The most severe recession in economic history, but also, the shortest.
MOST SEVERE COLLAPSE IN GDP ON RECORD

U.S. Real GDP, Annualized Growth(%)
STRIKING A DEVASTATING BLOW TO THE LABOR MARKET

U.S. Employment

RECORD JOB LOSSES

As of July, 9.3 million jobs (42%) returned

BUT LABOR MARKET RECOVERY HAS BEGUN

22.2 million job losses from Feb to April

Source: U.S. Bureau of Labor Statistics
JOB LOSSES STARTING TO IMPACT LEASING FUNDAMENTALS

U.S. Vacancy Rates, Various Property Types

VACANCY ON THE RISE IN THE FIRST HALF OF THE YEAR

HOWEVER, MARKETS REMAIN RELATIVELY TIGHT

Source: CoStar Group; Reis; Cushman & Wakefield Research
**CAPITAL MARKETS LARGELY IN WAIT & SEE MODE**

U.S. Sales Volume Transactions, by Entity Type ($B)

### SALES VOLUME IN Q2 AT LOWEST POINT SINCE 2011

<table>
<thead>
<tr>
<th>Property Type</th>
<th>Sales Volume Change YOY (2020 Q2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>-45%</td>
</tr>
<tr>
<td>Office</td>
<td>-72%</td>
</tr>
<tr>
<td>Apartment</td>
<td>-72%</td>
</tr>
<tr>
<td>Retail</td>
<td>-76%</td>
</tr>
<tr>
<td>Hotel</td>
<td>-91%</td>
</tr>
<tr>
<td>All</td>
<td>-69%</td>
</tr>
</tbody>
</table>

Source: Real Capital Analytics; Cushman & Wakefield Research
**WHILE PROPERTY PRICE INCREASES SLOW DOWN, INDUSTRIAL & MULTIFAMILY MORE RESILIENT**

<table>
<thead>
<tr>
<th>Property Type</th>
<th>Sales Price Change YOY (2020 Q2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>7.6%</td>
</tr>
<tr>
<td>Apartment</td>
<td>7.1%</td>
</tr>
<tr>
<td>Office</td>
<td>2.3%</td>
</tr>
<tr>
<td>Retail</td>
<td>-0.7%</td>
</tr>
<tr>
<td>Hotel</td>
<td>-5.4%</td>
</tr>
<tr>
<td>All</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Source: Real Capital Analytics; Cushman & Wakefield Research
DELINQUENCIES CONCENTRATED IN RETAIL & LODGING, SO FAR

Delinquency Rate by Property Type (% 30 Days +)

- Industrial: 1.7% (2019), 1.2% (2020)
- Office: 2.7% (2019), 2.4% (2020)
- Multifamily: 2.0% (2019), 3.3% (2020)
- Retail: 4.4% (2019), 16.1% (2020)
- Lodging: 1.8% (2019), 23.8% (2020)

Source: Trepp
SIGNS OF RECOVERY...

STOCK MARKET SURGE

RETAIL SALES REBOUNDING

MANUFACTURING GROWING AGAIN

LOW INTEREST RATES = REFINANCING BOOM

LAYOFFS DOWN: LABOR MARKETS IMPROVING

Source: Various
STILL MANY SCENARIOS & UNKNOWNS

U.S. Real GDP Forecast Scenarios ($B)

Source: Consensus forecast sourced to FiveThirtyEight/IMG where 22% of economists expect real GDP to return to pre-crisis levels in H2 2021 vs 44% expect H1 or H2 of 2022.

U.S. Real GDP Forecast Scenarios ($B)

Consenus Forecast: Return to 2019 GDP in mid-2022

Source: Consensus forecast sourced to FiveThirtyEight/IMG where 22% of economists expect real GDP to return to pre-crisis levels in H2 2021 vs 44% expect H1 or H2 of 2022.

Upside = Moody’s Analytics S0 Update Scenario, Downside = Moody’s S3 Downside Scenario; Forecast as of 7-22-2020
LABOR MARKETS’ PATH TO RECOVERY: BASELINE SCENARIO
Job Growth & Unemployment Rate Forecasts

Source: Bureau of Labor Statistics; Moody’s Analytics; Cushman & Wakefield Research
COVID-19 is accelerating trends that were already in the making.
ECOMMERCE SURGE CONTINUES THE INDUSTRIAL BOOM
Online Sales as % of Total Retail Sales* & Industrial Absorption

DRAMATIC INCREASE IN ONLINE SHOPPING

GENERATES DEMAND FOR INDUSTRIAL-LOGISTICS

Source: Ecommerce figures from Digital Commerce 360 analyzing the U.S. Department of Commerce’s Retail E-Commerce Sales Report and Monthly Retail Trade and Food Services Report.

Note: Total retail sales number excludes the sale of items not normally purchased online; specifically, motor vehicle & parts dealers (NAICS 441), gasoline stations (NAICS 447), and food services & drinking places (NAICS 722).

Industrial figures from Cushman & Wakefield Research
INDUSTRIAL ABSORPTION STRONG IN MANY MARKETS
Select U.S. Markets, 2020 H1

Source: Cushman & Wakefield Research
INDUSTRIAL VACANCY REMAINS LOW

U.S. Industrial Vacancy (%)
ACCELERATES CAPITAL FLOWING INTO INDUSTRIAL-LOGISTICS
U.S. Sales Volume ($B)

Source: Real Capital Analytics; Cushman & Wakefield Research
COVID-19 ACCELERATES DATA USAGE & DATA CENTER DEMAND

DATA CENTER Q2 HIGHLIGHTS

• **Distributed workforce**: Cloud services absorbed near-record capacity (200 MW) in Q2 as corporations rapidly shifted IT infrastructure to keep up with a suddenly distributed workforce.

• **Record throughput**: The largest internet exchanges across the world saw new record throughput, noting 50% increases in teleconferencing and 25% increases in online gaming and social media usage.

• **Further expansion**: Data center REITs remain focused on expansion to serve both large cloud services companies and corporations looking for further disaster recovery options and/or scalability.

REGIONAL CLOUD SERVICES SPEND ($B)

Source: Structure Research, Cushman & Wakefield Research
STRONGER HEADWINDS FOR CERTAIN RETAIL CONCEPTS

CHANGE IN SALES BY RETAIL SECTOR (PRE-VIRUS PEAK TO JUNE 2020)

-30% -20% -10% 0% 10% 20% 30%

Total
Sporting Goods
Nonstore
Building Materials
General Merch
Furniture
Health
Grocery
Electronics
Gasoline
Clothing
Restaurants

-28% -24% -14% -12% -10% -6% -6% -22% -10% -6%

June 2020, Change Since Pre-Virus Peak by Retail Sector

Source: U.S. Department of Commerce; Cushman & Wakefield Research

MAPS TO ECOMMERCE PENETRATION

<table>
<thead>
<tr>
<th>eCommerce Penetration</th>
<th>Before</th>
<th>After (Forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparel &amp; Accessories</td>
<td>29%</td>
<td>40%</td>
</tr>
<tr>
<td>Auto &amp; Parts</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Books, Music &amp; Video</td>
<td>55%</td>
<td>68%</td>
</tr>
<tr>
<td>Consumer Electronics</td>
<td>42%</td>
<td>55%</td>
</tr>
<tr>
<td>Food &amp; Beverage</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td>Furniture &amp; Furnishings</td>
<td>24%</td>
<td>42%</td>
</tr>
<tr>
<td>Health &amp; Beauty</td>
<td>11%</td>
<td>25%</td>
</tr>
<tr>
<td>Office Supplies</td>
<td>27%</td>
<td>60%</td>
</tr>
<tr>
<td>Other</td>
<td>24%</td>
<td>40%</td>
</tr>
<tr>
<td>Toys &amp; Hobby</td>
<td>37%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Source: ShawSpring Partners; Bank of America
RETAIL DEMAND NEGATIVE IN 2020 FOR FIRST TIME SINCE 2009

U.S. Retail Absorption by Quarter

Source: Costar Group; Cushman & Wakefield Research
MALLS WILL BE HIT HARD…
U.S. Mall Distribution by Class

Class B: 426 U.S. Malls
Will need to redevelop dead anchor space. Most will need some level of redevelopment. Weakest properties will be on the same trajectory as Class C & D were before the crisis.

Class A: 310 U.S. Malls
Nearly all will need to redevelop dead anchor space.

Class C & D: 334 U.S. Malls
Most of these will become redevelopment opportunities.

Source: Cushman & Wakefield Research
ACCELERATES REBIRTH OF THE SUBURBS THAT WAS ALREADY UNDERWAY
Turn Towards Suburbs Began Three Years Before Pandemic & Recession

POPULATION GROWTH STRONGER SINCE ‘16

CBD RENT PREMIUM DOWN FROM PEAK


Source: Cushman & Wakefield Research
Office faces both cyclical & structural headwinds, but it will fully recover.
JOB LOSSES (CYCLICAL) & EMPLOYEE LOCATION CHOICE (STRUCTURAL) WILL IMPACT WORKPLACE ECOSYSTEMS

CYCLICAL – JOB LOSSES

Office-using employment, millions

Great Financial Crisis: 2.4 million office jobs lost

COVID Recession: 2.6 million office jobs lost

Source: U.S. Bureau of Labor Statistics

STRUCTURAL – WORKING REMOTELY

% of US Workers Who Have Worked Remotely

Source: Gallup Panel 2020
OFFICE ABSORPTION TURNS NEGATIVE

U.S. Office Net Absorption by Quarter

Source: Cushman & Wakefield Research

Q2 2020 Net Absorption
CBD: -8.1 MSF
Suburbs: -15.0 MSF

Source: Cushman & Wakefield Research
OFFICE VACANCY TRENDS HIGHER; ENDED Q2 AT HIGHEST POINT SINCE 2015

U.S. Office Vacancy (%)

Source: Cushman & Wakefield Research
Baseline Assumptions:

- GDP recovery follows the baseline scenario—returns to pre-crises levels in 2022.
- U.S. office employment declines by 1.2 million office-using jobs in 2020.
- Congress passes another fiscal relief bill.
- Coronavirus situation begins to resolve by mid-2021.
- Historical relationship between job losses and net absorption holds true in this cycle.
- Percent of people working permanently from home increases from 5% to 10%.
- Share of agile workers increases from 40% pre-COVID-19 to 56%; assume 90% of agile workers have workstations.
- Halt in decade long trend of densification (sf per worker remains fixed at 2019 levels).

Source: Upside = Moody’s S0 scenarios, Baseline = Moody’s baseline scenario where GDP doesn’t fully recovery until 2022Q2, Downside = Moody’s S3 Scenario

Forecast as of 7-22-2020
Factors That Point to Full Recovery:

- Economic growth (e.g. GDP, population growth over the long-term).
- Share of office employment increasing as a share of nonfarm employment.
- Surveys indicate office employees want options *and* want to be in an office on a regular basis. The future is total workplace ecosystems that offer more employee choice.
  - 90% want to return to the office.
  - 78% want remote working policies expanded and a shift to balancing office, home and third places.
- Office retains value for its role in:
  - Agglomeration / knowledge spillover
  - Worker productivity
  - Cultural / branding factors
  - Mentoring, training and onboarding

Source: Upside = Moody’s S0 scenarios, Baseline = Moody’s baseline scenario where GDP doesn’t fully recovery until 2022Q2, Downside = Moody’s S3 Scenario
Forecast as of 7-22-2020
OFFICE ALSO HAS STRONG STRUCTURAL TAILWIND AT ITS BACK

Office-using Industries Expected to Account for Disproportionate Share of Future U.S. Job Gains

Source: U.S. Bureau of Labor Statistics; Moody's Analytics Forecasted

Office-using Employment as % of Total Nonfarm Payroll

Source: U.S. Bureau of Labor Statistics; Moody's Analytics Forecasted
The COVID-19 recession will hit the multifamily sector as well, but long-term fundamentals remain favorable.
NET ABSORPTION SLOWS & APARTMENT VACANCY TRENDS HIGHER

U.S. Apartment Absorption by Quarter (Units) & Vacancy

Source: CoStar Group
NEARLY 45.5 MILLION PRIME RENTERS BETWEEN THE AGES OF 20 AND 29 IN THE U.S.

Source: U. S. Census Bureau; Moody's Analytics Forecasted
AFTER SLOWDOWN, DEMAND EXPECTED TO TURN ROBUST BY 2022

U.S. Apartment Absorption by Year (Units) & Effective Rent Growth (Year-Over-Year)

Source: CoStar Group
## Closing Thoughts to Keep in Mind…

### Uncertainty limiting current activity…
- Current recession is unique in that it is being driven by a health pandemic. Mobility, confidence and activity are dependent upon virus spread being brought under control.
- Office workforces are largely still distributed, making it difficult for occupiers to gauge future office needs across their portfolios.

### …But, reasons for cautious optimism.
- Job creation started quickly, after a devastating two-month drop in employment.
- The recession is likely already over. The recovery, though fragile and uneven, has begun.
- Rent collections have remained strong for office, industrial and multifamily (each of which are averaging 90%+).

### Some pre-recession trends are being accelerated.
- eCommerce and online retail sales substituting for the lower levels of in-person shopping, eating, etc.
- Need for more data centers and cloud services capacity.
- Suburban submarkets increasingly attractive for some residents, workers and employers.
- Secular headwinds for retail were accelerated by this crisis.

### What else is to come?
- Occupiers examining portfolio strategies now, and some likely to make shifts in workplace ecosystems in the future. The office will remain a critical driver of culture, learning and personal connections.
  - Vast majority of office workers now want their employer to expand remote working policies and shift to balancing office, home and third places.
  - During the current pandemic-forced work-from-home experience, only 55% of workers “have a sense of well-being” and half struggle to connect with their company’s culture.
  - Opportunities exist as office rents have declined in one-fifth of U.S. markets, national vacancy is up 49 basis points quarter-over-quarter and sublease space has increased by 21% since the beginning of the year.
- Industrial demand remains strong, and many U.S. markets continue to have historically low vacancy rates.
  - Downside risk does still exist with disruptions to import / export volumes and potential bankruptcies of warehouse retailers.
KEY CONTACTS:

Kevin Thorpe
Chief Economist, Global Head of Research
kevin.thorpe@cushwake.com

David Bitner
Global Head of Capital Markets Research
david.bitner@cushwake.com

Jason Tolliver
Global Head of NewCommerce Research
jason.tolliver@cushwake.com

Carolyn Salzer
Industrial Insights, NewCommerce Research
carolyn.salzer@cushwake.com

Ken McCarthy
Economist, Global Research
ken.mccarthy@cushwake.com

David C. Smith
Global Head of Occupier Research
david.smith4@cushwake.com

Rebecca Rockey
Economist, Global Head of Economic Analysis & Forecasting
rebecca.rockey@cushwake.com

Garrick Brown
Retail Insights, NewCommerce Research
garrick.brown@cushwake.com

Kristina Garcia
Multifamily Insights, Capital Markets Research
kristina.garcia@cushwake.com
STATUS UPDATE:
U.S. PROPERTY MARKETS & THE ECONOMY

SEPTEMBER 2020

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Cushman & Wakefield (NYSE: CWK) is a leading global real estate services firm that delivers exceptional value for real estate occupiers and owners. Cushman & Wakefield is among the largest real estate services firms with approximately 53,000 employees in 400 offices and 60 countries. In 2019, the firm had revenue of $8.8 billion across core services of property, facilities and project management, leasing, capital markets, valuation and other services. To learn more, visit www.cushmanwakefield.com or follow @CushWake on Twitter.

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