JLL | Achieve Ambitions

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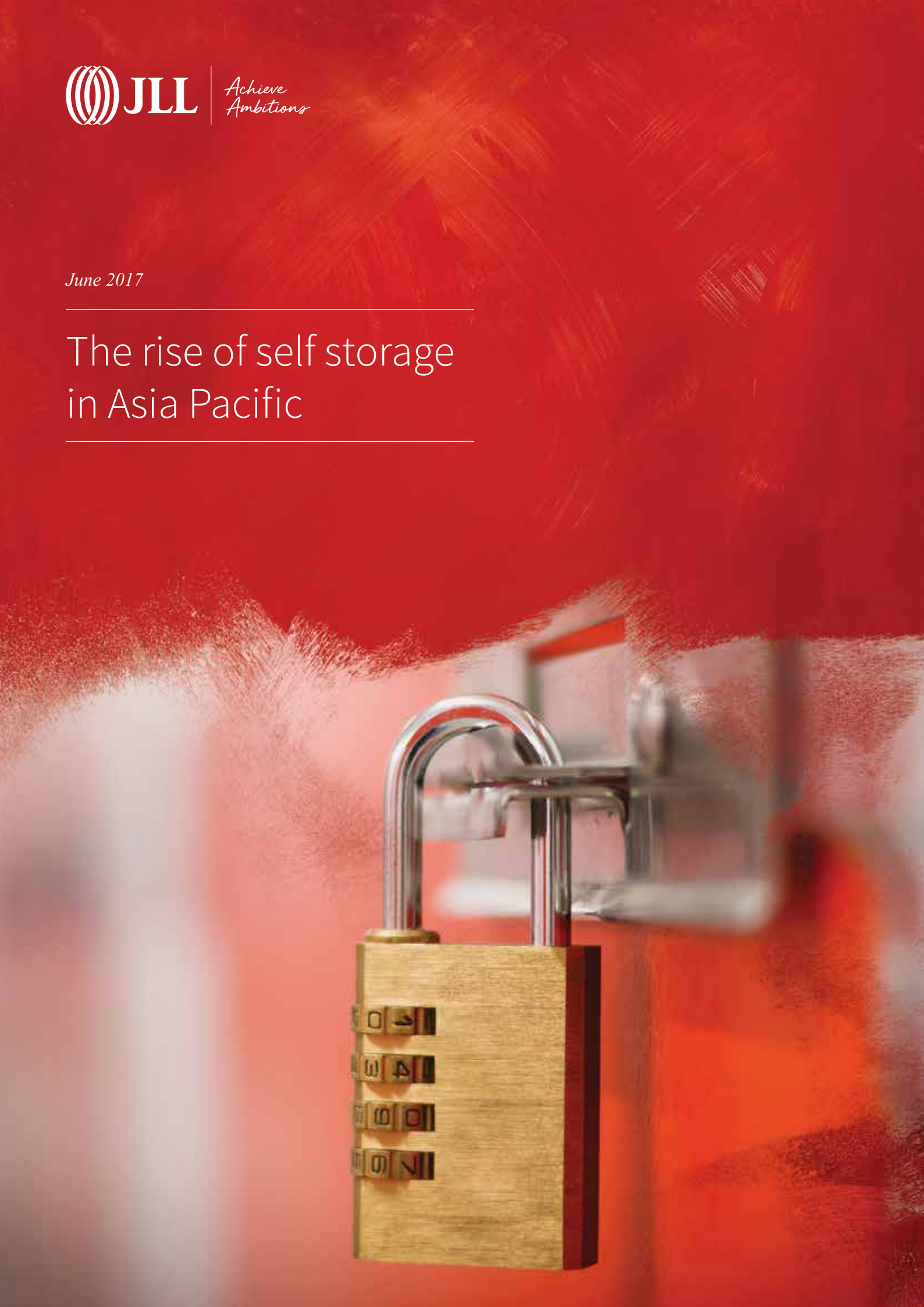
The rise of self storage in Asia Pacific



Foreword

Urbanisation, public awareness and the growth of small businesses is driving the demand for self storage in Asia Pacific. This report is written with the intention of providing insight into the real estate side of this rapidly-growing and dynamic sector. Space requirements from the sector are still relatively small at this point but continues to grow. We're also seeing rising investor interest in this real estate asset class because of market growth, increasing public awareness, as well as the lack of specialist self storage REITs in the region.*

We leverage on our in-house research capability and take a deep dive into the self storage markets across the Asia Pacific region to examine market conditions in Australia, China (Shanghai, Beijing, Shenzhen), Hong Kong, Singapore, Japan (Tokyo), Taipei and India (NCR Delhi) – plus snapshots of Malaysia and Thailand, two rising markets. Our analysis provides insight into market characteristics, ownership structures, lease terms/rents, estimated investment yields as well as potential risks and barriers to entry.

In conjunction, we have conducted in-depth interviews with key self storage operators across the the region, addressing questions on:

- Expansion plans and projected growth in market size
- Preferences on acquisition options
- Raising finance: internal funds, equity financing, joint venture, debt financing

We'd like to thank our interviewees and the Self Storage Association of Asia (SSAA) along with Ipsos for sharing their information from their 2017 annual report on operator conditions in Asia Pacific.

We hope that you'll find this report helpful and informative. We welcome any feedback on this report and any further observations on this growing sector.

*In comparison, one of the largest REITs in the US by market capitalization is a self-storage REIT.

Executive Summary

The self storage industry has a brief history in Asia compared with that in more mature markets in Australia, Europe and North America. But the Asian markets are evolving as the notion of storing personal belongings outside the home catches on. This is driven by growing affluence, changing lifestyles (especially smaller dwelling units in major cities, seasonal goods, etc.) and business practices.

Outside of Australia, the industry is most established in densely populated regional hubs such as Hong Kong, Singapore and Tokyo. However, the concept is also catching on in China and Taiwan, and is in very early development stages in India and parts of Southeast Asia.

Self storage markets in Asia Pacific are diverse and facilities and services on offer may vary substantially from one market to the next. In the broadest classification, facilities are either indoor or outdoor. Indoor facilities can be housed in a warehouse or other industrial buildings, lower grade office buildings, or general purpose commercial and even residential buildings while outdoor facilities typically include shipping containers.

Leasing

Leasing and owner-occupation represent two different options for operators. Leasing is more common in many regional hubs as more operators prefer leasehold interests that present lower entry costs. In general, we found that operators lease space for two to three years in Hong Kong, Singapore, Tokyo and Taipei, and up to five years in India and 10 years in China.

Lease terms and rent-free periods in this report are for typical tenants. Landlords may provide longer lease terms and the option to renew for larger tenants. Similarly, they may also offer longer rent-free periods, as larger self storage operators usually lease larger areas or entire buildings in some instances.

Ownership

Visibility into asset pricings is relatively low as there are few self storage facilities sales transactions outside of Australia.

Based on lease examples between operators and landlords, purchase prices in recent transactions and our own estimates, we calculate that yields to the landlords (rental streams from these facilities as a percentage of the purchase price) range from 2-4 per cent in Hong Kong and Taiwan, 5-7 per cent in Tokyo and Singapore, and up to 8 per cent or above in China and India, depending on location, access and building facilities. In comparison, yields on self storage facilities in Australia typically range between 5 and 8 per cent.

In comparison, the US market is very liquid with a self storage transaction volume of up to US$7 billion in 2016 and two of the largest portfolio sales (US$1.3 billion and US$1.4 billion) in the past decade transacted in 2016. The US market is far more advanced than the UK and European markets, and there remains a significant yield gap between the US and European assets, which we would expect to narrow as the market matures. We have seen transactional yields in the US compressed significantly in recent years. Class A transactional yields* in the US generally range between 5 to 5.25 per cent and non-Class A yields can be above 6.25 per cent.**

The UK market evolved during the 1990s to 2000s, and we saw the first portfolio deals with the acquisition of Access Self Storage and the management buy-out of Safestore, followed by regular portfolio and individual sales from 2007 onwards – with transactional yields on Grade A assets typically between 5.75 and 6.25 per cent and those on Grade B assets between 7 and 7.5 per cent. The European market is probably 10 years behind the UK market, but is catching up quickly with portfolio sales including Selstor in Sweden, BlueSpace in Spain, and the recent City Self Storage transaction. Transactional yields on Grade A assets in Europe typically range between 6 and 6.5 per cent and those on Grade B assets between 7.5 and 8 per cent.

Outlook

Although self storage is still at the early stages of being defined as a single product, this dynamic sector is now emerging on the radar of many investors because of potential market growth and increasing public awareness. We believe good quality platforms that largely comprise of self-owned assets – and have the scale – will present a highly investable product.

*net income from storage fees as a percentage of the purchase price

**non-Class A value-add deals have been seen under 5% in some areas

Table 1: **Market characteristics**

Market	Predominant property type	Market growth	Risks/barriers to entry	Acquisition Preferences
Australia	Typical industrial	Slow growth	High cost of land, achieving scale	Self-owned. Convert / Purpose built
Beijing	Commercial / mixed-use	Strong growth	Lack specific regulations & standards	Lease and convert
Shanghai	Commercial / mixed-use	Strong growth	Lack specific regulations & standards	Lease and convert
Shenzhen	Industrial / commercial	Strong growth	Lack specific regulations & standards	Lease and convert
Hong Kong	Typical industrial	Stable	Tighter government regulations	Self-owned / Lease convert
NCR Delhi	Typical industrial	Very early market	Lack specific regulations & standards. Conversion can be time consuming	Self-owned. Convert / Purpose built
Tokyo	Commercial (Grade C offices)	Strong growth	High land prices, language, different business practices	Self-owned / Lease convert
Singapore	Typical industrial	Stable	Availability and suitability of the space, compliance with regulations	Self-owned / Lease convert
Taipei	Commercial / mixed use*	Strong growth	Evolving regulations, public perception	Self-owned / Lease convert

*New laws released on 14 March 2017 requires that no self storage operators in Taiwan shall set up operations in areas zoned as, and all facilities located in commercial zones shall have at least one side facing a 10-metre wide road.

Table 2: **Rents and lease terms**

Market	Predominant Property Type	Market rents		Average lease length (years)	Rent-free period	Rental outlook
		(local convention)	(USD/sqm/year)			
Australia	Typical Industrial	AUD 260 / sqm / year	197	3 to 5	No incentives	Stable
Beijing	Commercial / mixed use	RMB 1-3 / sqm / day	106	5 to 10	No incentives	Up
Shanghai	Commercial / mixed use	RMB 2-3 / sqm / day	132	5 to 10	No incentives	Up
Shenzhen	Commercial/ Industrial	RMB 1-4 / sqm / day	132	5 to 10	No incentives	Up
Hong Kong	Typical industrial	HKD 10 -12 / sq ft / month	183	3	30 days	Up
NCR Delhi	Typical industrial	INR 19 – 23 / sq ft / month	42	3 to 5	30 - 45 days	Stable
Tokyo	Commercial (Grade C offices)	JPY 9,000 - 11,000 / tsubo / month	320	2	0 - 90 days	Down
Singapore	Typical industrial	SGD 1.4 / sq ft / month	128	2 to 3	30 - 60 days	Stable
Taipei	Commercial / mixed use	NTD 850-1,550 / ping / month	140	3	No incentives	Stable

Source: JLL, 4Q 2016
Notes: Rents are market average rents paid by operators to landlords. Rents are generally gross rents (asking or transacting).
All rents are measured on a built or gross floor area basis. Lease terms and rent-free periods for typical tenants.
Please refer to pg.25 for the retail rates that self storage operators charge their end-users.

Table 3: **Acquisition preferences**

Market	Predominant property type	Financing	USD / sqm	Yield (% pa)	Debt Cost	LTV
Sydney, Melbourne	Typical Industrial	Own funds, equity & debt	1500 - 2300	6-8%	4%	40-60%
Beijing	Commercial / mixed use	Own funds & equity	1325 - 5400	8-10%	6%+	30-60%
Shanghai	Commercial / mixed use	Own funds & equity	1150 - 4350	6-10%	5-6%	30-60%
Shenzhen	Commercial / Industrial	Own funds & equity	1700 - 5300	5%	6%+	50%
Hong Kong	Typical industrial	Own funds, equity & debt	4400	4.0%	3%	40%
NCR Delhi	Typical industrial	Own funds	400 - 500	9-10%	9-10%	40%
Tokyo	Commercial (Grade C offices)	Own funds, debt	4800 - 6700	5-6.5%	0.6%	50-75%
Singapore	Typical industrial	Own funds, equity & debt	1400	6.5-7%	3%	40-60%
Taipei	Commercial / mixed use	Own funds, equity & debt	4900 - 8500	2-3%	2.5%	65-70%

Source: JLL, 4Q 2016
Notes: Yields (net yields % pa) are estimated from the rental streams generated by self storage facilities, and either recent transaction prices or valuations as estimated by JLL.
All capital values are measured on built on a or gross floor area basis.

Shifting trends are fueling demand

The self storage industry has a brief history in Asia compared with that in the more mature markets in Australia, Europe and North America, where households view self storage space as extra closets or spare rooms for their homes. The notion of storing personal belongings elsewhere is relatively new in this region, as most people are still used to storing their possessions in their own homes.

What's driving the demand for self storage?

Public awareness: awareness of the product is a major driver for demand. The more nascent markets had to spend a lot of time and marketing on making the consumer aware that the product is there. For example, the UK market took arguably 20 years to get a good level of awareness in major cities.

Urbanisation: Urbanisation is clearly a demand driver for self storage in Asia. Hong Kong, Singapore and Tokyo, the most mature self storage markets outside Australia, have the smallest average home sizes in the Asia Pacific region, mainly as a result of dense population and also rising prices.

The size of an average home is less than 80 sqm (gross floor area basis) in Hong Kong, Singapore and Japan as compared with 90 sqm in the UK, 130 sqm in Shanghai and 250 sqm in the US and Australia (Table 4).

Table 4: **Rising income and small living space driving demand for self storage**

	Lettable floor area per capita (sqm)	Average home size (sqm)	GDP per capita, (nominal, US$)
USA	0.85	249.6	57,305
Australia*	0.17	231.0	51,811
UK*	0.05	88.9	40,005
Hong Kong	0.04	59.5	43,460
Singapore	0.02	77.0	51,718
Japan*	0.002	61.7	39,192
Taiwan	0.002	117.0	22,525
Malaysia	0.001	163.3	9,581
China	0.001	127.0	8,090

*Includes both traditional and outdoor container storage

Sources:

Lettable floor area per capita sqm – Self storage Association Asia; Annual Survey 2016 for Asia, FEDESSA European Self storage Annual Survey 2016 for the rest

Average home size – JLL Research, Commonwealth Securities, FEDESSA European Self storage Annual Survey 2016

Average household size, GDP per capita (nominal, US$) – Oxford Economics

Demand for personal self storage

Small living spaces cannot fully explain the demand for self storage, as the US and Australia have big self storage markets despite much larger home sizes.

Income levels appear to be another key demand driver, as we see a high positive correlation between gross storage space per person and nominal GDP per capita. The high correlation coefficient (+0.7) between the two sets of rankings suggests that self storage demand rises hand-in-hand with income level.

Growing affluence indicates that people are likely to accumulate more possessions and thus need additional space in which to store them. As such, we see scope for growing demand in personal self storage space in emerging Asia, especially China and Southeast Asia where standards of living are rising. In the core market, we expect to see greater demand for niche storage services such as document storage, climate controlled environments (e.g. for wine) and specialised space (e.g. for bicycles), as well as for value-added services such as pick up and delivery.

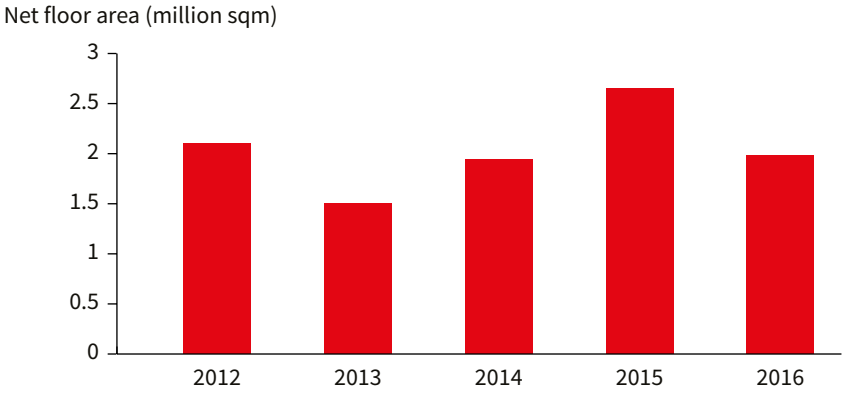
Demand for business storage

Self storage also provides a flexible alternative for businesses that do not want to sign long-term leases and prefer to rent an appropriately-sized space from a self storage provider instead of a large warehouse where much of the space may go unused. Businesses that use self storage space include large companies (for archival and document storage) as well as SMEs and start-ups that use them to store and sometimes even display merchandise.

The growth of businesses is another driver. Some markets have segments that specifically cater to firms that need additional space, at lower cost, to store items related to their business. For example, a number of self storage operators specialise in housing documents and furniture for large companies. By leasing self storage space and moving document storage offsite, companies are able to maximize the efficiency and flexibility of their office premises. The growth in the number of small businesses and new setups has also driven business demand for self storage. Evidence of the physical growth of businesses in markets featured in this report can be found in occupied stock figures. Over the 2012-2016 period, Grade A office occupied stock grew by more than 10 million sqm in these markets. Growth in demand for office space has in turn forced many companies to take a more frugal approach to their real estate footprints.

The growth in online sales has also driven demand. E-commerce retailers are using self storage space to facilitate last-mile delivery. Some operators also offer storage units where e-commerce firms can leave packages for shoppers to retrieve at a later time, easing some of the difficulty associated with last-mile delivery. Smaller online retailers are even using self storage units as showrooms where they display merchandise available for sale online.

Figure 1: **Growth of businesses is another driver of demand for self storage**



Source: JLL

Australia

Melbourne and Sydney

Key points for investors

- Abacus and National Storage REIT (NSR) both have a presence in Australia and New Zealand. All facilities are leased/operated by the Storage King Brand. They hold nine facilities across Wellington, Hamilton and Christchurch
- Self storage developers in Australia tend to buy to build, not hold until there is an appropriate time to develop as a residential developer might
- Holding income on appropriate sites is usually not sufficient to offset potential holding costs
- Investors have recently shown interest in acquiring inner city self storage facilities with an eye towards holding the asset then redeveloping it for other uses, e.g. residential, allowing some self storage operators to sell facilities at above-market rates
- Preference from most owners is to acquire freehold sites. A number of private owners align with national storage brands in franchise-like models for operating efficiencies
- Locations in the outer suburbs of Melbourne and Sydney offer land at lower cost, which makes building a new facility more feasible
- The main driver behind inner city location choice is pricing. Inner city sites are generally conversions of existing industrial and office buildings, with investors showing little preference between the two

Market characteristics

The self storage market in Australia includes both indoor and outdoor facilities. Indoor facilities are usually located within either converted established industrial buildings or purpose-built industrial structures. These structures are divided into units of various sizes, with each individual unit accessed by a roll-up door. Storage facilities located closer to major CBDs are often converted commercial buildings that have been reconfigured to allow storage facilities similar to those found at traditional industrial style buildings in suburban areas. Outdoor facilities are generally smaller corrugated metal structures with roll up doors to allow end-users direct access to the unit.

Personal storage is the largest segment of the self storage industry in Australia. Operators provide consumers with a wide range of unit sizes suitable for both short and long-term storage options. In addition, operators also offer packaging and transport services for an additional fee. Access varies from general business hours to 24-hour access depending on the facility. Personal self storage service has grown in recent years as inner-city apartment living as has become more prominent in Australia.

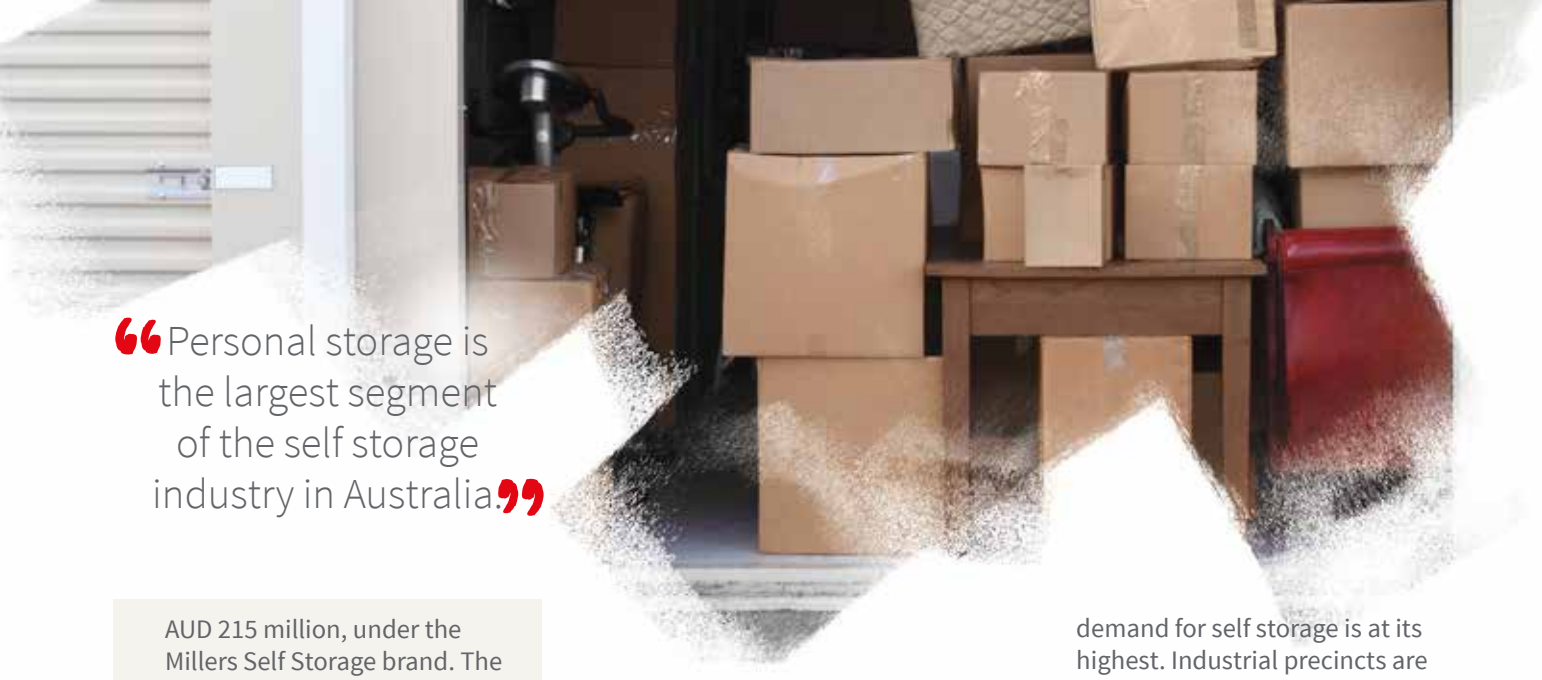
Temperature-controlled storage is typically used to store fine art and wine to avoid damage. Specialised operators have entered the market to offer services to wealthy individuals requiring such services. Other variants include storage facilities for infrequently used recreational items such as boats, cars and motorcycles, or specialised items such as guns, which require that safety procedures be strictly followed.

Ownership structure

Despite a wave of consolidation activity in recent years, the sector in Australia still remains largely fragmented. As the sector experiences continued downward pressure on pricing, small independent operators will find it increasingly difficult to compete with the economies of scale generated by the larger operators, potentially leading to more consolidation.

A large proportion of the sector remains privately owned and is often run under franchise agreements with major operators. Institutional investment in the sector is somewhat limited, however, a few players have large exposure to the self storage sector. Examples include the following:

- National Storage REIT – An AUD 740 million (approximate) investment vehicle listed on the Australian Stock Exchange (ASX). The investment trust includes direct real estate that is tenanted by the operating entity National Storage (Parent Company). The portfolio of the trust encompasses 110 centres across Australia and New Zealand. In 2016, an AUD 285 million joint venture between National Storage REIT and Heitman was established for the purpose of acquiring a portfolio of 26 self storage facilities across Australia
- Abacus Property Group – Owns a portfolio of 66 self storage assets located throughout Australia and New Zealand worth an estimated AUD 613 million. Abacus has been active in the sector since 2005 and has an operating relationship with Storage King, the largest self storage operator in Australasia
- Valad Property Group – In 2004, Valad Property Group established a 50:50 joint venture with Kennards Self Storage to purchase 24 properties worth approximately



> “Personal storage is the largest segment of the self storage industry in Australia.”

AUD 215 million, under the Millers Self Storage brand. The joint venture was disbanded in 2008 when Kennards bought Valad’s 50% stake in the partnership. The sale was completed in 2010. Kennards remains a privately held owner-operator of self storage facilities across Australia

Market rents

In the first half of 2016, National Storage REIT reported the following:

- Combined portfolio RevPAM* of AUD 207 per sqm (June 16: AUD 202 per sqm, ex-New Zealand)
- Combined portfolio rate per sqm of AUD 261 per sqm (Jun 16: AUD 272 per sqm)

Over the 12 months to December 2016, Abacus Property Group’s Self Storage Portfolio reported the following

- Combined portfolio RevPAM of AUD 232 per sqm
- Portfolio Average rental rate of AUD 262 per sqm

Transactions

Due to the relatively large proportion of private ownership and the fragmented nature of the sector, direct sales transactions are typically off-market deals negotiated between owners.

It should be noted that there has been some recent examples of self storage operators selling their facilities at above market rates to residential developers seeking inner city development sites with sufficient holding income until market conditions are right and construction begins on the residential project.

Risks and barriers to entry

- Australian self storage facilities generally have freehold land ownership rights.
- The high cost of land in inner-city locations is a major barrier to entry for self storage. Residential or office developments are generally the highest and best use for many sites within the inner city where demand for self storage is at its highest. Industrial precincts are generally not in close proximity to established residential areas and hence demand for self storage facilities in these areas is much lower.
- Achieving scale has been the largest barrier to entry for institutional investors who require economies of scale to achieve their target returns. The large fragmentation of the market provides limited opportunities for large scale portfolios to be purchased at appropriate rates for institutional investors. The establishment of a number of large key players has created market conditions similar to an oligopoly.
- As self storage facilities have no pre-commitments, let-up and holding costs can be a major barrier to the feasibility of projects. Considering that a self storage facility essentially contains a large number of small tenants, the period to achieving an occupancy rate that is sufficient to become profitable can be a year or more.

Table 5: **Recent transactions in Australia**

Address	City	Owner	Operator	NLA (sqm)	Valuation date	Valuation (AUD)
29 Penney Place, Blacktown	Sydney	Abacus Property Group	Storage King	6,782	Jun-16	$15-20m
24A Anzac Street, Greenacre	Sydney	Abacus Property Group	Storage King	3,941	Jun-15	$5-10m
71-75 Forsyth Road	Melbourne	Abacus Property Group	Storage King	3,607	Jun-15	$5-10m

Address	City	Owner	Operator	NLA (sqm)	Sale date	Sale price (AUD)
Kurnell	Sydney	National Storage REIT	National Storage	10,300	Aug-16	$17,500,000
Artarmon Central	Sydney	National Storage REIT	National Storage		Dec-16	$10,800,000
South Wharf	Melbourne	National Storage REIT	National Storage	4,800	May-16	$12,500,000
150 Arthurton Road, Northcote	Melbourne	EG Funds Management	StoreInvest	4,650	Jul-16	$13,450,000
397-411 Victoria Road, Ryde	Melbourne	Kennards Self Storage	Kennards Self Storage	2,600	Jun-16	$9,200,000

Source: Real Capital Analytics, company information

*RevPAM – Revenue per available square metre

Key points for investors

- A major attraction for potential investors is stable demand for self storage in both up and down economic cycles, although planning and location are important for success
- Investors will likely target a 20 per cent internal rate of return (IRR) in an emerging market (lower rates of return, e.g. 8-10 per cent, are acceptable in very few cases)
- Most investors aim for a five-year holding period and exit after that, compared to ten years or more in mature markets
- Finding a partner willing to back a self storage project with their own money is difficult, particularly given uncertainties concerning exiting the investment in emerging markets
- Obtaining debt financing can be even more difficult as banks are cautious about lending to new sectors such as self storage

Market characteristics

The self storage market in India is still at an early stage of development and relatively unregulated. Operators are fragmented and most of them operate from retail, residential or industrial space. Self storage facilities are most often used by companies, but demand from individuals for personal use is growing as people move from traditional landed houses to smaller urban dwellings. Most facilities in India are indoor and are located in the National Capital Region (NCR) of Delhi and there is a severe shortage of self storage facilities. As such, operators are able to achieve high occupancy rates (about 80% or more) and good returns despite poor quality fit outs.

Self storage facilities in NCR Delhi are generally found in industrial / warehousing areas, which differ from the industry norm in the region (i.e. easily accessible locations near densely populated areas). This is mainly because of regulations by local municipalities. As self storage facilities grow in their importance to local authorities, regulations are expected to be loosened, permitting these facilities to occupy more prominent locations in retail areas and along main road frontages.

Current major operators in India are Self Storage India (Gurgaon) and Store More (Noida and Gurgaon). With no brand leader in the country at present, growth opportunity exists for a brand that is well positioned with high quality and easily accessible facilities.

The market would benefit from increased competition among operators in order to develop and educate potential customers. Operating conditions have been challenging as it is difficult to find suitable locations and to raise capital. The high land acquisition cost for self storage facilities operating on freehold land further inhibits the growth of the market.

Market rent

The typical lease term, between landlord and operator, is three-to-five years. Longer lease terms, in excess of five years, might be available for large and built-to-suit space.

Asking rents are typically INR 19-23 per sq ft per month for prime space in NCR. Rents are calculated on built area (i.e. carpeted area and walls). Incentives in the form of rent-free periods are roughly equivalent to a fit out period of 30 to 45 days. Rent reviews are typically conducted at the time of lease expiry and range from increases of 12-15 per cent every three years, or 4-5 per cent on an annualised basis.

Transactions

No transactions were observed in the recent past. We estimate that valuations-based yields fall between 9 and 10 per cent.

Ownership structure

Freehold land is preferred as it gives owners more control over the development of the asset and more ownership security. However, operators looking to expand will consider leasing opportunities, especially if there is an opportunity to buy the land in the future. New, purpose-built or built-to-suit facilities are better over the long-term, but asset conversion is an attractive channel for new operators who wish to enter the market in a faster way.

Risks and barriers to entry

- Land-use rights are typically only available in industrial and warehousing zones as self storage is considered a storage activity
- International investors typically take a cautious approach due to the uncertainties of partnering with local investors and government regulations
- Conversion of existing land use to self storage may be time consuming in certain markets

India

NCR Delhi

> “We estimate that capital values for self storage space in central Tokyo should be around JPY 1.8 to 2.5 million per tsubo.”

Key points for investors

Independent research firm Yano estimates that the self storage sector in Japan is growing about 8 per cent per year. Quraz targets 10 per cent annual growth in capacity.

Ownership structure and acquisition

Quraz typically purchases and converts whole office buildings to self storage facilities. Some retail or industrial buildings with good floor loading may also suffice. Other operators typically lease part of a building from the building owner or have a management contract. Very few operators would undertake new purpose build, although Quraz is currently developing a facility.

The cost of land is very high with competition often coming from residential developers. It is much easier for operators to find floors in an existing office building to convert to self storage, with little or no bank capital needed. Conversion of floors and whole buildings might take 6-12 months and the construction of a new building about 6-12 months longer.

Operators that lease space will either finance their conversion with their own equity or operating cash flow, but some degree of bank financing may also be available, especially for operators with long-standing commercial banking relationships.

Market characteristics

Most of the self storage market is dedicated to standard self storage. There are some value- added services but these are relatively limited. Most demand for storage space comes from individual end users.

Facilities are usually found in converted office properties or converted mixed-use (generally office and warehouse) properties. Over 75 per cent of Quraz’s operations are in Greater Tokyo (the company owns 59 assets and 45 are in Greater Tokyo), and most of its properties are in dense residential neighbourhoods.

While container storage is relatively common in Japan, containers are generally not found in residential neighbourhoods but found further out in less densely populated neighbourhoods and commercial areas.

Indoor (self storage in older office and residential buildings) facilities located within Tokyo’s 11 wards (Chiyoda, Chuo, Minato, Shinjuku, Shibuya, Bunkyo, Shinagawa, Meguro, Setagaya, Ota and Koto)

Lease terms and rents

Lease term: Two years, standard lease.
Gross rent: JPY 9,000-11,000 per tsubo per month.*
Incentives: Rent-free period from 0-3 months.

Transactions

There are not many self storage transactions in Japan because most operators do not own the land and the buildings where they operate. As a result, it is very difficult to obtain transactional information regarding sales, cap rates and capital values.

We estimate that capital values for self storage space in central Tokyo should be around JPY 1.8 to 2.5 million per tsubo (based on gross floor area), which translates to gross yields of 7.5-10.0%. Net income yield was estimated 5.0%-6.5%.

Risks and barriers to entry

High land prices is a major barrier to entry. Other risks/barriers to entry to foreign investors include different language, culture and general business practices.

*based on gross floor area, Grade C office buildings and residential buildings in the 11 wards of Tokyo

Japan

Tokyo

Hong Kong

Key points for investors

Investors are attracted to the self-storage sector because of:

- Enhanced income profile derived from the conversion of and industrial use to a higher and better use within the permitted use class;
- Strong regular income growth due to the short-term nature of the storage licences;
- Insulation from market volatility driven by stable tenant base underpinning high occupancy levels;
- The opportunity to create value through consolidation in a classic build to core investment strategy

Operators can work in a number of formats with capital partners.

Market characteristics

The vast majority of self storage facilities are indoor with more often than not 24-hour access. Common features include climate control, video surveillance and smart card or pin code access. Services provided include pick-up and drop off, parking, mailbox for rent, 24-hour hotline and Wi-Fi. Some operators offer units designed for specific use such as wine storage (with lighting control), bicycle storage, document storage and clothing storage (some with a dressing room).

Most self storage facilities are housed in industrial buildings, hence in traditional industrial areas of Kwai Chung, Chai Wan, Tsuen Wan, Cheung Sha Wan, Sha Tin and Yau Tong.

The fire that occurred in Ngau Tau Kok in June 2016 has changed the industry's operating environment. The government is considering new regulations that may reduce efficiency ratios from 60 per cent of gross floor area to 40-50 per cent. The 2016 Ipsos/SSAA survey estimates that roughly 10 per cent of facilities have closed over the past year as a result.

Lease term: Generally three years with options to extend (subject to negotiation).

Market rent: Average rent was HKD 10-12 per sq ft per month*, with 90 per cent of rents between HKD 7.0 and HKD 17.5 per sq ft per month, based on lease transactions in industrial buildings that house self storage. A one-month rent-free period is usually offered by landlords.

Transactions

The average capital value of industrial buildings housing self storage is about HKD 3,200 per sq ft. Average yield ranges between 3.8% (based on sales transactions involving industrial buildings that house self storage) and 3.9% (based on valuation).

Ownership structure

Data from the SSAA indicates that over one half of self storage facilities in Hong Kong is primarily self-owned and the rest is leased.

Risks and barriers to entry

In practice, the Hong Kong government enforces laws regarding land use quite loosely, resulting in many self storage facilities operating illegally in buildings on "industrial only" land.

Land-use rights depend on the land lease and, for warehouse and storage related facilities, there are three types:

- Industrial only: the use of storage is not allowed
- Godown only: storage permitted
- Industrial and godown: storage permitted

> "Less rentable floor area as a percentage of gross floor area as well as bigger capital outlays on fire safety will lower investment returns, and cause operators to reassess their options."

The sector currently depends to a large extent on self-regulation. For example, customers need to comply with guidelines that are set by the Self-Storage Association of Asia (SSAA).

At the same time, the SSAA is working with the Building Services Department and Fire Services Department of the Hong Kong government on drafting safety standards for storage operators. For example, it is suggested that passageways should be wider, which may lower operators' rental income and, hence, reduce the value of these facilities.

The government intends to inspect industrial buildings to standardise the design and construction of properties and ensure that (over time) all industrial buildings are sprinklered.

Tighter government regulation is a major risk factor for investors in self storage facilities. Less rentable floor area as a percentage of gross floor area as well as bigger capital outlays on fire safety will lower investment returns, and cause operators to reassess their options.

*on gross floor area basis

Key points for investors

- Although the self storage market in Singapore is relatively mature and past the stage of rapid growth, stable occupancy and rental levels keeps the city attractive to real estate investors
- Typical investors (e.g. those linked with private equity funds) target IRR of around 15 per cent over a five-year investment period and exit after that time. Investors that are linked to the government naturally have a longer investment horizon
- Operators will likely combine their own funds or equity funds with debt financing in order to achieve their desired cost of funding

Market characteristics

While there are self storage facilities throughout Singapore, we found a greater concentration of such facilities in the Central (e.g., Toa Payoh, Bukit Merah), Northeast (e.g., Ang Mo Kio, Serangoon) and East planning regions.

Depending on their target clientele, these facilities may be equipped with air-conditioned (e.g. for wine storage) or non-air-conditioned units that come in a variety of sizes (e.g. a small locker or larger units for rent). They typically also offer flexible lease terms and 24-hour secured access to their users and customers.

Some self storage operators may offer value-added services to their customers, for example: packing supplies for purchase, moving services for hire and insurance coverage from third-party service providers.

Lease terms and market rents

Similarly to the typical industrial lease term, the lease is two-to-three years with the option to renew for a further term of a similar duration. Larger tenants with higher capital resources will generally prefer longer lease terms of more than five years.

Self storage operators typically lease their premises on a bare shell basis and install their own fit out. Rents are at the prevailing market rate quoted on a gross basis. We estimate that average gross warehouse rents were SGD 1.40 per sq ft per month as of 4Q16.

Typically, landlords will provide incentives of a one to two months rent-free period for the purpose of allowing tenants to fit out their space. However, this can be increased for larger areas with longer lease terms.*

Ownership

Two major self storage operators linked to the Singapore government and has an established market presence , own most of their facilities. Other operators typically lease existing industrial space from landlords, convert them and fit them out for their operations. Newly built or purpose-built facilities are rare as operators are not keen to take on development risk.

Transactions

There are no known recent transactions of self storage facilities. We estimate that capital values are in line with those of typical industrial facilities. The average warehouse capital value was SGD 184 per sq ft as of 4Q16. We also estimate that yields currently range between 6.5-7 per cent based on valuation.

Land-use rights

Self storage operations are allowed in industrial premises (usually warehouses) on Business 1 (B1) and Business 2 (B2) zoned land.**

The operator is responsible for ensuring compliance with the regulations stipulated by relevant government authorities. For example:

- Urban Redevelopment Authority (URA) land-use zoning and development control requirements
- JTC Corporation (JTC)/Housing and Development Board (HDB) approval and usage guidelines (for JTC/HDB premises)
- Singapore Civil Defence Force (SCDF) fire safety regulations
- Land Transport Authority (LTA) traffic management matters

As most self storage facilities are conversions from existing industrial premises, the operator will need to obtain approval from the URA for any change of use if the existing industrial

Singapore

> “For those looking to set up their own self storage business, barriers to entry include the availability and suitability of the space, as well as the need to ensure compliance with prevailing government regulations.”

building is used as a factory. There is no need for this if the existing industrial building is used as a warehouse.

The operator must also ensure that its self storage facility continues to comply with URA’s 60:40 industrial space usage requirement, i.e. at least 60 per cent of the total GFA must be set aside for self storage space and a maximum 40 per cent of the GFA can be for ancillary use (e.g. sales and admin offices).

For facilities held on on JTC/HDB land, there is a need to obtain their consent for assignment, change of use, intensification, etc. Most land today is available for 20-30 years as a leasehold and the option to renew is increasingly uncommon.

For those looking to set up their own self storage business, barriers to entry include the availability and suitability of the space, as well as the need to ensure compliance with prevailing government regulations.

*usually negotiated on a case-by-case basis.
**B1 areas are used or intended to be used for industry, warehouse, utilities and telecommunications for which the relevant authority (e.g. NEA) does not impose a nuisance buffer greater than 50 m.
B2 areas are used or intended to be used for industry, warehouse, utilities and telecommunications, with a nuisance buffer of over 50 m and within health and safety buffers.

China

Beijing, Shanghai and Shenzhen

> “Debt financing is difficult as operators leasing their storage facilities have little collateral when applying for bank financing.”

Key points for investors

- As the self storage sector in China is still at an early stage of development, most operators prefer to lease space instead of owning a facility
- Regulations over land use, building specifications and fire safety are currently largely non-existent. As a result, self storage facilities can be found in both residential and commercial buildings in China
- The expected growth of the market is a big attraction for potential investors (the market is expected to grow by around 10 per cent per year). Investors are likely to aim for an IRR of around 20 per cent over a five-year period
- Debt financing is difficult as operators leasing their storage facilities have little collateral when applying for bank financing

Beijing

Market characteristics

The self storage market in China is still at an early stage of development and most companies in Beijing entered the market after 2010. Due to a lack of warehousing space in the city centre, self storage in Beijing is primarily located in the basement of residential and commercial buildings, with only a few housed in industrial buildings. Most storage facilities are composed of divided rooms and smaller cubic containers. In addition, there are different types of storage catering to customers’ needs. For example, CBD self storage provides small size lockers in co-working facilities.

Individual demand for self storage space has surged in recent years. Residents of small apartments increasingly find it difficult to store their possessions, as the rapid growth in home prices across China’s Tier I cities has stretched the affordability of residential real estate. In addition, self storage space is also attractive to business end users, such as smaller online retailers and small business owners.

Major operators consist of logistics companies and real estate developers. There is only one foreign operator in Beijing, Supercheap Storage, from Australia which runs pianyicang.com that has a suburban storage facility in Shunyi District. Other operators are all local companies.

MyCube, OK Mini Storage and China Self Storage merged in January 2016, and with 13 facilities, became the largest operator in Beijing whilst CBD and Anton are ranked second with ten facilities each. Recently, real estate developer Vanke also entered the industry and established V Self Storage with each of its residential projects having self storage space.

Beijing had around 60 self storage facilities at the time of writing and the number continues to increase. Most self storage facilities are located in urban districts near their target customers and more than half are located in Chaoyang District. Nearly 20 per cent are in Haidian District and roughly 7 per cent are in Xicheng District. Other urban districts (Dongcheng, Shijingshan, and Fengtai) and three suburban districts (Daxing, Shunyi, and Tongzhou), have no more than three storage facilities each.

Market rents

Most of the self storage operators in Beijing lease their space. The typical lease term is between five and ten years depending on the landlord, but

operators often prefer longer lease terms of ten years or more. Rents range between RMB 1-3 per sqm per day in urban areas depending on location and facility. Rents can be much lower in suburban areas. Incentives are generally not provided as rents are already low for both landlords and operators.

Transactions

We estimate that NOI yields fall within the range of 8-10 per cent.

Shanghai

Market characteristics

Most self storage operators in Shanghai entered the market after 2010. As self storage businesses have been in operation for less than a decade, regulations and standards are still evolving and operators are still trying to optimise their business models.

Due to a lack of warehousing space in the city centre, most self storage facilities in Shanghai are commonly located in commercial space or in the basement of residential buildings, rather than industrial warehouses. Besides the standard storage comprising divided rooms and smaller cubic containers, there are different types of storage facilities catering to specialised demand, for example: Easy Storage provides wine storage. Self storage end-users comprise a mixture of individuals, households and small businesses.

Major players consist of logistics companies and real estate developers. Foreign operators (e.g. MyPlace from Germany runs MiniCC Storage) and local companies (e.g. Easy Storage, Love Box and Boxroom) started earlier to be followed by domestic listed companies (e.g. Public Self Storage from Shenzhen). Capitaland's StorHub brand opened a self storage facility in Shanghai in 2012, and recently, real estate developer Vanke entered the market and established V Self Storage. These companies have both purchased their own warehouses and leased space. MiniCC and StorHub both bought their own warehouses within industrial or commercial projects, while others rented one floor and operated them as self storage space regardless of the property type.

Location

Geographically, self storage facilities are distributed quite evenly in Shanghai. Operators have a presence in 11 urban districts*, with small concentrations in Xuhui and Pudong. This is probably because operators aim to balance lower rents against the need to be close to their potential customers.

Lease terms

Most self storage operators in Shanghai sign ten-year lease terms and usually sign long-term leases at residential and commercial buildings within the outer ring road. Operators opt to rent basements in residential buildings and cheaper floors at commercial buildings as they prefer locations close to their customer base and transport network nodes.

Market rents

Rents vary from RMB 2-3 per sqm per day in the urban areas based on location and facility. For those in suburban areas, rents can be much lower. Incentives are typically not provided as rents are already low for both landlords and operators.

Transactional evidence

NOI yields for landlords are estimated to range from 6-10 per cent. Capital values at facilities located within industrial and commercial buildings are between RMB 8,000-30,000 per sqm.

Shenzhen

Market characteristics

Most self storage warehouse clusters in Shenzhen's urban areas, primarily inside industrial buildings; however, some operators favour the basements of residential buildings and the less expensive space within commercial buildings. Operators who prefer to lease residential or commercial space generally do so to be closer to their customer base and transport nodes. Most storage facilities comprise divided rooms and smaller cubic containers of various sizes.

The self storage industry is still evolving in Shenzhen and in other parts of Mainland China and sector-specific regulations and standards are still lacking. Companies are still trying to work out the best business model for them to thrive. As a result, self storage can be found in any property sector and any area with land use rights as long as operators can profit.

Somewhat surprisingly, geographical distribution of self storage is concentrated in the urban areas of Shenzhen. Operators have a presence in six districts of Shenzhen**, with a heavy concentration in the most expensive residential city districts, Futian, Nanshan and Luohu.

Market players are composed of security service companies, warehouse companies and real estate developers. No foreign operators have been seen in the market so far. Local Shenzhen companies, including Vanke, are the key players in the market.

Market rents

Operators commonly lease properties for their self storage operations for RMB 1.2-4.2 per sqm per day in the urban areas depending on location and facilities. Rents in suburban areas can be much lower, e.g. RMB 1.0 per sqm per day. No incentives are provided as far as we know.

Transactions

Estimated gross yields achieved by landlords are below 5 per cent, depending on location and facility. For facilities located within industrial and commercial buildings, capital values range from RMB 12,000-36,500 per sqm depending on location, access and building facilities.

*Jing'an, Huangpu, Xuhui, Changning, Zhabei, Putuo, Songjiang, Minhang, Yangpu, Pudong and Baoshan.
** i.e. Futian, Nanshan, Luohu, Longhua, Longgang and Bao'an

Taiwan

Taipei

Key points for investors

- The self storage market in Taipei still has vast growth potential. The population of Greater Taipei* has a population of seven million, similar to Hong Kong
- The Taipei City Government officially recognises 43 self storage facilities of which nine are currently located within residential neighbourhoods. In contrast, there are about 400 self storage facilities in Hong Kong
- There is substantial room for growth in the medium term to tap into the pent-up demand
- Investors are attracted to the stable rental growth of 1-2 per cent per year and are likely to need about two to three years to reach the cash break-even point, or three to four years when including asset depreciation
- Most investors have a target IRR of 10-20 per cent or more over a five-year investment period

*consisting of Taipei City and the nearby cities of New Taipei and Keelung

Preferences on acquisition

It is almost impossible to find industrial buildings within the city limits of Taipei. Therefore, operators generally opt to lease space and convert existing commercial or mixed-use commercial and residential buildings. For example, a site that Easy Storage Taiwan plans to convert this year was initially designed to house a supermarket and retail stores.

However, pure office buildings are preferred to mixed-use buildings for conversion to self storage facilities. Although acquisition costs seem higher at pure office buildings, operators in mixed-use buildings must often contend with issues arising from locating in residential neighbourhoods e.g. fire hazards, storage of hazardous items, unwelcome personnel and additional customer traffic, along with various other problems and complaints.

Financing

Operators typically rely on their own funds, joint venture partnerships as well as debt financing. Bank financing is available although operators with leasehold premises that may lack sufficient collateral to secure a loan.

Market characteristics

Most self storage facilities in Taipei are located in core urban areas and near densely populated areas such as Xinyi, Songshan and Duanhua, although some can be found in the non-core CBD and city fringe areas such as Neihu and Nankong.

Facilities located in residential neighbourhoods are generally designed to store home items. Some also provide space that is large enough to store motorcycles and other large items. Self storage facilities in commercial areas are sometimes designed for business use. Many large companies have also started using these services. It is also worth noting that a few operators have incorporated co-working facilities for start-ups or small businesses as these small business entities that have limited space requirements.

Due to the rapid growth in online shopping and e-commerce, some vendors have rented storage space in several locations to facilitate last mile delivery. Some smaller internet vendors rent space for merchandise displays and hence, privacy and security have to be increased.

All facilities are indoor, temperature and humidity controlled with fire safety and security systems installed. Some operators provide standardised containers for users. On-demand storage is still a very new concept in Taiwan and it may be some time before the trend takes off. There are currently several storage operators that provide on-demand services, for example, users can order packing and register the package online and an operator will pick up the items and transport them to the storage facility. The same is true for users who want to access their stored items. Only self storage company staff are allowed in these facilities.

Lease terms and market rents

Most self storage operators in the CBD lease from individual landlords who have purchased commercial units on a strata-title basis. The typical lease term is three years and gives existing tenants priority to renew their leases. Gross rents are estimated to be NTD 850-1,550 per ping per month. Normally few or no incentives, such as rent-free periods, as provided.

> “Operators typically rely on their own funds, joint venture partnerships as well as debt financing.”

Transactions

To date we are not aware of any self storage sales transactions. We estimate that gross yields are around 2-3 per cent, based on rental information and CV data sourced from the government.

Ownership

Most storage operators lease space in strata-title owned buildings.

Risks and barriers to entry

Examples of foreign entry include an operator from Hong Kong and a joint-venture involving Extra Space Asia from Singapore.

One of the most significant barriers to entry is the evolving regulatory environment. After some zoning disputes and a fatal fire incident in Hong Kong in 2016, all levels of government in Taiwan turned their attention to the hazards and fire safety standards of such establishments. The Ministry of Economic Affairs has been drafting the official standards for, and the acknowledgement of, self storage as a formal business operation.

The Taiwan central government has delegated all municipal governments to draft ordinances, zoning by-laws, and or any other relevant self-governance regulations to better control the use of land and the safety of self storage facilities. The regulatory environment is still evolving as the new laws governing self storage land use were only launched on 14 March 2017. These state that no self storage operators shall set up operations in areas zoned residential and all facilities located in commercial zones shall have at least one side facing a 10-metre wide road.

Another barrier is the public’s negative perception of the industry as a whole, which has been influenced by a limited number of incidents.

Thailand

Bangkok

Market characteristics

Most Bangkok self storage facilities are located in suburban areas, with a limited presence in the central business area (CBA). However, there are no specific locations where operators cluster. The majority of operators have indoor facilities with 24-hour access and video surveillance. Only a few facilities are outdoors and housed in large shipping containers.

Market rents

Incentives are generally not offered by landlords. Lower monthly rents are offered for longer contract periods but information on actual rental levels are difficult to obtain.

Transactions

Capital values of the self storage market are not available and even data for industrial warehouses in Bangkok is very limited. Average prices for warehouses that were divested into REITs over the past few years are the closest proxy we have for capital values of self storage facilities. Prices ranged from THB 20,000 to THB 27,500 per sqm over the past five years. Based on estimated rental income and transactional capital value evidence, market yields range from 6-7 per cent. Please note that the majority of these divestments were in the Bangna-Trad Road area.

Risks and barriers to entry

The few businesses present in the market seem to operate in a grey area where they follow zoning and regulations for large warehouses. Most built-up areas allow for these, but the only caveat is that they must be next to 30-metre wide roads, which are rather limited in Bangkok.

> “Capital values of the self storage market are not available and even data for industrial warehouses in Bangkok is very limited.”

Malaysia

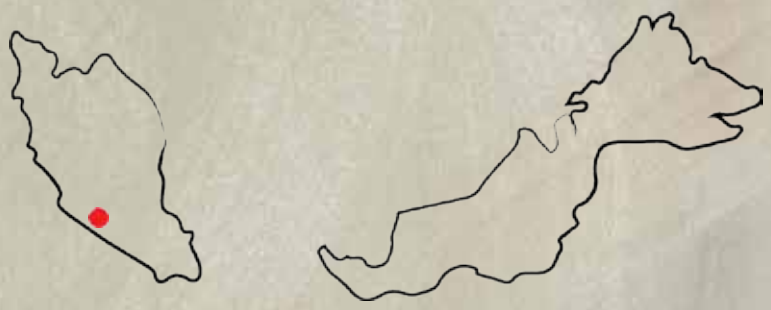
Kuala Lumpur

Key points for investors

- Investors are unlikely to be able to buy these properties in Malaysia as most self storage companies own their own premises and there are only a few landlords who lease to self storage companies
- The self storage sector in Malaysia has yet to grow sufficiently to become a new asset class which would appeal to investors

Market characteristics

The current market in Malaysia for self storage is emerging and still relatively small. Previously, most Malaysians lived in landed properties, and residing in condominiums and high-rise dwellings is a more recent phenomenon. Based on data from the National Property Information Centre (NAPIC), landed properties as a percentage of total properties transacted was 42 per cent in 2003 and declined to 28 per cent in 2016. Landed properties are still the most popular and preferred choice for locals if they are affordable and available. As land grows increasingly scarce and expensive in the city centre, developers have built more condominiums and apartments over the past decade and demand for self storage is beginning to emerge hand-in-hand with this gradual shift to smaller dwellings.



> “The self storage industry remains fragmented and operators occupy industrial, residential and retail space.”

At the time of writing, we are aware of seven self storage operations in Greater Kuala Lumpur, of which four facilities are owned by the operator while the space for the remainder is leased. The self storage industry remains fragmented and operators occupy industrial, residential and retail space.

Additional information

What is self storage?

Self storage is an industry in which storage space (such as rooms, lockers, containers, and outdoor space) is rented to customers, usually on a short-term basis.

Self storage end users are typically individuals who wish to store personal effects over the near or long-term and (typically) small firms that wish to store goods related to their business.

Some operators provide additional services such as pick-up and delivery (i.e., valet storage).

Property requirements

Rents measured in this report are market average rents paid by operators to landlords. Rents are generally gross rents (they can be asking or transacting). All rents are measured on built or gross floor area basis.

Freehold and leasehold represents two different options for operators to secure their premises.

Freehold: preferred by some operators due to certainty of its real estate

Leasehold: Presents a flexible arrangement at a lower entry cost

Geographies covered

Australia – Sydney, Melbourne
China – Beijing, Shanghai, Shenzhen
Hong Kong
India – Delhi NCR
Japan – Tokyo
Malaysia – Kuala Lumpur
Singapore
Taiwan – Taipei
Thailand – Bangkok

Interviewees

India
– Doug Perrins, Managing Director, Self Storage Thinking

Japan
– Stephen Spohn, President, Quraz

China
– Emma Feng, Chief Executive Officer, MyCube Self Storage

Hong Kong
– Oliver Leung, Chief Operations Officer, RedBox Storage

Taiwan
– Jodi Chen, Founder and Chief Executive Officer, Easy Storage Taiwan

Singapore
– Helen Ng, CEO, General Storage Company (Lock+Store, Singapore and Malaysia, The Store House, Hong Kong); and Chairwoman, SSAA

The contents of this report are based on:

a. JLL research;
b. Select findings from the Ipsos / SSAA 2017 Survey and the FEDESSA European Self Storage Annual Survey published by JLL;
c. Macroeconomic indicators (list of indicators) from Oxford Economics.

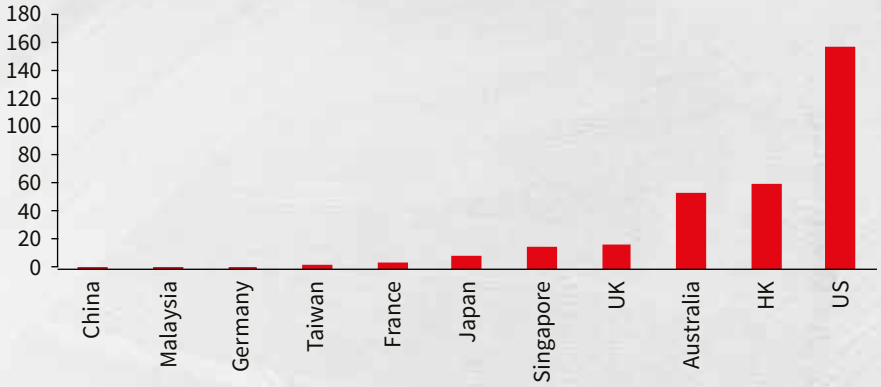
Appendix 1

Select findings from the Ipsos/SSAA 2017 survey and the FEDESSA European Self storage Annual Survey

1. Number of facilities per one million population

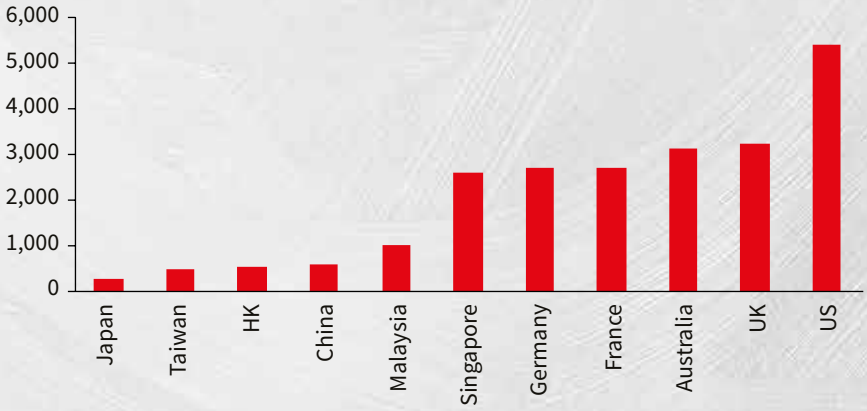
The self storage sector in Asia Pacific is still relatively small at this point, and on a per capita basis, the number of facilities vastly lags the UK and US. The number of facilities is expanding in most markets although Australia and Singapore may have past the rapid phase of market growth. One exception to this trend is Hong Kong, where the number of facilities have declined slightly over the course of 2016 to below 450 by end-2016 as a result of the government tightening regulations.

Figure 2: **Number of facilities**



Source: Ipsos/SSAA 2017 Survey, FEDESSA European Self storage Annual Survey

Figure 3: **Average facility size (sqm)**

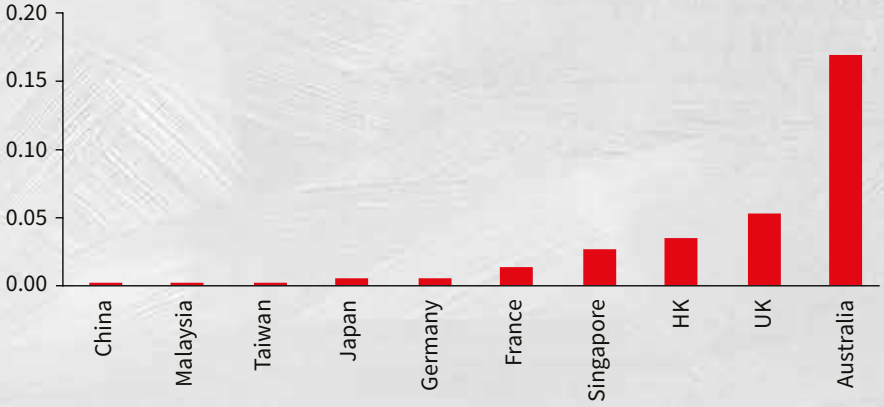


Source: Ipsos/SSAA 2017 Survey, FEDESSA European Self storage Annual Survey

2. Total lettable space

Total lettable space per person in Hong Kong and Singapore ranks highest in Asia at between 0.02 and 0.04 sqm per person, but still a fraction of 0.2 sqm in Australia.

Figure 4: **Total lettable space per person (sqm)**



Source: Ipsos/SSAA 2017 Survey, FEDESSA European Self storage Annual Survey

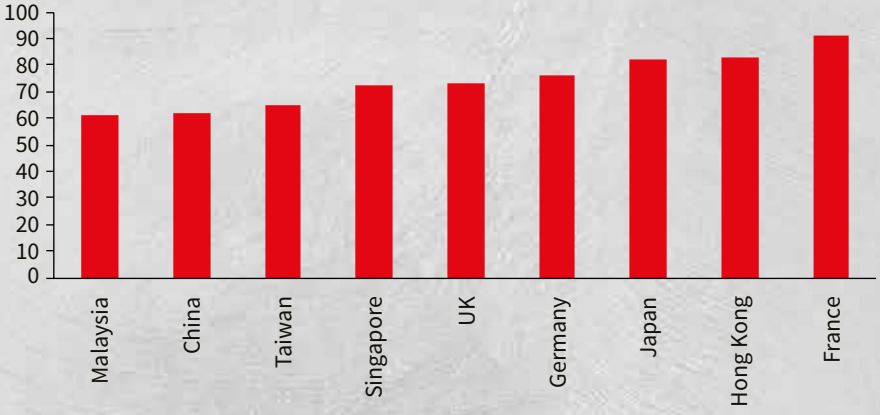
3. Average occupancy levels

The average occupancy level in 2016 across all six Asia Pacific markets was reported at 71 per cent. Self storage facilities in Hong Kong and Japan have the highest occupancy rates at over 80 per cent, followed by Singapore with a 73 per cent average occupancy rate.

4. Leased versus owner-occupied

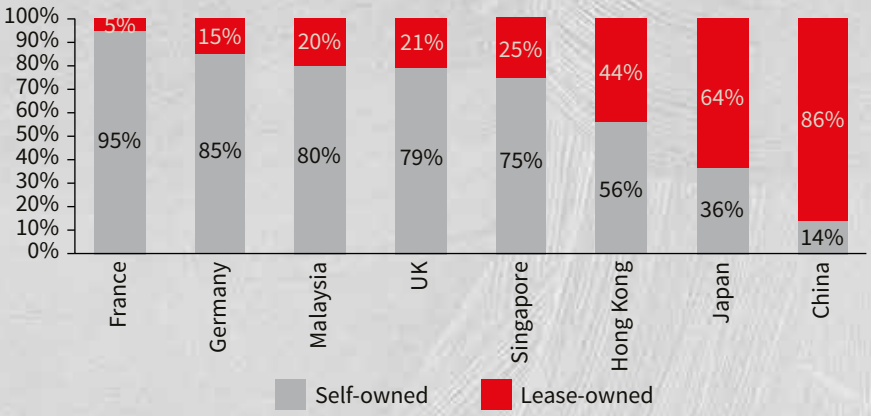
Leasing and owner-occupation represent two different options for operators. Fully freehold is a less common ownership model in Asia Pacific. More operators in the region prefer leasehold interests that present lower entry costs.

Figure 5: **Occupancy levels (%)**



Source: Ipsos/SSAA 2017 Survey, FEDESSA European Self storage Annual Survey

Figure 6: **Self-owned versus leased**



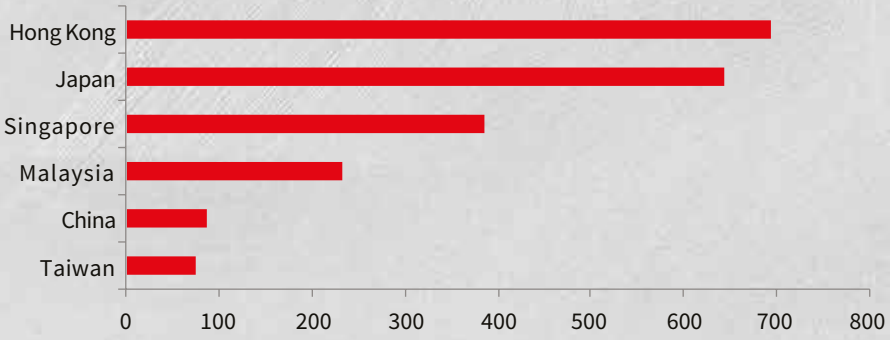
Source: Ipsos/SSAA 2017 Survey, FEDESSA European Self storage Annual Survey

Note: For Asian markets, self-owned includes both fully self-owned and primarily owned (held partially for lease); lease-owned includes both fully leased and primarily leased (partially owner-occupied).

5. Average retail rates that self storage operators charge end-users in major markets.

Operators in Hong Kong and Japan clearly have the highest rental rates from their facilities in the region.

Figure 7: **Average retail rates that self storage operators charge end-users (USD/sqm/year)**



Source: Ipsos/SSAA 2016 Survey

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