PitchBook

Real Assets Funds in Times of Crisis

What real assets investors should expect amid the pandemic

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Key takeaways

- Real assets have not been insulated from the economic slowdown caused by COVID-19. Travel, retail spending and oil prices have plummeted in the wake of global lockdowns, hurting the credit standing of many real estate tenants and the cash flow profiles of major infrastructure fund holdings.
- Institutional investors should expect to see distributions slow considerably as once-cash-flowing properties see rental income dry up due to mass unemployment and store closures.
- Real assets investors committing capital to funds raised during the crisis (i.e. 2020 vintage) will likely see outperformance in those funds versus vintages 2016-2019.
- Property sectors within real estate have been affected disproportionately, with hotel and retail seeing more damage than apartments and industrial properties so far.
- Infrastructure funds investing in data centers and telecommunications have long-term tailwinds that have strengthened with new work-from-home policies in response to the health crisis. However, energy infrastructure, airports and toll roads have been hit by the opposite side of that trade.

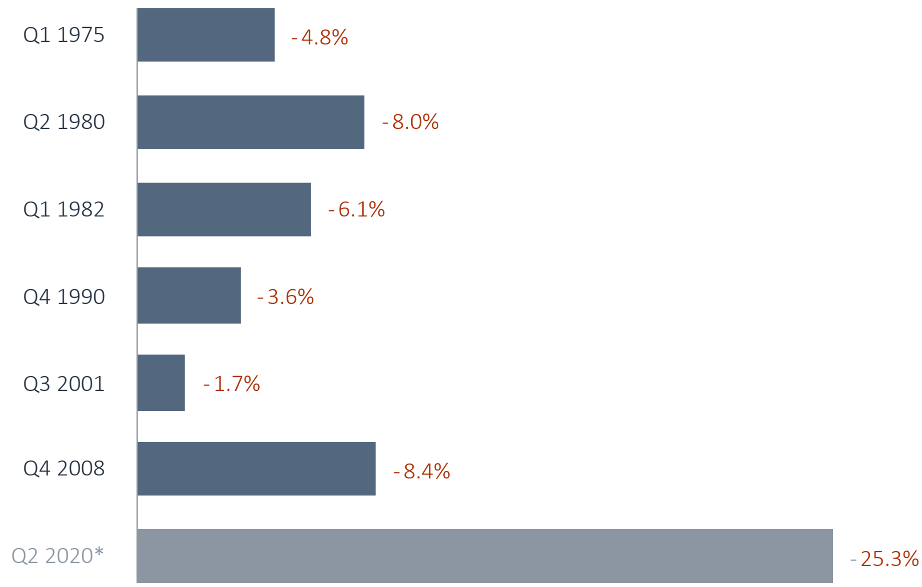
Introduction

The COVID-19 pandemic has forced many countries into economic shutdowns, plunging them into recessions and shaking the foundations of virtually every financial market around the globe. A major culprit in the last recession, real estate has already suffered significant collateral damage from the health crisis caused by COVID-19 as whole cities put up "sorry, we're closed" signs. A severe decline in vehicle traffic and flights has diminished the value of what were once stable infrastructure assets such as toll roads and airports. Additionally, a demand shock and manufacturing production cuts have hit commodities prices, and with oil producers unable to cut output fast enough, oil prices have collapsed to less than $20 per barrel. It remains to be seen how long these headwinds will last, or what their long-term impact will be, but it is helpful for investors to look to the past for a gauge on the future.

Published on April 28, 2020

While arising from different circumstances, the crisis of 2008-2009 offers a useful barometer for investors to form expectations around what a sharp drop in economic activity—albeit in a more truncated timeline—will look like. In many ways, the present crisis has unfurled harder and faster than the financial crisis. In the US, over 26 million unemployment claims have been filed in five weeks,[1] indicating that the country will soon confirm a recession, with consensus estimates suggesting the second quarter will see a 25.3% decline in GDP on an annualized basis.[2] To put that in perspective, during the worst quarter of the GFC, annualized GDP declined by *only* 8.4%. Even if we see a v-shaped recovery following this crisis, its severity will have lasting economic effects.

Worst quarter of GDP growth in recent recessions (annualized)



Source: BEA for 1975-2008 figures, WSJ Economic Forecasting Survey for Q2 2020 estimate | **Geography:** US
*Forecast

As institutional investors assess the impact on their portfolios, we have dissected our data to analyze how real assets funds have performed during past downturns. In this note, we also offer our thoughts on the present crisis versus the last and how outcomes might be different.

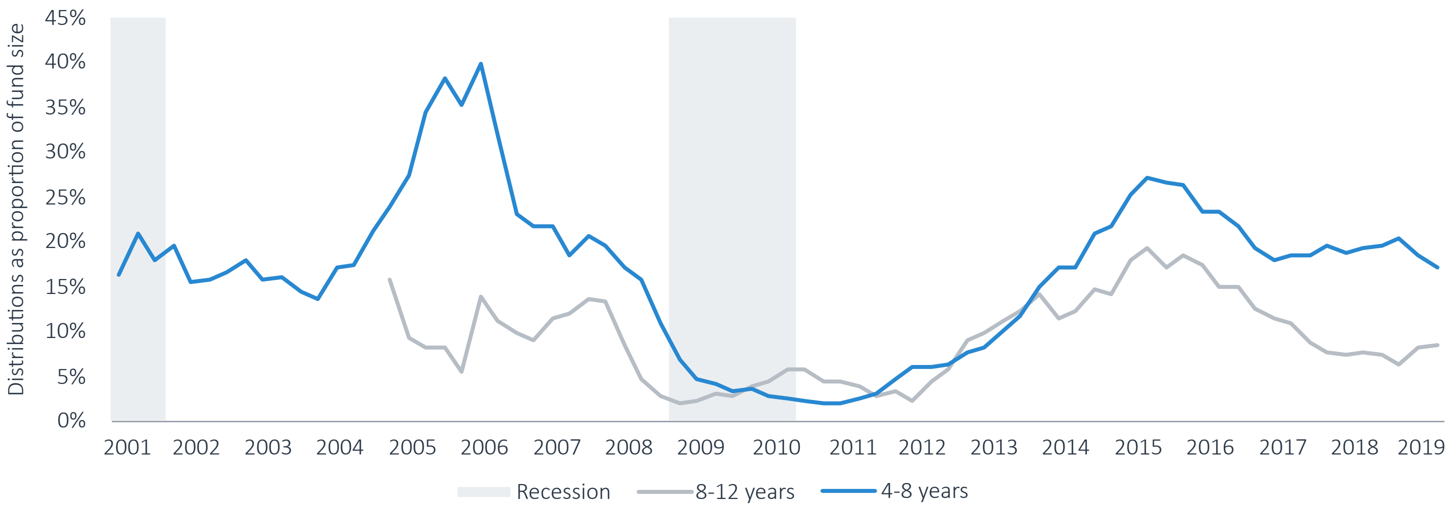
Real estate

One only needs to venture outside (socially distanced, of course) in most major metropolitan cities to see the repercussions of the current health crisis. Office buildings are empty, mall parking lots are concrete wastelands, and residential home buying has dried up as buyers and sellers hunker down in self-imposed or mandatory quarantine. This is in stark contrast to just a couple of months ago when the economy was humming along and real estate valuations in most commercial property sectors were at all-time highs. As such, real estate investors are reexamining their strategy in the coming quarters.

1: "Office of Unemployment Insurance Weekly Claims Report," United States Department of Labor, April 23, 2020
2: "Economic Forecasting Survey," The Wall Street Journal, April 1, 2020

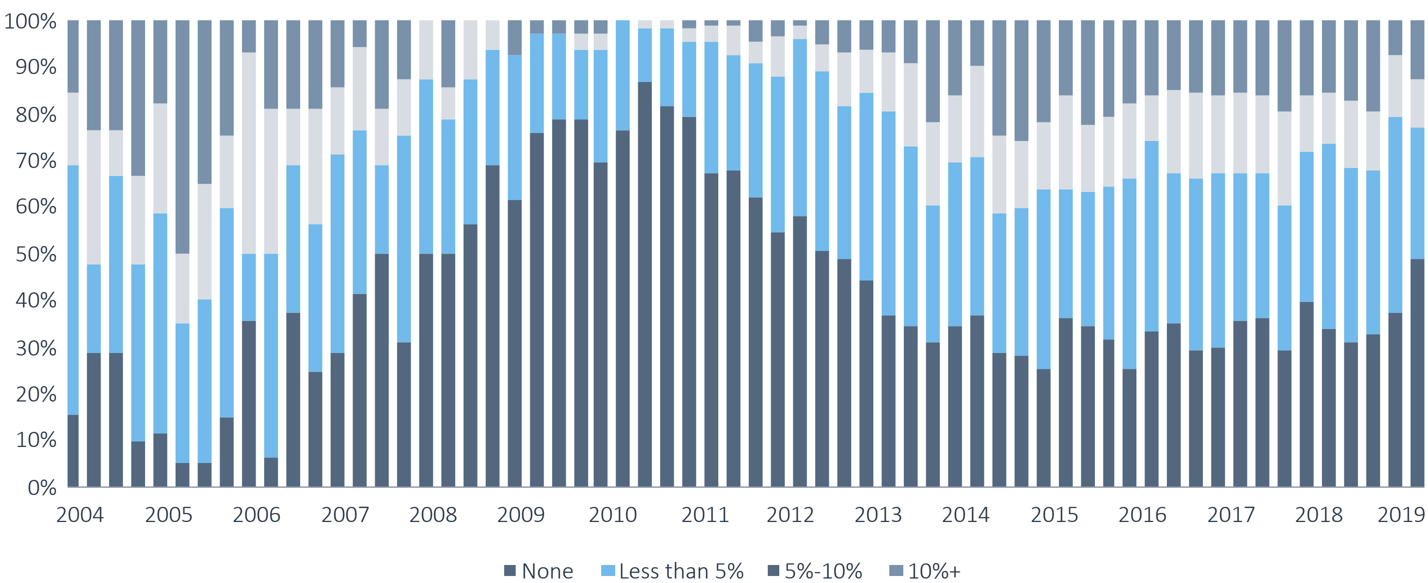
When it comes to cash flow management, institutional investors must know what to expect from the funds in which they are invested. What will distributions reasonably look like? For what capital contributions will the portfolio need to budget? During the GFC, LP investors in closed-end real estate funds saw their distributions dry up substantially. Funds aged between four and eight years, normally in prime harvesting mode, distributed only about 5% of committed capital on average annually between 2007 and 2010. Gone were the boom times when middle-aged funds were distributing 20%+ of commitments per year, as they were from 2003 to 2006. In that period, more than 80% of middle-aged funds on average were making distributions in any given quarter. During the crisis, that figure fell to only 30% or fewer.

Average rolling one-year distributions for select real estate fund age cohorts



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

Distributions as proportion of fund size (#) for funds 4-8 years old by quarter



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

We expect a similar pattern to occur in the coming quarters as GPs hold on to properties, not wanting to sell while valuations crater. The US market has already seen cracks forming; transaction volumes across property types fell by double-digit percentages in March as the crisis took hold.[3] With a lack of sales, institutional investors should expect lower and fewer distributions than they typically receive during the average economic upcycle. This will continue the slowdown we have already seen of late.

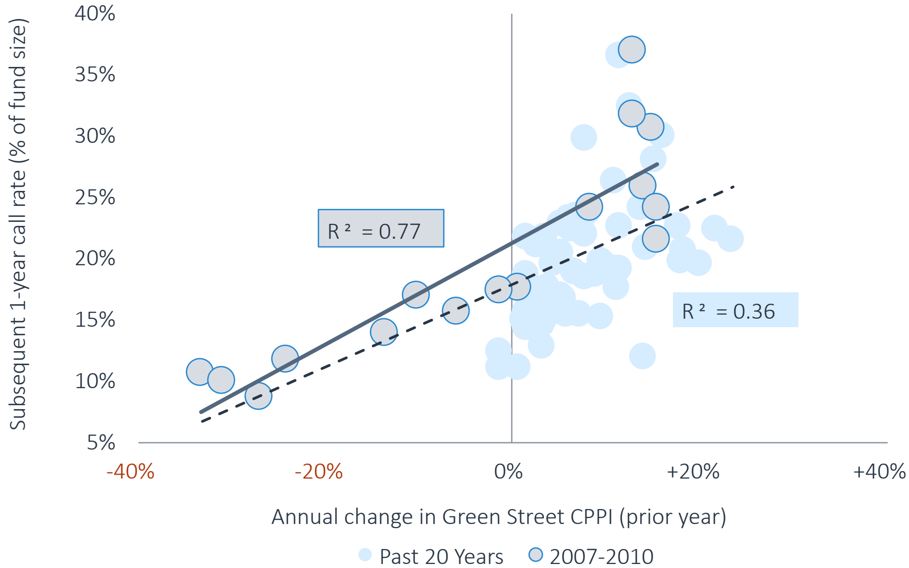
At the micro level, residential tenants have been pushing for rent concessions and relaxation of payment terms in the wake of their livelihoods upending. Millions have filed for unemployment, and the hardest hit of the population are those with occupations that have not been deemed essential and cannot be conducted virtually. They are also the group most likely to rent and live paycheck to paycheck. Without significant help, many will not be able to make their monthly payments. We have already seen this play out as the National Multifamily Housing Council (NMHC) released data showing only 69% of renters made any payment in the first five days of April. Comparing that to 82% at the same time in 2019 shows purse-string tightening in its early stages.[4] The problem is not unique to just residential tenants. Entire retail chains have publicly announced plans to negotiate relief with their landlords or to not pay rent entirely. Landlords will have to be creative over the foreseeable future in order to meet their own obligations. Analysts expect several retailers to declare bankruptcy in the coming weeks. This will come on top of the secular shift toward ecommerce that has killed dozens of companies already. According to Coresight Research, COVID-19 could cause the permanent closing of 15,000 stores, far surpassing the 9,500 in 2019. Thousands more have been shuttered on a temporary basis for an indefinite timeframe.

Missed payments will likely create a domino effect as rental income dries up for landlords who are still on the hook for property taxes, utilities, mortgages and management staffing. If a landlord chooses not to negotiate, it likely won't find replacement tenants for some time. Around the US, the demand for office space has evaporated in the wake of numerous stay-at-home orders. In Q1, US office leasing experienced a 21% decline QoQ (34% YoY), dipping below 50 million square feet for the first time this cycle.[5] New York was especially battered in the quarter, experiencing the weakest leasing activity in more than 25 years. The waning activity will further dampen the distributions LPs have come to expect from their normally steady real estate holdings.

With all the fear permeating the market, this may present unique opportunities for buyers that have raised recent funds and have dry powder waiting for a better entry point. As we highlighted in our recent 2019 Annual Real Assets Report, capital calls tend to rise after significant appreciation in property values and to decline following periods of depressed prices, coinciding with economic activity as well. The correlation was quite strong around the GFC, as the rolling 1-year price appreciation in commercial properties appear to have led future capital call rates in the subsequent year. In other words, just as prices were falling the fastest, GPs on average were putting less capital to work. On the flipside, only after real estate valuations rebounded significantly did capital calls begin to pick up the pace again. While some of this may be due to anchoring biases of potential sellers, the hesitation to invest until only after prices have recovered can keep buyers on the sidelines for too long.

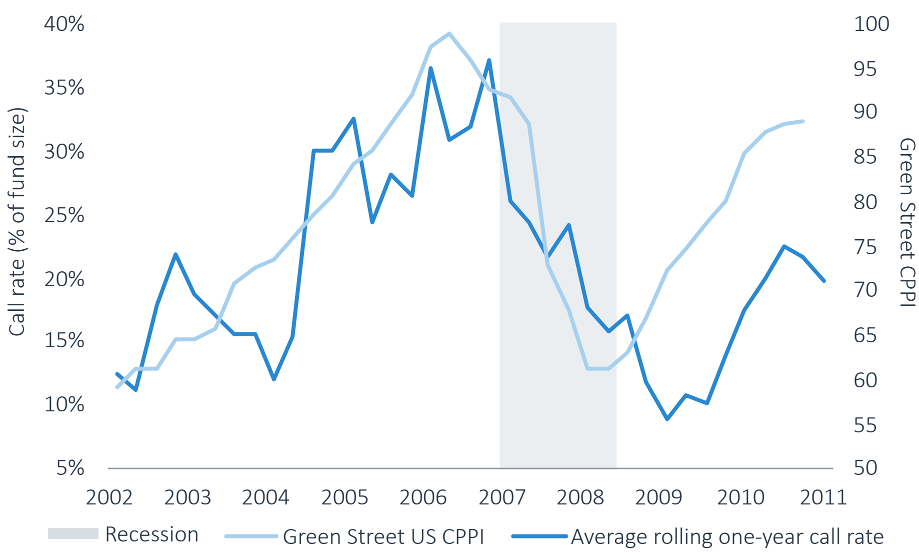
3: US Capital Trends Q1 2020, Real Capital Analytics, April 22, 2020
4: NMHC Rent Payment Tracker," National Multifamily Housing Council, accessed April 22, 2020
5: United States Office Outlook: Q1 2020, JLL, April 6, 2020

One-year change in Green Street CPPI versus the subsequent year's average call down rate



Source: Green Street Advisors and PitchBook | **Geography:** US
*As of June 30, 2019
Note: CPPI = Commercial Property Price Index

Average rolling one-year call rate versus Green Street CPPI

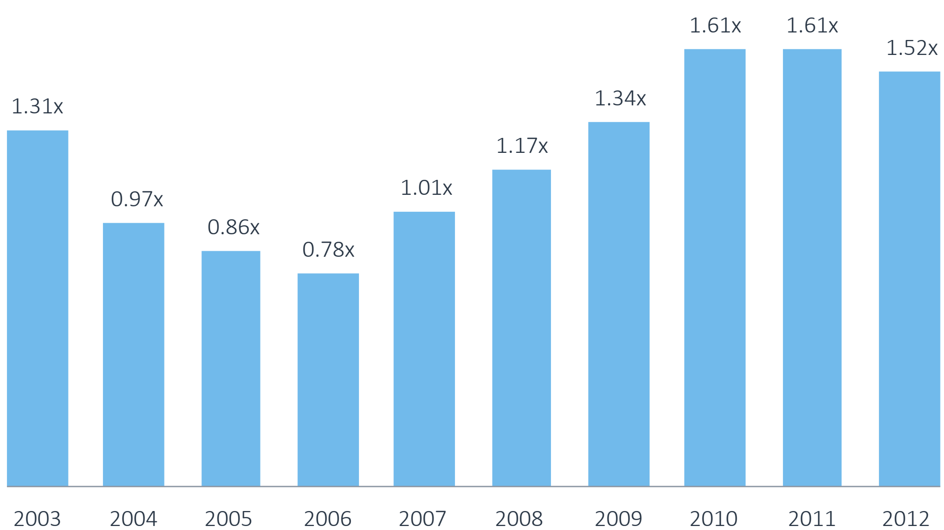


Source: Green Street Advisors and PitchBook | **Geography:** US
*As of June 30, 2019

Anecdotally, GPs have been more aggressive in this crisis than they were following the GFC when moving too slowly proved detrimental to eventual fund performance. We would expect to see capital calls outpace distributions by a larger margin than at the end of last cycle. Giant investment firms targeting real estate, such as Blackstone, Brookfield and Starwood Capital Group, are sitting on billions of committed capital and reportedly are eyeing deals in the most distressed sectors as smaller landlords struggle to make their monthly payments. Blackstone in particular just closed its record $20.5 billion fund and will have an additional $17 billion after final closes to its European and Asian flagship opportunistic funds.

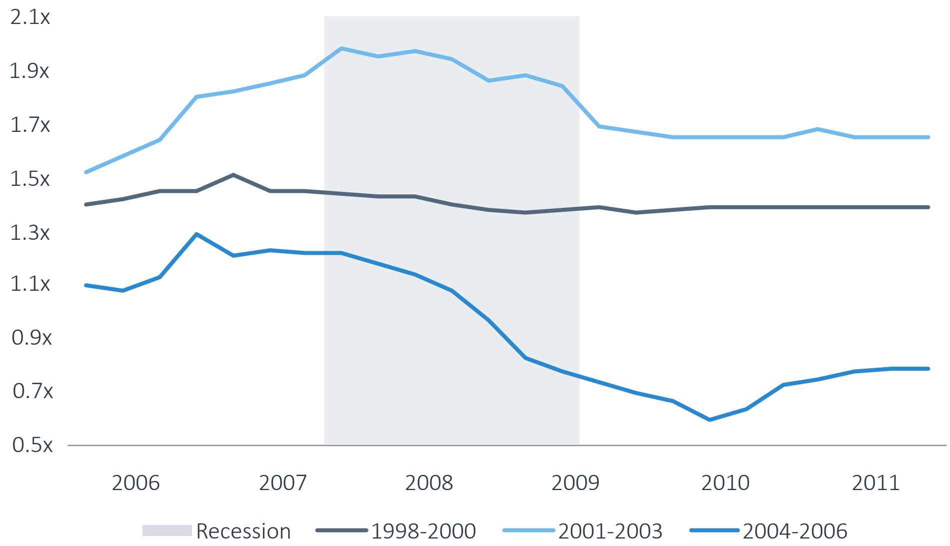
History suggests that funds raised during and in the aftermath of crisis periods tend to outperform, meaning many investors will see this sharp downturn as the best opportunity for returns in years. Real estate funds raised during and in the immediate aftermath of the GFC (vintages 2009-2012), for example, have been better performers compared to pre-crisis era funds (2004-2007). Likewise, those raised in recent vintages that have already deployed significant amounts of dry powder may struggle in the downturn and subsequent recovery. Pooled TVPIs for real estate funds in the vintage cohort of 2004-2006 were crushed as the mortgage crisis and GFC caused steep markdowns on assets. Many of these funds went underwater swiftly, with pooled TVPIs falling by half to 0.6x from the end of 2007 to Q2 2010. Despite lengthening holding times, performance for many funds in these vintages never returned to positive territory. Older vintage cohorts (2001-2003 and 1998-2000) were not struck nearly as hard because much of their value had already been realized by the time the crisis unfolded. Vintages 2009-2012, which were deploying capital during the recession and early recovery, had higher pooled IRRs and TVPIs compared to crisis-era funds seven years after inception. LPs that can continue committing to 2020 and 2021 vintage funds will similarly benefit.

Pooled TVPIs for real estate funds, 7 years since inception, by vintage



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

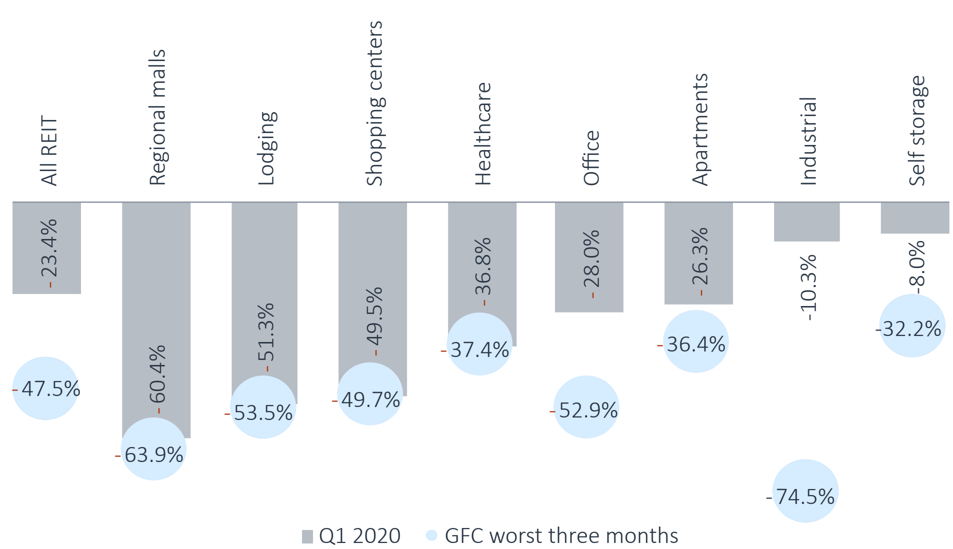
Rolling pooled TVPIs for real estate funds by vintage cohort



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

The public real estate investment trust (REIT) market provides a useful indication of the direction, if not the magnitude, of levered real estate values. In the first quarter of 2020, hotel REITs fell 51%, nearly matching their worst three-month performance during the depths of the financial crisis. In fact, in Q1 2020 retail, healthcare and lodging REIT indices all essentially matched their worst three-month periods of the GFC. For GPs that own properties in these sectors, the near-term hit to values is likely to be steep, though less pronounced given the propensity of private markets to adjust slowly compared to public equities. Meanwhile, owners of industrial properties (e.g., distribution centers and warehouses) have benefited from the accelerated shift to ecommerce by consumers, millions of whom cannot visit traditional retail centers right now. While values may be down in that sector, shifting demand toward logistics will cushion the blow relative to the collapse seen in the last recession.

Public REIT sector total returns (Q1 2020 versus worst three months during GFC)



Source: Nareit | **Geography:** US

The office sector is a mixed bag. On the one hand, many businesses that use traditional office space have been able to continue operations off-site and keep making payments. The long-term nature of those lease agreements is a desirable feature in the event of a downturn. On the other hand, leasing activity has ground to a halt, and there is real risk that the work-from-home lifestyle becomes normalized, dampening the need for growing businesses to lease more space. Regional differences will abound, too. Houston office space, for example, has been hit twice, with one punch coming from COVID-19 and the other from outsize exposure to the energy sector. It remains to be seen how long these shocks will last, but investors should continue to focus on high-quality tenants in low volatility markets to maintain steady cash flows.

Finally, lodging has suffered an unprecedented drop in demand as travel has shut down almost completely. Occupancy rates in early April were less than 25% across the US.[6] Top travel destinations such as Hawaii and New York have been hit even worse. The short-term lease structure of renting hotel rooms leaves the asset type especially vulnerable to demand shocks. Landlords cannot rely on monthly payments, like in the case of office or apartments. As such, average revenue per available room (RevPAR) has shrunk 84% to $15.61 nationally.[7]

Infrastructure

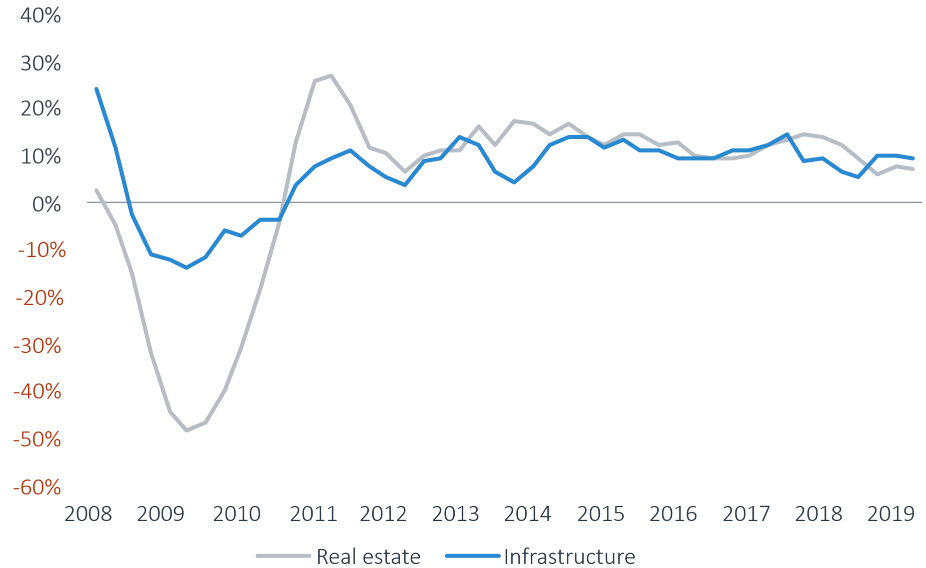
Infrastructure, the other major substrategy under the private real assets umbrella, is likely to weather the present storm better than other private market strategies. These vehicles typically have a longer-term focus and are more defensively positioned than real estate. Additionally, infrastructure funds tend to target long-dated, multibillion-dollar projects such as air- and seaports, train lines and data centers. When the economy rebounds, these assets in most instances will be well positioned for steady cash flows. Many traditional infrastructure projects are localized in nature; there aren't many rival airports popping up in cities to drive competition, for example.

For institutional investors, both distributions and capital calls should be expected to decline during an economic downturn. Infrastructure funds raised in vintages 2008-2010 had only called about 53%-60% of their capital by the end of Year 3, compared to 78% and 63% for 2007 and 2011 vintages respectively. 2016 vintage funds have already called an average of 83% of their capital. These funds may not have enough dry powder remaining to take advantage of depressed valuations in the event of a prolonged downturn. That said, this could be an interesting time for those infrastructure players with dry powder if cash-strapped municipalities decide to privatize assets to keep afloat.

The steadiness of infrastructure funds has been a remarkable feature of the asset class. Compared to real estate, infrastructure vehicles experienced less of a decline in rolling one-year IRRs during the GFC. While both strategies were over-levered, infrastructure was insulated by being less tied to economic cycles and not being a core source of the crisis itself. At the same time, vintages raised immediately following the GFC and global recession went on to have stronger performance than those raised during and prior to the crisis. Vintages 2010-2012 achieved pooled TVPIs of about 1.45x on average by Year 7 since inception, while 2006-2009 vintages only averaged about 1.10x. That has resulted in overall improved IRRs for the more recent vintages in aggregate as well.

6: "STR: US Hotel Results for Week Ending 11 April," STR, April 15, 2020
7: Ibid.

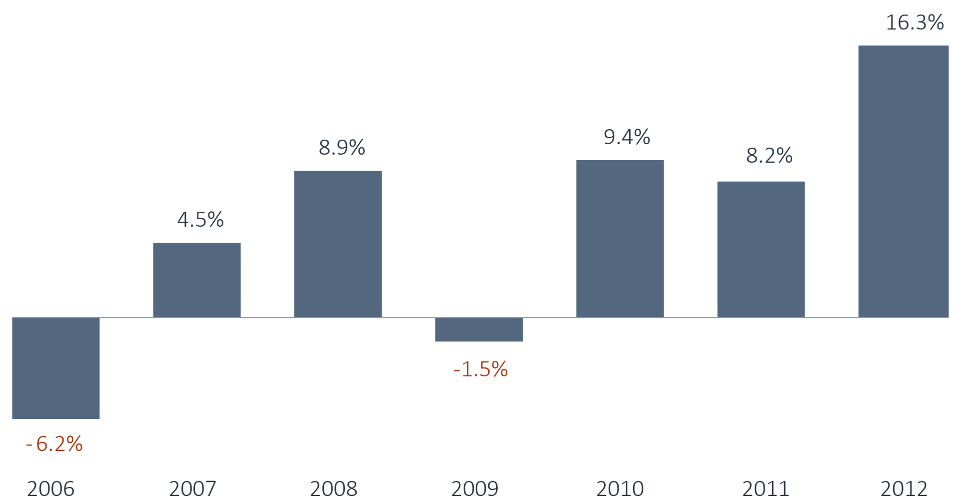
Rolling one-year pooled IRRs for real estate and infrastructure funds



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

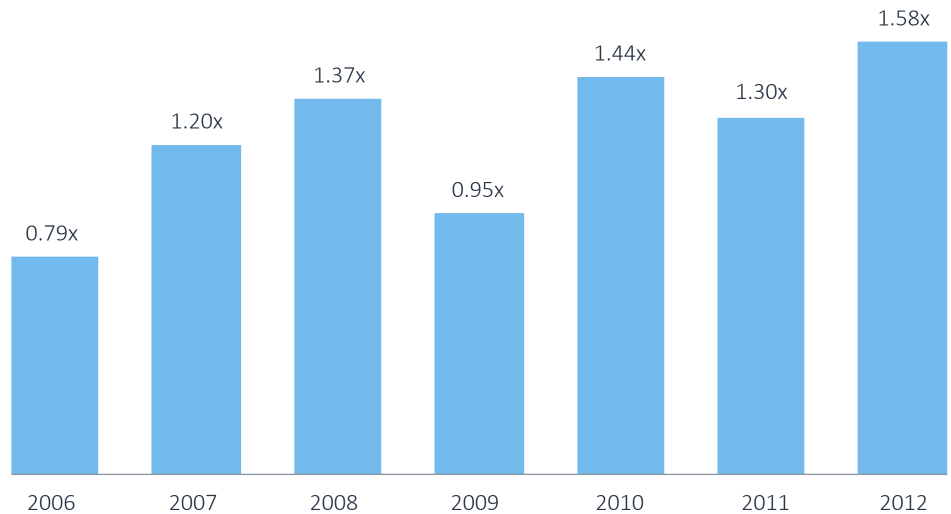
Evidence from the GFC suggests that infrastructure funds of more mature vintages tend to preserve LP capital better in a downturn compared to other strategies. The hedge that the infrastructure strategy represents can be seen by looking at a time series of pooled TVPIs for vintage cohorts raised prior to the crisis. It is not surprising that the 2004-2006 and 2007-2009 vintages experienced a decline, but the magnitude of it is smaller than that seen for other strategies of similar vintages, illustrating infrastructure's role as a fairly uncorrelated hedge. In fact, the older cohort of 2001-2003 continued to grow TVPI on a pooled basis throughout the crisis, though there was a limited number of funds in the sample.

Pooled IRRs for infrastructure funds, 7 years since inception, by vintage



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

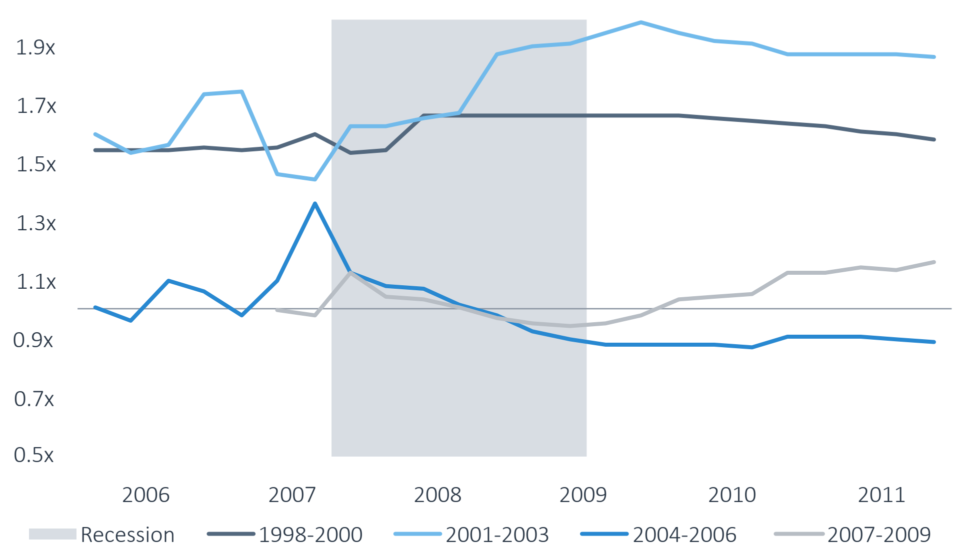
Pooled TVPIs for infrastructure funds, 7 years since inception, by vintage



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

Prior to the crisis, infrastructure in North America was still emerging as a sector. From 2005 to 2008, fundraising in the region grew from $2.6 billion to $18.4 billion. In Europe, established firms such as EQT, Macquarie and Partners Group have all raised multibillion-dollar funds focused on the continent in recent years. Global infrastructure fundraising increased in some part because of the expectation that public-private partnerships (PPP) would make infrastructure spending more appealing to for-profit investors. While there have been successful PPP ventures in various world geographies, in the US a robust infrastructure spending plan has faltered for years. Rumors have surfaced that a new deal may be in the works as a response to the economic troubles stemming from the health crisis, but so far nothing concrete has been unveiled.

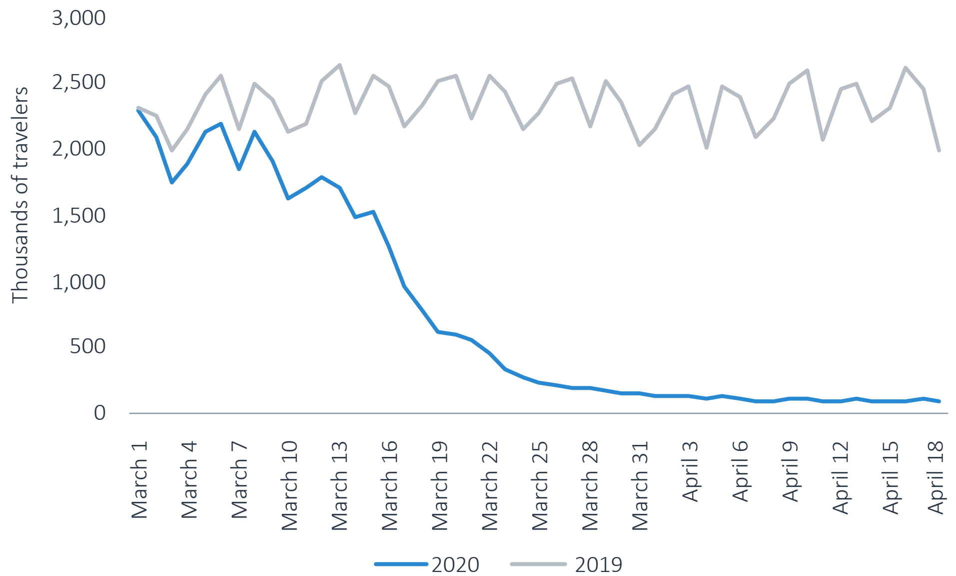
Pooled TVPIs for infrastructure funds by vintage cohort



Source: PitchBook | **Geography:** Global
*As of June 30, 2019

Today's infrastructure funds have ballooned in size, with about 70% of capital raised in 2019 concentrating in mega-funds (vehicles sized $5 billion or more). One such vehicle was the inaugural Blackstone Infrastructure Partners (BIP) fund, which closed on $14 billion. A permanent capital vehicle, it highlights a trend in the space for more long-dated capital lock-ups. With record amounts of dry powder in infrastructure GPs' coffers, deploying it in the current environment may yield significant opportunities. As one example, airports around the world have seen volumes dry up, hurting revenue streams (and likely valuations) in the short term. Airport assets had been trading at sky-high valuations prior to the crisis, according to data from PwC. Between 2016 and 2018, average EV/EBITDA multiples landed at about 22x, up significantly from 15x from 2013 to 2015.[8] Those assets were once considered safe because of generally steady demand for travel and the limited competition in local markets. That thesis is being put to the test now given the collapse in air travel since the beginning of March. A sharp rebound might be coming, but the possibility of a permanent shift in air travel demand is very much in the cards. Traditional business activity is now being conducted virtually. The longer that goes on for, the more likely companies will be comfortable continuing the practice in the future even after lockdowns are released.

Daily TSA airport checkpoint travel numbers (2019 versus 2020)



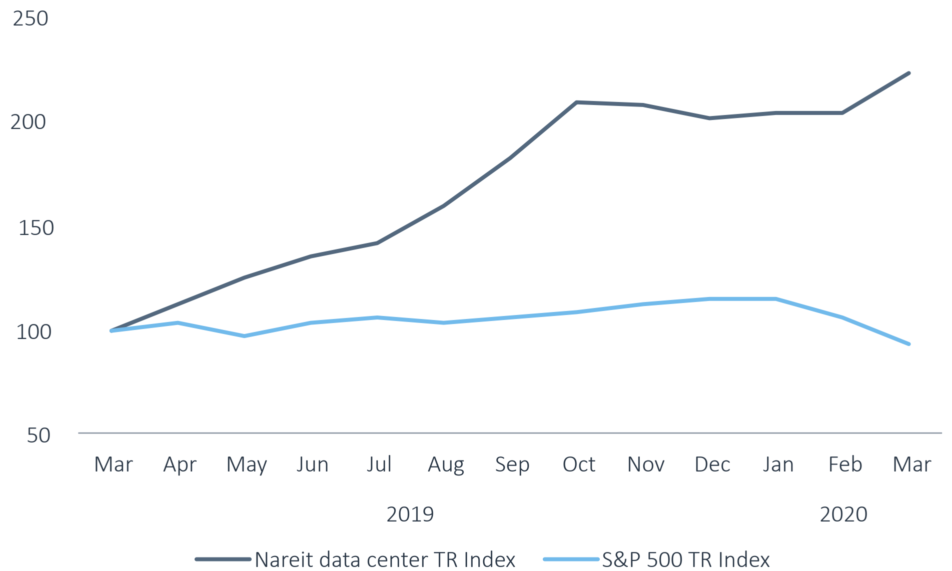
Source: TSA | **Geography:** US
*As of April 18, 2020

Meanwhile, communication-centric investments such as telecommunication towers and data centers have experienced a boon from the flood of online traffic as people work from home and offices go virtual. The need for digital infrastructure will be one constant as virtual communication becomes normalized. This is a unique time in history as millions of people carry their lives out online, holding meetings via video conferences and streaming everything from college courses to entertainment. Much of this happens in tandem within the same household. All of this has caused strains on internet speeds. If the work-from-home option is ubiquitous post-crisis, flexible work/

8: "Airport Transactions Taking Off Around the Globe," PwC, Bernard Chow and Colin Smith, n.d.

social relationships will strengthen the tailwinds for investors providing the proverbial pipes. The public markets have clearly recognized the trend, which has been exemplified by the outperformance of the return index for data center REITs in the US compared to the broader market. The niche sector actually gained about 9% during Q1 2020 while measures to combat the virus have expanded, causing both workers and their children to move to at-home solutions.

Nareit data center REIT TR index versus S&P 500 TR index (rebased to 100 in March 2019)



Source: Nareit and PitchBook | **Geography:** US
*As of March 31, 2020
Note: Nareit = National Association of Real Estate Investment Trusts

Finally, midstream investments—which are bought by oil & gas funds and as a subset for generalist infrastructure funds, such as Blackstone's— will struggle to generate positive cash flows. They will face difficulty as oil prices stay below levels at which it is profitable to drill and as demand from the economy remains subdued while under shelter-in-place mandates. The market slashed the Alerian Energy Infrastructure MLP Index (AMZ) by 58.2% in the first quarter of 2020, much of this coming just as the pandemic scare began to hit all stocks in late February. This trend will be extended if the collapse in oil prices to sub-$20 per barrel persists. However, pipeline contracts tend to be long term, insulating some of the cash flows for now. Differences in contract language will be important when choosing projects to pursue. Pipeline contracts that have locked-in minimum volume and pricing will see more stable cash flows than those that are overly reliant on those variables. Percentage-of-proceeds (POP) contracts will have the highest oil price risk for a midstream investment should the supply-demand imbalance continue. An announced agreement on April 9 between oil-producing countries to manage production may lead to a sustained recovery in the commodity, but only if the parties stick to the planned cuts. Still, without a lifting of the lockdowns, demand will remain at historically low levels. Drillers will have no choice but to turn off the spigots until the economy reopens. For natural gas investors, prices have come down in 2020, but not nearly as much as oil. The slowdown in oil drilling should dampen supply levels and cushion prices for natural gas, a bi-product of oil production.

Even when demand for energy returns, the push toward green sources is unlikely to abate, and improvements in a variety of technologies have only made alternative fuels more competitive with oil & gas. LPs with green initiatives will look to clean energy funds to carry the environmental impact reductions they hope to achieve.

Concluding remarks

The effect of the health crisis on the real economy is only just now being felt. Even with the White House releasing plans for an eventual reopening of the economy, consumer behavior will struggle to normalize in the foreseeable future. Already, real estate and infrastructure investments have been walloped by falling cash flows, and LPs should expect to see very limited returns from their fund commitments in the near term. And those funds that have been heavily exposed to retail and travel will feel the impact of COVID-19 long after the crisis abates. With crisis comes opportunity, though, and the eventual recovery will likely generate significant returns for the institutional investors that are able to strike at the right time and invest in the right assets. Industrial properties and telecommunication infrastructure is proving its resiliency in the crisis as the economy shifts faster into the digital realm. Distressed assets may remain that way only temporarily, opening the door for opportunistic managers that have dry powder at their disposal. GPs are eager to take advantage of the depressed valuations from the crisis, and, with history as a guide, the rewards for doing so could be substantial.