



ACADATA PRICES AND TRANSACTIONS (APAT LGA) METHODOLOGY

HOUSE PRICE DATA SERIES FOR LOCAL GOVERNMENT AREAS IN ENGLAND & WALES AND SCOTLAND BY PROPERTY TYPE

This paper describes the methodology employed in creating the Acadata Prices and Transactions (APAT LGA) data. APAT LGA provides time series data at Local Government Area levels for organisations requiring average transacted house prices and sales volume numbers, updated monthly, to assist analysis and decision making concerning the GB housing market.

APAT LGA prices and transactions are based upon Land Registry data from 1995 and upon data from Registers of Scotland starting in 2003. Prices are smoothed in order to reveal trends and APAT LGA includes an interactive chart facility to assist comparisons. APAT LGA provides data for every region, county, unitary district and London borough in England & Wales and local authority in Scotland. Our work on boundary changes is described herein. For organisations requiring data with further detail, our APAT POSTCODE provides an average price series plus transactions at postcode district level with optional data for prices and sales volumes in postcode sectors, towns, streets or localities of interest to clients.

The MIAC Acadmetrics Collateral Valuation Calculator (MACVC LGA), designed for client use in revaluing residential property portfolios and including calculation procedures, and our LSL Property Services/Acadata House Price Indices are built upon APAT LGA data.

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1. PREAMBLE

We outline below the methodology employed in preparing the monthly Acadata Prices and Transactions (APAT LGA) data. Since the data sources and, to a lesser extent, the data are different for England & Wales and for Scotland, the methodologies are described separately, as follows.

1.1 ENGLAND & WALES

1.1.1 Average house prices. The Land Registry (LR) is the sole source of the prices at which residential properties are sold in England & Wales. Acadata Prices and Transactions (APAT LGA) provides these true prices and transaction numbers as time series from 1995, updated monthly, at region, county, unitary district and London borough and property type levels.

1.1.2 Data It is important to note that APAT LGA:

- comprises the prices reported to the Land Registry (LR) following the sale of a property in England & Wales. LR does not hold data for properties sold in Scotland and Northern Ireland, Isle of Man, Guernsey or Jersey; nor does LR hold data for properties sold prior to 1995, except for all property types and all regions combined
- includes no property characteristic data e.g. as to room numbers
- includes prices and transactions for properties bought with cash
- provides the average prices and transactions, reported monthly by LR, without adjustment of any kind, except that prices are smoothed over rolling three month periods, in order to minimise volatility and to reveal trends
- excludes commercial sales; repossessions; sales for areas and property types with fewer than three reported transactions in any given month. Otherwise, APAT LGA comprises the entire transaction data population, as opposed to a sample

1.2 SCOTLAND

1.2.1 Average house prices The Registers of Scotland (RoS) is the sole source of the prices at which residential properties are sold in Scotland. Acadata Prices and Transactions (APAT LGA) provides these true prices and transaction numbers as time series from 2003, updated monthly, at local authority and property type level. Please note that, whilst local authorities in Scotland are unitary in nature, the term “unitary authority” is not used in Scottish legislation.

1.2.2 Data It is important to note that APAT LGA:

- comprises the prices reported to the Registers of Scotland (RoS) following the sale of a property in Scotland
- includes no property characteristic data e.g. as to room numbers
- includes prices and transactions for properties bought with cash
- provides the average prices and transactions, reported monthly by RoS, without adjustment of any kind, except that prices are smoothed over rolling three month periods, in order to minimise volatility and to reveal trends
- excludes commercial sales and repossessions. Otherwise, APAT LGA comprises the entire transaction data population, as opposed to a sample

2. PREPARATION

2.1 ENGLAND & WALES

2.1.1 Key tasks At each month end, LR sends us the average prices and transaction numbers for each region, county, unitary district and London borough, subdivided by each of the four property types (plus all-properties) recorded on the Land Register. We take these data and undertake:

- *data checking*, followed by any corrections required after consultation with LR
- *smoothing* (of house prices, but not of transactions)

as follows:

2.1.2 Data checking Our first task is to check the data received from LR for anomalous price changes or sales numbers e.g. for a particular type of property in a particular county. Upon occasion, a price is recorded with one or two added zeroes. We report any anomalies found to LR and await their confirmation or correction.

2.1.3 Smoothing In order to minimise the volatility, which otherwise masks true price trends, APAT LGA prices are calculated as the weighted average of the average prices for the three months centred on the month being reported, so that APAT LGA prices, together with those reported by the LSL Property Services/Acadata House Price Index (LSL Acad E&W HPI) are appropriate at the stated dates. We invite any subscriber, wishing to see the non-smoothed data, to advise us by email to information@acadata.co.uk.

2.1.4 Updating For at least one year, LR monthly data include prices for past months which have been changed because further transactions for the month have been reported. Thus the APAT LGA data for any given month reflect any additional transactions notified by LR for that month and are subject to change until APAT LGA reflects every single monthly transaction in England & Wales, excluding only the data listed in **1.1.2** above.

2.1.5 Timing Given the use of three month, centre month smoothing (cms) (**2.1.3**) and the fact that LR can provide only c.35% of the transactions for any current month at the month end, APAT LGA is published two months in arrears. Thus a May APAT LGA average house price for England & Wales represents the average of April, May and June and is published in July using c.96% April data, c.88% May data and c.38% June data. After the elapse of one further month, the additional transactions reported to LR for each month enable the August APAT LGA release to provide May prices based upon c.98% April data, c.96% May data and c.88% June data. In later releases, further transactions which affect the average prices are employed in updating APAT LGA.

2.1.6 APAT publication APAT LGA is normally prepared on or around the 10th working day of the month after the end of the current month.

2.2 SCOTLAND

2.2.1 Key tasks By the first working day of each month RoS sends us details of all transaction data received in the penultimate month. We take these data and undertake:

- *data checking*, followed by any corrections required after consultation with RoS
- *smoothing* (of house prices, but not of transactions)

as follows:

2.2.2 Data checking Our first task is to check the data received from RoS for anomalous prices for a transaction of a particular property type in a particular local authority. For example, on occasion a price is recorded with one or two added zeroes. We report any anomalies found to RoS and await their confirmation or correction.

2.2.3 Smoothing In order to minimise the volatility, which otherwise masks true price trends, APAT LGA prices are calculated as the weighted average of the average prices for the three months ending on the month being reported, so that APAT LGA prices, together with those reported by the LSL Property Services/Acadata House Price Index (LSL Acad Scotland HPI) are appropriate at the stated dates. We invite any subscriber, wishing to see the non-smoothed data, to advise us by email to information@acadata.co.uk.

2.2.4 Updating RoS monthly data includes data for previous months which have been changed or have just been reported. Thus the APAT LGA data for any given month reflect any additional transactions notified by RoS for that month, excluding only the data listed in **1.2.2** above.

2.2.5 Timing Given the use of three month, end month smoothing (ems) (**2.2.3**) and the fact that RoS provide, at the end of any month, c.99% of the transactions for the current month, but one, APAT LGA is published one month in arrears. Thus a May APAT LGA average house price for Scotland represents the average of March, April, and May and is published in July. Typically over 99% of data for May is available by this time.

2.2.6 APAT publication APAT LGA is normally prepared on or around the 10th working day of the month after the end of the current month.

3. FEATURES

3.1 ENGLAND & WALES

3.1.1 Regions, counties, unitary districts and London boroughs APAT LGA data are generated as distinct series and are provided for each combination of region (10), county and unitary district (108) and London borough (33), together with 5 property types, being detached, semi-detached and terraced houses, flats and all properties. This is a total of 755 data series.

3.1.2 Counties and unitary districts We discuss the boundary changes affecting counties and unitary districts in 3.1.7 below. As a result of these changes, LR has changed its counties and unitary district classifications on four occasions, in 1996, 1997, 1998 and 2008, creating new counties and unitary districts. Since we believe that most users would wish to see back data for the new sub-divisions, we provide estimated back data. Thus, e.g. for Berkshire, divided into 6 areas in April 1998, we estimate back data matching the pre-1998 transaction totals and the average price pre-1998 for Berkshire as a whole, but divided using a weighted average procedure amongst the new areas. We invite any client, wanting further detail as to the changes and to see the calculations, to contact us at information@acadata.co.uk.

3.1.3 Time series The APAT LGA series run from February 1995, since the January 1995 data are employed in the “centre month smoothed” (cms) calculation of February 1995, and we lack the December 1994 data to use in calculating a January 1995 cms average.

3.1.4 Data adjustment APAT LGA data are not seasonally adjusted, since to amend prices according to the season would distort the price change pattern if the series are being used for specific point in time valuations. Nor are the prices mix adjusted; mix and seasonally adjusted prices are provided within LSL Property Services/Acadata House Price Index available upon [request](#). Change in the all property average house price, for any given month and area, compared with the average price for the prior month may, therefore, reflect a month in which e.g. sales were mostly of detached houses, or of flats, such as to raise or lower the all property average, irrespective of real price changes. APAT LGA average prices for e.g. detached houses in the month concerned will not, however, be affected by an increase in the number of detached

houses sold in the month and users of APAT LGA can ascertain whether such an increase has occurred by looking at the transaction numbers reported.

3.1.5 Data scarcity APAT LGA data provide the average price for each property type in every county, unitary district and London borough. The number of transactions for a particular property type may be very low, even zero, in a particular area and month or months. LR itself calculates an average only if three properties of the same type have been sold in the month being reported. APAT LGA data necessarily reflect the above in that, in some cells, data are both scarce and volatile. The MIAC Acadametrics Collateral Valuation Calculator (MACVC LGA) in-fills missing cells with an estimate based on growth in the nearest regional series, for clients wishing to use an indexation procedure for property portfolio revaluation.

3.1.6 Comparative house prices There are wide variations in the average house prices published by the six house price indices and the one survey. In particular, the two official house price indices offer different alternatives. Whilst the Communities and Local Government HPI (now the ONS HPI) monthly averages are very comparable to those of our own LSL Property Services/Acadata House Price Index, those of the Land Registry HPI are similar to those of the lender indices.

3.1.7 Boundary changes There have been no changes to the London boroughs or the regions between January 1995 and today. There are marginal differences between the sum of the London boroughs and the county data for Greater London. LR advise that this is because, where sales within a particular London borough, county or unitary district were three or fewer, the data are not included in the London borough but are included in the county analysis.

3.1.7.1 APAT LGA county and unitary district data The Land Registry has changed its "Counties" classifications on four occasions between 1995 and today - in April 1996, April 1997, April 1998 and April 2008. For example, Bedfordshire was split into Bedford and Central Bedford. Back data employing weighted averages have been calculated for APAT LGA and ACVC LGA for the new classifications listed below.

3.1.7.1.1 Classifications changed When the LR records began in January 1995, LR maintained data for 54 separate counties and unitary districts. Of these, 43 classifications continue until today, with 11 areas being replaced as follows:

	Replaced April
Avon	1996
Berkshire	1998
Cleveland	1996
Clwyd	1996
Dyfed	1996
Gwent	1996
Hereford & Worcester	1998
Humberside	1996
Mid Glamorgan	1996
South Glamorgan	1996
West Glamorgan	1996

3.1.7.1.2 Classifications added in April 1996 LR increased the number of counties and unitary districts to 78. This was achieved by creating 33 new areas and dropping 9 previous areas as follows:

Old area dropped	Newly created areas
Avon	Bath and NE Somerset City of Bristol North Somerset

	South Gloucestershire
Cleveland	Hartlepool Stockton on Tees Middlesbrough Redcar & Cleveland
Clwyd	Conwy Denbighshire Flintshire Wrexham
Dyfed	Carmarthenshire Ceredigion Pembrokeshire
Gwent	Blaenau Gwent Caerphilly (part) Monmouthshire Newport Torfaen
Humberside	East Riding of Yorkshire City of Kingston upon Hull North East Lincolnshire North Lincolnshire
Mid Glamorgan	Bridgend Merthyr Tydfil Rhondda Cynon Taff Caerphilly (part)
South Glamorgan	Cardiff The Vale of Glamorgan
West Glamorgan	Swansea Neath Port Talbot
Still existing	
(Gwynedd)	Isle of Anglesey
(North Yorkshire)	York

3.1.7.1.3 Classifications added in April 1997 LR increased the number of districts to 91. This was done by creating 13 new unitary districts - no areas were dropped.

Still existing	Newly created areas
(Dorset)	Bournemouth
(East Sussex)	Brighton & Hove
(Derbyshire)	City of Derby
(Durham)	Darlington
(Leicestershire)	Leicester
(Bedfordshire)	Luton
(Buckinghamshire)	Milton Keynes
(Dorset)	Poole
(Hampshire)	Portsmouth
(Leicestershire)	Rutland
(Hampshire)	Southampton
(Staffordshire)	Stoke on Trent
(Wiltshire)	Swindon

3.1.7.1.4 Classifications added in April 1998 LR increased the number of districts to 109. This was done by creating 20 new unitary districts – 2 areas were dropped.

Old area dropped	Newly created Areas
Berkshire	Bracknell Forest Reading Slough West Berkshire Windsor & Maidenhead Wokingham
Hereford & Worcester	Herefordshire Worcestershire
Still existing	
(Lancashire)	Blackburn with Darwen
(Lancashire)	Blackpool
(Nottinghamshire)	City of Nottingham
(Cambridgeshire)	City of Peterborough
(Devon)	City of Plymouth
(Cheshire)	Halton
(Kent)	Medway
(Essex)	Southend on Sea
(Essex)	Thurrock
(Devon)	Torbay
(Cheshire)	Warrington
(Shropshire)	Wrekin

3.1.7.1.5 Classifications added in April 2009 In April 2009 LR increased the number of districts to 111. This was done by creating 5 new unitary districts – 3 areas were dropped.

Old area dropped	Newly created areas
Bedfordshire	Bedford Central Bedfordshire
Cheshire	Cheshire East Cheshire West & Chester
Durham	County Durham

For consistency, we have not reflected the April 2009 re-classifications into APAT LGA or ACVC LGA.

3.2 SCOTLAND

3.2.1 Aggregations APAT LGA data are generated as distinct series and are provided for each local authority (32) together with 5 property types, being detached, semi-detached and terraced houses, flats and all properties. This is a total of 160 data series.

3.2.2 Local Authorities The 32 local authorities have existed since 1st April 1966.

3.2.3 Time series RoS national data were available only from January 2001. However, the constituents of RoS data changed between then and April 2003, with a significant step change in prices between March and April. Data for 11 unitary authorities were unavailable for the period January 2001 to April 2003. Whilst data are available from April 2003, the averaging process used in APAT LGA and date conventions mean that APAT LGA price series for Scotland are available from June 2003.

3.2.4 Data adjustment APAT LGA data are not seasonally adjusted, since to amend prices according to the season would distort the price change pattern if the series are being used for specific point in time valuations. Nor are the prices mix adjusted; mix and seasonally adjusted prices are provided within LSL Property Services/Acadata House Price Index available upon [request](#). Change in the all property average house price, for any given month and area, compared with the average price for the prior month may, therefore, reflect a month in which e.g. sales were mostly of detached houses, or of flats, such as to raise or lower the all property average, irrespective of real price changes. APAT LGA average prices for e.g. detached houses in the month concerned will not, however, be affected by an increase in the number of detached houses sold in the month and users of APAT LGA can ascertain whether such an increase has occurred by looking at the transaction numbers reported.

3.2.5 Data scarcity APAT LGA data provide the average price for each property type in every local authority. The number of transactions for a particular property type may be very low, even zero, in a particular area and month or months. APAT LGA data necessarily reflect the above in that, in some cells, data are both scarce and volatile. The MIAC Acadametrics Collateral Valuation Calculator (MACVC LGA) in-fills missing cells with an estimate based on growth in the nearest regional series, for clients wishing to use an indexation procedure for property portfolio revaluation.

ABOUT ACADATA

Acadata is the new name for Acadametrics, an analytics and research consultancy focusing on house prices and property portfolio risk, and with a 23 year co-operation with Dr Stephen Satchell, Economics Fellow at Trinity College, University of Cambridge. We are expert in the measurement and analysis of house prices. Our FTHPI, launched in 2003 by the Financial Times, pioneered the use of Land Registry data in a mainstream house price index. Following a 2010 sponsorship agreement with LSL Property Services PLC, FTHPI was published as LSL Acad E&W HPI, retaining full independence and with a monthly commentary by Dr Peter Williams. Our LSL Acad Scotland HPI was launched in 2011. As FTHPI, the index was chosen by the Chicago Mercantile Exchange for a possible future residential house price derivative, put on hold as a result of the financial crisis.

In addition to our valued work for LSL, we provide data to other significant parties in the housing sector. For example, Hearthstone PLC uses the LSL Acad E&W HPI and LSL Acad Scotland HPI as a benchmark against which to monitor the price performance of their residential property investments.

In 2009, Acadametrics and New York based MIAC Analytics joined forces to work on risk solutions, forming the top-flight consultancy MIAC Acadametrics Ltd (M|A). In October 2013, Acadametrics accepted an offer by MIAC Analytics to acquire the whole of M|A for which Dr Satchell will continue as consultant. Acadata will focus on house price indices and data, with Dr Satchell advising as necessary. For all risk-related work, including stress and scenario testing, collateral valuation and forecasting, please see [MIAC | Acadametrics](#) (M|A).

In addition to house price indices, Acadata provides the Acadata Prices and Transactions (APAT LGA) data showing property type prices for Local Government Areas from 1995, using Land Registry data* for England & Wales counties, unitary authorities and London boroughs, as well as data from 2003 for local authorities in Scotland*. APAT LGA includes an interactive chart facility.

Acadata also provides APAT POSTCODE data. These comprise average prices plus transactions for postcode districts and optional data for postcode sectors, towns, streets or defined areas of interest to a client. These are used for example by:

- developers considering a residential investment in a particular post code sector
- house builders needing to understand the price and transaction trends in a postcode district or sector
- estate agents considering opening a further branch and wanting to know how much residential property business has been done in the district over a long term period
- branch comparisons against local trends

We prepare indices for third parties. We also forecast house prices, in conjunction with M|A.

Our work has a strong academic foundation and our solutions are developed using our own resources under our “research first” policy. Further detail is provided on our website www.acadata.co.uk.

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