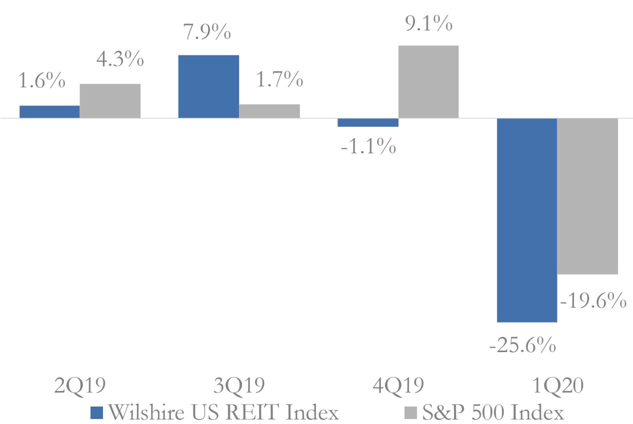
Global pandemic. The third estimate of Fourth Quarter GDP growth was 2.1% and the Federal Reserve Bank of Atlanta projects First Quarter GDP growth to be -0.3% but as noted on their website in big red letters, the estimate "does not capture the impact of COVID-19 beyond its impact on GDP source data and relevant economic reports that have already been released." According to the Bureau of Labor Statistics, changes in total nonfarm payroll in the past three months were 214,000, 275,000, and -701,000, respectively, an average of -71,667 and well below the average of 177,750 for the 12 months prior. While the economic effect of COVID-19 is slowly filtering into the payroll numbers, the exponential rise in weekly jobless claims from 281,000 (3/19) to 3.3 million (3/26), 6.6 million (4/2), 6.6 million (4/9), and 5.3 million (4/16) is the clearest coincident indicator of the devastation that is taking place in the US economy. The 10-Year Treasury Note yield plummeted from 1.919% on December 31, 2019 to 0.698% on March 31, 2020; however, with the FOMC cutting the federal funds rate to zero, the spread between the yield on the 3-Month Treasury Bill and the 10-Year Treasury Note actually rose from 36 bps to 55 bps in First Quarter.

The Wilshire US REIT Index (Index) was down 25.6% in First Quarter, worse than the S&P 500 Index which was down 19.6% but better than the Russell 2000 Index which was down 30.6%. Only six companies out of the 104 constituents of the Index produced positive results, of which four were data center companies; on the opposite ends of the spectrum, all the laggards were hotel and retail landlords, some losing more than 80% of their value.

REITs vs. S&P 500 Index
Total Return



Source: Wilshire Associates.

Sector Performance of the Wilshire US REIT Index
Ranked by First Quarter 2020 Performance

Sector	1Q20	Trailing 1-Year	Current Yield
Industrial	-2.0%	19.6%	2.7%
Self-Storage	-7.9	-4.8	4.1
Mfd. Housing	-19.7	0.0	2.3
Wilshire US REIT	**-25.6**	**-19.4**	**4.8**
Apartments	-26.0	-19.7	4.2
Diversified	-26.6	-22.4	5.4
Office	-28.8	-22.2	4.3
Health Care	-39.6	-35.7	8.2
Retail-Local	-49.3	-45.8	9.2
Hotels	-51.3	-50.5	7.2
Retail-Regional	-59.5	-66.4	15.0
Factory Outlets	-65.3	-74.1	28.6

Source: Wilshire Associates.

The onset of COVID-19 is having a singular impact on the relative performance of the various property types. Admittedly, some of the unintended consequences were entirely unexpected and have created a "whack a mole" environment for investors. For example, student housing, a relatively safe property type that had historically been a refuge in recessions, suddenly cratered with news of school closures and the cancellation of spring semesters. Senior housing, another defensive property type, was particularly hard hit by news of deaths at skilled nursing facilities like the Life Care Center of Kirkland; the mega-cap Health Care REITs, with taxable REIT subsidiaries susceptible to operating cash flows, were sold down quickly.

The clear winners in this time period were the data center REITs. If you can claim on your website, "when you build your digital platform with Equinix, you dynamically interconnect with the world's largest ecosystem of people, data and things," you can probably provide positive total returns through the carnage. Warehouse landlords also held up reasonably well as prospects for e-commerce traffic offset potential problems with small business and brick and mortar retail tenancy. The clear losers were lodging and retail; however, while investors can hope for a return to normalcy in travel and can assume that the Hiltons and the Marriott's of the world will survive, the same cannot be said for many of the retailers that were teetering on the edge already; COVID-19 may have been the straw that broke many shops' and restaurants' backs.

M&A. On February 10, Simon Property Group (SPG) and Taubman Centers (TCO) announced that they have entered into a definitive agreement under which SPG will acquire 80% ownership interest in The Taubman Realty Group Limited Partners (TRG), comprising all the shares of TCO common stock and approximately 1/3 of the Taubman family's ownership interest in TRG for $52.50/share in cash. TRG is the entity that owns and operates the Taubman malls, an UPREIT structure in which TCO, the public company, owns 70% and the Taubman family owns the rest.

Strangely, TRG will continue to operate the 24 assets in the portfolio; Robert Taubman will remain as Chairman, President and CEO, overseen by a new board comprising three representative each from Taubman and Simon. According to a concurrently released presentation, there is a buy/sell clause for the remaining 20% ownership in TRG after a two-year lock-up. Apparently, the two families have overcome the bitter fallout from SPG's hostile bid for TCO in 2002/3 during the incarceration of A. Alfred Taubman, the founder of the company and family patriarch, who was serving 10 months for price fixing at one of his other companies, Sotheby's.

Even before the onset of COVID-19, the pricing and the currency of the transaction seemed favorable to the Taubman family. Admittedly, $52.50/share is still a discount to Net Asset Value, but that metric is relatively useless for an asset class that has only one or two bidders left – hence the almost 100% premium to TCO's unaffected share price (before rumors emerged of a pending transaction). Since the TRG structure is extant there is very little G&A or interest savings. Perhaps SPG can supercharge the old buggy but that, nor the 3% accretion to SPG's earnings upon consummation, was of much comfort to SPG shareholders, particularly since its debt/NOI was ratcheting up from 5.2x to 6.1x.

Now layer on COVID-19 and the recession sure to follow, SPG is basically paying $3.2 billion in cash for 24 well-located, over-improved concrete bunkers. Even when the malls reopen, many of the underperforming tenants will emerge permanently impaired and/or bankrupt. Moreover, longer term, consumer behavior may change forever (not 21) in favor of open-air centers and/or e-commerce. During what is hopefully the height of equity market concerns about COVID-19, TCO traded as low as $38.54/share, an incredible 26.6% discount to deal price. However, the price improves day by day and merger arbitrage attorneys suggest that it will be hard for SPG to wiggle out of this deal (apparently, pandemics have been excluded as a Materially Adverse Change). Perhaps this is Alfred's revenge...

Observations from Home – Jeung Hyun In March, we eschewed attending Citi's 25th Annual Global Property CEO Conference in Florida in favor of an abundance of caution and webcasting from California. In all fairness to the hosts, attendance at the Silver Anniversary of this confab is irrelevant as cancellations started to gain momentum in February, starting with management teams and investors domiciled in Asia. At the end, attendance was down about 25% from pre-registration and representatives from 145 companies from around the globe presented, down from 185 companies the year before. We can't exactly tell you what the spread was like or the mood; however, speaking with attendees after the fact, "surreal" was the most commonplace description.

Michael Bilerman, head of Citi's REIT research, conducts three surveys during the Conference, one targeted to CEOs and two to the broad audience (during lunches). Reviewing the responses, the impact of COVID-19 was just beginning to be felt amongst the audience. This year, CEOs expected same-store NOI to be up 2.1% in 2021 compared to 2.6% last year (for 2020). CEOs expected a 32 bps increase in the 10-Year Treasury Note yield in 12 months, in-line with the average of ~ 30 – 50 bps in years past. And CEOs on average felt that the US would enter a recession in 2021, although those in sectors like Retail and Lodging suspected 2020. Lastly, there were increased expectations that M&A would continue in the sector as 55% of the CEOs (compared to 43% last year) thought that there would be fewer companies at next year's conference compared to 27% expecting the same.

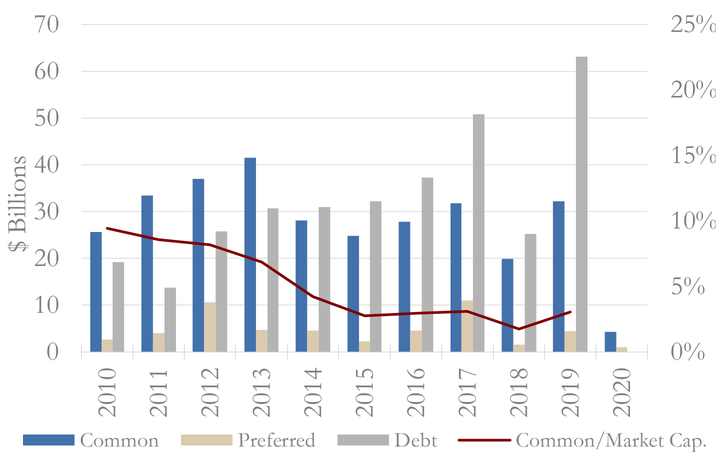
Attendees were only slightly less optimistic about REIT returns than last year; 72% expected positive returns for REITs compared to 74% in 2019. Investors broadened their "best performing sector" expectations to: Industrial (15%), Data Centers (13%), Shelter (13%), Health Care (12%) and Towers (12%); obviously, the deleterious effect of COVID-19 on senior housing was an unintended and unknown consequence as of March. Retail (41%) was deemed to be the worst performing once again, joined by Lodging (33%).

The vast majority of the attendees thought that we were in the later innings of the real estate cycle, both public and private (with private being a little bit longer in the tooth than public), but we have been stuck in the seventh inning for a number of years now. Similar to the CEOs, the majority of investors (58%) thought that we would enter a recession this year or next, compared to 35% last year; consistent with that theme, the two biggest areas of concern for investors were GDP growth (26%) and the election (25%).

Clogging in the pipes. According to NAREIT, $5.3 billion in capital was raised in First Quarter 2020, significantly less than the $21.3 billion raised in the prior quarter and the $19.6 billion raised a year ago in First Quarter 2019; obviously, the volatility of March precluded easy access to capital markets. All of the activity took place in the issuance of secondary equity (there were 14 offerings totaling $4.3 billion during the quarter, on par with $5.8 billion issued in the prior quarter and $7.3 billion issued a year ago) and preferred equity (there were 4 offerings totaling $1.0 billion during the quarter compared to $1.4 billion issued in the prior quarter and $0.8 billion issued a year ago). Needless to say, there were no IPOs.

We do suspect that NAREIT's figures are flawed since, remarkably, they report that there was no issuance of unsecured bonds in First Quarter when we know that several intrepid REITs tested the debt market with a few offerings in March. Alexandria, a blue-chip biotech landlord, was the first to offer unsecured bonds since the credit market seizure, issuing $700 million of 10-year unsecured bonds at a 415 bps spread and 4.9% rate on March 23 versus 120 bps and 2.75% rate for $400 million in September 2019.

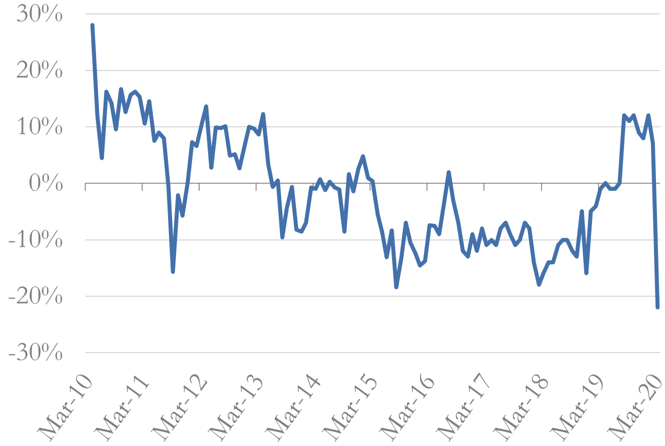
Historical Offering of Securities
2010 – 2020



Sources: S&P Global Market Intelligence, NAREIT 2020.

Passive leads the way. According to AMG Data Services, net flows out of dedicated real estate funds, excluding ETFs, totaled $0.5 billion in First Quarter 2020 compared to $0.9 billion in the prior year and significantly less than the outflows in excess of $2.2 billion in First Quarters 2018 and 2017. In comparison, REIT ETFs saw more significant outflows of $1.7 billion in First Quarter 2020 compared to inflows of $3.0 billion in the prior year; passive ETFs seem to be the vehicles of choice for tactical flows in and out of sector.

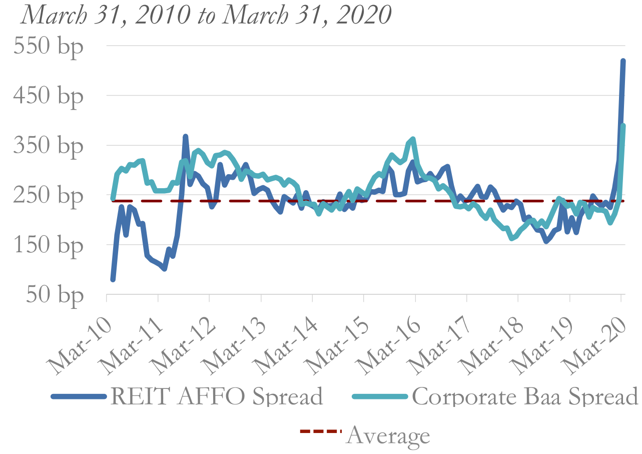
Premium/Discount to Net Asset Value
REIT Universe
March 31, 2010 to March 31, 2020



Sources: Adelante Capital Management and Green Street Advisors.

Risk premium on par with the ten-year average. The risk premium for owning commercial real estate, as represented by the spread between REIT cash flow yields and the riskless rate of return, trades well above the 10-year average of 238 bps. While the cash flow yield for REITs increased due to the sharp depreciation in prices (admittedly, analysts are flying blind on cash flow projections and have probably not made enough adjustments), the yield on the 10-Year Treasury Note has plummeted and, as a consequence, the spread between REIT cash flow yields and the 10-Year Treasury Note yield has spiked 295 bps sequentially from last quarter to 520 bps. Assuming that we can return to the cash flow potential of the high quality commercial real estate owned by REITs, investors are being highly compensated for the risk.
The Corporate Baa spread spiked 195 bps to 389 bps, also well above the 10-year average of 261 bps.

Spread Comparison
REIT Cash Flow and Corporate Baa Yields vs.
10-Year Treasury Note Yield
March 31, 2010 to March 31, 2020



Sources: Adelante Capital Management and Green Street Advisors.

Outlook

On March 5, Justin Fox, a Bloomberg Opinion columnist, wrote an early, informative article on the math behind the epidemiology of COVID-19; according to the article, there are two questions to be asked: how deadly is the virus and how contagious is it? The mortality rate, estimated to be ~1.0%, seems to be closer to the seasonal flu (0.1%) than the Ebola virus (50.0%), smallpox (30.0%) or even SARS (9.6%) and that number may come down as the denominator grows with more testing for infections. Now comes the hard part. How contagious is COVID-19? The infectiousness of a disease is describe by a metric called the reproduction number or "R0," which is comprised of "the probability of infection" x "the contact rate" x "the duration;" per Wikipedia, "the R0 of an infection can be thought of as the expected number of cases directly generated by one case in a population where all individuals are susceptible to infection." According to Justin Fox, the reproduction number for COVID-19 is estimated to be 2.8 compared to 4.8 for smallpox, 3.0 for SARS, 1.9 for Ebola, and 1.3 for the seasonal flu. So COVID-19 is a pretty contagious virus with a mortality rate that is estimated to be 10 times the seasonal flu.

In a perfect world (or South Korea), wide-spread testing early on in the process with subsequent government intervention to isolate the infected population would have minimized the number of infections and even mitigated the need for draconian nation-wide lockdowns, an unfortunate shotgun vs. rifle shot approach to reducing the contact rate. Alas, nearly one month into uneven applications of "shelter-in-place" orders across much of this country, we are now having uncomfortable "loss of life vs. economic fallout" conversations. Emblematic of those conversations is the brouhaha stirred by a March 20 Opinion piece in the New York Times authored by Dr. Katz, president of True Health Initiative and the founding director of Yale-Griffin Prevention Research Center; he advocated isolating, but also providing treatment for, the elderly and the chronically ill and a return to normalcy/herd immunity for the rest of the population. Dr. Katz writes, "I am deeply concerned that the social, economic and public health consequences of this near total meltdown of normal life - schools and businesses closed, gatherings banned - will be long lasting and calamitous, possibly graver than the direct toll of the virus itself." Of course, (i) there have been counters to Dr. Katz, most notably that he is underestimating the severity and duration of the virus, and (ii) medical researchers are still warning about the dangers of reopening the country too early, but it is hard to ignore the contrast between the 22 million Americans who have lost their jobs in the past four weeks and the ~40,000 COVID-19 related fatalities.

April Fool's day has come and gone and the question on everyone's mind seems to be how many of the REITs' tenants have paid their rent. What do we know? We know that not all commercial real estate is the same vis a vis the ability of the underlying tenancy to pay rent through the COVID-19 shutdown. Right now, investors are combing through all the REITs and the various property types to find ones with the highest percentage of tenants that can and will pay rent through the crisis (data center REITs are the easiest example here). For the ones with a high percentage of tenants that can't pay rent (e.g. brick and mortar retail), investors are scouring the balance sheets of the landlords to make sure that they can survive; in general though, REITs are in much better shape than before the last recession and have done a great job reducing their leverage levels over the past 10 years. Additionally, federal programs like the Payroll Protection Program (PPP), can help small businesses with payroll, if the money gets out quickly. Jason Furman, chair of the Council of Economic Advisors under President Obama, suggested on a recent episode of "Political Gabfest," that unemployment insurance might be a more effective way to get money to those in need since the payment infrastructure is already in place.

While many of the REITs are working with their tenants to get through this (e.g. rent deferrals to provide a short-term bridge), it is important to note that REITs are only one part of a chain of contractual and financial obligations; it is unrealistic to expect REITs to shoulder all of the burden of this crisis (having tenants not pay rent but expecting REITs to make all their interest payments and pay real estate taxes to their municipalities). Admittedly, there are one or two property types (e.g. brick and mortar retail – 23.5 square feet of retail square footage per capita for the US now seems ridiculous compared to ~4.0 square feet for European and Asian countries with comparable GDP per capita) that were having trouble even before COVID-19 that may now be permanently impaired; however, broadly speaking, REITs own the highest quality commercial real estate in the best locations, which we expect to survive and perhaps even gain share.

People need a place to live, e-tailers need warehouses for their goods and human beings are social animals who will congregate in restaurants and movie theaters once again; with the Wilshire US REIT Index underperforming the S&P 500 Index by 600 bps for the quarter, it feels like the baby is getting thrown out with the bath water. Isn't the adage "rent before profit?"

Disclosure:

Adelante Capital Management, LLC ("Adelante") is a registered investment adviser with the SEC. This report is for informational and professional purposes only, cannot be distributed without express written consent, and does not constitute advice, an offer to sell, or a solicitation of an offer to buy any securities and may not be relied upon in connection with any offer or sale of securities. The contents of this report should not be relied upon in making investment decisions. The information and statistical data contained herein have been obtained from sources that we believe to be reliable but in no way are warranted by us as to accuracy or completeness. The accompanying performance statistics are based upon historical performance and are not indicative of future performance. The types of investments discussed do not represent all the securities purchased, sold, or recommended for clients. You should not assume that investments in the securities or strategies identified and discussed were or will be profitable. While many of the thoughts expressed in this report are stated in a factual manner, the discussion reflects only Adelante's beliefs about the financial markets in which it invests portfolio assets. The descriptions herein are in summary form, are incomplete and do not include all the information necessary to evaluate an investment in any investment or strategy.