

## **“Professor’s Comments”**

(For the May 2010 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.*

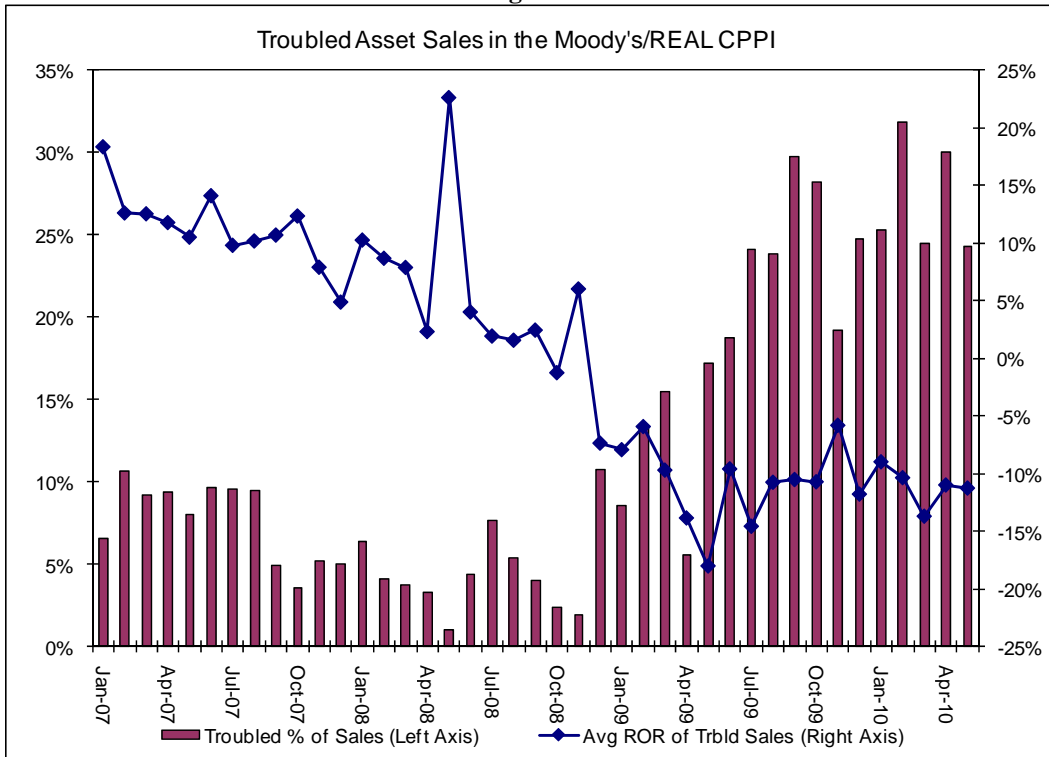
### **Upward trend continues through May ...**

Average same-property prices recorded in closed transactions tracked by RCA moved up sharply in May, 3.6%, the fourth highest return in the 113-month history of the CPPI. This makes two positive months in a row, and five of the last seven months have been positive, bringing the index to a level of 117.22, some 8.6% above its bottom of last October. Within the underlying major-asset (\$5,000,000+) market, RCA tracked an increase in sales volume from \$4.3 billion to \$5.1 billion between April and May, while the average RCA-reported cap rate declined from 7.8% to 7.4%. Thus, May’s results appear solidly positive, and they seem to confirm that the U.S. major-asset commercial property market has experienced a non-trivial rebound in average prices among closed deals since the market bottom last autumn. While the CPPI tracks the overall market average, other analysis reported previously in this column suggests that larger institutional quality asset prices have rebounded more strongly, probably on the order of twice as much as the 8.6% average.

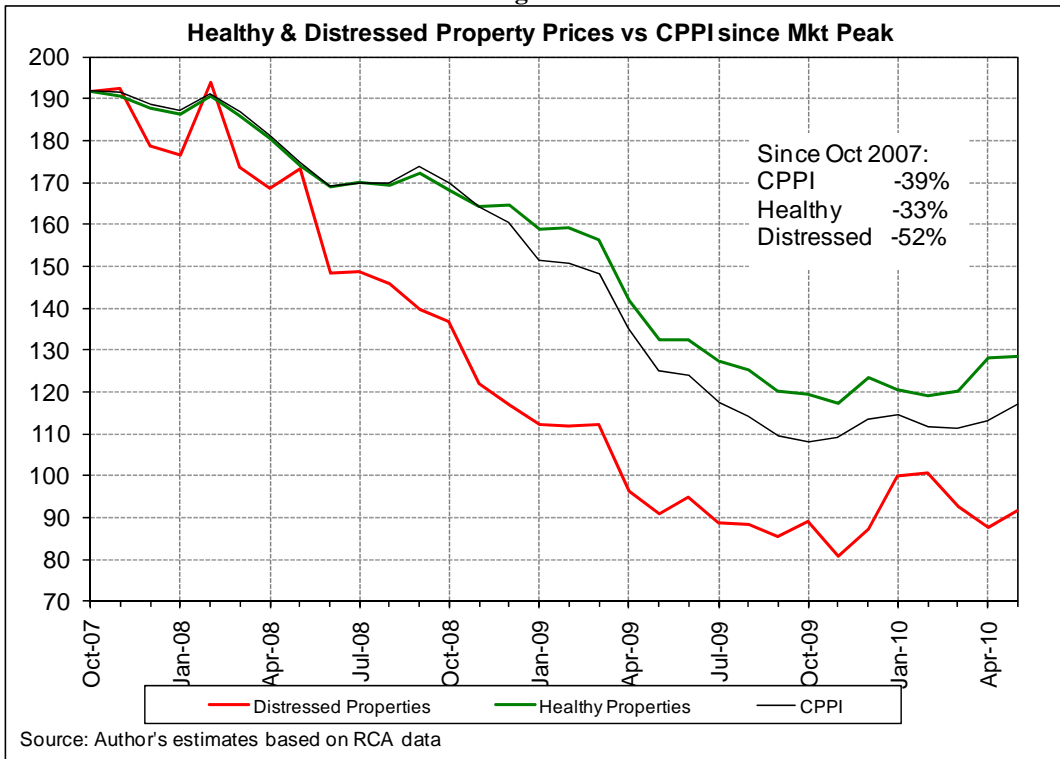
Nevertheless, trading volume is still very low by historic standards, the large backlog of distressed properties continues to accumulate at multi-billion-dollar rates every month, and concerns about the extent of the economic recovery, particularly in the employment dimension, hang over the commercial property market like a dark cloud. All of this may limit, or ultimately could even reverse, the nascent price recovery apparent in the index.

Peering into the entrails that we track regularly in this column, we can get some idea about how the index moved in May. While I don’t like to pay too much attention to any one month, the analytics this month may take a little bit of the wind out of the sails of the index’s cheery headline number. Figure 1 shows that the proportion of CPPI observations that were flagged as “troubled” assets by RCA declined from 29% in April to less than 25% in May. But this is not actually an indication of an improving market, just fewer distressed deals coming to closing in May. Furthermore, Figure 2 suggests that “healthy” asset prices may have been nearly flat in May. (The distressed index did bounce up, but it is more noisy.) All in all, I would still say we are essentially just bouncing along, having gained a little ground since the bottom, but in an environment that remains difficult and with an outlook that can hardly be called “rosy”.

**Figure 1**



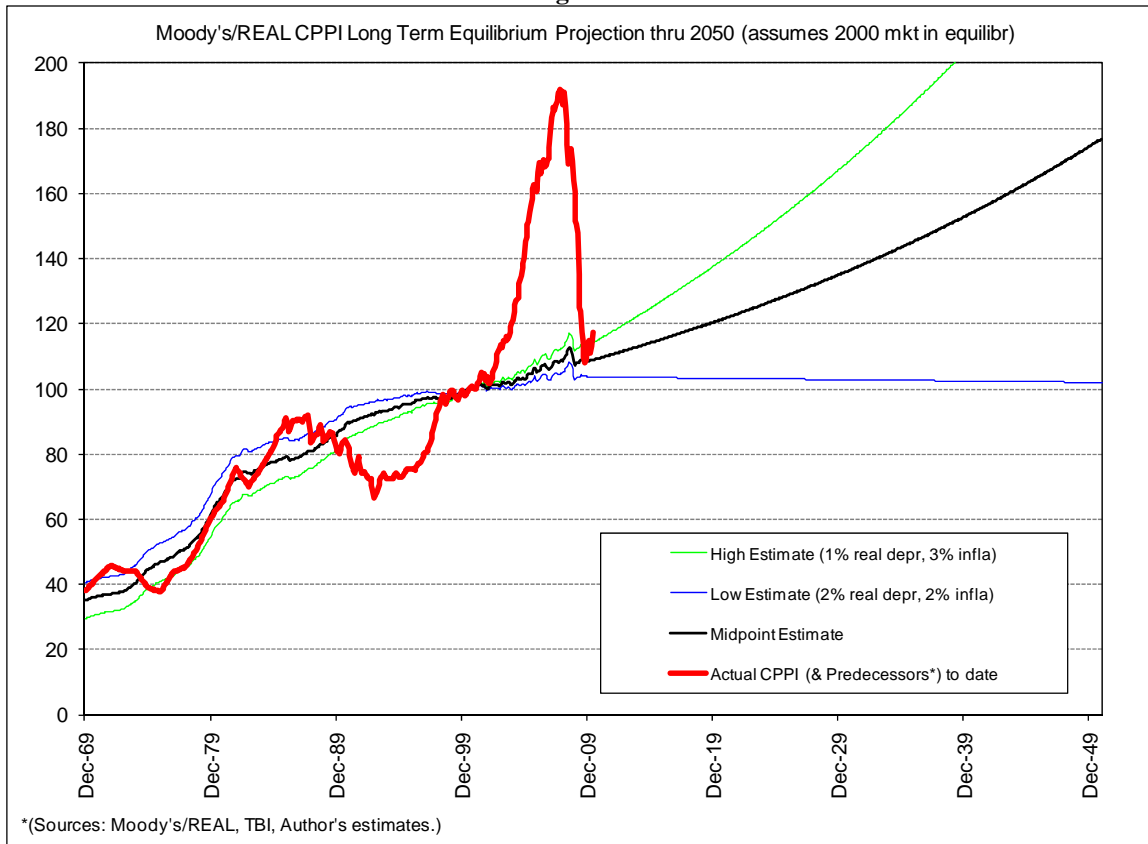
**Figure 2**



### The (real) long-term view...

Drilling into the current market's technicals as through the foregoing numbers, one can lose sight of the forest for the trees. Perhaps summer vacation is a good time to take a fresh look at a chart I first introduced into this column exactly a year ago. It pulls us up a good 30,000 feet above the forest to take a very long-term, broad brush view. Figure 3 presents an 80-year picture of same-property transaction pricing in the U.S. commercial property market: 40 years of history, and 40 years of future projection. The 40 years of history is based on the "Extended CPPI", a splicing of the Moody's/REAL CPPI with the TBI and unsmoothed NCREIF (or NCREIF predecessors) back through 1970 (indicated by the thick red line).\*

Figure 3



The future projection in Figure 3 is based on a simple equilibrium (or "sustainable pricing") assumption, which is also reflected in the depicted history. The equilibrium assumption consists of two parts: (i) the U.S. commercial property market was in approximate long-run equilibrium (a long-run sustainable price level) at the time of the inception of the CPPI in 2000 (index level = 100 at that point); and (ii) over the long run nominal same-property prices grow sustainably 1% to 2% per year *below* the general Consumer Price Index inflation rate. This "sustainable price path" model is depicted in Figure 3 by the thin green and blue upper (1% real depreciation) & lower (2% real depreciation) boundary lines (and the thin black line as the midpoint). For the future

\* The "Extended CPPI" and the data underpinning the chart in Figure 3 may be downloaded from the [realindices.com](http://realindices.com) website. It represents same-property transaction price levels in nominal terms.

projection, two scenarios are represented respectively in the upper and lower bounds, a high-inflation scenario of 3%/year CPI growth for the upper boundary, and a low-inflation scenario of 2%/year CPI growth for the lower boundary. All the series' evolution is pegged to a value of 100 at the end of the year 2000.

This is clearly a very simple, indeed simplistic, model. It could be wrong. But it helped me to call pretty well when and where the (at least temporary) bottom of the 2007-09 down-market would land. And it fits the 40-year, three-cycles-worth of history remarkably well. It presents the sobering prospect that the CPPI may not regain its 2007 peak value of 192 again until the decade of the 2030s or beyond, *on a sustainable basis*.

The simple model allows us to see when and to what degree bubbles occurred in the commercial property market, including both positive and negative bubbles. The latter are the periods just following the collapse of the two previous market cycles, in the 1970s and 1980s, when the commercial property market fell below long-run equilibrium (sustainable) pricing, leading to losses that according to economic equilibrium theory were greater than necessary, but then resulting in sustained periods of super-normal investment profitability (without yet going into the next positive bubble). The simple model in Figure 3 suggests that, so far, we have avoided going into a negative bubble in the bursting of the 2004-07 bubble. This in part no doubt thanks to government and industry policies and assistance, and in part thanks to lenders and creditors well remembering the experience of the last negative bubble in the early 1990s. So far, "pretend and extend" has kept the U.S. commercial property market out of a negative bubble. But can it (or even *should* it) keep on doing that?... Can we get a solid recovery, soon enough, without dipping into the negative bubble? From 30,000 feet, this is a very interesting question.

### **Some interesting technical facts & pointers about the CPPI...**

I began this "technical" section of this column last month (to play to the geek element of my readership, I should say, my esteemed nerd colleagues), and I would like to pick it up again here. The idea is to help improve understanding of some of the technical aspects of the Moody's/REAL Index. Last month I discussed some issues about data frequency and index freezing, equal-vs-value weighting of sales observations, and the filtering out of major rehab projects from the index. This month I would like to note some issues surrounding the focus of the index on so-called "major asset" properties, which for CPPI purposes are defined by RCA as greater than \$2,500,000 in value.

- **Value versus physical definitions of market segments.** Real estate *space* markets are highly segmented. A tenant who needs office space in downtown Boston cannot accept retail space in Houston as a substitute. Nor can a retail building in Houston move to Boston and change into an office building there. Rents and occupancies can vary widely at the same time across different space markets. The *physical* characteristics of properties really matter in the space markets, and therefore space markets are very *segmented*. But it is a bit different in the property *asset* market. Money is fungible and very mobile, especially among large institutional investors. The same money can buy either a Boston

office building or a Houston retail center, and the rent or resale profit provided by either is counted in the same currency. Asset markets are less segmented than space markets, and the segmentation that does exist is less defined by physical differences between properties. Potential tenants describe the properties they're looking for in physical terms (e.g., the need for 10,000 SF of space in west suburban Philadelphia). Potential investors, particularly large institutional investors, more often define investment targets or constraints in dollar terms (e.g., minimum property "size" of \$5,000,000). Of course no single dimension will be a perfect descriptor of the boundaries between market segments. But dollar value delineations are arguably as good as physical delineations for an index like the CPPI that is designed to track the investment experiences of relatively large-scale professional investors, referred to broadly as "institutional" investors.

- **What is the lower boundary of the "major-asset" property market segment?** Although property (asset) markets are less segmented than space markets, there does tend to be noticeably different types of investors and modestly different market behavior and functioning (including some different pricing) in the property market between, say, the market for a \$100-million skyscraper downtown, and that for a \$500,000 2-story office building in the suburbs. It is overly simplistic to think that there is a single, crisp boundary line between such asset market segments (or that any boundary would not change over time). Any line, whether based on physical or value metrics, will contain some arbitrariness.\* Traditionally Real Capital Analytics (RCA), the data source for the CPPI, has defined the "major-asset" property market that it focuses on by a \$5,000,000 lower boundary. There is reason to believe that properties above that value threshold trade in a relatively homogeneous and well integrated asset market, largely among institutional investors and large-scale professional private investors. Smaller properties tend rather to be the province of user-investors and owner-occupants and small-scale local "mom & pop" do-it-yourself property entrepreneurs. RCA has always focused on the "institutional" end of the U.S. commercial property market, broadly defined, and hence the limitation of the CPPI database to "major assets". But the boundary line between the "institutional" and "non-institutional" market segments is fuzzy, and one could argue that properties down to, say, \$2,500,000, are often also in the same arena with the larger properties. For example, many CMBS conduit loans were made on such properties, and institutions are major investors in CMBS bonds. For this reason, when RCA combined with the MIT Center for Real Estate to develop the CPPI, it was decided to begin collecting data on sales of properties in the

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\* It is also important to keep in mind that repeat-sales indices *per se* only track changes in same-property prices over time, not the total investment returns provided by those properties. The total return includes income thrown off by the property (net of capital expenditures). In terms of overall investment performance, we should be careful about simply assuming that differences in price-change behavior between property asset market segments necessarily imply similar differences in total return behavior between those same segments. For example, holding risk constant, capital market equilibrium theory would suggest that properties that tend to provide higher price appreciation would tend to provide lower income yields, resulting in equal total returns (on average).

\$2,500,000 to \$5,000,000 range for purposes of defining the CPPI. RCA has been collecting such data for the index since 2004.

- **Defining the index population.** Having decided for index construction purposes to treat \$2,500,000 as the threshold criterion for the institutional property investors that the CPPI is seeking to track, we still face a choice as to how to specify this boundary in the context of a repeat-sales index. There are actually four possible specifications, because each observation on which the index is based consists of two sales, in effect the “buy” and the “sell” in the round-trip completed investment experience of the investor. In principle we could apply the \$2.5 million threshold to *both* sales, to just the *first* sale, or just the *second* sale, or to *either* sale. (Note that these four possibilities are exhaustive and mutually exclusive.) While one can make a logical or reasonable argument for any one of the four criteria, the policy for the CPPI has been the last of the four: to apply the threshold to *either* sale. This makes the boundary of the investments tracked by the index *open*. In other words, we define an investment as “institutional” (that is, of the type that we are trying to track in the CPPI, i.e., passing the \$2.5 million threshold) if either its first sale (the “buy”) was above \$2.5 million, or its second sale (the “sell”) was above \$2.5 million. The reasoning is that if the investor either buys from or sells to an “institutional” investor (defined as an investor in the market for properties over \$2.5 million), then the investment is considered “institutional” (in the sense of being in the target population the CPPI is trying to track).\*

Needless to say, there are many technical fine points in the construction and usage of an index like the CPPI. Given that this is the world’s first commercially produced and regularly published repeat-sales index tracking commercial properties (it has been published monthly since December 2006), the CPPI has provided an exciting educational opportunity, including the need to help users and potential users understand the innovative technical issues this type of index has brought to the institutional investment information marketplace. I have enjoyed being a part of this learning process, and am looking forward to more of it as the CPPI continues to track the institutional real estate investment price experience through the no doubt very “interesting” times ahead.

-David Geltner, July 2010.

(See [www.realindices.com](http://www.realindices.com) for an archive of past issues of “Professor’s Corner”.)

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\* I believe that the “open” boundary is both a logical and a fair way to define the investor population whose experiences the CPPI is designed to track, and given that this population is by definition the index’s subject population, it would be incorrect to characterize the open specification as introducing “bias” into the index. However, each of the four possible boundary specifications will generally imply some systematic differences in the results of a repeat-sales index. For example, using the current RCA repeat-sales database, the full-history average *per annum* price-change would be some 35 basis-points lower than the official CPPI if one applied the value threshold criterion only to the first sale; it would be 153 bp/yr higher if the criterion were applied only to the second sale; and it would be 24 bp higher if it were applied to both the first and second sales. One advantage of the “open” boundary criterion is that it maximizes the amount of data available, which helps to reduce noise in the index.