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Lodging

What will happen to room rates? A big variable in the RevPAR recovery

Our deep-dive 90-year analysis notes intentional rate cuts even into a recovery

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What's Inside

90-year deep dive analysis into the critical topic of room rate integrity, one of the biggest drivers to the post-COVID recovery timeframe.

We analyze occupancy, ADR, and RevPAR trends from the Great Depression and three recent lodging shocks.

What's Incremental To Our View

In this report we discuss expectations for the recovery of room rates, or referred to in the hotel industry as the ability to maintain room "rate integrity". We have analyzed room rate movement since 1930, discussed with hotel experts about their strategies, and considered unique post-COVID variables. **Bottom line, we caution investors that if/when hoteliers lower rates due to a tepid demand recovery, as precedence strongly suggests, an EBITDA recovery timeframe may extend past consensus expectations. Other high-level themes discussed in this report:**

- Over the past year there has been no great rationale to lower rates to induce demand because much of the traveling public was simply not going to travel under any scenario. That said, we have observed in past cycles that once there is initial evidence of demand returning, hotels induce demand by lowering room rates and such actions to incentivize customers to visit one's hotel(s) is followed by a competitor lowering rates to maintain/induce their own demand.
- In an industry where thousands of hotels make their own pricing decisions, history has shown that once a few hotels start down the slippery slope of price cutting it is usually inevitable that others will follow.
- Past lodging shocks have also shown a clear multi-year profit consequence from the loss of rate integrity and why hoteliers have been reticent to lower room rates. Hoteliers are quite aware of the long cycle recovery from recent demand shocks.
- Considering the years before profitability recovers in full if rate integrity is lost, especially in an environment where lodging stock prices are in some cases at or near pre-COVID levels, we do not anticipate much messaging from the public companies on whether or not "rate integrity" is lost until the data is clearly evident.
- This lodging cycle could be distinct from precedence. There are several prerequisites/important considerations for rate integrity to hold due to pent-up demand post-COVID, although we view the list as long and difficult to fully transpire in 2H21/1H22.

SEE PAGE 21 FOR REQUIRED DISCLOSURE INFORMATION

History has shown that the rebound of occupancy does not mean that room rates will necessarily hold as following a demand shock, hoteliers generally have less ability to push room rates as demand recovers. While U.S. vaccination efforts appear to be progressing well and the pent-up demand surge is evident in leisure bookings, we caution that a prolonged weakness in business and group travel may lead to desperation for some hoteliers to bring in cash flow -- usually some intentional reduction to room rates is both precedence and the consequence, an action with a long, negative top-line and bottom-line impact. **We emphasize that an occupancy recovery to pre "demand shock" levels has historically come well ahead of the recovery of room rates and profitability.**

Rate integrity is a more complicated and nuanced topic than simply looking at headline statistics: hotel operations, labor models, employee morale, consumer behavior, hotel supply changes, and competitive pricing strategies all factor into the equation. In recent weeks we have seen a number of articles suggesting there is heavy room rate discounting simply by looking at average daily room rate (ADR) change. That interpretation is far too simplistic, technically inaccurate, and as we discuss below highly misleading to the current lodging environment. **Investors who use reported/historical ADR movement at a headline level to evaluate the recovery timing of EBITDA may also end up with imperfect investment decisions, <u>especially as intentional rate cutting can occur well into an occupancy recovery</u> and we have yet to see material rate discounting on a national or international scale as of yet.** Section two of our note dives into this topic with historical examples.

<u>We explain major puts and takes to prepare investors for what could be volatile room rate movement in 2H21 and 2022:</u>

1. **A brief 101 on "rate integrity,"** breaking through investor misconceptions on this topic
    a. Impact of big data and dynamic pricing vs. past cycles
    b. Dynamic vs. static hotel room pricing
2. **Review of past cycles** for rate integrity precedence
    a. Great Depression, early 1990s, early 2000s, and the Great Recession
3. **Discussions with hotel experts**, both public and private, as to how rate integrity may unfold this year
4. **One large variable that could lead to rate integrity being a relative "non-issue" in this lodging recovery: simmering pent-up demand.** This variable to our recollection has never occurred to such a degree in the modern U.S. hotel industry.

1. Rate Integrity 101 and what investors sometimes misinterpret on this fundamental topic

What is rate integrity: Room rate integrity, also called "rate setting" and/or discussed under the wider-reaching "revenue management" function is essentially the ability for hoteliers to set and maintain their intended room rate pricing without pressure to materially reduce rates. At a high-level room rates generally rise and fall within a basic economic demand-supply balance over the long-term, but the hotel industry is subject to daily reprising of hotels, last minute bookings/cancellations, and consumer behavior uncertainties. Additionally, demand shocks can be unpredictable.

- **Usually rate integrity is discussed with a negative connotation**, especially when there is a demand shock and/or combined with idiosyncratic events (natural disaster, media incident, etc.) resulting in a temporary imbalance in room rates. Conversely, when rates rise, we generally think of demand (occupancy) being robust and rate integrity a non-factor.

Before we dive further, let us note what is not a loss of rate integrity -- and a far too common misconception on ADR movement: ADR decline does not mean a loss of room rate integrity.

The mix of demand by customer type is a very important consideration in the average room rate, especially post-COVID where leisure demand dominates corporate demand. Leisure demand *generally* pays less than corporate demand, especially last-minute business travel. In today's environment where there is still limited corporate demand, ADR may naturally fall for some hotels even if room rates are held flat.

In the below hypothetical scenario, we assume that in year X a hotel had a normal year of demand. In year X+1 we assume there was limited demand beyond leisure, resulting in ADR falling 4.2%. In year X+2, we assume a rebound of all demand segments but with higher-rated group and transient business demand still lagging the rebound of leisure. In this scenario, ADR fell even more in year X+2 than in year X+1. Note that rate integrity is not lost in this scenario.

Mix shift impact (scenario case where room rates are unchanged)

Year	Customer Segment	Annual Rooms Demand	Percent of Demand	ADR	Revenue	Hotel ADR	Percent Change
X	Group/convention	20,000	20%	120	2,400,000		
	Transient business	40,000	40%	150	6,000,000		
	Transient leisure	35,000	35%	100	3,500,000		
	Crew	5,000	5%	50	250,000		
		100,000	100%		12,150,000	122	
X+1	Group/convention	3,500	19%	120	420,000		
	Transient business	6,000	33%	150	900,000		
	Transient leisure	7,000	39%	100	700,000		
	Crew	1,500	8%	50	75,000		
		18,000	100%		2,095,000	116	**-4.2%**
X+2	Group/convention	3,000	7%	120	360,000		
	Transient business	10,000	24%	150	1,500,000		
	Transient leisure	25,000	61%	100	2,500,000		
	Crew	3,000	7%	50	150,000		
		41,000	100%		4,510,000	110	**-5.5%**

Source: Truist Securities Research

- **Another common misread in our view is looking at the progression of transient and group ADR in 2021.** We do not feel segmentation trends will provide the granularity needed for investors until well after intentional rate cutting occurs. Similar to the above analysis, as leisure demand and social groups will likely come well ahead of the recovery of corporate travel, segment ADR may still fall prior to rate integrity loss. That said, a deeper analysis of travel sub-segments may provide insights. For example, we will be more attentive to the progression of sub-segments such as "Association Group" and "Negotiated" (corporate) later this year. However, we still find speaking with hoteliers and those that book travel on the corporate level as highly critical to a fuller perspective on how room rates are shifting and strategies as hoteliers adjust in real time. In short, our qualitative analysis of rate integrity matters to us just as much as the quantitative piece.

For the qualitative piece, we focus on our conversations with industry experts, including private hotel owners, asset managers, and consultants. We expect to provide updates to the rate integrity trend especially in our two monthly lodging notes, the RevPAR Monitor (heavily top-line) and P&L Analyzer (profit focused).

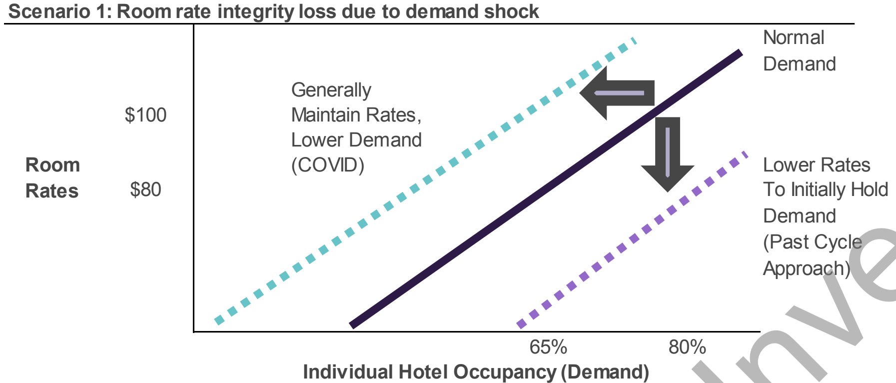
The progression of room rate integrity loss:

We present below a few graphical examples of the progression of an individual hotel's occupancy (demand) and room rates under a pressured, lower demand environment.

Initially when there is a demand shock (recession-related, terrorism, pandemic, etc.), an individual hotelier may consider two major strategic revenue decisions: hold room rates and expect to lose demand indefinitely or reduce rates in order to attempt to induce demand from other hotels and keep occupancy at or close to historical levels. In past cycles, we have seen the latter approach predominate. That said, the strongest operators and best-quality hotels (generally managed by the largest brands) tend to maintain rates as long as possible or lower rates less materially.

In the hypothetical example below, the decision to reduce rates but hold demand, evident in the move to the purple dotted line, moves RevPAR from $80 (80% occupancy * $100 ADR) to $64 (80% * $80). Conversely, if a hotel were to maintain rates but lower demand, the move to the blue dotted line, the hypothetical impact to RevPAR appears nearly the same (65% * $100, or $65). The flow to profitability and the impact to operations, however, can have very different consequences.

Scenario 1: Room rate integrity loss due to demand shock



Source: Truist Securities Research

- If a hotel generates a material amount of revenue from non-rooms spend, there may be an inclination to lower room rates as a hotel's labor and operational efficiency is greatly hit by reduced occupancy. Not only are the guest rooms subject to going empty by holding room rate -- the restaurants and meeting space may also suffer.
- Filling rooms ("heads in beds") is a common strategy for hoteliers who are afraid to have an empty hotel -- thus a relaxation of room rates is often easier to rationalize and implement in the short-term. Both unsophisticated hoteliers and even some highly sophisticated hoteliers choose to push occupancy not unlike how airlines often see the value in an occupied versus an empty seat.
- While higher occupancy may satisfy labor costs and employee morale, hoteliers are often more profitable by reducing flexible staff and other variable costs but hold room rates steady. The problem is if one's competition has lowered room rates, it is hard for the hotel that kept the higher rates to stay competitive

especially if there is no great product differentiation between the competitive properties. Customers are generally fairly sensitive to price differences between hotels when they "shop" where to stay.

Post-COVID, we have largely seen (so far) a trend where many hoteliers have assumed no major changes to room rates with the understanding that demand would obviously be impaired. Unlike in normal cycles, there was no great rationale to lower rates to induce demand in 2020 because much of the traveling public was simply not going to travel under any scenario. In the hypothetical scenario above (blue line), we may see a hotel with a $100 ADR go from 80% occupancy down to 20% and working back to normal as demand re-emerges. However, past lodging shocks suggest rate integrity is endemic if demand does not return promptly.

Past lodging shocks have also shown a clear multi-year profit consequence from the loss of rate integrity and why hoteliers have been reticent to lower room rates. Hoteliers are quite aware of the long cycle recovery from recent demand shocks. We view that rate integrity was impaired post 9/11 and the Great Recession. Given the delayed profit recovery, as summarized by hotelAVE below, we find from our conversations with private and public hoteliers at all price points that holding room rates close to pre-COVID levels is the currently preferred strategy even if room rates eventually are cut.

Duration of Hotel Recovery

hotelAVE Coronavirus Recovery Estimate

Hotel Recovery Time Line (in Years)								
Approximate Recovery Time (in Years) to "Period Prior to Event"								
Economic Environment	Event	Study Area	Duration of Travel Advisory or State of Emergency	Months until 1st month of positive Occu-pancy	Occupancy	ADR	RevPAR	GOP PAR
Deceleration	Coronavirus	National	Ongoing		+/- 2 Years	+/- 4 Years	+/- 5 Years	+/- 5 Years
Expansion	Zika	Miami only	3 months	9	1.8 Years	2 Years	2 Years	2 Years
Expansion	SARS	Toronto only	3.5 months	7	1 Year	4 Years	4 Years	Not Available
Recession	Financial Crisis	National	None	18	2.5 Years	4.5 Years	4.5 Years	5 Years
Recession	9/11	National	16 years	12	5 Years	3 Years	5 Years	5.5 Years

Sources: hotelAVE, CBRE, HVS, Truist Securities Research
Coronavirus recovery estimate by hotelAVE

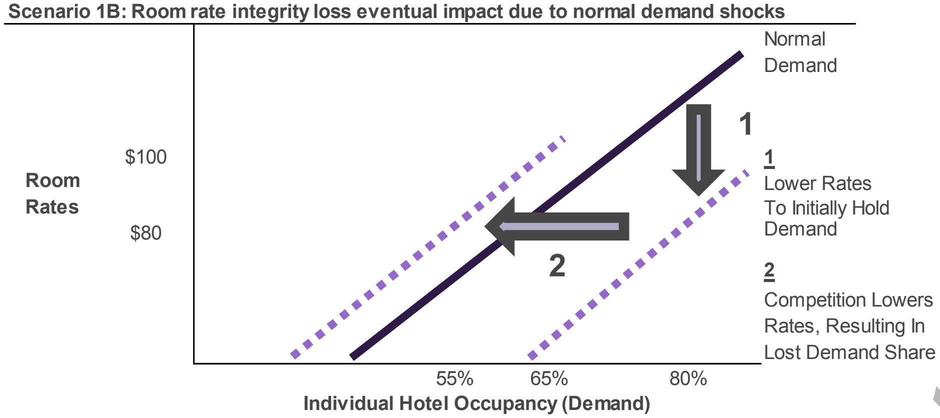
Considering the years before profitability recovers in full if rate integrity is lost, especially in an environment where lodging stock prices are in some cases at or near pre-COVID levels, we do not anticipate much messaging from the public companies on whether or not "rate integrity" is lost until the data is clearly evident. That said, a few of the REITS noted during 4Q earnings of their expectation that the re-opening of hotels in urban markets may result in rate degradation and one REIT CEO noted similar concerns in his firm's select-service portfolio on a hotel industry webinar pre-earnings. Not all public companies are as bearish about rate progression into 2022 (at least for one's own portfolio).

- If room rates do indeed fall for some hotels, the actualization of this impact is unclear until we have a sense of how corporate and group travel demand transpires especially in 2H21. Many private owners lack the liquidity of the public REITS and increasingly may have difficult conversations with lenders and the prospect of losing assets later this year. We note that lenders have been less desirous of taking back hotels given the uncertainty of a demand recovery but that does not mean that lenders will provide leniency forever.

Given the above dynamics, we view the following room rate loss scenario as at least somewhat likely in 2021:

- **In past cycles, the initial step of a hotel lowering rates to hold or induce demand was often followed by a competitor lowering rates to maintain/induce their own demand.** The net impact for an individual hotel is a loss of both demand/occupancy and room rates. As illustrated below, if a hotel ran 80% occupancy at a $100 room rate (RevPAR $80) in a normalized environment, the impact of lower rates following a demand shock leading to a competitor following suit, actualizes in a large RevPAR hit (55% occupancy * $80, or a RevPAR of $44).

Scenario 1B: Room rate integrity loss eventual impact due to normal demand shocks



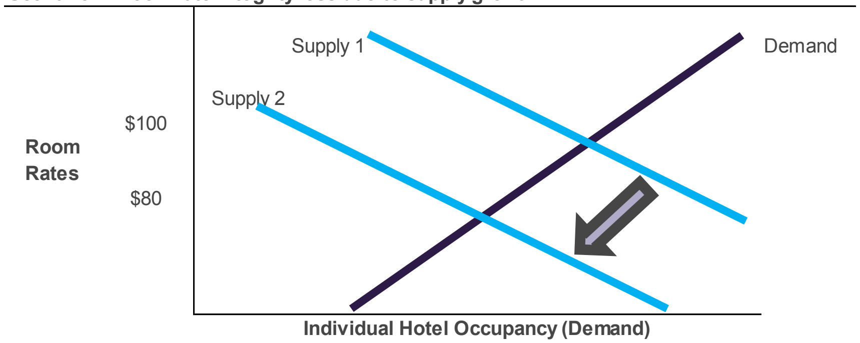
Source: Truist Securities Research

Following a demand shock, hoteliers generally have less ability to push room rates as demand recovers. As presented in hotelAVE's summary and in our cycle charts in the next section, the climb back to normalization, also known as occupancy and rate "stabilization", can take years. Hoteliers will often lower rates as demand returns in the attempt to gain/hold a demand share during the recovery. We view the mix of low occupancy and transparency on room rates on hotel booking websites (both for leisure and corporate demand) as providing the traveler a clear understanding of the cost of one's stay and can lead to resistance when rates are raised in a tepid demand environment.

Before we close this section, we address a more basic economics supply-demand situation on room rates. A second room rate loss scenario post-COVID that is somewhat less applicable on a national level but highly impactful in select markets is the consequence of new hotel supply being added in 2021 on top of hotels re-opening. In this scenario, both demand and room rates are negatively impacted due to more competition in a weak demand environment.

- If demand is robust, the impact of room rate degradation can be lessened. We saw this in some respects in Nashville and Austin pre-pandemic. However, for most markets, the demand-supply imbalance generally results in temporarily lower room rates. Compared to past downturns where there was rampant supply growth in the U.S. across chain scales and markets (we view +4-5% annual new supply growth over several years as a breaking point), we view new supply growth as relatively more modest in many U.S. markets today.

Scenario 2: Room rate integrity loss due to supply growth



Source: Truist Securities Research

- **A brief aside. Room rates can rise from new hotel supply, but that is very infrequent:** Only in very select cases can a new hotel induce demand -- convention center headquarter hotels being a prominent example of inducing new hotel demand to a market. That example is less helpful today as there is limited convention activity. While also less common today, a market lift to room rates can occur when a luxury hotel enters a market, becoming the rate leader. Due to enhanced destination prestige, that new hotel can actually lift rates of competitive hotels. This scenario can also take place when the first internationally branded hotel in a destination opens. We see this impact especially for emerging leisure destinations, emerging markets, and in some cases major U.S. cities that historically lacked luxury hotels. This scenario is far less common in the U.S. today as virtually all major hotel markets have at least some luxury exposure.
- **There is one national market where we expect the continuation of fast supply growth post-COVID without a material rate loss -- Mainland China especially within its Tier 2-4 markets.** GDP growth and the growth of the middle-class emerging domestic traveler in interior/non-Coastal markets should help balance the impact of new supply growth for several years.

Over recent years, especially in the last few years, room rate setting has become increasingly sophisticated and dynamic. In the past, room rates determination was quite static -- set and/or altered at most once a day, often by hoteliers calling nearby properties to ask what their room costs for the night. If one's rates appeared to low or high given expectations of one's own nightly occupancy, a hotelier may change their rates. Even into the 2000s, there were many hotels that set rates once a year, with perhaps 3-4 room categories and a few seasonal changes, and posted all these rates to their website. Those days are long gone. With big data, online bookings, expensive revenue management experts and software, as well as the greater expectation of price transparency from the public, room rate setting has become more scientific. At the same time, rate strategy is still a psychological battle for hoteliers to maximize profits while balancing demand, hotel operations, and labor costs.

A common misconception among investors is that because "lease terms" are effectively one day and demand can change quickly, room rates can recover quickly in an era of pent-up demand. For a variety of reasons, that logic is faulty. <u>Not all room rates can be easily adjusted.</u> If rates fall below the more static and previously contracted rates, a slippery slope of rate integrity is even more at risk.

- **Group/convention rooms:** A relatively static rate is what a conventioneer or group customer pays for a previously negotiated room at a hotel that is part of the "room block". For large events with thousands of attendees, several hotels may be contracted with rates set many months in advance that differentiate based on the location to the convention center, quality of the hotel, and expectation of availability of rooms for that time period. These rates do not change generally speaking. **For many REITS and C-corps, group rates set the base of all other rate setting -- at least in normal times when group/convention demand is robust. For large cities and some resorts, group/convention demand can be over 30% of total annual hotel revenue.**
    - One issue for rate integrity is when published room rates for a hotel fall below a contracted group rate, perhaps due to a demand shock or competition lowering rates. Some group attendees may choose to stay at a hotel that is outside of the group block due to costs or complain to the hotels within the group block that a cheaper rate is available online. A slippery slope of rate integrity can be lost as a hotel in the group block is not desirous to lose demand to competition.
    - A second issue may transpire later this year as groups may start to occur live but with lighter attendance. The consequence is the hotels in the group block may apply a "heads in beds" strategy and lower room rates simply to attract transient (non-group) demand.
- **Corporate negotiated rates:** Some corporations negotiate room rates with individual hotels/multi-unit operators/hotel franchisors on an annualized basis, which results in a hotel management team that can generally anticipate a certain level of volume at a discounted rate. **Due to the materiality of negotiated corporate room rates, which can be 10-20%+ of total annual demand for a hotel and can impact overall hotel rate setting for an entire year, we focus on this subject at our annual December conference (annual rate negotiations transpire around this timeframe).**
    - Corporations, especially larger corporations, have enacted strict policies that force their employees to travel within a negotiated group of contractually approved hotels. If an employee stays at a hotel outside the negotiated rate, a corporation may not have as much negotiating power in the following year's negotiations.
    - However, if the headline "best available rate" or "rack rate" offered to any customer is materially below the negotiated corporate rate, some corporations will attempt to have their employees book the cheaper rate in an opaque fashion. For this reason, the loss of rate integrity during a year can be very damaging to a hotel's profitability.

Another misconception from some investors relates to big data being the answer to maximizing room rates for maximum profitability. Generally we view dynamic pricing and big data favorably although we find some algorithmic pricing to lack common sense. Some VC-backed emerging disruptor hotel brands are attempting to take out the human component of rate setting although we have yet to see any evidence that algorithmic pricing is an improvement over the combination of quantitative and qualitative approaches, not to mention if the algorithms can properly factor fixed and variable labor costs and specific rational why a competitive hotel may be adjusting rates. There is a reason why revenue managers are very well paid -- rate determination is complex. **We occasionally hear from tech-focused investors that suggest room rate movement is "easy" or mathematically predictable to maximize profitability. If that was the case, we assume we would have heard about this success already and revenue management talent would be out of work.**

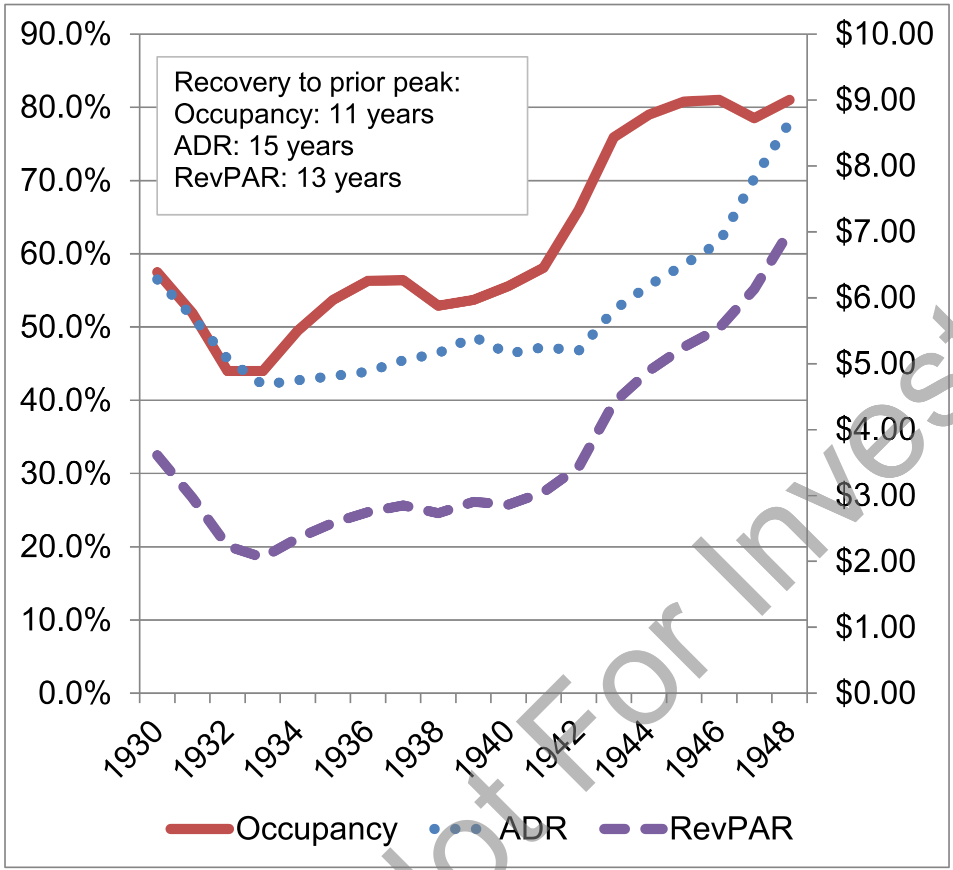
2. Review of past cycles for rate integrity precedence

We occasionally receive the question of what are the best sources of long-term U.S. hotel data collection through economic cycles. We focus on two highly reputable sources. CBRE Hotels (legacy PKF Consulting/PKF Hospitality Research) has collected and analyzed hotel income statements since 1936 and top-line performance prior to that. Since the 1980s, STR (now part of CoStar) has collected top-line data on a national level. We find both companies as gold standards.

For this note, we focus primarily on the Great Depression and the most recent three material lodging demand shocks. We also focus on the top-line for this note, although we recognize import in analyzing profit implications as well. We add that as revenue management has become more sophisticated, especially in an era of big data and digital bookings, even the most recent cycle trends might have proceeded differently, *ceteris paribus*, if the downturns had occurred in an era of big data and greater digital bookings alongside effectively transparent price discovery by guests.

As we have discussed before, one common thread appears in industry downturns -- and what may be applicable again in 2021: occupancy declines tend to precede ADR declines, sometimes by many months. Further, and more our focus for investors, an occupancy recovery can occur even if room rates are still intentionally being lowered. This logic makes some sense as hoteliers are not apt to lower room rates until the demand-supply dynamics are better understood and the comfort to lower rates may result in some gain to occupancy.

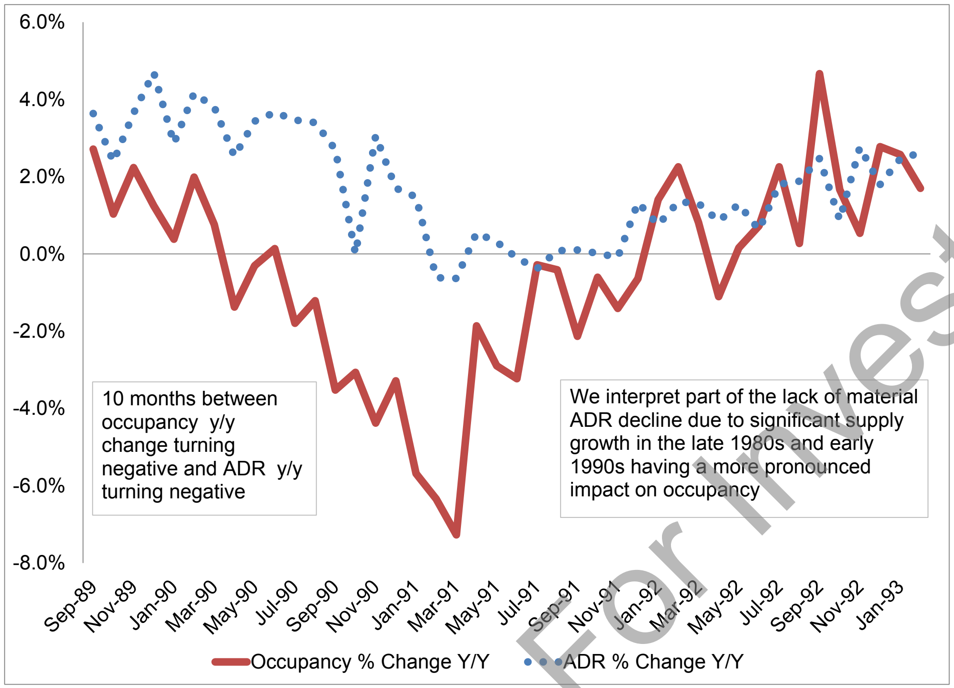
Great Depression: From a performance perspective, we have to go back to the 1930s to find a comparable period of lodging demand collapse. The only source of data from this time frame to our knowledge is from what is now CBRE Hotels (legacy PKF). While we cannot view today's lodging or economic environment akin to the smaller set of hotels that existed in the 1930s, not to mention the far more simplistic form of room rate setting, we note that occupancy in the collected set declined from 57.5% in 1930 to 51.9% in 1931 and 44.0% for 1932 and 1933 before a steady rebound until 1938. Similar to more recent periods discussed above, ADR fell for three years between 1930 and 1933 (total 25.5% decline) before rebounding slightly in 1934 and 1935. RevPAR in 1930 did not recover to pre-demand shock levels until 1943. We note that occupancy nearly recovered to 1930 levels by 1937 when the "recession within the depression" transpired. **Additionally, room rates were falling in the late 1930s even as occupancy was rising.** We cannot confirm if rate integrity was impacted but the trends would point in that direction.



Source: CBRE Hotels, Truist Securities Research

Early 1990s recession/Gulf War: Following a period of economic weakness in 1989 and 1990, the U.S. entered what is generally viewed as a mild recession in July 1990, lasting through March 1991, the Gulf War, and an arguably tepid employment recovery into 1992. Concurrently, the S&L crisis, resulting in the establishment of the conservator Resolution Trust Corporation by the U.S. government, added specific pressure to the U.S. real estate industry including foreclosed hotels.

- **In this cycle, there was a ten month gap between the period when hotel occupancy y/y change turned negative and when ADR change flipped negative -- and like in the 1930s, occupancy was recovering even though rates continued to decline.** Unlike in future cycles we discuss below, we view a number of unusual dynamics occurred in the early 1990s beyond the macroeconomic and real estate-specific matters above. For the lodging industry, supply growth had already begun to slow prior to the lodging cycle downturn. We view the absorption of new supply (including higher-quality select and full-service hotels) as helpful to ADR growth in the recovery. Supply growth was north of 4% in the late 1980s and was already in the mid-3s before the start of the recession. Supply growth fell to sub 2% after the Gulf War and less than 1% by late 1991.

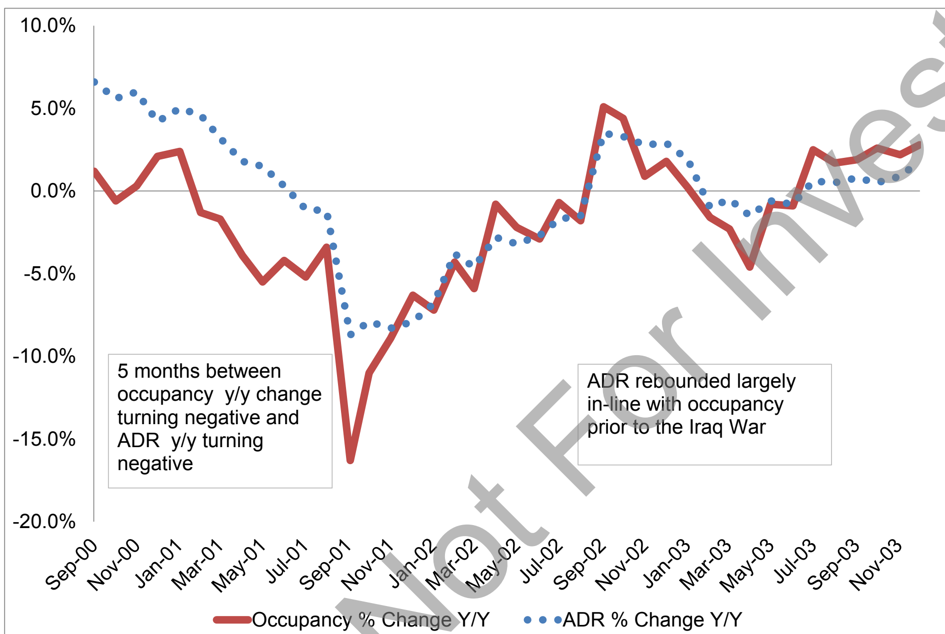


Source: Truist Securities Research, STR

Dotcom bust, 2001 recession, 9/11, and military action in Afghanistan and Iraq: A comparatively worse demand shock occurred in the early 2000s, contributed by the failure of new tech firms, a stock market decline, and the Fed's interest rate increases at the start of the millennium. The lodging industry was already struggling well before 9/11, with a recession that started in March 2001 and ended in November. ADR growth turned negative in July 2001. Notably, like in the decade prior, new supply growth was well below 3% by 2001 after years of growth in the 3-4% range in the late 1990s -- we cannot attribute ADR loss singularly from supply growth but instead partly from intentional ADR discounting. In this cycle, there was a five month gap between occupancy turning negative and ADR following suit.

Similar to COVID, 9/11's demand shock was partly a reflection of fear to travel. We view the 2002-2003 recovery period complicated by the post-recession economic recovery and a second RevPAR dip into the Iraq War period. However, once again, occupancy growth turned negative ahead of ADR. Additionally, as occupancy was recovering, rates continued to fall.

Unlike in the early 1990s, the late 1990s and early 2000s was a period of the emergence of online travel agencies (OTAs), travel review websites, and hotel websites resulted in greater room rate transparency and consumer feedback for the traveling public. There were many booking engines but many were unsophisticated. This timeframe was a period where hoteliers started to give rooms product to online third-parties who ended up selling rooms at highly discounted prices, materially reducing rate integrity for transient bookings and effectively encouraging customers to book third-party. The hotel industry has only started to regain traction versus third-parties in the last few years, driven by the "direct booking" efforts by the Lodging C-corps. **However, the rate integrity hit in the early 2000s, supported by the infancy and wild west of online travel, is still being felt today -- a 20+ year if not permanent impact.**



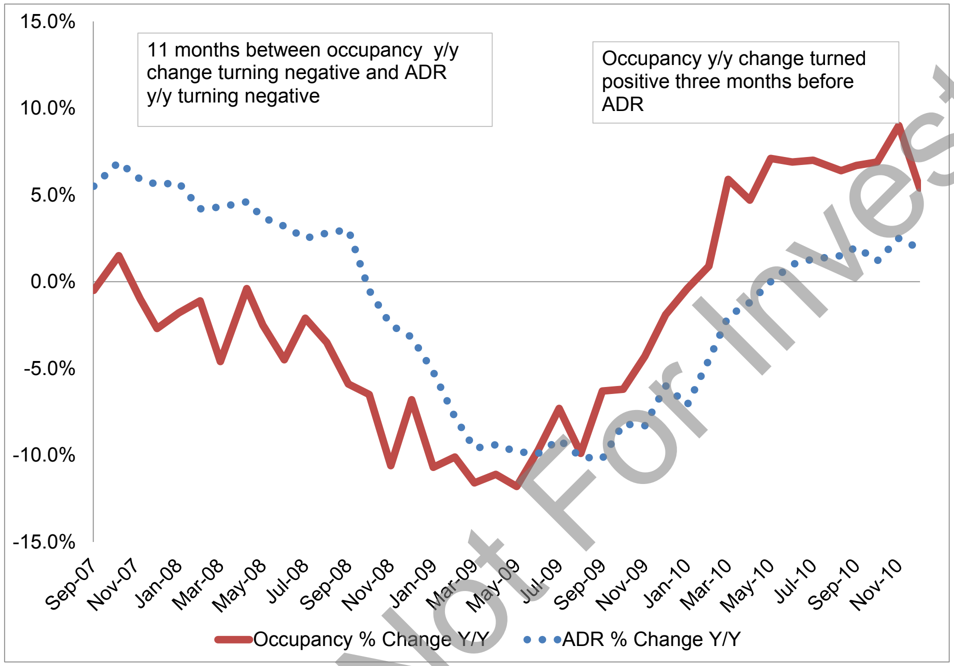
Source: Truist Securities Research, STR

Great Financial Crisis/Great Recession: The most severe economic recession of the recent examples, the GFC, arguably has remained in the psyche of hotel owners, operators, lenders, and investors. During the GFC, there was an 11 month gap between occupancy growth turning negative and ADR following suit. The lodging industry did not fully recover for over five years. For some hotels, the negative profit impact was even more prolonged due to further supply growth, including high-quality select-service hotels being built in the downtowns of Top 25 markets.

Similar to the early 2000s, hoteliers once again discounted room rates intentionally in attempts to draw demand to hotels running 40s and 50s in occupancy percentage. Many weakly performing hotels also gave even greater bookings share to OTAs, resulting in the continued relative power position the OTAs have today.

The combination of a severe recession, OTA share growth, the rise of shared accommodations, and another wave of supply growth lead to a tepid and delayed ADR recovery until the later part of the 2010s when occupancy was at historic highs.

From a rate integrity perspective, we know from personal experience that hoteliers were intentionally lowering rates well into 2009 and 2010 despite the recovery of demand. **In fact, it was the recovery of occupancy that arguably encouraged hoteliers to discount rates in order to keep/gain demand share, knowing that the demand to travel "was there for the taking."**

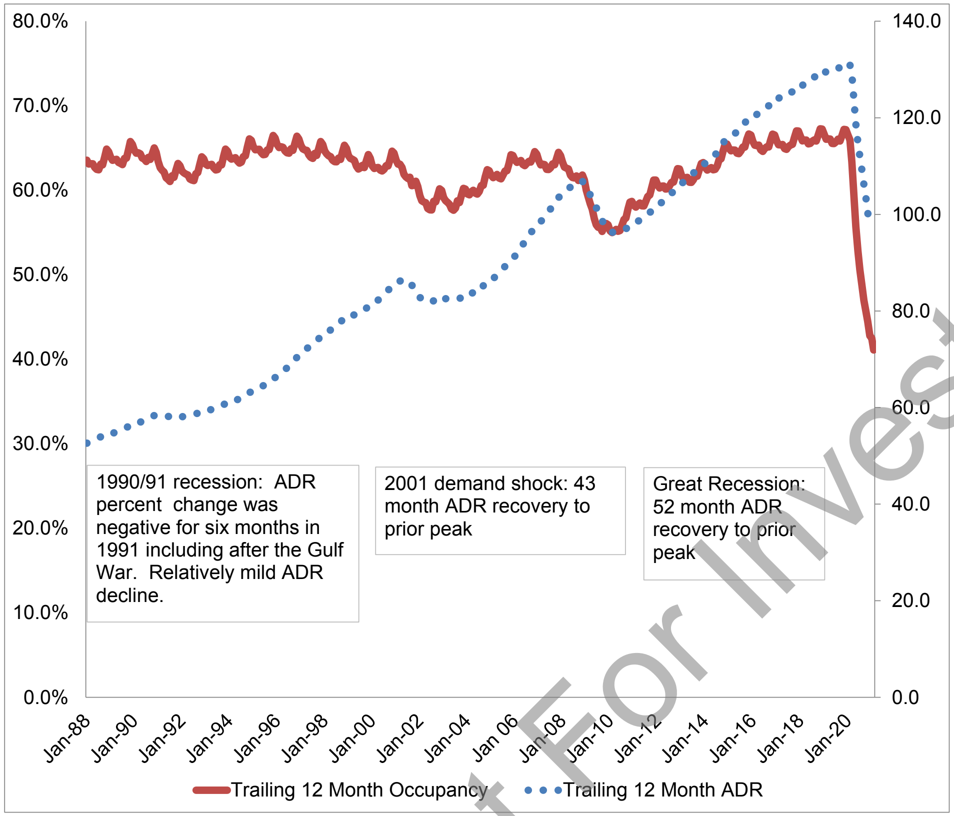


Source: Truist Securities Research, STR

Takeaways from the above cycles:

- **Occupancy generally falls ahead of ADR and also recovers first.**
- **Even if an occupancy recovery is evident, room rates can continue to decline -- and we view the loss of room rate integrity/intentional rate cutting as a contributing factor.**
- **Generally, the worse the lodging demand shock (war, terrorism, recession, etc.) the more rate integrity is lost.**

For a summary of the ADR impact over the last 30+ years following demand shocks, please see below.



Source: Truist Securities Research, STR

3. Discussions with hotel experts, both public and private, as to how rate integrity may unfold this year

We have asked a variety of hotel experts their impressions on how room rate integrity may progress this year. Outside of the commentary by a select few public executives, the general sense from those in the private industry (consultants, asset managers, and owners) is one of uncertainty. Such uncertainty does not provide us comfort that rate integrity will not be lost once again. Some hoteliers have told us they expect the rate loss impact to happen even if on a major delay due to the current lack of interest in most business travelers to resume traveling for work until travel fears have subsided.

When we consider forward bookings, given that the majority of bookings are still occurring for travel less than a week before arrival, we cannot rely on corporate volumes or convention booking pace as terribly reliable, at least not yet. Thus when we ask hoteliers and corporate travel executives whether or not corporate room rates may decline in 2022, few suggest rates are likely to hold, but most of our contacts do not have strong convictions as to the severity of rate discounting.

- The loss of convention citywide demand, at least until this demand recovers, eliminates the needed base of 20-40% of weekday lodging demand in major corporate markets (most Top 25 cities) where room rates can be maintained if not pushed higher. We emphasize that unlike every other modern downturn where hotel occupancies were at least in the 40 percent range at the worst periods, with conventions and business travel still occurring to some extent, we are in a completely new environment today.

Given the 5+ year impact that rate integrity loss brings to profitability, as shown in the recent demand shocks we discussed, we believe hoteliers have learned the lesson that the movement of ADR is far more impactful to profitability than occupancy. In the post-COVID recovery, especially with occupancy so uniquely challenged, we have seen a particular effort by hoteliers to reduce operating costs, especially labor, towards a highly variable model.

Generally, the more that a hotel is occupied, the greater the labor/operating costs. **However, if hoteliers can push room rates higher with a small impact to operating costs, there is a greater positive impact to profits than say filling one more room.** Said impact manifests not just for room rates but also for other hotel revenues -- such as the ability to push pricing on restaurants and meetings.

We find CBRE Hotels provided an excellent explanation of how hoteliers have adjusted their labor and operating costs in the immediacy post-COVID. We view below a clear example of drastic attempts to create highly variable operating models in a low occupancy environment, frankly a necessity for the many hoteliers running in the red. To our understanding CBRE's consultants reached out to many owners to better understand hotelier operating strategies.

TRUIST

Full-Service (150-300 rooms) COVID-19 Fixed and Variable Impact

Pre-COVID Costs		Immediate and Ramp Up Costs		Short- to Mid-Term Post-COVID Costs	
Fixed %	Variable %	Fixed %	Variable %	Fixed %	Variable %
Rooms		**Rooms**		**Rooms**	
35% - 40%	60% - 65%	10% - 15%	85% - 90%	30% - 35%	65% - 70%
Front Desk Supervisor, Housekeeping Supervisor, Rooms Manager, Minimum FTEs for Housekeeping and Front Desk	Outsourced Labor/Part-time, Distribution fees, Linen and Cleaning Supplies	Management or Supervisor	Most of line item, necessary labor for Post COVID-19 Ramp Up.	Front Desk Supervisor, Housekeeping Supervisor, Rooms Manager, Mimimum FTEs	Part time and Outsourced Labor, Distribution Fees, Linen and Cleaning Supplies
F&B		**F&B**		**F&B**	
30% - 35%	65% - 70%	5% - 10%	90% - 95%	25% - 30%	70% - 75%
Management Salary, Minimum FTE - Kitchen and Floor, Banquet Supervisor and Minimum Banquet FTEs	Food Costs, Part-time Labor. Banquet Outsource	Closed or Pre-package/ to-go, Kitchen FTE and/or Manager	Most of Line Item. necessary labor for Post COVID-19 Ramp Up	Manager, Minimum FTEs - Kitchen and Floor, Banquet Supervisor	F&B Rec-Concept/Grab & Go/Counter-Service to increase efficiency in outlets, Banquet Outsource
A&G		**A&G**		**A&G**	
30% - 35%	65% - 70%	20% - 25%	75% - 80%	25% - 30%	70% - 75%
General Manager, Assistant GM, Director of Operations, Suppert FTEs	Office supplies, Part Time Staff, Credit Card Comissions	General Manager, FTE (Security)	AGM, Support FTEs, Part Time Staff, Office Supplies, Credit Card Commissions	General Manager, Director of Operations, Support Staff, Security	AGM, Part Time Staff, Office Supplies, Credit Card Commissions
Sales & Marketing (Excluding Franchise Fees)		**Sales & Marketing (Excluding Franchise Fees)**		**Sales & Marketing (Excluding Franchise Fees)**	
40% - 45%	55% - 60%	20% - 25%	75% - 80%	30% - 35%	65% - 70%
Director or Sales, Room Sales and/or Banquet Sales Managers, Revenue Manager, Support FTEs, Sales Team, Website	Marketing Fees, Advertising, Public Relations	Single Manager or DOS. Maintaining future bookings, and service/rescheduling of any cancellations.	Room Sales and Banquet Sales Managers, Revenue Manager, Support FTEs, Post COVID 19 pre marketing/ ramp up.	DOS, Revenue Manager, Single Manager, Support FTE, potential for centralized sales	Part Time Staff, Advertising, Public Relations

Source: CBRE Hotels

The "why" of rate discounting in 2021:

- **Are hoteliers aware of the consequence of intentionally lowering room rates post-COVID even if demand is recovering? Yes. This topic comes up all the time in conversations. However, we view it still psychologically and operationally easier for hoteliers to wish to fill rooms (occupancy) than maintain room rates.** Even sophisticated hotel owners employ "heads in beds" strategies to fill rooms, focusing on occupancy over rates. Part of the rationale is the nature of operating costs, including stimulus money that can be provided to employed hotel staff that may be awaiting a return of demand. There is also a psychological impact to hotel employees working at "empty hotels". Filling hotel rooms with guests means more opportunities for non-rooms revenues, tips for housekeeping, greater job security with a full hotel, less potential turnover in an environment where labor availability may once again be stretched, and greater operator predictability on managing costs.
- **Demand is more predictable and forecast-able (in normal times) than room rates. The more that a hotel is booked well in advance of the date of arrival, the more that room integrity generally holds or can be adjusted for the fewer rooms left available. In short, certainty is more helpful to hoteliers than uncertainty.** Additionally, the more sophisticated the hotel owner/operator (and the more data available), the less likely room rates will be cut dramatically. Thus, hotels that have strong brands and are generally full of weekday business travelers and conventioneers have greater predictability for their budgeting. An example: a hotel that is normally 30% comprised of convention bookings (these events are scheduled often years in advance) and a predictably "X" thousand of annual rooms demand from certain employers near that hotel enhances forecasting predictability. Conversely, as in today's situation and likely for several months to years to come -- hotels have at least a partially last-minute booking pattern with less ability to predict their rates well in advance. Thus, the more rooms booked, the less rate integrity is an unknown threat.
    - Hotels most impacted by rate integrity issues tend to have less sophisticated ownership or operators, are less institutionalized with less lending support, have a high transient mix, and are often affiliated with weaker brands or are independent. The one caveat to above is that some owner-operators at the economy level may also be less inclined to make major adjustments to room rates on a dynamic basis due to limited staffing and resources. Only very recently have some C-corps provided revenue management tools to Economy and Midscale hotel owners. We do not know if C-corp efforts have helped lower-rated hotels on maintaining rate positioning post-COVID.
    - **When hotels with weaker dynamics start to discount rates, we view the eventuality is many stronger-positioned hotels eventually cannot resist the impact from rate cutting. The impact post-COVID across the lodging industry may be far from uniform as this downturn was not driven by an economic recession.** Lower-rated hotels and desirable resorts may not see as much rate degradation as the urban fly-to higher-rated gateway markets, especially those markets where international inbound demand is more material to the local hotels (LA, SF, Honolulu, Orlando, and NYC as a few examples).

4. One large variable that could lead to rate integrity being a relative "non-issue" in this lodging recovery -- a variable to our recollection has never occurred in the modern U.S. hotel industry:

Said variable is the vast pent-up demand to travel -- a variable that has been simmering in recent months due to many people unable/unwilling to travel for over a year. That simmer shall likely continue for at least several months given the lack of herd immunity and what is likely to be far below normal air travel for an extended period of time, especially international travel. We also recognize the impact from the COVID burnout may result in a focus on pleasurable activities. Certainly traveling fits and we have already seen several leisure destinations perform very well this winter. Our curiosity is will that "simmer "explode once the concerns over traveling are reduced or will the demand rebound remain gradual.

Our house view on post-COVID pent-up travel factors in several dynamics but for this note we focus on two in particular: the long-lasting desire/need for people to travel for vacation (and in some cases for work) and the safety risks of traveling. The interest in the resumption of global travel normalcy is arguably unprecedented but we can use two historical examples we discussed earlier as partial guides.

- **The safety risk comparison -- 9/11:** As we discussed earlier, the closest comparison to COVID from a safety risk to traveling is 9/11 -- and even in 2001 the worst occupancy month in the U.S. was 45.0% in December 2001 (per STR). For a variety of reasons, occupancy recovered despite terrorism fears that continued long after the initial attacks. Recall that when American Airlines Flight 587 sadly crashed in Queens, New York on November 12th of that year, there were some initial concerns that the crash was yet another terrorist attack. We note that there were concerns post 9/11 if the travel industry would ever recover fully and there were similar concerns about the viability of NYC as a tourist destination. Clearly the resolve of the global traveler showed that 9/11 was a major albeit temporary impact to the lodging industry including to that of NYC and Washington, D.C. The recovery of the national lodging industry took ~ 5.5 years per hotelAVE, but the lodging industry and the local NYC and DC markets eventually recovered.
    - Health risks can also eventually become insignificant factors: SARS, Zika, MERS, and other health concerns have caused temporary but not permanent losses to hotel demand in most markets.
- **The material demand shock comparison -- The Great Depression:** From a demand loss perspective, we have to go back to the 1930s. While we estimate that the occupancy recovery took 11 years (and RevPAR even longer), we note that occupancy nearly recovered to pre 1930 levels by 1937, when there was a "recession within the depression". We frankly cannot speak to the degree of demand to travel in the 1930s as a comparison to the 2020s but we do note that occupancy recovered far faster than room rates.

History as a guide shows that pent-up demand to travel has held even under the most severe risks to personal safety and economic collapse -- and we interpret all scenarios to incorporate corporate travel. However, rate integrity remained a headwind towards a recovery.

The good news: in 2021, we have a relatively strong economy and already health risks that appear to be reducing. Unlike after 9/11, the risk to travel is more transparent; health safety can be better achieved by self-protective measures such as vaccination and mask wearing. Unlike during the 1930s, today we have the power of economic stimulus, a strong stock market, and healthy consumer savings. Relative to even the GFC period, the improved quality of big data, increasingly dynamic rate pricing at all price points, and hotelier memories of the impact of rate cutting are all factors that may materially impact room rate progression this year and into 2022.

Nevertheless, if pent-up demand to travel does result in a near normalization of occupancy by 2022 and RevPAR by 2023/2024, that recovery would be as fast or faster than 9/11, the GFC, and the Great Depression. The most severe demand shocks in the last century suggest that the greater the demand shock, the longer the demand recovery. If 2021 ends up being an exception to the rule, then perhaps room rate integrity becomes a relative non-issue. We find that these concerns are premature to eliminate.

If room rate integrity does hold in 2021 and through 2022, we see the following factors as prerequisites or at least important considerations:

- Sharp recovery of corporate travel in 2H21
- Near-full resumption of convention citywides by 2022 in terms of attendance and volume of events, leading to sellouts of many hotels
- No material hit to corporate travel and entertainment budgets
- No material loss of individual corporate travel to video and teleconferencing
- International markets, including major inbound markets to the U.S. such as China, Canada, and the E.U., are able to achieve herd immunity by 1H22 and/or historical patterns of demand resume to 2019 levels by 2022
- There are no macroeconomic or geopolitical shocks that are beneath the surface
- COVID variants do not make the existing vaccines less reliable and/or booster shots are readily available, making future travel decisions unimpacted by health risks
- **Hoteliers have enough confidence to not discount room rates in the interim, especially for corporate rate negotiations for 2022**

From the above, we view many demand unknowns. While we hope the lodging industry does indeed recover faster than what we hope, the hurdles to breaking precedence are not few. We hope this note informs investors of past trends and as guidance for what may be a bumpy recovery to come.

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