CASTLEFORGE PARTNERS

22 June 2020

A FUTURE FOR OFFICES

"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction."

- Bill Gates

Another day, another article announcing the end of demand for office space. A couple weeks ago, it was a piece in the *Wall Street Journal* entitled "When It's Time to Go Back to the Office, Will It Still Be There?" It outlined a reduced number of offices in big city centres and covered the idea that employees will demand more hybrid schedules "that allow workers to stay home part of the week." This would lead to reduced demand for offices as employees would make use of other spaces, including the home, to carry out their work.

Countless other similar articles have appeared over the past month or two, as companies try to understand what a post-Covid-19 world might look like, at least from a workplace perspective:

- "How Your Company Office Could Change in the Post-Coronavirus Era" from CNBC
- "The End of the Office?" from the FT
- "Will Coronavirus Spell the End of the Traditional Office Working Space" from the Telegraph

The list goes on.

In this respect, some investors we've spoken to over the past month have likened investing in city centre offices to investing in shopping malls and retail warehouse parks in 2014-2016. Back then, buyers thought they saw merely a cyclical adjustment to cap rates but they missed the underlying structural changes to the industry that were happening as increasing e-commerce penetration led to a reduced need for physical retail. Those who failed to understand the structural change happening in the retail space paid the price by investing into value traps that were cheap for a reason.

And while the jury still seems to be out on the office market, we would be remiss if we did not even consider the potential that our biggest sector of focus is about to go the way of the regional shopping mall. The truth is, in the aggregate, we do believe it is very possible that overall demand for office space falls – or, at least, it falls for the ways we typically use office space today. The extent to which this occurs depends on whether:

- reducing office square footage and replacing it with remote working saps productivity;
- the cost of office space is so high that companies will choose to meaningfully reduce square footage, even after weighing these savings against expected productivity losses; and
- an alternative form of office space demand takes its place, that is more productive than working from home, yet still allows for material cost savings to firms.

Anyone who has recently spent extended time at home with roommates, in-laws or a crying baby can attest to the fact that while the office may not be perfect, neither is working from home. As a consequence, we believe even a structural fall in aggregate office space demand will not necessarily impact all types of office space and all geographies equally. In fact, we see the arguments for a fall in office demand leading toward higher relative demand for other, newer ways of using office space. Covid-19 appears to have accelerated a trend that was already happening up to early 2020 – the more efficient use of office space provided by flexible office operators.

Given these dynamics, we think an office investor who wants to be well-positioned to weather the structural changes that are likely to affect the office markets over the coming decade should hedge her exposure by getting involved in flexible office operations. The irony – and the opportunity – is that the public implosion of many of the well-known flexible office providers, like WeWork, is going to result in a slowdown in the addition to supply of flexible offices due to hesitancy from debt and equity capital, over the same period in which tenants increase their demand for the product.

HERE WE GO AGAIN?

Is investing in offices today really the same as investing in retail five years ago? It is possible that the investment community may be overcompensating for having missed the structural signals in the retail market and is attributing the same retail dynamics to the office sector today.

We believe that there are two material differences between offices today and retail five years ago: first, unlike e-commerce, working from home is not necessarily a good substitute product across all or even most industries. Second, we believe that the savings attainable by slashing real estate costs by one-third or one-half will not be meaningful enough to compensate for lost employee productivity.

Time Machines

With e-commerce, the consumer saves time by purchasing a product online that is the exact same as the one available in a physical store. In that case, Amazon extracts value by creating what Professor Scott Galloway calls a "time machine". The fact that consumers can replace an entire day of travelling to 20 different stores with placing one or two or 20 different online deliveries *at virtually no extra cost*, means the consumer can spend his day doing something much more useful with his time. This is an unequivocal, clear win for the consumer.

It's hard to deny that Zoom and other remote working software programmes can also be considered time machines. They save time going to and from meetings or making that long-distance trip to see customers when a simple video call would have been enough. But working from home ("WFH" in the new lexicon) is not the same type of time machine. The WFH time machine primarily acts to replace the commute to the office. Then again, considering the widespread use of smartphones, mobile broadband, cloud storage, audiobooks, public transportation and Uber, we question how much of the daily commute is truly wasted time.

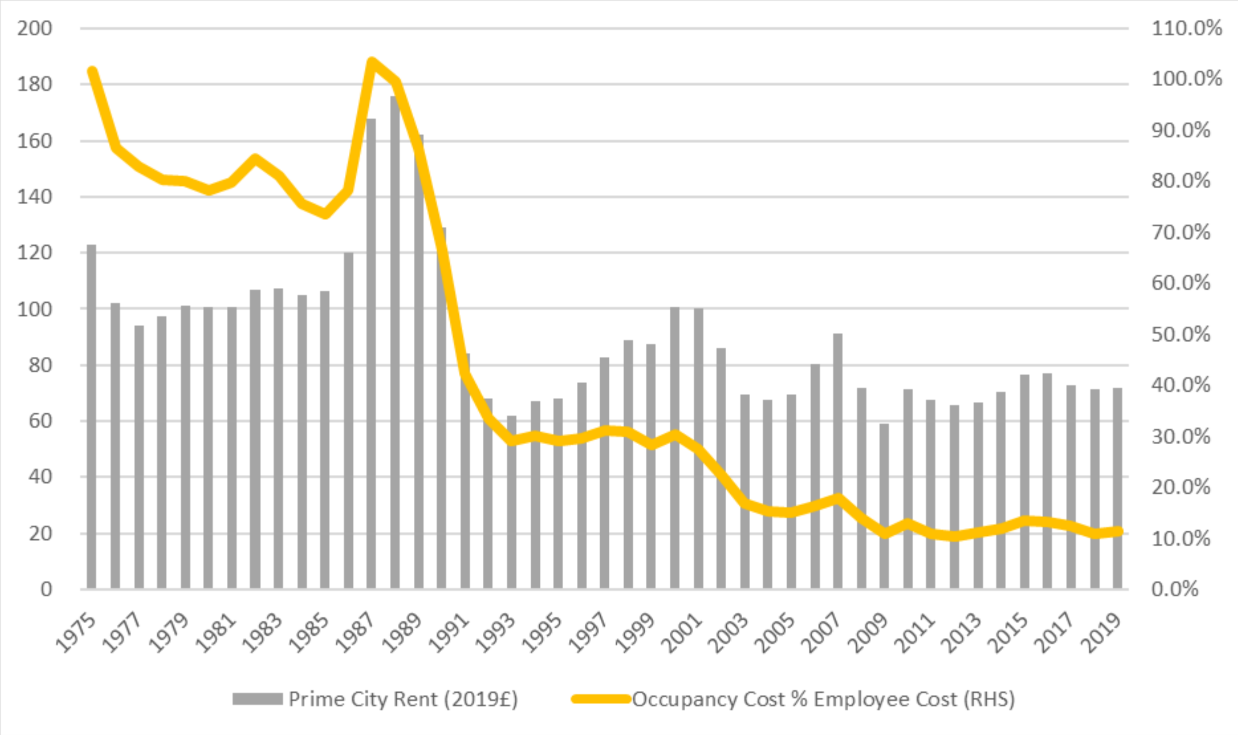
Even assuming commuting time is *wholly* wasted time, what do we gain by working in physical office spaces with our teams, instead of at home? It depends on who you ask and what kind of work they do.

An *Atlantic* article from 2017 indicates that "for jobs that mainly require interactions with clients (consultant, insurance salesman) or don't require much interaction at all (columnist), the office has little to offer besides interruption … but other types of work hinge on what might be called 'collaborative efficiency'—the speed at which a group successfully solves a problem. And distance seems to drag collaborative efficiency down."

An article in the Harvard Business Review concluded that, pre-Covid-19, knowledge worker office utilisation peaked at below 50% on any given day, and that's before Zoom changes the way we meet. By that logic, wouldn't the best way to manage cost be to remove half of all office space? No, according to the article, because that might be a false economy. The study found that it was the random interactions between people collaborating over work in the same space that generated some of the best ideas. Thus, for workers in some of the most knowledge-intensive fields, there is evidence that, unlike with e-commerce, in the world of office space, the items you pick up at the store and the items that get delivered to your door are not the same.

Penny-Wise But Pound-Foolish?

Assuming knowledge-intensive workers were to work from home and see productivity declines, how much money are companies likely to save in return? This is the key question that those advocating for cutting office space may need to consider more closely.



Castleforge proprietary analysis

We've done a study for London going back nearly 50 years about how much office space costs as a percentage of total employee salaries, considering the reduction in space usage per employee over that time period as ancillary uses have become more streamlined and efficient. Surprisingly, while it may not feel this way to the average CFO, office space has never been cheaper to the employer. Currently, office space costs stand at approximately 10% of employee salaries for the average City of London worker and closer to 5% for those industries with more knowledge-intensive workers. At Castleforge, it's 7%.

Which of course begs the question, just how much money are firms really going to save by reducing their use of office space if it reduces employee productivity even marginally? Put differently, would a firm accept a material loss in employee productivity by cutting a third of its office space to save 3% of staff costs by forcing a third of its employees to work from home every single day? We wouldn't.

And just because some of our employees already work from home 1-2 days per week (because they want to), we still will need to keep a desk available for them on the days they are in the office. Thinking about it from an employer's perspective, try telling the average City of London worker on over £80,000 per annum that she doesn't get a desk of her own because you'd like to save £3,000 per year. It wouldn't take long for her to leave for another company who can provide her with a desk, leaving you with a £10,000+ bill from a recruiter to replace her and plenty of time needed to train that replacement. The true competition among knowledge-intensive companies today is a war for talent, not space.

So, comparing the demand for offices today for the demand for physical retail in 2015 both misses the key component of the time machine equation - that you do not get the same product - and it also ignores the fact that the cost of using far less space is not a large portion of employee salaries let alone of overall operating costs.

Instead, employers are likely to focus on our third bullet above: alternative forms of space that take the place of more traditional ones. What is their office space being used for in the first place, and how can that space be used more efficiently through the application of recent technological advancements? Answering *that* question, we believe, is what will lend insight to understanding future office demand.

WHAT LAST-MILE DEMAND TELLS US ABOUT OFFICE DEMAND

The demand for office space is a derived demand for where public and private investment happens. There is nothing inherently necessary about an office building other than the fact that workers use the space to come together to solve problems. Consequently, the layout and location of offices have changed over time to respond to the ways we create economic growth.

Likewise, shopping centres or last-mile logistics operations are a derived demand for where consumption – another component of GDP – happens. Here too, we have seen changes over time in response to consumption patterns. Thus, it is instructive to think about the future of offices in the same way we think about online versus bricks-and-mortar retail.

No one can deny that industrial and logistics investments have benefitted massively from the growth in the sale of "things" over the internet. But many do not realise that overall consumer spending on things as a proportion of total spending is falling for certain categories of items like groceries and clothing. Meanwhile, last-mile warehousing has seen a material increase in demand from retailers in these categories, and thus a material increase in rents. How can we explain this?

In order to see how overall derived demand for space related to consumer spending on things changes, you need to decompose the demand for retail and logistics into its components:

- Physical retail space share of aggregate demand: the demand for physical retail is falling (that's an understatement!);
- Logistics space share of aggregate demand: the demand for last-mile logistics space (driven by e-commerce) is increasing; and
- Change in aggregate space demand: aggregate demand for physical goods in a number of categories has fallen and with it, presumably, demand for total consumption-related space.

The fall in the first may very well outweigh the rise in the second, even if there is an aggregate fall in the demand for physical goods. Furthermore, with a rise in demand for logistics space, if this is paired with a lack of supply to fulfil this rising demand, investors in this sector stand to make a great return.

The parallels to the office market are clear. While the overall demand for office space could fall as a result of remote working patterns, what matters more than the overall derived demand for places to undertake investment is the compositional demand and supply picture both for traditional offices and for whatever takes its place. So, what do we think will play the part of last-mile logistics space in this new office space drama?

SHOPPING MALL : LAST-MILE WAREHOUSE :: TRADITIONAL OFFICE : ???

Let's work under the assumption that the demand for physical office space structurally reduces. What would bring that about?

As discussed above, some of this may come as a result of employers shifting physical workspace requirements on to their employees via WFH, but we doubt this will occur en masse. We think the more likely answer comes from offices being used in a more efficient way, potentially causing employers to need less "traditional" office space overall. What would take its place is a more flexible type of working – a whole ecosystem that has already begun to develop around more mobile working and utilisation of remote working products. *And at the heart of this ecosystem is the flexible office provider*.

Flexible office providers are a unique solution to the changing needs of office space users because they offer plug-and-play solutions and access to the state-of-the-art office design and ways of working. Even more, they combine this spatial product with a contractual product comprising shorter-term leases that allow tenants to adjust their space requirements according to business needs at any given time.

Traditionally, tenants in the UK signed three-to-twenty-year leases over fixed areas and would undertake an expensive fit-out of this space to suit a vague idea of how their needs would look over the coming years. But over time, this process only worked well for a diminishing number of tenant profiles. Smaller tenants could get away with three-year leases, but were required to come up with substantial out-of-pocket costs in order to fit out, and later reinstate, their spaces. Larger tenants would generally take on at least five- if not ten- or twenty-year liabilities and be forced to set up the office space at the outset for how the business might look over two decades. As a result of these inefficiencies, traditional office leasing often proved to be suboptimal.

With flexible office leasing, tenants are given the option to take space on contracts typically between 1-24 months, allowing them to scale up or down depending on how the space needs of the business change over time. Furthermore, the cost of the fit-out is borne by the provider, who is best placed to do the work, finance the cost of the fit-out and alter the fit-out as the office ecosystem evolves.

An example of the latter is how we at Clockwise are reducing some of the smaller meeting rooms and instead converting these into pods for remote video conferencing sessions. After all, one-on-one meetings can largely be conducted via videoconference, but those conference participants will need somewhere to be while they conference. And since having ten people in a 20-person office videoconferencing from their desk at the same time is unworkable, voila…the videoconference pod is born. Due to our in-house development/construction knowledge and larger balance sheet, we are more easily and more cheaply positioned to do this compared to our individual tenants.

Furthermore, because these videoconferencing pods will not be used at 100% capacity for every tenant at every moment of the day, we can save on overall space usage by offering them as a bookable service for all tenants in the building. An aside. If you want to talk about the permanent impacts of Covid-19 and social distancing, call us. We do not believe that in the long run – or even the medium run – our future way of life as humans will be governed by staying 6 feet away from everyone at all times. Humanity will find workarounds.

THE SHAPE (LITERALLY) OF TOMORROW'S OFFICE DEMAND

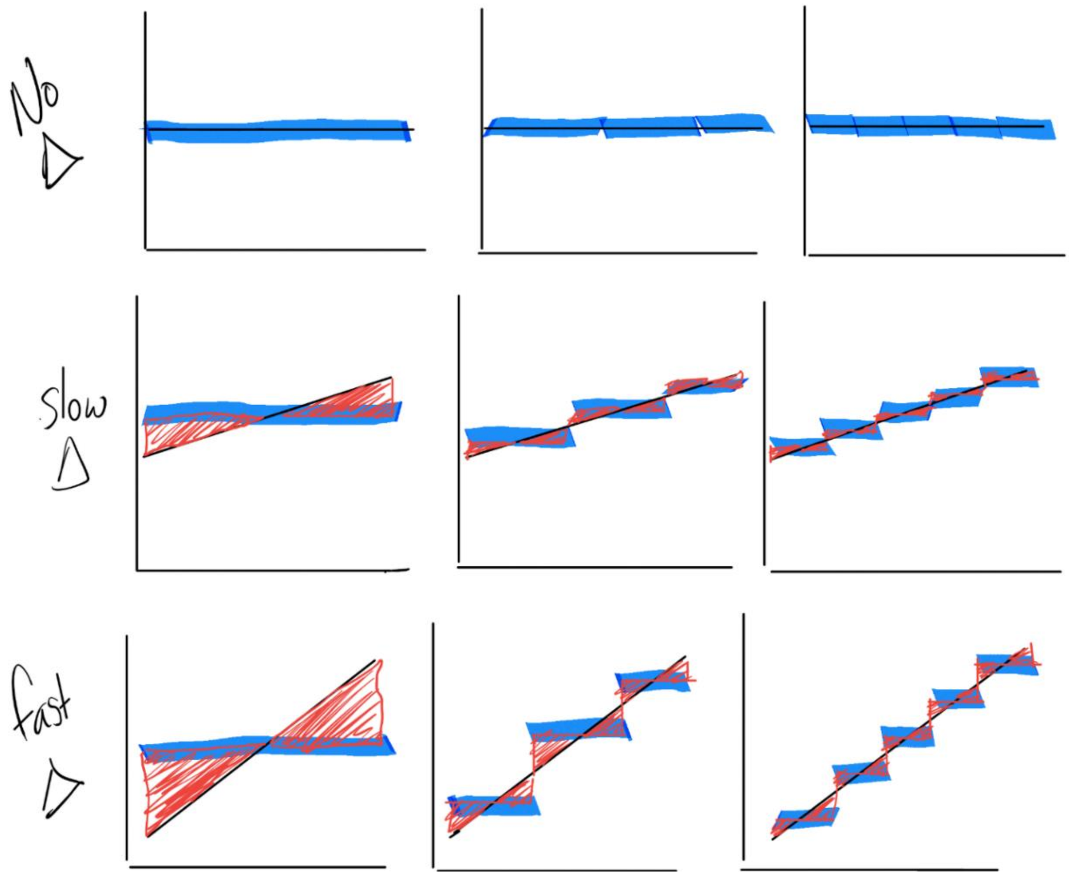
The move to more flexible leasing was already starting to happen before Covid-19. The total penetration of flexible office in London, for example, has grown from 1-2% of the total office stock to 6% over the past ten years alone. The trend in secondary markets in the UK has been behind, but is increasing and now stands at 2-3%. While a majority of employees surveyed by Savills in 2019 said that they still wanted to work from their own dedicated desk in an office building, a full 30% said they would prefer working from home or hot-desking arrangements at least part of the week

And this makes logical sense. With the rise of wi-fi, mobile broadband, cloud storage, SaaS and smartphones, companies are no longer tied to a particular physical location. The pace of business growth is changing today faster than it ever has and technological progress drives changes in the ways that space is used faster than ever before. Therefore, companies should want to shorten the length of commitment to any one type of office arrangement and to reduce switching costs between different offices and different layouts, which is exactly what providers like our own Clockwise can offer.

Let's run a simple example. Assume that for a particular business the number of employees (and thus workspace required) increases with time in a linear fashion. This is the black line in the graphic below. The slope of this line increases as the business grows at a higher rate. The blue lines represent the employee-equivalent office space occupied by the business over the length of a lease. The red areas represent the losses associated with too much or too little space available to employees at any given time in the business's evolution.

Real estate planning involves minimising the red area of the graph below. This is the area where a business either has too much space for its current headcount (thus wasting money) or too little space (thus suffering an opportunity cost due to undersupply of the spatial resources needed to maximise production). The blue line can also represent change in how office space is used, so that at any given time an office may not have enough large meeting rooms, desks, private offices or breakout areas. But balancing this all out is a cost of moving or reconfiguration, which negates the gains had by tracking the slope of the line and moving too often. So effective traditional office leasing is all about balancing out pace of business change with moving and disruption costs.

In the old days, when businesses expanded less rapidly and technological needs changed less frequently (the slope of the black line was closer to zero), the red area was pretty minimal and the cost of moving high, so that tenants would want to stay in the same space on a traditional lease for a long period of time, and could adequately amortise that expensive initial fit-out cost.



But with a much steeper pace of change, the red area becomes substantial, which means businesses will accept more frequent moves (i.e., higher cumulative switching costs) to offset the losses associated with over or undersupply of space. Above you can clearly see the effects of one, three and five moves under conditions of no change, slow change and a fast pace of change to business requirements.

The red area or loss due to inefficiency can be represented as the sum of the absolute values of the integrals of the linear function minus the blue line calculated from the start to end of each lease. Subtract from this a constant *m* for every *n* moves ($m \cdot n$) and you get the solution to how much you as a tenant are losing by having an inefficient square footage or layout configuration, over the course of your business life. You can basically optimise your loss by minimizing the function. (we are exploring the idea of a whole paper on this and what Bernhard Riemann can teach us about office demand, so if the above discussion left anyone shouting “More! More!” then we ask for your patience).

Flexible office providers help to optimise both elements of this net loss function, and therefore it is no surprise why they have become more popular in recent times. By offering shorter and more flexible lease terms they allow tenants to shorten the lease commitment (shorter blue line) and thus match tenant spending to today's and only today's needs for the business. This allows businesses to move along the slope of the function (black line) until they can almost match it. And perhaps as importantly, by financing the fit-out package and allowing a plug-and-play delivery of office space, flexible office providers reduce the moving and disruption costs found with traditional offices.

Flexible offices make sense in today's world much more than they did twenty or even ten years ago as the pace of business change increases and technological disruptors like remote working become more prevalent. And in a world beset with Covid-19, uncertainty about the pace of change abounds. Tenants are unsure about when people will be able to or want to return to work full time, with many businesses indicating late 2020 or even 2021, so why would tenants commit to longer term traditional leases now?

Yet, with both cyclical and structural factors pointing to an increasing pace of change, thereby implying an increased future demand for flexible offices, what is likely to happen to the growth in flexible office providers, and thus the supply of flexible office space, over the near-to-medium term?

LIKE TECH AFTER THE DOT-COM BUST

Marc Andreessen has noted that "every failed idea from the dotcom bubble would work now," and yet immediately following the crash twenty years ago, "tech" was a bad word. Likewise, "flexible" when used to describe offices is a bad word today. The litany of articles written by Bloomberg and the FT on the final days of WeWork claim that flexible office providers were in the business of a mismatch of assets and liabilities – that's why they went bust and that's why the model doesn't work.

But that's nonsense.

Virtually all businesses are in the business of asset-liability duration mismatch. Banks do this when they take deposits or loans to make longer term loans or investments. Industrial firms do this when they build plant capacity and then sell that capacity in the form of whatever widget they produce. Shipping companies buy or rent out ships to then sell the capacity and space on single journeys. And true to form, even traditional office owners do this! They just do it by buying into very long-life assets and then renting them out on less long-life terms of five to 20 years. And no one bats an eyelid when they do.

Readers will be familiar with what we believe to be the reason behind why WeWork's prospects soured. Rather than re-cover old ground, we would simply refer you to our 2017 and 2019 letters on the topic of asset-light business models in general. To sum it up here in a sentence or two? It has nothing to do with the product itself or even the model of asset-liability duration mismatch. It failed due to too much leverage (operating leverage that acted like near-100% LTV financing), and that model nearly always goes bust when supply or demand is thrown out of kilter. Like it does in banking (c. 2008), or containerised shipping (c. 1970), or even traditional offices (c. 1990).

Still, we expect the market's misunderstanding will leave a stain on the entire flexible office market. Despite an almost mathematically proven case for growth in demand for flexible offices, investors are likely to be hesitant to support flexible providers in expanding their portfolios even as demand for what they provide structurally increases.

Already, investors have started to throw the baby out with the bathwater. A PERE article from a few weeks ago quotes a market analyst noting that "In some cases, [landlords would be] willing to get rid of these co-working tenants and replace them with someone else just to get rid of the headache." But who will replace them? The sentiment ignores the structural changes going on in the market – just because landlords *want* to go back to the old way of leasing doesn't mean they *can*. Though, true to form, London landlords dropped over a quarter million square feet of leasing discussions with WeWork this week and things will get visibly more negative as serviced office providers look to renegotiate their leases across the world.

And on the financing side, the FT reported in mid-May this year that "bonds backed by WeWork lease payments have tumbled in value", and provides a very predictable line from ratings agency S&P Global warning of the "sustainability of the co-working business model in an economic downturn, during which tenants may rapidly cancel their memberships as employment dynamics shift." The major Covid-19-

related recession likely to unfold over the coming few years is almost sure to make things worse for the growth of the flexible office sector. Recessions and depressions are not the time that capital is necessarily available for new and growing sectors, especially ones that appear to have fallen on their faces at the end of the most recent cycle.

So, we see a period over the early part of the next cycle that looks like this:

The narrative is that office space demand – already falling cyclically due to a post-Covid-19 recession – is likely to fall further and structurally due to a number of different reasons, chief among them remote working and WFH. There is a general lack of understanding that this was already happening before Covid-19 and that flexible offices were the main beneficiaries of this structural change due to optimising footprint and reducing moving costs. However, due to the very public and much anticipated demise of WeWork, the poster child of the flexible office sector, investors and lenders will have a tendency to write off the sector. But this misses the notion that flexible offices and traditional offices are the opposite side of the same "business investment" coin, in the way that bricks-and-mortar retail and last-mile warehouses are opposite sides of the same "consumption" coin. The demand for flexible offices, which are in the mid-single-digit penetration rates today, much like e-commerce was single digit for consumption up until five to ten years ago, will increase, just at the moment that supply is unlikely to be provided to meet that demand.

A ROADMAP FOR THE WINDING JOURNEY AHEAD

We expect major structural changes to occur to the office landscape over the coming decade. The upcoming business cycle recession will result in a reduction in demand for office space of all kinds (along with reduced demand for most other forms of real estate), and when office demand does ultimately recover from the coming recession, it may never, in the aggregate, in certain markets, come back to its current level. Ever. Burying our head in the sand about that or doing the same thing and hoping for better results are both poor strategies for dealing with structural change.

Still, we do not believe that the numerous articles from the *FT* or the *Wall Street Journal* calling the demise of the office, based on employees' ability to work remotely or from home, are fully thought through. Just because tenants *can* save money by reducing their office usage does not mean that they *should*, after considering the likely savings achievable compared to the potential loss to employee productivity, especially in knowledge-intensive industries. Even small amounts of productivity loss, say, 5%, would outweigh the savings likely available to businesses based on our analysis of the London office market (one of the most expensive office markets in the world, mind you).

Instead, we see a shift in the way office space is used that better integrates employees with all the modern bells and whistles available from remote working and WFH technological advances. And *that*, we believe, could naturally reduce the amount of office space required.

But that is in the aggregate, and we don't invest in the aggregate. We believe that comparing structural changes in offices to bricks and mortar retail fails to see that traditional office has its own flip side, just like last-mile warehousing was for shopping centres: a flexible office product provided by professional operators. And just like how last-mile warehouses and logistics demand increased massively in a world of flat or even declining demand by consumers for many categories of "things," flexible office demand can increase massively in a world of flat or declining overall demand by businesses for creative and industrious square footage.

Moreover, in a world where the narrative surrounding flexible offices is negative, this creates a fantastic opportunity for us and our flexible office provider, Clockwise. We have four operational properties with another 11 on the way, so call us to chat about what we're seeing in the flexible office market. We are sitting on a lot of dry powder to take advantage of office owners listening to the consensus and running for the hills. Clockwise is a substantial organization of nearly 30 people with a growth plan to reach a team of over 75, that will allow us to do what most office owners around the UK and Europe could only dream of doing, at a time when demand for the Clockwise product is set to grow enormously off a low base. This all makes us very excited about the prospects for the next cycle, an excitement we believe that should also be shared by our investors.

Disclaimer:
The views contained herein are the views of Castleforge Partners Limited ("CFP") as of the date indicated and such views are subject to change without notice. CFP has no duty or obligation to update the information contained herein. This letter is being made available for educational purposes only and should not be used for any other purpose. The information contained herein does not constitute and should not be construed as an offering of advisory services or as an offer to sell or solicitation to buy any securities or related financial instruments in any jurisdiction. accuracy of such information and has not independently verified the accuracy or completeness of such information or the assumptions on which such information is based. This letter, including the information contained herein, may not be copied, reproduced, republished or posted in whole or in part in any form without the prior written consent of CFP.