

“A ‘TRUE MEASURE’ OF HOUSE PRICE INFLATION?”

23RD MAY 2015

INTRODUCTION

Our [“Which House Price Index?”](#) paper explains why monthly index estimates of the *level* of house prices differ from index to index. Whilst one index estimates e.g. the level of the “*price of the average house*”, another measures the level of the “*average of all prices paid for houses*”. Each index uses different data and a different methodology. Indices report prices at different points in the house buying cycle and report at different dates. It is widely assumed that, despite these differences, each index can be taken to measure house price *change* aka house price inflation. Is this so?

In our monthly LSL Acad E&W HPI News Release, we provide [“Comparison of Indices”](#) tables showing the different estimates of % Monthly and % Annual house price change provided by the various indices for the current (if available) and prior 12 months. Given the visible differences, what can be made of these? A “true measure” of house price inflation, to be used as a benchmark, is required. We calculate such a measure and compare the results of each index with it. Briefly, the “Difference Squared” numbers below, for each index in the “no lag” rows under the Annual and Monthly inflation sub-headings, show by how much each index, unadjusted for “lag” differs from the benchmark after averaging the differences over the five-year period October 2009 – September 2014.

DIFFERENCE SQUARED										
	LSL Acad E&W HPI "forecast"	LSL Acad E&W HPI "updated" (85%)	Halifax	Halifax 3 month	Nationwide	Nationwide 3 month	ONS	Rightmove	LR 1st published	LR Latest
<b>Annual</b>										
no lag	1.27	0.59	9.87		7.13		1.22	8.00	5.96	5.76
1 month	1.27	0.59	11.33		6.06		2.76	7.87	5.96	5.76
2 month	1.27	0.59	15.24		6.69		6.39	8.68	5.96	5.76
3 month	1.27	0.59	21.58		9.05		11.72	10.58	5.96	5.76
4 month	1.27	0.59	30.51		13.53		19.05	13.79	5.96	5.76
<b>Monthly</b>										
no lag	0.32	0.22	1.40	0.27	0.68	0.36	1.34	4.29	0.65	0.49
1 month	0.32	0.22	1.34	0.28	0.46	0.35	0.97	4.99	0.65	0.49
2 month	0.32	0.22	1.16	0.38	0.61	0.34	1.46	5.05	0.65	0.49
3 month	0.32	0.22	1.28	0.45	0.57	0.33	1.44	4.47	0.65	0.49
4 month	0.32	0.22	1.38	0.51	0.57	0.36	1.51	4.41	0.65	0.49
	<div style="display: flex; justify-content: space-between; align-items: center;"> <span style="background-color: #e0e0e0; padding: 2px;">affected by lag</span> <span style="background-color: #f0e0e0; padding: 2px;">unaffected by lag</span> </div>									

**Calculating a benchmark** We took every single transaction reported to the Land Registry over a 5 year period i.e. the complete dataset ending September 2014 and calculated the:

- % Annual change in house prices and the % Monthly change in house prices for each of the years concerned. These we employed as a benchmark “true measure of house price inflation”
- difference between each index % Annual and % Monthly result, averaged over each year, having squared the differences to eliminate plus and minus variations

- differences, after lagging the index results by from one to four months. For example, suppose that the Rightmove index provides an asking price that is reflected in the final transacted price reported to the Land Registry after a delay of 4 months, the Rightmove measures of change might closely reflect the benchmark if the comparison is made after lagging the Rightmove results by 4 months. Is this so?

## THE INDICES

We examine:

- **LSL Acad E&W HPI “forecast”**. Each month, we employ an “index of indices” model to forecast the Land Registry, accounting for the c.65% of monthly transactions not reported to the Land Registry by month end. Prices are 3 month averages. How good are these forecasts?
- **LSL Acad E&W HPI “update”**. In the month following release of the forecast, we update the past month result using the 85% transactions data by then available. Prices are 3 month averages. Are the updates better?
- **Halifax and Halifax 3 month** use the surveyor mortgage valuations upon which Halifax bases its mortgage offers for the month (no cash data); single and 3 month average results are provided
- **Nationwide and Nationwide 3 month** use the surveyor mortgage valuations upon which the Society bases its mortgage offers for the month (no cash data); single and 3 month average results are provided
- **ONS** uses mortgage completion prices provided to it by c.55% of lenders (no cash data); ONS is the last index for each month to be published
- **Rightmove** uses asking prices shown on their website, covering the bulk of sales; it is the first index for each month to be published
- **LR first published** uses the initial 35% of reported sales but only the c.36% of these for which an earlier property price is recorded; includes cash data but will be discontinued upon publication of an improved ONS HPI next year to include properties bought with cash; published at month end
- **LR latest** is updated monthly as additional sales are reported

## THE RESULTS

These results should not be taken as measuring the “best” index. They measure which indices, whether with single month average prices or prices averaged over 3 months, lagged or un-lagged, best match our house price inflation benchmark irrespective of the fact that each index calculates a different measure of house price levels. As such, they will enable those who make decisions based upon changes in house prices better to interpret the monthly newspaper house price headlines.

**% Annual change** the ONS HPI % Annual result most closely matches that of the benchmark followed by the LSL Acad E&W HPI “forecast”. Both ONS and Acadata use a relatively similar process of mix adjustment which may explain the relative conformity in the results.

A one to two month lag in the Nationwide results and a one month lag in the Rightmove results lessen differences from the benchmark but not substantially. Interestingly, both Rightmove and

Nationwide are the two indices that report their results at an early date in the month, suggesting that their figures are the most likely to be best lagged. LSL Acad E&W HPI “update” provides the best match of all for readers prepared to wait a month for the data.

**% Monthly change** Both Halifax and Nationwide now feature the three monthly averages, always employed by Acadata to minimise the effect of volatility and of low data volumes, and the results suggest that the Halifax 3 month results (i.e averaged over 3 months) most closely match that of the benchmark. This is followed by the LSL Acad “forecast” and the averaged Nationwide 3 month results. The Halifax press releases issued upon the publication of its index frequently suggest that the Halifax three monthly index is a more reliable measure of house price inflation; a statement which the figures here would support. Note that the single month un-lagged averages from the lender indices, especially that from Halifax, are quite far from the benchmark.

Lagging the Halifax single month index by two months improves the fit. So does a one month lag in the Nationwide single month and a one to three months lag in the Nationwide 3 month figure. Once again, LSL Acad E&W HPI “update” % Monthly provides a close indication of the benchmark results for e.g. analysts who can wait until August before estimating the effect of June house price changes.

**Consider e.g. Nationwide and LSL Acad;** looking at the three month figure for Nationwide in particular, we can assume that say the June Nationwide index will be based on the period April, May, June. LSL Acad E&W HPI’s monthly results for June are centre month smoothed over a period of May, June and July. Hence, there is a natural time lag of one month in the published figures between Nationwide and LSL Acad. If we then postulate that the Nationwide mortgage valuations take place one month before the house sale date employed by Acadata, this will increase the time lag to two months. Finally, if we postulate that the Nationwide figures, because of the early publication date in the month, are in fact partly based on the previous month, it is understandable that the figures are best lagged by up to three months.

**Why “A True Measure of House Price Inflation”?** It was because Mervyn King called for such a measure in September 1998 at the Building Societies annual conference that the LSL Acad and ONS indices were originated. Mervyn King pointed to the big difference in the Halifax and Nationwide estimates of Q1/98 % Annual house price change and how this would affect estimates of consumer spending and, hence, the Monetary Policy Committee decisions on interest rates. LSL Acad E&W HPI was launched in September 2004 as the FT House Price Index, then a privately funded attempt at providing a “true measure”. We began our Comparison of Indices to check whether or not our index provided a “true measure”, whether any of the other indices provided a more accurate measure and whether one of them would provide a leading indicator of house price change to use in our “index of indices” forecasting procedure.