

November Lodging RevPAR Monitor: Some nearterm (4Q) good news

2018: Steady as she goes (that can be good or bad, depends on how one spins it)

We start with the good news. Based on our forward-looking observations in our internal RevPAR data analytics lab combined with conversations with our network of private hotel owners, we believe companies such as HLT and MAR should come in at or near the high-end of their 4Q RevPAR guidances and possibly slightly exceed them. While we have not seen a sudden surge in 4Q (or for any quarter) bookings over the past six weeks outside of hurricane-impacted markets, we believe these companies simply set guidances conservatively for 4Q. 4Q RevPAR guidances for these companies are +2-3% for MAR in North America and +1-3% for HLT systemwide whereas our published expectation based on our data observations since August has been +2-4% (closer to the high-end now) for US full-service branded hotels. After posting approx. +4.0% in October and approx. +3.0% for the first half of November, the math says that these companies only need to do only approx. +0.0% to hit the +2% low-end and +2.2% to hit the +3% high-end in the rest of November and December. *Investors know it is all about "expectations" and we believe these companies set expectations that are achievable and likely beatable*.

- The other "good news" (relative to expectations) is we believe full-year 2018 RevPAR guidances for these companies (HLT and MAR are the only ones who have quantified 2018 RevPAR growth expectations) look realistic and achievable. To be clear we are not saying they should be beatable (at least not yet), rather all our RevPAR checks indicate the ranges are achievable. For 2018 MAR has guided RevPAR of +0-2% in North America and HLT has guided +1-3% (global) systemwide. Our 2018 estimate for branded US full-service hotels (the typical MAR and HLT hotel) continues to be -0.5 to +1.5%, a figure that has remained unchanged since we first introduced it last June.
- As it relates to the <u>C-Corps</u>, this stability in RevPAR expectations bodes well that they will hit their room growth targets in 2018; New unit growth should be the primary engine of earnings growth in 2018 for the C-Corps.
- It's all good until it isn't. While most C-corps trade at expensive multiples by historical standards, we note that historically asset-lite C-Corp multiples can get "whacky" (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 "isn't" part) in February/March earnings releases as it relates to 4Q results and forward expectations.

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

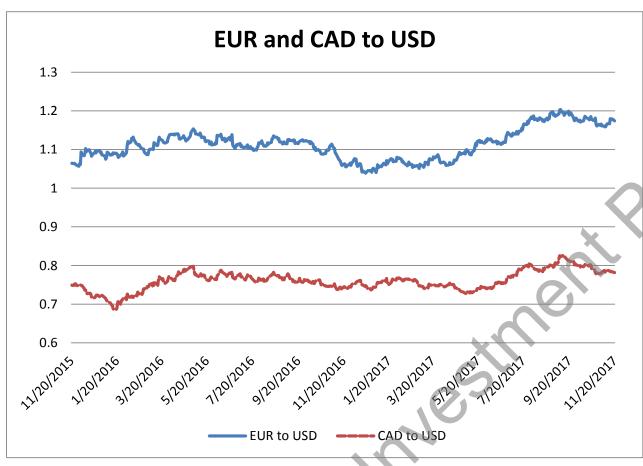
What's Inside

An in-depth update to our RevPAR outlook



The bad news unfortunately is that RevPAR of -0.5 to 1.5% in an environment of property-level operating costs of 3%+ does not bode well for margin expansion for hotel owners. 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. We believe these negatives will likely keep the hotel REIT stock prices in check over the next year. We continue to reiterate that (when excluding the hurricane impacted areas) we have yet to see an inflection point to indicate that the lack of a downward trend in forward bookings indicates the bottom of the cycle and subsequently we forecast 2018's growth to be slightly lower than 2017's.

- The good news for the hotel REITS is that at this level of RevPAR growth dividends are not stretched and barring a negative demand shock we do not attach a high level of risk they will be cut over the next year. Most hotel REITS dividends are at an attractive 4-6% yield.
- Secondly, the recent depreciation in the US\$ vs. the Euro and CAD\$ should be a benefit especially for the hotel REITS as they are congregated in major gateway markets that are popular for international visitation. Assuming this trend continues, we would expect to see it to be a small tailwind to RevPAR growth beginning in the first half of next year (there is a six month lag as to when changes in FX begin to help/hurt visitation due to the lengthy booking window of international leisure travel).
- Lastly, following a number of sell-side downgrades over the past month, sentiment and expectations for the hotel REITS are low. Historically, this helps set the foundation for eventual outperformance.



Source: Bloomberg

Other high-level forward-looking RevPAR trends we continue to observe: 1) Stable but uninspiring corporate demand trends (no post-election spark to overall demand though a temporary uptick in hurricane impacted areas due to government/contractor demand); 2) Decelerating Group/convention demand (a mixed bag over the past month with 2018 expectations ticking up slightly (one month does not make a trend) whereas 2019 continued along its downward trend line); and 3) Leisure remaining the relatively strongest of the three customer segments. Full employment, household income growth, and continued low gas prices, all of which are reflected in high consumer confidence, benefit this customer base. We believe customer wallet share has moved to experiences and travel away from retail.

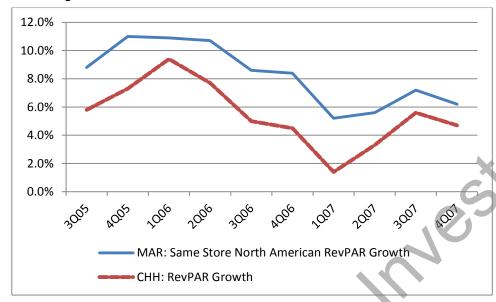
• Subsequently we remain more favorable on the leisure denominated sectors in our coverage universe, namely Vacation Ownership, Regional Gaming, and Cruise Lines. Admittedly, with the exception of cruise lines, these sectors are trading at or near all-time high valuation multiples, so one is paying a premium for this growth.

The markets we observe with strong hurricane driven bump-ups in forward demand are (not surprisingly) Houston, Orlando, and Miami (also easy Zika comps in Miami) in that order, with the strength almost entirely from increased occupancy and not from rate. We expecte these markets to have outsized RevPAR growth rates through August 2018, followed by difficult comps (though with positive 2-year growth rates, especially for Houston).



- Weather events such as hurricanes that result in extended housing displacement and recovery/infrastructure spending have historically been a positive for hotel demand in the greater impacted areas for the year after the event. Additionally while our headline forecast is for US full-service branded hotels (aka the typical Hilton or Marriott hotel), we expect growth rates for limited service hotels could be at least an additional 100-200 bps. higher. Within our coverage universe, CHH and IHG will be the biggest short-term beneficiaries, followed by WYN (note that WYN's hotel division only represents approx. 20% of the company's earnings).
- However, we caution that this is one-time demand and not sustainable demand. As can be observed in in the following chart, while the impacted regions in previous weather events saw massive upticks in demand for the next four quarters, as this demand was not sustainable it negatively impacted the following year's growth rates. This was most noticeable in 1Q06 and 1Q07 post-Katrina, where the headline RevPAR growth rate for CHH and MAR dropped by 800 and 500 bps respectively from the comparable quarter in the previous year.

RevPAR growth results for CHH and MAR around Katrina



Source: STRH research, Company results

Our 1Q18 RevPAR forecast for US full-service branded hotels of -1% to +1% is unchanged. We see this quarter being helped by approx. 100 bps. from post-hurricane demand. 1Q18 will experience a very difficult y/y comp in January in Washington DC. Additionally, 1Q18 will be negatively impacted by the timing of the Easter shift, as Easter falls on April 1 in 2018 vs. April 16 in 2017 (the last week of March 2018 will have deeply negative results for Group/convention business as Good Friday falls that week). While March will be hurt by the shift, April will benefit.

Our 2018 full-year projection of -0.5% to +1.5% is also unchanged as the first half of 2018 will likely get a 100 bps tailwind (making for a tough comp in 1H19) from hurricane demand while the back half of the year will likely receive a 100 bps headwind.

		Quarterly Tracking		
	4Q17E	2017E	1Q18E	2018E
	Overall	Overall forecast	Overall	Overall forecast
Oct-17	+2-4% High-end	+0-2%	-1% to +1%	-0.5% to +1.5%
Sep-17	+2-4% High-end	+0-2%	-1% to +1%	-0.5% to +1.5%
Aug-17	+2-4%	+0-2%	-1% to +1%	-0.5% to +1.5%
Jul-17	+1-3%	+0-2%		-0.5% to +1.5%
Jun-17	+1-3%	+0-2%		-0.5% to +1.5%
May-17	+1-3%	+0-2%	!	
Apr-17		+0-2%		
Mar-17		+0-2%		
Feb-17		+0-2%		
Jan-17		+0-2%		
Dec-16		+0-2%		
Nov-16		+0-2%		
Oct-16		+0-2%		
Sep-16		+0-2%		
Aug-16		+1-3%	* 1	
Jul-16		+1-3%		
Jun-16		+1-3%		

Source: STRH Research



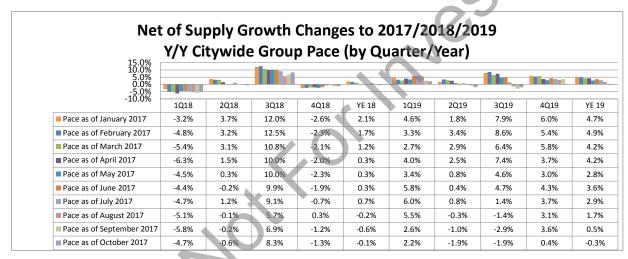
Monthly color for US full-service hotel RevPAR (STRH estimates). For even more granularity, please also see our Fall Calendar Shift RevPAR Roadmap report.

4Q17:

- October: Group business was helped by the shift in the timing of Yom Kippur and overall business will be aided by hurricane demand. October was one of the stronger months of the year and we estimate the month came in at approx. +4.5% for HLT's and MAR's domestic RevPAR.
- **November:** Similar to November 2016, November 2017 is surprisingly strong for Group business and could come in at the mid-to-high-end of the +2-4% 4Q range.
- **December:** Should be the weakest month of the quarter and is tracking towards the mid-point (we said low-end previously) of our +2-4% 4Q range. We suspect this is from Christmas falling on a Monday this year vs. a Sunday last year. To see the impact of this shift we look back to 2006, the last time Christmas fell on a Monday. For the week RevPAR was -7% with Sunday-Monday averaging -15% y/y (and keep in mind 2006 was a much better year for RevPAR growth than is 2017). This shift essentially removes school breaks for the week before Christmas and pushes some of them into January.

1Q18:

- January: The first week of the month will get a lift from New Year's Eve moving from a Saturday night to a Sunday night (see above). The last time this happened was in 2006 and US RevPAR was +7% for the first week of January 2007, with luxury hotel RevPAR up significantly. However the rest of the month will have a very difficult y/y comp due to last year's inauguration and women's march in Washington, DC. RevPAR in DC last year in January was +51% y/y.
- February: Looks to be a clean comp month. That said early indications are for a soft month, tracking towards the lower-end of our -1% to +1% range for overall 1Q18.
- March: This month will be hurt by the timing of Easter this year. Last year Easter fell on April 16 while this year it falls on April 1. The RevPAR impact will be that the last week of March 2018 will see a material drop-off in group and transient business whereas April 2018 will have a very easy comp.



Source: STRH Research, TAP. Figures are net of new supply.



On the good news front, international RevPAR growth continues to be positive. While we admittedly have far less visibility into the future in Europe and Asia than we do for the US, October RevPAR growth in constant currency for Europe of +6.9% and growth in US\$ of +11.9% were very strong. The bad news is this strength is only a benefit to the C-Corps, most notably for HLT and MAR. The weakening of the euro appears to have subsided in the last few months, although relative to the last few years, Europe is still relatively affordable for foreign visitors.

• East Asia by and large still presents a considerable long-term growth story for the C-Corps. While we are seeing supply maturation in some of the primary emerging markets (a good sign for rate integrity in our view), there are growth opportunities in many other markets. October RevPAR in Asia-Pacific came in at +2.7%.

Examining the three customer segments:

Leisure travel: In the near term hurricane demand is giving a lift to this segment (we acknowledge, and hope not to appear insensitive, that while hurricane demand is certainly not "leisure travel" in the traditional sense, for customer segmentation some of it falls in the leisure category). Additionally, underlying relative strength is coming from 2016 US household income growth of 3.2% and continued low gas prices, which translates into moderate growth in the forward-looking hotel demand and pricing trends.

- Our latest pricing and demand observations from our RevPAR data lab show RevPAR growth for Fall leisure travel tracking approx. +3-4% for US full service hotels (approx. 100-200 bps. higher for limited service properties as hurricane demand falls under this segment).
- Our analysis of multiple data sources including e-forecasting and OTAs indicates that the strength is being driven by hurricane related occupancy. Outside of hurricane-impacted areas, US resorts are seeing low-single digit increases in rate with flat to slightly decreasing occupancy.

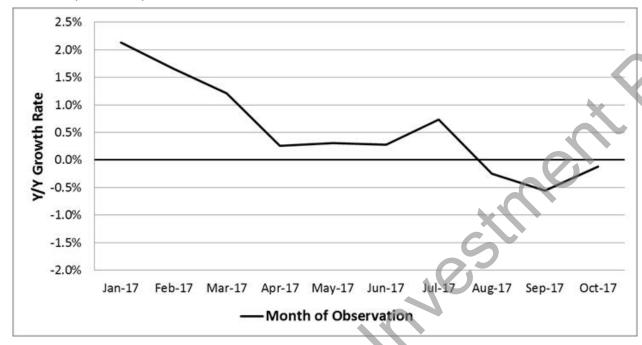
Individual business travel RevPAR expectations (visibility is about 60 days) have picked up slightly in the over the past two months. However, before investors get too excited, we believe this strength is from government and contractor related business in hurricane-impacted areas (we are not seeing an uptick in other regions). Prior to the hurricanes, forward expectations for this segment hovered around zero to slightly negative growth (primary data source: corporate travel agencies and OTAs) with no major changes over the past month. Due to the aforementioned hurricane related demand, the RevPAR expectation for the next several months for this business segment is now in the positive low-single digits.



Forward-looking Group/convention demand expectations were a mixed bag over the past five weeks (primary data source: TAP).

• 2018: ticked up over the past month (though we note one month does not mean a trend). Headline group demand is now pacing approx. -0.1% vs. the prior observation of -0.6% (net of new supply). To this we add approx. 1.5 percentage points of rate growth to come up with a projection that same-store Group RevPAR is tracking at approx. +0.5-1.5% for 2018 at the moment.

2018 Group demand pace trend

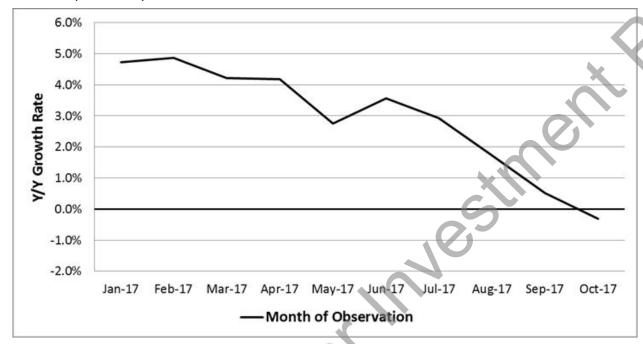


Source: STRH Research, TAP



- 2019: We continue to observe deceleration in 2019 pace. Our net-of-supply group pace for 2019 is -0.3% at the moment vs. +0.5% in our prior observation. To this we add approx. 1.5 percentage points of rate growth to come up with a projection that same-store Group RevPAR is tracking at approx. +0.5-1.5% for 2019 at the moment. However the trend line is not favorable here and suggests that range will be ratcheted down over the coming months. We note that 2019 will show massive gains in SF due to the completion of the Moscone center. When removing that market the trends look even less encouraging.
 - We advise readers that these figures represent a fraction of what will be the aggregated actual bookings (we estimate that the 2019 pace represents about 25-35% of what will actually be booked). The group pace for now mostly reflects citywide and far-in-advance in-house group bookings. The wildcard of course is how actual "paid & stayed" attendance is vs. the initial projection.

2019 Group demand pace trend



Source: STRH Research, TAP

S	egmentation By Co	mpany	
	Transient Corporate	Transient Leisure	Group
REITS			
CHSP	45%	20%	35%
DRH	45%	20%	35%
HST	45%	15%	40%
LHO	55%	20%	25%
PK	45%	20%	35%
RHP	5%	15%	80%
RLJ	55%	25%	20%
SHO	45%	20%	35%
PEB (not covered)	60%	20%	20%
	Transient	Transient	Group
C-corps	Corporate	Leisure	
CHH	45%	45%	10%
Н	40%	20%	40%
HLT	50%	20%	30%
IHG	45%	40%	15%
MAR	45%	20%	35%
WYN	45%	45%	10%

Source: STRH Research



Major Markets:

Ranking the big six major US markets for 2018. Group/meeting bookings is the best way to think about market outperformance/underperformance for time periods more than 90 days out. A healthy (or weak) convention calendar really drives city performance (with the notable exception of NYC as that is mostly a transient market).

Based initial group/convention bookings, we lump the top six markets into four buckets:

1. Strong in 2018: SF, Chicago

2. Average to slightly above average: NYC (but see NYC comments above)

3. Weak: Boston

4. Very Weak: LA, DC

Outside of the big six in North America, Canadian cities such as Montreal, Toronto, and Vancouver continue to look relatively strong, though as y/y comps get tougher and FX tailwind subsides, the strength is beginning to wane. Unfortunately, very few REITS (only HST in our coverage) own hotels in Canada.

- **Houston** is seeing a (temporary) 180 degree turnaround due to post-hurricane demand. We believe Houston will be one of the better if not best performing major market through August 2018. After that the city will face very difficult y/y comparisons and will likely be one of weakest markets in the country as far as y/y growth rates (though should still see positive 2-year growth rates).
- **Miami:** Prior to the hurricane the market was turning a corner in the second half of 2017 due to easy y/y Zika comps. Hurricane relation demand should only add to that strength for the next several quarters.

Additional color on the big six:

Boston: The first quarter of 2018 starts out soft but improves for the second quarter.

Est exposure t	o Boston mar	ket							
	CHSP	DRH	HST	LHO	PEB	PK	RHP	RLJ	SHO
Boston	15%	16%	6%	19%	8%	2%	0%	4%	17%
Rank	4	3	6	1	5	8	9	7	2
Note: Est. expo	sures include s	surrounding	g areas						
Source: STRH	Research, Con	npany data							



Chicago: Chicago looks slightly above average for the first half of 2018 followed by a very strong 3Q. That being said, with a new Marriott Marquis at McCormick, we are surprised the lift is so uneven from 3Q17 onward and that 2019 is a pull back.

	Group/convention outlook for Chicago													
Pace as of	<u>1Q17A</u>	2Q17A	3Q17E	4Q17E	1Q18E	2Q18E	3Q18E	4Q18E	1Q19E	2Q19E	3Q19E	4Q19E		
Sep-17	22.1%	10.4%	-4.4%	-8.2%	34.9%	1.6%	36.7%	25.1%	-27.4%	-2.0%	-20.0%	-19.7%		
Aug-17	22.1%	10.4%	-2.6%	-10.6%	10.4%	2.1%	33.6%	26.7%	7.3%	5.1%	-21.3%	-17.1%		
Jul-17	23.1%	10.6%	-14.9%	-2.4%	5.0%	3.0%	61.4%	14.4%	-9.4%	4.9%	-14.7%	-22.1%		

Source: STRH Research, TAP

Est exposure to	Chicago n	narket							
	CHSP	DRH	HST	LHO	PEB	PK	RHP	RLJ	SHO
Chicago	12%	13%	4%	7%	0%	6%	0%	6%	8%
Rank	2	1	7	4	8	6	8	5	3
Note: Est. expos	sures include	e surroundi	ng areas						
Source: STRH F	Research, Co	ompany dai	ta						



Los Angeles: For 2018, 1Q looks strong while 2Q looks very weak.

	Group/convention outlook for Los Angeles												
Pace as of	<u>1Q17A</u>	<u>2Q17A</u>	3Q17E	4Q17E	1Q18E	2Q18E	3Q18E	4Q18E	1Q19E	2Q19E	3Q19E	4Q19E	
Sep-17	3.4%	61.2%	-2.1%	3.9%	13.1%	-32.1%	1.1%	8.1%	-24.0%	13.4%	-18.4%	28.6%	
Aug-17	3.4%	61.1%	-5.8%	3.3%	16.9%	-32.3%	-0.3%	14.9%	-19.8%	13.3%	-19.6%	9.5%	
Jul-17	3.4%	70.2%	-14.0%	1.4%	18.8%	-37.3%	16.5%	12.6%	-19.8%	13.3%	-15.5%	11.1%	

Source: STRH Research, TAP

Est exposure	e to LA market									
	CHSP	DRH	HST	LHO	PEB	PK	RHP	RLJ	5	SHO
LA	11%	1%	5%	9%	16%	0%	0%	5%		10%
Rank	2	7	5	4	1	8	8	6		3
Note: Est. ex	posures include	surrounding	areas							
							A 1			
Source: STR	H Research, Con	npany data								

NYC: Just might squeak out a positive RevPAR growth result for 2017. However even a negative 1%-ish should be considered a success given the massive amount of supply that has and is coming into the market. Helping NYC are new regulations on short-term rentals (Airbnb) which may take some of the new "shadow supply" pressure away. That said, we believe it will be difficult for NYC to see anything much above flat RevPAR growth in 2017 and for 2018 as new hotel supply looms large.

• A major headwind to same store RevPAR growth in NYC is several years of compounded 4-6% new supply growth. Per Lodging Econometrics, city-wide new room supply grew 5.1% in 2016 and is forecasted to grow 5.1% in 2017, 8.3% in 2018, and 4.1% in 2019. Even if some of these expected new hotels never open, it is difficult to envision that NYC will not have continued pressure from above-average supply over the next several years.

Est exposure	e to NYC market								
	CHSP	DRH	HST	LHO	PEB	PK	RHP	RLJ	SHO
NYC	4%	10%	11%	9%	0%	6%	0%	6%	4%
Rank	6	2	1	3	8	4	8	5	7
Note: Est. ex	posures include s	surrounding	areas						
Source: STR	H Research, Com	npany data							



San Francisco: After a year of underperformance, the good news is that 2Q17 likely represented the low-point for RevPAR growth and 2Q18 should be the first quarter of very strong (likely strongest market in the country) RevPAR growth. **Specifically, March 2018 will be the month where SF turns the corner.** Strength extends through 2019. 2020 is a bit light (-13%) but 2021 is +20%. Please see our recent deep-dive into San Francisco for more color.

	Group/convention outlook for San Francisco												
Pace as of	1Q17A	2Q17A	3Q17E	4Q17E	1Q18E	2Q18E	3Q18E	4Q18E	1Q19E	2Q19E	3Q19E	4Q19E	
Sep-17	-16.1%	-44.7%	-21.9%	-2.7%	-21.9%	37.3%	77.6%	2.3%	121.8%	40.9%	49.1%	64.1%	
Aug-17	-16.1%	-44.7%	-21.6%	-2.8%	-17.9%	50.7%	69.4%	6.3%	124.1%	42.5%	49.1%	67.5%	
Jul-17	-16.1%	-44.7%	-24.7%	-3.4%	-15.2%	51.4%	70.0%	9.0%	126.0%	49.5%	50.5%	66.1%	

Source: STRH Research, TAP

Est exposure to	SF market								
	CHSP	DRH	HST	LHO	PEB	PK	RHP	RLJ	SHO
San Francisco	21%	1%	7%	15%	23%	12%	0%	11%	8%
	_			_			_		_
Rank	2	8	7	3	1	4	9	5	6
Note: Est. exposu	ures include :	surroundin	g areas						
Source: STRH Re	esearch, Con	npany data	1						

Washington DC: 1Q18 will have an extremely difficult y/y comp followed by a much stronger 2Q. The back half of 2018 has a very weak convention calendar.

	Group/convention outlook for Washington, D.C.												
Pace as of	<u>1Q17A</u>	<u>2Q17A</u>	<u>3Q17E</u>	4Q17E	<u>1Q18E</u>	<u> 2Q18E</u>	3Q18E	4Q18E	<u>1Q19E</u>	<u> 2Q19E</u>	<u>3Q19E</u>	4Q19E	
Sep-17	21.9%	-12.2%	7.2%	4.2%	-26.5%	29.4%	-45.7%	-17.6%	36.7%	-36.4%	7.0%	-6.0%	
Aug-17	21.9%	-12.2%	10.4%	3.4%	-26.4%	29.5%	-50.0%	-18.2%	37.7%	-35.7%	10.1%	-4.7%	
Jul-17	21.9%	-13.3%	10.9%	4.1%	-26.0%	28.3%	-46.2%	-18.8%	33.7%	-35.4%	9.7%	-4.7%	

Source: STRH Research, TAP

Est exposure	to DC market								
	CHSP	DRH	HST	LHO	PEB	PK	RHP	RLJ	SHO
DC	3%	5%	10%	16%	4%	3%	23%	4%	13%
Rank	8	5	4	2	7	8	1	6	3
Note: Est. exp	posures include s	surrounding	g areas						
Source: STRI	H Research, Com	pany data	1						



How we believe the 2017 hurricanes will impact winter leisure travel:

Over the last few weeks, we have started to get a better sense of how the recent hurricanes will impact winter leisure travel. While leisure travel is on the whole a lower rated segment relative to corporate travel, we point out that leisure is a high-rated business for many luxury and upper-upscale hotels and markets in the winter months, where RevPARs can be 200% or more during this season.

Unfortunately for the Caribbean (and the C-corps and REITS that have hotels there), the significant impact from this year's hurricanes has resulted in devastation to many islands' infrastructures and economies that are dependent on tourism. Numerous hotels are expected to be shut down at least through the end of the year and in many cases well into 2018.

We should point out, as have the Caribbean tourism agencies, that much of the region was not impacted by hurricanes Irma and Maria. However, the news generated from the hurricanes presents a relatively grim picture. We do not suggest that most travelers are familiar enough with the geography of the Caribbean to distinguish the impacted/non-impacted islands; however, many of the more accessible and well-known destinations for North Americans and Europeans were impacted. (We see cruises being less impacted than hotel guests flying to Caribbean resorts as the cruise lines will alter itineraries where applicable.)

Of the major Caribbean hotel destinations, Puerto Rico, the US and British Virgin Islands, and some of the smaller islands in the Leewards (including St. Barths and St. Martin/St. Maarten) were impacted by the storms. There are dozens of resorts in these destinations, including many luxury hotels that will not be open this winter.

Based on macro fundamentals and demand patterns, we assume that vacationers that intended to travel to these destinations will by and large still take a leisure trip, but it will likely be elsewhere. The Caribbean offers numerous alternatives as discussed below. However, not all the remaining destinations have the advantages that the storm-impacted region has, namely:

- U.S. citizens do not need a passport to go to U.S. islands. These islands have appeal not just for their beaches but are also popular and relatively safe -- islands to explore. This is an important distinction as the U.S. islands offer adventure and family-friendly attractions as opposed to some Caribbean islands where guests generally stay on-property the entire trip.
 - O While Puerto Rico hotels are slowly reopening before the winter holidays, it is less clear if the infrastructure and power issues will remain later this year. We expect the existing infrastructure issues throughout Puerto Rico will dissuade some guests from staying on the island.
 - The USVI has numerous hotel closures well into 2018.
 - Without these islands operating at full capacity, American travelers seeking to stay within the U.S. borders may choose to vacation stateside. Also: San Juan is a major hub for regional Caribbean travel. It is less clear how the news from Puerto Rico may impact travel demand from passengers that might normally pass through San Juan to go to other islands.
- Many of the affected islands are relatively proximate to the U.S. mainland. Not all travelers desire to travel longer distances to the southern Caribbean. Further, with the exception of a few popular islands in the southern Caribbean (the Dutch Antilles, Barbados, and a few others), many of the unaffected Caribbean islands in the south are not considered major tourist destinations.



Where will the "unaccommodated Caribbean demand" go? Due to demand and airlift patterns, we believe a few markets will benefit:

- Florida: For U.S. travelers without a passport, Florida is an easy and convenient option. We consider many of the hurricane impacted destinations as safe and family friendly (whereas some of the unaffected Caribbean destinations orient to couples and/or have less-than-stellar reputations for safety and security.)
 - Key West may be a beneficiary, especially in 1Q18. While much of the Florida Keys continues to recover, Key West itself is increasingly moving to normalcy. LHO noted on their 3Q earnings that their hotels will reopen in full in 4Q. We expect similar news from other REITS. For a variety of reasons, we believe Key West has a destination appeal that is a compelling alternative for vacationers that might normally frequent some of the storm-impacted Caribbean islands.
 - We also anticipate that the Florida convention and visitor bureaus, including the Keys, will be actively promoting that Florida is open for visitors this winter.
- Other major Caribbean destinations that will receive demand include: The Bahamas, Jamaica, Dominican Republic, Cayman Islands, Dutch Antilles, and Barbados. (Note: airlift to some of these destinations is relatively limited and/or requires additional travel time from the North America mainland. These downsides may result in travelers choosing Florida or other mainland U.S. destinations.)
- Mexico and Central America
- Ski destinations (although we suspect that travelers preferring warm weather destinations will not switch en masse to ski destinations)
- Hawaii and the U.S. Southwest (due to distance and airlift from the Central and Eastern U.S., we believe that these locations are likely secondary choices for most Caribbean-focused travelers.)
- Some travelers may choose a cruise in order to stay within the region and/or visit a fected islands by day but sleep on the ship at night.

We also note that weather in the northern U.S. matters – warm weather in the north is not good news for warm weather winter destinations. So far, we have had a warm fall in many of the northern states and NOAA is predicting a relatively warm winter in the Northeast (and a normal winter in the Midwest). This is not good news as some travelers are motivated by cold weather at home to make winter trips.

Implications for the Lodging REITS: Outside of the obvious impact to REITS with Caribbean properties, we expect Florida resorts to benefit the most from the unaccommodated demand. This will benefit the majority of our coverage (RHP less so as their hotels are group focused, although there may be some benefit to Gaylord Palms in Orlando.)

The major C-corps have hotels in the Caribbean; however, EBITDA exposures are relatively modest compared to Asia-Pacific and Europe. For most of the C-corps, we expect that the financial impact will generally be limited as demand shifts to other locations, often within the same franchisor's system.

• We note that WYN owns the Wyndham Grand Rio Mar in Puerto Rico which is closed and currently housing relief workers. H has 50% ownership in the Hyatt Place in downtown San Juan (reopening on November 1st).



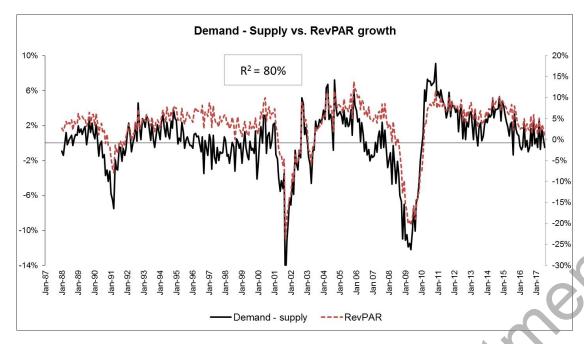
The Big Picture Topic: Why Have Forward Trends Been Unusually Unvolatile?

In summary:

- Most importantly there has not been a "shock" to end this lodging cycle. As we discuss below, there has yet to be a lodging cycle in recent decades that has not ended with a political, macroeconomic, or incident-related shock. It is possible although it would be very surprising if a new lodging cycle commenced in the next 12-18 months based on current fundamentals. Fundamental trends do not support such an assumption.
- Demand-supply fundamentals have remained positive well beyond the norm for recent lodging cycles. Less pressure from supply growth (and near record high occupancies) keeps rate integrity relatively stable (for now).
- The menagerie of both positive and negative macroeconomic and geopolitical matters, alongside uncertainty as to if/when significant pro-business legislation will positively impact lodging demand and ADR, has resulted in a "wait-and-see until 2018" attitude for corporate demand. With few exceptions for REITS with unique situations at play, we see the low RevPAR/moderate supply growth/moderate economic growth environment all contributing to the "relatively" stable hotel REIT stock prices (despite some moderate downward trends as of late).

Unusually unvolatile for late cycle: It is interesting to us that the industry fundamentals that make up the RevPAR equation – demand and supply – are both growing at low rates at this stage in the lodging cycle. This is a different scenario than what typically occurs towards the end of a lodging cycle, where RevPAR growth ends up slowing largely due to significant supply growth...with a cycle ending following a demand shock. As we have noted previously, RevPAR has historically crashed & burned at the end of the previous three cycles (1991, 2001, 2008), so a potential "soft landing" is new and uncharted territory; Then again saying "this time is different" inevitably leads to it not being different. But even in absentia of a demand shock, there are unusual differences in this cycle compared to the latter stages of the last three cycles.

As evident in the following chart, every lodging cycle decline since national data was first aggregated has been precipitated by the demand-supply spread shifting negatively. That trend has yet to occur this cycle. Since January 2016, the spread between demand and supply growth has averaged to +0.3% --- meaning that in the last year and a half, demand and supply growth have on average been roughly the same. Such a trend is atypical this late into a lodging cycle.



Source: STR, STRH Research

Supply growth: Less pressure from supply growth has led to the maintenance of the demand-supply equilibrium. Quite unusual for the latter periods of a lodging cycle, where occupancy remains at or near peak levels, is that supply growth has been modest in aggregate (although very high in a few markets).

- For example, per Lodging Econometrics, supply growth in Upper Upscale was +1.4% in 2007 but grew to +2.9% in 2008 (a +150 bps change). Whereas from 2016 to 2017, supply growth in Upper Upscale is expected to go from +1.5% in 2016 to +1.3% in 2017 (a decline of 20 bps) and increase by 70 bps from 2017 to 2018. The lack of significant supply growth in Upper Upscale certainly contributes to the lower volatility in our unusually un-volatile checks over the past several months, as rate integrity has been largely maintained in aggregate.
- Historically, significant RevPAR growth sustained over a number of years leads to supply growth significantly exceeding demand growth as developers rush to take advantage of unaccommodated demand (and profits). However, lending for new hotel construction has been conservative this cycle. Some banks and other typical hotel lenders revised terms significantly following the aggressively looser terms in the last cycle (where loan-to-values sometimes exceeded 80%). Note that high supply growth in combination with the Great Recession resulted in the worst lodging downturn in decades.
- In this cycle, we believe the comparably low late-cycle supply growth has played an important factor in RevPAR growth not turning negative (yet) and contributing to the non-volatility in forward demand trends. Concurrently, we are only just getting to the stage in this cycle where supply growth exceeds demand growth an incredible situation as we are in the eighth year of this lodging cycle.

While the overall hotel pipeline in this cycle continues to rise, a mitigating factor is that new construction hotels are pushing out their openings into future years. This topic was discussed on our conference call with Lodging Econometrics and in our question to MAR on the 2Q earnings call.

• The rationale for the delay of openings is largely for two reasons: 1) labor shortages in construction and 2) the hope/wait-and-see that the Administration will Make RevPAR Great Again. Few projects are getting cancelled outright – and rightly so as developers must go through multiple hurdles to get a project approved



for development and financed. However, with a relatively more muted level of supply growth nationwide, existing hotels have a greater opportunity to hold or push room rates (even modestly) in a period of historically high occupancy, leading to the maintenance of rate integrity.

We can also look at the 1990s lodging cycle in comparison to this current cycle as the 1990s had a long economic growth period that continued despite geopolitical turbulence. In the 1990s cycle, occupancy turned positive in January 1992. About 5 ½ years into the cycle (May 1997), the lodging demand-supply spread turned negative (supply exceeding demand). At that point in the cycle, supply growth was 3.4%. In part because of the macroeconomic strength in the U.S., RevPAR remained positive for an extended period of time despite significant supply growth (RevPAR remained positive until April 2001). As a comparison to the current cycle: supply growth reached 2.0% in April 1996 (52 months into that cycle) – and if we reach 2.0% supply growth this year, we will be 94 months into the current cycle. Supply growth in this cycle has remained at around 1.9% since January 2017.

Current Expectations for Top 25 Market New Supply:

Supply By Top 25 Markets (Sorted by Pipeline Rooms Growth as % of Census) As of 2Q17								
	Census Rank	YE 2015 Growth Rate	YE 2016 Growth Rate	2017F Growth Rate	2018F Growth Rate	2019F Growth Rate		
Nashville	24	2.4%	3.7%	3.5%	10.3%	6.4%		
New York City	4	4.8%	5.1%	5.1%	8.3%	4.1%		
Seattle	20	3.2%	2.3%	5.0%	6.4%	5.3%		
Miami	14	3.0%	4.1%	3.2%	4.9%	4.4%		
Denver	18	2.9%	2.6%	6.0%	3.7%	9.0%		
Dallas	8	1.5%	3.2%	6.1%	3.7%	4.4%		
Houston	9	3.6%	6.8%	3.9%	4.5%	5.4%		
Boston	13	1.7%	4.3%	2.5%	4.8%	2.5%		
Detroit	21	1.3%	2.3%	3.0%	3.5%	4.5%		
Los Angeles	6	0.8%	1.0%	4.1%	2.5%	3.8%		
Philadelphia	17	0.3%	1.6%	3.2%	3.9%	2.9%		
Minneapolis	23	2.4%	5.9%	1.7%	3.1%	4.6%		
San Diego	11	1.2%	1.6%	1.5%	1.8%	2.7%		
Atlanta	7	0.7%	1.4%	2.0%	2.6%	3.3%		
Washington, D.C.	5	1.6%	2.0%	1.9%	1.8%	1.9%		
Anaheim	12	1.1%	3.3%	2.0%	1.4%	3.3%		
San Francisco	15	0.7%	0.1%	2.7%	2.1%	1.1%		
Tampa	16	0.7%	1.5%	3.4%	2.8%	2.3%		
San Antonio	19	0.8%	1.9%	1.6%	1.7%	3.7%		
Phoenix	10	1.4%	1.6%	2.1%	3.0%	1.5%		
Chicago	3	2.6%	2.5%	1.0%	2.6%	1.8%		
Orlando	2	0.8%	1.8%	0.7%	1.0%	1.4%		
St. Louis	27	0.5%	1.3%	1.8%	2.1%	2.8%		
Oahu Island	36	0.5%	1.3%	0.0%	0.6%	0.0%		
Norfolk	25	0.6%	0.0%	0.8%	0.0%	0.3%		
Total Top 25 Markets		1.7%	2.6%	2.8%	3.3%	3.3%		

Source: Lodging Econometrics, STRH Research

Notes: The largest market in the U.S., Las Vegas, is not included in this chart due to its casino orientation. 2017-2019 are forecasts.



Demand growth: Remains muted with the "wait-and-see" approach likely to impact 2018 corporate rate negotiations. Alongside hotel developers adopting a "wait-and-see" approach leading to the elongation of hotel pipeline growth, we see a similar trend with business-focused hotel demand. This is impacting both transient corporate (the individual business traveler) and corporate-related group (generally among the highest-rated in-house and citywide group demand in major markets). At this time, there is a very consistent messaging from our coverage: macroeconomic indicators are largely positive but there has not been a translation to significantly improving demand fundamentals.

- Without greater confidence in the future business environment, we do not expect hotels to have much opportunity to aggressively push corporate negotiated rates in 2018. And that will likely parallel with in-house corporate-related group rates. Note that a few 2Q earnings calls presented a more bullish/pollyannaish view that corporations are optimistic about the economy, which will be reflective in 2018 rate negotiations.
- While we will not have a great indication of the results of 2018 corporate rate negotiations for another few months, our forward bookings intelligence on the group front and communications with corporate travel contacts suggest resistance to rate increases in 2018. And without any large spur to demand growth combined with moderately increasing supply growth, we see the equilibrium resulting in the continuation of the deceleration of RevPAR growth to low-single-digit positive.
- As positive here with muted and unvolatile demand is the industry has good visibility into cost controls. However it is tough to fight the tide of wage growth in a stagnant-to-worsening RevPAR environment. REITS have so far been able to keep margins mostly flat to down slightly in a +1% (or worse) RevPAR environment. However, wage growth is a rising concern (as was addressed in our recent Lodging Speaker Series)

The implication to the stocks from all these considerations is a continuation of the bifurcation between the Lodging C-Corps and the REITS. We note that manager/franchisor oriented Lodging C-Corps are up ~ 20% YTD (total return) whereas the REITS are slightly down. The C-Corps are natural beneficiaries of supply growth. Additionally, EBITDA growth for C-Corps is likely still achievable even in a flat RevPAR environment with moderate domestic supply growth (see MAR's earnings scenarios from their investor day for example). The bigger growth opportunity for the C-Corps in the near-term, both in terms of RevPAR growth and pipeline growth, continues to be from Europe and Asia. Barring a global shock, we see the increased geographic diversification of the Lodging C-Corps as long-term positive albeit with increased risk befitting a greater mix of properties in emerging economies. The one major exception to this thesis is incentive management fee generation which largely lacks profit hurdle requirements in Asia (a positive theme that we expect to hear more of from the C-Corps – particularly if incentive fees decline in the U.S.)

- We also have seen investors move into the C-Corps from other consumer sectors, although we caution new investors to the space that lodging demand can be fickle (one night leases in hotels vs. multi-year leases in traditional commercial real estate.)
- The new investor interest in the C-Corps has led to multiple expansion. We raised our EV/EBITDA multiples by ~ 50 bps for the highest-quality C-Corps post-2Q earnings.

The bifurcation of the Lodging stocks presents a more critical eye towards the hotel REITS. Most of the REITS have basically held their stock prices following the run-up post-election (largely un-volatile stock movement with slight deceleration of late). However, we see more risk to the downside for REITS leading into 2018 than we do for C-Corps. The combination of rising supply growth, wage pressure (an emerging trend), and the lack of sustainably positive corporate demand momentum combine for measurable headwinds. A saving grace for the REITS is we believe there are still opportunities to cut costs. For one, at high occupancy, staffing is full. For most hotels (non-unionized in particular), there will be opportunities to reduce staffing if demand falls at a measurable level. Second, while we believe that there is less fat in other operating areas as compared to the last lodging cycle, there is still low-hanging fruit both at the property and corporate level. (We do not hesitate to mention that some REITS were smartly undergoing property-level margin preservation initiatives well before RevPAR declines became actualized. We commend these efforts as simply good strategic leadership.) Nevertheless, we continue to favor C-Corps over the Lodging REITS especially given pressures on owned hotel margins from increasing labor costs.

- Assuming we do not see a rebound in demand in the near term, what are some of the tailwinds we are paying attention to that might lead to stock growth?
 - M&A activity/REIT privatization (examples: PK has actively stated their interest in acquisition and RLJ was pursued by Blackstone [BX, \$31.94, NR] this past summer [WSJ]);



- O A few REITS should see tailwinds from major property renovations and repositionings;
- o The rebound in San Francisco particularly into 2019 (post the ramp-up of the Moscone Convention Center) will benefit the majority of our coverage; and
- A weakening dollar (and no negative geopolitical shocks) positively impacting international inbound demand.

There are several relative bright spots that we believe will continue to prevent hotel stock prices from significantly contracting:

- 1. Other sectors considered "uninvestable" by investors. Investors tell us other sectors which historically were in their investment universe have become "uninvestable" due to threats from Amazon (AMZN, \$1,137.84, Buy, Squali) and the like. While we see Airbnb (private) as a threat to the hotel industry, we think the threat is nowhere near the magnitude of say Uber (private) vs. yellow cabs. A frequent comment we hear from investors when we discuss lackluster hotel fundamentals and expensive lodging stocks, most notably MAR vs. peers, is "Our other investment choices look far less attractive so we're sticking with our investments in lodging for now."
- 2. **Hotel REIT dividends are attractive and should be sustainable over the next year.** We believe unwillingness to have to go against a 6%+ dividend yield has kept investors from being overly negative (potentially shorting) the hotel REITS.
 - a. Concerning the hotel REITS, a big outstanding question that will arise in the next few months will be corporate rate negotiations for 2018. Positively, consumer confidence remains high alongside small business confidence. However, the Conference Board's CEO Confidence index fell 7 points in 2Q17 from the prior quarter. It is less clear if/how business sentiment will be impacted by the dissolution of some of the President's business councils, the impending debt-limit deadline, and the possibility of a government shutdown later this year. We will start to get a sense of corporate rate negotiations in 3Q earnings commentaries and moreover when we see the REITS at our Boston conference in December.
 - b. Another emerging trend relates to increasing labor and benefit costs which is also a headwind to the REITS.



Price Target/Risks Summary

Lodging	TKR	Price 11/22/17	Rating	PT*	% upside down- side	2018E EBITDA (\$M)	Target EV/EBITDA Multiple	Risks
								Upside risk: improvement in NY and Chicago markets
								Downside risk: softening of RevPAR trends in Boston or SF. Slowdown in
Chesapeake Lodging Trust	CHSP	\$28.58	Hold	\$24	-16%	\$180	12.0X	real estate lending.
0	0			074	001	0000	44.00	Upside risk: conservative guidance.
Choice Hotels	CHH	\$77.40	Hold	\$71	-8%	\$323	14.0X	Downside risk: big catalyst of special dividend already baked into the stock. Upside risk: specific markets (esp. NYC) perform better than expected.
DiamondRock Hospitality	DRH	\$11.19	Hold	\$11	-2%	\$249	11.5X	Downside risk: company unable to locate properties to buy.
		*		***				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
Host Hotels & Resorts	HST	\$19.77	Hold	\$19	-4%	\$1,432	12.5X	sales do not happen.
Hyatt Hotels	н	\$70.79	Hold	\$68	-4%	\$773	13.0X	Upside risk: Transient and group trends outperform expectations Downside risk: ongoing misexecution and volatility.
i iyati i loteis	- 11	Ψ10.13	Tiolu	ΨΟΟ	-4 /0	ΨΠΟ	15.07	Downside risk: Disruption in a major market (HGV more concentrated than
								peers), issues with Japanese customer (HGV more exposed than peers),
Hilton Grand Vacations	HGV	\$40.21	Buy	\$45	12%	\$413	11.5X	difficulty sourcing additional fee-for-service inventory deals
								Downside risk: overhang from remaining big sponsor ownership, slowing
Hilton	HLT	\$75.27	Buy	\$77	2%	\$2,070	14.7X	pipeline
InterContinental Hotels	IHG	\$57.36	Hold	\$51	-11%	\$899	13.5X	Upside risk: further acceleration in returning capital to shareholders. Downside risk: trends continue to worsen in Greater China
Intercontinental Hotels	Ing	φ57.30	Holu	φυι	-1170	φοσσ	13.37	Downside risk: membership base erosion as churn outstrips new timeshare
ILG	ILG	\$27.66	Buy	\$30	8%	\$372	11.1X	sales
		4 =		***		***		Upside risk: ability to increase dividend.
LaSalle Hotel Properties	LHO	\$28.33	Hold	\$26	-8%	\$319	12.5X	Downside risk: heavy D.C. exposure.
								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
Marriott International	MAR	\$126.54	Hold	\$108	-15%	\$3,149	14.8X	and policy risks negatively impact lodging demand.
								Upside risk: Mix shift not an issue for margins, quicker execution/upsize of
								buyback program; Downside risk: inability to achieve development margin
M	\/AO	£400.70	11-14	6400	407	# 00F	44.47	targets, inability to close asset sales or asset sales are done at lesser
Marriott Vacations	VAC	\$133.72	Hold	\$128	-4%	\$305	11.1X	values than expected Upside risk: The downturn in the lodging cycle is short-lived and positive
								macroeconomic trends result in increasingly positive RevPAR growth and
							_ V)	improved EBITDA.
								Downside risk: Significant supply growth and macroeconomic
Park Hotels & Resorts	PK	\$29.11	Hold	\$28	-4%	\$760	12.0X	challenges/shocks.
								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
RLJ Lodging Trust	RLJ	\$21.28	Hold	\$22	3%	\$581	11.5X	leverage, macroeconomic challenges/demand shocks.
		* =				7		Upside risk:recovering group demand better than expected, better margin
								recovery.
Ryman Hospitality Properties	RHP	\$69.03	Hold	\$60	-13%	\$389	12.3X	Downside risk: booking issues stickier than expected.
								Upside risk: valuation discount to peers.
Sunstone Hotel Investors	SHO	\$16.51	Hold	\$15	-9%	\$340	12.0X	Downside risk: San Diego, Boston, LA exposure. Insufficient ADR lift from Boston Park Plaza/Marriott Wailea Beach renovations.
Ourisione moter investors	3110	φ10.51	Holu	φιο	-5%	φοιιο	12.00	Downside risk: the timeshare business is especially vulnerable to economic
Wyndham Worldwide Corp	WYN	\$109.78	Buy	\$112	2%	\$1,485	10.0X	softness.
					1.			
					,			

^{*} All of our Lodging price targets are derived by applying a larget EV/EBITDA multiple to our estimate for 2018 EBITDA

Source: FactSet, STRH research



Companies Mentioned in This Note

Amazon.com, Inc. (AMZN, \$1,156.16, Buy, Youssef Squali)

Carnival Corporation (CCL, \$66.79, Buy, C. Patrick Scholes)

Choice Hotels International, Inc. (CHH, \$77.20, Hold, C. Patrick Scholes)

Chesapeake Lodging Trust (CHSP, \$28.72, Hold, C. Patrick Scholes)

DiamondRock Hospitality Company (DRH, \$11.25, Hold, C. Patrick Scholes)

Gaming and Leisure Properties, Inc. (GLPI, \$36.03, Hold, C. Patrick Scholes)

Hyatt Hotels Corporation (H, \$70.65, Hold, C. Patrick Scholes)

Hilton Grand Vacations Inc. (HGV, \$40.53, Buy, Bradford Dalinka)

Hilton Worldwide Holdings Inc. (HLT, \$75.64, Buy, C. Patrick Scholes)

Host Hotels & Resorts, Inc. (HST, \$19.79, Hold, C. Patrick Scholes)

InterContinental Hotels Group, PLC (IHG, \$57.41, Hold, C. Patrick Scholes)

ILG, Inc. (ILG, \$28.11, Buy, C. Patrick Scholes)

LaSalle Hotel Properties (LHO, \$28.34, Hold, C. Patrick Scholes)

Marriott International, Inc. (MAR, \$127.62, Hold, C. Patrick Scholes)

MGM Growth Properties LLC (MGP, \$29.39, Buy, C. Patrick Scholes)

Norwegian Cruise Line Holdings Ltd. (NCLH, \$55.31, Hold, C. Patrick Scholes)

Park Hotels & Resorts Inc. (PK, \$29.14, Hold, C. Patrick Scholes)

Royal Caribbean Cruises Ltd. (RCL, \$125.45, Buy, C. Patrick Scholes)

Ryman Hospitality Properties, Inc. (RHP, \$69.41, Hold, C. Patrick Scholes)

RLJ Lodging Trust (RLJ, \$21.26, Hold, C. Patrick Scholes)

Sunstone Hotel Investors (SHO, \$16.49, Hold, C. Patrick Scholes)

Marriott Vacations Worldwide Corp. (VAC, \$135.45, Hold, C. Patrick Scholes)

Wyndham Worldwide Corporation (WYN, \$110.27, Buy, C. Patrick Scholes)

Airbnb (private)

Blackstone (BK, \$34.72, NR)

Four Seasons (private)

Uber (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 ≥ 15% (10% for low-Beta securities)***
- · Reduce total return ≤ 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 11/27/2017):

Coverage Unive	rse		Investment Banking Clients Past 12 Months				
Rating	Count	Percent	Rating	Count	Percent		
Buy	419	60.64%	Buy	141	33.65%		
Hold/Neutral	268	38.78%	Hold/Neutral	64	23.88%		
Sell/Reduce	4	0.58%	Sell/Reduce	1	25.00%		

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. 2017. 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