Impact of COVID-19 on the Real Estate Market
(Tenth in a Series)

April 24, 2020

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Overview of Today’s Call

- Update on COVID-19

- Performance of Public Real Estate

- Impact of COVID-19 on the Real Estate Market

  - Alan Kava, Co-Head of the Merchant Banking Division (MBD) Real Estate Group in the Americas, Goldman Sachs

  - Ralph Rosenberg, Global Head of Real Estate at KKR

  - Roy March, Chief Executive Officer at Eastdil Secured
Speaker Introduction: Alan Kava, Goldman Sachs

Alan Kava

Speaker Overview

- Co-head of the Merchant Banking Division (MBD) Real Estate Group in the Americas.
- Responsible for the design and implementation of MBD’s real estate investment strategy in the Americas.
- Member of the MBD Real Estate Investment, Urban Investment Group Investment, Private Real Estate Investment and Firmwide Investment Policy Committees.

Goldman Sachs MBD Real Estate Overview

- Over 25 years of experience across global markets, property types, risk profiles, capital structures and investment cycles. Invested $50bn in real estate equity and debt strategies since 2012.
- MBD Real Estate Stats: ~$38bn in AUM across real estate equity and credit, 18 offices in 13 countries, over 300 dedicated real estate professionals
- Investment Strategies (US, EMEA, and Asia):
  - Real Estate Private Equity: Core, Income and Value-Oriented, Opportunistic, Development
  - Real Estate Private Credit: Senior Credit, Mezzanine Loans, Non-Performing Loans

1. MBD Real Estate reflects the integration of the MBD, UIG, GSSG, GSAM PRE, as announced in June 2019 and effective on August 26, 2019. Figures as of December 31, 2019 and exclude GSAM Japan. 2. As of December 31, 2019, reflects integration of MBD, GSSG, and other business areas. Source: Investment Strategy Group.
Speaker Introduction: Ralph Rosenberg, KKR

Ralph Rosenberg

Speaker Overview

- Global Head of KKR's Real Estate Platform; joined KKR in 2011.
- Prior to joining KKR, Mr. Rosenberg was a partner at Eton Park Capital Management and also managed his own firm, R6 Capital Management, which later merged into Eton Park.
- Partner at Goldman Sachs until 2006.

KKR Overview

- KKR has been a global provider of equity and debt across real estate investment strategies since 1981
- Company Stats: (1) $12.7bn in AUM globally ($9.9bn in Americas, $1.5bn in Europe, $1.3bn in Asia), (2) 85 professionals across 11 cities (3) own or lend on $68bn of real estate assets based on asset value and collateral value.
- Investment Strategies:
  - Value Add & Opportunistic Equity: US and European Investment Funds
  - Real Estate Credit: Senior Mortgage (Ticker: KREF), Junior Tranche CMBS

Source: Investment Strategy Group, KKR
Speaker Introduction: Roy March, CEO Eastdil Secured

Speaker Overview

- CEO of Eastdil Secured, L.L.C., the leading real estate investment banking company in the United States.
- **More than 42 years of real estate experience at Eastdil Secured** across financing, sales, acquisition, and capital markets activities in the United States, Europe, and East Asia.
- Founded in 1967, Eastdil was the first real estate investment banking firm in the United States. The New York based firm has been involved in over $2.3 trillion in transactions since 2007.

Eastdil Overview

- Eastdil Secured is a leading private real estate investment banking company with the mission to create value for our clients, and to be the most relevant and trusted advisor in the commercial real estate capital markets.
- In 2019, Eastdil Secured has completed over $170 billion of global capital market transactions, including the $18.7 billion industrial portfolio sale for Global Logistics Partners, which is the largest private market sale in U.S. history.

Source: Investment Strategy Group, Eastdil Secured LLC.
SARS-CoV-2 Pandemic Timeline

Total reported infections worldwide: 2,636,368
Total reported fatalities worldwide: 184,036
(as of midnight 22 April 2020)

* As of April 22, 2020

Pandemic Appears to be Slowing Down in the United States

• While the number of new daily infections remains high in the United States, the pandemic appears to have plateaued and may now be on a downward trajectory.

• In New York state, which accounts for over a third of total US confirmed infections, new cases of infections appear to have peaked and are generally decreasing now.

* As of April 22, 2020
Source: Investment Strategy Group, Worldometers, Washington Post
• Italy and Spain, two of the top three nations globally with most cases of reported infections and fatalities, appear to have contained the outbreak.

• In parts of Europe like Germany, lockdowns and social distancing measures are now gradually being relaxed.
US REITs have underperformed the S&P 500 by more than 11% year-to-date; deterioration of the macro backdrop has translated to slowing demand, potential tenant bankruptcies, and a deteriorating financing environment.

Homebuilders have also underperformed; Goldman Sachs Global Investment Research (GIR) expects a 23% qoq decline in housing starts in Q2, from an annualized rate of 1.47 million in Q1 to 1.13 million in Q2.

REITs have underperformed equity benchmarks across other developed markets as well; a global REIT benchmark\(^1\) is down nearly 28.0% (in USD terms) year-to-date, relative to the MSCI World index at -15.7%.

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1. FTSE EPRA NAREIT Developed REIT Index. For the US, performance is calculated using the Wilshire REIT index. For international markets, performance is computed using the regional components of the FTSE EPRA NAREIT Developed REIT Index. Data as of Apr 23, 2020.

Source: Investment Strategy Group, Bloomberg, Factset.
Considerable dispersion in sector performance; malls, shopping centers and hotels that were severely affected by COVID-19 underperformed, as well as companies with higher leverage and shorter lease terms.

Newer non-core REIT sectors such as datacenters and towers have outperformed, along with industrials/warehouses which benefit from a physical to digital transition.
US REITs Seem Fairly Valued Relative to Equities, but Cheap vs. Fixed Income

1. Earnings Yield of US REITs Versus S&P 500 Index

- The Adjusted Funds From Operations ("AFFO") yield to price for REITs, a measure akin to the earnings yield for the S&P 500, stands at 5.2%, which is inline to the S&P 500 earnings yield of 5.5% measured on a 1-year forward basis.

- The spread between the cap rate implied by REIT prices\(^1\) and other measures of yield such as the spreads of Baa corporate bonds stands at its highest levels relative to history.

2. Spread of Implied Cap Rates\(^1\) to Baa Corporate Bond Yields

1. For implied cap rates, each of the five major sectors is given a 20% weight; weighting within each sector is based on total public market value of assets (i.e., market cap + debt). Other assets are assumed to experience the same percentage change in value as operating real estate.

Source: Investment Strategy Group, Green Street Research. Data as of Apr 20, 2020
COVID-19 has led to dramatic widening in spreads across CMBS in all rating tranches.

We see deterioration in credit metrics in the commercial mortgage space, as demonstrated by late payment rates\(^1\) among commercial mortgages which spiked up in April.

- Stress was particularly seen among hotels, retail and mixed-use properties.

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1. The late payment rate for CMBS includes all loans past their due date, including those less than 30-days delinquent. Data as of Apr 1, 2020.

COVID-19 has contributed to a slowdown in private real estate transaction volume. Equity transaction volume has materially declined since the spread of the virus.

The debt capital markets have also come to a dramatic halt, especially in the CMBS space, and any new loan issuances have been executed at much wider spreads.
Cap Rates

- Although it is too early to determine the impact of COVID-19 on cap rates, the prior cycle demonstrated that stressed market environments can result in temporary periods of dislocation where cap rates widen, but then return to historic downward trajectory in line with a declining interest rate environment.

1. Cap rates are shaded by distance from trailing average to identify trend. Includes industrial assets selling for at least $5 million. Data as of April 6, 2020
Source: Investment Strategy Group, GS MBD, Costar.
Most global travel has ground to a halt. Trailing 28-day hotel occupancy across the US has dipped materially to 22% as of April 22, 2020 from 68% in 2019.

Many hotel owners are choosing to close hotels, with over half of Manhattan hotels currently closed.
Prior to COVID-19, retail was experiencing signs of distress as declining sales have led stores to permanently close.

In fact, before COVID-19, 2020 was expected to have 171mm SF of store closures, more than prior years.

COVID-19 has exacerbated declining retail sales, with the exception of food and beverage (mostly grocery stores) and online retail, as many retailers are forced to close temporarily.
Although supply chains have been disrupted, industrial real estate has continued to see tight vacancy levels. Availability rate for the sector stood at 4.8% at the end of Q1 2020, inline with its 5-year average.

In addition, e-commerce prior to COVID-19 had already been benefiting from the continued growth of e-commerce, with e-commerce representing 64% of logistics absorption in 2019.
Office leasing in the second half of Q1 2020 has decreased sharply, with total leasing nationally for the quarter at 61mm SF.

Of note, New York City’s total office leasing of 4.5mm SF was the lowest experienced in at least 25 years.

Although it’s too soon to determine how COVID-19 will impact office space use going forward, there has been a trend towards consolidation this cycle, with office space per employee decreasing over 17% (≈50 SF) since 2009 in New York City, as a proxy.

Source: Investment Strategy Group, GS MBD, Cushman & Wakefield, JLL, Hodges Ward Elliot, REIS, ny.labor.gov
Multifamily rent collections were expected to be low due to a historic spike in unemployment. However, as of April 19th, 89% of apartment households made a full/partial rent payment, only slightly lower than 2019’s rate of 93%.

As in-person tours are not possible, COVID-19 has contributed a temporary slowdown in leasing activity with 36% fewer leases in April 2020 compared to 2019².

However, more residents are choosing to renew their leases instead of vacating, helping preserve property occupancy.

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1. Data is collected from 11.5 million apartment units. Data are collected weekly, with the first data collection happening the 1st through the 5th, followed by the 6th through the 12th, 13th through the 19th and so on for the remainder of each month. Data as of April 19, 2020. 2. Data sourced from Realpage and based on US property management database. Reflects rolling count of renters who decide to renew and rescind their vacate notices. Data as of April 18, 2020.

Source: Investment Strategy Group, GS MBD, NMHC, Realpage.
State of the Market?

“Alphabet Leads Tech Retreat on Real Estate Deals”
– *The Information, April 21, 2020*

“Blackstone Abandons $20 Million Deposit on Scrapped Office Deal”
– *Bloomberg, April 1, 2020*

“SL Green’s $815 Million Deal to Sell New York City Office Tower Falls Apart”
– *Wall Street Journal, March 24, 2020*
Less Use of Office Space?

Source: Investment Strategy Group.
Consumer and Investment Management Division

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Important Information

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The following table provides an example of the effect of management and incentive fees on returns. The magnitude of the difference between gross-of-fee and net-of-fee returns will depend on a variety of factors, and the example has been simplified.

<table>
<thead>
<tr>
<th>Period</th>
<th>Gross Return</th>
<th>Net Return</th>
<th>Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>6.17%</td>
<td>4.61%</td>
<td>1.56%</td>
</tr>
<tr>
<td>2 years</td>
<td>12.72%</td>
<td>9.43%</td>
<td>3.29%</td>
</tr>
<tr>
<td>10 years</td>
<td>81.94%</td>
<td>56.89%</td>
<td>25.05%</td>
</tr>
</tbody>
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