The New Normal: The Long-Term Impact of COVID on Cities & Consumers
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In this paper, I will explore the impact of COVID-19 on US consumer and real estate trends, given their interlinkages. My views reflect my work as a US Consumer Economist with two decades of experience analyzing consumer trends, and as a member of KKR’s GBR1 as well as Real Estate Americas teams. At KKR, I partner with real estate, private equity, and credit deal teams globally to develop and diligence investment themes and opportunities. Herein, I will share views from that perch on how COVID-19 is likely to affect consumer behavior across sectors going forward.

I. Introduction

Following a decade of relative prosperity during which the United States maintained a positive growth trajectory despite multiple periods of turbulence, including the recent oil crisis, Ebola, contested elections, and the China Trade War, overlapping calamities in 2020 have brought economic activity to a near halt. The combination of longstanding political and social strife has met with an unforeseen health and economic crisis, which together have dealt a debilitating blow. As investors, some of the core questions with which we are wrestling surround future economic growth, the fate of our cities, shifts in the nature of work, and changes in consumer behavior that may persist post-COVID. There is also the reality that the long-standing racial divide, laid bare by recent events, has again proven to be a root cause of some of the health and economic perils we face as a country. We must address racial inequities if we are to move forward.

I first began writing about some of these trends in 2014. At that time, many investors were puzzled about the delayed consumer spending recovery following the Global Financial Crisis. Research into the consumer income statement and balance sheet by demographic cohort showed that income inequality and the evaporation of consumer credit could explain slower aggregate consumption growth. Importantly, that work also showed that the growing Hispanic wallet would present tremendous opportunities for investors. Today, the racial digital divide and the high proportion of minorities employed in the challenged services sector has placed the future growth of the Black and Hispanic wallet in jeopardy.

A data-driven approach to understanding these shifts in both the macroeconomic environment and consumer behavior is even more important now. Market sentiment has been volatile and has oscillated between declaring economic revival on the one hand and the death of our cities on the other. The reality is that we are still in the middle of both a health and an economic crisis, and as such should be careful about extrapolating too much from current trends that may not prove permanent. That said, I am long term bullish on the US and believe in the resilience of our cities but understand the hurdles we must overcome to achieve long-term growth.

As Henry McVey and my colleagues on KKR’s Global Macro Team have described, the Federal Reserve and Congress have acted swiftly to sustain markets and the economy during this crisis. That said we should expect continued volatility and slower economic growth over the medium term, particularly amid higher levels of corporate and sovereign debt, ongoing health and safety concerns, political uncertainty, and social unrest. Improvements to productivity in companies able to lean into technology enhancements will drive some efficiency gains, but those investments will ultimately lead to inconsistent growth across sectors. Further, over the next several years, structural underemployment and an elevated personal savings rate amid ongoing economic uncertainty will also result in slower consumer spending growth. Fiscal stimulus remains a wild card, but thus far, it has served to support middle- and lower-income spending despite significant job losses.

“The only thing that this sort of learned pragmatism gives me is the opportunity to engage my colleagues who have the real power to make a difference in this country.”

Ken Frazier, CEO Merck

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1 KKR’s Global Macro & Asset Allocation, Balance Sheet, Markets Risk and Analytics Team.
Finally, rhetoric around the “great urban exodus” is likely overblown. While large cities are likely to face short-term headwinds, corporate investment and demographic trends suggest that large cities can recover in the medium-to-long term. The key determinant will be the ability to secure proper funding. Affluent households have certainly fled large urban areas during the pandemic, but the data suggests that medium-sized cities have continued to thrive. That said, particularly following a crisis, large cities have historically provided greater opportunities for higher compensation and economic mobility. Amid the structural headwinds we face, we need the type of innovation and productivity growth that can occur in cities from clustering firms, universities, investors and consumers. Against this backdrop of recovering big cities and sustained growth in medium sized cities, the consumer trends that should persist post-COVID will be those that reduce cost, increase convenience, and improve health, well-being and quality of life. Below is a high-level summary of the high conviction themes that fit this framework:

• **Dispersion:** The locus of economic activity should disperse among multiple metropolitan nodes beyond gateway cities. We affirm our pre-COVID conviction around Sunbelt migration as well as the above-average growth of medium-sized cities. Consumer spending should benefit. In real estate, multifamily, industrial and innovation office are secular winners. Gateway cities will face headwinds in the short term, but long-term budget reconciliation serves as a foundation for rebirth. Retail and older office spaces in larger central business districts (CBDs) are short-term losers, we believe.

• **Essentialism:** In the context of in-person gatherings, essentialism should thrive. Specifically, we expect in-person meetings to take place only when safe, necessary or highly valued. Essentialism has implications for a broad range of industries including healthcare (telehealth), personal care, retail, entertainment (online), travel (less business travel, more domestic leisure travel), apparel (casual) and real estate (single family rentals and purchases, industrial, HVAC/filtration upgrades).

• **Bifurcation:** Amid slower consumer spending growth, structural underemployment, and a focus on value and convenience, we believe consumers will likely consolidate their commodity spend among large retailers who have omni-channel service and delivery capabilities and are able to offer competitive pricing. We also see tailwinds supporting smaller manufacturers with differentiated products that are difficult to find elsewhere, particularly as larger brands scale back on SKUs. These could include goods with a specific health, ESG, ethnic or cultural significance. Losers are mid-sized retailers or manufacturers lacking a differentiated value proposition, product or service experience.

2 Our city categorizations refer to population density. Large cities refer to cities like New York, San Francisco, Los Angeles or Chicago with a population density of over 5,000 people per square mile, as determined by the US Census. Medium-sized cities include Atlanta, Dallas, Charlotte or Phoenix, which have population densities between 2,000 to 5,000 people per square mile.
Given the slow growth and volatile environment we envision medium term, investors should be poised to capitalize on these high conviction trends where we expect to see outsized growth.

We present a more fulsome discussion of the economic backdrop as well as key investing themes in the following sections of the paper. Section II provides an update on the consumer, including empirical evidence that the true recovery has not yet begun. Section III presents the case for urban resilience and recovery, with proper funding in place. In Section IV, we revisit our previously discussed theme around medium-sized cities as the true beneficiaries of Millennial migration trends. In Section V, we discuss our view that consumer spending will be bifurcated between large-scale players providing essential/commodity goods and niche players with differentiated products and/or value propositions.

II. Investing During Crisis

In this section, we provide an update on the consumer and include empirical evidence that suggests that the true economic recovery has not yet begun.

We must be cautious when extrapolating current trends as determinants of future behavior, as the pandemic is ongoing. In our view, we have simply settled on a new crisis normal, and this phase will persist until we have a vaccine, effective treatment, or herd immunity. Estimates are that we are unlikely to achieve herd immunity until the end of 2021.

Before the most recent stock market correction, headlines seemed to characterize the pandemic and the subsequent economic strain as past tense, as something that had occurred. Indeed, the focus has been on the strength of markets despite the divergent story fundamental indicators appeared to tell. For one, as Henry McVey has highlighted, Facebook, Amazon, Apple, Microsoft and Google have been responsible for the strong performance we have seen in the S&P 500. These five stocks are up 59% for 2020, while the remaining 495 have returned only one percent year-to-date. Further, while we appear to have bent the curve again, and the number of new cases per week is decelerating, the pandemic is still ongoing. As of August 28, the weekly number of new COVID cases remains above the April 17 peak.

An examination of other economic fundamentals and real-time data suggests that while growth has certainly improved since the second quarter trough, the rate of change has declined. In some cases, growth has actually plateaued. Particularly as it relates to our study of the consumer sector, which represents two thirds of the economy, understanding the extent of activity, level of employment, levels of confidence and growth of spending are important factors to monitor.

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EXHIBIT 1

The Weekly Number of New COVID-19 Cases Remains Elevated

<table>
<thead>
<tr>
<th>New Weekly US COVID-19 Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>220,949</td>
</tr>
<tr>
<td>461,039</td>
</tr>
<tr>
<td>283,914</td>
</tr>
</tbody>
</table>


EXHIBIT 2

Consumer Sentiment Around Current Conditions Has Improved, but Future Expectations Remain Low

<table>
<thead>
<tr>
<th>Consumer Sentiment: Current Conditions versus Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Conditions</td>
</tr>
<tr>
<td>Expectations</td>
</tr>
</tbody>
</table>


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3 A situation in which a sufficient proportion of a population is immune to an infectious disease (through vaccination and/or prior illness) to make its spread from person to person unlikely. Even individuals not vaccinated (such as newborns and those with chronic illnesses) are offered some protection because the disease has little opportunity to spread within the community. Source: CDC.
We track the mobility of the US population using the Dallas Fed’s Mobility and Engagement Index (MEI). The MEI uses geo-location data collected from a large sample of mobile devices to gain insight into how often people leave their homes, how far they travel, and for how long they are outside the home. Following a strong rebound from April to June, the MEI has plateaued. Workers have not fully returned to in-person offices, nor are they going to the theater, restaurants or shopping in-store at pre-COVID levels. This is certainly an abnormal time.

EXHIBIT 3
Mobility Has Plateaued

As restrictions eased in April, we saw a steady improvement in small business employment. However, data from HomeBase suggests that the pace at which small businesses are reopening has also leveled off. According to the Small Business Administration, small businesses account for 47.5% of total employment in the US. Nationally, the proportion of small businesses open and their hourly employees working remains roughly 20% below pre-COVID levels. Those figures paint a stark picture in contrast to the 8.4% unemployment rate recently reported.

EXHIBIT 4
Small Business Reopenings Have Stalled

If we cut the data by ethnicity, African-Americans and Latinos are suffering the brunt of job losses. Indeed, the labor force-participation rate – the employed or employment-seeking proportion of the population – has declined by 5 percentage points for both African-Americans and Latinos versus an average of 3 percentage points for the total population.

EXHIBIT 5
Under-Employment Has Impacted Those Without College or High School Degrees Hardest

If we cut the data by ethnicity, African-Americans and Latinos are suffering the brunt of job losses. Indeed, the labor force-participation rate – the employed or employment-seeking proportion of the population – has declined by 5 percentage points for both African-Americans and Latinos versus an average of 3 percentage points for the total population.
We look to the employment to population ratio to obtain a comprehensive sense of the scope of job loss suffered during the pandemic. As Exhibit 5 shows, individuals without high school or college degrees have experienced the most acute impact. Further, while we have seen some job gains in each cohort, there are roughly 12 million fewer people employed today versus in February 2020. Nine million of the total unemployed individuals do not have a college degree. Further, the total number of people claiming unemployment benefits for the week ending August 29 was nearly 30 million. If we cut the data by ethnicity, African-Americans and Latinos are suffering the brunt of job losses. Indeed, the labor-force-participation rate – the employed or employment-seeking proportion of the population – has declined by 5 percentage points for both African-Americans and Latinos versus an average of 3 percentage points for the total population.

The high proportion of Latino and Black individuals employed in the services sector and the related inability to work from home are chief among the drivers of disproportionate job loss among minorities. Per Exhibit 7, African-Americans and Latinos were much more likely to venture out of their homes during the peak of the pandemic, which made those populations more susceptible to illness. According to the CDC, occupation is among the reasons minorities contracted COVID-19 at higher rates. In addition, minorities are more likely to work in service industries such as healthcare, retail, transportation and leisure which have faced significant disruption during COVID, and in many cases did not afford the opportunity to work from home.⁴

Further, as digitization continues to transform sectors and the future of work, the racial digital divide may leave minorities at a crippling disadvantage going forward. Indeed, according to Deutsche Bank’s research, a large segment of African-Americans and Latinos may lack the technology access and skills that will be necessary to compete for future jobs.⁵ As a result, amidst technological disruption, many of these job losses may be difficult to recoup, and a substantial portion of “temporary” layoffs may prove to be permanent.

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Further, we anticipate a second wave of job losses over the next few quarters as companies seek to accelerate digitization and/or cut costs. All told, structural underemployment is likely to last until 2024. In order to return to pre-COVID levels of employment, we will need sustained levels of above-average economic growth. July 2020 GDP was $21 trillion, the same level first achieved in January 2019. Per Morgan Stanley’s Economic Research, we are currently on track only to return to December 2019 output levels by sometime in 2021.6

Amidst the tremendous employment decline we have seen thus far during the pandemic, fiscal stimulus has worked to bolster income and support spending for lower income Americans. As detailed in an NBER paper on Income, Liquidity, and the Consumption Response to the 2020 Economic Stimulus Payments, lower income households ramped up spending towards food, nondurable items and household goods by one-third within the first ten days of receiving their stimulus checks. On the other hand, per proprietary data from MScience, upper income households increased personal savings rates and contracted spending significantly. While there was a brief recovery in spending in the June-July period, spending has since declined again for the top quartile of households.

Fiscal Stimulus Provided Income Support to Lower Income Americans

EXHIBIT 9

<table>
<thead>
<tr>
<th>US Disposable Personal Income (% From Jan-20 Levels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>135%</td>
</tr>
<tr>
<td>Low Income</td>
</tr>
</tbody>
</table>


In contrast to normal periods, middle-and-lower income consumers who have benefitted from fiscal stimulus have driven consumer spending growth, thereby bolstering sales of durable and nondurable goods. On the other hand, spending on services – which comprise over 60% of total consumer spending, remains muted, leaving aggregate spending growth in negative territory as of August 2020.

Consumer Goods Spending Has Rebounded...

EXHIBIT 11

<table>
<thead>
<tr>
<th>US Consumption Growth, Y/y % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable Goods</td>
</tr>
</tbody>
</table>


Historically, what has determined the path of return and recovery has been the will to act – driven by who is impacted, the ability to contain the crisis, new regulations as well as infrastructure, all of which are tied to capital availability. The case for supporting the recovery of high-density cities like New York, San Francisco and Washington, DC relies upon historical precedent and recent commercial real estate investments.
### History Suggests That US Cities Can Thrive After A Pandemic With Investment in Innovation

<table>
<thead>
<tr>
<th>PANDEMIC</th>
<th>NYC IMPACT</th>
<th>HOW NY ADAPTED</th>
</tr>
</thead>
</table>
| 1793-1803 Yellow Fever Outbreaks | • Outbreak initially blamed on immigrants  
• Wealthy residents fled Lower Manhattan to the countryside  
• The affluent returned to new less densely populated spaces further north in Greenwich Village, Gramercy or Chelsea | • New hospitals developed with isolation wards and orphanages  
• Creation of first water system  
• Increased focused on hygiene including bathing and street cleaning  
• New more open areas of the city developed to entice the return of wealthy residents |
| 1832-1866 Cholera Outbreaks   | • Outbreak initially blamed on poor  
• Disproportionate impact on poor and minorities particularly in early outbreaks  
• Amid Irish famine, immigration continued despite outbreak  
• Affluent exodus to suburbs and rural areas (1830s-1860s)  
• Affluent returned in the late 1860s, several years following the development of new sanitation measures and containment of cholera | • Development of Croton Aqueduct to bring clean upstate water to the city  
• Banishment of pigs to city outskirts and increase focus on overall hygiene  
• New workforce housing allowing more air and light access developed  
• Establishment of Metropolitan Board of Health and funding of a strong Sanitation department which created higher standards of living for future generations |
| 1918-1919 Spanish Flu       | • The influenza struck individuals of all groups and classes throughout the country, so no single immigrant group was blamed  
• Primarily affected healthy, young adults, not older people or children  
• Coincided with a major wave of immigration | • Led to creation of many universal health care systems still in operation today  
• NY tapped into its pre-existing health infrastructure (field clinics, public health campaigns, staggering business hours to relieve subway congestion) leading to one of the best outcomes in the US |
| 2020 COVID-19              | • Disproportionate impact on poor and minorities  
• Affluent have fled the city for the suburbs and rural areas | • TBD |


In the current COVID-19 crisis, similar patterns have emerged. In the middle of the pandemic, without the need to be proximate to a physical office, we found that many city dwellers fled to vacation or parents’ homes. Using proprietary spending data from FISERV, a KKR portfolio company, we analyzed the migration patterns of approximately 100,000 cardholders who resided in Manhattan and San Francisco pre-COVID. According to the data, during COVID 55% of Manhattanites in the sample largely remained in the city. Of those who decamped the city, approximately 82% retreated to nearby locations within the surrounding suburban or metropolitan areas, and 18% packed up and headed West. Aggregated by state, a significant proportion of New Yorkers also retreated to counties in Florida and New Jersey. Interestingly, those who remained within the city tended to be over 60 years old, potentially due to the vulnerability of this population to contracting COVID-19.

"From the Black Plague, to the Spanish flu, there are several examples of global cities not only rebounding from pandemics, but also thriving thereafter."
EXHIBIT 14

Manhattanites Largely Fleed to Long Island, Brooklyn and Queens Counties During COVID

For San Franciscans who decided to leave town, the more popular destinations were South and West to other California counties, Colorado, or Arizona. Interestingly, approximately 12% of native San Franciscans spent time in New York during the period. These individuals were likely college students, remote or furloughed workers who left the city to return to their parents’ homes. According to the data, during COVID-19, only 45% of San Franciscans remained in the city. Similar to what we saw in Manhattan, those who remained within the city tended to be over 60.

When describing the “great urban exodus,” some have improperly compared the experience of the 1960s to what has occurred this year. In reality, the 2020 outmigrants from cities has differed markedly. For one, a pandemic precipitated the flight from large cities this year. Second, cities have also become increasingly affluent versus the long-term decline they faced sixty years ago. Third, the protests catalyzed by the brutal murder of George Floyd, which stemmed from a long history of racial injustice, were unlike any we had seen in recent history. Most protesters have been white, Hispanic and Asian, as well as middle income or affluent. They have also included families, and students, as well as individuals from diverse professional and economic backgrounds.

EXHIBIT 15

San Franciscans Fleed to Diverse Counties in California, Colorado and Arizona

Data as at July 31, 2020. Source: FISERV.
B. Remote Work

Our research suggests that the prevalence of work from home should persist with many working remotely 1-2 days per week, but the physical office and large cities will remain important. Even technology companies, who were more likely to adopt flexible work-from-home policies prior to COVID, are continuing to commit to physical office space in large central business districts like New York City, as well as in medium-sized CBDs. While companies may need less office space in some markets given the increased prevalence of work from home, physical space remains important as the locus of recruiting, culture and collaboration.

EXHIBIT 16

Even With the Coronavirus Heightening Uncertainty...

Distribution of Tech Company Office Leases by Market, 2020 YTD*


"Our research suggests that the prevalence of work from home should persist with many working remotely 1-2 days per week, but the physical office and large cities remain important."


EXHIBIT 17

...Tech Companies Still See the Benefits of Metropolitan Areas As Hubs for Talent

Some Key Tech Company Office Leasing Transactions for Manhattan

<table>
<thead>
<tr>
<th>Millions of Square Feet</th>
<th>Building/Location</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 2,900,000</td>
<td>111 Eighth Avenue</td>
<td>Google</td>
</tr>
<tr>
<td>2014 700,000</td>
<td>770 Broadway</td>
<td>Facebook</td>
</tr>
<tr>
<td>2014 420,000</td>
<td>7 West 34th</td>
<td>Amazon</td>
</tr>
<tr>
<td>2016 260,000</td>
<td>225/233 Park Ave S</td>
<td>Facebook</td>
</tr>
<tr>
<td>2017 315,000</td>
<td>450 W. 33rd Street</td>
<td>Amazon</td>
</tr>
<tr>
<td>2018 350,000</td>
<td>Pier 57</td>
<td>Google</td>
</tr>
<tr>
<td>2015 1,500,000</td>
<td>Hudson Yards</td>
<td>Facebook</td>
</tr>
<tr>
<td>2019 261,000</td>
<td>888 Broadway/333 Johnson Ave</td>
<td>Netflix</td>
</tr>
<tr>
<td>2019 1,300,000</td>
<td>St. John’s Terminal</td>
<td>Google</td>
</tr>
<tr>
<td>2020 660,000</td>
<td>Lord &amp; Taylor</td>
<td>Amazon</td>
</tr>
<tr>
<td>2020 740,000</td>
<td>Farley Building</td>
<td>Facebook</td>
</tr>
<tr>
<td>2020 200,000</td>
<td>Times Square</td>
<td>TikTok</td>
</tr>
<tr>
<td>2020 220,000</td>
<td>11 Penn Plaza</td>
<td>Apple</td>
</tr>
<tr>
<td>2020? 400,000-500,000</td>
<td>4-5 Sites under Review</td>
<td>IBM</td>
</tr>
</tbody>
</table>


Over the past two years, technology firms leased nearly 13 million square feet of New York City office space. Further, according to CBRE, technology firms have continued to secure space in large cities, leasing nearly 1.9 million square feet of new space in New York City since the beginning of 2020, including 1.4 million square feet since early March8. While the figure comprises only roughly 0.5% of the total 400-500 million square foot New York Office market9, these moves suggest that even technology firms have not completely abandoned the physical office. Many of these firms (Amazon, Facebook, Apple, Google, and Netflix) are creating technology hubs to drive innovation and consolidate market share. Non-tech companies are also hiring software engineers and highly skilled tech talent, as there is a heightened need to upgrade systems and to focus on innovation in the post-COVID environment. Indeed, using LinkedIn’s data on total job listings as of August 2020, New York City still holds the top spot for total jobs listings and San Francisco has the highest number of software engineering jobs available.
And Job Listings in NYC, Particularly for Software Engineers, Remain Robust

EXHIBIT 18

<table>
<thead>
<tr>
<th>Size of CBD</th>
<th>Market</th>
<th>Job Listings</th>
<th>Professionals</th>
<th>Job Listings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>New York, NY</td>
<td>294,141</td>
<td>72,496</td>
<td>3,099</td>
</tr>
<tr>
<td>Large</td>
<td>Los Angeles, CA</td>
<td>187,734</td>
<td>45,050</td>
<td>1,948</td>
</tr>
<tr>
<td>Large</td>
<td>San Francisco, CA</td>
<td>155,877</td>
<td>144,872</td>
<td>5,912</td>
</tr>
<tr>
<td>Medium</td>
<td>Dallas, TX</td>
<td>124,643</td>
<td>26,684</td>
<td>1,315</td>
</tr>
<tr>
<td>Medium</td>
<td>Atlanta, GA</td>
<td>89,992</td>
<td>20,928</td>
<td>888</td>
</tr>
<tr>
<td>Medium</td>
<td>Houston, TX</td>
<td>72,954</td>
<td>10,385</td>
<td>293</td>
</tr>
<tr>
<td>Medium</td>
<td>Phoenix, AZ</td>
<td>67,350</td>
<td>13,062</td>
<td>546</td>
</tr>
<tr>
<td>Medium</td>
<td>Charlotte, NC</td>
<td>48,434</td>
<td>5,703</td>
<td>406</td>
</tr>
<tr>
<td>Medium</td>
<td>San Antonio, TX</td>
<td>32,653</td>
<td>4,283</td>
<td>254</td>
</tr>
<tr>
<td>Medium</td>
<td>Sacramento, CA</td>
<td>26,801</td>
<td>5,157</td>
<td>139</td>
</tr>
<tr>
<td>Small</td>
<td>Winston-Salem, NC</td>
<td>22,984</td>
<td>1,574</td>
<td>55</td>
</tr>
<tr>
<td>Small</td>
<td>Rochester, NY</td>
<td>15,748</td>
<td>3,440</td>
<td>91</td>
</tr>
<tr>
<td>Small</td>
<td>Tucson, AZ</td>
<td>13,287</td>
<td>1,995</td>
<td>160</td>
</tr>
</tbody>
</table>

Data as at August 31, 2020. Source: LinkedIn.

Facebook’s investment in Manhattan office space provides support for both a long-term revival of large cities as well as the continued importance of physical space. In May, Mark Zuckerberg announced that he expected half of Facebook’s employees to work remotely over the next decade. In addition, the Company announced that it did not expect employees to return to the physical workplace until the summer of 2021 and would likely pursue a more diffuse and conservative national office footprint spread. However, in August, the company completed a lease of 730,000 square feet of newly built office space in Manhattan. The firm has also expanded its physical office footprint in Los Angeles, and is growing significantly in Seattle per the recent purchase of a 430,000 square foot building in the Spring District. Per an engineering director who co-manages Facebook’s New York operations, the company expects that the physical office will continue to “play a key role in recruitment, product development, collaboration, and growth... So much of what we do is collaborative. [Software is] like writing a book together where all the plots have to connect and make sense and there are thousands of authors. It’s really hard to do if you’re not co-located in the same space and it’s important to even be able to see each other in the same space.”10 Facebook presents a great example of the importance of retaining corporate culture and driving innovation while fostering flexibility.

C. Demographics

New York City has been the epicenter of discussion around both the urban revival of the past quarter century as well as the bevy of recent headlines regarding the great urban exodus. Examining the movement of Millennials as well as income growth suggests that claims of urban decline may be overblown. However, demographic shifts suggest that the city may have work to do to become more economically inclusive and welcoming to families.

While it is true that total population growth has been flat to negative for the broader New York City Metropolitan Statistical Area – which includes Jersey City, Stamford and Philadelphia, the area has seen some growth in the important Millennial population. Looking more closely at New York City itself, Millennials have been migrating to the enclaves of the Bronx, Brooklyn and Staten Island. Millennials, who were born between 1981 and 1996, are now the largest generational cohort in the US and will be responsible for driving a bulk of economic growth in the country going forward.

EXHIBIT 19

While Newer Markets Like Phoenix, Atlanta and San Antonio Have Experienced an Uptick in Population Growth, NYC and San Francisco MSAs Continue to Attract Millennials

<table>
<thead>
<tr>
<th>Select US Markets</th>
<th>Total Population Growth</th>
<th>Total Population Growth %</th>
<th>Millennial Population Growth</th>
<th>Millennial Population Growth %</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>9,939</td>
<td>1%</td>
<td>4,358</td>
<td>1%</td>
</tr>
<tr>
<td>Dallas, TX</td>
<td>683</td>
<td>5%</td>
<td>183</td>
<td>2%</td>
</tr>
<tr>
<td>Houston, TX</td>
<td>566</td>
<td>4%</td>
<td>130</td>
<td>2%</td>
</tr>
<tr>
<td>Los Angeles, CA</td>
<td>48</td>
<td>0%</td>
<td>130</td>
<td>1%</td>
</tr>
<tr>
<td>Phoenix, AZ</td>
<td>459</td>
<td>6%</td>
<td>119</td>
<td>2%</td>
</tr>
<tr>
<td>Atlanta, GA</td>
<td>427</td>
<td>4%</td>
<td>115</td>
<td>2%</td>
</tr>
<tr>
<td>San Francisco, CA</td>
<td>147</td>
<td>1%</td>
<td>86</td>
<td>2%</td>
</tr>
<tr>
<td>San Antonio, TX</td>
<td>222</td>
<td>5%</td>
<td>72</td>
<td>3%</td>
</tr>
<tr>
<td>New York, NY</td>
<td>-65</td>
<td>0%</td>
<td>70</td>
<td>0%</td>
</tr>
<tr>
<td>Charlotte, NC</td>
<td>236</td>
<td>5%</td>
<td>66</td>
<td>3%</td>
</tr>
<tr>
<td>Sacramento, CA</td>
<td>128</td>
<td>3%</td>
<td>51</td>
<td>2%</td>
</tr>
<tr>
<td>Tucson, AZ</td>
<td>43</td>
<td>3%</td>
<td>16</td>
<td>2%</td>
</tr>
<tr>
<td>Rochester, NY</td>
<td>-10</td>
<td>0%</td>
<td>12</td>
<td>1%</td>
</tr>
<tr>
<td>Winston-Salem, NC</td>
<td>23</td>
<td>2%</td>
<td>9</td>
<td>2%</td>
</tr>
</tbody>
</table>


10 “A senior Facebook executive reveals why the company is still betting on NYC real estate with its recent blockbuster office deal,” Business Insider, August 30, 2020.
Pre-COVID, Long-Term Trends Solidified Around Very Large Metro Areas As Centers for Growth and Prosperity

### Data as at March 5, 2020. Source: Brookings analysis of American Community Survey and US Census Bureau data. Note: 53 very large metro areas have populations exceeding 1 million; 56 large metros areas have populations between 500,000 and 1 million; and 83 midsized metro areas have populations between 250,000 and 500,000.

#### EXHIBIT 20

<table>
<thead>
<tr>
<th></th>
<th>Very Large Metro</th>
<th>Large Metro</th>
<th>Midsized Metro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Standard of Living, 2008-2018, %</td>
<td>10.4%</td>
<td>4.5%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Change in Employment Rate, 2008-2018, % Points</td>
<td>0.6</td>
<td>-0.2</td>
<td>-0.9</td>
</tr>
<tr>
<td>Change in Median Earnings, 2008-2018, %</td>
<td>6.5%</td>
<td>4.7%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Change in Productivity, 2008-2018, %</td>
<td>9.4%</td>
<td>6.0%</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

### EXHIBIT 21

Within New York City, Millennials Have Been Migrating to the Bronx, Brooklyn and Staten Island

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kings County, NY</td>
<td>657</td>
<td>665</td>
<td>8</td>
</tr>
<tr>
<td>Queens County, NY</td>
<td>540</td>
<td>519</td>
<td>-20</td>
</tr>
<tr>
<td>New York County, NY</td>
<td>495</td>
<td>492</td>
<td>-3</td>
</tr>
<tr>
<td>Bronx County, NY</td>
<td>311</td>
<td>322</td>
<td>10</td>
</tr>
<tr>
<td>Richmond County, NY</td>
<td>91</td>
<td>94</td>
<td>3</td>
</tr>
<tr>
<td>Total New York City</td>
<td>419</td>
<td>418</td>
<td>0</td>
</tr>
</tbody>
</table>

Data as at December 31, 2019. Source: NY State.

As New York City has attracted and nurtured more wealth creation, housing prices have soared. As a result, pre-COVID, many young families have found remaining in the city with school-age children more difficult. As Derek Thompson has highlighted, since 2011, the number of babies born in New York has declined 9 percent in the 5 boroughs and 15 percent in Manhattan. In high-density cities like San Francisco, Seattle, and Washington, D.C., no group is growing faster than wealthy college-educated whites without children. In contrast, the population of families with children older than 6-years shrank.

While many of the individuals who have fled from the city are likely to return, families with children are more likely to move permanently to suburbs or medium-sized cities in the coming years.

We believe that those likely to return to live in the city in droves are single people and young couples for whom social interaction, art, theater and restaurants remain an important focus for their careers and personal lives. The headwinds we expect in the short term may actually serve to make cities more affordable for both singles and families in the longer term. There will likely be demand for larger amounts of open space in cities, particularly for young families, which may create opportunities for infrastructure investment.

The challenge for New York, which is heavily dependent on its highest-earning one percent, is that the loss of the high-income tax base would cripple its budget and its ability to sustain growth in spending on education, public health, transportation, and public safety. According to New York City’s Independent Budget Office, tax filers earning $1 million or more comprise less than one percent of all tax filers in the city, but account for nearly 40% of total personal income taxes paid.

Further, any tax increases could serve to increase out-migration of high-income earning taxpayers upon which state and city budgets rely. For example, as New York’s tax rates increased between 2010 and 2017, New York’s share of the nation’s million-

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12 Derek Thompson, “The Future of the City is Childless,” July 18, 2019.
aires decreased to 11 percent from 15 percent, while Florida’s share increased by 26 percent to 9 percent. However, many cities are likely to face budget challenges post-COVID. For example, Arizona is considering a controversial measure to increase taxes significantly for individuals earning over $250,000 in order to cover shortfalls in the education budget.

D. Density and COVID

Many were quick to blame the city’s density for the intensity of the COVID-19 crisis in New York. In reality, the concentration of individuals explained only a small part of the story, as hyper-dense cities like Singapore have very effectively managed the spread of the disease. Further, COVID has spread in both high-and-low density areas from Wuhan to Detroit. Indeed, by the early summer, the virus was actually spreading faster in suburban areas than in large cities.

EXHIBIT 22

The Distribution of COVID Cases Has Shifted

Many were quick to blame the city’s density for the intensity of the COVID-19 crisis in New York. In reality, the concentration of individuals explained only a small part of the story, as hyper-dense cities like Singapore have very effectively managed the spread of the disease.

EXHIBIT 23

Large Urban Areas Are Now Doing Better Than Smaller Cities and Suburbs in Managing COVID

In reality, it appears that the lack of adherence to social distancing and mask wearing protocols may be the primary drivers of disease transmission. A WHO funded study published in The Lancet suggests that social distancing and wearing of masks helps prevent the spread of COVID and reduces the risk of infection for the mask wearer by up to 65%. Also, a John Hopkins study of 913 metropolitan counties in the US revealed “that denser counties, as compared to more sprawling ones, tended to have lower death rates—possibly because they enjoyed a higher level of development including better health care systems.” By late summer, the disease was spreading fastest in areas like Florida, Texas and Arizona. On the other hand, high-density areas in Singapore and South Korea have been able to control disease transmission.

EXHIBIT 24

The Change in COVID Cases Was Originally Concentrated...

Many were quick to blame the city’s density for the intensity of the COVID-19 crisis in New York. In reality, the concentration of individuals explained only a small part of the story, as hyper-dense cities like Singapore have very effectively managed the spread of the disease.

15 https://ballotpedia.org/Arizona_Proposition_208_Tax_on_Incomes_Exceeding_250,000_for_Teacher_Salaries_and_Schools_Initiative_(2020).
E. Municipal Budgets

While the importance of urban areas in fostering innovation and productivity has only increased amidst this crisis, cities will require funding to address structural unemployment and invest in infrastructure. Given the economic and consumer spending decline experienced in New York City, there is significant incentive for the city to take extraordinary measures to recover. Cities face substantial budget challenges, but do have options to meet the funding gap. Per Morgan Stanley Research, a federal aid package could certainly cover revenue shortfalls. Given the political environment, if a CARES package for cities does not ultimately pass, states have the ability to borrow directly from the Fed at low costs, though that would likely involve some austerity measures. Austerity options include tax increases, furloughs, capex cuts or pension holidays, which are traditional options for states in a recession. Those options are clearly less attractive now given the need to rebuild and attract individuals back to the city.

While the importance of urban areas in fostering innovation and productivity has only increased amidst this crisis, cities will require funding to address structural unemployment and invest in infrastructure.
IV. Dispersion

As we described in our paper on Rentership last year (see The New Consumer), we have been witnessing the migration of the important Millennial population to the Sunbelt given its affordability, job growth and quality of life. COVID has only accelerated the growth of medium-sized cities, as well as exurbs and suburbs near gateway cities. Amid growth in southern and medium-sized cities nationally, the locus of economic activity should disperse among multiple metropolitan nodes beyond gateway cities. We are long-term bullish on these secular trends, which create cross-asset class investment opportunities across real estate – industrial, multifamily, and office, infrastructure, as well as consumer private equity – both online and brick and mortar.

EXHIBIT 28

Long Term Migration to Southern and Western Areas of the United States

![Graph showing net domestic migration rate](image)


As home prices have increased faster than wages over the past decade, affordability has become an even greater concern. For middle-income households in particular, lower density metropolitan areas have provided more affordable housing options relative to income. According to Zillow, the median price of a home today is approximately $250,000. Using national figures as estimates, an individual earning 80% of the median income or approximately $48,000, with a credit score over 580, could qualify for a down payment as low as $7,500 with a total carrying cost of around $1,566 per month.\(^\text{17}\) National average monthly rent is $1,665. However, per data from the Bureau of Labor Statistics, middle-income expenditures exceed earnings, and these households must use credit or pre-existing savings to fill the income gap. Indeed, 43% of middle-income households have no savings at all. Further, pre-COVID, most individuals who did not yet own a home, had net worth of less than $5,000 held in savings accounts.

**EXHIBIT 29**

Tracking Consumer Spending Suggests That Above-Average Growth Continued in the South During COVID

![Graph showing consumer spending trends by region](image)


Amid growth in southern and medium-sized cities nationally, the locus of economic activity should disperse among multiple metropolitan nodes beyond gateway cities. We are long-term bullish on these secular trends, which create cross-asset class investment opportunities across real estate – industrial, multifamily, and office, infrastructure, as well as consumer private equity – both online and brick and mortar.

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\(^\text{17}\) U.S. Census Bureau, American Community Survey (ACS) and Puerto Rico Community Survey (PRCS), 5-Year Estimates. The PRCS is part of the Census Bureau’s ACS, customized for Puerto Rico. Selected monthly owner costs are the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second mortgages, home equity loans, and other junior mortgages); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, and water and sewer); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (installment loan payments, personal property taxes, site rent, registration fees, and license fees).
EXHIBIT 30

Households With Incomes Averaging $55K and Below Spend More Than They Earn

Average Monthly Disposable Income by Quintile (2019 after-tax income minus expenditures)

- $2,000
- $1,000
$0
$1,000
$2,000
$3,000
$4,000

Lowest quintile
Second quintile
Middle quintile
Fourth quintile
Highest quintile

Note: Households in the lowest quintile have an average income of $12K, second quintile: $31K, middle quintile: $55K, fourth quintile: $90K, highest quintile: $205K. Consumer units whose members experience a spell of unemployment may draw on their savings to maintain their expenditures. Self-employed consumers may experience business losses that result in low or even negative incomes, but are able to maintain their expenditures by borrowing or relying on savings. Students may get by on loans while they are in school, and retirees may rely on drawing down savings and investments. Data as at December 31, 2020. Source: Consumer Expenditure Survey, Bureau of Labor Statistics, Haver Analytics.

EXHIBIT 31

43% of Middle-Income Households Have No Savings

Percentage of Families Who Saved Income, 2016

Data as at December 31, 2016. Source: Survey of Consumer Finances, Haver Analytics.

Further, upper middle-income households with savings, or who already own a home can benefit from low interest rates and a vibrant origination market. According to the St. Louis Fed, MBS holdings have increased by $600 billion to $1.95 trillion since mid-March - an increase that accounts for around 35% of gross issuance in that timeframe. These policy actions have helped bolster a vibrant origination market, aiding new purchases and refinances. As a result, the average 30-year fixed mortgage rate has fallen from roughly 3.75% to 2.85% since January, according to Freddie Mac’s Primary Mortgage Market Survey, which could result in a tangible benefit over a thirty-year period.

EXHIBIT 32

The Skew Is Enormous - Most Renters Have Less Than $5,000 in Their Bank Accounts

2016 Net Worth by Housing Tenure, $ '000s

$0
$80
$160
$240
$320
$400
$480
$560
$640
$720
$800
$880
$960
$1,040
$1,120
$1,200
$1,280
$1,360
$1,440
$1,520
$1,600

Total Households
Renters

$8.0 $55.0 $195.0 $1,460.0
$0.2 $1.2 $4.4 $32.8

0-30th Percentile
31-60th Percentile
61-90th Percentile
91-100th Percentile

Data as at December 31, 2016. Source: Survey of Consumer Finances, Haver Analytics.

Fiscal stimulus during COVID has certainly provided support to households, which has sustained consumer spending despite the tremendous employment loss among middle-and-lower-income households in particular. Indeed, on an annualized basis, fiscal stimulus could provide an incremental $2,000-4,000 to the average middle-income household. For households at the upper end of the middle-income range, that support could be sufficient to enable a new home purchase.

“Indeed, 43% of middle-income households have no savings at all. Further, pre-COVID, most individuals who did not yet own a home, had net worth of less than $5,000 held in savings accounts.”

18 Source: http://www.freddiemac.com/pmms/
Fiscal Stimulus Provided A Boost to Personal Income During COVID

In addition, we have actually seen continued multifamily strength in medium-sized cities while apartment rates have been under pressure in New York and San Francisco. Further, the value of multifamily dwellings in smaller and mid-size cities has actually increased during COVID.


Against this backdrop, single-family home sales in particular have accelerated particularly throughout the summer months of 2020. Preliminary data put forward by Compass CEO, Robert Reffkin\(^{19}\) suggests that sales velocity has picked up across regions, driven by pent up demand from the spring, Millennial families accelerating their purchase decisions, and wealthy families purchasing second homes. That said, in the absence of additional fiscal stimulus and against the backdrop of slower growth, long-term underemployment and tighter lending standards, significant headwinds to homeownership in the medium and long term remain for many middle-income households.

Data as of August 26, 2020. Source: CNN.

Indeed, netting sales activity from March to August, we are still below the seasonally adjusted growth in single-family home sales that would have occurred had growth been constant between January and August. Sales velocity has certainly picked up, but it has not yet been sufficient to make up for the earlier sales contraction.

\(^{19}\) Data as of August 31, 2020. Source: University of Michigan, Haver Analytics.
In addition, we have actually seen continued multifamily strength in medium-sized cities while apartment rates have been under pressure in New York and San Francisco. Per Exhibit 37, proprietary data from UBS Evidence Lab gleaned from scraping a range of housing related websites suggests that the value of multifamily dwellings in mid-size cities has actually held up during COVID.

The reality is that 40-50% of middle-income renters - across large and medium-sized cities from New York to Denver, pay more than 30% of income for housing. Further, middle-income households in high-density areas are more likely to pay over 50% of their income for housing versus households in less dense cities. For many of these households, homeownership is not an option.

In Exhibit 37, proprietary data from UBS Evidence Lab gleaned from scraping a range of housing related websites suggests that the value of multifamily dwellings in mid-size cities has actually held up during COVID.

EXHIBIT 36
Single Family Home Purchases Are On Pace to Recover From Spring Declines

![Graph showing NAHB/ Wells Fargo Housing Market Index (HMI relative to 1Q2020 seasonally adjusted average)]

Note: The NAHB/Wells Fargo Housing Market Index (HMI) is based on a monthly survey of NAHB members designed to take the pulse of the single-family housing market. The survey asks respondents to rate market conditions for the sale of new homes at the present time and in the next six months as well as the traffic of prospective buyers of new homes. Data as at August 31, 2020. Source: NAHB, Haver Analytics.

EXHIBIT 37
Midsize Cities Have Held Up Well During COVID

![Graph showing Value of Multifamily Apartments, March 26, 2020 = 100]

Source: UBS Evidence Lab. Note: The UBS Evidence Lab Housing Report is a suite of reports within the Local Markets Economics module. The UBS Evidence Lab developed a robust engine to load, validate, cleanse, and analyze various sources of housing data globally. City – Large: Territory inside an Urbanized Area and inside a Principal City with population of 250,000 or more; City – Midsize: Territory inside an Urbanized Area and inside a Principal City with population less than 250,000 and greater than or equal to 100,000. Data as at August 8, 2020. Source: UBS.

EXHIBIT 38
25% of Renters Pay More Than 50% of Income for Housing

<table>
<thead>
<tr>
<th>PROPORTION MODERATELY COST-BURDENED HOUSEHOLDS</th>
<th>PROPORTION OF SEVERELY BURDENED HOUSEHOLDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15-30K</td>
<td>$30-45K</td>
</tr>
<tr>
<td>High Density MSAs</td>
<td>18.4</td>
</tr>
<tr>
<td>Medium Density MSAs</td>
<td>28.2</td>
</tr>
<tr>
<td>Moderate Density MSAs</td>
<td>38.6</td>
</tr>
<tr>
<td>United States</td>
<td>36.1</td>
</tr>
</tbody>
</table>

Notes: Cost-burdened (severely cost-burdened) households pay more than 30% (more than 50%) of income for housing. JCHS categorizes households with zero or negative income as having severe burdens, while households paying no cash rent have no cost burdens. Monthly housing costs include the contract rent and utilities for renter households. Only the 100 most populous metros are included here. GBR defines high, medium and moderate density as follows: High defined as CSBA for which the average density of the underlying counties is ≥999 people per square mile, medium defined for CBSAs with average density between 499 and 999, and moderate defined as CSBA for which the average density of the underlying counties is <499. Data as at December 31, 2019. Source: JCHS tabulations of US Census Bureau, American Community Survey 1-Year estimates.
As migration to medium-sized cities accelerates and consumer spending moves online, industrial space is the real growth lever. Prologis estimates that e-commerce requires three times more logistics space than traditional brick and mortar stores\(^{20}\). Amazon has leased more than 5 million square feet in industrial/warehouse space in the Atlanta market in 2020 according to CoStar. Large cities will also benefit. Amazon is Chicago’s biggest growth engine as the company leased 14.2 million square feet of warehouse space there this year, with plans to hire as many as 15,000\(^{21}\). The office sector in medium-sized cities will also benefit as companies seek to diversify their talent nodes and follow the migration.

In sum, we affirm our pre-COVID conviction on Sunbelt migration as well as growth of medium-sized cities. In light of low savings and quality of life issues, middle-income consumers will likely continue to move to medium-sized cities, including the Sunbelt. We believe that in real estate, multifamily, industrial and innovation office are the secular winners. Gateway cities will face headwinds in the short term, but longer-term budget reconciliation could serve as a foundation for rebirth. Retail and older office in larger CBDs are short-term losers, in our view.

V. Essentialism

Once the recovery finally takes hold and more people return to the physical office, there will be shifts in patterns investors need to assess. Driven by cost, quality of life and risk mitigation, for both firms and individuals, in-person meetings are likely to take place only when safe, necessary or highly valued. This ‘Essentialism’ has implications for a broad range of industries including healthcare (telehealth), personal care, retail (e-commerce), entertainment (online), travel (less business travel, more domestic leisure travel), apparel (casual) and real estate (single family rentals and purchases, industrial, HVAC/filtration upgrades).

It is true that many of the patterns we are seeing today reflect the reality that we remain in the middle of a pandemic absent an effective treatment or vaccine for COVID-19. According to the Bureau of Labor Statistics, around 46% of workers have been able to telework during the pandemic. That figure is higher because of metropolitan areas and certain industry sectors geared to remote work. The implication is that these individuals did not need to commute to work or have any of the related spend (commute costs, dining out).

Once the recovery finally takes hold and more people return to the physical office, there will be shifts in patterns investors need to assess.
That said, given improved productivity, successful technology adoption, the ability to reduce health risks, as well as the long-term potential to reduce cost, many US companies have become more comfortable with the prospect of remote work. Both tech and non-tech companies have already announced new permanent policies allowing employees to split time between the physical office and remote locations.

Per a recent UBS Evidence Lab survey to gauge future office demand, 53% of the 450 C-suite executives expect at least some increase in WFH 12-24 months from now. 27% indicated that they expect remote work to increase significantly. Work from home expectations skewed higher in the “Financials & Real Estate” as well as “IT & Telecommunications” sectors. If we look to countries where normal economic activity has resumed e.g., Germany, companies have already adopted these types of policies.

EXHIBIT 41
Nearly One Third of Companies Expect to Significantly Increase Remote Work

<table>
<thead>
<tr>
<th>How do you expect remote work to change 12-24 months out, relative to your prior expectations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significantly increase</td>
</tr>
<tr>
<td>Some increase</td>
</tr>
<tr>
<td>No effect</td>
</tr>
<tr>
<td>Some decrease</td>
</tr>
<tr>
<td>Significantly decrease</td>
</tr>
<tr>
<td>Not applicable/Can’t say</td>
</tr>
</tbody>
</table>

0% 10% 20% 30%


EXHIBIT 42
Companies in the Financial Services, Real Estate and Tech Sectors Are Most Likely to Increase Remote Work

<table>
<thead>
<tr>
<th>How do you expect remote work to change 12-24 months out, relative to your prior expectations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial and Real Estate</td>
</tr>
<tr>
<td>IT &amp; Telco Services</td>
</tr>
<tr>
<td>Industrials</td>
</tr>
<tr>
<td>Consumer Staples</td>
</tr>
<tr>
<td>Consumer Discretionary</td>
</tr>
<tr>
<td>Healthcare</td>
</tr>
<tr>
<td>Energy, Materials and Construction</td>
</tr>
</tbody>
</table>

0% 10% 20% 30% 40% 50%


On an individual front, consumers have developed new patterns around remote shopping and personal care. Consumers have experimented with either performing services themselves, using remote tools to obtain guidance, or shopping online. In-person meetings or visits occur only if necessary or in the perceived safety of groups of friends or family. Of course, social activities with diverse groups will resume (hopefully), as those are highly valued, but unnecessary visits will not likely return.

EXHIBIT 43
Online Media, Grocers and Autos Were Clear COVID Winners That Will Continue to Grow

Mscience US Consumer Spending Panel (Y/y%, 14-day moving average)

These trends are likely to affect the following industries:

- **Healthcare** – The widespread adoption of telehealth services has reduced unnecessary hospital visits and ensured real-time access to medical providers for millions of Americans. We expect this trend to continue and potentially accelerate.

- **Personal care & beauty** – Personal care & beauty has been one of the outperforming consumer spending categories over the past decade. In the absence of service alternatives during COVID-19, consumers have increased their focus on self-care. Styling products especially for individuals with wavy or curly hair are likely to benefit. However, there are some sectors that are likely immune from disintermediation e.g., nail salons and some hair salons, given the difficulty of executing your own pedicure or adding your own highlights.

- **Retail** – U.S. E-commerce penetration is accelerating higher in 2020 thanks to the pull-forward effect from COVID. Indeed, credit and debit card data tracking data of US consumer-spending patterns suggest categories such as health/personal care, groceries, and apparel have shown good resilience following the initial surge in April and are therefore likely to maintain their COVID-related online penetration gains.

- **Entertainment** – Online gaming was outperforming pre-COVID. Limited alternative entertainment options only increased adoption and options further. We see this trend continuing at an accelerated rate.

- **Travel** – We expect a heightened preference for domestic travel particularly amid ongoing personal safety and health concerns as well as Henry McVey’s outlook for a weaker dollar. While international travel will return, it is likely to be more costly. Further, during COVID, consumers have had to discover domestic travel options, which have supported home sharing businesses, new and used auto purchases as well as rentals. We expect this to continue.

- **Housing** – We see continued support for single-family home purchases for upper income households, as well as single-family rentals more generally, as households have greater flexibility to work and enjoy life outside of urban centers.

- **Online conferencing** – We believe Microsoft Teams, Zoom, and Google Meets platform usage increases as large swaths of workers avoid unnecessary in-person meetings or business travel.

- **Apparel** – We expect an overall decline in apparel spending though tailwinds support outperformance in casual apparel, athleisure, and outdoor apparel.

- **Commercial office real estate** – We expect reduced demand for large headquarters in gateway cities. In particular, there are significant headwinds for large, older office space in large CBDs. We expect tailwinds to support office in medium-sized and Sunbelt markets.

- **Technology** – In order to meet the demands of the virtual office, e-commerce acceleration, and the increased desire for e-services, companies will need to invest in technologies like cloud computing, collaboration tools, automation, and data analytics.

**VI. Bifurcation**

Amid slower consumer spending growth, structural underemployment, as well as increased focus on value and convenience, we expect consumers will consolidate their commodity spend among large retailers who can deliver omni-channel service and delivery capabilities and offer competitive pricing. We also see tailwinds supporting smaller manufacturers with differentiated, difficult to find elsewhere products, particularly as larger brands scale back on SKUs. These could include goods with a specific health, ESG, ethnic or cultural significance. We believe losers are mid-sized retailers or manufacturers lacking a differentiated value proposition or product.

Even after the introduction of a potential vaccine, structural unemployment should persist for several years given some of the shifts we have described amid slower economic growth. Following the Great Financial Crisis, it took 10 years for employment to return to pre-GFC levels. While we expect this recession to be short, structural underemployment is likely to persist for 3-5 years. While fiscal packages like the CARES Act may support middle- and lower-income spending in the short term, uncertainty over the long term likely drives a value orientation.

Particularly for essentials and commodity products, consumers are likely to continue to consolidate spend at fewer retailers even after COVID. McKinsey reports that US consumers are consolidating shopping trips and shifting their retailer and brand loyalties during the crisis. Before COVID, 17% of consumers did grocery shopping once every two weeks or more. As of May, that figure had jumped to 30%. We expect these trends to continue post-COVID amid a value orientation and continued caution around being in crowds.

According to IRI, SNAP participation increased to 13% in April from 11% in December 2019, as the USDA increased benefits. SNAP participation correlates with unemployment trends, and for this population paying low prices and finding value are the primary objectives. Notably, SNAP participants accounted for 10% of total grocery spend and a greater proportion of online food and beverage spend than non-SNAP shoppers. COVID-19 accelerated state adoption, with 44 states participating in the SNAP Online Purchasing Pilot; Arkansas, Hawaii and Mississippi are in the planning phase.

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23 IRI, The Changing Shape of the CPG Demand Curve: SNAP Benefits, August 28, 2020. Note: SNAP is a federal program that provides nutrition benefits for eligible low-income individuals and families to support their ability to purchase healthy foods. Due to COVID-19, the USDA implemented a 40% increase in overall SNAP benefits, which amounts to a $2B monthly allotment, in addition to the usual $4.5B that goes toward monthly SNAP benefits. SNAP eligibility rules require that participants be at or below 130% of the Federal Poverty Level. 130 percent of the poverty line for a three-person family is $2,213 a month, or about $26,600 a year.
SNAP Participation Increased to 13% in April From 11% in December 2019

![SNAP Participation Chart]


We Expect SNAP Purchasing Power to Continue to Consolidate Spend At Fewer Retailers Post COVID

![Profile of SNAP Households Diagram]


Large Retailers Have Taken Market Share During COVID

![Market Share of Large Retailers Chart]


Though Smaller Manufacturers With Unique Products Have Thrived

![CPG Brand Market Share Chart]

Note: Extra Small = <$100M, Small = <$1B Medium = $1B-$5.5B, Large >$5.5B based on L52 Source: IRI data for multi-outlet and convenience (MULO+C). Data as at June 14, 2020. Source: IRI Consulting analysis.

“Even after the introduction of a potential vaccine, structural unemployment should persist for several years given some of the shifts we have described amid slower economic growth.”
VII. Conclusion

In the environment we envision, the trends that will gain momentum will likely be those that reduce cost, increase convenience and improve quality of life, health and well-being. Against a backdrop of heightened volatility that will surely persist amid virus uncertainty, the high likelihood of a disputed election, and underemployment, investors should identify and lean in to long-term secular themes. In conclusion, we reiterate a few of our high conviction themes:

- **Dispersion**: The locus of economic activity should disperse among multiple metropolitan nodes beyond gateway cities. We affirm our pre-COVID conviction on Sunbelt migration as well as the growth of medium-sized cities. Consumer spending should benefit. In real estate, multifamily, industrial and innovation offices are secular winners. Gateway cities will face headwinds in the short term, but long-term budget reconciliation serves as a foundation for rebirth. Retail and older office in larger CBDs are short-term losers.

- **Essentialism**: In the context of in-person gatherings, essentialism should thrive. We expect in-person meetings to take place only when safe, necessary or highly valued. Essentialism has implications for a broad range of industries including healthcare (telehealth), personal care, retail, entertainment (online), travel (less business, more personal domestic), apparel (casual), transportation (less public) and real estate (single family rentals and purchases, industrial, HVAC/filtration upgrades).

- **Bifurcation**: Amid slower consumer spending growth, structural underemployment, focus on value and convenience, consumers will consolidate their commodity spend among large retailers who can deliver omni-channel service and delivery capabilities and offer competitive pricing. We also see tailwinds supporting smaller manufacturers with differentiated, difficult to find elsewhere products, particularly as larger brands scale back on SKUs. These could include goods with a specific health, ESG, ethnic or cultural significance. We believe losers are mid-sized retailers or manufacturers lacking a differentiated value proposition or product.

"Amid slower consumer spending growth, structural underemployment, as well as increased focus on value and convenience, we expect consumers will consolidate their commodity spend among large retailers who can deliver omni-channel service and delivery capabilities and offer competitive pricing. We also see tailwinds supporting smaller manufacturers with differentiated, difficult to find elsewhere products, particularly as larger brands scale back on SKUs. These could include goods with a specific health, ESG, ethnic or cultural significance. We believe losers are mid-sized retailers or manufacturers lacking a differentiated value proposition or product."

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