

# **Methodology of the Monthly Index of Services**

## **Real Estate Industry Review Phase II**

### **Introduction**

At the launch of the experimental Index of Services (IoS) in December 2000, a commitment was made to review and improve where practical, the sources and methods used to measure the service sector. Given the scale of the review for the real estate industry, the review was split into two phases. In June 2004, the findings of the first phase were implemented. This paper outlines the findings of the second phase of the Real Estate Industry Review.

### **Summary**

The industry review for real estate phase II (known hereafter as real estate) has recommended:

- to introduce the annual number of properties sold by property companies and public sector for real estate activities with own property
- to introduce IPD net income deflated by the IPD Rental Value Index to measure the output of letting of own property other than dwellings

Although the methodology will be changed all the way back to 1994 in the IoS system, only the period from 2001 will be revised. The main impact of the new methodology is weaker growth since 2002.

### **How important is Real Estate?**

In terms of gross value added (GVA) weights in 2002, recreation (SIC<sup>1</sup> Division 70) represents:

- 13.7% of the IoS
- 10.1% of Total GVA

Real estate is published as part of the Business Services and Finance<sup>2</sup> component within the IoS.

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<sup>1</sup> The SIC is the Standard Industrial Classification, and this is the classification system used in the UK to define industrial groupings. The 4-digit refers to the level of detail and is generally the level at which data is collected and aggregated from within GDP(O) and IoS. More detail on this can be found in the IoS Methodology documentation

<sup>2</sup> This covers the following sections of the UK SIC: J Financial Intermediation and K Real Estate, Renting and Business Activities

## Methodology

### Previous methodology<sup>3</sup>

Within Division 70 there are 3 3-digit SICs. For the purposes of IoS and GDP(O) these have been restructured in order to derive a basic business and household split of output, which is consistent with Input-Output. Table 1 below gives the detail of the methodology that was previously used:

**Table 1**

SIC	Description	Output indicator	Source	Deflator	2000 Weight (GDP=1000)
70.1 & 70.2 (part)	Real estate activities with own property Letting of own property other than dwellings	1.IPD 'Total return index' 1986=100 2.Local authorities' employees (GB) in housing departments 3.Local authority non-trading capital consumption	IPD ONS LA	Investors Chronicle CB Richard Ellis Rent Index  Deflated at source	17.3
70.2 (part)	Letting of dwellings	The sum of: 1.HE on rent of public sector housing at 2001 prices (£million) 2.HE on rent of public sector housing at 2001 prices (£million) 3.Imputed rent of owner occupied dwellings at 2001 prices (£million)	HE HE HE	Deflated at source Deflated at source Deflated at source	74.8
70.31	Real estate agencies	Deflated turnover from VAT returns (£million)	HMRC	1.RPI: Real estate agent fees 2.CSPI: Real estate agencies	2.7
70.32	Management of real estate on a fee or contract basis	Deflated turnover from VAT returns (£million)	HMRC	1.CSPI: Canteens and catering 2.CSPI: Property rental payments 3.CSPI: Security services 4.CSPI: Industrial cleaning	1.8
CSPI – ONS Corporate Services Price Index, HE – Household Expenditure, HMRC – HM Revenue & Customs, IPD – Investment Property Databank, LA – ONS data for Local Authorities, ONS – ONS Quarterly Inquiry, RPI – ONS Retail Price Index, VAT - Value Added Tax					

### *Letting of dwellings and Real Estate Activities on a fee or contract basis*

As explained in the previous article on real estate, the letting of dwellings and Real estate activities on a fee or contract basis were reviewed last year and were implemented at Blue Book 2004. Therefore this note only relates to Real estate activities with own property and Letting of own property other than dwellings.

### *Real estate activities with own property and Letting of own property other than dwellings*

Although these are two distinct activities, they were previously grouped. The indicator used was the Total Return Index supplied by the Investment Property Databank (IPD). This

<sup>3</sup> In this report, the previous methodology refers to the methodology used prior to Blue Book 2004, and the new methodology to the methodology taken on at Blue Book 2004

measures the rate of return of direct investment in commercial property. The index is based upon a databank of portfolios, who supply monthly valuations, capital expenditure, and rental income on a monthly basis. IPD then aggregate the portfolios to produce the index. The IPD Total Return Index was deflated using the CB Richard Ellis Prime Rent Index, which comprises market rental values and yields. This series was periodically benchmarked to the latest current price input-output data.

The other indicator used was a LA employees series of the number of staff working in housing departments, together with LA non-trading capital consumption. These indicators are used on the basis that Gross Value Added for a non-market producer is made-up of compensation of employees and capital consumption. Hence, instead of measuring output directly, this method attempts measure the components of GVA directly.

### **Reasons for review**

The main reasons for reviewing these indicators within the real estate industry were as follows:

- development of real estate is not covered by the existing indicators
- employment data is used as an indicator for real estate activities with own property which is input based and inappropriate
- IPD Total Return Index is used as an indicator for commercial letting which is not specific to this industry
- the deflator used for commercial letting is skewed towards the prime rents of London

### **What should we be doing?**

In October 2001, Eurostat (European Union's Statistical Office) published the '[Handbook on price and volume measures in national accounts](#)'. The handbook provides guidance by product, on what price and volume methods should ideally be used (A methods), are acceptable methods (B methods) and those methods that should not be used (C methods). The handbook has been written in the context of annual data but the same rules apply to sub-annual data.

The Handbook gives the following guidance for real estate:

#### *Real estate activities with own property*

A model price approach would be an A method, although it would be very difficult to apply properly. A B method could be the use of a price index of investments. Less good, but still B methods, are the use of numbers of properties sold or numbers of transactions of notaries to measure the trade in property.

#### *Letting of own property other than dwellings*

The use of PPIs on the basis of e.g. rents per m<sup>2</sup> office space is an A method, provided sufficient detail is available on different types of buildings and their quality. Alternatively, the use of volume indicators relating to the volume of the stock of non-residential property could be a B method.

## Issues faced by the industry review

Due to the unique nature of each group within this division, each group will be looked at individually, rather than generalising by issue as has been the practice with previous reviews. Therefore, each section will review key features, output definition, issues and recommendations.

### 70.1 Real estate activities with own property

#### *Key features of the industry*

This industry includes the following industries:

- 70.11 Development of and selling of real estate
- 70.12 Buying and selling of own real estate

These will now be looked at in turn.

#### *Development and selling of real estate*

This class involves bringing together of financial, technical and physical means to realise real estate projects for later sale, whether for residential buildings or other real estate.

#### *Buying and selling of own real estate*

This class involves the buying and selling of self owned real estate, apartment buildings and dwellings, non-residential buildings and land. The price and volume handbook says that it is in essence a trade activity, which the national accounts should record on a net basis.

#### *Output definition*

Output is the total value of goods and services sold. In practice this is turnover or income deflated by appropriate price indices. (This is difficult due to the wide variety of unique services provided.)

#### *Issues*

- Is turnover data available?
- What options are there for using volume indicators?

#### *Turnover data availability*

MIDSS are not available for this industry, so the only turnover series that could be considered was VAT. Upon review the series had a number of step-changes and without briefing on the data, was difficult to quality assure. The VAT also showed poor coherence with annual data sources. The review concluded that the using VAT turnover was not a viable option for this review.

#### *Availability of volume indicators*

The price and volume handbook says that the number of transactions of notaries could be used as a proxy for trade in property. In this respect, Revenue & Customs publish the number

of property transactions for England, Wales & Northern Ireland on a monthly basis. However, these figures are for the total number of property transactions, of which 75% are individuals (households).

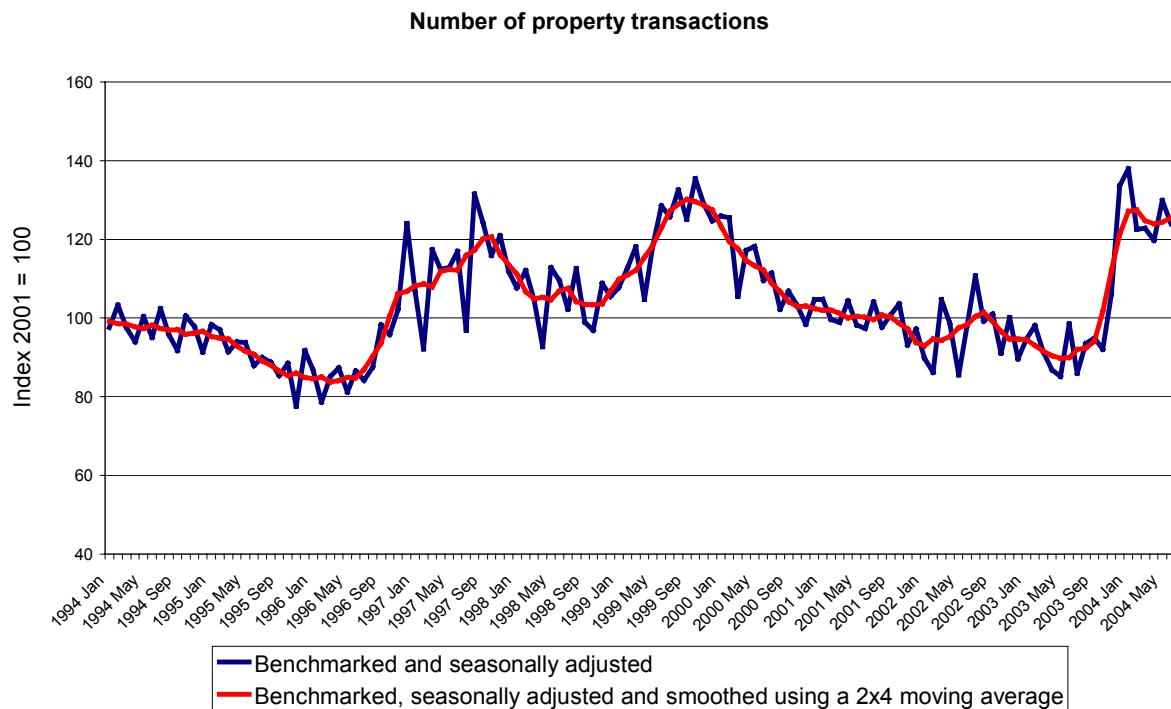
Revenue & Customs also publish the number of property transactions by type of seller (individuals; property companies; public sector; financial institutions; all others) for England and Wales, but only on an annual basis.

The review considered two options for using this data:

1. Benchmark the monthly series of all property transactions to the annual series of properties sold by property companies and public sector only
2. To forecast and interpolate the annual series of properties sold by property companies and public sector only

The figures below illustrate the two options:

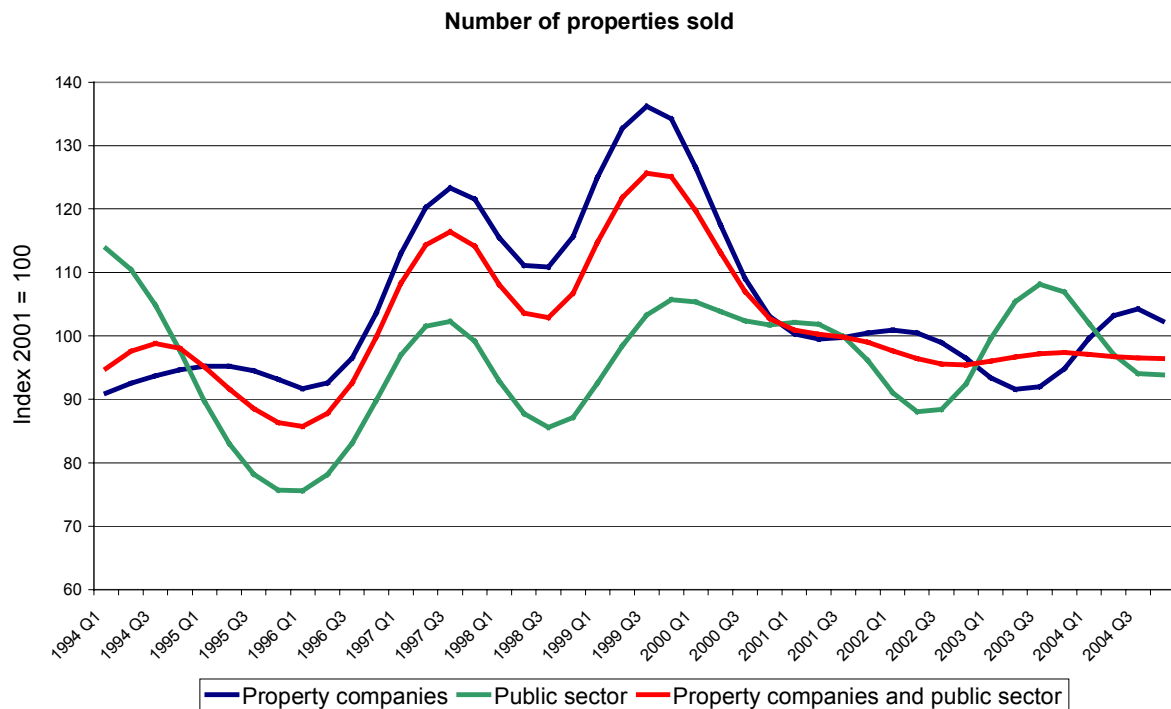
**Figure 1 – Total number of property transactions**



Although this method utilises monthly data, it is not representative of the industry as three quarters of it is made up of individuals/households. The monthly data displays a great deal of volatility and has been smoothed using a 2x4 moving average. Overall, this option was discounted as it is dominated by households and as such the path and volatility is not representative. Note that from January 2004 onwards, there is a discontinuity in the time series due to the introduction of a new form<sup>4</sup>.

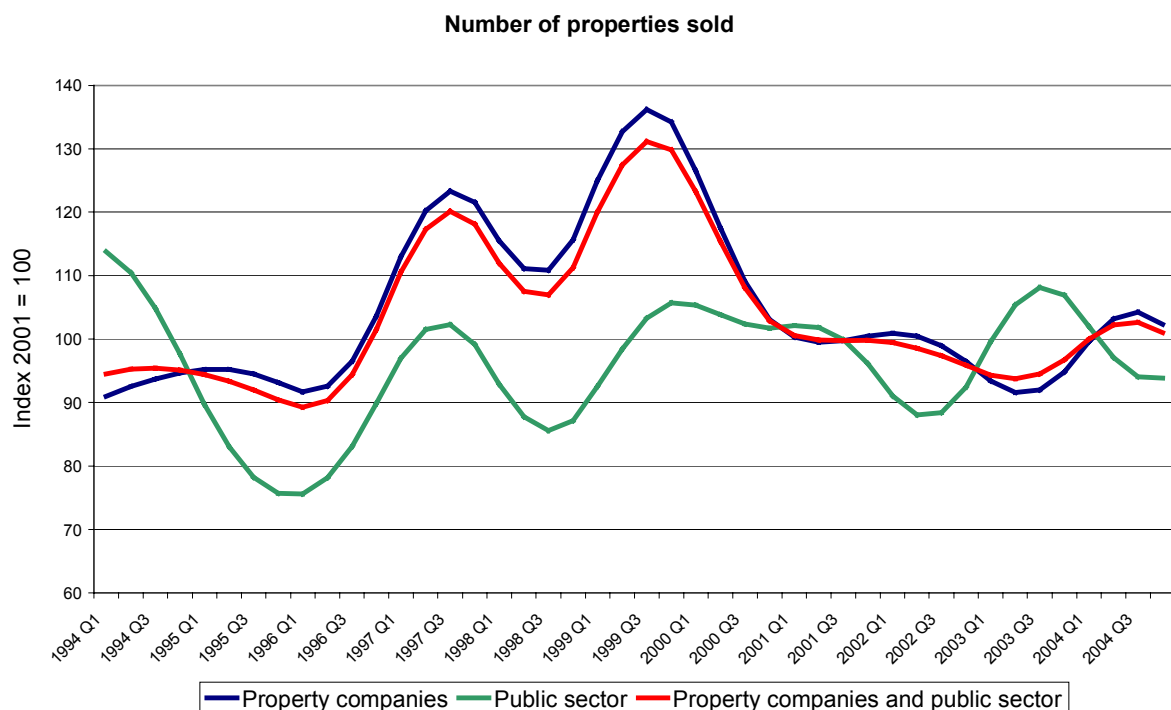
<sup>4</sup> In December 2003 new stamp duty land tax forms were introduced and due to the change in administrative arrangements, there are some issues of consistency when comparing the 2003 quarter 4 and later quarters with previous quarters. For more information, please see the HM Revenue Customs website (see references)

**Figure 2 –Number of properties sold by public sector and property companies**



The second option, shows for the later period a much different story to that of total property transactions, and although only an annual data source is a better option. It is also clear that the public sector and property companies transactions are also different and in the latest periods counter-cyclical. For this reason, the review recommended weighing together the property companies and public sector series by utilising data on the value of property transactions. This weighted series can be seen below in

**Figure 3 – Weighted number of properties sold by public sector and property companies**



## Recommendation

### **1. To introduce the annual number of properties sold by property companies and public sector to measure this industry**

## **70.2 (pt) Letting of own property other than dwellings**

### *Key features of the industry*

This class involves the letting and operating of self-owned real estate such as non-residential buildings and land.

### *Output definition*

The output of this industry is the income received from the letting of commercial property deflated by an appropriate price index.

### *Issues*

- What turnover data are available?
- What options are there to improve the current indicator?
- Availability of deflators
- Is benchmarking appropriate?

### *Is turnover data available?*

As with the previous group, no MIDSS data are available, and because this activity is only part of the larger letting own property group, VAT data is not available exclusively at this level. For this reason turnover data was not pursued in this review.

### *Options for improving current indicator*

The Total Return Index is actually measuring the rate of return of direct investment in commercial property. It is therefore clearly not appropriate to measuring the output of this industry. After liaising with IPD, they have been able to supply the ONS with total net income. This equals total income received from rent, less property management and irrecoverable costs.

### *Availability of deflators*

The options available are as follows:

- CB Richard Ellis Prime Rental Index
- CSPI for property rental payments
- IPD Rental Value Index

The CB Richard Ellis Prime Rental Index was used as the deflator for the IPD Total Return Index, but the main problem with this index is that it is skewed towards the prime rents of central London. The CSPI for property rental payments is constructed using the IPD Gross

Income Index. This represents the growth in rent passing net of ground rent, i.e., the actual rent paid by the tenant. However, the rent is expressed per property rather than relating to per square foot. The real estate industry works on a 'per square foot' basis. The IPD Rental Value Index represents the growth in open market rental value, i.e., the rent the property would attract if it were put on the market for letting (per square foot). The review recommended using the IPD Rental Value Index.

*Is benchmarking appropriate?*

Given that the recommended indicator is more appropriate to the industry, the review has that benchmarking to CPIO should be discontinued.

### Recommendation

- 2. To replace the IPD Total Return Index with IPD net income received from rent**
- 3. To replace the CB Richard Ellis Prime Rental Index deflator with the IPD Rental Value Index**
- 4. To discontinue benchmarking to CPIO data**

### **Who was consulted as part of the Industry Review process?**

Within the ONS, there was comprehensive consultation with relevant teams both within National Accounts and in the survey areas. In terms of external consultations we are grateful to the assistance received from Alsop Verrill, CB Richard Ellis, Eurostat, HM Revenue & Customs, Investment Property Databank and Land Registry.

### **New methodology**

In summary the industry review for phase II of division 70 has made the following recommendations that were implemented at Blue Book 2005:

- to introduce the annual number of properties sold by property companies and public sector for real estate activities with own property
- to introduce IPD net income deflated by the IPD Rental Value Index to measure the output of letting of own property other than dwellings

### **Benefits and assumptions of new methodology**

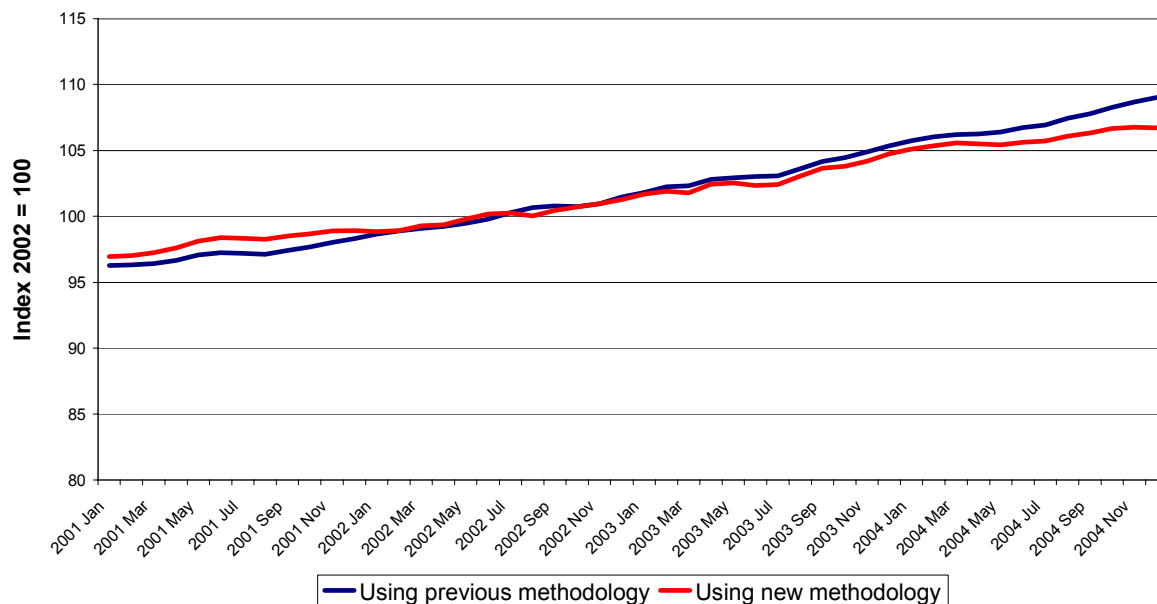
<b>Benefits</b>	<b>&amp;</b>	<b>Assumptions</b>
Where Revenue & Customs property transactions data have been introduced, we will now be measuring buying/selling and development of own real estate, where this has previously been omitted	<b>&amp;</b>	Where Revenue & Customs property transactions data have been introduced, we are assuming that all activity comes from trading in property
More appropriate data series being used to measure letting of commercial property		Letting of commercial property is half of letting of own property as a whole
Real estate output will no longer be linked to increases in property prices		

## Impact of new methodology

The graph below shows the impact of the new methodology on Division 70. The data has been revised back to January 2001. This in line with the open period for revisions set-out in the National Accounts Revisions Policy for Blue Book 2005 for this division.

Figure 4

### Real Estate activities (SIC 2003 division 70) chained volume measures seasonally adjusted



## Contact Information

Any questions or comments on this article are welcome, as are offers to participate in the process of improving industry sources and methods. Any enquiries should be addressed to:

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## Annex 1 - Comparison of new and old methods

Group/Class	Industry Description	Current Output Indicator	Current Deflators	Proposed Output Indicator	Proposed Deflators	GVA weight per 1000
70.1 & 70.2 (pt)	Real estate activities with own property Letting of own property other than dwellings	1.IPD 'Total return index' 1986=100 Annual benchmark series for 1 Deflated input-output data (£million) 2.Local authorities' employees (GB) in housing departments, full-time equivalents, adjusted to take account of trends in local authorities' wages and salaries at 1995 prices 3.Local authority non-trading capital consumption at 1995 prices (£million)	1.CB Richard Ellis Prime Rental Index  3.Deflated at source	Number of properties sold by property companies and public sector from the Revenue & Customs Survey of property transactions	N/A	17.3
				IPD net income received from rent	IPD rental value index	

IPD – Investment Property Databank

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For information on the HM Revenue & Customs property transactions data please visit: [http://www.hmrc.gov.uk/stats/survey\\_of\\_prop/menu.htm](http://www.hmrc.gov.uk/stats/survey_of_prop/menu.htm)