Land Value Inflation

Land valuation

The value of land is determined by the usual operation of market forces – demand and supply. The demand for land is largely a derivative of its earning power when put into use; it has little or no intrinsic value. The highest values, measured in millions of pounds per hectare, are generated by occupational and trading construction uses. Agricultural and forestry uses support values in the low thousands of pounds per hectare, and then only if intensive (Australian outback bush providing dry and scrubby grazing for cattle is worth only dollars per hectare). Without the prospect of a productive use, land is economically worthless. Supply, however, is absolutely limited by the physical constraints of the planet.

When it comes to valuation, whilst on a practical basis a surveyor may use a comparative method, ultimately, since value is a derivative, it has to be established as the result of a residual value calculation.

Valuation sensitivity

This paper is only concerned with the value of land for residential and commercial development purposes, such as homes, offices, shopping, industry, and leisure together with the associated infrastructure. For these uses a traditional residual land value ("RLV") calculation can be prepared, in which the land value is what is left over (the residual) from sales revenue receivable, after deduction of all development costs including interest, and profit (RLV = Revenue – (Costs + Profit))

Being a residual makes land value volatile. Any change in revenues and/or costs will have an equivalent absolute effect divided between profit and land value. Because, prior to development, profit is likely to be set as a fixed target percentage of sales or costs, the amount of the change in revenues and/or costs absorbed by profit will be fixed, leaving the balance to be absorbed by the land value. Because land value is usually small relative to revenues and development costs, say 10% - 20%, the effect on land value is disproportionately high.

Example 1 - Profit targeted on Sales:

Sales revenue expected from a residential site is attributed 64% to development costs and 20% to profit (as a target), leaving 16% of sales for land value.

If the sales forecast increases by 20% then 20% of that will be absorbed by profit leaving 80% of the increase for land value. Land value will double. A 20% reduction in sales forecast will reduce land value to nil.

	% of Sales	BaseCase	Sales Up	Sales Down
			20%	-20%
		£	£	£
Sales Revenue		1,200,000	1,440,000	960,000
Development Costs	64%	-768,000	-768,000	-768,000
Profit Target	20%	-240,000	-288,000	-192,000
Residual Land Value		**192,000**	**384,000**	**-**
RLV compared to BaseCase			100%	-100%

The nature of the relationship between revenues and costs, and land value, is unaffected by whether the profit target is set as a proportion of revenues or costs. As

Examples 1 and 2 demonstrate, a change in sales under either method has the same effect on land value.

Example 2 - Profit targeted on Costs:

The BaseCase proportions are the same as in Example 1 except that they are expressed in terms of total cost with development costs being 80% and land value 20% of TDC. The profit target is 25% of TDC.

To the extent that the sales forecast increases it will be attributed to profit and land value in the ratio 80:20. A 20% increase in sales will double the land value and a 20% reduction in sales forecast will reduce land value to nil.

	% of TDC	BaseCase	Sales Up	Sales Down
			20%	-20%
		£	£	£
Sales Revenue		1,200,000	1,440,000	960,000
Development Costs	80%	-768,000	-768,000	-768,000
Profit Target	25%	-240,000	-288,000	-192,000
Residual Land Value		**192,000**	**384,000**	**-**
TDC (Total Development Costs)		960,000	1,152,000	768,000
RLV compared to BaseCase			100%	-100%

Examples 3 and 4 demonstrate how a change in development costs under either method has the same effect on land value.

Example 3 - Profit targeted on Sales:

The BaseCase is the same as in Example 1, but it is the development costs forecast that changes. Since profit is targeted as a proportion of sales it remains constant, so any change in development costs will have an equal and opposite effect on land value.

	% of Sales	BaseCase	Costs Up	Costs Down
			25%	-25%
		£	£	£
Sales Revenue		1,200,000	1,200,000	1,200,000
Development Costs	64%	-768,000	-960,000	-576,000
Profit Target	20%	-240,000	-240,000	-240,000
Residual Land Value		**192,000**	**-**	**384,000**
RLV compared to BaseCase			-100%	100%

Example 4 - Profit targeted on Costs:

The BaseCase is the same as in Example 3, but it is the development costs forecast that changes. In order to maintain profit margin, TDC has to remain constant. So any change in development costs will have an equal and opposite effect on land value.

	% of TDC	BaseCase	Costs Up	Costs Down
			25%	-25%
		£	£	£
Sales Revenue		1,200,000	1,200,000	1,200,000
Development Costs	80%	-768,000	-960,000	-576,000
Profit Target	25%	-240,000	-240,000	-240,000
Residual Land Value		**192,000**	**-**	**384,000**
TDC (Total Development Costs)		960,000	960,000	960,000
RLV compared to BaseCase			-100%	100%

What is at work here is a multiplier effect determined by the TDC divided by the land value. In Examples 1 and 2 above, this is 960,000 / 192,000 which equals 5. This multiplier can be applied directly to a change in sales revenue to determine the effect

on land value. Hence a 20% increase in sales results in a 100% increase in land value and vice versa for a decrease in sales.

For a change in development costs the multiplier is development costs divided by land value. In Examples 3 and 4 above, this is 768,000 / 192,000 which equals 4; actually -4 as an increase in costs has a depressing effect on land value. This multiplier can be applied directly to a change in development costs to determine the effect on land value. Hence a 25% increase in costs results in a 100% reduction in land value.

This analysis has demonstrated how land value, at a single point in time, is sensitive to changes in the revenue and cost assumptions used in the residual calculation. It is important to appreciate this when preparing project appraisals that derive a site value.

As simple rules of thumb, for a constant profit rate, (1) an X% change in sales revenue will have an X% x (Costs + RLV) / RLV effect on RLV, and (2) a Y% change in development costs will have a -Y% x Costs / RLV effect on RLV.

The next section shows how value can change over time as revenue and cost projections depart from standard.

Inflation in appraisals

The multiplier effect makes the residual land value very sensitive to changes in revenues and costs. As the following examples demonstrate, it is sensitive to the application of inflation to appraisal input assumptions, even if the rates for revenues (eg: rents or house prices) and costs (eg: construction) are the same.

Example 5 - RLV Sensitivity at a Point in Time to Future Inflation:

Sales revenue expected from a site is attributed 64% to development costs and 20% to profit (as a target), leaving 16% of sales for land value. Costs are expended evenly over two years with sales occurring on completion.

The appraisal is recalculated using equal values for revenue and cost inflation applied to current levels. Inflation of 4% raises RLV by 25% - more than 6 times 4%.

% of Sales		**Nil**	**Low**	**Medium**	**High**
Sales Inflation pa		0%	2%	4%	6%
Costs Inflation pa		0%	2%	4%	6%
		£	**£**	**£**	**£**
Sales Revenue		1,200,000	1,248,480	1,297,920	1,348,320
Development Costs	64%	-768,000	-783,360	-798,720	-814,080
Profit Target	20%	-240,000	-249,696	-259,584	-269,664
Residual Land Value		**192,000**	**215,424**	**239,616**	**264,576**
RLV compared to BaseCase			**112%**	**125%**	**138%**

The reason why the effect is so dramatic, and indeed, on first sight, counter-intuitively so, is that revenue is inflated *for two years* to the disposal point, whereas costs are only inflated to the average spend point at the end of year 1. The effect is even more pronounced if the development period is extended from two years to four.

Example 6 - RLV Sensitivity at a Point in Time to Future Inflation:

Costs are expended evenly over four years with sales occurring on completion. Inflation of 4% raises RLV by 52% - more than 13 times 4%.

	% of Sales	Nil	Low	Medium	High
Sales Inflation pa		0%	2%	4%	6%
Costs Inflation pa		0%	2%	4%	6%
		£	£	£	£
Sales Revenue		1,200,000	1,298,919	1,403,830	1,514,972
Development Costs	64%	-768,000	-799,027	-830,669	-862,925
Profit Target	20%	-240,000	-259,784	-280,766	-302,994
Residual Land Value		**192,000**	**240,108**	**292,395**	**349,053**
RLV compared to BaseCase			**125%**	**152%**	**182%**

Where developments are of short duration, or of a rolling nature – like house-building where the time between construction and disposal may be as low as 3 months – the effect of applying inflation is much less than where the delivery duration is long, as is usually the case in large hi-rise commercial projects.

Asymmetric inflation; applied to costs only, has a predictable effect on outcomes, suppressing land value. But only a small amount of revenue inflation can more than offset a high cost inflation rate.

Example 7 - RLV Sensitivity at a Point in Time to Future Inflation:

Costs are expended evenly over two years with sales occurring on completion. A higher rate of inflation is applied to costs than to revenues and this can suppress land value.

	% of Sales	Nil	Low	Medium	High
Sales Inflation pa		0%	0%	0%	3%
Costs Inflation pa		0%	3%	6%	6%
		£	£	£	£
Sales Revenue		1,200,000	1,200,000	1,200,000	1,273,080
Development Costs	64%	-768,000	-791,040	-814,080	-814,080
Profit Target	20%	-240,000	-240,000	-240,000	-254,616
Residual Land Value		**192,000**	**168,960**	**145,920**	**204,384**
RLV compared to BaseCase			**88%**	**76%**	**106%**

Note: the examples serve to make the point but they do overstate the effect as the analysis does not allow for the extra increase in development costs as a consequence of the interest burden on higher land values, held for longer periods.

The application of inflation, at the same annual rate, to both revenues and costs has a positive effect on RLV, provided costs are incurred before revenues are determined. The longer the period of expenditure before revenue determination, the larger the effect will be.

Land inflation over time – the mechanism

So far, this paper has examined the effect of applying anticipated future inflation rates to appraisals, in order to calculate the residual land value at a single point in time, and observed how sensitive the static land value can be, largely because of the timing discrepancy between the application of inflation to revenues and to costs. However, if a project is moved into the future, as a whole, then timing discrepancy is eliminated, and the consequent effects of inflation on residual land value are more pedestrian. If revenue and cost inflation are equal, then the RLV will inflate by the same amount.

Example 8 - Effect of Inflation on RLV over time (Equal Rates)

Sales revenue expected from a residential site is attributed 64% to development costs and 20% to profit (as a target), leaving 16% of sales for land value.

If the project is delayed, or repeated in future years, and equal inflation is applied to both revenues and costs, then land value will inflate by the same amount.

	% of Sales	Year 0	Year 1	Year 1	Year 1
Sales Inflation pa			3%	4%	5%
Costs Inflation pa			3%	4%	5%
		£	£	£	£
Sales Revenue		1,200,000	1,236,000	1,248,000	1,260,000
Development Costs	64%	-768,000	-791,040	-798,720	-806,400
Profit Target	20%	-240,000	-247,200	-249,600	-252,000
Residual Land Value		**192,000**	**197,760**	**199,680**	**201,600**
RLV growth pa			3.0%	4.0%	5.0%

What this indicates is that, over the long term, if revenues and costs generally inflate together, then land values will tend to drift upwards at a similar rate. If there is a difference between the inflation rates then the multiplier effect will be expressed in the outcome and this explains how market land values can change dramatically over time.

Example 9 - Effect of Inflation on RLV over time (Unequal Rates)

Unequal inflation for 1 year is applied to the starting values for sales and development costs.

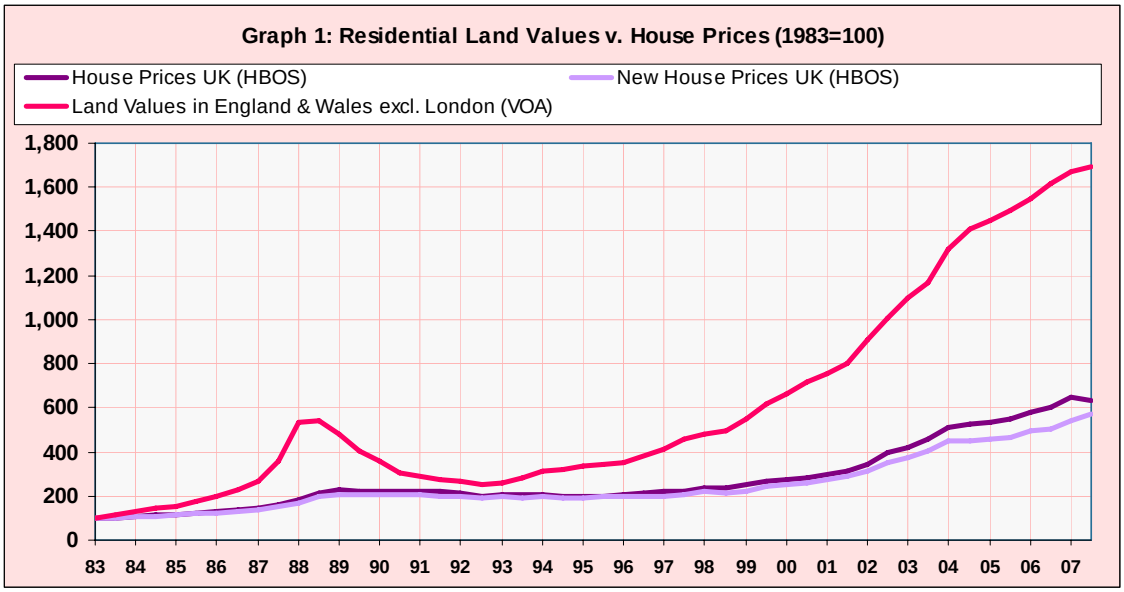
	% of Sales	Year 0	Year 1	Year 1	Year 1
Sales Inflation pa			5.0%	3.0%	10.0%
Costs Inflation pa			4.5%	5.5%	4.5%
		£	£	£	£
Sales Revenue		1,200,000	1,260,000	1,236,000	1,320,000
Development Costs	64%	-768,000	-802,560	-810,240	-802,560
Profit Target	20%	-240,000	-252,000	-247,200	-264,000
Residual Land Value		**192,000**	**205,440**	**178,560**	**253,440**
RLV growth pa			7.0%	-7.0%	32.0%

A 0.5% positive balance in favour of sales revenue inflation, using 5% pa against the long term historic rate for construction prices of c.4.5% pa, will have land values moving ahead by 7% pa. A 1.5% difference the other way (3.0% v 5.5%) is necessary to achieve a reduction in land values of -7% pa. It takes 1/3 of the difference to achieve growth than to achieve reduction. This is not quite as obtuse as it seems; against a GDP deflator of say 3% pa the first case gives a real growth of 4% and the second case a real growth of -10%. In the third Year 1 column in Example 9, when sales values move ahead quickly, as they sometimes do, then land values advance even more rapidly.

Land inflation over time – the reality

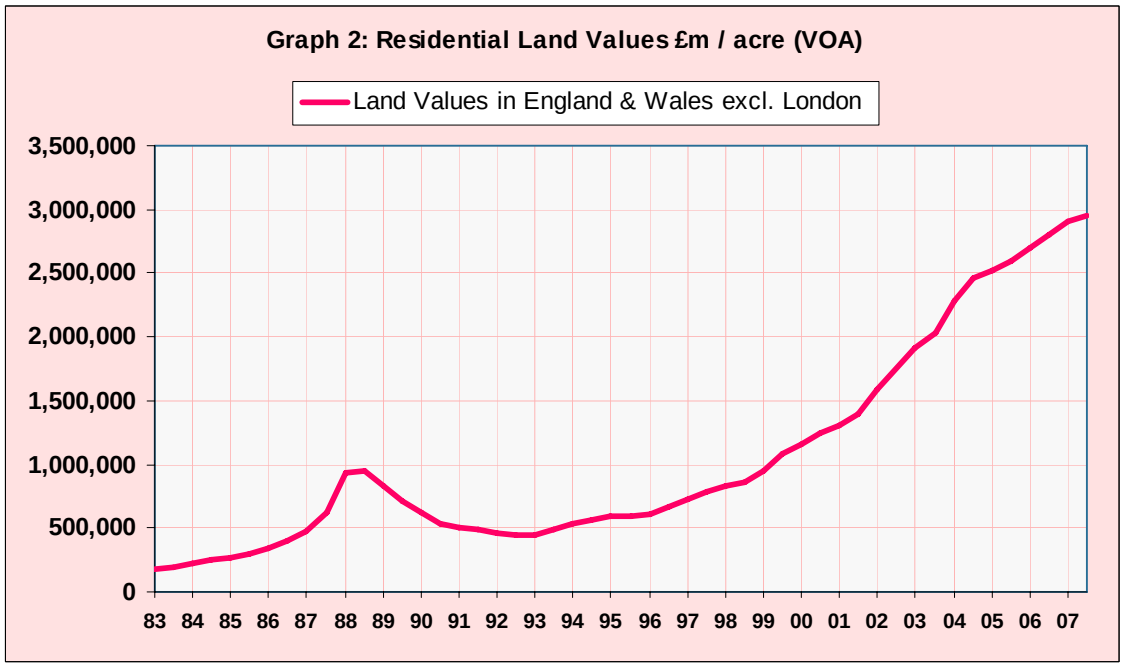
House Prices and Residential Land Prices

To illustrate just by how much UK residential land values have moved proportionately ahead of house prices Graph 1 below plots the values as indices since 1983.



While average UK house prices have risen by 6.4 times (7.8% pa), and new house prices by 5.7 times (7.36% pa), land values have risen by 17 times (12.2% pa).

Graph 2 shows the change in UK average land values since 1983, in absolute (nominal) terms, rising from £174,000 per acre in mid-1983 to £2,950,000 per acre at the end of 2007.



The late-eighties bubble is very evident, with values departing above trend from the end of 1985 (£301,000) then more than trebling to a peak in 1988 (£929,000). After the bubble burst, values slid for four years, by more than half (£438,000), before confidence slowly returned in 1993. Over the next 7.5 years, to mid-2000, values increased by 2.6 times (£1,150,000) and over the following 7.5 years, to end-2007, increased by 2.6 times again (£2,950,000). On average the growth was remarkably similar between the first (13.74% pa) and second (13.38% pa) halves of the cycle upswing from 1992 to 2007. Although we must wait until July 2008 for the VOA's next

report, the reported market evidence clearly suggests that the end of 2007 marked a peak and values have since been falling.

In trying to trace the determinants of land value changes over the past 15 years it is useful to examine equivalent changes in the two main determining factors: house prices and development costs. Since the land value index increased evenly between the first and second halves of the previous 15 years, and since the bulk of development cost is construction cost, and since tender prices also increased steadily over the period, it would be reasonable to expect that house prices, the other key driver, would have increased evenly as well. But this was not the case.

The HBoS index of new house prices shows that prices bottomed at £67,300 at the end of 1992, then rose to £88,800 by mid-2000, and to £198,900 at the end of 2007. New house prices rose modestly by 1.32 times (3.76% pa) over the first 7.5 years to mid-2000, and then soared by 2.24 times (11.35% pa) to the end of 2007.

That soaring house prices since 2000 did not drag up land values at a faster rate, is an anomaly, suggesting that something was acting to suppress land values. The calculations in Example 10 show the amount by which development costs, if they were the only significant variable factor in play, would have had to increase year on year, in order to generate actual land value inflation.

Example 10 - Deriving Land Value Changes for 1992 - 2000 - 2007

In 1992 a one hectare residential development appraisal is constructed giving a land value of £438,000. The revenues for 2000 and 2007 are inflated by the HBoS house price index changes of 3.76% pa and 11.35% pa respectively.

Cost Inflation rates to 2000 and then to 2007, that generate the residual land values reported by the VOA after each 7.5 year period, are identified as 1.82% and 10.68% respectively.

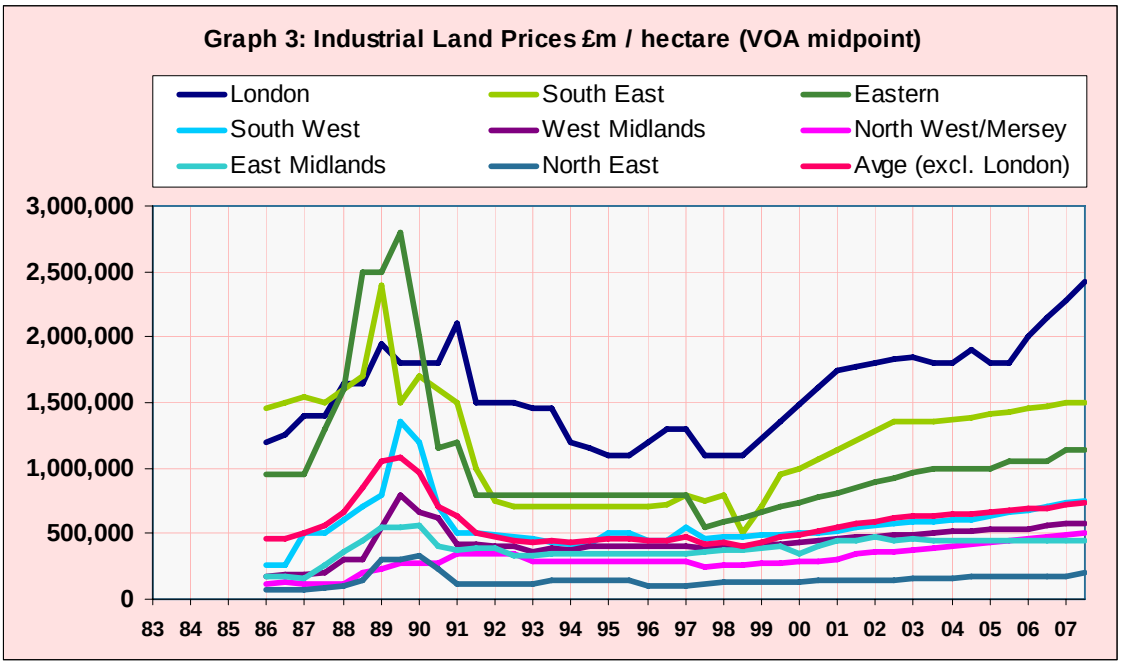
	% Sales	end-1992	% Sales	mid-2000	% Sales	end-2007
House Price Inflation pa				3.76%		11.35%
Costs Inflation pa				**1.82%**		**10.68%**
		£		**£**		**£**
Sales Revenue		4,380,000		5,776,953		12,938,249
Development Costs	75.0%	-3,285,000	65.1%	-3,760,410	62.2%	-8,047,511
Profit Target	15.0%	-657,000	15.0%	-866,543	15.0%	-1,940,737
Residual Land Value	10.0%	**438,000**	19.9%	**1,150,000**	22.8%	**2,950,000**
RLV growth over 7.5 years				2.6		2.6

Development cost inflation of 1.82% pa over the period 1992-2000 does not raise any significant queries, against construction price inflation over the period of c.3.5% pa and suggests some efficiency savings and profit squeezing occurred. However, 10.68% pa over 2000-2007 is a clear indicator that something other than construction cost inflation, which was c.4.8% pa, was in play. It is not the purpose of this paper to analyse and explain in detail the reasons for land value changes over recent years. However, as part of the process of understanding the mechanisms in play, it is instructive to delve a little deeper into this anomaly.

Industrial Land Values

Midpoint industrial land values in England (excluding London) were essentially flat between 1992 and 2000, ranging down and up between £450,000 and £500,000 per hectare. But, as with residential land values, industrial land values also grew thereafter, inflating to the end of 2007 by 50% (5.5% pa). This is entirely consistent with economic

growth driving land demand up and rents up (albeit slowly) and easy credit supply driving investment yields down, over 2000-2007.



Land inflation of 5.5% suggests that development costs must have inflated by less than 5.5%. Since industrial and residential development share similar design team and labour force and building material resources and infrastructure obligations and costs of finance, then the underlying price of residential development costs cannot have risen by significantly more than they did for industrial development, ie: <5% pa.

Residential Land Prices and Social Load

Apart from private house prices and basic building costs, at least two other significant land value determining factors were in play over the period 2000 – 2007:

- Building densities increased. Being able to put more on a site raises its value, more or less in proportion to the increase in density.
- Social load increased. For instance, the affordable housing requirement rose. More affordable housing would have had the effect of diluting the increase in private market house prices and suppressing land values.

Example 11 shows the combined effect on the appraisal in Example 10, of applying an increase in density of 20% and lifting affordable from 10% to 30%.

Example 11 - Deriving Land Value Change for 2000 - 2007

In 2000 a one hectare residential development appraisal is constructed giving a land value of £1,150,000 assuming 10% affordable housing. Private house prices are then inflated by the HBoS house price index at 11.35% pa to 2007, wth affordable inflated at 3.0% pa.

If the affordable proportion is increased to from 10% to 30% and density rises by 20%, then to generate a residual land value of £2,950,000 cost inflation of 8.5% is required.

	% of Sales	mid-2000	% of Sales	end-2007	
House Price Inflation pa				11.35%	
Affordable Housing Inflation pa				3.0%	
Costs Inflation pa				**8.5%**	
Density Change				20.0%	
Affordable		10.0%		30.0%	
		£		£	
Private Housing		7,091,667		14,823,875	
Affordable Housing		575,000		2,583,744	
Total Revenue		7,666,667		17,407,620	11.6%
Development Costs	70.0%	-5,366,667	68.1%	-11,846,477	
Profit Target	15.0%	-1,150,000	15.0%	-2,611,143	
Residual Land Value	15.0%	**1,150,000**	16.9%	**2,950,000**	
RLV growth over 7.5 years				2.6	

While 11.35% pa house price growth is diluted by the extra affordable housing proportion this is more than offset by the uplift in density, and total revenue increases by 11.6% pa over the period. Part of the increase in development costs is due to 20% extra density volume, leaving a balance of 8.5% pa to be absorbed by profit margins and non-volume cost effects. If, say 3.5% pa of this is made up of growth in tender prices net of efficiency savings, then 5.0% pa is unexplained. Since UK house-builder profitability was fairly constant over the period 2000 – 2007, all that remains to absorb the value increase that would otherwise have been reflected in land values is development cost specification.

What the above analysis indicates is that, on top of tender price inflation (reflecting labour and materials), development costs inflated by an additional 5.0% pa attributable to something else. The following list suggests what the main drivers of that 5% could have been, over the period 2000 – 2007:

- Site preparation costs. Part of the government's agenda for building new homes has been an insistence that developers use more brown land. In general, brown land involves higher costs (eg: decontamination, flood-protection etc) than green field land of the same area, to bring into production.
- Building type. The period saw a trend towards inner city regeneration and greater densities. The corollary of these factors is a much greater weighting of hi-rise buildings, in the overall mix, and these cost more to deliver per unit of habitable area than lo-rise due both to the pure expense of hi-rise (construction, M&E, undercroft parking, duration etc) for equivalent gross area, and the loss of gross area to common space (circulation, stairs, M&E etc).
- Fitout specification. In order to compete with each other and attract buyers, house-builders have been gradually lifting the quality of fittings used in new homes, at some extra cost.
- Incentives. Despite the high prices, or perhaps because of them, annual unit sales of new homes have declined over the period, and house-builders have had

to work hard to secure sales. Incentives such as, part-exchange, deposit-paid, VAT payment, and rental guarantees have been and increasing expense.

- Land banking. In order to secure long-term supply and protect against rising plot prices, house-builders accumulated bigger land stocks, and this translates into higher holding costs.
- S106 costs – development specification. The government has piled on the regulations, particularly for energy performance and other forms of sustainability.
- S106 costs – planning gain. In recent years local planning authorities have become more efficient at extracting gains from developers in order to pay for things like infrastructure projects and local transport projects.

These are probably the main the factors that have acted to suppress land inflation.

While some of these extra costs are obviously a voluntary exercise by the house-builders to maintain competitiveness and attract the higher prices they achieved, perhaps the bulk of extra costs more likely to be have been involuntary; driven by the local planning authorities passing on the government's green & sustainable agenda through S106 agreements; the preference for high cost, sustainable, energy efficient, hi-rise construction, with a high proportion of affordable, on contaminated ex-industrial land, with a chunky contribution to local and strategic infrastructure needs and public realm aspirations.

The Outlook for Land Values

With commercial profits and rents forecast to fall, and spending and house prices already falling, the outlook for land prices, for industrial, for retail, for leisure for offices, and for homes, is an immediate decline.

By how much they will fall and for how long is impossible to say, but looking at the aftermath of the previous asset price bubble which burst in mid-1989 may be useful.

- House prices fell for 3.5 years, all homes by 12% (3.6% pa), new-build by 7.5% (2.2% pa), and were then essentially flat for a further 3 years, before they began to rise again in 1996. Residential land values (England and Wales excl. London) fell for the same initial 3.5 years, but by 48% (16.9% pa), implying a multiplier of 4. For the next 3 years, during which house prices were static, land values rebounded by 22% (6.8% pa). The probable cause of the volatility in land values is rapid de-stocking followed by re-stocking of land banks, by house-builders.
- At the peak of the 2007 bubble, residential land prices were 6.7 times the previous low point and 3.2 times the 1988 high.
- The peak of the industrial land price boom lagged residential by about a year, in late 1989. Thereafter values fell for 4.5 years by 60% (18% pa), and were then static for 2.5 years, before they began to rise again in 1997.
- At the peak of the 2007 bubble, industrial land prices were up by 67% over the previous low but were still 32% below the 1989 high.

Evidently the bubble pressure in industrial land values was much lower in 2007 than it was in 1989, whereas in residential land values it is much higher. Given the inevitable uncertainty over the factors driving down values, probably all that can be concluded with confidence is that if they both revert to trend (or indeed undershoot), then residential land values will fall by more than industrial land values.

A further grim point for residential land values, is that the social load, rather than easing as other cost pressures may do during the deflation, is set to accelerate substantially as a consequence of three main drivers: (1) the need for even more affordable housing, (2) the government's energy performance targets (due to be imposed through the Building Regulations with carbon neutrality due in 2016) together with Lifetime Homes and other such burdens, and (3) the Community infrastructure Levy. In addition, de-stocking through the downturn will also undermine land values.

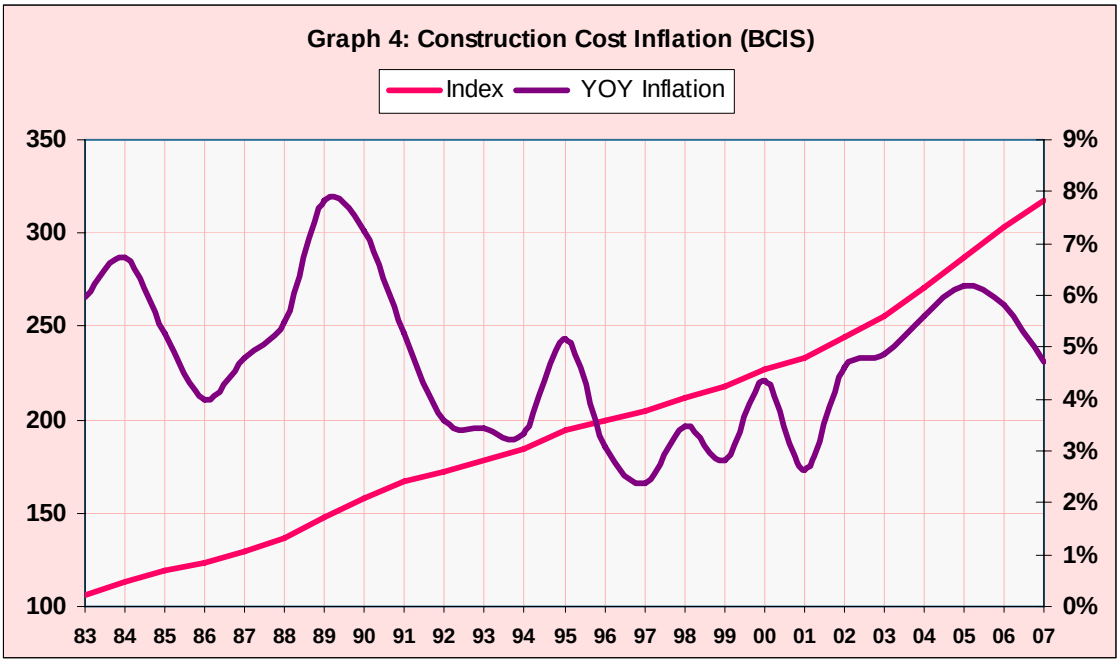
Example 12 - Land Value Forecast for 2008 - 2010

In 2007 a one hectare residential development appraisal is constructed giving a land value of £2,950,000 assuming 30% affordable housing. Over the next 3 years, new private house prices deflate by 10% overall and affordable prices inflate at 3.0% pa. Density increases by 10% and the affordable proportion by another 5%.

While Total Revenue would remain static, a 4% pa increase in costs would wipe out the land value. 3% pa would leave a positive value, and 5% pa would leave a negative.

	% of Sales	end-2007	end-2010	end-2010	end-2010
House Price Deflation			-10.00%	-10.00%	-10.00%
Affordable Housing Inflation pa			3.0%	3.0%	3.0%
Costs Inflation pa			**3.0%**	**4.0%**	**5.0%**
Density Change			10.0%	10.0%	10.0%
Affordable		30.0%	35.0%	35.0%	35.0%
		£	£	£	£
Private Housing		14,823,875	13,627,377	13,627,377	13,627,377
Affordable Housing		2,583,744	3,623,269	3,623,269	3,623,269
Total Revenue		17,407,619	17,250,646	17,250,646	17,250,646
Development Costs	70.0%	-11,846,476	-14,239,461	-14,663,049	-15,085,155
Profit Target	15.0%	-2,611,143	-2,587,597	-2,587,597	-2,587,597
Residual Land Value	16.9%	**2,950,000**	**423,588**	**0**	**-422,106**

So, what is construction price inflation likely to be? If the past is any guide then, as indicated by Graph 4 in respect of the period after the 1988 bubble, it may ease back to around 3% - 4% pa, although this ignores the anticipated additional social load.



As for house-builders; volumes will be low, profits will be squeezed by land write-downs and acceptance of lower gross margins and cash resources will be constrained.

At mid-2008 the long-term trend UK residential land value is probably between £1m and £2m per hectare. Reversion to trend alone could trim 50% off the value in real terms by (to £1.5m) by 2011. The growing effects of social load could reduce the value to below £1m.

Finally, a potentially bright, if sobering, note for land investors is that rapidly rising food prices, and the need to grow crops for bio-ethanol production, and trees for wood-pellet CHP burners, are dragging up the value of arable and forestry land. By 2011 these uses could be more valuable than land for housing.

Real Estate Financial Solutions provides Excel models and operational expertise to support the valuation process. Available at www.re-financial.co.uk.

Written by John Tauwhare in 2008.