Executive Summary

The outbreak of COVID-19 has quickly translated into a severe shock for the global economy and real estate markets. Near-term indicators of performance have turned sharply downward, and the situation is fast-moving.

While a sharp recession is unfolding across the region, the U.S. real estate market was in good shape in the run-up to COVID-19 and the policy response has been substantial — so there are some reasons for optimism.

In the Americas, attractive investment themes can be grouped as follows:

- **Infill Industrial:** Adoption of online retail is set to become accelerated by the current crisis. Logistics assets with easy access to areas with significant spending power typically command higher rents — even for older properties.

- **Suburban Apartments:** Rising household size among millennials points toward growing requirements for larger apartments located in suburban areas.

- **Rising Senior Housing Demand:** COVID-19 is currently weighing on senior housing demand and profitability, but anticipated growth of the over-75 population points to rising demand — and significant new supply requirements — in the next decade.

- **Supplier Diversification Driving Mexico Industrial Demand:** COVID-19 is accelerating a shift to more-diversified supply chains that was already under way, creating demand for industrial real estate in Mexico.
Sharp Recession Unfolding, Prompting Fiscal and Monetary Response

The Americas real estate markets are in the initial stages of reacting to a global health crisis that has induced a plunge in tenant demand and investment activity. With the spread of COVID-19, most major cities and regions were subjected to movement restrictions and stay-at-home orders, with ongoing uncertainty as to when businesses might resume normal operations. Mexico and other Latin American countries are in earlier stages of containing outbreaks as compared with the United States. Real estate investment has all but ground to a halt since March, and it is uncertain when some visibility on pricing will return.

Proactive government monetary and fiscal policy interventions, which have already exceeded those implemented in the three years after the start of the global financial crisis, may have set a floor underneath the economic disruption. The Federal Reserve has injected trillions of dollars of liquidity to support credit markets, spreading those injections across a broader range of asset classes than it did during the global financial crisis. Some measures specifically target real estate, mostly providing credit support for collateralized bond markets. Additionally, Congress has authorized nearly $3 trillion of fiscal support for both workers and small businesses.

Despite the policy support, we expect some level of disruption will persist as long as social-distancing requirements remain in place, which may be well into 2021. In the interim, the nature of this downturn will bring many unique challenges — in particular, an unprecedented drop in rent collections. However, some aspects of the investment and operating landscape have begun to come into focus. While the impetus of this downturn may be unique, the impact on real estate investment markets will in many ways mirror prior downturns, with drops in tenant demand, and a period of market illiquidity accompanied by opaque pricing signals.

State of Play Going into This Recession

Heading into 2020, U.S. real estate investment markets were robust and on track for a very active year, coming off a record high of $600 billion in transactions in 2019. Investment intentions surveys indicated another year of net capital inflows to real estate. Amid low interest rates and with the Fed once again in accommodative mode, real estate was fairly valued relative to most other asset classes, with cap rate spreads to government bonds slightly wider than historical averages.

Nevertheless, real estate investors’ risk appetites were already beginning to decrease prior to the COVID-19 shutdowns. The U.S. economic expansion was nearing its 11th year, and growth was moderating amid labor shortages in nearly all sectors. Investor preferences had begun to swing back toward core strategies — particularly capital from Asia and Europe — including continued allocations to real estate debt.

Likewise, at the start of year, occupier market fundamentals were supportive of rent growth across most sectors — notably excluding retail. Office market vacancies were near 20-year lows, with moderate supply and positive, though decelerating, rental growth.

In the industrial sector, demand from both tenants and investors remained robust, driving sustained capital value growth (exhibit AM1). Supply had picked up in recent years yet remained well below historical averages — especially given the record-low vacancies.
Industrial values were rising rapidly in the run-up to the crisis…

…while the retail sector was already under pressure

Sources: NCREIF, Real Capital Analytics, PGIM Real Estate. As of May 2020.

Exhibit AM1: Pre-Crisis Capital Value Growth and Investment Demand

Capital Value Growth by Sector (% p.a.)

Transaction Volume Index

Industrial values were rising rapidly in the run-up to the crisis…

…while the retail sector was already under pressure

Sources: NCREIF, Real Capital Analytics, PGIM Real Estate. As of May 2020.

Apartment supply had been running at a higher pace than other property types and higher than its historical average since 2013, but this was consistently matched by sustained growth in demand as household formations increased.

Both senior housing and storage were working off moderate supply excesses heading into 2020, which had constrained rental growth below historical norms. Senior housing expenses had also been rising due to the same labor scarcity affecting the broader economy, yet supply pipelines had already begun to moderate, and pricing was supported by strong investor demand.

The only major soft spot was the retail sector, which was already contending with store closures and a structural shift to e-commerce which had been adding pressure to revenues and expenses in recent years. These pressures will be magnified in the coming years. In stark contrast to the rest of the real estate market, average capital values for retail properties had already been falling since early 2018, led lower by malls.

Much as companies with strong balance sheets are well positioned to weather the current downturn, real estate markets with fundamentals on firmer footing should be the safest ports in the storm. The severity and duration of that storm are still uncertain, with no major sector likely to avert at least near-term value declines.

For Clues to the Future, Turn to the Past

Although every cycle is different, past real estate market corrections provide clues as to how broader economic downturns, despite their variety of triggers, have tended to impact different property types and geographies.

Necessity-driven property types, including most residential and grocery-anchored retail, have traditionally demonstrated more resilience — and have recovered faster — than discretionary formats. Apartments have been traditionally the most defensive in terms of values, while rental declines have been, on average, in line with the industrial market (exhibit AM2).
The office sector historically has been the most volatile over the course of business cycles, with the most significant peak-to-trough declines in both rents and values, as well as the most prolonged recovery periods.

While retail values historically have held up at least as well as the overall market, this will not be the case in the coming downturn. Discretionary retail, which is most concentrated in malls and lifestyle centers, is likely to be disproportionately affected. Social-distancing requirements, together with shifts in customer preferences, will constrain formats where people congregate, including restaurants and cinemas.

**Looking for Exit Signposts**

Another consistent feature of every downturn is a hesitancy to believe when a trough has been reached. Corners turned are generally recognized only in hindsight. Resolute investors will be ready to recognize opportunities to pursue tactical opportunities caused by distress or temporary mispricing, as well as to take advantage of what may be attractive entry points for long-term conviction strategies.

While real estate performance generally lags the onset of economic recoveries, real estate investors who wait until the economic cycle is called tend to be late to the recovery. Following the global financial crisis, transaction volume bottomed out in the first half of 2009 — just in line with when the recession was ultimately declared to have ended.

Thus, green shoots of economic recovery can provide good signals for investors to start sharpening underwriting pencils. The monthly Conference Board Leading Economic Index and its components is an effective signal. Other timely signs of real estate tenant demand returning include increases in industrial production, retail sales and — in a more direct sign of investor confidence — multifamily-permit issuance.
**Investment Opportunities**

While there are some cyclical investment strategies that have quickly devolved into irrelevance (e.g., those premised on tight labor markets), tactical opportunities may emerge as some owners face distress and are forced to sell or recapitalize.

Furthermore, we retain our conviction around durable investment theses grounded in long-term structural trends. One of these is the ongoing structural shift to e-commerce, which has fundamentally altered the nature of the industrial market and which we expect to be reinforced — if not accelerated — by rising consumer adoption during mandated quarantine periods.

We also see compelling, demographic-driven investment trends that could extend beyond the new decade and into the next. Each is driven by one of the two largest generational cohorts in American history, with the baby boomers (born 1946-65) fueling a rapid rise in demand for senior housing and the millennials (born 1980-95) moving out of cities and into suburbs and driving demand for larger, suburban apartments outside urban centers.

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### 1. Infill Industrial

Adoption of online retail is set to become accelerated by the current crisis. Logistics assets with easy access to areas with significant spending power typically command higher rents — even for older properties.

The COVID-19 response has reinforced or even accelerated adoption of e-commerce and omnichannel retailing. Online grocery is one example. A survey by retail intelligence group Acosta indicates that 33% of respondents placed their first-ever online grocery order in March or April 2020.

Ongoing growth in e-commerce and omnichannel retailing, combined with consumer expectations of ever-faster direct delivery, continues to propel tenant demand for industrial space. Retailers and consumer product firms are being challenged to re-orient their logistics and fulfillment infrastructures from a supply chain designed around efficiently replenishing store shelves to also serve a demand chain designed for direct-to-consumer delivery within a day or two.

As a result, consumer-oriented industrial tenants need last-mile properties to satisfy the demand chain. But last mile usually means something quite different from its literal definition. Within a metro area, these are locations where companies seek to minimize direct-to-consumer delivery costs, and as a result, older properties that may lack modern features are still viable options for tenants — and also investors. The key consideration for these locations is the delivery vehicles' ability to access the greatest customer base as efficiently as possible, providing quick and efficient access to both population density and affluence.

To help visualize the locations best suited for last-mile delivery, maps are effective tools. Using Atlanta as an example, exhibit AM3 divides the metro area into postal codes colored different shades of blue. The shading indicates locations that offer access to the highest (dark blue) or lowest (light blue) amount of aggregate household income within a 45-minute drive time.
Exhibit AM3: Impact of Location on Logistics Rents

Aggregate Income Reach by Postal Code, Atlanta – 45 Minute Drive Time

Rent Level by Submarket Quality

The map indicates that areas located north of central Atlanta, with a high density of affluent households and adjacent to highway junctions (see the arc above the city center), offer tenants access to the greatest amount of spending power.

Industrial rents in these submarkets are higher than average, meaning that even older, smaller warehouse properties may provide good investment opportunities. Conversely, locations to the south, where population densities are lower and rent levels are cheaper, provide less-efficient access to key population centers within the metro area. For direct-to-consumer needs, rent savings are offset by higher transit costs.

This map alone does not consider all of the factors important to site selection for a last-mile distribution warehouse. For example, access to labor is one key consideration not incorporated in this analysis, yet as customer demands for ever-shorter delivery times increase, locations and industrial buildings with the best access to local spending power give both tenants and industrial real estate investors a significant competitive edge.

2. Suburban Apartments

Rising household size among millennials points toward growing requirements for larger apartments located in suburban areas.

The United States is on the cusp of a shift in housing demand, including rental apartments, that will disproportionately skew toward suburban locations. There is historical precedent for this suburban shift, with the last large cohort of younger renters, the baby boomers — requiring a suburban building boom in the 1970s and 1980s. Most apartments built then had two or more bedrooms — in contrast to the smaller units built in recent years. We expect a return closer to that unit mix, as today’s younger renters couple up and have children — albeit later in life than in previous generations.
Demand for urban apartments swelled in the aftermath of the global financial crisis, fueled by a preference for urban living by some millennials entering their early- to mid-20s. Rents soared in downtown submarkets, but developers were quick to capitalize on such strong demand. Instead, suburban rental growth has outperformed since 2014, largely due to heavy construction activity in urban areas (exhibit AM4). While suburban development activity is also rising, it remains well below the pace of inventory growth seen in the most urban submarkets. Stronger fundamentals have also supported stronger total returns during the past five years.

Exhibit AM4: Assessing Apartment Performance

Suburban Versus Urban Apartment Rent Growth (% p.a.)

Garden Versus High-Rise Apartment Total Returns (% p.a., 4Q Rolling)

Suburban apartments have outperformed since 2013, reflecting elevated supply growth in urban areas.

Returns on high-rise apartments have lagged in recent years.

Sources: Axiometrics, NCREIF, PGIM Real Estate. As of May 2020.

Given the size of their age cohort, shifts in millennials’ lifestyle preferences as they age will have major implications for the relative performance of different segments of the multifamily space. The aging of the millennial population into their mid-30s will provide a tailwind to suburban demand, as more and more young couples move out of urban areas in search of more space and better school districts as they start to grow their families. The U.S. Census Bureau projects the population in their 30s will grow 7.1% by 2025 versus 3.8% for the rest of the nation. In 2019, the most common age in the United States was 28 — close to the median age at first marriage for men (30) and women (28). By 2025, the most-populous age range will be the mid-30s, many of whom will have children or be close to starting families (exhibit AM5).
The demand shift to the suburbs will also coincide with a shift in unit type preferences. The percentage of studios and one-bedroom units in newly completed buildings has risen significantly, making up over 50% of all units completed in 2018. With the bulk of the millennial population in their mid- to late-20s for much of this recent cycle, that strategy has made sense. Indeed, rental growth for studios and one-bedroom units has outpaced two- or more-bedroom units in most markets even despite higher concessions.

Nonetheless, as tenants move to the suburbs for more space and access to good school systems for their children, studios and one-bedroom units are unlikely to meet their lifestyle needs. Instead, we expect a growing preference for two- and three-bedroom units in the suburbs as the bulk of the millennial generation ages.

### 3. Rising Senior Housing Demand

COVID-19 is currently weighing on senior housing demand and profitability, but anticipated growth of the over-75 population points to rising demand — and significant new supply requirements — in the next decade.

The nature of the COVID-19 pandemic presents particularly acute challenges for the senior housing sector. Senior housing communities and operators face considerable stress in keeping both staff and residents protected, with pressures on both the expense side, as costs of mitigation and staffing increase, and the revenue side, as move-in rates slow markedly. Operators and owners face squeezed revenues that may be compounded by reputational risks — particularly as less care-intensive sectors including assisted and independent living are conflated in media reports with nursing homes.

Nevertheless, looking beyond the immediate crisis, our long-term view of senior housing remains positive. Given the strength of the underlying demographic demand drivers long in place, the sector remains well positioned for long-term growth, and the coming few years could prove an attractive entry point for senior housing investors.
The sector has experienced somewhat softer fundamentals in recent years, as its compelling long-term demand growth profile — and the influx of capital to real estate more generally — attracted investment, thereby fueling new supply and leading occupancies and incomes to ebb. In response to this modest softness, the supply wave had already begun to abate, with starts slowing since the end of 2017 (exhibit AM6). Given the present market conditions, both supply and demand are likely to recede in the near term. However, we expect demand to rebound rapidly once restrictions are lifted, as pent-up demand provides a near-term boost and thereafter as demographic tailwinds gain momentum.

![Exhibit AM6: Senior Population and Senior Housing Supply](exhibit)

There is a strong correlation between the size of the senior population (those aged 75 years or more) and demand for senior housing units, with adoption rates consistently in the range of 6.50–6.75% over the past decade. In other words, for every additional 1,000 seniors in the population, an average of 66 additional senior housing units are occupied.

In the next 10 years, the senior population cohort will grow at more than twice the pace of the past decade — from 23 million to 34 million, an increase of nearly 50%. Assuming the rate at which seniors adopt senior housing remains constant at 6.6%, new demand will average 41,000 units per year in the next 10 years — about twice the recent five-year average of just over 20,000 units (exhibit AM7). Even if adoption rates were to fall significantly, by, say, a full percentage point to 5.6%, net new demand would still average more than 23,000 units per year.
Given these projections, and despite the near-term softness that has led developers to pull back, substantial new construction will be required in the sector within the next few years. Assuming baseline adoption rates, new supply at the historical average pace of 2.4% would fall short of projected demand by 2025. Even in a scenario in which supply grew by 3.1% per year — as recorded during the past five years — vacancies in the sector fall below their prior cycle low by 2024.

In all but the most pessimistic of scenarios — in which demand decreases and supply continues at elevated rates for a prolonged period — vacancies are still lower than current levels. Even if this growth in population falls short of projections or if adoption rates for senior housing ebb as seniors decide to forgo or delay moving into senior housing for financial, technological or societal reasons, the sheer magnitude of the demographic shift portends significantly higher demand for senior housing units.

Senior housing historically has been among the more-resilient sectors in downturns, as it is much more needs based than the major property sectors. Given the health emergency nature of this downturn, performance in the near term will be poor, pressured at least as much by rising expenses as any drop-off in demand, yet given demographic tailwinds, it remains a compelling long-term investment opportunity.

4. Supplier Diversification Driving Mexico Industrial Demand

COVID-19 is accelerating a shift to more-diversified supply chains that was already under way, creating demand for industrial real estate in Mexico.

Momentum is building in the two-decade-long evolution toward a more-integrated North America supply chain, with manufacturing activity growing fastest in Mexico. Disruptions from the COVID-19-induced factory shutdowns in China in early 2020 likely have accelerated this transition. Production delays and unanticipated cost increases have provided manufacturers with added incentives to minimize bottlenecks.
As recently as 2018, China accounted for 22% of all imports into the United States — about double Mexico's share (exhibit AM8). As of the first quarter of 2020, China's share has fallen to 17%, while Mexico's share has risen to 14%. Many factors have contributed to these shifts, which if maintained would make Mexico the largest supplier of goods to the United States. Tariffs have been imposed on Chinese goods at various times over the past three years, and uncertainty about U.S. trade policy with China is a further incentive for businesses to diversify supply chains. NAFTA renegotiations have injected some uncertainty about Mexico-U.S. trade relations, but as of May, the new United States-Mexico-Canada Agreement (USMCA) faces only ratification by Canada to reduce that uncertainty.

The larger factor, however, is that China has become a more expensive place in which to manufacture due to rising labor costs. In 2008, average hourly wages in China were one-third of those in Mexico, and they are now about 30% higher. Manufacturing wages have nearly doubled in China over that period, while they have remained broadly flat in Mexico. Other countries, such as Vietnam and India, have lower labor costs than either China or Mexico and have grown their share of imports into the United States as well. But Mexico's proximity to the United States, existing supply chains and infrastructure, and free-trade agreements give it an advantage over every other emerging market.

Mexico's industrial market has grown to meet this demand, with industrial inventory doubling since 2008. Despite supply additions averaging 7% per year over the past decade, industrial vacancies stood below 5% entering 2020. Industrial rental growth has lagged the U.S. average over that period in U.S.-dollar terms, though when converted to local currency, rents have more than doubled. And, although most industrial leases are in U.S. dollars and many tenants are multinational corporations, cap rates in Mexico were 300 basis points higher than the U.S. average at the end of 2019.

Certain areas of Mexico have developed manufacturing specializations, and they now benefit from scale advantages. For example, the Bajio region, which accounts for 22% of Mexico's manufacturing output, is home to 32% of Mexico's transportation manufacturing production value. Industrial demand in the region has grown with Mexico nearly doubling its share of NAFTA automotive exports from 2008 to 2019.
Tijuana has become a medical-device-manufacturing hub, with most of its production exported to the United States and Canada. As a result of the rapid growth in medical device exports and supply constraints due in part to topography, Tijuana’s industrial rents are now nearly as high as Mexico City’s, and its vacancy rate stands below 2% as of early 2020 (exhibit AM9).

Tijuana also provides a case study in cost advantages in manufacturing that extend beyond labor. Industrial rents for buildings in Tijuana are about 40% lower on average than rents for buildings with similar specifications located immediately across the border in San Diego. There are similar cost gaps in the immediately contiguous cities of Ciudad Juárez and El Paso, Texas, and Reynosa and McAllen, Texas. In addition, in response to U.S. corporate tax cuts in 2017, Mexico implemented new income tax and value-added-tax incentives for companies operating in the northern border region of Mexico, effectively reducing the corporate income tax rate from 30% to 20% and the value-added-tax rate from 16% to 8%.

Despite the long-term outlook for growing industrial demand, the near term will be challenging. The COVID-19-induced sharp drop in global and U.S. consumption will temporarily cause demand for many consumer goods — particularly major purchases like autos — to decline. It will also disproportionately hit industries exposed to travel, including aerospace. When ratified, the USMCA will make the goods of some industries, including automotive manufacturing, slightly more expensive in Mexico in part due to minimum wage requirements.

But our view is that the near-term demand shortfall will be temporary — similar in many ways to the brief interruption in the growth of Mexico’s manufacturing industry during and immediately after the global financial crisis. The secular growth story remains intact, supported by an acceleration in supply chain diversification that was already under way.
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