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MARKETS

Sales data: What's in the basket?

Posted by Binyamin Appelbaum May 2, 2008 11:47 AM

Here's a bit of a conundrum for the data wonks among you: I wrote earlier this week about the Case-Shiller index, which shows that Boston-area prices declined by 4.6 percent in February. This morning I got a new report from Radar Logic, a real estate analytics firm, showing that Boston-area prices declined by 11.3 percent in February.

Boston-area homes were selling for about $200 per square foot at the end of February, according to Radar Logic. That means a 2,000-square-foot home was selling for about $400,000. Prices per square foot last reached these levels in 2003.

That's the news. Now comes something a bit technical, but hopefully worth the trip.

Both Case-Shiller and Radar Logic use complicated formulas to get around a basic dilemma: The mix of homes sold in a given month can create the illusion of a change in home values. If more larger homes sell in a given month, average prices may appear to rise, even if the price of every home has stayed the same. If more smaller homes are sold, prices may appear to fall. Radar Logic divides the house price by the number of square feet to create an even comparison of homes of all sizes. Case-Shiller derives trends by comparing multiple sales of the same homes.

My first thought was that Radar Logic's data may still be skewed by changes in the mix of homes sold, because smaller and less expensive homes generally have higher values per square foot than larger and more expensive homes. If that's true, it should follow that Radar Logic will report a relatively healthier market than Case-Shiller in months when a relatively larger number of small homes are sold.

It has been my assumption that many of the people forced to sell in this market were the owners of smaller and less expensive homes. Among other things, this explained why Case-Shiller has been reporting smaller price declines than Warren Group, whose raw data on median sales prices is skewed downward by more small-dollar sales.

The problem, of course, is that Radar Logic reports a much bleaker situation than Case-Shiller.

Is it possible that the sales mix actually is tilted heavily toward more expensive homes? One indication the answer is yes comes from the Case-Shiller data, which breaks down sales trends into three bands based on home prices. In February, Case-Shiller reported that Boston homes in the least expensive band lost 14 percent of their value while homes in the top band lost 1 percent of their value. Without diving too deeply into math, the fact that the overall Boston index fell 4.6 percent implies that the mix of sales is indeed tilted toward more expensive homes.

I'd be interested to hear your thoughts on this, and I'd be very interested to see any data bearing on the question.