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June 2016

## **Executive Summary**

This white paper analyses the Limited Service Hotels as an investment alternative for institutional investors. The hotel markets in Asia Pacific have seen supply growth in the last two decades, but it has yet to catch up to the level of growth in inbound tourist arrivals. This results in a long term uptrend of occupancy rates across major markets. Compared to the full service hotels, limited service hotels have a lower investment outlay because it has a lower gross floor area per room, a lower per square foot renovation cost, and enough design flexibility to access cheaper land options. The lower cost structure of limited service hotels is driven by a significant reduction in staffing, a de-emphasis of food & beverage, and at times a city-hub operation model. As such, the investment returns of limited service hotels is superior to full service hotels, with a higher first year cap rate and significantly lower breakeven RevPAR and theoretical breakeven occupancy. This means that limited service hotels would survive better both in economic downturns and during short-term tourism shocks. In this article, we have stress tested hotels against the Severe Acute Respiratory Syndrome epidemic in 2003. The defensive characteristics of LSHs, as demonstrated by this paper, should focus investors to consider this asset class as part of their core real estate allocation.

Information about this white paper series is available at <http://investlsh.blogspot.com/>

## Contents

Executive Summary .....	1
Investing in Limited Service Hotels .....	3
AP Hotel Demand Growth Outstripped Supply Growth.....	3
Hotel Supply has Expanded in Asia Pacific .....	3
Long Term Occupancy Trended Up.....	5
Investment Views .....	5
Lower Investment Outlays of LSHs .....	6
Per Room GFA Driven Mainly by Amenities .....	6
Flexibility Allows for Lower Land Cost.....	6
Fewer Amenities also Lower Renovation Cost.....	7
Special Situations – Additional Amenities .....	7
The Lower Cost Structure of Limited Service Hotels.....	7
Staff Economy .....	8
Food & Beverage as Drag on Cost Structure.....	9
City Hub Economy of Scale .....	9
Investment Returns.....	9
First Year Cap Rate .....	9
Breakeven Analysis.....	10
Stress Testing Premium LSHs .....	10
Hotels Serve Multiple Purposes in an Institutional Real Estate Portfolio .....	12
Disclaimers .....	13
About Admiral Investment Limited.....	13

## Investing in Limited Service Hotels

In a previously published white paper<sup>1</sup>, Admiral has discussed the investment merits of limited service hotels (LSH). LSHs focus mainly on delivering a room experience appropriate for its brand position. By de-emphasizing or dropping various amenities that are provided by full service hotels (FSH), LSHs have a lower investment outlay and a lower operational cost. *Ceteris paribus*, LSHs, when compared to FSHs, increase investment yield and reduce investment risks, and this leads to an investment product that provides a risk-adjusted return that is on par or slightly better than that provided by other commercial real estate.

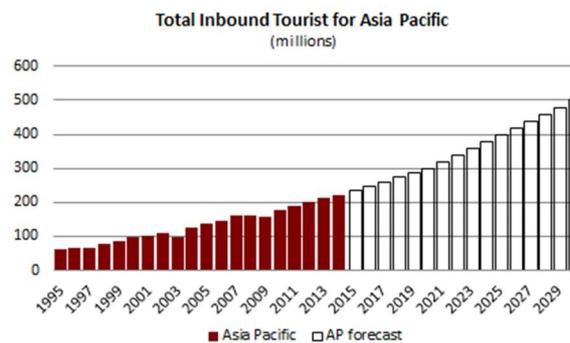
This white paper will further investigate the investment characteristics of LSHs. We will first evaluate the existing hotel supply and demand dynamics in various Asia Pacific economies.

We will also look at some illustrative examples of LSH underwriting. The investment project analysis discusses the investment outlays of hotels, and the hotel cost structure evaluates the operational costs of hotels. From these two analyses, we will draw conclusions on the investment returns and risk management related to LSHs.

### AP Hotel Demand Growth Outstripped Supply Growth

Asia Pacific hotels have seen demand grown substantially in the last two decades. As investors respond to this demand growth, hotel supply in most countries has rapidly expanded. Thus, investors are naturally concerned that, given the supply expansion, whether it is still desirable to invest in hotels today, in either new or existing assets.

In 1995, the number of total inbound tourists for Asia Pacific was 60 million, and by 2014, the number has reached 210 million. Moreover, the UN World Tourist Organization expects inbound tourists to grow to 300 million by 2020 and 500 million by 2050.



Source: UN World Development Indicators, UN World Tourist Organization

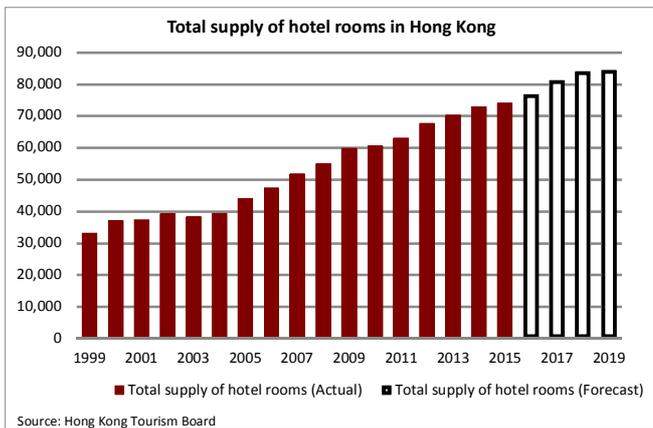
We believe that the demand growth represents an one-time secular shift as Asian economies developed into modern, consumer-based economies. While Japan has joined the Organization for Economic Co-operation and Development (OECD) in 1964 and Australia in 1971, Korea only joined OECD in 1997. In addition, Korea is a member of the Asian Tigers, which also include Hong Kong, Singapore and Taiwan. The Asian Tigers all developed at around the same period. Some ASEAN countries followed the same model, with about a decade of delay. China and India have also industrialized over the last thirty years.

Thus, Asia as a whole industrialized over the last fifty years, with the consumer culture largely developed in the last twenty years. Thus, it is not surprised that inbound tourist arrivals recorded a 3.5 times jump (from 60 to 210 million) from 1995 to 2014.

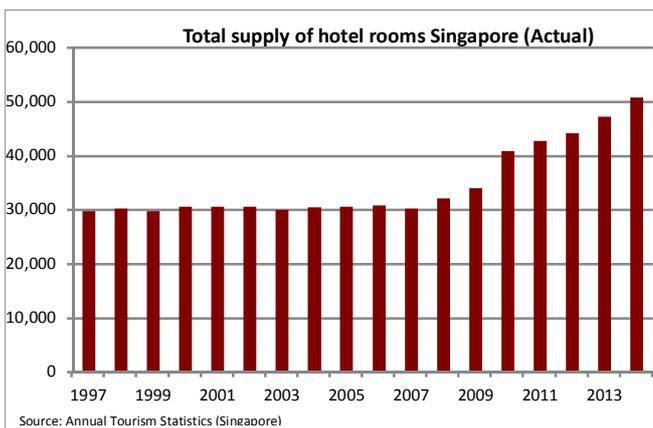
### Hotel Supply Has Expanded in Asia Pacific

Responding to the tourist market expansion, many markets have seen additions of new hotels. Hong Kong, for example, has seen the number of hotel rooms rising from 32,871 rooms in 1999 to 73,846 in 2015, representing a 125% increase. Factoring new supply, by 2019 the Hong Kong Tourism Board expects the number of rooms to reach 84,082, representing a 156% increase in supply from 1999.

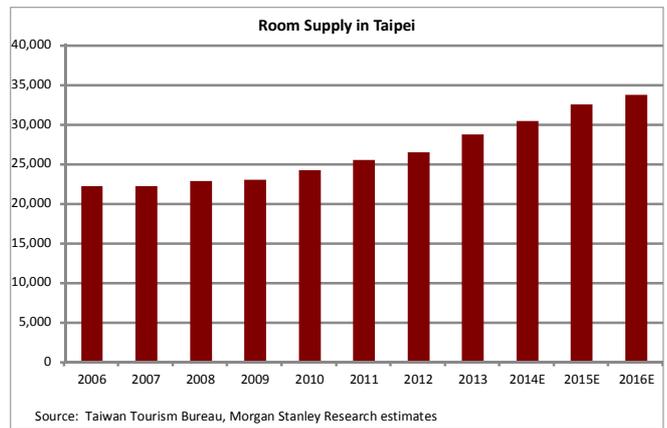
<sup>1</sup> Admiral Investment Limited. "A Case for Limited Service Hotels" 8 May, 2016. Additional information on limited service hotel, including links to Admiral's white paper, is available at <http://investlsh.blogspot.hk/>



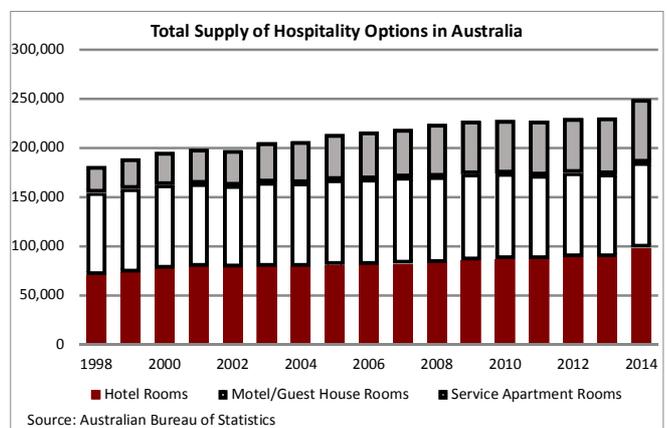
Other markets have also seen supply increases. Of the major markets we cover in this study<sup>2</sup>, Singapore has seen a 71% increase in its supply, from 29,583 rooms in 1997 to 50,676 in 2014. Note that room supply in Singapore has materially expanded only from 2008 onwards, as the city-state implemented several tourist attractions, including two casinos, a theme park, and F1 Formula Race.



Room supply in Taipei has also increased, although at a slower rate than Hong Kong or Singapore. From 2006 to 2016 (government estimates), room supply in Taipei has increased from 22,128 rooms to 33,647 rooms, representing a 52% expansion. This statistics, however, excludes some hospitality options, especially those that did not apply for an operating license. Based on our conversations with industry insiders, there may be an additional 3,000 to 5,000 rooms, representing another 10 to 15% of supply.



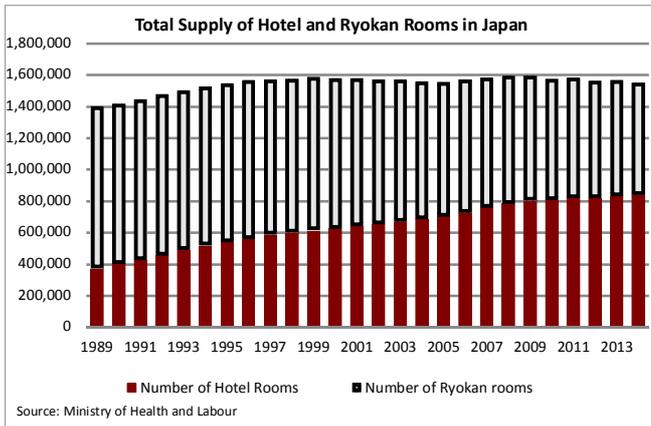
Australia, which has joined the OECD in 1971, had a slower, albeit still material, increase in hotel supply. From 1998 to 2014, hotel rooms in Australia have increased from 180,077 rooms to 248,313 rooms, representing an increase of 38%.



At the surface, Japan represents an exception to the supply expansion. Japan's overall supply of hotel rooms have increased from 1.39 million rooms in 1989 to 1.54 million rooms in 2014, representing only an 11% increase.

This, however, masks the fact that the number of modern hotels have increased from 369,011 rooms in 1989 to 834,588 rooms in 2014. However, *ryokan*, the traditional Japanese style hospitality option, has fallen from 1.02 million rooms in 1989 to 0.7 million rooms in 2014. Note that *ryokan* often serves as a high-end option, with a focus on traditional amenities and services. One disadvantage of *ryokans* is that services are often delivered in Japanese, making it inaccessible to foreign tourists. Thus, the change in hotel / *ryokan* composition reflects that even Japan has adapted its hospitality industry to an increasingly international clientele.

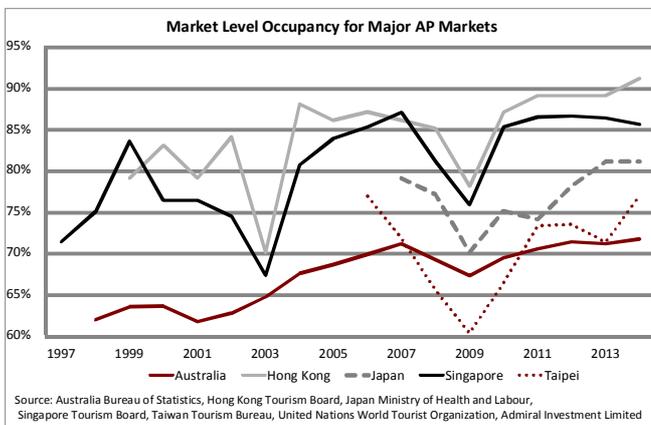
<sup>2</sup> Similar analyses on other selected Asia Pacific markets are available upon request.



## Long Term Occupancy Trended Up

Notwithstanding the significant increase in hotel supply, however, occupancy in most markets have continued to hold up. In fact, Australia, Hong Kong and Singapore have all seen long term occupancy levels increased.

Hong Kong, for example, saw its city-wide occupancy level increased from 79% in 1999 to 91.1% in 2014, while Singapore has seen occupancy increasing from 71% in 1997 to 85.5% in 2014. Even Australia, widely seen as the most mature and most stable commercial real estate market within the group, has increased the overall occupancy from 62% to 72%. Although our occupancy data for Japan and Taipei are shorter, both markets have also shown some increase in occupancy from 2006 to 2014.



The occupancy data is a strong indicator that the increase in hotel supply has not caught up with the increase in hotel demand. The table at the bottom of this page compares the increase in hotel supply and tourist arrivals in all five markets. In every market, the growth in the tourist arrival markets has been significantly higher than the growth in hotel supply. The growth gap was the smallest in Australia, with tourist arrivals growing by 65% and hotel supply growing by 38%. The largest growth gap was in Hong Kong, with tourist arrivals growing by 557% over the analysis period but with hotels only growing by 156%.

In fact, in all markets except Australia, tourist arrivals have recorded a triple-digit growth over the analysis period. The formation and subsequent expansion of the consumer middle-class, the improvement of airports and airline capacity, and the increase in tourist and business infrastructure are all underlying reasons for the strong growth. We share the view that this growth is secular, and will continue as Asian economies mature.

## Investment Views

Generally, Admiral believes that most major hotel markets remain unsaturated and thoughtful underwritings can uncover attractive investments. In particular, the hotel markets in Japan, Singapore, selected ASEAN economies, and Australia are particularly attractive, with tourist arrivals continued to grow and supply remains manageable.

Market-by-market analyses are available to clients and investors upon request.

### Hotel supply has not caught up with tourist arrival growth in Asia Pacific

	Start of Period*	End of Period**	Hotel Supply			Inbound Tourist Arrivals		
			Start of Period*	End of Period**	Growth	Start of Period*	End of Period**	Growth
Australia	1998	2014	180,077	248,313	38%	4,167,000	6,868,000	65%
Hong Kong	1999	2019 (forecast)	32,871	84,082	156%	11,330,000	74,396,000	557%
Japan	1995	2014	1,393,298	1,544,607	11%	3,345,000	13,413,000	301%
Singapore	1997	2014	29,583	50,676	71%	7,197,871	15,231,469	112%
Taipei	2006	2016 (forecast)	22,128	33,647	52%	3,600,000	7,800,000	117%

\*Refers to data from the earliest available year, which is typically the first year the government announces supply numbers

\*\*Refers to the latest available year; Forecast if one is given by government bodies

Source: Australia Bureau of Statistics, Hong Kong Tourism Board, Japan Ministry of Health and Labour, Singapore Tourism Board, Taiwan Tourism Bureau, United Nations World Tourist Organization, Admiral Investment Limited

## Lower Investment Outlays of LSHs

Compared to full service hotels, limited service hotels offer a higher risk-adjusted return because of its lower investment outlay and operational costs. Both features are a direct consequence of LSHs adopting a minimalist approach on amenities. This section will analyse the investment outlay of a LSH, while the next section will analyse its cost structure.

In this section, we take an illustrative example of hotel development in Hong Kong. All data are current, to the best of our knowledge, as of early 2016. We compare a premium limited service hotel, which would be listed as 3.5-star, and a full service hotel, which would be listed as 4-star.

This comparison is the closest to an apples-to-apples comparison, as premium limited service hotels do target to complement 4-star full service hotels as a lower cost alternative that provide the same level of in-room experience.

Overall, the development cost per room of a premium limited service hotel is HKD 3.124 million, while the same cost of a full service hotel is HKD 6.195 million. In short, the per room cost of a premium limited service hotel is about 50% of that of a full service hotel. See the following table for details.

The development cost, once factored in a long term, normalized development profit, is close to currently observed trading price of hotels in Hong Kong. This provides further circumstantial evidence of the validity of the assumptions.

### Illustrative Example of Development Cost

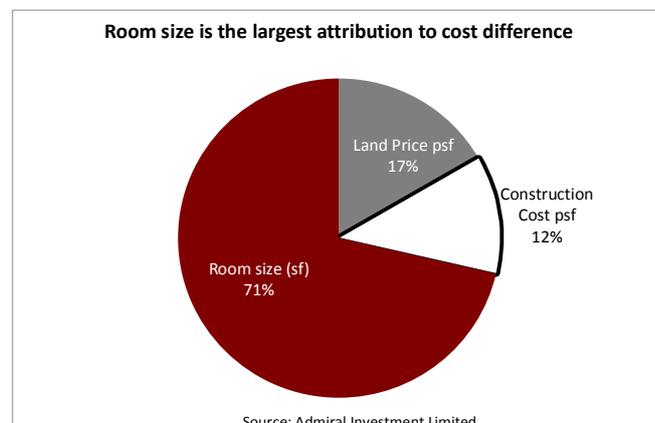
(Using data for Hong Kong hotels, all dollar amounts in HKD)

	Premium Limited Service Hotels (3.5 star)	Full Service Hotels (4 - 4.5 star)
Land Price psf	10,000	12,000
Construction Cost psf	4,200	5,700
Development Cost psf	14,200	17,700
Room size (sf)	220	350
<b>Development Cost per room</b>	<b>3,124,000</b>	<b>6,195,000</b>
<i>Notes:</i>		
Construction and room size include these amenities	Integrated Lounge Area	Business Center Restaurant & Bar Banquet & Function Fitness Centre Swimming Pool

Source: Travelodge Asia, Admiral Investment Limited

Stress testing the above model suggests that of the three independent variables – land price, construction cost,

and room size – room size is the most important factor of the cost advantage in premium limited service hotels. In fact, for the above model, difference in room size contributes 71% of the cost difference, while land price contributes 17% and construction costs contributes 12%.



## Per Room GFA Driven Mainly by Amenities

The room requirements for premium limited service hotels and full service hotels are typically similar. As such, the actual room area for the two types of hotels is usually quite close. However, the room size requirement is based on gross floor area, meaning that we have taken into account of the different amenities required by the two products.

For example, a 4,000 square feet business centre, if shared by 150 rooms, will add 26 square feet to the average room size. Similarly, banquet and meeting rooms, swimming pools, and gyms all add to the required GFA for full service hotels. To a premium limited service hotels, the space devoted to amenities is deadweight space that is not occupied by additional rooms.

In fact, in our assumptions, we assume that the additional 130 square feet required by full service hotels is mainly driven by the additional amenities.

## Flexibility Allows for Lower Land Cost

The second assumption is land cost. In this analysis, we assume that the two hotel types are located in similar districts within the city, but a premium LSH has more flexible requirements that can lead to lower land price.

A premium LSH can afford to be located in a slightly weaker street than a FSH, given that its brand profile as a junior competitor to the FSH. In Hong Kong, a FSH may be in Central, while a LSH may be in Sheung Wan or Wanchai.

Secondly, even if the two types of hotels compete in the exact same district, a LSH can afford to be in less dominant lots. The precise location of a lot can affect factors such as the placement of the loading area and access to public transportation. Given its design flexibility, a LSH can make trade-offs on these factors and be developed on land that may fail key requirements for a FSH.

### **Fewer Amenities also Lower Renovation Cost**

As we assume that the premium LSH will offer an in room experience similar to that of a FSH, the actual cost of renovating a room will be similar between the two.

Similar to our assumptions on room size, our cost of renovation assumption also includes the shared cost of the amenities. Business equipment, such as computers and printers, increases the renovation cost of a business centre. The per square foot cost of building a swimming pool is also higher than the cost of renovating a normal guest room. This has led to a higher overall cost for the FSH.

### **Special Situations – Additional Amenities**

In some premium LSH projects, especially in a renovation project, there may be existing amenities that are beyond the core requirement of a LSH. The most common example is the food & beverage option, which a premium LSH may not provide as part of the standard amenities.

The first strategy is to convert this space into additional rooms, but this may not be possible. A street facing space, for example, will not create a pleasant room experience.

Another common strategy is to treat this amenities space as retail space to be leased out. In fact, in one currently active LSH, the owner has converted the bottom two floors of a hotel into street shops for fashion brands.

Granted, using the lower floors of a hotel asset as retail space is not limited to LSHs. The Peninsula Hotel, one of the most premium full service hotels in the world, has a well-regarded, high-end retail podium in its flagship hotel in Tsim Sha Tsui, Kowloon.

However, for a LSH, the retail space concept can help the LSH to provide amenities without incurring costs. A coffee shop chain or a third-party restaurant can provide

food & beverage to travellers. Instead of maintaining its own staff, the LSH can instead collect rental income.

From an investment angle, converting portions of a LSH into retail shops also lower the per-room development cost, as some of the amenities GFA is now turned into rent-collect retail space. Given the idiosyncratic nature of these opportunities, we have not included them in our main analysis above, but we have seen deals where the retail space can lower the per room development cost of a LSH by another 10 to 20 percent.

### **The Lower Cost Structure of Limited Service Hotels**

In this section, we analyse the typical cost structure of a premium LSH and that of a FSH. The data comes from actual data of Singapore, but we believe that this is representative of hotels around the region.

In this particular example, the premium LSH has eliminated most amenities, but it has kept a basic food & beverage service (imagine it as a coffee shop or a small bar). The FSH, on the other hand, runs all necessary amenities to maintain a 4-star rating, including F&B, business centers, and some recreational facilities. Both hotels are assumed to have 200 rooms and to be operating in normal economic environment.

Note that we also assume that the RevPAR<sup>3</sup> of the FSH is HKD 1,530, while that for the premium LSH is HKD 772.5, representing a 66% higher revenue generating ability for the FSH. Since all of the below analysis is expressed as a percentage of total operating revenue, a percentage point cost of a FSH is 66% larger, in dollar terms, than that of a Premium LSH.

The cost structure follows the Uniform System of Accounts for the Lodging Industry, although for analytical clarity, we have split costs into their fixed costs, direct variable costs and indirect variable costs. Fixed costs are costs that do not fluctuate with short term changes in demand. Direct variable costs are costs that scale with short term changes of demand and incurred at the point of operation. Indirect variable costs are overheads and other costs.

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<sup>3</sup> Revenue Per Available Room, or the product of average daily rate and occupancy rate. This is the primary measure of the revenue generating capability of a hotel room.

According to our model, the total operating cost of premium LSHs is 49.7%, versus 68.2% of a FSH. Therefore, the Gross Operating Profit Margin (GOP) of a premium LSH is 50.3%, versus 31.8% for a FSH.

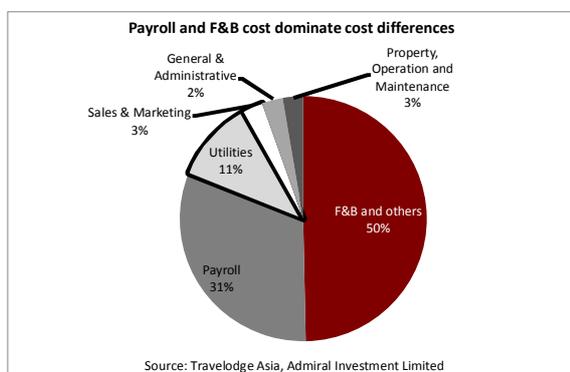
**Illustrative Cost Structure of Premium LSHs and FSHs**  
(Using Hong Kong data, as of April 2014, all dollar amounts in HKD)

	Premium Limited Service Hotels (3.5 star)	Full Service Hotels (4 - 4.5 star)	Difference
Average Daily Rate	850	1,800	
RevPAR	722.5	1,530	
Total Operating Revenue	100.0%	100.0%	
Room	90.0%	70.0%	
F&B and others	10.0%	30.0%	
<i>Fixed Cost</i>			
Payroll	19.1%	24.9%	5.8%
<i>Direct Variable Cost</i>			
Rooms	12.6%	12.6%	0.0%
F&B and others	4.0%	13.2%	9.2%
Total Direct Variable Cost	16.6%	25.8%	9.2%
<i>Indirect Variable Cost</i>			
General & Administrative	2.5%	3.0%	0.5%
Sales & Marketing	2.0%	2.5%	0.5%
Property, Ops and Maintenance	2.5%	3.0%	0.5%
Utilities	7.0%	9.0%	2.0%
	14.0%	17.5%	3.5%
Total Operating Costs	49.7%	68.2%	18.5%
<b>GOP Margin</b>	<b>50.3%</b>	<b>31.8%</b>	

All percentage terms are as a percentage of Total Operating Revenue.  
Source: Travelodge Asia, Admiral Investment Limited

About half of the cost difference, using a percentage basis, comes from the lower operating cost from F&B and others, while 31% came from payroll. Savings from the remaining cost contributes for less than 30% of the total savings. See the below pie chart for the detailed breakdown.

This result is not surprising, as the initial motive to create a hotel with fewer amenities is to save on operating costs. Note that all the costs in the above table are expressed as a percentage of total operating costs, and this has two implications.

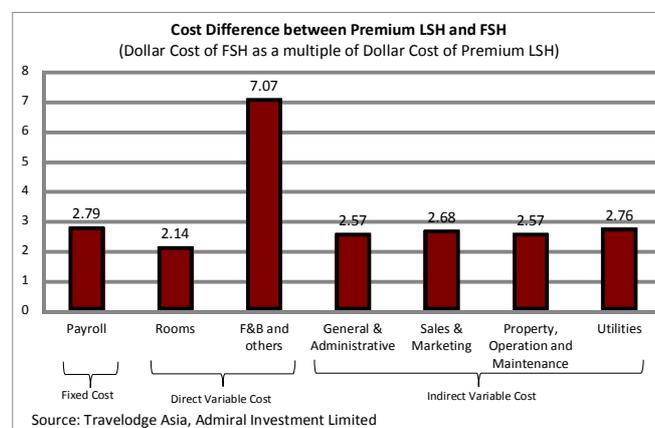


First, the profit margin of the F&B services is actually similar between premium LSHs and FSHs, with the premium LSHs running the F&B services at a 40% direct variable cost and FSHs running it at 44%. The

assumption is that service level, provided that a premium LSH decides to offer it, will be similar between a premium LSH and a FSH.

Second, since the RevPAR of the FSH in the analysis is 66% higher than that of the premium LSH, the cost difference, in dollar terms, is much larger than the percentage analysis. For example, payroll cost of the FSH, in dollar terms, is 2.8x higher than that of the Premium LSH.

The below chart shows the cost difference between the two types of hotels by listing the dollar cost of FSHs as a multiple of the dollar cost of the premium LSHs. The direct variable cost of F&B and others, is again the most significant cost differential, with the FSH spending 7 times more than a premium LSH.



Most other costs, however, are in a much tighter brand, ranging from 2.14 times for room direct costs to 2.79 times for payroll costs. Because the two hotels are assumed to have 200 rooms each, the higher dollar costs of the FSH suggests that it spends more on each of these items on a per room basis.

## Staff Economy

The lower payroll cost of a premium LSH is entirely driven by a lower staff requirement. In fact, we have assumed that the two hotel types will have the same staff compensation schedule, meaning the same function will be paid the same. In reality, high level positions for a FSH may command a premium, which will further lower the GOP ratio of a FSH.

The staff-to-room ratio for a premium LSH is between 1:4 and 1:5, but the ratio for a FSH is 1:1. In our analysis, the premium LSH has 26 staff member, while the FSH has 114. This allows a premium LSH to run a similar-sized hotel (200 rooms) at about 35% of the cost for FSH.

Of the various teams, the front office team is the only team where staffing between the two types of hotels is comparable. Even then, because of leaner services, the premium LSH front desk team has 11 less staff members than that of the FSH.

The premium LSH does not need a public area attendant team, a concierge function, a banquet team, or a recreation team, which saves 36 positions. It also has a much smaller cleaning team, F&B waiter team and chef team, saving another 41 positions. The following chart summarizes the difference in team management strategy.

LSHs have smaller teams in most operational areas

	Functions
Comparable but smaller	Front Office
Bare bone teams	Cleaning F&B (waiter) F&B (kitchen)
Non-existing functions	Concierge Public area attendant Banquet Recreation team

Source: Travelodge Asia, Admiral Investment Limited

Additional savings can be achieved if more functions are outsourced to either a third party or a city operation hub. We will discuss the city hub concept at the end of this section.

### Food & Beverage as Drag on Cost Structure

The first-generation limited service hotels listed food & beverage as the amenities to avoid, because of its much lower GOP margin. The dominant cost of food & beverage is the cost of goods sold (COGS), which include items such as food material. In our model, we assume that COGS is between 40 to 44% of the food revenue. This is in line with the best practice for food & beverage companies around the region, and we do not think that a hotel brand can significantly improve upon this margin.

Beyond COGS, the food & beverage offering also requires a staff of its own to run. To maintain the services of a FSH, a team of around 30 staff member, roughly equally split between waiter and chef staff, is required. Should the FSH operates around the clock, with offerings such as late night in-room service, additional staff is required to prepare the food.

Furthermore, running a food & beverage option during an economic downturn can create additional financial risks. A minimum level of staffing is required to support the food & beverage services, which adds to the minimum overall staffing levels of the hotel.

Furthermore, managing food inventory can be difficult when demand level becomes volatile. Any spoiled food items will add to the COGS, which further lowers the profit margin of the operation.

### City Hub Economy of Scale

While we have not modelled its effects, a city hub can further lower operating costs. A city hub operation is set up to manage all sister hotels in the vicinity. In the most elaborate set up, services offered including the general manager, the back office, maintenance staff, laundry services, and food & beverage preparation.

By sharing a general manager with several sister hotels, a hotel can further cut its payroll. Moreover, by using an offsite laundry service, a hotel can turn more floor areas into rooms. A city-hub set up in the sub-urban area or an industrial district pays lower rent, which can further lower overall operating costs.

A city hub is limited by distance. A general manager still needs to regularly visit his hotels. If his mandate contains too much geographic space, management will become increasingly difficult. Laundry needs to be shipped to the hotels, and transportation costs will escalate if the required distance becomes too large.

Thus, a city hub is usually the most effective when it manages only hotels in a well-defined geographic area, such as a city. While a FSH can use a city-hub as well, a premium LSH usually benefits more from a city-hub, as it is more typical to have multiple LSHs in a city.

In our model, a city-hub would lower the payroll, because of the shared general manager, G&A and property maintenance spending.

### Investment Returns

Premium LSHs have a lower investment outlay and operating costs than FSHs. This leads to a higher yielding investment asset, as shown in the below analysis. We use the same model we have used in the two previous sections, focusing on the investment returns of the two hotel types. For reference, we have also included the return statistics of developing a Grade B office or a high-rise retail asset in similar locations in Hong Kong.

### First Year Cap Rate

The first key statistics is the first year cap rate, defined as the expected gross operating profit for the first year divided by the development cost. For office, the cap rate is calculated by Net Operating Income (NOI). A quick

comparison between the first year cap rate and prevailing cap rates for existing assets indicates whether development profit can be expected.

For both hotel types, we assume that the hotels will reach an occupancy rate of 85%, which is reasonable given that 85% is seen as full occupancy for a hotel and that current occupancy rates in Hong Kong are between 85% and 90%. The Average Daily Rates are based on a sample of hotel rates, of similar brand positioning, captured from third-party websites in April 2016. For office, we assume a per square foot rent of HKD 35 per month and a 100% occupancy rate.

We assume that the GOP margins will be the same as the cost structure analysis in the previous section, with the premium LSH running at 50.3% and the FSH running at 31.8%. Office NOI is assumed to be 85% of its revenue.

The first year cap rate for the Grade B office asset is 2.5%, while that for the FSH is 2.9%. The premium LSH has the highest first year cap rate of 4.2%. The 180 bp gap between the office and the premium LSH is wider than the observed cap rate difference between the two asset classes, suggesting opportunities in the premium LSH.

**Illustrative Investment Return Analysis**  
(Using data for Hong Kong hotels in HKD)

	Premium Limited Service Hotel (3.5 star)	Full Service Hotel (4 - 4.5 star)	Grade B Office/Retail
ADR	850	1,800	35 (psf rent)
Occ	85%	85%	100%
RevPAR	722.5	1,530	35
GOP Margin	50.3%	31.8%	85%
1 Year revenue	132,647	177,587	357
First Year Cap Rate	4.2%	2.9%	2.5%
Breakeven RevPAR	359	1,043	5.25
Theoretical Breakeven Occupancy	42.5%	59.5%	17.7%

Source: Travelodge Asia, Admiral Investment Limited

While this model assumes a development project, other investment strategies, such as renovation and rebranding projects, can be analysed under similar statistics. The per square foot renovation cost is likely to be smaller than the per square foot construction cost. However, the per square foot cost of an existing hotel is also likely to be higher than the pure land cost. Whether a rebranding project is more profitable depends on whether the investor can find an investment target that lowers the renovation cost enough to justify the higher cost of acquiring an existing structure.

## Breakeven Analysis

Furthermore, we also calculated the breakeven statistics of the three asset types. A breakeven analysis is useful for hotel investment because of the higher operating cost. This means that during an economic downturn, hotel assets can make an operating loss.

The simple analysis shows the breakeven occupancy, which is the minimum level of occupancy, at current Average Daily Rate, for the operation not to become loss making. The theoretical breakeven occupancy of a premium LSH is 42.5%, which is 17 percentage points lower than a FSH's 59.5%. For reference, an office building can breakeven at an occupancy rate of 17%.

The breakeven occupancy is useful to show the relative stability of the different types of hotels. However, on its own the breakeven occupancy can be misleading, as hotels have the ability to quickly reduce average daily rates to drive a higher occupancy.

In reality, a breakeven RevPAR is more accurate, as a RevPAR measure takes into account management response in an adverse environment. Using the same model, the breakeven RevPAR for a premium LSH is HKD 359, and that for a FSH is HKD 1,043. Compared to the current RevPAR, the breakeven RevPAR of a premium LSH is about 50% to its current RevPAR, while that of a FSH is 68%. In other words, a premium LSH can afford to lose half of its business before running a loss, and a FSH can only lose 30% of its business.

Granted, during an economic downturn, hotels can lower its operating costs to lower its breakeven RevPAR. Thus, the true breakeven RevPAR will be slightly lower than our model suggests.

## Stress Testing Premium LSHs

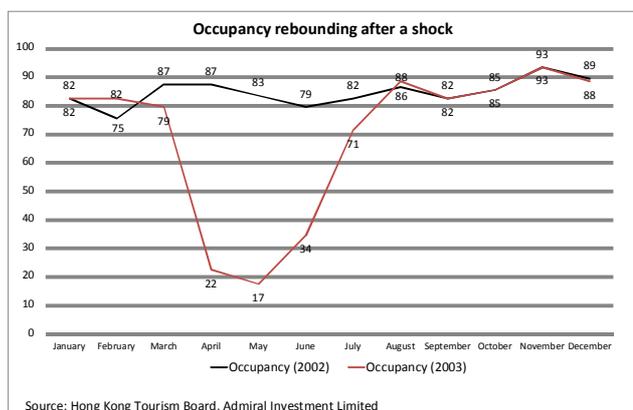
During a true economic downturn, all commercial real estate will face difficulties. Even if office and retail assets are not prone to making operating losses, the drop in asset value and risks introduced by the debt structure can induce investment issues for all asset classes.

In addition, the more efficient cost structure of a premium LSH makes LSHs more defensive than FSHs during an economic downturn, as it has a lower breakeven RevPAR and can withhold more rental deterioration.

Hotels, however, are subject to an additional risk in the form of short term shocks. During a short term shock, such as epidemics, hotels immediately see occupancy and RevPAR drop, while other forms of commercial real estate are protected by the longer lease structure. As such, stress tests on hotels can show the level of risks.

In 2003, Hong Kong is one of the cities that faced the Severe Acute Respiratory Syndrome virus (SARS virus), where between March and June, the virus killed 299 people and infected several hundreds more. Hong Kong was listed as an infected area by the World Health Organization, and as such, inbound traveling slowed down significantly.

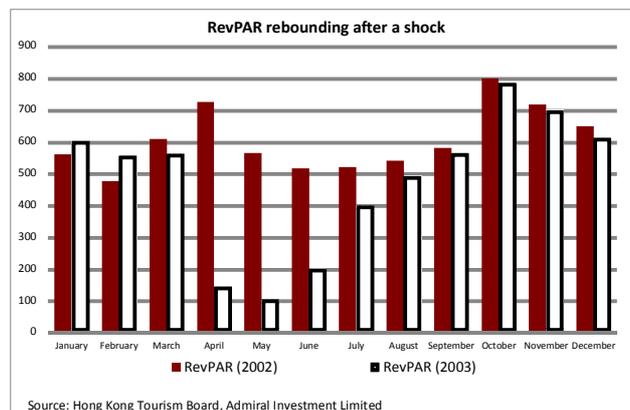
The following chart compares the occupancy levels in 2002 and 2003 for all hotels in Hong Kong. While occupancy levels stayed at around or above 80% in every month in 2002, they dropped to 22% in April and then 17% in May during 2003, when the epidemic was at its full strength. However, once Hong Kong was removed from the WHO list of infected area on June 23, occupancy levels have rebounded. By August, occupancy levels have reached 2002 levels. By August, occupancy levels have reached 2002 levels.



As discussed previously, hotel operators can manage occupancy rates by dropping the Average Daily Rate, which could lead to a rebound in occupancy levels without a similar rebound in revenue levels.

The below chart compares the monthly RevPAR of all Hong Kong hotels. Like occupancy levels, RevPAR between April and June in 2003 was noticeably lower than the 2002 levels, but after the rebound in August, monthly RevPAR is comparable to the levels in 2002.

As a whole, the full year RevPAR of 2003 was about 80% of 2002. Most hotel types can survive through this level of stress.

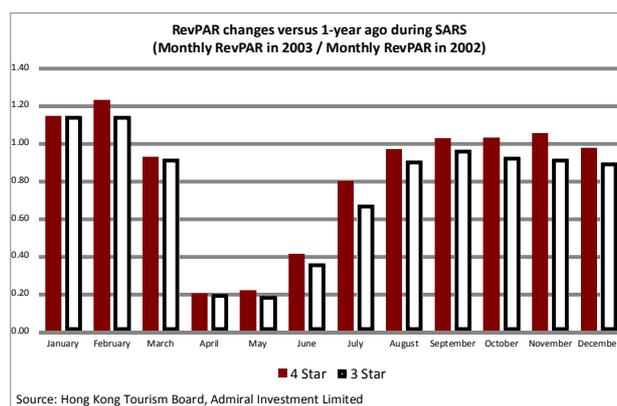


Furthermore, the rebound is similar across different brand positions. The below chart shows the monthly RevPAR changes for 4-star and 3-star hotels on a year-over-year basis for 2002 and 2003. We believe that these groups are acceptable proxies for FSHs and premium LSHs, respectively.

Similar to the occupancy levels of all hotels, RevPAR fell between April and June, but recovered to close to 2002 levels after August.

Granted, 3-star hotels are between 3 to 5 percentage points weaker than 4-star hotels in its recovery, but the lower cost structure of a 3-star hotel, at 17 percentage points as discussed in the previous section, more than enough to compensate for the slightly weaker recovery.

Since premium LSHs have a similar rebound after a crisis but operate under a more efficient cost structure than FSHs, they are more defensive in a short term shock.



## Hotels Serve Multiple Purposes in an Institutional Real Estate Portfolio

*(This portion of the white paper has been syndicated as a column article to EJ Insight, the English publication of the Hong Kong Economic Journal, Singapore Journal. And the IREI in the US. As a standalone article, this article summarizes the white paper but does contain some repeated language)*

This white paper analyses the Limited Service Hotels (LSHs) as an investment alternative for institutional investors. LSHs focus mainly on delivering a room experience appropriate for its brand position. By de-emphasizing or dropping various amenities that are provided by full service hotels (FSHs), LSHs have a lower investment outlay and a lower operational cost. In Part 1 of our white paper series<sup>4</sup>, we have discussed the qualitative factors associated with LSHs, and in this paper, we will discuss the investment fundamentals of the sector.

The hotel markets in Asia Pacific have seen supply growth in the last two decades, but it has yet to catch up to the level of growth in the inbound tourist arrivals. The number of hotel rooms has increased by 156% in Hong Kong, 71% in Singapore, 52% in Taipei, 38% in Australia, and 11% in Japan. However, inbound tourist arrivals have grown in an even faster pace, with triple-digit increases in all markets and over 65% in Australia. As a result, Australia, Hong Kong and Singapore have all seen long term occupancy levels increased when tracking occupancy levels over the last twenty years. Inbound tourist arrivals are expected to increase by another 50% in the next five years, and we believe that both new and existing hotels remain attractive.

Compared to the full service hotels, limited service hotels have a lower investment outlay because it competes with full service hotels with a comparable in-room experience but few of the amenities. The de-emphasis on amenities lowers the gross floor area per room, as the rooms need to absorb less public space. The per square foot renovation cost is also lower, as a premium LSH does not need to invest in equipment and structures that provide amenities like business and recreational centres. Premium LSHs also have enough design flexibility to access cheaper land options, either because a particular plot fails to satisfy the brand requirements of a FSH or because a LSH can convert previously public space into rentable retail space.

The lower cost structure of limited service hotels is driven by a significant reduction in staffing. In our model, a similar size hotel (200-room) needs 26 employees as a premium LSH but 114 as a FSH. In dollar terms, this reduces the payroll of a premium LSH by 65%, and in terms of percentage of operating revenue, by 5.8%. A de-emphasis on food & beverage is the largest cost savings, where in terms of percentage of operating revenue, a LSH can save 9.2% of operating revenue. While this paper did not model specifically for a city-hub operation model, a LSH can achieve further savings by building up multiple hotels in the same city.

The investment returns of limited service hotels is superior to full service hotels, with a higher first year cap rate and significantly lower breakeven RevPAR and theoretical breakeven occupancy. This means that limited service hotels would survive better in an economic downturn, when the cost structure allows a LSH to survive longer. Short term tourism shocks, such as the SARS epidemic, also have similar effects on FSHs and premium LSHs. The more efficient cost structure then leads to a higher income yield for premium LSHs.

The relatively defensive nature of LSHs, as demonstrated in this paper, should focus institutional investors to consider this asset class as part of their core real estate allocations.

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<sup>4</sup> Available at <http://investlsh.blogspot.hk/>

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## **About Admiral Investment Limited**

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