Housing inventories and prices: what's next for the US housing market?

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Housing Inventories and Prices:
What’s Next for the US Housing Market?

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January 16, 2009

Abstract

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1. Introduction

One of the most commonly-cited facts about the current situation in the US housing market is that there are very substantial supplies of homes for sales, particularly when compared with the low prevailing level of home sales. It has been widely conjectured that this “glut” of houses for sale is likely to be a factor continuing to depress house prices for some time. While the underlying reasoning behind this idea—that excess supply should lead to price declines—is clear, there appears to have been very little empirical work done on this relationship. One exception was a chart reported in a post on 26 May 2008 post by the respected blogger Calculated Risk, illustrating a strong negative relationship between the months supply of existing homes and the rate of change of national home prices.¹

This paper has three goals. First, it provides an econometric examination of the relationship between months supply and house prices. A particularly strong relationship is found between the change in house prices and months supply for new homes. Indeed, supply conditions in the market for existing homes and other fundamental variables such as mortgage rates or GDP growth are found to have little impact on house prices once one controls for the role of supply conditions in the market for new homes. This is not to say that fundamental variables such as growth or interest rates have no effect on house prices. Rather, it is that they impact house prices via their effect on months supply of new homes: For instance, low mortgage rates may stimulate new homes sales, thus reducing months supply and so raising house prices generally.

Second, the paper examines the dynamics of this relationship. If we know that there is excess supply in the market and that it is depressing house prices, the obvious question is: What happens next? In other words, how does the housing market tend to unwind itself from this position and how long does it take? I do this by separately examining the behavior of new home sales as well as the supply side of the market. Some interesting results are obtained. For example, a high level of months supply has a significant negative effect on the number of new homes put on the market for sale. Slowing down an unwinding from a situation of high supply and falling prices, however, is the fact that new home sales depend positively on the growth rate of house prices, so falling prices tends to depress house price sales.

Third, our regressions produce a simple recursive dynamic model that can be simulated to project the future evolution of new home sales, supply, and house prices. Our baseline projection suggests a fairly grim outlook for the US housing market, with prices falling over the next two years before stabilizing in 2010 and sales and construction activity also remaining at low levels for a few years.

The contents of the paper are as follows.

¹See calculatedrisk.blogspot.com/2008/05/scatter-graphs-months-of-supply-vs.html
### Table 1: House Prices and Months Supply

<table>
<thead>
<tr>
<th>Dependent Variable: $\log(PH_t/CPI_t) - \log(PH_{t-4}/CPI_{t-4})$</th>
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<th>(2)</th>
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<td>0.21</td>
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<td>(0.006)</td>
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<td>$MSupply_t^{new}$</td>
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<td>0.33</td>
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</table>

**Notes:**
Figure 1
Real House Price Changes against Months Supply of Existing Homes (Correlation=-0.60)
Figure 2

Real House Price Changes against Months Supply of New Homes, (Correlation=-0.69)
Figure 3

Real Year-over-Year House Price Changes and Months Supply of New Homes

-25 -20 -15 -10 -5 0 5 10 15
3 4 5 6 7 8 9 10 11


House Prices

Months Supply
Figure 4

New Homes Sales and Number of New Homes Just Put on Market
Figure 5

New Homes Sales Per Household and New Homes Just on Market Per Household

- **New Home Sales**
- **New on Market**
Figure 6

Forecast Simulation of Real House Prices and Months Supply (Shaded Area is Simulation)
Figure 7

Forecast Simulation of New Homes Sales and New-to-Market Homes