RESEARCH

Knight Frank

REALTY ASSET MONETISATION 2018

AN OVERVIEW

Deciphering the emerging trends in monetisation of real estate assets

Connecting People & Property, Perfectly.

PREFACE

In the current decade, apart from finance from banks / Non-Banking Financial Companies (NBFCs), private equity (PE) investments have been an important source of funds for the Indian real estate sector. Private equity capital comes primarily from institutional investors and accredited investors, who can dedicate substantial sums of money for extended time periods. These include Sovereign Funds, Pension Funds, Pure Private Equity Funds and Real Estate Funds.

> “With the new government assuming office in 2014 and the subsequent roll out of a battery of reforms like RERA and GST, there has been a paradigm shift in investors’ interest. These reforms have collectively set a new order and changed the perception global investors had of India.”

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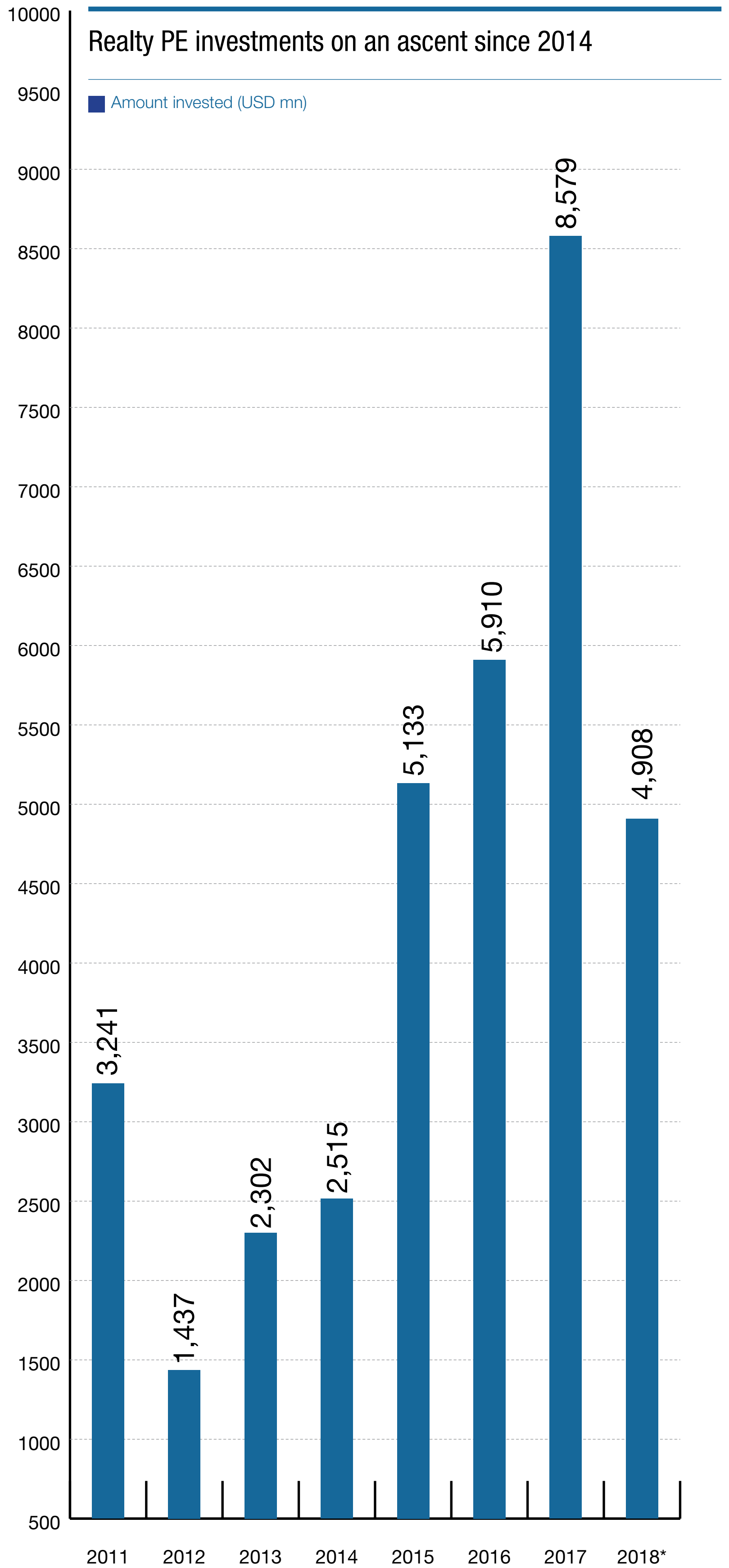
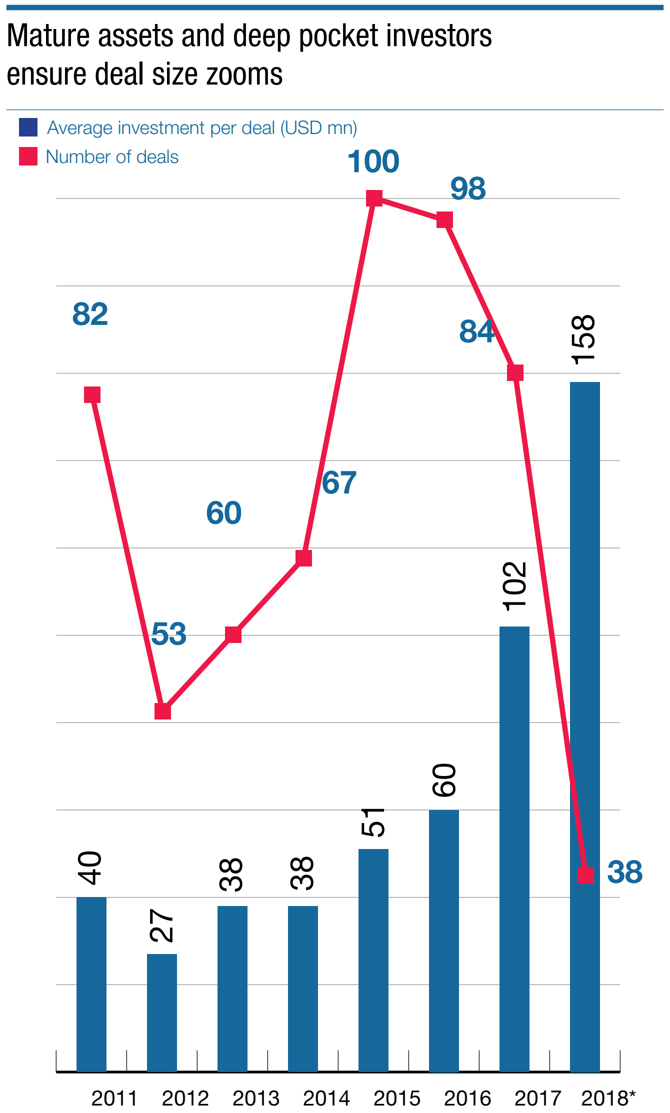
PE investments into real estate across debt and equity

“Post the current government coming into power in 2014, the PE investments grew at a CAGR of around 36% from USD 2.5 billion in 2014 to USD 8.6 billion in 2017.”



Note: 1.* - till June 30, 2018
2. The data includes commitments into investment platforms by investors/funds
Source: Knight Frank Research, Venture Intelligence

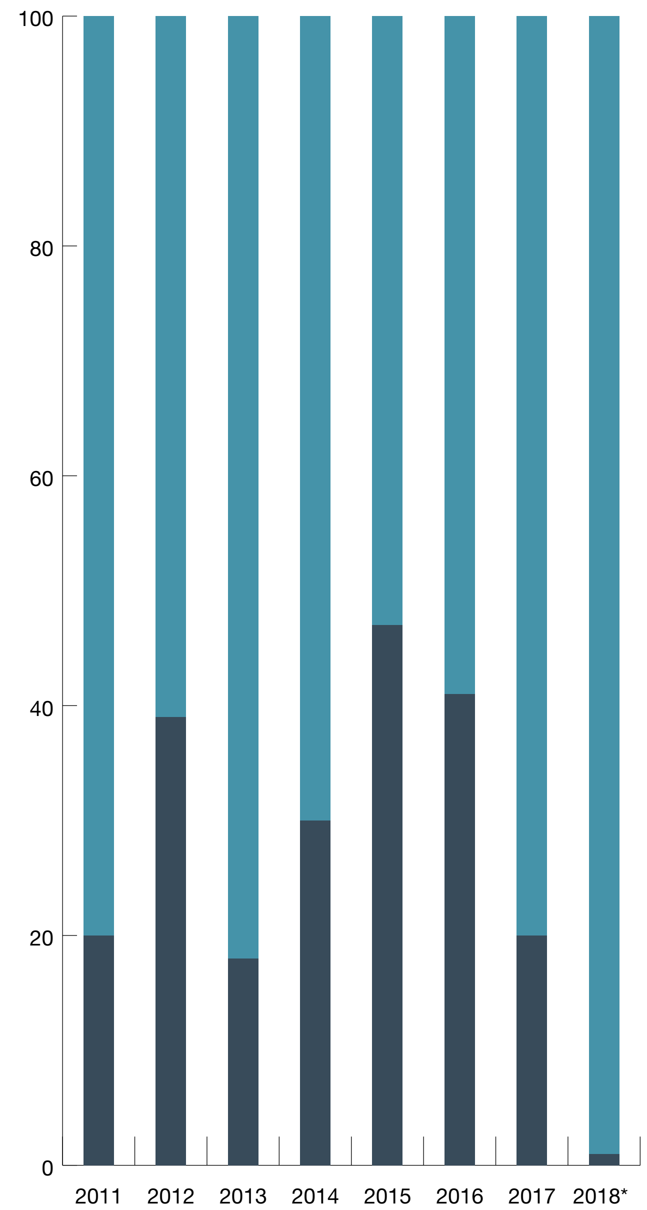
- Private equity investments into Indian real estate did not show any upward trend between 2011 and 2013, in fact, the investments had declined compared to 2011. However, with the new government assuming office in 2014 and the subsequent roll out of a battery of reforms, there has been a paradigm shift in investors' interest. Post 2014, the PE investments grew at a CAGR of around 36% from USD 2.5 billion in 2014 to USD 8.6 billion in 2017.
- The Indian real estate sector was perceived by investors globally as developing in terms of quality assets across segments. However, some of the biggest path-breaking reforms of independent India became a reality in the past few years. Some of them include – the Real Estate (Regulation and Development) Act, 2016 (RERA), the Benami Transactions (Prohibition) Amendment Act, 2016, infrastructure status to affordable housing projects, demonetisation, interest subvention schemes, relaxation of norms to encourage Real Estate Investment Trust (REIT) listings and the Goods and Services Tax. These reforms have collectively set a new order and changed the perception global investors had of India.
- The cumulative fund flow in the Indian real estate sector from 2011 to 2017 was recorded at USD 29 billion. Two-thirds of this was invested over the past three years, i.e. 2015–17. Even for the first half of 2018, the run rate is very encouraging with around USD 4.9 billion being invested in the first six months of the current calendar year.
- 2016 and 2017 witnessed several big ticket transactions of large mature assets such as the USD 1 billion Hiranandani-Brookfield deal in 2016 and USD 1.4 billion DLF-GIC deal in 2017. In the first quarter of 2018, a similar big ticket transaction was closed between Indiabulls and Blackstone.
- In the coming years, there is a greater probability that we may witness a blip in the annual PE investments. This is because the assets that were transacted between January 2016 and March 2018 in the big ticket deals (indicated above) have a long gestation period and would take more than a decade to mature and become operationally efficient. Although these deals significantly elevated the annual investments for those years, currently there are very few large mature assets available in the country for investors. Hence, whenever a blip occurs, it should not necessarily be interpreted as the sector is facing headwinds.



Note: 1.* - till June 30, 2018
2. The data includes commitments into investment platforms by investors/funds
Source: Knight Frank Research, Venture Intelligence

- Since 2011, nearly 660 deals have been done via the PE route. The average investment per deal across debt and equity has increased almost 2.5 times from USD 40 million per deal in 2011 to USD 102 million per deal in 2017. In the first half of 2018, the average investment was USD 158 million per deal, which was nearly four times the average investment per deal in 2011. This increase in average deal size was due to increase in number of large ticket size (large mature assets) transactions in the recent years. The number of deals has also gone up by 57% from 180 deals in 2012–14 to 282 deals in 2015–17 period.

Big ticket investors bullish on annuity assets, commit subtantially higher risk captial



Note: 1.* - till June 30, 2018
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Source: Knight Frank Research, Venture Intelligence

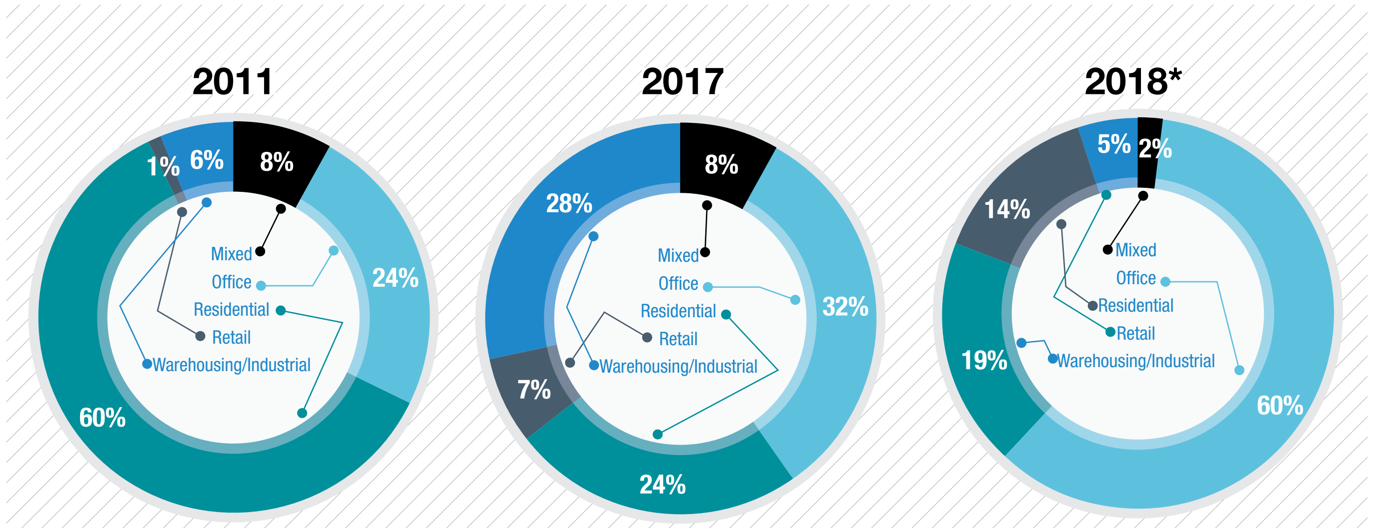
- Private equity (PE) by virtue, is risk capital, which generally goes in purchasing equity in a company or project and making maximum returns from the upside.

- Traditionally, the PE funding route in Indian real estate was via entity-level equity as well as project-level equity. However, since the beginning of the current decade, the completions of a large number of residential projects were delayed and many are now nothing but abandoned sites. As a result, investors who had taken up equity in the projects burned their fingers terribly. There was no reprieve for their anguish. Many investors were not able to recover their initial investment, leave alone expect any gains. These factors forced the PE investors to shun the risk associated with investing equity into development projects and invest via debt or structured debt instruments. However, for ready-to-move-in, rent-yielding assets, the development and occupancy risks are largely mitigated. Hence, the investors took up equity positions in rent yield assets.

- As a consequence, despite the overall investments increasing each year since 2014, the share of debt in total investments increased in the 2014–16 period. Particularly, for under-construction projects, the investors were not ready to take on any equity risk and preferred to invest via debt and significant proportion of the equity investments went into ready assets.

- In the past few years, particularly between January 2016 and March 2018, there were several big ticket equity investments that went into the acquisition of rent-yielding commercial assets, e.g. the USD 1.4 billion DLF-GIC deal, USD 1 billion Hiranandani-Brookfield deal and USD 730 million Indiabulls-Blackstone deal. Such large deals significantly increased the proportion of equity investments as a part of total PE investments in those years.

Policy reforms drive realty investors to warehousing



Source: Knight Frank Research, Venture Intelligence
Note:* - till June 30, 2018

2

Analysis of PE investments in commercial real estate

Private equity, by virtue, is risk capital, which generally goes in purchasing equity in a company or project and making maximum returns from the upside. For the purpose of analysis, we went through the equity investments made by institutional investors into single-use commercial assets (investments in retail/malls, warehousing and office). We have ignored equity investments into mixed development projects, i.e. projects having mixture of retail spaces, office, residential, hotels, etc. which is less than 10% of the total investments under consideration.

"There has been a significant shortage in supply of good quality office spaces in the prime business districts of the country. This shortage coupled with strong occupier demand has been adding upwards pressure on rentals. Such assets have been witnessing significant interest from investors."

2.1 OFFICE ASSETS-

2.1.1. INTRODUCTION

The office real estate market has seen a strong demand from investors over the past few years. We have witnessed significant interest from institutions who are queuing up to lap up good quality, rent-yielding office assets. One of the reasons for this spike in demand was the acute shortage in supply of good quality large office space in top Indian cities. The primary reason for shortage in supply was that developers had shifted most of their attention towards residential projects due to poor response from occupiers of office space from 2008 to 2012 as an aftermath of the global financial crisis. Despite overall office space vacancy levels being in double digits in several of these cities, the good quality office spaces are still commanding premiums and are witnessing upwards pressure on rents on account of scarcity in supply and robust demand from occupiers. Moreover, in the prime business districts of the country in areas such as BKC and Lower Parel in Mumbai, DLF Cyber City in Gurgaon and ORR in Benguluru, the scope for additional supply hitting the market in the next 12 to 18 months is low due to limited availability of land and the limits on the development potential.

2.1.2. ANALYSIS OF INVESTMENTS

Table 1:
Investor activity grows with maturing India office market

OFFICE			
Year	Number of deals	Amount invested (USD mn)	Average investment per deal (USD mn/deal)
2011	4	296	74
2012	4	393	98
2013	5	843	169
2014	2	333	167
2015	5	314	63
2016	3	1,131	377
2017	9	2,252	250
2018*	12	2,784	232

Note: 1.* - till June 30, 2018
2. The data includes commitments into investment platforms by investors/funds
Source: Knight Frank Research, Venture Intelligence

- The investments in office space increased significantly, almost eight times since the beginning of the current decade, from USD 296 million in 2011 to USD 2,252 million in 2017 . The average investment per deal has also increased from USD 74 million per deal to USD 250 million per deal in the same period.

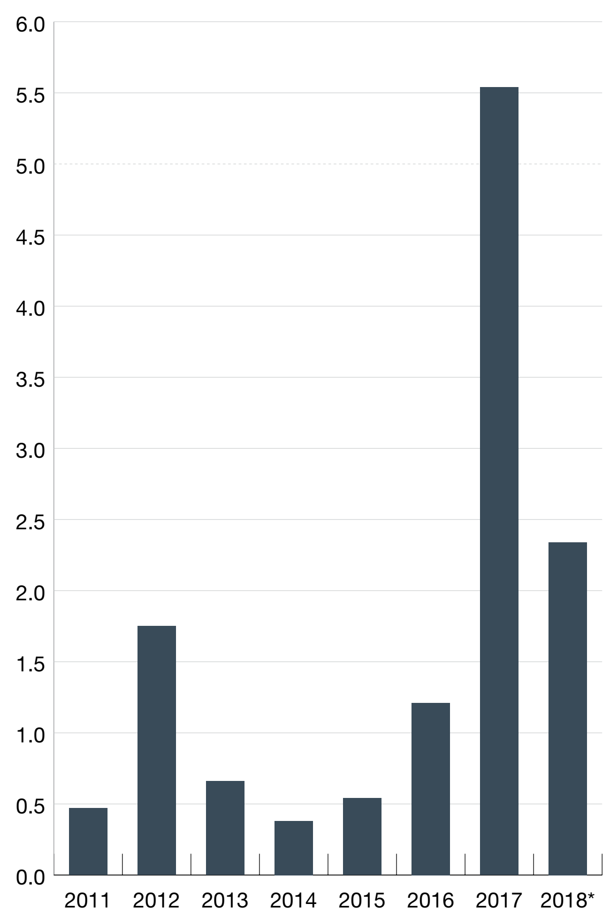
- In the first half of 2018, already USD 2,784 million has been invested. The number of deals has grown constantly over the years since 2014. In 2017, there were 9 deals in the entire year; however, there were 12 transactions involving office assets in the first half of 2018. Hence, it is quite likely that the full year numbers for 2018 would be higher.

- This increase in number of investments and also the investment per deal was due to the increased participation of global private equity giants, sovereign and pension funds. Since these investors have deep pockets, medium to long term horizon and on the expectation of making reasonably good returns from the Indian markets, they preferred to invest in assets above a certain minimum size so that it can have a meaningful impact on their funds' overall returns. Also, the nature of deals that happened in the mature leased office assets led to this increase in deal size.

- In some of the office assets that were acquired by investors, the current set of occupiers had taken up space in those assets during the weak office leasing market, i.e. between 2008 and 2012. Many of those assets are located at some of the most sought after business districts of the country. The market rentals prevailing that time were at the bottom of its cycle and the vacancy levels were very high. Hence, after many years of standard rent escalations (generally 15% escalation every three years), the rents that those set of occupiers are paying is much lower than the market rents prevailing today, as the escalations had happened on a low base. Over the last three years, the office leasing market has been inching steadily towards its peak; demand from occupiers for good quality space has been growing, the rental growth has been strong and the vacancy levels have shrunk drastically and in some business districts it is even in single digits. Hence, when these tenancy contracts become due for renewal, the potential for rental appreciation during contract renegotiation is huge. Such office assets are becoming increasingly attractive to investors.

- The period starting from January 2016 to June 2018, represented an exceptionally exuberant period for office space landlords and the numbers reflect the same. In the coming years, there may be a slight dip in the annual investments. This is due to the fact that the investments in the last couple of years shot up on account of one-off big ticket transactions like – the Hiranandani-Brookfield deal in 2016, DLF-GIC deal in 2017 and the Blackstone-Indiabulls deal in 2018. Such transactions do not happen often due to the sheer size of assets that are involved in the transactions, as those assets have a long gestation period and take more than a decade to mature and become operationally efficient.

A record 5.5 mn sq m (59.6 mn sq ft) of office space witnessed investor interest in 2017



Note: 1.* - till June 30, 2018
2. The data includes commitments into investment platforms by investors/funds
Source: Knight Frank Research, Venture Intelligence

- If we look from the asset perspective, since 2011 investor activity has happened in around 12.9 million square meter (139 million square feet) of office assets, where the investors purchased partial stake or complete stake. However, the quantum of stake on offer for investors has varied substantially depending on the scale/extent of debt and liquidity challenges with which the seller was contending.

- The PE giants generally prefer acquiring controlling or complete stake in the asset, whereas the sovereign and pension funds prefer to take partial stake as they do not wish to take the responsibility or get into hassles of day-to-day management of the asset. The sovereign and pension funds prefer to partner with big local developers in a particular region who have the ability and expertise to become national players or become the dominant player in certain regions.

- Deals in 2017 witnessed involvement of a record 5.5 million square meter (59.6 million square feet) of office space; highest in the current decade. However, the quantum of stake (share in space) under consideration in those assets did vary across deals. For example, in the biggest deals of 2017: DLF-GIC and K Raheja-Blackstone, the quantum of stake purchased was less than 50%.

Table 3:
Top office markets attracted USD 8.3 billion investments

Year	Number of deals	Amount invested (USD mn)	Quantum of office space involved in partial or complete stake sale (in sq m)	Quantum of office space involved in partial or complete stake sale (in sq ft)
Mumbai	11	3,393	34,78,168	37,439,000
NCR	7	1,658	27,70,810	29,825,000
Bengaluru	7	1,141	25,92,902	27,910,000
Hyderabad	8	949	21,35,173	22,983,000
Chennai	5	693	9,79,190	10,540,000
Pune	5	445	7,22,873	7,781,000
Kerala	1	67	2,13,675	2,300,000
Grand Total*	**44**	**8,347**	**1,28,92,791**	**138,778,000**

Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

Table 4:
Developers pocketed USD 7.9 billion from sale of office assets

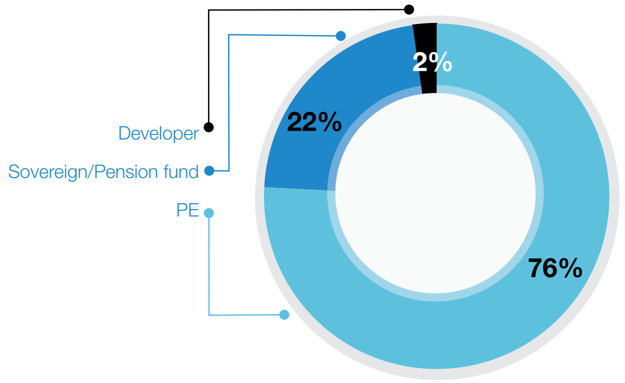
Seller type	Amount invested (USD mn)	Share of total investments	Area transacted in mn sq m (in mn sq ft)
Developer	7,894	95%	12.5 (135)
PE	452	5%	0.4 (4.2)
Grand Total*	**8,347**		**125.9 (139.2)**

Note: * -1. Cumulative investments from January 2011 till June 30, 2018
2. Data within parathesis is in million square feet
Source: Knight Frank Research, Venture Intelligence

- Around USD 8.35 billion has been invested into commercial office assets from 2011 till June 2018. Mumbai and the National Capital Region (NCR) dominated these investments in terms of deal value followed by Bengaluru.

- Since 2011, developer's pocketed majority (95%) of the inflows and parted with partial or complete stake in their assets. The remaining 5% of the inflows came in as exits via secondary sales for PE players. This reflects the fact that the office asset ownership in India is in the primary stages with most assets being owned by developers themselves.

Table 5:
Long-term capital providers likely to add stability to office markets

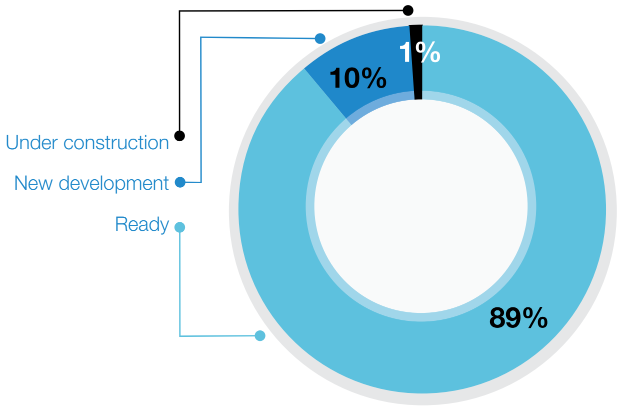


Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

- A large amount of overall investment in office space was led by PE funds (76%) followed by sovereign funds (22%). The sovereign funds and pension funds prefer rent-yielding assets with quality tenants on long leases, as they prefer annuity income assets to be a part of their overall portfolio. They have very long time horizons generally greater than 10 to 15 years.

- The PE giants are looking to make returns within a time period of 8–10 years in line with their fund life cycle. They are trying to make the most of the shortage in supply on good quality office buildings in India, which has been an issue for many years and the new additional supply coming in every year has been unable to keep up with the demand.

Table 6:
Investors look to avoid development risk, commit to mature assets



Note: * - Cumulative investments from January 2011 till March 2018
Source: Knight Frank Research, Venture Intelligence

- There was a clear preference of investors towards avoiding project development and execution risk. As a consequence, the share of equity investments into new-development projects and under constructions since 2011 was a meager 10% and 1%, respectively, compared to 89% in ready projects. This risk-averse strategy was on account of the history of high execution risk observed in real estate projects in India over the past decade.

- Moreover, the fund life cycles of some of the PE investors are short, generally less than 10 years. If they invest in under-construction projects, then any delay in delivery of the project can significantly hamper their realised returns. Hence, there is not much interest being witnessed for equity investments in under-construction projects.

- Going forward, as ready rent-yielding assets become scarce, there would be some players willing to take risks and enter the sector at the project development phase. Although there are limited instances, some investors have indicated that they have started partnering or are in talks to partner with developers for their new office development projects.

Table 7:
Investors from Singapore and the U.S. commit the most to office assets

Investor country	Number of deals	Amount (USD mn)
Singapore	16	3,326
U.S.	11	2,268
Canada	3	1,586
India	13	860
UAE	1	307
Grand Total*	**44**	**8,347**

Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

- Foreign investors were the most dominant in equity participation in commercial office projects. Investors from Singapore contributed to the largest chunk of investments, investing around USD 3.3 billion in over 16 deals. Some of the biggest investors of Singapore origin were GIC and Xander. The U.S. and Canada followed Singapore in terms of quantum of funds invested. Blackstone, Brookfield and Canada Pension Plan Investment Board (CPPIB) were the major investors from these countries.

- Blackstone has been very aggressive in acquiring office spaces over the past few years and has emerged as the biggest office space landlord in India; it has also been following the same aggressive strategy for acquiring retail spaces and would emerge as the biggest retail space landlord in India soon.

- There is an increased participation from foreign investors on account of recuperation of global growth, scarcity in supply of good quality office spaces in India, high scope for rental growth and improvement in India's macro fundamentals since the current government came into power in 2014. On account of these factors, the investors are anticipating steady increase in demand from occupiers and rental growth for office space in India in the coming years.

89%

of investments into office space went into acquisition of ready assets

Table 8:
Compression in capitalisation (cap) rates over the past 7 years

Year	2011	2017
Select good quality rent-yielding office assets	10 – 12%	7.5 – 8.5%

Source: Knight Frank Research

- One of the major reasons for compression in cap rates between 2011 and 2017 was the reduction in expectation of risk-adjusted returns for India on account of implementation of a battery of reforms by the current government, which has led to transformation of the industry structure from unorganised to organised. These reforms coupled with the low interest rates regime globally, as well as falling interest rates on account lower inflationary pressures in India, also reduced the expectations of required risk-adjusted returns.

- In this period there was a huge scarcity in supply of good quality office space in the most sought after business districts in India. Due to the scarcity and the robust growth in demand from occupiers, the potential for rental growth in this period was very evident. This potential for rental growth attracted a large number of big investors. As a result, the investors were willing to transact the asset at lower cap rates (higher value of the asset) as it would be compensated by the expectation of strong growth in rentals. In addition to reduction of risk expectations and falling interest rates, the potential for rental growth and rise in number of investors also contributed to the compression in cap rates in the above period.

- The early investors who had invested in the 2011–12 period have made significant gains on account of cap rate compressions and strong rental growths.

- Investors entering the market today are expecting the cap rates to compress further up to 150 bps in the long term (more than 8 years), which would coincide with their exit horizon. They are hoping to get dual benefits – primarily from the growth in rental income and secondly from further compression in cap rates. Albeit in the short term (next 3–5 years), there is a high probability that the cap rate compression may not happen as the rising US bond yields, increase in India's sovereign bond yields, rise in global crude prices and inflationary pressures in India would add upwards pressure on cap rates.

> “The growth in retail sales has led to windfall for developers on account of revenue sharing agreements plus a minimum guarantee in retail assets. In the coming years the retail growth is expected strengthen further on account of favorable demographics and strong GDP growth of India.”

2.2. RETAIL ASSETS (MALLS)-

2.2.1. INTRODUCTION

The past decade has seen failure of a vast number of malls across the country. The major reasons for this were – strata sales by developers, poor planning with respect to design, smaller (non-optimal) size of malls, improper location selection, inaccurate demand forecasting, shrinkage in catchments, advent of e-commerce and in most cases oversupply of spaces in the same locality. Due to oversupply of malls, the malls that were doing well initially started to suffer.

A huge number of the malls failed and shutdown, the ones which survived had to undergo a major transformation from a mere provider of space for brands to modern day entertainment hubs. A large number of cases of failure made investors shift their focus away from malls. Even developers shelved plans to build malls and the land acquired for constructing malls were either kept idle or were used for residential or office constructions.

In order to attract occupiers most of the developers agreed to go for revenue sharing agreements with minimum guarantee for their retail assets instead of fixed base rents. This was done so that mall owners would be incentivised to increase footfalls and if the malls continued to struggle then the occupiers would not have the burden of high rents.

With large number of malls going out of business coupled with no new supply, the malls which survived and could transform as per the need of the hour started commanding premiums. Occupiers/retailers started lining up to take up space in those assets. For the malls which started doing well, the revenue sharing agreements became more and more valuable. The owners were able to achieve rental growth higher than that they would achieve in the case of standard rent appreciation clauses (15% every three years) in rental agreement of office assets.

The growth story for malls is not over yet. There is significant potential for mall revenues to grow on account of dearth in supply of good quality successful malls, the rising consumer demand, increasing levels of disposable income, India’s gross domestic product (GDP) growth, demographics and ongoing structural changes taking shape in select malls to accommodate new anchors and entertainment options in order to remain relevant against the competition from online retail. These factors would further propel the growth in revenues.

Despite the fact that the risk in retail assets are higher compared to office assets as retail assets need involvement in day-to-day management, the investors are still chasing prime retail assets as the scope for revenue growth is immense and possible compression in cap rates on a long-term time horizon would give them additional gains.

2.2.2. ANALYSIS OF INVESTMENTS

Table 1:
With increasing competition to acquire office assets, investors start to take cognizance of quality retail assets

RETAIL			
Year	Number of deals	Amount invested (USD mn)	Average investment per deal (USD mn/deal)
2011	-	-	-
2012	1	28	28
2013	-	-	-
2014	-	-	-
2015	1	37	37
2016	5	652	130
2017	5	545	109
2018*	4	245	61

Note: 1.* - till June 30, 2018
2. The data includes commitments into platforms by investors/funds
Source: Knight Frank Research, Venture Intelligence

- For a considerable amount of time, post the Global Financial Crisis (GFC), a large number of malls in India struggled and some of them went out of business. Several retail assets were thriving and were undergoing transformation to become modern day entertainment hubs. It was not clear as to which malls would undergo the transformation successfully. Thus, there was a considerable lull in transactions of retail assets between 2011 and 2015 and investors were interested in acquiring rent-yielding, good quality office assets.
- As good quality, rent-yielding office assets started becoming more and more difficult to acquire due to shortage of supply, the valuations demanded by developers became steeper. With the office space supply pipeline in the most sought after business districts not being robust, the investors shifted attention towards other rent-yielding assets such as retail (malls) and warehousing. Hence, the number of retail assets (malls) being transacted increased significantly since 2016. However, investors preferred to acquire only the good quality and best performing retail assets.

Table 2:
Significant investor interest beyond the top metros

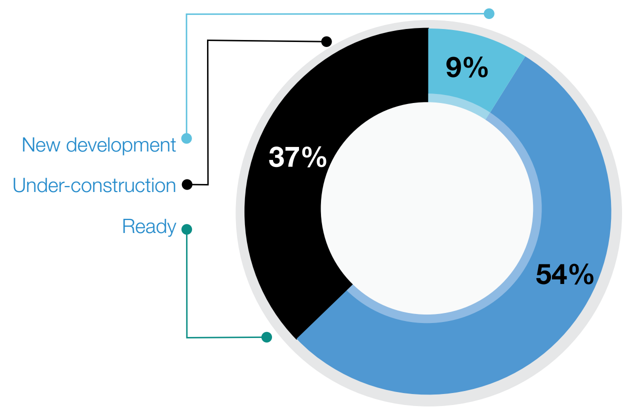
Year	Number of deals	Amount invested (USD mn)	Quantum of office space involved in partial or complete stake sale (in sq m)	Quantum of office space involved in partial or complete stake sale (in sq ft)
Pune	4	395	185,805	4,370,000
Mumbai	2	365	353,029	2,000,000
Chandigarh	2	267	120,773	3,800,000
Ahmedabad	1	123	130,063	1,300,000
Lucknow	1	115	91,973	1,400,000
Chennai	2	106	241,546	990,000
Indore	2	61	39,483	2,600,000
Bhuwaneshwar	1	46	85,842	425,000
Grand Total*	**16**	**1,507**	**1,654,496**	**17,809,000**

Note: 1.* - till June 30, 2018 | 2. The data includes commitments into platforms by investors/funds | Source: Knight Frank Research, Venture Intelligence

- After a period of intense struggle with some of the retail assets going out of business, the malls which could successfully transform into modern day entertainment hubs are performing exceptionally well and the developers are witnessing high rental growth on account of revenue sharing agreements. The developers who are in dire need of funds for expansion or debt repayment have sold or are in talks to sell stake in some of their malls.
- Many developers in the top metros of India who are not in need of funds are still holding on to their most sought after retail assets, as the anticipated rent growth in the mall is higher than contractual terms. The developers want to pocket majority of the rental growth coming in from revenue sharing agreements. Hence, the transaction volumes for top metros of India are not significantly higher than the volume for other cities. As a consequence, investors are looking to acquire assets outside the top 4 metros.
- In the top cities of India like Mumbai, NCR, Bengaluru and Pune, there can be multiple malls within the city that can do well simultaneously, as the population density is higher and catchment of each mall is smaller. However, in the tier-II and tier-III cities of India only a limited number of malls can do well simultaneously, as the population density is lower and the catchment expanse for each mall is vast. Evidence suggests that generally in the tier-II and tier-III cities, the biggest mall of the city is generally the best performing mall and in some cases they also evolve into a destination mall. Moreover, it is very easy to identify the best performing mall in smaller cities compared to the top metros. Thus, the investors who have ventured into tier II and tier III cities of India have gone for the biggest and the best performing asset of that city.

46%
(in terms of area transacted) of the equity investments have gone into new development and under-construction retail assets.

Table 3:
Incorrigible defunct malls and low per capita quality mall space make a strong case for investments into under-construction and new development



Note: 1. * - Cumulative investments from January 2011 till June 30, 2018
2. The above percentages represents share in terms of area of asset transacted
Source: Knight Frank Research, Venture Intelligence

- Unlike office space developments, investors are ready to take some development risk when it comes to developing retail assets, as in India, the per capita availability of malls space is very low compared to developed countries.
- As some of the malls are now defunct due to various incorrigible issues like – design, size of mall and strata sales, it is very difficult to revive them despite there being no other mall in that vicinity or catchment. This makes a strong case for construction of an entirely new asset. Hence, 46% (in terms of area transacted) of the equity investments have gone into new development and under-construction assets.

Table 4:
Investors from the U.S. actively acquire retail assets

Investor country	Number of deals	Amount invested (USD mn)
U.S.	9	781
Singapore	3	288
Canada	1	250
India	3	188
Grand Total*	**16**	**1,507**

Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

Table 5:
PE and long-term capital providers alike are actively participating in quality retail assets

Investor type	Number of deals	Amount invested (USD mn)
Developer	2	151
PE	12	956
Sovereign / Pension fund	2	400
Grand Total*	**16**	**1,507**

Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

- Investors of U.S. origin, particularly Blackstone, were the most active investors in retail assets. From being one of the biggest landlords in office space, Blackstone is now becoming one of the biggest retail space landlords in India.

- Apart from Blackstone, the major investors in retail assets were Canada Pension Plan Investment Board (CPPIB), GIC and Xander.

Table 6:
Compression in capitalisation (cap) rates over the past 7 years

Year	2011	2017
Select good quality rent yielding retail assets	11–13%	6–8%

Source: Knight Frank Research

- For retail assets (malls), the inherent risks are higher compared to office assets. One of the main risks is the volatility in rental income, because it is not a plain vanilla real estate property but a service-oriented business requiring constant engagement with consumers.

- As the rental agreements for malls are generally revenue sharing plus a minimum guarantee, the chances of rents fluctuating are higher. Hence, the retail assets (malls) should be transacted at higher cap rates than office assets in order to compensate for the associated risk and volatility in rental income.

- However, on account of low per capita retail space in India compared to the global average coupled with retail growth due to rise in disposable income, the developers have witnessed high growth in rentals over the past few years. The rent growth for retail assets has been higher compared to office assets, which has a fixed rent clause with only a standard rent escalation provision (15% every three years). Going forward, the potential for future retail revenue growth is still high, as the level of disposable income is expected to grow further with the GDP growth and rising consumerism.

- As a result, the potential for high retail rental growth (due to revenue sharing agreements in addition to minimum guarantee) is leading to investors transacting retail assets at a lower cap rate compared to office assets.

- Similar to office assets, one of the major reasons for compression in cap rates in retail assets between 2011 and 2018 was the reduction in expectation of risk-adjusted returns for India on account of implementation of economic reforms. These reforms coupled with a low interest rate regime globally, as well as falling interest rates on account of lower inflationary pressures in India, also reduced the expectations of required risk-adjusted returns.

- In addition to reduction of risk expectations and falling interest rates, the potential for rental growth and rise in number of big investors also contributed to the compression in cap rates in the above period.

- Investors entering the market today are expecting the cap rates to compress further up to 150 bps in the long term (more than 8 years), which would coincide with their exit horizon. They are hoping to get dual benefits – primarily from the growth in rental income and secondly from further compression in cap rates. Albeit in the short term (next 3–5 years), there is a high probability that the cap rate compression may not happen as the rising US bond yields, increase in India's sovereign bond yields, rise in global crude prices and inflationary pressures in India would add upwards pressure on cap rates.

WAREHOUSE ASSETS

"The implementation of GST along with other government initiatives is expected to cause a phenomenal shift in the logistics and warehousing industry structure from unorganised to organised. Acknowledging this shift, the institutional players have started investing aggressively into the organised segment."

2.3 WAREHOUSING

2.3.1. INTRODUCTION

The warehousing industry in India is undergoing an unprecedented transformation from a mere provider of storage space within four walls into a modern day warehousing hub similar to the ones in developed countries.

Logistics cost in India accounts for 13–17% of the Gross Domestic Product (GDP), which is nearly double (6–9%) the logistics cost to GDP ratio in developed countries such as the U.S., Hong Kong and France. Much of the higher cost could be attributed to absence of efficient intermodal and multimodal transport systems. Moreover, warehousing, which approximately accounts for 25% of the logistics cost, has also been facing major challenges. This further added to the logistics cost borne by the end users and other stakeholders.

Majority of warehousing operations in India is being handled by small and fragmented unorganised players, which add to the cost. The share of large organised players is small, but growing steadily. Earlier, the incentives to enter India's warehousing sector was minimal for organised players, as the occupiers themselves were content to engage with fringe partners offering low cost options with a network of small storage facilities near consumption centres. Multiple state and central level taxes made it sensible for companies to maintain multiple smaller warehouses in each state; as having multiple warehouses in different states reduced the cascading effects inter-state taxes. Further, this limited the focus on automation and higher throughput.

The biggest tax reform in the history of independent India – the Goods and Service Tax (GST), was introduced by the current government to make the entire nation a unified market by replacing multiple inter-state taxes. GST is also expected to reduce inefficiencies in the supply chain and also cause a phenomenal shift in the industry structure from unorganised to organised. If implemented properly it would eliminate the need to have multiple warehouses in each state and the companies would be able to operate out of single or few large warehouses based on their supply chain dynamics. It would also lead to consolidation in the sector.

In addition, the government has introduced several initiatives to augment the growth and encourage investments in the logistics and warehousing industry in India such as: granting infrastructure status to the logistics sector including warehousing industry, implementing the 'Make in India' programme and development of multimodal transport logistic park networks to promote the planned industrial/ manufacturing corridors like Delhi-Mumbai Industrial Corridor (DMIC) and Delhi-Kolkata Industrial Corridor.

Over the past few years there has already been a gradual transition in the mindset of occupiers to use the services offered by organised segments. This change in mindset was further accentuated with the implementation of GST. A plethora of factors are driving this wave of change, such as:

- Requirement from compliance regulators (in case of the pharmaceutical industry),
- Stringent enforcement of penalties on non-complaint warehousing facilities,
- Economies of scale being achieved through larger warehouses,
- Safety and security of goods, efficiency in operations,
- Demand for quicker turnarounds,
- Need for efficient warehousing designs,
- Advent of e-commerce, and
- Entry of multinational businesses in the country that prefer to occupy only complaint facilities.

On the back of all these initiatives, there is huge scope for growth of the organised warehousing segments. The implementation of GST would accentuate the shift in industry structure from unorganised to organised. As per the latest warehousing report published by Knight Frank India, there has been an 85% year-on-year (YoY) growth in annual leasing transactions in the warehousing industry within the organised s` egment in 2017. The transactions have increased from 13.9 million square feet in 2016 to 25.7 million square feet in 2017. In the years ahead, these transaction numbers are expected to remain strong, as the occupiers would realign their supply chain due to the implementation of GST and shift to large warehouses to make the most of their savings due to reduction in inventory levels and gain from economies of scale and efficiency in operations.

2.3.2. ANALYSIS OF INVESTMENTS

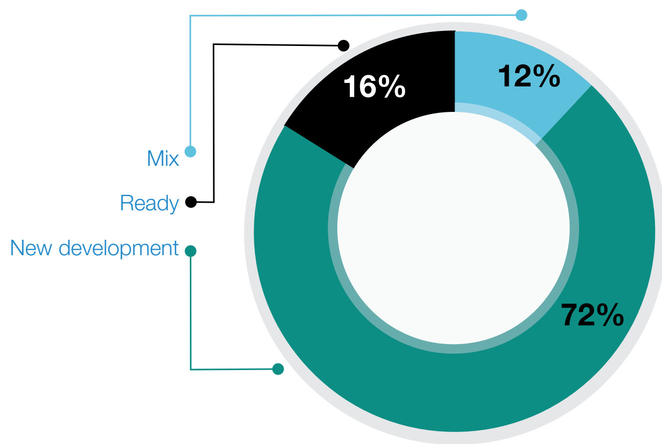
Table 1:
Policy reforms make warehousing attractive for investors

WAREHOUSING			
Year	Number of deals	Amount invested (USD mn)	Average investment per deal (USD mn/deal)
2011	2	109	55
2012	-	-	-
2013	-	-	-
2014	1	300	300
2015	2	184	92
2016	2	201	101
2017	9	2,428	270
2018*	3	955	318
Grand Total	**19**	**4,177**	

Note: 1. * - till June 30, 2018
2. The data includes commitments into platforms by investors/funds
Source: Knight Frank Research, Venture Intelligence

- Warehousing is one of the most promising and upcoming sectors in India. Ever since the current government came into power in 2014, the sector has been propelled into a different trajectory. The implementation of GST, continued government focus on building industrial corridors and the unabated growth of the Indian consumption market has whipped up the growth potential of the sector.
- As good quality rent-yielding office assets started becoming more and more difficult to acquire due to shortage of supply, the valuations demanded by developers increased sharply. With the office space supply pipeline in the most sought after business districts not being robust, investors shifted their attention towards other rent-yielding assets such as malls and warehousing. Hence, the investors have started to look at warehousing with renewed vigour.
- The cumulative investments in to the warehousing industry since 2011 was USD 4.2 billion, almost three times compared to the investment of USD 1.5 billion into retail assets in the same period.
- Investors had started taking cognizance of the opportunities in this sector much before the government could implement the reforms such as implementation of GST and granting infrastructure status to logistics industry including warehousing. Hence, the warehousing industry has witnessed strong inflow of investments since 2014.

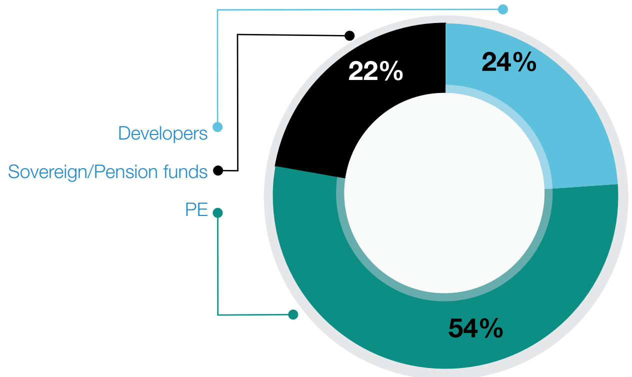
Table 2:
Shorter construction timeline attracts investors to greenfield opportunities



Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

- Warehousing assets require very less amount of time (around 12–18 months) to construct compared to office and retail assets. As the warehousing industry in India has largely been fragmented, there are not many large Pan-India organised players in the industry whose acquisition price can have a meaningful impact on the investors' funds size.
- Due to dearth in projects of certain size, which can have a meaningful impact on the funds' size, investors preferred to go for developing such assets that eventually can become worthy for REITs or for secondary sale. 72% of investments into the sector have been invested in greenfield / new development projects and 12% have been invested into a mix of ready and new development. Only 16% of the inflows went into the acquisition of ready projects.

Table 3:
Warehousing attracts all categories of stakeholders



Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

- PE investors generally have a shorter investment horizon (generally less than 10 years) and need to exit their investments compulsorily within the stipulated time. As warehousing assets need a shorter time for gestation time (generally less than 18 months), PE funds are willing to invest in greenfield warehousing projects. The PE funds are optimistic that on account of acute shortage in supply of space by organised players and burgeoning demand from occupiers, they would be able to construct, stabilise their assets and exit successfully from the asset within the fund life cycle. Sovereign/pension funds prefer to hold on to their assets from the annuity income perspective.

Table 4:
Investors from Singapore and Canada contribute the most

Investor country	Number of deals	Amount invested (USD mn)
Singapore	5	1,564
Canada	2	900
India	5	636
US	4	500
UAE	1	400
China	1	100
Hong Kong	1	76
Grand Total*	**19**	**4,177**

Note: * - Cumulative investments from January 2011 till June 30, 2018
Source: Knight Frank Research, Venture Intelligence

- Investors from Singapore were most active in the warehousing space. Some of the major investors include Ascendas-Singbridge Group and Everstone Capital. From Canada, CPPIB, Ivanhoe Cambridge (the real estate subsidiary of Canadian pension fund CDPQ) and QuadReal Property Group were the most active. From the U.S. and UAE, the big names included Warburg Pincus and DP World.

72%
of the investments into warehouse assets went new development

"Investors entering the market today are expecting the cap rates to compress further up to 150 bps in the next 8–12 years. They are hoping to get dual benefits – primarily from the growth in rental income and secondly from compression in cap rates."

WILL THE CAP RATES COMPRESSION CONTINUE?

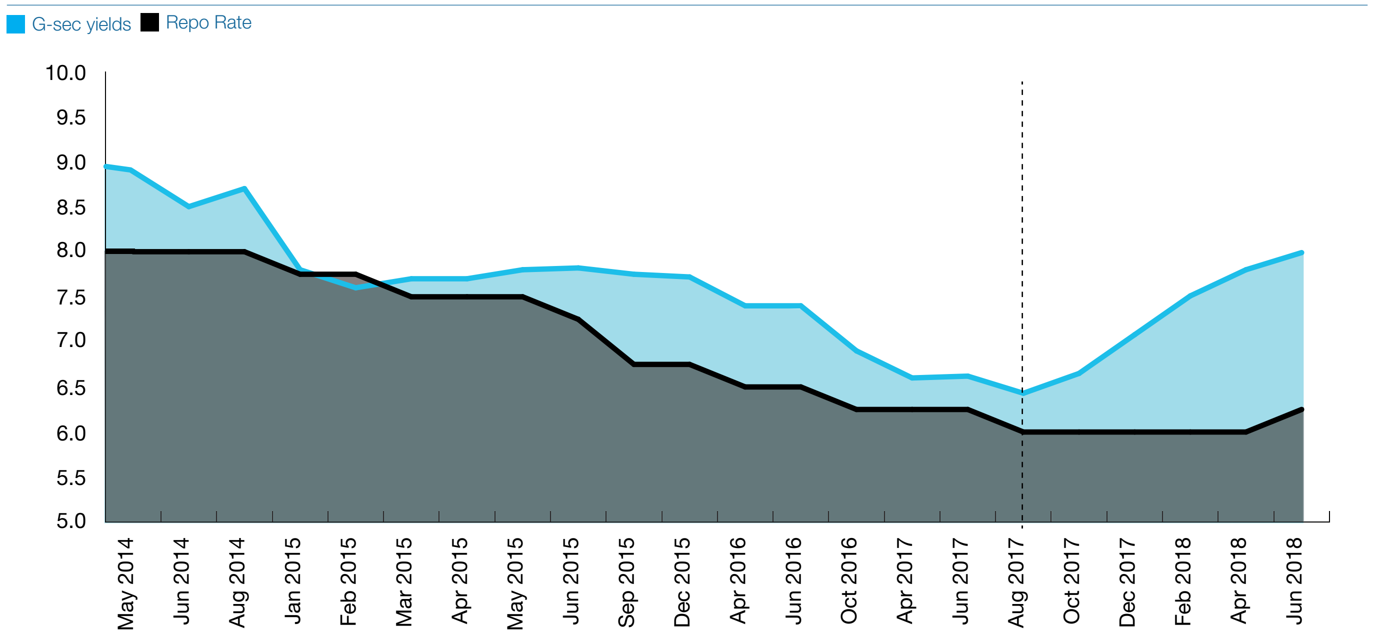
As indicated in the above section, the investors have been aggressively taking up space across office, retail and warehousing assets. This exuberance has led to a drastic compression in cap rates across all these three asset classes over the past 3–5 years. Despite the compression in cap rates, the investors' appetite for quality space seems undeterred. Investors entering the market today are expecting the cap rates to compress further up to 150 bps in the next 8–12 years. The projections are also in sync with the estimated exit time. They are hoping to get dual benefits – primarily from the growth in rental income and secondly from compression in cap rates.

On the rental front, there is optimism about the growth prospects, as there has been a significant crunch in the supply of good quality office space across major cities in India. Vacancy rates in some of the most sought after business districts in India such as the Bandra-Kurla Complex and Lower Parel in Mumbai, Outer Ring Road in Bengaluru and DLF Cyber City in NCR have shrunk to single digit levels. These prime business districts have limited scope for substantial new supply. The supply crunch coupled with strong occupier demand has been driving up the rentals for good quality office space. With the business environment in India improving and the country's GDP growth rate expected to improve in the coming years, the occupier demand would strengthen. This would provide tailwinds for future rental growth.

The oversupply of retail assets (malls) in India led to underperformance and closure of a large number of properties. Select retail assets, which survived and transformed into successful ones, are witnessing strong occupier demand and rental growth. These particular retail assets are attracting investors' attention at par with or in some cases higher than that witnessed in case of office assets. The demand is primarily driven by scope for better rental growth. Unlike office assets, which generally have a standard rental appreciation clause of 15% every three years on the base rent, the retail assets come with revenue sharing along with a minimum guarantee. There is a significant potential for mall revenues to grow on account of the rising consumer demand and ongoing structural changes taking shape in select malls to remain relevant against the competition from online retail. Hence, with respect to the expectation of rental growth in office and retail assets, the investors would be able to achieve their desired objective.

However, with respect to expectations of cap rate compression, one needs to be cautious. Globally, the days of zero/low interest rate regimes are coming towards an end. The U.S. Fed has ended its quantitative easing programme and has already hiked the rates several times, and has indicated of more rate hikes in the coming years. This has led to an increase in cost of funds globally. The U.S. bond yields have already increased and crossed 3%. Even in India, the reducing interest rate regime prevailing for the last three years is likely to end soon and so is the case with Government Securities (G-sec) yields. We believe that the country's economy is at the bottom of the current interest rate cycle and going forward the rates would start hardening. The government's breaching of fiscal deficit targets currently, have already put upwards pressure on G-sec yields. Further, additional factors such as expectation of higher inflation, weakened capital reserve position of banks owing to Non-Performing Assets (NPAs), treasury losses on bank's G-sec holdings and the early sign of pick up in credit growth have been pushing banks to raise lending rates. With elections in several states and the general election approaching, the volatility would be higher in the next two years.

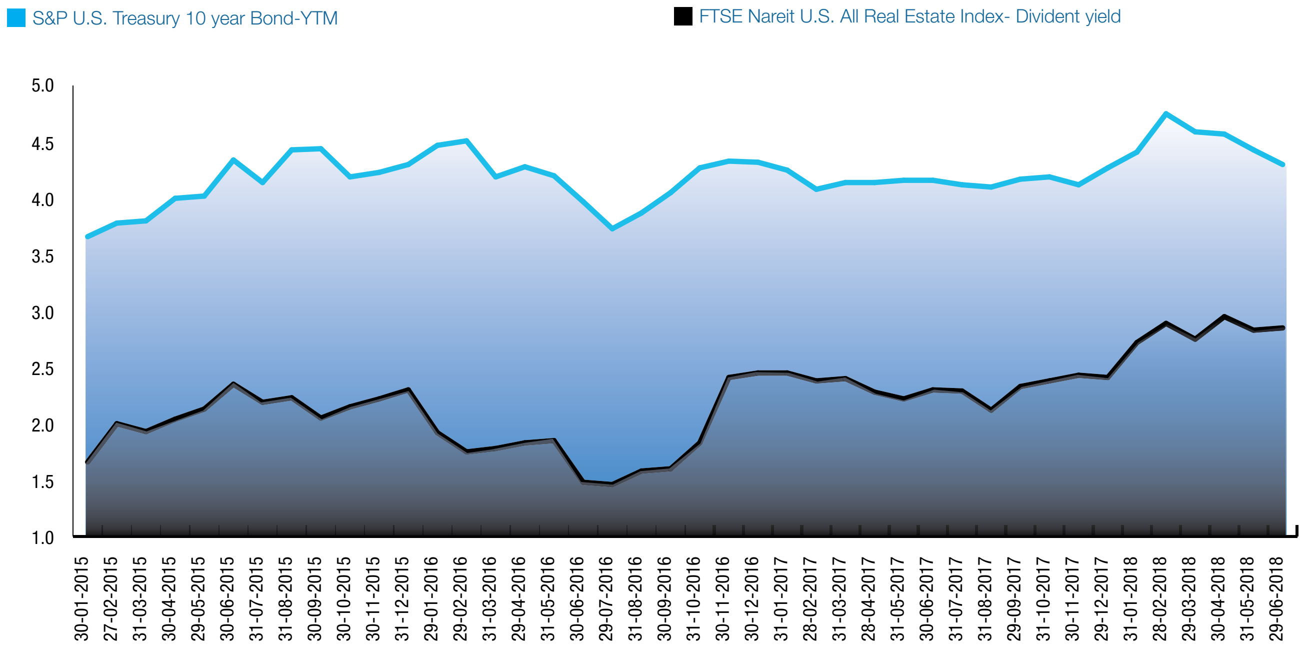
Rising G-sec yields



Source: Reserve Bank of India (RBI), Knight Frank Research

Even in India, the reducing interest rate regime prevailing for the last 3 years has come to an end and RBI has hiked policy rates in the June 2018 monetary policy review as so is the case with Government Securities (G-sec) yields. We believe that the country's economy is at the bottom of the current interest rate cycle and going forward the rates would start hardening. The government's breaching of fiscal deficit targets currently, have already put upwards pressure on G-sec yields. Further, additional factors such as expectation of higher inflation, weakened capital reserve position of banks owing to Non-Performing Assets (NPAs), treasury losses on bank's G-sec holdings and the early sign of pick up in credit growth have been pushing banks to raise lending rates. With elections in several states and the general election approaching, the volatility would be higher in the next two years.

US Treasury yields V/S All REIT dividend yield



In the U.S., the dividend yield of the real estate index trust (REITs) has generally moved in tandem with the treasury yield. Towards the end of 2015, ever since the U.S. Fed, started announcing interest rate hikes, the dividend yield on REITs have also moved upwards.

Drawing parallels, in India, the cap rates would move in tandem with the rising India G-sec yields; thereby reducing the likelyhood of further cap rate compression in the short term.

While it is too early to comment on the extent of rise in lending rates and G-sec yields, in the short term they are likely to have an impact on the current trend of cap rate compression. If the rise in lending rates and G-sec goes up beyond 100–150 bps, the expectation of returns from real estate investments would go up. Thus, particularly in the short term, the case for cap rate compression would weaken and it may hold steady or increase marginally to keep the spread constant. Overall, the institutional investor may have to rely more on rental growth to make up for their expected returns from their investments in the near future.

When it comes to long-term perspective, India's macro-economic fundamentals and GDP growth outlook remain strong on the back of settling of the ongoing structural reforms and completion of mega infrastructure projects in the next five years. In turn, as the economy matures, the perceived risk pertaining to invest in India is likely to come down. With the Reserve Bank of India's continuous focus on keeping the inflation under 4% and the government's efforts for fiscal consolidation, the cap rates are going to see required compression. Hence, investors with longer investment horizons, like endowment funds, sovereign funds, pension funds and insurance companies, would achieve returns at par with their expectations.

A note of caution: an unforeseen catastrophe like the global financial crisis of 2007–08 should not be repeated, the current low intensity trade war should not exacerbate and India should have a stable government beyond 2019.

3

Scouting for the next set of opportunities

> The financial creditors and tribunal must separate the non-core realty assets from the company and auction them separately. This would lead to better price discovery of the non-core assets and better realisation (lower haircuts) to creditors.

3.1 MAKING THE NON-PERFORMING ASSETS PERFORM

The Insolvency and Bankruptcy Code, 2016 (IBC) was introduced to create a single law for insolvency and bankruptcy. Earlier acts such as SARFAESI Act and SICA Act had failed to provide any meaningful exit or reprieve for creditors of failed companies. Hence, a strong law was required to provide a time-bound solution for the failed companies and help creditors get their dues.

The Code proposes two separate tribunals to oversee the process of insolvency resolution, for individuals and companies: (i) the National Company Law Tribunal (NCLT) for companies and Limited Liability Partnership firms; and (ii) the Debt Recovery Tribunal for individuals and partnerships.

In the initial stages, the companies under the ambit of various restructuring schemes were kept out of the purview of IBC till the moratorium period was on. After many years of languish and futile attempts to save the loss-making companies via various restructuring schemes (CDR, S4A, 5:25 scheme and Flexible Structuring of Existing Long Term Project Loans), the Reserve Bank of India (RBI) recently announced scrapping most of the restructuring schemes and instructed the creditors to admit the companies under IBC instead of restructuring the loans. The RBI also came out with strong guidelines and reduced the timeliness for classification of an account as NPA. These moves would lead to a greater number of companies being referred to NCLT in the next two years than those referred since the act came into existence.

Already a large number of failed companies have been referred to NCLT by their creditors. Some of the companies are seeing closure, many companies are getting entangled due to attempts by various parties involved to sabotage the process and few companies are finding new buyers via auctions. The government and the insolvency regulators have been very proactive in bringing out amendments to the law whenever there has been a hiccup. For the first time in India, a continuous and serious effort is being undertaken to end the NPA mess. The code is constantly evolving, as in India, due to the heterogeneity of the country it is very difficult to have a 'one size fits all' approach. It will take some time for the dust to settle, but this is an imperative move in the right direction.

One of the opportunities in the NPA mess is maximising the value from the non-core assets by selling them separately from the main business. Many companies, which have been referred to NCLT, have prime assets located in the most sought after locations across major cities of India. Some of these companies have high book value non-core assets (for e.g. company headquarters, company owned assets, regional/sales offices at prime locations) that may not be useful for the bidder, as the bidder would only be interested in the business and core assets (plant and machinery). The bidder would thus bid for companies as a whole and attribute majority value of the company only based on the core assets and would get the non-core assets much below the fair value, as the bidders would be bidding for the company as a continuing entity and not sum of the parts. This may lead to lower realisations for banks and financial creditors. The financial creditors and tribunal must rather separate these non-core assets from the company and auction them separately. This would lead to better price discovery of the non-core assets and better realisations (lower haircuts) to creditors. As the IBC has been proactively updated to resolve the pain points and ensure maximum gains for the creditors of defaulting company; if there are no provisions in the current law to separate the non-core assets from the business and sell them separately, then an amendment should be made it so as to ensure maximum realizations.

A similar arrangement was done for a company under the erstwhile Scheme for Sustainable Structuring of Stressed Assets (S4A) scheme. Lodha Developers Pvt. Ltd (LDPL) had recently purchased five acres of prime land in Mumbai's Jogeshwari suburb from Patel Engineering Ltd, which had agreed to reduce its debt by selling non-core assets under the S4A scheme.[1]

Currently, a large number of the PE funds, sovereign and pension funds are chasing too few office and retail assets. Knight Frank is of the opinion that if the entire acquisition process of the non-core asset monetisation can be completed within a stipulated time frame without any scope of future litigations, there would be huge amount of interest from these funds for such assets. It would thus lead to better realisation for the financial creditors. The government through the NCLT must create an effective environment for successful transfer of assets in a short period of time by establishing single window clearance system. Moreover, the laws for transfer of assets should be framed in such a way that it isolates the assets from any sort of dispute in the event of future litigations on the NCLT process.

A large number of sick Public Sector Undertakings (PSUs) have not been referred to NCLT despite being bankrupt for years due to the parental lineage being the central and state governments. These PSUs have prime assets acquired at historical costs and the government has to pump in money from their budgets just to keep them alive for social considerations. A large scale asset monetisation can be done for these PSUs without shutting down these businesses and the funds raised can be used for keeping these units afloat or for government spending. The sought-after assets of these companies should be separated from the PSU and be monetised in the best possible way (auction or lease).

3.2 USING ASSET SALES TO SHORE UP BANKS' CAPITAL RESERVES

The Government of India's capital infusion into the banks has largely been inadequate. The intention of capital infusion was to kick-start the credit growth by building on capital reserves, rather it has gone into write-offs from loses incurred from non-performing assets. The recovery from the NPA cases referred to NCLT has not started as yet, as the bankruptcy code has been in a stage of evolution and the process needs time to reach closure. In many cases, the lenders are not ready to take haircuts; as a result the recovery process is stalled. After several years of weak credit growth and low industry capacity utilisation, the tide has finally turned. As per the latest observation in the monetary policy there are early signs of credit growth and increase in industry capacity utilisation. However, currently many banks in India do not have the adequate capital buffer required for lending to support this growth and industry expansion. The capital position of banks is expected to weaken further in the coming years as the NPA reporting laws have become more stringent, provisioning requirements have increased and NCLT resolution cases may require incurring of haircuts.

Owing to such a scenario, the Reserve Bank of India has put several banks with weak capital reserve position under Prompt Corrective Action (PCA). PCA places several restrictions on the bank's expansion till the bank is able to shore up its capital reserves.

In such a scenario, the banks can look at asset sale or the sale and lease back models to raise funds by monetisation of their assets. The banks can explore the sale and lease back model if they do not have space at other offices to accommodate the staff. As indicated in the previous sections, since full tenanted good quality office assets in prime business districts are becoming scarce, a large number of sovereign and pension funds who are interested in stable annuity incomes would be interested to participate in the sale and lease back of such assets provided the banks enter into long-term leases with the asset buyers. As the tenants would be state-owned banks, leases would be long term and the chances of them shifting out is low as that particular asset/assets would be important for their operations; thus, the tenancy risk would be lower despite having a single tenant. Hence, the banks would be able to extract a better deal for their office assets, which would be at a cap rate lower than the current prevailing cap rate (7.5–8.5%) for full tenanted good quality office assets in prime business districts.

Similarly, several state-owned banks, which have company-owned office assets located in the most sought after business districts, can sell their office space to raise funds, if they have other offices to accommodate the staff. One of the recent examples of this includes IDBI Bank (which was put under PCA by RBI) selling its office at Bandra-Kurla Complex (BKC) to Securities and Exchange Board of India (SEBI) via auction for INR 1,000 crore. IDBI Bank would be shifting its employees working at BKC to other offices.

3.3 FULLY COMPLIANT ASSETS - THE NEED OF THE HOUR

There are several deals for office as well as retail assets in which the parties involved had completed negotiations, the acquisition price was agreed upon but was called off at the end in the due diligence stage. Some of these assets were almost fully occupied good quality assets. The main reasons for them were violation of rules and construction norms. Some of the violations were:

- Blatant misuse of FSI
- Constructing area higher than that approved
- Ignorance of fire safety aspects in design
- Change in tenants use (non-IT tenants occupying buildings inside designated export oriented IT buildings)
- Misuse of SEZs laws
- Blatant violations of environment norms
- Misuse of fire safety areas for other activities instead of being vacant
- Misuse of parking policy,
- Exceeding of permitted building height,
- Giving out terrace for restaurants and canteens, etc.

Some of these violations are corrigible, whereas others are incorrigible. In certain cities of India some of these violations can be addressed by paying fines, whereas in other cities the occupancy certificates issued for the building are revoked and there is no option of paying fines.

The global sovereign funds, pension funds and PE funds like CPPIB, GIC, Blackstone and Brookfield have a very reputed brand image. They do not want their names to be tarnished by getting associated with projects that have violated any norms. If some unwarranted incident occurs, the fund's reputation can be tarnished despite not constructing the project and only being associated as an investor. Moreover, they may have to pay hefty fines in their country of origin as laws on any violations causing loss of life even by their subsidiaries are stringent there. Hence, these funds are cautious not to acquire projects in which there are any violations. Developers intending to gain from such opportunities should be compliant with construction and development norms.

> “The institutional investors who have invested in India have very reputed brand image and do not want their names to be tarnished by getting associated with projects that have violated any norms. Developers intending to gain from such opportunities should focus on complying with the construction and development norms.”

[1]Newspaper article in Mint on Nov 22, 2017

3.4 GREEN BUILDINGS – THE NEXT DESTINATION

In India, the concept of green buildings has not yet become common despite some developers adopting it few years ago. Except for a few projects, it has not been implemented across the wider spectrum.

However, globally such assets have gained prominence and the occupiers prefer to take up space in green buildings. Some organisations have a policy of reducing their carbon footprint and have made it a policy to take up space in green buildings only. Even the global investors have a clear mandate in certain countries to acquire only certified assets. As environmental problems of climate change, air pollution, energy wastage, etc. become prominent, the demand from occupiers for green buildings would increase. Hence, developers in India should take notice of this change and should re-orient focus on constructing green buildings. In the near future, these buildings are certain to command a premium.

Globally green building assets have gained prominence as the occupiers prefer to take up space in green buildings and the global investors have a clear mandate in certain countries to acquire only certified assets. This trend is likely to catch up in India and in the near future, these buildings are certain to command a premium.

3.5 USING TECHNOLOGY IN RETAIL

Many retailers in India are using data analytics to run their business. However, the investors who have exposure to retail assets across the globe and in India are of the view that in India, the retailers are not implementing many aspects of data analytics used globally. Hence, the gains of using data analytics are being realised partially. They are of the opinion that simple technological hardware to collect the required data has not being installed in retail assets (malls) and the software used by various retailers has not been integrated completely across all the chains. Some of the examples for using technology in retail are:

- In the U.S., mall owners have tied up with credit card companies to obtain the address of the frequent shoppers. After collating the data, they were able to map the catchment of the particular mall and could decide on the appropriate or most effective marketing medium that would reach the maximum target audience in the lowest possible costs.

- In Australia, the malls had installed smart cameras in their parking lot through which they could collect the information on vehicle registrations. Later they tied up with the vehicle registration department and were able to trace from which residential catchments the cars were coming.

- In some of the global malls, the use of internet of things (IOT) has gained prominence for creating pull effect. If a customer walks by or stands outside a particular shop, a discount offer SMS is immediately sent to his phone that would be valid for a limited amount of time so as to entice him to visit the store.

- Globally several retailers and mall developers have teamed up to combine offline retail with online and create a seamless experience. In several countries, people go to malls just to get a touch and feel of the product at the retail shops. Once the customer decides which product to buy he/she orders it on shopping portal (computer) within the store and the product is delivered to him when he exits the store or at the parking lot or at his house. As a result, the customer does not have to carry shopping bags when he/she is roaming inside the mall.

In India, the use of technology to enhance a customer's shopping experience has not yet started except for a few retail assets but that too are at a nascent stage. Globally, e-commerce has been the biggest threat to malls and has led to reduction in sales and footfalls in malls. In India, since the per capita mall space availability is low and the options for entertainment are limited, malls that are doing well would continue to perform. However, as the country matures, if malls want to stay relevant in the age of e-commerce and increase their sales, they must embrace these aspects of technology to the fullest and at the earliest. Implementing the aspects of data analytics and technologies used by retailers globally can help in enhancing the shopping experience and thereby contribute to growth in sales.

> "The investors who have exposure to retail assets across the globe and in India believe that in India, a lot can be done to enhance the shopping experience and increase the retail sales by implementing many aspects of data analytics used globally."

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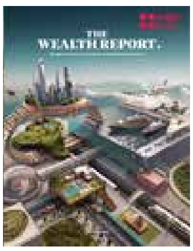

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