COVID-19, declared a pandemic by the World Health Organization in March 2020, has disrupted the global economy and financial markets, presenting unique valuation challenges to real estate owners, investors, appraisers, and developers.

To properly measure the fair value impact of COVID-19 on real estate assets, developments in the macro economy, real estate equity markets, and property-level market need to be recognized. During this period of directly unobservable market transactions, valuations will be best supported by well-reasoned judgments and analysis, assessment of risk factors, and proper documentation.

Market developments

Global economy and real estate equity market performance

The spread of COVID-19 has significantly impacted businesses, cities, and almost entire countries. Public equities reacted aggressively by shedding three years of gains in a few volatile weeks. In mid-February, the S&P 500 index peaked at an all-time high of 3,393, and then fell to as low as 2,192 just over a month later.

The KPMG chief economist’s base case forecast suggests a 12 percent drop in Q1 global GDP, and preliminary analysis suggests a 4.3 percent drop in U.S. GDP in 2020. Despite Congress approving a $2.0 trillion stimulus package and the Federal Reserve providing an additional $2.3 trillion in funding, uncertainty over the human and economic toll of COVID-19 still remains.

To illustrate these changes and impact on real estate, we focus on major real estate indices to highlight performance since February 2020.

Major REIT index performance since Jan 31, 2020

![Graph showing REIT index performance since Jan 31, 2020.](source: S&P Global Market Intelligence SNL as of April 8, 2020)

Source: S&P Global Market Intelligence SNL as of April 8, 2020

1 See KPMG’s complete economic impact analysis here [https://www.kpmg.us/content/dam/kpmg/pdf/2020/covid-19-impact.pdf]
Property-level performance
While movements in the real estate equity markets provide an indication of COVID-19’s impact on the real estate sector, the property-level markets have been impacted to varying degrees and are challenging to dissect. The table below summarizes research and observations related to key drivers, challenges, and potential impact on different property types.

*Shaded area represents degree of potential negative impact of COVID-19 to operations and value of properties within a sector.

<table>
<thead>
<tr>
<th>Property type*</th>
<th>Key observations</th>
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<tbody>
<tr>
<td><strong>Lodging</strong></td>
<td>— The hospitality industry has felt the biggest impact of COVID-19. Almost all conferences, events, conventions, and vacations have been postponed or canceled, leading to record low occupancy levels.</td>
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<td>— Occupancy levels below 30.0 percent is possible in the near future, putting at risk some hotel properties to close permanently. BLS reported that 459,000 jobs were lost in this sector in March of 2020.</td>
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<td>— Oxford Economics conducted an economic study to compare hotel room demand and total job losses in the industry to 9/11, the financial crisis of 2007–2009, and COVID-19. The data shows an unprecedented impact on jobs and hotel occupancy related to COVID-19 compared to 9/11 and the financial crisis. According to Oxford Economics, occupancy was projected to bottom out at 25.0 percent through the summer months, with 50.0 percent occupancy projected by January 2021.²</td>
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<td>— With more jobs expected to be eliminated and occupancy projected to further decline, the industry needs to brace for longer-term stabilization.</td>
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<td><strong>Senior housing</strong></td>
<td>— Operators have been taking measures to prevent COVID-19 outbreaks at senior housing facilities through heightened infection mitigation and containment strategies, as the elderly are at higher risk for developing complications from COVID-19.</td>
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<td>— Operating expenses related to workforce and purchase of critical supplies and personal protective equipment have increased. The pace of move-ins has slowed significantly out of fear of community transmission. According to The American Seniors Housing Association (ASHA), the financial impact of COVID-19 on the senior housing and assisted living industry could be between $10.0 and $20.0 billion.</td>
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<td>— During the financial crisis of 2007–2009, the senior housing industry experienced more occupancy loss at independent living facilities than assisted living facilities. However, all senior living type facilities will be impacted as consumers weigh the risk of community transmission and their financial ability to pay for housing.</td>
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| Retail         | — Retailers are facing disruptions in the global supply chain, mandatory closure of nonessential businesses, operational cost increases, and decline in demand as consumers are more reluctant to spend disposable income. Shopping malls are also closed or provide limited shopping hours.  
— BLS reported that 52,000 jobs were lost in this sector in March of 2020. Retailers in the experiential, dining, and consumer goods space have been hit the hardest while grocery retailers and wholesale clubs have exceeded sales projections. However, even for businesses deemed essential, uncertainty remains as retailers are limiting store hours and the number of shoppers.  
— Along with the decline in revenue for retailers, landlords could face cash flow pressure as tenants default on their lease payments, request concessions, or close businesses.  
— 85.0 percent of real estate investment managers invested in retail that responded to a NAREIM survey in March indicated they received rent relief requests from tenants.  
— Retailers with an infrastructure to support and fulfill online orders and home delivery will fare better. Over the last 10 years, market observations indicate neighborhood and community center vacancies have risen to historic highs near 11 percent in 2011 and almost 10 percent in 2019. Vacancies are anticipated to rise with asking and effective rents declining through 2021.  
— Retail owners are now facing the choice between providing rent relief in the short run or evictions of current tenants resulting in higher vacancies and longer-term income losses. |
| Office         | — The global work-from-home environment will likely cause organizations to question their office space needs. Landlords with short-term leases will experience the greatest degree of exposure, but the long term impact will most likely result in downsizing of office space and an investment in remote technologies.  
— Based on market observations, the office market fundamentals have been lukewarm over the past decade as illustrated by a minor decline in vacancy rates from 2010 to 2016, with an uptick in vacancy rates during the last three years, and an effective rent growth averaging only 2.6 percent from 2011 to 2019 per year.  
— With average fundamentals and increasing vacancy rates, national office vacancies may rise upwards of 20.0 percent in 2020. The sector may experience an additional increase in 2021 before vacancies begin declining. The asking and effective rent growth are anticipated to be negative before recovering in 2022.  
— BLS reported that 52,000 jobs were lost in the business services sector in March of 2020. Further office-using job losses and the pace of employment recovery will determine the trajectory of office market performance over the next two years or more. |
| Student housing| — Many colleges and universities have canceled in-person classes and transitioned to remote learning causing many students to relocate off campus to family residences.  
— Owners and operators have reported waiving late fees and evictions for the time being.  
— The longer-term pressure will be on occupancy for the 2020 to 2021 academic year, as preleasing activity has come to a halt. Without knowing when academic activity on campuses will resume, there is hesitation by students in signing new leases. Student housing facilities with a large international student population may also be impacted due to pending travel restrictions.  
— To minimize the impact on the 2020 to 2021 academic year, owners and operators will need to move quickly to execute leases when academic activity is scheduled to resume, to make up for lost time in preleasing activities.  
— In the longer term, owners and operators may need to anticipate decreased demand for student housing resulting from increased remote learning offerings, as higher learning institutions may improve their remote learning capabilities. |
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| **Multifamily** | — Multifamily is facing short-term challenges as a large number of tenants seek rent forgiveness over the next several months. Landlords may prefer short-term rental loss, compared to long-term vacancy increases.  
— Effective rents may flatten or decline in certain markets over the next two years. Additional risk may be shifted to lenders as property owners will be asking for forbearance. That said, the multifamily asset class has seen a very strong performance and the long-term projections are still positive. In the short term, middle-market assets will likely see less of an impact compared to expensive or low-income properties, as low-income properties may be immediately impacted by job loss.  
— Vacancy rates may reach levels near 2010 figures before they improve in the long term, although they are not expected to reach levels as high as the 2009 financial crisis.  
— Given the recent strong performance, there is a potential for an oversupply. In some areas, new construction has reached historic levels. Although vacancy rates are anticipated to rise, construction is anticipated to slow, which may provide a counterbalance to prevent even higher vacancy increases. |
| **Industrial**  | — Logistics space has seen strong performance over the last five years, and COVID-19 may result in more permanent demand for online shopping boosting demand for logistics space.  
— Short-term challenges are expected for industrial warehouse space from supply chain disruptions, but long-term negative effects are not anticipated on the sector overall.  
— Vacancies are expected to rise in 2020 with a potential to increase in 2021. Asking and effective rents are anticipated to decline through 2021.  
— Though retailers are facing challenges, shelter-in-place policies (even short-term) are anticipated to increase online shopping, benefiting online retailers, which may result in a potential increased demand for warehouse/distribution space. |

### Valuation considerations

COVID-19 creates unique challenges when trying to determine the types of adjustments that should be applied to fundamental valuation inputs in the short and long term. While certain property types are absorbing the financial impact better than others, all property types will be affected. The valuation impact that the $2.0 trillion federal stimulus package and $2.3 trillion of Federal Reserve’s funding will have on real estate assets still remains to be seen. Given these market dynamics and the current lack of observable transactions, there are a few key points that market participants should consider when valuing real estate assets.

**Revenues, operating expenses, and net operating income**

**Evaluating fiscal year (FY) 2020 budgets**

It is important to consider how the property is positioned and the degree of which cash flows could be impacted. Some factors to evaluate include:

— Nature of the asset and type of tenants
— Occupancy in the near and midterm
— Quality of tenants and ability to collect rents
— Rent concessions that need to be granted
— Credit loss
— Inflationary rent growth
— Ability to rebound after a pandemic/recession
— Ability to operate through a shutdown (i.e., is the asset considered essential service)
— Ability to control costs and cash flows.

**Forecasting FY 2021 and beyond**

Consideration should be given to the specific drivers and assumptions to arrive at adjusted forecasted cash flows. Consider if the disruption could result in permanent lost growth and/or the potential shape and tenor of a recovery. Utilizing a scenario-based approach to model recovery alternatives will allow asset owners and managers to develop detailed forecasts.

There are undoubtedly more unknowns and thus greater difficulty in forecasting relative to a stable market. It is important to revisit and reassess budgets.
and forecasts on a more frequent basis to deal with constant change. Consider implementing short-term controls that would warrant revisiting key assumptions, such as an existing tenant subleasing space or notification of tenant insolvency.

**Discount rate**

Asset managers, investors, and developers may be tempted to adjust the discount rate to account for the increase in perceived risk from the disruption. While there may be divergence in practice, we believe sufficient thought should be given to the underlying cash flows before adjusting the discount rate. To the extent that the discount rate is adjusted due to immediate challenges in adjusting the cash flows or there is more inherent risk in achieving the cash flow projections, a proper level of analysis, diligence, and documentation also needs to be performed to support the adjustment to the discount rate. An adjustment to the discount rate should be not be viewed as an alternative to adjusting the cash flows. Rather, the selection of the appropriate discount rate should weigh the risk of realizing the projected cash flows generated from the underlying assumptions, as well as disposition price at the end of the holding period.

The below chart indicates movements in discount rates across various commercial real estate sectors after the financial crisis of 2007–2009. While some sectors demonstrate significant changes, others have appeared to be relatively stable.

**Discount rate movements post-2007 financial crisis**

![Discount rate movements chart](https://example.com/discount_rate_chart)

Source: PwC Korpacz Investor Surveys

Note: Flex/R&D and Warehouse property types are commensurate with industrial properties. Apartment is commensurate with student housing and multi-family. Senior housing data is not available.

The relatively small movements in the discount rates during the financial crisis of 2007–2009 provide us guidance on the necessity to be cautious before adjusting discount rates for valuation purposes. However, given the uncertainty with the lodging, senior housing, and retail sectors, consideration should be given to whether the discount rate should reflect additional risk, to the extent that the additional risk was not already reflected in the cash flow projections, as the recovery period in those sectors may be longer compared to other sectors. Determining the appropriate discount rate and any adjustments requires an in-depth analysis and understanding of the asset and the market as a whole.

In addition to understanding appropriate discount rates to value commercial real estate, it is also important to understand whether return requirements of developers or investors have changed considerably due to the disruption. A closer look at the bond markets and ability of investors to obtain debt could provide insights into levered returns. Levered return requirements of equity investors and bond market interest rates could also impact the underlying unlevered returns or the discount rate that should be utilized for valuation purposes.
Terminal capitalization rate
Terminal capitalization rate movements are often tied to the anticipated hold period of the underlying commercial real estate. Asset owners, managers, investors, and developers need to consider whether the disruption has caused any changes to the anticipated hold periods. In addition, any deferral in capital improvement projects planned in the short term due to disruption could also have an impact on the terminal cap rate that needs to be utilized within the valuation analysis. Also, the relationship to other rates of return such as the unlevered discount rate should be considered. As terminal capitalization rate is utilized to develop a terminal value at the end of the forecast period, rates generally tend to stay stable during normal conditions. The below chart indicates movements in terminal capitalization rates across various commercial real estate sectors after the 2007 financial crisis.

![Terminal Capitalization rate movements post 2007 financial crisis](chart.png)

Source: PwC Korpacz Investor Surveys
Note: Flex/R&D and Warehouse property types are commensurate with industrial properties. Apartment is commensurate with student housing and multi-family. Senior housing data is not available.

A closer look at the holding periods and potentially deferred capital improvement projects could provide insights into the terminal capitalization rates that should be utilized for valuation purposes.
Key valuation drivers for Q2 2020
COVID-19 will create unique challenges for entities reporting the fair value of their real estate properties for Q2 2020 as the economic impact from COVID-19 is likely to be more than short term. The retail and hospitality sectors so far have been the hardest hit sectors, whereas the industrial and multifamily sectors may experience much less volatility in values. Regardless of the asset class, the primary value drivers will likely be revenue rather than discount rates. Transaction activity is likely going to be very low over the next several months as owners negotiate with tenants and lenders, thus pricing based on observable transaction evidence may not be possible. Scrutiny within valuation committees and from auditors will focus on the depth of analysis and transparency in revenue forecasts.

The following are likely going to be the key areas of scrutiny within valuation committees and from auditors, requiring robust analysis and proper documentation for the following areas:

Retail, office, and industrial
- Economic health of the tenants and their ability to maintain rent payment or work through lease modifications
- Accurately capturing lease modifications in future cash flow projections
- Renewal risk both in terms of rate and occupancy
- Downtime assumptions

Lodging
- Analysis of historical sources of occupancy and near-term and midterm outlook of the industry or leisure segment that drives the demand
- Ability to control fixed and semivariable cost during a period of lower occupancy

Senior housing
- Financial strength of the operator if the operator is a third party
- Ability of the facility to accept new residents (may be largely dependent on availability of rapid COVID-19 testing)
- Temporary or longer-term disruption to demand
- Permanency of increased operating costs

Student housing
- Ability for higher education institutions to resume classes
- New lease signings for the 2020 to 2021 academic year, including international students
- Permanent remote learning offerings for certain student segments or courses

Multi-family
- The impact of unemployment on the ability of tenants to continue paying rent
- Short and long term impact to luxury, middle market, and low income properties

Summary
In summary, without directly observable market pricing, the impact of COVID-19 to property values requires a measured approach focused on reassessing budgeted and forecasted financials. A thoughtful analysis is necessary to determine the discount rate and terminal capitalization rates and any adjustments that need to be made based on property-specific characteristics. Nuances within each sector within commercial real estate should be understood in detail before arriving at value conclusions.

KPMG is here to help
We understand choosing an adviser that has the technical skills and practical experience to provide sound and objective advice is of utmost importance during these volatile times. KPMG professionals have experience in dealing with the challenges faced by market participants in such volatile times and can help you think through complex valuation topics and associated financial reporting implications.

Some of the key areas we can help include (i) net operating review and cash flow analysis, (ii) portfolio analysis, (iii) discount rate and terminal capitalization rate analysis, and (iv) valuations for strategic planning, financial reporting, and tax purposes. Our experience working with a wide range of real estate developers, public REITs, private equity investors, and other market participants with significant real estate holdings provides us with a unique understanding of market dynamics and investor return requirements. Our constant interaction with market participants allows us to bring a holistic approach to your valuation requirements.
Have questions?
Do you have questions related to measuring fair value or potential impairment exposure of your real estate assets in the upcoming months? For more information, please contact your KPMG adviser.

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