Marketing Material *

April 2020 / Research Report

COVID-19 SPECIAL EDIT: U.S. REAL ESTATE STRATEGIC OUTLOOK

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1 / Overview

- The lockdown of much of the country will in our opinion level a heavy blow to the economy in 2020. We believe that a sharp, “V-shaped” rebound in the second half of the year is unlikely. Even as the lockdown is gradually lifted, the economy will suffer residual damage. Historically, recessions have lasted, on average, about one year, ranging from eight months in 2001 to 18 months during the Global Financial Crisis (GFC).[1] While the duration of this recession may be at the shorter end of the range, it will, in our view, last through year-end.

- The massive fiscal and monetary response is unprecedented in the post-war era.[2] These measures should provide a powerful backstop to asset prices, although near-term setbacks are possible. In 2021, a combination of relaxed social distancing (ideally supported by the release of a vaccine), pent-up demand, and improving financial conditions should fuel an economic recovery.

- We believe that in time-honored fashion, real estate will follow the economy with a lag of one or two quarters. However, owing to the real estate industry’s underlying strength (low vacancies, moderate construction, and disciplined leverage), this cycle should be milder than the GFC. Moreover, as the fundamentals heal, we believe that real estate’s attractive relative yields (cap rate spreads to Treasuries) will underpin solid investment returns.

- In our view, defensive strategies will outperform through the recession and early recovery. From a sector perspective, this warrants an overweight to the industrial sector, market weights to the apartment and grocery-anchored retail sectors, and underweights to the mall and office sectors. From a geographic perspective, we believe that markets benefitting from structural drivers, including the technology industry and population growth, will outperform.

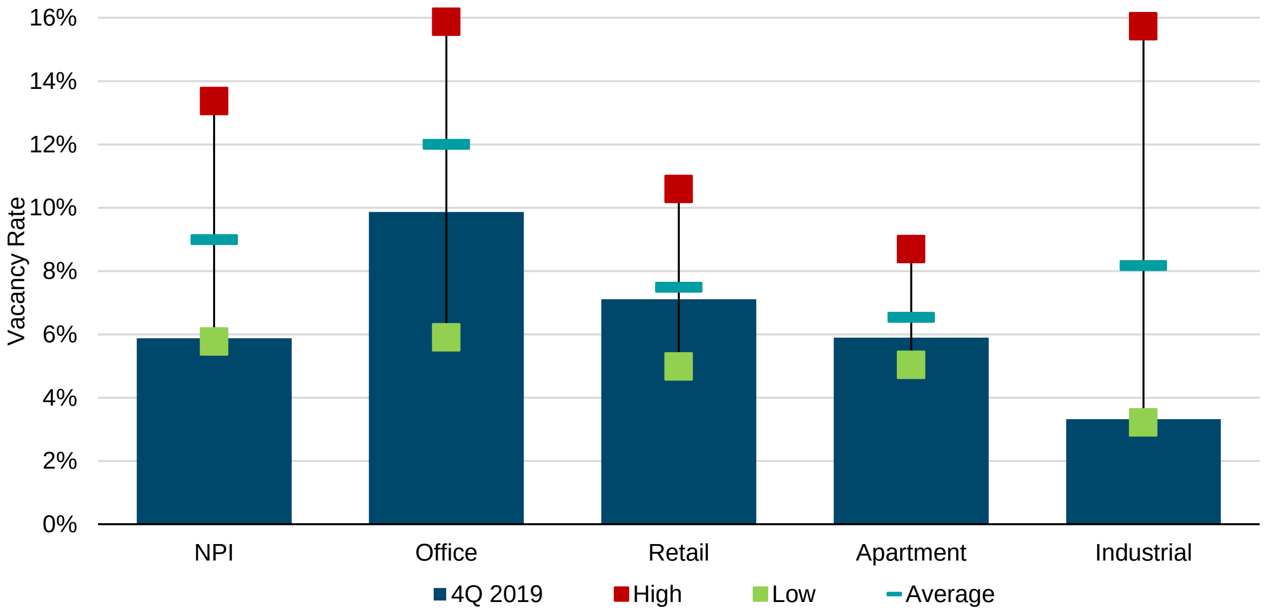
- The principal risk to the outlook is a more protracted lockdown or a resurgence of the virus as social distancing measures are eased. An additional risk is that the recent improvement in financial conditions falters under the weight of the recession.

[1] NBER. As of April 2020.
[2] Congressional Budget Office; Federal Reserve; DWS. As of April 2020.

2 / Real Estate Fundamentals

Heading into the crisis, real estate fundamentals were remarkably healthy. In the fourth quarter of 2019, vacancies of 5.9% (four-quarter moving average) were near a 30-year low and below their 30-year average in every sector (see Exhibit 1).[3] Net Operating Incomes (NOI) were advancing 4.4% annually (four-quarter moving average), more than double the rate of inflation.[4]

EXHIBIT 1: REAL ESTATE VACANCY RATES BY SECTOR



For illustrative purposes only. Past performance is not indicative of future results.
Source: NCREIF. As of December 2019.

Although corroborating data has yet to roll in, it is all but certain that COVID-19 has abruptly reversed this momentum. The immediate damage has been centered on the retail and leisure and hospitality industries, which have been largely shuttered amid the lockdown (physical retail sales fell about 8% year-over-year in March and hotel occupancy plunged to 21% in April from over 90% the year before).[5] Spiraling unemployment insurance claims, totaling more than 22 million in the four weeks to April 10 (roughly 13% of the labor force), testify to the rapid deterioration in labor markets.[6]

We believe that a sharp, “V-shaped” rebound in the second half of 2020 is unlikely. To be sure, broad-based lockdowns will, in our view, be relaxed as infection rates stabilize. But history shows that economies exhibit considerable momentum — both on the way up and on the way down (so-called “virtuous” and “vicious” cycles, respectively) — as labor, commercial, financial,

[3] NCREIF. As of December 2019.
[4] NCREIF. As of December 2019.
[5] Census Bureau (retail sales); STR (hotel occupancy). As of April 2020.
[6] Department of Labor. As of April 10, 2020.

and global markets provide mutual reinforcement. Some lockdown restrictions may persist; weak businesses may fail to revive; high unemployment may undermine household income and confidence; debt accumulated during the lockdown (including deferred rent) may restrain state, corporate, and household spending; weak profits may curb business investment; and a fragile global economy may hamper exports.

These pressures will eventually fade. In the postwar period, recessions have on average lasted about one year, ranging from eight months in 2001 to 18 months in the GFC.[7] Unlike in past cycles, the economy does not exhibit imbalances, such as asset bubbles or inflation, that need to be purged. Household balance sheets are generally sound and pent-up demand is undoubtedly building. Perhaps most important, the federal government and Federal Reserve have injected massive stimulus into the economy and financial markets — more than $2 trillion (10% of GDP) each — with the potential of more to come, an intervention that is unparalleled outside of wartime.[8] It is therefore possible that the recession will wind down by year-end, leading to a recovery in 2021.

Real estate fundamentals will feel the effects of the recession through demand drivers including employment (Office), household formation (Apartment), and retail sales (Industrial and Retail). There will likely be lags in the process owing to delays in decision-making and contractual lease obligations. Furthermore, in our view, the impact will be mitigated by two factors: First, vacancy rates were, for the most part, sitting well below equilibrium (average historical) levels heading into the crisis. Second, the supply pipeline is constrained (construction is in line with its 20-year average) and will likely slide further due to lockdown-related delays and uncertainty around future leasing conditions.[9] We anticipate that vacancy rates will increase and rents will fall in the second half of the year and into 2021. However, we believe that the cumulative rental decline, about 5%-10% (with large variations by sector and market), will be only half as severe as during the GFC. Rent growth should accelerate in 2022 as demand recovers, supply dwindles, and vacancies converge toward equilibrium.

[7] NBER. As of April 2020.
[8] Congressional Budget Office; Federal Reserve; DWS. As of April 2020.
[9] Bureau of Economic Analysis. As of March 2020.

3 / Real Estate Capital Markets

Financial markets cratered in March as COVID-19 proliferated around the globe. The S&P 500 slid about 34% from its February peak and BBB bond yields more than doubled to 5.3%.[10] In the real estate arena, listed REITs plunged 39% and non-agency CMBS spreads ballooned from about 90 basis points to more than 360 basis points (agency CMBS spreads also expanded about 100 basis points).[11]

Beginning in late March, the Federal Reserve (Fed) responded with a host of measures which helped fuel a remarkable rally. After initially pledging to buy $700 billion of Treasury bonds and Agency CMBS, the Fed vowed to expand purchases without limit. It then launched a series of facilities aimed at injecting liquidity into virtually every corner of the credit markets, including commercial paper, municipal bonds, corporate bonds, loans to small and medium-sized “main street” businesses, and asset backed securities — including AAA-rated non-Agency CMBS. In total, the Fed’s actions pushed its balance sheet to $6.4 trillion on April 15 from $4.3 trillion in early March.[12] And they had an extraordinary impact on financial markets: stocks and bonds, including REITs and CMBS, closed roughly half their initial losses.

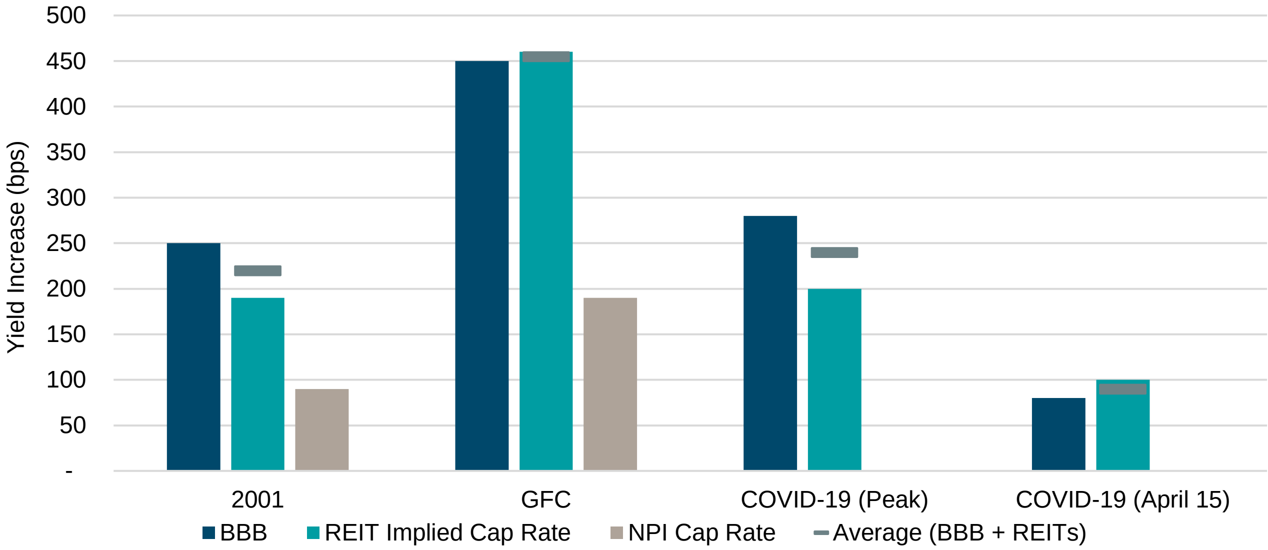
Post-crisis data on private lending and transactions activity is still largely unavailable. Anecdotally, banks and insurance companies continue to lend, prioritizing existing relationships, but only on safer assets, with lower proceeds and on costlier terms. CMBS originations have largely ceased. Transactions activity has also dwindled, both due to the logistical challenges of underwriting property during a lockdown, and to the difficulty of assessing fair market value.[13]

It seems likely that uncertainty surrounding the outlook for the economy and fundamentals, coupled with the tightening of financial conditions since early March, will suppress lending and investment activity and drive cap rates higher. Lower equity prices may push domestic institutions’ real estate allocations above target; constrained and more expensive lending may dampen appetite from levered investors; and lower share prices may keep listed REITs on the sidelines.

The key question is how long and severe any retrenchment might be. Attractive cap rate spreads to Treasuries (more than 350 basis points) may draw capital from yield-seeking investors, including private savers and overseas buyers.[14] The Fed’s aggressive intervention could also have a profound effect. A good rule of thumb (using the past two cycles as a guide) is that cap rates increase a little less than half as much as BBB bond yields and REIT implied cap rates (see Exhibit 2). The swift turnaround in both of these markets suggests that cap rates might increase 30-40 basis points, far less than the 190-basis-point registered during in the GFC. The impact could be even smaller if financial markets continue to rally, although this is by no means assured.

[10] Bloomberg. As of April 2020.
[11] Bloomberg. As of April 2020.
[12] Federal Reserve. As of April 2020.
[13] DWS. As of April 2020.
[14] NCREIF (cap rates); Federal Reserve (10-year Treasuries); DWS. As of April 2020.

EXHIBIT 2: BBB YIELDS, REIT IMPLIED CAP RATES, AND NPI CAP RATES IN DOWNTURNS



Source: NCREIF (NPI Cap Rate), Green Street Advisors (REIT Implied Cap Rate), Bloomberg (BBB). As of April 2020.

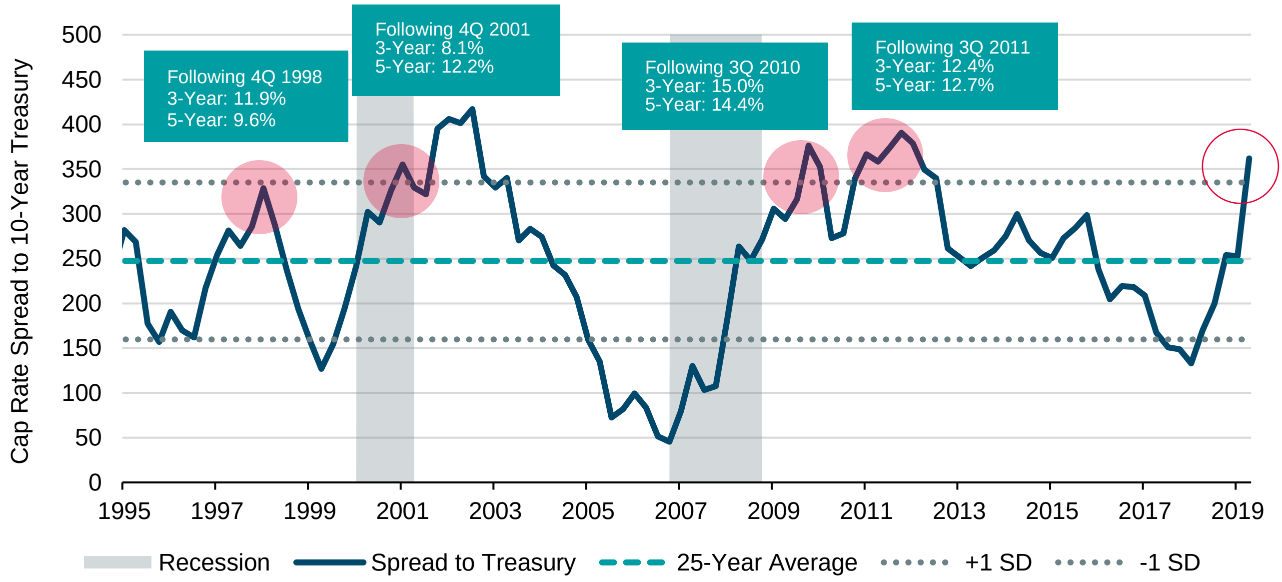
Past performance is not a reliable indicator of future returns.

4 / Real Estate Performance

The COVID-19 recession will exert downward pressure on rents and upward pressure on cap rates. However, we believe that low initial vacancy rates, moderate new supply, and attractive valuations will cushion the blow. Overall, the combination of falling cash flow and rising yields could result in value losses of 10%-20%, although there is considerable uncertainty around these numbers: a protracted shutdown could inflict greater damage to the economy and fundamentals, while a sustained improvement in financial markets could help to anchor cap rates.

Abstracting from this year's turbulence, we believe the medium-term outlook for real estate is bright. The economy and real estate fundamentals will surely heal from the crisis, whether in six months, a year, or more. Yet we believe that interest rates will remain low for much longer, as they have following past recessions. It is noteworthy that in the past, cap rate spreads to Treasuries at current levels have seen investment returns averaging close to or well in excess of 10% over the ensuing three to five years (see Exhibit 3).

EXHIBIT 3: CAP RATE SPREADS TO 10-YEAR TREASURIES AND TOTAL RETURNS



Source: NCREIF and Federal Reserve. DWS estimated 1Q 2020 cap rate and U.S. Treasury yield as of March 31, 2020. Past performance is not indicative of future results. Real estate represented by NPI-ODCE Index. Index returns assume reinvestment of all distributions and do not reflect fees or expenses. It is not possible to invest directly in an index.
As of April 2020.

The cycle will also unfold differently across the real estate landscape. In our view, sectors and markets that enjoy positive structural drivers and more inelastic demand should outperform in the recession and early stages of recovery. Conversely, those that suffer negative structural trends and greater cyclical sensitivity should fare worse.

Industrial: Over the past several years, the expansion of e-commerce has been a boon to the industrial sector, as retailers have stored more inventory and consumed more space to facilitate rapid fulfillment. We estimate that since 2013, e-commerce has added about 50% to industrial absorption above what might have otherwise been generated from economic growth alone. The COVID crisis has reinforced this trend: in March 2020, non-store retail sales (primarily e-commerce) increased 9.7% (year-over-year), even as total retail sales plunged 6.2% (year-over-year). Prominent online merchants have reportedly rationed access to warehouses, prioritizing daily necessities, having run out of capacity. To be sure, demand may soften as the recession dampens the circulation of goods across the country, and the existing development pipeline might increase leasing competition in the near term. Physical stores will also eventually reopen. But having acclimatized to purchasing more products online, consumers might accelerate their migration from physical to online platforms, providing a lasting boost to the sector. Furthermore, even for physical commerce, the crisis has exposed vulnerabilities that may induce businesses to store more inventory as a precaution against future supply-chain disruptions, whether due to epidemics, geopolitical tensions, natural disasters, or other unforeseen events.

Apartment: COVID-19 job losses have been concentrated among retail, leisure and hospitality, and other lower-wage service workers who have a higher propensity to rent (home rental rates are 21% and 49% for above- and below-average income households, respectively).[15] However, demand for apartments tends to be relatively resilient during recessions, as jobless renters resort to savings and government or family support to remain in their homes. Furthermore, people typically avoid taking on substantial financial obligations, including mortgages, in periods of economic uncertainty. Absorption remained (slightly) positive during the GFC despite the loss of nine million jobs. To be sure, this recession may be worse, particularly in the short term. However, generous federal income support — cash handouts of $1,200 per adult and $500 per child for most households, plus a $600 supplement to weekly unemployment benefits (restoring the median income for most workers) — should help residents to continue paying rent. Preliminary industry data indicates that April rental collections totaled 84% — a figure that might increase as government assistance reaches more people — down only slightly from 90% the year before.[16] As the recession runs its course, we believe that housing shortages and affordability challenges will continue to support the sector.

Retail: The retail sector has traditionally been a refuge for real estate investors, holding up well in recessions thanks to the durability of demand for daily necessities (e.g., groceries) and the prevalence of long-term leases within more discretionary categories (e.g., apparel and home furnishings). However, the industry was under duress heading into the crisis, as e-commerce cannibalized sales at traditional vendors: 21 major retailers declared bankruptcy in 2019, matching a record high.[17] Forced store closures have only exacerbated these pressures. Even after the lockdown abates, malls might continue to struggle. Initially, consumers may avoid enclosed shopping destinations and refrain from discretionary purchases. Longer-term, COVID-inspired e-commerce growth might accelerate the demise of department and apparel stores. Grocery-anchored centers, on the other hand, might fare better. Many of their tenants, including grocery stores, pharmacies, banks, liquor stores, and health care providers, remain open and are thriving during the lockdown. Others, such as salons, dry cleaners, restaurants, and fitness clubs, are closed and not paying rent. However, these services are typically resilient in recessions and should revive after the lockdown eases, even in a sluggish economy. Longer-term, these vendors are largely insulated from e-commerce pressures and should continue to expand to meet the needs of a growing population, even as construction of new centers remains subdued.

Office: While many office employees are working from home, office tenants are reportedly continuing to pay rent (with the exception of some co-working outfits).[18] However, Office is traditionally the most cyclical of the major sectors, and we believe that fundamentals will weaken in the second half of 2020 as bankruptcies and job losses mount. Some analysts have also questioned whether the recent experiment with homeworking might dampen future demand for office space. We believe this view is speculative: although recent experience might show that remote working is possible, it is not necessarily optimal. Morale and productivity may suffer from isolation and household distractions. Moreover, within the workplace, increased sensitivity to health and wellness concerns might motivate some employers to rethink efforts to squeeze more employees into tighter spaces, including the trend toward "hoteling", or sharing, workstations. Even so, history suggests that due to its heavy capex burden, the office sector typically only outperforms in the late stages of a cycle when tight markets generate robust rental growth, a condition that we do not expect for several more years (albeit not in all markets).

[15] Census Bureau. As of December 2019.
[16] NMHC. As of April 12, 2020.
[17] Bloomberg, company filings and press releases, Retail Drive, and DWS. As of December 2019.
[18] DWS. As of April 2020.

Markets: Every recession affects local economies and real estate markets in different ways: consider San Francisco and Boston in the dot-com bust and Phoenix and Florida in the housing crash. We believe that the COVID crisis will disproportionately impact geographies with outsized exposure to energy (Houston) and leisure and hospitality (Florida). Conversely, markets with greater exposure to technology (e.g., San Francisco, Seattle, Boston, and Austin), a secular growth industry on which the public is relying more than ever, should perform better. Over the longer term, we believe that Sunbelt markets with low living and business costs (e.g., Texas and Florida) will continue to attract in-migration and corporate relocations, supporting demand for real estate. While Florida may experience some near-term disruption, this might present opportunities to capitalize on the state's longer-term growth prospects.

Appendix: Performance over the past 5 years (12-month periods)

	12/18-12/19	12/17-12/18	12/16-12/17	12/15-12/16	12/14-12/15
NFI-ODCE	5.3%	8.3%	7.6%	8.8%	15.0%
	03/19-03/20	**03/18-03/19**	**03/17-03/18**	**03/16-03/17**	**03/15-03/16**
S&P 500	-7.0%	9.5%	14.0%	17.2%	1.8%
FTSE/NAREIT All Equity REITs	-15.9%	20.5%	-1.1%	5.3%	4.7%

Sources: NCREIF, Standard & Poors, FTSE/NAREIT, Moody's Analytics. As of March 31, 2020.
(Latest data available).

Past performance is not a reliable indicator of future returns.

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