

EU housing statistics

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At the Fourth ECB Conference on Statistics, the President of the ECB, Jean-Claude Trichet, said that "... the ECB has the following high-priority requirements concerning the euro area statistics compiled by Eurostat and the NSIs [National Statistical Institutes]: 1. more comprehensive and timely statistics on ... housing markets ..."²

This paper provides information on the progress achieved by the European System of Central Banks (ESCB) in the field of (non-financial) EU housing statistics. In 2003 the ESCB Working Group on General Economic Statistics started contributing to the improvement of housing market indicators for ESCB analysis. Most of the indicators concerned – residential property prices, several structural housing indicators, and housing wealth – are not covered under any EU statistical regulation, and ***the collection of non-harmonised statistics from the ESCB Working Group on General Economic Statistics and the subsequent compilation of euro area and EU aggregates has filled important gaps.***

Non-harmonised national headline indicators for ***residential property prices*** are collected from all EU countries; semiannual estimates for the euro area are derived and published by the ECB. Conceptually, there are large differences between the national data. A major step forward can be expected in the medium term as a result of Eurostat's project on dwelling price statistics. Until then, the most important data shortcomings concern the infrequency of the data for Germany and Italy, and gaps in the coverage of the housing market in several national indicators.

As regards ***structural housing indicators*** (eg number of dwellings, housing completions and owner-occupancy rates), a set of statistics is collected by the ***ESCB Working Group on General Economic Statistics*** and has been used in ECB publications. Improvements to the coverage and timeliness of the data requires the use of non-official sources and increased use of estimations by national central banks and the ECB.

In the last two years the ECB has compiled and published euro area estimates for ***housing capital stock and households' housing wealth***, derived from data available from national statistical institutes and, for household wealth, national central banks. Although these estimates are surrounded by more uncertainty than other euro area statistics, simulations have shown the data to be sufficiently robust, in particular as regards growth rates. Desirable improvements concern national data availability (ie for countries for which currently no information is available other than housing investment data). Furthermore, the forthcoming new data on the value of the dwelling stock (excluding land) owned by households, as required by the revised ESA95 Transmission Programme, will be used to improve the estimates. Finally, the ECB's DG Statistics aims to integrate the experimental capital stock and wealth estimates into the euro area accounts.

¹ European Central Bank. Comments were provided by Werner Bier, Daniela Schackis and Richard Walton. The views expressed in this paper are those of the authors and do not necessarily reflect the views of the European Central Bank.

² Trichet, J-C: "A strategic vision on euro area statistics: the ECB's view", speech given at the Fourth ECB Conference on Statistics, Frankfurt am Main, 24–25 April 2008 (<http://www.ecb.europa.eu/press/key/date/2008/html/sp080424.en.html>).

1. Background

In recent years, the analysis of euro area and EU housing markets has intensified and so has the demand for high-quality statistics on national, euro area and EU housing market supply and demand conditions, in particular changes in residential property prices over time. The quality of available non-financial statistics on housing markets is still far from satisfactory and the ECB is working with national central banks to improve availability and comparability globally. Since 2003, the ESCB Working Group on General Economic Statistics and the ECB's DG Statistics has contributed to improving housing market indicators for ESCB analysis. As most of the indicators are not covered by EU statistical regulations, the collection of non-harmonised statistics from national central banks and the compilation of euro area and EU aggregates by the ECB's DG Statistics contribute to filling an important gap, at least partly. This paper reports about the availability and the statistical quality of data on residential property prices (Chapter 2), structural housing indicators (Chapter 3) and housing wealth (Chapter 4).

2. Residential property price indicators

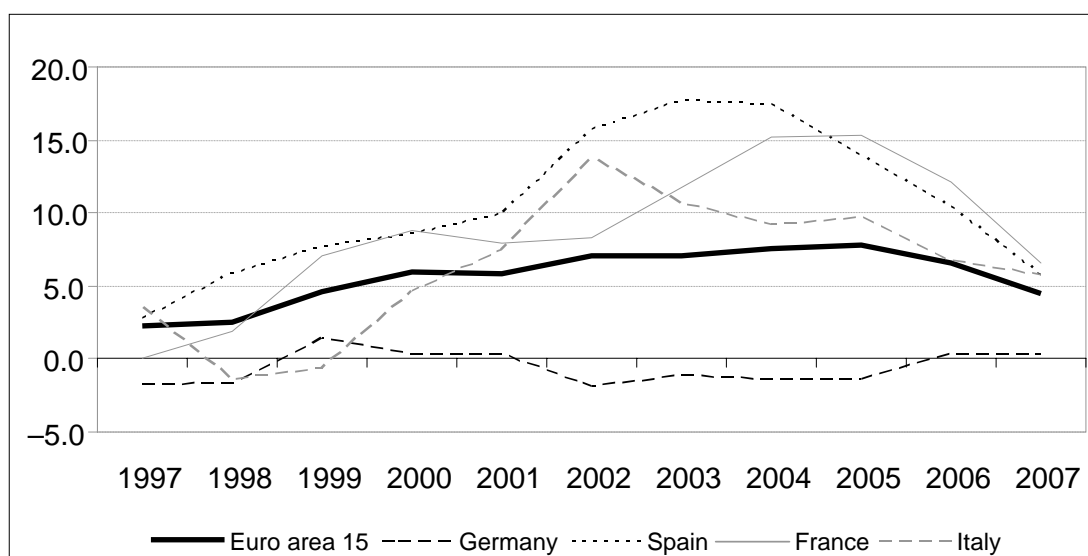
Official residential property price statistics, compiled by national statistical institutes, are lacking in several EU countries. In recent years the ECB expanded its regular collection of available non-harmonised indicators for changes in residential property prices from national sources, in cooperation with the EU national central banks, which are in several cases also the source of the data. The data for the euro area are published in the ECB Monthly Bulletin and can be downloaded from the ECB website.³ Non-confidential data for euro area countries are provided on request. Comprehensive metadata have been established in order to facilitate the use and comparison of these non-harmonised data. An overview of the available annual indicators for the EU 27 countries is included in Annex 1.

Euro area countries

Residential property price indicators are available for all euro area countries, but differ in terms of coverage of geographical area and types of dwellings (new and existing, houses and flats) as well as in the way price changes are controlled for changes of dwelling characteristics. Data for Germany, Cyprus and Luxembourg are reported only at an annual frequency. For Italy semiannual figures are compiled; in addition an experimental quarterly series has been provided by the Bank of Italy. For other countries, residential property price indicators are published quarterly or even monthly (the Netherlands, Portugal). The following chart compares the rates of change in residential property prices in Germany, Spain, France and Italy with the average growth rate for the euro area.

³ See <http://sdw.ecb.europa.eu/>.

Chart 1
**Residential property prices in Germany, Spain, France,
 Italy and the euro area**
 Annual percentage change



Source: National central banks and ECB calculations.

Other EU countries

Residential property price indicators are available for all non-euro area EU countries. The statistical quality varies even more than for the euro area countries. The price indices for Denmark, Sweden and the UK⁴ are well established and available quarterly or monthly (UK). For most of the new Member States, residential property price indicators have been made available only recently, mostly by the national statistical institutes. Furthermore, data for Romania are internal estimates by National Bank of Romania. Aggregated price data typically do not represent the complete national market. Indicators for Bulgaria, Estonia, Hungary and Romania refer to prices collected in the capital cities or in major cities. Available price indicators for Bulgaria, the Czech Republic, Estonia, Latvia, Hungary, Romania and Slovakia cover existing dwellings, mainly or exclusively flats. Most indicators are average prices per square metre of typical units. The statistical shortcomings of these series may be significant, in particular in view of the generally large quality differences between old and new dwellings, and between dwellings in different locations or regions. These indicators must therefore be used with caution.

Euro area aggregates

The ECB's DG Statistics compiles a euro area residential property price indicator from country data. The euro area index is a weighted average of the year-on-year rates of change of the national indicators, weighted together with GDP shares of a constant weight reference year. For the euro area, annual aggregate back data have been estimated for 1982–95,

⁴ For the UK several house price indices exist, referring to different data sources and applying different statistical concepts. (See, eg <http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/housingmarket/publications/communities-local/house-price-index/>.)

using alternative sources for those larger euro area countries whose headline indicators started only in the 1990s.

In October 2004, ECB's DG Statistics compiled for the first time semiannual estimates of the euro area residential property price indicator. Annual data for Germany and Luxembourg have been interpolated. A first estimate for the first half of the year is compiled around the end of the same year. First results for the second half of the year, and the year as a whole, are released in April of the following year. Generally, euro area residential property price indices are revisable, reflecting increased country coverage or revisions in some country indicators, which may also affect the back data.

Future developments

Looking ahead, Eurostat's pilot work on an HICP-based price index for the acquisition of owner-occupied dwellings is expected to also provide a new and harmonised euro area dwelling price index. Twelve EU Member States participated in the second stage of the pilot study, which finalised its work mid-2007. The pilot countries developed experimental price indices for the acquisition of residential dwellings. In the third and final stage of this pilot work, which started in the second half of 2008, the statistical quality of these indices will be further improved. In addition, it is planned that all EU Member States contribute to the development of price indices for dwelling purchases. Final results are expected by end-2009. However, given that many countries need to implement entirely new statistics and surveys in this field, it is as yet uncertain whether regular production can be achieved without a legal basis. Discussions on such a regulation have started, but it may take some time before it is implemented. Residential property prices have been proposed as addition to the list of Principal European Economic Indicators (PEEIs).

Improvements have been made, in the country coverage of the ECB data collection and semiannual releases of euro area aggregates. Major remaining caveats concern the differences between the statistical sources and methods used, and the infrequency of the data for Germany and Italy. Given that it may take some time before Eurostat regularly compiles harmonised quarterly dwelling price indices for the euro area and the EU, the ESCB Working Group on General Economic Statistics will continue its work in this field.

3. Structural indicators on housing

In 2003, the ESCB agreed on a set of six structural housing indicators, which were to be based on non-harmonised national definitions. The ESCB Working Group on General Economic Statistics collects annual data on the number of private households, the number of dwellings, vacancy rate, housing completions, housing transactions, and the type of tenure (owner-occupied and rented). The targeted timeliness is 18 months. However, since information on several of these indicators is collected in household surveys, meeting this target requires estimations. Reliable estimates are not always available, in particular for most recent periods. Therefore, it is challenging to produce complete and aggregate data sets for the euro area and the EU.

Calculation of European aggregates

The ECB's DG Statistics compiles results for the euro area and the EU. Gaps in the national data are filled by estimates conducted by the national central banks or the ECB. Annex 2 presents available information for the euro area. Euro area aggregates for the number of households, the number of dwellings, the vacancy rate, housing transactions, and the shares of rented and owner-occupied accommodations are available only until 2005.

Future developments

It is expected that the data collection on Structural Housing Indicators will continue over the next years. It is unlikely that data will become available from other European sources in the near future. Important exceptions are statistics on house sales, which have been proposed to the list of PEEIs. The ESCB will undertake further efforts to improve timeliness and to fill existing gaps in the reporting.

4. Euro area households' housing wealth

Housing capital stock is defined as the value of residential dwellings (excluding land) in use. Households' housing wealth covers the value of all residential dwellings, including the value of the underlying land, owned by households. The latter, in particular, is important for ECB analysis as housing wealth accounts for a large part of the total wealth held by households and can have significant effects on households' consumption, investment, saving and portfolio decisions. In the absence of official euro area aggregates, the ECB has compiled estimates for the euro area capital stock (including a breakdown by main asset types, of which housing) and the households' housing wealth. First estimates were published in 2005 and 2006, respectively.⁵ Euro area results are estimated using available national estimates by national statistical institutes' and national central banks' sources (covering about 80% of the euro area), and ECB estimates for missing data. These indicators – unlike the statistics on residential property prices and structural housing indicators – do not have yet a complete country breakdown.

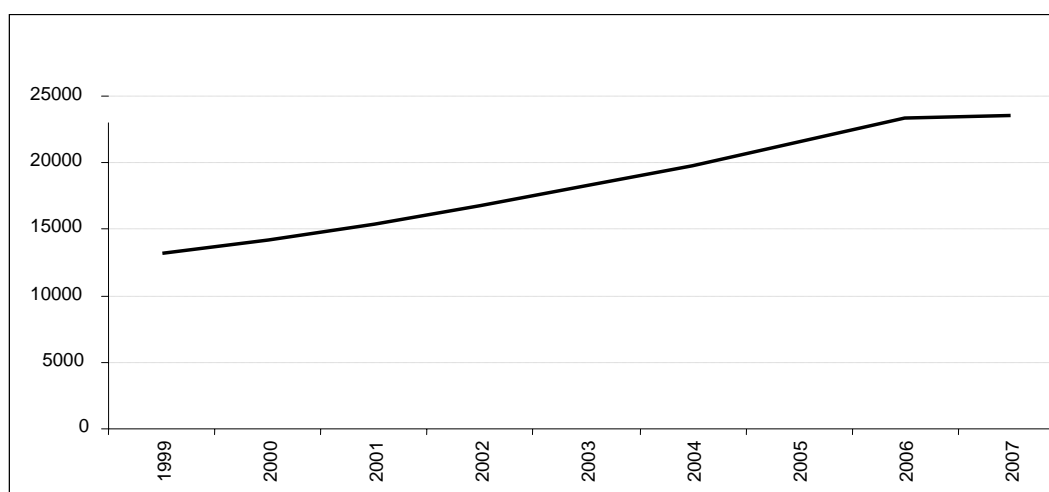
Results

Chart 2 shows that euro area households' housing wealth is estimated to have increased from EUR 13,211 billion in 1999 to EUR 24,232 billion in 2006, with an average nominal growth rate of 9% p.a. Based on the development of the euro area residential property price index, the value of euro area households' housing wealth can be expected to have remained unchanged in 2007. The share of housing wealth in households' net worth (ie housing wealth plus financial assets minus liabilities) has increased from approximately 59% in 1999 to 68% in 2006 and 2007. Chart 3 shows households' net worth in the euro area (as a percentage of gross disposable income).

⁵ The euro area data are published on the ECB website, and have been introduced in the ECB Monthly Bulletin. See "Estimates of euro area capital stock", Box 4, *ECB Monthly Bulletin*, May 2006; and "Estimates of housing wealth for households in the euro area", Box 5, *ECB Monthly Bulletin*, December 2006.

Chart 2
Households' housing wealth in the euro area

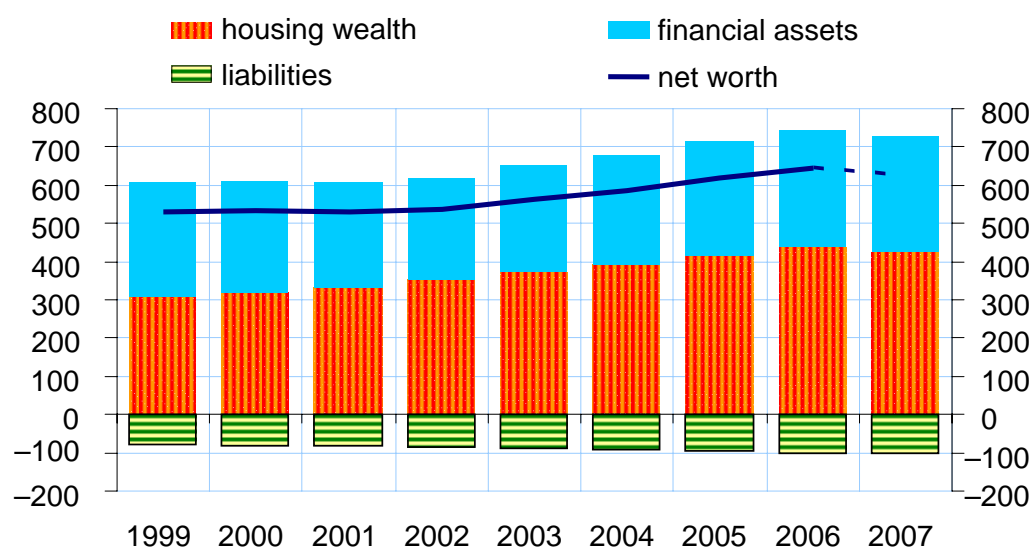
In billions of euros



ECB calculations.

Chart 3
Households' net worth in the euro area

Percentage of gross disposable income



ECB calculations.

Future developments

The ECB's estimates for euro area capital stock and households' housing wealth help to close a data gap with regard to economic and financial analysis and projections. The experimental estimates are subject to a higher degree of uncertainty than most other euro area statistics. In particular this holds for households' housing wealth statistics, which include implicit estimates for the value of the land on which the dwellings have been built. Nevertheless, a sensitivity analysis has confirmed that the experimental estimates are sufficiently robust, in particular as regards development over time. Data quality is expected to

improve over time as more and better estimates will become available at the national level. In particular the revised ESA95 Transmission Programme requires national statistical institutes to provide estimates on the housing stock owned by households, and to transmit other detailed estimates on non-financial assets by institutional sector.

Finally, the ECB's DG Statistics is currently working on a project that aims to integrate the existing capital stock and households' housing wealth estimates in the framework of the euro area accounts by institutional sector.

**Annex 1:
Residential property prices for EU countries,
annual percentage change⁶**

	Belgium	Germany	Ireland	Greece	Spain	Italy	France
	New and existing houses: whole country	New and existing houses and flats: whole country	New and existing houses and flats: whole country	New and existing houses and flats: whole country	New and existing houses and flats: whole country	New and existing houses and flats: whole country	Existing houses and flats: whole country
1996	4.5	-1.1	-	9.9	1.4	2.4	-
1997	3.6	-1.9	-	8.2	2.8	3.4	0.1
1998	6.7	-1.6	22.6	14.4	5.8	-1.4	1.9
1999	7.8	1.4	22.5	8.9	7.7	0.8	7.1
2000	7.1	0.2	20.5	10.6	8.6	3.9	8.8
2001	6.2	0.2	14.0	14.4	9.9	6.0	7.9
2002	7.8	-1.9	6.1	13.9	15.7	12.6	8.3
2003	7.1	-1.2	14.3	5.4	17.6	7.2	11.7
2004	12.0	-1.4	11.5	2.3	17.4	7.0	15.2
2005	16.7	-1.5	7.2	10.9	13.9	8.6	15.3
2006	11.1	0.3	13.4	12.2	10.4	5.8	12.1
2007	9.2	0.3	0.9	.	5.8	5.0	6.6

	Luxembourg	Malta	Netherlands	Austria	Portugal	Finland	Euro area
	New and existing houses and flats: whole country	New and existing houses and flats: whole country	Existing houses and flats: whole country	New and existing houses and flats: whole country	New and existing houses and flats: whole country	Existing houses and flats: whole country	New and existing houses and flats: whole euro area
1996	4.0	8.8	10.8	0.4	1.7	-	2.0
1997	3.6	8.5	12.0	0.8	3.6	-	2.3
1998	3.6	4.9	10.9	-5.0	4.5	-	2.5
1999	6.4	3.2	16.3	-1.9	9.0	-	4.9
2000	7.3	8.4	18.2	-1.2	7.7	-	6.0
2001	11.4	5.0	11.1	2.2	5.4	-0.5	5.5
2002	10.8	8.7	6.4	0.2	0.6	7.4	6.8
2003	11.5	13.3	3.6	0.3	1.1	6.3	6.4
2004	14.0	20.3	4.3	-2.2	0.6	7.3	7.2
2005	11.7	9.8	3.9	5.1	2.3	6.1	7.6
2006	.	3.5	4.6	4.0	2.1	7.4	6.4
2007	.	1.1	4.2	4.1	1.3	5.9	4.3

For note and source, see the end of the table.

⁶ Data for Cyprus, Romania and Slovenia are confidential.

Annex 1:
Residential property prices for EU countries,
annual percentage change⁷ (cont)

	Bulgaria	Czech Republic	Denmark	Estonia	Latvia	Lithuania
	Existing flats: large cities	Existing houses and flats: whole country	New and existing houses: whole country	Existing flats: capital city	Existing flats: whole country	New and existing houses and flats: whole country
2000	–	13.5	6.5	1.6	–	–9.7
2001	0.3	9.5	5.8	34.3	–	23.8
2002	1.8	13.1	3.6	29.5	–	9.5
2003	12.2	11.4	3.2	12.9	2.7	18.1
2004	47.6	–0.8	8.9	27.8	2.3	9.9
2005	36.6	–0.6	17.6	31.0	20.0	51.7
2006	14.7	0.8	21.6	51.7	159.3	39.2
2007	28.9	.	4.6	10.1	45.1	33.5

	Hungary	Poland	Slovakia	Sweden	United Kingdom
	Existing houses and flats: capital city	New and existing flats: whole country	Existing houses and flats: whole country	Existing houses and flats: whole country	New and existing houses and flats: whole country
2000	–	–	–	11.2	9.8
2001	–	–	–	7.9	8.5
2002	–	–	–	6.3	17.4
2003	10.9	–	39.6	6.6	22.4
2004	9.1	–6.1	15.4	9.3	18.3
2005	0.8	20.0	–10.3	9.0	5.7
2006	–0.8	3.8	16.8	12.2	8.3
2007	1.6	.	23.9	10.4	9.4

Gaps in the euro area countries' back data have been filled by referring to other indicators or estimates.

Source: National central banks and ECB calculations.

⁷ Data for Cyprus, Romania and Slovenia are confidential.

**Annex 2:
Structural indicators of the housing
market in the euro area 12**

	1. Number of private households ¹	2. Number of dwellings ²	3. Vacancy rate ³	4. Number of housing comple- tions ⁴	5. Number of housing transac- tions ⁵	6. Type of tenure	
						6.1 Rented accom- modation ⁶	6.2 Owner- occupied ⁶
Unit	1,000,000	1,000,000	%	1,000	1,000	%	%
1990	102.2	127.9					
1991	111.4	129.2		1,508		38.1	58.2
1992	113.0	130.7		1,502		38.2	58.1
1993	114.6	132.1	11.4	1,583		38.1	58.1
1994	116.0	133.6	11.6	1,750		38.5	58.2
1995	117.0	135.2	11.8	1,787		38.1	58.6
1996	118.0	136.9	11.9	1,809		37.8	59.0
1997	119.1	138.7	12.1	1,663		37.3	59.6
1998	120.2	140.4	11.8	1,709	2,982	36.9	59.9
1999	121.5	142.2	11.8	1,755	3,121	36.3	60.8
2000	123.0	144.0	11.8	1,758	3,034	35.9	61.3
2001	124.5	145.9	11.8	1,771	2,978	35.7	59.3
2002	127.0	147.7	10.1	1,792	3,235	35.8	61.5
2003	128.7	149.6	10.6	1,746	3,254	35.4	61.8
2004	130.6	151.5	10.6	1,761	3,742	35.2	62.0
2005	132.0	152.7	10.5	1,880	3,846	36.1	60.9

Notes: Based on partially non-harmonised national data which are broadly in line with commonly agreed target definitions. Euro area aggregates are shown if a country coverage of at least 80% has been achieved; national data are sometimes estimates.

¹ Close to the ESA definition, ie "small groups of persons who share living accommodation and pool some/all of their income to consume goods and services, mainly housing and food" (ESA 2.75). ² Buildings that are used entirely or primarily as residence; includes all buildings, whether they are occupied or not. Partly includes secondary and tourist accommodation. ³ Share of vacant dwellings, ie not occupied or let by owners, in the stock of all dwellings. Partly includes secondary and tourist accommodation. ⁴ Number of housing completions during the period. ⁵ Number of transactions of dwellings during the period. Makes use of a variety of national data sources. ⁶ Shares of rented and owner-occupied accommodation do not add up to 100% as other types of tenure are excluded (eg accommodation let free of charge).

Sources: ECB calculations based on national data.