Third Quarter 2013: Good Vibes (Nahenahe)

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Abstract
Our hotel real estate cycle analysis based on the repeat sales approach indicates that we will continue to experience an upward price momentum. This quarter, for the first time since the commercial real estate boom in 2004, all three of our price indices—large hotels, small hotels, and repeat sales of hotels—have positive price trends and are moving in the same direction. Hotel properties also exhibit a slight decline in the premium relative to other property types signaling that investors currently have lower perceived default risk for hotel properties. Our business confidence metric, along with the NAREIT Lodging/Resort index and the Architecture Billing Index, suggests that we should continue to expect to positive price momentum for larger hotels and our repeat sales index in the near term. We also expect a slight decline in prices for smaller hotels going forward based on the Consumer Confidence Index. This is paper number 8 of the index series.

Keywords
Cornell, hotel prices, business confidence, NAREIT lodging/resort index, architecture billing index, HOTVaL

Disciplines
Real Estate

Comments
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Supplemental File:
Hotel Valuation Model (HOTVAL) We provide this user friendly hotel valuation model in an excel spreadsheet entitled HOTVAL Toolkit as a complement to this report which is available for download from http://scholarship.sha.cornell.edu/creftools/1/

This article is available at The Scholarly Commons: https://scholarship.sha.cornell.edu/cremi/8
EXECUTIVE SUMMARY

Our hotel real estate cycle analysis based on the repeat sales approach indicates that we will continue to experience an upward price momentum. This quarter, for the first time since the commercial real estate boom in 2004, all three of our price indices—large hotels, small hotels, and repeat sales of hotels—have positive price trends and are moving in the same direction. Hotel properties also exhibit a slight decline in the premium relative to other property types signaling that investors currently have lower perceived default risk for hotel properties. Our business confidence metric, along with the NAREIT Lodging/Resort index and the Architecture Billing Index, suggests that we should continue to expect to positive price momentum for larger hotels and our repeat sales index in the near term. We also expect a slight decline in prices for smaller hotels going forward based on the Consumer Confidence Index. This is paper number 8 of the index series.

About the Cornell Hotel Indices

In our inaugural issue of the Cornell Hotel Index series, we introduced three new quarterly metrics to monitor real estate activity in the hotel market. These are a large hotel index (hotel transactions of $10 million or more), a small hotel index (hotels under $10 million), and a repeat sales index (RSI) that tracks actual hotel transactions. These indices are constructed using the CoStar and Real Capital Analytics (RCA) commercial real estate databases. For the repeat-sale index, we compare the sales and resales of the same hotel over time. All three measures provide a more accurate representation of the current hotel real estate market conditions than does reporting average transaction prices, because the average-price index doesn’t account for differences in the quality of the hotels, which also is averaged. A more detailed description of these indices is found in the first edition of this series, “Cornell Real Estate Market Indices,” which is available at no charge from the Cornell Center for Real Estate and Finance (CREF). In this fourth edition, we present updates and revisions to our three hotel indices along with commentary and supporting evidence from the real estate market.
Analysis of Indices through Q3, 2013

Hotel market volume has increased. The total volume of hotel transactions increased for the third quarter. The increase was the most impressive on a year-over-year basis (46.5%), although the quarter-over-quarter growth in transactions (15%) was also strong. The volume of large hotel transactions remained at the same pace as last quarter while small hotel transaction volume rose by 22 percent from the previous quarter. The transaction volume for large hotels grew almost 10 percent on a year-over-year basis; small hotel transaction volume was even more impressive with a year-over-year growth rate of 68 percent. The positive trends for large transactions appear in Exhibit 1, and smaller hotel transactions are shown in Exhibit 2, both on the next page.

Déjà vu all over again: Dreams really do come true. In our previous issue, we introduced the concept of hotel real estate cycle analysis. We had stated that hotel prices should continue to exhibit positive momentum if the current cycle continues to behave in a similar manner relative to prior cycles based on repeat sales. Exhibit 3 provides the price index for the repeat hotel sales used to construct our RSI cycle analysis in Exhibit 4 together with the hedonic price indices for small and large hotels. Exhibit 4 confirms our prior analysis based on cycle analysis; we are not only continuing to experience positive price momentum but this positive trend should continue into the next quarter.

Both large and small hotels are experiencing positive price momentum. Exhibit 5 shows that prices have turned upwards for both the large-hotel and small-hotel indices. The last time this phenomenon occurred was back in the fourth quarter of 2004 during the commercial and residential real estate boom. Exhibit 6 shows that the large-hotel index is currently above both its three-year and five-year moving average, indicating a “buy” signal. Exhibit 7 provides further evidence that the large-hotel index is rising on a year-over-year basis. Like larger hotels, Exhibit 8 shows that smaller hotels also experienced positive price momentum with the current price also above both their three-year and five-year moving average.

Hotels also continue to trend upwards in terms of repeat sales. The repeat sale of hotels, shown in Exhibit 9 based on the full sample, echoes a similar story to large and small hotels. Currently the repeat sale index (full sample) stands at 129.88 (2013Q3), which is above where it was as of the second quarter of 2013 (127.68) and also the third quarter of 2012 (111.79). The repeat hotel sale index rose 15.5 percent on a year-over-year basis (2012Q3 to 2013Q3) and 1.2 percent on a quarterly basis (2013Q2 to 2013Q3).

Cap rates have compressed (declined). For the second quarter of 2013, the latest quarter for which ACLI reports data on hotel cap rates, cap rates have declined from 7.8 percent in 2013Q1 to 6.6 percent in 2013Q2. This compression in hotel cap rates is consistent with the positive price trend. Exhibit 10 shows that although the rate on the 10-year Treasury bond (constant maturity) rose slightly from 1.96 percent to 2.3 percent, the hotel cap rate spread over the

1 Please note that the number of transactions is limited to the sales that are included in the hedonic index. As such, it should not be construed as being the total market activity.

2 We report two repeat sale indices. The repeat sale full sample index uses all repeat sale pairs, whereas the repeat sale index with a base of 100 at 2000Q1 uses only those sales that occurred on or after the first quarter of 2000. In other words, the restricted repeat sale index thus doesn’t use information on sales prior to the first quarter of 2000. As such, if a hotel sold in 1995 and then sold again in 2012, it would be included in the full sample repeat sale index, but it would not be included in the post-2000 index.
Exhibit 1

Median sale price and number of sales for large hotels (sale prices of $10 million or more)

Exhibit 2

Median sale price and number of sales for small hotels (sale prices of less than $10 million)

Sources: CoStar, Real Capital Analytics
## Exhibit 3

Hotel indices through 2013, quarter 3

<table>
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<tr>
<th>YrQtr</th>
<th>Hedonic Index Value</th>
<th>Hedonic Index Value</th>
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</table>
**Exhibit 4**

A comparison of hotel real estate cycles using the Repeat Sales Index

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**Exhibit 5**

Hedonic hotel indices for large and small hotel transactions

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Sources: Cornell Center for Real Estate and Finance, CoStar, Real Capital Analytics
Exhibit 6

Large hotel index, with three-year and five-year moving averages

Sources: Cornell Center for Real Estate and Finance, CoStar, Real Capital Analytics

Exhibit 7

Year-over-year change in large-hotel index, with moving-average trendline

Sources: Cornell Center for Real Estate and Finance, CoStar, Real Capital Analytics
Exhibit 8

Small-hotel index, with three-year and five-year moving averages

![Graph showing small-hotel index with moving averages](image)

Sources: Cornell Center for Real Estate and Finance, CoStar, Real Capital Analytics

Exhibit 9

Hotel repeat-sale index (full sample), three-year moving average, and five-year moving average

![Graph showing hotel repeat-sale index with moving averages](image)

Sources: Cornell Center for Real Estate and Finance, CoStar, Real Capital Analytics
The ten-year treasury fell from 5.89 percent to 4.3 percent. This suggests that investors are pricing hotels at a lower risk premium due to lower anticipated risk from investing in this asset class. Since the ACLI cap rates tend to be associated with large hotel deals, the increase in hotel cap rate is consistent with our previous observation that the prices of large hotels have risen. We expect the ACLI cap rate to continue to decline further in 2013Q3 (recall that ACLI reports cap rates one quarter behind our report) since the price of large hotels has increased in this period.

Mortgage financing volume for hotels has increased, but so has cost. Exhibit 11 shows that the mortgage origination volume for hotels increased in the second quarter of 2013, although it is down from its high in the fourth quarter of 2014. The level of loan origination volume is comparable to a year ago (2012Q2). The cost of obtaining hotel financing has risen relative to the last quarter although the interest rate spread has remained constant. The interest rate on Class A full service hotels, which was 4.81 percent (5.06 percent for Class B) as of June 2013 (2013Q2), is currently at 5.53 percent for Class A (5.78 percent for Class B) as of September 2013 (2013Q2). Exhibit 12 shows the interest rate spread between Class A (B&C) interest rates on full service hotels over the ten-year Treasury bond, while Exhibit 13 shows the spread between the interest rate on Class A (B&C) full service hotels over the interest rate corresponding to non-hotel commercial real estate (the hotel real estate premium). The hotel real estate premiums for both higher quality (0.43%) and lower quality (0.53%) hotels have decreased slightly relative to the previous quarter (0.53%, higher quality; 0.68%, lower quality). The slight decrease in the premium in Exhibit 13 is a signal that the perceived default risk for hotel properties has declined relative to the four major commercial real estate property types in the third quarter of 2013.

Expect a continuation in the price trend, according to the tea leaves. Exhibit 14 compares the performance of the repeat sales index relative to the NAREIT Lodging/Resort Price Index. The repeat sales index tends to lag the NAREIT index by at least one quarter or more. This is consistent with academic studies which find that securitized real estate is a leading indicator of underlying real estate performance, since the stock market is forward looking or efficient. Looking ahead, the NAREIT lodging index has turned up (5%). The architecture billings index (ABI) for commercial/industrial

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3 The interest rate on hotel properties is generally higher than that for apartment, industrial, office, and retail properties, in part because hotels’ cash flow is commonly more volatile than that of other commercial properties.
We thus anticipate an increase in the price of large hotels as well as our repeat sales index based on all three of our leading indicators—NAREIT, ABI, and NAPM. In contrast to other leading indicators, the Consumer Confidence Index from the Conference Board which we use as a proxy for anticipated consumer demand for leisure travel and a leading indicator of the hedonic index for low priced hotels (<$10 million), fell slightly in September (blue line). Based on the three-month moving average trendline (in red) in Exhibit 17 and a decrease in the consumer confidence index for September (-3%), we anticipate a slight downward trend in the transaction price for low priced hotels.

Hotel Valuation Model (HOTVAL) Has Been Updated

We have updated our hotel valuation regression model to include the transaction data used to generate this report. We provide this user friendly hotel valuation model in an excel spreadsheet entitled HOTVAL Toolkit as a complement to this report which is available for download from our CREF website.

4 http://www.aia.org/practicing/economics/aia076265
5 We used the May ABI index as reported on June 19, 2013, since the June ABI index will be reported after the writing of this report. The ABI anticipates non-residential construction activity by approximately 9-12 months. According to material posted on their website, “The indexes are developed from the monthly Work-on-the-Boards survey panel where participants are asked whether their billings increased, decreased, or stayed the same in the month that just ended. According to the proportion of respondents choosing each option, a score is generated, which represents an index value for each month.”
6 The ISM: Purchasing Managers’ Index (Diffusion index, SA), also known as the National Association of Purchasing Managers (NAPM) index, is based on a survey of over 250 companies within twenty-one industries covering all 50 states. It not only measures the health of the manufacturing sector but is a proxy for the overall economy. It is calculated by surveying purchasing managers for data about new orders, production, employment, deliveries, and inventory, in descending order of importance. A reading over 50% indicates that manufacturing is growing, while a reading below 50% means it is shrinking.
Exhibit 12

Interest-rate spreads of hotels versus U.S. Treasury ten-year bonds

Source: Cushman Wakefield Sonnenblick Goldman

Exhibit 13

Interest-rate spreads of hotels versus non-hotel commercial real estate

Source: Cushman Wakefield Sonnenblick Goldman
Exhibit 14

Hotel repeat sales index versus NAREIT lodging/resort price index

Exhibit 15

Hotel repeat sales index versus architecture billings index
Exhibit 16

Business confidence and high-price hotel index

Exhibit 17

Consumer confidence and low-price hotel index

Sources: Cornell Center for Real Estate and Finance, Institute for Supply Management (ISM)

Sources: Cornell Center for Real Estate and Finance, Conference Board
ABOUT THE AUTHORS

**Crocker H. Liu**, Ph.D., is a professor of real estate at the School of Hotel Administration at Cornell where he holds the Robert A. Beck Professor of Hospitality Financial Management. He previously taught at New York University's Stern School of Business (1988-2006) and at Arizona State University's W.P. Carey School of Business (2006-2009) where he held the McCord Chair. His research interests are focused on issues in real estate finance, particularly topics related to agency, corporate governance, organizational forms, market efficiency and valuation. Liu's research has been published in the *Review of Financial Studies, Journal of Financial Economics, Journal of Business, Journal of Financial and Quantitative Analysis, Journal of Law and Economics, Journal of Financial Markets, Review of Finance, Real Estate Economics* and the *Journal of Real Estate Finance and Economics*. He is currently the co-editor of *Real Estate Economics*, the leading real estate academic journal and is on the editorial board of the *Journal of Property Research*. He also previously served on the editorial boards of the *Journal of Real Estate Finance and Economics* and the *Journal of Real Estate Finance*. Liu earned his BBA in real estate and finance from the University of Hawaii, an M.S. in real estate from Wisconsin under Dr. James Graaskamp, and a Ph.D. in finance and real estate from the University of Texas under Dr. Vijay Bawa.

**Adam D. Nowak**, Ph.D., is an assistant professor of economics at West Virginia University. He earned degrees in mathematics and economics at Indiana University – Bloomington in 2006 and a degree in near-east languages and cultures that same year. He received a Ph.D. from Arizona State University last May. His thesis title was "Eigenvector Methods and Cointegrated Series." Nowak taught an introduction to macroeconomics course and a survey of international economics at Arizona State. He was the research analyst in charge of constructing residential and commercial real estate indices for the Center for Real Estate Theory and Practice at Arizona State University.

**Robert M. White**, Jr., CRE, is the founder and president of Real Capital Analytics Inc., an international research firm that publishes the *Capital Trends Monthly*. Real Capital Analytics provides real time data concerning the capital markets for commercial real estate and the values of commercial properties. Mr. White is a noted authority on the real estate capital markets with credits in the Wall Street Journal, Barron’s, The Economist, Forbes, New York Times, Financial Times, among others. In addition, he was named one of National Real Estate Investor Magazine’s “Ten to Watch” in 2005, Institutional Investor’s “20 Rising Stars of Real Estate” in 2006, and Real Estate Forum’s “10 CEOs to Watch” in 2007. Previously, Mr. White spent 14 years in the real estate investment banking and brokerage industry and has orchestrated billions of commercial sales, acquisitions and recapitalizations. He was formerly a managing director and principal of Granite Partners LLC and spent nine years with Eastdil Realty in New York and London. Mr. White is a Counselor of Real Estate, a Fellow of the Royal Institution of Chartered Surveyors and a Fellow of the Homer Hoyt Institute. He is also a member of numerous industry organizations and a supporter of academic studies. Mr. White is a graduate of the McIntire School of Commerce at the University of Virginia.

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Disclaimer

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