

## Box 5

**ESTIMATES OF HOUSING WEALTH FOR HOUSEHOLDS IN THE EURO AREA**

This box presents new ECB estimates of euro area households' housing wealth. Households' housing wealth is defined as the value at current market prices of all residential dwellings, including the value of land on which the buildings are built, owned by households. Housing wealth accounts for around 60% of the total wealth of households and can have significant effects on households' consumption, investment and portfolio decisions. The box explains the new estimates for the period 1980-2005 and puts them into perspective by using selected indicators.

**Estimation method**

As data on households' housing wealth are currently not available for several euro area countries, an estimate of the aggregate euro area households' housing wealth cannot be derived as a straightforward summation of country data. Annual data on households' housing wealth, including both the housing capital stock and the underlying value of the land, are currently available for around 80% of the euro area in terms of GDP coverage. The part accounted for by the countries for which no such data exist has been approximated using the information of the countries for which such estimates are available.<sup>1</sup>

The estimation procedure involves several steps. In a first step, the housing capital stock was compiled for the euro area, using available national data and estimates for the missing countries based on the assumption that their 1980 GDP-to-capital stock ratio is equal to the average ratio for the available countries. Next, the housing capital stock in a given year is taken to equal that of the previous year minus that part of the stock that has reached the end of its service life (reflected by the retirement rates) plus the gross fixed capital formation in the current year minus the consumption of fixed capital or depreciation. The retirement and depreciation rates are assumed to correspond to the average ratios observed for the available countries.<sup>2</sup> Since the resulting euro area series refers to the economy as a whole, the second step was to estimate the part of the housing capital stock held by households, assuming that the weighted average households' share in the available countries' whole economy capital stock holds for the missing countries. A third step was to estimate the value of the land underlying the houses, again applying the weighted average share of housing capital stock in the available countries' housing wealth of households for the missing countries. The final estimates also take into account the revaluation effects to reflect price changes of the capital stock of housing.

**Estimates for households' housing wealth**

Chart A shows that the estimates of euro area households' housing wealth (net of depreciation) imply an increase from €3.7 trillion in 1980 to €19.6 trillion in 2003.<sup>3</sup> This represents an average annual rate of growth of 7.6% for the entire period. However, the above-mentioned

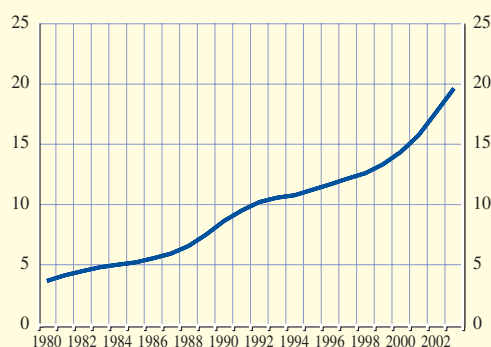
1 The revised transmission programme of Council Regulation (EC) No 2223/96 on the European system of national and regional accounts in the Community that is expected to enter into force in 2007 includes the mandatory transmission by national statistical offices of data on dwellings owned by households, but the provision of data on land will remain voluntary. When available, these new data will be used to improve the compilation of euro area housing wealth statistics.

2 This methodology was previously applied for the estimation of the euro area capital stock data at constant prices. See the box entitled "Estimates of the euro area capital stock" in the May 2006 issue of the Monthly Bulletin.

3 National data before 1999 are aggregated using the fixed conversion rates of the euro.

**Chart A Euro area households' housing wealth**

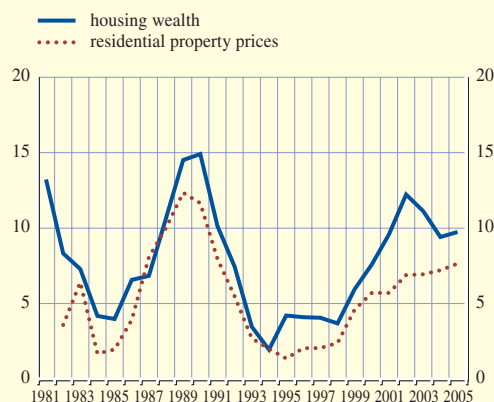
(at current market prices; EUR trillions)



Source: ECB.  
Note: Estimates take into account the depreciation of households' housing capital stock.

**Chart B Growth in housing wealth and residential property prices in the euro area**

(annual percentage changes)



Source: ECB.

assumptions suggest that euro area households' housing wealth estimates are subject to a higher degree of uncertainty than other euro area statistics, mainly because the national data used in this estimation are themselves surrounded by greater uncertainty than other national statistics owing inter alia to a lower quality of house price statistics (house prices are in several countries a crucial determinant for the growth of housing wealth). Nevertheless, a number of sensitivity simulations conducted indicate that in particular the growth rates of the households' housing wealth estimates are sufficiently robust to changes in the underlying assumptions.

Chart B shows the annual rates of growth for households' housing wealth and residential property prices in the euro area. As the available national data on households' housing wealth are currently only available up to 2003, data for the most recent years have been estimated on the basis of a historical econometric relationship between housing wealth on the one hand and house prices and net residential investment on the other, where the latter data are available up to 2005. Therefore, households' housing wealth estimates for the period 2004-05 should be taken with caution. It appears from the chart that in the euro area there have been two broad housing wealth cycles, with peaks in the growth rates in the period 1989-90 and possibly in 2002. The chart also shows that changes in households' housing wealth have followed fairly closely the house price developments in the euro area. This is not very surprising as changes in house prices affect the value of the existing stock of housing, and residential investment and depreciation flows are rather small in relation to the total housing stock. However, a value measure for housing wealth has the advantage that it can provide information on developments in the level of housing wealth which is needed for a number of analytical purposes.

#### Estimates for households' net worth

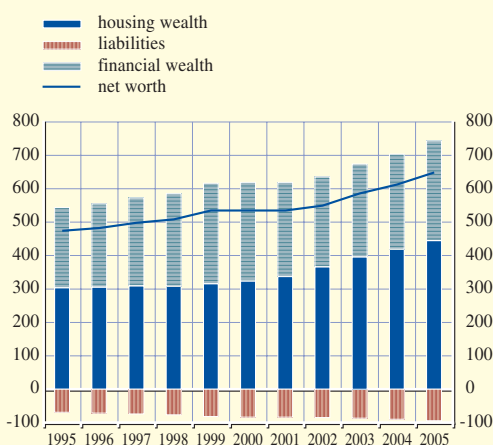
Chart C shows the developments in households' net worth (i.e. the sum of households' housing and financial wealth, net of their liabilities) as a percentage of gross disposable income in the euro area in the period between 1995 and 2005 (the period for which data on households'

financial wealth are available).<sup>4</sup> It appears that households' total assets less liabilities were increasing relatively steadily as a percentage of disposable income in the euro area in the second half of the 1990s, amounting to about 535% of disposable income in 2000. The increase in households' net worth was mainly due to the favourable stock market developments and the resulting rise in households' financial wealth during this period, while households' housing wealth remained fairly stable in relation to disposable income until 1998. Thereafter, households' net worth increased strongly in the euro area, to around 650% of disposable income in 2005. This development mostly reflected the strong housing market dynamics and house price increases witnessed during the last seven years, which led to a marked rise in households' housing wealth from about 310% of disposable income in 1998 to some 445% in 2005. Household indebtedness has also increased relatively steadily in the euro area since 1995, but the increase has remained significantly below the rise in households' housing and financial wealth. It should however be noted that the assets and the liabilities are not evenly distributed across households.

To sum up, the ECB's new estimates for euro area households' housing wealth help to close a data gap with regard to economic and financial analysis and projections. The estimates point to strong increases in housing wealth since 1998, in line with the buoyant housing market dynamics observed in many regions of the euro area. When assessing the implications of these increases – for instance in terms of debt-to-wealth ratios – it should be borne in mind that the new households' housing wealth series are subject to a higher degree of uncertainty than other euro area statistics, and that the quality is expected to improve over time as more and better estimates become available at the national level.<sup>5</sup>

Chart C Households' net worth in the euro area

(as a percentage of gross disposable income)



Source: ECB.  
Note: Data on financial wealth and liabilities for 2005 are based on estimates.

4 Purchases by households of consumer durables are not regarded as investment in national accounts and have not been included in household total wealth estimates in this context. For the data on household gross disposable income (which is the sum of net disposable income and consumption of fixed capital) and other integrated non-financial and financial accounts data for the institutional sectors in the euro area (households, non-financial corporations, financial corporations and government), see the ECB press release "First release of euro area accounts for institutional sectors (1999-2004)" on 31 May 2006.

5 The new time series on housing wealth is available on the ECB's website (from the Statistical Data Warehouse).