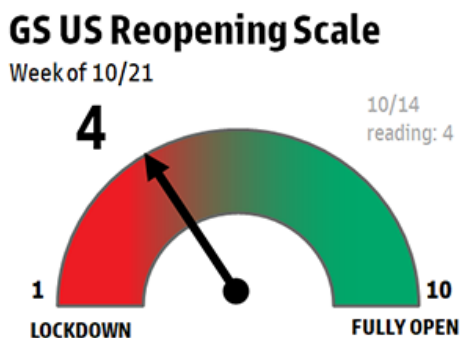


## Measuring the Reopening of America

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



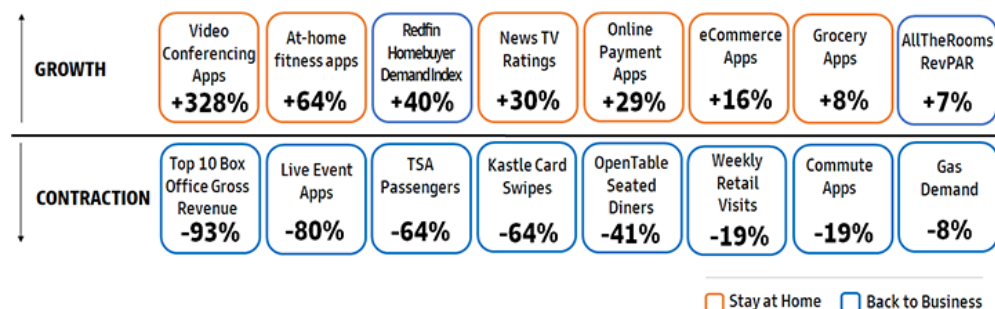
**New this week: We hear from our Real Estate and REITs team on the state of the return to work through the lens of office markets, sublease rates, asking rent trends and residential suburban migration, which have reflected a slower than expected return, leading to high vacancies and declines in new 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 (see [Tracking Coronavirus: October 20th](#)).

### 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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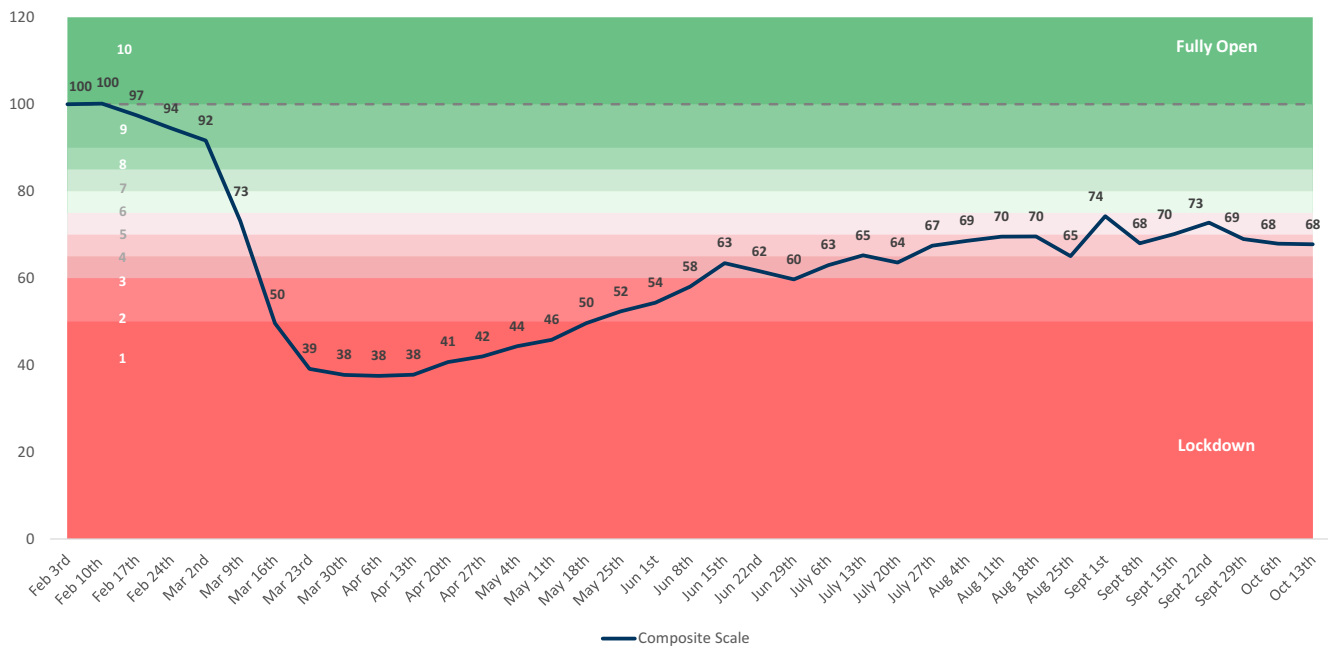
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The Composite Score that underlies the Reopening Scale ([Exhibit 2](#)) stayed flat at 68 (vs. 68 and 69 in the prior two weeks, respectively). Our GS US Reopening Scale remains a '4' this week reflecting this.

To determine the position of the scale (1-10) we calculate growth or decline in each category relative to a pre-Crisis baseline (week of Feb 3rd), and equal-weight each category into our Composite Scale. From there, we assign a Reopening score reflecting these quantitative inputs ([Exhibit 16](#)). As progress towards reopening continues, we expect that will show up in the Reopening Scale moving higher.

**Exhibit 2: Our Composite Scale stayed at a 68 this week**

Date on x-axis represents first day of week measured



This exhibit summarizes data from sources listed in Exhibits 5, 14 and 15. Modest historical revisions as we refine included data sets and account for minor data revisions.

Source: Goldman Sachs Global Investment Research

## Key Findings

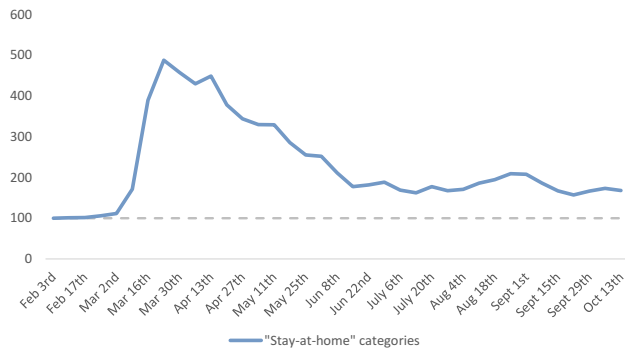
Our read of these data sources continues to describe a landscape we're all very familiar with: lots of eCommerce deliveries, streaming media, and video chats taking the place of theater visits, travel, and trips to the mall. As that picture changes ([Exhibit 4](#)), with a larger number of cities and states fluctuating between various stages of reopening and individuals charting their own path independent of much of that fluctuating guidance, the distinction between the red slipping onto the "Stay at Home" heatmap and the green showing up on the "Back to Normal" heatmap becomes increasingly blurry. Measures of Business Activity, which tend to be available on a more delayed basis, are beginning to show improvement in key categories like transportation, housing and machinery as businesses adapt to this reality.

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.

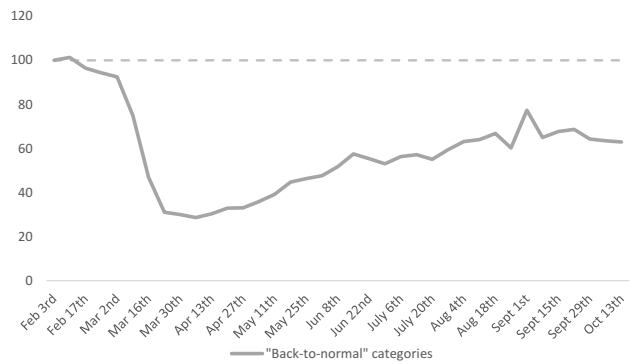
**Exhibit 3: Stay at Home categories decelerate slightly**  
Date on x-axis represents first day of week measured



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, led by Amazon’s app downloads surging to +33% y/y from +2% last week, driven by Prime Day on October 13 -14 this year. The 4 online payment apps we track all saw accelerated growth this week, led by Square Cash at +48% y/y. 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. Instacart, however, still grew +70% y/y in the most recent week. 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 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	
Stay home	eCommerce	Amazon		-24%	-1%	36%	17%	-5%	12%	24%	17%	23%	12%	9%	19%	17%
		Walmart Shopping		11%	-7%	21%	0%	20%	8%	35%	49%	18%	-8%	4%	-19%	-5%
		Target		9%	24%	23%	7%	2%	12%	4%	3%	-4%	-8%	-9%	-7%	-16%
	US App Downloads	Wayfair		-10%	-7%	-1%	3%	18%	-19%	-38%	-21%	-20%	-14%	-45%	-27%	-10%
		Ebay		19%	94%	93%	82%	90%	80%	83%	77%	89%	78%	83%	88%	72%
		Instacart		8%	99%	97%	86%	81%	81%	69%	45%	41%	49%	77%	86%	70%
	Grocery	Costco		124%	-76%	-60%	-47%	-38%	-34%	-27%	-24%	-29%	-35%	-30%	-29%	-27%
		Kroger		12%	-33%	52%	49%	22%	17%	-45%	-39%	-32%	-2%	-3%	-18%	-19%
		Refrigerated dough		26%	22%	19%	19%	21%	19%	17%	21%	24%	24%	11%	12%	
	% growth	Household cleaning		4%	18%	25%	21%	23%	16%	20%	26%	30%	35%	29%	33%	
		Alcohol		3%	14%	14%	16%	16%	4%	23%	16%	14%	14%	14%	15%	
		Staples		0%	8%	9%	9%	9%	3%	10%	9%	9%	6%	8%		
	Online Media	Netflix		1%	11%	11%	12%	13%	5%	11%	12%	13%	12%	8%	8%	
		Disney+		-20%	7%	-2%	-1%	-1%	16%	23%	12%	30%	2%	-4%	-10%	1%
		US App Downloads (m/m change)		-46%	-47%	21%	-13%	-9%	-8%	88%	59%	7%	-6%	-54%	-37%	-9%
	News TV	Hulu		11%	12%	12%	6%	13%	13%	6%	18%	6%	6%	0%	-4%	2%
		Amazon Prime Video		12%	-7%	-1%	-3%	-3%	5%	14%	20%	10%	0%	11%	7%	10%
		CNN		-2%	-9%	55%	81%	141%	83%	35%	60%	57%	-2%	113%	100%	19%
	Online Gaming	Fox News Channel		-46%	6%	22%	33%	33%	101%	31%	36%	36%	20%	78%	40%	56%
		MSNBC		-16%	40%	29%	51%	91%	61%	48%	33%	40%	-19%	34%	20%	13%
		Twitch Streams		11%	67%	31%	32%	62%				81%				
	Food Delivery	Steam		9%	28%	31%	32%	35%	37%	39%	40%	43%	45%	45%	46%	47%
		Users		24%	1%	7%	7%	7%	2%	8%	20%	5%	-2%	-8%	2%	3%
		Consumer Spend		32%	68%	68%	80%	63%	74%	41%	20%	43%	41%	57%	83%	
	At-home Fitness	Grabhub		-32%	15%	20%	5%	0%	-16%	-5%	-8%	-3%	-7%	-18%	-13%	-21%
		UseEats		-22%	4%	9%	4%	6%	3%	9%	2%	-8%	-1%	-4%	5%	11%
		DoorDash		-30%	2%	0%	-11%	-6%	-1%	4%	-1%	5%	7%	1%	10%	6%
	Video Chat Apps	Dominos		-20%	11%	21%	-1%	-3%	-14%	8%	1%	2%	7%	21%	99%	28%
		Proton		65%	245%	229%	169%	226%	308%	227%	183%	176%	240%	251%	162%	164%
		Map My Run		-18%	11%	23%	29%	57%	69%	67%	67%	52%	44%	66%	49%	
	Online Payment Apps	Nike Training Club		0%	83%	74%	93%	101%	83%	41%	56%	158%	26%	11%	11%	3%
		Yoga 1 Down Dog		-34%	49%	-20%	-8%	-23%	82%	84%	136%	150%	150%	159%	97%	133%
		Workout for Women		-18%	-26%	-23%	-24%	-27%	-12%	-18%	-17%	-16%	-10%	-2%	-28%	-30%
Online Payment Apps	Zoom		33%	1032%	1016%	1407%	1485%	1758%	1788%	1320%	817%	818%	861%	1017%	952%	
	Stripe		-22%	4%	3%	2%	13%	15%	-13%	-24%	8%	20%	-16%	-16%	-16%	
	Houseparty		-47%	55%	75%	93%	49%	25%	21%	4%	37%	30%	37%	23%	42%	
Square Cash App	PayPal		15%	37%	35%	16%	16%	27%	35%	20%	27%	36%	34%	31%	38%	
	Venmo		14%	16%	6%	2%	28%	6%	12%	4%	1%	7%	5%	6%	15%	
	Square Cash App		18%	50%	36%	36%	48%	87%	61%	59%	37%	47%	44%	42%	48%	
Zelle		18%	8%	12%	5%	3%	-1%	1%	10%	7%	5%	8%	12%	15%		

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. Office REITs share prices have declined an average 46% YTD despite only an 11% decline in average 2020 FactSet consensus FFO per share. We believe the underperformance reflects the uncertainty around the timing and magnitude of a return to the office and the long-term impact of work from home (WFH) on office demand. 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.

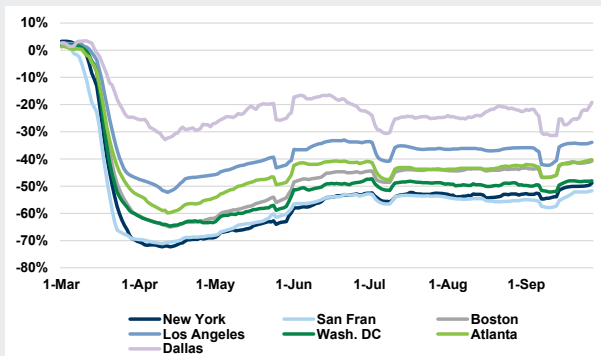
- **Vacancies and net absorption (a measure of demand):** Office vacancies in NYC and SF have increased 120bps and 370bps to 9.2% and 9.5%, respectively, since early March 2020. Vacancies are at five-year highs in both NYC and SF. The rise in vacancies and sharp decline in new leasing activity have led 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

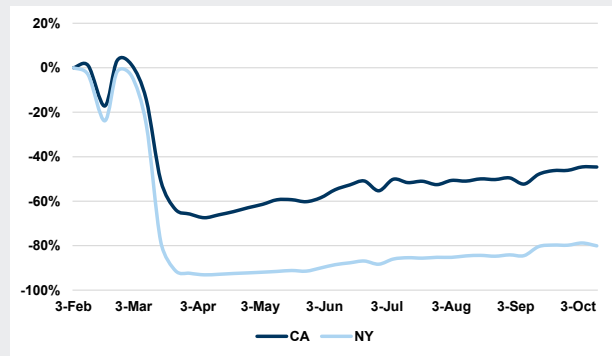


Google LLC "Google COVID-19 Community Mobility Reports".  
<https://www.google.com/covid19/mobility/> Accessed: Oct. 16, 2020

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**

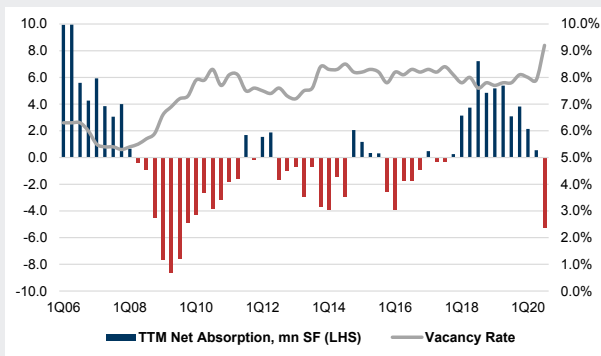
Building security card swipes, relative to pre-covid baseline



Source: Kastle Systems

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

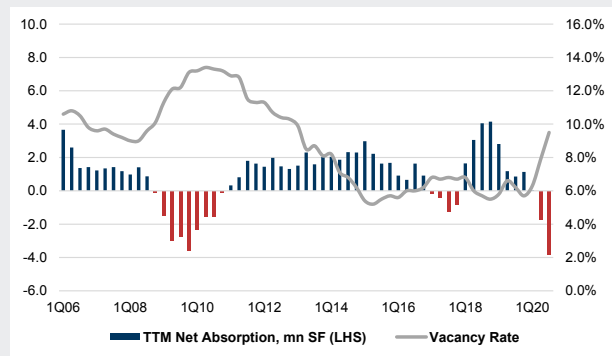
New York City TTM Net Absorption and vacancy rate



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

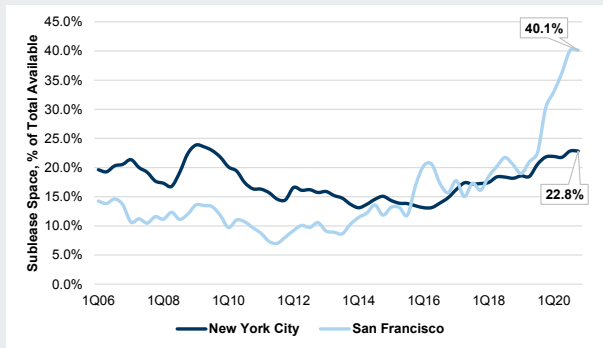


Source: CoStar



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

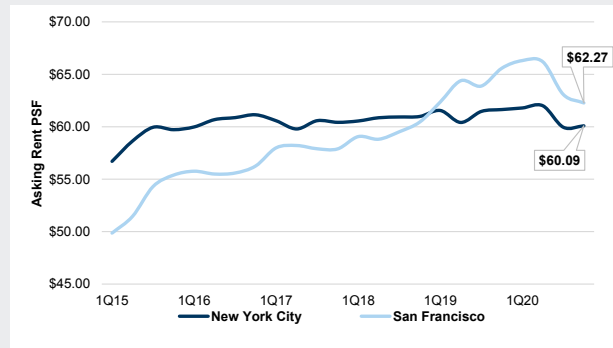
Office sublease space as a percent of total available space, 4QTD



Source: CoStar

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

Asking rent per square foot, 4QTD

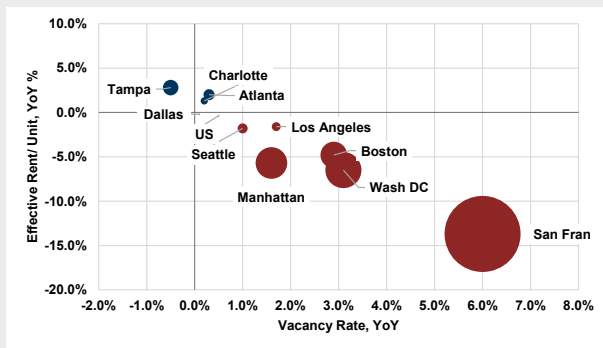


Source: CoStar

**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

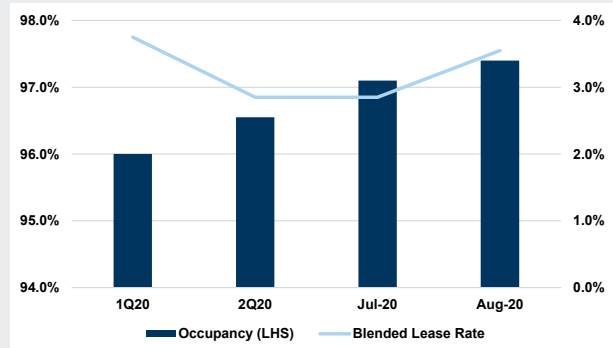


Bubble size and color represent magnitude and direction of change in effective rent per unit.

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 Vrbo app downloads up 132% y/y and 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 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	Anytime Fitness	US App Downloads	63%	-84%	-73%	-87%	-88%	-87%	-87%	-87%	-87%	-87%	-87%	-87%	-87%	-87%	-87%	Sensor Tower	
			Classpass	42%	-41%	-40%	-39%	-37%	-34%	-34%	-34%	-31%	-31%	-30%	-30%	-30%	-30%	-30%	Foursquare	
		Foursquare	Gym Foot Traffic	-16%	-49%	-44%	-41%	-40%	-43%	-38%	-41%	-38%	-34%	-34%	-34%	-33%	-33%	-33%	Sensor Tower	
			US App Downloads	-11%	-35%	-38%	-38%	-43%	-38%	-41%	-38%	-30%	-30%	-26%	-31%	-29%	-29%	-29%	Sensor Tower	
	Commuting	Uber	US App Downloads	-40%	-44%	-46%	-45%	-43%	-44%	-33%	-36%	-36%	-35%	-26%	-31%	-29%	-29%	-29%	Sensor Tower	
			Starbucks	8%	-20%	-19%	-14%	-17%	-33%	-11%	-18%	12%	2%	63%	-4%	15%	-4%	15%	EIA	
	Community Mobility Reports	Google COVID-19	Transit % change from baseline	1%	-11%	-11%	-10%	-8%	-7%	-14%	-5%	-9%	-7%	-6%	-6%	-6%	-6%	-6%	Google	
			Workplaces % change from baseline	-28%	-28%	-29%	-29%	-29%	-27%	-30%	-29%	-30%	-30%	-29%	-29%	-29%	-29%	-29%	Google	
	Box Office	Kastle	% change from baseline	-31%	-31%	-31%	-30%	-30%	-30%	-34%	-27%	-27%	-20%	-20%	-20%	-20%	-20%	-20%	Google	
			US Top 10 Gross	0%	-68%	-68%	-68%	-67%	-66%	-67%	-69%	-64%	-64%	-64%	-64%	-64%	-64%	-64%	-64%	Kastle
	Sports TV	ESPN	Moves Released	27%	-100%	-100%	-99%	-98%	-98%	-98%	-76%	-81%	-80%	-84%	-85%	-85%	-85%	-85%	-85%	Box Office Mojo
			Ratings	-22%	-60%	-61%	-66%	-70%	-81%	-79%	-80%	-76%	-78%	-70%	-66%	-65%	-65%	-65%	-65%	Box Office Mojo
	Dining	OpenTable	Seated diners	-6%	19%	16%	29%	-16%	-4%	-36%	-4%	16%	-2%	12%	-34%	-33%	-33%	-33%	Nielsen	
			Bars Foot Traffic	26%	83%	97%	117%	196%	89%	407%	72%	57%	95%	-42%	-30%	-46%	-46%	-46%	-46%	Nielsen
	Retail	Foursquare	Total Retail	15%	9%	12%	9%	-26%	-81%	-50%	-38%	-43%	-38%	-43%	-43%	-43%	-43%	-43%	-43%	Foursquare
			Weekly Visits	-59%	-56%	-54%	-50%	-48%	-44%	-44%	-44%	-44%	-42%	-41%	-36%	-41%	-41%	-41%	-41%	OpenTable
	Retail and Recreation	ShopperTrak RCT Corporation	Outlet Malls	-8%	-27%	-25%	-25%	-22%	-22%	-18%	-12%	-11%	-16%	-14%	-15%	-15%	-15%	-15%	-15%	ShopperTrak RCT Corporation
			Weekly Visits	-9%	-57%	-56%	-54%	-51%	-52%	-50%	-20%	-34%	-34%	-34%	-34%	-34%	-34%	-34%	-34%	ShopperTrak RCT Corporation
	Retail and Recreation	Factsus	Consumer spend	0%	-13%	-10%	-14%	-13%	-14%	-11%	-14%	-10%	-9%	-15%	-13%	-13%	-13%	-13%	-13%	IRI Worldwide
			% growth	2%	-9%	-8%	-10%	-13%	-13%	-8%	-14%	-14%	-14%	-14%	-14%	-14%	-14%	-14%	-14%	IRI Worldwide
	Retail and Recreation	Google	Department stores	3%	11%	24%	33%	0%	16%	20%	16%	19%	20%	12%	12%	12%	12%	12%	12%	Factsus
			% change from baseline	-14%	-14%	-15%	-14%	-14%	-13%	-10%	-10%	-10%	-15%	-14%	-14%	-14%	-14%	-14%	-14%	Google
	Retail and Recreation	Factsus	Consumer Spend	-18%	-9%	3%	-1%	-27%	22%	2%	7%	5%	5%	9%	9%	9%	9%	9%	9%	Factsus
			Consumer Spend	-74%	-73%	-71%	-71%	-70%	-66%	-67%	-69%	-69%	-69%	-69%	-64%	-64%	-64%	-64%	-64%	Factsus
	Airlines	Kayak	TSA checkpoints	66%	-68%	-63%	-63%	-60%	-51%	-60%	-50%	-53%	-50%	-50%	-50%	-50%	-50%	-50%	-50%	TSA
			Domestic flight search volume	1%	-36%	-33%	-30%	-30%	-28%	-19%	-30%	-32%	-32%	-30%	-29%	-29%	-29%	-29%	-29%	Kayak
	Lodging	STR	US Occupancy	-10%	-29%	-28%	-29%	-29%	-29%	-17%	-28%	-28%	-30%	-28%	-28%	-28%	-28%	-28%	-28%	STR
			Google Search Traffic	-7%	-31%	-28%	-25%	-21%	-19%	-8%	-8%	-11%	-11%	-12%	-9%	-11%	-11%	-11%	-11%	Google
Live Events	AllTheRooms	RevPAR	-12%	-48%	-44%	-39%	-39%	-36%	-26%	-35%	-35%	-36%	-40%	-36%	-36%	-36%	-36%	-36%	AllTheRooms	
		ADR	64%	-50%	-54%	-50%	-44%	-38%	-25%	-20%	-31%	-34%	-34%	-31%	-34%	-31%	-36%	-36%	AllTheRooms	
Online Travel	Sensor Tower	Booking.com	13%	10%	12%	20%	23%	20%	63%	26%	29%	18%	23%	35%	20%	20%	20%	20%	Sensor Tower	
		US App Downloads	36%	46%	46%	46%	26%	42%	22%	48%	8%	19%	12%	7%	7%	7%	7%	7%	Sensor Tower	
Live Events	EventBrite	US App Downloads	7%	-16%	-12%	-10%	-10%	4%	15%	9%	11%	13%	16%	11%	1%	1%	1%	1%	Sensor Tower	
		US App Downloads	72%	80%	92%	92%	93%	93%	93%	93%	93%	93%	93%	93%	93%	93%	93%	93%	Sensor Tower	
Card Payments	Mastercard	US Switched Volume	9%	-80%	-81%	-82%	-81%	-78%	-82%	-82%	-76%	-76%	-76%	-72%	-72%	-72%	-72%	-72%	Company data	
		US Switched Volume	5%	5%	5%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	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	3M	TSA passenger throughput	-74%	-73%	-71%	-71%	-70%	-66%	-67%	-69%	-68%	-67%	-64%	-64%	TSA
			Actual air traffic growth	-60%	-61%	-61%	-61%	-61%	-61%	-62%	-62%	-62%	-57%	-58%	-58%	OAG
			Passenger aircraft in service	-28%	-26%	-26%	-26%	-26%	-25%	-25%	-24%	-24%	-24%	-24%	-24%	Cirium
			Monthly sales (organic)	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	Company data
			US Refinery Utilization %	-17%	-15%	-16%	-14%	-19%	-25%	-17%	-17%	-12%	-10%	-10%	-10%	Wards
	Autos		Auto SAAR	-10%	-10%	-10%	-10%	-10%	-7%	-7%	-9%	-9%	-10%	-10%	EIA	
			Domestic ethanol blending	-11%	-11%	-11%	-11%	-10%	-11%	-7%	-7%	-9%	-9%	-10%	-10%	EIA
			Google Search Traffic	1%	0%	-1%	-1%	-9%	-6%	-3%	1%	3%	2%	2%	3%	Google
			Mortgage Applications	22%	22%	27%	33%	28%	40%	6%	25%	22%	21%	24%	24%	Mortgage Bankers Association
			Purchase Loan Rate Lock Activity	32%	45%	50%	61%	51%	42%	42%	78%	36%	51%	43%	43%	NAR
	Industrial housing	Single-Family Housing Permits	NSA	15%		16%										Census Bureau
			Months of Supply, SAAR	-40%		-40%										Census Bureau
		New Home For-Sale Inventory	Months of Supply, SAAR	-27%		-28%										National Association of Realtors (NAR)
			Median	6%		-4%										Census Bureau
		Existing Home Prices	Median	9%		11%										NAR
Units, SAAR			46%		43%										Census Bureau	
Existing Home Sales		Units, SAAR	9%		10%										NAR	
		Purchase Loan Rate Lock Activity	32%	45%	50%	61%	51%	42%	42%	78%	36%	51%	43%	43%	AEI	
Online Real Estate		Redfin	Texas cement shipments	-3%					21%	23%	28%		35%		Texas Comptroller	
			Home-buying demand	29%											Redfin	
	Caterpillar	Retail sales	-35%												Company data	
		New aircraft orders	(20)												Company data	
	Industrial equipment	Komtrax	Komtrax operating hours	-12%												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	-2%	2%	2%	5%	3%	25%	-5%	6%	5%	7%	8%		AAR
	Truck spot pricing		34%	37%	37%	35%	43%	43%	37%	44%	43%	50%	47%		Truckstop	
	DAT load to van ratio	DAT load to van ratio	5.22	5.23	5.02	5.15	5.69	5.78	5.29	5.19	5.28	5.51	4.24	4.24		DAT
		Truck Load Availability Index (2014=100)	166	181	176	192	205	218	175	213	214	237	209			Truckstop
	Big 3	west coast ports inbound loaded containers	Cass freight index	-8%												
Daily sales			15%													Port data
Multi-Industry	Fastenal	Dental volumes (vs. baseline)	-27%		-27%		-26%		-26%		-18%		-18%		Company data	
		Elective procedures (vs. baseline)	-13%	-15%	-13%	-13%	-12%	13%	-33%	-16%	-22%				ADA	
	Personal Health	Generic Nrx volumes (mn)	Generic 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
			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
	Power & Utilities	Electricity Demand	Growth y/y	1%	-5%	2%	-4%	10%	0%	-8%	-8%	-12%	-12%	-1%		EI
Facebook / Instagram			-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.

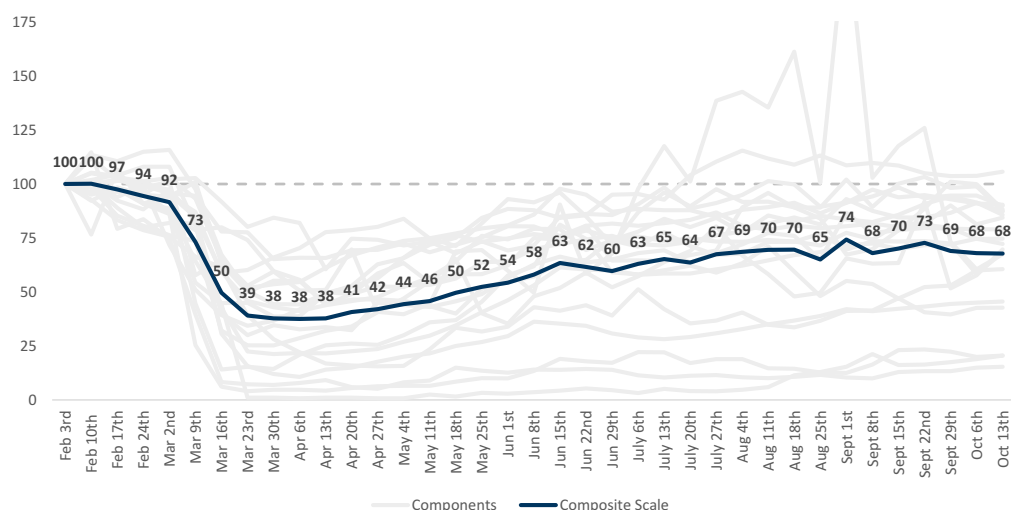
The GS US reopening scale, based on the trajectory of the Composite Scale, first reached 1 in the week of March 16th, where it remained for 10 weeks, indicating that consumers were still at the trough of impacts from COVID-19. This week our composite score of 68 supports a Reopening scale of ‘4’, the 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

We plan to update and refine this data weekly as a tool to measure the pace of reopening, measure consumer behavior and highlight sectors and companies that may be benefiting or disproportionately impacted from the shape of that process.

## Appendix

**Exhibit 18: Concern about Coronavirus has moderated more recently, but still remains elevated relative to June lows, which has impacted shopping behavior as well**

	24-Mar	31-Mar	7-Apr	14-Apr	21-Apr	28-Apr	12-May	26-May	22-Jun	28-Jul	25-Aug	30-Sep
% very concerned about Coronavirus (10 on 1-10 scale)	26%	34%	40%	31%	32%	28%	21%	20%	18%	27%	24%	22%
% of shoppers who report that Coronavirus has impacted shopping behavior	88%	89%	92%	89%	91%	90%	89%	85%	83%	88%	81%	77%

Source: Numerator

**Exhibit 19: Gasoline demand declined week-on-week in the most recent week (Oct 9)**

US gasoline demand

	7/24/2020	7/31/2020	8/7/2020	8/14/2020	8/21/2020	8/28/2020	9/4/2020	9/11/2020	9/18/2020	9/25/2020	10/2/2020	10/9/2020
Barrels/day (000's)	8,809	8,617	8,883	8,630	9,161	8,786	8,390	8,478	8,515	8,529	8,896	8,576
Wk on wk change	3.0%	-2.2%	3.1%	-2.8%	6.2%	-4.1%	-4.5%	1.0%	0.4%	0.2%	4.3%	-3.6%
YoY change	-7.8%	-10.7%	-10.6%	-10.3%	-7.5%	-7.2%	-14.4%	-5.2%	-8.9%	-6.7%	-6.0%	-8.3%

Source: EIA

**Exhibit 20: Impact to shopping habits have shown a moderation in September relative to July/August**  
% of consumers reporting behavior

	24-Mar	31-Mar	7-Apr	14-Apr	21-Apr	28-Apr	12-May	26-May	22-Jun	28-Jul	25-Aug	30-Sep
Experienced product shortages at stores I'm trying to buy from	79%	70%	73%	66%	69%	65%	65%	56%	49%	58%	51%	48%
Eating out less		61%	61%	61%	61%	55%	59%	56%	52%	61%	52%	49%
Delaying purchases or services		53%	53%	56%	56%	54%	55%	46%	45%	46%	37%	35%
Stores I might otherwise go to are closed		37%	40%	40%	44%	42%	42%	34%	29%	21%	21%	15%
Making online purchases when I would usually shop in store	32%	31%	36%	37%	45%	41%	48%	43%	43%	50%	46%	38%
Stocking up on products I wouldn't otherwise stock up on	38%	31%	38%	32%	38%	32%	37%	31%	35%	38%	37%	35%
Buying products I wouldn't otherwise buy	24%	19%	23%	20%	22%	21%	20%	18%	18%	18%	17%	14%
Shopping in a store I wouldn't otherwise shop	22%	16%	19%	15%	16%	14%	13%	9%	12%	12%	9%	9%

Source: Numerator

**Exhibit 21: The latest credit and debit card usage data shows that the overall rate of consumer spending declines have begun to abate as restaurant and travel sales declines ease**

Live view of consumer spending, based on credit and debit card usage across the United States

	May 25 - May 31	Jun 1 - 7	Jun 8 - 14	Jun 15 - 21	Jun 22 - 28	Jun 29 - Jul 5	Jul 6 - 12	Jul 13 - 19	Jul 20 - 26	Jul 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
<b>Spending change (% YoY; adjusted for day-of-week effects)</b>	<b>-27.1%</b>	<b>-24.6%</b>	<b>-21.9%</b>	<b>-18.9%</b>	<b>-18.3%</b>	<b>-18.1%</b>	<b>-17.9%</b>	<b>-18.7%</b>	<b>-18.4%</b>	<b>-16.4%</b>	<b>-15.6%</b>	<b>-14.1%</b>	<b>-13.3%</b>	<b>-12.9%</b>	<b>-10.9%</b>	<b>-9.7%</b>	<b>-9.7%</b>	<b>-10.6%</b>	<b>-10.9%</b>	<b>-7.9%</b>
<b>General Merchandise &amp; Grocery</b>																				
Big Box	-8.3%	-9.0%	-7.1%	-5.9%	-6.8%	-6.6%	-7.2%	-7.5%	-3.9%	-5.6%	-5.7%	-3.8%	-2.9%	-2.3%	-0.4%	7.4%	4.7%	5.7%	6.1%	
Grocery	0.1%	2.8%	2.5%	5.6%	7.5%	4.2%	5.7%	6.4%	5.5%	5.4%	4.9%	3.8%	3.6%	1.3%	-1.5%	8.9%	4.9%	3.7%	4.1%	
Pharmacy	-23.2%	-24.0%	-21.6%	-17.2%	-13.6%	-14.3%	-13.7%	-12.0%	-11.3%	-11.1%	-11.9%	-11.5%	-11.8%	-12.9%	-10.9%	-14.7%	-11.4%	-12.3%	-12.6%	
Wholesale Club	-7.0%	-7.3%	-5.1%	-0.8%	-0.9%	-0.5%	-5.5%	-1.6%	0.5%	0.0%	0.4%	2.5%	1.3%	-1.0%	10.2%	-7.8%	5.0%	2.4%	0.1%	
<b>Retail</b>																				
Apparel	-51.5%	-41.3%	-34.5%	-31.7%	-32.8%	-36.6%	-36.0%	-29.4%	-33.2%	-36.4%	-39.8%	-34.5%	-33.5%	-37.1%	-40.5%	-17.5%	-16.4%	-16.3%	-20.0%	
Office Supplies	2.0%	9.3%	18.4%	19.9%	6.6%	-18.0%	-23.2%	-16.8%	-24.2%	-25.5%	-30.2%	-33.1%	-29.8%	-29.2%	-28.5%	-27.1%	-9.0%	-20.9%	-25.4%	
Pet Supplies	-14.0%	-11.4%	-9.7%	-3.3%	-5.3%	-4.5%	-6.8%	-2.6%	-0.7%	-3.7%	-1.8%	0.9%	-2.6%	-1.0%	1.6%	-0.4%	5.2%	4.7%	6.5%	
<b>Restaurant</b>																				
Casual Dining	-59.1%	-56.0%	-53.3%	-50.5%	-40.5%	-45.7%	-47.9%	-46.6%	-46.5%	-43.9%	-42.1%	-40.7%	-37.6%	-34.1%	-33.8%	-23.3%	-30.7%	-29.5%	-28.0%	
Fast Casual	-22.7%	-22.5%	-20.1%	-16.2%	-15.5%	-10.9%	-15.4%	-12.3%	-13.6%	-12.1%	-8.8%	-8.7%	-7.0%	-7.0%	-3.9%	-6.3%	-6.2%	-7.0%	-3.9%	
Fast Food	-13.9%	-12.0%	-11.4%	-7.5%	-10.4%	-5.5%	-7.0%	-5.8%	-6.2%	-4.5%	-2.4%	-1.8%	-1.3%	-1.6%	0.1%	6.8%	2.6%	2.4%	4.1%	
Fine Dining	-73.9%	-73.6%	-74.2%	-68.3%	-53.5%	-62.0%	-62.2%	-63.9%	-56.9%	-56.2%	-57.1%	-55.8%	-56.2%	-48.5%	-41.3%	-35.6%	-49.8%	-41.2%	-35.5%	
<b>Food Delivery</b>																				
Food Delivery	80.9%	68.2%	74.1%	74.7%	83.2%	79.2%	85.6%	84.5%	82.9%	82.0%	89.0%	94.0%	90.4%	87.2%	79.9%	85.1%	78.6%	77.7%	74.3%	
Grocery Delivery	339.4%	316.9%	294.1%	272.5%	271.6%	309.3%	284.3%	281.3%	266.0%	259.7%	254.3%	233.9%	222.0%	220.7%	207.7%	182.4%	191.5%	181.5%	179.1%	
Meal/Snack Kit	33.0%	37.9%	43.0%	39.2%	44.0%	52.1%	38.7%	39.7%	44.2%	40.8%	30.9%	31.5%	34.0%	42.0%	22.0%	35.5%	35.6%	32.3%	31.3%	
<b>Travel</b>																				
Airline	-91.3%	-88.7%	-83.5%	-80.6%	-81.6%	-83.8%	-88.0%	-88.5%	-87.9%	-86.5%	-85.9%	-84.1%	-82.8%	-79.6%	-76.9%	-78.7%	-76.3%	-74.7%	-74.2%	
Car Rental	-78.4%	-72.8%	-71.7%	-67.0%	-65.1%	-62.3%	-62.0%	-58.6%	-59.9%	-58.5%	-55.5%	-53.5%	-50.8%	-45.9%	-46.4%	-34.2%	-41.6%	-44.6%	-42.6%	
Cruise	-118.1%	-129.5%	-123.2%	-151.5%	-154.7%	-130.8%	-143.8%	-129.7%	-114.7%	-113.8%	-113.5%	-111.4%	-102.2%	-103.3%	-98.7%	-93.3%	-95.1%	-95.4%	-92.7%	
Hotel	-82.7%	-78.5%	-77.7%	-72.9%	-72.1%	-66.4%	-64.5%	-66.3%	-65.6%	-63.6%	-59.5%	-57.6%	-54.9%	-54.3%	-55.6%	-43.8%	-61.1%	-61.1%	-57.5%	

Sector indices are aggregated per sector and show the difference year-on-year on a seven-day moving average window; Flights are charged at time of booking, but hotels and car rentals are often charged upon checkout. As a result, there is likely an understating of the amount of canceled future reservations at hotels and car rental agencies.

Source: 1010data, Exabel, Data compiled by Goldman Sachs Global Investment Research

**Exhibit 22: The panel data shows that consumers are spending more on essentials as they shelter at home, but they are buying more on-line while specialty (e.g., Beauty) and convenience oriented outlets lag**

Weekly index by retail channel	6/21/2020	6/28/2020	7/5/2020	7/12/2020	7/19/2020	7/26/2020	8/2/2020	8/9/2020	8/16/2020	8/23/2020	8/30/2020	9/6/2020	9/13/2020	9/20/2020	9/27/2020
<b>2020 Retail sales vs. 2019</b>															
<b>Total</b>	<b>121</b>	<b>113</b>	<b>112</b>	<b>111</b>	<b>104</b>	<b>115</b>	<b>110</b>	<b>113</b>	<b>114</b>	<b>113</b>	<b>106</b>	<b>117</b>	<b>114</b>	<b>116</b>	<b>115</b>
Online	166	151	163	147	88	179	169	170	172	167	168	168	157	153	154
Food	123	111	114	112	114	115	109	110	112	110	101	113	113	114	112
Dollar	131	118	109	116	124	121	115	122	119	115	106	117	112	118	118
Liquor	123	110	107	111	121	127	128	123	131	128	114	148	120	136	126
Club	116	113	109	111	118	120	111	115	112	111	98	121	107	118	113
Mass	118	110	105	107	107	106	100	106	104	107	101	108	112	113	115
Drug	110	105	101	114	114	99	98	93	96	96	95	99	95	103	100
Bodega	112	103	109	95	99	126	90	87	91	120	70	125	87	90	105
Pet	98	97	98	96	115	102	99	112	98	105	94	107	114	119	97
Military	104	70	95	87	95	88	78	83	62	61	54	83	72	68	62
Gas & C-Store	83	84	82	77	77	80	81	82	84	85	82	91	85	87	84
Beauty	63	68	81	82	99	82	84	90	100	90	79	83	86	109	82
<b>Channels not included in index totals</b>															
Electronics	88	83	69	110	74	89	92	108	99	77	70	86	86	87	103
Home Improvement	171	151	141	139	145	137	157	146	146	149	114	125	145	151	148
Office	160	83	52	76	85	74	66	64	75	82	93	121	78	112	109
QSR	89	83	85	84	85	84	86	89	90	90	87	95	93	93	89

Source: Numerator

**Exhibit 23: Theaters remain in steep declines and amusement park and sporting event spending remain soft as well but are witnessing some decline abatement more recently; the trends for restaurant sales and department stores have improved relative to levels seen in April**

Consumer spend (YoY % chg.)	5-Jul-20	12-Jul-20	19-Jul-20	26-Jul-20	2-Aug-20	9-Aug-20	16-Aug-20	23-Aug-20	30-Aug-20	6-Sep-20	13-Sep-20	20-Sep-20	27-Sep-20	4-Oct-20	11-Oct-20
<b>Retail</b>															
Department Stores	6%	11%	2%	-2%	3%	11%	24%	33%	6%	16%	26%	16%	19%	26%	12%
Discount Stores	34%	36%	36%	41%	35%	45%	56%	38%	30%	34%	40%	49%	35%	45%	36%
Grocery Stores & Supermarkets	9%	11%	11%	11%	9%	17%	22%	17%	12%	14%	18%	17%	17%	21%	15%
Misc. General Merchandize	29%	25%	24%	27%	25%	29%	43%	27%	29%	36%	29%	39%	38%	36%	27%
Variety Stores	20%	24%	24%	24%	24%	31%	39%	29%	23%	26%	32%	34%	31%	30%	21%
Wholesale Clubs	29%	33%	37%	38%	28%	47%	36%	29%	24%	45%	43%	56%	32%	49%	42%
Retail average	21%	23%	22%	23%	21%	30%	37%	29%	21%	29%	31%	35%	29%	35%	26%
<b>Entertainment</b>															
Amusement Parks	-69%	-61%	-65%	-66%	-64%	-61%	-56%	-57%	-64%	-49%	-54%	-56%	-53%	-53%	-57%
Commercial Sports & Athletic Fields	-44%	-47%	-45%	-40%	-37%	-35%	-32%	-26%	-42%	-15%	-32%	-15%	-34%	-17%	-24%
Fast Food Restaurants	4%	5%	6%	6%	13%	12%	24%	16%	14%	17%	12%	14%	14%	19%	15%
Movie Theatres	-98%	-97%	-98%	-97%	-96%	-96%	-95%	-89%	-80%	-84%	-83%	-85%	-84%	-87%	-88%
Restaurants	-15%	-9%	-10%	-9%	-2%	-5%	7%	3%	2%	7%	4%	6%	7%	12%	7%
Tourist Attractions	-22%	-20%	-12%	-28%	-18%	-9%	3%	-1%	-27%	22%	2%	7%	7%	5%	9%
Video Games	51%	64%	65%	49%	32%	68%	80%	63%	74%	41%	20%	43%	41%	57%	83%
Entertainment average	-28%	-24%	-23%	-26%	-25%	-18%	-10%	-13%	-18%	-9%	-19%	-12%	-15%	-9%	-8%
<b>Travel</b>															
Airlines	-69%	-71%	-72%	-71%	-69%	-68%	-63%	-63%	-60%	-57%	-60%	-55%	-53%	-50%	-53%
Cruise Lines	-72%	-80%	-80%	-82%	-82%	-81%	-81%	-78%	-83%	-81%	-85%	-82%	-82%	-79%	-87%
Lodging	-19%	-20%	-21%	-21%	-14%	-10%	-1%	-5%	-10%	4%	-15%	-11%	-11%	-4%	-9%
Travel Bookings	-31%	-32%	-34%	-33%	-27%	-22%	-16%	-19%	-22%	-11%	-25%	-21%	-20%	-16%	-17%
Travel average	-48%	-51%	-52%	-52%	-48%	-45%	-40%	-41%	-44%	-36%	-46%	-42%	-42%	-37%	-42%
<b>Healthcare</b>															
Drug Stores and Pharmacies	8%	8%	8%	11%	11%	15%	23%	15%	9%	15%	39%	11%	2%	15%	10%

Source: Facteus

**Exhibit 24: Total CPG sales growth largely sustained its high-single-digit growth momentum**

Weekly growth indexed to previous year baseline

	07/26/2020	08/02/2020	08/09/2020	08/16/2020	08/23/2020	08/30/2020	09/06/2020	09/13/2020	09/20/2020	09/27/2020	10/04/2020	10/11/2020
Total CPG	112	108	109	109	109	103	110	109	109	109	106	108
Total Edible	115	111	111	112	113	105	111	112	113	112	108	108
Total Non Edible	107	104	106	104	104	99	105	104	105	105	103	104

Source: IRI Worldwide



**Exhibit 25: Sales for frozen food and baking related categories remain elevated**

Weekly growth indexed to previous year baseline

	7/26/2020	8/2/2020	8/9/2020	8/16/2020	8/23/2020	8/30/2020	9/6/2020	9/13/2020	9/20/2020	9/27/2020	10/4/2020	10/11/2020
<b>Total Edible</b>	<b>115</b>	<b>111</b>	<b>111</b>	<b>112</b>	<b>113</b>	<b>105</b>	<b>111</b>	<b>112</b>	<b>113</b>	<b>112</b>	<b>108</b>	<b>108</b>
<b>Beverages</b>	<b>111</b>	<b>108</b>	<b>107</b>	<b>110</b>	<b>110</b>	<b>103</b>	<b>112</b>	<b>107</b>	<b>107</b>	<b>106</b>	<b>106</b>	<b>111</b>
Water	109	108	105	109	109	97	109	105	104	102	103	111
Sports/Energy Drinks	111	108	106	108	108	107	112	102	105	105	105	112
Non Fruit Drinks	118	114	112	112	111	99	109	109	110	108	107	109
Juices	112	109	106	110	111	103	109	108	108	106	106	109
Drink Mixes	117	115	114	119	121	110	118	116	115	115	112	111
Coffee & Tea	110	106	108	109	109	103	109	107	109	109	107	108
Carbonated	113	109	110	113	113	105	118	110	109	109	107	111
<b>Frozen</b>	<b>123</b>	<b>118</b>	<b>117</b>	<b>119</b>	<b>122</b>	<b>117</b>	<b>118</b>	<b>118</b>	<b>120</b>	<b>119</b>	<b>114</b>	<b>116</b>
Other Frozen	123	121	116	118	118	112	114	117	119	115	109	109
Frozen Snacks	124	121	119	123	124	124	119	119	123	122	118	118
Frozen Meat/Poultry/Seafood	136	126	125	126	130	120	122	125	128	127	120	122
Frozen Meals	118	112	111	112	116	114	110	111	115	113	109	109
Frozen Fruits & Vegetables	126	121	120	121	121	118	118	117	119	120	116	115
Frozen Desserts	116	114	114	118	119	115	120	118	115	115	114	116
Frozen Beverages	127	124	119	124	126	120	129	127	125	123	121	125
Frozen Baked Goods	123	118	118	119	118	108	121	122	121	122	115	113
<b>General Food</b>	<b>113</b>	<b>108</b>	<b>108</b>	<b>109</b>	<b>110</b>	<b>101</b>	<b>108</b>	<b>109</b>	<b>110</b>	<b>110</b>	<b>106</b>	<b>106</b>
SS Vegetables	124	119	116	116	118	106	107	115	123	120	113	103
SS Fruit	118	112	111	108	110	100	107	109	111	108	106	108
Snacks	107	104	105	106	106	97	107	105	106	105	103	104
Meals	121	115	113	114	116	103	108	111	116	115	110	109
Ethnic	125	121	119	121	123	116	118	120	121	120	116	118
Cookies & Crackers	107	105	103	104	105	95	104	104	104	104	102	101
Condiments & Sauces	122	116	115	118	118	105	118	119	117	116	112	113
Candy	101	99	101	100	101	96	103	100	102	102	99	98
Breakfast	108	102	103	105	108	103	102	107	109	107	102	105
Baking	130	123	121	122	123	112	117	121	123	123	116	116
Baby Food	107	92	106	106	105	97	99	104	105	101	97	105
<b>Beverage Alcohol</b>	<b>114</b>	<b>114</b>	<b>114</b>	<b>116</b>	<b>116</b>	<b>104</b>	<b>123</b>	<b>116</b>	<b>114</b>	<b>114</b>	<b>114</b>	<b>115</b>
<b>Refrigerated</b>	<b>116</b>	<b>112</b>	<b>111</b>	<b>113</b>	<b>114</b>	<b>107</b>	<b>113</b>	<b>114</b>	<b>113</b>	<b>113</b>	<b>110</b>	<b>110</b>
Refrigerated Meals	112	108	108	108	110	104	109	106	109	109	107	107
Refrigerated Dough	127	122	119	118	121	112	117	121	124	124	117	112
Refrigerated Desserts	117	111	114	117	116	111	110	114	112	113	110	106
Refrigerated Condiments	114	111	111	113	114	105	116	115	113	112	111	112
Refrigerated Beverages	118	114	113	118	117	113	116	114	113	112	111	113
Refrigerated Baked Goods	116	115	116	114	118	111	114	119	115	113	111	109
Other Refrigerated	127	125	121	123	125	120	119	120	120	121	115	114
Dairy	114	111	111	112	113	108	112	113	113	112	109	109

Source: IRI Worldwide

### Exhibit 26: In HPC, home and personal cleaning products remain relatively strong, while beauty products and basic hygiene products continue to lag

Weekly growth indexed to previous year baseline

	7/26/2020	8/2/2020	8/9/2020	8/16/2020	8/23/2020	8/30/2020	9/6/2020	9/13/2020	9/20/2020	9/27/2020	10/4/2020	10/11/2020
<b>Total Non Edible</b>	<b>107</b>	<b>104</b>	<b>106</b>	<b>104</b>	<b>104</b>	<b>99</b>	<b>105</b>	<b>104</b>	<b>105</b>	<b>105</b>	<b>103</b>	<b>104</b>
<b>Beauty</b>	<b>108</b>	<b>104</b>	<b>105</b>	<b>103</b>	<b>102</b>	<b>100</b>	<b>105</b>	<b>101</b>	<b>103</b>	<b>102</b>	<b>99</b>	<b>102</b>
Skin Care	104	101	102	104	102	99	107	102	102	101	99	101
Shaving	99	91	95	92	91	91	97	94	95	94	93	96
Personal Cleansing	132	127	129	125	121	119	123	120	118	118	114	119
Hair Care	104	100	101	98	97	96	100	97	100	100	97	100
Grooming Supplies	105	103	102	99	100	101	103	103	103	105	102	104
Fragrance	96	91	92	90	87	87	92	86	87	86	81	84
Cosmetics	88	87	90	86	87	86	89	86	90	91	85	87
<b>General Merch</b>	<b>109</b>	<b>104</b>	<b>106</b>	<b>105</b>	<b>105</b>	<b>98</b>	<b>106</b>	<b>110</b>	<b>108</b>	<b>108</b>	<b>105</b>	<b>105</b>
Water Treatment	115	109	108	104	102	99	105	112	106	108	106	109
Small Appliance	125	121	128	120	116	113	117	129	121	128	116	113
Pet Care	104	100	105	103	103	97	105	104	105	104	102	103
Pest Control	118	115	121	120	119	109	113	119	108	99	99	115
Paper Products	114	107	108	105	106	100	105	107	109	108	108	109
Office/School Supplies	88	76	79	86	98	108	116	125	118	112	109	109
Miscellaneous General Merch	116	115	119	117	114	103	113	117	116	116	110	110
Household Plastics/Storage	112	106	106	103	103	105	107	112	109	109	106	105
Hosiery	97	87	84	84	90	92	99	105	104	108	94	86
Foils, Wraps, & Bags	117	109	110	107	109	100	109	114	112	112	108	109
Electronics/Photography	113	114	120	112	111	87	100	115	116	116	107	105
Disposable Tableware	113	109	110	110	110	97	115	117	112	113	110	110
Barbecue	122	122	125	127	131	80	108	189	129	134	133	137
Automotive	88	85	88	89	88	85	89	89	87	89	87	91
<b>Health</b>	<b>113</b>	<b>108</b>	<b>110</b>	<b>108</b>	<b>106</b>	<b>101</b>	<b>104</b>	<b>102</b>	<b>104</b>	<b>105</b>	<b>102</b>	<b>105</b>
Other Health Care Products	167	152	153	153	152	141	143	137	136	133	128	133
Nutrition/Weight Loss	119	114	115	113	111	107	112	108	112	111	109	115
Mouth Care	104	100	104	100	99	97	103	102	104	102	99	102
Health Remedies	105	102	103	100	98	90	93	92	93	95	94	96
First Aid	106	103	103	103	103	101	102	102	103	103	102	104
Feminine Products	102	98	98	96	97	94	99	98	99	99	96	98
Family Planning	113	113	113	113	112	110	109	115	112	113	112	113
Baby Care	103	99	99	99	99	99	97	98	103	103	97	97
<b>Home Care</b>	<b>122</b>	<b>113</b>	<b>118</b>	<b>114</b>	<b>113</b>	<b>107</b>	<b>112</b>	<b>117</b>	<b>118</b>	<b>120</b>	<b>114</b>	<b>118</b>
Laundry	117	108	111	107	104	100	104	109	108	107	102	106
Household Cleaning	128	118	125	121	123	116	120	126	130	135	129	133
Air Fresheners	121	115	119	113	112	103	113	114	115	115	107	110
<b>Tobacco</b>	<b>97</b>	<b>97</b>	<b>98</b>	<b>98</b>	<b>98</b>	<b>96</b>	<b>101</b>	<b>98</b>	<b>99</b>	<b>99</b>	<b>100</b>	<b>101</b>

Source: IRI Worldwide

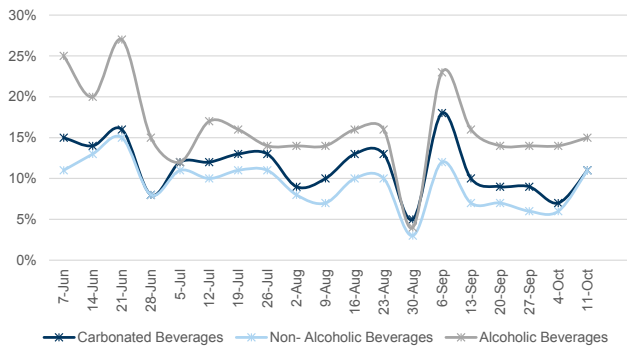
### Exhibit 27: In Beverages, consumers are buying more alcohol for at home consumption

YoY \$ sales % change

Tobacco and Beverages Avg.	YoY \$ sales % change												
	7/26/2020	8/2/2020	8/9/2020	8/16/2020	8/23/2020	8/30/2020	9/6/2020	9/13/2020	9/20/2020	9/27/2020	10/4/2020	10/11/2020	L2wk Avg
<b>Non- Alcoholic Beverages</b>	<b>11%</b>	<b>8%</b>	<b>7%</b>	<b>10%</b>	<b>10%</b>	<b>3%</b>	<b>12%</b>	<b>7%</b>	<b>7%</b>	<b>6%</b>	<b>6%</b>	<b>11%</b>	<b>9%</b>
Water	9%	8%	5%	9%	9%	-3%	9%	5%	4%	2%	3%	11%	7%
Sports/Energy Drinks	11%	8%	6%	8%	8%	7%	12%	2%	5%	5%	5%	12%	9%
Non Fruit Drinks	18%	14%	12%	12%	11%	-1%	9%	9%	10%	8%	7%	9%	8%
Juices	12%	9%	6%	10%	11%	3%	9%	8%	8%	6%	6%	9%	8%
Drink Mixes	17%	15%	14%	19%	21%	10%	18%	16%	15%	15%	12%	11%	12%
Coffee & Tea	10%	6%	8%	9%	9%	3%	9%	7%	9%	9%	7%	8%	8%
Carbonated	13%	9%	10%	13%	13%	5%	18%	10%	9%	9%	7%	11%	9%
<b>Beverage Alcohol</b>	<b>14%</b>	<b>14%</b>	<b>14%</b>	<b>16%</b>	<b>16%</b>	<b>4%</b>	<b>23%</b>	<b>16%</b>	<b>14%</b>	<b>14%</b>	<b>14%</b>	<b>15%</b>	<b>15%</b>
<b>Tobacco</b>	<b>-3%</b>	<b>-3%</b>	<b>-2%</b>	<b>-2%</b>	<b>-2%</b>	<b>-4%</b>	<b>1%</b>	<b>-2%</b>	<b>-1%</b>	<b>-1%</b>	<b>0%</b>	<b>1%</b>	<b>1%</b>

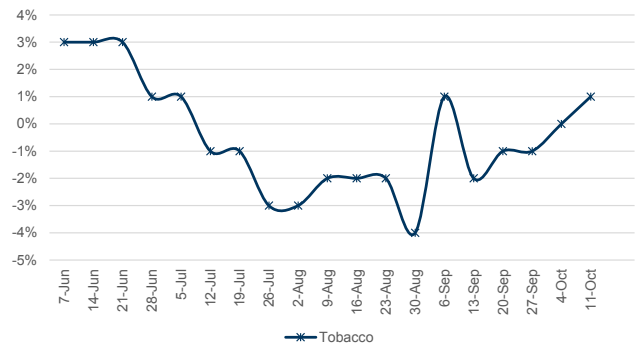
Source: IRI Worldwide

**Exhibit 28: Beverages - Alcoholic & Non-Alcoholic**  
y/y sales growth %



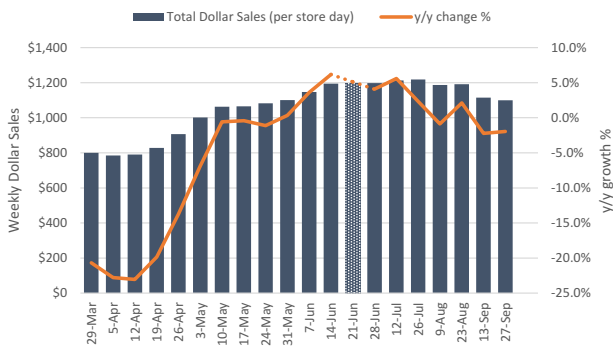
Source: IRI Worldwide

**Exhibit 29: Tobacco**  
y/y \$ sales growth %



Source: IRI Worldwide

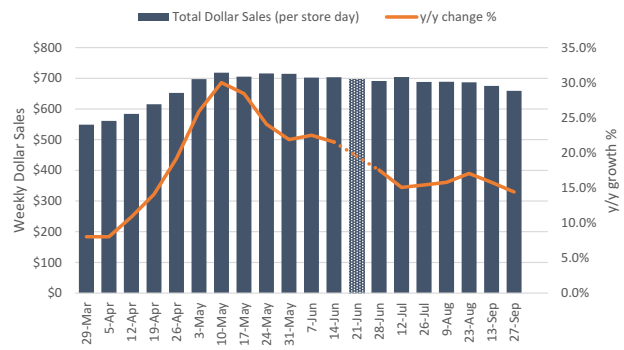
**Exhibit 30: Non Alcoholic Beverages**



Data for 6/21 based on an average of 6/28 and 6/14 data

Source: NACS PDI

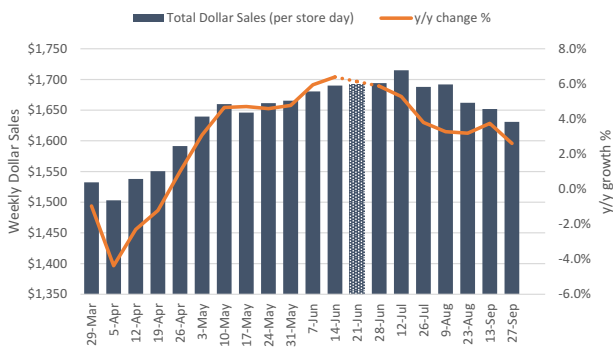
**Exhibit 31: Alcoholic Beverages**



Data for 6/21 based on an average of 6/28 and 6/14 data.

Source: NACS PDI

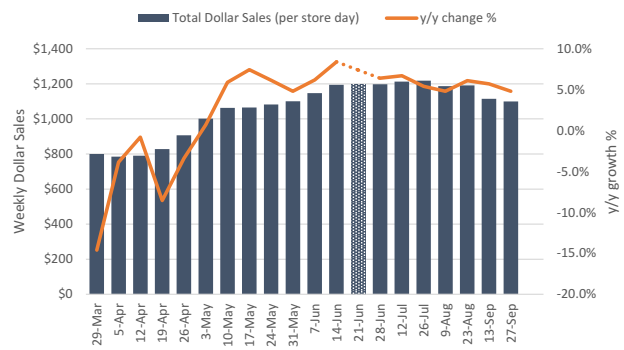
**Exhibit 32: Tobacco**



Data for 6/21 based on an average of 6/28 and 6/14 data.

Source: NACS PDI

**Exhibit 33: Total C-store sales**



Data for 6/21 based on an average of 6/28 and 6/14 data.

Source: NACS PDI

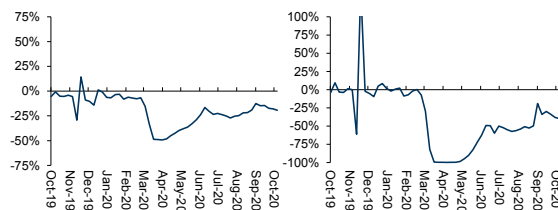
**Exhibit 34: The GS/TRE Raw Index correlates to monthly comps. The Seasonally Adjusted Index smooths for calendar shifts. For Oct MTD the Raw Index was -4.3%, lower than September.**

Raw Index	GS/TRE Index, YoY			Seas. Adjusted	GS/TRE Index, YoY		
	20/19	19/18	18/17		20/19	19/18	18/17
<b>Monthly</b>							
Jan	2.2%	1.9%	2.7%	Jan	2.2%	1.9%	2.7%
Feb	2.0%	2.0%	1.9%	Feb	2.0%	2.0%	1.9%
Mar	-3.2%	1.4%	3.4%	Mar	-3.2%	1.4%	3.4%
Apr	-20.5%	2.9%	3.4%	Apr	-20.5%	2.9%	3.4%
May	-16.6%	2.2%	4.2%	May	-16.6%	2.2%	4.2%
Jun	-10.7%	2.4%	3.6%	Jun	-10.7%	2.4%	3.6%
Jul	-8.8%	2.2%	3.2%	Jul	-8.8%	2.2%	3.2%
Aug	-5.3%	1.5%	3.4%	Aug	-5.3%	1.5%	3.4%
Sept	-3.2%	1.9%	3.8%	Sept	-3.2%	1.9%	3.8%
Oct	-4.3%	1.9%	2.1%	Oct	-4.3%	1.9%	2.1%
Nov		3.4%	2.7%	Nov		3.4%	2.7%
Dec		2.9%	3.3%	Dec		2.9%	3.3%
<b>Weekly - Seasonally Adjusted</b>							
<b>September</b>	<b>-3.2%</b>	<b>1.9%</b>	<b>3.8%</b>	<b>October</b>	<b>-4.3%</b>	<b>1.9%</b>	<b>2.1%</b>
- wk1 - 09/05	-3.4%	1.1%	4.4%	- wk1 - 10/10	-3.8%	1.6%	2.8%
- wk2 - 09/12	-3.9%	2.5%	3.4%	- wk2 - 10/17	-4.9%	2.7%	2.7%
- wk3 - 09/19	-2.4%	1.4%	4.0%				
- wk4 - 09/26	-2.8%	3.2%	2.9%				
- wk5 - 10/03	-3.3%	1.5%	4.2%				

Source: Goldman Sachs Global Investment Research, The Retail Economist

**Exhibit 35: ShopperTrak Total Retail visits -19.3%; same store Outlet Malls -39.7%**

ShopperTrak Total Retail & same store Outlet Malls YoY change by week



Source: ShopperTrak RCT Corporation, Goldman Sachs Global Investment Research

# Disclosure Appendix

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