Airbnb & Hotel Performance
An analysis of proprietary data in 13 global markets

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### Executive Summary

Hotel performance continued to show strength while more hosts than ever were renting their residences on Airbnb, according to STR and Airbnb data.

Performance data through July 2016 indicated hotels were following their normal cyclical trajectory, hovering at or just below the peak at a time when Airbnb listings outnumbered the world’s largest hotel company by nearly three units to one. As of July, the U.S. hotel industry had recorded its 77th consecutive month of revenue-per-available-room growth. During that same month, hoteliers sold more roomnights (117 million) than ever before.

Those same dynamics largely held true in the following 13 global markets analyzed in this report: Barcelona, Boston, London, Los Angeles, Mexico City, Miami, New Orleans, Paris, San Francisco, Seattle, Sydney, Tokyo and Washington, D.C. Airbnb provided more than two-and-a-half years of daily data for each market, which STR analyzed and then compared to its hotel performance data.

Among the most compelling findings:

- Airbnb occupancy generally was the highest in markets where hotels had high occupancy.
- Hotel occupancy was significantly higher than Airbnb occupancy.
- While Airbnb’s share of total accommodation supply (i.e. Airbnb units and hotel rooms) was growing, its share of market demand and revenues still was generally below 4% and 3%, respectively.
- Airbnb guests typically stayed longer than the average hotel guest, with roughly half of Airbnb roomnights coming from trips of seven days or longer.
- Airbnb’s share of business travel was substantially smaller than its share of leisure travel.
- Hotel average daily rates generally were higher than Airbnb rates (e.g. $16 higher on average in our seven U.S. markets).
- Hotel ADR increased in all but one market (Paris) in the year ending July 2016. Airbnb rates decreased in eight markets and increased in five.

Supply might have been a contributing factor in that latter point, as the majority of the markets analyzed in this report saw available Airbnb units increase by more than 40%—and in some cases north of 100%. When analyzing growth rates, however, it’s important to acknowledge the baseline. Airbnb is a relatively new presence in many markets, and growth rates often are commensurate with untapped potential. In other words, Airbnb has more room to grow in most markets, whereas hotels have carved out an established presence over decades.
The Airbnb demand story followed a similar narrative, with growth rates that generally were above 60%. Harder to assess was the nature of this demand—whether it was mostly incremental, as many of Airbnb’s most ardent defenders have argued, or whether it represented a roomnight that otherwise would have been spent in a hotel, as many critics have alleged.

While competitive pressures exist across the lodging landscape, it is difficult to assess the interplay between different accommodation types with different operating models. Hotel inventory is fixed; a hotel room tonight is a hotel room tomorrow. Airbnb inventory can flex, as hosts take supply on and off the market based on their willingness to make privately owned units available to the public for rent. This analysis represents our attempt to normalize the data set, but it should not be interpreted as a true “apples-to-apples” comparison.

That said, one can still glean meaningful insight and information from the data. A review of compression nights, for instance, showed no noticeable impact of Airbnb within the seven U.S. markets included in this report (Figure 1). The number of nights in which occupancy exceeded 95% had increased steadily since the Great Recession, reaching its peak of 76 during year-to-date July 2015. That number dipped slightly to 71 through July 2016, which followed a softening of several other macroeconomic indicators. Also at play was the 1.6% uptick in hotel supply in those seven markets, which should not be underestimated. This looks to be a small percentage increase on the surface given the high base of hotel supply (92,871,685), but the total number of new supply added (1,487,458) to these markets was actually substantial.
What’s more, U.S. hoteliers in those seven markets saw no degradation of their rate premiums during that same period. ADRs on compression nights during 2016 were 35% higher than on non-compression nights, which represents a record high.

Compression night performance in the six international markets followed a similar track, although more volatility was observed in the aggregate given the disparate economic and political factors at play.

With this analysis, it is our intent to provide the most comprehensive comparison of Airbnb and hotel performance data ever reported to better inform the conversations in this “street corner” business. It is not our intent to draw correlation or causation. We will share more findings as we continue to examine the available information and as new data becomes available.
Methodology and Data Sets

Airbnb provided STR with market-level activity data from 1 December, 2013, to 31 July, 2016, for the following 13 markets: Barcelona, Boston, London, Los Angeles, Mexico City, Miami, New Orleans, Paris, San Francisco, Seattle, Sydney, Tokyo and Washington, D.C. These markets and submarket definitions were based on zip codes used by STR. Matching based on zip code wasn’t possible in Tokyo, London and Mexico City, so Airbnb provided data based on how it defines these markets.

While Airbnb provided a complete set of data for these 13 markets, STR excluded data we deemed incomparable to hotels to provide a more relevant analysis for our stakeholders. STR excluded shared and private rooms, limiting its analysis to entire homes/apartments/etc. We also excluded listings that hold more than seven people because groups of this size are the least likely to stay in hotel rooms.

Some charts and tables do not include every market due to the fact that either the Airbnb or hotel data in those segments was insufficient for analysis.

All currency is reported in local currency.

STR was not remunerated in any way for its analysis, and its participation in this analysis was not contingent upon developing or reporting predetermined results.
The Data Dilemma

Airbnb-sourced data is preferable to scraped data, but it still presents challenges. The Airbnb universe includes accommodations of all shapes and sizes, not to mention a fundamentally different operating model. Thus, we acknowledge our analysis is not a true “apples-to-apples” comparison. By applying the following filters to the data set, however, we ensured the Airbnb performance data we used provided the most meaningful comparison to our hotel performance data:

1. We removed Airbnb listings that aren’t actually available for rent. (Some hosts create listings but never actually make them available).
2. We removed shared bedrooms and private rooms with shared living space, because it is unlikely a typical hotel guest would view such a space as a viable alternative to a hotel room.
3. We removed large Airbnb listings that hold more than seven people, because groups of this size are unlikely to stay in hotel rooms.

Within the remaining listings, there was still the “Airbnb experience” factor, which might include kitchens and other apartment-style amenities, meeting the host, and other factors unique to the accommodation. For example, a small percentage of Airbnb listings are eclectic accommodation types such as treehouses, camper vans, yurts, castles and so forth that were not identifiable in our dataset.

Most reports about Airbnb rely on scraped data. Pulled directly from advertised listings on the company’s website, scraped data can prove a useful indicator—but one subject to numerous assumptions, which in turn can lead to unsupported conclusions. This is why STR prefers to use data directly from Airbnb.

Data Scraping Methodology and Assumptions

- **Scrape Listings, Calendars**: Assumptions:
  - All listings shown are bookable
  - All calendars are up to date
  - All blocked dates are booked

- **Scrape Reviews**: Assumptions:
  - Review rates are equal across listing and geographies

- **Scrape Base Price**: Assumptions:
  - Published price applies uniformly

- **Apply Average Stay**: Assumptions:
  - Length of stay is uniform across listing and geographies

Source: Airbnb
One of the biggest issues with scraped data is the challenge of determining whether a listing is actually booked or simply unavailable for rent. Without being able to make this distinction accurately, it is impossible to determine supply and demand.

To see just how different scraped data is from real Airbnb data, we compared real Airbnb data from a previous STR analysis on New York City to scraped data. For the 12 months ending August 2015, the scraped data substantially overestimated both demand and revenue. This suggests that estimates of demand and revenue market share that are based on scraped data may indeed be overestimates as well.

STR has used scraped data in the past, and we believe it can be a useful, directional indicator of Airbnb’s growth and prices. But just as when benchmarking hotel performance, source data is far more reliable.
The Accommodations Landscape

Unlike the hotel industry, in which descriptive attributes often are drawn from fixed real estate, Airbnb’s portfolio is more fluid and difficult to categorize. Listings come in various shapes and sizes, with availability constantly evolving as hosts take inventory on and off the market.

Despite this elusive quality, Airbnb is not beyond measure. Data provided from Airbnb on 13 global markets revealed new insights on the platform’s size and makeup.

As of November 2016, Airbnb reported having just over 3 million listings worldwide. By raw number of listings, this was nearly three times the size of the newly combined entity of Marriott International and Starwood Hotels & Resorts Worldwide (Figure 3).

Figure 3
Largest Lodging Companies by Rooms/Listings

Airbnb
Marriott International 1.1M
Hilton Worldwide 774K
Intercontinental Hotels Group 717K
Wyndham Worldwide 677K
AccorHotels 519K
Choice Hotels International 511K
Best Western Hotels & Resorts 296K
Carlson Hospitality Group 177K
Hyatt Hotels Corporation 168K

But recall that only a portion of Airbnb’s listings are actually comparable to hotel rooms. To estimate the fraction of hotel-comparable rooms within Airbnb’s global inventory, we extrapolated based on data provided by Airbnb for 13 markets.
Within this dataset, we calculated the fraction of Airbnb supply that comprises: 1) units not available for rent, 2) shared rooms, 3) private rooms, and/or 4) units that can host large groups (seven or more people). We then applied this fraction to the total number of Airbnb listings globally to estimate that only 1.08 million listings (35% of total Airbnb listings) are effectively available and reasonably competitive with hotels. This estimate is just under the total number of Marriott rooms. Figure 4 shows this “corrected” view, per our methodology.

Demographics differ between Airbnb and hotels
Over the past year, the average age of a guest booking on Airbnb was 35, and 53% of all guests were female, according to Airbnb. According to the AH&LA’s “Lodging Industry Trends 2015” report, 50% of all hotel travelers were aged 35-54, and males made up the bulk at 63%.
Airbnb guests are primarily leisure-oriented
The alternative accommodations provider in July 2015 launched “Airbnb for Business” to target more corporate travel. By 2016, Airbnb business travel had tripled in size, and more than 50,000 companies had used Airbnb for Business, according to Airbnb. The company estimates that 10% of its bookings are for business travel, though this may include travelers combining business and leisure travel.

While STR does not track business travel, an analysis of weekday (traditionally business-focused) versus weekend (traditionally leisure-focused) travel provides a good proxy.

Hotel occupancy typically was highest mid-week for the 13 markets, while Airbnb’s occupancy was highest on the weekend (Figure 5). This supports the logic that Airbnb is more leisure-focused than hotels. The only exception is San Francisco, where Airbnb occupancy was the highest on Wednesday and Thursday.

Figure 5
US Occupancy by Day of Week
July 2016, 12-Month Moving Average
In both hotels and Airbnb, average daily rate was the highest on the days with the highest occupancy (Figure 6). The largest variance in ADR between hotels and Airbnb occurred on Tuesday and Wednesday, which makes sense given these were the most occupied days for hotels and least for Airbnb. The pricing premium was reduced to $5 on the weekend, when competition for leisure travelers is arguably most intense. Recall that for the Airbnb data, we included listings that can accommodate up to six people, which skewed Airbnb rates higher than if we only considered listings accommodating one or two guests.

Airbnb’s share of weekday demand grew steadily over the past three years and was highest in Los Angeles, but was still less than 5% of total weekday demand in every U.S. market we examined (Figure 7). Most cities hovered in the 1-3% range.
While Airbnb’s share of weekday demand was growing, hotels in most markets still saw weekday demand growth. Boston and New Orleans were the only markets that saw a slight decline in hotel weekday demand year-over-year.

Additionally, weekday ADR was up in all markets except Miami. Four markets (Barcelona, Tokyo, Los Angeles and San Francisco) saw hotel weekday ADR growth of 5-10%.
Guests stay longer with Airbnb
Figure 8 shows the percentage of Airbnb roomnights sold by trip length for seven U.S. markets.

Figure 8
Trip Length Distribution for 7 US Markets
July 2016, 12-Month Moving Average

Please note: This chart does not show the percentage of total trips booked. Rather, it’s the percentage of total roomnights sold. Of all Airbnb roomnights sold, 29.2% were part of a trip that lasted between seven and 29 days, while 17.3% were part of a trip that lasted a month or longer. Combined, 46.5% of all Airbnb roomnights sold were part of a “long-term stay.”

STR currently does not track length of stay. However, we do have an extended-stay indicator that applies to approximately 30 brands in the U.S. that focus on attracting hotel guests for an extended amount of time. In the seven U.S. markets included in this report, 9% of all roomnights sold were attributed to extended-stay brands. This figure does not account for guests that stay for an extended period in non-extended stay hotels, but it is a good directional indicator.

Thus, the data suggests that travelers who use Airbnb typically have longer lengths of stay on average than do typical hotel guests.

In Los Angeles, Mexico City and Sydney, more than half of all Airbnb roomnights sold were part of trips that lasted a week or longer (Figure 9). New Orleans had the smallest percentage (20%) of roomnights for trips of a week or longer. Interestingly, hotel occupancy growth in extended-stay properties in New Orleans was down 8%, which indicates the demand for extended-stay nights declined in that market.
The number of roomnights sold on Airbnb that are part of stays of a week or longer declined 5% in the 12 months ending July 2016, which indicates that Airbnb trip lengths in all markets studied are decreasing. Meanwhile, the share of hotel demand attributable to extended stays has remained relatively stable.

**Figure 9**

**Percent of Airbnb Demand for 7+ Days**

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo</td>
<td>35.9%</td>
</tr>
<tr>
<td>Sydney</td>
<td>56.9%</td>
</tr>
<tr>
<td>Paris</td>
<td>41.8%</td>
</tr>
<tr>
<td>Mexico City</td>
<td>56.2%</td>
</tr>
<tr>
<td>London</td>
<td>48.3%</td>
</tr>
<tr>
<td>Barcelona</td>
<td>39.5%</td>
</tr>
<tr>
<td>Washington DC-MD-VA</td>
<td>45.7%</td>
</tr>
<tr>
<td>Seattle WA</td>
<td>37.4%</td>
</tr>
<tr>
<td>San Francisco CA</td>
<td>47.7%</td>
</tr>
<tr>
<td>New Orleans LA</td>
<td>20.3%</td>
</tr>
<tr>
<td>Miami FL</td>
<td>49.7%</td>
</tr>
<tr>
<td>Los Angeles CA</td>
<td>50.9%</td>
</tr>
<tr>
<td>Boston MA</td>
<td>43.0%</td>
</tr>
</tbody>
</table>

The only market that saw the number of Airbnb extended-stay nights grow was San Francisco. Notably, only 4% of all hotel supply in San Francisco was classified as extended stay, which is the smallest of any U.S. market studied.

While Airbnb does have a large percentage of extended-stay demand, these hotels in the U.S. still saw healthy growth. July 2016 year-to-date demand was up 5%, which was above the U.S. average of 1%. ADR growth for extended-stay hotels also was higher than the U.S. average at 4%.
Market Overviews

While analyzing the data in aggregate helps paint the larger picture, further clarity is gained by looking at the individual brush strokes on a market-by-market basis.

But first, a mathematical word of caution: Growth rates of many key performance indicators for Airbnb are much larger than those of hotels. There is a simple reason for this: Since Airbnb represents a tiny fraction of the inventory of hotels, Airbnb data starts at a low base—hence, high growth rates.

Tokyo serves as a good example. The market’s Airbnb supply footprint roughly tripled in the 12 months ending July 2016, a rate that dwarfed hotel supply growth of 3.2% in the comparable period. Those percentages belie the actual market dynamics, however. Tokyo’s baseline of 951,459 Airbnb rental nights listed in the 12 months to July 2015 is much less than the hotel baseline of 38 million available roomnights.

In other words, Airbnb had considerably more room to grow, and each additional unit listed represented a higher percentage increase than did each additional hotel room.

Supply and demand
As mentioned previously, Tokyo reported the highest percentage growth, with both Airbnb supply and demand more than tripling. This outpaced the growth rate of the second fastest growing market, Mexico City, where supply and demand both more than doubled.

Airbnb growth rates were muted in its more “mature” markets, such as its home base San Francisco and also Paris. The larger baseline of units in these markets softened the supply growth rates.

All markets, with the exception of Barcelona, reported supply growth of more than 30% in the 12 months ending July 2016. All markets reported demand growth of more than 20%.
Generally, Airbnb saw a favorable balance between supply and demand (Figure 10). Demand outpaced supply in all but three markets (Paris, Tokyo and San Francisco), resulting in healthy occupancy growth.

Because hotel supply and demand started at such a high base, year-over-year growth rates for the 12 months ending July 2016 were much smaller compared to those recorded for Airbnb.

While Tokyo’s Airbnb growth rates were the largest among the markets we examined, the city’s hotel growth numbers were not. Miami reported the largest hotel supply increase (4.1%), and Mexico City reported the largest hotel demand increase (5.5%).
Unlike Airbnb, hotels saw a less favorable balance between supply and demand (Figure 11). Seven markets reported supply increases that outpaced demand, resulting in negative occupancy growth during the period. Two markets (Paris and New Orleans), reported hotel demand decreases.

Given that hotel demand decreased and Airbnb demand increased in those two markets, Airbnb likely did affect hotel demand. However, there are also other market-level factors at play such as the recent terrorist activity in Paris and large event shifts in New Orleans that also negatively impacted hotel demand. In all other markets, both Airbnb and hotel demand increased at the same time, so there seemed to be no universal relationship at work.

**Figure 11**

**Hotel Supply and Demand Growth**

*July 2016, 12-Month Moving Average*

<table>
<thead>
<tr>
<th>Market</th>
<th>Hotel Supply PC</th>
<th>Hotel Demand PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Barcelona</td>
<td>0.3%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Greater London</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Mexico City</td>
<td>1.6%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Paris</td>
<td>0.5%</td>
<td>-9.0%</td>
</tr>
<tr>
<td>Sydney</td>
<td>2.4%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Tokyo</td>
<td>2.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Boston MA</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Los Angeles/Long Beach CA</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Miami/Hollywood FL</td>
<td>4.1%</td>
<td>3.2%</td>
</tr>
<tr>
<td>New Orleans LA</td>
<td>2.0%</td>
<td>-0.4%</td>
</tr>
<tr>
<td>San Francisco/San Mateo CA</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Seattle WA</td>
<td>2.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Washington DC-MD-VA</td>
<td>0.8%</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

**Occupancy and ADR**

Hoteliers sold significantly more of their available inventory than did Airbnb hosts during the 12 months ending July 2016.

In San Francisco, for instance, hoteliers sold more than eight out of every 10 hotel rooms available (84.6%), which was third highest among our 13 markets. Airbnb hosts in that market, meanwhile, sold more than five out of every 10 units available (51.8%), which also was third highest.

The above example underscores another trend: Airbnb occupancy was highest in markets in which hotel occupancy was highest, which might suggest Airbnb is accommodating incremental demand (Figure 12).
In the U.S., hoteliers charged an average of $16 more for their rooms than Airbnb hosts charged for their units (Figure 13). The largest delta was reported in Miami, where hoteliers charged $44 more on average than did Airbnb hosts. The most expensive market for both hotels and Airbnb was San Francisco.

Recall again that since our data set includes Airbnb listings with occupancy up to six, Airbnb ADRs will skew higher than if we only considered listings accommodating one to two guests.
Market share
A review of market share (Figure 14) indicates Airbnb penetrated the accommodations landscape most significantly in terms of supply, which makes sense given the significant growth numbers reported in this KPI. But a key consideration is that while our dataset carefully logged listings that technically were available for booking, Airbnb hosts do not always keep their calendars perfectly up to date. (i.e. Listings may not actually have been available for rent.) In such instances, we logged a unit of supply when in fact this supply was not made available for rent. This is a challenge of using Airbnb data, even when it is direct from the source.

That Airbnb had not penetrated market demand as significantly was a product both of the unavailable supply mentioned above and of lower occupancy rates. In other words, an influx of Airbnb units did not always translate into a corresponding increase in bookings.

The still lower revenue share was a natural outcome of the above imbalance between supply and demand, combined with the tendency to price Airbnb units lower than the average hotel room.

Airbnb’s share of supply was highest in London. London also had the second highest share of demand (after Tokyo) and revenue (after Los Angeles). On the opposite end of the spectrum, Washington, D.C. had the lowest Airbnb share of supply, demand and revenue.

Figure 14
Airbnb’s Share of Supply, Demand and Revenue (Hotels + Airbnb)
July 2016, 12-Month Moving Average

Note: We excluded Barcelona, Mexico City and Paris from the market share analysis because STR’s hotel sample in these markets is insufficient.
Airbnb’s Impact on Hotel Compression Nights

Room demand in the U.S. has grown steadily since the Great Recession ended, which makes any direct negative impact by Airbnb hard to ascertain.

Some hotel operators have suspected Airbnb’s impact is more pronounced during periods of peak demand, when major events (e.g., trade fairs, concerts, sporting events) or certain market dynamics push absolute occupancy levels at or above 95%. These “compression nights” yield higher hotel ADRs, and thus maximize revenue.

Some operators also suspect that the same market fundamentals that buoy hotel ADR also prompt more opportunistic Airbnb hosts to list inventory. This viewpoint asserts that an increase in Airbnb supply softens the spike in demand, resulting in the two following assumptions:

1. a decrease in the number of compression nights; and/or
2. a lack of pricing power on compression nights.

U.S. compression nights hold steady

We examined data for seven U.S. markets between January and July to test the aforementioned assumptions (Figure 15).

Figure 15
Compression Nights for 7 US Markets
July YTD
In contrast to the first assumption—that Airbnb has driven a decrease in the number of compression nights—we found that the number of compression nights has held steady at more than 70 nights for the past three years. The number of compression nights peaked in 2015 at 76 nights and then dipped slightly to 71 in 2016.

The year 2013 arguably serves as the best baseline, however, because it was before Airbnb had a significant presence and before hotel supply ramped up during this recent up cycle.

A few other things stand out:

- Compression nights mirror macroeconomic trends. The number was smallest in 2009 during the Great Recession. It steadily increased as U.S. GDP growth increased.
- The most recent dip likely can be explained by factors in the hotel industry as opposed to an external demand shock. Compression nights decrease either because demand decreases or supply increases. Given the 1.6% supply increase in the seven U.S. markets, a decline in compression nights is not surprising. We actually would expect this trend to continue as supply increases.

**U.S. compression night pricing remains strong**

The second question posed by hoteliers is the impact on pricing power. (i.e. Does increased Airbnb supply have an adverse impact on pricing power during these high-demand nights?) To answer this question, we examined ADR on compression nights versus non-compression nights and calculated the percent difference for those nights.

![Figure 16](https://via.placeholder.com/150)

**ADR Premiums on Compression Nights in the US**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR Premium</td>
<td>30.3%</td>
<td>23.0%</td>
<td>15.8%</td>
<td>34.9%</td>
<td>24.1%</td>
<td>26.5%</td>
<td>34.6%</td>
<td>30.8%</td>
<td>25.6%</td>
<td>34.9%</td>
<td>34.8%</td>
<td></td>
</tr>
</tbody>
</table>
As Figure 16 on the previous page shows, the ADR premium has hovered near 35% for the past two years, as well as in 2012 and again in 2008 before the Great Recession. There exists some volatility in the years between, but the trend line—at least on a market level—suggests minimum impact from Airbnb or additional supply in general.

**Compression night dynamics outside of the U.S.**

Despite a decrease in compression nights for the six markets outside of the U.S. during the most recent year, 62 compression nights is still in line with the long-run average (Figure 17).

Supply growth in these markets was 2.4% through July 2016, which explains some of the drop-off. The majority of downward pressure, however, came from Tokyo. Compression nights in the market decreased from 43 through July 2015 to 23 through July 2016, which accounted for 65% of the decrease reported in the six-market data set. (Similarly, the majority of the lift in 2015 overall came from Tokyo, where compression nights increased by 16.)

Only one of the six international markets we examined saw the number of compression nights increase year over year: Mexico City. Barcelona saw no change in the number of compression nights, and the remaining four markets experienced a decrease.

Compression night rate premiums were up in all non-U.S. markets. They were at record highs in Mexico City, Sydney and Tokyo. Barcelona had the highest pricing power on compression nights, during which hoteliers charged 60.8% more for a guestroom than they did on non-compression nights.
Compression in CBDs
For hoteliers, the downtown area, here referred to as the Central Business District, is often a bellwether for the larger market performance. CBDs are where major offices, meeting facilities and tourist attractions are located—and therefore where hotel supply is typically concentrated. It is not hard to imagine that because of the attractiveness of CBDs to tourists, group and business travelers that many Airbnb hosts also list their units there as well.

Figure 18 shows Airbnb’s share of total supply and demand in the U.S. CBDs. On average, Airbnb has 5% of total supply and 3% of demand, similar to its shares in the overall market.

Figure 18
Airbnb’s Share of Total Supply and Demand (Hotels + Airbnb)
July 2016, 12-Month Moving Average

Compression is particularly strong in CBDs because this is where hotels typically fill up first during large events and conventions.
For the seven U.S. market CBDs combined, compression nights increased for six consecutive years before the 14-night decrease recorded year-to-date July 2016 (Figure 19). The bulk of this was due to Boston CBD, which experienced 15 fewer compression nights. San Francisco was the only CBD that saw compression nights increase (+17).

Outside the U.S., compression nights fluctuated more than in the U.S. (Figure 20). The all-time-high number of compression nights occurred in 2010 followed by decreases in 2011 and 2012.

Please note: We omitted two of our 13 markets (Mexico City and Tokyo) where a clear CBD classification was not possible. Figure 20 reflects performance data in the CBDs of Barcelona, London, Paris and Sydney.
There were 40 fewer compression nights in international CBDs during the first seven months of 2016. At 54 compression nights, this was the third lowest number of compression nights since 2005. Compression nights were down in all four international CBDs studied.

CBDs typically achieve higher rate premiums than the full market. In the U.S., rate premiums were nearly 37% through July 2016 (Figure 21). All CBDs in the U.S. and international markets saw rate premiums grow year-over-year except Boston. Three CBDs even saw record rate premiums this year (London, Sydney and San Francisco).

Figure 21
ADR Premiums on Compression Nights in the US CBDs
July YTD
Airbnb’s Impact During Special Events

The opportunity to maximize one’s returns during a special event is not unique to the hotel sector. These high-demand periods benefit Airbnb as well, allowing longtime hosts to yield higher rates or first-time hosts to make their introductory splash in the sharing economy. While the resulting influx of supply might satisfy incremental or overflow demand, some hoteliers argue that it dampens their ability to realize outsized revenues.

In an attempt to explore that claim, we examined select special events of two types:

1. calendar events such as Christmas or Rosh Hashanah; and
2. organized events such as the Super Bowl and the Mexico Grand Prix.

The following examples show the impact of these events on hotel and Airbnb demand and average daily rate.

New Year’s Eve (U.S.)

U.S. hotel room demand on New Year’s Eve grew the past two years, with the exception of two instances: Los Angeles in 2014 and New Orleans in 2015 (Figure 22). Positive growth rates ranged from 0.5% to 18% and were not consistent from year to year or market to market. We interpret this to mean that local events (e.g. concerts, fireworks, celebrations) for New Year’s Eve can drive performance, and thus performance is hard to generalize.

Figure 22

US Market Hotel Demand Growth on New Year’s Eve
2014/2015
For Airbnb hosts, demand growth on New Year’s Eve was consistently lower in 2015 than in 2014 (Figure 23). That said, the 2015 growth rates still were significant, topping 50% in all markets except San Francisco (19.8%).

In the U.S., ADR was higher for hotel rooms than for Airbnb listings in all but one instance: Washington, D.C., where hotel ADR was $118 and Airbnb ADR was $121 in 2015.

Hotel ADR premiums over Airbnb in the other six U.S. markets ranged from 37% at the high end (Miami, where hotel ADR was $409 on New Year’s Eve in 2015) to 1% at the low end (New Orleans, with hotel rate of $237).
US Market Hotel and Airbnb ADR on New Year’s Eve
2013/2014/2015

**Hotel**

2013: $179, $203, $139, $159, $116, $139, $139, $219, $116
2014: $183, $208, $141, $164, $133, $146, $146, $226, $133
2015: $183, $208, $146, $170, $138, $175, $175, $226, $146

**Airbnb**

2013: $165, $185, $116, $149, $123, $133, $133, $202, $123
New Year’s Eve (Sydney)
For an example of New Year’s Eve performance outside of the U.S., we examined Sydney, which plays host to one of the globe’s finest fireworks spectacles. The event draws more than a million attendees, which fueled hotel occupancy of 97.3% and Airbnb occupancy of 84% in 2015. Hoteliers charged 562 Australian dollars (a 12% premium) for the night, while Airbnb hosts drove rate 16% to AU$313.

Thanksgiving
The major national non-religious U.S. holiday often yields demand decreases as business travel gets put on hold. However, continued macroeconomic growth has given leisure travelers confidence in recent years, and hotel demand actually has increased on Thanksgiving (Figure 25).

Figure 25
US Market Hotel Demand Growth on Thanksgiving
2015
Because Thanksgiving generates more family travel than any other holiday and Airbnb often targets that customer profile, it is not surprising that Airbnb demand growth for that night also was strong (Figure 26). Demand growth rates of more than 50% year over year are not uncommon. In Los Angeles and Miami, Airbnb demand approximately doubled from 2014 to 2015.

Figure 26
US Market Airbnb Demand Growth on Thanksgiving
2015

This influx of demand manifested in pricing power for Airbnb hosts. Whereas hotel ADR typically was higher throughout the rest of the year, Airbnb ADR on Thanksgiving was higher in six of the seven U.S. markets (Figure 27).
One possible explanation is Airbnb hosts know that leisure travelers are looking for units in close proximity to their Thanksgiving festivities, which are likely in residential neighborhoods. With that location preference in mind, guests may trade cost for convenience to be close to their families and not have to spend time in transit.

In contrast, hotel operators know any demand is good demand given the lack of business guests on this holiday, so they priced accordingly.

**Super Bowl 50 in San Francisco**
Residents opened their homes to the flood of visitors who descended upon San Francisco for Super Bowl 50 in February 2016. Airbnb supply increased 105% over the same Sunday in 2015. While demand increased 76%, it failed to keep pace with supply and led to the curious outcome of negative occupancy growth (-14%).

Hotel supply, which obviously is much less elastic to sudden spikes in demand, was basically flat. Demand was up 10%.

ADR for both hotels and Airbnb started at the same base ($190) on the comparable Sunday in 2015. On Super Bowl Sunday, however, pricing strategies for the two accommodation types varied drastically. Hotel rates increased by 138% to $452, while Airbnb rates increased by 43% to $272.
Boston Marathon
Unlike the Super Bowl, data for the Boston Marathon (held 18 April, 2016) showed remarkably similar ADR performance for both hotels and Airbnb. The average hotel room was priced at $237, an increase of 5% from the prior Boston Marathon. The average Airbnb unit cost $241, a decrease of 1%.

There were 76% more Airbnb units available (1,831 in total) during the event in 2015, and demand increased 63% (or an additional 379 units sold). That increase in supply gave guests more choice, likely undermining hosts’ ability to drive rate.

Hotel demand increased by 795 rooms (or 2%) to more than 45,000 roomnights sold. Hotel occupancy of 87% was on par with the prior year’s marathon.

Mexico Grand Prix
Formula 1 racing returned to Mexico City for the first time on 1 November, 2015, after a hiatus of more than two decades. The race was held in front of 135,000 spectators.

Commensurate with the large crowd, hotel demand increased 20% and occupancy increased 19% to 69%. Airbnb demand increased by 167%, equating to an additional 900 units sold.

Hotel ADR for the night increased 150% to 4,575 Mexican pesos. Airbnb unit ADR increased 17% to 1,450 pesos.

The Airbnb ADR, while higher than year ago, was still only 31% of the achieved hotel rate, so it stands to argue that the audiences for these accommodation choices were different. The Airbnb unit occupants may have not been in the market for the much higher priced hotel rooms, so it is hard to tell if demand was syphoned off or was actually accretive to the accommodations industry that evening.
In Closing

After examining the data presented to us by Airbnb and laying it over our hotel performance data, it’s clear Airbnb is a force in the travel industry.

Our research, as with other research before it, reveals strong Airbnb growth rates in supply and demand. It’s important to again note that such increases are coming off relatively low baselines for comparison. Still, the trend highlights not only the desire of unit owners to make their spaces available for short-term rent but also the desire of a willing audience to book them.

While that much is certain, less so is the direct impact that Airbnb has on hotel demand. So many factors are at play—supply growth, macroeconomic headwinds, disruptive technology and new entrants to the accommodations space—which makes isolating causality between any one or two a challenging pursuit. Airbnb may be a relatively new factor, but it is one among many in a long line of rent-by-owner platforms.

As city and state legislators wrestle with the implications of an evolving short-term rental landscape, we hope the data presented here provides further insights into the workings of at least one of its newer entrants. The players are quickly maturing, as is legislation on all levels.

With this analysis, we strove to move toward a better understanding of the lodging landscape. We encourage questions and feedback that will help get us all closer still, and we look forward to sharing additional research as more data is made available to us.