the productivity of construction industry, while they have a positive indirect impact on the performance of sectors related to real estate transactions as well as on the performance of the financial and insurance sectors. In addition to this, an expansion in the output of the non-metal mineral products manufacturing sub-sector is expected due to the production of concrete, cement and glass used for construction.

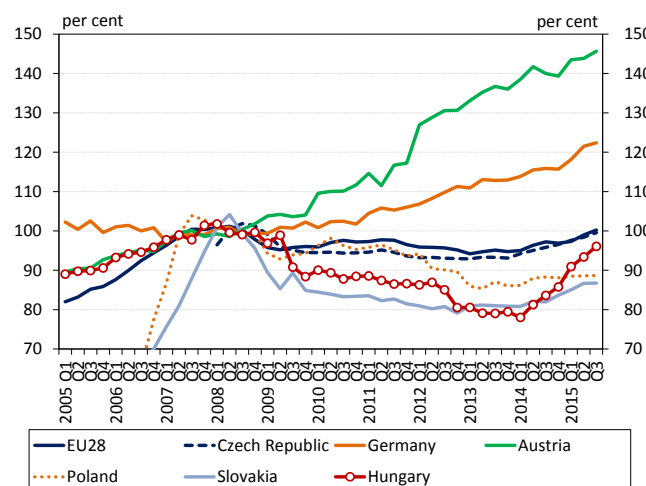
⁵ In quantifying the impacts of the programme, we used Balance of Intersectoral Relations based estimates and the experience gained from the operation of the real estate market in the 2000s.

Chart 18: Number of built homes per 10,000 inhabitants, 2015



Source: HCSO.

Chart 19: Trends in house prices in Europe, average of 2008 = 100%



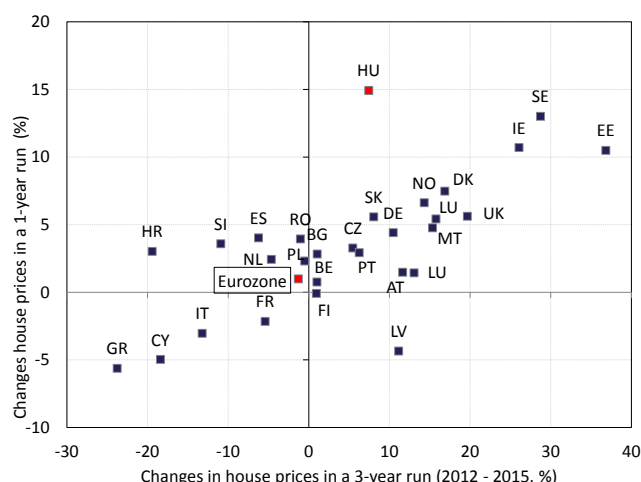
Source: Eurostat, BIS

3.2. International comparison

In 2015, housing prices continued to increase at the regional level. In 2014 and in the first three quarters of 2015, housing prices appreciated in all of the Visegrád countries, coinciding with the average changes in housing prices in the European Union. However, the extent of price appreciation observed in Hungary in 2014 and the first three quarters of 2015 significantly exceeds what was seen in the neighbouring countries. While the level of housing prices rose by 6.9 per cent, 3.1 per cent and 7.2 per cent in the Czech Republic, Poland and Slovakia, respectively, the increase in Hungary was as high as 21 per cent (Chart 19). Although the most dynamic increase in the price level is currently observable in Hungary, it should be noted that the drop in prices in Hungary was the steepest in the region after 2008.

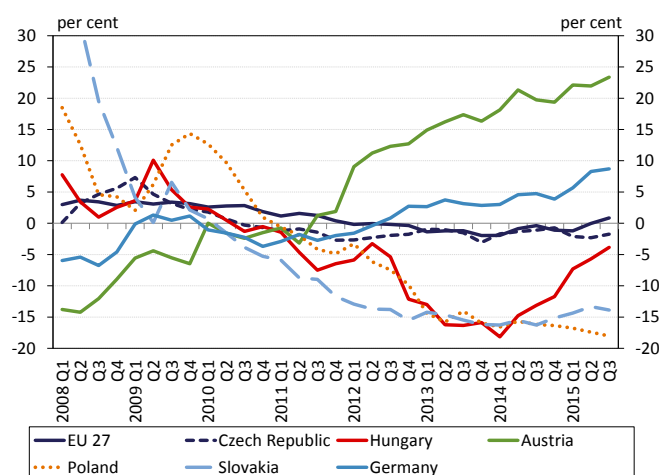
The growth rate of domestic housing prices is high over the short run, even in a European comparison. Looking back from 2015 Q3, domestic housing prices increased nearly by 15 per cent in one year, marking the highest rate among the EU Member States. Examining the changes in Hungarian housing prices over a three-year time horizon, however, a more moderate increase is seen. Over this time horizon, housing prices increased by some 7.4 per cent. Thus, the current strong price appreciation does not seem to be

Chart 20: Changes to the nominal house prices on one-year and three-year time horizon in European comparison



Source: ECB, BIS

Chart 21: Percentage deviation of nominal housing prices/per capita nominal GDP from the long term average of the indicator



Note: The long-term average of the house price index/GDP per capita was calculated between 2005 and 2015 Q3.

Source: Eurostat, BIS

striking in light of the significant price depreciation in previous years (Chart 20).

The dynamic increase in housing prices seems to be a necessary adjustment. Assuming a long-term connection between nominal housing prices and per capita nominal GDP, we can establish that the current level of housing prices does not differ significantly from the long-term average of its ratio relative to per capita GDP (Chart 21). In the Visegrád countries on the other hand, the value of housing prices relative to per capita GDP can be considered as historically low. The depreciation of nominal housing prices since 2009 resulted in a decrease in the ratio by the end of 2013, and thus the dynamic housing price appreciation since early 2014 appears to be a necessary adjustment relative to per capita GDP. It should be noted, however, that the current heterogeneity of the Hungarian housing market may shape this picture. Due to the relatively stronger recovery of the market of used dwellings in larger settlements (in particular in Budapest), the continuous and more detailed monitoring of housing prices – broken down by regions – may be necessary (see Box 2).

BOX 2: ENSURING THE METHODOLOGICAL FRAMEWORK FOR MORE EXTENSIVE MONITORING OF HOUSING PRICES

The change in housing prices is a key variable in understanding housing market developments, and thus the ongoing monitoring of such is important in several aspects. Changes in housing prices influence the financial position of households owning residential property, and thus impact the medium and long-term consumption and saving decisions of such households. On the other hand, changes in housing prices also have significant financial stability implications as well. Residential properties serve as collateral for mortgage loans, and accordingly any changes in their value directly impacts the balance sheet and profitability of financial institutions, through the expected losses. Consequently, it is important to monitor whether or not changes in housing prices are in line with macroeconomic fundamentals. Furthermore, the spatial heterogeneity of the Hungarian housing market raises the need for the examination of housing prices broken down by regions and possibly by settlement types.

“MNB housing price index”

Domestic housing market developments show a heterogeneous picture in a breakdown by regions and settlement types.

On the sub-markets of Budapest and larger settlements a stronger recovery is observable. Within the framework of the publication *Housing market report*, a detailed analysis and presentation of housing price changes is possible on regional basis. With the future publication of the *MNB housing price index* changes in housing prices will be presented not only by regions, but also at the level of individual settlement types, while residential properties in Budapest will be evaluated in a condensed form.

Determination of the equilibrium of housing prices:

Current methodology: The equilibrium of housing prices is approached with variables determining the demand side of the housing market by an error correction specification (ECM).⁶ The equilibrium of housing prices is estimated by setting up equations describing the long-term equilibrium correlation between housing prices and the macroeconomic fundamentals influencing the housing market, while the existence of a long-term correlation is proven by short-term dynamic equations. The explanatory variables used for estimating the equilibrium housing price level include *inter alia* per capita real GDP, the consumer price index, the unemployment rate (total and permanent), the stock of labour force, the BUX index, the stock of retail housing loans and real wages.

Planned methodological development: We plan to add to the currently available tools a vector error correction model (VECM). This model captures similar connections in terms of structure as the currently available tools, but estimates the factors affecting the equilibrium based on a more detailed methodology. Consequently, we expect more reliable forecasts from the model. The model is expected to capture the role and size of demand and supply factors in shaping housing market equilibrium and thus continuously provide a picture of the types of changes triggering developments in the housing market and the extent of them. According to our expectations, in addition to exploring structural connections, the model will be a good tool for the long-term analysis of housing market equilibrium, as well as for capturing and forecasting short-term adjustments. The task of the model is to signal deviations from long-term equilibrium and the extent of such deviations and to provide information on the expected time horizon over which individual cases of disequilibrium can be resolved. In light of the above, the model will be suitable for evaluating the housing market in terms of stability and also as a basis for the application of macro-prudential instruments, e.g. shaping the capital requirement on housing loans, prescription of loan-to-value ratio (LTV) and payment-to-income ratio (PTI).

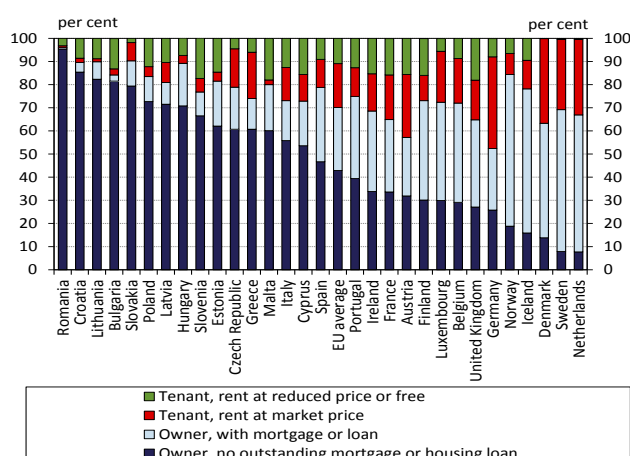
⁶ For further information see: Financial Stability Report, May 2014 Box 3.

4. FEATURES OF THE HOUSING LOAN MARKET

When purchasing residential properties, it is common that the buyer partially finances the transaction by borrowing. In Hungary, the share of self-owned properties is nearly 90 per cent, and thus, for households, the state of the housing loan market has a significant impact on changes in housing conditions through the affordability of housing purchases.

In 2015, the volume of new housing loans grew substantially, rising by around 50 per cent in annual terms. This occurred despite loan agreements concluded in 2015 already having to comply with the restrictions of the “debt cap” rules governing the loan-to-value (LTV) and the payment-to-income (PTI) ratios. The ratio of loans taken out for new home construction shows a downward trend: after hovering between 10-17 per cent in recent years, it was at 8 per cent at the end of 2015. The financing costs of housing loans declined, and with lending standards unchanged, a wide range of banks have registered a revival in demand. Based on this, the expansion of newly extended loans may be considered as demand driven. The affordability of housing by borrowing improved in the first three quarters of 2015. Rising prices were counterbalanced by favourable financing costs stemming from the low interest rate environment and the longer average term of new loan contracts provided by financial institutions. However, it is worth mentioning that this latter aspect may be also the result of increased demand. The elimination of the foreign currency exposure of households through FX-conversion may also contribute on the medium-term to the easing of the supply constraints of credit institutions.

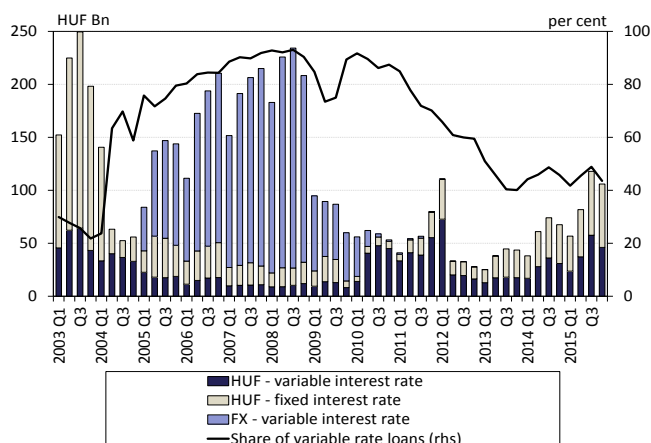
Chart 22: Distribution of dwellings by tenure status in an international comparison



Note: Based on data from 2014.

Source: Eurostat

Chart 23: Volume of new housing loans by interest rate fixation and denomination



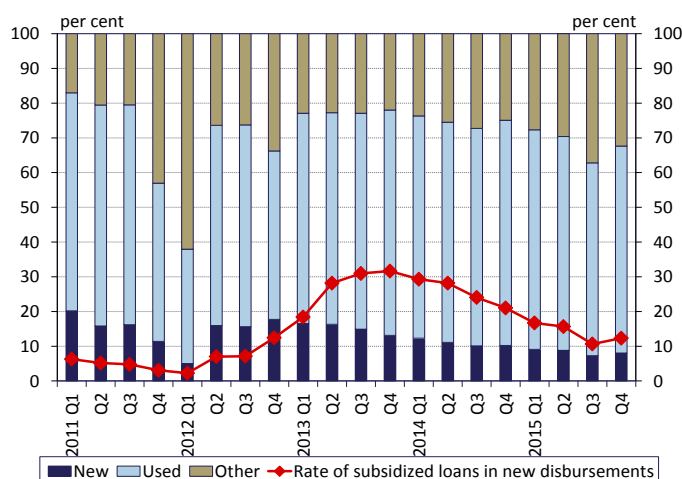
Source: MNB

In Hungary, due to the high ratio of self-owned property, mortgage lending has key importance. Due to the relatively high value, households often finance the purchase of residential property by borrowing. In 2014, one fifth of home owners had a home for which they had housing loan debt (Chart 22). At the end of 2015, some 3,000 billion HUF housing loan debt was recorded in the balance sheet of the credit institutions sector. Outstanding loans are practically entirely denominated in HUF since the FX-conversion, while state subsidised loans account for nearly one fourth of the entire stock.

Housing loan disbursements grew significantly in 2015, after hitting a low level during the crisis. The volume of new housing loans has shown a tentative increase since the historic low level of 2012 (Chart 23). In 2015 H2, the value of new contracts (disregarding loan refinancing following FX-conversion) amounted to HUF 192 billion and was thus 36 per cent higher than the volume of contracts concluded in the same period of the previous year. This occurred despite contracts concluded in 2015 already having to comply with the restrictions of the debt cap rules governing the loan-to-value and payment-to-income ratios. The ratio of new loans with variable interest rates 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 2015 Q4 the interest rate of 56 per cent of new housing loans was already fixed for at least one year.

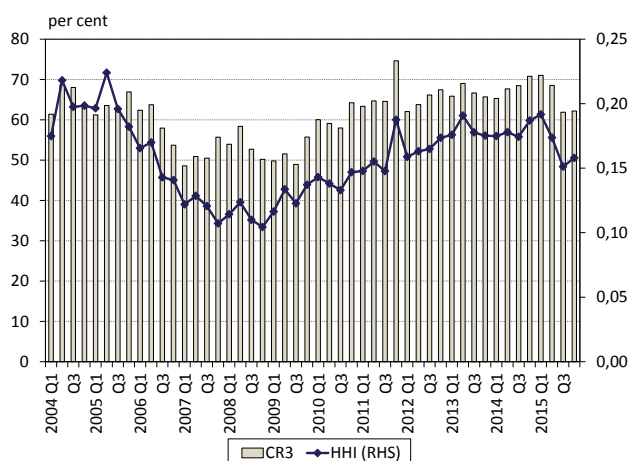
The ratio of loans for the purchase of new dwellings has been decreasing for three years. The majority of housing loans are taken out by clients to purchase used dwellings, while loans for the purchase of new dwellings accounted

Chart 24: Distribution of housing loan disbursements by loan purpose



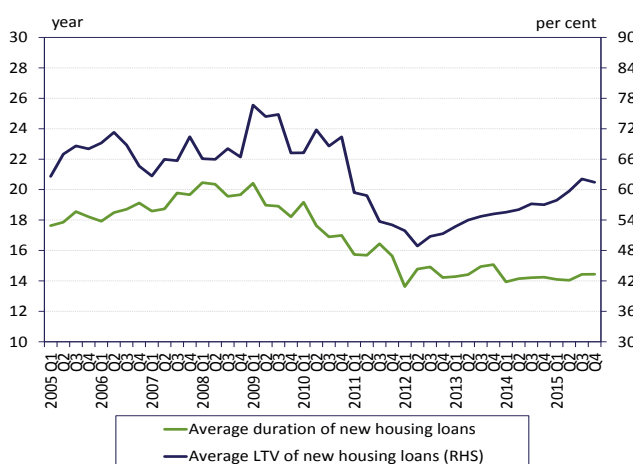
Source: MNB

Chart 25: Concentration in the market of new housing loans



Source: MNB

Chart 26: Average initial maturity of new housing loans and their LTV ratio



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

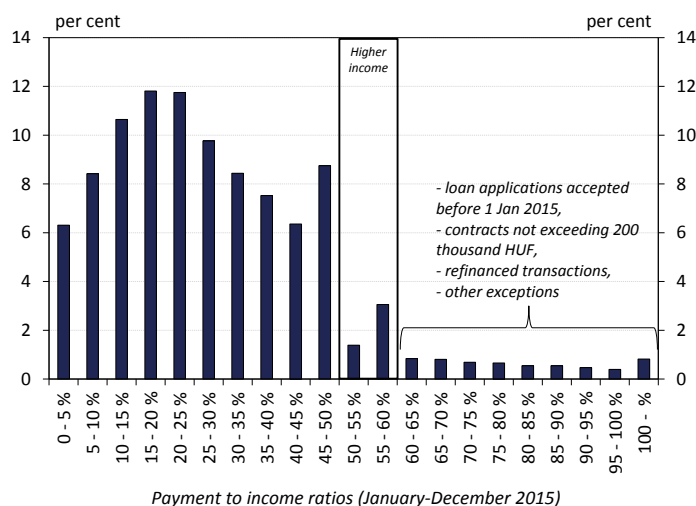
for just 8 per cent of new contracts in 2015 Q4 (Chart 24). The small supply of new dwellings plays a key role in this regard. The ratio of state subsidised HUF loans (with interest subsidy for home purchase) also shows a falling tendency: at the end of the period under review, these loans only accounted for 14 per cent of newly contracted housing loans. The decline in the utilisation of the subsidy programme can be explained mostly by the fact that the average level of market interest rate reached the interest rate available with the interest subsidy.

Concentration on the new housing loan market is significant. On the market of new loans, the Herfindahl index (HHI) showed a decline in 2015, but the ratio of the market share of the three largest credit institutions (CR3) reflects a significant concentration in new lending. There are 23 institutions present on the market of newly issued mortgage loans, and the three largest participants control 62 per cent of the market, although this ratio declined from 71 per cent since the end of 2014 (Chart 25). Considering the sub-segment of lending for the purpose of purchasing a new home, from among the 20 market operators the market share of the three largest credit institutions is 60 per cent despite the fact that on the whole these are not the leading credit institutions on the market. As the result of the high concentration, the loan conditions and debtor preferences of the largest financiers of new lending may be decisive in terms of households' access to housing loans.

The average LTV ratio of new housing loans increased further. The average loan-to-value ratio of new housing loans increased slightly in 2015 H2 (Chart 26). The average LTV calculated for disbursements rose by 1.7 percentage points to 61.5 per cent by end-December 2015. The increase in the ratio – despite the debt cap rules having been introduced – is partly caused by the higher LTV values of no-charge refinanced loans after the FX-conversion, which are recorded in the statistics as new loans. The average initial maturity of housing loans disbursed in 2015 was above 14 years, which is somewhat higher than the value in 2014. The typical amount of loan contracts show also an upward trend: while at the beginning of 2014 the median loan amount was HUF 3 million, by the end of 2015 it has reached HUF 4 million. The growth in new lending was not restricted by the “debt cap” rules: 90 per cent of the retail deals concluded in 2015 show a PTI figure of below 50 per cent (Chart 27).

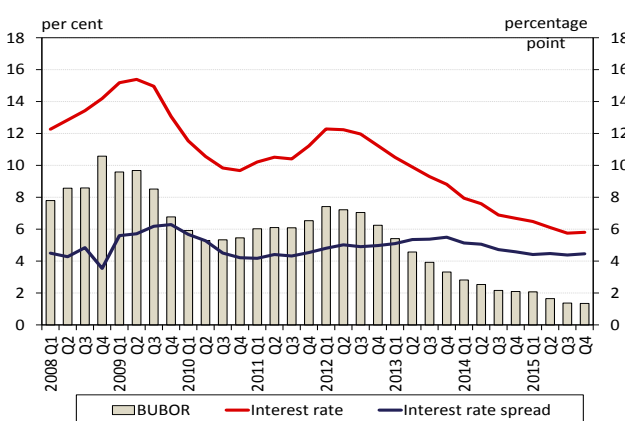
Financing costs of housing loans decreased. The average APR (annual percentage rate of charge) calculated for new disbursements decreased by 0.3 percentage point to 5.8 per cent in 2015 H2 (Chart 28). The decline can be

Chart 27: Distribution of the PTI values of new loans in 2015



Source: MNB

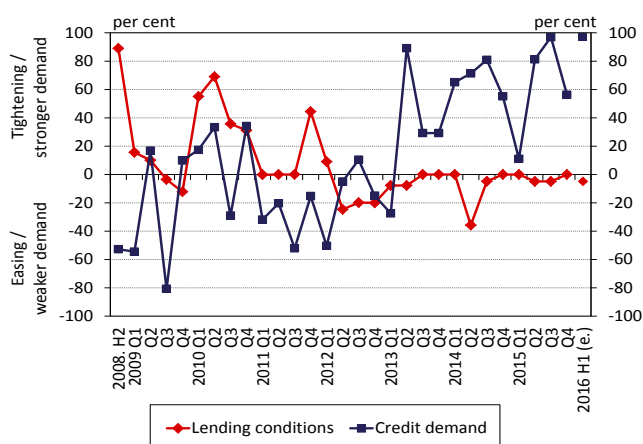
Chart 28: Financing costs of new housing loan contracts



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

Source: MNB

Chart 29: 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 the market share.

Source: MNB, based on the answers of respondent banks

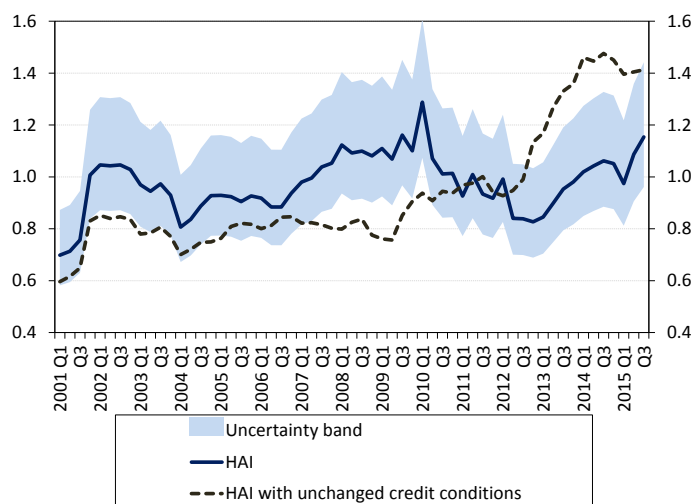
explained by the decline in the reference interest rate following the base rate cuts (in the reference period, spreads remained unchanged on average). The average interest level of the schemes provided by building societies reached and then slightly exceeded the market average in 2015. In addition to significantly stimulating demand, over the long term the low interest rate environment may result in an interest rate risk in the debt servicing of households with variable interest mortgage loans.

With housing loan conditions unchanged, banks are registering rising demand. Based on the Lending Survey, lending conditions remained unchanged overall in the past one and a half years, despite economic prospects and housing market developments pointing to the easing of standards in 2015 H2 (Chart 29). Loan conditions can still be considered as tight, and thus the increase in new disbursements can be mostly attributed to rising demand. Looking forward, while Hungarian banks do not intend to ease conditions in the next half year, they do expect the broad-based growth in demand experienced in 2015 to continue.

The HAI index presents the impact of factors influencing the affordability of buying a house on an aggregate basis. The affordability of housing is influenced by numerous factors, which may have opposite effects on each other. An increase in house prices makes buying a house *ceteris paribus* more difficult, while growing real wages make it easier. A decline in the cost of credit is also a contributing factor, making it possible to purchase a house at a given price by paying lower instalments. An easing of banks' non-price credit conditions is also important: when the bank lends with relatively higher initial maturity or with a higher payment-to-income ratio, buying a given house requires relatively lower household income. In order to define the aggregate impact of the above factors, we summarise them by creating a single numerical index (Housing Affordability Index, HAI). The HAI shows how easily an average household with two incomes can buy a house by financing it with credit at current credit conditions, assuming that it is able to make the minimum down-payment. An increase in the value of the index indicates that buying a house with credit financing becomes easier.

Housing affordability improved in 2015. The Housing Affordability Index (HAI) showed an increase by the end of 2015 (Chart 30). According to the MNB's calculations, a household with two average incomes has an income 15 per cent higher than required to take out a typical mortgage

Chart 30: Housing Affordability Index, HAI⁷



Source: MNB

loan necessary for the purchase of an average home. The index has changed due to multiple factors: although the dynamic appreciation of housing prices pointed to a decrease in the index, this was counterbalanced by the favourable effect of low financing costs. Calculating the value of the index using a 30 per cent payment-to-income (PTI) ratio and 20-year maturity, we arrive at a significantly higher value. This indicates that the transactions being realised are characterised by relatively tight loan conditions, while exactly the opposite was true before the outbreak of the crisis. Among the reasons for this, cautious loan supply and the composition of loan demand may play a role. At the same time, the heterogeneity of these factors highlights the importance of segmentation not shown by the index capturing the average. The index has relative difficulty capturing some factors: in 2010 it stood at a high level, despite the fact that rising unemployment and more stringent credit conditions made buying a house with credit financing affordable for a lower number of households.

⁷ 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 the Financial Stability Report (text in Box 3).

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 Széchényi 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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