

Box 6

EURO AREA HOUSE PRICES AND THE RENT COMPONENT OF THE HICP

In the euro area, as in many other economies, expenditures on buying a house or flat are not incorporated directly into consumer price indices, but expenditures on rent generally are. Given the theoretical long-run relationship between developments in house prices and rents, changes in the prices of residential dwellings could have an indirect impact on consumer price inflation via changes in rents. In this context, it is possible that the recent sharp decline in house prices in some euro area countries may have exerted some downward pressure on rents which, in turn, may have had an impact on the euro area headline HICP through its rent component. The purpose of this box is to assess the scope of such an impact for the euro area. First, it

describes the relationship between developments in house prices and rents from a theoretical perspective. Second, it presents an empirical analysis of the co-movement of euro area house prices and the rent component of the HICP, highlighting, in particular, some of the limitations to the theoretical implications. Finally, the impact on the euro area headline HICP is evaluated and compared with the results for the US consumer price index (CPI).

The co-movement of house prices and rents from a theoretical perspective

Housing can be considered from an investment perspective, i.e. as a non-financial asset, or from a consumption perspective, i.e. as shelter consumed by an owner-occupier or a tenant. Both perspectives imply that there is a long-run relationship between house prices and rents, although with potentially different adjustment mechanisms in the short run. When considering residential property as an asset, rents can be viewed as a proxy for the corresponding dividend. This would imply, for example, that a higher present discounted value of future dividends, all else being equal, would translate into a higher price for the underlying asset. However, when considering housing as a service that is consumed by the owner-occupiers or tenants – under the assumption that owning and renting a property can be substituted for one another – the existence of temporary price misalignments, such as the overvaluation of purchase prices of residential dwellings, would imply a trade-off of buying for renting. This would have opposite effects on changes in house prices and changes in rents, resulting – under perfect market conditions – in a long-run equilibrium in the housing market. In practice, the forces driving house prices and rents, as well as their co-movement, are nevertheless subject to several limitations, which are discussed below in relation to the empirical evidence for the euro area.

Empirical evidence for the euro area

The empirical analysis of the co-movement of house prices and rents in the euro area is based on the ECB's euro area residential property price indicator¹ and the rent component of the euro area HICP. Annual rates of change in these series are presented in Chart A.² Having followed an upward trend for a protracted period of time, the annual rate of change in euro area residential property prices started to decelerate around 2005 and finally went into negative territory in 2009.³ By contrast, rent growth in the euro area was much less volatile over the same period. Overall, the movements in euro area property prices have been more pronounced than those seen in the rent component of the HICP. From 1997 to 1999, the growth rates of the two series moved in opposite directions. Starting in 2000 changes in the growth of the rent component of the HICP appeared to have mirrored changes in the growth of residential property prices, albeit with a substantial lag and much smaller amplitude.

There are several factors that might explain the above-mentioned differences between developments in residential property prices and developments in rents, including rent regulation, fiscal policy measures related to housing, structural economic changes, financing conditions and statistical issues. In the euro area, there are various forms of rent regulation, such as rent indexation (to various price indices), caps on rent increases, long rental agreements with various clauses on adjusting rents and rent protection. The rent component of the HICP also includes social housing rents, which constitute

1 The ECB's euro area residential property price indicator is a semi-annual weighted average of country indicators. The series starts in 1996 and the latest available observation refers to the second half of 2009.

2 The semi-annual data of the rent component of the euro area HICP represent an average of the monthly observations.

3 For more details, see the box entitled "Recent housing market developments in the euro area", *Monthly Bulletin*, ECB, May 2010.

a significant share of the rental market in some euro area countries. As a result, only a fraction of the rental payments covered by the HICP – typically those referring to new rental agreements for non-social housing – might be expected to directly adapt to market forces in general and to changes in house prices in particular.⁴ This is a key reason for the muted and delayed response from the overall rent index.

The relationship between house prices and rents may also be weakened by supply constraints as well as by the limited scope for substituting buying and renting for one another, owing, for example to borrowing constraints, the size of the rental market, differences in the characteristics of rented and owner-occupied property and high transaction costs. When considering housing as an asset, other factors affecting the user cost of

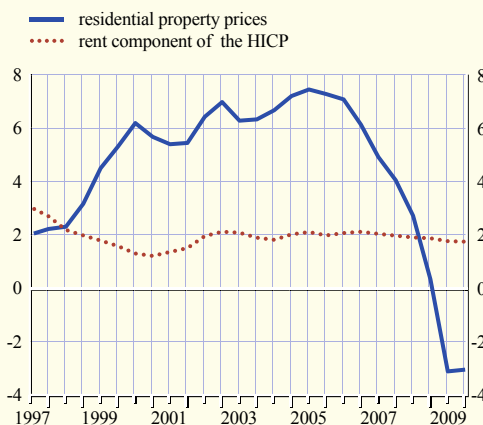
housing could drive a wedge between rents and residential property prices. Such factors include mortgage interest rates, various forms of property taxes and subsidies, as well as expectations for future house price developments.⁵ In view of the most recent boom and bust in the housing markets in the United States and some euro area countries, the latter factor could have played an important role in the decoupling of house prices and rents in the first part of the last decade.

Some of the above-mentioned factors may also explain the divergence between the annual rates of change in rents and house prices that was observed in several euro area countries during the late 1990s. As shown in the left-hand panel of Chart B, many euro area countries saw a decline in rent inflation between 1997 and 1999, while house prices were accelerating. The start of EMU during this period brought about important structural changes. First, in many countries, consumer price inflation fell, which could have had a downward impact on rent inflation through the indexation mechanism. As shown in the right-hand panel of Chart B, in many countries, the deceleration in inflation of the rent component of the HICP mirrored the deceleration in the headline HICP, even though it was stronger.⁶ Second, falling nominal and real interest rates made it more economical for households to buy rather than to rent a property, possibly triggering a substitution effect that supported house prices and drove down growth in rents.⁷

In addition, it is important to realise that the limited co-movement observed between euro area house prices and the rent component of the HICP might also reflect some statistical issues. With regard to house prices, the data used in this box have been collected by euro area NCBs⁸

Chart A Euro area residential property prices and the rent component of the HICP

(annual percentage changes)



Sources: Eurostat and ECB.

4 See also the Structural Issues Report entitled “Structural factors in the EU housing markets”, ECB, 2003.

5 For more information, see the article entitled “Assessing house price developments in the euro area”, *Monthly Bulletin*, ECB, February 2006 and “Housing finance in the euro area”, *Occasional Paper Series*, No 101, ECB, March 2009. See also Hiebert, P. and Sydow, M., “What drives returns to euro area housing? Evidence from a dynamic dividend-discount model”, *Working Paper Series*, No 1019, ECB, 2009.

6 Chart B should be interpreted with some caution as it depicts contemporaneous changes in one series against another, while changes in rents might be expected to react to changes in the headline HICP and house prices with a lag.

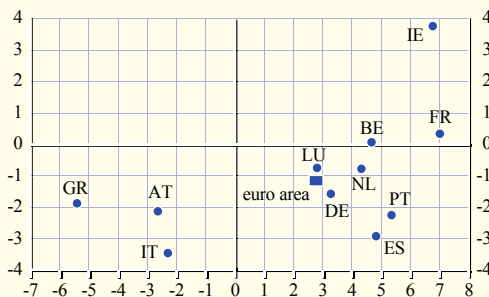
7 See the above-mentioned Structural Issues Report for more details.

8 EU statistical offices are currently working on a harmonised statistical approach for compiling residential property price indices. However, so far only a few countries have published results for this project.

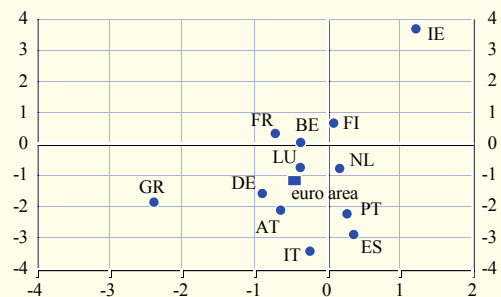
Chart B Changes in euro area residential property prices, rents and headline HICP between 1997 and 1999

(percentage points)

x-axis: residential property prices
y-axis: rent component of the HICP



x-axis: headline HICP
y-axis: rent component of the HICP



Sources: Eurostat and ECB.

Note: The changes refer to the annual rate of growth in 1999 minus the annual rate of growth in 1997 (or 1998 when earlier data are not available).

and are not harmonised in terms of statistical properties. An analysis of the pass-through of changes in house prices to changes in residential rents could be affected, in particular, by differences in the coverage of dwelling types across indices. Moreover, such an analysis may also be affected by the way in which individual price changes are combined to form an aggregate index and adjustments are made for compositional changes in the characteristics of dwellings whose prices are observed over time. For example, house price indices reflecting the prices of existing dwellings measure a different phenomenon than indices that cover the prices of new dwellings. The transmission of price changes in existing and new dwellings to the rent component of the HICP may have very different dynamics in terms of the size, channel and timing of the pass-through. Notably, in the euro area, whereas the indicators for many countries cover both new and existing dwellings, around one-third of the coverage of the euro area residential property price indicator refers to country indicators that only reflect changes in the prices of existing dwellings.

As for the rent component of the HICP, although it is more suitable for cross-country comparisons, statistical issues may still hamper the analysis of the pass-through. In particular, it is important that rent indices accurately reflect the balance between rental agreements for newly developed and existing properties and that they cover open market and social rents. As noted above, the prices of existing agreements may tend to be stickier than prices for new agreements and more often subject to price regulation. In some euro area countries, coverage of new rental agreements, in particular those for newly built units, is limited.

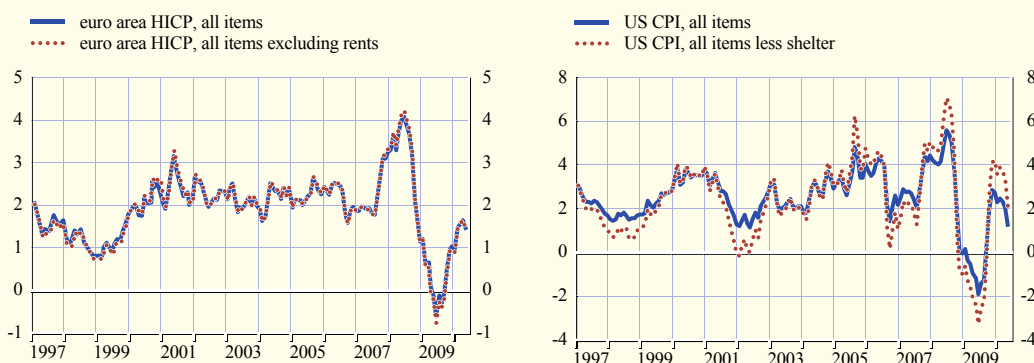
Another issue relates to the relative contribution of country developments to the euro area residential property price indicator on the one hand, and to the rent component of the euro area HICP on the other hand. The euro area residential property price indicator aggregates changes in national house prices by using GDP shares, while the estimates for the rent component of the euro area HICP reflect the relative size of the rental markets in each country.

Impact on the overall consumer price indices in the euro area and the United States

To assess the impact of rent inflation on the overall HICP, the left-hand panel of Chart C compares the euro area annual HICP inflation rate of the all-items index with the index including all items

Chart C Euro area HICP and US CPI, all items and all items excluding rents

(annual percentage changes)



Sources: Eurostat, ECB and Thomson Financial Datastream.

apart from rents. The right-hand panel shows annual percentage changes in the US CPI all-items and all-items-less-shelter indices. While the differences between both series are negligible in the euro area, they are more significant in the United States. In particular, most recently, the US CPI all-items-less-shelter index has recorded higher growth rates than the CPI including all items. One important point to be stressed in this context is that the US CPI and the euro area HICP differ in terms of their coverage of housing costs. The former includes owner-occupiers' costs for shelter in the form of imputed rental payments, while the latter does not cover the shelter costs of owner-occupied housing.⁹ Owners' equivalent rents constitute around 24% of the cost of living covered by the US CPI. By contrast, actual rents account for around 6% of the basket of both the US CPI and the euro area HICP.

In conclusion, while, in theory, house prices and rents may be expected to co-move in the long run, various institutional and economic factors are likely to affect the dynamics of this relationship. In the euro area, the response of the rent component of the HICP to developments in residential property prices is only muted. Consequently, the recent sharp movements in house prices have had an overall negligible impact on the euro area HICP when considered through the "rent" channel. By contrast, in the United States, the falls in the growth rates of rents have contributed significantly to lowering inflation in recent months.

⁹ With regard to the treatment of owner-occupied housing in the HICP, see also Box 2 in the article entitled "The Harmonised Index of Consumer Prices: concept, properties and experience to date", *Monthly Bulletin*, ECB, July 2005. The shelter index of the US CPI also includes lodging away from home and tenants' and household insurance, but the weight of these items is relatively low.