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PERE

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Insight

2

Fast themes Highlights from the report

5

EDITOR'S LETTER

Analysis

6

Macro trends will differentiate returns in US industrial sector, says Realterm's director of research Nathan Kane

US industrial enters 2020 on a positive note, observes JLL's Peter Kroner 9

Logistics triumphant year RCA's JimCostello on logistics deal data10

Consumer proximity offers a sound basis for investing Assets in densely populated areas should offer the most resilient value and growth potential, say Crow Holdings' Ben Doherty and

Ken Valach **12** A year in logistics *PERE*'s top headlines

from 2019 16

'Setting up an institutional business is the main target' Mileway CEO Emmanuel Van der Stichele sets the agenda in his first interview with *PERE* **18**

Mastering the 'last-hour' market Why location planning matters to operators 24

Age of the mega-shedEuropeandistribution hubs are getting larger, moresophisticated and costlier. LCP's JamesMarkby and Kristof Verstraeten, andInvesco Real Estate's Tom Emsondiscuss the implications28

32

Logistics' new era DHL's Matthew Wright gives an occupier's take

Europe's e-commerce boom has only

just begun Panattoni Europe's CEO Robert Dobrzycki on how the trend will create new development opportunities in established markets 34

Get smarter with logisticsAllianz RealEstate's Kari Pitkin on finding value38

Germany still provides opportunitiesfor smart investors GARBE IndustrialReal Estate's CEO Christopher Garbeon how the country's logistics' marketcan generate attractive returns39

Last touch, but out of reach? Investor appetite for last-mile is at a peak, but assets are hard to find 42

Following the occupier's lead Oxenwood Real Estate co-founders Jeremy Bishop and Stewart Little explain why they are tracking tenant demand into urban logistics and continental European markets

How European logistics bounced back CBRE's Mark Cartlich casts an eye over the region's logistics recovery 47 Priming the Asia-Pacific logistics market

44

ESR co-founders Jeffrey Shen and Stuart Gibson on how the region's growth story means developers are hard-pressed to meet investor appetite **48**

 Stars align for India logistics Why

 some of the world's largest investors

 are flocking to the market
 51

Going global with a personal touchMapletree Logistics' Chua Tiow Chyeon why logistics property is a key partof the company's growth as it expandsglobally54

Data Room A stellar 2018 left a lot for	
2019 to live up to	58
Points of view Experts share their	
perspectives on logistics	60

Insight

Five fast themes From e-commerce to the environment, the priorities in logistics are changing rapidly

ogistics is changing beyond all previous recognition, *writes James Linacre*. Online shopping - with its ever-dwindling patience for lengthy delivery times - really

has turned the ugly duckling into the swan.

The retail sector once lorded over logistics, but industrial now attracts a greater share of global investment than retail does and continues to trend upward. As the performance of the sector has improved, so has the perception of it. Logistics is not being overlooked anymore.

The role of e-commerce cannot be overstated, but other trends are just as important to keep on top of, not least the rise of Asia as an attractive logistics market. Countries such as China provide obvious opportunities, but India is investing heavily in infrastructure to provide logistics with a platform to prosper.

Location matters. There is a fine balancing act between proximity to customers and rent levels, although consumers' expectations of rapid delivery increasingly push that balance in favor of proximity. Finding suitable sites in or around the most densely populated urban areas is not easy but should be worth it. It is also worth investing in technology to keep properties at the cutting edge. There is an increased concern around obsolescence, so if operators want to continue delivering the goods to investors, they will have to deliver the goods to customers in a rapidly changing market. Here are five trends underlining logistics' transformation.

E-commerce gives logistics a leg up

The sector is being propelled into the limelight by the inexorable rise of online shopping. It is e-commerce demand that is most responsible for the inversely shifting fortunes of retail and industrial.

This has not gone unnoticed in the market. "Because of the e-commerce story [investors] see logistics as probably the best real estate asset class right now," says Panattoni Europe CEO Robert Dobrzycki.

The increased logistics demand comes at the expense of retail. Real Capital Analytics figures show retail accounting for approximately 25 percent of global investment a decade ago, when industrial accounted for around 10 percent. Now, industrial has pushed ahead of retail, the former climbing to 16 percent and the latter dropping to 13 percent.

"Many retail shops may be shutting down or downsizing their physical

stores... but warehousing fulfillment centers are seeing respectable growth in demand," says Chua Tiow Chye, deputy group CEO of Mapletree Investments.

Dobrzycki is so confident that e-commerce growth will continue to lead to increased consumption that he argues now is the time to expand into new locations, regardless of how late in the real estate cycle we are.

2 Asia is on the rise

One target for that expansion is Asia. Stuart Gibson, co-founder at ESR, sees "a huge wall of capital" looking to get into Asian logistics. "There is an increasingly strong interest from Canadian, European and Singaporean investors in logistics property in the region," he says.

Japan, China and South Korea are ESR's core markets, but the company is also very excited about the potential for India. Mapletree's Chua, too, sees India - with its population of 1.37 billion and rapidly expanding middle class - as a prime location to expand into, albeit one that is tough to make inroads into.

"All the factors which drive logistics demand are prevalent in India - favorable demographics, rapidly developing e-commerce and organized retail channels," says Craig Duffy, head of fund management at GLP. Government policy has also been a key enabler for the sector, with the government pledging to invest \$1.4 trillion in new infrastructure over the next five years.

The challenge in India is land supply, although the government is making that easier, too. "The largest component of a project is land and securing it can take up to a year. Moreover, you can add another 12-30 months for a project delivery depending on the size of the warehouse and the approvals required," says Rajesh Jaggi, managing partner at Everstone.

3 The competition for prime locations is fierce

Supply is not just an issue in India, however. The demand for last-mile logistics centers, as consumers expect ever faster delivery, is astronomical.

"Investor appetite for last mile is unquestionably the most intense expression of appetite for any sub-class within the logistics sector," says Jack Cox, head of EMEA industrial and logistics capital markets at CBRE. "It is the white heat of the flame and there are good reasons for that."

Logistics assets in and around major cities outperform in rental growth and total return, but land supply is a major obstacle, with suitable sites scarce and expensive. Densely populated cities also make for slow journey times.

While expensive rents are a concern, rent is typically a far smaller cost than fuel for logistics operators. In fact, transport can account for half of all logistics costs. With that in mind, accepting higher rents for locations that will provide transport savings is a sensible strategy.

Analysis by DWS Group and location and customer analytics specialist CACI shows how investors can have the best of both worlds - positioning to take advantage of high spend potential catchment areas while also avoiding the priciest rent locations.

"If you can get a warehouse in a location where you are making big savings on transport, you can afford to pay a much higher rent. That is important because it means that the values for logistics use will compete with other uses in those locations," says Marcus de Minckwitz, director at Savills.

4 You're going to need a bigger, greener shed

"The trend in the market is for superlarge, super-complicated developments," says LCP co-founder Kristof Verstraeten. business plan, they have turned out even bigger than we expected." It is not all about size. A raft of advanced technological and environmental features, which were not deemed necessary a few years ago, are increasingly being incorporated. That makes developments now far more costly to develop, although energy efficiency will lead to cheaper operating costs over the longer term. Global luxury brand group Kering's decision to take a 15-year lease on a 1.7

"While we are probably doing a number

of projects that are in line with our

decision to take a 15-year lease on a 1.7 million-square-foot distribution hub in Italy marked one of last year's largest logistics pre-lettings. The two-building campus is due to be completed early this year and is noteworthy not just for its size, but also for its environmental credentials.

The buildings will be the first LEED platinum-certified logistics buildings in the country - and possibly on the continent, according to Verstraeten. The buildings will be heated and cooled via heat pumps using geothermal wells and the entire surface of the roof will be used for solar paneling, so it can supply electricity to other local sites. Customers now expect far more than just four walls and a roof.

5 The sector continues to reach new highs

Expectations are high for deal volumes, too, which have set new records. After a mammoth year in 2018, activity for the first three quarters of 2019 matched the corresponding months of the year before. While Q4 figures have not been finalized, the sum of what has been recorded as closed plus all projects currently under contract would push

activity for 2019 ahead of the pace set in 2018, notes Real Capital Analytics senior vice-president Jim Costello.

Blackstone was a major deal player once again. A pair of Blackstone entities bought portfolios of assets from GLP for a total price of \$18.7 billion. "These two deals may represent somewhere between 9 and 13 percent of global industrial investment activity for 2019 when all the figures for the year are finalized," says Costello.

Editor's letter Going the last mile for logistics



Helen Lewer

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new decade is a perfect time to reflect on recent years gone by, take stock of progress and ponder the path ahead. Members of the private real estate investment fraternity doubtless will be doing just that – contemplating where to place their bets in 2020 and beyond. Those not yet bought into logistics, might do well to give it some serious thought. For this is a sector undergoing rapid change. And, as we know, with change often comes opportunities for investors.

Logistics' narrative is no longer one of big, soulless warehouses in the back of beyond – this is a sector diversifying and being shaped by the new trends that define the times

we live in. And its appeal to institutional money is growing at pace. Real Capital Analytics predicts that global logistics deal volume for 2019 will exceed \$160 billion, once all Q4 data is in. If so, it will be a record level for the sector. So, what is the fuel powering logistics' performance? In one word: e-commerce.

The ever-growing penchant for shopping online surely takes credit for

much of logistics' success story in the past couple of years. Retailers need more warehouse space to store goods. Further, with ever-quicker delivery times expected, occupiers require facilities located closer to consumers. A boom in urban logistics – the last-mile phenomenon – is underway. And institutional capital can see a pot of gold; last-mile logistics is primed to be a source of long-term growth and value-add. Blackstone's new venture, Mileway, profiled in this report, is perhaps the clearest example yet of an industry heavyweight positioning itself to take advantage.

The last word on the matter is best left to one of the experts lending their insight to this report: "There is no better real estate asset class to be in right now than logistics because of the momentum provided by e-commerce." A message you will find repeated strongly across the pages within.

Enjoy the report,

Helen Jene

Helen Lewer

4 A boom in urban logistics - the last-mile phenomenon - is underway **5**



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EXPERT COMMENTARY

As industrial increasingly becomes a preferred property class, investors are paying ever-higher prices. But that may limit the potential for continued outperformance, explains Realterm's director of research, Nathan Kane



Macro trends will differentiate returns in the US industrial sector

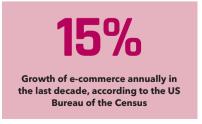
Post-global financial crisis, operating fundamentals in the industrial sector have been exceptionally attractive. A half-decade of record-level demand growth for industrial space, combined with vacancy rates as low as they have been in twenty years, have led to several years of near double-digit rent growth.

Today's underwriting in many cases incorporates an expectation that current conditions persist. Notwithstanding this optimism, a supply response has substantially eroded overall rent gains across the sector in most previous market cycles. As the current cycle matures, proper asset selection becomes critically important to generating higher returns in the industrial property sector going forward.

Historically, the best predictor of user demand for industrial space has been GDP growth. Over a 20-year period, the corre-

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lation coefficient between GDP growth and industrial net absorption lagged by six months is 0.88. GDP includes many drivers of demand for warehouse space (primarily retail sales and global trade) and general industrial space (manufacturing output, construction and equipment investment). Since the end of the GFC, the US economy has



been in a record-length expansion phase. This growth has fueled the need for industrial properties, especially warehouse space, with US warehouse occupancy 1.8 billion square feet higher at the end of 2019 than in 2009.

Tricky conditions

Despite the length of the current expansion, economic growth was weaker in 2019 than in the previous two years. A significant corporate tax cut fueled healthy economic growth in 2017 and 2018, but the impact of that fiscal action was muted in 2019. In addition, conflicts with US trading partners, especially China, resulted in weaker import growth and an actual decline in exports in 2019.

The impact of weaker tradeflows has been felt through the supply chain across most major transportation modes. Year-todate container volume through November 2019 at the Ports of Los Angeles and Long Beach was 8.2 percent lower than a year ago. US rail container volume in the same period was down 3.8 percent. Overall trucking volume was mostly unchanged from the previous year, but some long-distance truckload carriers have struggled because of weaker revenues against already thin profit margins.

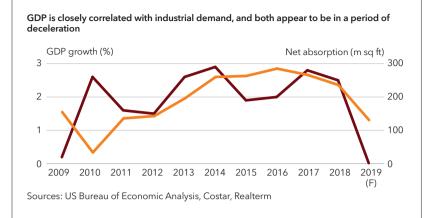
Economic uncertainty and increasing barriers to trade have led many logistics tenants to pause leasing decisions until more clarity over the direction of the global economy emerges. Consequent to this pause, demand growth for industrial space appears to be decelerating. CoStar reports that after topping 230 million square feet annually between 2014 and 2018, warehouse net absorption was about half this level in 2019.

While growth in demand for industrial space is slowing, the pace of construction is accelerating. According to CoStar, warehouse inventory under construction totaled 265 million square feet at the end of 2018. By the end of 2019, that level had risen to 295 million. This growing oversupply and weakening demand will cause the vacancy rate to continue to rise from the record low of 4.4 percent recorded at the end of 2018. There is little reason to expect any sudden collapse in demand or major increase in vacancy, but a rising vacancy rate will likely mean weaker rent growth going forward than the annual pace above 5 percent observed over the past five years.

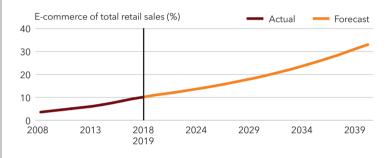
E-commerce propelling industrial property demand

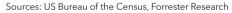
Nevertheless, there are several macroeconomic trends that will help to mitigate the impact of an economic slowdown on the industrial sector. The largest of these trends is the rate of e-commerce growth as a percentage of total retail sales. The US Census Bureau reports that around 11 percent of retail sales in 2019 were conducted online, up from 5 percent in 2012. E-commerce has grown by 15.3 percent annually over the past decade. Furthermore, it has accounted for almost all inflation-adjusted growth in the retail sector since 2000.

In response to this trend, retailers have been expanding their supply chains to serve the direct-to-consumer segment of the market in addition to bricks-and-mortar retail centers. The additional warehouse space required to serve the online consumer market contributed to the record absorption in pre-

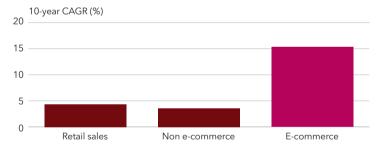


E-commerce boom is fueling demand for industrial space



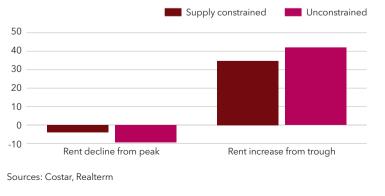


E-commerce is buoying retail sales



Source: US Bureau of the Census

Rent volatility is higher in supply unconstrained areas (%)



vious years, and it has partially offset weakening demand in 2019 from an economic slowdown.

The impact of these cyclical and structural trends will have a disparate impact on industrial properties. The industrial sector is quite heterogeneous. While warehouse properties comprise approximately 80 percent of value in the sector (and are themselves highly varied), there are other important sub-types, including light industrial, flex, manufacturing and high flow-through (HFT) logistics uses. Looking forward, e-commerce will play a crucial role in determining return outperformance of the property subtypes within the industrial real estate sector. Realterm believes that high flow-through properties are uniquely configured to benefit most from this trend.

E-commerce driving HFT demand

HFT properties are infill industrial properties best suited to capture growth in space demand from e-commerce users, and they are almost fully insulated from the potential for supply growth to present new competition. Optimal characteristics of HFT properties include a high ratio of loading positions relative to the building's size, and substantial excess land for staging and equipment parking. These features accommodate rapid inventory turnover and speed the movement of freight to the final destination, which is increasingly the consumer.

Warehouse space is often viewed as a commodity by its users; one regional distribution center is little differentiated from another. As a result, many price-sensitive tenants may freely move to competing lower cost properties to avoid paying higher rents, which becomes a risk to the landlord in an oversupplied market. Rental growth in these buildings is often a function of the cost of new construction, which in turn is a function of the cost of available land. While rising e-commerce sales will help to fuel increasing use of these properties, the prospect of new supply growth will constrain future potential warehouse rent growth.

In the current real estate cycle, peripheral locations in major national hubs like central New Jersey and southern California's Inland Empire have attracted an outsized share of new construction. During this boom, year-on-year rent growth in these areas has at times surpassed 10 percent. However, in previous downturns, these areas have experienced serious market cor"Proper asset selection will become critically important to generating higher returns in the industrial property sector going forward"

"E-commerce will play a crucial role in determining return outperformance of the property subtypes within the industrial real estate sector" rections, with rents declining by at least 10 percent in the past two recessions. There is also a disparity in rent performance between supply-constrained and unconstrained submarkets in the nations five largest real estate markets – Greater New York, southern California, Chicago, Dallas-Fort Worth and Atlanta – through the last recession and recovery.

Infill industrial properties, which include HFT properties, are less exposed to the risk of supply growth eroding rent gains. Because they generate considerable noise and pollution, HFT properties are often difficult to entitle for new development. Moreover, they do not generate as many jobs as traditional warehouses. For these reasons, municipalities are often reluctant to approve this use for undeveloped parcels. Restrictive zoning, the lack of competing vacant land and the expense of redeveloping older industrial properties protect infill HFT owners from new competition and contribute to the potential for sustained rent increases even through a downturn in the real estate cycle.

Tenant demand for these properties also helps to drive rents higher. This point has become especially evident with the proliferation of e-commerce users. Properties used for e-commerce distribution are optimally located as close as possible to their consumer base to maximize delivery route efficiency. Transportation costs account for around two thirds of the total logistics expense, while rent accounts for around 5 percent of this total. Logistics tenants are willing to pay proportionally much higher rents for efficient facilities near their consumer base in order to keep transportation costs low.

Sources such as eMarketer and Forrester Research believe e-commerce is likely to total around 30 percent of all retail sales by 2040 from a base of 11 percent in 2019. This growth will need to be accommodated mostly through the existing stock of HFT properties due to their locational benefits and efficient building configuration to accommodate high inventory turnover. The acceleration of freight volume through these facilities enhances the value of these properties to the transportation user. This higher value to the user is reflected in a willingness to pay substantially higher rents. Consequently, HFT properties are likely to continue to benefit from this secular demand shift despite otherwise fully priced and slowing general industrial performance.

US industrial enters 2020 on a positive note



Commanding demand drivers saw annualized national rent growth in 2019 reach its second-strongest showing in sector history at 6.3%, writes JLL's manager of the national capital markets research group

he sector has enjoyed 37 consecutive quarters of positive net absorption, and a sixth consecutive year of over 220 million square feet of net absorption. Total net absorption lagged new deliveries at year-end 2019, with vacancy rates rising slightly to 5.1 percent. This is not a sign of weakening market conditions, but can be attributed to the lack of quality vacant space left in the market to absorb, which has also resulted in a decline in the average size of lease transactions.

This performance has not gone unnoticed by investors. The total volume for transactions over \$5 million surged past \$100 billion in 2019 for the first time. Additionally, a 'new normal' in terms of liquidity has been emerging since 2013, as sector volume growth has averaged 22.5 percent year-overyear, with volumes in 2019 nearly doubling the 10-year sector average of \$54 billion.

According to NCREIF, industrial's annualized returns from 2000 to Q3 2019 were 10.3 percent - 20.5 percent and 13.4 percent higher than the office and multi-housing sectors respectively. Return growth is primarily driven by the strength of e-commerce and leasing fundamentals, which are driving aggressive rent growth and attractive cash returns. The healthy return rate has not come at the expense of stability as the implicit risk of industrial remains lower than the other major property sectors, indicating the ongoing attractiveness of industrial investments. The sector has also experienced record-setting cap rate compression while maintaining the widest risk premium among the other property sectors.

Foundational shift due to e-commerce

As retailers realign supply chains and distribution networks to accommodate the growth of direct-to-consumer e-commerce operations, new opportunities for industrial investment are emerging. Traditional retailers realize the need to create distinct supply chain networks to support this expanding business area, and thus, created a new demand base for the sector. This is important when it comes to newly developed big-box space and urban infill space close to dense populations of consumers. E-commerce growth as a percentage of overall retail sales – 5.8 percent in 2013 to 11.2 percent

"Grocery retail is one of the final frontiers when it comes to retooling traditional retail store fulfillment supply chain networks" in November 2019, according to the Bureau of Labor Statistics – has driven demand for industrial space and is correlated to rising rents and falling vacancy.

And newly announced expansions of e-commerce operations by grocery retailers seem primed to escalate in the next three years as they roll out free service offerings. Grocery retail is one of the final frontiers when it comes to the evolution and retooling of traditional retail store fulfilment supply-chain networks. E-commerce orders account for just 3 percent of all grocery retail sales in the US. Preventing expansion is the required capital expenditure on climate-controlled industrial space. Grocery delivery operations have been constrained to large volume, traditional hub-and-spoke models of fulfillment to physical retail stores.

If traditional retail trends are any indication as to how rapidly investment and supply-chain realignment will occur, this segment of industrial demand may continue to transform in a similar fashion as traditional retail supply chain networks. Several grocery retailers have invested in pilot programs for advanced picking facilities and selective market tests throughout the country, with plans for expanding the number of markets upon testing. In an increasingly competitive investor landscape, expanding investment strategies to align with the foundational shifts that must occur to support the expansion of grocery retail into e-commerce operations are expected to be an area of focus for investors comfortable with the high capital expenditure and unproven risk associated with these types of facilities.

Logistics' triumphant year

As investors shift their focus from retail to industrial, the sector's deal activity for 2019 looks likely to exceed \$160bn – a record level, observes Real Capital Analytics' Jim Costello

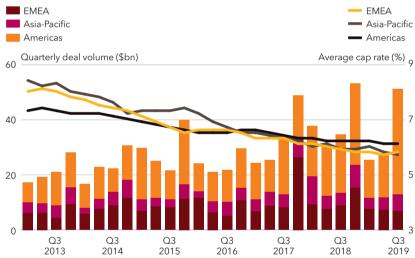
raditionally, the retail property sector captured a larger share of global investment in income-producing properties than the industrial sector. A decade ago, the retail sector represented 25 percent of global activity with the industrial sector capturing only a 10 percent share. The industrial sector was viewed as a boring, stable market with generic properties, unlike the retail sector with its glamorous properties. Into 2017, however, boring became sexy and the industrial landscape steadily gained more attention from investors globally, with the sector pushing above the 10 percent share of market activity. In the four quarters to Q3 2019, industrial represented 16 percent of global investment activity versus only a 13 percent share for the retail sector.

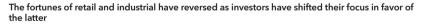
This steady climb in investor interest has translated to record-high deal volumes. Activity for the first three quarters of 2019 was essentially on par with the trend set through the first three quarters of 2018. Figures for Q4 are not yet finalized, but the sum of what has been recorded as closed plus all projects under contract would push activity for 2019 ahead of the pace set in 2018.

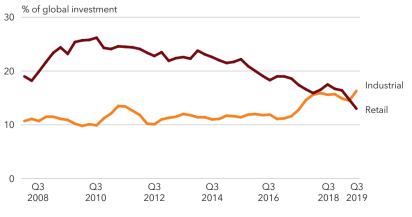
Blackstone was behind the most significant industrial deals in 2019. Two different entities of the firm bought portfolios of assets from GLP for a total price of \$18.7 billion.

Those two deals may represent somewhere between 9 and 13 percent of global industrial investment activity for 2019 when all the figures for the year are finalized.









Source: Real Capital Analytics

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KEYNOTE INTERVIEW

Consumer proximity offers a sound basis for investing



Assets in densely populated and infill locations should provide the most resilient value and vigorous growth for US logistics investors, say Crow Holdings' Ben Doherty and Ken Valach

Trammell Crow began his career in real estate 70 years ago by building and leasing a warehouse in Dallas, Texas. Crow Holdings carries on this legacy in the logistics space through Crow Holdings Industrial, its industrial development company, and Crow Holdings Capital, its investment management company. Ken Valach, chief executive officer of Crow Holdings Industrial, and Ben Doherty, managing director of the logistics and self-storage groups at Crow Holdings Capital, drill down into the US logistics market with *PERE*'s Stuart Watson.

What locations are most attractive to institutional capital to invest in US logistics today and does e-commerce impact market selection?

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Ben Doherty: Crow Holdings Capital focuses on the top US markets that serve the highest population density and consumption base, as these markets tend to have barriers for new supply and the strongest operating fundamentals. It is clear that continued growth in e-commerce is the main demand driver for logistics space today. However, it is hard to quantify exactly how much e-commerce is contributing to absorption because of the difficulty in determining what space is dedicated to online sales versus more traditional logistics uses, including the replenishment of traditional retail stores.

Nevertheless, e-commerce users tend

to demand three times more space and lean toward newer product, except in infill locations where location and proximity to customers may trump functionality. In deeply populated markets, drive time to consumers becomes the most important factor for e-commerce operators because of the pressing need to get their products to end users quickly. Often, these urban infill locations are in high-barrier markets with little opportunity to build new product, so tenants will lease existing product that may not meet their needs from a functionality standpoint.

Ken Valach: Future proofing your investment in the logistics sector always comes back to location. Crow Holdings Industrial is focused on the top eight US metropol-

Minding the store

US self-storage still offers possibilities for investment

Self-storage has been a challenging sector for investors in recent years, says Doherty, but it may be about to turn a corner. "We have seen an abundance of new supply come onto the market. Operators have shown themselves willing to give substantial discounts in order to fill up their facilities, and in some cases this has driven rental rates below the levels underwritten by developers and capital providers. However, many believe that new supply peaked in 2019, and while 2020 fundamentals may continue to be challenging in affected trade areas, demand continues to see year-over-year increases. We expect this to continue over the next few years."

Self-storage remains attractive to investors because it provides a diverse but predictable cash flow, and virtually no capital expenditure is required when a tenant vacates a space. "For the most part, all you need is a broom to sweep out the unit," quips Doherty. The sector may also provide a useful hedge against fluctuations in national economic cycles. "Selfstorage is a needs-based product. Life events drive the demand, and this can offer resiliency to economic swings."

As in the logistics market, Crow Holdings Capital is mainly focusing on new development in major US metros with strong consumer demand.

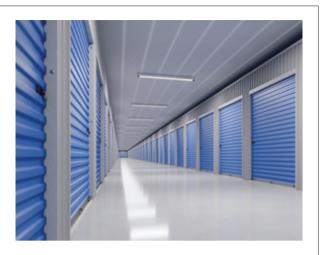
itan areas, which represent approximately 50 percent of the absorption in the country. However, city selection is not the only important element; developers need to consider additional factors like access to freeways and the number of traffic lights trucks will have to go through when driving to and from the location.

Further, selecting a location with good access to employees is increasingly important, especially for some of the labor-intensive e-commerce uses. The employee base in the logistics sector is generally not highly compensated, so if the drive for employees is too far, hiring can be difficult. To address this challenge, some tenants prefer infill locations, not just for distribution of products, but also because proximity to mass transit makes it easier for employees to get to work.

Are investors in the sector better served by acquiring existing space or by backing development?

KV: Crow Holdings Industrial is a developer by specialization. In the rare case when we do an acquisition, it is because we are going to "We believe we will continue to see the highest rent growth in premier highbarrier sub-markets due to constraints on available space and the growing demand for last-touch properties"

BEN DOHERTY



"You can still find pockets of opportunity because selfstorage is a trade area business – facilities largely serve only a three- to five-mile radius. We are seeing trade areas where it still makes sense to put new supply on the ground, and where we can achieve our lease-up projections and rental rates," says Doherty.

However, it is vital to have detailed knowledge of the local market landscape before building. "You have to understand demographics and the potential 3-5-7 mile area, what is under construction today, which existing stores could be expanded, who has applied for permits to build new product and what land is or could be zoned for storage use."

tear something down and re-zone it to construct a new building. With that caveat, we believe the best opportunity today in logistics is ground up development. We see market support for this belief in two recent separate accounts with institutional investors in which our partners find there is greater value to build rather than buy.

BD: We place great emphasis on investment basis. In previous years, we focused primarily on acquisitions where we could lease vacant space and roll existing below-market leases to market rents to drive net operating income and increase asset value. We were able to acquire these highly functional and well-located assets at a favorable basis relative to replacement cost. However, during the last five years, we have largely pivoted toward speed-to-market speculative development because we see greater value in our investment basis for modern Class A buildings and an opportunity for outsized returns. This is supported by the improving trends in logistics fundamentals; demand is outpacing supply, and we have seen consecutive quarters of increasing rents and declining vacancy.

Analysis

Which industrial asset types provide the most resilient value?

BD: We spend a lot of time talking to tenants and brokers to understand current tenant needs and how they may evolve in the future. Today, we see the greatest potential value in buildings that are 400,000 square feet or smaller. In fact, most of the recent warehouses we are building are 150,000 to 300,000 square feet. We prefer smaller buildings for a few reasons: there is generally a lack of available space in modern buildings this size; they tend to provide greater optionality for demising into multi-tenant use; and they historically serve the deepest tenant market. Last-touch infill locations are particularly scarce due to the high barriers for new supply. In some markets, we are seeing double-digit rent growth for those types of assets.

Investors are aware that while they might be paying a seemingly low cap rate today, these investments have historically provided the most predictable cash flow and the opportunity to realize the highest increased rents over a longer duration of the hold period.

KV: Over the past 10 years, e-commerce has changed the definition of what constitutes a Class A logistics building. We try to examine the supply within each market and build something that stands out above the competition. For instance, the amount of land available for employee and trailer parking can affect the value of the building and is often overlooked as a value source. Future proofing is a popular topic today, but with speculative buildings it is always tough because of the lack of clarity around what the market will look like in twenty years.

You also have to avoid individualizing a space in such a way that your building becomes less attractive to some tenants. For instance, a popular idea today is to go to the highest clear height that tenants demand to 'future proof' a property, but the truth is that some tenants do not want that kind of height. It may actually be too specialized. It is more art than science to find the right mix of features to best position a property for today and tomorrow.

Are there any areas of the US logistics market where investors should exercise caution?

BD: I worry about new supply in certain low-barrier markets, but at the same time



Case study: Wildlife Commerce Park, Dallas

Wildlife Commerce Park is a 220-acre business park located in the heart of Dallas-Fort Worth. This cornerstone logistics park is the result of a floodplain reclamation project by Crow Holdings Industrial. It is centrally positioned between Dallas and Fort Worth within close proximity to the DFW International Airport. The strategic location offers easy access to regional population centers via multiple transportation modes.

The project currently consists of eleven Class A buildings totaling 3.7 million rentable square feet. Phase II was completed in December 2019 and was 92 percent preleased. A focus on prime location, access to a strong labor force, a diverse mix of building features, the newest security and quality amenities are key factors in the success of the project and have resulted in a robust tenant base with national credit. The logistics park also features a 100-acre lake, interior roadways and infrastructure. Wildlife Commerce Park is expected to be a long-term hold by Crow Holdings Industrial.

"Wildlife Park is a great example of creating a site in a central location in one of the major markets which is a regional distribution hub and has a large and growing population. The site has convenient access to labor, freeways and a major airport. We had enough land to execute on a variety of buildings that appeal to a wide range of tenants," says Ken Valach.

some of these markets have great aggregate consumption drivers for logistics demand. This tends to mean that some developers and capital providers believe that 'if you build it, they will come'. In these markets, site selection, design and labor are critical – if you choose the wrong location and design, and the property remains vacant for a long period of time, it can have a depressive effect even on transactions in the surrounding area, so a lot of research and knowledge are required to avoid these risks."

"Future proofing your investment always comes back to location"

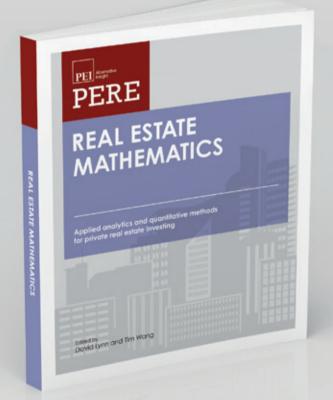
KEN VALACH

KV: I agree, however, some of the low-barrier markets are very large, so you must avoid painting them with the same broad brush. For example, South Dallas is arguably overbuilt because of land availability and low barriers to permitting, but there are other parts of Dallas where an entitled site will do very well. North-east Atlanta is soft, but Atlanta is very strong overall. Wherever you are, you must remain aware of pricing. We do a lot of one-off joint ventures with third-party private equity groups, and everything today is priced to perfection. We recently dropped out of a deal in Southern California because of pricing. We could not justify rental rates that were so far above what anyone has achieved to date. That is where a lot of capital gets nervous and so do we.

BD: On the positive side, the permitting process is getting longer and more expensive, which helps limit new supply. These types of constraints in high-barrier submarkets should sustain high rent growth and favorable fundamentals for the foreseeable future.

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Logistics year in review

Opportunities in Asia-Pacific proved popular with many real estate managers and investors in 2019

AEW's LOGISTIS fund extended again

AEW Europe raised another €750 million for the vehicle and extended its life to 2026. The new equity brought the total fund size to €2.3 billion. According to Rob Wilkinson, chief executive of AEW Europe, the capital raise was 100 percent undertaken by existing investors, including Allianz, APG and PGGM.

MAR 19

LaSalle IM plans \$1bn China logistics fund debut

The China Logistic Development Fund has a target of \$1 billion and is seeking 16 percent net return, say sources. LaSalle has traditionally invested in China via partnerships and its regional, blindpool funds. In 2018, the manager formed a \$300 million JV with local developer China Logistic Property Holdings to invest in warehouses in China.

MAY

Blackstone buys GLP's US industrial portfolio for \$19bn

JUN

Totaling 179 million square feet, with blue-chip tenants including Amazon, the acquisition nearly doubles the manager's US industrial holdings to roughly 370 million square feet. Blackstone will split the properties between Blackstone Real Estate Partners, its global opportunistic strategy, and its income-oriented non-listed REIT, Blackstone Real Estate Income Trust.

JUL



Colony Capital launches new logistics business

Colony Capital doubled down on industrial real estate with the rollout of a new strategy in a sector that has been one of the bright spots in the troubled company's portfolio. The firm has closed on a \$1.16 billion industrial portfolio, adding 7.7 million square feet of last-mile logistics property and jumpstarting a new strategy focused on bulk warehouses.



LOGOS fully invests maiden \$400m Indonesian logistics venture

The company plans to double the size of the platform, according to Stephen Hawkins, LOGOS's managing director for South-East Asia. "We are looking to upsize the venture, so we can start to gradually pursue other opportunities we have identified in the pipeline," he said. The new commitment will most likely come through re-ups from the two existing institutional investors that have committed to the vehicle so far.



AustralianSuper grows logistics exposure with New Zealand debut

The superannuation fund will develop a \$334 million prime logistics estate in Auckland with operator LOGOS. The investor will fund the additional purchase of 14 hectares of land and full development of 24 hectares of the Wiri Logistics Estate in Auckland, alongside LOGOS. The latter initially bought 10 hectares of the site in July 2018 and kicked off construction in April 2019.

CBRE GI, LOGOS forms \$800m Chinese logistics vehicle

Sources told *PERE* that the yuandenominated vehicle raised the capital from three or four Chinese insurance companies and two offshore institutional investors in July. The two firms corraled \$500 million-\$600 million via a first close in March.

This partnership will pursue logistics development projects and invest in existing logistics assets in first- and second-tier Chinese cities. Through the development projects, the firms will be targeting a develop-to-hold, long-term investment strategy.

SEP

Fosun seeks \$450m from offshore for logistics vehicles

Fosun Stater Logistics plans to raise \$450 million via two offshore logistics vehicles: a core logistics vehicle and a develop-to-core logistics vehicle. For the core vehicle, the firm is aiming to raise \$200 million before Q2 2020, seeded by three logistics assets in Hangzhou, Wuxi and Xi'an in China. For the develop-to-core logistics vehicle, the firm is planning to raise \$250 million for seven logistics development projects in the pipeline.

Norges Bank acquires stake in \$2bn US industrial portfolio

Norges Bank Investment Management, manager of the Government Pension Fund of Norway, announced its acquisition of a 45 percent stake in the portfolio from Black Creek Group's Industrial Property Trust REIT. The fund invested \$896 million for its stake through a long-standing JV partnership with Prologis, which will hold the remaining 55 percent interest and manage the 127-property portfolio on behalf of the venture.



Investcorp closes on its largest logistics deal to date

NOV

The Bahraini manager purchased 126 US properties for a total of \$800 million. With the addition of the new portfolio, Investcorp has doubled its US industrial exposure to 20 million square feet across 240 properties. The bulk of the assets in the portfolio came from Boston-based Taurus Investment Holdings. Properties range from last-mile logistics and distribution to light manufacturing and industrial chemical facilities.

Blackstone's last-mile bets placed with opportunity fund money

Blackstone is aggregating investments in the space through its newest opportunity funds: Blackstone Real Estate Partners Europe V and Blackstone Real Estate Partners Europe VI. The first approximately 1,000 properties that make up the portfolio of Mileway, a company representing Blackstone's debut last-mile logistics bet to be wrapped in a corporate entity, are almost exclusively made up of transactions from BREP V. With BREP V now beyond 90 percent deployed, Mileway's growth will come from BREP VI.



DEC

ADIA made \$750m follow-on bet in China logistics mandate

The sovereign wealth fund, through its subsidiary HIP China Logistics Investments, committed an additional \$750 million to Prologis to invest in logistics in China. The investor decided to re-up its investment in its existing mandate with the industrial real estate company during Q4 2019. The stabilized assets in the mandate will be sold to a new open-end vehicle set up by Prologis in China. ADIA is also an investor in the vehicle, according to sources.

'Setting up an institutional business is the main target'

Mileway CEO Emmanuel Van der Stichele sets the agenda in his first interview with PERE, three months after walking into the high-pressure environment that comes with leading one of Blackstone's high conviction bets. By Jonathan Brasse

he opportunity was the appeal." For Emmanuel Van der Stichele, the chance to lead Blackstone's latest conviction bet in real estate was too good to turn down. "It doesn't often happen that you get such a chance."

Van der Stichele is in Blackstone's London office participating in his first interview with *PERE* as chief executive officer of Mileway, a business launched in September by the private real estate giant. It is, essentially, a company wrapped around more than 1,000 urban logistics properties that Blackstone has been aggregating since 2017. Together, they carry a value of more than \notin 8 billion.

The assets are defined today as 'last-mile logistics', the business widely regarded to be the first of its kind dedicated to this type of industrial property anywhere in the world. The bet has been made with equity from the Blackstone Real Estate Partners Opportunity Fund series in Europe, the higher risk and return characteristics of which are in line with its rapid growth aspirations for the new venture.

Being responsible for such a concerted – and sizeable – outlay by the world's biggest landlord, and for a fund series with consistently high performance, carries a weight of expectation. Furthermore, these funds are closed-ended, which means the investment is on a timer – BREP funds currently have investment periods of 5.5 years. Add the fact there is significant broader interest from investors and manager peers alike to see whether a dedicated platform strategy in this as-yet largely unsophisticated segment of the asset class can be institutionalized, and the pressure to succeed is not just high, but under the spotlight too.

"Of course, there's pressure for me to perform," responds Van der Stichele. "But whatever you choose to do, you always want to perform."

From a 20-year-plus career becoming increasingly senior at established powerhouses, including banks Credit Suisse and JPMorgan, and latterly at logistics manager Goodman, Van der Stichele feels ready to step up to steer a business with no track record, in a sector with limited institutional history. While Mileway starts life as the biggest pure-play, last-mile logistics business around, it is also a start-up.

No legacy issues

Indeed, while Mileway 1.0 has almost 100 million square feet of property in close proximity to more than 100 cities across Europe to manage, and more than 7,000 customers to service, it has no legacy infrastructure to contend with. Effectively, Van der Stichele has inherited a blank canvas on which to demonstrate how a last-mile logistics business should by run. "That's a tremendous benefit," he says. "It has been really helpful in attracting talented people, too. I have an opportunity here to build a team from scratch."

And team-build he has. Last month, Panayot Vasilev joined as chief financial

Analysis

"There will be an exit at some point, and we want to be sure we have a business that is

ready"

EMMANUEL VAN DER STICHELE Blackstone officer from parent Blackstone where he also held a CFO position. He adds to a C-suite also comprising Dominiek Van Oost, chief operating officer and a fellow Goodman alumnus, and Thomas Ten Bokum, formerly European operations lead at logistics giant Prologis. They are part of a 150-strong bench charged with establishing and growing a business ripe for an institutional exit in a short timeframe.

Assessing when and how that exit ultimately occurs is Adam Shah, Blackstone's COO of Europe real estate asset management. Shah, sitting beside Van der Stichele, echoes the benefits of operating in firstword territory. "We don't have any legacy issues that a similar business might have that has grown through M&A, with the competing systems that brings. There's no need to be spending lots of time at central office trying to translate and aggregate all that data."

Shah says Mileway is already benefiting from having one financial system, developed by Blackstone as it was aggregating the asset base over the last 18 months. "We require all our vendors and third-party service providers to plug into that system," he says. "That's part of what will make Mileway an attractive investment opportunity, the fact it is self-contained."

This uniformity of infrastructure at Mileway is going to be important when meeting the challenge of herding so many assets in what is broadly regarded to be a fragmented marketplace, and managing so many relationships over short lease terms. Last-mile space often lets for between three and five years, versus five to 10 for big box properties.

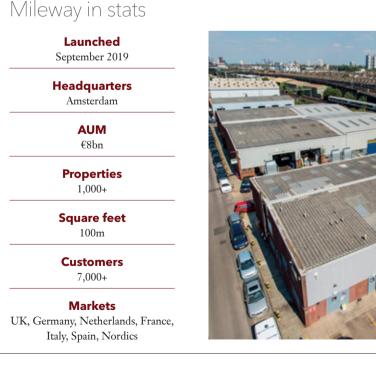
"There's an intensity in the management given the granularity of having tenants which are smaller and, in certain cases, not quite as sophisticated. It is a very different discussion to be had with a tenant wanting one million square feet, compared to a tenant wanting 100,000 square feet. Often, they are represented by different professionals and have a different leasing process. This is much more relationship-driven."

Van der Stichele thinks the singular infrastructure offered by Mileway will also be of benefit to its tenants. In keeping with private real estate's broader theme of real estate as a service as well as an asset, he expects the business's occupiers to enjoy the economies of scale it achieves. "Not just being able to have the resources to better maintain your properties, but also being able to source more qualitative and cost-effective services from suppliers as well as having better systems to focus more on your customers will be welcomed. We have a clear opportunity to do a more professional job here."

Driving rents

Such a service is hoped to enhance Mileway's strategy to improve its portfolio's performance and so, in turn, drive the bottom line. To that end, the business has acquired assets with notable vacancy. It is also expected to assist its strategy of driving rents among an occupier base which is often rent-insensitive. Indeed, according to a report by Munich-based manager DWS, rent typically accounts for just 4 percent of logistics costs for many e-retailers, which are the types of tenant Mileway seeks to accommodate.

When *PERE* interviewed James Seppala, Blackstone's head of real estate in Europe, after Blackstone announced the launch of Mileway, he described scenarios in which properties could be offering a 3-5 percent going-in yield only for increases in occupancy and tenancy changes to precipitate



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yields reverting to market levels hundreds of basis points higher. These higher prices can be further intensified in areas of scarce supply owing to their infill locations and where competing use demands, such as local services and even light manufacturing, can see occupiers often able to pay more for their space.

In the UK, for instance, where Blackstone is in the throes of privatizing logistics business Hansteen in a £500 million (\$650 million; €583 million) deal - which neither Van der Stichele nor Shah can discuss – rents for infill urban locations can vary widely from around £6 a foot in places like Norwich to up to about £20 per square foot in the highly competitive London markets such as Brent, according DWS's report. "If you look on the supply side, there are places where we operate where supply even decreases because of urbanization pressures," Van der Stichele remarks. "That's another interesting aspect of last-mile logistics where there is also an alternative use over time."

Mileway will buy individual properties, Shah confirming many assets have been acquired at low single million-dollar valuations. But it is the Hansteen-like big portfolio purchases that have really fast-tracked the critical mass necessary to establish the business. The biggest of these was Hansteen's German and Dutch assets, alongside London-based manager M7, in a deal valued at €1.2 billion in 2017. Purchases from Starwood Capital, HIG Capital and Oaktree have also contributed to Mileway's dayone portfolio. While rival managers aspire to acquire last-mile properties given their notably higher valuations nowadays, few have the firepower to do so at such a pace and at such size.

Whether Blackstone sees copycats will be one litmus test of the thesis. Mike Bryant, co-head of private real estate at Zug-headquartered manager Partners Group, sees strong occupier demand. He sees equity buyers switching tack from retail investments to logistics too. But he questions whether the real economy will continue to support the surge in pricing. "Will GDP growth really support rental growth assumptions underpinning some of the prices people are paying? We have a tendency toward last-mile. But we've seen some of the pricing as quite full and I don't think we have the conviction to underwrite the rental growth that maybe others are seeing."

Ed Craston, head of fund management at rival manager Patrizia, adds: "We, and many others, do believe in last-mile logistics as an important and growing sub-market. What it means for an aggregating strategy, I just don't know. We do feel it's an important part of a logistics strategy. The only area I can't express a view on is the extent you create a standalone strategy and a platform with an exit in mind."

Bill Benjamin, head of real estate for manager Ares Management, says: "Lastmile is an essential part of the logistics chain that moves goods to businesses and homes in growing urban areas and is part of an expanding asset class." Benjamin says last-mile logistics is one of Ares' current investing strategies too, placing it also among the movers in this nascent territory: "There is plenty to assembling a critical mass of assets which attracts tenants, to build professional management teams and to centralize functions to maximize the value of the assets."

Blackstone has backed its own view on whether a standalone last-mile logistics business makes sense with action. For his part, Van der Stichele has accepted the challenge of turning a "blank sheet of paper" into a "best-in-class company." For him, job one is handling the pressure of answering to a private real estate giant and serving the world's most popular fund series. Do that job well, and job two could be running a business in institutional shape. "Of course, I look at it from the long-term perspective because Mileway will be a long-term owner."

But, little more than three months into the job, Van der Stichele is thinking mostly of the task at hand. "Setting up an institutional business is the main target," he states. "There will be an exit at some point, and we want to be sure we have a business that is ready."

Last-mile takes center stage for Blackstone's opportunity capital

Blackstone's last-mile bets are being made with its opportunistic money as the 'big box' segment of the logistics market institutionalizes

When Blackstone discusses its property strategies, logistics features prominently. And while many of the strategies have regional focuses, it is logistics where the firm sees growth potential all around the world. "Logistics is our highest conviction global investment theme today," Ken Caplan, global co-head of Blackstone Real Estate, said in a recent statement.

However, Blackstone's conviction toward distribution facilities is evolving. Today, there is a clearer distinction between the types of logistics where it is placing its biggest bets.

Blackstone has long made its highest returns in the sector investing in large, out-of-town distribution centers – what it terms 'big box'. The firm aggregated assets into the business Indcor in the US before selling it to logistics giant GLP for \$8.1 billion in 2014; and Logicor in Europe, selling that to China's sovereign wealth fund, China Investment Corporation, for €12.25 billion in 2017. Notably, these investments were made using the limited life, opportunistic capital of its Blackstone Real Estate Partners global fund series.

The investments have produced suitably high returns for the series. While Blackstone declines to discuss specific deal performance, its latest two mostlyinvested BREP funds, VII and VII, in which these deals feature, are generating net IRRs of 16 percent and 15 percent and equity multiples of 2x and 1.4x respectively, as per its latest quarterly report published November. Such performances keep pace with the gains being made in the broader logistics market, according to the European Association for Investors in Non-Listed Real Estate Vehicles, which recorded fund level returns of more than 15 percent from the asset class in the last five years.

In a sign of maturing times for the sector, today Blackstone often acquires its larger distribution assets using perpetual, lower risk and return money. For instance, when it acquired GLP's US logistics assets for \$18.7 billion in June last year – including a number of assets previously sold to GLP in the Indcor deal – \$5.3 billion of the assets were purchased with its income-oriented, non-listed US REIT, Blackstone Real Estate Income Trust. In Europe, meanwhile, more than 50 percent of the assets in its \notin 4.4 billion open-end, core-plus Blackstone Property Partners fund are distribution properties. BPP's latest performance, as per the quarterly report, was 10 percent net IRR and 1.3x equity.

Today, it is increasingly using its opportunistic money to acquire last-mile logistics properties. The portfolios aggregated to form Mileway came from its Blackstone Real Estate Partners Europe V and VI funds, the European equivalents of its flagship BREP global opportunity fund series. Mileway's launch was quickly followed by the firm's acquisition of Colony Industrial, a business comprising light industrial assets in the US – described by Blackstone as last-mile – in a deal valued at \$5.9 billion. The capital for that deal came from BREP IX, its latest global opportunity fund.

Its pending £500 million (\$650 million; €583 million) acquisition of Hansteen, a UK-listed logistics business intended to be amalgamated into Mileway's asset base, is also anticipated to be made via BREP money, although at press time that deal was yet to complete.

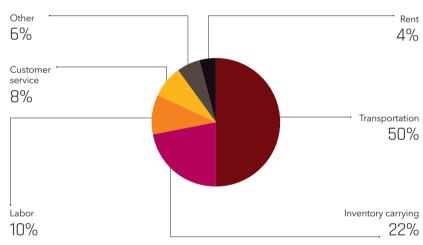
Mastering the 'last-hour' market

Careful location planning means logistics operators can maintain proximity to potential customers without overpaying on rent, writes James Linacre

The final hour

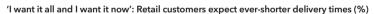
Fast delivery is about time, not just distance – last hour rather than last mile. With customers becoming more demanding, rents increasing and supply limited, it is more important than ever to choose the right location for a logistics facility.

Fuel is typically a far greater cost than rent for logistics operators. A key consideration for location, therefore, is minimizing drive time. Analysis by DWS Group and location and customer analytics specialist CACI, comparing the highest online spend potential within a 60-minute drive time with rent and land values, suggests there are locations where occupiers can find relative value and investors could benefit from potential rental outperformance – specifically in the UK and Germany, although the same principles apply in other markets.



Source: Establish, Inc/HWD, Grubb & Ellis Global Logistics, Cushman & Wakefield, January 2019

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Source: PwC Global Insights Survey, 2018

Fuel for thought: Transport accounts for half of logistics costs, far outstripping rent

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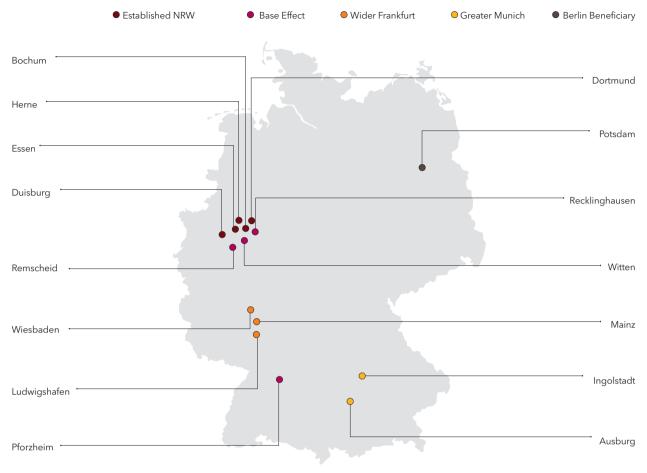
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Jeremy Bishop Co-founder

> Stewart Little Co-founder



Analysis



Smarter cities: Potential hubs with high levels of online spend potential offering significant rental discounts to established locations

Source: DWS, August 2019

Spotlight on Germany

There are many potential logistics hubs in Germany that would balance access to high customer spend potential while offering discounted rents when compared with established hubs. Supply constrained last hour locations such as Pforzheim, where rents are low, provide a 'base effect' defensive cover, believes DWS. These locations will particularly benefit once technological change makes time over distance a more important factor.

Online spend potential matters, but a small reduction in that department can be married to a significant drop in rent levels. For example, in the North Rhine-Westphalia region, where average access to online spend throughout the state is almost triple the national average, the likes of Herne and Bochum have similar levels of online spend potential as Dusseldorf and Cologne but offer relative pricing and rental discounts.

Locations near Frankfurt can also be interesting. There are low rents and favorable base effects. While rents are high in the Bayern region, the likes of Augsburg and Ingolstadt are relatively cheaper than Munich.

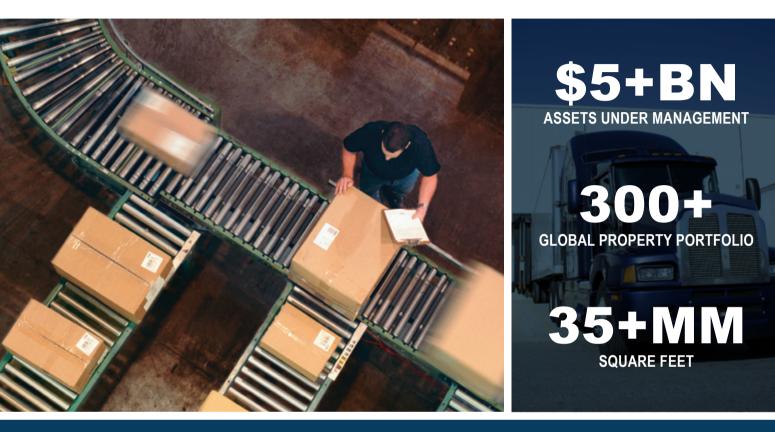
Prime locations in south-eastern Berlin are pricey, but rents are 18 percent cheaper in Potsdam.

Above average opportunities: index of average online spend within a one-hour drive (scores out of 300, where national average is 100)





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KEYNOTE INTERVIEW

Age of the mega-shed



Distribution hubs in Europe are getting larger, more sophisticated and costlier, presenting an evolving set of challenges for capital providers and developers, say LCP's James Markby and Kristof Verstraeten, and Invesco's Tom Emson

In November, global investment manager Invesco Real Estate demonstrated its confidence in specialist logistics platform Logistics Capital Partners, by increasing its preferred equity investment in the business by a third. The additional capital injection will allow LCP to exceed its three- to five-year strategic plan to develop over €1 billion of new distribution space across Europe. LCP co-founders James Markby and Kristof Verstraeten, and Tom Emson, senior director of transactions at Invesco, discuss how investors can access the market for the large and complex modern facilities increasingly being demanded by European logistics occupiers.

Why is backing a platform like LCP a good strategy for Invesco?

Tom Emson: We have high conviction on this space and we want to be overweight in it. We invest in logistics across a number of strategies globally and within Europe, ranging from core to higher-returning strategies like our initiative with LCP. By maintaining

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close relationships with specialist logistics development platforms, we can access product at an early stage of its development, and we see a competitive advantage in being able to invest in high-quality, modern, highly automated stock.

James Markby: The increase is a combination of short-term funding for live projects and capital that will allow us to secure land and do the early-stage work on new sites. Because it is effectively an investment into LCP as a company, it is very helpful in increasing our performance in terms of speed and reliability of execution. We can be very nimble and efficient in jumping on the opportunities because we know the capital is there. That ability to be entrepreneurial is exactly what you need in this highly competitive market context with a lot of money chasing logistics. Kristof Verstraeten: Meanwhile, the trend in the market is for super-large, super-complicated developments. We are now active in the Netherlands, Belgium, France, Spain and Italy, and doing a lot of repeat business for customers like Amazon, and while we are probably doing a number of projects that are in line with our business plan, they have turned out even bigger than we expected, with a variety of advanced technological and environmental features that make them very capital-intensive to develop.

Are environmental issues gaining traction in the logistics sector?

TE: We assess ESG factors for all of the investments we make across all sectors. It is front of mind and has been for a while now. We target the higher sustainability levels of labels like BREEAM or a LEED in the products we are investing into while managing our existing portfolios to try to improve ESG aspects.



Case study: Kering Group global logistics hub, Trecate, Italy

Luxury that doesn't cost the Earth

Kering may not be a household name, but the global luxury group's brands, which include Gucci, Saint Laurent and Alexander McQueen, certainly are, while the company's decision to take a 15-year lease on a 1.7 million square foot distribution hub in northern Italy was unquestionably a big deal, marking as it did one of the largest logistics pre-lettings of 2019. At well over €150 million two-building campus, developed by LCP and backed by Invesco funding, is due to be completed in the first quarter of this year.

The project epitomizes the trend for occupiers to consolidate their supply chains into larger, more technically complex, greener hubs, says Verstraeten. "It got bigger and more important as the customer decided to integrate more of their business and brands into that building, taking the consolidation and automation trends as far as they can realistically be achieved. The automation and systems within the building are of a cost that is of the same order of magnitude as the building itself."

He adds that Kering was also determined to push the envelope on sustainability: "The buildings will be the first LEED platinum – the highest rating – certified logistics buildings in Italy, and possibly Europe," he claims. "This is achieved by using the best and most advanced specifications for all parts of the buildings and their electrical and mechanical systems. Once completed, the buildings will be heated and cooled via heat-pumps using geothermal wells. Furthermore, the entire surface of the roof will be used for solar panels, allowing Kering to also supply stores and other sites with electricity generated in Trecate."

KV: A building that is more energy efficient is going to be cheaper to operate, even though it may cost a little bit more at the outset. Secondly, environmental performance and climate change is a huge topic and it will not become any less important in the coming years. Real estate is a long-term asset and in order to be ready for the future all the logical arguments point toward making sure that buildings are sustainable and energy efficient. We see most of the speculative developers going down this route, but you can go much further working together with a tenant because a very environmentally friendly building will be more expensive and therefore will need a higher rent that will be offset by cheaper operating costs. On build-to-suit projects, large corporate occupiers are pulling the real estate market along with them on sustainability. It can be a slightly more complicated business case to make when you are building specula-

"On a risk-adjusted basis, there has been far more appealing value in build-to-suit schemes"

TOM EMSON Invesco tively because your expectations of increased rent are an assumption that still needs to be tested and validated, so while speculative development is becoming increasingly sustainable it is happening in more incremental steps.

JM: There is also a change in some of the aspirations of third-party logistics providers in this area, with the types of supply chain planning and longer-term business plans they are proposing to their end customers. In the past, their occupational strategies have typically been relatively short term and reactive because of the length of logistics contracts, but we are seeing a trend of tendering with proposals for longer-term supply chain strategies, adopting 15-year plans that allow them to consider completely new designs and operationally more efficient buildings, which ultimately provide a lower operating cost in the longer term. Working in tandem with

some of these 3PL groups is creating some interesting new project ideas and wins. These are all complimentary push/pull factors for longer-term occupational planning, all coinciding to create a more compelling case to review the whole long-term efficiency of the whole supply chain operation.

How do you strike the right balance between speculative and build-to-suit development?

KV: Our development business is only 25-30 percent speculative. In some ways, build-tosuit is more efficient because you can turn your capital around faster and therefore it often gives you higher IRRs. However, the two approaches are complimentary to a large degree because they are both fed by the acquisition of developable land. To ensure a pipeline of sites, you need a team of specialists and engineers looking for land and taking it through the various stages of master-planning. When you have been through that process it might coincide with a build-to-suit need from a tenant, but you might also find it is a good piece of land to start speculative development.

JM: You need to analyze the specifics of your site and where it sits in relation to the competition. Where there is already a supply of smaller units it would be unwise to dilute the appeal of a site that could accommodate a large pre-let by breaking it up for speculative development. Generally speaking, across Europe it is becoming harder to source deliverable large-scale sites, in locations that work for end users, so if through master-planning we can create one of those rare opportunities, that is where we prefer to spend our time. The preparation of those sites is a manageable and controllable technical process that enables value creation that is not predicated on capital markets, economic cycles or the operating environment.

TE: On a risk-adjusted basis, there has been far more appealing value in build-to-suit schemes. That said, we do very granular research in a number of markets across Europe and we are fairly comfortable where most of them sit from a demand and supply perspective, so leaning into some speculative development over the last 12 to 24 months has been shown to be a well-priced risk. Moreover, one of the attractions of the logistics market is that you are exposing yourself to development and leasing risk over a shorter period because warehouses can be built com"Across Europe, it is becoming harder to source deliverable large-scale sites in locations that work for end users"

JAMES MARKBY LCP

"On build-to-suit projects, large corporate occupiers are pulling the real estate market along with them on sustainability"

KRISTOF VERSTRAETEN

paratively swiftly compared with other asset classes.

What challenges do investors in European logistics markets face?

TE: The standard warehouse boxes of five to 10 years ago have been superseded by buildings that are far more sophisticated in their design and specification. That increases delivery costs and means that capital values to build this sort of real estate and the rental levels that occupiers are paying for it have moved on significantly. For investors, it is important to understand to what degree that is caused by inflation in capital values and pricing at this point in the market cycle, and how much is a structural shift because of a change in the nature of the product.

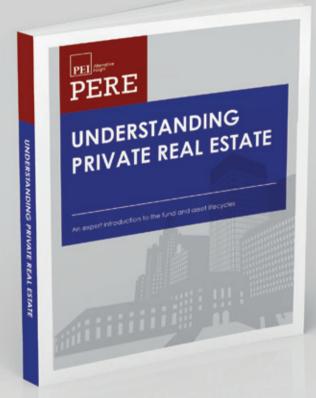
Meanwhile, there is a bifurcation of the demand between smaller last-mile product and large-scale, automated build-to-suit sites. Somewhere in the middle, there is a lot of traditional general warehousing, and it is important to be invested in the right part of the market from both a geographic and a product-type perspective. The other risk we look at closely is something very prevalent in the retail sector - covenant risk. If one is buying long-leased e-commerce-related logistics it is important to bear in mind the covenant strength of the operator and the nature of their underlying business. There are several retailers where you wouldn't rush to buy one of their stores, so you have to be cautious about buying one of their logistics operations.

What are the prospects for the market in the year ahead?

KV: When we have had a good run in the occupier and capital markets for a relatively long period, the logical thing is to be vigilant for signs of it slowing down. Actually, in the last three months of 2019 the evidence has mostly shown the opposite: no slowdown, more projects, more demand, more tenders. We are a bit stronger in the southern European markets of France, Spain and Italy where there is definitely a lot of work still to be done to reconfigure supply chains, while the German industrial sector is slowing down a little bit, so it might become slightly quieter in some northern European markets. In addition to the strong occupier demand, there is still plenty of capital appetite when we exit our projects, and that capital is slowly getting more comfortable with larger and more modern logistics buildings because investors see them as the projects of the future.

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View from the occupier: Logistics' new era



Guest comment by Matthew Wright

Global and regional supply chains are adapting to new realities, and occupiers are making different choices about how they locate, design and operate facilities, says DHL's vice-president development Europe

-commerce has irrevocably changed - customer expectations - they de-_ mand a fast and convenient logistics experience, and as more B2B commerce moves online it will demand the same service. In order to meet these expectations, supply chain real estate has polarized - ever larger fulfilment centers in nationally or regionally strategic locations, supplemented by smaller last-mile facilities on the periphery of large conurbations. Decisions on where to locate facilities, in order to meet heightened expectations, will be limited by land availability. In large conurbations, where land availability is most limited, multi-story facilities may become more viable and logistics could displace other alternative uses.

Sustainability will become a mandate to operate in the logistics industry. Governments, cities and operators are committing to cut emissions and waste. Logistics operations are a major generator of emissions and therefore offer huge potential to capture savings. There will be greater focus on the life cycle of a facility - how the construction is sourced, what initiatives the building specification includes and how these benefit the future operation. The funding of these initiatives is currently shared between developer and tenant. Many of these initiatives have value beyond the initial lease term, reducing future voids, but we have yet to see this reflected in investment valuations.

"While automation will impact significantly on logistics, people still matter"

Impact of automation

Digitalization will see greater adoption of technology to optimize operations and improve service levels. Logistics facilities are becoming increasingly automated with a consequent impact on building specification. Automation is driving a trend toward higher buildings to achieve greater pallet capacity and productivities. For example, DHL is currently developing a 538,195 square feet facility in the UK, which has a minimum clear height of 18 meters and part 28 meters clear height to accommodate an automated high bay. The operational height, racking and material handling equipment require a more exacting floor slab tolerance in terms of flatness and load-bearing capacity. Greater automation requires greater power supply, and when availability is limited the lead time to bring power supply forward is protracted.

While automation will impact significantly on logistics, people still matter. Technology will aid repetitive and highly physical tasks, enabling people to undertake more meaningful tasks that require management, analysis and innovation. An available source of skilled labor will remain fundamental to the choice of location. In an era of high employment, we are seeing the definition of prime locations blur or change. In the face of transient employment and strong competition for labor, occupiers could be tempted to move away from more established locations.

All of the trends discussed here will generate greater obsolescence in buildings. Occupiers will migrate toward more modern facilities as they seek to maintain and capture market share. A two-tier logistics real estate market will develop. This will not be the age of your father's shed.



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KEYNOTE INTERVIEW

Europe's e-commerce boom has only just begun



Transformation of the region's logistics infrastructure to support online shopping habits still has a long way to go, creating new development opportunities in established markets, says Panattoni Europe's Robert Dobrzycki

The European logistics real estate market has never been hotter, with a wide variety of local and global investors clamoring for assets to fulfil their allocations. Much of that sentiment can be credited to consumers' increasingly enthusiastic embrace of online shopping, which is necessitating the construction of a new breed of fulfilment centers.

US-headquartered developer Panattoni established its European platform in 2004 and has since built up a formidable reputation for delivering logistics buildings in central Europe, Germany and the UK. Panattoni Europe chief executive officer Robert Dobrzycki explains to PERE's Stuart Watson how the company is hoping to ride the e-commerce wave into other European territories.

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Why is this a good moment to expand your European business?

E-commerce is transforming the logistics business everywhere, Europe included. Not only is it driving demand among our customers as their online business expands, but also demand from investors. Because of the e-commerce story they see logistics as probably the best real estate asset class right now in terms of the supply-demand fundamentals and potential future growth, so they are increasing their allocations to the sector.

The structural shift that is favoring our sector is taking place at the cost of tradi-

tional retail, and e-commerce logistics is emerging as a new form of retail asset. We are no longer just an industrial developer, but also an e-commerce retail development company.

Despite it being pretty late in the real estate cycle, the increased occupier and investor demand we are seeing in the markets where we are already established suggests to us that this is the right moment to expand into new geographies. When Panattoni set up its European business we focused mainly in central Europe because we saw demand in the region being driven by logistics for manufacturing and by access to cheap labor. The driver for expansion into western Europe now is not production, but increased consumption based on the growth of e-commerce. Of course, western Europe is a mature and stable market, but the whole retail supply chain is changing because of the growth of e-commerce. From that standpoint it could be considered an emerging market, so that makes it a favorable time for a development company like us to enter it.

We are already developing in the UK and Germany and are expanding into the Netherlands and Spain. In the future we will look at France and Italy too. E-commerce retailing will grow throughout Europe, but it will do so fastest in western Europe where consumer spending is stronger. We are developing more logistics space in Europe than any other developer now, with an operation and a set of client relationships that we can lever to push into western Europe on the back of e-commerce-related growth.

What prompted you to start with the Netherlands and Spain?

Even though it is not a very large country, the ports of the Netherlands and its central location within the west of the continent make it the gateway to Europe. Logistics facilities in the Netherlands often serve other European countries as well as the domestic population, and that strategic hub status makes it an important market for any logistics developer. Land supply is tight, prices are high, and there is already a lot of competition, so it is not the easiest market to enter.

On the other hand, many of the developers are local rather than international players, so by virtue of being a large cross-border business we will be able to access demand from non-domestic customers and investors that would like more exposure to that market. We are in the process of hiring a local team there, because having boots on the ground is always desirable, particularly when you are looking to secure land.

A brownfield strategy – acquiring older sites, improving their situation and demolishing buildings – could be an effective approach there. However, it is important not to be too rigid in approach, but instead to match the opportunities that arise to customer and investor demand.

There is also relatively little competition from other international developers in Spain, but unlike the Netherlands, logistics operations there tend to be more focused on serving the domestic markets of Spain and Portugal. Panattoni's customers in Spain may well be global e-commerce businesses, but they will generally be serving local consumers.

Amazon delivery

Online retail giant demonstrates continued appetite for Polish logistics

If further proof were needed of the rapid growth of e-commerce logistics in Europe, the fact that Panattoni developed no fewer than three huge distribution centers for Amazon last year in Poland alone would put the matter beyond doubt.

The three developments comprise a 645,840 square foot fulfilment center in Bolesławiec, a building of 484,380 square feet in Łódź, and a 2.26 million square foot leviathan in Gliwice, bringing the total number of large-scale projects that Panattoni has undertaken for the e-tailing giant to eight.

The Gliwice building, which was completed in September, has four storeys and includes 80,000 square feet of office space. Developed on a plot of 56 acres, the building measures 317 meters long, 182 meters wide and 26.7 meters high, with a floor area as big as 29 soccer football fields. It will help Amazon to service growing demand, increase its product selection and support more third-party sellers.

All three projects were forward-funded by the same unnamed US institutional investor, which is also providing capital through a joint venture arrangement for the roll-out of a program of smaller last-mile distribution centers for Amazon in Germany, with three developments completed and three in the pipeline.

"We feel that is just the start," says Dobrzycki. "All over Europe, large e-commerce customers are choosing to locate large warehouses close to the labor force while also acquiring last-mile facilities near to consumers."



Building big: the huge Gliwice Amazon fulfilment center is as large as 26 soccer fields

The market is already quite active in Barcelona, Madrid and Valencia, but other cities that will generate e-commerce demand are not yet so well covered. We find clients by following the population and consumption, then the investors will follow.

We will aim to establish our business in those two countries in 2020, and while we do that look for people to help us to expand



into Italy and France. For the new expansions we will work with a number of strategic investment partners in the same way as we have done in the UK and Germany, however we try to keep our balance sheet healthy enough to pick up opportunities that come along which might not fit our joint venture strategies, but which smaller local players might find difficult to execute.

With logistics real estate in such high demand, are the established European markets looking overheated?

Germany is still perceived by investors as the most attractive European logistics market. It has the largest population, highest consumption and a strong manufacturing base, as well as being centrally located in

Analysis

Europe. However, it is very competitive in terms of investor demand. Almost everyone is trying to play in that market.

Investors unable to acquire at the right price in Germany and western European markets are looking toward central Europe, where in many cases the users are serving consumers in Germany and other parts of western Europe anyway, but from more cost-efficient locations where there is better labor availability, like Poland and the Czech Republic. There can be a yield differential of 150 basis points between fulfilment centers on either side of the German-Polish border, even if they are operated by the same company and serve largely the same market.

That is an investment opportunity because the yield differential doesn't make a lot of sense when the investment on the eastern side of the border is actually likely to have greater appeal for potential occupiers. We are seeing a lot of Asian money going into central Europe and trying to acquire product at those more attractive yields.

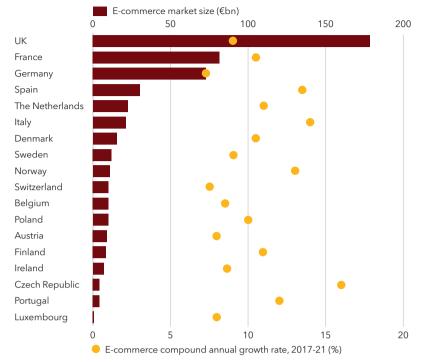
There is some caution among investors, but many of them think that even if it is late in the cycle this asset class is probably the best one to invest in at this stage. Looking at interest rates and how returns for alternative investments compare, investors have to place some money in real estate, and there is no better real estate asset class to be in right now than logistics because of the momentum provided by e-commerce.

There may be a broader economic slowdown – we see that happening even now – but in our view and that of our investors, logistics is perfectly positioned to weather a downturn. This is what we are seeing in the UK right now. Brexit uncertainty has delayed business decision-making and weakened the economy, but e-commerce has hardly been affected at all.

Are investors becoming more comfortable with specialized e-commerce logistics assets?

An increasing number of occupiers are using large, highly-automated multi-level buildings, so to an extent the asset class is becoming more standardized, but they are still regarded as a bit specialized in terms of their appeal to a broad spectrum of occupiers. There are features around these assets that can help investors to be comfortable with them, though.

Developers can mitigate the risk by asking for longer leases, while the amount



Business to consumer e-commerce market value 2021

Source: JP Morgan 2019 Payments Trends - Global Insights Report

of investment that e-commerce businesses put into those buildings, together with the difficulty of recruiting and retaining labor, makes it unlikely that occupiers would choose to move. With the last-mile facilities there is less of an issue. Because they are located within city boundaries, it is hard to imagine those locations losing value.

Does European logistics face any challenges? What will be the dominant industry trends in 2020?

Shortages of land can present a challenge, and in some markets obtaining building permits is also starting to be difficult because planners dislike the unfriendly features produced by logistics buildings such as in-

"We are no longer just an industrial developer, but also an e-commerce retail development company" creased traffic. But given how much more labor e-commerce utilizes than standard logistics that is the key challenge.

Occupiers' biggest fear when selecting a location is that there might not be enough labor. They will often prioritize that over the specific nature of the building.

Sometimes automation can provide the answer, but in many cases it helps, but does not entirely solve the problem. Labor is driving where customers will locate and therefore determining what will be the strongest locations over time.

There will be a huge wave of last-mile developments in western Europe. We are already seeing that in the UK and Germany as e-commerce retailers reconfigure their supply chains to serve their customers more efficiently.

I cannot imagine that yields will compress further in Germany – returns there will be driven by rental growth – but there may be some cap rate compression in Spain, Italy and central Europe because the appetite for the asset class will only increase. Asian investors will continue to be present in Europe trying to acquire logistics property. In the UK, there could be a bit more certainty next year so we may see more customers outside the e-commerce sector signing leases.



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Getting smarter with logistics



Finding value in logistics is not just about large 'big box' assets but increasingly urban and 'last-mile' facilities, says Allianz Real Estate's head of business development

he profound, ongoing growth of e-commerce and the need for ever smarter supply chains means the global logistics sector continues to offer significant growth opportunities for yield-focused, long-term real estate investors.

Consumers and businesses are clearly enjoying the benefits of new distribution infrastructures – Amazon-announced net sales increased 24 percent to \$70 billion in Q3 2019 versus Q3 2018. The rise of competitors such as Alibaba and Reliance Industries, both in their domestic markets but also on the international stage, underscores the ongoing need for sophisticated logistics facilities globally and the role that investors can play in catering for that demand.

Moreover, as the market has evolved and matured, the need for different types of logistics facilities with ever-more-sophisticated technological capabilities has also expanded – the focus is not just the 'big box' sites that can handle large volumes of goods but also the 'last mile' and urban depots that can get these goods to their destination more efficiently and quicker.

Urban outlook

Urban centers have, in particular, become a highly attractive investment sub-class in recent years fueled by the expansion of e-commerce. Urban logistics' share of the total supply chain costs can be more than 50 percent in Europe, making it a priority for those seeking to gain a competitive advantage.

There has been, and will continue to be, strong demand in this area, with the redevelopment of existing buildings – including retail assets – a core part of the investment "High-tech centers and last-mile facilities will likely be important catalysts driving the sector forward" narrative. This can include the redevelopments or deep refurbishments of current sites in main cities and/or participation in large mixed-use redevelopments including housing, logistics facilities and even retail. Logistics has become a very hands-on asset class.

While there is a real lack, still, of land available for logistics purposes, in particular for extra-large developments in main logistics corridors, high-tech centers and lastmile facilities will likely be important catalysts driving the sector forward as we look to the next decade. For many investors, there is a focus on the sub-sectors in the industry as a means to maintain the growth momentum.

Allianz Real Estate has itself materially increased its allocation to the logistics sector over the past few years and expects to expand its footprint in select markets through direct and indirect strategies. Our logistics AUM increased from $\notin 5.7$ billion to $\notin 6.6$ billion – an increase of 20 percent – in the six-month period to end of June 2019, accounting for around 10 percent of our total global growth portfolio of $\notin 67.1$ billion.

European AUM increased 12 percent, US by 4 percent and Asia-Pacific by 71 percent. In addition to widening its footprint across Europe, Allianz will look to diversify its logistics portfolio, striving to provide stable cashflows for stakeholders.

Overall, Allianz believes logistics demand should remain stable while strengthening the undersupply constraints, which is in line with the firm's mixed investment strategy incorporating core, core-plus and development-to-core. This will provide income to secured assets while creating value to improve the average return.

KEYNOTE INTERVIEW

Germany still provides opportunities for smart investors



With elective acquisition and intensive asset management, capital providers can make attractive returns in German logistics – even amid tight land supply and waning cap rate compression, argues GARBE Industrial Real Estate's CEO Christopher Garbe

Over the past 25 years GARBE Industrial Real Estate has become established as one of the leading players on the German logistics scene, developing into a fully integrated platform which develops projects, provides property and asset management services, and manages investment vehicles including funds, joint ventures and separate accounts. Chief executive officer Christopher Garbe shares his local knowledge on how to navigate Europe's hottest and tightest logistics market with *PERE*'s Stuart Watson.

What is the best way for investors to access the German logistics market right now?

Investors that want minimal risk, and are willing to pay high prices because they believe logistics assets are inexpensive compared with offices, can pursue a core strategy

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and buy direct together with a good advisor. For all strategies with higher risk profiles from core-plus upward, we would strongly recommend that investors team up with an experienced specialist manager via funds or other means of indirect investment like club deals and separate accounts. If an investor wants to take development risk then they should probably form a joint venture with a manager that is taking a considerable equity share to ensure their interests are aligned. This is a time when many investors are focused on active asset management and development because they are aware that pricing is way above its previous peak and they cannot rely on further capital growth.

Will the keen investor appetite for the sector continue?

While prices are quite steep, the positive factor with logistics is that, so far, we have not seen a lot of rental growth. Rents have only really begun to increase over the last 12 to 18 months. Vacancy in the sector in Germany stands at around 2 percent while e-commerce is continuing to drive activity. That gives me confidence that investors are not overpaying because there is still potential for considerable rental growth. By contrast, the office market has already seen a lot of rental growth and yield compression, so I would be more worried about what will happen in that sector if there is a downturn in the market.

The yield gap between the office and logistics market used to stand at about 200 basis points. That has closed to around 100

basis points. The difference in build cost and underlying site value between office and logistics buildings explains why office rents and capital values are higher, but not why there is a difference in the yield. In the past, the argument was there was no real rental growth to be had in logistics, but due to the unsatisfied demand generated by e-commerce, that is no longer true. Many logistics buildings also form part of an integrated supply chain, which means occupiers are very unlikely to move out, and gives the assets infrastructure-like characteristics that make them a more robust investment. By acquiring logistics and industrial assets, investors are not only buying real estate, but also investing in megatrends like e-commerce, digitalization and automation.

There are also German-specific factors that make the country a potent logistics

Rents ready for take-off

Logistics rental growth in Germany has picked up only recently, leaving scope for further increases, suggests Christopher Garbe



Good as new

Lidl portfolio: creating investment opportunities in tight markets

In April 2018, Garbe acquired six warehouses for €59 million on behalf of its core plus Garbe Logistikimmobilien Fonds Plus (GLIF +) fund from discount food retailer Lidl. Located close to German cities, five of the buildings were built in the 1990s and one in the 1960s. Three were vacant and the remaining three were occupied on short-term leases. The following year Garbe let five of the properties to Amazon and one to a logistics company on terms of five to 10 years. The portfolio is now valued at €110 million (\$ m), an 86 percent increase.



hub. The Deutsche Mittelstand provides the economy with a really strong backbone of medium-sized companies focused on light industrial and manufacturing, and those always require a substantial supply of space. Then because the country is in the middle of Europe you can conduct logistics activity across national borders from a base in Germany. Germany also has a good supply of skilled labor, and it benefits tremendously from being in the euro. If the country had its own currency then it would be valued very highly, which would be a show-stopper for exports. I think we will continue to see further rental growth and demand for space remaining stable. The period of yield compression will come to an end. Right now, the cost of capital in Germany is extremely cheap, but in future the banking market may become slightly less favorable to real estate, bringing an end to the exponential growth in investor demand we have seen in recent years. Instead, the market will become more stable.

What challenges do investors face in current market conditions?

There is a lot of competition in the German market with many local and international investors looking for investment-grade product while supply is limited by a lack of available land. The German government's sustainability agenda 2020 aims to reduce the take up of greenfield land from 130 hectares per day to 30 hectares per day by 2020. That target will be missed, but the land take has been reduced to around 60 hectares per day and will fall further. Because of that, municipalities are unwilling to allocate their limited supply of development sites to logistics use, which tends to consume a lot of land while generating traffic and CO2 emissions, and provides few skilled jobs and sometimes little tax revenue.

Therefore, it makes sense to buy existing sheds, even older ones, and brownfield sites can be converted to industrial use. Those assets have a great risk/return profile, but to access them you need a good manager that knows the sector and has people on the ground. The rising prices paid for industrial space help to pay for the added expense of redevelopment. However, sometimes we buy a building with the intention of demolishing it and find that there are potential tenants that will pay almost as much as they would for a new shed, so long as it is in a good location.

Analysis

Committing to memory

GARBE enters data center market

In October, GARBE launched a joint venture with Munichheadquartered data center specialist NDC Data Centers to provide a replicable data center model for the European market. NDC-GARBE Data Centers Europe aims to attract custom from hyperscalers such as Amazon, Google and Facebook, as well as co-locators, wholesalers and large corporations. It will develop buildings using NDC's technology, which can produce energy savings from cooling of 90 percent and cut CO2 emissions by up to 30 percent.

Christopher Garbe says: "Increasing demand for IT capacity is in conflict with dwindling natural resources. Based on GARBE's project development experience and access to land on the one hand, and NDC's patented and verified technology concept, which reduces construction time and energy consumption, on the other, we anticipate great development potential."

The joint venture has secured sites near Frankfurt, Munich and Berlin, as well as in northern Sweden. "The investment

Technology, artificial intelligence and automation are disrupting the logistics space, as they are all real estate sectors. How can portfolios be future-proofed to respond to tenant demand?

Contract logistics and general forwarding still require about the same type of building as they have for the last two decades, with automation driving up the need for more electric power and better internet access. Sheds have also tended to get bigger – footprints of up to 1 million square feet (100,000 square meters) are not unusual anymore, and buildings are also higher. However, demand will continue for standard buildings with some details adapted for local markets.

E-commerce is a true game changer, with volumes growing exponentially and vast amounts of money being invested in research into technology and fulfilment processes. These buildings have undergone a much more rapid evolution. Only a short time ago, e-commerce sheds were basically large boxes housing relatively simple processes with a low level of automation and requiring large numbers of unskilled manual workers, but in a matter of years most human labor in pick and pack-processes will be replaced by robots. The true value of the real estate in this segment does not lie in the building or its versatility, as e-commerce is profitable enough for operators to invest in

"There is a lot of competition in the German market with many local and international investors looking for investment-grade product while supply is limited by a lack of available land"



commitment for a data center is a lot higher than for a logistics building, so to develop them we need investment partners from more or less day one onward, but when completed they are an attractive asset with a 10 to 15-year contract, often to a bluechip company like Google or Amazon," adds Garbe. "To begin with, we are likely to look for investment partners on a projectby-project basis, and then when we have built up that side of the business, we may look for a strategic partner."

> adapting buildings out of their own pockets. The true future value of a plot of land lies in the permission to handle intensive traffic and build relatively high.

> That poses a particular challenge in many urban areas in Germany, and our answer to that was to design a multi-level hybrid building, the GARBE Cube. In order to convince city councils to permit some logistics space, the two or three-level building is masked by building light industrial and office space on two or three sides and on top. This drives up the number of jobs and also the municipality's tax revenue per square meter while keeping rents payable for logistics tenants.

> Emissions of all sorts are key to the future value of property. We try to buy land and assets with permits allowing plenty of traffic and always make sure not to endanger the permits when tenants or their processes change. We also use every opportunity to beef up electricity supply and internet access. Even in a country with comparatively well-developed digital infrastructure like Germany the quality of internet access - or lack of it - sometimes cools down the interest of potential tenants in a property. It is also essential not to design sheds, multi-level or single-story alike, with too many specific features. Despite all of the technology in use nowadays, industrial buildings will remain a shell to house constantly changing processes.

Last touch, but out of reach?

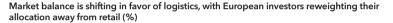
Investor appetite for last-mile logistics is at a peak, but assets are hard to find. Stuart Watson reports on the factors shaping investor strategies in an emerging sector

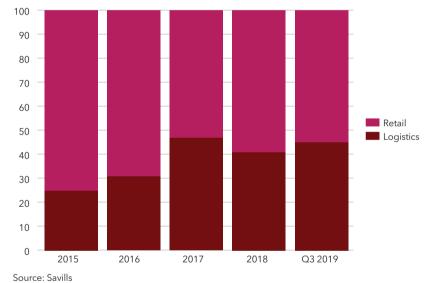
-commerce is one of the defining economic trends of the era, and it is driving a voracious demand for last-mile logistics. "We are having an urban logistics boom," says Tim Wang, head of investment research at Clarion Partners, which manages 170 million square feet of logistics space in the US. "Consumer expectations of faster delivery are getting pampered by e-commerce companies like Amazon. As a result, everybody wants their warehouse to be closer to the end consumer, as well as a larger pool of labor."

And where occupiers go, real estate investors will follow. "Investor appetite for last-mile is unquestionably the most intense expression of appetite for any sub-class within the logistics sector," says Jack Cox, head of EMEA industrial and logistics capital markets at CBRE. "It is the white heat of the flame and there are good reasons for that. Logistics assets located within and around the urban curtilage outperform in rental growth and total return large format logistics assets in more distant locations."

But there is a major obstacle facing both investor and occupier aspirations: land supply. Urban logistics makes most sense in densely populated areas where journeys are slow and proximity to the customer is vital to support fast delivery. In those locations, sites are already scarce, expensive and subject to a number of competing uses, many of which are far more appealing to municipal authorities and surrounding residents than traffic-generating sheds.

Within that dilemma lies a part of the key to its solution, argues Marcus de Minck-





witz, director of the omnichannel group at consultants Savills: "Real estate cost as a proportion of total cost in a standard supply chain is only about 5 percent, while the big costs are transport and labor. If you can get a warehouse in a location where you are making big savings on transport, you can afford to pay a much higher rent. That is important because it means that the values for logistics use will compete with other uses in those locations."

Limited locations

Nonetheless, it is currently very difficult for investors to invest at scale in last-mile property. The viability of the asset class is limited to just a few locations, says Chris Caton, global head of research at logistics platform Prologis: "It is only the top dozen cities in the world that are really qualified for lasttouch facilities because they have the density and customer base to demand this kind of solution where occupiers are willing to pay for it."

Meanwhile, he adds, the scarcity of lasttouch property predates the rise of e-commerce by decades. "Logistics real estate development has been focused on delivering the next parcel of land on the periphery of cities, so there is a lack of quality product to support demand. Among our last-touch customers there are e-commerce retailers, but also a whole range of activities that make city life possible, like food and beverage companies, construction materials and furniture goods – there is a wider range of customers for the product type than is appreciated."

For big investors like Allianz Real Estate this is "a difficult segment to source," admits European head of business development, Kari Pitkin. "We are looking at urban logistics funds rather than direct investment to get into the last-mile sector, because it is generally smaller investment tickets. An urban logistics facility could be a €10 million ticket, so we need an operating partner to source those kinds of smaller assets. We are still in the process of finding the right manager and we have been evaluating lots of urban logistics strategies, although we do already have exposure by investing with Prologis and Blackstone funds," she says.

Developers experimenting

Like many aggregators of logistics property, CBRE Global Investors has tended to access the asset class by acquiring larger facilities which lie outside urban areas, but are nonetheless close enough to deliver goods into cities, says head of EMEA logistics, Philip Dunne. To source inner-city facilities, investors will rely on forming relationships with developers, he suggests. "It is the development sector that will change the landscape first by securing more brownfield land or repurposing existing real estate to develop the product that will support that element of the supply chain. We are seeing lots of developers experimenting and collaborating with occupiers to figure out how they can solve the supply problem."

As logistics values rise and retail values fall, underutilized retail space would appear to be an obvious target for developers. "With the distress we are seeing in retail the day when that becomes a reality is drawing ever closer," predicts Cox. "The issue has been the planning risk because of local authorities' outdated view that logistics does not create jobs and is noisy dirty and creates congestion."

Wang says he is aware of six US malls being redeveloped for logistics use. Clarion acquired the Burlington Center mall in New Jersey in 2019 and is working up plans to demolish the existing buildings and replace them with 1.8 million square feet of distribution space. "It will take lots of capital and at least two years to do that, but we really like the locations and major e-commerce retailers are willing to pay higher rents for the right locations with access to their end consumers," he says.

In London, Prologis was among the first developers to buy an existing shopping location with a view to redeveloping it for logistics space, when it purchased a retail park in the northern suburb of Edmonton from M&G Real estate last year. In the UK capital, the trends that have driven the need for last-mile logistics close to consumers are particularly pronounced, and the city has also seen office and residential land snapped up by logistics developers. In 2019, Prologis



PHILIP DUNNE CBRE Global Investors bought land adjacent to the Stockley Park suburban office park in west London previously earmarked for office development. It is also planning a "vertical Prologis Park" at Bow Road in east London, within a multi-level historic warehouse building, which will also include media and creative activities and community facilities. Meanwhile, GLP-owned Gazeley is proposing to build a 436,000-square-foot, three-story urban logistics hub on a former housing plot in the city's Docklands area.

Rifle shot situations

Caton describes repurposing of retail sites as "very rifle shot situations" that only emerge where retail is situated close to distribution corridors, however. Instead, he believes the dominant trend will be the redevelopment and intensification of existing industrial areas. "The classic model will be where a developer replaces an industrial building with a logistics one, or a single-story building with a multi-story one," he predicts.

While multi-story buildings are common in Japan, Hong Kong and China, they have rarely been developed in Europe or the US, but rocketing land prices and rents are supporting the business case for building higher. "There is a multi-level warehouse being developed right now in Brooklyn and similar developments in Seattle and San Francisco. That is the only way to justify the very high cost of land in some dense urban locations," says Wang. Meanwhile, London-listed industrial REIT SEGRO has built Paris's first two-story warehouse Air 2 Logistique, letting it to furniture retailer IKEA and French home improvement chain Leroy Merlin.

"There are reasons why the Japanese model will not cut-and-paste to other markets related to the cost of construction and the size of the trucks, which are smaller there," says Caton. "I think the Chinese model is more appropriate where you tend to see two or three-story buildings in a wide variety of sizes."

He cautions investors to give careful thought to their approach to what is still an emerging asset class. "This is a new category and even the logistics operators themselves are still sorting out what they want. Investors will need to be very informed about customers' priorities, the locations they want and the building features they need, so there is a risk that there will be some challenged strategies."

KEYNOTE INTERVIEW

Following the occupier's lead



Oxenwood Real Estate co-founders Jeremy Bishop and Stewart Little explain why they are tracking tenant demand into urban logistics and continental European markets

Oxenwood Real Estate, the London-headquartered specialist logistics investment manager co-founded by Jeremy Bishop and Stewart Little, is now a little over fiveyears old, and the business is poised to enter a new, expansionary phase. In March last year, the firm agreed a £200 million (\$261 million; €234 million) capital increase from its long-time investment partner, Bermuda-based Catalina Holdings, to fuel Oxenwood's drive into value-add investing and fund further forays into continental Europe. PERE's Stuart Watson asks Bishop and Little to explain their new direction and evaluate the prospects for the UK and European logistics markets.

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Why is this a good time to go higher up the risk curve and do more value-add investing?

Jeremy Bishop: The change of approach is tenant-driven. As retail becomes less about bricks-and-mortar and more about e-commerce, occupiers still have a tremendous amount of work to do in adapting and perfecting their supply chains, and we want to be able to generate returns for our investors by supporting them to do that. We started the business doing investments in tenanted buildings and have gradually gone up the risk curve by buying shorter leases and extending buildings. When it came to re-upping with Catalina Holdings, we suggested to them that this was a good time to do some slightly higher-risk opportunities.

The free return from market movement in favor of investors has expired. Now, to generate decent returns you have to look at development profit and/or income growth. For investors that will take on a little more risk, we think those return criteria can be generated from the more urban and fringe-urban middle and final-mile assets supported by growing online sales. In the main, the capital provided by Catalina is core or core-plus, but we have a sleeve which is less defined, and which allows us to do value-add and create returns through development.

We also have a value-add relationship with another capital partner, Aimco, and we are seeking to further diversify our sources of capital to do more capex-intensive repositioning projects. Investors like logistics real estate because of the income growth it provides, particularly in the urban segment, and the structural tailwinds mean they are willing to take the risk for value-add returns.

Stewart Little: Where we have had conviction in markets, we have found ourselves comfortable taking on vacancy, building extensions and developing new space. In the last two years, smaller buildings in more urban, more liquid locations have benefited from higher rental growth and greater demand. There are more occupiers seeking buildings of around 100,000 square feet than there are wanting 500,000 square feet, so our focus has shifted.

We are currently building our first speculative development, a 75,000 square foot unit in Warrington, near Manchester. That is a manifestation of how our strategy is evolving, to focus on more liquid markets by size and by geography. We are still invested in larger buildings – we will acquire them if that is what occupiers want – and we continue to look at the strategic land market, but the gravitational pull is toward meeting the needs of occupiers with smaller buildings in urban areas.

How are changing occupier needs shaping locational decision-making?

SL: The need for power is becoming ever more relevant in the location choices occupiers make today. It now sits alongside labor availability at the top of their list. Some of the locations in the south of England and the Midlands, which have been established investment destinations for 20 years, are short of power and labor. In areas where we have previously seen heavy industries, like coal mining, there are large sites with latent power supply and labor that is accustomed to shift work, so we might see those becoming tomorrow's locations for the first-mile national or regional piece.

In the last-mile market, occupiers need to get as close as possible to consumers to fulfil expectations about delivery times, but power supply will become more important



Case study: Weybridge, Surrey

Value-add repositioning for e-commerce

The Surrey town of Weybridge lies just within the M25 orbital motorway to the south west of London in the sweet spot for commuters into Waterloo Station, and also for logistics firms looking to serve that quadrant of the UK capital. In June 2019, Oxenwood's joint venture with Catalina Holdings paid £16.4 million (\$21.4 million) to buy an 80,000 square foot warehouse from occupier Northamber, a distributor of IT equipment.

The tenant will remain on a short-term lease while Oxenwood secures planning permission to extend the unit by a further 40,000 square feet before it is refurbished and re-let. "That plays into our urban logistics strategy," explains Little. "We expect to pre-let the building before the refurbishment is complete to household-name occupiers looking to serve London for last-mile e-commerce. We have been surprised by the degree of interest and we expect to be able to increase rents by around 30 percent from our underwriting expectations."

"The free return from market movement in favor of investors has expired"

JEREMY BISHOP

there too. Diesel and combustion engine delivery vehicles will be hit by increased taxation or outright banning, so more power will be needed for electric vehicles as well as automation. That will affect calculations about which are the optimum locations.

What are the prospects for the UK logistics market in 2020?

JB: Some investors were very wary of the UK in 2019. I am a Brexit optimist because even in the few weeks since the election I feel that the appeal of the UK to outside investors in real estate has changed profoundly and logistics real estate prospects remained largely uncoupled from the overall sentiment.

A trade agreement with the EU still needs to be concluded, but the UK is much stronger economically than it has sometimes been given credit for, and I think it will respond very well to having a government with the ability to get things done. Since 2010, we

Case study: Radzymin, Warsaw

Capturing yield compression in Poland

In October, Oxenwood made its debut purchase in Poland, acquiring a 91,500 square foot courier delivery center newly developed by Panattoni and occupied by DHL Parcel Polska on a 10-year lease for \in 13.5 million (\$15 million). "We like the fundamentals of Warsaw and the growth in back office functions there. That will be the type of activity that drives e-commerce demand, so to have a DHL parcel facility servicing north Warsaw is good business," says Little.

The acquisition was made at a yield of around 6.25 percent. "Poland is a market where yields are very attractive relative to those in neighboring Germany. Near Berlin you would probably have been buying that building at around 4 percent, so that is 200-plus basis points of arbitrage," he adds. "Even in the comparatively short period we have owned it, we have seen significant yield compression."

It is unusual for Oxenwood to underwrite cap rate compression in today's market, says Bishop, but in this case, we felt that there was sufficient investor demand to do so. "It is probably the only building in our portfolio over the last 18 months where we thought there may be some yield compression as a contributor to our forecast return. Some of the others have seen some yield shift, but this has been principally a function of our value-add initiatives, lease extensions for example."



have mostly had coalition or minority governments, which have found it difficult to act decisively. I believe that the UK is going to become a better place for business and I expect the emphasis on Brexit to subside.

SL: The confidence of international logistics operators in their ability to provide justin-time delivery across the English Channel has been fractured since the referendum. As a consequence, there has been a shoring up of supply chains, and the sector in the UK has benefited from that as occupiers take on more space for stockpiling and inventory management.

That will continue to support demand over the next year or two. However, where there is a perception of very strong demand – 2019 will see the biggest take-up in the sector ever in the UK – there is always a risk of over-development in some areas or size brackets, and unguided capital can sometimes slip up on that risk of oversupply. Logistics is shielded to some degree from the difficulties of the retail sector because many tenancies are third-party logistics operators with retail contracts underneath, but there must be some risk of contagion coming into the logistics sector.

Why are you looking to expand your continental European holdings?

SL: Many investors and occupiers look at logistics on a pan-European basis. Our continental European strategy is based on the opportunities that arise through occupier relationships. For example, one of the occupiers in our UK portfolio has asked us to help to source two locations on the continent.

JB: We don't propose to do development in Europe just yet. The strategy is about taking tenant relationships and deploying them into income-producing assets. We are not trying to conquer the entire European continent in a day. So far, we have been focused on Germany and Poland, with an opportunistic acquisition in Dublin. It is possible to obtain some very favorable pricing on financing for German assets, and we are making a major effort to build up our holdings there.

It will remain a stable, low interest-rate environment for underwriting investments

in both the UK and Europe. I hope there will be some growth in the UK that may give rise to interest rate increases. In Germany, there are negative interest rates on fixed-income instruments, and while I do not like to predict further cap rate compression, that might just happen in Germany. However, you have to ask if there will come a point when real estate investors say: "No, it does not matter what the arbitrage with fixed income is, yields are low enough for an illiquid asset like real estate."

SL: If yields are still falling, investors must believe there will be growth in rents. E-commerce has not yet really taken off in continental Europe in the same way as it has in the UK.

As a consequence, there may yet be huge growth in online consumption in Germany, France and Spain in particular, which will drive the need for the sector to provide new space in markets where there has hitherto been little speculative development, and will support rental growth. That might prompt further yield compression as people identify and buy into that growth story.

How European logistics bounced back



CBRE's senior director, industrial and logistics, EMEA capital markets, casts an eye over the region's recovery

f we assume 2009 to be the bottom of the cycle (which it generally was other than for Spain), over the past decade capital values have more than doubled in local currency in four of the five markets. The exception is Spain, because the market didn't bottom out until 2013 in capital value terms.

France, for which we are using Paris, has actually seen the highest value increase at 148 percent, or 9.5 percent per year, as it has seen the sharpest yield compression in the period and the second-highest rental growth. London has seen a 113 percent rise in capital values, partly because the market did not bottom out until 2010 and partly because yields peaked lower than elsewhere at 6.5 percent in 2009.

European logistics data

Net initial yields (%)	2009	Q3 19			
UK	6.5	4.0			
France	8.0	4.2			
Germany	7.3	3.7			
Netherlands	7.4	4.2			
Spain	8.5	5.0			
Prime rents*	2009	Q3 19			
UK	1.1	1.5			
UK France	1.1 4.8	1.5 6.2			
France	4.8	6.2			
France Germany	4.8 6.3	6.2 6.8			

Source: CBRE

Over the last nine years (2009-18) takeup across the top 10 markets has increased 155 percent, or 11 percent on average per year, from 107 million square feet to nearly 280 million square feet, despite a dip during the eurozone crisis in 2012-13. There has been an even stronger recovery in new completions, especially in the last three years.

New supply has risen 15 percent a year over the nine-year period to 161 million square feet in 2018. Nevertheless, the average vacancy rate has fallen from a peak of 9 percent in 2009 to just 4.4 percent in Q3 2019 and in 2018 take-up covered new supply by 1.7x.

On the face of it, third-party logistics was the largest contributor to demand for space

10-year rental growth (%)	CAGR	Total			
υк	2.8	31.3			
France	2.6	28.8			
Germany	0.7	7.0			
Netherlands	1.7	18.2			
Spain	-1.7	-15.4			
Capital values*	2009	Q3 19			
Capital values*	2009 17.2	Q3 19 36.6			
UK	17.2	36.6			
UK France	17.2 60.4	36.6 149.9			
UK France Germany	17.2 60.4 87.6	36.6 149.9 183.8			

*€/sq ft per annum

in the five largest markets in 2018, with 43 percent of the total. At the same time, pure play e-commerce was 14 percent of the total and retail was just 8 percent. However, this understates the total demand from both e-commerce and retail, as the transport and logistics category will include some contracts for e-commerce retailers. Similarly, trade and wholesale is likely to be largely retail related, taking that total to about 19 percent.

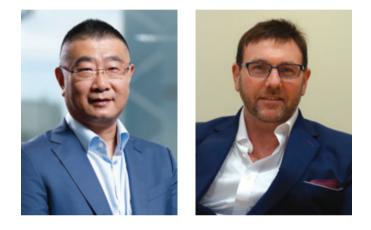
We would expect the e-commerce total to continue rising as e-commerce penetration of retail increases across Europe. In the UK, e-commerce accounted for 32 percent of total take-up in 2018 and internet penetration in the UK, at about 18 percent, was twice as high as in Europe.

Take-up by sector, 2018 (%)



KEYNOTE INTERVIEW

Priming the Asia-Pacific logistics market



So compelling is the growth story in Asia-Pacific logistics that developers are hard- pressed to create assets to meet investor appetite, say ESR co-founders Jeffrey Shen and Stuart Gibson

On November 1, 2019, APAC-focused logistics platform ESR completed a \$1.8 billion flotation on the Hong Kong stock exchange. "There are several advantages to being a public company," explains Stuart Gibson, who leads the business alongside fellow co-founder and co-chief executive officer Jeffrey Shen. "We expect to get an official credit rating which will hopefully reduce our cost of capital. Also, a lot of the investors we deal with, especially in Europe and North America, can only invest in publicly traded companies, so that was a part of the investment universe that we were missing out on. Thirdly, floating on the stock market gives a growing company a bit of luster, especially when trying to attract the best talent in Asia." Gibson and Shen tell PERE's

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Stuart Watson about the opportunities that the reinvigorated business will seek to capture in perhaps the most dynamic global region for logistics real estate investment.

What is the appetite among institutional investors for logistics property in Asia-Pacific?

Stuart Gibson: Asia, rather than Europe or the US, is where the global growth is right now, so there is a huge wall of capital that wants to get into this space and only a handful of platforms across the region creating new assets. We are continually working with our partners to accommodate the capital that wants to get into the business and fund our development pipeline. There is an increasingly strong interest from Canadian, European and Singaporean investors in logistics property in the region. Many of them are among the most informed and experienced investors in this asset class.

Which regional markets offer the opportunity to invest at scale?

SG: We see tremendous opportunities in our three core markets of Japan, China and South Korea. Some investors perceive Japan in general as a mature market where returns and growth are low, but in the logistics sector quite the opposite is true. In view



Case study: ESR Kuki Distribution Center, Japan

Conquering a development challenge

Few projects illustrate the lengths to which logistics developers must go to secure development sites in the notoriously tight Japanese land market as well as ESR Kuki Distribution Center.

ESR Kuki was approached and had an opportunity to discuss with the Tokyo University of Science about a surplus

campus in Kuki City in Saitama in the Tokyo Metropolitan area. However, it took three years and over a hundred meetings to work with local planners to secure the necessary permits to build a four-story warehouse.

ESR advised the municipal authorities to convert the lecture theatres that occupied half the site into

of the cost of capital, development yields and cap rates, capital values in Japan are huge. In terms of e-commerce, which is a key driver for business growth of logistics real estate, Japan lags behind its neighbors, even though it is often associated with the latest technology and coolest gadgets. E-commerce penetration is 6 percent in Japan while in China and Korea it is around 25 percent, but it is catching up.



Square feet leased by Amazon at ESR's Kuki Distribution Center in Japan

a community center, while the facility was built on the remainder of the plot. "It is a great testament to the patience our team needed to get through the urban planning and re-zoning process. That can be a real headache, but it turned out to be one of the most successful projects across the whole group," says Gibson.

> The 1.6 million square foot development was completed in September 2018, and in January this year ESR announced that Amazon was to take approximately 780,000 square feet. The other half of the warehouse is tenanted by a number of e-commercerelated businesses serving the northern Tokyo area.

Jeffrey Shen: In China, e-commerce continues to boom. E-commerce companies require space for moving in and out their goods, which creates volume and velocity. This is where we come in. ESR is a major landlord for e-commerce companies in China, with 1.6 million square meters (17.2 million square feet) – 45 percent of our leased area in China – occupied by leading e-commerce tenants such as Cainiao and JD.com as of June 30, 2019.

Korea has high capital values and there is a lot of investor demand for large-scale modern, tenant-based logistics properties. Robust online consumption growth and 3PL service providers continue to drive demand. We are the one institutional developer delivering high-quality, leasable space for a myriad of customers at the moment.

Analysis

More recently, ESR has also established a presence in India, Singapore and Australia. What is the potential for logistics investment in those countries?

SG: India is a really exciting market and is garnering increasing investor attention. It has some of the attributes of China in terms of scale, although it does not have the same velocity yet. We entered the market two years ago and have 854,900 square meters (9.2 million square feet) either built or under construction and a further pipeline under MOU of 2 million square meters (21.5 million square feet) as of June 30, 2019.

JS: In India, a local team with deep experience and teaming up with pre-eminent partners are key to success. Our partnership with, for example, Lodha Group and Future Group to develop large-scale, state-of-the-art properties exemplifies this strategy. There is also a growing trend of gravitating towards 'built-to-suit' facilities, which have higher lock-ins.

In the low interest-rate environment, RE-ITS have emerged as a choice of growing appeal as a result of the low bond yield. This is particularly true with the island state, where REITS are increasingly popular. But when it comes to REITS, size matters. We acquire REITS with assets of good potential and achieve consolidation and scale. Through creating more scale, we enjoy more liquidity.

For Singapore, it is a different strategy.

SG: For Australia, it is an ideal market for core investors that are looking for stable return. The land is freehold, not leasehold as in some parts of Asia, which makes investors more comfortable with the risk there. We have undertaken mergers and acquisitions to grow our platform, acquiring the entire equity interest in Commercial & Industrial Property Pty (CIP), and 100 percent of the securities of Propertylink to boost our portfolio. We are building up our pipeline and a strong fund management platform.



What will be the main challenges and opportunities in Asia-Pacific markets in the coming year?

SG: The challenge of acquiring land is always on our minds, but the team has been doing that for many years. The biggest risks are more perceived than manifest. When there is a cooling in the rhetoric around the China-US trade dispute, investors start to back off. There are other geopolitical issues like the tensions between Japan and Korea, the potential for conflict in the Middle East, and Brexit. Each of those things individually will not have a big impact, but if you get a confluence of these factors, investors can be inclined to sit on their hands.

JS: With the uncertainties and the changing trade policies, governments make efforts to boost domestic consumption, driving a growing demand for more logistics space. The majority of ESR tenants service do"Asia is where the global growth is right now, so there is a huge wall of capital that wants to get into this space"

STUART GIBSON

mestic consumption and this creates opportunities for us.

SG: We see rising opportunities in light manufacturing, cold storage and data centers, and we are considering what we can do with the skill sets that our team already possesses to support businesses in these sectors.

JS: Geographically, there will be opportunities for expansion in countries with a growing consumer class. South-East Asia offers very promising opportunities for growth with the rising middle class in the region, as well as increasing affluence and online penetration in some of the markets. But to tap the opportunity, deep local experience and good partners are crucial. The future is now. The year 2020 will herald a decade of new, exciting opportunities for logistics real estate in Asia-Pacific, and we are confident that it will be a great time ahead for all of us in the region.

"The future is now. 2020 will herald a decade of new, exciting opportunities for logistics real estate in Asia-Pacific"

JEFFREY SHEN

Stars align for India logistics

A combination of positive factors has brought some of the world's largest investors into the sector. By Mark Cooper



ot long ago, India logistics was considered a fringe sector, but in the past two years it has attracted billions of dollars from some of the world's largest in-

vestors and managers.

This change of heart has been driven by a confluence of positive factors, including the growth of e-commerce, demographics, urbanization, GDP growth, infrastructure investment and the 2017 launch of India's Goods & Services Tax.

Since 2017, major logistics developers and investors including ESR, GLP, Logos and CapitaLand have entered the market, in conjunction with global investors such as Allianz, Canada Pension Plan Investment Board, Temasek and Ivanhoé Cambridge.

Craig Duffy, head of fund management at logistics developer and investment manager GLP, which announced a partnership with domestic logistics specialist IndoSpace last year, says: "All the factors which drive logistics demand are prevalent in India – favorable demographics, rapidly developing e-commerce and organized retail channels, and coupled with government initiatives which have been rolled out over the past few years, it is one of the most promising markets globally."

Government backs logistics

Government policy has been a key enabler of the logistics sector, says Abhijit Malkani, co-chief executive for ESR India, which the listed logistics real estate specialist launched in 2017 and which now has 9,202,067 square feet of gross floor area (GFA). "The combination of GST, infrastructure status for logistics and clearer state policy on warehousing has driven the institutionalizing of the sector in India. There has also been a big focus by the government on infrastructure, particularly roads."

In September, Indian prime minister Narendra Modi announced his government would invest a staggering \$1.4 trillion in new infrastructure over the next five years. The spending is part of plans to more than double the size of the Indian economy to \$5 trillion over the next five years.

The introduction of GST in 2017 was a crucial stage in modernizing the nation's logistics business. The national goods and services tax replaced a raft of levies including state taxes, which had forced logistics companies to maintain multiple warehouses across states in order to avoid local taxes. The GST has finally united all the Indian states into a single tax market and removed

"The investor side of logistics real estate will continue to be dominated by big-ticket investors"

JAI MIRPURI ESR the implications of state lines on logistics strategy, thus logistics operators began to consolidate their operations into fewer, larger warehouses in key locations.

This trend is important for logistics developers and investors, says Jai Mirpuri, co-chief executive for ESR India. "The move toward bigger facilities opens up the market to specialists such as ESR and makes it worthwhile to invest in technology and sustainability."

A truly national market and the ability to focus on key locations are transforming the logistics industry. Hari Krishna, director CPPIB, India, which invested \$500 million into a joint venture with IndoSpace in 2017, says: "The logistics industry is increasing in sophistication and there is growing involvement from third-party logistics companies."

ESR's Malkani adds: "We are seeing logistics firms seeking to consolidate from 150 smaller warehouses into perhaps 20-25 modern facilities. We expect to see domestic firms making the transition from Grade B space to Grade A, as they come to understand the value of modern warehousing."

Outside of government policy, "the fundamental drivers of logistics real estate in India are the same as elsewhere," says Mirpuri. "Our focus is on serving domestic consumption."

India's 1.35 billion population is youthful – a median age of 27, compared with China – and urbanizing rapidly. According to research by McKinsey, India's urban population is expected to grow from 340 million in 2008 to 590 million in 2030. There is a growing middle class and GDP growth has averaged around 7 percent over the past decade.

Overall vacancy (%) and average rent in Indian cities

As elsewhere, e-commerce is driving logistics demand; the India Brand Equity Foundation estimates e-commerce sales will grow from \$39 billion in 2017 to \$120 billion by 2026. Hari Krishna says: "India is one of very few emerging markets to have both Amazon and Walmart active. However, at the same time, physical retail is still growing in India, which is different from other markets and these retailers also need warehousing space."

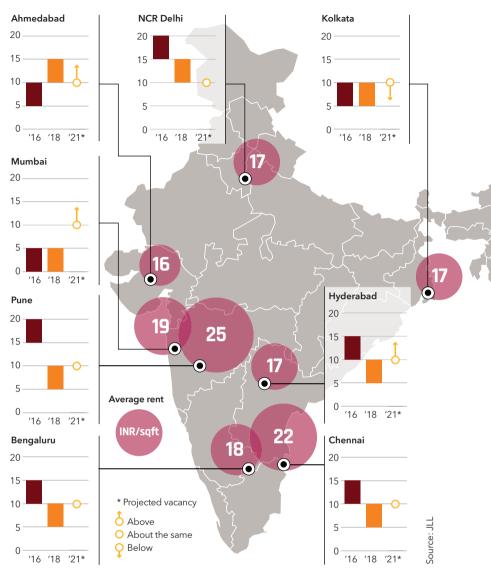
He also notes that CPPIB is "seeing an increase in light manufacturing which has accelerated in the past few quarters, as firms have diversified away from reliance on China." The automobile industry and its ancillary suppliers have become an important tenant group for industrial and warehousing companies.

City-centric

A number of Indian cities have emerged as key logistics locations, says Rajesh Jaggi, managing partner for real estate at Indian private equity group Everstone. Alongside US industrial group Realterm, Everstone co-sponsored IndoSpace, the longest-established modern logistics developer in India, which is now partnered with GLP.

Jaggi says: "The top consumption and industrial centers of India – Delhi-NCR, Mumbai, Pune, Bengaluru and Chennai – will continue to be the primary markets for logistics in India. The economic growth of these large urban agglomerations will continue to drive the growth of logistics."

Citing CBRE research, Jaggi adds: "Logistics leasing in India rose 31 percent to



The largest India-focused real estate funds with logistics included in their strategy

Fund name	Fund manager	Target size (\$m)	Current size (\$m)	Fund strategy	Fund sector		
IndoSpace Logistics Parks III	IndoSpace	550	580	Opportunistic	Industrial-specific		
Kotak Alternate Opportunities Fund	Kotak Investment Advisors	359	360	Opportunistic	Industrial included within remit		
IndoSpace Logistics Parks II	IndoSpace	300	344	Opportunistic	Industrial-specific		
Kotak India Realty Fund	Kotak Investment Advisors	300	265	Opportunistic	Industrial included within remi		
IndoSpace Logistics Parks I	IndoSpace	240	240	Opportunistic	Industrial-specific		
LICHFL Urban Development Fund	LIC Housing	85	90	Opportunistic	Industrial included within remit		
Kotak India Real estate Fund IX	Kotak Investment Advisors	74	74	Debt	Industrial included within remi		
BlackSoil Realty Fund	BlackSoil Group	37	8	Opportunistic	Industrial included within remit		

Source: PERE

13 million square feet in the first half of this year, from the same period in 2018. Mumbai, Chennai and Bangalore accounted for more than 60 percent of total leasing activity during that time.

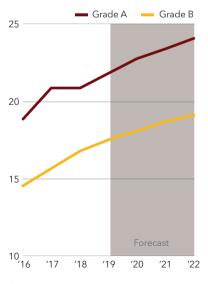
"Kolkata, as the largest urban center in east India and gateway to north-eastern states, has also emerged as one of the top warehousing markets in the country. In addition, Ahmedabad and industrial clusters in Gujarat are also generating demand for modern warehousing."

Big regional and global specialists have dominated the big push into India logistics real estate, each taking a slightly different approach. ESR has grown its business organically since its 2017 launch, while GLP opted to partner with IndoSpace last year. Logos joined forces with India's Assetz Property Group in 2017 to form Logos India.

Singapore's CapitaLand bought an Indian logistics platform with this year's acquisition of Ascendas-Singbridge, which has been developing in India (although not in the logistics sector) since 2007.

Reports suggest Blackstone Group, already a major investor in India offices and retail, is on the verge of moving into the industrial and logistics sector with a deal to acquire a 50 percent stake in Hiranandani Group's logistics venture and a 70 percent

India average rental trend (Rupees/sqft)





stake in Allcargo Logistics' warehousing portfolio.

While managers have taken a variety of routes into India, the investor path has been more straightforward: large global investors have allocated substantial sums to joint ventures or club deals with operators. Thus CPPIB partnered with IndoSpace, and subsequently GLP, Allianz has a \$1 billion joint venture with ESR, while Ivanhoé Cambridge and QuadReal Property Group have backed Logos to the tune of \$800 million. Singapore's Temasek is the core equity source for the S\$400 million (\$294 million; €266 million) Ascendas India Logistics Program.

Competition has increased dramatically in the past few years. However, ESR's Mirpuri says: "There is more competition but compared with the potential size of the market, there is room; there are fewer professional logistics real estate players in India than in Chicago."

Malkani adds that the increased visibility of modern warehousing space will demonstrate its value to domestic logistics companies.

PERE research data show a number of other India industrial funds launched. However, thus far there have been few opportunities for smaller investors. Mirpuri says: "The investor side of logistics real estate will continue to be dominated by big-ticket investors. Logistics itself is relatively recently an institutional real estate sector and in developing markets requires considerable and long-term capital commitments."

For most large investors, India is a natural extension of their global commitment to logistics. Andrea Orlandi, head of real estate investments – Europe at CPPIB, says: "We have been very successful investing in the industrial and logistics sector globally. It has been a way for us to participate in the growth of emerging markets where consumption and manufacturing has been increasing. Thus we have had successful programs in China and in Brazil among the emerging markets, and we have continued to invest in the sector in Europe, the US, Australia and Japan."

Growth of the Indian logistics real estate market is expected to be dramatic. JLL research estimates there will be a national total of 165 million square feet by 2022, up from 65 million square feet in 2018. JLL data show third-party logistics firms accounted for 29 percent of space absorption in 2018, the largest single tenant type.

Grade A logistics rents are around 21 rupees (0.30; 0.27) per square feet per month, according to JLL research, which expects steady rental growth for Grade A and Grade B space through 2022. Market yields for modern warehousing are hard to quantify due to a lack of transactions in the nascent market, but cap rates of around 8.5 percent are estimated.

Access to land a challenge

The main obstacle for logistics developers is land supply, although the government acceptance of logistics as a land use type means it is easier to get zoning. Everstone's Jaggi says: "The major challenge that continues to impact the sector is acquisition of feasible land parcels. The largest component of a project is land and securing it can take up to a year. Moreover, you can add another 12-30 months for a project delivery depending on the size of the warehouse and the approvals required."

Although warehousing developers estimate that India is five to seven years behind China in its logistics market, they are creating modern space and using the latest technology. Jaggi adds: "Adoption of smart warehouse systems, mobility applications, artificial intelligence and warehouse management systems is bringing significant optimization in warehouse operations."

Everstone and GLP have a joint venture to invest in "technology and innovation-based logistics ecosystems," says GLP's Duffy. Meanwhile, CPPIB, via its private equity division, has invested into Indian logistics company Dehlivery.

Despite government policy being crucial to the development of India's modern warehousing, the market is not state-directed in the same way that logistics is in China. Developers need to work with communities in order to acquire land and to get the staff for new facilities. ESR's Malkani says: "Social sustainability is as important as environmental sustainability for ESR in India.

"We are developing on greenfield sites in rural areas so have a responsibility to engage with the communities there. This creates a virtuous circle: if we help villagers upskill, they can work at the new facilities and be a part of their success."

KEYNOTE INTERVIEW

Going global with a personal touch



Chua Tiow Chye, deputy group CEO of Mapletree Investments, explains why logistics real estate will continue to be a large part of the \$42bn real estate company's growth as it expands globally

What interested Mapletree in logistics as an asset class?

We have been a big fan of logistics RE since 2003 and it now constitutes about a third of Mapletree's business. Whether we are B2C or B2B oriented, logistics is the lifeblood to support the growth in trade, e-commerce and consumption.

The need for supply chain management is now becoming very clear. For instance, cross-border trade or increasing e-commerce businesses will need support infrastructure to deliver goods either to the storefront or straight to homes. In larger economies such as the US, China or Japan, there is a surge on logistics RE demand as e-commerce grows. Many retail shops may be shutting down or downsizing their physical stores as the shopping landscape transforms, but warehousing fulfillment centers are seeing respectable growth in demand.

Mapletree has been plugged into this logistics growth since 2003, when the sup-

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ply chain network in Asia was very nascent. Back then, people were confounded as to why Mapletree was interested in investing in nondescript sheds when our competitors were building Grade A office buildings. However, we were looking for stable cashflows and long-term growth trends which had already taken root in the Western developed economies. We believe that logistics RE, globally, will continue to offer both investment and development opportunities.

Investing in any RE asset requires convincing investors on risk-return. Why does logistics continue to resonate with investors?

The risk profile of logistics is slightly different compared to retail or office and, in our view, favorable from a risk-return perspective. The tenants that take up space typically fall into three categories. The first being end-users such as the supermarkets, and they usually enter into long-term leases with us, which means limited downside leasing risk.

Second, e-commerce is premised on being able to deliver a wide range of goods directly to buyers quickly and at competitive pricing. Thus, e-commerce players such as Amazon and JD.com may ink slightly midto long-term leases for different categories of logistics facilities – from large regional centers to urban last-mile collection centers.

The third category comprises third-party logistics players, who provide back-end logistics services, such as breaking bulk or pick-and-pack, to retail stores or e-commerce players. Their leases tend to be shorter as they depend on back-to-back contractual agreements with their principals. Taken together, all these make the leasing risk for logistics very manageable, as there is a good spectrum of long, medium, and short-term tenants, which allows stability in the cashflow, along with upside rental potential.

Development also has limited downside risk. The cost of building a warehouse could be in the order of 30-40 percent of what it would cost us to build a Grade A office of the same square footage. As such, the development risk is more controlled and at the same time lowers the bar for going into various countries for development.

From a property yield perspective, logistics can give about 200-300 bps higher returns than commercial RE asset classes. Hence, this is financially an attractive asset class, especially given the backdrop of growth in e-commerce and trade.

Mapletree is headquartered in Singapore with a portfolio across the region. From a development and investor perspective, where are the best logistics opportunities?

Mapletree has invested in the Asia-Pacific logistics market directly using its own balance sheet, primarily to undertake development projects and also through its sponsored Mapletree Logistics Trust, which largely acquires investment properties. More recently, we have successfully closed a \$4.5 billion AUM logistics fund focused on 262 assets in the US and Europe with investors mainly from Asia and the Middle East.

Singapore has a high concentration of warehouses, one of the highest in the region. However, Singapore is also a small and competitive market. Given its transpar"Logistics as an asset class has a certain stickiness with its tenants: we build commonality and relationships"

ent legal and investment environment, there are many competitors for the logistics asset class in Singapore. Hence, we must look further to new markets for continued growth.

In Asia-Pacific, there are two huge markets: China and India. We continue to deploy substantial capital to invest in China because of the demand, population and consumption growth. However, with few high-quality warehouses capable of meeting the demand growth, we chose the development route and now have more than 40 logistics parks developed or developing across first-tier and second-tier cities – mostly oriented towards domestic e-commerce.

We are trying to get into India as it is a nation of 1.37 billion people with a growing middle-class. While it may be tough to make inroads into the country, it is encouraging to note that there have been increased interests and transactions from institutional investors in this market. Getting clean land titles remains a challenge and we are hopeful that we can make some headway soon.

Japan is already quite advanced in the logistics business, but until recently the available warehouses were small and obsolete. With growing demand for better facilities, many developers, including us, are building efficient multi-story ramp-up warehouses. We are also on the verge of exiting a 51 billion yen (\$464 million; €417 million) logistics development fund which we syndicated some five years ago in Japan and will continue to expand in that market.

Hong Kong SAR, other than the current short-term issues of civic protests, continues to have high demand for logistics, but the biggest issue is land supply. We were fortunate with the successful government tender in Tsing Yi for a relatively big piece of land, and continue to look for good opportunities.

We have also completed a fair number of acquisitions in Australia and begun developing logistics facilities. Similarly, we have developed and will continue to develop several logistics parks in Vietnam and Malaysia.



New hub rising: Mapletree Logistics Hub Tsing Yi, completed in 2016, provides exposure to key markets

Breaking new ground

Mapletree Logistics Hub Tsing Yi was Mapletree's first greenfield development in Hong Kong SAR

In 2013, Mapletree won a bid for a 226,000 square foot site in Tsing Yi, Hong Kong SAR, for HK\$1.69 billion (\$218 million; €196 million). Known as Mapletree Logistics Hub Tsing Yi, it was Mapletree's first greenfield development in Hong Kong SAR. In March 2016, Mapletree completed the 11-story, ramp-up, Grade A warehouse with a net lettable area of 1.6 million square feet. In October 2017, Mapletree sold the 100 percent occupied warehouse to its REIT, Mapletree Logistics Trust, for HK\$4.8 billion.

Analysis

With such intimate knowledge of Asia-Pacific, why has Mapletree chosen to expand into a global platform? What advantage does that global approach yield?

There are largely three main factors. First, logistics as an asset class has a certain stickiness with its tenants: we build commonality and relationships. For instance, we engage our global tenants to understand their requirements for locations in Europe or Asia. Chinese players are also starting to come out into the broader Asian context. Hence, we can better serve our tenants if we have a global footprint to cater to their needs.

Second, there are vast sources of capital from Asian institutional investors such as sovereign wealth funds and pension funds, as well as private equity investors and family offices looking to deploy funds globally. We think our strength lies not only in bringing Western capital into Asia, but also in structuring products abroad for our Asian investors. There has been an increasing demand for such products that we can structure in our role as a resourceful capital manager with a good track record.

Third, from the perspective of Mapletree as a company, in order to scale to the level we want, we have to be a global player and not merely an Asian one. We predict that most of our future growth will come from overseas markets.

To effectively manage these overseas markets, we have set up quite a lot of office infrastructure abroad because real estate is a highly local business. We now have only one third of our workforce headquartered in Singapore. Investing and operating our property assets have to be managed on a local basis, even as we expand globally.

What should a modern global logistics portfolio look like?

Ideally, there should be a balance between developed and developing markets to manage risk and to balance risk-return profiles. We need to assess each market to find out what the key drivers are.

For instance, we are active in Poland as we believe Central Eastern Europe will emerge as a service center for Western Europe because of its lower costs and convenience. Another good attribute for a logistics portfolio to have is a mix of income-generating assets complemented by a pipeline of development properties, and have appro"A mix of of developed and developing markets is where we think logistics will have both immediate availability as well as long-run impact"

priate vehicles and investors to support the respective growths.

In markets such as China, we will continue to buy land, build, and then decide whether to put the assets into private equity funds or offer them to our publicly listed REIT. A mix of developed and developing markets, coupled with a mix of investment and development capability, is where we think our investment into the logistics space will yield immediate returns and extend the runway into the future.

Your focus in Europe is the UK and Poland. Why those markets in particular?

Poland is strategically located between Eastern and Western Europe. Many operators are putting their facilities in Poland because of the cost differential, and we have to follow where our clients want to go. Provided the costs of transportation are lower than the savings, we will explore going further into Central or Eastern Europe in the near future. We're also keeping an eye on China's push into Europe, such as its Belt and Road initiative. We think some nodal points along the way will become good logistics markets. Nevertheless, we will continue to look for assets at logistics nodes in Western Europe. We currently do not have any exposure in the UK, but are seriously looking to acquire both existing assets and land for potential development. Ironically, we believe UK logistics will benefit from Brexit, as businesses there will need more facilities to store their goods.

Looking at North America, whose market is late-stage, how do you achieve value-add?

Although the US market is more mature, we still expect rental growth to continue to be robust on the back of structural changes resulting from e-commerce growth. Moreover, as one of the few operator-managers with good logistics RE in the world, we are looking for different ways to extract value beyond market growth.

Within our US portfolio, there is the potential to unlock value by increasing the leasable area through tenant expansions. This can be done by building out available land, and offering value-add propositions such as refurbishing and rebuilding for new tenants. Hence, we have teams on the ground to actively asset manage these properties. We now have two main offices in the US – one in New York and one in Los Angeles – and regional offices in Dallas, Atlanta and Chicago.

Looking to this year and beyond, do you foresee any headwinds that might cool appetite for logistics, and how is Mapletree preparing to face them?

Many investors that follow us abroad are looking at sustainable returns. Logistics is arguably the most sought-after asset class. Some downsides come from the continuous trade war, which can hit our end-users and ultimately our rental income. So far, we have been lucky: it has not had any impact on us.

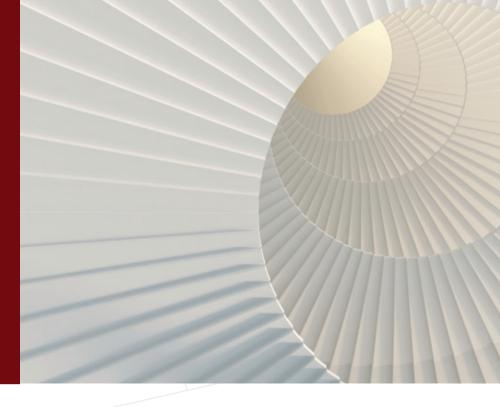
The other challenge is, of course, looking for opportunities, especially in disruptions due to technology and market trend changes. Getting capital is not a big issue for us, but getting deals is more so, since RE is a very local business. So, we do need to continuously get our infrastructure and manpower up to speed to look for deals. To progress to the next step (like development) we need to build up quite fast. However, we think this asset class is more resilient than the others, so we remain committed to logistics RE in spite of the challenges.

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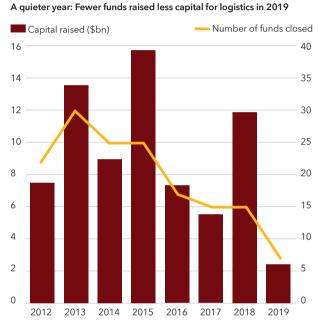
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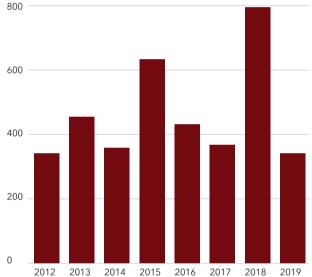
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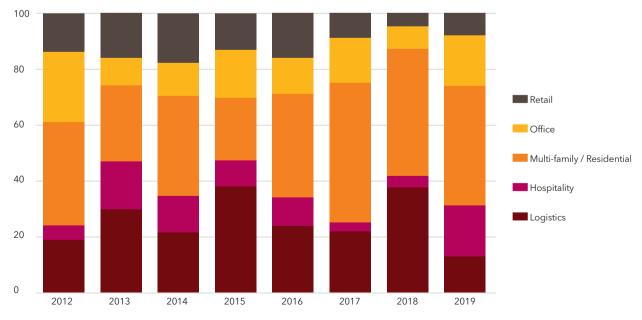
Logistics' stellar 2018 left a lot for 2019 to live up to, as PERE's fundraising data show







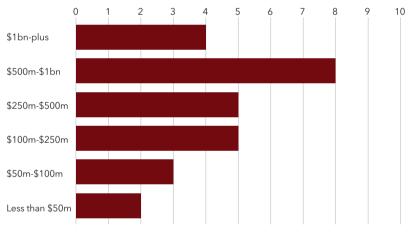
A smaller slice: The share of capital raised for logisitics declined last year relative to other sector-specific strategies (%)



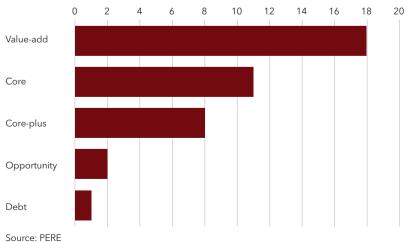
Fund name	Head office	Fund manager	Target size (\$m)	Fund strategy	Regional focus
Black Creek Industrial REIT IV	US	Black Creek Group	2,000	Core	North America
Exeter Industrial Value Fund V	US	Exeter Property Group	1,600	Value-add	North America
Prologis UK Logistics Venture	US	Prologis	1,326	Core	Western Europe
Logistics Warehousing Fund	China	China Life Investment Holding Company	1,220	Value-add	Asia-Pacific
Exeter Core Industrial Fund III	US	Exeter Property Group	1,000	Core	North America
Cabot Industrial Value Fund VI	US	Cabot Properties	800	Value-add	Multi-regional
BEOS Corporate Real Estate Fund Germany IV	Germany	BEOS	705	Core	Western Europe
Cabot Industrial Core Fund II	US	Cabot Properties	600	Core	North America
Gramercy Property Europe IV	UK	Clarion Gramercy	531	Core-plus	Western Europe
IIP I	Israel	Israel Investment Partners	500	Opportunistic	Middle East/Afric

Thinking big: Logistics funds in market on January 1, 2020, show a preference for size











Points of View

Experts share their perspectives on the global logistics property market

"Real estate has polarized – ever larger fulfilment centers in nationally or regionally strategic locations, supplemented by smaller last-mile facilities on the periphery of large conurbations"

Matthew Wright, DHL's vice-president, development, Europe

"The profound, ongoing growth of e-commerce and the need for ever smarter supply chains means the global logistics sector continues to offer significant growth opportunities for yieldfocused, long-term investors"

Kari Pitkin, head of business development, Allianz Real Estate "Consumer expectations of faster delivery are getting pampered by e-commerce companies like Amazon. As a result, everybody wants their warehouse to be closer to the end consumer"

Tim Wang, head of investment research, Clarion Partners

"Shortages of land can present a challenge, and in some markets obtaining building permits is also starting to be difficult because planners dislike the unfriendly features produced by logistics buildings, such as increased traffic"

Robert Dobrzycki, chief executive officer, Panattoni Europe "The future is now. 2020 will herald a decade of new, exciting opportunities for logistics real estate in Asia-Pacific"

Jeffrey Shen, co-founder and co-chief executive officer, ESR

"All the factors which drive logistics demand are prevalent in India – favorable demographics, rapidly developing e-commerce and organized retail channels, and coupled with government initiatives which have been rolled out over the past few years, it is one of the most promising markets globally"

Craig Duffy, head of fund management, GLP

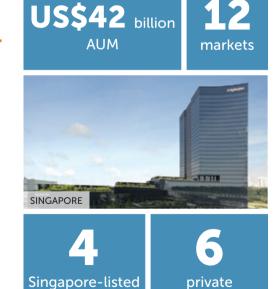


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Brett Robson, Head of Real Estate

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