



Lodging - US RevPAR +3.6% Y/Y Last Week: Group outperformance on a low occ week

Group helped by very easy y/y comps in Seattle and SF

What's Incremental To Our View

Overall U.S. RevPAR was +3.6% Y/Y for the week ending 2/3/2018, per STR, down from the prior week's result of +4.5%. (2-year stacked RevPAR was +2.5% vs. +8.4% in the prior week.) Independent hotels (about 1/3rd of the data set) were +3.1% y/y. Luxury (+5.3%) was the strongest chain scale for branded hotels; Upper Upscale was only +2.2%. Upper Midscale, Midscale, and Economy chains at +4.4%, +3.7%, and +4.5% all beat the overall US hotel industry average. Within Upper Upscale & Luxury class hotels, Group (+3.6% vs. +6.7% prior week) was stronger than Transient (+1.5% vs. +4.0% prior week).

Last week's results were impacted by multiple factors:

- Last week was a low occupancy week (~56%). We believe that a low occupancy period can create volatility in y/y RevPAR growth.
- Group was the outperformer last week, helped by very easy y/y comps in Seattle and San Francisco (Group occupancy was down more than 45% in the 2017 comp for both cities). Additionally, we are of the belief that results may have been slightly helped (basis points, not percentage points) by last-minute Group bookings that did not disappoint like they had done for the prior several years; [please see our most recent RevPAR Monitor for additional color](#).
- We believe that the net impact of the Super Bowl shifting to Minneapolis from Houston would have been more muted (less positive impact to headline RevPAR) had it not been for the hurricane-related demand that is continuing in Houston. The 2-year Houston RevPAR performance is still +9.5% (from the comparable 2016 week).
 - The hurricane markets of Miami and Orlando still performed relatively well, as noted below.
- Despite the mid-single digit headline RevPAR result, we note that Upper Upscale ADR growth was just +0.6%. This suggests to us that some hotel managers were unable to significantly push rate and this reflects the steady (albeit low growth) transient corporate demand environment.

For the month of January, we estimate that full-service branded domestic hotels (the typical Hilton [HLT, \$80.69, Buy], Hyatt [H, \$78.24, Hold], or Marriott [MAR, \$140.03, Hold] hotel) will finish at approx. +1.5-2.0% ([in-line with what we have been forecasting](#)). We estimate that the overall industry will finish approximately +2.5-3.0% (unchanged from our prior estimate) driven in part by strength in the

C. Patrick Scholes
212-319-3915
patrick.scholes@suntrust.com

Bradford Dalinka
212-303-4190
bradford.dalinka@suntrust.com

Gregory J. Miller
212-303-4198
gregory.j.miller@suntrust.com

Jeffrey Stantial
212-590-0993
jeffrey.stantial@suntrust.com

What's Inside

Weekly STR results and analysis

Economy chain scale. Please note that reported monthly results include hotels that are not in the weekly data set.

RevPAR details:

- **Luxury was the strongest chain scale. Midscale and Upper Midscale underperformed by 160 bps and 90 bps respectively:** Luxury RevPAR (+5.3%), Upper Upscale (+2.2%), Upscale (+2.5%), Upper Midscale (+4.4%), Midscale (+3.7%), and Economy (+4.5%). Independent hotels (+3.1%) underperformed headline U.S. RevPAR.
- **Within Upper Upscale & Luxury class hotels, Group was stronger than Transient:** Transient segment (individual business and leisure travelers) RevPAR was +1.5% (vs. +4.0% last week) and Group segment RevPAR was +3.6% (vs. +6.7% last week).
- **Chicago (+11.1%) was the strongest of the top 5 markets:** Boston (+3.8%), LA (-1.3%), NYC (+7.2%), and D.C. (-0.7%).
- **Other relevant markets:**
 - **San Francisco was flattish:** RevPAR was +0.6% vs. +0.4% last week. We anticipate weak y/y results in San Francisco for 1Q due to the renovations at the Moscone Center (comps get easier starting in 2Q).
 - **Texas results were mixed:** Dallas RevPAR was +6.9% (vs. +8.0% last week). Houston RevPAR was -45.1% (vs. +12.7% last week).
 - **Other hurricane-impacted markets continue to see strong performance:** Miami (+15.4% vs. +15.0% last week); Orlando (+10.5% vs. +9.9% last week).

The lodging and leisure stocks:

- **Based on our last several months of RevPAR data analytics observations, we are less cautious on the hotel REITS than we were at the same time last year, though to be clear not overly bullish.** Given recent forward-looking demand and pricing trends, we continue to have higher confidence that numbers will not need to be cut in 2018 and that dividends will be paid (though we're not expecting dividend raises of any size this year). We see the major issue/challenge for the hotel owners in 2018 as cost containment. **In an environment of property-level operating costs of 2.5%+ vs. flat to 2% RevPAR growth**, this does not bode well for margin expansion for hotel owners (outside of PK, which has some unique self-help drivers). A second strike against the hotel REITS at this moment is that the growth in RevPAR is primarily driven by the leisure segment as opposed to the corporate segment, the latter being the bread and butter customer for the hotel REITS. Of the hotel REITS, PK is our favorite.
- **For the C-Corps, it's all good until it isn't, though.** While most C-corps trade at expensive multiples by historical standards (not the case for the hotel REITS as the gap between hotel REITS and C-Corps is as wide as it has ever been), we note that historically asset-lite C-Corp multiples can get "wacky" (See Four Seasons and Choice Hotels in the prior cycle, for example) and can stay expensive up to the point where a management team delivers unexpected bad news (then look out below!); Based on our data checks and industry conversations we are not expecting such unexpected bad news (the "all good until it isn't" part) in February/March earnings releases as it relates to 4Q results and forward expectations.

Model Update: We are correcting our estimates we had updated in yesterday's 4Q earnings preview for Ryman Hospitality Properties (RHP, \$69.67, Hold) due to a model error. Our 2017 EBITDA goes to \$357M from \$354M and 2017 AFFO/share goes to \$5.57 from \$5.55. Our 2018 EBITDA goes to \$380M from \$368M and 2018 AFFO/share goes to \$6.13 from \$6.01.

Weekly RevPAR Summary

YoY % change in RevPAR													
	U.S.	Upper		Upper		Inde-		New					
		Luxury	Upscale	Upscale	Midscale	Economy	pendent	York	Boston	LA	Chicago	DC	
12/9/2017	6.8%	8.2%	3.8%	5.6%	6.0%	5.8%	6.7%	8.9%	-1.2%	-0.7%	13.2%	1.2%	-6.7%
12/16/2017	8.1%	7.9%	6.7%	7.9%	7.3%	6.3%	5.8%	9.4%	6.7%	3.5%	7.5%	-2.9%	-3.1%
12/23/2017	7.6%	-1.8%	10.2%	10.7%	13.4%	9.6%	8.8%	2.8%	3.3%	12.9%	3.2%	20.0%	7.9%
12/30/2017	-6.7%	-1.0%	-9.0%	-6.5%	-6.0%	-5.9%	-3.5%	-8.6%	-10.7%	-8.7%	-0.7%	-17.9%	-14.1%
1/6/2018	9.6%	25.0%	11.8%	11.7%	10.1%	9.9%	9.8%	2.5%	34.0%	24.4%	14.5%	13.8%	1.9%
1/13/2018	5.5%	6.2%	0.8%	0.2%	0.8%	1.0%	4.4%	16.5%	-1.6%	-4.2%	-2.4%	-10.6%	-3.6%
1/20/2018	-3.2%	-7.2%	-7.1%	-2.3%	-0.1%	1.2%	2.9%	-4.9%	4.8%	0.7%	4.3%	6.2%	-64.1%
1/27/2018	4.5%	6.1%	3.3%	1.2%	1.2%	2.8%	5.4%	8.5%	10.1%	0.6%	2.5%	44.7%	-13.4%
2/3/2018	3.6%	5.3%	2.2%	2.5%	4.4%	3.7%	4.5%	3.1%	7.2%	3.8%	-1.3%	11.1%	-0.7%

Decent group week helped by easy y/y comps

Luxury and Economy led the industry

Chicago and NYC led the Top 5 markets

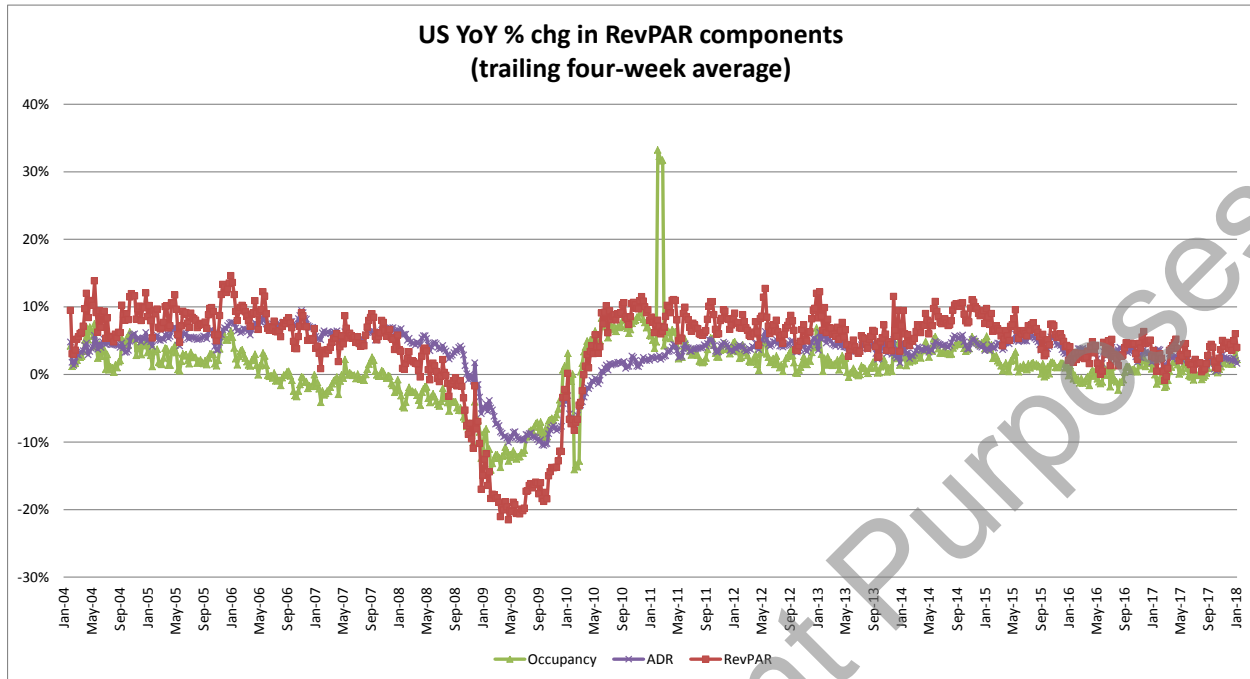
1Q15	8.0%	6.3%	6.0%	7.0%	8.5%	8.8%	9.2%	8.9%	-4.3%	13.8%	7.7%	11.4%	6.3%
2Q15	6.5%	5.5%	5.4%	5.9%	6.3%	6.6%	6.7%	7.1%	-1.8%	7.1%	7.4%	11.0%	11.7%
3Q15	5.9%	4.4%	4.0%	5.7%	5.7%	6.4%	6.1%	6.8%	0.6%	7.1%	11.1%	5.1%	0.3%
4Q15	4.8%	2.7%	3.8%	4.2%	4.9%	3.7%	4.4%	5.9%	-2.0%	5.3%	8.3%	1.4%	2.1%
1Q16	2.7%	1.6%	1.9%	2.2%	2.0%	0.0%	1.8%	4.0%	-1.2%	-3.0%	16.6%	-4.8%	3.1%
2Q16	3.5%	0.8%	2.9%	3.1%	3.2%	3.2%	3.0%	4.2%	-4.5%	1.5%	11.1%	-1.0%	3.5%
3Q16	3.3%	1.5%	2.5%	2.0%	1.8%	2.5%	3.0%	5.1%	-2.5%	-0.5%	9.3%	1.2%	5.5%
4Q16	3.2%	1.9%	0.6%	1.2%	2.2%	3.9%	4.4%	5.1%	0.9%	-1.6%	6.9%	3.3%	8.0%
1Q17	3.4%	2.1%	3.0%	1.0%	2.4%	3.5%	2.6%	5.2%	-1.3%	-1.1%	-2.5%	1.5%	16.1%
2Q17	2.7%	2.3%	0.6%	0.6%	1.2%	2.4%	3.7%	5.1%	0.2%	4.4%	3.6%	0.8%	0.8%
3Q17	1.9%	0.5%	-0.7%	0.7%	1.8%	3.5%	2.9%	3.1%	-0.9%	-0.2%	-1.2%	-5.0%	-0.6%
4Q17	4.2%	4.5%	3.2%	3.8%	3.9%	3.7%	3.7%	4.1%	0.8%	3.7%	4.2%	-2.5%	2.2%

YoY % change in ADR													
	U.S.	Upper		Upper				Inde-	New				
		Luxury	Upscale	Upscale	Midscale	Midscale	Economy	pendent	York	Boston	LA	Chicago	DC
12/9/2017	4.0%	7.2%	2.3%	2.8%	2.8%	3.4%	4.3%	5.8%	-0.8%	-0.6%	6.5%	0.4%	-1.3%
12/16/2017	3.5%	1.5%	2.7%	3.4%	2.8%	3.7%	3.8%	3.5%	5.3%	-0.5%	5.1%	-1.9%	-0.5%
12/23/2017	0.5%	-5.9%	1.0%	1.8%	2.8%	2.8%	3.6%	-1.7%	-1.5%	1.3%	4.9%	4.1%	1.1%
12/30/2017	-1.4%	1.7%	-2.6%	-2.5%	-1.1%	0.0%	0.5%	-2.2%	-10.3%	-7.2%	2.0%	-11.5%	-7.2%
1/6/2018	5.8%	15.9%	6.9%	6.8%	4.8%	5.7%	5.9%	1.5%	23.8%	7.4%	10.6%	5.1%	-1.9%
1/13/2018	5.4%	7.0%	2.5%	1.5%	1.4%	2.2%	3.8%	13.8%	-2.1%	-2.7%	2.8%	-3.8%	-2.5%
1/20/2018	-1.7%	-6.1%	-3.7%	-0.9%	0.1%	1.6%	2.2%	-1.5%	-0.1%	0.0%	5.9%	3.0%	-54.4%
1/27/2018	3.9%	2.3%	2.5%	2.3%	2.3%	3.3%	4.6%	6.3%	4.2%	-0.9%	3.4%	17.1%	-2.9%
2/3/2018	2.2%	2.7%	0.6%	1.1%	2.2%	3.0%	4.1%	2.1%	1.8%	-0.9%	2.5%	2.1%	-1.7%
1Q15	4.7%	5.8%	4.7%	5.2%	4.7%	4.7%	5.5%	4.7%	-4.1%	7.3%	6.5%	7.1%	1.7%
2Q15	4.8%	4.9%	4.8%	5.3%	4.6%	4.3%	5.4%	4.6%	-1.5%	6.8%	7.1%	9.2%	7.9%
3Q15	4.5%	3.7%	3.6%	5.2%	4.4%	4.6%	5.0%	4.6%	0.3%	7.4%	9.6%	5.3%	-0.1%
4Q15	3.6%	2.3%	3.0%	3.9%	3.5%	3.0%	4.2%	3.8%	-2.3%	3.9%	6.1%	2.3%	1.0%
1Q16	3.2%	1.9%	2.7%	3.2%	2.6%	1.7%	3.3%	3.7%	-3.1%	1.4%	11.3%	-1.9%	1.1%
2Q16	2.9%	1.5%	2.2%	2.9%	2.8%	2.7%	3.4%	3.0%	-3.1%	3.3%	9.4%	0.3%	2.1%
3Q16	3.4%	1.5%	2.5%	2.7%	2.4%	3.1%	3.6%	4.4%	-2.7%	2.3%	7.5%	1.9%	3.5%
4Q16	2.6%	2.1%	1.4%	2.2%	2.0%	2.2%	3.2%	3.8%	-1.2%	1.3%	5.8%	3.9%	4.1%
1Q17	2.5%	2.3%	2.4%	1.3%	1.6%	1.8%	2.4%	3.5%	-2.2%	0.0%	-0.2%	1.7%	13.6%
2Q17	2.2%	2.2%	1.2%	1.7%	1.5%	2.1%	2.3%	3.5%	-1.5%	4.1%	2.8%	1.5%	2.0%
3Q17	1.4%	1.4%	0.2%	0.8%	1.2%	1.9%	2.4%	2.2%	-2.0%	0.8%	1.8%	-2.4%	0.0%
4Q17	2.4%	2.2%	1.9%	1.8%	1.8%	2.5%	3.4%	2.1%	-0.2%	0.8%	4.6%	-2.0%	2.4%

YoY % change in Occupancy														
	U.S.	Upper		Upper			Inde-		New					
		Luxury	Upscale	Upscale	Midscale	Economy	pendent	York	Boston	LA	Chicago	DC		
12/9/2017	2.7%	1.0%	1.5%	2.7%	3.2%	2.3%	2.2%	3.0%	-0.5%	-0.1%	6.2%	0.8%	-5.5%	
12/16/2017	4.5%	6.3%	3.9%	4.3%	4.4%	2.5%	2.0%	5.7%	1.3%	4.1%	2.3%	-1.0%	-2.7%	
12/23/2017	7.1%	4.4%	9.2%	8.7%	10.3%	6.6%	5.0%	4.6%	4.8%	11.4%	-1.6%	15.3%	6.8%	
12/30/2017	-5.4%	-2.7%	-6.7%	-4.1%	-5.0%	-5.9%	-4.0%	-6.6%	-0.5%	-1.6%	-2.6%	-7.3%	-7.4%	
1/6/2018	3.6%	7.8%	4.6%	4.6%	5.0%	4.0%	3.7%	1.0%	8.2%	15.8%	3.6%	8.3%	3.9%	
1/13/2018	0.2%	-0.7%	-1.7%	-1.3%	-0.6%	-1.2%	0.6%	2.3%	0.5%	-1.5%	-5.0%	-7.1%	-1.1%	
1/20/2018	-1.5%	-1.1%	-3.6%	-1.4%	-0.2%	-0.4%	0.7%	-3.5%	4.8%	0.7%	-1.5%	3.1%	-21.2%	
1/27/2018	0.6%	3.8%	0.8%	-1.1%	-1.1%	-0.5%	0.8%	2.1%	5.7%	1.6%	-0.9%	23.6%	-10.8%	
2/3/2018	1.4%	2.5%	1.6%	1.4%	2.2%	0.6%	0.4%	0.9%	5.3%	4.7%	-3.7%	8.8%	1.0%	
1Q15	3.1%	0.5%	1.3%	1.7%	3.6%	3.9%	3.5%	4.0%	-0.2%	6.1%	1.1%	4.0%	4.6%	
2Q15	1.6%	0.6%	0.5%	0.6%	1.7%	2.2%	1.3%	2.3%	-0.3%	0.3%	0.3%	1.7%	3.5%	
3Q15	1.4%	0.6%	0.4%	0.5%	1.3%	1.8%	1.0%	2.1%	0.2%	-0.3%	1.3%	-0.1%	0.4%	
4Q15	1.2%	0.4%	0.8%	0.2%	1.3%	0.6%	0.2%	2.1%	0.3%	1.4%	2.0%	-0.9%	1.1%	
1Q16	-0.5%	-0.3%	-0.8%	-0.9%	-0.6%	-1.7%	-1.5%	0.3%	2.0%	-4.3%	4.7%	-3.0%	2.0%	
2Q16	0.6%	-0.7%	0.7%	0.2%	0.4%	0.5%	-0.4%	1.2%	-1.4%	-1.7%	1.5%	-1.4%	1.3%	
3Q16	0.0%	0.0%	-0.1%	-0.6%	-0.6%	-0.6%	-0.6%	0.7%	0.3%	-2.8%	1.7%	-0.7%	1.9%	
4Q16	0.6%	-0.2%	-0.8%	-1.0%	0.2%	1.7%	1.2%	1.2%	2.2%	-2.8%	1.0%	-0.5%	3.7%	
1Q17	0.9%	-0.2%	0.6%	-0.3%	0.7%	1.6%	0.2%	1.6%	1.0%	-1.1%	-2.4%	-0.2%	2.2%	
2Q17	0.5%	0.1%	-0.6%	-1.1%	-0.3%	0.4%	1.4%	1.6%	1.7%	0.3%	0.8%	-0.7%	-1.2%	
3Q17	0.5%	-0.9%	-0.9%	-0.1%	0.6%	1.6%	0.5%	0.9%	1.1%	-1.0%	-2.9%	-2.7%	-0.5%	
4Q17	1.8%	2.2%	1.3%	2.0%	2.1%	1.2%	0.3%	2.0%	1.0%	2.8%	-0.3%	-0.5%	-0.2%	

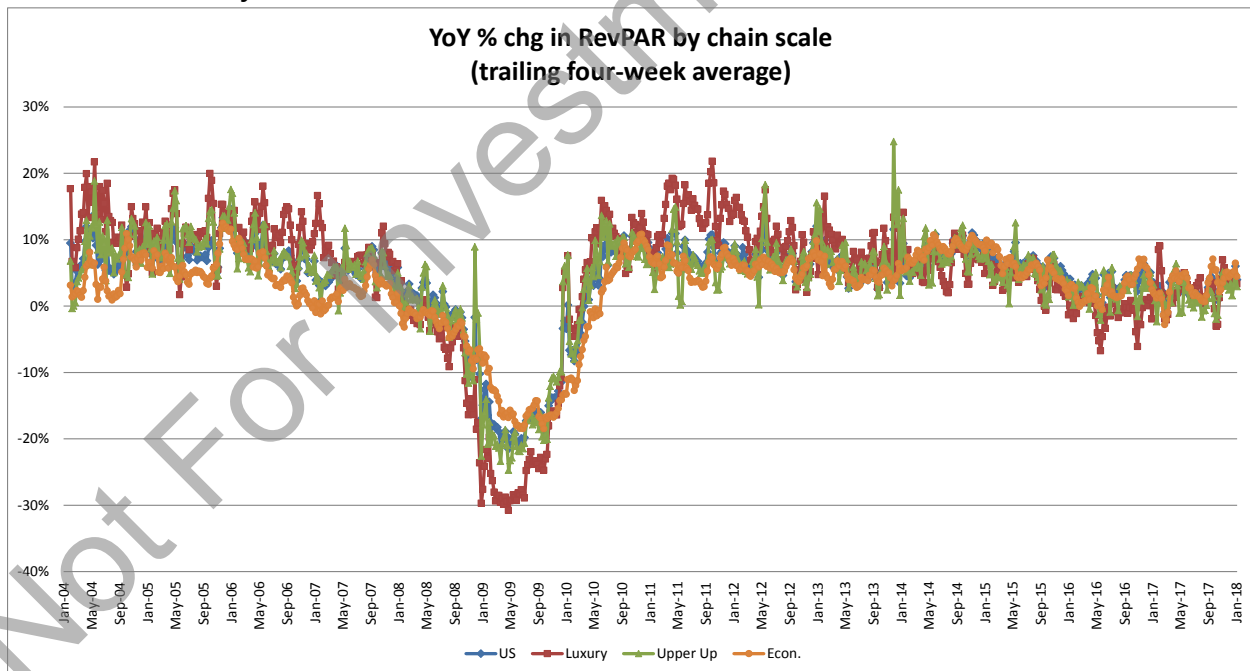
Source: STR data, STRH research

RevPAR Component Trends

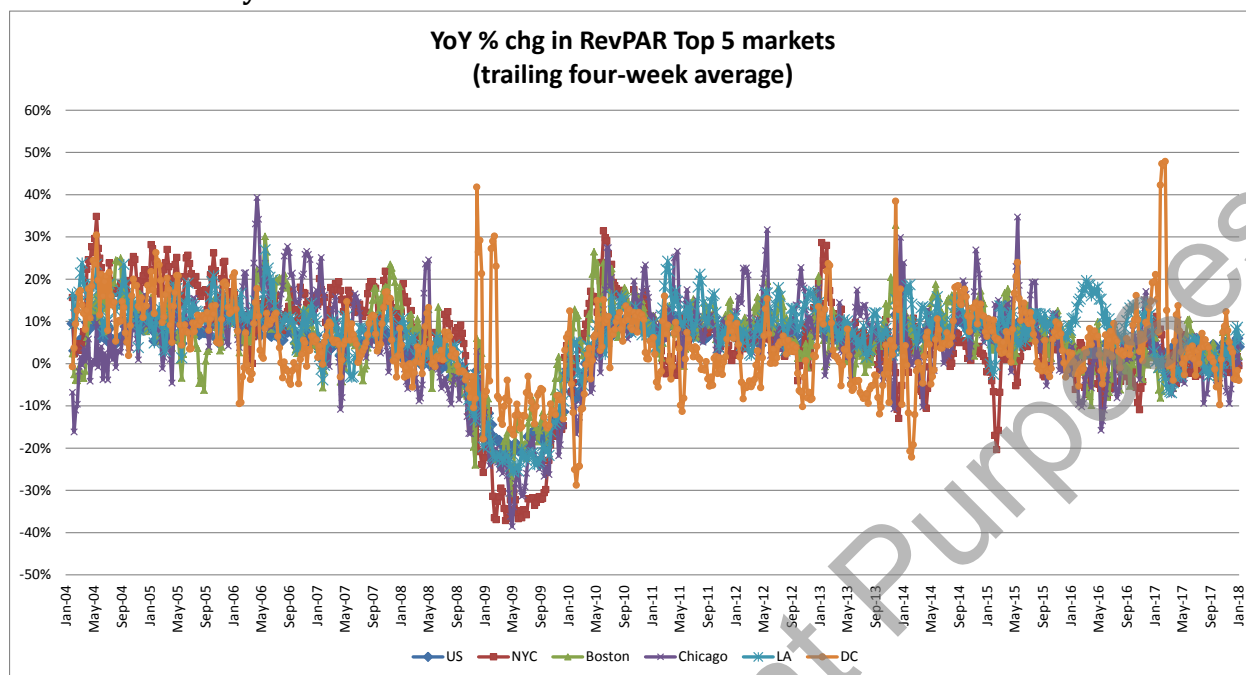


Source: STR data, STRH research

RevPAR Trends by Chain Scale



Source: STR data, STRH research

RevPAR Trends by Market

Source: STR data, STRH research

Price Target/Risks Summary

Lodging	TKR	Price 2/6/18	Rating	PT*	% upside down- side	2018E EBITDA (\$M)	Target EV/EBITDA Multiple	Risks
Chesapeake Lodging Trust	CHSP	\$25.89	Hold	\$24	-7%	\$180	12.0X	Upside risk: improvement in NY and Chicago markets Downside risk: softening of RevPAR trends in Boston or SF. Slowdown in real estate lending.
Choice Hotels	CHH	\$78.65	Hold	\$71	-10%	\$323	14.0X	Upside risk: conservative guidance. Downside risk: big catalyst of special dividend already baked into the stock.
DiamondRock Hospitality	DRH	\$11.20	Hold	\$11	-2%	\$249	11.5X	Upside risk: specific markets (esp. NYC) perform better than expected. Downside risk: company unable to locate properties to buy.
Host Hotels & Resorts	HST	\$19.42	Hold	\$19	-2%	\$1,431	12.5X	Upside risk: the company increases dividends by more than expected; NYC outperforms or is sold down at attractive multiples Downside risk: Group underperforms. NYC hotels underperform and asset sales do not happen.
Hyatt Hotels	H	\$78.24	Hold	\$68	-13%	\$773	13.0X	Upside risk: Transient and group trends outperform expectations Downside risk: ongoing misexecution and volatility.
Bluegreen Vacations Corporation	BXG	\$17.42	Buy	\$19	9%	\$167	7.9X	Downside risk: 3rd party induced defaults, worsen. Middle market customers underperform.
Hilton Grand Vacations	HGV	\$44.55	Buy	\$45	1%	\$413	11.5X	Downside risk: Disruption in a major market (HGV more concentrated than peers), issues with Japanese customer (HGV more exposed than peers), difficulty sourcing additional fee-for-service inventory deals
Hilton	HLT	\$80.69	Buy	\$77	-5%	\$2,070	14.7X	Downside risk: overhang from remaining big sponsor ownership, slowing pipeline
InterContinental Hotels	IHG	\$63.95	Hold	\$51	-20%	\$899	13.5X	Upside risk: further acceleration in returning capital to shareholders. Downside risk: trends continue to worsen in Greater China
ILG	ILG	\$30.04	Buy	\$30	0%	\$365	11.1X	Downside risk: membership base erosion as churn outstrips new timeshare sales
LaSalle Hotel Properties	LHO	\$28.34	Hold	\$26	-8%	\$319	12.5X	Upside risk: ability to increase dividend. Downside risk: heavy D.C. exposure.
Marriott International	MAR	\$140.03	Hold	\$108	-23%	\$3,149	14.8X	Upside Risk: Significant U.S macroeconomic improvement results in large recovery in transient corporate demand (and consequential >400 bps RevPAR improvement). Owned assets sell for premium prices relative to MAR expectations. Downside Risk: 2017 or 2018 is a recession year in the US. Geopolitical and policy risks negatively impact lodging demand.
Marriott Vacations	VAC	\$141.29	Hold	\$128	-9%	\$305	11.1X	Upside risk: Mix shift not an issue for margins, quicker execution/upside of buyback program; Downside risk: inability to achieve development margin targets, inability to close asset sales or asset sales are done at lesser values than expected
Park Hotels & Resorts	PK	\$27.65	Buy	\$32	16%	\$746	12.5X	Downside risk: Significant supply growth and macroeconomic challenges/shocks.
RLJ Lodging Trust	RLJ	\$21.43	Hold	\$22	3%	\$581	11.5X	Upside risk: RevPAR reaccelerates due to macroeconomic improvements, leading to estimate revisions and multiple expansion. Downside risk: Significant supply growth, struggle to source deals/lower leverage, macroeconomic challenges/demand shocks.
Ryman Hospitality Properties	RHP	\$69.67	Hold	\$60	-14%	\$380	12.3X	Upside risk: recovering group demand better than expected, better margin recovery. Downside risk: booking issues stickier than expected.
Sunstone Hotel Investors	SHO	\$16.02	Hold	\$15	-6%	\$340	12.0X	Upside risk: valuation discount to peers. Downside risk: San Diego, Boston, LA exposure. Insufficient ADR lift from Boston Park Plaza/Marriott Wailea Beach renovations.
Wyndham Worldwide Corp	WYN	\$119.77	Buy	\$112	-6%	\$1,485	10.0X	Downside risk: the timeshare business is especially vulnerable to economic softness.

* All of our Lodging price targets (ex-PK) are derived by applying a target EV/EBITDA multiple to our estimate for 2018 EBITDA

Source: FactSet, STRH research

Companies Mentioned in This Note

Bluegreen Vacations Corp. (BXG, \$17.42, Buy, C. Patrick Scholes)
Choice Hotels International, Inc. (CHH, \$78.65, Hold, C. Patrick Scholes)
Chesapeake Lodging Trust (CHSP, \$25.89, Hold, C. Patrick Scholes)
DiamondRock Hospitality Company (DRH, \$11.20, Hold, C. Patrick Scholes)
Hyatt Hotels Corporation (H, \$78.24, Hold, C. Patrick Scholes)
Hilton Grand Vacations Inc. (HGV, \$44.55, Buy, Bradford Dalinka)
Hilton Worldwide Holdings Inc. (HLT, \$80.69, Buy, C. Patrick Scholes)
Host Hotels & Resorts, Inc. (HST, \$19.42, Hold, C. Patrick Scholes)
InterContinental Hotels Group, PLC (IHG, \$63.95, Hold, C. Patrick Scholes)
ILG, Inc. (ILG, \$30.04, Buy, C. Patrick Scholes)
LaSalle Hotel Properties (LHO, \$28.34, Hold, C. Patrick Scholes)
Marriott International, Inc. (MAR, \$140.03, Hold, C. Patrick Scholes)
Park Hotels & Resorts Inc. (PK, \$27.65, Buy, C. Patrick Scholes)
Ryman Hospitality Properties, Inc. (RHP, \$69.67, Hold, C. Patrick Scholes)
RLJ Lodging Trust (RLJ, \$21.43, Hold, C. Patrick Scholes)
Sunstone Hotel Investors (SHO, \$16.02, Hold, C. Patrick Scholes)
Marriott Vacations Worldwide Corp. (VAC, \$141.29, Hold, C. Patrick Scholes)
Wyndham Worldwide Corporation (WYN, \$119.77, Buy, C. Patrick Scholes)
Four Seasons (private)

Analyst Certification

I, C. Patrick Scholes, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

I, Bradford Dalinka, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

Required Disclosures

Analyst compensation is based upon stock price performance, quality of analysis, communication skills, and the overall revenue and profitability of the firm, including investment banking revenue.

As a matter of policy and practice, the firm prohibits the offering of favorable research, a specific research rating or a specific target price as consideration or inducement for the receipt of business or compensation. In addition, associated persons preparing research reports are prohibited from owning securities in the subject companies.

Charts indicating changes in ratings can be found in recent notes and/or reports at our website or by contacting SunTrust Robinson Humphrey. Please see our disclosures page for more complete information at <https://suntrust.bluematrix.com/sellside/Disclosures.action>.

STRH Ratings System for Equity Securities

Dissemination of Research

SunTrust Robinson Humphrey (STRH) seeks to make all reasonable efforts to provide research reports simultaneously to all eligible clients. Reports are available as published in the restricted access area of our website to all eligible clients who have requested a password. Institutional investors, corporates, and members of the Press may also receive our research via third party vendors including: Thomson Reuters, Bloomberg, FactSet, and S&P Capital IQ. Additional distribution may be done by sales personnel via email, fax, or other electronic means, or regular mail.

For access to third party vendors or our Research website: <https://suntrustlibrary.bluematrix.com/client/library.jsp>

Please email the Research Department at STRHEquityResearchDepartment@SunTrust.com or contact your STRH sales representative.

The rating system effective as of Oct. 7, 2016:

STRH Rating System for Equity Securities

SunTrust Robinson Humphrey (STRH) rates individual equities using a three-tiered system. Each stock is rated relative to the broader market (generally the S&P 500) over the next 12-18 months (unless otherwise indicated).

Buy (B) – the stock's total return is expected to outperform the S&P 500 or relevant benchmark over the next 12-18 months (unless otherwise indicated)

Hold (H) – the stock's total return is expected to perform in line with the S&P 500 or relevant benchmark over the next 12-18 months (unless otherwise indicated)

Sell (S) – the stock's total return is expected to underperform the S&P 500 or relevant benchmark over the next 12-18 months (unless otherwise indicated)

Not Rated (NR) – STRH does not have an investment rating or opinion on the stock

Coverage Suspended (CS) – indicates that STRH's rating and/or target price have been temporarily suspended due to applicable regulations and/or STRH Management discretion. The previously published rating and target price should not be relied upon

STRH analysts have a price target on the stocks that they cover, unless otherwise indicated. The price target represents that analyst's expectation of where the stock will trade in the next 12-18 months (unless otherwise indicated). If an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of STRH Research Management not to assign a target price; likewise certain stocks that trade under \$5 may exhibit volatility whereby assigning a price target would be unhelpful to making an investment decision. As such, with Research Management's approval, an analyst may refrain from assigning a target to a sub-\$5 stock.

Legend for Rating and Price Target History Charts:

B = Buy

H = Hold

S = Sell

D = Drop Coverage

CS = Coverage Suspended

NR = Not Rated

I = Initiate Coverage

T = Transfer Coverage

The prior rating system until Oct. 7, 2016:

3 designations based on total returns* within a 12-month period**

- Buy – total return $\geq$ 15% (10% for low-Beta securities)***
- Reduce – total return $\leq$ negative 10% (5% for low Beta securities)
- Neutral – total return is within the bounds above
- NR – NOT RATED, STRH does not provide equity research coverage
- CS – Coverage Suspended

*Total return (price appreciation + dividends); **Price targets are within a 12-month period, unless otherwise noted; ***Low Beta defined as securities with an average Beta of 0.8 or less, using Bloomberg's 5-year average

SunTrust Robinson Humphrey ratings distribution (as of 02/07/2018):

Coverage Universe			Investment Banking Clients Past 12 Months		
Rating	Count	Percent	Rating	Count	Percent
Buy	439	62.09%	Buy	151	34.40%
Hold/Neutral	266	37.62%	Hold/Neutral	67	25.19%
Sell/Reduce	2	0.28%	Sell/Reduce	1	50.00%

Other Disclosures

Information contained herein has been derived from sources believed to be reliable but is not guaranteed as to accuracy and does not purport to be a complete analysis of the security, company or industry involved. This report is not to be construed as an offer to sell or a solicitation of an offer to buy any security. SunTrust Robinson Humphrey, Inc. and/or its officers or employees may have positions in any securities, options, rights or warrants. The firm and/or associated persons may sell to or buy from customers on a principal basis. Investors may be prohibited in certain states from purchasing some over-the-counter securities mentioned herein. Opinions expressed are subject to change without notice. The information herein is for persons residing in the United States only and is not intended for any person in any other jurisdiction.

SunTrust Robinson Humphrey, Inc.'s research is provided to and intended for use by Institutional Accounts as defined in FINRA Rule 4512(c). The term "Institutional Account" shall mean the account of: (1) a bank, savings and loan association, insurance company or registered investment company; (2) an investment adviser registered either with the SEC under Section 203 of the Investment Advisers Act or with a state securities commission (or any agency or office performing like functions); or (3) any other person (whether a natural person, corporation, partnership, trust or otherwise) with total assets of at least \$50 million.

SunTrust Robinson Humphrey, Inc. is a registered broker-dealer and a member of FINRA and SIPC. It is a service mark of SunTrust Banks, Inc. SunTrust Robinson Humphrey, Inc. is owned by SunTrust Banks, Inc. ("SunTrust") and affiliated with SunTrust Investment Services, Inc. Despite this affiliation, securities recommended, offered, sold by, or held at SunTrust Robinson Humphrey, Inc. and at SunTrust Investment Services, Inc. (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including SunTrust Bank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. SunTrust Bank may have a lending relationship with companies mentioned herein.

Please see our Disclosure Database to search by ticker or company name for the current required disclosures, Link: <https://suntrust.bluematrix.com/sellside/Disclosures.action>

Please visit the STRH equity research library for current reports and the analyst roster with contact information, Link (password protected): [STRH RESEARCH LIBRARY](#)

SunTrust Robinson Humphrey, Inc., member FINRA and SIPC. SunTrust and SunTrust Robinson Humphrey are service marks of SunTrust Banks, Inc.

If you no longer wish to receive this type of communication, please request removal by sending an email to STRHEquityResearchDepartment@SunTrust.com

© SunTrust Robinson Humphrey, Inc. 2018 . All rights reserved. Reproduction or quotation in whole or part without permission is forbidden.

ADDITIONAL INFORMATION IS AVAILABLE at our website, www.suntrustrh.com, or by writing to:
SunTrust Robinson Humphrey, Research Department, 3333 Peachtree Road N.E., Atlanta, GA 30326-1070

Not For Investment Purposes