

“Professor’s Comments”

(For the May 2009 Moody’s/REAL Index returns.)

This is a periodic commentary which will generally be posted monthly on the “RealIndices” web site, offering the perspective on the indexes of Professor David Geltner (or occasional guest commentators). Geltner was a leader of the team at MIT that developed the methodology for the Moody’s/REAL Indexes.

Back-to-back “black months”:

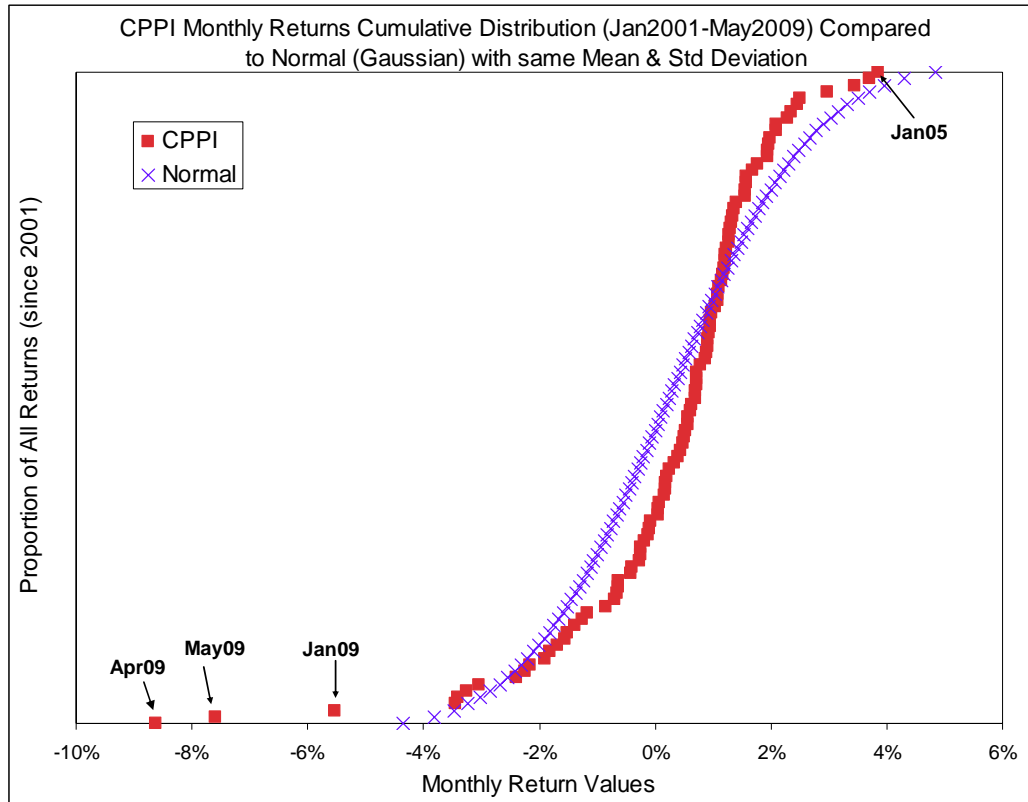
The Moody’s/REAL CPPI lost 10 points in May, dropping from 135 to 125, a monthly drop of 7.6%. This makes the second month in a row of near-record losses in the same-property transaction prices of U.S. commercial real estate tracked by Real Capital Analytics. Coming on the heels of April’s record 8.6% drop, the index is now down year-to-date 22% (through May). The index is down 34.8% since its October 2007 peak at a level of almost 192 and is now only 25% above its December 2000 starting value in nominal terms.

I explained in my last month’s commentary how extreme the recent movements in the CPPI are in private real estate markets, far out on the left-tail of the return distribution (even if that tail appears “fatter” than we might have previously admitted). Now I can’t help indulging my quant-nerd musings again... If commercial property returns have an annual volatility of 10% and were normally distributed, we would expect a one-month drop like May’s -7.6% only about once in 19 years. That sounds pretty reasonable if you figure that real estate cycles seem to repeat roughly every 15-20 years and that we are probably at or near the worst of this one. However, if you join the April and May drops together into a 2-month drop of -15.6%, our 10% annual volatility and normal distribution assumptions imply that such back-to-back months should occur on average only once in 2400 years, which would take us back to the days of Plato and the Peloponnesian War. “Black months”, indeed.*

The chart on the next page graphically depicts what I’m talking about. It plots (as the solid squares) all of the 101 monthly returns of the CPPI since its inception in January 2001 through May 2009, ranked in order from lowest to highest, effectively describing a cumulative histogram. The “X”s indicate what a normal (or Gaussian) distribution of 101 returns would look like, with the same mean and standard deviation as the actual Moody’s returns. The three Moody’s returns on the bottom left of the chart are the “fat tail”, returns so far removed from the normal distribution that they suggest real estate returns are in fact not really governed by the Gaussian distribution, at least not

* On the other hand, if real estate’s annual volatility were 20% (which is greater than that of large-cap stocks), then the normal distribution would allow back-to-back months like this past April-May on average once every six years (i.e., without any “fat tails”). In fact, considering evidence from other indexes and the historical record, it seems likely that the rate of decline in commercial property prices this year has been greater than any at least since the Great Depression of 1929-33, and possibly greater than then. Clearly real estate annual volatility is substantially less than 20%, and the distribution of returns is more “fat-tailed” than “normal”.

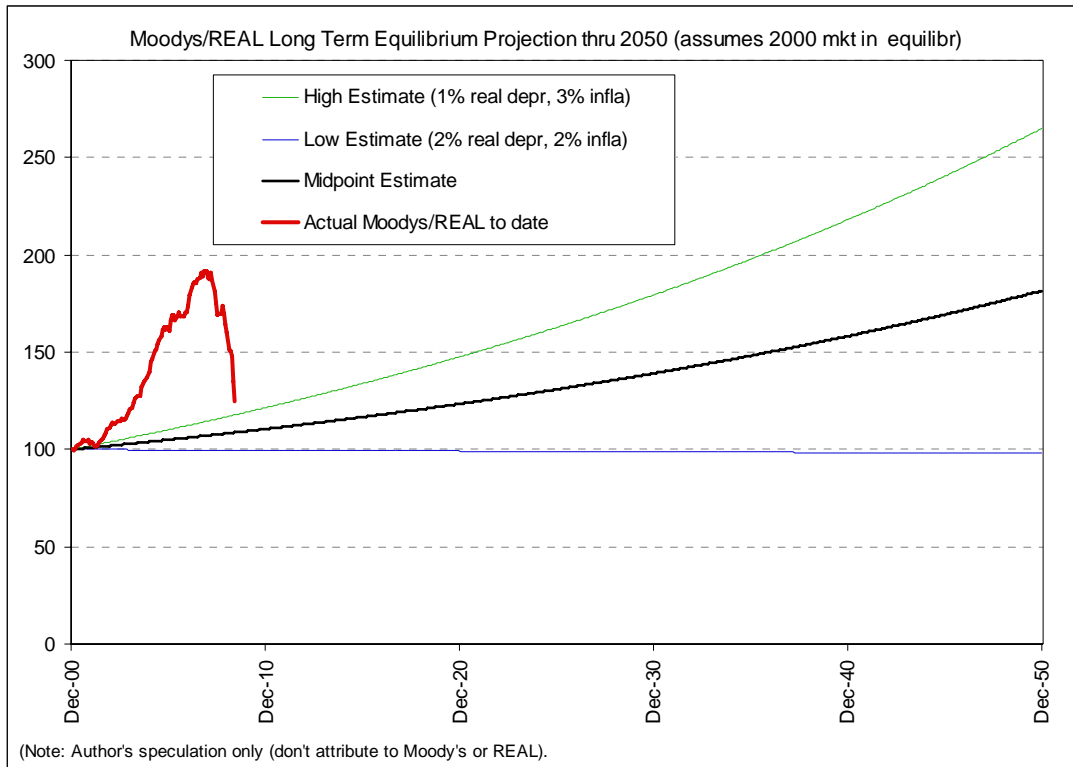
sometimes. Prominently, all three of those fat-tail returns have occurred in 2009, with the two worst being the back-to-back returns of April and May. Interestingly, there does not seem to be a symmetrical fat tail at the upper end of the distribution, which if anything seems “skinny”, actually *inside* the normal distribution, at least so far in the Moody’s/REAL Index history since 2001. (Who knows, maybe there will be a fat positive bounce out of a negative bubble if prices drop too far...)



Bravely looking for the bottom:

Almost every month this year as I’ve written this commentary for REAL I’ve speculated on how far the CPPI will fall in order to complete the current downturn. And I keep getting surprised for the worst. The Monthly All-property Index is now down to the level it first reached in early 2004, in nominal terms. If we adjust for inflation, the index is now at levels of mid-2001 (reached again in mid-2002 after recovering from a mild downturn in the intervening year), thus, back almost to the index’s starting level of 100 pegged in December 2000. In last month’s commentary I suggested a scenario in which the long-run equilibrium level of the CPPI could hang around in the low-to-mid 100s for most of the first few decades of this century (e.g., if the 2000 level represented a balanced market and inflation averages not much more than the real depreciation rate of properties – see chart below). In such a scenario we might not see the CPPI level surpassing its 2007 peak again until towards the middle of the century, at least in sustainable equilibrium terms (that is, apart from another bubble, or major inflation). But even in such a scenario, May’s drop should be getting us within striking distance of a sustainable bottom. Such a bottom would be in the neighborhood of 105 to 115 in the CPPI. At the rate the index has been falling, we will be there within a few months (if not sooner). Obviously, the May

index level of 125 is much closer to the bottom than the distance we have already fallen from the peak of 192. The worst is clearly over in terms of the transaction price drop. Of course, arrival at a solid bottom does not guarantee that the market won't "fall through", into a "negative bubble". But that seems unlikely given the amount of capital poised on the sidelines of the property market, at least provided that the real economy doesn't take another nose-dive severely below its now-projected path of slow recovery.



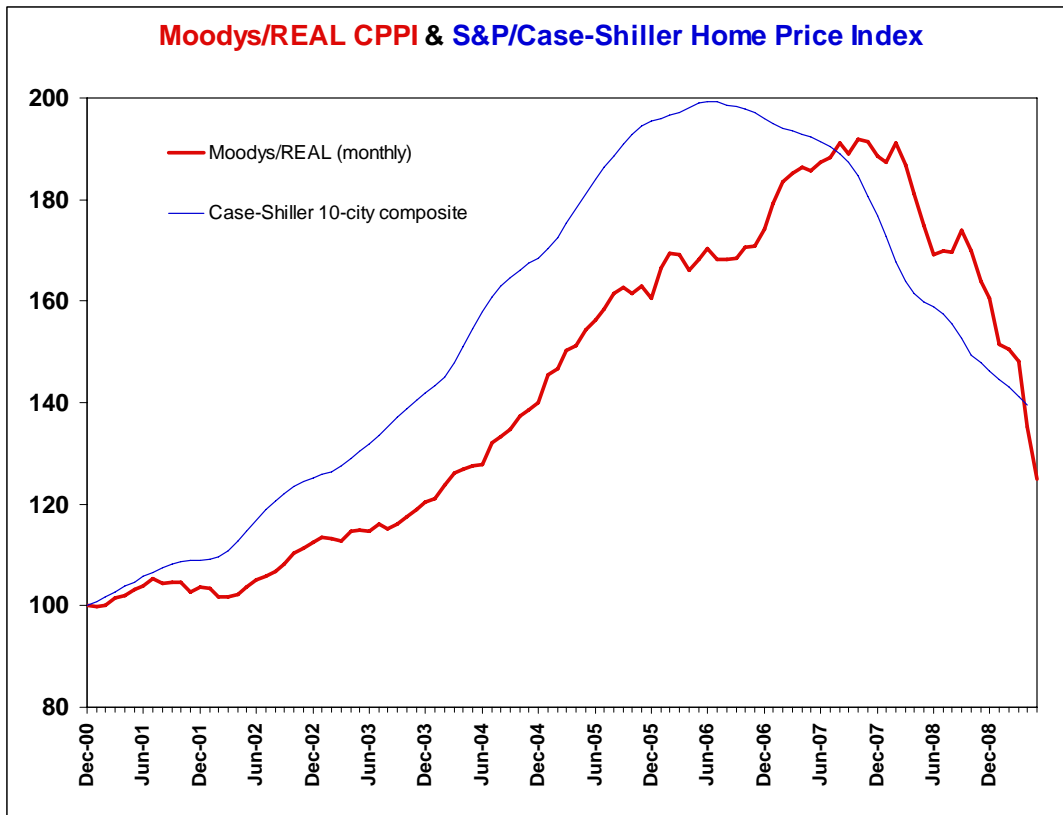
Nevertheless, that there is a bit farther to fall yet does seem likely, from several perspectives. For one, the index has a fair amount of monthly inertia, so it is unlikely the plunge of the past couple months could be stopped too suddenly. A more structural consideration is the extremely low transaction volume. As noted in Moody's and RCA's reports, May's transaction volume was a record low, the bottom so far (and perhaps it will prove to be the overall bottom). Such low transaction volume suggests that loss-aversion is still playing a role. Property owners largely are still staying out of the market, and prices are apparently not yet quite at the level sufficiently low to get potential buyers to move. Nobody wants to be the first big mover. In 2008 some investors thought they had jumped in on a bargain market, only to have their legs cut out under them. Credit markets are still very weak, there is still much uncertainty about the underlying U.S. economy, and everyone knows there is a lot of existing commercial property debt that will be coming due or facing debt service pressure. Won't that cause sellers to cut prices even further?

It seems hard to imagine we could find a solid bottom until transaction volume substantially picks up, and it seems hard to imagine that happening without more widespread recognition of the new reality by property owners. Such "capitulation" or

abandonment of loss-aversion would probably be accompanied by at least a slight further reduction in prices. Nevertheless, the dam will break at some point; investors on the sidelines will come in and establish the bottom, perhaps even a bounce-back, depending on how far prices have fallen by then. As noted above, without an unexpected further disaster in the real economy, the Moody's/REAL Index indicates that the transaction prices that were occurring in May are already just about there. It is just that there are so few of them that they don't impart confidence.

Distressed sales & comparisons to housing:

An intriguing question is the potential role of “distressed sales”. In the housing market, the major drop in transaction prices (e.g., as measured by the S&P/Case-Shiller Index) did not occur until substantial sales of distressed properties began to occur (in late 2007). But commercial property markets seem to be behaving a bit differently. One way to measure “distressed sales” in commercial markets is as the sales of assets classified by Real Capital Analytics as “troubled”, according to RCA’s “Troubled Asset Radar” tracking system. By that measure, almost 10% of May’s repeat-sales in the CPPI were “troubled”, which is more than twice the long-term average. It was enough to drive the index down in May perhaps two or three points lower than it otherwise would have been. But it is still not nearly as large a proportion of distressed sales as we have been seeing in the housing markets for quite some time now. Yet May’s drop in the CPPI takes commercial property now farther below its peak than U.S. housing has fallen below its peak. As of April the Case-Shiller Index was down only about 30% from its June 2006 peak, versus the CPPI now 35% below its October 2007 peak. (See chart below.)



Commercial prices have dropped twice as fast as home prices, and this without nearly as much distressed selling. And while housing sales volumes have now started to increase (including the distressed selling) and the rate of decline in home prices seems to be tapering off, commercial property volumes continue to decline and prices to fall even faster. Thus, the dynamics and the functioning of the two markets (housing and commercial real estate) have played out a bit differently so far in this downturn. I do not know the implications for how things will ultimately play out. But if commercial keeps falling as fast as it has, then I wonder if it may have more of a bounce when it does stop falling, especially given that commercial markets were in better shape than housing going into the downturn. As always, “stay tuned”...

-David Geltner, July 2009.