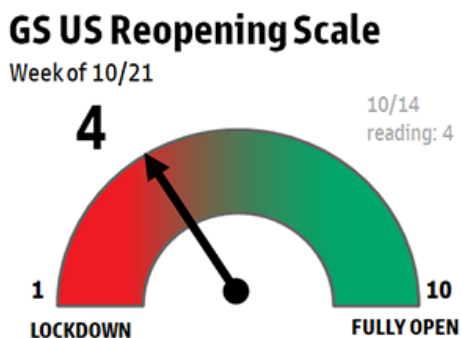


Note: The following is a redacted version of the original report published October 21, 2020 [19 pgs].

## Measuring the Reopening of America

# The GS US Reopening Scale: Range of recovery paths widen for different categories, remain a '4' (Week of Oct 21)



**New this week: We hear from our Real Estate and REITs team on the state of the return to work through the lens of office markets, sublease rates, asking rent trends and residential suburban migration, which have reflected a slower than expected return, leading to high vacancies and declines in new leasing activity.**

In week 25 of the *Measuring the Reopening of America* series, several

back-to-normal categories that had improved over the past few weeks reversed trends, including lodging and dining, while stay-at-home vertical growth largely decelerated. Net, our composite score remains the same as last week as the pace of reopening continues to fluctuate across different categories but the overall trend fails to show progress for essentially the third month.

**Heath P. Terry, CFA**  
+1(212)357-1849 | heath.terry@gs.com  
Goldman Sachs & Co. LLC

**Richard Skidmore, CFA**  
+1(801)741-5459 | richard.skidmore@gs.com  
Goldman Sachs & Co. LLC

**Noah Poponak, CFA**  
+1(212)357-0954 | noah.poponak@gs.com  
Goldman Sachs & Co. LLC

**Jason English**  
+1(212)902-3293 | jason.english@gs.com  
Goldman Sachs & Co. LLC

**Bonnie Herzog**  
+1(212)902-0490 | bonnie.herzog@gs.com  
Goldman Sachs & Co. LLC

**Alexandra Walvis, CFA**  
+1(212)357-6283 | alexandra.walvis@gs.com  
Goldman Sachs & Co. LLC

**Susan Maklari**  
+1(212)357-3906 | susan.maklari@gs.com  
Goldman Sachs & Co. LLC

**Jordan Alliger**  
+1(212)357-4913 | jordan.alliger@gs.com  
Goldman Sachs & Co. LLC

**Kate Wang**  
+1(212)902-7929 | kate.wang@gs.com  
Goldman Sachs & Co. LLC

**Adam Hotchkiss**  
+1(212)902-3941 | adam.hotchkiss@gs.com  
Goldman Sachs & Co. LLC

**Ankit Prasad**  
+1(212)934-6394 | ankit.prasad@gs.com  
Goldman Sachs India SPL

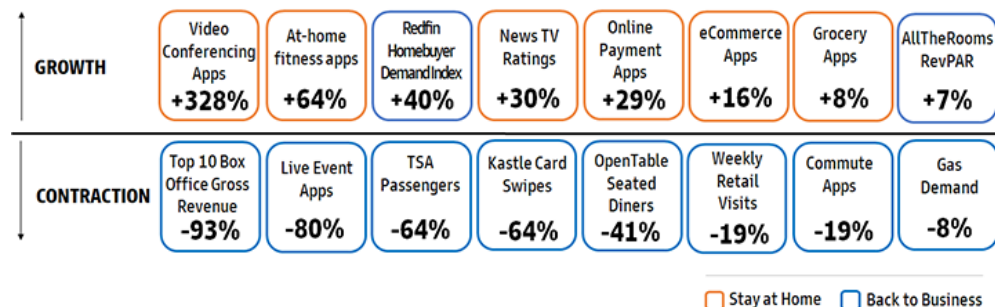
**Katherine Fogertey**  
+1(212)902-6473 | katherine.fogertey@gs.com  
Goldman Sachs & Co. LLC

**Nathan Rich**  
+1(212)357-2710 | nathan.rich@gs.com  
Goldman Sachs & Co. LLC

**Joe Ritchie**  
+1(212)357-8914 | joseph.ritchie@gs.com  
Goldman Sachs & Co. LLC

### Exhibit 1: Reopening at a glance: Back-to-business segments see declines, stay-at-home see re-acceleration

% change y/y for week ending October 18



This exhibit summarizes data from sources listed in Exhibits 5, 14 and 15.

Source: Goldman Sachs Global Investment Research

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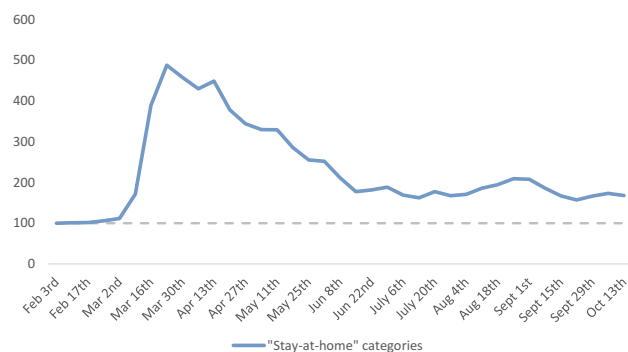
This week, we hear from our Real Estate and REITs team on the state of office markets, sublease rates, asking rent trends and residential suburban migration, as return to office rates have been slower than expected leading to high vacancies and declines in new leasing activity.

### Highlights

- **Increased road travel over summer leads to spike in gas station visits.** GasBuddy published its latest report on 3Q20 gas station foot traffic and consumer ratings, based on more than 9 million consumer visits and 1 million ratings on the Gas Buddy consumer app, during the three month period between July and September. Over the summer months, total gas station visits saw a spike, and were 17% higher on an average compared to GasBuddy's footfall index (indexed against weekly visits over 1/5/20-2/22/20), as warm weather, and stronger preference for cars over air travel resulted in increased road travel over the summer. As of September 19, total gas station visits were back in line with pre-Covid levels, as seen in 1Q20.
- **Total US mortgage purchase applications rose 24% y/y for the week ended October 9 as housing activity reaccelerated sequentially and remains strong through early October.** On 10/20, home builder NVR reported 3Q results with orders up 40% y/y, led by the Northeast +68% and Southeast +56%. We note this compares to low single digit norms, especially for the Northeast given its mature profile and broader geographic shift towards more affordable regions of the country. In our view, the more recent growth is reflective of the **ongoing secular shift resulting from the pandemic as buyers seek out suburban locations and look to take advantage of historically low rates**. As reflected in our channel checks—along with NVR's results—housing is among the leaders of the economic recovery and still has legs to it.
- **Trends in apparel and accessories continue to point to a recovery.** Tiffany & Co. released positive preliminary August and September results last week, with preliminary net sales down slightly QTD, as the US sequentially improved and mainland China remained strong. The company called out that **the positive trends have continued into October**. VF Corp also reported last week and pointed to sequentially stronger momentum across brands and geographies in the quarter, with growth accelerating in mainland China (up 19% ex-FX), continued momentum in digital (up 42% ex-FX), and strengthening performance in September at both retail and wholesale. The company expects to return to low single digit growth in 2H20 driven by positive growth in 4Q20.

**Exhibit 3: Stay at Home categories decelerate slightly**

Date on x-axis represents first day of week measured

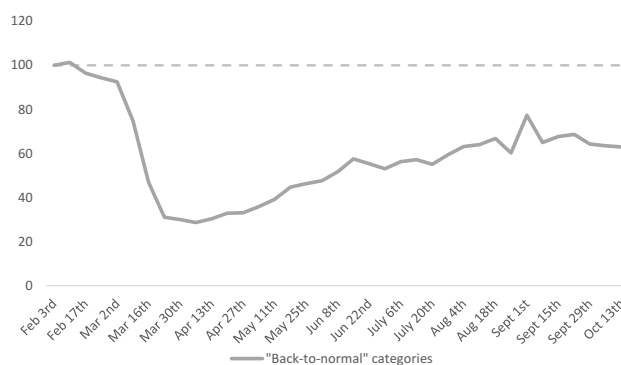


This exhibit summarizes data from sources listed in Exhibits 5, 14 and 15.

Source: Goldman Sachs Global Investment Research

**Exhibit 4: Back-to-Normal categories on average down 37% from February levels, but up 34pts from trough**

Date on x-axis represents first day of week measured



This exhibit summarizes data from sources listed in Exhibits 5, 14 and 15.

Source: Goldman Sachs Global Investment Research

## Weekly Trends

### Stay Home

While it is no surprise that services like Zoom, Amazon and Peloton remain in high demand during a time when many states and cities have uneven degrees of reopening policies, we track data across a number of sources and verticals to understand the extent to which different categories are being impacted.

This week, stay-at-home categories mostly decelerated with the notable exceptions of eCommerce and online payments. Among the stay-at-home grocery products, household cleaning agents remain in the lead with sales accelerating to +33% y/y. At-home fitness app and video conferencing app growth continues to decelerate, while food delivery and online streaming download volumes have essentially returned to 2019 levels on average. New TV ratings continue to be high as we near elections, with all the news TV channels we track showing significant positive y/y growth.

**Exhibit 5: “Stay at Home” metrics have re-accelerated**  
 Feb 10 - July 26 excluded for presentation purposes; see prior reports for data

Basket	Sector	Company/App	Metric	y/y % change, unless otherwise noted														Source
				Feb 3 - Feb 9	July 20 - July 26	July 27 - Aug 2	Aug 3 - Aug 9	Aug 10 - Aug 16	Aug 17 - Aug 23	Aug 24 - Aug 30	Aug 31 - Sep 6	Sep 7 - Sep 13	Sep 14 - Sep 20	Sep 21 - Sep 27	Sep 28 - Oct 4	Oct 5 - Oct 11	Oct 12 - Oct 18	
Stay at Home	eCommerce		US App Downloads	0%	24%	19%	29%	16%	20%	17%	19%	21%	15%	10%	6%	9%	16%	Sensor Tower
			US App Downloads	48%	6%	-4%	-18%	-8%	-3%	0%	-2%	-4%	-2%	4%	14%	13%	8%	
	Groceries		Refrigerated dough	-2%	27%	22%	19%	19%	21%	12%	17%	21%	24%	24%	17%	12%		
			Household cleaning	4%	23%	18%	25%	21%	23%	16%	20%	25%	30%	35%	29%	33%		
			% growth	3%	14%	14%	14%	16%	16%	4%	23%	19%	14%	14%	14%	15%		
			Alcohol	0%	12%	8%	9%	9%	9%	3%	10%	9%	9%	9%	6%	8%		
	Online Media		US App Downloads (m/m change)	-46%	-11%	-47%	-21%	-13%	-9%	-8%	88%	59%	7%	-6%	-54%	-37%	-9%	Sensor Tower
			US App Downloads	1%	3%	4%	3%	0%	3%	11%	14%	17%	15%	3%	2%	-2%	4%	
	News TV		CNN	-5%	75%	-9%	55%	81%	141%	83%	35%	60%	57%	-8%	113%	109%	19%	Nielsen
			Fox News Channel	46%	-3%	6%	22%	33%	33%	101%	31%	30%	30%	20%	78%	40%	56%	
	Online Gaming		MSNBC	-16%	21%	40%	29%	51%	91%	61%	48%	33%	40%	-19%	34%	20%	13%	
			Steam	11%		67%		62%						81%				
	Food Delivery		Total Hours Watched	9%	31%	28%	31%	32%	35%	37%	39%	40%	43%	45%	45%	48%	47%	Sully Gnome
			Users	24%	2%	1%	7%	7%	7%	2%	8%	20%	1%	-2%	-8%	2%	3%	Steam website
	At-Home Fitness		iOS app downloads	4%	49%	32%	68%	80%	63%	74%	41%	20%	43%	41%	57%	83%	3%	Sensor Tower
			Consumer Spend	-27%	-3%	7%	0%	-5%	-5%	-8%	6%	0%	4%	7%	11%	54%	17%	Fadus
Video Chat Apps		Users	-1%	80%	88%	57%	40%	67%	106%	80%	85%	111%	90%	88%	66%	64%	Sensor Tower	
		US App Downloads	-12%	415%	364%	365%	501%	507%	590%	602%	499%	292%	279%	294%	342%	339%		
Online Payment Apps		Users	16%	31%	27%	22%	15%	16%	30%	27%	23%	18%	24%	23%	23%	29%		
		US App Downloads																

Source: Sources in exhibit, compiled by Goldman Sachs Global Investment Research

### Stay home category updates

- At Square’s annual partner and developer conference this week, the company announced the release of Terminal API, which is a card payment device that developers can connect to their POS. Square also noted that it has more than quadrupled its base of managed partners since 2018, and is expected to reach 1mn total partner-connected sellers in 2021.
- Zoom released the public beta for OnZoom last week, a platform for paid Zoom users to create and monetize events. OnZoom has added event discovery and monetization features, including the ability to list and sell tickets, share and promote events via social media and favorite events.

**This week, we hear from our Real Estate and REITs analyst Richard Skidmore on the state of office markets, sublease rates, asking rent trends and residential suburban migration, as return to office rates have been slower than expected leading to high vacancies and share declines in new leasing activity.**

**Bottom line:** Office market fundamentals have weakened during the pandemic, especially in high-density urban and coastal locations, as the economy slowed and employers transitioned to working from home. Even as the economy begins to recover, employees have not yet returned to the office in large numbers. A vaccine and reduced concerns about the virus are likely needed to drive a meaningful recovery in a return to the office. We believe WFH will have a marginal impact on office demand partially offset by economic growth and a reversal of densification.

The trend of WFH has led to increased urban to suburban migration. For example, Mymove.com reported

US Postal Service (USPS) data indicated New York City (NYC) and San Francisco (SF) had ~111,000 and ~27,000 net move outs from February to July 2020 compared to only ~19,000 and ~9,700 in 2019 (see [report](#)). The urban to suburban trends have negatively impacted multifamily fundamentals in urban coastal markets, while sunbelt markets have been more resilient. Multifamily asking rents and occupancy have declined sharply in urban coastal markets, but have been more resilient in sunbelt markets. We expect the sunbelt multifamily markets to continue to outperform urban coastal multifamily markets until employees (e.g. prospective multifamily tenants) begin returning to urban office markets in greater numbers. We also expect the recent trends in migration to further support the strength in the single family rental market as well.

### Latest Trends

**Office:** Employees' return to the office has been slower than expected. Prior to Labor Day, office companies reported that office utilization (percent of employees in the office) was in the mid to high single digits across key urban markets (e.g. NYC, SF, Boston). Landlords expected utilization to increase after Labor Day; we had been expecting utilization to improve to 20%-25%. However, companies at the Goldman Sachs Private Real Estate Conference in early October noted that office utilization increased to the mid-teens in September - a slower pace than expected. Based on Google mobility to the workplace data, employee mobility to the workplace had been relatively stable through 3Q2020 with a modest uptick after Labor Day (see [Exhibit 6](#)). San Francisco and New York remain the furthest below pre-covid baselines. Card swipe data from Kastle Systems, which tracks the number of building security card swipes and fob taps, also points to a similar trend ([Exhibit 7](#)) and only modest improvement relative to pre-Labor Day attendance. Increased numbers of employees in the office will be an important catalyst for office companies, in our view, but will likely be limited absent a vaccine and/or decline in the virus. As employees return, we believe employees and employers will see productivity improve, collaboration and idea generation increase, greater mentoring/training and culture building, which will in turn lead to increased office utilization.

As office utilization has been slow to recover and work from home has proven functional to keep businesses operating, office fundamentals (e.g. vacancies, asking rents, sublease space) in key urban markets have deteriorated since the beginning of the pandemic according to CoStar data.

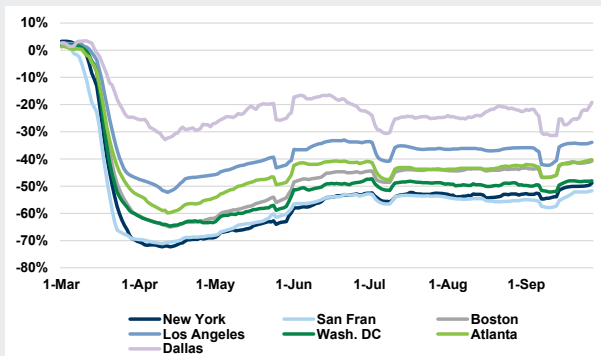
- **Vacancies and net absorption (a measure of demand):** Office vacancies in NYC and SF have increased 120bps and 370bps to 9.2% and 9.5%, respectively, since early March 2020. Vacancies are at five-year highs in both NYC and SF. The rise in vacancies and sharp decline in new leasing activity have led to negative office space absorption in 3Q2020 with trailing 12-month absorption falling to negative 5.3mn sq ft in NYC ([Exhibit 8](#)) and negative 3.8mn sq ft in SF ([Exhibit 9](#)) as reported by CoStar - levels not seen since the Great Financial Crisis in 2009.
- **Sublease space:** As WFH continues and companies try to reduce their office space, companies have looked to sublet their office space. Available sublease space has increased sharply in SF year-to-date with sublease space accounting for 40% of the total 21mn sq ft of available space, up from 30% of only 12.2mn sq ft at yearend 2019. In NYC, sublease space stands at nearly 23% of available space, up from 22% at yearend. While the percent of sublease space has increased only 100bps since yearend, total absolute sublease space in NYC has increased to 20mn sq ft, up from 15.6mn at yearend as total

available space has increased by 21% YTD.

- Asking rents:** Increased vacancies and available sublease space has begun to pressure office asking rents. Office asking rents in SF have declined 4.2% since early March and are down 1.5% YoY. In NYC, office asking rents have fallen 3.2% since early March and 1.3% from a year ago. Comments from industry participants at the Goldman Sachs Private Real Estate Conference in early October indicated that net effective rents (asking rents minus concessions) are down 10%-12% in NYC.

**Exhibit 6: Return to office activity was relatively stable through 3Q2020 with a modest uptick in early September after Labor Day**

Mobility to the workplace, relative to pre-covid baseline

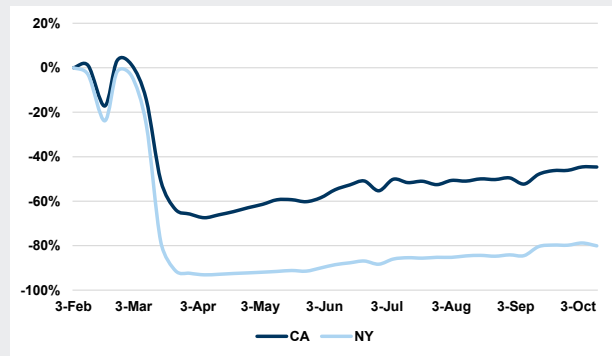


Google LLC "Google COVID-19 Community Mobility Reports".  
<https://www.google.com/covid19/mobility/> Accessed: Oct. 16, 2020

Source: Google COVID-19 Community Mobility Reports

**Exhibit 7: As of mid-October, card swiping in New York was down 80% from the first week of February**

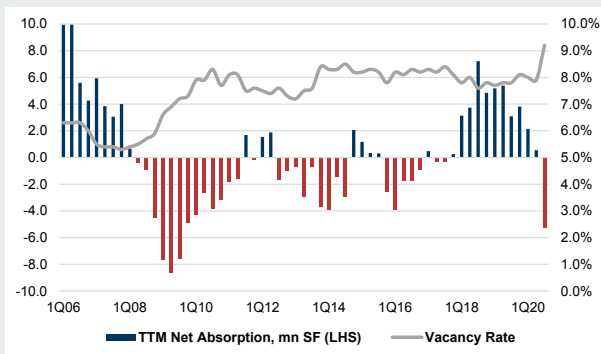
Building security card swipes, relative to pre-covid baseline



Source: Kastle Systems

**Exhibit 8: New York's vacancy rate reached a high of 9.2% in 3Q2020**

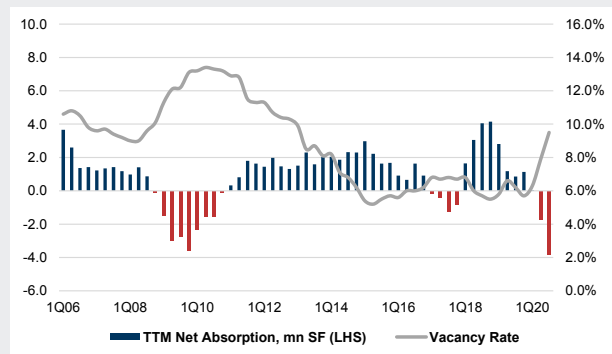
New York City TTM Net Absorption and vacancy rate



Source: CoStar

**Exhibit 9: San Francisco's vacancy rate spiked to 9.5% in 3Q, the highest level in a decade**

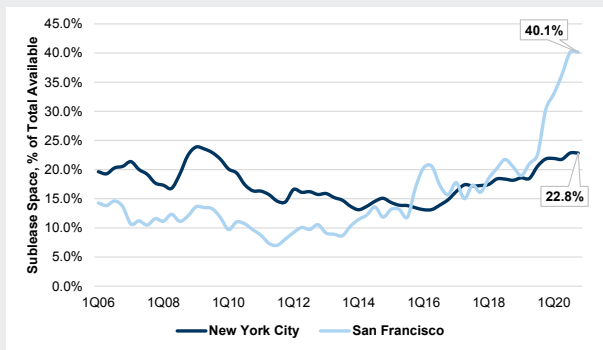
San Francisco TTM net absorption and vacancy rate



Source: CoStar

**Exhibit 10: Sublease space now comprises 40% of available inventory in San Francisco**

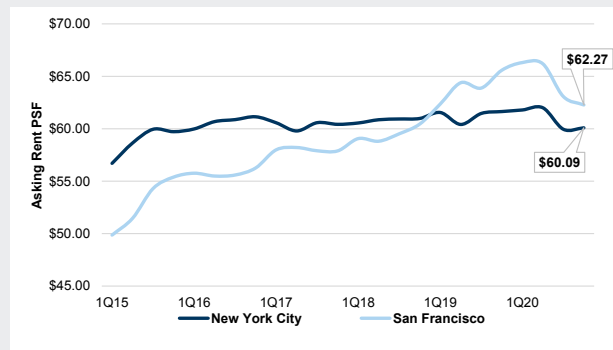
Office sublease space as a percent of total available space, 4QTD



Source: CoStar

**Exhibit 11: San Francisco asking rates are now 5.0% lower than a year ago**

Asking rent per square foot, 4QTD

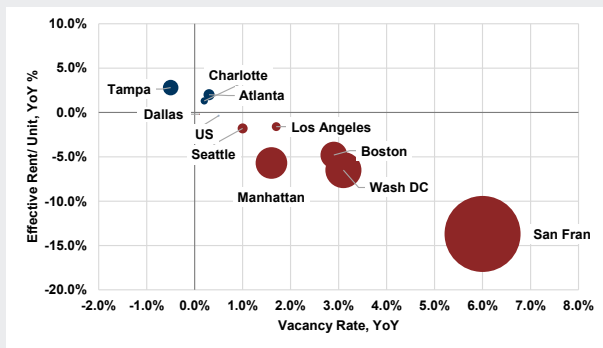


Source: CoStar

**Residential (multifamily and single family rentals):** Operating fundamentals within multifamily and single family rentals (SFR) have been impacted by migration trends towards suburban and sunbelt markets and out of urban and coastal locations. Comments from industry participants at the Goldman Sachs Private Real Estate Conference indicated that migration trends continue to favor suburban and sunbelt markets relative to urban and coastal markets. Multifamily vacancies have risen more in coastal markets than in sunbelt markets, which has led to greater declines in effective rents (asking rents minus concessions) in coastal markets. For example, San Francisco has experienced the largest increase in multifamily vacancies and the largest decline in net effective rents (Exhibit 12). Within SFR, companies noted that occupancy has risen to record or near record levels in 3Q2020 and blended lease rates have accelerated through August to 3.6% YoY (Exhibit 13) as they have benefited from customer demand for increased space in more suburban markets.

**Exhibit 12: Sunbelt multifamily markets are outperforming urban coastal markets**

Year-over-year change in vacancy and effective rent per unit by city

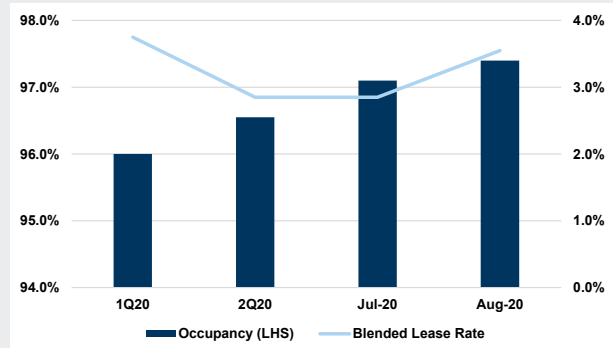


Bubble size and color represent magnitude and direction of change in effective rent per unit.

Source: CoStar, Goldman Sachs Global Investment Research

**Exhibit 13: Single family rental occupancy at record levels in August driving blended lease rates higher**

Occupancy (%); blended lease rate YoY percent change



Data is the average of AMH and INVH's reported occupancy and blended lease rates

Source: Company data, Goldman Sachs Global Investment Research



### Back to Normal

The “Back to Normal” category includes some of the most heavily impacted consumer segments, including commuting, dining and all aspects of travel.

Back-to-normal categories were mixed this week, with OpenTable seated diner figures (-41% y/y) reversing its significant holiday weekend improvement last week (-36% y/y) as case counts rise and temperatures cool. Retail and travel figures, including weekly retail visits, outlet mall retail visits, lodging metrics and airline data, were all roughly flat from the prior week. However, within lodging there is still a clear preference for alternative accommodations, with AllTheRooms RevPAR +7% in the week ending October 11th, compared to US Hotel Occupancy at -29% y/y and ADR -26% y/y. Kastle card swipes, a measure of the pace of return to work, have remained at -64% y/y since mid-September, after improving steadily since April. Gas demand also reversed its course of improvement this week to reach -8% y/y (compared to -6% and -7% in the two prior weeks).

**Exhibit 14: “Back to Normal” metrics seeing mixed trends, though mostly still down y/y**  
 Feb 10 - July 26 excluded for presentation purposes; see prior reports for data

Basket	Sector	Company/App	Metric	y/y % change, unless otherwise noted																Source
				Feb 3 - Feb 9	July 20 - July 26	July 27 - Aug 2	Aug 3 - Aug 9	Aug 10 - Aug 16	Aug 17 - Aug 23	Aug 24 - Aug 30	Aug 31 - Sep 6	Sep 7 - Sep 13	Sep 14 - Sep 20	Sep 21 - Sep 27	Sep 28 - Oct 4	Oct 5 - Oct 11	Oct 12 - Oct 18			
Back to Normal	Gym Attendance	Foursquare	US App Downloads	-42%	-53%	-51%	-43%	-40%	-39%	-37%	-34%	-37%	-34%	-31%	-31%	-30%	-44%	Sensor Tower		
			Gym Foot Traffic	-43%	-42%	-41%	-40%	-39%	-37%	-34%	-37%	-34%	-31%	-31%	-30%	-30%	-30%	Foursquare		
			US App Downloads	-18%	-48%	-48%	-42%	-48%	-45%	-40%	-40%	-33%	-40%	-41%	-37%	-44%	-44%	Sensor Tower		
	Commuting	Google COVID-19 Community Mobility Reports	Gas Demand	1%	-8%	-11%	-11%	-10%	-8%	-7%	-14%	-5%	-9%	-7%	-6%	-8%	-8%	EIA		
			Transit % change from baseline	-29%	-28%	-28%	-29%	-29%	-29%	-27%	-30%	-29%	-30%	-29%	-30%	-29%	-29%	Google		
			Workplaces % change from baseline	-31%	-31%	-31%	-31%	-30%	-30%	-30%	-34%	-27%	-26%	-26%	-26%	-26%	-26%	Google		
	Box Office	Kastle Card Swipes	% change from baseline	0%	-68%	-68%	-68%	-67%	-66%	-67%	-66%	-67%	-66%	-64%	-64%	-64%	-64%	-64%	Kastle	
			US Top 10 Gross	27%	-100%	-100%	-100%	-99%	-98%	-92%	-90%	-79%	-91%	-88%	-94%	-95%	-93%	-93%	Box Office Mojo	
	Sports TV	NBCSN	Ratings	-22%	-92%	-92%	-91%	-89%	-79%	-81%	-79%	-80%	-76%	-78%	-79%	-76%	-76%	-76%	Box Office Mojo	
			Movies Released	-6%	24%	15%	16%	-29%	-18%	-45%	-36%	-45%	16%	12%	12%	-34%	-33%	-33%	Box Office Mojo	
	Dining	OpenTable	Seated diners	-28%	-14%	83%	97%	117%	195%	89%	407%	72%	57%	95%	-43%	-30%	-46%	-46%	Nielsen	
			Weekly Visits	15%	-26%	-9%	-12%	-8%	-26%	-8%	-26%	-8%	-26%	-8%	-26%	-8%	-26%	-8%	-26%	-8%
	Retail	Cosmelec	Outlet Malls	-8%	-25%	-27%	-25%	-25%	-22%	-22%	-19%	-12%	-15%	-15%	-17%	-18%	-19%	-19%	ShopperTrak RCT Corporation	
			Weekly Visits	-8%	-55%	-57%	-56%	-54%	-51%	-52%	-50%	-34%	-20%	-34%	-34%	-38%	-40%	-40%	ShopperTrak RCT Corporation	
			% growth	0%	-15%	-13%	-19%	-14%	-13%	-14%	-11%	-14%	-10%	-9%	-15%	-13%	-13%	-13%	IRI Worldwide	
	Retail and Recreation	Google COVID-19 Community Mobility Reports	Department stores	2%	-4%	-9%	-8%	-10%	-13%	-13%	-8%	-14%	-13%	-14%	-19%	-16%	-16%	-16%	IRI Worldwide	
			Consumer spend	2%	3%	11%	24%	33%	6%	19%	28%	16%	19%	26%	12%	12%	12%	12%	Factus	
	Airlines	Karak	Amusement Parks	-15%	-14%	-14%	-15%	-14%	-14%	-14%	-13%	-16%	-15%	-15%	-14%	-15%	-15%	-15%	Factus	
			Consumer Spend	-68%	-64%	-61%	-66%	-57%	-64%	-60%	-64%	-60%	-53%	-53%	-53%	-53%	-53%	-53%	Factus	
	Lodging	Hilton	TSA checkpoints	-75%	-74%	-73%	-71%	-71%	-70%	-66%	-67%	-66%	-68%	-67%	-64%	-64%	-64%	-64%	TSA	
			Consumer spend	-71%	-69%	-68%	-63%	-63%	-60%	-60%	-67%	-60%	-55%	-50%	-50%	-53%	-50%	-53%	Factus	
	Card Payments	Mastercard	Domestic flight search volume	-1%	-8%	-30%	-33%	-30%	-30%	-28%	-28%	-19%	-30%	-32%	-32%	-29%	-29%	-29%	Karak	
			US ADR	-1%	-27%	-25%	-25%	-23%	-23%	-23%	-17%	-28%	-29%	-30%	-26%	-26%	-26%	-26%	STR	
Online Travel	AllTheRooms	Google Search Traffic	1%	-7%	-31%	-28%	-25%	-21%	-25%	-19%	-8%	-8%	-11%	-12%	-8%	-11%	-11%	Google		
		RevPAR	-12%	-51%	-49%	-44%	-39%	-39%	-39%	-28%	-33%	-33%	-33%	-40%	-38%	-38%	-38%	AllTheRooms		
Live Events	Marriott	US App Downloads	37%	-12%	-9%	17%	25%	17%	17%	34%	17%	31%	35%	28%	29%	14%	14%	Sensor Tower		
		US Switched Volume	32%	-85%	-85%	-87%	-85%	-85%	-85%	-86%	-87%	-83%	-82%	-82%	-80%	-80%	-80%	-80%	Company data	

Source for Google Community Mobility data: Google LLC “Google COVID-19 Community Mobility Reports”. <https://www.google.com/covid19/mobility/> Accessed: <16th October 2020>; Google search data from Google Trends

Source: Sources in exhibit, compiled by Goldman Sachs Global Investment Research

### Back to normal category updates

- AMC has begun to offer private theater rentals at select locations starting at \$99. Rental customer can invite up to 20 people to a screening, and additional pricing depends on the title chosen for the screening.
- After decelerating over the past several months, recent IRI data (through Oct 11) indicates that Consumer Packaged Goods growth has stabilized at a high-single-digit growth level since August (excluding weekly fluctuations). That said, while Household and Personal Care has largely sustained its low-single-digit growth momentum over this period, Food posted high-single-digit growth for second consecutive week, which points to a deceleration relative to low double-digit growth seen earlier. Within Beverages, Non-Alcoholic Beverages accelerated to low

double-digit growth, while Alcoholic Beverages saw steady, but strong double-digit growth for the week. Tobacco sales improved to low single digits for the week.

### Business Activities

TSA passenger volumes were flat this week after the significant improvement last week over Columbus Day weekend. In our most recent GS Air Travel Restriction Tracker, we noted that data as of 10/18 indicates that 41 states fall above thresholds that would lead to travel restrictions by NY/NJ/CT, up from 36 in our last update and leaves just 10 states (including DC) that would not be subject to travel restrictions. We expect to see additional states added to the NY/NJ/CT travel restriction lists and no states removed in our two-week forecast. Redfin's homebuyer demand index is up 40.3% from pre-pandemic levels for the week ending October 11, as active listings fell to an all-time low on the platform, highlighting the high demand and interest in homebuying.

**Exhibit 15: Business Activity metrics recovering to reflect the economic impact of the crisis**  
Feb 3 - July 26 excluded for presentation purposes; see prior notes for data

Basket	Sector	Company/App	Metric	y/y % change unless otherwise noted												Source	
				July 27 - Aug 2	Aug 3 - Aug 9	Aug 10 - Aug 16	Aug 17 - Aug 23	Aug 24 - Aug 30	Aug 31 - Sep 6	Sep 7 - Sep 13	Sep 14 - Sep 20	Sep 21 - Sep 27	Sep 28 - Oct 4	Oct 5 - Oct 11	Oct 12 - Oct 18		
Business Activity	Industrial consumer	TSA passenger throughput	TSA passenger throughput	-74%	-73%	-71%	-71%	-70%	-66%	-67%	-69%	-67%	-64%	-64%		TSA	
			Actual air traffic growth	-60%	-61%	-61%	-61%	-61%	-61%	-62%	-62%	-62%	-57%	-58%	-58%		OAG
		3M	Passenger aircraft in service	-28%	-26%	-26%	-26%	-26%	-25%	-25%	-24%	-24%	-24%	-24%	-24%		Cirium
			Monthly sales (organic)			2%											Company data
			US Refinery Utilization %	-17%	-15%	-16%	-14%	-19%	-25%	-17%	-17%	-12%	-10%	-10%			Wards
	Autos	Auto SAAR	Auto SAAR	-11%	-11%	-11%	-11%	-10%	-11%	-7%	-10%	-9%	-10%			EIA	
			Domestic ethanol blending	1%	0%	-1%	-1%	-9%	-6%	-3%	1%	3%	2%	2%		Google	
		Mortgage Applications	Mortgage Applications	22%	22%	27%	33%	28%	40%	6%	25%	22%	21%	24%			Mortgage Bankers Association
			NSA	15%			16%										Census Bureau
	Industrial housing	Single-Family Housing Permits	Single-Family Housing Permits	-40%			-40%										Census Bureau
			Months of Supply, SAAR	-27%			-28%										National Association of Realtors (NAR)
		Existing Home For-Sale Inventory	Existing Home For-Sale Inventory	6%			-4%										Census Bureau
			Median	9%			11%										NAR
		New Home Prices	New Home Prices	46%			43%										Census Bureau
			Units, SAAR	9%			10%										NAR
Existing Home Sales		Existing Home Sales	32%	45%	50%	61%	51%	42%	42%	78%	36%	51%	43%			AEI	
		Purchase Loan Rate Lock Activity	-3%													Texas Comptroller	
Online Real Estate	Redfin	Texas cement shipments	29%					21%	23%	28%		35%			Redfin		
		Home-buying demand	-35%												Company data		
	Caterpillar	New aircraft orders	(20)						(3)						Company data		
Industrial equipment	Komtrax	Komtrax operating hours	-12%							-6%					Komtrax		
		Used construction equipment inventories	-7%												Sandhills Global		
	Sandhills Global	North America replacement tire volumes	-3%													Company data	
		Weekly rail economically sensitive carloads	-6%	-4%	-3%	-1%	-2%	16%	-8%	2%	0%	3%	4%			AAR	
Industrial trade	US rails	Weekly rail intermodal carloads	34%	37%	37%	35%	43%	43%	37%	44%	43%	50%	47%			AAR	
		Truck spot pricing	5.22	5.23	5.02	5.15	5.69	5.78	5.29	5.19	5.28	5.51	4.24	4.24			Truckstop
	DAT load to van ratio	DAT load to van ratio	166	181	176	192	205	218	175	213	214	237	209			Truckstop	
		Truck Load Availability Index (2014=100)															CASS
	Big 3	Cases freight index	-8%							-2%						Port data	
Multi-Industry	Fastenal	west coast ports inbound loaded containers	15%													Company data	
		Daily sales	3%							2%						Company data	
Personal Health	Dental	Dental volumes (vs. baseline)	-27%			-27%				-26%			-18%			ADA	
		Elective procedures (vs. baseline)	-13%			-13%				-13%			-22%			IQVIA	
		Branded Nrx volumes (mn)	3.1	3.2	3.6	4.5	4.9	5.7	6.2	7.9	8.2	8.8	9.0			IQVIA	
Power & Utilities	Electricity Demand	Generic Nrx volumes (mn)	38.6	38.8	38.8	38.8	38.9	39.7	35.8	40.0	39.8	39.8	40.1			IQVIA	
		Growth y/y	1%	-5%	2%	-4%	10%	0%	-8%	-8%	-12%	-12%	-1%			EEl	
Advertising	Facebook / Instagram	Cost per 1,000 Impressions	-7%	-1%	1%	2%	-14%	-18%	-8%	-3%	-9%	19%	7%	13%		Guipia Media	

Google search data from Google Trends

Source: Sources in exhibit, Goldman Sachs Global Investment Research

### Business Activities category updates

- Elevated trendlines persist in transports; with rail intermodal and economically sensitive carloads (ex coal and ag) staying in positive territory. While some sequential slippage in truck trends is to be expected after sharp run-up, we stress that trendlines remain well above normal and indicate a very tight market.
- Google Cloud announced the launch of Lending DocAI, a dedicated service for the mortgage industry. The tool is designed to help mortgage lenders and borrowers with a smoother transaction experience, including automated document reviews.

## The GS Reopening Scale

To look at all of these metrics in aggregate and quantify where consumers are on the path to economic recovery, we created a composite scale that is based on the inverse average of growth in all the sectors within “Stay at Home” categories and the normal average of “Back to Normal” categories relative to the week of February 3rd, reflecting where the consumer is between the two categories. We index a value of 100 to consumer activity in the week of February 3rd, before the impact of COVID-19 in the US, and the minimum value that the composite scale has reached is 38. We then translate the composite scale onto a GS reopening scale of 1-10 ([Exhibit 16](#)), where values less than or equal to 50 represent a 1 and a return to Feb 3rd levels would represent a 10. This week, we add an interactive version of our composite scale graph, which shows the contributions from each of the ‘Stay-at-home’ and ‘Back-to-normal’ verticals we include in the composite scale.

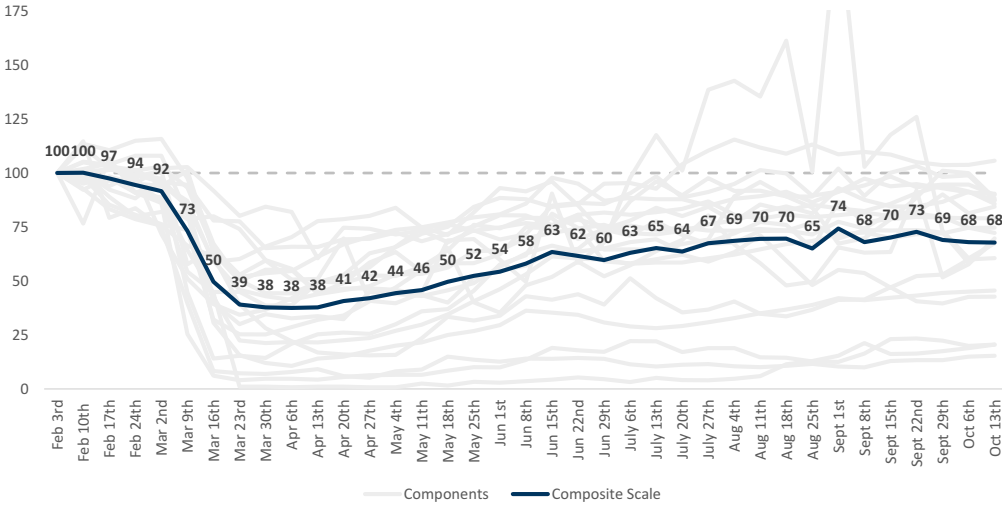
The GS US reopening scale, based on the trajectory of the Composite Scale, first reached 1 in the week of March 16th, where it remained for 10 weeks, indicating that consumers were still at the trough of impacts from COVID-19. This week our composite score of 68 supports a Reopening scale of ‘4’, the same as last week. We expect that as states continue to reopen for business these metrics will recover more meaningfully, bringing the scale to higher levels over time, though recent spikes in COVID-19 cases and associated state government actions may limit or reverse the pace of reopening. We would expect the recovery to a 10 to still take a number of months, during which period the “Stay at Home” category will show significantly slower growth, while the “Back to Normal” category will likely moderate declines as people resume daily activities of dining, commuting and travel, among others.

**Exhibit 16: Composite scale to Reopening Scale**

Composite Scale	Reopening Scale
100+	10
91-99	9
86-90	8
81-85	7
76-80	6
71-75	5
66-70	4
61-65	3
51-60	2
≤50	1

Source: Goldman Sachs Global Investment Research

**Exhibit 17: Composite Scale, Feb. 3 - October 18**  
Date on x-axis represents first day of week measured



This exhibit summarizes data from sources listed in Exhibits 5, 14 and 15.

Source: Goldman Sachs Global Investment Research

# Disclosure Appendix

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Financial Returns and Multiple use the Goldman Sachs analyst forecasts at the fiscal year-end at least three quarters in the future. Growth uses inputs for the fiscal year at least seven quarters in the future compared with the year at least three quarters in the future (on a per-share basis for all metrics).

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