

CBRE HOTELS

The World's Leading Hotel Experts.

Persistence at the Peak

Atlanta Hospitality Alliance

December 8, 2016

Mark Woodworth and Jamie Lane

CBRE Hotels' Americas Research

mark.woodworth@cbre.com jamie.lane@cbre.com

AGENDA

- Economic Indicators
- Airbnb
- Consolidation
- Business Cycle
- Our Forecasts
 - U.S. & Atlanta
- Cap Rates

QUESTION:

**How do you feel about the
economy today?**

Good?

Okay?

Bad?

QUESTION:

**How does that compare to
what you were thinking on
Halloween?**

Good?

Okay?

Bad?

ANOTHER QUESTION:

**What will the economy be like
a year from today?**

Same?

Better?

Worse?

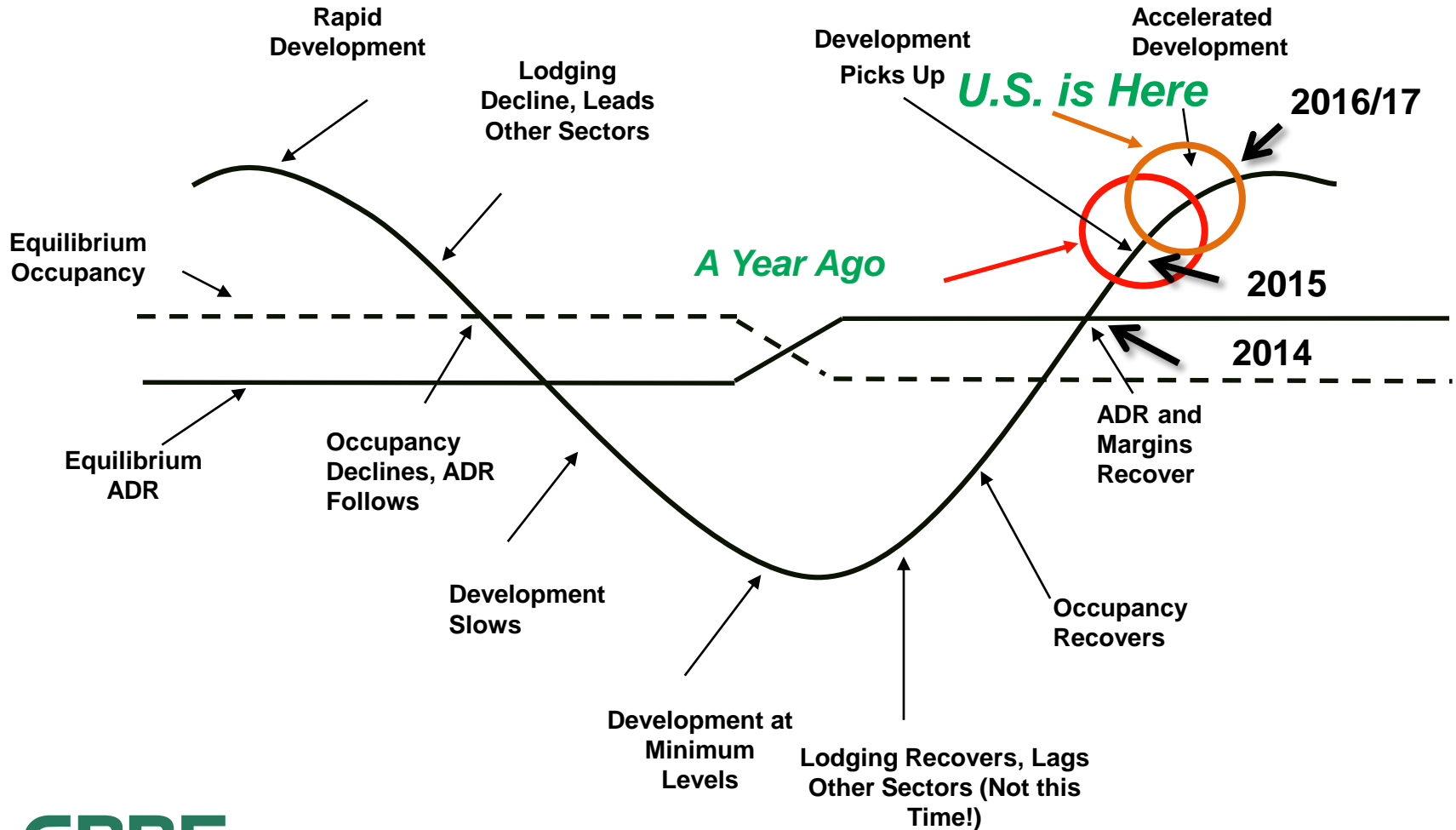
ECONOMIC INDICATORS - OVERVIEW

How the Overall Economy Impacts the Lodging Industry

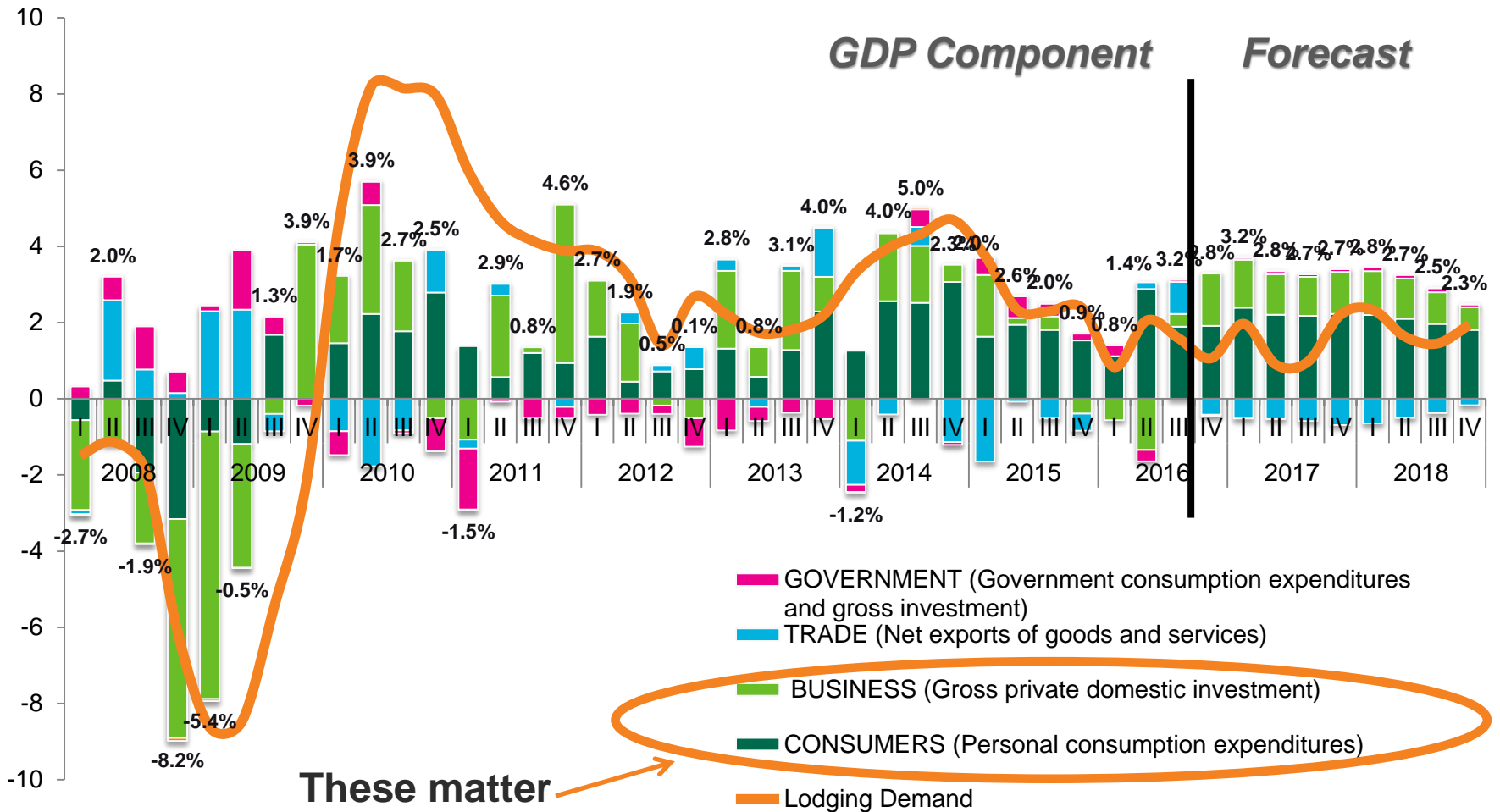
- Lodging is a cyclical Industry – we can predict the future by looking at the past trends.
- Employment and income are the most important indicators CBRE Hotels uses to forecast the U.S. Lodging Industry.
- Leading economic Indicators can be used to help predict turning points.
- The current situation of the U.S. economy and near term outlook look strong for continued increases in hotel demand for at least the next two years.

THE HOTEL MARKET CYCLE

The hotel market is cyclical and we can predict what will happen based on past trends.



THE OUTLOOK FOR THE DRIVERS THAT ARE MOST IMPORTANT TO HOTELS REMAINS FAVORABLE



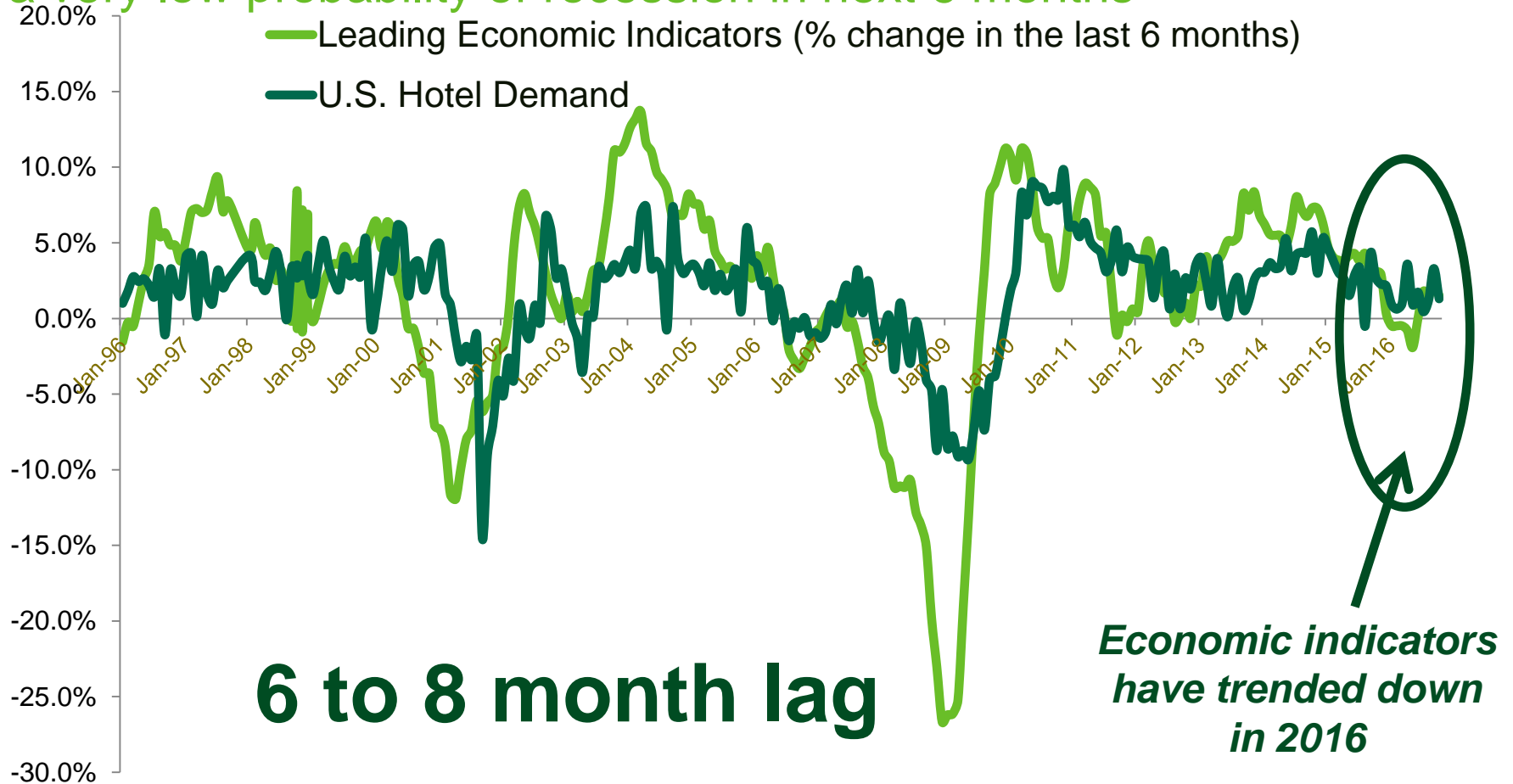
These matter the most.



Source: BEA, Moody's Analytics, CBRE Hotels | Americas Research Hotel Horizons: November 2016, STR, Inc.

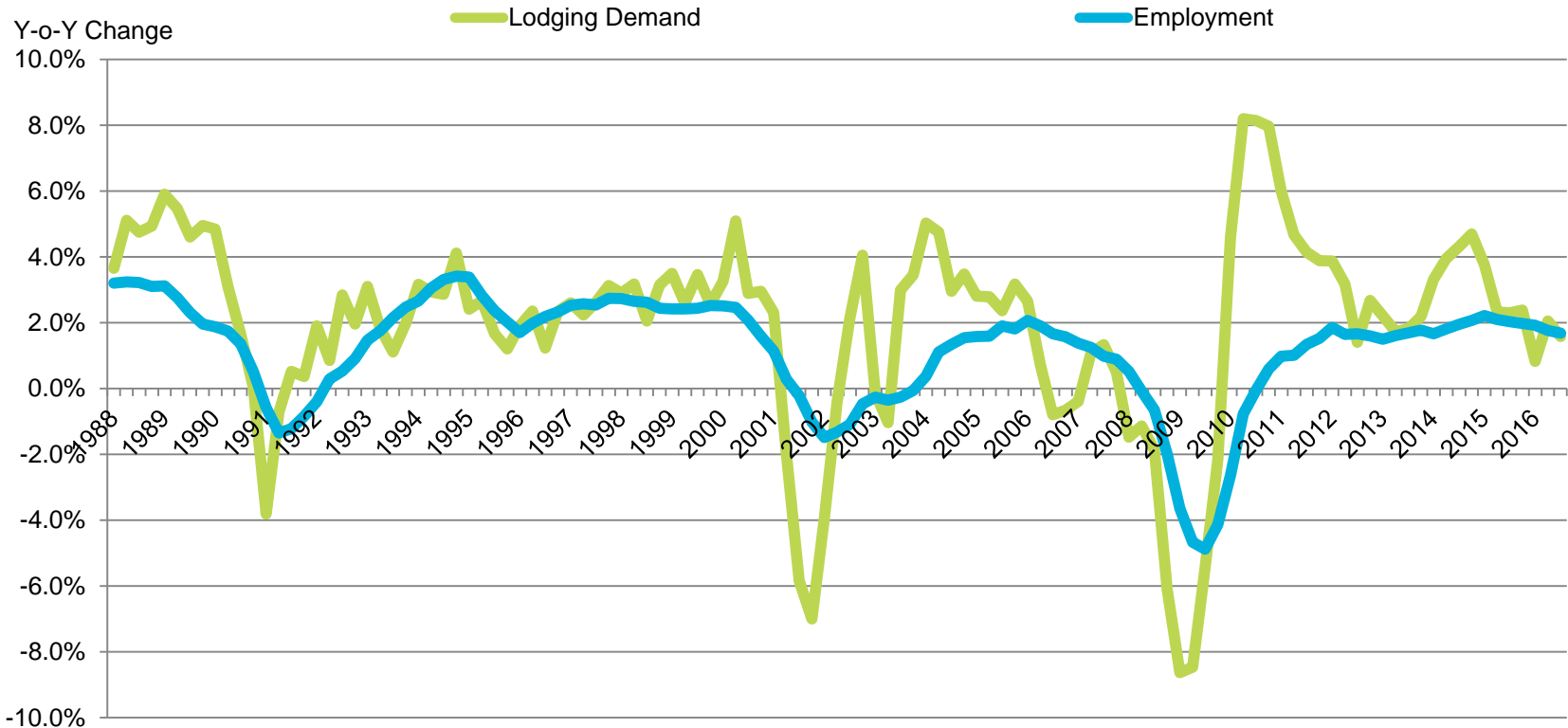
LEADING ECONOMIC INDICATORS

Index has trended down in 2016, but recent gains means there is a very low probability of recession in next 6 months



EMPLOYMENT & HOTEL DEMAND

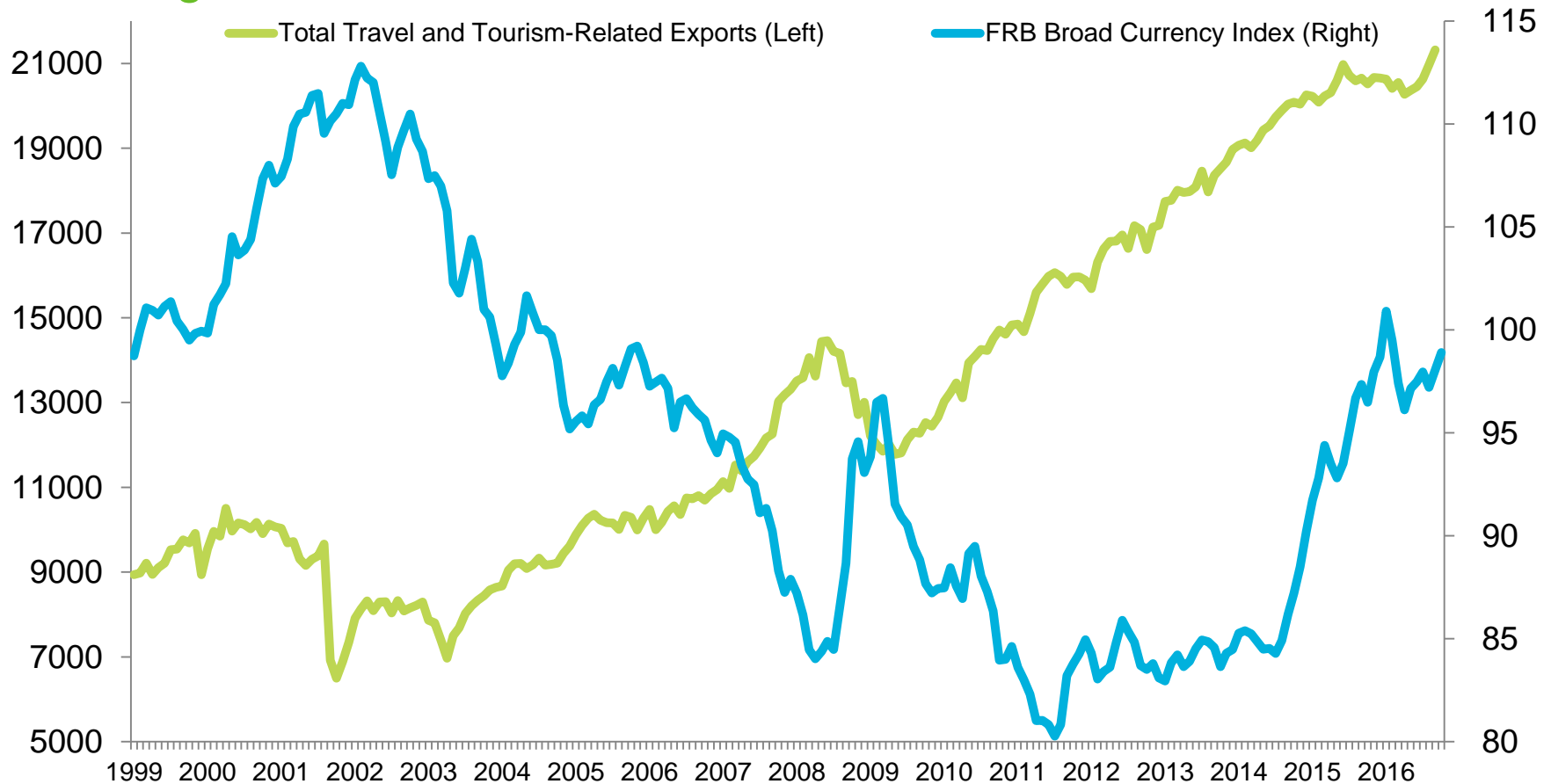
Changes in hotel demand correlate closely to changes in the employment rate.



Source: STR, BEA, Q3 2016.

EFFECT OF STRONG DOLLAR

The Strong U.S. Dollar means that U.S. travel is more expensive for foreign travels which leads to lower international demand.



Source: Federal Reserve Board, International Trade Association, Q3 2016

Note: Quarterly data in real terms, '97=100

CHAIN SCALES/ MARKETS IMPACTED

- Upper Prices U.S. hotels are vulnerable to fluctuations in exchange rates—Strong Dollar has a negative impact on U.S. lodging demand
- Among Upper Price chain scales, the luxury segment appears particularly sensitive to exchange rate movements
- Gateway cities show greatest impact from changes in the exchange rate:
 - Boston
 - Chicago
 - Los Angeles
 - Miami
 - New York
 - San Francisco
 - Washington DC

Source: *How currency exchange rates affect the demand for U.S. hotel rooms* :Corgel, Lane, Walls. International Journal of Hospitality Management

CBRE HOTELS

The World's Leading Hotel Experts.

AIRBNB

A new and Growing Supply



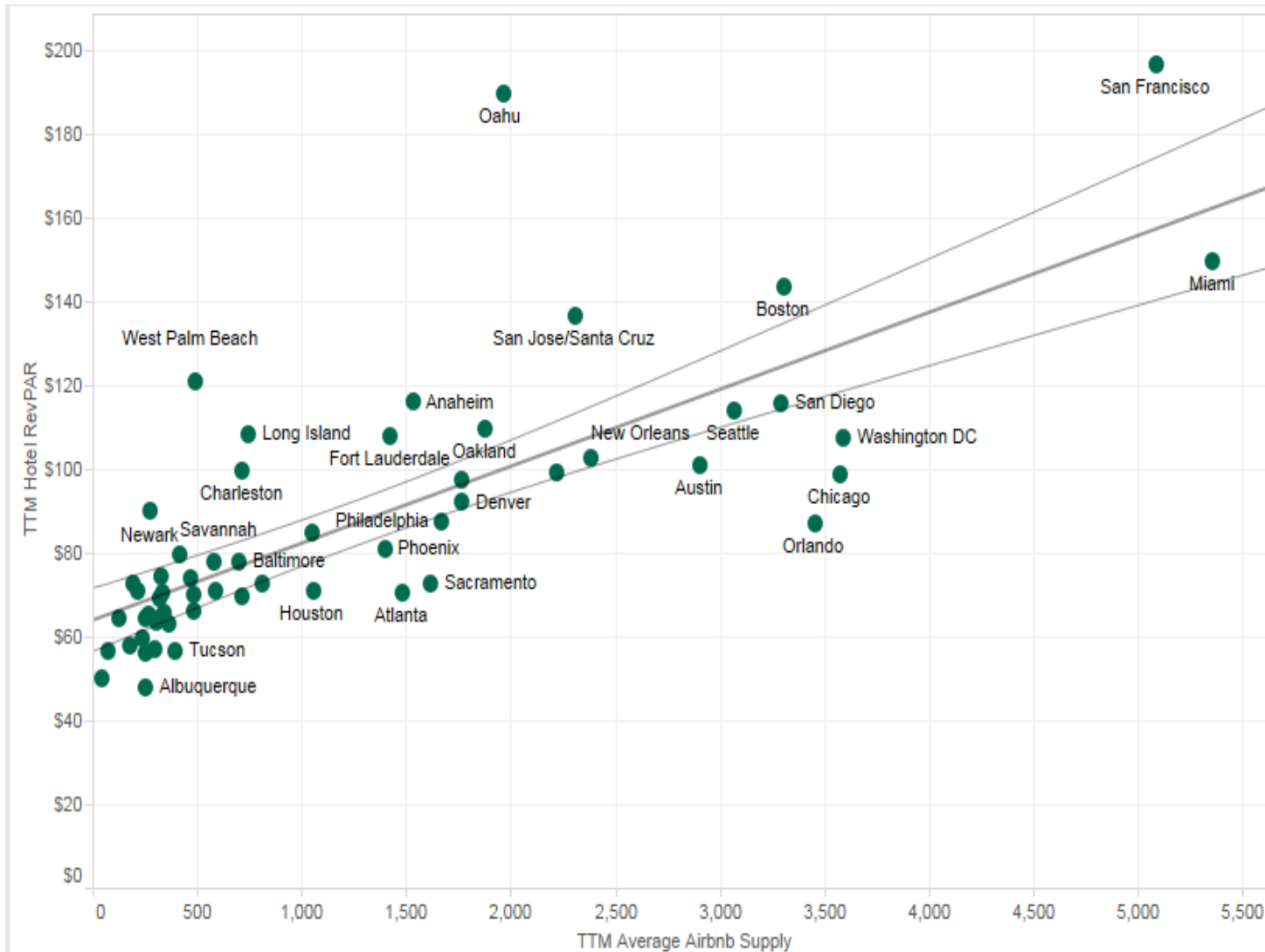
AIRBNB

A New Competitor

- Unlike traditional hotels, Airbnb has a very fluid supply that can react to demand changes quickly.
- Airbnb is now the leader in the home sharing economy with ~2.3 million rooms, but not the only player.
- Airbnb is having greater impact on hotel business in higher RevPAR markets, where there is greater economic incentive to create supply.
- Regulation is and continues to be a major headwind for Airbnb's growth prospects both in the U.S. and overseas.

Data is Provided by Airdna, a company that collects data from Airbnb's Website for all world wide listings (~2.3Million).

HIGHER MARKET REVPAR GENERALLY MEANS MORE COMPETITION FROM AIRBNB

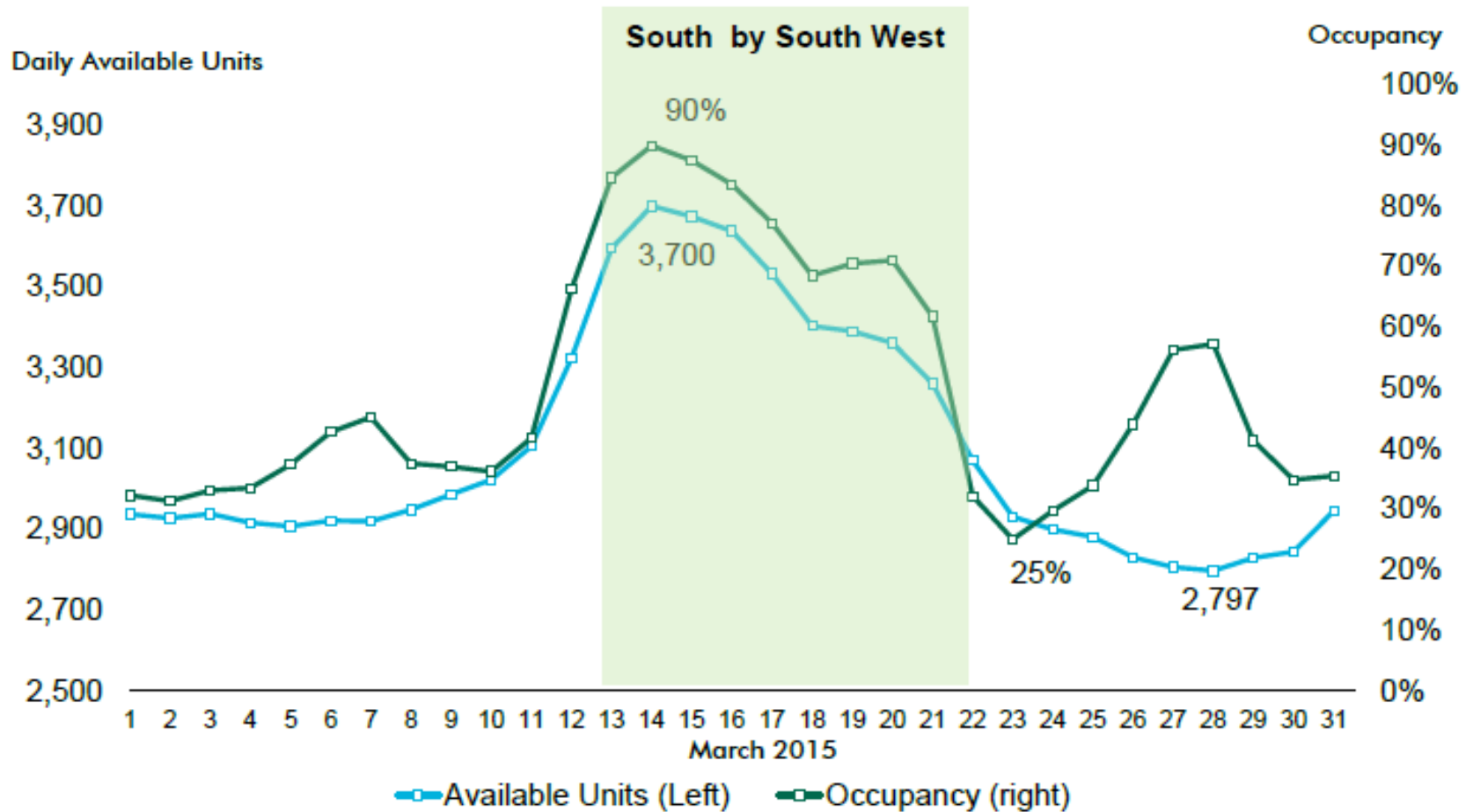


R2=58%

Sources: CBRE Hotels' Americas Research, Airdna, STR, Q22016.

SUPPLY OF AIRBNB UNITS CAN INCREASE DRASTICALLY DURING MAJOR EVENTS

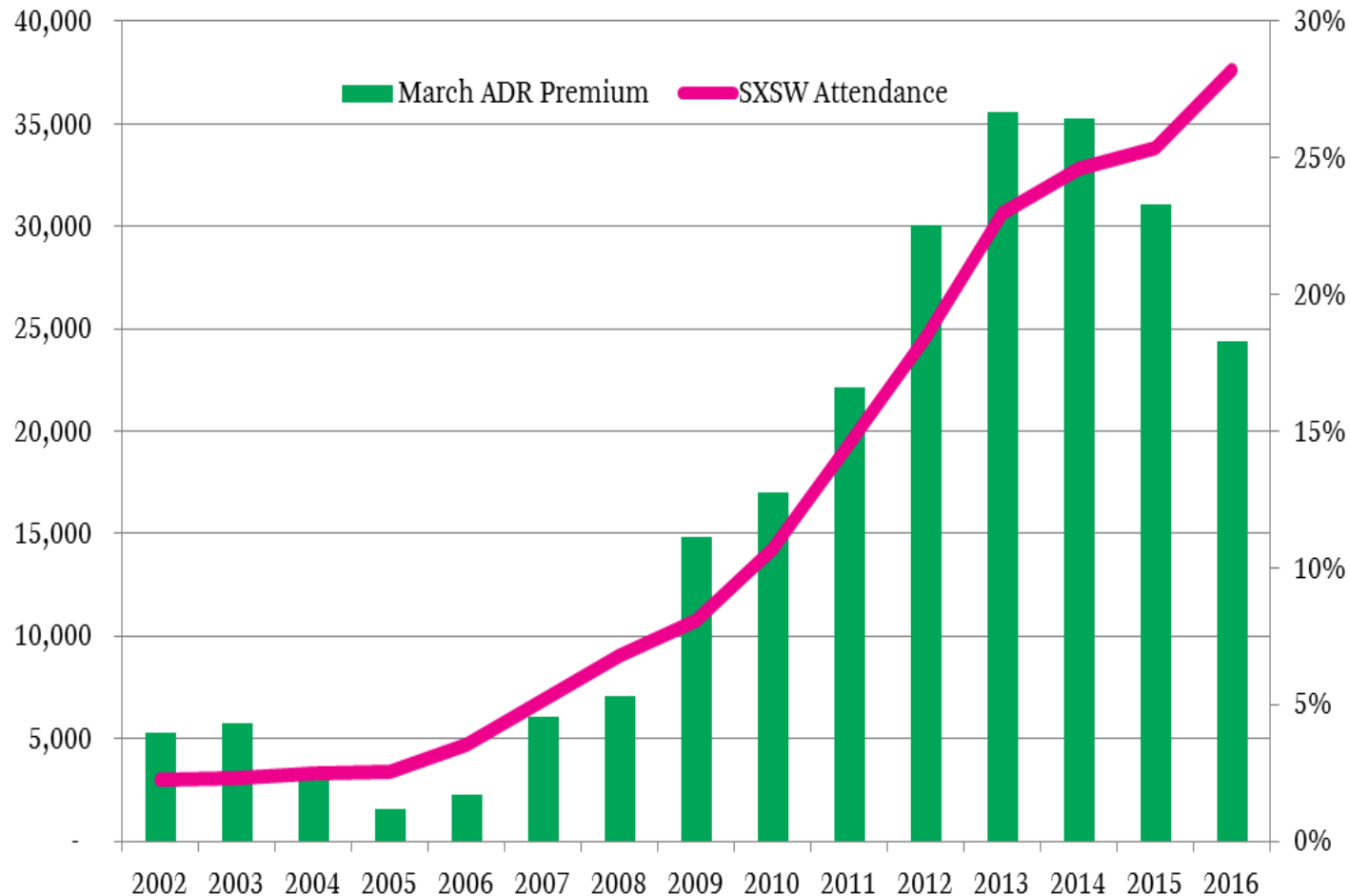
Austin Airbnb supply and occupancy peak during SXSW



Sources: CBRE Hotels' Americas Research, Airdna, Q22016.

AUSTIN, TX – SXSW – LOWER PRICED HOTELS

Airbnb may be decreasing the premium that hotels are able to charge during major events

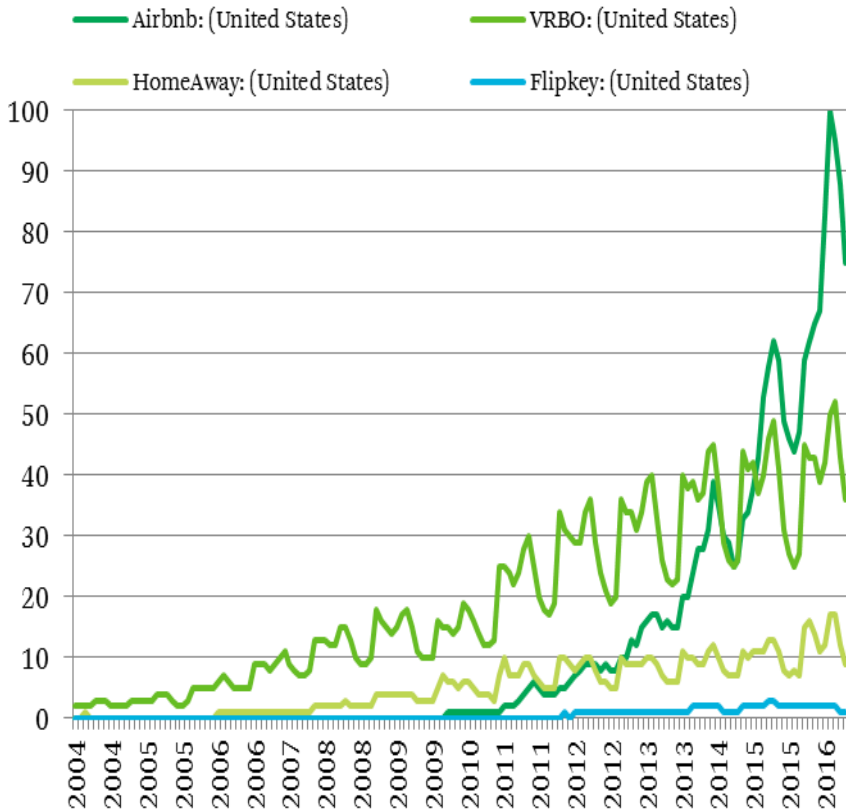


Sources: CBRE Hotels' Americas Research, STR, South by Southwest, Q22016.

GOOGLE TRENDS—SHORT TERM RENTAL SITES

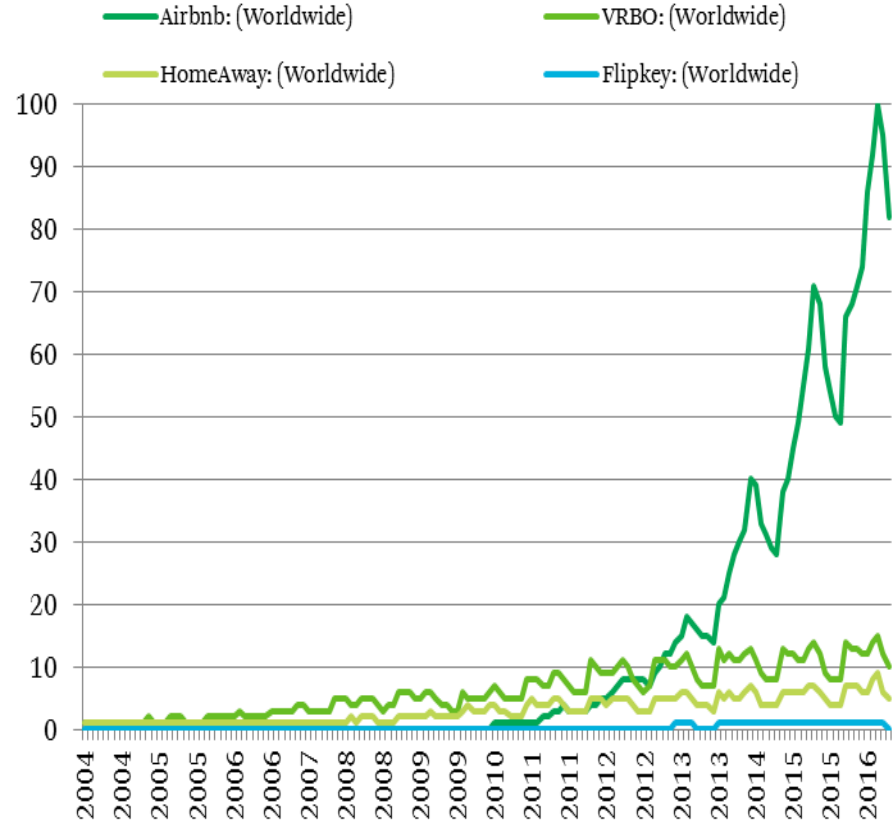
Airbnb has quickly become the leader in the Sharing Economy in both in the U.S. and Worldwide.

United States



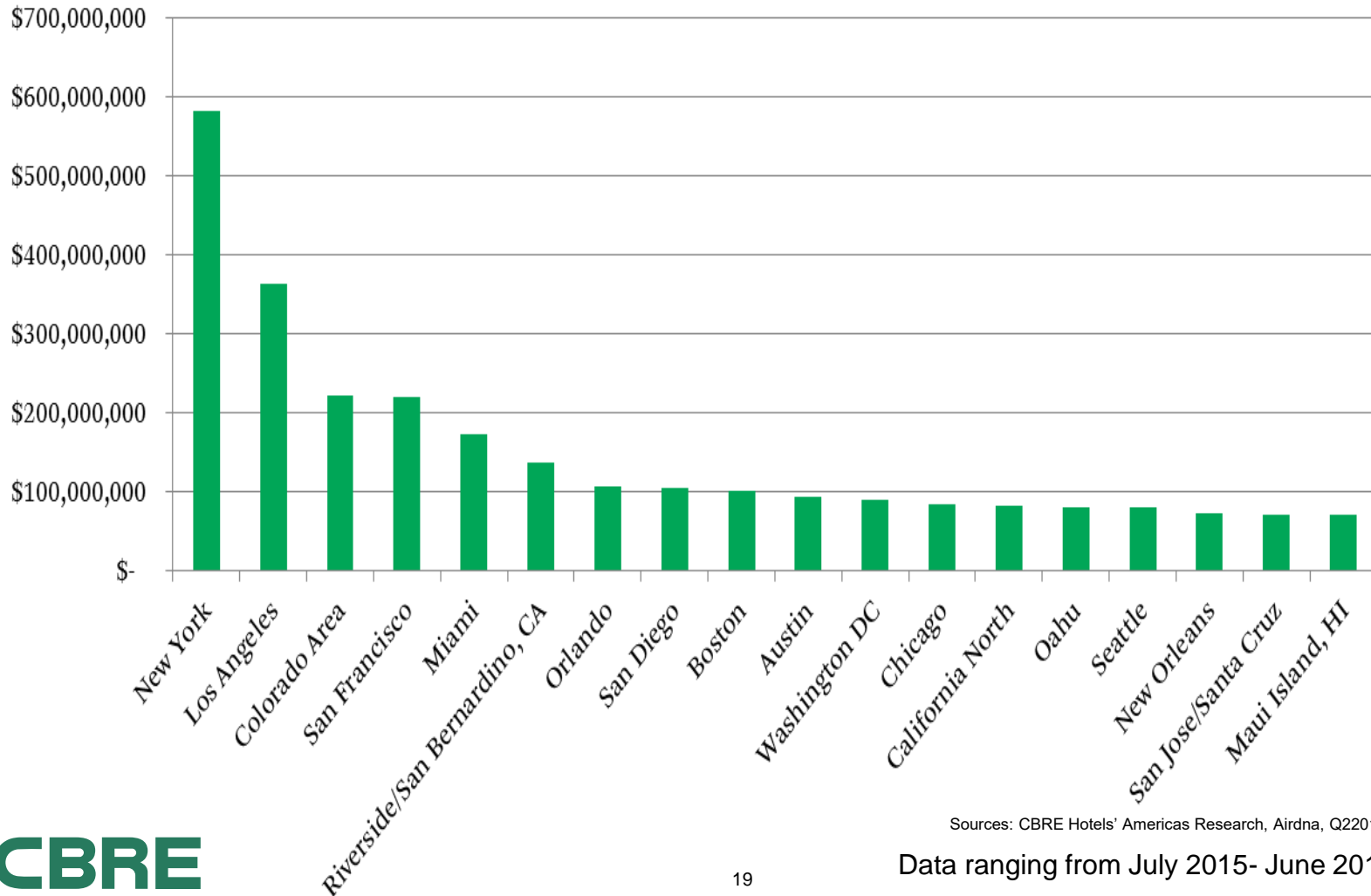
Sources: GoogleTrends, Q22016.

Global



REVENUE GENERATED ON AIRBNB

Airbnb booking revenue from 12 months ending June 2016, was more than half a billion dollars in the New York market

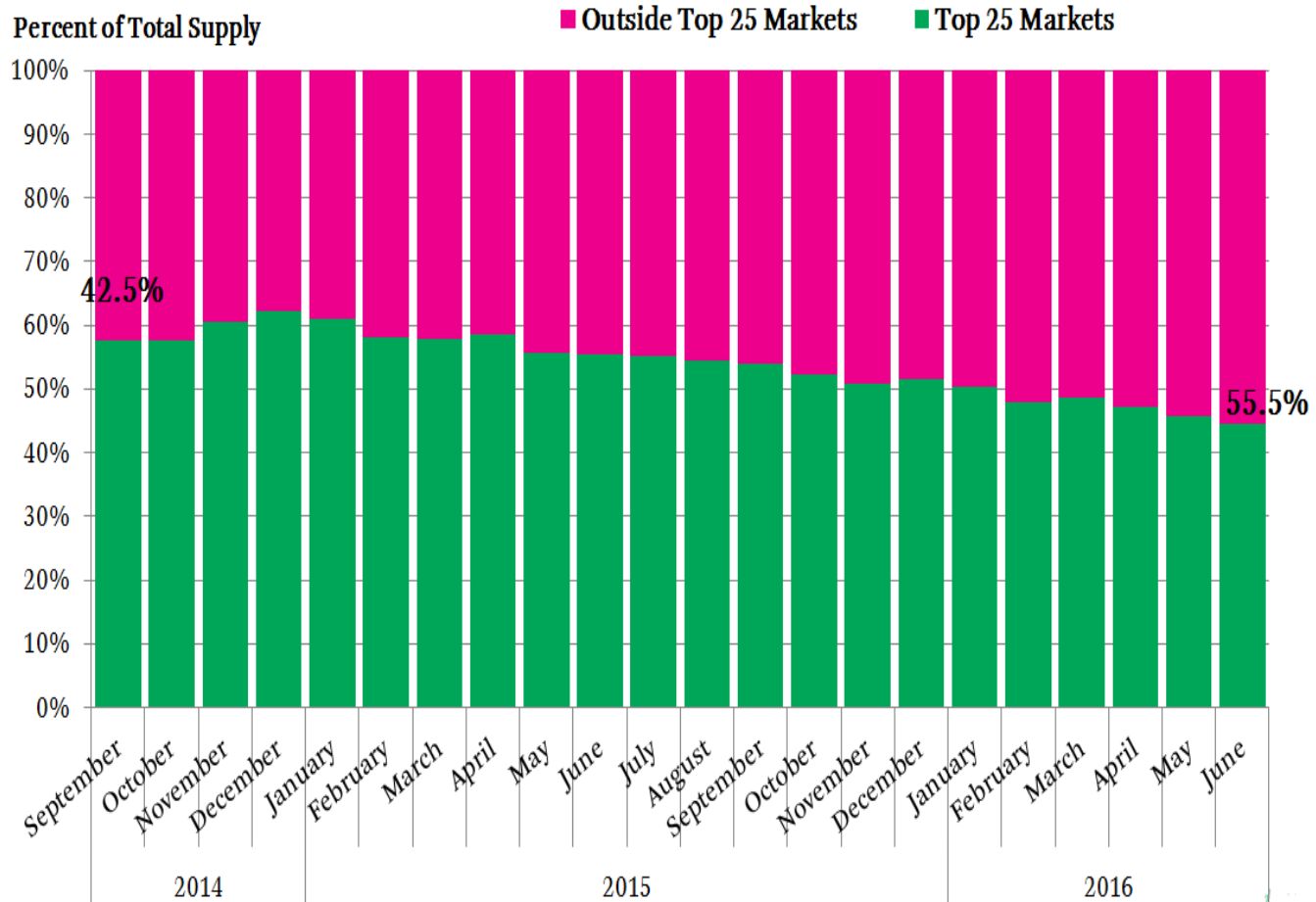


Sources: CBRE Hotels' Americas Research, Airdna, Q22016.

Data ranging from July 2015- June 2016

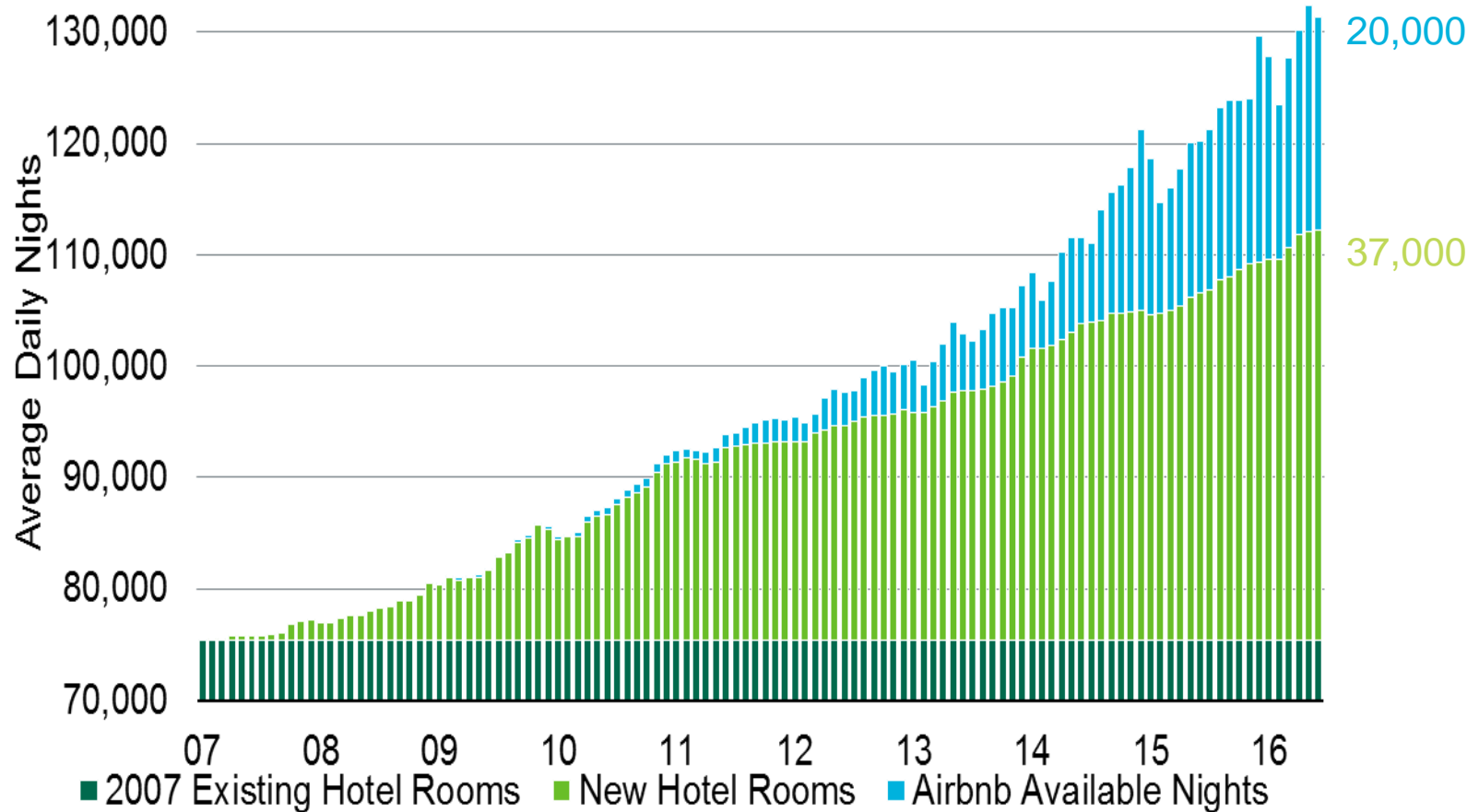
CHANGING GROWTH PATTERNS FOR AIRBNB

While the Top 25 markets still drive the most revenue for Airbnb, the remaining markets now represent more than half of total supply



NEW YORK SUPPLY (AIRBNB+HOTELS)

In the most saturated U.S. market, New York City, Airbnb room supply is growing faster than the new hotel supply.



Sources: CBRE Hotels' Americas Research, New York Attorney General, Airdna, STR, Q32016.

BOSTON UNIVERSITY – AIRBNB STUDY

Other academic research on the impact of Airbnb on the hotel industry shows a significant impact on hotel revenue.

- NEGATIVE IMPACT ON LOWER-PRICED HOTELS AND THOSE NOT CATERING TO BUSINESS TRAVELERS (1/4 IMPACT OF NEW HOTEL ON EXISTING REVENUE)
- IMPACT MATERIALIZES THROUGH LESS AGGRESSIVE ADR PRICING
- IMPACT ON ADR'S IS MOST PRONOUNCED DURING PERIODS OF PEAK DEMAND

AIRBNB COMPETITION INDEX

AIRBNB COMP. RANK	MARKET	MKT SUPPLY (%)	MKT SUPPLY INDEX	ADR PREMIUM (DISC)	ADR PREMIUM INDEX	ACTIVE UNIT GROWTH	ACTIVE UNIT GROWTH INDEX	AIRBNB COMPETITION INDEX
1	New York	15.5%	100.0	(33.7%)	100.0	41.3%	10.3	77.6
2	Miami	10.3%	66.4	(21.9%)	65.2	98.4%	24.6	55.7
3	Los Angeles	11.5%	74.1	(19.3%)	57.3	67.6%	16.9	55.6
4	Oahu	7.0%	45.0	(32.5%)	96.5	132.9%	33.3	55.0
5	San Francisco	9.9%	63.8	(17.9%)	53.1	47.8%	12.0	48.2
6	Oakland	9.8%	63.2	(15.4%)	45.8	61.7%	15.5	46.9
7	Orlando	2.8%	18.3	(16.3%)	48.4	399.2%	100.0	46.2
8	Portland	8.3%	53.7	(13.5%)	40.2	74.9%	18.8	41.6
9	Seattle	7.2%	46.4	(14.5%)	43.1	92.3%	23.1	39.8
10	West Palm Beach	3.0%	19.3	(23.9%)	71.1	169.5%	42.5	38.1
11	San Jose/ Santa Cruz	6.7%	42.9	(10.8%)	32.0	100.6%	25.2	35.8
12	Fort Lauderdale	4.7%	30.2	(13.1%)	39.0	160.9%	40.3	34.9
13	Boston	6.3%	40.7	(12.4%)	36.7	73.3%	18.4	34.2
14	Sacramento	6.6%	42.4	34.1%	-	173.3%	43.4	32.1
15	Austin	8.5%	55.1	3.1%	-	68.0%	17.0	31.8

Sources: CBRE Hotels' Americas Research, Airdna, STR, Q22016.

CBRE HOTELS

The World's Leading Hotel Experts.

CONSOLIDATION



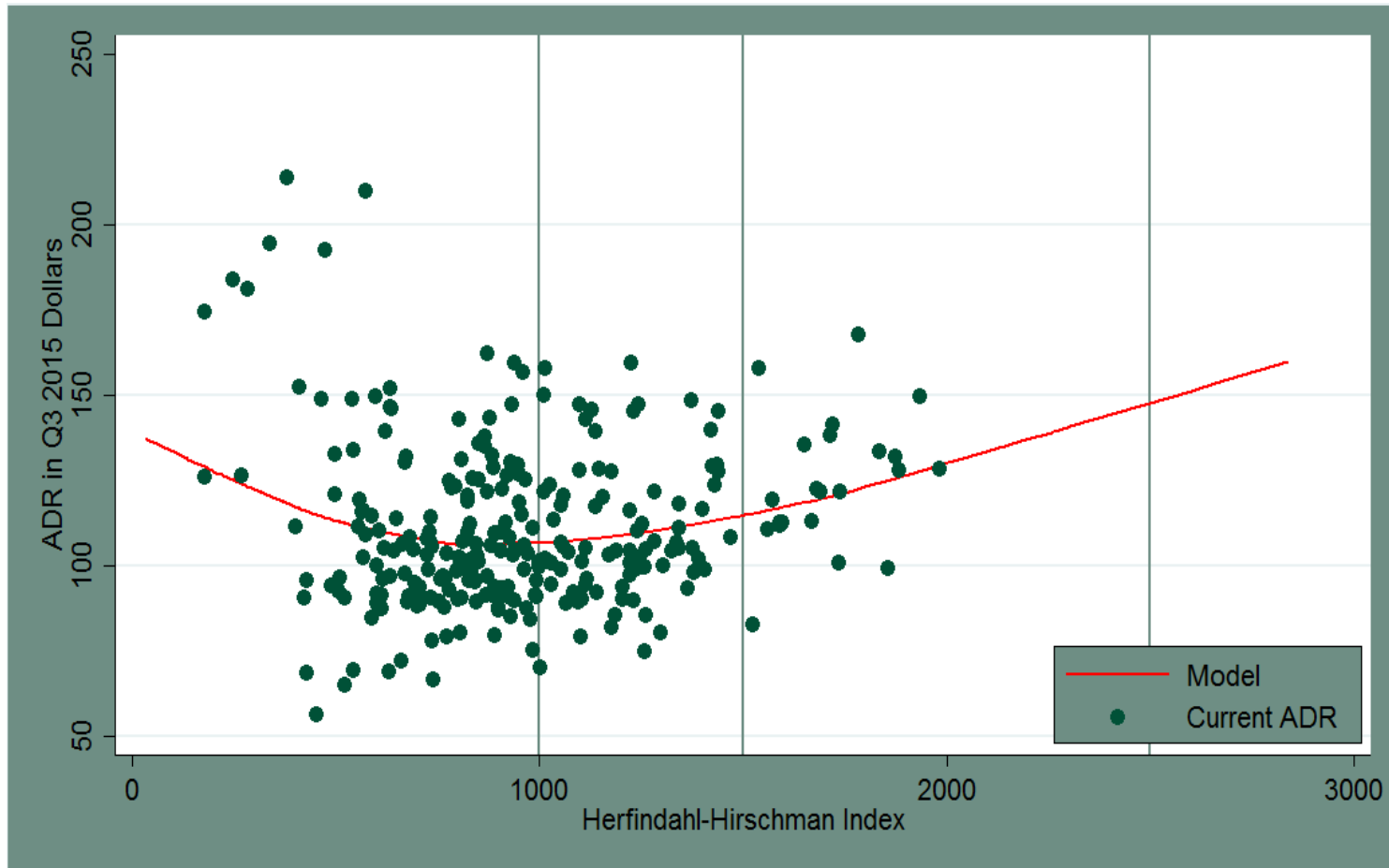
CONSOLIDATION

- History has shown a strong correlation between higher market concentration from a single supplier and stronger room rates.
- Due to the Marriott-Starwood merger, many markets will see large increases in supplier concentration.
- The pricing power that comes from decreased competition will drive up ADR in more highly concentrated markets.

Market Concentration is Measured by the Herfindahl-Hirschman Index (HHI)

MARR-WOOD IMPACT ON ADRS

History has shown a positive relationship between market concentration and ADRs



Source: CBRE Hotels' Americas Research; STR, Q3 2016.

MARKETS WITH HIGH CONCENTRATION

With the merger, there have been shifts from moderately concentrated to highly concentrated markets

Pre-Merger

Tract	HHI
Phoenix Central, AZ	1,982
Arlington, VA	1,934
Fairfax/Tysons Corner, VA	1,883
Indianapolis CBD, IN	1,874
Raleigh Crabtree Mall, NC	1,857

Post-Merger

Tract	HHI
Indianapolis CBD, IN	2,837
Arlington, VA	2,660
Fairfax/Tysons Corner, VA	2,603
Phoenix Central, AZ	2,297
West Plano/Frisco, TX	2,276

- Un-concentrated Markets: HHI below 1500
- Moderately Concentrated Markets: HHI between 1500 and 2500
- Highly Concentrated Markets: HHI above 2500

MARKETS WITH THE GREATEST INCREASE IN CONCENTRATION

Hotels in these markets could see greater pricing power from decreased competition

Tract	HHI Pre	HHI Post	Difference
Indianapolis CBD, IN	1,874	2,837	962
Denver CBD, CO	1,425	2,256	831
Philadelphia CBD, PA	1,374	2,182	808
Charlotte CBD/Airport, SC	1,239	1,975	736
Arlington, VA	1,934	2,660	725
Boston CBD/Airport, MA	960	1,683	724
Pittsburgh CBD, PA	1,421	2,142	721
Fairfax/Tysons Corner, VA	1,883	2,603	720
Kansas City, KS	1,034	1,736	702
West Plano/Frisco, TX	1,592	2,276	685
Los Angeles Airport, CA	1,178	1,839	661
Dedham/Marlborough, MA	1,440	2,099	659
Cleveland CBD, OH	1,669	2,266	597
Philadelphia Airport/Stadium, PA	1,559	2,128	569
Dulles Airport Area, VA	1,591	2,151	560
Seattle CBD, WA	867	1,421	554
Minneapolis CBD, MN	1,431	1,978	547
Scottsdale, AZ	865	1,367	502
Tampa CBD/Airport, FL	1,260	1,759	498

Source: CBRE Hotels' Americas Research; STR, Q3 2016.

CBRE HOTELS

The World's Leading Hotel Experts.

**WHERE IS EACH
SECTOR/MARKET IN THE
CYCLE?**

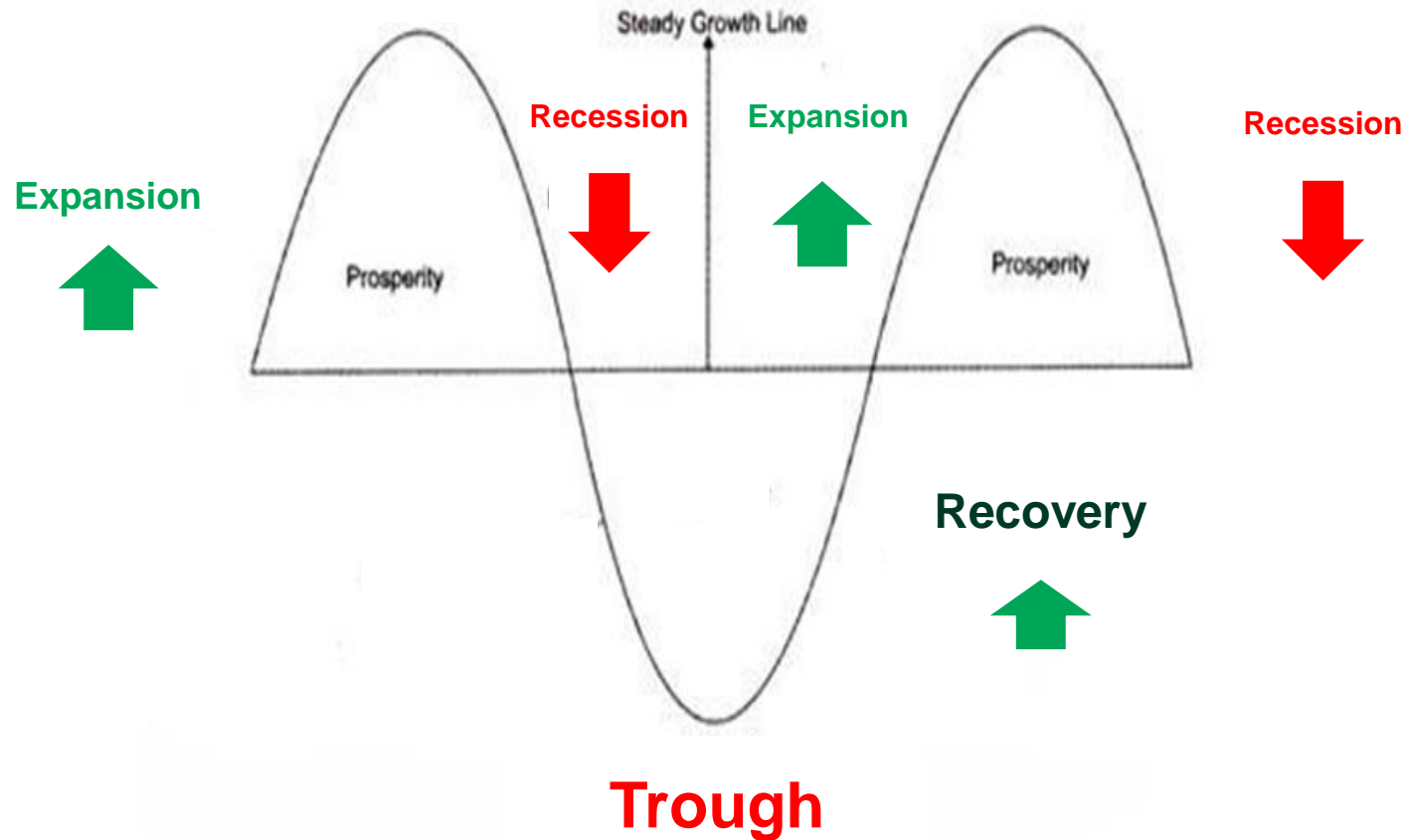


THE HOTEL BUSINESS CYCLE & NEXT 2 YEARS

- The industry has had 6 straight years of RevPAR gains, but not all sectors or markets have fully recovered from the last recession.
- The outlook for employment is good for the next 2 years, after that, there is more uncertainty.
- CBRE Hotels' Americas Research Forecast calls for at least 2 more years of positive RevPAR.

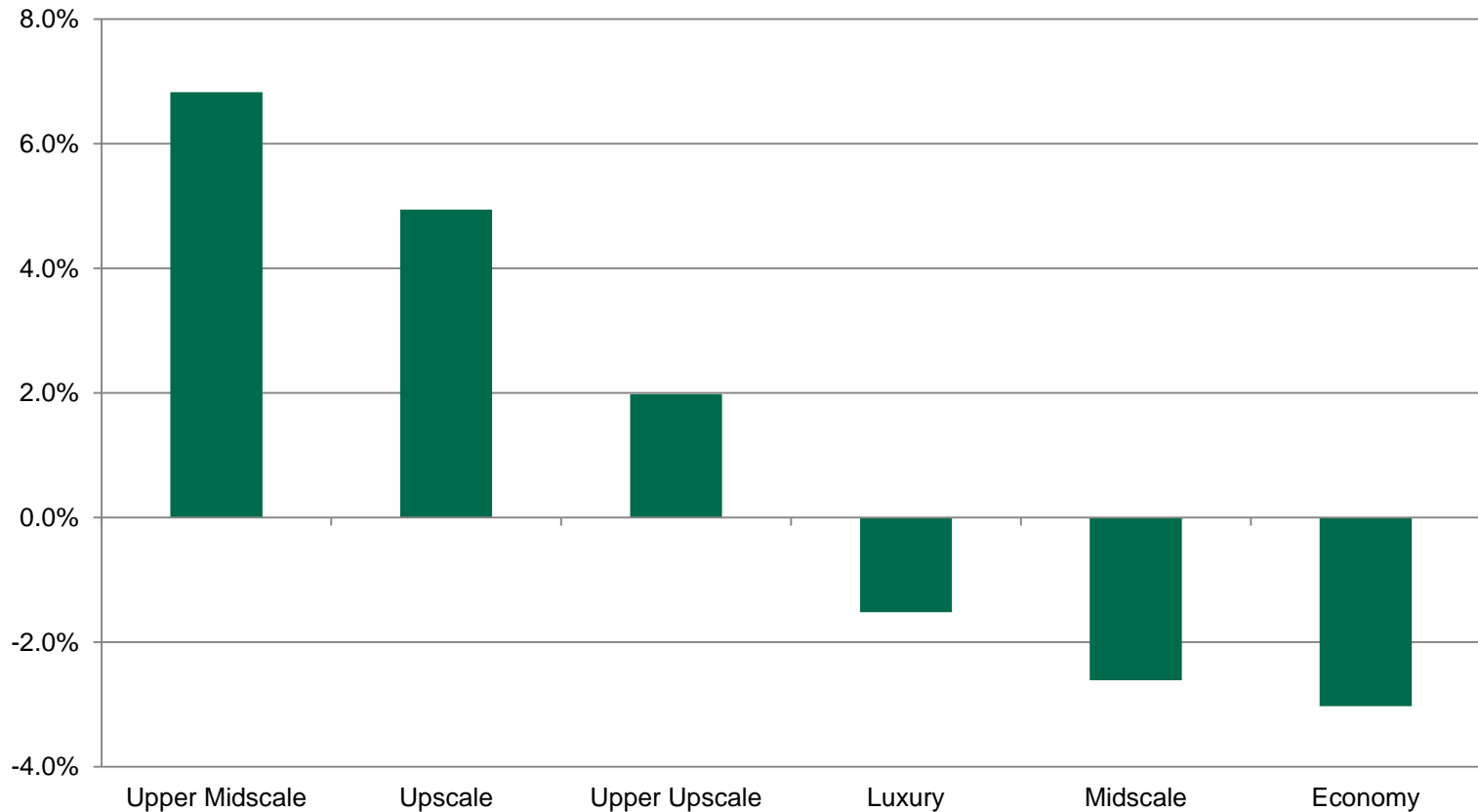
TIMES ARE GOOD FOR MOST, BUT NOT ALL

THE BUSINESS CYCLE



REAL REVPAR CHANGE FROM PREVIOUS PEAK

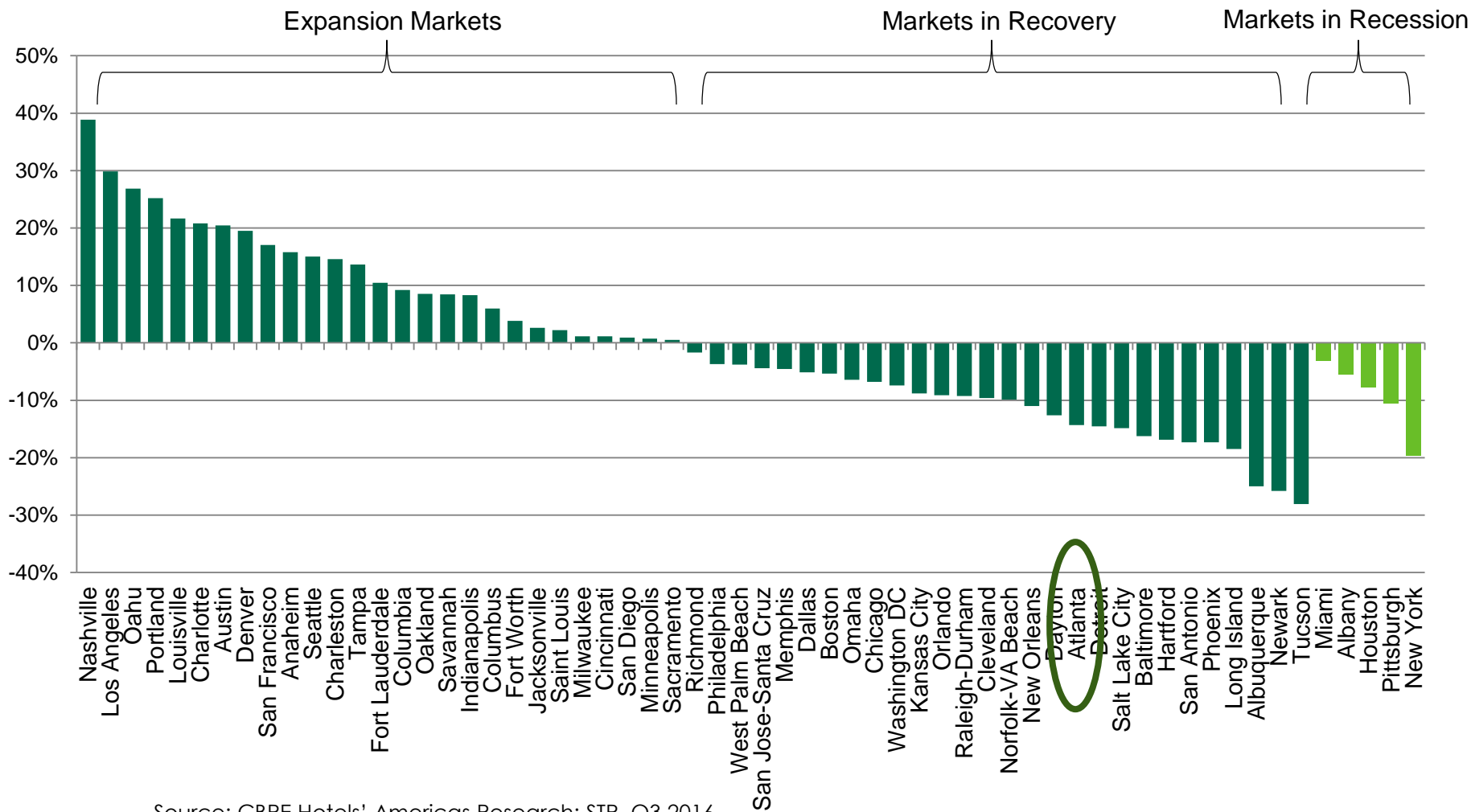
Since the previous peak in the cycle, the Upper Midscale and Upscale hotel categories are making a strong recovery.



Source: CBRE Hotels' Americas Research; STR, Q3 2016.

REAL REVPAR CHANGE FROM PRE-RECESSION PEAK

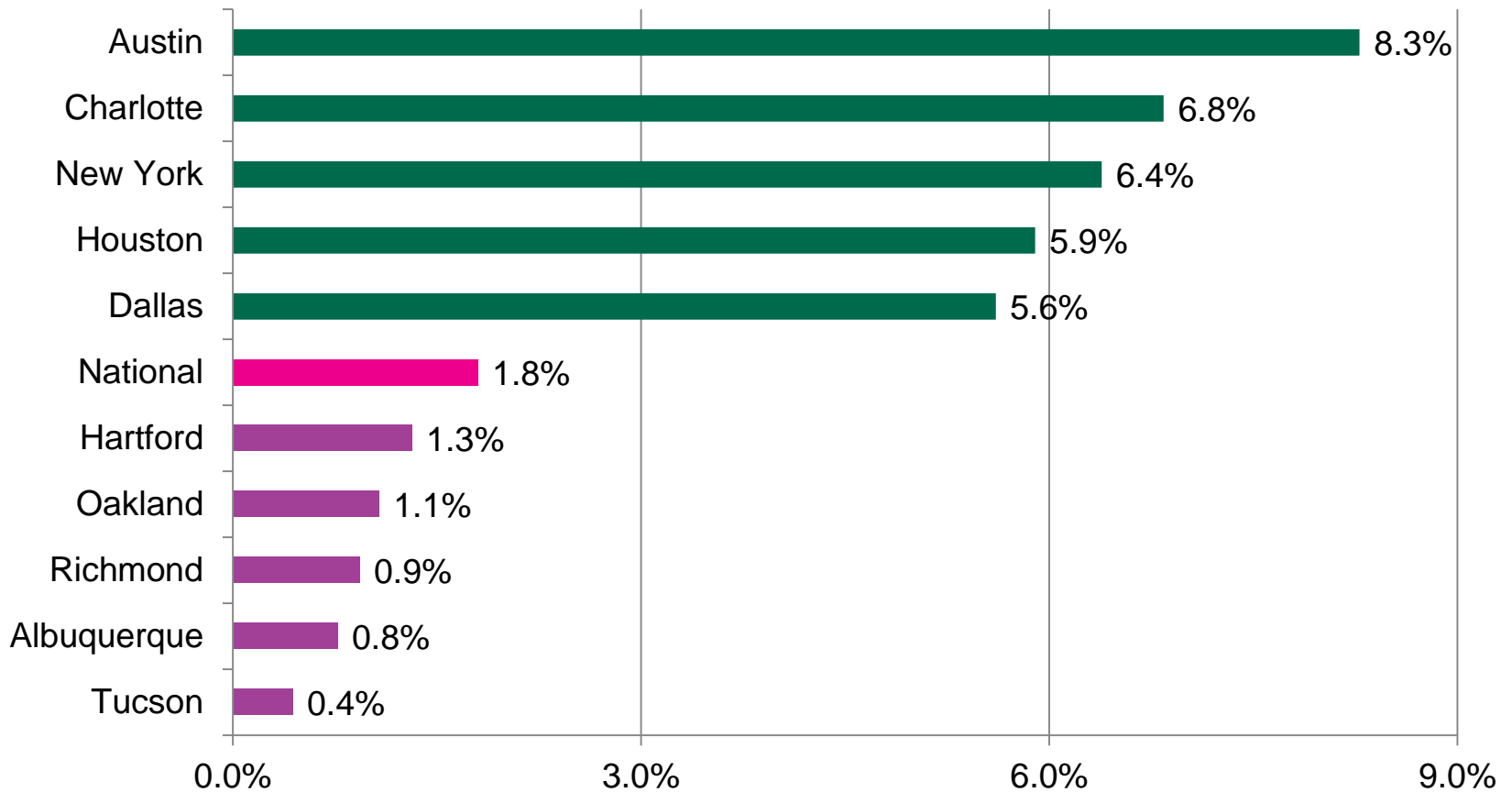
Not all markets have fully recovered from the last recession.



Source: CBRE Hotels' Americas Research; STR, Q3 2016.

GREATEST / LEAST CHANGE IN SUPPLY

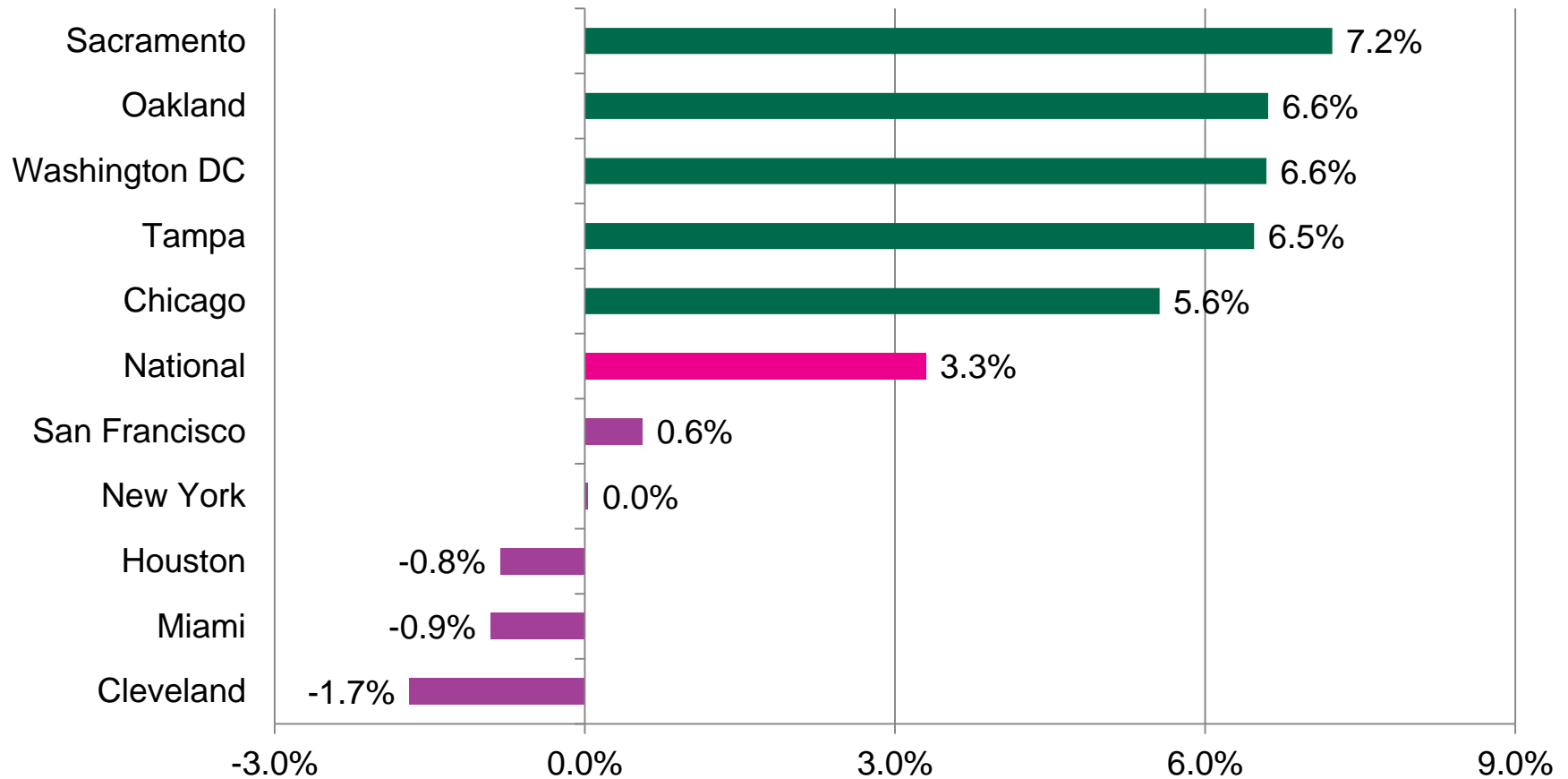
Forecast Change – 2016 to 2017



Source: CBRE Hotels' Americas Research, December 2016 – February 2017 Hotel Horizons® Forecast

GREATEST / LEAST CHANGE IN ADR

Forecast Change – 2016 to 2017



Source: CBRE Hotels' Americas Research, December 2016 – February 2017 Hotel Horizons® Forecast

U.S. BASELINE FORECAST

Forecast calls for a continual decline in RevPAR growth mainly due to slowing employment gains and new supply diluting ADR.

	Long Run Average	2013	2014	2015	2016F	2017F
Supply	1.9%	0.6%	0.7%	1.0%	1.6%	1.8%
Demand	2.0%	2.0%	4.1%	2.7%	1.4%	1.5%
Occupancy	62.0%	62.2%	64.3%	65.4%	65.3%	65.0%
ADR	3.0%	3.8%	4.6%	4.5%	3.3%	3.3%
RevPAR	3.2%	5.2%	8.2%	6.2%	3.2%	2.9%

Source: CBRE Hotels' Americas Research; STR, Q3 2016.



ATLANTA

ATLANTA FORECAST

Atlanta

2016

2017

	December <u>2015</u>	Dec. 2016 <u>Update</u>	December <u>2015</u>	Dec. 2016 <u>Update</u>
Occupancy	70.5%		70.7%	
ADR	7.1%		6.2%	
RevPAR	7.8%		6.5%	

Pretty Much as Expected

Inflation Stayed Low

Source: CBRE Hotels' Americas Research –December 2015 + 2016, Hotel Horizons® Report, STR

ATLANTA MSA - ALL HOTELS

ADR Growth to Remain Strong

	2013	2014	2015	2016F	2017F	Long-Term Average
Occupancy	63.1%	68.2%	69.9%	69.8%	69.2%	62.6%
% Change	3.7%	7.9%	2.7%	-0.1%	-0.8%	-
ADR	\$87.77	\$91.86	\$97.77	\$103.64	\$108.25	-
% Change	2.1%	4.7%	6.4%	5.9%	4.4%	2.3%
RevPAR	\$55.35	\$62.52	\$68.35	\$72.31	\$74.90	-
% Change	5.9%	13.0%	9.3%	5.8%	3.6%	2.8%

Source: CBRE Hotels Americas' Research—December 2016 Hotel Horizons® Report, STR.

ATLANTA MSA - ALL UPPER-PRICED HOTELS

OCCUPANCY GROWTH GIVES WAY TO ADR INCREASES

	2013	2014	2015	2016F	2017F	Long-Term Average
Occupancy	68.5%	72.3%	74.1%	74.1%	73.0%	66.3%
% Change	+2.2%	+5.5%	+2.5%	0.1%	-1.6%	--
ADR	\$123.58	\$129.26	\$136.61	\$143.87	\$150.95	--
% Change	+2.3%	+4.6%	+5.7%	+5.3%	+4.9%	+2.3%
RevPAR	\$84.67	\$93.47	\$101.22	\$106.67	\$110.14	--
% Change	+4.5%	+10.4%	+8.3%	+5.4%	+3.3%	+3.1%

Source: CBRE Hotels Americas' Research–December 2016 Hotel Horizons® Report, STR

ATLANTA MSA - ALL LOWER-PRICED HOTELS

OCCUPANCY LEVEL BEGINS TO PLATEAU

	2013	2014	2015	2016F	2017F	Long-Term Average
Occupancy	59.1%	64.9%	66.7%	66.5%	66.3%	60.1%
% Change	+5.1%	9.8%	2.8%	-0.3%	-0.2%	--
ADR	\$57.32	\$60.73	\$65.42	\$69.91	\$72.90	--
% Change	+3.3%	+6.0%	+7.7%	+6.9%	4.3%	+1.9%
RevPAR	\$33.86	\$39.40	\$43.63	\$46.48	\$48.36	--
% Change	+8.6%	+16.4%	+10.7%	+6.5%	+4.1%	+2.4%

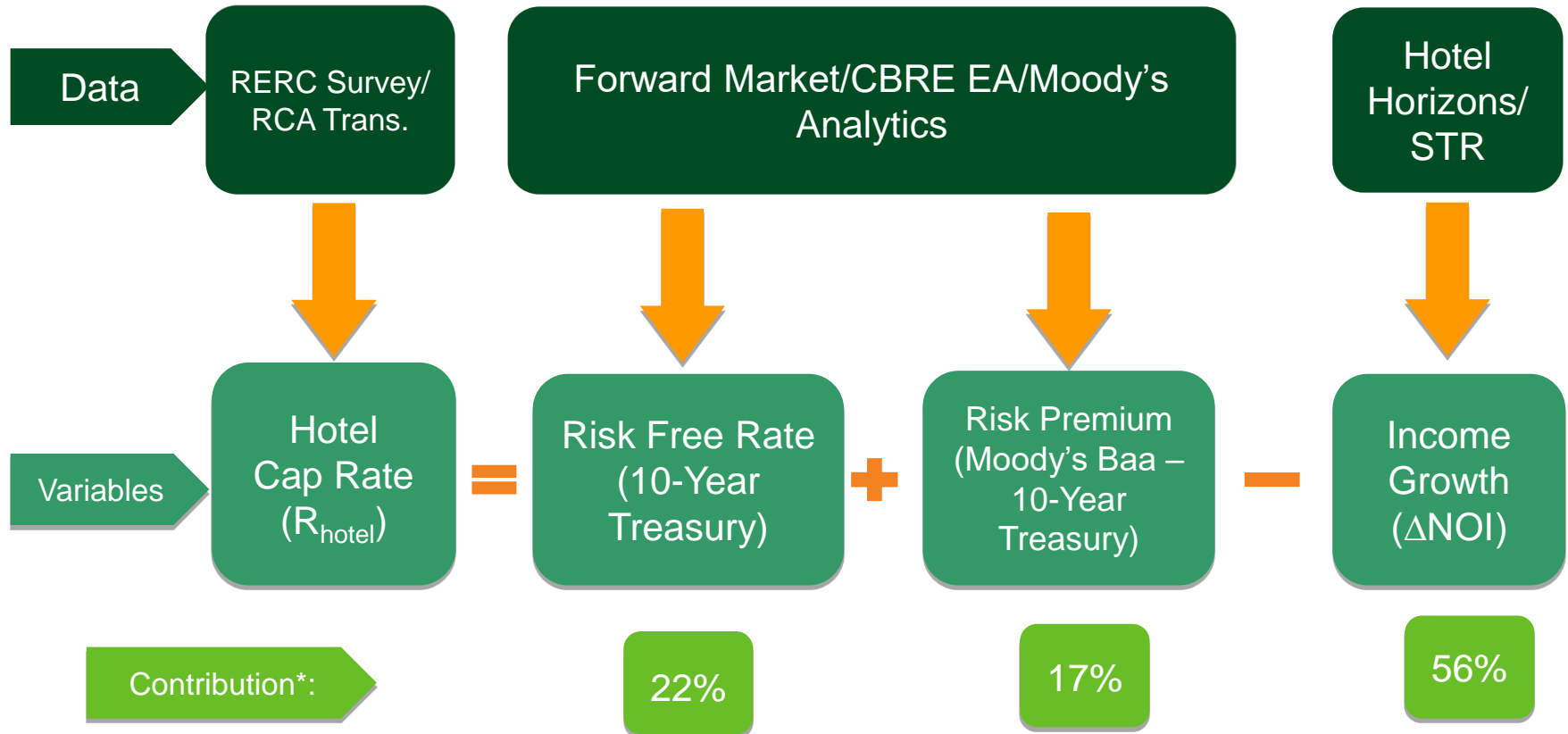
Source: CBRE Hotels Americas' Research–December 2016 Hotel Horizons® Report, STR



CAP RATE FORECASTS

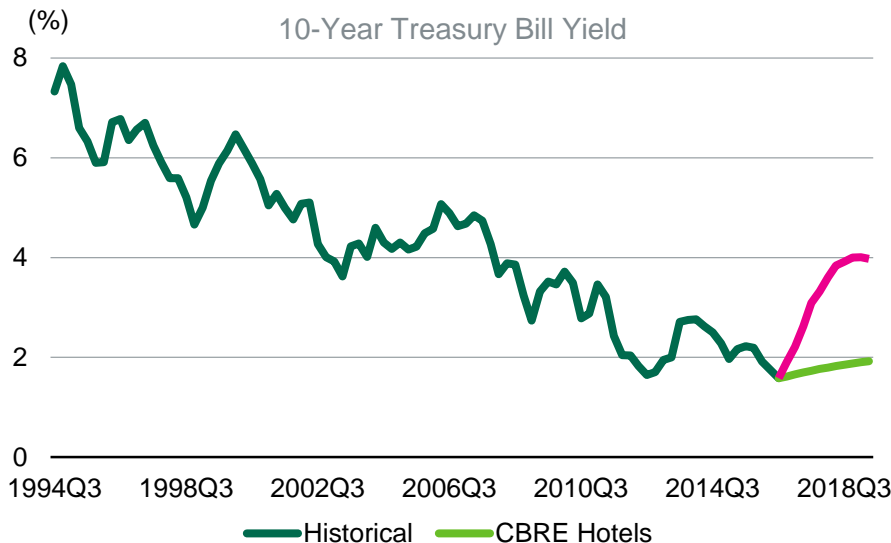
HOTEL CAP RATE FORECASTING MODEL

Market Return, Risk, and Income Growth (from Gordon Growth Model)

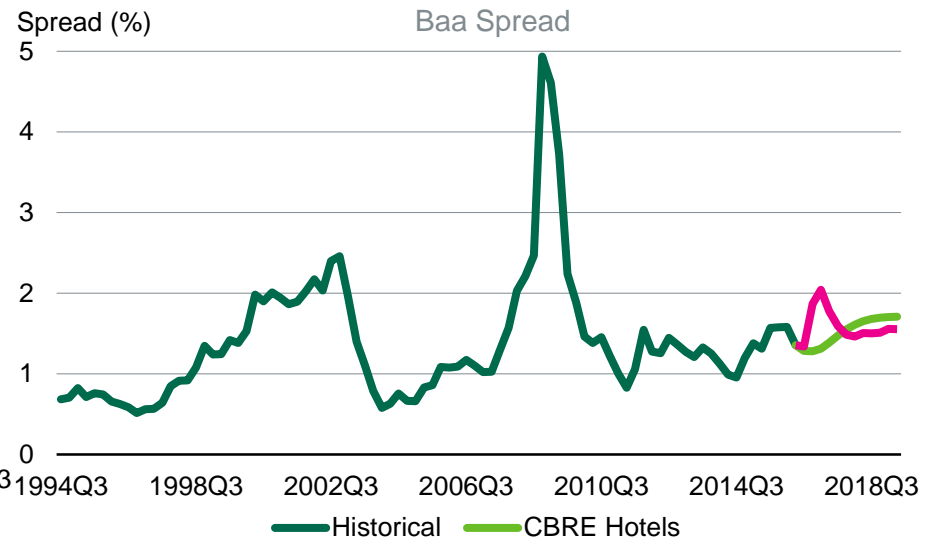


CAP RATE FORECASTING METHOD AND DATA SOURCES

- Four exogenous predictive variables: Δ NOI, 10-year Treasuries, Baa Bond yield-to-10-year treasury spread, change in Real Estate Debt to GDP Ratio
- Two sources forecast 10-Year Treasuries yield
 - Moody's Analytics Forecast
 - Market Expectations
- Two sources for Baa bond yield forecasts
 - Moody's Analytics Forecast
 - Mean Reversion Forecast



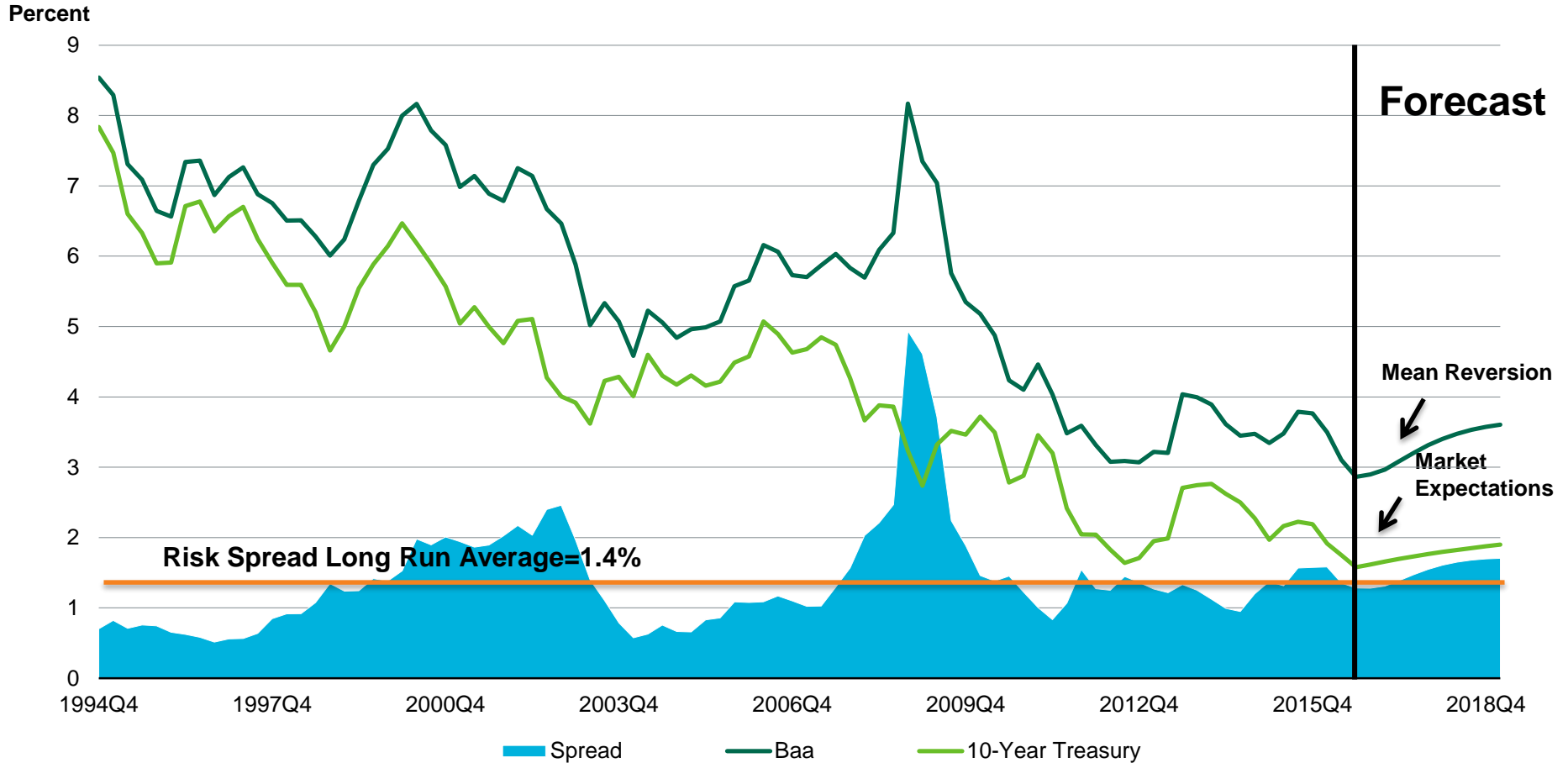
Sources: CBRE Hotels, Moody's. Q3 2016.



Sources: CBRE Hotels, Moody's. Q3 2016.

RISING INTEREST RATES AND RISK SPREADS

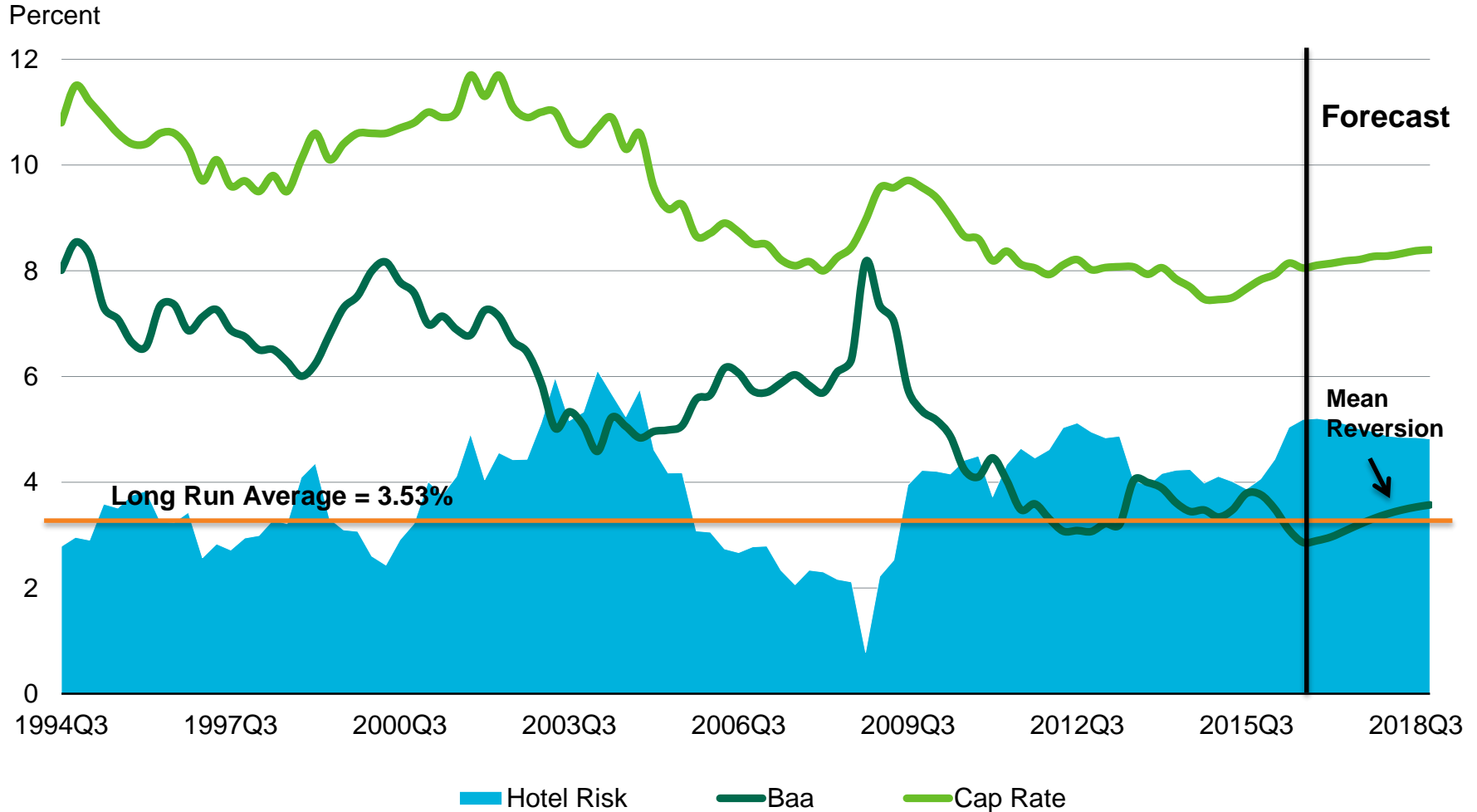
BAA BONDS MINUS 10-YEAR TREASURY



Sources; CBRE Hotels' Americas Research, Moody's. Q3 2016.

RISING RATES AND HOTEL RISK

HOTEL CAP RATES MINUS BAA BONDS



WHERE ARE CAP RATES GOING? BASED ON MARKET EXPECTATIONS

	10-Year Treasury	Risk Premium (Baa - 10-Yr Treasury)	Real Estate Risk Premium (Hotel Cap Rate – Baa)	Hotel Cap Rate
2010	3.22	1.38	4.32	8.92
2011	2.78	1.11	4.29	8.18
2012	1.81	1.33	4.93	8.07
2013	2.35	1.26	4.42	8.03
2014	2.54	1.07	4.15	7.76
2015	2.14	1.46	4.01	7.61
2016F	1.74	1.37	4.97	8.06
2017F	1.81	1.44	5.06	8.2
2018F	1.94	1.66	4.85	8.35
L.R.A. (1994- 2015)	4.46	1.38	3.53	9.37

Forward market indicates treasuries will rise slowly

Slightly overshooting LRA

Cap rates will remain below the LRA

CBRE HOTELS

The World's Leading Hotel Experts.

THANK YOU

Mark.Woodworth@cbre.com

Jamie.Lane@cbre.com

<https://pip.cbrehotels.com/presentations>