

## Cornell Real Estate Market Indices: 2014, Q2:

# Prices Rise as Expected, Moderate Price Growth Is Anticipated

Crocker H. Liu, Adam D. Nowak, and Robert M. White, Jr.

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### EXECUTIVE SUMMARY

**A**s discussed in the previous report, we expected prices for hotel properties to rise in the second quarter based on our repeat sales index, and we're happy to report that they did. Our EVA analysis continues to suggest that hotel investors should expect most of their profit to come from capital gains when the hotel is sold rather than from operating performance. We also expect moderate price gains for both large and small hotels to continue next quarter, barring no unexpected interest rate hikes. This is report number 11 of the index series.

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#### Analysis of Indices through Q2, 2014

**P**rices do reflect RevPAR. In the previous issue (2014Q1), we had revisited the year-over-year change in RevPAR relative to our Repeat Sale Index. Since we showed that the year-over-year change in RevPAR is a leading indicator of price fluctuations in hotel properties, we expected prices to reflect the positive momentum in the second quarter. The second quarter has come and gone, and we are happy to report that prices have increased as predicted.

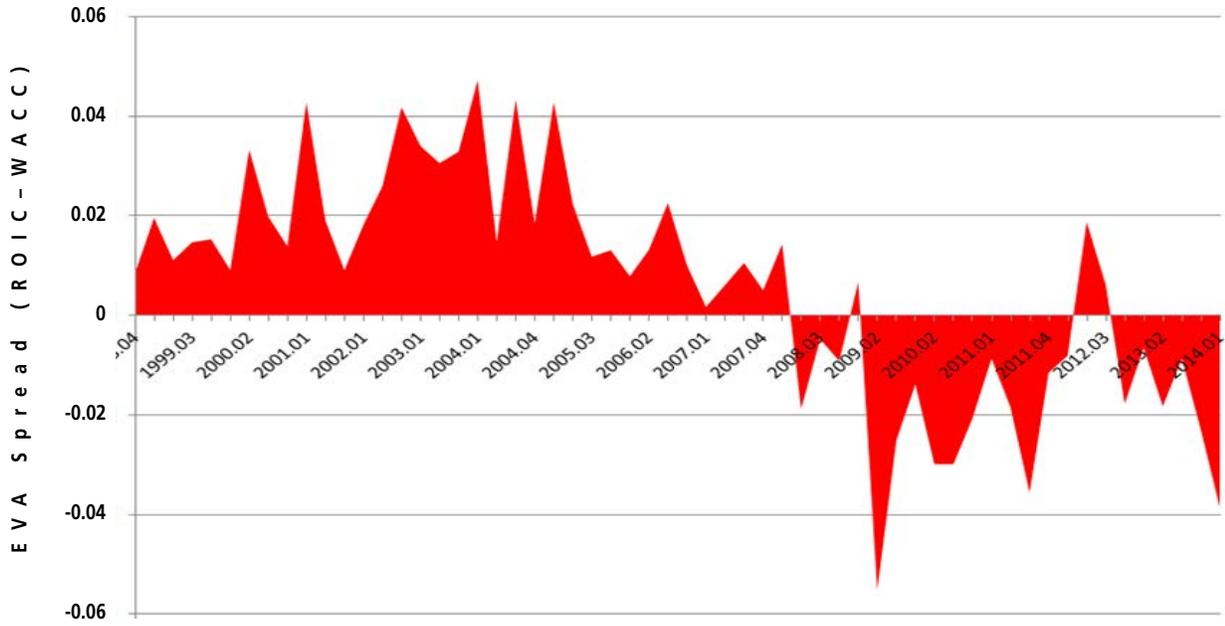
#### About the Cornell Hotel Indices

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**I**n 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.

**EXHIBIT 1**

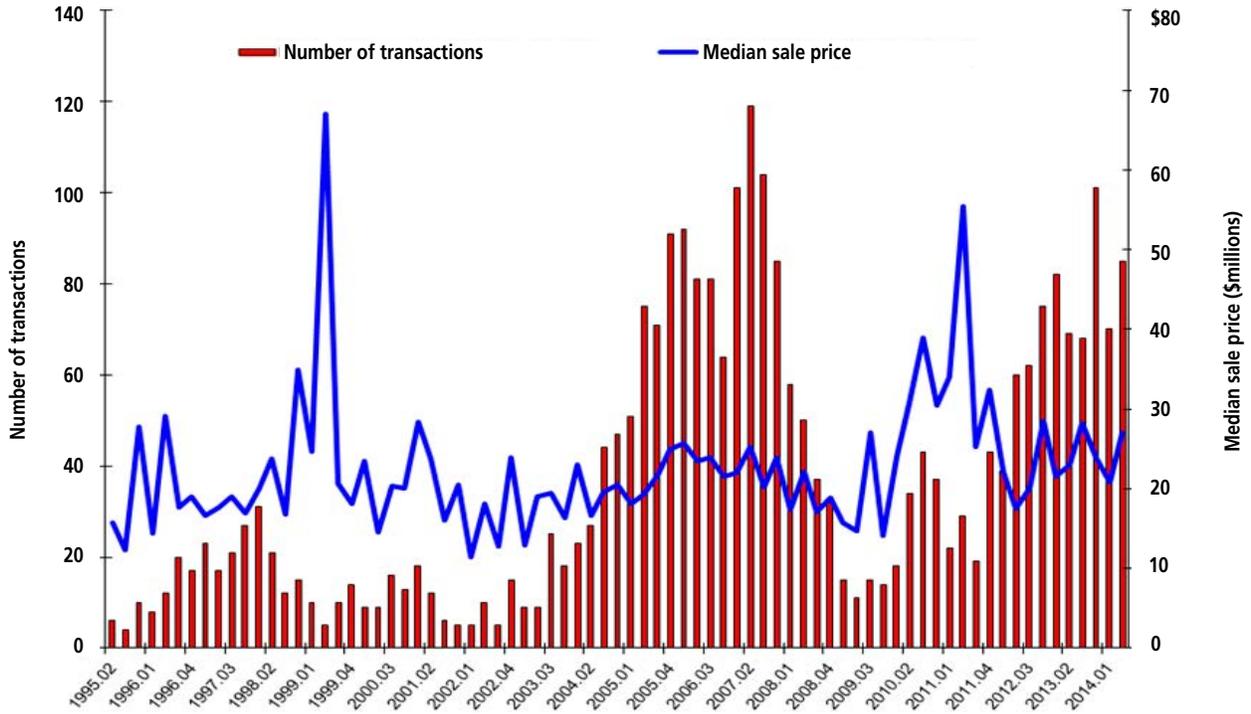
**Economic value added (EVA) for hotels**



Sources: ACLI, Cornell Center for Real Estate and Finance, NAREIT, Federal Reserve

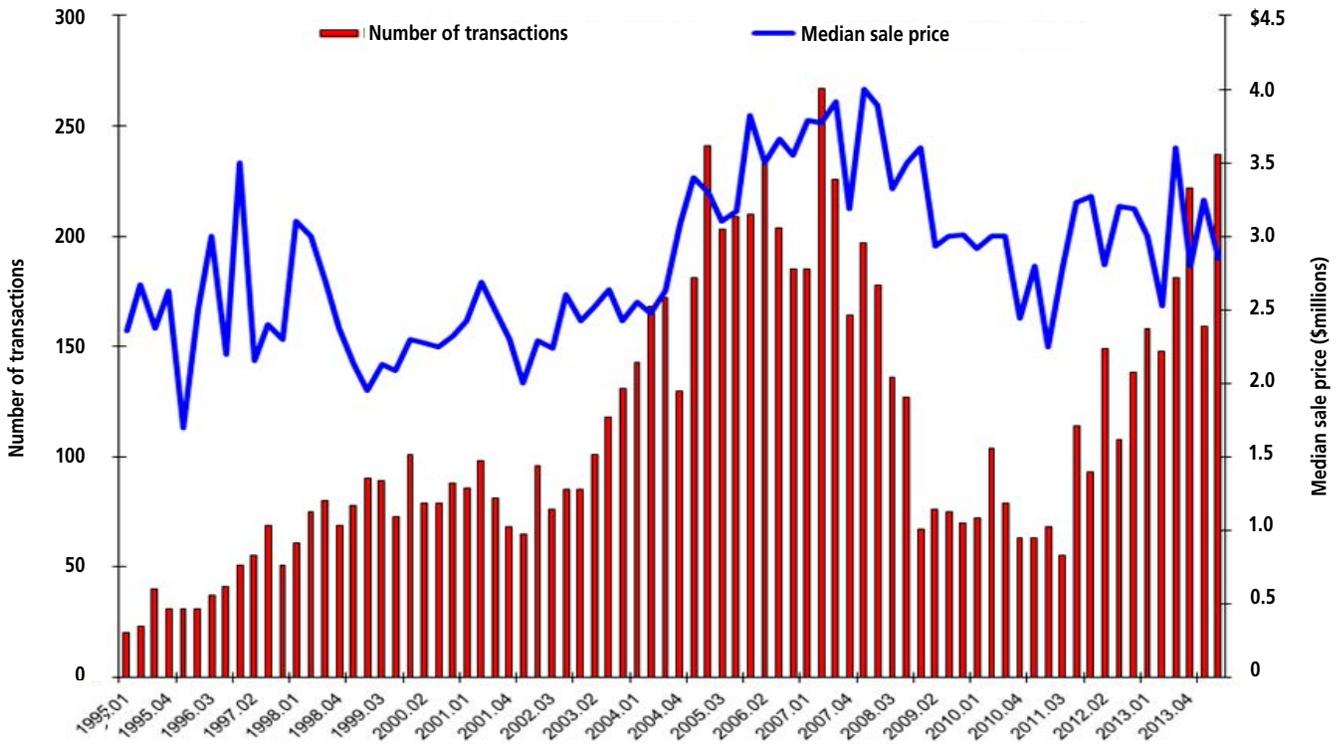
**EXHIBIT 2**

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



Sources: CoStar, Real Capital Analytics

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



Sources: CoStar, Real Capital Analytics

Hotel investment based on operating performance continues to languish. Our Economic Value Added (EVA) indicator, shown in Exhibit 1, continues to reflect lackluster operating performance. Total borrowing cost increased from 2013Q4 to 2014Q1, while the current hotel yield (cap rate) continued to remain unchanged—resulting in an increasingly negative EVA spread. This calculation indicates that return for hotel investors continues to come at the back end of the project. That is, investors will make their money when they sell the hotel due to price appreciation rather than making their money immediately from operations.

Hotel transaction volume increased in the second quarter, as did median price. Year over year, the hotel transaction volume increased 48.4 percent (2013Q2 to 2014Q2) while it rose 40.6 percent (2014Q1 to 2014Q2) on a quarter-over-quarter basis. The volume of large hotel transactions rose 21.4 percent, while small hotel transaction volume rose by 49.1 percent from the previous quarter.<sup>1</sup> The transaction volume for large hotels increased 23 percent on a year-over-year basis, and small hotel transaction volume experienced a even greater

<sup>1</sup> The number of transactions in this instance 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.

gain, with a year-over-year growth rate of 60.1 percent. The median price for large hotels rose 17.4 percent, while the median price for small hotels rose 12.9 percent on a year-over-year basis. A slightly different situation existed on a quarter-over-quarter basis, however, with large hotels experiencing a 30.1-percent gain while smaller hotel prices dropped 12.3 percent. Exhibit 2 shows a positive trend in the number of transactions and median price for large hotels. In contrast, Exhibit 3 shows that although the number of transactions for small hotels has also increased, the median sale price declined.

Still déjà vu all over again. It appears that sales history continues to repeat a cycle that we saw nearly two decades ago. Hotel prices continue to behave in a similar manner relative to the 1995Q2 to 2002Q4 cycle, based on repeat sales. Exhibit 4 provides the price index for the repeat hotel sales used to construct our RSI cycle analysis in Exhibit 5 together with the hedonic price indices for small and large hotels. Exhibit 5 continues to confirm our prior calculations based on cycle analysis; we had anticipated a positive trend for the first quarter of 2014. We expect a downward trend in the third quarter of 2014 if history

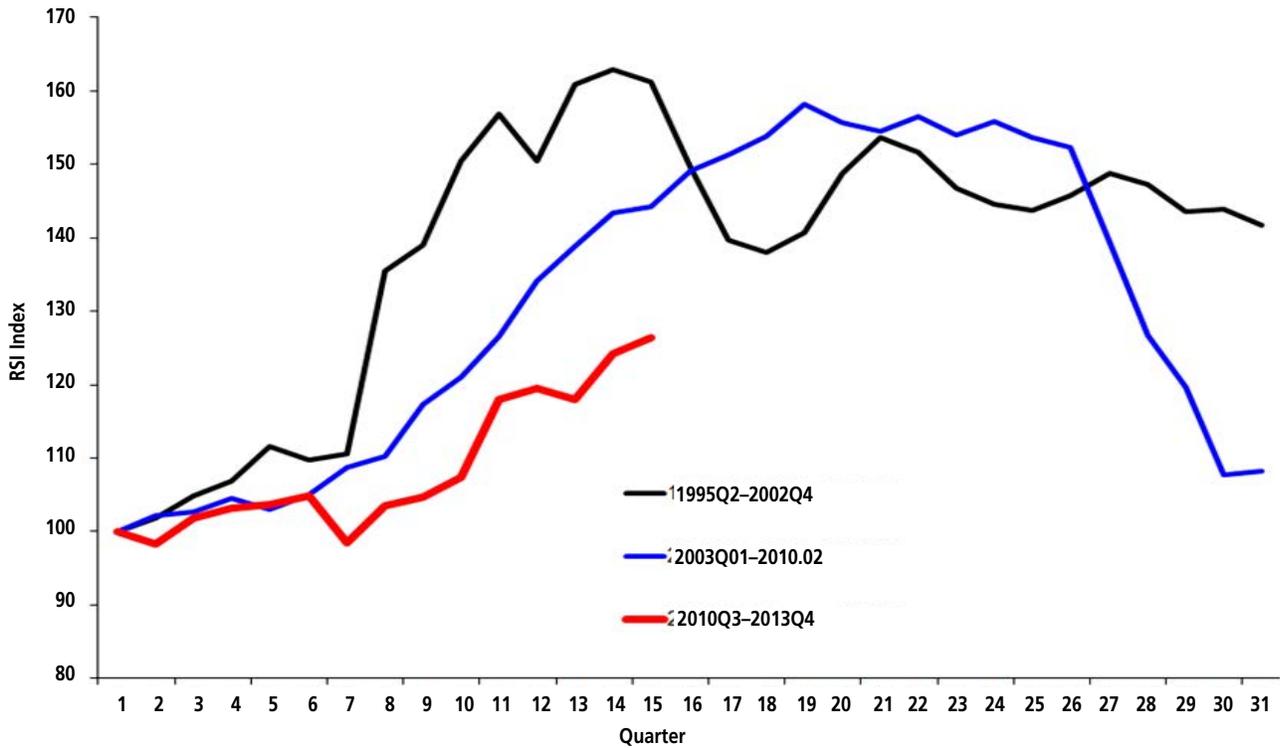
EXHIBIT 4

Hotel indices through 2014, quarter 1

YrQtr	Index Value				YrQtr	Index Value			
	Hedonic Low Priced Hotels (<\$10M)	Hedonic High Priced Hotels (>=\$10M)	RSI Repeat Sales Index	RSI Index Value Repeat Sales		Hedonic Low Priced Hotels (<\$10M)	Hedonic High Priced Hotels (>=\$10M)	RSI Repeat Sales Index	RSI Index Value Repeat Sales
1995.02	99.102	68.769	63.924	.	2005.01	127.06	115.581	109.122	134.503
1995.03	98.863	61.358	65.266	.	2005.02	134.78	121.844	112.571	125.87
1995.04	101.121	56.238	67.227	.	2005.03	137.905	121.099	118.43	143.097
1996.01	97.306	88.038	68.638	.	2005.04	140.084	129.461	125.715	137.547
1996.02	95.34	92.855	71.661	.	2006.01	143.231	136.196	130.107	145.254
1996.03	100.366	97.322	70.524	.	2006.02	144.156	142.534	134.078	144.751
1996.04	95.214	106.166	70.907	.	2006.03	148.564	149.61	134.939	148.018
1997.01	104.639	97.585	86.984	.	2006.04	151.37	151.602	139.368	153.142
1997.02	104.318	100.153	89.265	.	2007.01	151.211	152.499	141.402	153.132
1997.03	100.584	104.148	96.628	.	2007.02	154.129	157.69	143.89	153.959
1997.04	104.269	108.419	100.81	.	2007.03	156.107	153.589	147.733	160.64
1998.01	102.711	114.444	96.631	.	2007.04	154.397	151.927	145.321	159.423
1998.02	109.358	124.792	103.37	.	2008.01	156.844	146.794	144.166	173.891
1998.03	111.863	121.425	104.67	.	2008.02	157.785	146.048	145.331	167.379
1998.04	112.946	130.709	103.66	.	2008.03	154.155	145.094	143.229	150.531
1999.01	111.495	123.158	96.11	.	2008.04	155.012	142.691	145.063	158.559
1999.02	105.805	102.578	89.777	.	2009.01	151.065	140.17	142.993	149.412
1999.03	103.547	112.205	88.638	.	2009.02	140.94	125.448	142.494	145.321
1999.04	101.959	100.031	90.282	.	2009.03	136.842	119.858	130.338	96.678
2000.01	100.012	103.337	95.476	100	2009.04	132.655	108.716	118.563	102.867
2000.02	101.338	108.959	98.697	107.096	2010.01	127.018	115.075	113.594	116.777
2000.03	100.337	102.407	97.376	88.277	2010.02	125.88	123.723	102.379	100.967
2000.04	103.386	108.243	94.308	86.368	2010.03	125.192	144.164	102.817	102.213
2001.01	106.292	120.755	92.894	95.949	2010.04	121.696	165.133	108.694	124.847
2001.02	110.24	124.742	92.279	102.148	2011.01	123.147	160.299	106.895	114.935
2001.03	112.31	124.18	93.591	101.691	2011.02	120.602	172.476	110.623	114.047
2001.04	110.044	123.827	95.618	93.487	2011.03	117.033	159.475	112.222	107.416
2002.01	107.205	112.623	94.598	108.191	2011.04	121.425	159.362	112.661	126.323
2002.02	103.502	102.242	92.261	84.956	2012.01	121.397	165.666	114.004	111.653
2002.03	103.801	94.002	92.491	94.394	2012.02	125.972	152.169	107.029	84.562
2002.04	106.658	97.676	91.033	94.009	2012.03	132.107	151.483	112.516	126.371
2003.01	108.923	99.34	93.488	99.301	2012.04	133.45	148.834	113.751	131.254
2003.02	112.672	119.188	95.502	105.599	2013.01	134.769	148.214	116.813	123.765
2003.03	115.614	125.739	96.544	105.203	2013.02	132.543	154.544	128.297	137.973
2003.04	115.167	129.994	98.201	103.587	2013.03	134.661	163.733	129.923	141.548
2004.01	116.367	129.123	96.753	104.202	2013.04	133.159	164.86	128.282	139.017
2004.02	116.236	112.266	98.762	113.577	2014.01	134.584	164.235	134.976	164.006
2004.03	116.387	119.41	101.06	113.919	2014.02	136.17	164.734	137.35	156.085
2004.04	120.203	110.249	102.49	103.721					

**EXHIBIT 5**

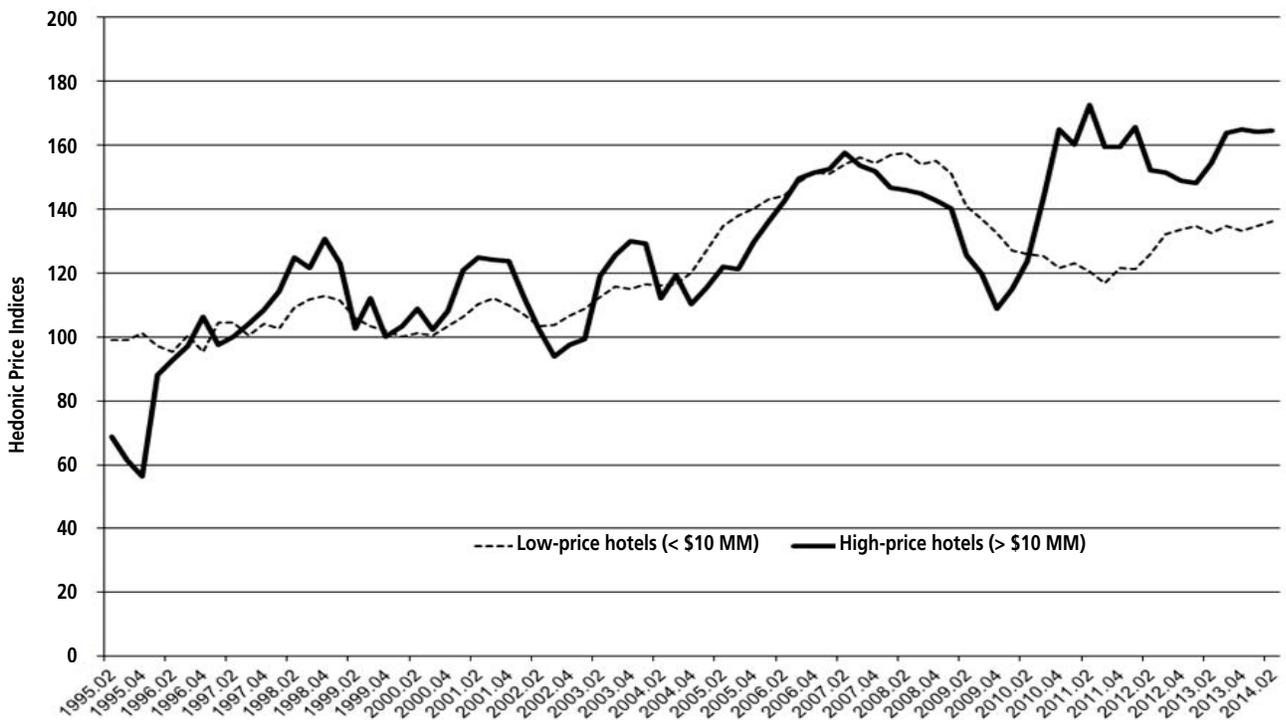
**Comparison of hotel real estate cycles using repeat sales**



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

**EXHIBIT 6**

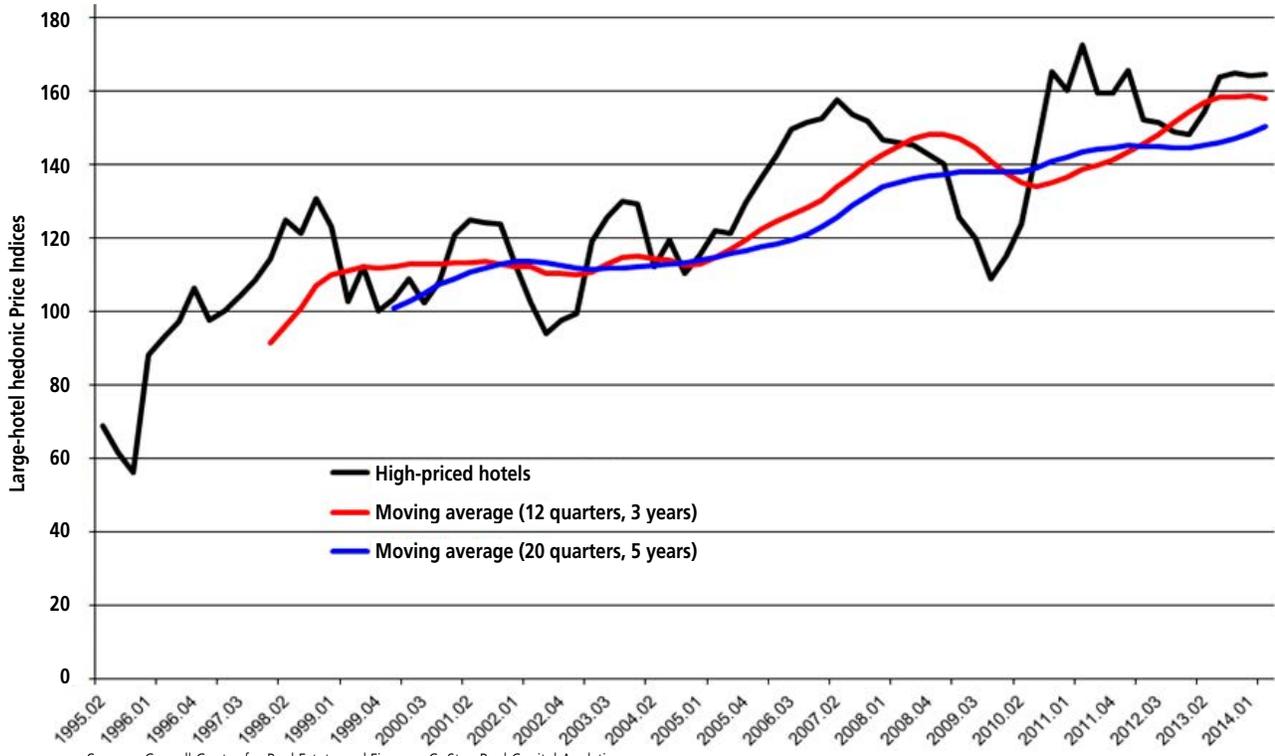
**Hedonic hotel indices for large and small hotel transactions**



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

**EXHIBIT 7**

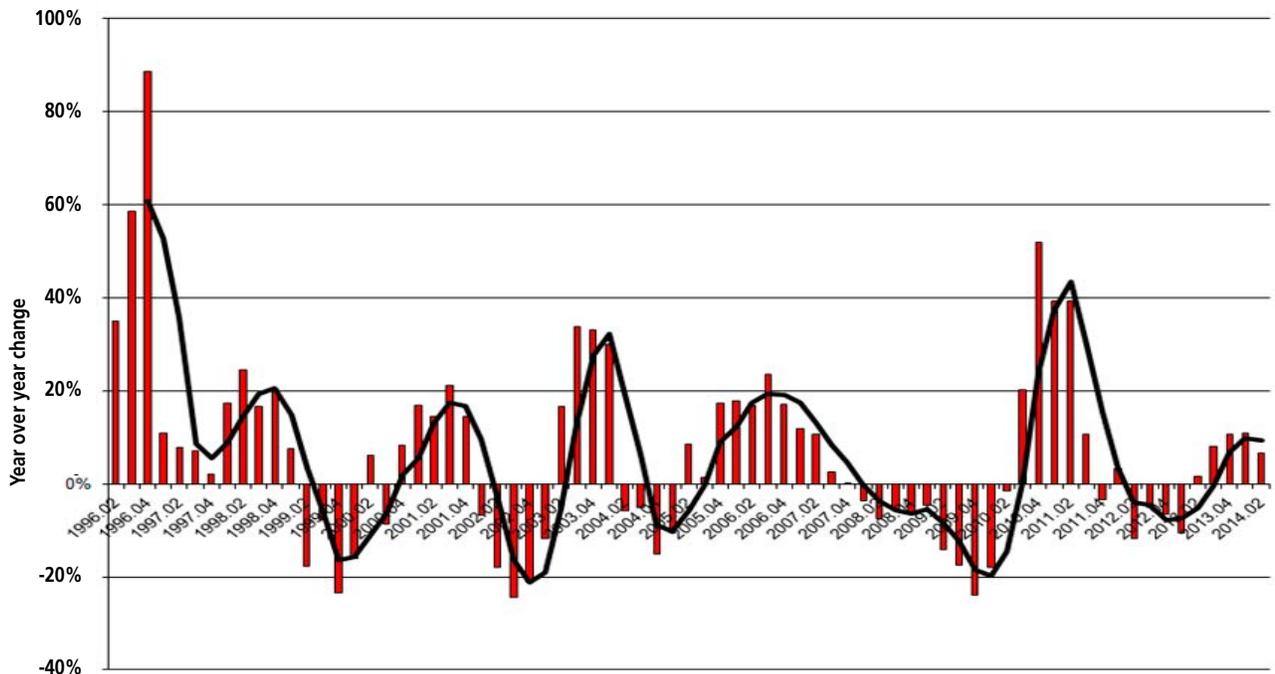
**Large hotel index, with three-year and five-year moving averages**



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

**EXHIBIT 8**

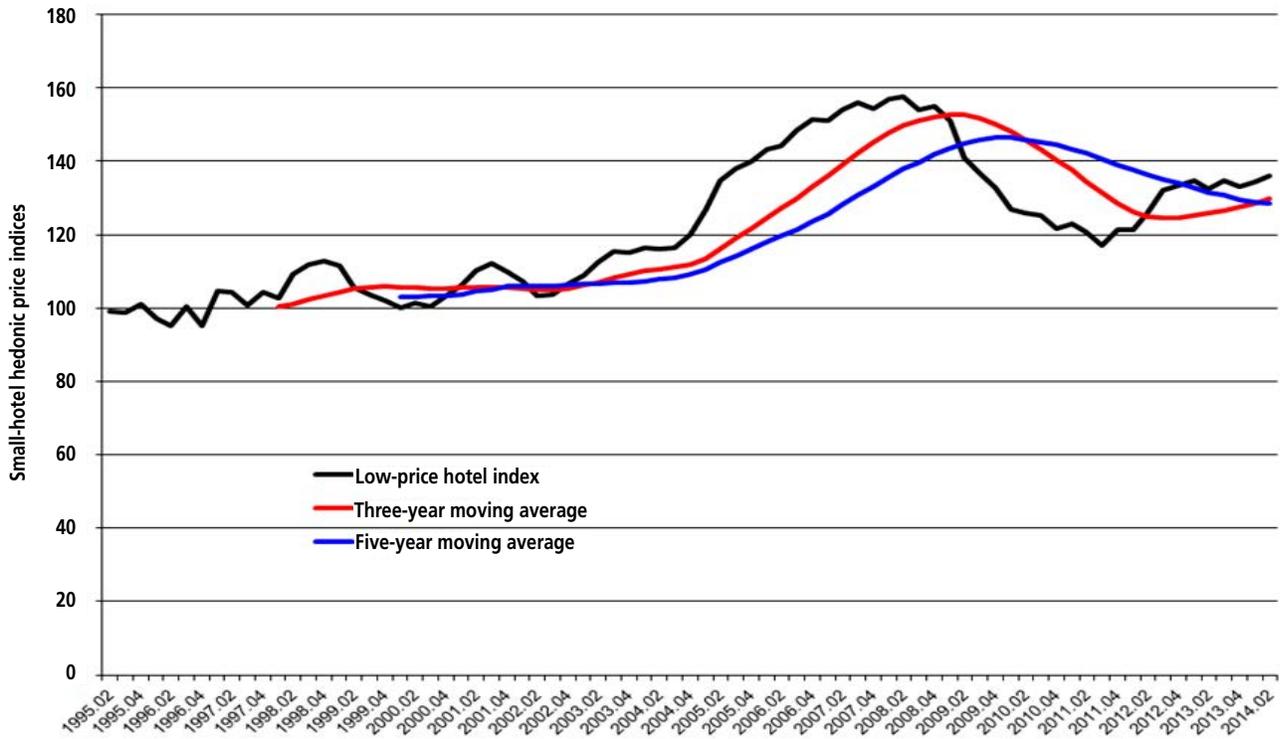
**Year-over-year change in large-hotel index, with moving-average trendline**



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

**EXHIBIT 9**

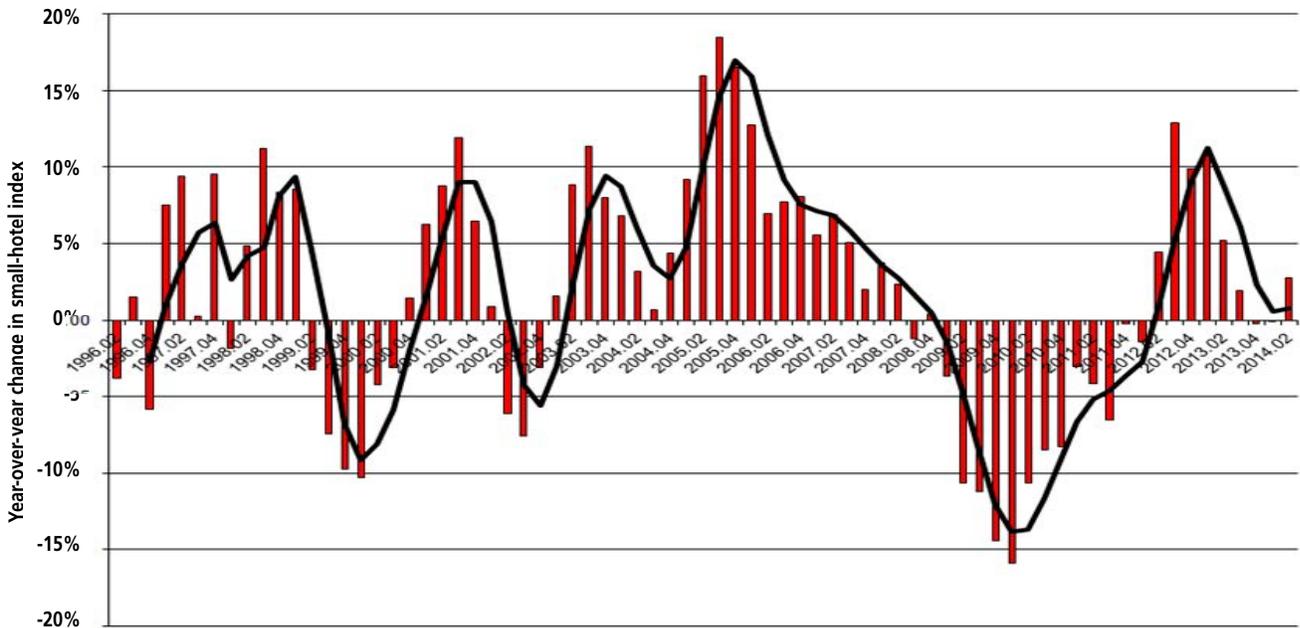
**Small hotel index, with three-year and five-year moving averages**



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

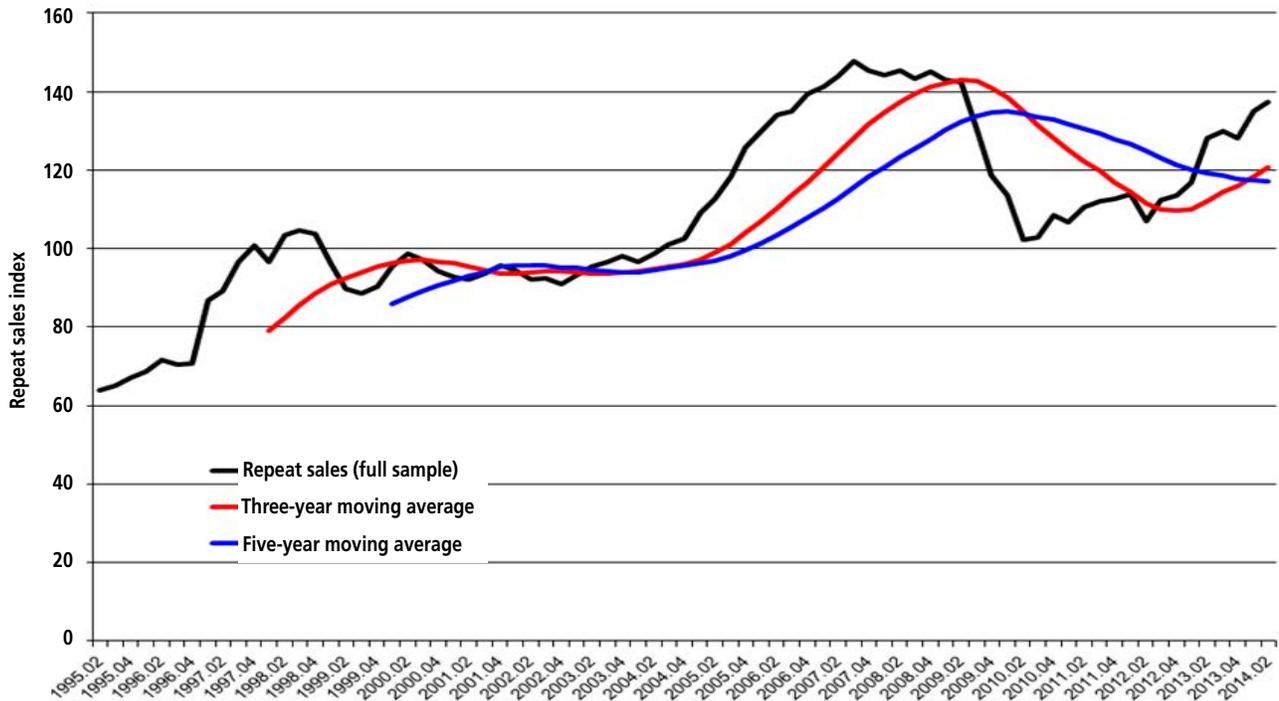
**EXHIBIT 10**

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



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

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



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

repeats itself. The key might lie in what the Fed does with interest rates to prevent the economy from overheating.

Prices of large and small hotels are starting to flatten. Exhibit 6 shows that prices for the large-hotel and small-hotel indices appear to have flattened in general, with prices rising by 1 percent or less. However, Exhibit 7 shows that the large hotel index continues to remain above both its three-year and five-year moving average, signaling a continued “buy.” Exhibit 8 provides further confirmation that the large-hotel index continues to rise on a year-over-year basis, although the index is now increasing at a decreasing rate. Exhibit 9 shows that the current price for smaller hotels has remained relatively constant, with its three-year moving average inching slightly above its five-year moving average. Exhibit 10 reveals that year-over-year growth in the price of small hotels has finally reversed the continued decline in year-over-year price growth since the first quarter of 2013. We are hopeful that this positive momentum will continue in the next quarter.

Hotels continue to trend upwards in terms of repeat sales. The repeat sale of hotels in Exhibit 11 based on the full sample has a more positive price momentum relative to

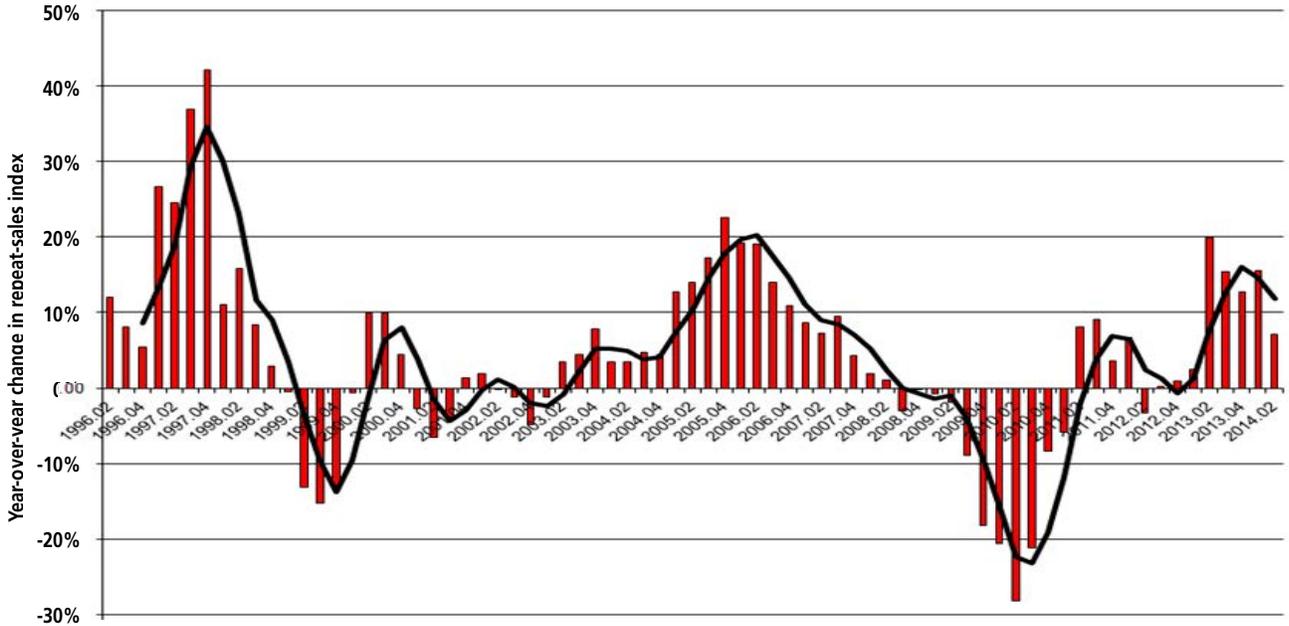
either large hotels or small hotels.<sup>2</sup> The current repeat sale index (full sample) of 137.35 (2014Q2) is above the previous quarter’s (2014Q1) index of 134.98 as well as above the previous year’s index of 128.297 (2013Q2). In percentage terms, the repeat hotel sale index rose 7 percent on a year-over-year basis (2014Q2 to 2013Q2) and also increased 1.75 percent on a quarterly basis (2014Q1 to 2014Q2). Exhibit 12 provides an alternative perspective of this positive price momentum in the repeat sales. Similar to large hotels, the index is now increasing at a decreasing rate. Viewed together, this is a signal that price growth based on repeat sales may be moderating (flattening).

Cap rates remain flat. For the first quarter of 2014, the latest quarter for which ACLI reports data on hotel cap rates, cap rates have declined slightly, from 6.14 percent in 2013Q4 to 6.095 percent in 2014Q1. Exhibit 13 shows that although the rate on the 10-year Treasury bond (constant maturity) declined from 2.9 percent to 2.72 percent, the hotel cap rate

<sup>2</sup> 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 and none with an initial sale before that time.

**EXHIBIT 12**

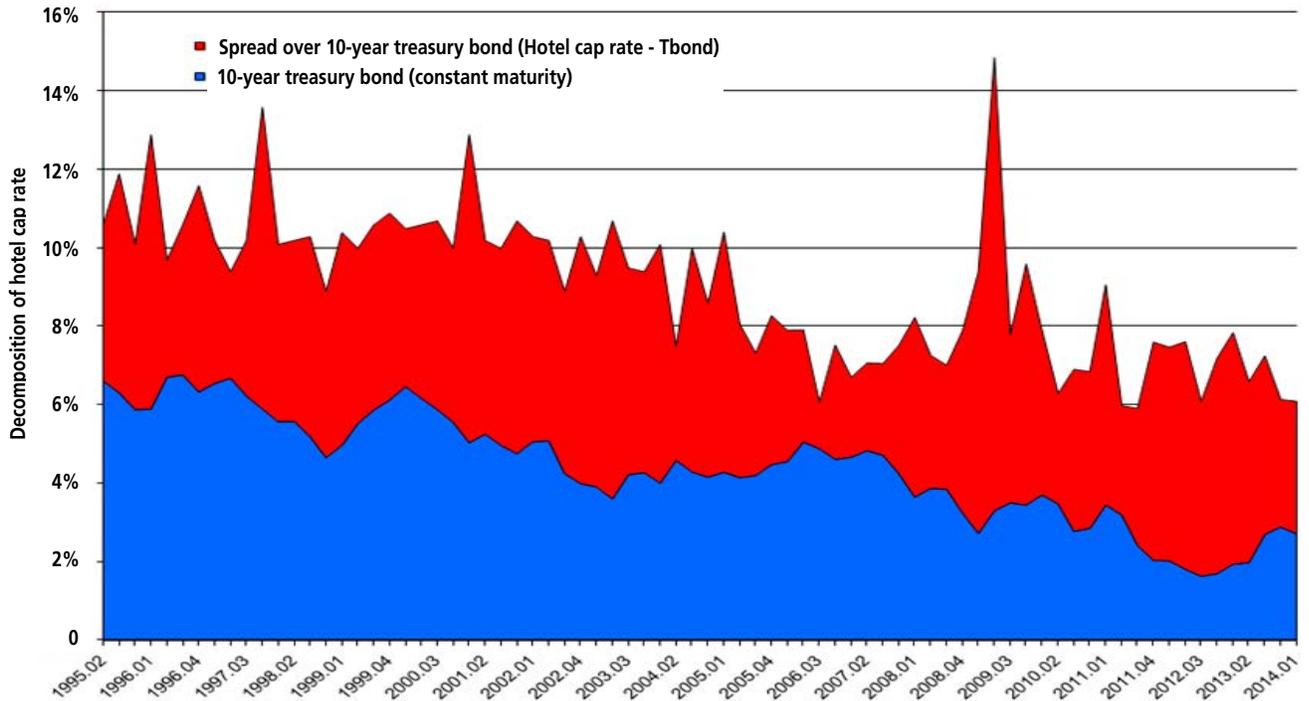
**Year-over-year change in repeat-sale index, with moving-average trendline**



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

**EXHIBIT 13**

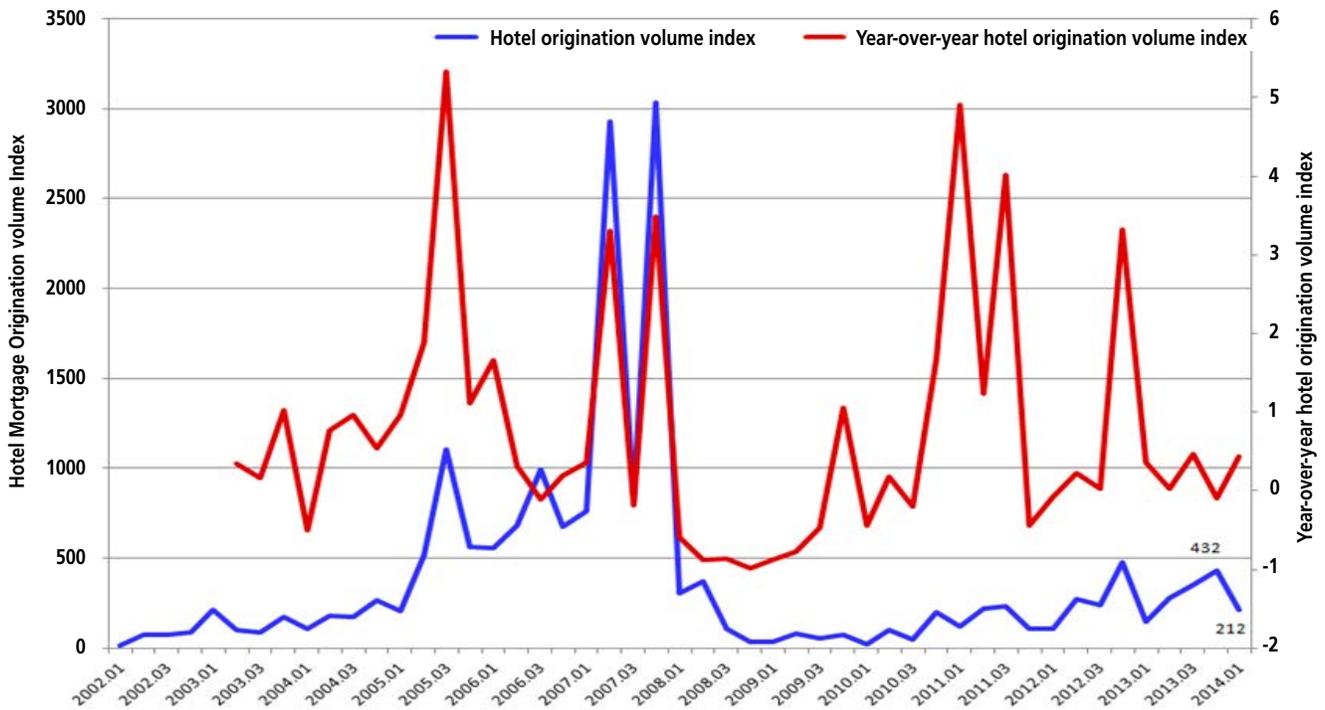
**Decomposition of ACLI hotel capitalization rates into risk premium and risk-free rate**



Sources: ACLI, Cornell Center for Real Estate and Finance

**EXHIBIT 14**

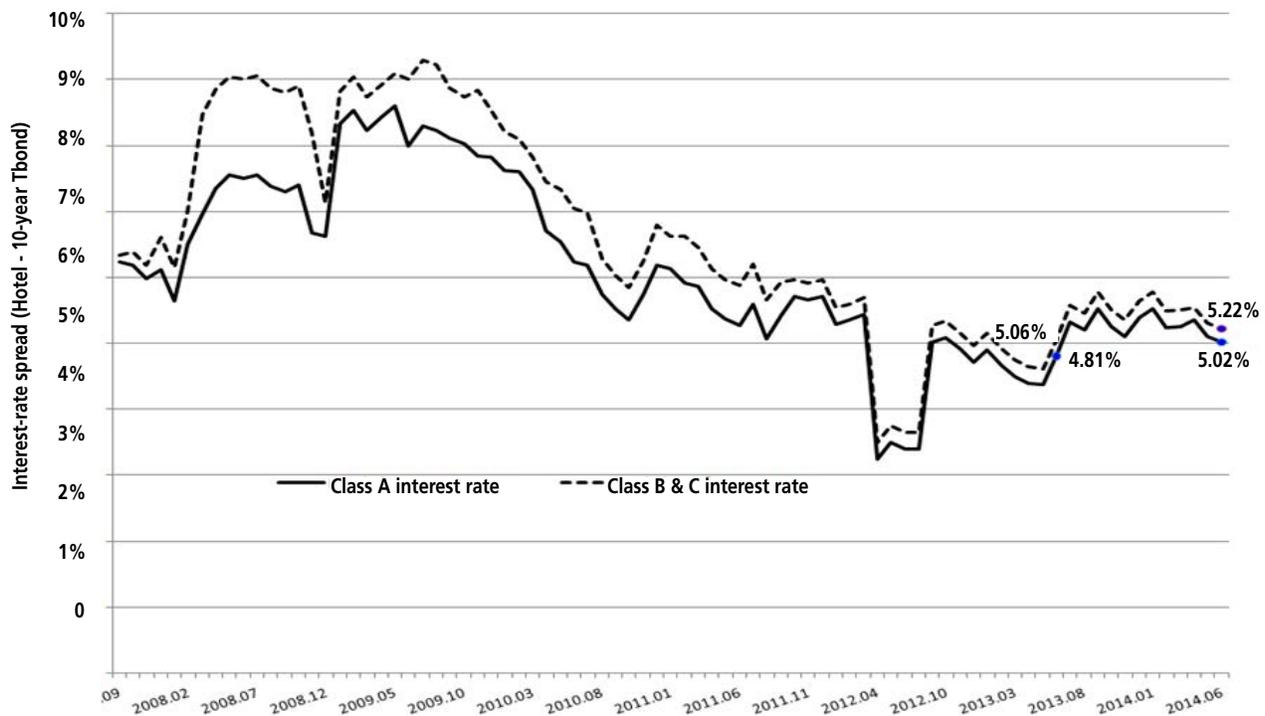
**Mortgage origination volume for hotels**



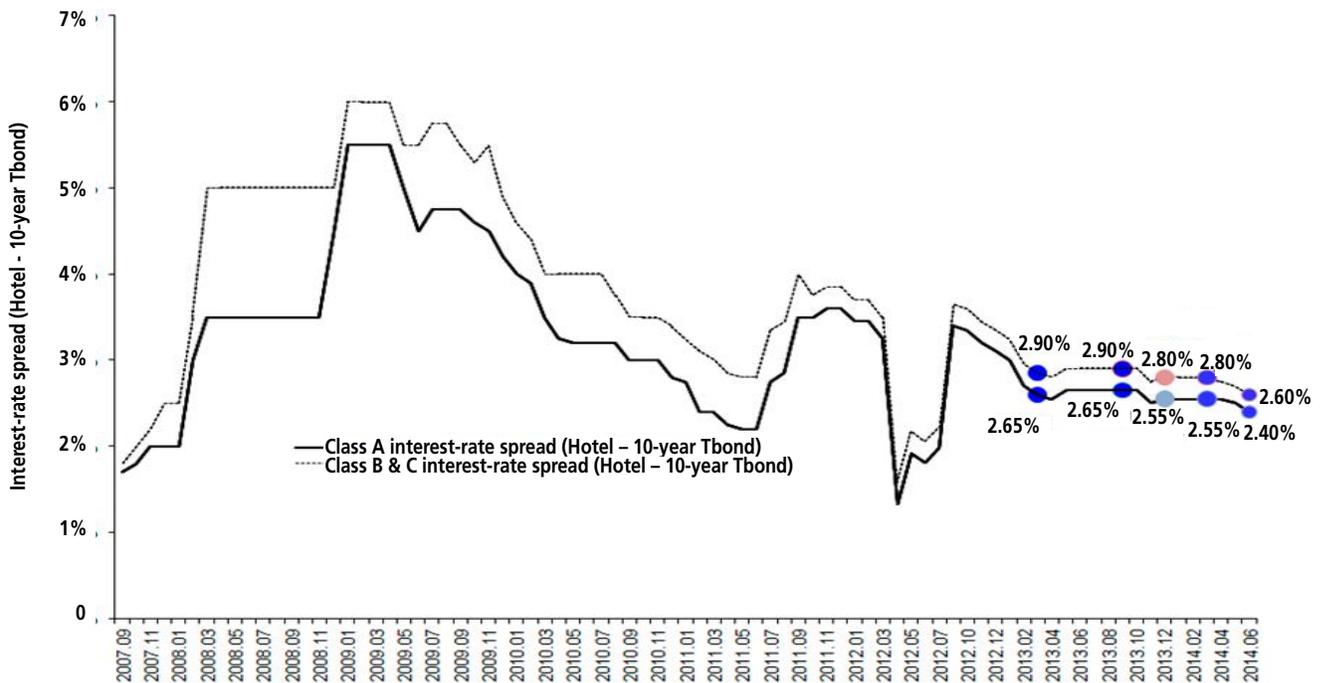
Sources: Cornell Center for Real Estate and Finance, Mortgage Bankers Association

**EXHIBIT 15**

**Interest rates on Class A hotels versus Class B & C properties**



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



Sources: Cushman Wakefield Sonnenblick Goldman

spread over the 10-year Treasury increased slightly, to 3.38 percent from 3.24 percent. Given that PKF expects RevPAR to continue to increase for the third quarter as well as over the remainder of this year,<sup>3</sup> we expect the gradual upward trend in prices to continue into the next quarter, assuming that cap rates continue to remain relatively flat.

Mortgage financing volume declined over the quarter but increased on a year-over-year basis. Exhibit 14 shows that the mortgage origination volume for hotels declined by 51 percent in the first quarter of 2014, reversing the trend from the prior quarter (2013Q4, in which it gained 54 percent). However, the level of loan origination volume was 43 percent greater than during the previous year (2013Q1).

Cost of debt financing remains constant, but relative risk premium for hotels continues to rise. The cost of obtaining hotel financing has remained relatively constant since July 2013 (see Exhibit 15), when the interest rate was 4.81 percent for Class A hotels and 5.06 percent for B&C hotels. As of June 2014, the interest rate on Class A hotels is 5.02 percent, and for Class B&C hotels the rate is 5.22 percent. Exhibit 16 shows the spread between Class A hotel rates against B & C interest rates on full-service hotels over the 10-year Treasury bond. On this metric, interest rate spreads

have remained relatively flat since 2013Q1, indicating that the lender compensation for risk associated with lending on hotels has not changed. Exhibit 17 shows the spread between the interest rates on Class A full-service properties with those for B&C hotels over the interest rate corresponding to non-hotel commercial real estate, a spread which we refer to as the hotel real estate premium.<sup>4</sup> The hotel real estate premiums for both higher quality (.57%) and lower quality (.67%) hotels have risen relative to the previous 2 quarters (.53% (H)/.63% (L) for 2014Q1 and .52% (H)/.61% (L) for 2013Q4). The slight increase in the premium in Exhibit 17 is a signal that the perceived default risk for hotel properties continued to rise relative to the four major commercial real estate property types in the second quarter of 2014.

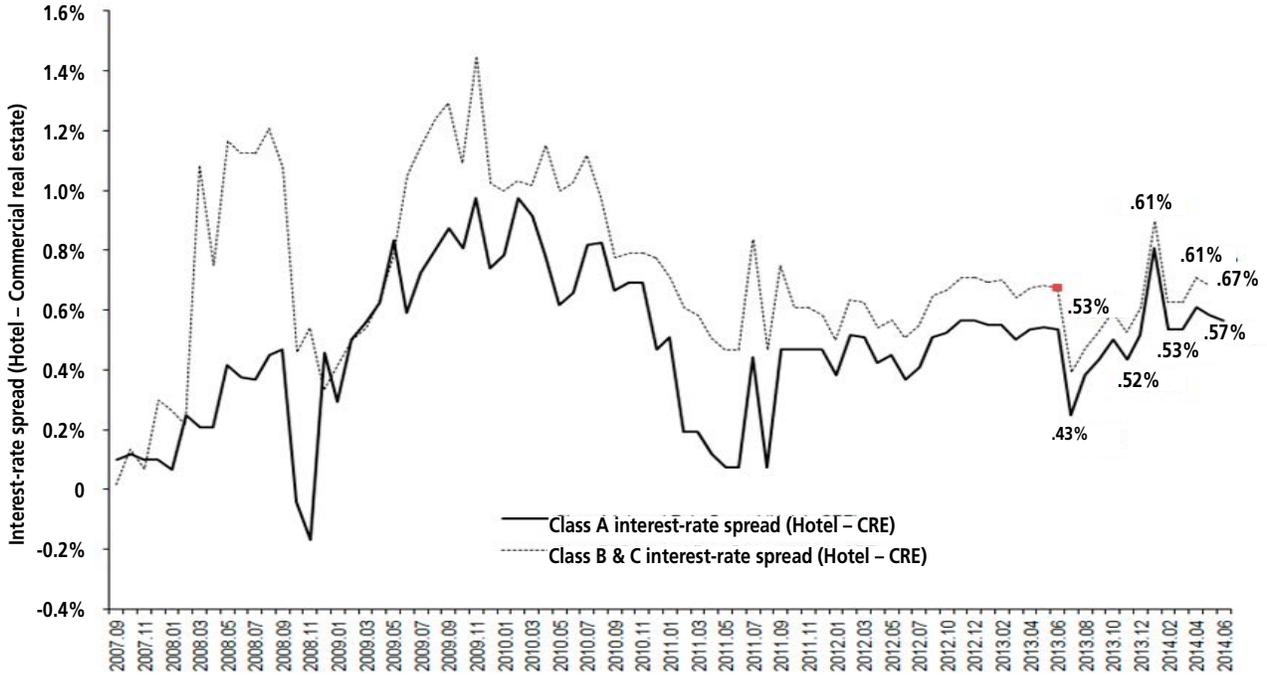
Expect a moderate rise in the price of large hotels and small hotels, according to the tea leaves. Exhibit 18 compares the performance of the repeat sales index relative to the NAREIT Lodging/Resort Price Index. The repeat sales index tends to lag the NAREIT index by at least one quarter or more. This is consistent with prior academic studies which find that securitized real estate is leading indicator of underlying real estate performance since the stock market

<sup>4</sup> The interest rate on hotel properties is generally higher than that for many other types of commercial properties, in part because hotels' cash flow is commonly more volatile than that of other commercial properties.

<sup>3</sup> RevPAR forecast is taken from Hotel Horizons, a PKF publication.

**EXHIBIT 17**

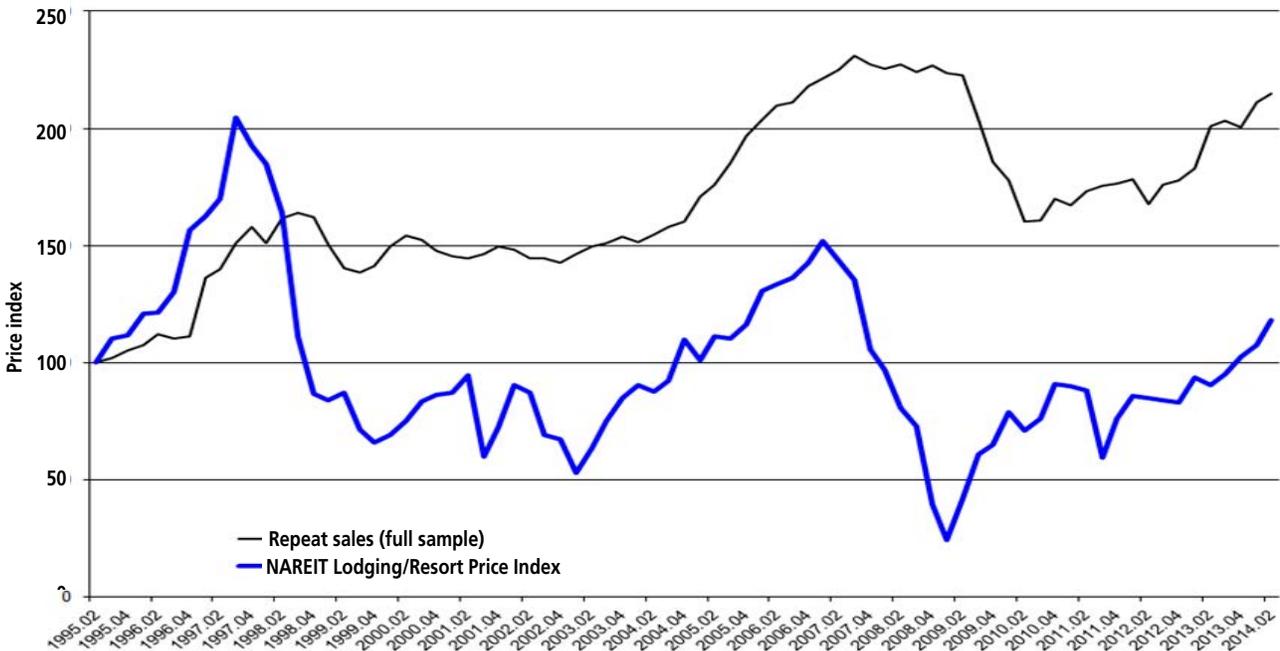
**Interest-rate spreads of hotels versus non-hotel commercial real estate**



Source: Cushman Wakefield Sonnenblick Goldman

**EXHIBIT 18**

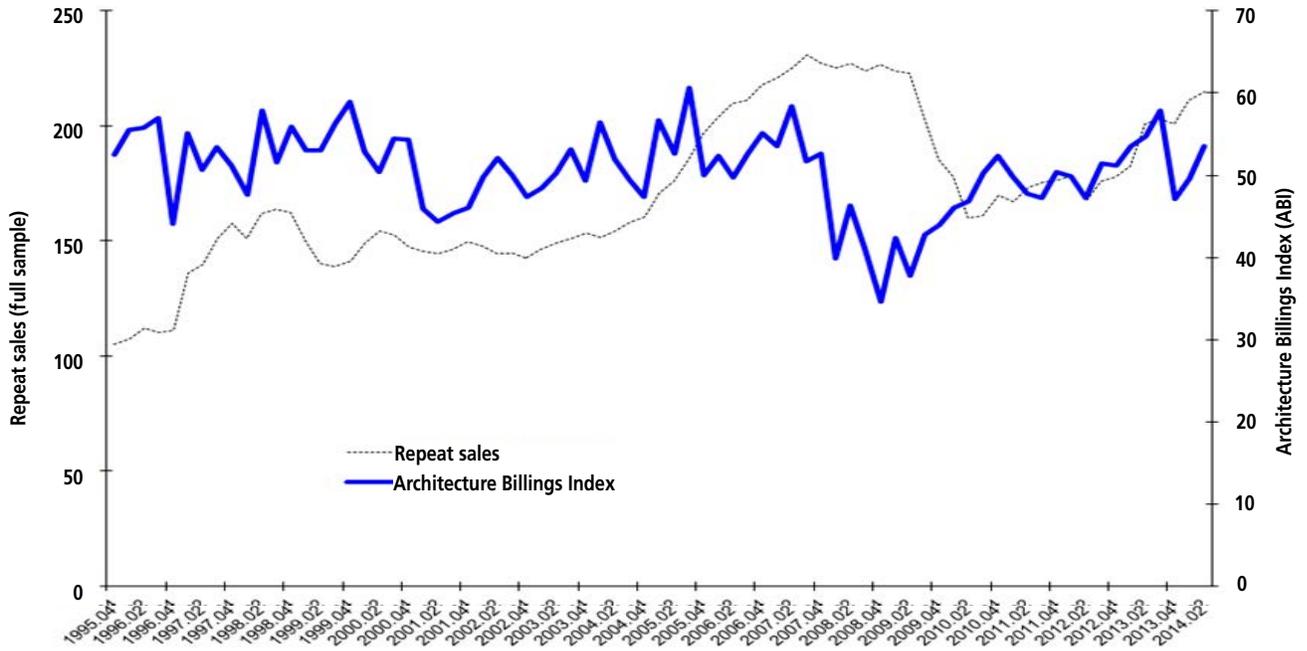
**Hotel repeat sales index versus NAREIT lodging/resort price index**



Source: Cornell Center for Real Estate and Finance, NAREIT

**EXHIBIT 19**

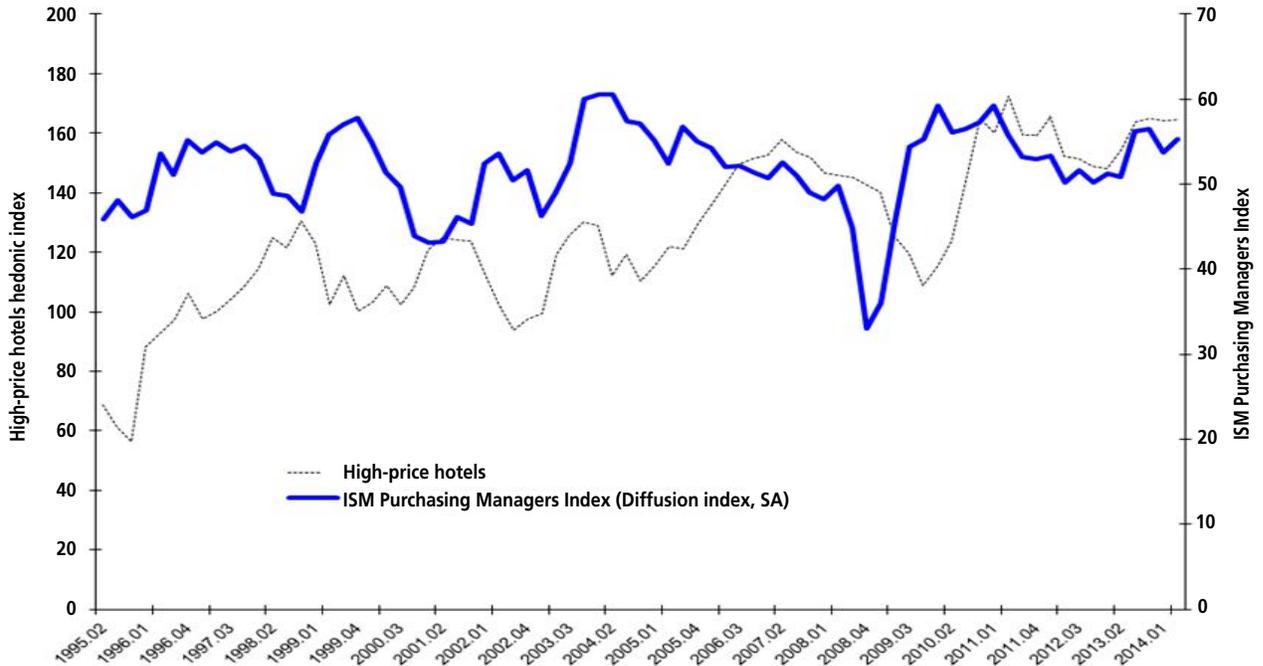
**Hotel repeat sales index versus architecture billings index**



Sources: Cornell Center for Real Estate and Finance, American Institute of Architects

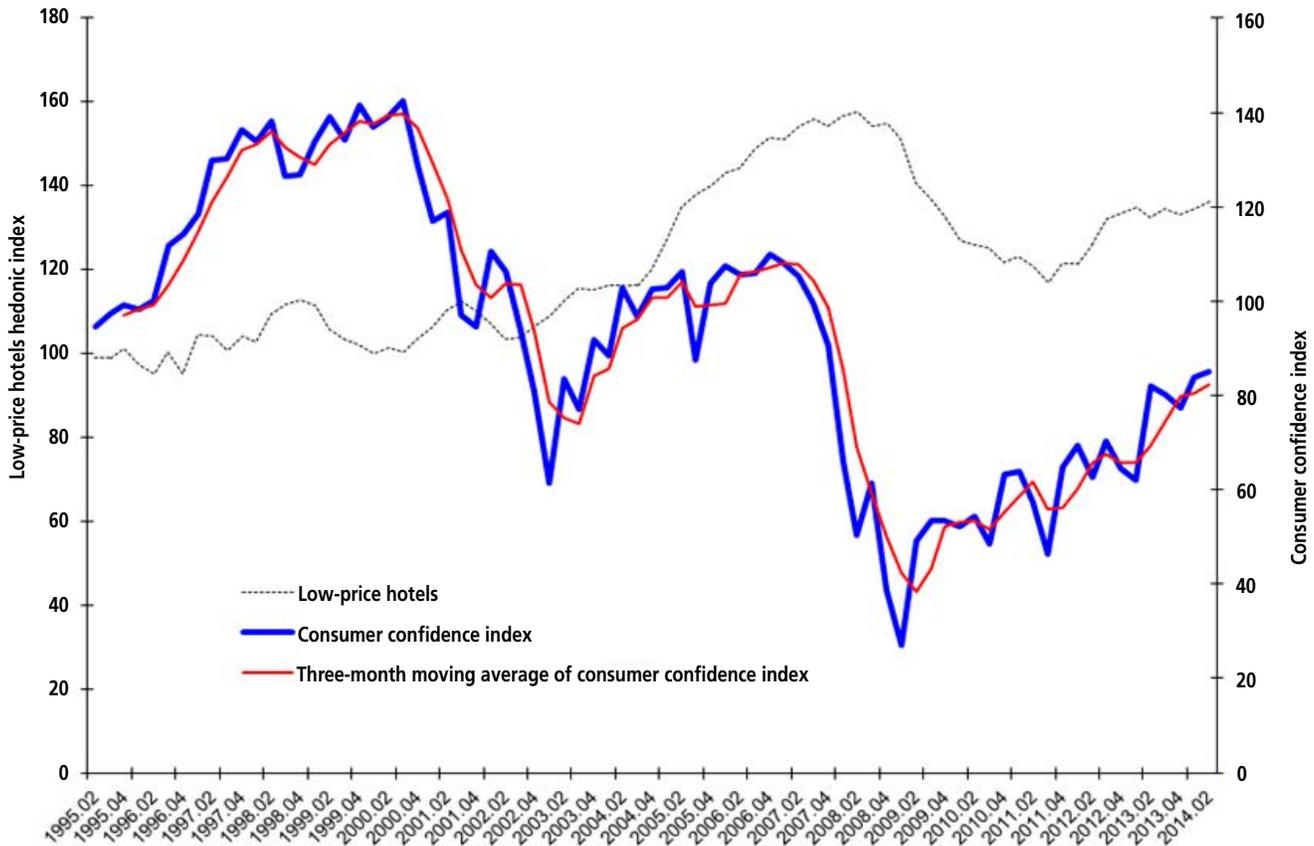
**EXHIBIT 20**

**Business confidence and high-price hotel index**



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

## Consumer confidence and low-price hotel index



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

is forward looking or efficient. Looking ahead, the NAREIT lodging index has continued its forward momentum, rising 10 percent this quarter. This is greater than the gain posted in the prior three quarters: 5 percent in 2014Q1, 7.5 percent in 2013Q4, and 5.3 percent in 2013Q3. Consequently, the rate of increase in NAREIT Lodging Index is accelerating. The architecture billings index (ABI) for commercial/industrial property,<sup>5</sup> which represents another forward-looking metric also continued its upward path rising, 8 percent this quarter compared to a 5-percent gain in the previous quarter, as shown in Exhibit 19.<sup>6</sup> Consistent with these indicators,

<sup>5</sup> [www.aiaa.org/practicing/economics/aiaa076265](http://www.aiaa.org/practicing/economics/aiaa076265)

<sup>6</sup> 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."

the National Association of Purchasing Managers (NAPM) index,<sup>7</sup> which is an indicator of anticipated business confidence and thus business traveler demand reversed directions and turned up 3 percent this quarter from a 5-percent decline in the previous quarter. The absolute level of the index has continued to stay above 50 since 2009Q3 (55.3 this quarter), indicating that the manufacturing sector continues to gain strength.

While we see this as positive news we hope that this continued gain does not lead to an interest rate hike, given Federal Reserve Chair Janet Yellen's comment that earlier-than-planned rate hikes are possible if the labor market

<sup>7</sup> 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.

continues its surprising improvement.<sup>8</sup> Barring any unanticipated interest rate hikes, we anticipate a rise in the price of large hotels in the next period. Positive momentum is also expected for hotels based on repeat sales, since both the NAREIT index and the ABI are signaling a positive price trend for the next quarter.

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) rose slightly in June (blue line). The consumer confidence increased approximately 4 percent on a year over year basis this quarter (2013Q2 to 2014Q2), which is a smaller increase than the 36 percent rise year over year in the prior quarter (2013Q1 to 2014Q1). We anticipate a modest upward trend in the transaction price for low priced hotels based on the year over year trend. ■

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<sup>8</sup> According to Janet Yellen's statement in the online version of the Wall Street Journal ([online.wsj.com/articles/feds-yellen-u-s-economy-continues-to-improve-but-recovery-not-yet-complete-1405432838](http://online.wsj.com/articles/feds-yellen-u-s-economy-continues-to-improve-but-recovery-not-yet-complete-1405432838)), "If the labor market continues to improve more quickly than anticipated by the [Fed] then increases in the federal-funds rate target likely would occur sooner and be more rapid than currently envisioned."

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## Hotel Valuation Model

The 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.

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InterContinental Hotels Group

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**Michael Medzigian '82**  
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**Chang S. Oh**  
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**David Rosenberg**  
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**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

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