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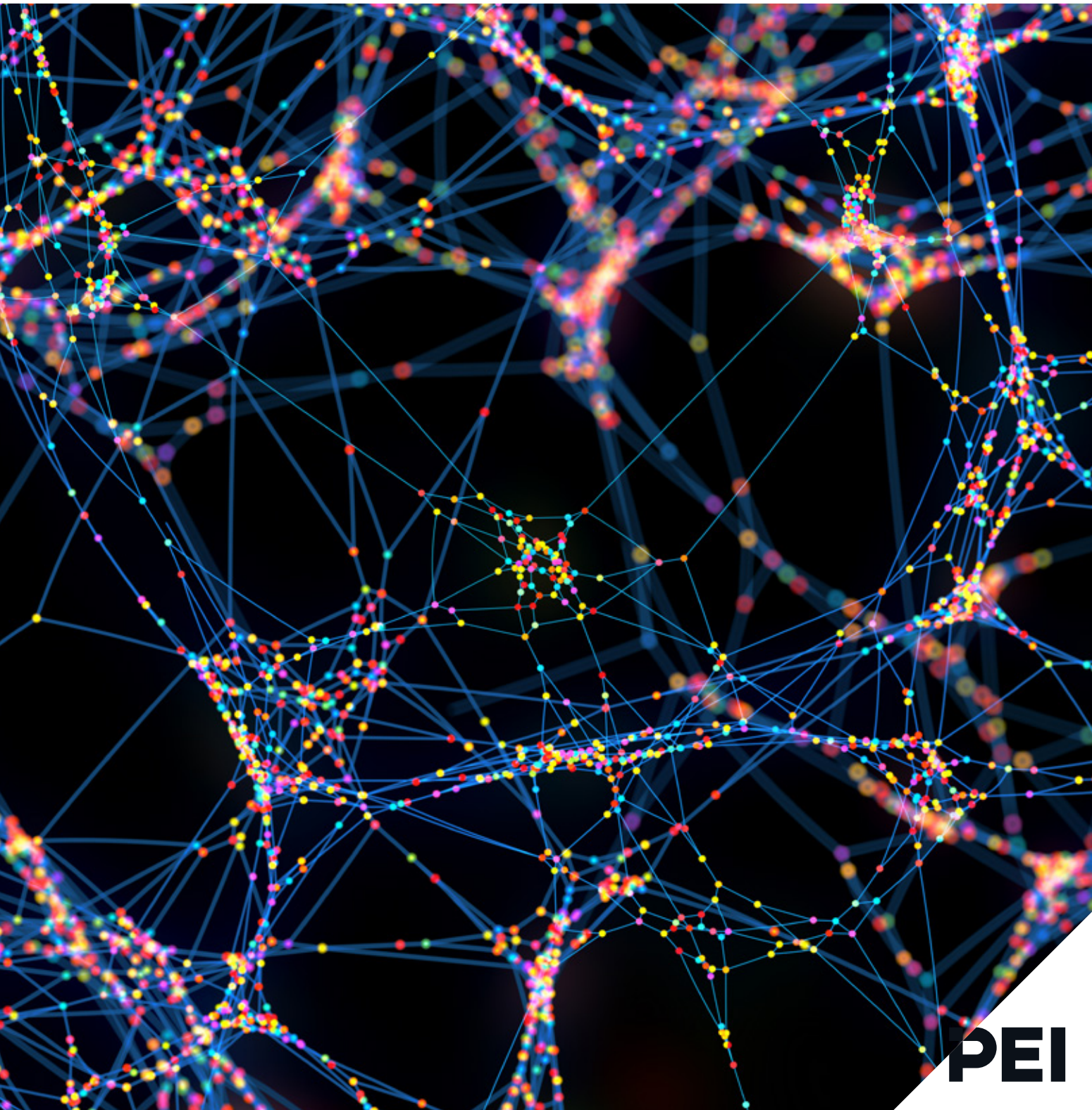

PEI

ROUNDTABLE

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Clean bill of health for life sciences

Real estate investors appreciate the stickiness of tenants in the life sciences sector, with new geographic clusters emerging as demand grows. By Mark Cooper

The pandemic sharpened the world's focus on life sciences. The industry, which produces pharmaceuticals, medical devices and biotechnology, was responsible for creating the covid-19 vaccines, but its real driver is demographics. The world's wealthiest nations are aging amid longer life expectancies and lower birth rates, and a $2.38 trillion industry has emerged to extend and improve the quality of people's lives.

Life sciences real estate facilitates the laboratories, manufacturing space and associated offices the healthcare and biosciences industry needs. Following a post-pandemic boom in demand, a record $33.7 billion was invested in life sciences and R&D real estate in 2021, as per MSCI research.

PERE's life sciences roundtable brought together three investors from around the world to discuss the evolution of and outlook for the sector. Not long ago, this niche was largely confined to East and West Coast US, but today life sciences clusters are emerging all over the world, and the industry is making new demands of the real estate players that house it.

Bill Abramowitz, portfolio manager at Chicago-headquartered manager Nuveen Real Estate, says: "The traditional definition of life sciences real estate was the R&D space where drugs or vaccines were created, but now there are multiple life sciences subsectors and a lot of crossover between life sciences, technology and the medical field. It's a much more diverse sector today."

Life sciences real estate comprises laboratory space, which is rated by containment levels (CL 1-4) depending on what is being studied, and manufacturing facilities, which are labeled Good Manufacturing Practice (GMP), referring to the processes and fit-out required to guarantee the purity of drugs or medical devices.

Cold storage is also becoming an important part of the mix, with next-generation treatments such as

Chan Chakravarti
Head of indirect strategies, Asia-Pacific
Ivanhoé Cambridge

Chanakya 'Chan' Chakravarti is head of indirect strategies, Asia-Pacific at Ivanhoé Cambridge, a Canadian real estate investor with C$77 billion ($58 billion; €53 billion) of assets under management, of which approximately $1 billion is in life sciences real estate. Based in Mumbai, he has been with Ivanhoé Cambridge since 2018 and previously worked for JPMorgan and Actis.

Olivia Drew
Director and portfolio manager, European life sciences
UBS Asset Management

Olivia Drew is a director and portfolio manager, European life sciences, at UBS Asset Management's Real Estate & Private Markets business, where she has worked since 2017. The Swiss investment manager launched a UK life sciences real estate strategy in 2022, which now has $3.1 billion of gross development value. UBS's private markets business has around $111 billion of assets under management (as of March 31).

Bill Abramowitz
Portfolio manager
Nuveen Real Estate

William 'Bill' Abramowitz is a portfolio manager for the US Cities Workplace strategy, investing in the life sciences and medical office sectors at Chicago-headquartered manager Nuveen Real Estate, following roles with Ares Management, Equity Office Properties and JPMorgan.

personalized cell and gene therapies requiring ultra-low-temperature manufacturing facilities.

The industry emerged in Boston and Cambridge in Massachusetts alongside San Diego and San Francisco in the US, and subsequently in the 'golden triangle' of Oxford, Cambridge and London in the UK. More recently, life sciences clusters have developed in continental Europe, China and India, as well as in developed Asian markets such as Singapore, Australia and Japan.

New life sciences locations emerge due to local demand and the cheaper staff and space on offer. A Savills report in 2021 estimated that scientist salaries in the UK were half those in the US, for example, while in India eight scientists could be hired for the same amount. Similarly, rents for the best life sciences space in China could be had for a fifth of the US floorspace cost.

"The UK is some way behind the US in terms of how mature the sector is – probably five to seven years behind," says Olivia Drew, director and portfolio manager, European life sciences, at UBS Asset Management. "Over the past couple of years the focus here has been on CL2 biology lab space, but right now we are in the early stages of understanding all the pieces involved, such as GMP space and bio-manufacturing."

Even further behind is Asia-Pacific, says Chan Chakravarti, head of indirect strategies, Asia-Pacific at Canadian real estate investor Ivanhoé Cambridge. "We are about a decade behind the US – perhaps not quite so far in Australia and Japan, but certainly in India."

JLL estimates a total of 202 million square feet of life sciences inventory in the US life sciences market, and 36 million square feet of space under development.

Meanwhile, in the UK's golden triangle, there is five million square feet of inventory and nearly 16 million square feet under development. CBRE estimates a total of 100 million square feet of R&D laboratory space in Asia-Pacific.

> *"The three traditional things necessary for a life sciences cluster are universities, a hospital network and pharma companies"*
>
> **OLIVIA DREW**
> **UBS Asset Management**

Resilience in clusters

The pandemic might have brought the importance of healthcare into sharp focus, but US life sciences real estate investment trusts slumped like the wider stock market in 2020, and have performed sluggishly since.

The panel insists the underlying life sciences real estate market remains resilient, however. Chakravarti points out that life sciences tenants tend to be "sticky" because they are well-capitalized companies that invest a lot of capital into customizing the space. "There's also a very heavy regulatory regime, which makes it even more onerous for them to move from these spaces."

Unlike the office sector, life sciences real estate has not been vulnerable to the impacts of homeworking, says Abramowitz. "In the US, we struggle with some of our office usage numbers, but in life sciences, particularly lab space, usage is near pre-pandemic levels. You cannot perform lab work from home. We stress this a lot with our investors: whether it's a medical office facility, GMP manufacturing or life sciences, it's particularly resilient to the work from home dynamic."

The key to the resilience of life sciences tenants is the clusters within which companies operate, says Chakravarti. "Clustering is central to life sciences; this cannot be overemphasized. It is unlikely that an occupier will move out of a dynamic cluster because they rely on the ecosystem, particularly in the post-pandemic era where collaboration is key. My main argument to my principals in favor

"My main argument to my principals in favor of this sector is that, once these guys have signed a seven-year lease, they are there"

CHAN CHAKRAVARTI
Ivanhoé Cambridge

Lenders warm to life sciences opportunity

Underlying demand for life sciences reassures those providing debt to the emerging sector

Rising interest rates have made securing debt more fraught for real estate investors, but lenders are supportive of the life sciences sector due to its strong fundamentals.

"Life sciences ticks a lot of boxes for lenders, particularly when they're struggling to deploy in some of the other real estate sectors," says Olivia Drew of UBS Asset Management. "We have been pleasantly surprised with the support we've had for both pre-leased and speculative space, bearing in mind this is a nascent sector in the UK."

Nonetheless, the environment for borrowing has changed in recent months, says Bill Abramowitz of Nuveen Real Estate. "Debt pricing has certainly changed, and spreads have widened, but – unlike office, which has seen deterioration to the actual real estate fundamentals – changes in life sciences have been primarily related to changes in the broader capital markets."

Lenders are also prepared to support the sector in emerging markets such as India, where Canadian real estate investor Ivanhoé Cambridge owns life sciences real estate. Chan Chakravarti says: "We have been pleasantly surprised with the support from debt providers, considering that it's India and it's a niche sector. We were expecting a huge pushback, frankly, but we've had quite a lot of support from global debt shops as well as locals."

He adds lenders have done their research on the sector and "like the same things we do: the underlying covenant, the type of work, the length of lease and the lack of competition from work from home."

of this sector is that, once these guys have signed a seven-year lease, they are there."

Life sciences clusters, wherever they are in the world, share similar attributes, says Drew. "The three traditional things necessary for a life sciences cluster are universities, a hospital network and pharma companies. There is a global shortage of skilled workers in this industry, which means that when an occupier has a location and a workforce, they are less likely to move because they would have to go to a lot of effort in recruitment and training in the new location."

An important question for investors in life sciences is exactly where new clusters will emerge. For example, there are a number of up-and-coming clusters in London, such as Kings Cross, White City, London Bridge, Canary Wharf and Whitechapel. The density of hospitals and academic institutions and the strong transport links in the city make all these locations viable.

"It remains to be seen how companies differentiate between these locations, or even if London itself is seen as the cluster rather than one or more

of these locations," says Drew. "When we look at the US markets and see how big they are, and how small London is in comparison, it seems like London could just be one cluster, but that is up for debate."

In the US, the high cost of core life sciences markets is encouraging the development of new clusters, says Abramowitz. "Established companies can create additional business units in markets which have a lower cost of business, as we have seen in some office markets. The migration to Sun Belt markets is happening to an extent with life sciences, where markets like Raleigh/Durham and even Denver have picked up some life sciences activity."

In Asia, new clusters are emerging rapidly in both China and India, which have educated and large populations, providing healthcare companies with both staff and customers. Chakravarti says: "Prior to the pandemic it was virtually unheard of to develop and test a new vaccine or therapy or medical device in less than 10 years. However, today, everyone wants everything faster, which means that locations can emerge faster and it is not just about a sub-market but the whole city."

The beauty of the cluster is that it creates a virtuous cycle, says Abramowitz. "You will see larger companies come in and plant their flag, and in time there are spin-offs or people starting their own ventures. This attracts venture capital investment, creating a virtuous cycle of wealth and knowledge."

Indeed, the life sciences industry has been swelled by more than $400 billion of venture capital investment globally in the past five years, as investors look to back the next wonder drug, medical device or vaccine.

However, there has been concern that venture capital investment is on the slide after a record year for life sciences in 2021, according to data from research firm PitchBook Data and broker Savills. Funding fell nearly one-third in 2022 and has been sluggish so far this year.

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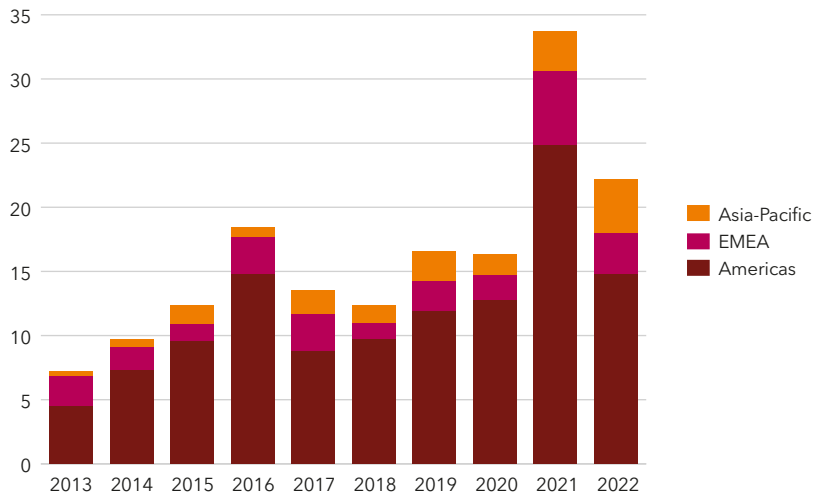
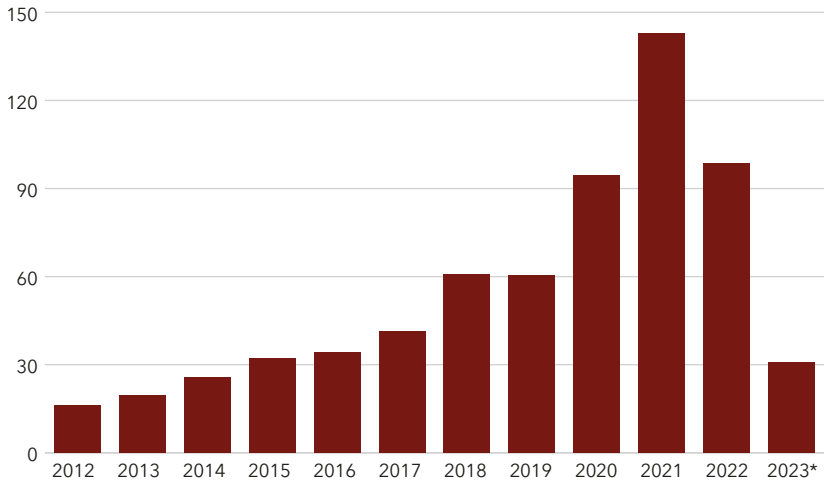
>
> **BILL ABRAMOWITZ**
> **Nuveen Real Estate**

Life sciences/R&D real estate deal volume reached a record high in 2021 ($bn)



Income-producing assets valued at $10m or greater are included. Development sites excluded. Closed deals only.
Source: MSCI

Venture capital investment for pharmaceuticals and biotechnology, healthcare devices and supplies, and healthcare technology systems has not recovered to 2021 peak ($bn)



*as of early July
Source: PitchBook Data, Savills

Abramowitz, however, remains optimistic. "We have seen a decrease in venture capital funding, although it's still at a historically high level. Will the cash that pharma is sitting on be able to jump into earlier-stage companies and create M&A activity? The expectation is for an acquisitive couple of years for pharma. And venture capital funding hasn't gone, but spending has moderated as the cost of capital has increased."

Drew also notes the industry is by no means starved of capital: "Big pharma also has a huge amount, $1.4 trillion, of dry powder on the balance sheet so this should generate some M&A activity.

"We held a life sciences conference recently with some global VCs present, and they saw 2021 as something of a bubble year, with deals rushed through. Now we are moving into a more challenging time but perhaps a healthier environment with regard to due diligence. The life sciences firms we speak to are generally optimistic about the medium-term outlook."

A changing ecosystem

Nonetheless, the panelists acknowledge the global life sciences landscape is changing. As well as the challenge of falling funding, many of the world's largest pharmaceutical companies are running out of time to exploit their most profitable drugs. "Over the next five or seven years $200 billion-$250 billion-worth of patents are going to fall off the cliff, ie, lose exclusivity. Some of the companies impacted are the big names in big pharma," says Chakravarti.

However, he sees this as an opportunity for developing markets. "I will stick my neck out and say, this is going to create an opportunity for Asia, especially markets like India, in generics and biosimilars [non-branded or replica drugs]."

Drew is also optimistic the industry will deal with this challenge. "In a way, the patent cliff is actually an opportunity for the life sciences sector, because it's where biotech really comes in. Biotech companies now account for two-thirds of the R&D pipeline, up from a third about a decade ago. Big pharma companies only account for about 23 percent of that pipeline activity."

Nonetheless, more uncertain capital markets for both life sciences and real estate are making investors more cautious about their underwriting and their tenants. "A change in the past year or two is a pull-back with regard to earlier-stage companies and increased attention being paid to credit," says Abramowitz.

"Often, smaller, early-stage companies are working on a specific initiative, the success of which can make or break the company. Obviously, that is always important, but the emphasis has increased in the past year or two."

However, early-stage companies are fueling future demand for life sciences real estate. "It's interesting because you

SOURCE: UBS ASSET MANAGEMENT

Cambridge-Side mall: sections being repurposed for life sciences tenants

Retail conversion's potential

***PERE*'s life sciences roundtable singled out the conversion of a retail mall in Cambridge, Massachusetts as a key recent deal in the life sciences real estate space**

Former retail space on the upper floors of the CambridgeSide mall, owned by New England Development and a client advised by UBS Asset Management since 1989, has been repurposed for life sciences tenants. In February this year, flexible laboratory space firm SmartLabs leased the entire third floor. Construction started in 2020 for a multiphase redevelopment which will provide more than 1.6 million square feet of retail, life sciences and residential space.

can differentiate between what's best from a covenant perspective and what's best from an ecosystem perspective, which can produce different answers," says Drew.

"A lot of innovation is coming from smaller biotech firms, which might have a weaker covenant, but they do have the R&D activity, and they attract the skilled staff who want to work at an exciting company developing an exciting treatment. What we're trying to do across our portfolio is strike a balance, so that we have some covenant exposure to the larger companies, but also so that we create an ecosystem where people want to be."

That ecosystem must also have room for growth, says Chakravarti. "Not being able to offer scale is a portfolio killer. That is the other aspect of stickiness: you need to be able to cater to their ambitions, whether via build to suit or in a multi-tenant format."

One of the factors life sciences real estate owners in Asia keep thinking about is obsolescence, he adds. "Life sciences is seen as part of the office ecosystem, so we are constantly having to address the question of what happens if a tenant leaves a heavily customized space. That keeps us very aware that we need to stick to the lowest common denominator, which is office labs."

Investors do not want to see the lowest common denominator when it comes to the ever more pressing topic of ESG, however. The life sciences sector faces the same pressure to lower its emissions, and panelists say they seek certifications such as LEED and WELL for their assets. One of the advantages of a relatively new sector is that it has little legacy space. However, Chakravarti says the specific demands of the sector, for example with regard to temperature, and the 24/7 nature of many operations mean assets can be energy intensive.

Investor appetite

Panelists note there is something of a learning process for institutional investors to get comfortable with life sciences real estate and the tenants it serves. For example, Drew says UBS Asset Management's strategy is the only one providing commercial GMP space to occupiers in the UK. "Manufacturing space is critical for keeping occupiers in the UK. However, it is a harder investment proposition to understand because the costs are higher and the buildings require regulatory approval. It is another layer of complication over and above a lab, and at the moment the UK market is still grappling with R&D and lab space."

Meanwhile, Chakravarti says a key question for investors is pricing liquidity, owing to the relative youth of the life sciences sector and the different speeds at which it is maturing around the world. However, he says: "I think the questions around liquidity are balanced by tenant stickiness to some extent."

Despite the challenges associated with investing in a niche and emerging sector, the panelists agree that investors have bought in to the mega-trends driving the life sciences industry – primarily demographics, but also the increasing wealth and healthcare spend around the world – and like the idea of getting exposure to them via real estate.

Abramowitz says: "The overall viewpoint of private market investors is that there are great long-term demand drivers behind life sciences and the broader healthcare industry. In the US, for example, 20 percent of GDP is in healthcare. We have an aging population and significant growth in the numbers of people 65 or older. These demographics are fueling the demand drivers behind life sciences, and investors appreciate those trends." ■