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## OWNER OCCUPIED HOUSING IN THE HICP

### ECB POSITION PAPER

#### 1. The coverage of owner occupied housing in the HICP

Consumers acquire homes for providing shelter, i.e. for the purpose of consumption over a longer period. At the same time it is uncontroversial that the purchase of a dwelling shares common characteristics with expenditures for investment or saving, which are typically not covered in a CPI. The relevance of the two motivations – provision of shelter services versus saving and expected capital gains - may differ between countries and over time and may depend on the level of current or expected inflation. However, considering the substantial expenditures of household required for the use of the shelter service, the exclusion of owner occupied housing from HICPs is not satisfactory and leaves a gap in the coverage of consumer expenditures for consumption purposes.

Moreover, the exclusion of owner occupied housing from the HICP is an unsatisfactory solution against the background of the comparability requirement for the HICP. It leads to differences in the coverage of *total* housing expenditures of consumers between countries. The owner occupation level differs in the EU between around 40% (DE) and 80% (IE) and the market shares of rental dwellings differ accordingly. Depending on the size of the rental market in the countries, price changes in the housing sector are reflected to a differing degree in HICPs of different countries. This reduces the comparability of HICPs.

#### 2. Purposes and concepts of consumer price indices

It is a common view that different purposes of a consumer price index require different concepts for its design and, in this case, for the coverage of owner occupied housing. The different purposes of a CPI can be classified into two broad categories:

- **Compensation indices** - have the purpose of adjustment, indexation or evaluation of consumers' money income (e.g. wages or pensions).
- **Inflation indices** - have the purpose of measuring macroeconomic inflation, comparing inflation between countries and deflating value data.

Moreover, the following three main **concepts** for price measurement are distinguished:

- **Payments** - measures the payments (cash outlays) of consumers. The flow of payments can be spread over several periods and can be different from the time of purchase and the period of consumption.
- **Transaction** - measures the price of transactions in the period of purchase/acquisition. It can be different from the actual payments and their timing and different from the costs of consumption and their timing.
- **Use** - measures the cost of consuming. The costs of consumption may occur after the transaction period and may occur before or after the payments period.

Whilst some links and overlaps exist between the three concepts, the **payment concept** is most appropriate for a compensation index. Its use ensures that consumers are compensated for the change in cash outlays for consumption expenditures. The **transaction approach** is linked to inflation analysis, since it refers to market transactions in monetary terms. It is the basis for most other macroeconomic price statistics (input and output prices, trade prices).

The classification of the **use concept** into the “compensation” or the “inflation” category is less obvious. The use concept may be justified for a compensation index, if the objective is to compensate for the costs of maintaining a certain “standard of living”. The use concept may also be justified in the context of an inflation index; if consumer price inflation is defined in a welfare oriented way (“change in expenditure necessary to ensure a constant standard of living”), the user cost approach is appropriate to capture the “price” of the service provided by consumer durables. The imputed “price” may however vary without the consumer being aware of it. In addition, the user cost approach is appropriate for the deflation of value series, if these include estimates for the “imputed” value of the service flow provided by consumer durables or dwellings.

### 3. **Concept for owner occupied housing and the view of monetary policy**

Whilst for many items covered in the index different concepts will lead to the same result (in particular for immediately consumed goods and services), for owner occupied housing the differences may be significant and important for monetary policy.

The payments approach for owner occupied housing – existing in different variants and covering the cash outlays including credit costs – answers the question on the change through time in cash outlays for a sample of owner occupied dwelling in the reference period. Since dwellings are to a large extent financed out of credits, credit costs are an important part of all variants of the payments approach. This corresponds to the consumers' perception of the costs of a house purchase and continued ownership. However, the flow of

payments and the credit costs cannot be an indicator of a change in the price level in the economy. Moreover, a key concern from a monetary policy point of view is to avoid the inclusion of “imputed costs” derived from interest rates in the HICP. If interest rate costs are included in the HICP, policy actions to maintain price stability may, at least initially, have perverse effects on the headline HICP measure of inflation, leading to presentational problems for the communication of monetary policy decisions. The payments approach is currently used by one euro area country (IE) for its national CPI. The payments approach is not considered appropriate for the HICP.

The transaction approach for owner occupied housing - defined either as a "net" or a "gross" acquisition approach - reflects the change in price level of the flats and houses acquired by households in the reporting period. It ensures a complete coverage of expenditures in the sense that those prices are covered, which were agreed between buyer and seller. It limits the coverage to monetary transactions *between different* institutional units. In the “gross” acquisition approach all transactions are covered, including the household sector internal transactions (purchase of used dwellings). The “net” approach reflects only the purchases from other sectors (mainly new dwellings). The transaction/acquisition approach excludes notional (imputed) transactions within one institutional unit (services provided by the household to the same household). This is attractive for an “inflation index” which is expected to measure a monetary phenomenon.

Only a few countries currently apply (AU, NZ) or have applied the net acquisition approach (US). A particular problem with the net acquisition approach is that central banks generally hesitate to include asset prices in a main indicator and a target variable of monetary policy. The factors which cause changes in dwelling prices (current costs, but also expectations on future development of nominal and real variables, changes in the expected return on investment) are different from the factors which influence the prices of immediately consumed goods and services. Including asset prices in the HICP may falsely give the impression that monetary policy has an implicit asset price target. Policy makers do however not necessarily know the appropriate level of asset prices better than the market, asset prices have a real component which cannot be influenced by monetary policy over the longer-term (neutrality of monetary policy) and by trying to target highly volatile asset prices, a central bank may transmit volatility to the rest of the economy. Another objection put forward against the transaction concept for dwellings in the HICP is the expected increase in volatility of the index caused by the dwelling (or, in particular, land) price cycles.

The transaction approach may take account of these concerns by using price indices which exclude land price movements from its coverage (construction output prices, costs of repairs etc.). This treatment also complies with the treatment of the purchases of land in the ESA 95, which excludes the acquisition of non-produced assets from final expenditure. Under these conditions, the net acquisition approach is an interesting option for the coverage in HICP. It should, however, also be acknowledged that proposed construction output prices are only a proxy for the ideal measure of a consumer price excluding land price.

The user cost approach for owner occupied housing – consisting of estimates of the rental equivalent approach (using rents of comparable rental dwellings) or measures of the capital costs (which may include

mortgage interest, depreciation, and/or costs of foregone capital income) – measures the price or costs of the *consumption flow* provided by the occupied dwelling. Variants of the user cost approach are used by 6 of the 7 EU countries, which cover owner occupied housing in their national CPI. It is appropriate for deflating estimates of consumption which include an estimated value for the service provided by dwellings – the case for private consumption in national accounts. A broader definition of inflation, including also changes in opportunity costs for using dwellings (or other durables), is useful for macroeconomic analysis and in particular for deflating statistical series which include the estimated value of the services provided by durable goods, but the meaning of opportunity cost estimates in a policy and target indicator for monetary policy purposes is less obvious. In addition, it may be objected that the possible estimates of opportunity costs differ substantially depending on the assumptions and the judgmental element is disturbing in this index. This is even more important as the potential HICP index weight of owner occupied housing implied by the user cost approach is high – significantly higher than for the transaction and payments approach - since it covers an estimate for the costs of *all* owner occupiers, whether actual costs arise to this extent (e.g. due to a mortgage debt) or not (e.g. households paying no other costs than maintenance). Finally, as for the payments approach, the inclusion of interest cost in the index by some variants of the user cost approach is a disadvantage from the central bank point of view. In favour of the user cost approach it can be argued that – given the difficulty of finding a fully satisfactory solution - the opportunity costs may be an acceptable proxy for the price of the continuous “acquisition” of shelter services and that the inclusion of a comparable proxy is better than the complete exclusion from the index.

#### **4. Existing legal framework for HICP**

The existing EU Council and Commission HICP regulations include some provisions which cannot be ignored when discussing the available options for owner occupied housing.

The HICP framework regulation of 1995 defines HICPs as “inflation” indices (underscoring added):

*“Whereas there is a need for the ...monetary authorities to have ...consumer price indices for the purpose of providing comparisons of inflation in the macro-economic and international context as distinct from indices for national and micro-economic purposes.”* (Council Regulation (EC) No 2495/95)

This regulation also defines the scope of HICPs. It puts the emphasis on “prices”, “purchase” and the “satisfaction of consumer needs”, but does not distinguish between the economic features of the good.

*“The HICP shall be based on the prices of goods and services available for purchase in the economic territory of the Member State for the purposes of directly satisfying consumer need.”* (Art 3)

Important provisions are included in the Council Regulation of 1998:

*“Whereas prices not actually paid by consumers in such purchases or opportunity costs or interest payments are not appropriate...”* (Council Regulation (EC) No 1687/98)

Article 1.3 (a)(2) and (3) of this regulation define the concept of coverage and prices:

*“Household final monetary consumption expenditure is defined as that part of final consumption expenditure which is incurred by households in monetary transactions.... Unless otherwise stated Annex 1b follows the definitions laid down in the European System of Accounts (ESA) 1995....”; “Prices used in the HICP are the purchase prices paid by households to purchase individual goods and services in monetary transactions”.*

## **5. Existing EMI and ECB opinions on draft regulations**

The concept of HICP coverage has been supported by the ECB and its predecessor, the EMI in the consultations on draft regulations, including the concept of household final monetary consumption expenditure (see ECB Opinion of 14 July 1998). However, in view of the known difficulties of finding an appropriate solution for owner occupied housing, the ECB and the EMI noted at earlier occasions that for the coverage of owner occupied housing a narrow and very limited definition of the HICP would not be satisfactory:

*“The Draft Regulation might be understood to mean that only narrowly defined HCPIs totally excluding imputed prices should be aimed at. Monetary policy purposes as well as comparability may also require broader measures of consumer price inflation”* (EMI Opinion on Council Regulation (EC) No 2495/95/1995, para 5b).

and

*“The provisions contained therein should not prejudice the coverage of owner-occupied housing in general or exclude options for the coverage of this item in future extensions of the HICP”.* (ECB Opinion on Council Regulation (EC) No 1687/98, para 7)

## **6. Treatment in national accounts and implications for the HICP**

The ESA and SNA treatment is frequently referred to in the discussion of owner occupied housing. The ESA and the SNA require the recording of the services provided by owner occupied housing on the production, income and consumption side of the system, measured by an estimated imputed value for the rental equivalent. This treatment is, however, governed by the definition of the production boundary of the system. The SNA explains the coverage (underscoring added):<sup>1</sup>

*“The ratio of owner-occupied to rented dwellings can vary significantly between countries ..., so that both international and intertemporal comparisons of the production and consumption of housing services could be distorted if no imputation were made for the value of the own-account housing services”.* (SNA 6.29)

National accounts also acknowledges the limits of the inclusion of “imputed” transactions:

*“It is clear that the economic significance of these flows is very different from that of monetary flows. For example, the incomes generated are automatically tied to the consumption of the goods and services produced;*

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<sup>1</sup> The SNA instead of the ESA is quoted, since it contains more detailed references to owner occupied housing.

they have little relevance for the analysis of inflation or deflation or other disequilibria within the economy". (SNA 1.21)

The SNA rules the classification of consumption goods and capital goods:

"Final consumption expenditure excludes expenditures on fixed assets in the form of dwellings or on valuables. Dwellings are goods used by their owners to produce housing services. Expenditure on dwellings by households, therefore, constitutes gross fixed capital formation". (SNA 9.45)

and

"All dwellings ... are fixed assets. Owner occupiers are treated as the owners of enterprises engaged in the production of housing services for their own final consumption so that dwellings are not consumer durables". (SNA 10.70)

The ESA/SNA treatment of owner occupied housing is justified for the measurement of output and consumption. As a consequence, an estimate for the value of imputed rents is included in the relevant deflators, but national accounts acknowledge that the recording of non-market transactions has little relevance for inflation analysis. Moreover, the equivalent rent approach - though used for national accounts – is, according to the views of several EU countries, not possible for the HICP, since comparable rental markets are too small.

The ESA and SNA treat the purchase of a dwelling as gross fixed capital formation. The reason underlying this convention is the production boundary of the system. If classified as a consumer durable, households could not use the dwelling for producing services for own consumption. The classification of dwelling purchases as capital goods in the ESA is a consequence of the definition of its production boundary, but does not prejudice the treatment in a consumer price index.

## **7. The treatment of other items related to owner occupied dwellings**

The extension of coverage of the HICP requires besides a decision on the treatment of the direct dwelling costs a decision on the treatment of other costs related to the acquisition and the maintenance of the dwelling (e.g. repairs and insurance). As Eurostat's Task Force report has shown, the potential index weight of these costs is considerable and would account for around half of the total weight of owner occupied housing if the net acquisition approach were adopted. The treatment of the items concerned – agents' fees, insurance, services and materials for maintenance and repair- does not raise any insurmountable conceptual or practical problems.

## 8. Conclusions

The purpose of the HICP is defined as an “inflation” index. A coverage of expenditures for owner occupied housing is desirable in order to ensure a broad coverage of consumption expenditures and to improve the comparability of expenditure coverage across countries. From the three possible concepts, the payments approach may be ruled out for the HICP, mainly because interest costs should not be included in a price index used for monetary policy purposes.

The inclusion of owner occupied housing expands the coverage of the HICP beyond the area of directly observable consumption volumes and prices. The EMI and the ECB have supported this step on earlier occasions as necessary for completing the coverage of household expenditures. All variants of the transaction approach and in particular of the user cost approach involve the use of estimations and second best proxy measures. They require a particular definition of consumption and an approximate delimitation of consumption and investment.

In conceptual terms, both the transaction and the use concept can be justified for an inflation index, though neither is without shortcomings. The strength of the transaction concept lies in its focus on monetary transactions. Since inflation is a monetary phenomenon and the instruments of a central bank aim at influencing prices of market transactions, this approach has particular advantages. The advantage of the net acquisition approach is the limitation to those purchases which change the dwelling stock owned by households. The exclusion of the land price element ensures that movements of asset prices are not (or only to a very limited extent) reflected in the HICP, which is a key concern of the ECB. The lack of experience with the net acquisition approach in Europe is a practical disadvantage which has to be taken into account for the timetable to extend the coverage, but it is not a decisive argument against its use in principle. It makes it necessary to investigate its practical implication before the approach is fully implemented.

Besides the focus on market transactions, the proposed net acquisition approach has two further positive features, which the ECB considers important. First, the net acquisition approach appears to be feasible in *all* Member States. Second, the net acquisition approach can be introduced in a comparable manner by *all* Member States. An alternative solution is available in the user cost (equivalent rent) approach. Assuming that the price of owner occupied housing is the price of the shelter service provided by the dwelling and that the consumer makes, in every period, a decision to “purchase” this service, the user cost can be seen as the price for the acquisition of the service. This “purchase” is, however, notional and implies no exchange of money, of assets or of liabilities. The coverage of owner occupied housing following the user cost approach can make the HICP coverage more complete and comparable. However, it does not add to the index information about price changes of goods and services exchanged between purchaser and seller. For the development of the HICP for monetary policy purposes, and taking into account the lack of appropriate data for the application of the equivalent rent approach in several countries, priority should therefore be given to the development of the transaction approach.

The ECB suggests a two step approach for the extension of coverage of the HICP.

- In the first step, the coverage of the HICP should be extended to certain other costs related to owner occupied dwellings, namely agents and other fees, insurance, services and materials for maintenance and repair. A considerable part of the actual expenditures of owner occupiers would be covered thereby.
- In a second step, the coverage of dwelling purchases in line with the net acquisition approach as suggested by Eurostat's Task Force should be developed (exclusion of land, use of proper construction output price indices).

Given the importance of this change in coverage and the necessary development of appropriate price measures the ECB strongly recommends introducing the coverage of dwelling purchases in an experimental, extended HICP index which would complement the "official" HICP for some time until the full extension of coverage is carried out (if the experience with the net acquisition approach is positive). A sufficient quality and comparability of the price indicators used is a pre-condition for the extension of coverage.