

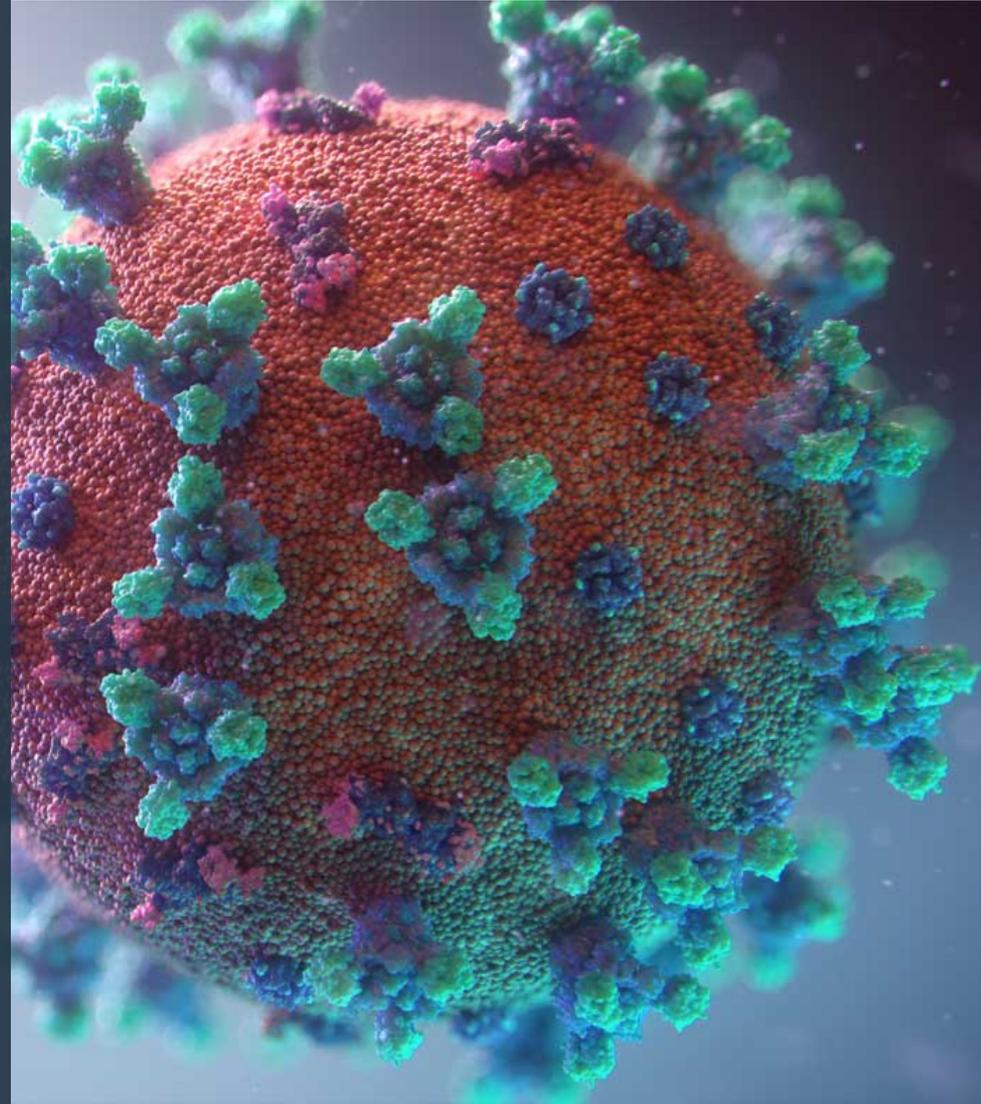
**nuveen**  
REAL ESTATE

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# COVID-19: Global Research Update

1 April 2020

Nuveen Real Estate Global research



# Executive summary



Q1/Q2 likely to record the largest economic contraction in living memory. Property, like most sectors, will not be immune, as indicated by the listed/public markets.

## Near-term impact for real estate

- In the last month, the promised fiscal stimulus already exceeds that of the GFC (global financial crisis of 2008). And we expect more, given that a quarter of the world's population is in 'lockdown.'
- The government restrictions to social mobility unsurprisingly have led to deserted retail centers, leisure and hotels - which is unlikely to change until early summer (at best). Collected quarterly rents have plummeted, with consequences for landlords and lenders alike, and retail administrations have risen.
- Office leasing volumes are likely to be reduced. However, we will watch corporate profitability and share prices.
- U.S. and European imports from China are falling due to the supply chain disruption which could weaken demand for warehouses most closely tied to Chinese imports. Warehouses tied to e-commerce sales should continue to perform well.
- Housing should prove more resilient; but near-term management and revenue concerns abound in student and senior accommodation. In the build-to-rent sector, concerns are linked to development funding, construction costs and delivery dates.

## Longer-term impact for real estate

- Migration to online retail is accelerating, supporting logistics (new customers, extension into groceries, medicine, etc.)
- Consolidation in the retail world is fast-forwarded (marginal retailers going out of business, focus of remaining retailers on the best assets and locations)
- Supply chain diversification out of Asia (originally triggered by the China-U.S. trade conflict) is accelerated and re-shoring of some manufacturing is occurring Europe and the U.S., or proximate to these regions
- Office space transformation: More home working and as a result downsizing of office space requirements, but more investment into quality space (shift to central locations, smarter fit-outs, more communication technology). Co-working operators are likely to face financial difficulties, which may lead to consolidation.
- Increased focus on business responsibility: Amplified public pressure on businesses to ensure they play a positive role in the economy and serve all stakeholders. That should benefit already booming ESG and impact investing strategies. Themes around diversification, resilience and low debt are likely to become even more important as a result.
- Housing has structural tailwinds, but there are potential implications for design, density, location and quality of life metrics.

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# Global responses to COVID-19

The world's largest economies have already announced stimuli exceeding those seen during the GFC

Market	Fiscal response	Monetary response	State guarantees for companies	Income subsidies for affected	Tax deferrals	Social Security Subsidies	Debt Repayment Holiday
China	\$110B & Epidemic Prevention Fund	\$120B bank lending facility, cuts to RRR, near term funding rates	Yes			Yes	
U.S.	\$2T (10% GDP)	Injections into funding and credit facilities, Fed cut interest to zero (from 2.5% in mid 2019)	Yes	Yes		Yes	
Europe	Time to use Euro Stability Mechanism (European Bailout Fund) created post GFC	€120B asset bond purchases, €1.2T additional targeted longer term financing					
Italy	Initial \$25B to be ramped up with billions promised	(Rising credit spreads)	Yes	Yes			Yes
Spain	€200B (17% GDP) includes €100B state aid, alongside economic stimulus	(Rising credit spreads)	Yes	Yes	Yes	Yes	Yes
U.K.	£330B (15% GDP) corporate, consumer guarantees		Yes	Yes	Yes	Yes	Yes
Germany	€500B corporate bailout, additional €156B budgetary injection. Total bailout can build-up to 5% of GDP		Yes	Yes	Yes	Yes	
Austria	Initial €4B to be ramped up with billions promised		Yes	Yes			
France	Initial €45B dwarfed by an additional stimulus to bank-roll economy		Yes	Yes	Yes	Yes	
Netherlands	Initial €20B to be grown in necessary		Yes	Yes			
Sweden	Initial €30B pm to be grown if necessary	\$ injections into funding and credit facilities, interest rates already at zero	Yes	Yes		Yes	
Japan	\$97-140B (3% GDP)	JPY 700B bond purchases, BoJ liquidity promises	Yes	Yes		Yes	
Australia	Additional measures brings package to AUS\$189B (9% GDP). A\$105B injected in financial markets	Interest rate cut to 0.25% from 0.75%	Yes	Yes			

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# Country and sector risk matrix

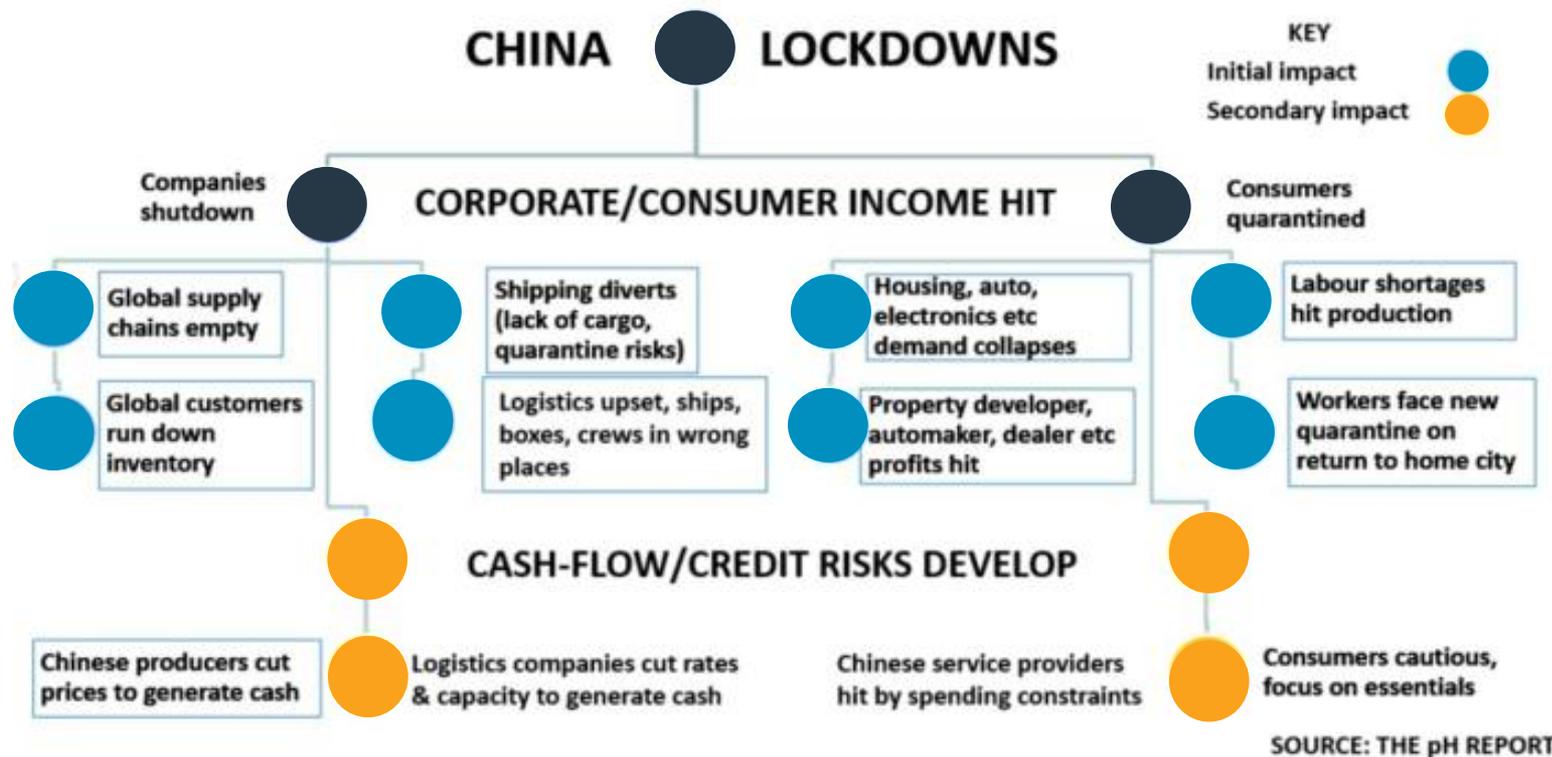
While all sectors are affected, international diversification will help to spread any impact over time (colors depict relative risk)

Market	Overall	Retail	Industrial/ Logistics	Housing	Office	Debt
U.S.	Orange	Red	Green	Green	Orange	Green
Canada	Orange	Orange	Orange	Orange	Orange	Orange
U.K.	Orange	Red	Green	Red	Orange	Green
France	Orange	Red	Green	Orange	Orange	Green
Germany	Orange	Red	Green	Green	Green	Green
Australia	Orange	Orange	Green	Orange	Green	Green
China	Orange	Red	Green	Orange	Green	Orange
Japan	Orange	Orange	Orange	Green	Green	Orange
Singapore	Red	Red	Green	Green	Green	Orange
South Korea	Orange	Orange	Green	Orange	Green	Orange

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# An illustration of how COVID-19 is affecting companies and consumers

**How the coronavirus moves through the real economy and into financial markets:** While the illustration is specifically about China, it is applicable to economies and financial markets around the world. Unlike previous recessions or even depressions, the coronavirus has caused both a supply and demand shock. Consumers are not spending so there is no demand for the products businesses are producing.



Sources: The pH Report  
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# Global short-term view



*Retail*

## All regions:

- Travel restrictions are curtailing tourism flows, bearing down on the already badly hit retail sector.
- Retailers are asking for rental concessions to cope with the downturn, with government measures, including handouts are being implemented to help retailers cope with the unprecedented crisis.
- NOI across the retail sector will fall drastically over the next month as it is likely that rental concessions will be granted by landlords in the short term.
- Fear of infection and government advice to implement social distancing will continue to suppress consumer activities, particularly hitting the food & beverage (F&B) and hospitality sectors.
- Retailers who are able to shift consumer behaviour online and mobilise strong online supply chains will have a much-needed lifeline to their business model and profitability
- With social distancing rules having to be adhered to in distribution warehouses, many retailers have currently halted their online delivery arm

## Asia Pacific:

- Activities are slowly resuming across China, as restrictions on movements are steadily being lifted. The majority of shops and restaurants are now open, and property sales are back to 60% of normal levels in large cities. The second wave of imported infections have led many countries to impose more stringent border controls.

## Europe:

- The outbreak will act as the catalyst to spur e-commerce in countries that haven't widely adopted it (e.g. Italy, Spain) benefiting e-commerce logistics
- Vulture funds will focus on the best placed convenience sector and may pick some experiential centres with strong long term prospects from weak landlords

## United States:

- Grocery-anchored stores are more insulated due to lower exposure to global supply chains and the necessity-oriented nature of the property type. However, malls are seeing a pull back in foot traffic due to social distance and are overexposed to discretionary spending categories such as apparel, dining and entertainment.
- Green Street has revised class-A mall values down another 5% due to COVID-19. In the public markets, mall implied cap rates range between 9%-11%. Malls are trading at a discount to intrinsic value of around 30% for the week ending March 27, 2020.

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# Global short-term view



## All regions:

- Firms are likely to adopt a wait-and-see approach before signing new leases or acquiring additional space in existing buildings.
- Labor market conditions flashing red globally. Most sentiment indicators are showing a sharp pullback in conditions, which will drag on future profitability.
- A suspension of rental growth is inevitable, with potential for rent holidays in some countries, tenants seeking rent relief or renewing at lower rates, and the likely increase in bankruptcies.
- The best scenario for the sector is a rebound in H2 2020, but office job losses are likely if disruption extends into H2 and corporates retrench.
- Co-working can expect immediate disruption due to widespread social distancing, but markets with high concentration of tech companies could prove defensive given increased demand for home-working and home entertainment streaming services.
- Risk-off sentiment could lead to a suspension of development schemes without pre-committed tenants, while value-add assets are unlikely to be financed.

## Asia Pacific:

- The Australian cabinet plans to implement a six-month moratorium for commercial and residential tenancies as a result of the coronavirus outbreak, notably a reduction or waiver of rental payment for a defined period and the ability of tenants to terminate leases on the grounds of financial distress. Elsewhere across Asia Pacific, sale and leasing transaction volumes have slowed to a crawl, as companies continue to reassess overall impact on profitability and long-term business viability. The risks of increasing bankruptcies and looming job losses are heightening, particularly in hospitality related sectors. The next batch of high frequency data for March will provide a more transparent gauge of the downturn, while the April data will provide a match up of the support provided by the massive stimulus package underway across all regional economies.

## Europe:

- Under a longer lasting recession scenario, rental falls should be expected with the scale of correction governed by specific market volatility. Elsewhere, the risk-off approach may lead to a suspension of development schemes without pre-committed tenants, while value-add assets are unlikely to be financed
- Potential for opportunities to secure a discounted entry price for value-add assets.
- Lower interest rate environment suggests defensive capital values for core secure income, but temporary dislocation to prime pricing cannot be ruled out.
- Extended transaction timelines and delayed launches are already evident and cross-border activity will be particularly hard hit, especially affecting cities traditionally targeted by outbound Asian capital.

## United States:

- Green Street estimates M-RevPAF to be 0% in 2020, a decline of ~100 basis points due to the coronavirus.
- We expect west coast offices will continue to outperform their east coast counterparts.
- The public market suggests implied office cap rates are around 6%. This is an 80 basis points increase relative to mid-February, before the outbreak.
- For the week ending March 21<sup>st</sup>, U.S. initial jobless claims spiked to 3.28 million, the highest on record. While the majority of workers laid off thus far have been lower wage workers, the longer the recession continues, the more higher wage, office-using workers will be affected. In the near term, we expect office leasing velocity to slow, if not grind to a halt as businesses delay leasing decisions.
- We expect office tenants with below investment grade ratings to file for bankruptcy at a higher rate than investment grade.

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# Global short-term view



**Industrial**

## All regions:

- The U.S.-China trade war had prompted a re-think of supply chains across manufacturing companies globally. COVID-19 likely to accelerate this.
- Reducing dependency on China and creating supply-chain resiliency is likely to come with a price tag, but logistics real estate is set to benefit from increasing demand as a result.
- Warehouse facilities centered on manufacturing, trade and port/freight throughput are likely to see weaker demand, but modern logistics facilities such as distribution centers, last-mile and cold storage will hold up better, as the shutdown in public life drives demand for online retailing, mainly in daily necessities and grocery products.
- A glimmer of hope: 80% of large industrial firms in China are resuming production and should be back to capacity in the next few months.

## Asia Pacific:

- Manufacturing expectations have slumped in China, Singapore and Japan.
- Even e-commerce companies that are likely to fare better in this climate are unlikely to aggressively take-up new space, with rents likely to come under pressure the longer the pandemic persists.

## Europe:

- The focus is on identifying system-critical warehousing facilities needed to keep food and medical supply chains intact. Some firms are now looking for short-term lettings and logistics service providers who have offered to free up space for these kind of flows if needed.
- Near-shoring beneficiaries are likely to be low-cost locations in Eastern Europe, Portugal, Turkey and possibly North Africa. This long-term upside has to be balanced with severe short-term risks around factory closures, staff shortages and supply chain disruptions, which are set to lead to bankruptcies of the weakest retailers, 3PLs and manufacturers.

## United States:

- West coast warehouse demand driven by supply chains (as opposed to e-commerce) could be negatively impacted given that west coast imports from China were already falling due to the trade war.
- The longer-term implication is a re-routing of some supply chains out of China to other parts of Asia Pacific (if feasible) and to North America which could affect west coast warehouse demand.
- Green Street predicts M-RevPAF for warehouses will be down ~200 basis points in 2020, to 3.1%, given the supply chain disruptions and slowdown in GDP. In the public markets, warehouse implied cap rates are around 4.5% versus 4.3% a month ago.

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# Global short-term view



## Housing

### All regions:

- These difficult times reinforce the importance of adhering to a robust strategy that targets resilient locations which are set to benefit from long-term structural trends. Housing, in all forms, needs to be viewed through a long-term lens.
- Multifamily is viewed as one of the more defensive sectors during economic downturns. But the longer the pandemic persists and the more prolonged the downturn lasts, the hit to the job market and wage growth will start to bear down on rental affordability.

### Asia Pacific:

- Multifamily in Tokyo, one of the most resilient sectors, will not be immune to a prolonged pandemic, most notably as market rents start to decline even though occupancy has been above 90% through cycles.
- The Purpose-Built Student Accommodation (PBSA) sector in Australia is likely to see a bigger near-term hit to occupancy and income, as some foreign students have delayed the start of school terms. Sydney and Melbourne, with stronger fundamentals, will likely fare better than Adelaide and Perth.
- Investment volumes are likely to decline this year, as operators reassess their asset management strategy, alongside new construction. Longer-term, this sector remains robust given the strong education demand from emerging markets such as China and India.

### Europe:

- PBSA: Revenue hits with talk of rent holidays for those affected by COVID-19 (directly and indirectly) plus real risk that applications for the new academic year will be down from an international perspective.
- Much focus on corporate responsibilities/reputation risk. Area to monitor are developments, especially those with a tight deadline of completion, potential step in. Increased guarantees sought.
- Build-to-Rent: Governments have promised support to renters as well as ‘mortgage holidays.’ Economic headwinds might accelerate demand for the rented sector if any house price corrections are mirrored by a more stringent lending environment. Current project discussions continue, with reviews of underwriting, financing and cost of land etc. Externally, we need to monitor developers/existing asset owners/propositions should they come under stress, providing an opportunity for Nuveen to step in.

### United States:

- With U.S. initial jobless claims spiking to unprecedented levels, we expect renters to ask for rent relief. The fiscal stimulus will help soften the blow to the housing sectors as it will help pay for necessity items like housing and food.
- In the near term, it is likely fewer renters will re-locate, which equates to higher tenant retention and implies steady occupancy, although likely at the expense of rental declines
- Of note, manufactured home NOI growth has never turned negative and has one of the lowest downside return volatilities during recessions. This feature of manufactured housing could change in the recession depending on its severity.

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# Global short-term view



*Debt*

## Asia Pacific:

- It's too early for the impacts to be felt in the marketplace, but we believe there will be a flight to quality assets and higher credit borrowers.
- Given the reduction of base interest rates, it is not immediately obvious that all-in rates would increase (i.e. spread may not increase significantly) with the reduction in base rates so deals may be done at current market rates (e.g. 2.5% - 3.0%) or no deal is done.
- The market will likely slowdown the deployment of debt capital as lenders take a wait-and-see approach. This may provide opportunities to win business given our ability to provide certainty of execution and ability to still undertake larger transactions, say c.\$80 million upwards.

## Europe:

- Credit market turbulence threatens to bleed into commercial real estate financing. And as lenders start to digest corrections, in both values and income components, the industry is likely to record a rise in payment defaults, and ICR / LTV covenant breaches.
- The sensible approach is to handle every loan on a case by case basis, working with the sponsor where appropriate in a pragmatic manner as it would be crystallising potential losses on loans in a dysfunctional market is unwise.
- For existing loans, investors should take comfort from original loan structures, covenants, sound underwriting and levers in place to protect the lender position. But there are risks from tenant revenues, and the outlook is very sector specific. Communication with sponsors and scenario-testing are important. Guide from REITs are unsettling.
- For new lending, a flight to safety is unlikely to transfer into tighter debt costs. Credit is increasingly difficult and expensive for retail, leisure, hotel sectors; pricing will widen by sector, quality and location. Economic stress in the banking sector may provide an opportunity for 'new lenders' to increase their exposure. Development lending very tricky.

## United States:

- The pandemic quickly brought 10-year and 30-year U.S. Treasury rates to all-time lows. The Federal Reserve cut the federal funds rate to 0-0.25%, announced a \$700 billion quantitative easing program to stimulate lending, and loaned \$1.5 trillion in short-term repurchase agreements to maintain liquidity.
- From a borrower perspective, the low interest-rate environment will benefit fixed-rate refinancing at the expense of floating-rate origination. However, from a lender perspective, origination volumes will likely be much lower in 2020 than in years past as lenders struggle with the new rate environment.
- Once liquidity returns to the commercial mortgage markets, borrowers will likely be subject to stricter underwriting standards.

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# Asia Pacific-specific view

**Regional:** The 2020 Olympic Games has been postponed to next year

**Australia and New Zealand:** New Zealand banned entry to all non-residents from Friday 20 March

**China & Singapore:** Signs of economic activities start to resume in mainland China

- Risk of a new wave of infections with influx of people from overseas seeking treatment and testing
- SG\$48 billion to be set aside to help Singaporeans and business weather the economic impact from the pandemic and to boost the economy

**Japan:** Looking into offering cash pay-outs to households as part of a stimulus package that could be worth more than 30 trillion yen (U.S.\$276 billion) to deal with the virus fallout

- Visitor arrivals to Japan plunged by 58.3% y/y in February after a 1.1% y/y drop in January

**South Korea:** Seeing a stabilising trend of new cases reported; extensive testing has been proven to be the key of the country's low fatality rate

- Production of key industrial sectors suffers from intermediate goods disruption

Market	Risk
Australia	Orange
China	Orange
Hong Kong	Red
Japan	Orange
New Zealand	Green
Singapore	Red
South Korea	Orange

Investments	Risk
Prime	Green
Secondary	Red
Development	Red
Debt	Green

**Prime:** Resilient and fundamentally strong markets & assets to provide most attractive long-term income & returns

**Secondary:** Pricing & income security under pressure as financially weak tenants are most vulnerable under current setting

**Development:** Uncertainty heightened in terms of construction period and leasing discussions

**Debt:** Flight to safety assets and increased banking stress provide opportunities for lenders

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# European-specific view

## Regional:

- Italy and Germany have the highest share of older people who are more susceptible to the virus
- The health care systems appear weakest in the U.K. and strongest in Germany
- The tourism industry has a high share of GDP in Italy, Spain, Greece and Portugal

Market	Risk
Germany	Orange
U.K.	Orange
France	Orange
Italy	Red
Spain	Orange
Netherlands	Orange
Austria	Orange

Sector	Risk
Office	Orange
Retail	Red
Logistics	Green
Housing	Green

**Office:** Developers have been more disciplined than in previous cycles, but it is a cyclical sector

**Retail:** Woes likely to be exacerbated with pain spreading to countries such as Germany, Spain and Italy, where retail has held up relatively well

**Logistics:** Benefits from structural tailwinds but development activity is strong, and it has been a very cyclical market historically

**Housing:** Demand is based on demographics and is generally a less cyclical sector. Beware of less stable niches such as co-living or student housing

Investments	Risk
Prime	Green
Secondary	Orange
Development	Red
Existing value-add	Red
Future value-add	Green
Debt	Green

- **Prime:** Assets with tenants with good covenants are always the best bet in hard times
- **Secondary:** Assets are first to suffer from weaker tenant demand and falling investment liquidity.
- **Development:** Leasing activity could suffer if occupier tide turns
- **Debt:** With sensible LTVs and covenants is much better placed than equity exposure

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# European-specific view (continued)

Italy was the first European country to experience a surge of cases and went into lock down, so the country can be viewed as the canary in the coal mine for first signs of improvement. On Monday some news from the U.K., Spain and Germany indicated that the peak of new infections may be in sight. However, light at the end of the tunnel and loosening of conditions is most likely weeks away. All countries seem to be following the same, if not quite as dramatic trajectory, as Italy and Spain.

The ECB emergency measures to buy government bonds and commercial paper to the tune of €750 billion, combined with aggressive and reassuring rhetoric, was well received by commentators and financial markets.

All national governments and the E.U. have announced similar and quite significant support measures for businesses. The extensive welfare states in European countries can act as a powerful stabiliser, rescuing business and shoring up household finances. It is expected that normal fiscal rules will be relaxed for the time being. However, fiscally stronger countries such as the Netherlands, Sweden or Germany are in a better position to offer material help to their businesses. However, due to deep economic interlinkages, issues in one country (Italy in particular) could have enormous repercussions for the rest of the Eurozone as well.

## Current headlines:

- Property stocks are taking a pounding as the coronavirus crisis escalates, with share prices plummeting by around 37% on average in the past month. Struggling retail landlord Intu has seen the biggest fall. Its share price has crashed 96% in the past month. A small number of property companies have been somewhat shielded from the crash, including logistics developers, health care REITS and German housing firms.
- Retailers and hospitality companies have withheld large parts, in some cases all rental payments this months leading to controversial public debate about the legality and morality of withholding rent in such a never foreseen situation. Some countries have clear laws and standard lease contracts (Austria, Netherlands) but in most countries, it remains unclear, likely leading to protracted legal disputes stretching beyond the current crisis.
- In a spot survey of German investors, about half of the respondents have indicated that they will postpone decisions on ongoing investments, only a small minority has decided to cancel deals, while a significant minority has decided to continue as before the crisis.
- Co-working and serviced office operators are resorting to discounts and rent-free periods after seeing transactions slump by around 90% in London since the Covid-19 outbreak.

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# U.S.-specific view

U.S. private property values will move lower in the coming months and quarters. It is hard to know at this point but the U.S. public REIT market suggests private property values are about 20% lower than they were in mid-February. Healthcare, technology and housing REITs (except senior housing) continue to trade more favorably in the public market than lodging, malls and offices. However, in the near term, we expect all property types to experience negative impact to rents and values.

## Current headlines:

- The U.S. now has the most amount of COVID-19 cases in the world, surpassing those reported in China. COVID-19 cases are doubling every three days
- On Thursday, March 26<sup>th</sup> initial jobless claims reached 3.28 million the highest on record -- a number that speaks to the gravity of the situation.
- On Friday, March 27<sup>th</sup>, Congress approved a \$2 trillion fiscal stimulus package. The fiscal stimulus includes direct cash payments of up to \$1,200 for each taxpayer, \$2,400 for married couples with an additional \$500 for every child. The package also provides \$25 billion in loans for passenger airlines, \$4 billion for cargo air carriers, \$150 billion for businesses and \$350 billion in loans for small businesses (businesses with fewer than 500 employees). Companies that receive government aid will be limited in their stock buy backs and dividend payments.
- Moody's Analytics estimates that GDP would have fallen at annualized rate of 28% in 2Q 2020 without the fiscal stimulus. With the fiscal stimulus they expect 2Q 2020 GDP to fall at annualized rate of 18%.
- The Fed bought more government-backed debt this week than it did from November 2010 to June 2011 when it bought \$600 billion of securities. The actions taken by these parties cannot be overstated and with any luck these measures will put the economy towards more of a GFC-type-recession scenario than a recession-worse-than-the-GFC scenario.
- Market movements from here on out depend on how quickly the fiscal stimulus gets distributed, how effective it is in staving off a very deep recession, and on the trajectory of COVID-19 in the U.S.

Sector	Risk
Office	High
Retail	Very High
Industrial	High
Housing	High

**Office:** Leasing in the near term is likely to slow as businesses take a wait-and-see approach. A major recession would cause most businesses to re-think their space needs, causing fewer renewals and less demand for space.

**Retail:** Woes likely to be exacerbated and to accelerate retailer bankruptcy filings. Retail values were falling before COVID-19 and will continue to do so in the aftermath of the virus.

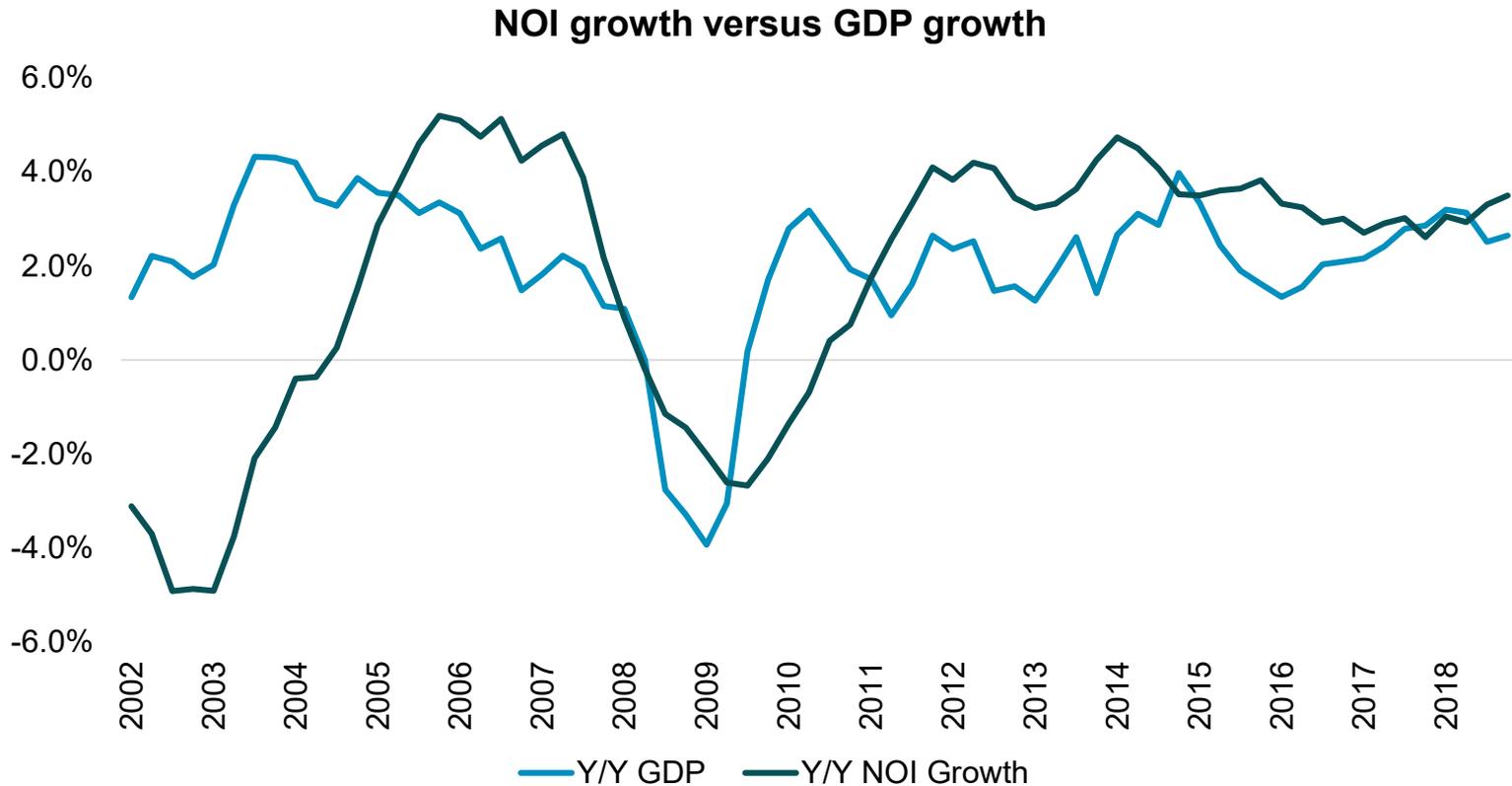
**Industrial:** Not likely to benefit uniformly. E-commerce driven warehouses should benefit while those more reliant on west coast import demand are likely to experience less demand going forward as global supply chains shift out of China.

**Housing:** Demand will depend on the depth of the U.S. recession as apartment demand relies on job growth. If apartment dwellers lose their jobs en masse then expect rent growth and values to decline.

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# NOI growth correlated to GDP growth

**NOI growth moves with economic growth:** NOI growth is correlated to GDP growth – with a lag. Economic growth or lack thereof begins to show up in NOI growth with a about a year lag. Unfortunately, reliable NOI growth data only goes back to 2001 so the analysis is limited to the 2001 and 2007-2009 recessions. NOI growth is most volatile among sectors with the shortest lease terms – apartments, lodging and self-storage.



Source: NCREIF Operational Index, U.S. Bureau of Economic Analysis  
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# Key take-aways



In light of the current market crisis, we want to emphasize that our conviction remains unchanged

- Private real estate is valued on a quarterly basis via appraisals which helps it avoid the daily market volatility seen in publicly traded stocks and bonds in the last few weeks. However, given the unprecedented upheaval across global financial markets and economies, we expect private real estate values will be affected in the coming months as quarterly total returns data is released in the coming months
- We believe that while some real estate sectors will be hit hard such as hospitality and malls in terms of occupancy and valuations, others stand to gain in the long term.
- We expect private real estate valuations will be impacted in the coming months.
- Because of this dispersion across sectors, we believe that the current environments require careful, thoughtful investment management. In the short-term we know there will be challenges, but in the long term we believe that this environment will present opportunities for strategic investment.
- Real estate is not a short term portfolio trade – it is a strategic allocation – and it provides a powerful alternative to traditional public markets in client portfolios.

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