

Asset Inflation

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THE ROLE OF asset price inflation has gained prominence after the financial crisis of 2008 due to the role of sub-prime housing loans in the United States. In the developed world, the definition of assets mainly include investments in housing and equities. The definition of assets has been expanded to include gold in India.

In this article, we analyse the price movements of these three Indian assets – houses, equities and gold – for the period 2009–10:Q4 to 2012–13:Q1. The sample is restricted, as the Reserve Bank of India (RBI) has started collecting housing prices for nine cities only since 2008–09:Q4.

The period since 2009–10:Q4 is marked by volatility and uncertainty if one examines the peaks and the troughs of important macroeconomic variables. The GDP growth rate, after going up from 8.6 per cent in 2009–10:Q4 to a peak of 10.1 per cent in 2010–11:Q4, plunged to a low of 4.7 per cent in 2012–13:Q4.

Retail inflation has been sticky with the level significantly higher than the RBI comfort zone of five per cent (Table P.1). Average retail inflation, as

measured by the change in the Consumer Price Index of Industrial Worker (Base Year 2001=100) on a year-on-year (yoy) basis, was 10.2 per cent during the period 2009–10:Q4 and 2012–13:Q1.

Nominal interest rates, measured by the 91-day Treasury bill rate, went up from 4.2 per cent in 2009–10:Q4 to 8.9 per cent in 2011–12:Q4, before coming down to eight per cent. However, real interest rates remained mostly negative throughout this period, except for the last two quarters of 2011–12, thanks to high inflation.

Returns on the BSE Sensex have also been volatile throughout this period as shown by the quarter-on-quarter changes in the Sensex.

In contrast investment in gold and property (retail) has yielded positive real returns (not shown in tables). Housing inflation, for instance, has been consistently higher than retail inflation. Likewise, average real gold inflation too has been higher at 13.6 per cent than consumer price inflation. Indeed it has been higher than real housing inflation (11%) as well during this period. However, the lower standard deviation for real housing inflation (4.3)

Table P.1: Growth Rate, Inflation and Asset Inflation, 2009–10:Q4 to 2012–13:Q4

Quarter	Housing Price Index (HPI, Average 9 cities), % yoy	Hedonic Housing Price Index (Average 9 cities), % yoy*	Consumer Price Index, Industrial Worker Inflation Rate (2001=100) (% yoy)	GDP Factor Cost Growth Rate (% yoy)	Gold Inflation Rate (% yoy)	91-day Treasury Bill Rate	91-day Real Treasury Bill Rate	BSE Sensex	BSE Sensex (% quarter on quarter)
2009–10:Q4	18.5	18.6	15.3	8.6	14.6	4.2	-11.1	16,772.0	0.1
2010–11:Q1	19.4	17.4	13.7	9.7	22.2	4.8	-8.8	17,401.7	3.8
2010–11:Q2	21.1	24.4	10.3	8.9	22.9	6.1	-4.2	18,636.0	7.1
2010–11:Q3	16.5	20.8	9.2	9.3	20.0	7.0	-2.2	20,020.7	7.4
2010–11:Q4	19.6	19.7	9.0	10.1	23.1	7.2	-1.8	18,532.0	-7.4
2011–12:Q1	21.2	23.3	8.9	7.5	23.1	7.8	-1.1	18,828.3	1.6
2011–12:Q2	19.0	16.6	9.2	6.5	36.2	8.4	-0.8	17,109.3	-9.1
2011–12:Q3	23.7	22.7	8.4	6.0	38.5	8.6	0.3	16,427.7	-4.0
2011–12:Q4	24.8	23.1	7.2	5.1	36.2	8.9	1.8	17,450.3	6.2
2012–13:Q1	24.1	22.5	10.1	5.4	32.5	8.4	-1.8	16,989.3	-2.6
2012–13:Q2	23.1	21.8	9.8	5.2	20.2	8.2	-1.6	17,809.7	4.8
2012–13:Q3	26.0	24.0	10.1	4.7	12.2	8.2	-1.9	19,090.7	7.2
2012–13:Q4	19.4	20.1	11.7	4.8	7.7	8.0	-3.7	19,197.7	0.6

Notes: 1. yoy means year-on-year.

2. *Hedonic methods are techniques for quality adjustments that are incorporated in the calculations of the price indices for segments like houses.

3. Real Treasury Bill Rate=Nominal Treasury Bill Rate – Consumer Price Industrial Worker Inflation Rate.

Sources: Reserve Bank of India, Labour Bureau, Ministry of Statistics and Programme Implementation.

than for gold (11) suggests that the former has been relatively steadier throughout this period. Post 2012–13:Q2, housing inflation has soared above gold.

What has caused this massive asset inflation in India? Was it lack of investment opportunities as the economy falters and inflation erodes financial returns? Or loss of faith in alternate forms of investment, given negative real returns on bank deposits and poor and volatile return on equity?

Correlation does not imply causation, but we analyse them to discern any co-movement between the various variables in this period. Housing inflation is found to have statistically significant correlations with key macro indicators such as inflation, real interest rate and GDP growth rate. There is a statistically significant negative correlation between hedonic housing price index and retail inflation (–0.5). Housing inflation (HPI, % yoy) is positively correlated with the real interest rate (0.5) and negatively correlated with the GDP factor cost growth rate (–0.7). Gold and retail inflation are correlated negatively (–0.6) and so is gold inflation and BSE Sensex (–0.6). Similar to housing, gold inflation and real interest rate is positively and significantly correlated (0.5). The real interest rate is significantly negatively correlated with retail inflation (–0.97) and the GDP factor cost growth rate (–0.5) for this period. This simple analysis suggests that housing price inflation is tied up with macroeconomic variables, but the causation is difficult to determine empirically for this short sample period.

Given that there is significant co-movement of housing price inflation with key macro indicators, we examine it further in a disaggregated fashion for the Housing Price Index (Table P.2). Delhi and Kolkata lead in housing inflation with average

inflation 30 per cent and above between 2009–10:Q4 and 2012–13:Q4. Delhi (31%) had the highest average inflation rate between 2009–10:Q4 and 2012–13:Q4 followed by Kolkata, Mumbai, Lucknow, Ahmedabad, Jaipur, Chennai, and Bengaluru. Kanpur comes at the bottom with single-digit inflation.

Table P.2 shows that different cities have different housing dynamics. However, other than Kanpur, all cities show strong trends of housing inflation. There is moderation in housing inflation in Mumbai, Delhi and Kanpur. Housing inflation in Delhi remains very high at 32.7 per cent in 2012–13:Q4, but it is lower than the 47 per cent in the previous quarter. Housing inflation in Kanpur has turned negative since 2012–13:Q2, whereas it has remained stagnant in Lucknow and Ahmedabad. The rest of the cities show an upturn in housing prices. The southern cities of Bengaluru and Chennai have seen an increasing trend in housing inflation. It is relatively low in Bengaluru at 5.5 per cent in 2012–13:Q4, but it is higher than the 1.2 per cent in the previous quarter. Housing inflation in Chennai has increased from 13.7 per cent in 2012–13:Q2 to 26.5 per cent in 2012–13:Q4. The cities of Kolkata and Jaipur continue to see very strong housing inflation. Housing inflation in Jaipur has doubled from 9.7 per cent in 2012–13:Q3 to 18 per cent in 2012–13:Q4. From the trough of (–)7.9 per cent in 2011–12:Q4, housing inflation in Kolkata has gone up steadily and was at 63.2 per cent in 2012–13:Q4.

In sum, while the economy has been sliding downwards, asset inflation has been soaring for most of the period between 2009–10:Q4 and 2012–13:Q4. This has implications for both growth and equity.

Housing inflation is found to have statistically significant correlations with key macro indicators such as inflation, real interest rate and GDP growth rate.

Table P.2: House Price Index (HPI) by City (% yoy)

Quarter	Mumbai	Delhi	Bengaluru	Ahmedabad	Lucknow	Kolkata	Chennai*	Jaipur	Kanpur
2009–10:Q4	36.4	9.5	-1.5	24.3	12.5	7.5	18.2	42.5	20.2
2010–11:Q1	23.3	21.1	0.3	15.5	12.8	16	43.8	46.3	5.3
2010–11:Q2	20	15	0.3	23.4	8.4	45.7	61.7	32.8	12.7
2010–11:Q3	17.9	11.7	3.9	9.8	17.2	45.3	10.9	32.1	17
2010–11:Q4	26.3	23.4	15.4	3.5	24.7	59.9	-9.6	8.9	12.9
2011–12:Q1	33.9	25	12.4	30	27.8	34.3	-23.1	11.2	13.7
2011–12:Q2	31.1	31.8	13.8	26.6	23.9	1.8	-16.1	10.3	6.9
2011–12:Q3	20.3	51.4	39.6	33.4	25.9	-3.9	1.6	3.9	4.9
2011–12:Q4	30.4	44.4	23.7	37.7	21	-7.9	9.5	5.9	9.5
2012–13:Q1	21	42.2	19.9	15.9	20.2	30.1	25.9	6.7	7.1
2012–13:Q2	12.8	47.2	23.2	12.7	31.3	42.7	13.7	7.6	-1.8
2012–13:Q3	29.7	47	1.2	9.3	28.6	59.6	24	9.7	-16.4
2012–13:Q4	10.6	32.7	5.5	9.2	28.9	63.2	26.5	18	-21.4

Note: * Chennai Index is based on both residential and commercial properties.
Source: Reserve Bank of India.