

IMPACT OF THE COVID-19 CRISIS ON EUROPEAN LISTED REAL ESTATE: UPDATE

SEPTEMBER 2021

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EXECUTIVE SUMMARY

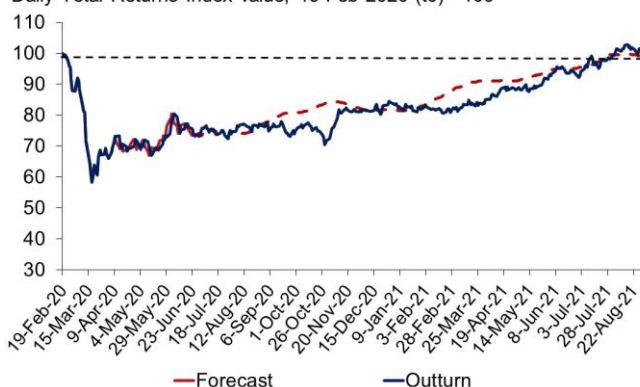
Oxford Economics were commissioned by EPRA in May 2020 to provide a research paper¹ examining the outlook for the European economy and implications for listed real estate in the wake of the pandemic. This report revisits and updates the analysis presented in that paper.

European listed real estate has enjoyed a strong rebound

- ❖ The investor enthusiasm that has driven the rebound in global stock markets over the past 18 months has also benefitted the European listed real estate market, although the benchmark FTSE EPRA Nareit Developed Europe Index has lagged broader European stock market benchmarks². This may reflect investor concerns regarding the impact of the pandemic on real estate, including the potential for the pandemic to have accelerated longer-term structural shifts in how real estate is used. Still, the headline European listed real estate index was around 1% above its pre-pandemic peak by the end of August 2021.
- ❖ The recovery in listed real estate has to date followed very closely the pathway we had forecast last year³, despite the baseline trajectory for the economic recovery presented in our May 2020 report having been delayed due to the re-imposition of lockdown restrictions in late 2020 and early 2021. The outturn has also broadly tracked the recovery pathway of the Eurozone crisis, with the benchmark FTSE EPRA Nareit Developed Europe Index very close to its pre-crisis peak after around 18 months.

Outlook for European listed real estate: Forecast (June 2020) vs Outturn

Daily Total Returns Index value, 19 Feb 2020 (t₀) = 100*

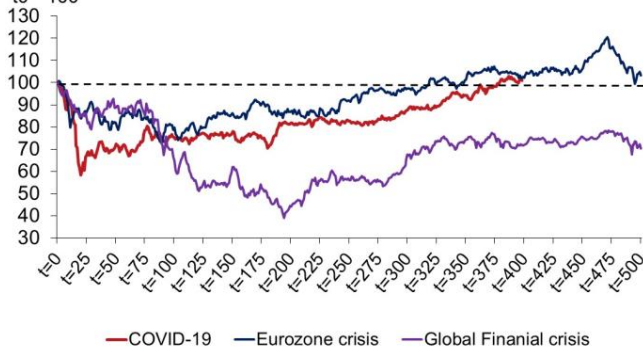


* Pre-crisis peak

Source: Oxford Economics/Haver Analytics/EPRA

Performance of European listed real estate during crisis periods

Daily Total Returns Index value
t₀ = 100*



* Pre-crisis peak

Source: Oxford Economics/Haver Analytics/EPRA

¹ Oxford Economics (2020), "Impact of the COVID-19 crisis on European listed real estate", EPRA Market Research Paper available at <https://bit.ly/3iOZhQ0>.

² For example, the broad STOXX Europe 600 total return index had risen 13% above its pre-crisis peak by the end of August 2021.

³ These high-frequency projections were presented in a webinar, which is available to view online:

<https://www.brighttalk.com/webcast/9819/424040/european-listed-real-estate-impact-of-the-covid-19-crisis>

But the pandemic has affected real estate sectors in different ways

- ❖ There has been considerable variation in listed real estate performance across sectors, geographies and quality of underlying properties. Traditional sectors such as office, retail and lodging/resorts have been especially hard-hit, whereas residential property and other commercial real estate sectors that support the digital economy, such as warehousing and data centres, have enjoyed a surge in demand. The pandemic has accelerated a number of structural trends that were already evident prior to the crisis and these themes are expected to continue driving strong returns after the pandemic.

Divergence in performance across sectors set to persist

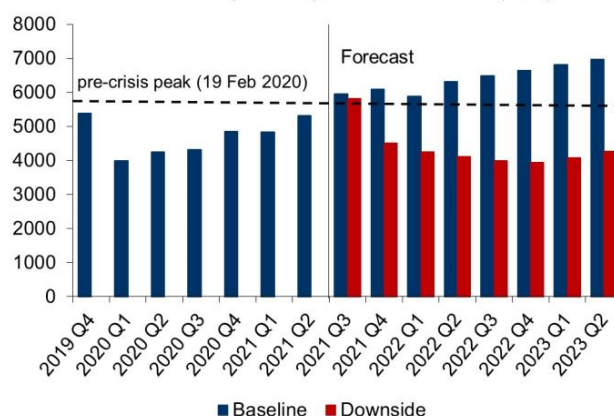
- ❖ We continue to expect that the path of the economic recovery will be bumpy and uneven. But we still anticipate a strong rebound in activity over the coming year, supported by continued government support, the release of Next Generation EU funds, loose monetary policy and stronger global growth. Crucially, this outlook is also linked to the vaccination roll-out and assumes governments do not re-impose substantial new restrictions. This should encourage households to save a smaller share of their incomes and gradually draw down some of the excess savings built up since the start of the pandemic, fuelling strong growth in consumer spending.
- ❖ Real estate should not be viewed as a single market, with underlying sectors following the same cycle. Indeed, the recovery in real estate is likely to remain uneven across sectors, reflecting the uneven nature of the economic recovery. Real estate investors must therefore pay careful attention to sector allocations and investment style. Despite apparent attractive valuations in some sectors, there is a risk of an increase in corporate insolvencies as public support measures fade, which could put renewed downward pressure on real estate prices in hard-hit sectors such as retail.

Increased near-term volatility for listed real estate, but upside from H2 2022

- ❖ Private sector credit growth is now moderating and we anticipate that the rate of economic growth (on a quarterly basis) is past its peak. These developments are typical of a mid-cycle environment but do suggest that returns are likely to be more modest in coming months, alongside increased volatility in equity markets and with risks tilted more towards the downside. The scope for further price gains in listed real estate appears greater from the second half of next year, although investors would also be advised to pay careful attention to underlying sector exposure.

Outlook for European listed real estate

FTSE EPRA Nareit Developed Europe Total return index (EOP)



Source: Oxford Economics/EPRA

Prospects also vary across geographies

- ❖ At a country level, prospects for listed real estate in the Nordics and Germany appear more positive, with these economies having weathered the crisis relatively well and the economic outlook being positive (the listed real estate outlook is also helped by the heavy exposure to residential assets in Germany and industrial properties in the Nordics). And while Brexit continues to cast a shadow on London's real estate market, the UK capital may have already priced in any potential Brexit hit, meaning valuations relative to Continental Europe look increasingly attractive. Conversely, southern European real estate markets are more likely to struggle with the structural headwinds affecting their large retail and hospitality sectors (although they will benefit from substantial public investment through the Next Generation EU funds).

Risks are skewed to the downside

- ❖ Uncertainties around our baseline projections remain significant, however, reflecting the unprecedented nature of the crisis. We have modelled a downside economic scenario where vaccines prove less effective against new, more transmissible variants of the virus and restrictions remain in place for a protracted period. This would be associated with renewed declines for European listed real estate, with valuations remaining significantly below the pre-pandemic peak even in 2023.

1. INTRODUCTION

Oxford Economics were commissioned by EPRA in May 2020 to provide a research paper⁴ examining the outlook for the European economy and implications for listed real estate in the wake of the pandemic. Published just weeks after the World Health Organisation declared COVID-19 a 'pandemic', the outlook at that time was especially uncertain and investors were struggling to understand the fallout from the crisis.

This report revisits and updates the analysis presented in that paper. We have now entered a period of greater optimism with the global economy rebounding strongly as many advanced economies have made solid progress with vaccinations allowing economies to re-open and restrictions to be lifted; but the recovery is proving uneven across geographies and sectors, with implications for listed real estate investors. Moreover, the outlook remains subject to significant downside risks, including the potential for additional COVID-19 waves, vaccine hesitancy, the premature withdrawal of government support and financial stress.

The report is organised as follows:

- **Section 2** analyses the unfolding economic recovery in Europe and presents forecasts for growth over the next few years.
- **Section 3** examines recent trends in European listed real estate and implications of the economic and sectoral outlook for future performance.
- **Section 4** presents a short conclusion with implications for investors.

The Appendix provides a brief summary of the Oxford Global Economic Model, the key tool used for our economic analysis and projections.

⁴ Oxford Economics (2020), "*Impact of the COVID-19 crisis on European listed real estate*", EPRA Market Research Paper available at <https://bit.ly/3iOZhQ0>.

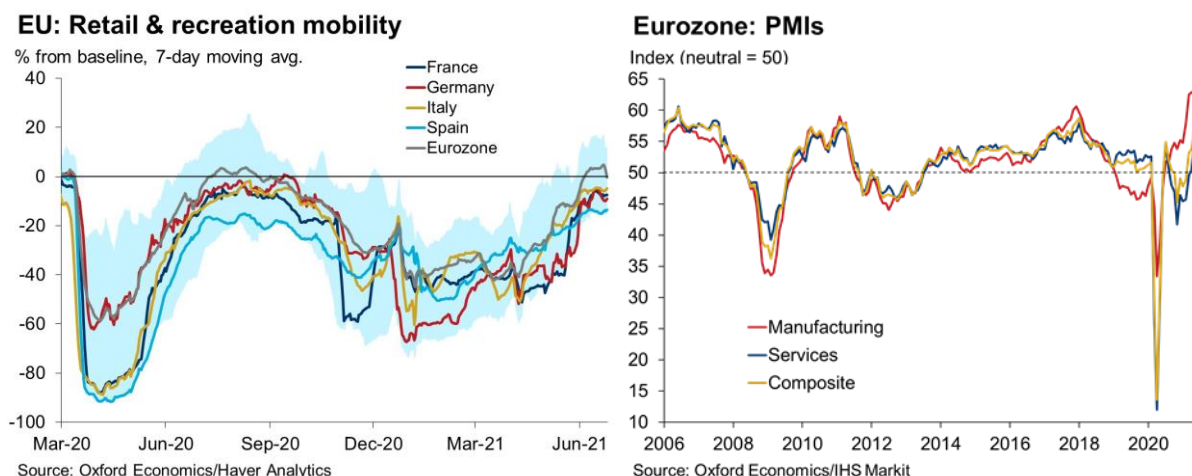
2. PATHWAYS TO ECONOMIC RECOVERY AND GROWTH

2.1 THE ECONOMIC RECOVERY IS FIRMLY UNDERWAY

After a weak start to 2021 with rising Covid cases and restrictions re-imposed in many countries, there are now clear signs that economic activity in Western Europe is picking up speed (albeit later and less strongly than the US). Manufacturing has recovered strongly, partly as a result of generous government income support and the accommodative policies of central banks, but also the rapid rebound of global trade in goods.

With governments across the region having eased pandemic-related restrictions over the past few months and vaccination progress accelerating after a slow start, eager consumers are taking advantage, as reflected in indicators of consumption and mobility. Encouragingly, social consumption activities such as hospitality, culture and recreation are catching up with goods consumption. And high-frequency indicators of business activity have soared, confirming that the recovery is well underway.

Fig. 1. Positive trends in mobility and business activity



Delta variant poses a threat to the fledgling recovery

The sudden surge in growth has come at a cost, as inflationary pressures have mounted due to labour shortages and disruptions to supply chains caused by the pandemic, as well as rising commodity prices. But a strong rise in inflation had been expected due to transitory pandemic-related factors together with base effects due to prices having collapsed at the start of the pandemic last year. The pick-up in prices should therefore prove temporary, especially as there is still a sizeable amount of spare capacity in the European economy. On the other hand, the recent disruption present in global supply chains emphasises that despite the resurgence in economic activity, Europe's economic recovery remains highly contingent on broader global developments related to the pandemic.

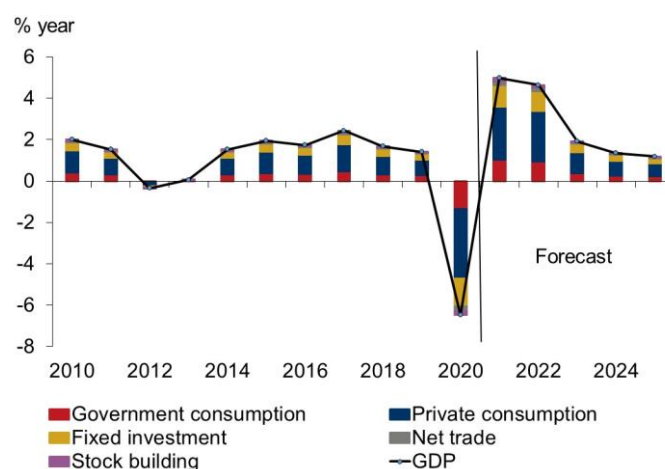
A more worrying development is that infections are increasing again across Western Europe and there is evidence of vaccine hesitancy across certain demographic groups. Solid vaccine coverage among the vulnerable groups should limit the most severe health outcomes, but the Delta variant poses a significant downside risk in H2 2021. Indeed, the recent increase in new coronavirus cases has already dented consumer and business sentiment, consistent with a deterioration of the balance of risks to the outlook. Surveys reveal rising worries about the durability of the protection that vaccines offer (as evidenced in Israel), with consumers concerned that restrictions may be re-imposed in the autumn and winter months. Meanwhile, businesses – especially those in the industrial sector – are expressing increasing concerns about the supply problems plaguing the sector.

We remain optimistic regarding the economic outlook

Against this backdrop we continue to expect that the return to full normality will be bumpy. Indeed, the baseline trajectory for the recovery presented in our May 2020 report has already been delayed due to the re-imposition of lockdown restrictions in late 2020 and early 2021. But we still anticipate a strong rebound in activity over the coming year, supported by continued government support, the release of Next Generation EU funds (as discussed later), loose monetary policy and stronger global growth. Crucially, this outlook is also linked to the vaccination roll-out and assumes governments do not re-impose substantial new restrictions. This should encourage households to save a smaller share of their incomes and gradually draw down some of the excess savings built up since the start of the pandemic, fuelling strong growth in consumer spending.

Fig. 2. The European economy is primed for a strong rebound

Western Europe: Contributions to GDP growth



Source: Oxford Economics/Haver Analytics

While we think the vaccination roll-out means a new wave will look very different from the previous ones, localised restrictions and delays to re-opening cannot be ruled out should another wave of cases lead to a worrying pick-up in hospitalisations, particularly in countries with low vaccine coverage and fewer second doses. A key factor will also be the response of consumers to surging cases, which may lead to voluntary changes in behaviour, such as avoiding

activities requiring close social contact, where the bulk of the rebound would otherwise come from.

Another round of strict lockdowns is unlikely

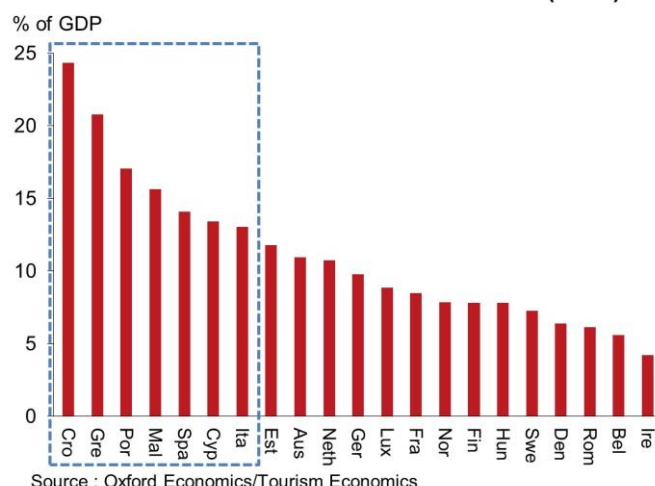
There are two main reasons why governments are likely to refrain from re-imposing severe restrictions:

- First, vaccines have so far proved to be effective against the Delta variant. In the UK, which is a few weeks ahead regarding the spread of the Delta variant and which had a vaccination level similar to current European levels when the spread started, the link between new cases and hospitalisations has been significantly weakened compared to previous waves.
- Second, there is likely to be political opposition to new lockdowns, especially if the vaccination programmes continue without setbacks, given the large fiscal cost of extending the emergency support measures and concerns about the sustainability of public finances. Restrictions are more likely to be imposed on the margins, impacting activities and places with the highest risk of virus transmission, such as bars, nightclubs, or cinemas.

The most immediate impact from the Delta variant is likely to be in the tourism sector, given we are now in peak summer season. This is especially true for countries such as Italy, Spain, Portugal, Greece, Croatia, Malta, and Cyprus, where travel and tourism make a sizable contribution to the total economy. Normally, these countries receive nearly half of their annual tourism revenues between July and October, so the outlook for tourism is a key component of Q3 and Q4 GDP growth.

Fig. 3. Size of tourism sector a key element to the near-term outlook

Travel & tourism total contribution to GDP (2019)



So far, available data still suggests that this year's summer season will be significantly better than 2020. But forecasting the impact from Delta requires predicting the responses of governments and tourists to the rise in cases, something that is highly uncertain. Some countries like Malta are already limiting foreign visits to only fully vaccinated people, whereas others like the UK are set

to loosen travel restrictions. Also, there is evidence of strong domestic tourism activity partly replacing foreign visitors in some countries, which would support a broadly neutral GDP impact.

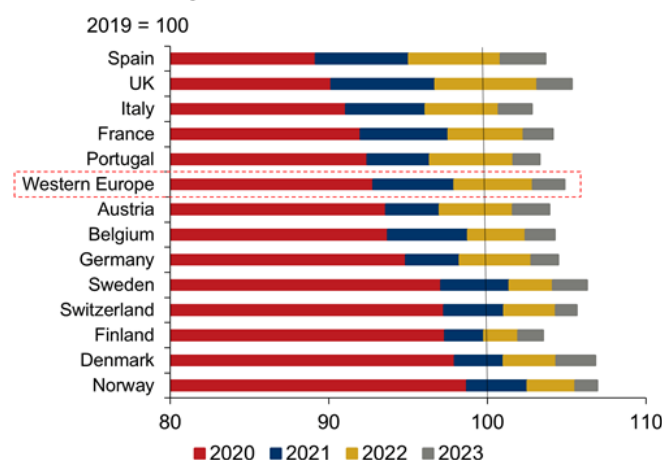
Economic prospects hinge on vaccination programmes

Recovery prospects depend heavily upon the success and speed of vaccination programmes, as well as the timing of the eventual withdrawal of virus containment measures. But the economic outlook will also be influenced by factors including economic structure, the response of households and companies, as well as the strength of the economic policy response.

In this respect, the Nordic countries stand out for having weathered the pandemic better than most peers in Europe (aided by generous welfare systems, widespread digitalization and a relatively low reliance on tourism as well as other sectors with high levels of social contact), while also making significant headway in their vaccination programmes. As illustrated by Figure 4, Denmark, Norway and Sweden are all expected to surpass pre-crisis levels of GDP by the end of 2021. Another strong performer is the Swiss economy, whose sectoral structure of output has helped to insulate it from the crisis (the country's main industries include pharmaceuticals, high-tech goods, biotechnology and financial services). In contrast, the UK suffered one of the steepest declines in output during the crisis but having rolled out its vaccination programme more quickly than most other countries, it is expected to benefit from an especially sharp rebound in growth during 2021-22.

Fig. 4. Near-term economic prospects vary across Europe

Western Europe: GDP, 2020-23



Growth prospects are uneven across sectors

Sectors which fared worst in 2020 are likely to see the strongest recoveries over the next few years. For example, a strong recovery in spending in high-contact sectors, following the lifting of social distancing restrictions, will benefit sectors like accommodation & food and art & recreation. Although these sectors will see

spectacular growth rates in the short-term, this is largely a function of the extent of the collapse they suffered in 2020 and even by 2025 we expect their output to still be close to pre-pandemic levels.

Fig. 5. Some sectors will struggle to recoup sharp declines in output

| Forecast for Western Europe¹ | | | | | | |
|---|------------------------|-------|-------------------|--------------|------------|--------------|
| (Percentage change) | | | | | | |
| | % total economy (2019) | | Gross value added | | Employment | |
| | Gross value added | Jobs | 2020 | 2025 vs 2019 | 2020 | 2025 vs 2019 |
| Agriculture, forestry & fishing | 1.4 | 2.6 | -1.1 | 2.3 | -5.8 | -10.5 |
| Mining & quarrying | 0.8 | 0.2 | 1.2 | 5.1 | -2.5 | -9.0 |
| Manufacturing | 15.4 | 12.0 | -7.9 | 7.3 | -4.8 | -5.8 |
| Electricity, gas & water supply | 2.8 | 1.1 | -4.7 | 3.8 | -2.8 | -2.2 |
| Construction | 5.3 | 6.3 | -7.2 | 8.0 | -2.7 | 1.6 |
| Wholesale & retail trade | 11.1 | 14.0 | -6.9 | 8.9 | -4.3 | 0.2 |
| Accommodation & food services | 1.9 | 5.5 | -37.2 | 6.3 | -9.9 | -1.1 |
| Transport & storage | 4.3 | 4.9 | -12.6 | 3.2 | -4.8 | -1.3 |
| Information & communication | 5.9 | 3.3 | -0.8 | 16.9 | -1.1 | 5.8 |
| Financial & insurance activities | 5.5 | 2.6 | -1.4 | 5.8 | -2.9 | -3.1 |
| Real estate activities | 12.0 | 1.2 | -0.6 | 8.2 | -0.8 | 2.0 |
| Professional, scientific & technical activities | 11.4 | 14.2 | -8.7 | 7.2 | -4.2 | 3.6 |
| Public administration & defence | 7.3 | 6.4 | 2.8 | 4.4 | -1.2 | -1.8 |
| Education | 4.4 | 7.1 | -10.0 | 14.1 | -2.0 | 0.9 |
| Health & social work | 7.5 | 12.1 | -3.9 | 9.6 | -1.5 | 3.2 |
| Arts, entertainment & recreation | 2.9 | 6.5 | -18.7 | 3.1 | -5.4 | -0.4 |
| Total | 100.0 | 100.0 | -6.5 | 7.3 | -1.5 | 2.3 |

Source: Oxford Economics/Haver Analytics

¹ Includes UK, France, Germany, Italy, Netherlands, Belgium, Sweden, Spain, Austria, Denmark, Finland, Greece, Ireland, Norway, Portugal, and Switzerland.

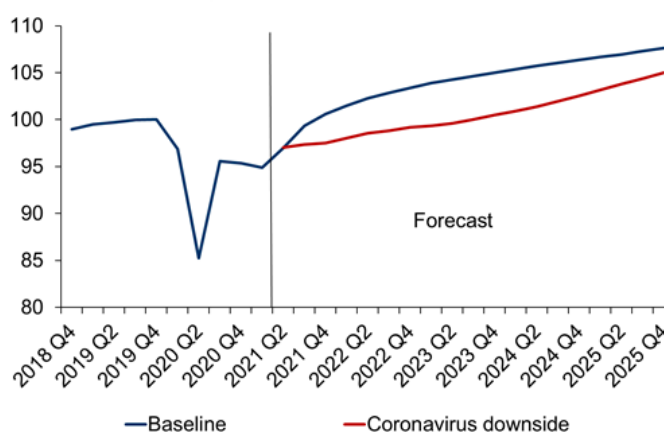
Vaccine efficacy poses a threat to the fragile recovery

A clear risk to the outlook is that vaccines prove less effective against new, more transmissible variants of the virus. In this scenario, we would expect restrictions to remain in place for a protracted period. In the near term, this would result in weaker economic activity and further declines in financial markets. The subsequent recovery would also be sluggish, as the combination of persistent restrictions, increased risk aversion and long-term scarring weigh heavily on the global economy. As illustrated by Figure 6, we anticipate that the level of GDP in Western Europe would be close to 3% below our baseline projections even in 2025.

Fig. 6. Alternative economic scenarios

Western Europe: GDP in the Baseline and Downside

Index (2019 Q4 = 100)



Source: Oxford Economics/Haver Analytics

2.2 THE EUROPEAN POLICY RESPONSE

Our May 2020 research paper highlighted how the economic damage from the pandemic could extend into the long term. This underscored the importance that policymakers take steps to reduce adverse spill-overs and second-round effects from the shutdowns to keep these costs to a minimum. Fortunately, European policymakers responded with an unprecedented package of monetary and fiscal support measures that proved rather larger than we had initially anticipated. Reflecting these developments, our baseline projections for Western Europe now assume that the long-run impact of the crisis on the economy's supply capacity should be relatively modest⁵.

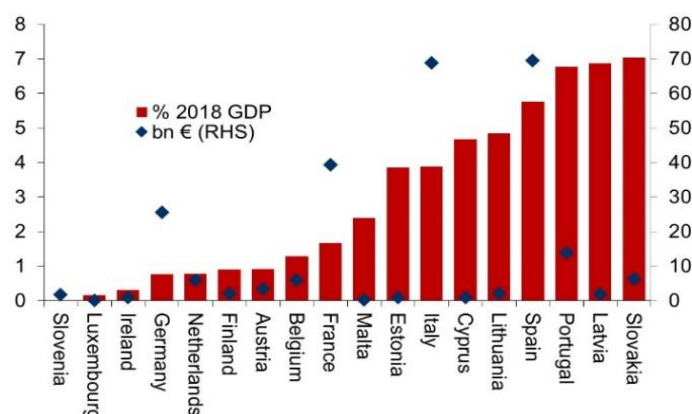
Disbursement of EU funds to coincide with re-opening of economies

Critical to this outlook is the agreement by EU leaders in December 2020 on the EU budget and Next Generation EU (NGEU) recovery package, which will provide additional spending of up to €750 billion in total, financed by borrowing at the EU level. Southern and central-eastern European countries will be the biggest beneficiaries of this financial support. The funds will provide EU economies with financing to help sustain the recovery as the policy focus gradually shifts away from emergency support measures. Importantly, it will have an immediate, direct impact on GDP by generating demand through higher public and private investment, giving a strong boost to growth over the next 5-6 years. Moreover, the funds aim to reset economies on a new trajectory of more inclusive and sustainable growth.

⁵ This represents an upgrade to our baseline forecasts, as the May 2020 report anticipated Western European GDP in the medium term would be about 1.5% below the levels we had forecast before the outbreak.

Fig. 7. Allocation of funds has been directed to economies most in need

EU recovery fund: Grant allocation

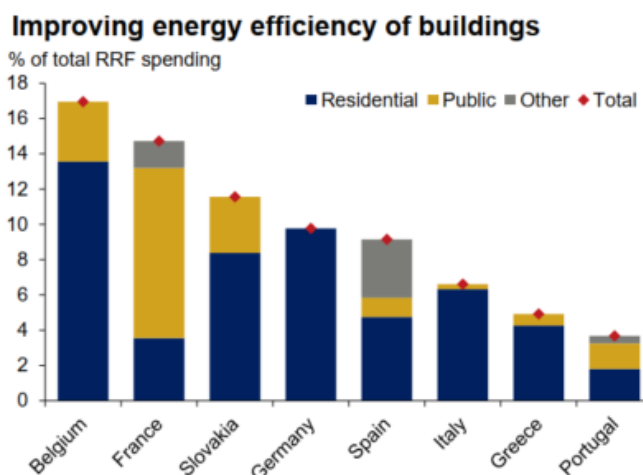


Source: Oxford Economics/Haver Analytics/European Commission

Following European Commission approval of national Recovery and Resilience (RR) Plans, the Recovery Fund's initial disbursements can be released. Starting in autumn this year, governments across Europe will then begin implementing the hundreds of reforms and investments they have committed to in their plans.

It is worth noting that a significant proportion of the NGEU funds will be used to support the real estate sector's ecological and digital transition. With Europe's buildings responsible for 40% of the continent's energy consumption, one of the most common large investments across the different plans is making buildings more energy efficient (Figure 8).

Fig. 8. Building renovations are the most common item in RR Plans



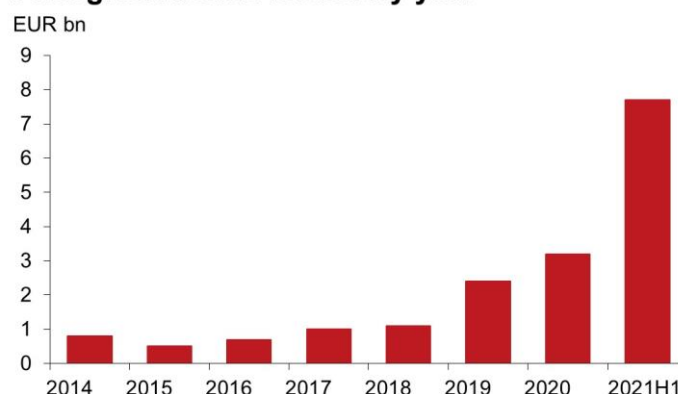
Source: Oxford Economics/Haver Analytics

With climate change at the top of the European policy agenda, the European Commission has committed to issuing over €250bn in green bonds, totalling nearly 30% of the overall recovery package. Several EU members states including Germany, Italy and France have also undertaken sizeable green bond issuances across 2020-21. The real estate sector has been a part of this wider trend and in the past 12 months constituents of the EPRA Nareit Europe index

have issued over €5.5bn in green bonds, representing a 139% (€3.2bn) annual increase.

Fig. 9. Green bond issuance by listed real estate companies

Total green bonds issued by year*



*Based on a survey of 29 European listed property companies (EPRA members) with a market capitalisation of EUR 168.2 billion (as of 30/06/2021). Green bonds which reached maturity prior to 30/6/21 were excluded.

Source: EPRA compiled from Bloomberg, TR-Eikon and S&P

Green bonds have a growing appeal especially as they indicate good management of environmental risks and opportunities and in the real estate space show a clear strategy to allocate to green-related developments and projects. Issuers have been able to boost demand by providing investors with a range of metrics that quantify green impacts, such as energy and water savings from efficiency measures and annually avoided carbon emissions from projects. Further, developments such as the increased emphasis on a green recovery post COVID-19 and the European Commission's new green bond standards which aim to form a 'gold standard' for companies and governments looking to raise money for environmentally friendly projects/programmes are likely to provide a further boost to this growing market for green bonds and increase their long-term appeal.

Effective implementation of plans remains a challenge

But the road ahead is still long with a number of potential hurdles to effective implementation of the planned investments. Potential issues include:

- Political risks related to the willingness of future governments to stick with the plan set by incumbents (all countries will have general elections during the lifetime of the Recovery Fund). Renegotiating plans and priorities risks delays, which has been a factor in the relatively slow absorption of structural funds in the past.
- Public procurement frameworks in some of the largest recipients are very weak, which may slow down effective absorption or limit the quality of final outcomes.
- Some measures will require significant administrative capacity to implement. For example, planned subsidies will need to be designed, communicated, and applied in a way to promote take-up in line with agreed targets, with multiple risks at every step of the process.

Securing the positive assessments by the Commission and formal approval by the Council is therefore only the start. The long and hard work of implementing the plans, which will determine the success of the Recovery Fund as a blueprint for European response to common shocks, then begins.

UK long-term recovery plans still under consideration

Meanwhile, the UK government is currently working on its own plans to rebuild the economy over the long-term, albeit it is behind other European countries in this process. A key component of these plans is the government's National Infrastructure Strategy (NIS), published in November 2020, which sets out proposals for long-term investment in the UK's infrastructure. Together with spending on other sectors including health, education, science and defence, the NIS forms part of the government's plans to deliver £600bn of public investment over the next five years. The NIS is designed help the UK meet its target of net zero carbon emissions by 2050, while also boosting productivity across the country and supporting private investment (leveraged by public investment). But the UK government also needs to improve its record of delays and cost overruns on major infrastructure projects to extract maximum value for taxpayers.

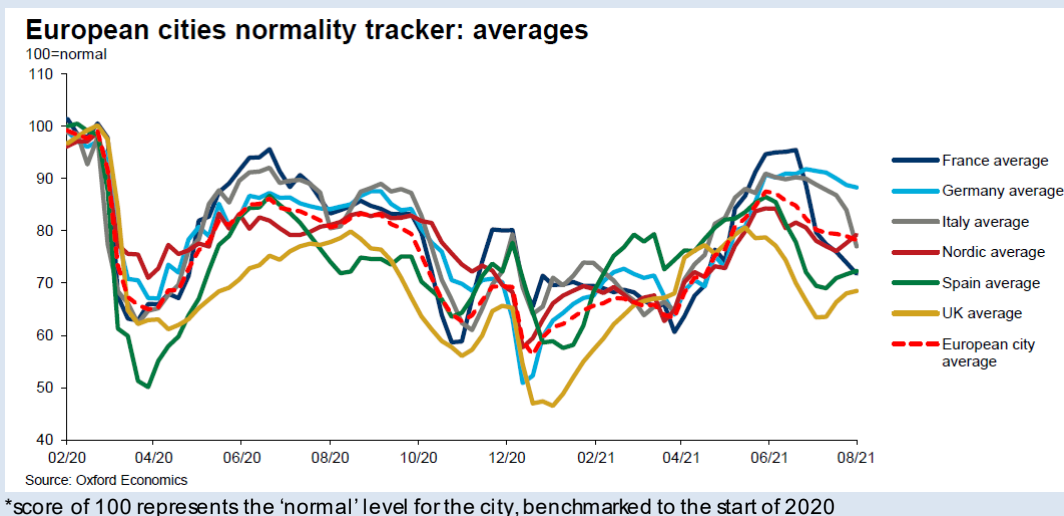
SPECIAL FOCUS BOX 1: OUTLOOK FOR EUROPEAN CITIES

The majority of Europe's major cities experienced record declines in GDP during 2020. A key determinant of the magnitude of the falls was the intensity of containment measures adopted by national and local governments. For example, relatively milder recessions in Bucharest and Stockholm partly stemmed from the lighter-touch approaches of their respective governments in combating the virus; conversely, major cities in the UK and Spain experienced sharper contractions in activity, as economic performance was severely damaged by tight social restrictions, their underlying economic structure (high shares of activity in social-contact services), and recurring periods of lockdown.

The distribution of sectors across both regions and cities also had major implications for the patterns of economic decline in 2020. For example, sub-national data for Germany show that Berlin (-3.6%) was among the least affected cities in 2020, with the fall in GDP much shallower than Germany as a whole (-5.1%). The more modest hit to Berlin's economy relates to its higher concentrations of professional and digital services, as well as the public sector. Conversely, manufacturing-intensive states such as Baden-Württemberg and Bayern (Bavaria)—which include the cities of Stuttgart and Munich respectively—experienced much deeper contractions in total output than nationally, albeit they are now benefitting from the rebound in global trade.

With many of Europe's cities re-entering lockdown, 2021 started on a weak note. Our European cities normality index⁶ (which shows the extent to which cities across Europe are moving back towards 'normality' following the onset of the pandemic) rose consistently throughout April and May 2021, with major cities seeing the level of retail and workspace mobility move to more 'normal' territory. But latest data show normality scores declining in many cities as infection rates have picked up again. On the other hand, summer holidays are also likely to have impacted workplace mobility to some extent.

Fig. 10. European cities normality tracker*

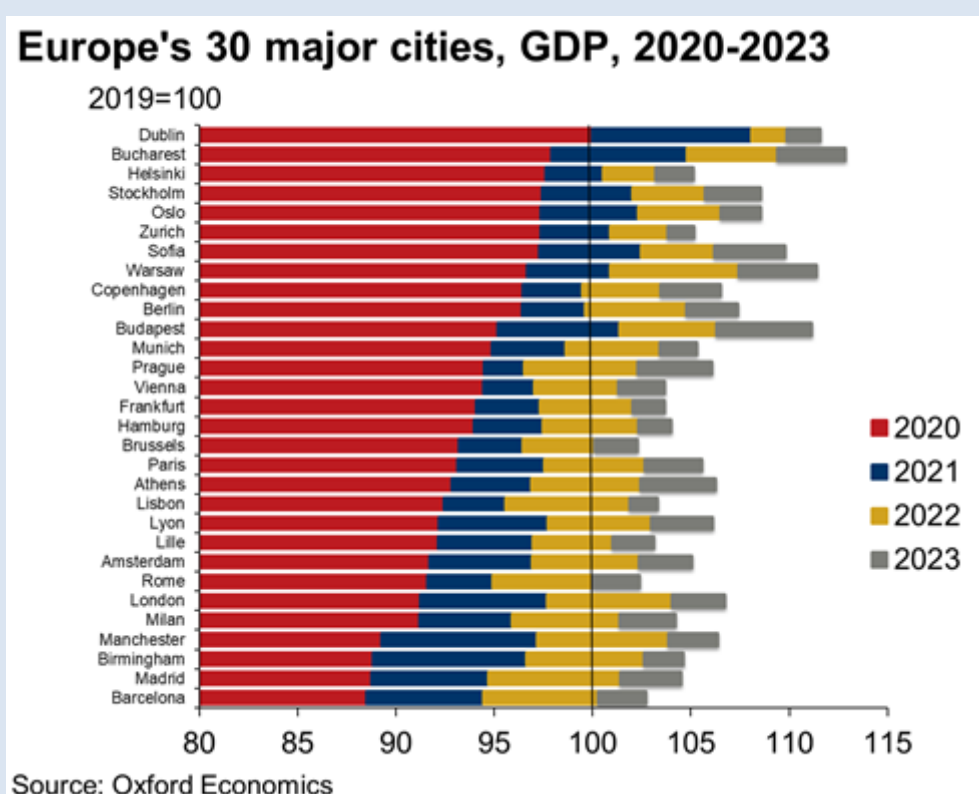


⁶ The normality index takes into account infection rates, evidence of mobility (whether people are at their workplaces or visiting retailers), and what has happened to unemployment. Details on methodology are provided in the Appendix. The index does not adjust for seasonality, so this should be taken into account when interpreting results.

Europe's major cities have higher concentrations of high-income households than nationally and these households have accrued the most excess savings during lockdown. This suggests that cities will benefit the most from a release of pent-up consumer demand over the coming year. And alongside the accelerating vaccine rollout and the improving health situation, this supports our baseline view of a vigorous rebound in city GDP in H2 2021 and into 2022.

In nine out of 30 instances we forecast that GDP will not only recover but surpass their pre-pandemic levels this year. As evident in Figure 11, the nine include the Nordic cities of Oslo, Stockholm, and Helsinki, with all three having less ground to make up following relatively modest hits to GDP in 2020. We also anticipate a group of Eastern European cities—Bucharest, Budapest, Sofia, and Warsaw—to fully recover in 2021, plus Zurich in Switzerland, and Dublin in Ireland. Most other cities will return in 2022, while Rome is the lone city that will have to wait until 2023.

Fig. 11. Most major cities to recovery by end-2022



Looking beyond the short-term distortions caused by the pandemic, we expect that Europe's major cities will continue to outperform, on average, their respective countries over the longer term. This is partly explained by our sectoral outlook, with Europe forecast to continue on its path towards higher concentrations of dynamic, high-value sectors such as professional, ICT, scientific & technical services. These sectors are more highly concentrated in Europe's city economies and thus should help to propel GDP growth (as well as demand for associated real estate).

On the other hand, there is some uncertainty over the extent to which growth in these sectors will correspond to increased demand for physical office space. The rise of remote working and conferencing means it is possible that growth here could be more muted, which, in turn, would have an adverse impact on sectors such as retail and hospitality. That said, we do not subscribe to the view that the pandemic will result in a mass movement of people away from cities. Indeed,

latest available data do not support this view. For example, monthly demographic data for Amsterdam show that migration patterns, outside of lockdown periods, remained broadly in line with pre-crisis trends. And while population growth was slightly weaker for 2020 as a whole, the Dutch capital still outperformed relative to non-city regions.

It is this ability of Europe's major cities to continue to attract people that has been central to their economic performance. Working age populations in major cities have risen over the past decade, despite declines nationally. And we project working age populations in cities to continue increasing over the next few years, albeit at slowing rates.

Remote working will result in shifts to where people decide to live, work and travel. Nevertheless, the factors outlined above underpin our view that Europe's major city economies will not only recover strongly from the pandemic, but also outpace national growth over the longer-term. Likewise, demand for offices, retail and residential real estate in Europe's cities will not collapse, but it is likely to be reduced compared to pre-crisis trends.

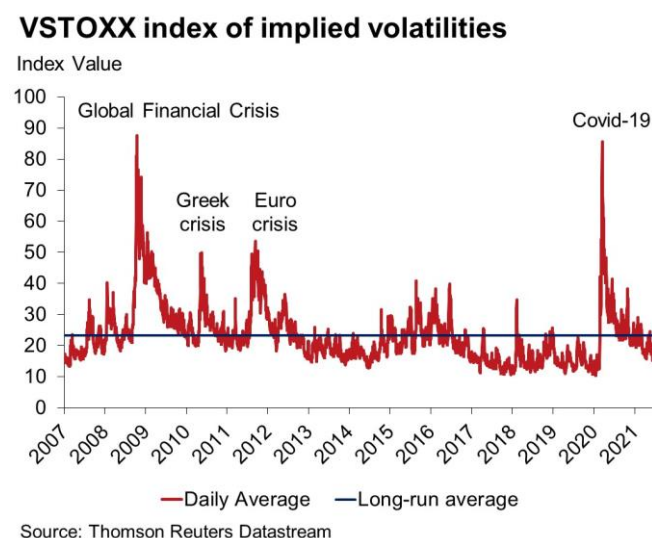
3. OUTLOOK FOR EUROPEAN LISTED REAL ESTATE

3.1 POLICY STIMULUS HELPS EQUITY MARKETS TO REBOUND

March 2020 saw one of the most dramatic stock market crashes in history, with the broad STOXX Europe 600 total return index plunging by 35% from its peak on 19th February to its trough on 18th March. But equity prices have since rallied strongly, supported by central banks injecting an enormous amount of liquidity into the market to avert a potential financial collapse. European stocks even continued to climb in late 2020 despite tighter restrictions on economic activity, prompting some concerns that the gap between markets and economic data had never been larger.

By the end of August 2021, the broad STOXX Europe 600 total return index was trading at record highs, having risen 13% above its pre-crisis peak. Volatility had also tumbled to pre-pandemic levels, an indication that equity investors have grown relatively comfortable that the current rally in stock markets will not be derailed, given the current backdrop of a fast-growing global economy. That said, we have passed the peak in the global liquidity expansion, so tightening monetary conditions may place some downward pressure on equity valuations following their significant expansion over the past year.

Fig. 12. Volatility has fallen to pre-pandemic levels



Listed real estate has lagged the market recovery

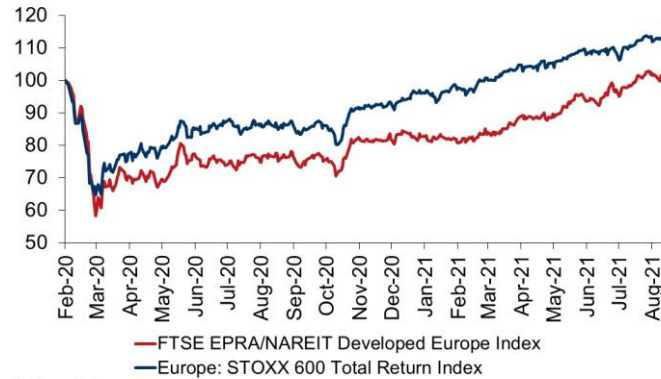
The investor enthusiasm that has driven the rebound in global stock markets has also benefitted European listed real estate, although the benchmark FTSE EPRA Nareit Developed Europe Index has underperformed the broader stock market. This may reflect investor concerns regarding the impact of the pandemic on real estate, including the potential for the pandemic to have accelerated longer-term structural shifts in how real estate is used. Still, the headline European listed real

estate index had risen 1% above its pre-pandemic peak by the end of August 2021 (Figure 13).

Fig. 13. Listed real estate has underperformed the broader market

Performance of European listed real estate vs. broad stock market during the Covid-19 outbreak

Daily Total Returns Index value
Feb 19, 2020 = 100*



* Pre-crisis peak

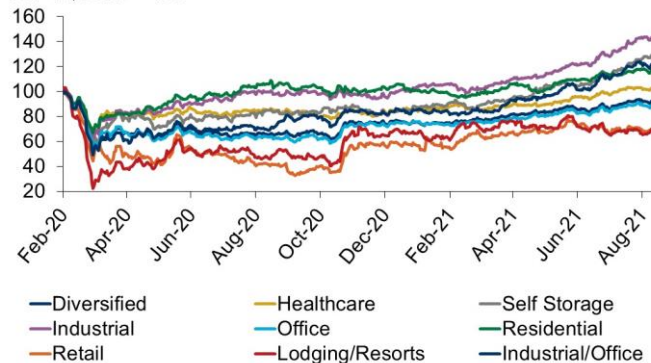
Source: Oxford Economics/Haver Analytics/EPRA

The pandemic has affected listed real estate sectors in different ways, with those that are heavily reliant on social interactions – retail, lodging/resorts and offices – having been especially hard-hit early in the pandemic. Although these sectors did rise strongly in Q4 2020 following the announcement of successful COVID-19 vaccine tests, they remain significantly below their pre-pandemic peaks and trade at significant discounts to net asset value (NAV). Conversely, residential property and commercial real estate sectors that support the digital economy have performed strongly. The latter include industrial properties, warehousing/storage (a beneficiary of accelerated growth in e-commerce) and alternative sectors such as data centres (which benefit from increasing use of online services).

Fig. 14. Returns have been uneven across sectors

Performance of European listed real estate by sub-sector since the Covid-19 outbreak

Daily Total Returns Index value
Feb 19, 2020 = 100*

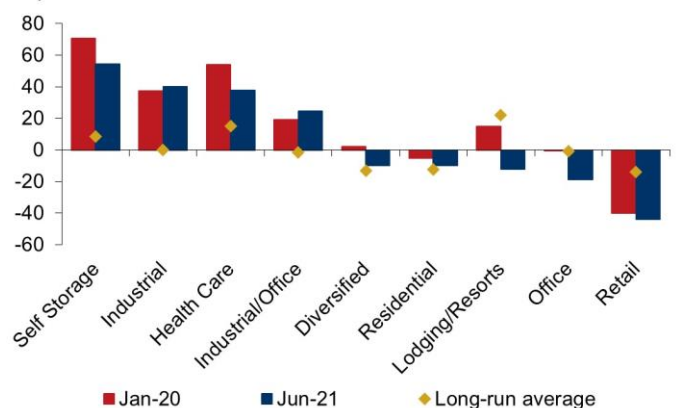


*Pre-crisis peak

Source: EPRA

Europe: Listed real estate premium/discount to NAV

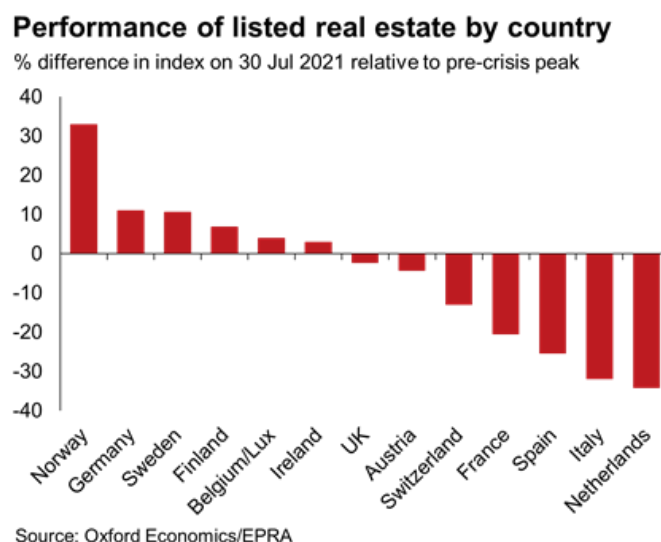
FTSE EPRA NAREIT Developed Europe Index
% premium/discount to NAV



Source: EPRA

There are also notable differences in performance of listed real estate indices at the country level. As shown in Figure 15, it is perhaps not surprising to see the Nordic countries and Germany having outperformed, given these economies have weathered the crisis better than peers in Western Europe; equally, the economies of Spain, Italy and France have been hit hard by the crisis and listed real estate has underperformed. The underlying sectoral composition of the indices is also a factor explaining their relative performance – outperformers include those with heavy exposure to industry (Nordics) and residential (Germany), while indices for the Netherlands, France and Spain have all suffered from their large weighting of retail properties.

Fig. 15. There are also sharp divergences in returns across countries



3.2 POST-CRISIS TRENDS IN LISTED REAL ESTATE

The recovery in listed real estate has to date followed very closely the pathway we had forecast last year (Figure 16)⁷. The outturn has also broadly tracked the recovery pathway of the Eurozone crisis, with the benchmark FTSE EPRA Nareit Developed Europe Index very close to its pre-crisis peak after around 18 months. The recovery pathway to date contrasts with the persistent weakness experienced in the wake of the GFC, as European listed real estate companies, and property markets more broadly, were in much better shape prior to this crisis than at the time of the GFC. Large-scale policy support has also averted a potential credit crunch whilst supporting demand in the economy.

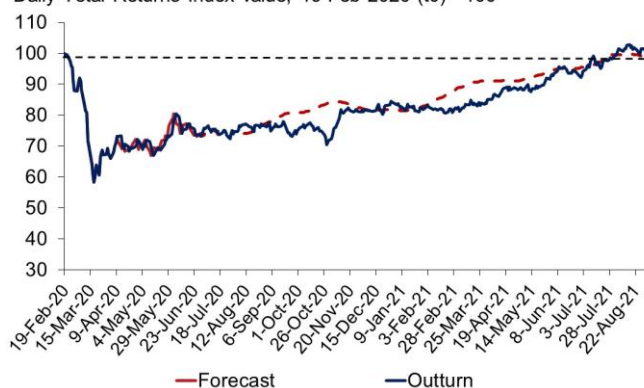
But historic crisis episodes can only offer limited information on the future trajectory of listed real estate prices. The outlook at this juncture depends very much on how the current crisis unfolds and potential structural shifts induced by the pandemic.

⁷ These high-frequency projections were presented in a webinar, which is available to view online: <https://www.brighttalk.com/webcast/9819/424040/european-listed-real-estate-impact-of-the-covid-19-crisis>

Fig. 16. Listed real estate performance during crisis episodes

Outlook for European listed real estate: Forecast (June 2020) vs Outturn

Daily Total Returns Index value, 19 Feb 2020 (t0)= 100*

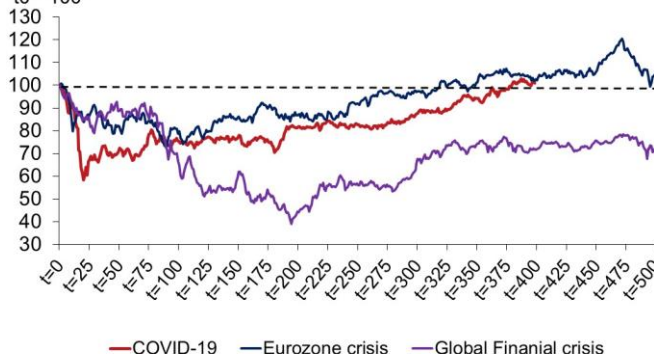


* Pre-crisis peak

Source: Oxford Economics/Haver Analytics/EPRA

Performance of European listed real estate during crisis periods

Daily Total Returns Index value
t0= 100*



* Pre-crisis peak

Source: Oxford Economics/Haver Analytics/EPRA

Divergence in performance across sectors to persist

Robust economic growth over the remainder of 2021 and into next year should support demand for real estate and help stimulate a recovery in commercial property values. That said, real estate should not be viewed as a single market, with its constituent sectors following the same cycle. Indeed, the recovery in real estate, like much of the rest of the economy, is likely to remain uneven across sectors. And despite apparent attractive valuations in some sectors, there is a risk of an increase in corporate insolvencies as public support measures fade, which could put renewed downward pressure on real estate prices in the affected segments.

Beyond the near-term impact, the pandemic has accelerated pre-existing structural trends in certain sectors of the market (see Figure 18). For example, traditional brick-and-mortar retail was already experiencing difficulties from the shift to e-commerce and this has been compounded by the crisis. With e-commerce penetration rates still relatively low in some European countries, this shift could still have some way to go.

The pandemic may also have a longer-term negative impact on demand for offices with more flexible office working and the substitution of online meetings for in-person gatherings. Indeed, consumer surveys from countries across Europe have indicated that office workers plan to work two-three days a week after the pandemic, with most companies foreseeing a hybrid workforce distributed between the office, home and “third places”.⁸ That said, property investors appear to expect a rebound in prices as a recovery in demand for offices coincides with a supply shortage that pre-dates the pandemic—according to Real Capital Analytics, prices for offices in Europe's central business districts rose 13% in the first half of 2021 from 2020⁹. Indeed, it is unlikely that

⁸ Expectations for the European office market are discussed in more detail in the August 2021 EPRA office report: https://prodapp.epra.com/media/Sector_Analysis_Office_-_August_2021_1630079441961.pdf

⁹ <https://www.reuters.com/business/world-europe/european-recovery-sight-property-investors-bank-office-2021-07-06/>

urbanisation will go into reverse. With only a fraction of jobs in professional services or other roles where remote-working is a practical option, urbanisation rates should continue to rise.

Shifts in real estate demand may also occur within sectors. For example, it is likely that well-located offices near transport hubs will remain in demand, but more peripheral offices in satellite towns and office parks could be more negatively affected in terms of activity and valuation. Certain retail segments with strong defensive characteristics, such as supermarkets and retail warehouses (units that sell bulky goods such as furniture, DIY and homewares) are also likely to outperform other retail units. Asset performance will also be increasingly linked to sustainable building design – future-fit properties that meet these credentials will command a premium.

Meanwhile, the crisis has strengthened the momentum in certain sectors, particularly residential, logistics and alternative assets such as telecommunication towers and data centres. As discussed in Special Focus Box 2, the secular themes underlying these trends (such as digital transformation) are likely to persist in the medium term, creating significant structural tailwinds for these sectors.

A positive outlook for listed real estate tempered by downside risks

Accurately forecasting how listed real estate valuations will be affected by these unprecedented shifts in consumer behaviour and corporate policies is extremely difficult, so any projections are subject to a high degree of uncertainty.

As illustrated by Figure 17, our baseline scenario envisages some increased volatility in the FTSE EPRA Nareit Developed Europe Index in the near term, which would be typical of a transition to a mid-cycle environment. Although economic growth remains well above trend, we anticipate that the rate of expansion in activity (on a quarterly basis) is past its peak; similarly, the expansion of liquidity is now past its peak, with central bank balance sheets expanding relatively slowly and private sector credit growth moderating. These developments are typical of a mid-cycle environment and are not something that should completely derail the equity bull market given the enduring strength of underlying fundamentals; but they do suggest that returns are likely to be more modest in coming months, alongside increased equity market volatility and with risks tilted more towards the downside. The scope for further price gains appears greater from the second half of next year, assuming the withdrawal of policy support does not expose substantial price misalignments in real estate and lead to significant forced sales of assets in heavily impacted sectors. In this scenario, we see the FTSE EPRA Nareit Developed Europe Index gaining around 20% relative to current (August 2021) levels by mid-2023.

SPECIAL FOCUS BOX 2: Green assets and digital transformation

The unprecedented nature of the COVID-19 crisis entails lasting changes to how people live, work and invest. Digital transformation and sustainability are two structural investment themes that have evolved from the crisis.

Energy-efficient buildings

As countries across Europe make efforts to reduce their carbon emissions, the **environmental performance** of buildings will become an increasingly important consideration for tenants. With companies publishing their carbon footprints and committing to emission-reduction targets, they will need to consider how the buildings they occupy contribute towards these goals. In the office sector, the green credentials of buildings will become a top priority for many tenants, who will demand environmental certifications such as BREEAM (Building Research Establishment Environmental Assessment Method) to certify the sustainability of their facilities. Landlords may also need to commit to environmental targets and data sharing for reporting on performance.

For real estate investors, the shift toward a green economy and associated policy and regulatory changes pose clear financial risks that they will need to manage. A shift toward green assets can help to future-proof investments and enhance performance. Indeed, ESG-focussed funds have already shown relative resilience through the crisis, demonstrating how the green agenda is already at the forefront of investors' minds.

Digital transformation

Digital transformation is also contributing to a new landscape in the listed real estate universe, with the enabling physical infrastructure representing a potential investment opportunity.

For example, the pandemic has accelerated demand for cloud services due to the need for corporates to move operations online together with the increased consumption of online services by households. This shift in demand for cloud services is expected to persist beyond the crisis and feed into accelerated construction of new **data centres** as operators look to build more capacity.

While data centre development in Europe has traditionally centred around Frankfurt, London, Amsterdam and Paris (the so-called 'FLAP' markets), investors are now also looking at potential new locations across Europe with good access to other major cities. In part, this move reflects considerations around emissions, power usage, planning permissions and utility permits. For example, Norway is attracting increasing attention as a potential future data centre hub due to its plentiful renewable energy – a consideration that will also be taken into account by corporate users looking to meet sustainability targets.

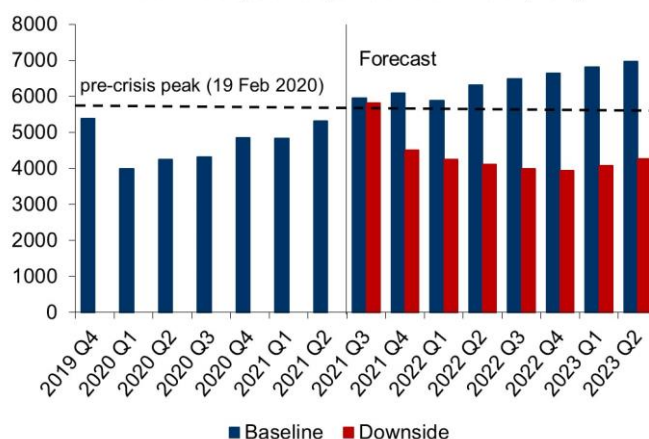
Similarly, demand for **telecommunication towers** has ballooned with the growth of data usage from smartphones. The use of connected devices will continue to grow and the transition to 5G and buildout of associated infrastructure across Europe will require a sharp increase of capital expenditures to upgrade networks. In particular, "small-cell" antennas will be essential for the roll out of 5G, as the radio frequency has less propagation (i.e. it cannot travel as far and so will require a higher number of points to transmit efficiently).

Owners of telecom towers are usually paid rents by the operators under long-term, typically non-cancellable contracts with annual escalators. With operators needing to develop larger, denser and more efficient networks, there is a clear path of structural growth for this asset class and a variety of opportunities for investors.

Fig. 17. Alternative futures for European listed real estate

Outlook for European listed real estate

FTSE EPRA Nareit Developed Europe Total return index (EOP)















Source: Oxford Economics/EPRA

At a country level, Germany appears well positioned, with cities such as Berlin, Munich, Hamburg and Frankfurt benefitting from the economy's relative strength. The Nordic countries also have an attractive outlook, although the small size of the listed real estate market in countries such as Finland and Norway may limit their appeal to investors. And while Brexit continues to cast a shadow on London's real estate market, the UK capital may have already priced in any potential Brexit hit, meaning valuations relative to Continental Europe look increasingly attractive. Conversely, southern European real estate markets are more likely to struggle with the structural headwinds affecting their large retail and hospitality sectors.

Uncertainties around our baseline projections remain significant, however, reflecting the unprecedented nature of the crisis. As shown in Figure 17, our downside economic scenario (described in Section 2) would be associated with renewed declines for European listed real estate, reflecting the shock to underlying property market fundamentals. Declining real estate prices and rents, associated with a more persistent increase in vacancy rates, could result in listed real estate valuations remaining significantly below current levels even in 2023.

Fig. 18. Impact of the crisis on European real estate sectors

| Real estate sector | Pre-crisis outlook | Impact of the crisis to date | Medium-term impact of the crisis (3-5 years) | Impact relative to pre-crisis trend |
|--|--|--|---|---|
| Residential  | <p>Multifamily residential sector delivering a favourable return profile, with increasing demand and supply shortages in major European cities.</p> <p>Growth in non-EU students supporting rising demand for student accommodation.</p> | <p>Housing markets have demonstrated remarkable resilience during the crisis. Helped by supportive government policies and low interest rates, house prices have increased across Europe. But there has been a shift in preferences around how and where people want to live.</p> <p>Student accommodation providers in the UK have been hard hit by a decline in occupancy rates due to travel restrictions during the pandemic, but other major European countries have been more resilient.</p> | <p>Despite an expected slowing in urbanisation trends, housing shortages in big European cities mean the sector should continue to provide investors with attractive long-term cash flows.</p> <p>International student mobility will recover as travel restrictions are reduced. Undersupply is a feature of the student housing market and the sector remains attractive over the medium term due to growing student populations across Europe.</p> |  |
| Retail  | <p>High street rental values in most cities under pressure as e-commerce claims a growing share of sales revenue.</p> | <p>Retail has been hit hard by the health crisis. Across Europe, retailers have been granted rent discounts or holidays to help their survival. Shopping centres and high streets have been especially hard hit, whereas retail parks and supermarkets are performing better.</p> | <p>Vacancies will rise due to business failures and with online shopping likely to continue at higher rates, retailers' physical footprint will be reduced. Some void retail assets may be attractive for alternative uses. Demand is likely to remain more robust for prime destinations.</p> |  |
| Office  | <p>Generally positive outlook, with vacancy rates in many major cities at their lowest levels in 15 years. But some concerns of 'overheating', with prime office yields at low levels.</p> | <p>Tenant demand has been negatively affected by economic weakness and lockdown measures. Despite a broad increase in vacancy rates (from low levels) average prime headline rents have remained stable across core markets in the region. Office prices in Europe's central business districts also picked up in H1 2021.</p> | <p>Corporates are likely to reduce their office footprint due to the expected growth in hybrid work patterns. This will focus investor appetite on higher-quality, tech-enabled assets in prime locations. ESG criteria will also become an increasingly important driver of performance.</p> |  |
| Industrial  | <p>Healthy demand, with warehousing in particular benefitting from growth of e-commerce.</p> | <p>Industrial property has benefitted from relatively stable demand, with accelerated growth in e-commerce boosting demand for logistics facilities.</p> | <p>Growth of e-commerce and reconfiguration of supply chains will support structurally higher demand and logistics floorspace requirements. Demand for modern units will be higher due to their ability to accommodate automation.</p> |  |
| Self-storage  | <p>Growth supported by mobility of workforce and increased adoption of micro-apartments in cities.</p> | <p>Lockdowns and associated restrictions on travel have had a negative impact on occupancy rates, although demand is now recovering as restrictions are lifted.</p> | <p>A slower rate of urbanisation post-crisis may reduce demand. But Europe's self-storage sector remains undersupplied, supporting its resilience.</p> |  |
| Lodging  | <p>Growing demand and shortage of hotel capacity allowing for healthy revenue growth prospects.</p> | <p>Hospitality was the hardest hit of all real estate sectors, with precipitous declines in hotel occupancy. Recently, strong domestic tourism has partly replaced foreign visitors in some countries.</p> | <p>Continued low occupancy rates will lead to reduced revenues and some permanent hotel closures. Hotels with a low share of domestic tourism and those relying on business travel are most at risk.</p> |  |

4. CONCLUSION

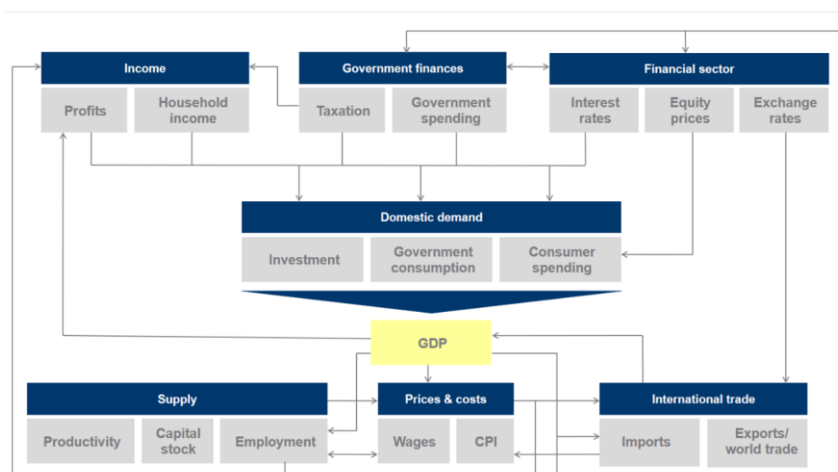
The pandemic has proved challenging for the real estate market, albeit with considerable variation in the impact across sectors, geographies and quality of properties. Traditional sectors of office, retail and lodging/resorts have been especially hard-hit, whereas residential property and commercial real estate sectors that support the digital transition have enjoyed a surge in demand. The pandemic has accelerated a number of structural trends that were already evident prior to the crisis and these secular themes are expected to continue driving returns through the pandemic and beyond.

While European listed real estate has benefitted from the rebound in stock markets over the past 18 months, the recovery has lagged broader equity benchmarks. Our central view is that listed real estate prices face a period of consolidation over the next few months, but there should be room for renewed upward momentum from H2 2022. Investors would be well advised to pay attention to underlying sector exposure, however, reflecting divergent prospects. The outlook also differs significantly across countries, with markets in Germany, the UK and Nordics likely to outperform peers.

APPENDIX I: THE OXFORD GLOBAL ECONOMIC MODEL

The key framework in which Oxford Economics' analysis is conducted is its own Global Econometric Model (GEM). The GEM replicates the world economy by interlinking 80 countries, 6 regional trading blocs and the Eurozone. These countries are interlinked through international trade in goods and services, competitiveness (measured by unit labour costs adjusted for the exchange rate), capital markets, interest rates and commodity prices. Historic data and forecasts are updated on a monthly basis by our country economists.

STYLISTED VERSION OF THE GEM



This Model—which is unique among the commercial economic consultancies—provides a rigorous and consistent structure for analysis and forecasting, and allows the implications of alternative global scenarios and policy developments to be readily analysed at both the macro, sectoral and regional level.

Asset prices are embedded in the Global Economic Model. Key financial variables include:

- **Interest rates:** policy rates, money market rates, sovereign yield curves, Swap curves.
- **Equity prices:** main stock market indices covered in each country.
- **Exchange rates:** spot rate against US\$ & € enabling calculation of other cross rates, and nominal/real effective exchange rates.
- **Commodity prices:** oil, natural gas, gold, and other metals.

We have also estimated an equation linking the performance of European listed real estate with fundamental economic drivers. This was incorporated into the GEM so that future performance of the EPRA Developed Europe Index could be assessed under alternative economic scenarios.

APPENDIX II: CITIES NORMALITY TRACKER METHODOLOGY

Our European Cities Normality Tracker shows the extent to which cities across Europe are moving back towards ‘normality’ following the Covid-19 pandemic. We have calculated the index for approximately 100 cities, with a score of 100 representing the ‘normal’ level for each city, understood as the start of 2020. The table below provides detail on the underlying index components.

| Component | Description | Source |
|------------------------------|---|--|
| Workplace mobility | Level of activity in workplaces compared to baseline period of 3 rd Jan – 6 th Feb 2020*. Calculated as 7-day average. | Google LLC - Google COVID-19 Community Mobility Reports (www.google.com/covid19/mobility) |
| Retail & recreation mobility | Level of activity in shops and restaurants compared to baseline period of 3 rd Jan – 6 th Feb 2020*. Calculated as 7-day average. | Accessed 20/08/2021 |
| Coronavirus cases | 14 day notification rate of newly reported COVID-19 cases per 100,000. Due to increased testing capacities, the number of recorded cases are much higher during the second wave. | European Centre for Disease Prevention and Control (ECDC) https://coronavirus.data.gov.uk/ https://www.ge.ch/ https://www.zh.ch/ |
| Unemployment | Quarterly unemployment level (NUTS2) compared to 2019 Q4. Interpolated with national monthly data and pushed on to the latest week with our national forecast. German regions use national data. | Eurostat Labour Force Survey (LFS) |
| Normality | The average of the four components above | |

* Cross-country comparisons should be made with caution because of possible differences in some definitions and measurements.

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