The New Consumer
Ten years into the longest economic recovery in the history of the United States, investors are becoming increasingly concerned about a downturn. Along with the late cycle, trade tensions, stagnating corporate margins, and a Federal Reserve with limited tools in its coffers are legitimate reasons for a higher degree of caution. The consensus view however is that the consumer is in great shape, and since that sector represents two-thirds of the economy, we have less to fear.

While we agree that the US consumer in aggregate appears to be in better shape relative to 2007, the emergence of the “Asset Light Consumer” – with respect to the consumer balance sheet as well as consumer purchases has created new vulnerabilities and altered the landscape for investment. The Great Recession, technological disruption, demographics, and the rise of the services sector have led to the rapid growth of a rentership and sharing economy, which has long term implications for growth and investing. Consumers now own fewer assets and allocate more of their income to experiences over things. Furthermore, the shift to a services economy has led to a reduction in many traditional forms of corporate investment in favor of the software and equipment needed to support consumer demand. Herein we will examine the impact of these shifts and identify potential opportunities.

- In Section I, we present our diagnosis of the health of the consumer.
- In Section 2, we disaggregate this view by looking at the profile of renters versus owners.
- In Section 3, we delve into some of the drivers of the rentership and sharing economy by examining the housing, automobile, and apparel markets.
- We conclude in Section 4 with thoughts on implications for investors.

Section I: Our Diagnosis of the US Consumer

While we believe we are late in the economic cycle, fundamentals remain solid for the consumer when considered in aggregate. That said, our Global Macro and Global Public Affairs teams continue to monitor trade policy risk given the price increases consumers are already facing. However, monetary policy-driven risks appear low, given our expectation for an additional interest rate cut this year.
The Consumer Cycle

Historically, the factors that have been most predictive of a consumer downturn in the consumer sector are: payroll growth, spending on cyclically sensitive areas such as goods and housing, as well as delinquencies. A slowdown in payroll growth tends to precede wage growth softness as corporates reduce hiring plans in anticipation of a downturn or amid weakness in demand. Similarly, spending on big-ticket items such as autos, homes, electronics, and furniture typically decline earliest as the business cycle matures, as these categories are more discretionary and interest rate sensitive. On the other hand, categories of consumer staples, such as food and clothing, are necessities and therefore less sensitive to economic cycles. Shifts in spending on services are more of a mixed bag. The vast majority of consumer spending is devoted to services such as payments for health care, housing and transportation and, in aggregate growth in spending on services tends to be relatively stable.

Our consumer cycle indicators suggest that the cycle may have peaked though recent interest rate cuts may provide a late cycle boost. To be sure, we have seen a slowdown in payroll growth, as well as existing home sales.

EXHIBIT 1
Payroll Growth Appears to Have Peaked for the Cycle

```
While we agree that the US consumer in aggregate appears to be in better shape relative to 2007, the emergence of the ‘Asset Light Consumer’ – with respect to the consumer balance sheet as well as consumer purchases has created new vulnerabilities and altered the landscape for investment.
```

Data as at September 6, 2019. Source: BLS, Haver Analytics.
That said, spending on both housing as well as durable goods has shown recent improvement, and motor vehicle spending remains solid. Our work has shown that historically, a significant slowdown or decline in spending on durable goods or motor vehicles in particular has precipitated a downturn by a year or more.

"Spending on both housing as well as durable goods has shown recent improvement, and motor vehicle spending remains solid. Our work has shown that historically, a significant slowdown or decline in spending on durable goods or motor vehicles in particular has precipitated a downturn by a year or more."

In addition, consumer delinquencies tend to rise in advance of a downturn and thus far, they remain low and continue to decline. While each cycle differs depending on the origination of the stress (e.g., in autos vs. housing or student loans vs. credit cards), weakness diffuses into the consumer sector typically via excess leverage, rising interest rates, slower payroll and wage growth, rising energy/gasoline prices, or declines in wealth. As weakness builds, delinquencies increase. The widening out of the credit box can also drive
up delinquencies as marginal borrowers have more access to credit.

In sum, these factors in addition to declining interest rates suggest that while the consumer cycle may have peaked, there are no imminent signs of a downturn in the sector.

**EXHIBIT 5**
Delinquencies Are Low and Continue to Decline

![Graph showing delinquencies declining over time.]

*Consumer Delinquencies, % of Total Balances*

Data as at July 30, 2019. Source: Federal Reserve Bank of NY, Haver Analytics.

**EXHIBIT 6**
The Abatement of Interest Rate Hikes Has Provided Support to Cyclically Sensitive Sectors

![Graph showing Federal Funds Target Rate.]

*Federal Funds Target Rate, %*

Data as at July 30, 2019. Source: Bloomberg.

**EXHIBIT 7**
Employment Levels Are At Cyclical Highs

![Graph showing employment levels.]

*Employment Ratios, %*

Data as at July 30, 2019. Source: Bureau of Labor Statistics, KKR GBR.

“The Health of the US Consumer

Against a backdrop of a peaking cycle, consumer fundamentals remain solid at the aggregate level. We frame our overall assessment by examining the consumer’s ability to spend: essentially the state of employment, income and credit, their willingness to spend, expressed via consumer sentiment, and examine the strength of the consumer balance sheet that will determine the sector’s ability to weather a downturn. In aggregate: unemployment is low, income growth is solid, leverage remains in check, the savings rate is high and household net worth continues to grow. That said, slowing payroll growth, credit headwinds and peaking income expectations suggest that consumer-spending growth will likely slow going forward.

“Against a backdrop of a peaking cycle, consumer fundamentals remain solid at the aggregate level.”
Notwithstanding the slowdown in payroll growth in 2019, we have reached near full employment and wages are rising, resulting in strong real disposable income growth. In addition to income, the availability of credit drives the consumer’s ability to spend. With regard to credit, we are beginning to see some early evidence of headwinds. The proportion of banks tightening lending standards on consumer credit cards has reached the highest level since prior to the financial crisis. A sustained tightening of credit card standards could lead to slowing growth in consumer spending, but thus far, it is too early to tell whether these trends will continue, particularly if the Federal Reserve cuts interest rates further. Taken together, our income and credit metrics suggest that consumers continue to have the wherewithal to increase spending though credit constraints may portend slower growth going forward.

"With regard to credit, we are beginning to see some early evidence of headwinds. The proportion of banks tightening lending standards on consumer credit cards has reached the highest level since prior to the financial crisis."

Consumers also tend to make decisions on whether or not to spend based on future expectations for income growth. According to the University of Michigan’s survey of consumer expectations, a metric closely watched by the Federal Reserve, income growth expectations may have peaked. As a result, we would expect consumer willingness to spend to moderate going forward.
Finally, the strength of the consumer balance sheet in the aggregate indicates that as the cycle turns, the overall sector is in decent shape to weather a potential downturn. For one, the consumer financial obligations ratio – a measure of household debt-to-income remains at historical lows.

Second, the average savings rate remains elevated. Between 2000 and 2008, the savings rate averaged 4.6%. Since 2008, the saving rate has averaged 7.2%¹, pointing to a greater cushion of precautionary saving among consumers in the aggregate. As we will describe later in more detail, these aggregate average savings rate metrics usually reflect upper income household trends who are responsible for the bulk of household income and expenditures. Potential reasons for the elevated saving rate include higher economic and political uncertainty as well as declines in the ability to withdraw equity from homes compared to the pre-recession period. Prior to the recession, consumers relied upon home equity withdrawals as a financial cushion, but now may need to rely more on their own savings.

Third, driven by gains in the stock market and housing, US household net worth continues to grow. Household net worth finally surpassed pre-crisis levels in 2018 following a severe contraction during the Great Financial Crisis.

¹ Data from the Bureau of Economic Advisers as of July 31, 2019.

Finally, the strength of the consumer balance sheet in the aggregate indicates that as the cycle turns, the overall sector is in decent shape to weather a potential downturn.
In sum, we expect the consumer sector to continue to grow, albeit at a decelerating pace given slowing growth in the ability to spend and peaking income expectations. In the event of a downturn, given low leverage levels, high savings and solid net worth, we do not foresee a severe contraction in consumer spending in the aggregate.

Data from the Census Bureau as of June 30, 2019.

Section II: The Economic Health of Renters versus Owners

From a low of 30% in 2005, to 36% in 2019, the proportion of households who rent instead of own their homes has grown significantly. Indeed, five million additional households now rent instead of own. We delve into the health of renter households in this section, and explore the drivers of the new rentership economy in the subsequent section. Herein, we focus on the majority of renters who earn low to moderate incomes, but note a new segment of high-income renters has proliferated since the financial crisis.

While we are constructive on the consumer sector overall, we do have concerns about the vulnerability of the asset light, lower to moderate-income renter segment in the event of a downturn. Indeed, if we bifurcate the data to assess the economic state of homeowners (asset rich) versus home renters (asset light) who now represent ~36% of the total, we uncover some concerning trends. These consumers are vulnerable as we near a downturn, as their expenses are growing faster than their income, and they are generally debtburdened, and dependent on wage income.

According to data from the Bureau of Economic Analysis, the average owner earns almost double the income of the average renter, who does not earn enough to cover his or her annual expenses. Renters on average earn $43,621, but spend $43,857 annually, an annual deficit of $236.

EXHIBIT 16
Average Income for Renters Is Insufficient to Cover Expenses

<table>
<thead>
<tr>
<th></th>
<th>Renter</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual after-tax income</td>
<td>$43,621</td>
<td>$75,873</td>
</tr>
<tr>
<td>Average annual expenditures</td>
<td>$(43,857)</td>
<td>$(70,125)</td>
</tr>
<tr>
<td>Remaining income</td>
<td>$5,748</td>
<td></td>
</tr>
</tbody>
</table>

Data as at December 31, 2017. Source: BEA, Haver Analytics.
Renters, On Average, Allocate 26% of Their After-Tax Income to Rent

Structural factors such as mortgage credit constraints and the limited supply of affordable homes have driven up the price of rentals in highly sought after urban centers. Rental costs have outpaced wage growth for most of this business cycle, which is among the causes of higher delinquencies for renters. Per the chart above, renters spend more annually for housing than homeowners, amid low interest rates. As of 2016, rental costs represented at least 26% of after-tax income for the average renter and this proportion has continued to rise.3 Most economists would consider any individual who allocates 30% or more of pre-tax income to housing as facing a debt burden and vulnerable to financial challenges.

Data as at December 31, 2018. Source: BEA, Haver Analytics.

Rental Costs Are Growing Faster Than Wages

The result of this income-expenditure shortfall over time is low net worth and potential high delinquencies for renters in a downturn. The total median net worth for renter households is only $5,000, while owner households have a median net worth of $231,000.4 In addition, a higher proportion of renters face delinquencies today, which indicates that a meaningful proportion of the segment is already debt-burdened despite the strong economic environment. Furthermore, during the past two downturns, the proportion of renter households that were 60 days or more delinquent in meeting their debt obligations rose to 17-19% from ~13-14% prior to the crises.5

Structural factors such as mortgage credit constraints and the limited supply of affordable homes have driven up the price of rentals in highly sought after urban centers.

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3 Data from the Bureau of Economic Advisers, December 2018.
4 Data from the Bureau of Economic Advisers, December 2016.
5 Ibid.4.
Median Net Worth for Renters Is Only $5K

Data as at December 31, 2016. Source: BEA, Haver Analytics.

Delinquencies Have Been High for Renters Even in A Strong Economy

Data as at December 31, 2016. Source: BEA, Haver Analytics.

Debt to Income Ratios for Renters Seem Reasonable, But Omit the Rental Cost Burden Facing the Segment

Data as at December 31, 2016. Source: BEA, Haver Analytics.

Debt to Asset Ratios Highlight the Absence of An Asset Cushion for Renter Households

Data as at December 31, 2016. Source: BEA, Haver Analytics.

Though aggregate data like debt-to-income ratios remain low, these figures obviate the impact of a loss of employment or income, and do not incorporate rising rent burdens that are increasingly pressuring these consumers. To be sure, while debt to income ratios for renters on average were only 6.7% as of the most recent data in 2016 versus 11.7% for owners, debt to asset ratios for renters are almost double the ratio for owners. On average, debt represents 19.3% of assets for renters versus 11.3% for homeowners. In the event of a downturn or loss of wage income, renters lack the asset cushion that might enable them to continue to meet their debt obligations. As an example of how volatile renter spending can be in a downturn, consider that renters actually fared worse in the mild 2001 recession versus the more severe 2009 recession. Renter spending may have been more resilient in the great financial crisis because of a mix shift effect i.e., more affluent former owners became renters due to walking away from their underwater houses.

While ~56% of the households over the past decade who have become renters may fit the profile of the average low to moderate income renter depicted thus far, the remaining 44% are higher income households. According to the Joint Housing Center at Harvard University, households with a median income of $100,000 or more comprised nearly a quarter of the increase in renter households. 56 percent of new renters are from the Millennial and Generation X cohorts. Notably, seniors have also driven 44% of the recent growth in rentership households. As described in our prior note on de-

6 Ibid 4.
7 Ibid 4.
8 America’s Rental Housing 2017, Joint Center for Housing Studies of Harvard University, December 24, 2017.
mographics (see What Does Population Aging Mean for Growth and Investments), higher income renters seek to live in amenity rich new construction housing whose supply has increased dramatically since the financial crisis. Empty nest seniors are increasingly leaving the suburbs to access the services and community available in cities.

EXHIBIT 23
Renters Exhibit More Cyclically-Sensitive Spending Characteristics Versus Owners

EXHIBIT 24
High Degree of Diversity Among New Renters

Data as at December 31, 2018. Source: BLS, Haver Analytics.

Indeed, significant diversity exists among renters as a group, as well as between renters of homes or those who rent or share vehicles, for example. That said, in the subsequent section, we seek to identify the common drivers across these various renting and sharing business models.

Section III: Drivers of Rentership & The Sharing Economy

We often bifurcate our discussions of rentership and sharing, but we believe there are similar trends driving the increase in both. On the demand side in both cases, the post financial crisis consumer in particular seeks access to goods and services at lower cost, with greater convenience, and with lower utilization expectations. Supply side dynamics also play a significant role (i.e., whether there are underutilized assets available at lower cost).

EXHIBIT 25
Student Loan Burdens Have Prevented Many Millennials From Purchasing Homes


On the demand side, the post financial crisis consumer in particular seeks access to goods and services at lower cost, with greater convenience, and with lower utilization expectations. Supply side dynamics also play a significant role (i.e., whether there are underutilized assets available at a lower cost.)
Renting allows consumers to benefit from the use of goods or assets that they might not otherwise be able to access. For example, multifamily rentals skyrocketed as structural constraints such as burdensome student loan debt and tight mortgage lending standards prevented many Millennials from purchasing homes. In addition, as urbanization accelerated and demand for new construction apartments with amenities increased, luxury condominium rentals enabled customers to experience a certain lifestyle without directly owning the asset.

Sharing allows consumers access to an experience or good on an as needed basis, and offers community benefits as well as income generation opportunities. Owners who share their resources (assets or labor) are able to generate income, increase asset utilization, and more directly connect to users. Further, these assets are often available to users at a significant discount to the costs of ownership. Boatbound, an example of a US leisure boat rental firm, offers customers the chance to enjoy an afternoon on the water without the cost and burden of boat ownership.

In this section, we delve into the foundations of the rentership and sharing economies, and then examine three sectors: housing, autos and clothing, in more detail.

The Foundation

Great Financial Crisis – The Great Financial Crisis reduced the ability and interest for many to own assets or goods directly. Even ten years later, while the economically driven demand for goods and asset ownership has improved as incomes have grown, a sustained interest in renting or sharing versus owning - driven by flexibility, cost, mobility, as well as social and environmental considerations, remains. Indeed, in a 2016 Pew Research Survey, 72% of renters said they would like to buy a house at some point. About two-thirds of renters in the same survey (65%) said that economic circumstances drove their decision to rent, compared with 32% who said they rented as a matter of choice.

Particularly for Millennials who graduated from college with burdensome student debt during the period surrounding the Great Financial Crisis, the difficulty in finding long-term employment, stagnant income growth, the lack of access to credit as well as the crisis-driven decline in residential and financial asset values, fundamentally altered their employment and purchasing behavior.

The huge increase in student debt in particular has created a tremendous financial strain for many Americans. In 2001, only 11 percent of high-income households and 4 percent of low-income households owed student debt, but by 2016, one in five households owed some student debt. Relaxed accountability rules that determined which colleges could participate in federal student loan programs, an increase in student eligibility as well as rising tuition costs, led to the five-fold increase in outstanding student loan debt between 2004 and 2018. Lower-quality distance education programs now qualify and students are able to assume additional debt without regard to the amount of other debt outstanding. As of the end of 2018, 43 million Americans owed $1.4 trillion in student debt, an average of $33,500 per borrower. Of the 43 million, 17 million were under 30, and borrowers over 40 are responsible for 40 percent of all education debt. Seniors too are bearing a growing proportion of student debt due to parent PLUS student loans.9
Further, in a recent Chegg.com survey, more than 67 percent of borrowers with household incomes of less than $30,000 reported having difficulty making payments. More surprising was that 48 percent of borrowers with household incomes over $75,000 also reported challenges. Thirty-six percent of borrowers indicated that they forgo other monthly payments to pay student loans. Indeed, one million borrowers default on their student loans annually, which triggers harsh consequences including significant collections fees, damage to their credit score, wage garnishment and legal action.¹⁰

In addition, Millennials witnessed the evaporation of financial and residential wealth held by their parents during the financial crisis. Housing and shareholder equity declined -54% and -49% from peak to trough, respectively. Further, while household net worth has recovered in aggregate since the financial crisis, home prices in some suburban areas in particular remain below their pre-crisis peaks. For example, values for homes purchased in the Bridgeport-Stamford-Norwalk, Connecticut area between 2005 and 2009, remain below their purchase prices. Student loan debt which has become a burden to Millennials as well as their parents has had ripple effects on asset formation as well as purchasing behavior. Millennials and others have become more value-oriented, more willing to move to find jobs, and less able or interested in acquiring assets.

 Indeed, while income growth has improved since the financial crisis, we find that large segments of middle-income households have refrained from purchasing assets and continue to lack the savings to support these purchases. Over the past four years, after-tax income growth has averaged ~4%, with upper and middle-income household income growth averaging ~4% and ~3%, respectively. However, while the savings rate for upper income households is currently at 9%, the rate for the median household is now 0%.¹¹ Not only do these households lack the savings to afford an asset purchase, but they are also more vulnerable in a downturn.

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But The Median Household Is Saving Less Than Pre-Financial Crisis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle income household</td>
<td>6.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Upper income household</td>
<td>10.0%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>


The growth in the gig economy is just one outcome of these post-crisis trends. Instead of a more traditional system based on full-time employment for one employer, many workers increasingly have multiple "gigs," or jobs, which are both more readily available since companies do not need to offer health insurance and other benefits. Further, these jobs provide more flexibility to both employees and employers. The share of the US workforce in the gig economy rose from 10.1 percent in 2005 to 15.8 percent in 2015.\(^{12}\) In addition, employers are increasingly using gig workers to lower costs and meet project needs. According to an Ernst & Young study, 66% of large companies are now using gig workers in their labor force.

Employee Tenure Has Declined in Recent Years, Particularly for Millennials

<table>
<thead>
<tr>
<th>Employment Tenure, Years</th>
<th>2012</th>
<th>2014</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>3.2%</td>
<td>3.0%</td>
<td>2.8%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>


Technology – E-commerce penetration and smartphone adoption have driven the growth of sharing economy platforms. As more transactions have moved online, consumer choice, price transparency, and convenience have all improved. Indeed, customers now have 24/7 access to transact via their smartphones.

Both producers and consumers benefit from the growth of these platforms. Sharing economy companies leverage these online platforms to match customers and suppliers more efficiently and offer consumers the flexibility to access goods and services only for as long as needed. Owners can rent out cars, rooms and clothing when not in use, while taxis and hotel rooms often spend time empty.

Further, the network effect facilitated by these platforms has driven valuations. In March 2017, Airbnb was valued at ~$31 billion – roughly the same as Marriott International after its acquisition of Starwood Hotels and Resorts Worldwide.\(^{13}\)


\(^{13}\) Ville Satopaa, “Disrupting business models is not enough. We need tech innovation too,” March 2018.
Smartphone Penetration Has Facilitated the Use of Mobile Platforms

EXHIBIT 34

Smartphone Penetration of Mobile Phone Market

Data as at December 31, 2016.

Increased E-Commerce Penetration Leads to More Price Transparency, Choice and Convenience

EXHIBIT 35

US Brick & Mortar Share of Consumer Wallet

Data as at December 31, 2018.

Drivers of Rentership/Sharing Economy Disruption by Sector

In this final sub-section of Section III, we present a framework for comparing the drivers of renting and sharing as well as review some examples within the housing, transportation and apparel markets. Across all of our investing businesses, and particularly on our Special Situations team, we seek to understand how disruptive a sharing economy business model could be to a more traditional business model as these shifts may create challenges for incumbents but also opportunities for new players.

From our vantage point, sectors where the cost to own or rent are high and growing, where underutilized assets like vehicles sit idle 95% of the time, the demand for short term usage and perceived social or environmental benefits are likely candidates for disruption. We already see relatively high sharing economy penetration of housing and auto markets, but perceive lower threats to sectors where demand frequency is high and costs are relatively low, as in the case of apparel staples.

Urbanization - The sharing economy blossomed as the recession set in, smartphone penetration skyrocketed, and urbanization increased in the US. Today, globally, for the first time in history, more people live in cities than in rural areas14. New knowledge and technology-based industries have attracted Millennials to the urban core. Older populations with empty nests and increased longevity are increasingly moving to the city to meet mobility, access and community needs.

## Drivers of Disruption by Sector

<table>
<thead>
<tr>
<th>DRIVE</th>
<th>SHORT DESCRIPTION</th>
<th>HOUSING</th>
<th>TEMPORARY LODGING</th>
<th>TRANSPORTATION</th>
<th>LUXURY APPAREL</th>
<th>APPAREL STAPLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership cost burden</td>
<td>Cost to own and maintain as a proportion of income</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Rental cost burden</td>
<td>Cost to rent as a proportion of income</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Underutilized assets</td>
<td>Degree to which assets are underutilized</td>
<td>High</td>
<td>High</td>
<td>Very high</td>
<td>Very High</td>
<td>Low</td>
</tr>
<tr>
<td>Technology</td>
<td>Potential for technology platform to increase utilization and drive network effects</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Demand Frequency</td>
<td>Demand for short term usage/access</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Quality Control</td>
<td>Ability to systematically control quality</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Perceived social or environmental benefit of sharing</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Net assessment</td>
<td>Likelihood of sharing economy disruption</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Example providers</td>
<td></td>
<td>Coliving</td>
<td>Airbnb, Coliving</td>
<td>Lyft</td>
<td>Rent The Runway</td>
<td></td>
</tr>
</tbody>
</table>

Data as at August 31, 2019. Source: GBR analysis

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### Housing & Lodging

Amid the demographic trends and structural constraints supporting continued rentership in the housing sector, KKR’s real estate team worked to develop expertise around the multifamily sector. We believe that the large Millennial and Generation Z cohorts should drive strong long-term demand for housing overall while affordability constraints, the lack of single-family inventory, a decline in ownership incentives amid higher taxes, and a preference for new construction housing in urban/suburban areas, should continue to support rentership.

Per Morgan Stanley’s estimates, the coming of age of 73 million Millennials plus 78 million members of Generation Z will drive increases in US housing demand over the next decade.\(^{15}\) That demand should disproportionately fuel rentership amid low average net worth for these younger cohorts. As described earlier, following the Global Financial Crisis, many Millennials faced limited job and income prospects, which challenged student loan repayment and led to a rise in delinquencies. Millennials lacked the capacity to invest and save which has resulted in lower net worth for the cohort versus prior generations. Per the Federal Reserve Board, as of 2016 Millennials had an average net worth of $11,100, which was far short of the average $88,000 down payment required on a median-priced home over that period.

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Driven by Demographics and the Economic Recovery, Household Formation Trends Have Recovered From Crisis Lows…

EXHIBIT 38

In 2018, the average conventional single-family home in the US in 2018 cost $417,400. The average down payment, including upfront mortgage fees averaged $92,000 or 22% of the value of the home. Ongoing monthly mortgage costs and interest payments, insurance and general maintenance.

EXHIBIT 39

In 2018, the average conventional single-family home in the US in 2018 cost $417,400. The average down payment, including upfront mortgage fees averaged $92,000 or 22% of the value of the home. Ongoing monthly mortgage costs and interest payments, insurance and general maintenance.

EXHIBIT 40

Affordability is a challenge as all-in mortgage costs now represent a substantially higher proportion of median income.

EXHIBIT 41

The 2012 mortgage cost burden coincided with the ramp up in rentership. Between 2016 and 2018, homeownership rates recovered somewhat, but 2019 has witnessed a return to rentership growth.

In 2018, the average conventional single-family home in the US in 2018 cost $417,400. The average down payment, including upfront mortgage fees averaged $92,000 or 22% of the value of the home. Ongoing monthly mortgage costs and interest payments, insurance and general maintenance.

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In 2018, the average conventional single-family home in the US in 2018 cost $417,400. The average down payment, including upfront mortgage fees averaged $92,000 or 22% of the value of the home. Ongoing monthly mortgage costs and interest payments, insurance and general maintenance.
Ten Years Into the Longest Recovery in History, Homeownership Rates Remain Far Below the Pre-Crisis Peak

Indeed, ten years into the longest economic recovery in history, amid rising incomes and low unemployment, homeownership rates remain far below the pre-crisis peak. Homeownership rates sit at 64.2% versus 69.4% prior to the crisis and have recently inflected downwards. These trends support our view that as the economy improves, some income motivated rentership may abate, but other structural and preferential factors are likely to continue to support renting versus owning.

To understand where these rentership shifts are most prevalent, we analyzed microdata on population density and rentership trends between 2012 and 2017. We found that the bulk of the increase in renter households occurred in the Pacific and Mid-Atlantic regions of the US, and to a lesser extent, the South Atlantic and New England regions.

We believe that the large Millennial and Generation Z cohorts should drive strong long-term demand for housing overall while affordability constraints, the lack of single-family inventory, a decline in ownership incentives amid higher taxes, and a preference for new construction housing in urban/suburban areas should continue to support rentership.
...and Found That the Bulk of the Increase In Renter Households Occurred in the Pacific and Mid-Atlantic Regions of the US

In total, suburban and urban areas have both seen a significant increase in the number of renter households. However, the counties with the largest increases in renter households have been major coastal cities like LA and NY.

In Total, Suburban and Urban Areas Have Both Seen A Significant Increase in the Number of Renter Households...

New models of rentership include single-family rentals. Driven by the structural factors described above as well as Millennials moving into child-rearing years and requiring more space, single family rentals (SFRs) now make up 66 percent of the rental housing stock, and 53% of renting households live in these homes. We see evidence of this trend towards single-family rentals for families with data from Quantifind, a data and analytics firm that has developed a proprietary approach to extracting signals from unstructured data including online social conversation. Per below, there is a significantly increased focus on single-family rentals for 35 to 54 year olds versus 21 to 34 year olds. Interestingly, we see a reversion to multifamily rentals in the cohort aged 55 and over.

Formal models of sharing have also emerged in the housing sector, moving from informal roommate arrangements to co-living, for example.

Single Family Rentals Are More of a Focus for 35-54 Year Olds, While Empty Nesting Seniors Over 55 Are More Interested in Multifamily Rentals

Share of people by Age talking about Single Family Rentals vs. Multi Family Rentals
August 16, 2018 - August 15, 2019

<table>
<thead>
<tr>
<th>Age</th>
<th>Brand 1</th>
<th>Brand 2</th>
<th>Diff +/-</th>
<th>Index</th>
<th>Point Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 to 54</td>
<td>56.4%</td>
<td>42.6%</td>
<td>13.8</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>21 to 34</td>
<td>12.6%</td>
<td>10.2%</td>
<td>2.4</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>55 and Over</td>
<td>25.5%</td>
<td>43.7%</td>
<td>-18.3</td>
<td>59</td>
<td></td>
</tr>
</tbody>
</table>

Sample Size: Single Family Rentals: 2,360, Multi Family Rentals: 2,073
People talking about the brand (Organic)
Data source: twitter

Data as at August 15, 2019. Source: Quantifind, KKR GBR. Note: In the comparison above conversation about single-family rentals covers American Homes 4 Rent, Nestseekers, and Invitation Homes. Multifamily rental companies include Avalon Communities, Equity Residential, Camden Living, and UDR Apartments.

Formal models of sharing have also emerged in the housing sector, moving from informal roommate arrangements to co-living, for example. The housing affordability crisis, including rising multifamily rents, as well as the delayed onset of marriage, has driven the rise of apartment sharing, or roommates.

Rising Rental Costs Are Driving Increased Roommating

Roommate Household Proportion of Total Households

<table>
<thead>
<tr>
<th>City</th>
<th>2005</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>New York City</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Boston</td>
<td>35%</td>
<td>40%</td>
</tr>
</tbody>
</table>


EXHIBIT 49
The Ollie Co-living Value Proposition

To be sure, co-living options often offer even lower cost alternatives to traditional multifamily. Co-living members can save up to 15-40% of the cost of rent versus a conventional studio. The economic arbitrage derives from micro space management or upgrading properties slightly outside of urban centers. Technology platforms in the space work to maximize room utilization as well as provide customized lifestyle management. Companies like Ollie offer the services and amenities typically found only in hotels, with the density and community provided by dormitory living. Targets for these solutions range from Millennials who seek amenity access and community at low cost, to traveling families who want to rent a low cost apartment with a kitchen and multiple bathrooms, but with the institutional management offered by co-living providers.

From an investment perspective, many of these solutions offer higher net operating income growth by maximizing density (which reduces single tenant risk) and using technology to optimize occupancy.
However, there are potential regulatory restrictions depending on the neighborhood and co-living property type.

EXHIBIT 50
Co-Living Options Offer Even Lower Cost Alternatives

<table>
<thead>
<tr>
<th></th>
<th>Average Nightly Costs, $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional Hotel</td>
<td>250</td>
</tr>
<tr>
<td>Airbnb</td>
<td>220</td>
</tr>
<tr>
<td>Coliving</td>
<td>175</td>
</tr>
</tbody>
</table>

Data as at December 31, 2016. Source: Zillow, Company documents.

Home sharing models continue to evolve as well and have become more institutional with companies including Saunder, who are proactively reaching out to homeowners to rent their homes and control the quality of the asset.

Ground Transportation

Driven by rising urbanization, low vehicle utilization, underemployment, the opportunity to supplement income, and perceived social and environmental benefits, ridesharing growth has skyrocketed as an alternative to car ownership, car rental and taxi transportation. Over the past five years, growth in consumer spending on ridesharing has exceeded all other categories of transportation growth. Lyft and its peers operate mobile platforms, which pair drivers and riders in real time. They rely on hundreds of thousands of individual drivers who typically operate as sole proprietors, manage the maintenance of their own vehicles, and set their own schedule. Fares to users comprise a fixed minimum variable pricing model based on time and distance, as well as potential increases (surge pricing) when demand is peaking. The prevailing rate when drivers choose to pick up passengers largely determines driver wages. When prices increase due to increased passenger demand, driver wage rates also increase.

EXHIBIT 51
Consumer Spending On Ridesharing and Taxi Services Has Outpaced Growth in Other Ground Transportation Segments

Index of Google Searches for Major Ground Transportation Platforms (2005=100)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>taxi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lyft + uber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hertz + avis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data as at December 31, 2018. Source: Google, KKR GBR.

Using GoogleTrends, which measures Internet searches, we are able to see the rapid growth of interest in ridesharing versus taxi and car rental services beginning in 2014, consistent with US GDP data showing the beginning of the decline on spending on these alternatives. Before 2012, there was little trace of any online searches for Uber or Lyft and today searches for those two services dominate the category. However, ridesharing penetration rates do vary by region. There is far more interest in ridesharing in California versus Maine with significant variance even within cities in those states. Further, per the diagram below, Alabama appears to be a taxi service stronghold. Tracking social conversation trends, ridesharing dominates in major population centers in New York, Texas and California, while rental car discussions are more prevalent in Midwestern and Southern states.

Over the past five years, growth in consumer spending on ridesharing has exceeded all other categories of transportation growth.
### Exhibit 53
Massive Shift in Google Search Prior and Post 2009 As Searches for Lyft and Uber Now Dominate

**Share of searches by subregion, Pre-2009**

- taxi
- lyft + uber
- hertz + avis

Data as at September 14, 2019. Source: GoogleTrends.

**Share of searches by subregion, 2009-Present**

- taxi
- lyft + uber
- hertz + avis

Data as at September 14, 2019. Source: GoogleTrends.

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**Exhibit 54**
Ridesharing Dominates Social Conversation in Major Population Centers While Rental Car Discussions Are Prevalent in Midwestern and Southern States

**Share of people by States talking about Rental Cars vs. Ride Sharing**
August 15, 2018 - August 14, 2019

Sample Size: Rental Cars 48,195, Ride Sharing: 1,335,778
People talking about the brand (Organic)

Data source: twitter

Data as at September 14, 2019. Source: Quantifind.

Among the core demand drivers for ridesharing, and the sharing economy in general, is the opportunity to generate incremental income, have more schedule flexibility and increase the utilization of existing assets e.g., an existing vehicle. According to Morgan Stanley, car owners use their cars an average of one hour per day for an implied 4% vehicle utilization. With ridesharing models, driver-passenger matching technology has increased capacity utilization. Ridesharing drivers have a substantially higher capacity utilization rate than do traditional taxi services in every city, except New York, where the utilization rates are very similar. For example, based on a 2016 study of five cities, ridesharing drivers had a passenger in their car around half the time, whereas taxi drivers have a passenger in their car anywhere from 32% of the time in Boston to nearly 50% of the time in New York City. High population density in New York likely supports more efficient supply/demand matching. On the other hand, while higher capacity utilization may reduce idle time, it may also lead to an increase in traffic and gas consumption.

For riders, convenience and the ability to access a vehicle on a short-term on-demand basis has driven penetration. Further, unless you are looking to take a trip during high traffic, high demand periods, ridesharing options are typically cheaper than taxis. However, during periods of surge pricing, taxis are usually the most economical option. Nonetheless, according to a quantitative study of individual ridesharing data, the University of Chicago found that passengers are relatively inelastic. For every 10% increase in ridesharing fares, demand falls by only ~5%.17

Aside from the taxi industry, ridesharing has also been disruptive to

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the broader automotive sector. Ridesharing options have reduced the need to have a license, which has contributed to slowing vehicle sales and pricing growth. Rising urbanization should support further ridesharing penetration, as the model is most efficient in high-density areas. On the other hand, replacement rates for shared vehicles will increase due to higher utilization, which should sustain the need for vehicles.

**EXHIBIT 55**

Rideshare Penetration Is Inversely Correlated With Licensed Driver Prevalence

![Licensed Driver % Versus Ridesharing Growth](image)


As ridesharing penetration increases and more drivers rely on these sharing platforms to meet their full employment needs versus only a gig to secure supplemental income, these business models will continue to face scrutiny. The number of ride-share drivers, who are often designated as individual proprietors, rather than payroll employees, has increased by over 400% since 2012.18 Indeed, efforts are already underway by sharing economy platforms and workers to empower drivers and provide a better safety net. A broader safety net would reduce the vulnerability of these workers in a downturn or in any adverse economic advent.

**EXHIBIT 57**

As Ridesharing Penetration Increases and More Drivers Rely On These Sharing Platforms, These Business Models Will Continue to Face Scrutiny

![Taxi & Limousine Services: Payroll Employees Versus Individual Proprietorships (Thousands)](image)

Data as at December 31, 2017. Source: Bureau of Labor Statistics, IRS, KKR GBR.

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18 Kevin Wright, "Along for the ride: Tracking the sharing economy’s impact on GDP," Kansas City Federal Reserve, 2017.
Apparel

Per our Consumer/Retail private equity team, retail has been among the last frontiers of the sharing economy given the challenges of managing logistics, inventory and consumer preferences. Indeed, the sharing economy business model may not be a convenient solution for products or services used on a daily basis. That said, a peer-to-peer based online marketplace such as eBay has found its niche in creating community and an experience enabling users to sell and find unique products. Similarly, newer brands who are enabling consumers to rent or share sought after luxury goods or trendy items are experiencing success.

Both supply and demand-driven factors have propelled growth of apparel renting and sharing businesses. On the one hand, the rise of fast fashion outlets offering inexpensive, trendy items with short shelf-lives, and the rising prevalence of the Instagram culture where experiences are photographed and widely shared on social media, have contributed to the decline in clothing utilization. On the other hand, the decline in utilization has brought attention to the apparel sector’s responsibility for 20% of all industrial water pollution or 10% of total carbon emissions, which has led to rising concerns over sustainability and driven the demand for alternative utilization models.

According to data obtained by the Ellen Macarthur Foundation in conjunction with Euromonitor, global clothing utilization – the average number of times a garment is worn before it ceases to be used, has decreased by 36% compared to 15 years ago. In particular, fast-fashion has led to an increase in the number of styles and overall output. In the US, clothing consumption has doubled to 14 million tons per year in less than two decades. An estimated $500 billion of value is lost every year due to barely worn clothing and the entire system creates greenhouse gas emissions of 1.2 billion tons a year19. Successful companies will address some of the environmental concerns plaguing the industry. Doing so will likely drive incremental demand as Millennials are willing to pay more to support sustainable brands.

Clothing items that have high value and low usage, characteristics that have driven sharing in other sectors, may be the ground for penetration in apparel. Customers obtain the aspirational access to clothing - either to a single item or to a broader wardrobe that they could not otherwise afford, and can feel less guilty about spending a lot of money for an item they will wear only once or twice. These models allow customers to borrow items for a set period at 10-20% of an item’s full retail value. Millennial shoppers, who are more interested in spending money on trips and festivals versus clothing, are among the core drivers of demand.

When comparing rentership and sharing business models in apparel, customer service and events seem to drive rentals, while the buying and selling community and the opportunity to generate income drives sharing. Using Quantifind’s algorithm for extracting signals from Twitter conversations, dresses and customer service are among the most frequently discussed topics when discussing clothing rentals. Customer service from purveyors such as Rent the Runway includes allowing customers to borrow up to four items at a time, swap or return any time, and without worrying about laundry or dry clean-

Positive commentary around both rentership and sharing apparel business models focuses on great prices for sought after designer clothing and apps with features that make selling and shopping easy and convenient. Poshmark in particular gives users an opportunity to make money off their closet by creating a pseudo online boutique.

EXHIBIT 58

Analyzing Conversations Around Apparel Lease/Rent

<table>
<thead>
<tr>
<th>Conversation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>@RenttheRunway</td>
<td>Hey absolutely love your service + just ordered a couple of fancy dresses for Vegas! Would love to chat about collab ideas.</td>
</tr>
<tr>
<td>I’m really excited to wear another @RenttheRunway dress at the DGOD wedding tmrw. Had my first in-store experience and y’all were the best 🤩</td>
<td></td>
</tr>
<tr>
<td>So excited to wear my super cute dress this Saturday to the first wedding of the year! Thanks, @RenttheRunway!</td>
<td></td>
</tr>
<tr>
<td>Just signed up for @RenttheRunway unlimited. SO. EXCITED. It seriously can’t get here fast enough! 🥳</td>
<td></td>
</tr>
<tr>
<td>@RenttheRunway thank you so so much for all of your help with my order! Great customer service❤️❤️</td>
<td></td>
</tr>
<tr>
<td>@RenttheRunway Best customer service anyone could ask for!!! Thanks to your team for helping me avoid a crisis! I am a forever customer❤️❤️</td>
<td></td>
</tr>
</tbody>
</table>

Data as at August 14, 2019. Source: Quantifind.

Analyzing Conversations Around Secondhand Apparel

**Conversations about Secondhand Apparel for Lease/Rent**

Aug 15, 2018 - Aug 14, 2019

<table>
<thead>
<tr>
<th>Total People</th>
<th>20,008</th>
</tr>
</thead>
<tbody>
<tr>
<td>love</td>
<td>2,889</td>
</tr>
<tr>
<td>selling</td>
<td>2,015</td>
</tr>
<tr>
<td>cute</td>
<td>1,057</td>
</tr>
<tr>
<td>clothes</td>
<td>1,034</td>
</tr>
<tr>
<td>closet</td>
<td>854</td>
</tr>
<tr>
<td>stuff</td>
<td>845</td>
</tr>
<tr>
<td>Nice</td>
<td>800</td>
</tr>
<tr>
<td>item</td>
<td>798</td>
</tr>
<tr>
<td>shit</td>
<td>786</td>
</tr>
<tr>
<td>check</td>
<td>732</td>
</tr>
<tr>
<td>sale</td>
<td>648</td>
</tr>
<tr>
<td>app</td>
<td>619</td>
</tr>
<tr>
<td>find</td>
<td>613</td>
</tr>
<tr>
<td></td>
<td>556</td>
</tr>
<tr>
<td></td>
<td>553</td>
</tr>
<tr>
<td>account</td>
<td>504</td>
</tr>
<tr>
<td>order</td>
<td>503</td>
</tr>
<tr>
<td>best</td>
<td>482</td>
</tr>
<tr>
<td>listed</td>
<td>478</td>
</tr>
</tbody>
</table>

Data as at August 14, 2019. Source: Quantifind.

**EXHIBIT 60**

Decline in the Number of Days A Garment Is Worn Before It Is Discarded

Average Number of Times a New Garment Is Worn (Including Reuse Within Each Region)

Data as at December 31, 2016. Source: Euromonitor, Ellen Macarthur Foundation.

**EXHIBIT 61**

Decline in Apparel’s Share of the Consumer Wallet

change in consumer wallet share (2000 vs 2018)

Data as December 31, 2018. Source: Bureau of Economic Advisers, KKR GBR.

To meet this growing demand, fashion rental and sharing companies must address the challenges of holding and managing inventory for a wide range of styles and sizes, as well as coordinate the logistics of dry cleaning and repairs. Rent the Runway buys each product in a range of sizes, and sends users two sizes in case the one they order does not fit. The company has also invested heavily in logistics to ensure products returned to the company in the morning can be ready to ship to a new customer that evening. However, this problem is more difficult to address for peer-to-peer companies. StyleLend.

When comparing rentership and sharing business models in apparel, customer service and events seem to drive rentals, while the buying and selling community and the opportunity to generate income drives sharing.
requires owners to send in items they want to rent out first to the company, which manages dry cleaning and delivery. Tulerie attempts to decrease complexity by managing its own user network. Tulerie interviews potential users who must gain acceptance into the network before they are able to list clothing from a select set of designers, and provides a white-glove service where the company will take charge of rentals from photographing to shipping and cleaning.

We see further challenges for new sharing economy business models from existing brands. Existing brands are likely to start renting services of their own. For example, Rebag, the luxury handbag resale company, launched a new business called Rebag Infinity where shoppers who buy handbags can return the item up to six months later and receive a 70% credit to purchase a new bag. We also anticipate hesitations in choosing to rent or share lower priced or heavily used items that are worth the investment. Customers will likely continue to wear everyday staples like a great fitting pair of jeans or a leather jacket, as well as continue to own their smartphones.

**Conclusion**

In the event of an economic downturn, the Federal Reserve will have less room to cut interest rates or employ other alternative measures used during the Great Financial Crisis. Despite widespread focus on the health and resilience of the aggregate consumer sector, we highlight vulnerabilities that lie beneath the surface among the home renting cohort in particular. The average middle-income renter who represents ~20-25% of households holds very little if any financial or residential wealth. Indeed, the average net worth of a renter is $5,000. While incomes have improved since the financial crisis, the median household is not saving any of that income amid high rental and healthcare prices. Further, our data suggests that even households who earn incomes over $75,000 face challenges. As a result, we expect higher delinquencies for renters writ large in a downturn.

The rentership and sharing economy proliferated post the financial crisis in the absence of traditionally secure jobs or strong income growth opportunities. However, despite the improvement in the employment and income picture, renting and sharing remain prevalent. For one, the absence of savings for many renters limits their ability to afford the down payment on a house or car. Second, structural constraints such as high levels of student debt or mortgage lending standards continue to pose challenges for ownership. Third, the flexibility and convenience offered by sharing economy models remain attractive to consumers. Consumers enjoy the benefits of access without the responsibilities of direct ownership. Consequently, while we expect ownership rates to improve, the sharing and rentership models that have penetrated many sectors including housing, autos and apparel, are likely to proliferate.

That said, the displacement of traditional secure jobs and the creation of more part-time work first catalyzed by the Financial Crisis, and later sustained and supported by the sharing economy, poses challenges to the business model. The advent of technology platforms that could efficiently match asset owners and service providers to users has made gig work viable. As more workers rely on multiple gigs for their long-term employment needs, the models of work and the relationship between labor, government and companies will need to continue to evolve. In the short term, gig economy workers and asset light consumers need to save more. In the long term, governments and companies may need to provide benefits and security that holding assets had traditionally offered.

Further, the decline in homeownership will likely translate into a loss of a wealth creation opportunity for a large segment of the population. Historically, homeownership has been an important determinant of the long-run well-being of families and individuals, enabling investments in education and businesses, providing economic security in times of lost jobs or poor health, and a means of wealth transfer to children.²⁰

For investors, we suggest a focus on four primary areas:

- Lower rates of homeownership will likely lead to continued delays in asset purchases in the short term, followed by a slower rate of consumption growth in the medium to long term. As spending continues to outpace income growth, this renting and sharing consumer will continue to lack the savings to make asset purchases. Further, as Millennials enter their forties and healthcare burdens rise, savings will likely increase at the expense of consumption. In conjunction with the impact of demographics, this longer-term shift in consumption may lead to even slower growth in spending on goods, as well as some softness in discretionary services spending in favor of increased spending on healthcare as well as contributions to savings.

- Sharing and rentership models are likely here to stay, and will continue to disrupt traditional business models given the benefits they provide to consumers as well as workers.

- Be cautious about investing in sharing economy models that do not directly address the evolving needs of workers. We are in the middle of the Fourth Industrial Revolution, the digital revolution, which has resulted in a redefinition of work. The transition will likely continue to disrupt industries and investors should take heed.

- As the large consumer sector is diverse, be sure to disaggregate macro trends to understand how different cohorts behave. If business success relies upon demand fueled by renters, the business model may face more challenges than anticipated in a downturn.

- Finally, the impact of the new asset light consumer and the transition to a services economy may have contributed to slower growth in capex. New sharing economy business models for example rely less on traditional equipment. Instead, software and servers fuel the digital services economy. Increased sharing economy penetration creates less demand for the same quantity of assets e.g., autos, resulting in slowing growth in capex.

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²⁰ Christopher E. Herbert, Daniel T. McCue, and Rocio Sanchez-Moyano, “Is Homeownership Still an Effective Means of Building Wealth for Low-income and Minority Households? (Was it Ever?),” Harvard University, Joint Center for Housing Studies, September 2013.
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