

# Moody's/REAL Commercial Property Price Indices, November 2007

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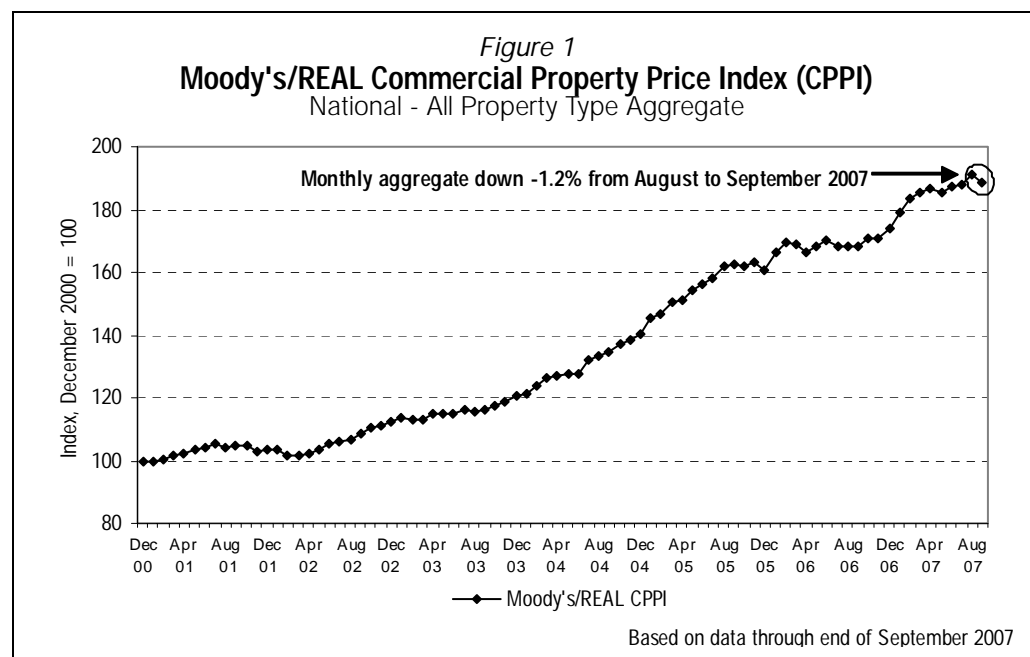
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## OVERVIEW: MOODY'S/REAL COMMERCIAL PROPERTY PRICE INDEX (CPPI) SHOWS FIRST SIGN OF AN INFLECTION POINT IN COMMERCIAL REAL ESTATE

This November report of the Moody's/REAL Commercial Property Price Indices (CPPI), based on data through the end of September, might represent the inflection point in commercial real estate values given the ongoing liquidity crunch. This month, the Aggregate Index across all property types measures 188.89, a decline of -1.2% from the previous month.



The Moody's/REAL CPPI measures the change in actual transaction prices for commercial real estate assets based on the repeat sales *of the same assets* at different points in time. As such, it is the best indicator of the change in actual market prices for commercial real estate - in the aggregate, by property type, by region, and by sub-region wherever possible.<sup>1</sup>

The all-property type aggregate is a monthly index, based on data through the end of September. The other indices discussed in this report are quarterly, based on data through the end of the third quarter, or the end of September.

Notable observations include the following:

- The all-property type aggregate index declined in September from August, by 1.2%, although the measure is still up from the end of the previous quarter and year.
- Although the number of transaction pairs used to calculate the indices is down, this is precisely the kind of market environment in which having the most robust analytical tools at one's disposal has the greatest benefit. In short, method matters.
- Among individual property types on a national scale, retail and industrial space showed the greatest improvement in prices in the third quarter from the quarter before, while offices and apartments saw prices decline.
- Price increases in the top ten markets again exceed national norms in most property types.
- In the West apartments and offices departed somewhat from the national profile as multifamily housing declined by more than the nation as a whole, and offices outperformed the US overall by a significant margin.

*Figure 2* lists the current score for each of the 29 components in the Moody's/REAL suite of indices. Moody's will customarily report all index numbers in each report for investors' convenience, even though not all indices are recalculated each month, as noted in earlier reports. Any index that is based on new data is marked in bold and gray; all others are the same as last period. The schedule for updating each index is listed in the Appendix. Charts for the previously-published index measures are also included in the Appendix.

<sup>1</sup> A summary or short version of the repeat sales methodology is available in a Moody's Special Report. [US CMBS: Moody's Publishes the First Commercial Property Price Indices Based on Commercial Real Estate Repeat Sales Data](#). Sept. 19, 2007. This is available on Moodys.com > Structured Finance > Commercial MBS > CRE Indices. In addition, a very detailed and complete explanation of the methodology is available in a White Paper from MIT. David Geltner and Henry Pollakowski. *A Set of Indexes for Trading Commercial Real Estate Based on the Real Capital Analytics Transaction Prices Database*. MIT Center for Real Estate. Sept. 26, 2007.

*Figure 2*  
**Current Moody's/REAL CPPI and Change from Earlier Periods**

**New This Period: National All Property Type Aggregate**  
**New This Period: National - Four Property Types**  
**Top 10 MSAs - Four Property Types**  
**West - Four Property Types**

Repeated: East - Four Property Types  
South - Four Property Types  
Southern California - Four Property Types  
MSA Office Markets - New York, San Francisco, and Washington DC  
MSA Apartment Market - Florida

	Current Index <sup>M</sup>	1 Month Earlier	1 Year Earlier	2 Years Earlier
<b>National All Property Type Aggregate</b>	<b>188.89</b>	<b>-1.2%</b>	<b>12.1%</b>	<b>16.1%</b>
	Current Index <sup>Q</sup>	1 Quarter Earlier	1 Year Earlier	2 Years Earlier
National - Apartments	192.33	-1.0%	10.4%	6.0%
National - Industrial	190.68	3.0	11.9	19.1
National - Office	176.73	-0.5	12.8	25.9
National - Retail	195.19	2.6	6.0	15.1
Top 10 MSAs 1 - Apartments	222.82	0.1	12.8	12.9
Top 10 MSAs - Industrial	197.91	2.3	9.1	18.4
Top 10 MSAs - Office	171.06	-0.2	8.5	23.6
Top 10 MSAs - Retail	196.47	4.1	10.0	11.5
West - Apartments	191.38	-2.6	10.7	14.6
West - Industrial	180.40	2.9	10.6	16.3
West - Office	173.60	4.5	20.6	37.4
West - Retail	198.61	3.2	3.2	15.0
	Current Index <sup>A</sup>	1 Year Earlier	2 Years Earlier	
East - Apartments	203.96	7.3%	5.7%	
East - Industrial	175.50	7.1	10.4	
East - Office	177.13	15.1	26.1	
East - Retail	202.18	7.3	11.3	
South - Apartments	161.57	2.3	0.1	
South - Industrial	187.62	11.5	27.7	
South - Office	175.34	-0.9	17.0	
South - Retail	181.37	5.4	15.8	
So. California - Apartments	214.74	1.7	10.6	
So. California - Industrial	209.45	15.3	39.5	
So. California - Office	184.74	6.5	20.9	
So. California - Retail	243.79	7.1	30.5	
New York - Office	224.54	18.8	37.2	
San Francisco - Office	127.24	15.6	25.5	
Washington DC - Office	172.70	5.3	16.5	
Florida - Apartments	215.72	-2.9	11.9	

M Monthly series. Most recent data is through September 30, 2007.

Q Quarterly series. Most recent data is through the end of the 3rd quarter 2007. Analysis is based on data from that 3rd quarter.

1 Top Ten MSAs refers to the ten MSAs with the most transactions, by dollar volume, in each property type.

A Annual series. Most recent data is through the end of the 2nd quarter 2007. Analysis is based on data from four quarters (3Q06, 4Q06, 1Q07, and 2Q07). Given that the measure is of a rolling four-quarter period, data as of the end of the 2nd quarter can not be compared with that from the end of the previous quarter.

## NATIONAL - ALL PROPERTY AGGREGATE INDEX INCLUDES FIRST MONTH OF DATA POST-CREDIT CRUNCH

The National - All Property Type Aggregate is a monthly series, and this November report is based on data through the end of September 2007, which is the first full month of data emerging after the credit crunch picked up steam in August. As such, this could be the first stages of an inflection point in commercial real estate prices.

Over the next few months, we might see more ups-and-downs in the index - with the downs exceeding the ups on a net basis - in contrast to the rather steady upward march of prices represented over the last year or so.

Although the aggregate index across all property types of 188.89 declined by -1.2% from the previous month, the index is still up 12.1% over the same period of the previous year, and 16.1% over two years (refer back to *Figure 1* on page 1).

The aggregate index has previously demonstrated monthly dips within recent history, ranging from -1.3% (June to July 2006) and -1.4% (November to December 2005) to -1.8% (March to April 2006).

Nonetheless, given the current capital market environment, the prospect of a singular, one quarter blip in prices seems unlikely. Instead, we are more apt to see greater volatility in prices, although the ups-and-downs of price fluctuations might be net down over several periods in the near future.

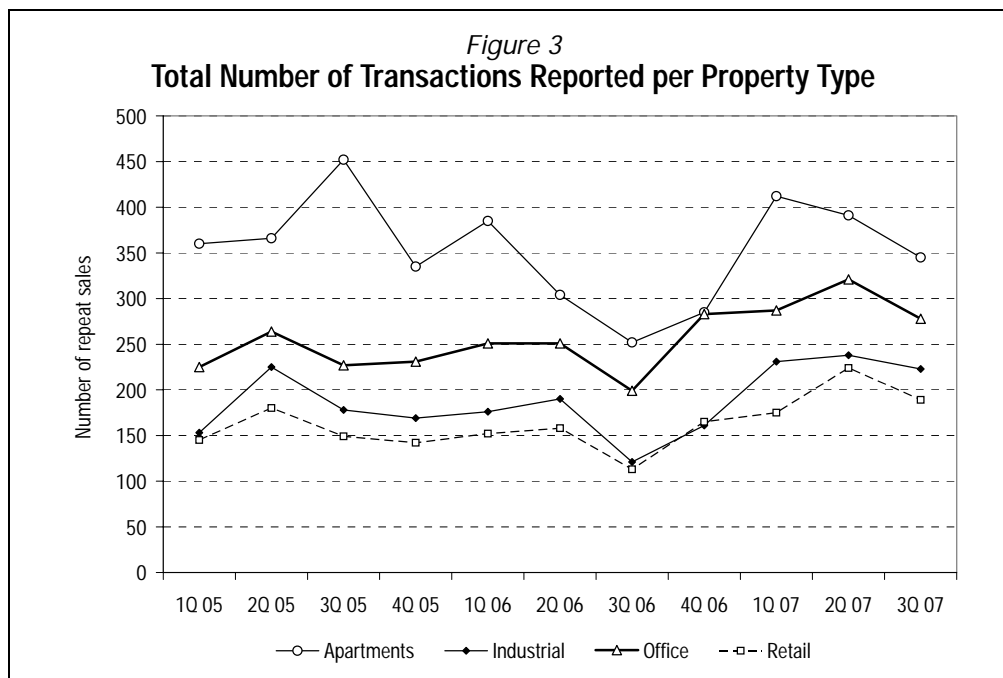
### When Robust Models Matter the Most

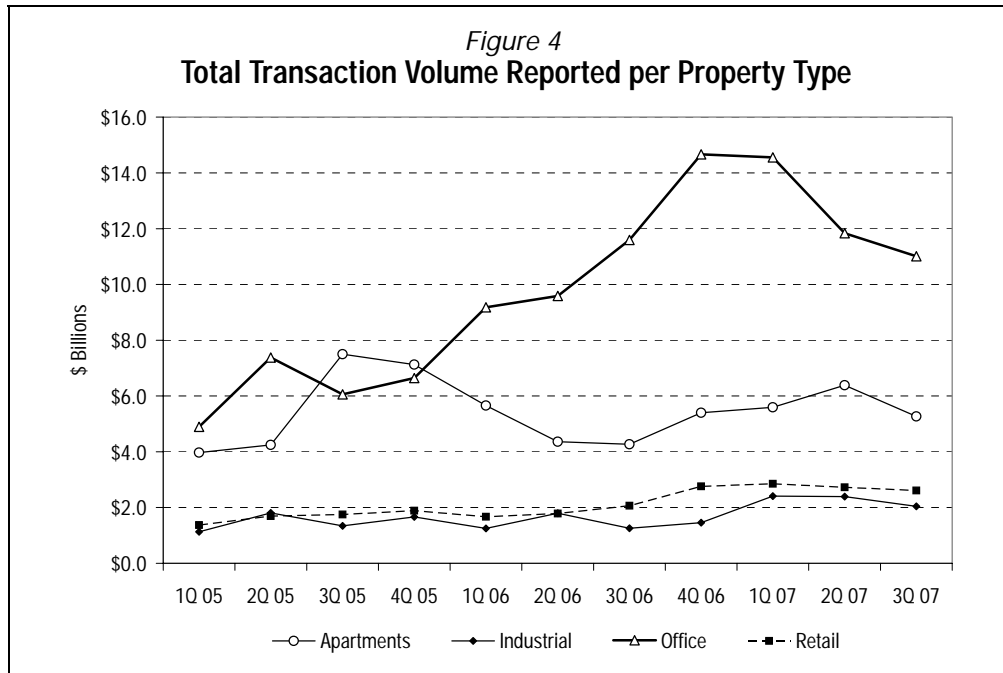
Softer commercial real estate markets raise the specter of fewer transactions, which in turn might seem to challenge the data basis for this and other price series.

Although the number of transactions is what is critical for a valid repeat sales regression (RSR) calculation, the total dollar volume of repeat sales should also give comfort to investors of the richness and depth of the data on which the Moody's/REAL indices are calculated. In the interest of transparency, *Figure 3* illustrates the total number of transactions per property type for each quarter of the last few years, and *Figure 4* illustrates the total dollar value of transactions, again per property type for each quarter of the last few years.

We have already seen some softening in transaction volume - the number of monthly transactions dipped in September, down by 20% from the previous month and by 30% from the peak in June of this year. Nonetheless, this is well above the minimum threshold required for the repeat sales regression model to run effectively.

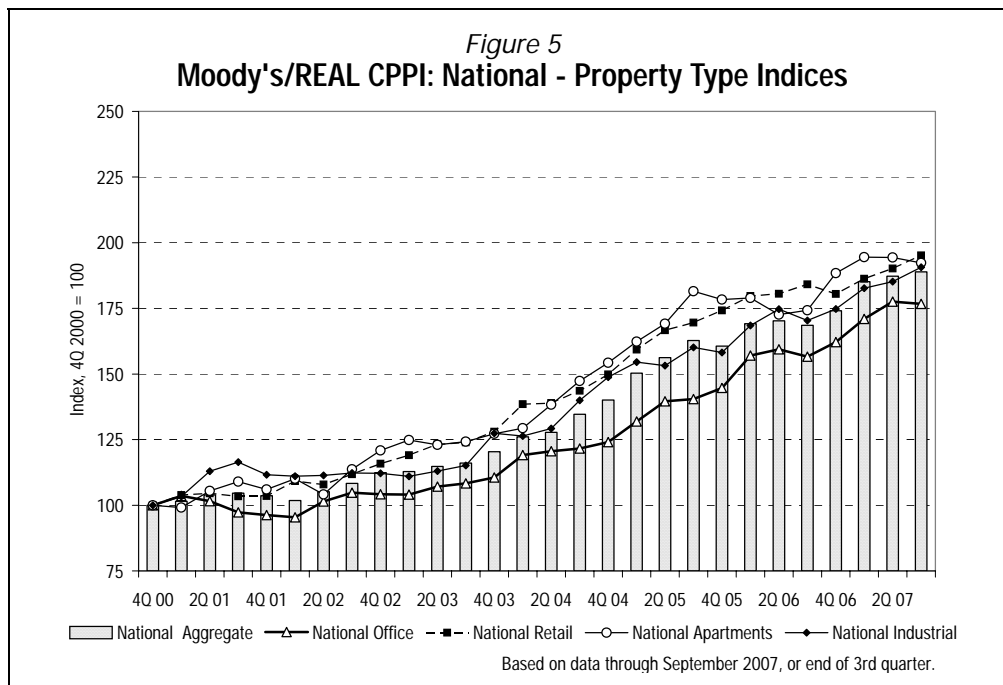
**In fact, in difficult markets, using the most robust statistical tools available in one's methodology is absolutely critical.** Readers who have not already done so are encouraged to read the MIT White Paper that provides substantial details about the techniques employed in the Moody's/REAL price indices.





**NATIONAL - PROPERTY TYPE INDICES: NOT ALL SECTORS ARE MOVING IN PARALLEL**

The National - Property Type Indices for the four major property types is a quarterly series, and this report is based on data through the end of the third quarter 2007. Although aggregate prices declined by -1.2% from the previous month in the monthly series (see *Figure 1*), on a *quarterly* basis aggregate prices still showed an increase of 0.9%. However, individual property types departed materially from that baseline.



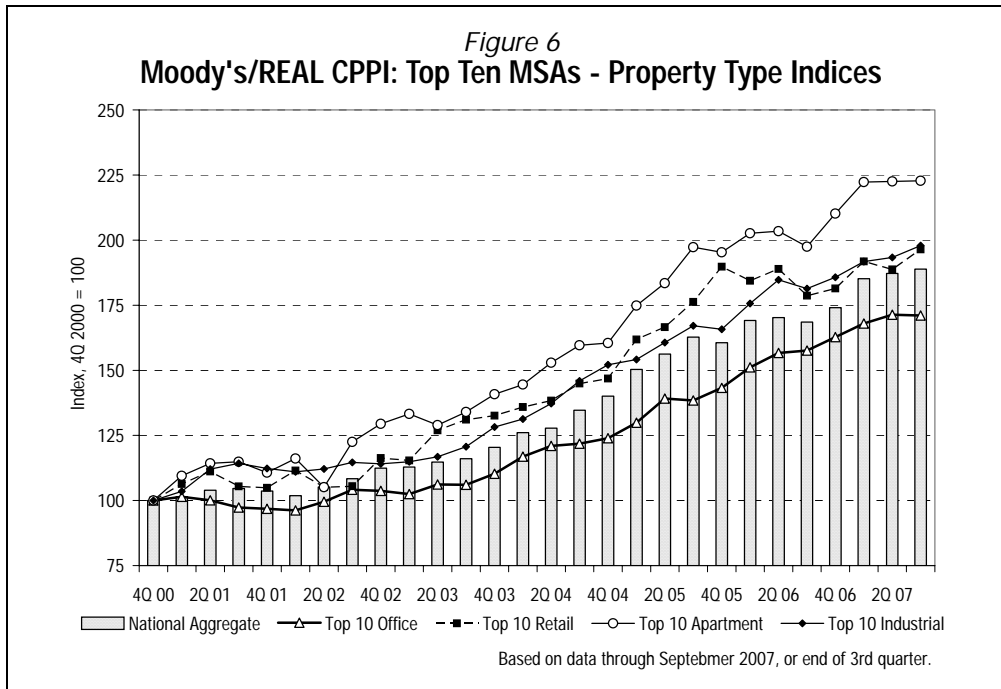
The strongest quarterly improvement was in the industrial sector, where prices were up by 3.0% from the quarter before, followed closely by retail space, up 2.6%. Indeed, both of these products have consistently demonstrated the generally steady march up in prices typically associated with commercial real estate in the last few years.

In contrast, prices fell on a quarter-to-quarter basis in offices and apartments, by -0.5% and -1.0% respectively. As in the aggregate index, this is not the first time either of these products has seen a back-up in prices. In multifamily

housing, prices fell by 4.9% from the third quarter of 2005 to the second quarter of 2006. The only other recent drop in office prices was by -1.8%, from the second quarter of 2006 to the third quarter of the same year. Nonetheless, given that real estate will always be a capital-intensive asset class, the existing credit environment increases the risk of further price declines, albeit in fits and starts.

## TOP TEN MSAS - PROPERTY TYPE INDICES: BIG CITIES WIN AGAIN

This series is based on the ten MSAs which are home to the largest number of transactions in each property type.<sup>2</sup> Approximately 50%-70% of the national index is driven by the performance of assets in only ten cities, although that ratio varies by property type and over time. In the most recent quarter the Top Ten markets comprise the majority of transactions, ranging from slightly more than 50% of the retail sales to 60% of the industrial and about 65% of the office and apartment repeat sales. This is also a quarterly series, based on data through the end of the third quarter 2007.



In general the assets in the Top Ten cities in each property type outperformed the national aggregate. For example, apartments in the largest markets saw prices increase, albeit by a hair (up 0.1%) while nationally the sector declined by -1.0%. Likewise, offices declined (-0.2%) but by less than the US as a whole (-0.5%). Finally, retail prices increased by 4.1%, outperforming the national 2.6% pace. Although prices still increased, only the industrial sector in the Top Ten markets (up 2.3%) performed less well than the nation (up 3.0%).

This is consistent with other Moody's research that has found smaller or secondary markets to suffer higher delinquency rates, and tertiary markets to be weaker still.

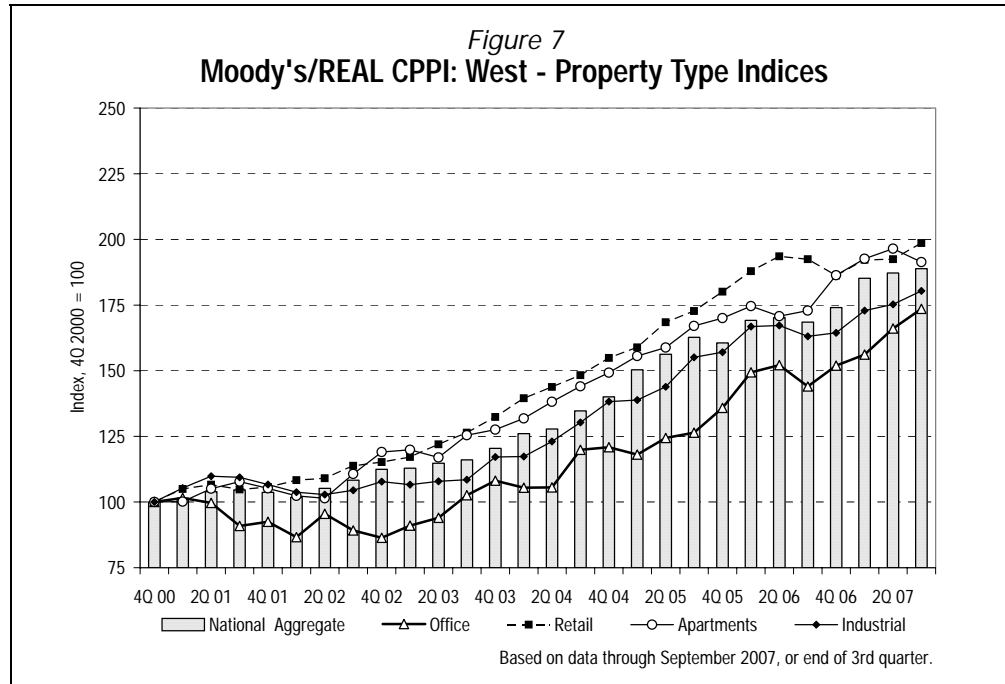
## MOODY'S/REAL WESTERN REGION - PROPERTY TYPE INDICES: APARTMENTS DISAPPOINT WHILE OFFICES OUTPERFORM

The Western Region - Property Type Indices for the four major property types is also a quarterly series, and this report is based on data through the end of the third quarter 2007.<sup>3</sup> The West comprises a bit more than its fair share of the national data base of transactions. Approximately 35%-40% of all sales are in the West, whether measured by number or value. Three of the four property types saw prices improve - and some by wide margins. The outlier was apartments, where prices fell by substantially more than in the US as a whole. In contrast,

<sup>2</sup> The Top Ten cities which comprise the largest number of transactions in each property type are listed in the Appendix to an earlier report, [Moody's/REAL Commercial Property Price Indices](#), September 2007. Sept. 19, 2007.

<sup>3</sup> The regions are the same as those defined by NCREIF. A list of each of the states included in each region is provided in the CPPI Primer: [US CMBS: Moody's Publishes the First Commercial Property Price Indices Based on Repeat Sales Methodology](#). The data for two other regions, the East and the South, are an annual series and will be refreshed next month. The data for the Midwest is insufficient to meet minimum standards for publishing a regional series.

office prices in the West increased by more over the last quarter than any other product, either nationally or in the Top Ten cities.



In two of the four property types performance mirrored that of the nation as a whole. The retail sector in the West (up 3.2%) outpaced the nation (up 2.6%), but both are doing quite well. Similarly, performance of industrial space in the West (up 2.9%) is parallel that of the nation (up 3.0%). However, apartments and offices in the West departed somewhat from the national profile as follows:

*Apartments.* West, -2.6%. National, -1.0%.

In an unusual twist, performance of the national apartment market was actually dragged down by apartments in the West. Alternatively, one might say that apartment prices are falling sooner and/or faster in the West than in the rest of the nation. That said, Los Angeles remains a source of strength, with apartment prices that clustered at the high end of returns in the region.

*Office.* West, +4.5%. National, -0.5%.

Conversely, the national office price index would have been down much more but for being rescued by the West. The rather impressive jump in office prices in the region over the previous quarter is mirrored by an equally impressive strength in prices over the previous one- and two-year periods, as offices have increased in value at more than twice the pace of apartments or industrial space and by an even greater multiple over retail assets. Disaggregating the rate of return for offices in the West by MSA, the Los Angeles metro area again accounts for a disproportionate share of above-average returns, with some particularly stellar returns also coming in San Francisco.

The attached Appendix includes the following:

- A calendar summarizing the report cycle, i.e., which indices are recalibrated in which month. The calendar also indicates the precise release dates for Moody's/REAL Indices for 2008. The December 2007 report will be released on Wednesday, Dec. 19. (*Figures 8, 9, and 10*)
- Charts for the 16 sub-indices that were not recalculated for this report. These are repeated from the previous report so that both data and charts for all indices, whatever the most recent calculation, are included here in one document for investors' convenience. (*Figures 11 - 15*)

**APPENDIX**

*Figure 8*  
**CPPI: Report Release Cycle, 2008**

	<b>JANUARY</b>	<b>FEBRUARY</b>	<b>MARCH</b>
	Jan. 22, 2008	Feb. 19, 2008	March 19, 2008
Report to be released:	Aggregate	Aggregate	Aggregate
For period:	November	December	January
Based on data through:	November 30	December 31	January 31
Report to be released:		12 Quarterly Indices (A)	16 Annual Indices (B)
For period:		4th Quarter	4th Quarter
Based on data through:		December 31	December 31
	<b>APRIL</b>	<b>MAY</b>	<b>JUNE</b>
	April 21, 2008	May 19, 2008	June 19, 2008
Report to be released:	Aggregate	Aggregate	Aggregate
For period:	February	March	April
Based on data through:	February 28/29	March 31	April 30
Report to be released:		12 Quarterly Indices (A)	16 Annual Indices (B)
For period:		1st Quarter	1st Quarter
Based on data through:		March 31	March 31
	<b>JULY</b>	<b>AUGUST</b>	<b>SEPTEMBER</b>
	July 21, 2008	Aug. 19, 2008	Sept. 22, 2008
Report to be released:	Aggregate	Aggregate	Aggregate
For period:	May	June	July
Based on data through:	May 31	June 30	July 31
Report to be released:		12 Quarterly Indices (A)	16 Annual Indices (B)
For period:		2nd Quarter	2nd Quarter
Based on data through:		June 30	June 30
	<b>OCTOBER</b>	<b>NOVEMBER</b>	<b>DECEMBER</b>
	Oct. 20, 2008	Nov. 19, 2008	Dec. 22, 2008
Report to be released:	Aggregate	Aggregate	Aggregate
For period:	August	September	October
Based on data through:	August 31	September 30	October 31
Report to be released:		12 Quarterly Indices (A)	16 Annual Indices (B)
For period:		3rd Quarter	3rd Quarter
Based on data through:		September 30	September 30

Figure 9

**(A) 12 Quarterly Indices include the following:**

APARTMENT	RETAIL	OFFICE	INDUSTRIAL
National Apartment	National Retail	National Office	National Industrial
Top 10 MSAs Apartment	Top 10 MSAs Retail	Top 10 MSAs Office	Top 10 MSAs Industrial
West Apartment	West Retail	West Office	West Industrial

Figure 10

**(B) 16 Annual Indices with Quarterly Releases include the following:**

APARTMENT	RETAIL	OFFICE	INDUSTRIAL
East Apartment	East Retail	East Office	East Industrial
South Apartment	South Retail	South Office	South Industrial
So. California Apartment	So. California Retail	So. California Office	So. California Industrial
Florida Apartment		New York Office San Francisco Office Washington DC Office	

Figures 11 - 15 represent previously-published indices and are included here for readers' convenience. All of these indices are based on data through the end of the second quarter 2007.

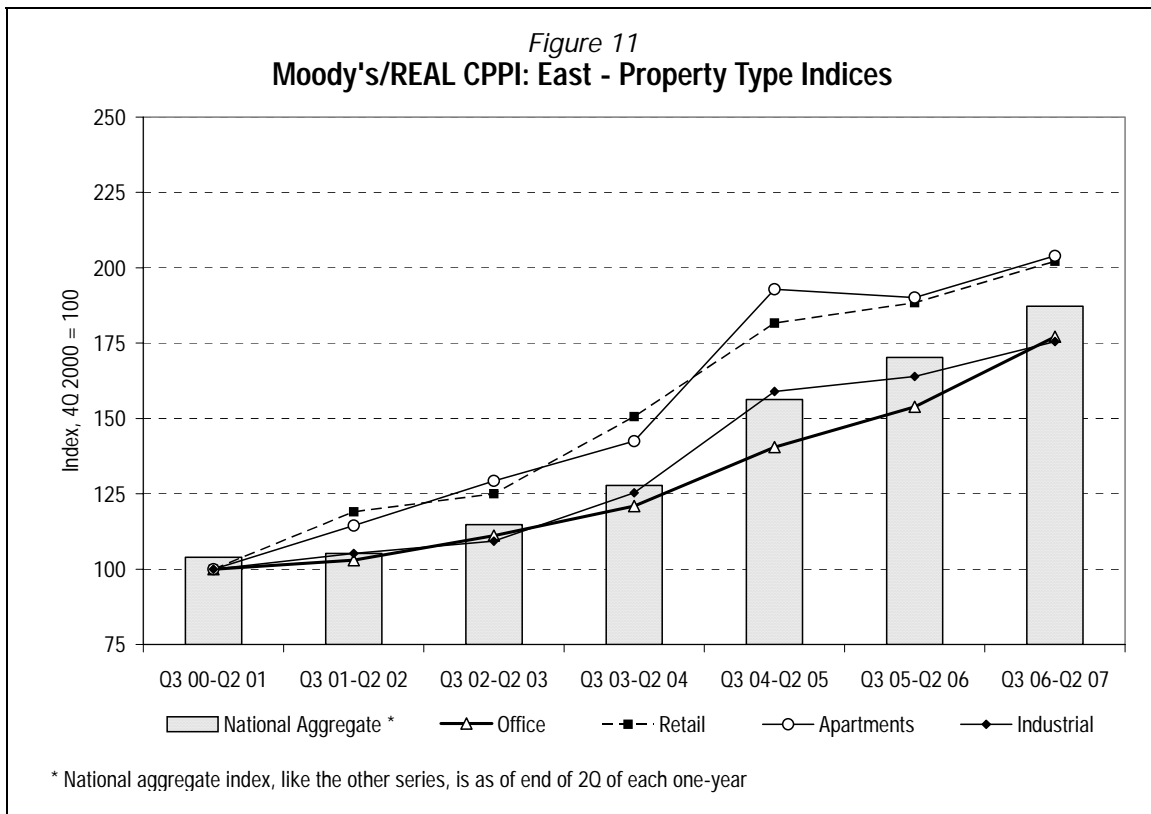
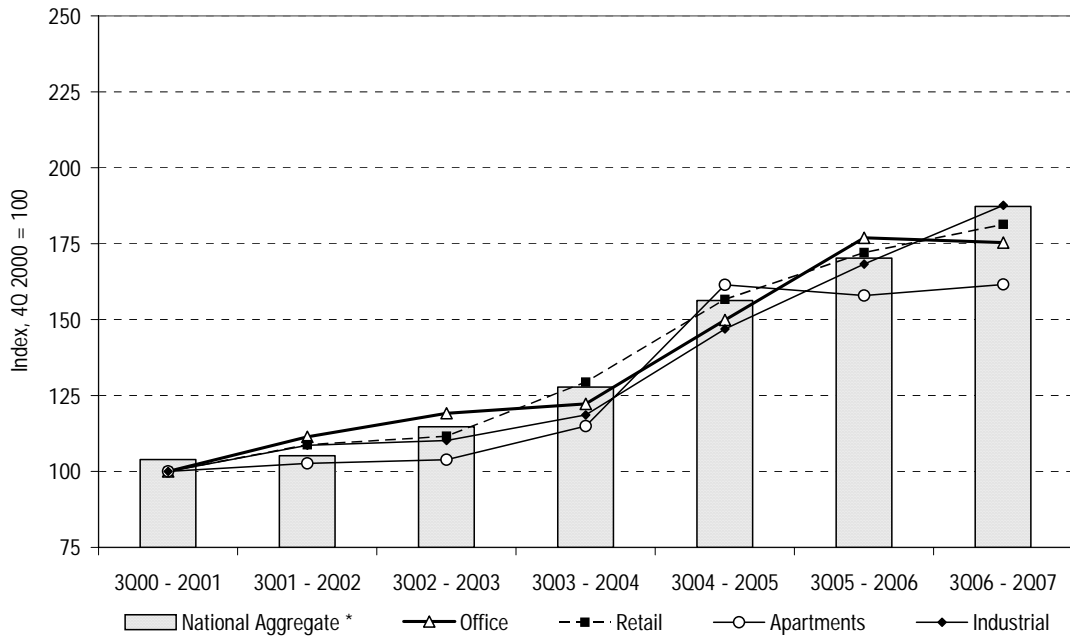
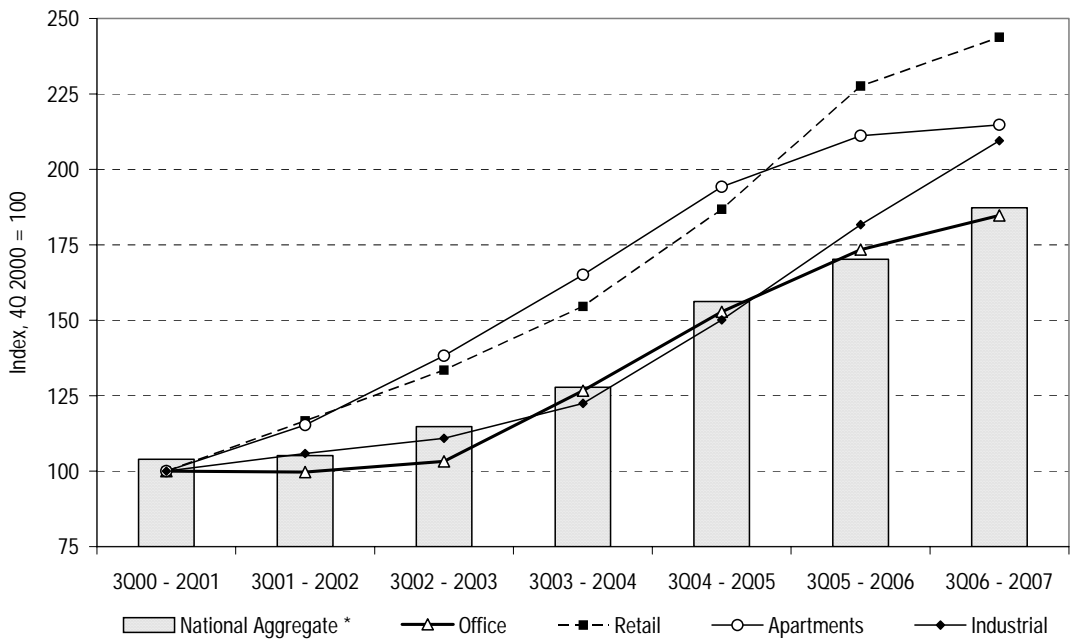


Figure 12  
**Moody's/REAL CPPI: South - Property Type Indices**



\* National aggregate index, like the other series, is as of end of 2Q of each one-year

Figure 13  
**Moody's/REAL CPPI: Southern California - Property Type Indices**



\* National aggregate index, like the other series, is as of end of 2Q of each one-year

Figure 14  
**Moody's/REAL CPPI: Major Office Markets Indices**

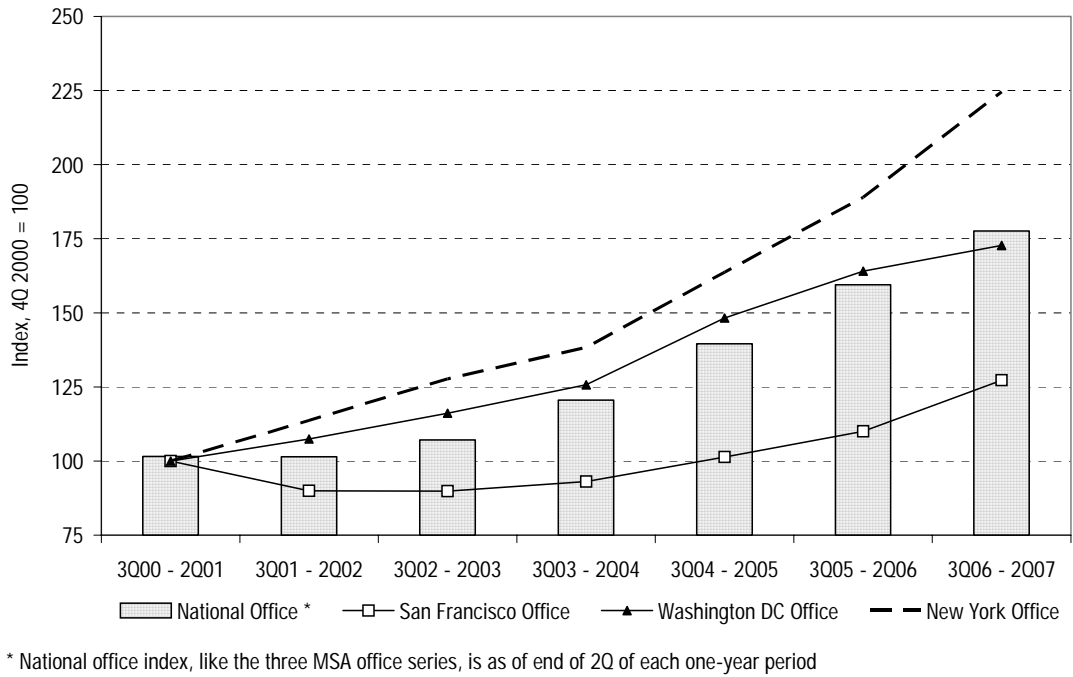
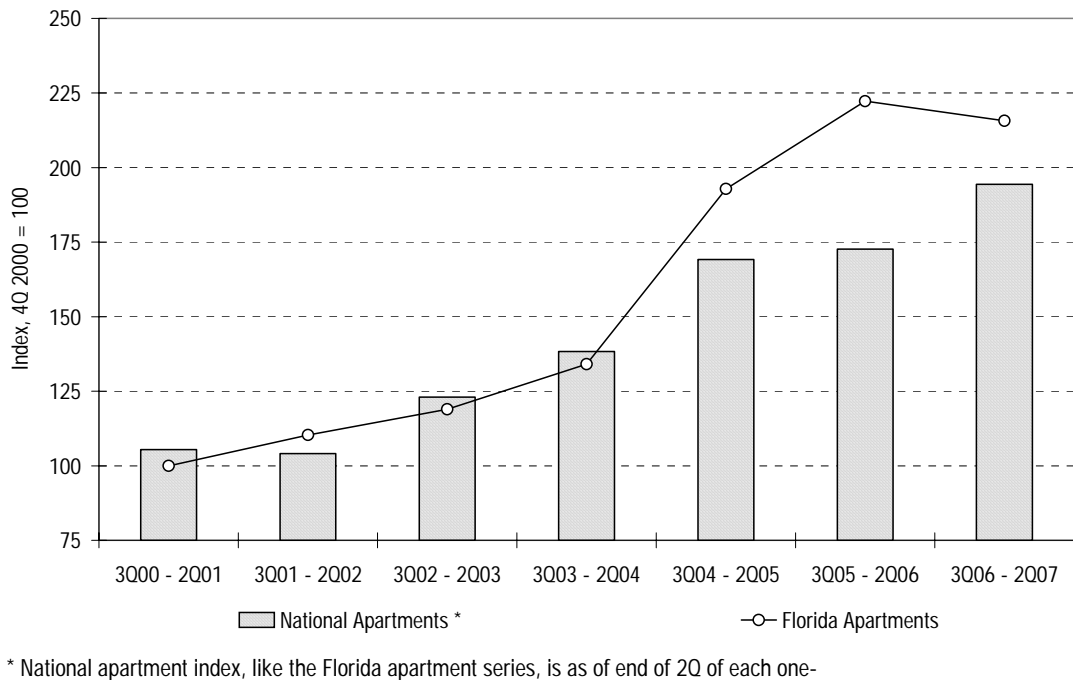


Figure 15  
**Moody's/REAL CPPI: Florida Apartment Index**



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