

Global Research / 12 March 2020

COVID-19 Global Real Estate Implications



Contents

Executive Summary	3
Setting the scene	
Implications for corporate occupiers and response timeline	6
Implications for capital markets	8
Implications by real estate sector	9
Hotels and hospitality sector	10
Retail markets	11
Industrial and logistics markets	12
Office markets	13
Living sectors	14
Final thoughts	15



Executive Summary

Governments, businesses and communities are facing up to the reality of COVID-19. The short-term impacts on economic growth, business activity and individual behaviour are undeniable and, while the current consensus is for a rebound in the global economy in H2 2020, the exact trajectory is unknowable. We therefore suggest a scenario planning approach, rather than betting on any bold predictions, with a focus on preparedness for either a mild to moderate slowdown that is transitory in nature or for a more severe and sustained slowdown.

Corporate occupiers

- The health and well-being of employees will be the initial primary corporate concern, followed closely by business continuity plans. Given the rapidly changing situation, businesses need to be nimble and flexible. We advocate a corporate response that focuses on Preparedness, Protection, Monitoring and Communication.
- Operational resilience will be a longer-term focus for real estate decision-makers as businesses develop the ability to respond quickly should they face another similar event in the future.

Capital markets

- Investment activity is likely to slow in H1 2020 as investors react to uncertainty, with the retail and hospitality sectors being the most affected. A shift to defensive assets is expected – key considerations as major arbiters of risk include income stability, operation criticality and occupation density.
- Real estate investment has fluctuated during previous crises, but the overarching trend over time has been for increased allocations to the sector and we see no reason for this to change. Real estate continues to offer attractive relative returns in comparison to other asset classes.

Hotels and hospitality

- The impact of travel restrictions, event cancellations and individuals' reticence to travel have been immediately felt in the hospitality sector. In the short term, occupancy rates will fall.
- Locations with a high proportion of international visitors are most exposed, whilst locations accessible to a domestic audience by car or public transport may benefit. There is potential for a fairly rapid rebound if the virus is contained in short order.

Retail markets

- Global retailers must prepare to navigate a period of elevated risks to cash flow and increased operational costs arising from a slump in consumer demand and disruption to supply chains. Protecting cash flow remains crucial for all retailers, and particularly for those operators with thin profit margins. Those hardest hit may seek temporary rent reliefs from landlords.
- Retailers with robust infrastructure to fulfil online orders could be longer-term beneficiaries, placing a greater emphasis on the shift towards a flexible omnichannel retail model. Ensuring continuity of operations by rethinking supply chains will be key to mitigating the risk of future shocks.

Industrial and logistics markets

- Disruption to global supply chains is the main effect on the industrial and logistics sector. Reduced activity at major gateway ports and airports is resulting in falling utilisation rates and idle resources. The outbreak is likely to elevate the issue of supply chain resilience and mitigation.
- This outbreak may accelerate the use of automation and robots in operations and reduce the sector's reliance on labour. The move to online shopping, especially for groceries, could become more permanent and, in turn, boost demand for logistics space.

Office markets

- The outbreak could put greater pressure on markets which are already in a late stage of their cycle, creating the potential for a delay to investment activity and softer rental growth than previously forecast. An increase in remote working is likely to reduce office utilisation rates, whilst landlords with exposure to short-term leases will be the most vulnerable.
- Over the longer term the outbreak will probably fasttrack the adoption of remote working and investment into collaborative technologies.

Living sectors

- The largest impact of COVID-19 is undeniably human. The long-term trend towards higher-density living and increased collaboration spaces potentially heightens the risk of transmission. Mitigation protocols will need to be developed.
- The living sectors, particularly multifamily, tend to have more defensive characteristics, benefitting from stable income streams and the ability to actively maintain rents to limit void periods. Demand is also relatively resilient to external shocks.

Final thoughts

- Although it is easy to concentrate on the short-term economic impact of COVID-19, the longer-term societal and real estate impacts should not be overlooked. The impact and aftermath will change our way of living and working, potentially leading to new operational models. Could it prove to be the catalyst for certain secular shifts?
 - Office increased remote working and a greater focus on health, well-being and productivity.
 - Retail the normalisation of online grocery shopping, forcing a change in retailer behaviour.
 - Industrial the de-globalisation of supply chains to mitigate risk.
 - Sustainability changed perception of travel and renewed emphasis on sustainable practices.
 - Technology increased integration of technology, particularly PropTech and MedTech, impacting all aspects of life and business.



Setting the scene

The outbreak of COVID-19 and its rapid spread across the globe has taken many by surprise, and businesses, communities and governments must now confront the reality of the seriousness of the situation. There is a wealth of information (and misinformation) to be consumed on a daily basis and, in such a fluid situation, the facts and consequences are changing quickly. While individuals and businesses remain focused on health and well-being, this paper will highlight the potential implications for real estate.

In the short term, the impact on global economic growth is undeniable, with those countries that are the most advanced in the outbreak already feeling the effects. At the time of writing, the consensus forecast is for a sharp shock to the global economy in the first half of 2020, followed by a bounce-back – reminiscent of the recovery after the SARS outbreak in 2003. Although the immediate hit to demand has been very evident in the retail and hospitality sectors, certain industries are more susceptible to the disruption of supply chains. Disruption has already started in sectors such as automotive, aviation, chemicals and consumer goods, and the full effects have yet to filter through. Conversely, pharmaceuticals and healthcare are most likely to experience a surge in demand.

Health authorities, governments and financial institutions globally are uniting in their goal of protecting and treating their populations, containing the spread of the virus, and ensuring the stability and health of businesses. Many central banks possess limited ammunition, but further rate cuts and quantitative easing, targeted liquidity support, and macroprudential forbearance will provide some cushioning to the slowdown. Fiscal policy measures could be implemented, yet they would likely be most effective in targeting industries most acutely affected by a loss of revenue and higher costs. Our current base case is guarded. The further the outbreak widens and the longer it persists, the greater the chance of a more prolonged impact on the global economy and, by extension, real estate markets. At this point it is difficult to separate the actual current and likely economic impact from the fear-gripping news sources and financial markets. The exact trajectory of the outbreak and the resulting economic effect is unknowable. We suggest a scenario planning approach, rather than betting on any bold predictions, with a focus on preparedness for either a mild to moderate slowdown that is transitory in nature or for a more severe and sustained slowdown.

For our clients to better address the situation, we have compiled an initial assessment of the impact and implications on real estate sectors globally which we shall be updating as the situation evolves.

Implications for corporate occupiers and response timeline

A challenging environment for corporate activity

Corporate occupiers must remain nimble and able to react quickly to this rapidly changing situation. We recommend a focus on the four areas where the implications loom large: Business Operations, Workforce, Finance and Communications.

Business Operations

Preparedness is critical. Despite the existence of business continuity plans, for many firms the outbreak has exposed gaps. Business operations may be hit, and consideration should be given to changing or closing operations in affected areas and transferring business to new geographies or knowledge to key employees.

Supply chain disruption should be anticipated and counteracted. Supply chain visibility is also a challenge across industries and one that corporates should seek to improve. Manufacturing facilities may face immediate and lasting interruption, as will product distribution channels. As a result, businesses are addressing logistics, labour costs, productivity and hedging risks across supply chain locations.

Strategic decision-making processes will face interruption. It is unclear at present when we will know the extent and the duration of this impact; in the meantime, businesses will be fast-tracking contingency planning measures to deal with a potential prolonged period of disruption.

Workforce

People protection and wellness are the priority. Wellness needs to be put at the forefront as a basic corporate duty of care to employees and to ensure workplace productivity. Contingency plans need to be implemented for employees unable to commute, travel or occupy corporate locations, and access to sites for visitors, suppliers and the public also needs to be reviewed. Social and professional 'distancing', absenteeism and illness are likely to cause disruption and present a potential impediment to operations and sales. Your buildings can also act as barriers to contamination. In the longer term, 'building health' (including building ventilation, air filtration, and cleaning) and facilities / management preparedness will all become increasingly important. Remote working is key to ensuring the continuity of your activities. Difficulties communicating with colleagues and clients, IT system capacity issues and the risk of workforce shortages will also affect productivity. Mitigating policies and procedures and an increasing adoption of effective remote working will help reduce some of this impact.

Finance

The financial impact on corporates will be multifaceted. Businesses are required to finance the emergency response along with the mitigation and resilience costs around planning, 'solutioning', training and recovery from the outbreak. Additional costs for hiring should be considered – the availability of temporary replacement workers and other substitute resources may be difficult. The cost of distributed technology investment and telecommuting tools to enable remote working where feasible should be evaluated.

Deploying new technologies and solutions (e.g., PropTech and MedTech) to control the level of infections of employees will require capital investment. Not all investment will be recoverable, but this will leave a legacy of improved and more robust operational measures and systems.

Communications

Communication is essential to provide transparency. Establish protocols and guidelines to communicate information to employees and business partners on your infectious disease outbreak response plans.

Avoid miscommunication and ensure the appropriate dissemination of information, and also avoid 'fake news' or 'infodemics'. (An 'infodemic' is an overabundance of information – some accurate and some not – that makes it hard for people to find trustworthy sources and reliable guidance when they need it.)

What is your Corporate Response Timeline?

The corporate response to COVID-19 needs to start immediately and we advocate Preparedness, Protection, Monitoring and Communication. This is an ongoing process and priorities will change over time as businesses review long-term decision-making strategies. We can already see that COVID-19 may have long-lasting consequences (both positive and negative) that will affect corporates' decision-making strategies for the long term. The following outlines a phased approach to a tactical corporate response, from initiation to embedding resilience, with some examples of specific actions.

When	Ном
Immediate next 1 to 2 weeks Preparedness Protection Communication	 Activate (or create) a business continuity plan for real estate operations and form a global response team. Build data-analytics capabilities to enable real-time analysis of how changing threats might affect an organisation. Establish communications protocols and guidelines. Streamline decision-making processes to ensure rapid response and enable effective communication to maintain business continuity. If needed, close facilities (or parts thereof) immediately, identify alternative working locations and deploy a remote-working plan. Increase hygiene and cleaning measures on site and consider waste management, and also bring in more outdoor air in buildings with heating and ventilation systems (or opening windows in buildings without) to help dilute airborne contaminants.
Short Term 3 to 4 weeks Monitoring and Readiness	 Monitor and assess the situation continually. Accelerate mobile and remote-working enablement programmes as needed. Focus over the short term on operational management of real estate and mitigation processes for critical sites. Ensure that adequate supplies are maintained – consider any potential disruption to supply chains.
Medium Term 1 to 3 months Continuity	 Consider: Continuity of mobile and remote-working enablement programmes. Supply chain disruption impacting operations. Increased hesitancy and cautious real estate decision-making. Reduction of face-to-face client interaction – plan for alternative means of contact and engagement.
Long Term over 3 months Resilience	 Successful acceleration of remote working, leading to a longer-term cultural shift. Supply chain diversification and enterprise footprint optimisation. Carbon emission reduction and reduced air travel which could shift enterprise perceptions on sustainability and the 'Responsible Enterprise'. The need for high-spec real estate with a view to better provide a safe and healthy workplace. An increase in workplace technology adoption – sensors, air quality and occupancy indicators – and the faster deployment and use of PropTech and MedTech to enhance workplace safety.

Although the short-term attention of corporates will go on business continuity, there are significant longer-term implications for real estate decision-making – with a renewed emphasis on the ability to react quickly to a similar event in the future with a focus on operational resilience. These will vary by sector, with the implications set out in the individual sector commentaries that follow.

Uncertainty filters through to investors in the immediate term

Over the short term, particularly in H1 2020, investment activity in global commercial real estate is expected to slow. Investors will apply more due diligence and will experience a lower practical ability to execute transactions. Extended transaction timelines and delayed launches are already evident in highly affected markets; however, technology will be used to connect parties and reduce some of the barriers to execution.

Hospitality, retail and leisure have seen the sharpest decline in sentiment and impact on operating performance. Crossborder activity is also anticipated to be particularly hard hit, especially in those cities targeted by outbound Asian capital. Conversely, with recent shifts in rates, a more accretive currency hedge is expanding the landscape of opportunities for some investors and countering downward pressure.

Interest rate volatility is impacting lenders who remain in a phase of 'price discovery', particularly in the U.S. The marketplace is more turbulent now and lenders are struggling to price assets. Nevertheless, the supply of credit continues to be abundant.

Given these factors, investors are expected to turn towards more defensive assets and sectors. As there is a lack of comprehensive data on the effect of COVID-19 on fundamentals, investors should look to a few key considerations as major arbiters of asset-level risk in the short term:

- **Income stability:** The less variable the contractual income, the less risk. This favours the living sectors and office assets with credit tenancies and strong remaining terms.
- **Operation criticality:** The more important the facility and tenancy to revenue and business operations, the lower the risk. This favours data centres and critical logistics assets.
- Occupation density: The higher the density of occupants, the higher the operational risk of contagion. This creates short-term risk for hotels, retail, select living assets and flex-office operators.

If the virus is contained in relatively short order, a bounce-back in H2 2020 is anticipated in global real estate investment. There is a record level of dry powder (US\$330 billion) and pressure to deploy capital, and this will ensure that investor appetite stays strong. Once the situation stabilises, and investors have greater clarity, pent-up demand is expected to be released in the second half of the year.

Although investment into real estate has fluctuated over the years through various downturns, the overall trend has been for higher allocations to real estate and we see no reason for this trend to reverse. Real estate continues to offer good relative returns in comparison to other asset classes and we have witnessed increased volatility in the equities and commodities markets. The differential between real estate yields and government bond yields remains at or near all-time highs. Given this, we expect to see continued flows (and potentially an increase) of capital into real estate over the medium to long term. As such, the yield impact of COVID-19 is predicted to be minimal.



Implications by real estate sector

Hotels and hospitality, retail, industrial and logistics, office and living

The impact of the COVID-19 outbreak is being felt across all aspects of work and life. Understandably, the implications for each sector are quite specific and different. In exceptional circumstances, like the current environment, it is difficult to view the longer-term repercussions. However, we are assessing each sector for immediate impacts and will also unpack some of the less obvious longer-term effects. Based on our assessment, we have sequenced the major property sectors to reflect the level of short-term risk, with hotels experiencing the most short-term volatility in performance and the living sectors being the most resilient.

Reduced personal and business travel impacting sector

Travel advisories and restrictions are influencing travel plans for individuals and corporations across the globe; hence the impact on the hospitality industry has been immediate. As the number of countries with reported cases continues to rise, major conferences and highprofile events around the world, such as South by South West and MIPIM, have been cancelled or postponed. In addition, individual travellers are growing more selective about their travel and reconsidering non-essential leisure related trips; where official travel restrictions have been applied, consumers have been able to cancel and receive refunds.

Hotel operators can expect occupancy rates to drop for at least a quarter and, in turn, the resulting inability to actively drive peak pricing to reduce average daily rates (ADR) and revenue per available room (RevPAR). Risks to staff availability may put a further strain on operators' capacity to provide a service.

The magnitude of the impact will depend on the duration of the outbreak and counteracting measures, though there are compensating factors which could provide some cushioning during a period of reduced demand. Domestic travel markets will see some downward pressure from within-country restrictions and consumer hesitation to travel, but will benefit from a substitution away from international vacationing towards domestic 'staycation-ing'. Markets that enjoy the highest levels of international visitation, e.g., New York and Paris, are most exposed to drops in international travel, while those accessible to a domestic audience by car or public transport may hold up better. Looking towards the second half of the year, there is potential for a rapid rebound as activity returns to normal levels. However, as seen after previous recessions and human-impact events (e.g., strikes and terrorist attacks), there is a risk that the return to normalcy is protracted. Destinations considered epicentres of the outbreak, or that responded ineffectually, may see a prolonged downside. Investment transactions are likely to be delayed but should come back relatively quickly. In the long term, the epidemic is unlikely to be a catalyst for significant structural change.



Retail markets

Navigating a period of constrained consumer demand and profits

Global retailers must prepare to navigate a period of elevated risks to cash flow and increased operational costs arising from a slump in consumer demand and disruption to supply chains.

The drop in international travellers will most acutely impact global gateway cities, luxury markets and superprime retail destinations. Domestic retail spending may suffer a temporary decline from consumer reluctance or inability to visit destinations where infection risks are elevated. Non-essential goods items and leisure services will be hit harder than perishables and essential dry goods, which have seen elevated demand as consumers stockpile to avoid personal shortages. As the outbreak spreads, this behaviour can be expected to emerge in new geographies. In the short term, supply chain disruption will lead to lower inventory levels for some retailers and may result in upward pressure on consumer prices, albeit much depends on the flexibility to source and manage stock. Fashion operators following a traditional two-season model are likely to see disruption spill over later into the year.

If transmission of the virus slows by mid-year, the important Q4 seasonal sale period will be minimally affected, helping to lessen the full-year financial impact. Nonetheless, Lunar New Year sales have already suffered a deep blow and months of inactivity are unlikely to be made up. Significant downside risks exist across all geographies if the spread of the virus continues through year-end. Protecting cash flow remains crucial for all retailers, and particularly for those operators with thin profit margins, including weaker retailers and non-food value operators. Those hit hardest may seek temporary rent reliefs from landlords. If liquidity and capital constraints arise, new store openings will slow and refurbishments will be delayed.

Retailers with the infrastructure to fulfil online orders through home delivery are currently being perceived as beneficiaries of consumers' reluctance to visit stores and we are seeing an increased conversion of people to online. Greater emphasis will be placed on the shift towards a flexible omni-channel retail model and sustainable fulfilment; strengthened partnerships between landlords and retailers will need to emerge to achieve this.

In the longer term many retailers are likely to rethink their supply chains to ensure continuity of their operations and to mitigate risks of future shocks. Coupled with initiatives to improve the sustainability performance and limit the environmental impact of wider operations, retailers may opt to produce and house more stock locally. This may boost additional demand for logistics space and/or drive the repurposing of existing store networks.

Supply chain risk mitigation and resilience

Disruption to global supply chains will significantly impact the industrial and logistics sector. The contraction in China's manufacturing sector is already causing supply shortages and the temporary suspension of production in downstream facilities globally.

Reduced activity at major gateway ports and airports is resulting in falling utilisation rates and idle resources. Inventory levels will decline in affected regions and those with supply chain linkages to affected areas, while sourcing replacement stock is likely to be difficult or impossible in the short term due to the breadth of geographical impact. Globally, warehouse capacity utilisation will fall and firms specialising in fulfilling shortterm excess space demand will probably see a drop in demand.

The outbreak is likely to elevate the issue of supply chain risk mitigation and resilience – concerns that had come to the forefront amid heightened trade tensions. The business-level response can be varied, with two notable alternatives pursued:

- A re-shoring or near sourcing of manufacturing and an increase in diversification in terms of sourcing. This could result in additional regional demand for industrial facilities and associated logistics, but also potentially lead to reduced container flows at major gateway ports and lower warehouse demand in these locations. Technology will be key to securing greater supply chain visibility to achieve this.
- A reversal of an existing lean supply chain with low inventory cover. Firms may decide to increase their inventory levels in the long term given the uncertainty and disruption, and this may have a positive flowthrough effect to demand for warehousing space. The business case is strongest for high-value and high-turnover goods.

In the longer term this outbreak and the anticipation of future shocks may accelerate the use of automation and robots in operations. Specifications of buildings and their locations would be impacted: highly automated buildings may be taller but smaller in terms of their building footprint and require less land for car parking. Labour may become a less important location factor compared with power. Moreover, the move towards online shopping, especially for groceries, could become a more permanent part of the retail landscape which would in turn boost demand for logistics space.



Office markets

Short-term disruption as working from home increases

Benchmarked against SARS, COVID-19 presents a different scenario, with many office markets now at historically high rental levels. There is a risk that the outbreak could put greater pressure on markets that are in a later stage of their cycle. A delay to investment activity and softer rental growth than previously forecast are headwinds to 2020 performance.

Office utilisation rates will fall as remote working increases, and landlords with exposure to short-term leases are the most vulnerable. Co-working operators in particular may be at risk if members decide to cut short-term contracts; hybrid operators with more secure medium-term income will be less exposed.

In markets most affected, landlords currently negotiating leases with tenants may demonstrate a willingness to expedite discussions and potentially offer elevated concession packages to close transactions. With ongoing uncertainty, landlords are well-advised to acquiesce on small points in lease negotiations to ensure deals are executed and long-term NOI is preserved.

We are in the middle of the largest test of home-working in history and corporates are adopting, refining and testing policies, processes and infrastructure to make it work. We expect quarantine protocols to encourage work-from-home initiatives and for these practices to be adopted in new geographies as contagion spreads. Large multinationals who recently, and publicly, announced the scaling back of home-working practices now indicate a desire to embrace widespread use of this practice until the outbreak passes. Looking beyond 2020, we anticipate that demand for remote working and investment in collaborationtechnologies to grow, which could fast-track the more widespread adoption of these practices. While this could be perceived as a threat to future office demand, it is unlikely to be so. A focus on higher utilisation and densification of space has already driven efficiencies and resulted in limited excess space in optimised portfolios. Rising employment in relevant sectors will more than outweigh any impact on demand from home-working.



Living sectors

Generally defensive sectors but with varied profiles

The largest impact of COVID-19 is undeniably human. The outbreak will further highlight the evolution of how we work, live and play. The living sectors, from residential, student housing and co-living to senior/ healthcare, are all closely bound-up in the way we behave and interact. The long-term trend towards higher-density living and increased collaboration spaces has potentially heightened the risks of transmission, and operators will need to develop mitigation protocols.

From an investor perspective, the living sectors have defensive investment characteristics, benefitting from stable cash flows and the ability to actively manage rents in order to maintain occupancy and limit void potential. Demand is typically resilient to economic shocks and is fundamentally supported by the unaffordability of home ownership, urbanisation and increased interest in more flexible-living solutions. However, diminishing consumer confidence and reduced mobility will impact demand during this period of uncertainty.

Residential

Multifamily, as an asset class, will remain resilient to the effects of the COVID-19 outbreak with its more stable, longer-term income profile and defensive investment characteristics. Where new housing supply is supported by investor purchases, there will be near-term demand uncertainty for locations that rely on international sales. Technology is an important mitigator and plans for new online transaction platforms will be accelerated in 2020.

Student Housing

There are risks associated with the mandated closures of higher education facilities and institutional mitigations, such as the increased use of online education (which may become more mainstream as we see a shift towards increased tech adoption throughout this crisis). Modern stock is also weighted towards demand from international students, notably from Asia. Uncertainty and travel restrictions will have a direct impact on occupancy, new applications and income that will drag on performance for the 2020/21 study terms.

Co-Living

There is downside risk from flexible, short-term co-living leases which present immediate risks to income. This nascent sector is broadly supported by private equity capital rather than more stable institutional capital. This implies a heavy strategy bias towards continued growth in assets in order to establish scaled platforms that can be stabilised for exit. An extended outbreak will undermine further investment and will increase the likelihood of M&A activity for private equity capital that no longer has the appetite to support cash-hungry business models.

Senior / Healthcare

Due to the age and average health profile of occupiers, the sector retains considerable additional risks to operators. Across the spectrum of provision, needsbased care homes will be more resilient to COVID-19 demand effects, but this will be offset by additional operating costs related to much higher protection protocols required for occupants. In the short term, investment activity will be constrained as asset-level due diligence is restricted.



Final thoughts

Catalyst for societal and real estate change?

Although it is relatively straightforward to assess the immediate and direct real estate impact of COVID-19 – with an escalating number of event cancellations, office closures, travel restrictions and quarantined areas – the indirect effects are yet to be fully realised. Cities and countries which have seen the highest number of cases will certainly feel the direct impacts the hardest, but all locations will experience the indirect effects, be it a reduction in tourism, breakages in supply chains or even changes to the way we all live and work.

The longer-term societal and real estate implications could continue to be felt over the years to come. Mitigation activities will last for several months and it will take some time to reach a full recovery. The impact and aftermath of COVID-19 will change our way of living and working, potentially leading to new operational models:

- Is this the catalyst for remote working to become a more entrenched part of working life, improving well-being and workforce productivity?
- Will online grocery shopping become the norm for new cohorts of people and how will retailers respond to this increased demand?

- Will the de-globalisation of supply chains accelerate as businesses look to mitigate risk?
- Will carbon emission reduction and reduced air travel improve productivity and shift enterprise perceptions on the need to travel and the importance of sustainability?
- Will it force the enhanced integration of technology across all aspects of life and business?

These are questions which we cannot definitively answer yet and all have significant real estate implications. However, we can certainly see that the longer-term consequences of the outbreak will continue to filter through in ways that were far from obvious at the start. Human, economic and business impact are inevitable, but new measures, policies and procedures, and investing in the right infrastructure, will help mitigate risk in the short and longer term.

We will continue to monitor the situation on the ground across the globe and will provide updates on new and emerging trends as this situation evolves.





JLL Regional Headquarters

Chicago 200 East Randolph Drive Chicago IL 60601 USA +1 312 782 5800

Authors

Global

Carol Hodgson Senior Director, Global Research carol.hodgson@eu.jll.com

Sean Coghlan Global Director, Capital Markets Research sean.coghlan@am.jll.com

Marie Puybaraud Global Head of Research, Corporate Solutions marie.puybaraud@eu.jll.com

Jeremy Kelly Lead Director, Global Research jeremy.kelly@eu.jll.com London

30 Warwick Street London W1B 5NH United Kingdom +44 20 7493 4933

Singapore

1 Paya Lebar Link, #10-08 Paya Lebar Quarter Tower 2 Singapore 408533 +65 6220 3888

Americas

Ben Breslau Chief Research Officer, Americas benjamin.breslau@am.jll.com

Ryan Severino Chief Economist, Americas ryan.severino@am.jll.com

EMEA

James Brown Chief Research Officer, EMEA james.brown@eu.jll.com

David Rea Chief Economist, EMEA david.rea@eu.jll.com

Asia Pacific

Roddy Allan

Chief Research Officer, Asia Pacific roddy.allan@ap.jll.com

Lee Fong Research Director, Asia Pacific lee.fong@ap.jll.com

COPYRIGHT © JONES LANG LASALLE IP, INC. 2020

This report has been prepared solely for information purposes and does not necessarily purport to be a complete analysis of the topics discussed, which are inherently unpredictable. It has been based on sources we believe to be reliable, but we have not independently verified those sources and we do not guarantee that the information in the report is accurate or complete. Any views expressed in the report reflect our judgment at this date and are subject to change without notice. Statements that are forward-looking involve known and unknown risks and uncertainties that may cause future realities to be materially different from those implied by such forward-looking statements. Advice we give to clients in particular situations may differ from the views expressed in this report. No investment or other business decisions should be made based solely on the views expressed in this report.