

This document contains: (1) Press Release, (2) Commentary, & (3) FAQs Responses.

MIT PRESS RELEASE

EMBARGOED FOR RELEASE AT 9:00 A.M. ET WEDNESDAY FEB 4, 2009

MIT commercial property price index posts record drop -Gauge declines more than 10 percent in fourth quarter

CAMBRIDGE, Mass., Feb. 4 — Transaction sale prices of commercial property sold by major institutional investors fell by more than 10 percent — a record — in the fourth quarter of 2008, according to an index developed and published at the MIT Center for Real Estate that also posted a record 15 percent drop for the year.

The 10.6 percent drop in the transactions-based index (TBI) for the fourth quarter is the largest quarterly decline in the gauge's history, which dates to 1984. The previous record was a 9 percent drop in the fourth quarter of 1987. The 15 percent fall in 2008 is also a record, topping the 10 percent and 9 percent declines in 1992 and 1991, respectively.

The index's performance means that prices in institutional commercial property deals that closed during the fourth quarter for properties like office buildings, warehouses and apartment complexes are now 22 percent below their peak values attained in the second quarter of 2007. The index has fallen in five of the past six quarters, but the recent drop is by far the steepest.

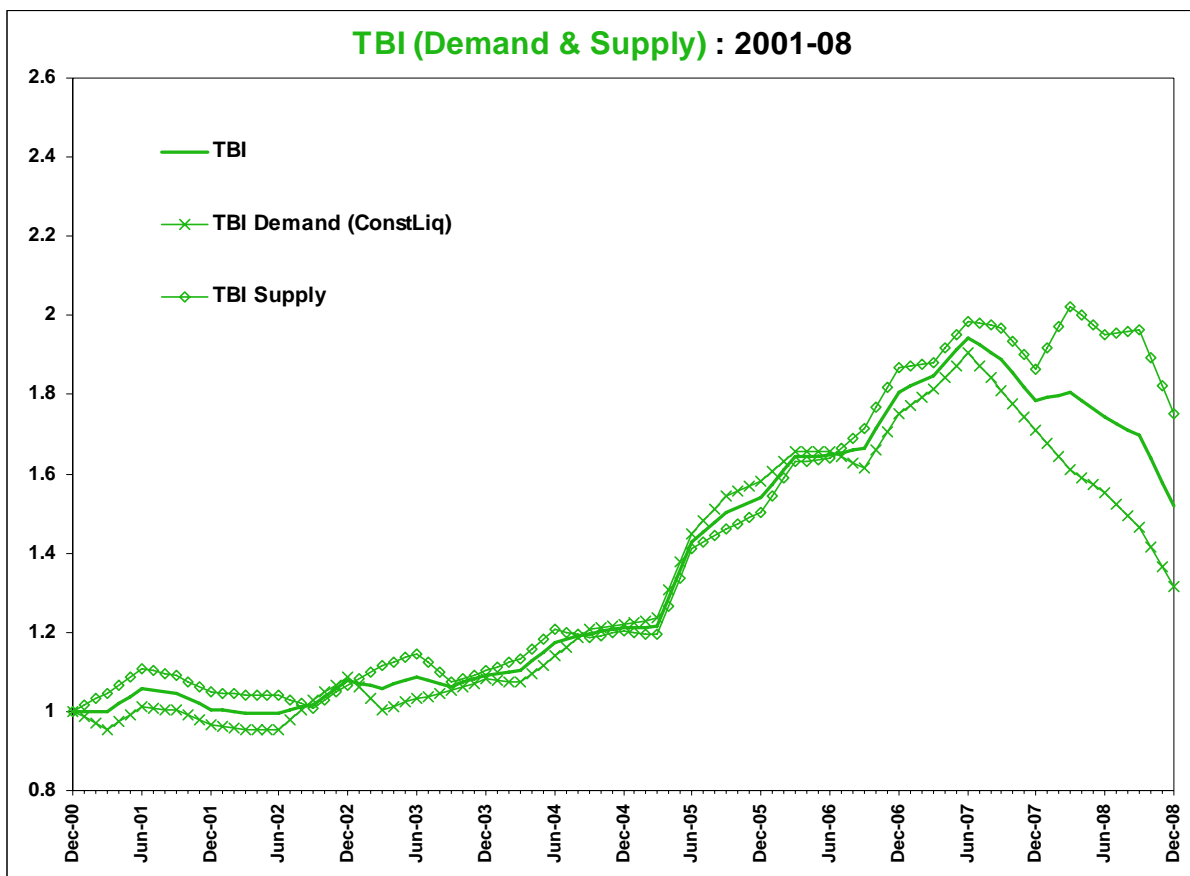
“With the index already having fallen 22% in the current downturn, it now seems likely that this down market will be at least as severe as that of the early 1990s for commercial property,” said Professor David Geltner, Director of Research at the Center for Real Estate. In the last major downturn in the U.S. commercial property market 20 years ago, the TBI price index declined a total of 27 percent from 1987 through 1992, with most of that drop occurring in 1991-92. “Nevertheless, a decline of 22 percent compares favorably to the stock market, which has lost more than 40 percent over the same period, including 20 percent in the last quarter,” Geltner noted.

The MIT/CRE publishes not only the price index based on closed deals, but also compiles indices that separately gauge movements on the demand side and the supply side of the market that it tracks. The demand-side index tracks the changes in prices that potential buyers are willing to pay (sometimes called a “constant-liquidity” index of the market, because it tracks how much prices would have to change to keep a constant ability to sell as many properties at the same rate of trading volume). That index has now fallen steadily for all of the past six quarters, dropping again in the third quarter by 10.3 percent, and is down 23 percent for the year and 31 percent since its mid-2007 peak.

“The results posted by our index are corroborated by recent evidence from another commercial property price index whose methodology was developed at the MIT/CRE, the Moody's/REAL Index produced by Moody's Investors Service,” said MIT/CRE Principal Research Associate Henry Pollakowski, noting that Moody's December results were scheduled to be published Feb. 19. “This index showed a sharp decline in its latest monthly report, for November, placing that

broader index of realized commercial property prices at 15 percent below its 2007 peak, even before the end of the year.”

The TBI tracks the prices that institutions such as pension funds pay or receive when transacting commercial properties like shopping malls, apartment complexes and office towers. The MIT Center’s TBI is based on prices of National Council of Real Estate Investment Fiduciaries (NCREIF) properties sold each quarter from the property database that underlies the NCREIF Property Index (NPI), and also makes use of the appraisal information for all of the currently 6,000 NCREIF properties. Such an index — national, quarterly, transaction-based and by property type — had not been previously constructed prior to MIT’s development of it in 2006. NCREIF supported development of the index as a useful tool for research and decision-making in the industry.



Geltner Commentary on 4Q2008 TBI Results...

Transaction volume of sales of properties out of the NCREIF Property Index (NPI) shrank in 4Q2008 to only 0.64% of the current NPI property population. This is the second lowest quarterly sales volume percentage in the history of the TBI (only 2Q1992 at the bottom of the previous major downturn was lower, barely, at 0.61%). 4Q2008 was by far the lowest volume percentage among fourth quarters of the calendar years, which normally show a volume spike (the only other really low 4th quarter was 1991 with 0.99% – even 1992 had 4Q volume of 2.10% of the property population). 4Q2008 volume was also down sharply from the previous quarter: 40 sales in 4Q versus 81 sales in 3Q2008.*

Often when sales volume is down sharply this reflects a pulling apart of the two sides of the market, with the supply-side reservation price index (property owners' prices at which they are willing to trade) either rising farther or not falling as much as the demand-side (constant-liquidity) price index that represents potential buyers' willingness-to-trade prices. However, this is not the case in 4Q2008, making the market behavior this quarter a bit of an anomaly and a puzzle. My guess as to what is going on is the following (but I cannot confirm this)... I believe the extreme conditions in the capital markets in 4Q2008 effectively bifurcated the NPI-based property market into two separate sub-populations of property owners: those (relatively few) who were under considerable pressure to sell (probably largely in open-end funds with investor exit queues placing the funds under pressure to liquidate some properties); and all the other NCREIF member property owners or ownership vehicles (closed-end funds, separate accounts, etc) for which there was no direct pressure to sell properties. The former population essentially went down and met the demand side of the market, as they had to do. The latter population stayed almost completely on the sidelines.

I don't know for sure if the above description correctly characterizes the NPI property market in 4Q2008. In any case, the TBI behaved statistically in 4Q2008 as if property market price-elasticity were nearly infinite, and this is in marked contrast to the earlier phase of the current downturn when price-elasticity appeared to be quite finite (notably the big difference in 1Q2008 price movements between the demand-side reservation price movement and the variable-liquidity equilibrium price movement at that time – the “big disconnect” between the two sides of the market when property owners would not adjust their reserve prices downwards). Perhaps this signals that the market is moving into another phase of the downturn, perhaps a phase in which property owners stop holding out against the downturn in demand-side sentiment?...

-David Geltner, February 4, 2009.

Above commentary reflects the opinion of the author only, not of MIT or the Center for Real Estate.

* As noted, the 40 sales in 4Q08 included no retail property sales at all, as a result of which we cannot publish an update of the retail sector TBI for 4Q08. We will update the retail index in the next quarter in which there are retail sales, at which time we will “straight-line” the index from 3Q2008 to that point (in effect assuming equal quarterly returns during the missing span).

Frequently Asked Questions re 4Q2008 TBI...

Excerpts from email discussions with index users...

Question (Meaning of Price vs Demand Indexes):

"My interpretation is that [the price index] metric represents the average value of all US core real estate [in the subject sector]. Data is also provided for the "Demand" and "Supply" indices. Is it an oversimplification to presume these indices suggest the trends in Seller's v. Buyer's asking price?"

Response (DG):

I would say that your interpretation is essentially correct. The (variable-liquidity) price index reflects the changes in prices in realized transactions, closed deals, and each of those deal prices of course reflects an agreement between parties on both sides of the market (supply as well as demand), and therefore the price index reflects the market "equilibrium" price (such as it was at the end of the time period reported by the index). While equilibrium prices are most important because they do represent a sort of "agreement" between the two sides of the market, in real estate they must be interpreted in the context of trading volume (or "liquidity") that is highly pro-cyclical in nature, with far less trading in a down market, especially in the early stages of a sharp downturn as we are in now. Thus, you can't expect to be able to sell as many properties as quickly or easily at the equilibrium price in a down-market as at the equilibrium price in an up-market. (Maybe this matters to you, maybe it doesn't.)

So, to add depth and perspective to the picture, we produce the demand and supply side indexes. The demand-side ("constant-liquidity") index reflects systematic changes in what economists call the "reservation price" that potential buyers are willing to pay, which is not exactly the same thing as the "asking price" in real estate, because posted asking prices are meant as a signal and perhaps a starting-point for negotiations, whereas the "reservation price" is the price at which the party will stop searching, stop negotiating, and do the deal. Same thing on the supply side, only from the perspective of the property owners, the potential sellers. By looking at these two indexes reflecting reservation price movements on each side of the market you can get a deeper picture of what is going on underlying the transaction price changes in the market.

As noted, these indexes are "statistical products", which means they can contain some estimation error, and also they are limited by some simplifying assumptions in their structure. For example, the underlying econometrics forces the model to have the same magnitude of price-elasticity on the demand side and on the supply side. You will note that the difference between the variable-liquidity price index and the two reservation-price indexes (demand and supply) is always the same magnitude (just opposite sign) between those two sides of the market. This reflects the simplifying assumption of equal-elasticity magnitude (always equal across the two sides, but not constant over time).

Question (Sufficiency of Number of Observations):

"The MIT website indicated transaction volume was extremely low in Q408, which calls into question whether there was sufficient data available to support the current index value, particularly at the asset-class level."

Response (DG):

Regarding your question about the number of transactions, in effect, the sufficiency of the sample size, we are getting scarily low. My sense (this is based on my experience and judgment, not formal statistical science) is that we are still OK at the aggregate level, for the all-property

index. I have less confidence in the individual sectoral indexes. As I suggested on the web site, I would recommend consulting the Moody's/REAL Commercial Property Price Index for a transactions-price index that is based on a broader population and hence much larger sample of transactions, particularly for looking at the sectoral level. The Moody's index is like the variable-liquidity (equilibrium) price index version of the TBI, only it tracks a much larger, broader population of commercial properties. (You can download the Moody's data from either <http://web.mit.edu/cre/research/credl/rca.html> or <http://www.realindices.com/real/index.htm> as well as from Moody's).

Having said that, I must say that the three TBI sectoral indexes that we were able to produce this time (as noted, we couldn't do retail due to complete lack of sales), look fairly reasonable to me. This despite that they have only about a dozen transactions each. We don't have a policy of not publishing a TBI just because of few data observations, but one certainly does need to keep that in mind. In general I have been pleased with how reasonably the indexes seem to perform even with surprisingly few observations. We employ a noise filter that seems to be very effective. Nevertheless, as I said, I would take the sectoral indexes especially with a grain of salt.

Question (Role of Appraisals in the TBI):

"While the information provided on the MIT website seems to suggest that the index is impacted only by actual transactions, your research paper on the topic also discusses the use of appraised values as reported by the NPI in the TBI. I would appreciate knowing exactly how the TBI incorporates appraised values, if at all."

Response (DG):

Regarding your question about how the appraised values are used in the transaction price index, the appraised values are just a right-hand-side variable in the regression to control for qualitative differences cross-sectionally across the properties (such as size, quality of location, age, etc). The dependent variable in the regression is only the actual transaction price (per SF), hence, the index is truly a transaction price based index, not appraisal based. (Maybe I should clarify, the index measures "longitudinal" movements, changes through time, and it does so based purely on changes in transaction prices, not appraised values.)

Question (Backward Adjustments):

"We have noticed significant historical revisions in the price series. Were the revisions larger than normal, and is there a story behind them?"

Response (DG):

Regarding backward-adjustments, they may have been a bit larger than normal this time, probably due to the sharp turn in the market during calendar year 2008. As noted on the web site, we consider the "TBI" to be "preliminary" through the first three quarters of each year, then "finalized" (though there can still be further backward adjustments) with the 4th-quarter report. This is due to technical reasons which I will briefly explain here...

We use a ridge regression noise filter in the index. This is a Bayesian technique that works by biasing the return estimates towards an "anchor". The anchor is the transactions-based index estimated at the annual frequency at the end of every calendar year. By estimating at the annual frequency we have much more data in each period and hence less noise. (We also control for temporal aggregation at the annual frequency, so we avoid lag bias.) But we can only update that

transactions price based anchor at the end of the calendar year. During the interim (other three quarterly indexes) we use the appraisal-based NCREIF Index as the anchor. The appraisal-based index is lagged, and that made an especially large difference during 2008 because of the sharp turn in the market. This is probably why the backward-adjustments were larger in 4Q08 than they usually are. The most recent index should be considered to be the most up-to-date and accurate for the historical returns.

Question (Index Base Period & Levels Comparisons):

"I was hoping you could tell me the base year for the transactions-based index. I think it might be 1983, but I was hoping you might be able to confirm for me."

Response (DG):

The base period is 1Q1984 (first return period 2Q1984) for the national aggregate index, and 1Q1994 for the sectoral indexes.

The base periods' index values for the TBI are not necessarily equal to 100. As you know, the base period value of an index (any index) is arbitrary. The meaningful information in the index is the periodic returns (relative changes starting from the base period). What our program does is to set the base period index value level to whatever level will give the TBI index levels an average value (across the entire history) equal to the average value level of the corresponding NCREIF Index in which the latter's base period value is set (arbitrarily) to 100. (We could have done it the other way round – it's just arbitrary we picked the NPI to set to 100.) This is done purely for visual display in the graphs. In reality there is no rigorous comparison between the index value levels between the NPI and TBI indexes. You can't say that transaction prices were 5% above appraised values just because the TBI (capital index) happens to be, say 210 in a period when the NPI is 200. (However, if the next period the TBI moves to 189 and the NPI moves to 190 then you CAN say that period the transaction prices moved down 10% while the appraised values moved down 5%.) The reason we set the starting values as we do for visual purposes in the graphs is that, as an approximation, it does make sense to assume that appraised values and transaction prices will tend to have equal average values over the long run. While lagging and smoothing in the appraisal-based index will cause its returns to differ from the transaction-based returns over short-to-medium spans of time, over longer historical spans of time involving full "cycles" in the real estate market the differences between appraisals and transactions tend to cancel out: Appraisers tend to follow the market, just with some lag and perhaps smoothing off the peaks and valleys a bit.

Question (Aggregate index not composite, & missing retail 4Q08):

"I am trying to retrieve data on your Transactions-Based Index and it appears as though the fourth-quarter data for the retail segment is missing. It is present for the office, industrial, apartment and composite index, however. If the composite was calculated I would assume the retail data is available. If you can provide any feedback I would really appreciate it. Thank you very much."

Response (DG):

We could not publish a retail index for 4Q08 because there were no sales of retail properties out of the NCREIF database that quarter. The aggregate index is not a composite built up from the sectoral indexes, but rather is an independently-estimated regression based on the entire data sample of sold properties as if they were all members of a single population.