

Note: The following is a redacted version of the original report published June 3, 2020 [20 pgs].

Measuring the Reopening of America

The GS US Reopening Scale: Likely the last week at '1' (Week of June 3)

GS US Reopening Scale

Week of 6/3

5/27
reading: 1



New this week: eCommerce, Streaming Media and other Stay at Home categories decelerate as Travel leads Back to Normal's gradual improvements, plus a deeper look into the reopening of physical retail.

Following our [first month](#) in the series, we continue to monitor the reopening of America, using a wide range of data across "Stay at Home" (food delivery, eCommerce, streaming media, grocery sales, etc.) to "Back to Normal"

(commuting, box office, travel, etc.) and business activity (freight, housing, equipment sales, etc.) categories as a supplement to economic measures. We have added a few new data series this week and will continue to expand and refine the analysis as more data becomes available and the profile of reopening evolves.

Heath P. Terry, CFA
+1(212)357-1849 | heath.terry@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

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

Kate McShane, CFA
+1(212)902-6740 | kate.mcshane@gs.com
Goldman Sachs & Co. LLC

Stephen Grambling, CFA
+1(212)902-7832 | stephen.grambling@gs.com
Goldman Sachs & Co. LLC

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

Michael Ng, CFA
+1(212)902-8618 | michael.ng@gs.com
Goldman Sachs & Co. LLC

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

Jerry Revich, CFA
+1(212)902-4116 | jerry.revich@gs.com
Goldman Sachs & Co. LLC

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

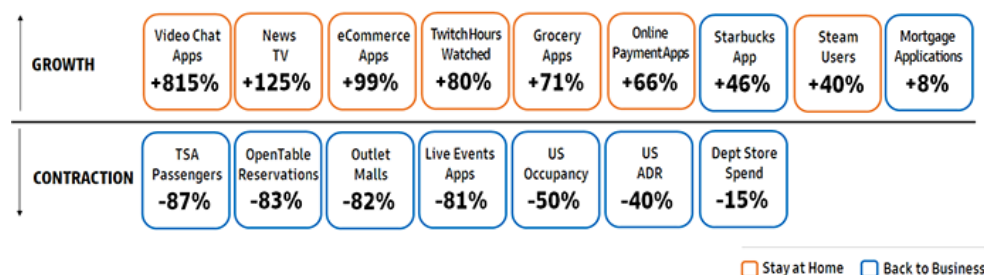
Kate Wang
+1(212)902-7929 | kate.wang@gs.com
Goldman Sachs & Co. LLC

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

Vivek Srivastava
+1(212)902-7042 | vivek.srivastava@gs.com
Goldman Sachs & Co. LLC

Exhibit 1: Reopening at a glance: Back-to-business segments see modest improvements, stay-at-home see slight deceleration

% change yoy for week ending June 3



This exhibit summarizes data from sources listed in Exhibits 5, 12 and 13.

Source: Goldman Sachs Global Investment Research

The GS US Reopening Scale, which attempts to quantify where the balance of the scale sits between "Stay at Home," the state we still largely find ourselves in, and

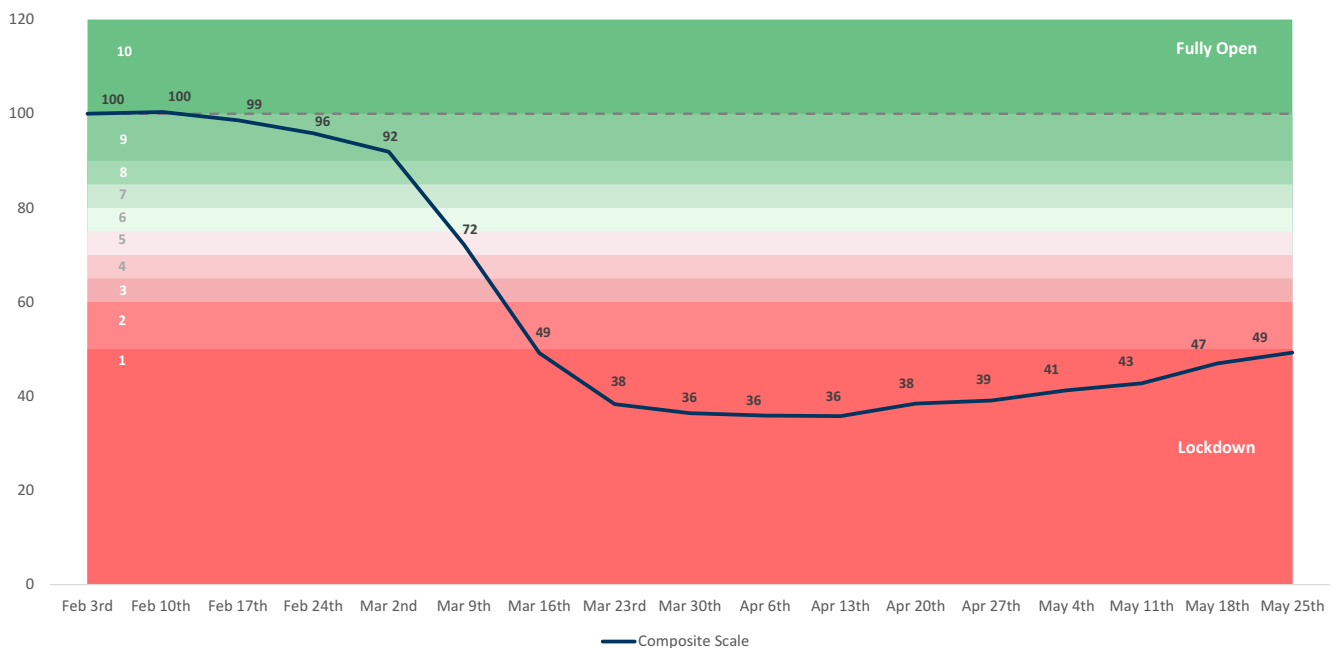
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“Back to Normal,” remains at 1 through the week of 6/3 as we have not seen ample aggregate reversal in trends to move the scale **though there has been significant movement in the internal metrics, most notably the deceleration we saw this week across the board in stay-at-home metrics, and only very modest improvements in back to normal categories.** Reflecting that, the Composite Score that the Reopening Scale is based on (Exhibit 2) improved modestly for the seventh straight week to 49 (vs. 47 and 43 in the prior two weeks, respectively).

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 (Exhibit 15). From there, we assign a Reopening score reflecting these quantitative inputs (Exhibit 14). As progress toward reopening begins, we expect that will show up in the Reopening Scale moving higher.

Exhibit 2: Our Composite Scale shows continuing rebound in recent weeks, though we remain just below 50

Date on x-axis represents first day of week measured



This exhibit summarizes data from sources listed in Exhibits 5, 12 and 13. 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 across 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 concerts, travel, and time at the office. While that picture remains very one sided in the data (Exhibit 4), with a larger number of cities and states beginning to look for ways to reopen, we expect to see the scale shifting higher over time, showing less

“Stay at Home” activity and more signs of “Back to Normal”

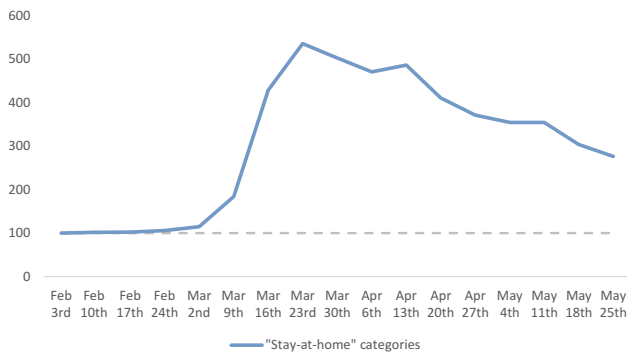
This week, we look into the recovery in both hardline and softline retail as stores begin to reopen, along with the potential impact from pent-up demand and divergence across different types of retailers.

Highlights

- **eCommerce, Streaming Media, and other Stay at Home categories decelerated slightly after several weeks of acceleration.** While the Memorial Day Holiday may have been a factor, all 9 eCommerce and grocery categories we track decelerated at least double digits over the prior week, while 3 of the 4 streaming media categories saw similar declines. While there wasn't a material offsetting increase in the retail categories we track, which continued to improve gradually, the deceleration in streaming media could be explained in part by the spike in news consumption.
- At our [2020 Travel and Leisure Conference](#), our conversations with management lead us to believe that **liquidity concerns are largely in the rear view, companies are optimistic about reopening trends but the path back to 2019 levels is unclear**, and any deal activity (M&A, strategic transactions, or PE) is largely frozen. Similarly, we heard constructive commentary on the demand rebound in China as hotel occupancy surpasses ~40%, up from ~10% in February and that drive-to-leisure markets will have a strong recovery.
- **Housing's positive momentum continued through May, with several builders reporting sales flat y/y for the month.** We look for this to continue into June with mortgage rate locks, an indication of purchase activity, up 19% y/y for the week ended May 25. Our channel checks suggest this is driven by incremental buyers looking to move out of city centers and into the suburbs and take advantage of increased affordability. As a result, builders across geographies—from DC to California—are gradually re-engaging in land deals, a sign of their optimism on demand.
- **Lyft reported that overall rides in May increased +26% versus April and rideshare rides increased week over week for 7 consecutive weeks.** Specifically, rideshare rides for May over April are +73% in Denver, +42% in NYC and +40% in Seattle. Management noted that riders are taking relatively more rides on weekdays versus weekends in relation to commute trips and essential store purchases, although there was also stronger relative sequential growth in weekend rides for the past three weekends. Bike rides have also increased +118% in May over April.

Exhibit 3: Stay Home categories resume relative deceleration

Date on x-axis represents first day of week measured

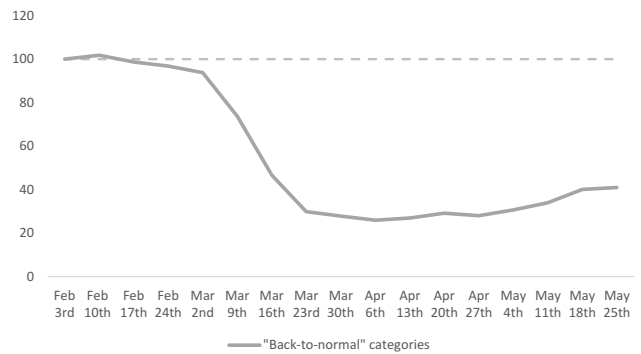


This exhibit summarizes data from sources listed in Exhibits 5, 12 and 13.

Source: Goldman Sachs Global Investment Research

Exhibit 4: Back to Normal categories on average down 59% from February levels, but up 15pts from trough

Date on x-axis represents first day of week measured



This exhibit summarizes data from sources listed in Exhibits 5, 12 and 13.

Source: Goldman Sachs Global Investment Research

Weekly Trends

Stay Home

While it is no surprise that services like Netflix, Zoom and Amazon are in high demand during a time when many states are implementing shelter-in-home policies, we continue to collect and track data across a number of sources and verticals to understand the extent to which different categories are being impacted.

This week, we have seen a notable slowdown in many stay home categories as growth rates moderate across the space. eCommerce app downloads decelerated to +99% y/y (compared to +149% in the prior week) as retail stores reopen for business and people begin to shift some spending back into physical channels. Similarly, video gaming metrics, which have surged since the beginning of the lockdown, are slowing with aggregate App store video games downloads at +3% y/y from May 25-31, although Twitch hours watched remain elevated in May (+80% y/y). For the first time since lockdowns began, food delivery app downloads have turned negative to -3% y/y in the most recent week, down from +13% y/y in the prior week. However, our stay-at-home household items \$/store is still up 28% y/y on average, according to Catalina, suggesting that households are cutting back on deliveries as restaurants reopen while still doing lots of cooking at home.

Exhibit 5: “Stay at Home” metrics moderating after the initial surge for these categories during lockdowns and sheltering in place

Feb 9 - Mar 15 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	Mar 16 - Mar 22	Mar 23 - Mar 29	Mar 30 - Apr 5	Apr 6 - Apr 12	Apr 13 - Apr 19	Apr 20 - Apr 26	Apr 27 - May 3	May 4 - May 10	May 11 - May 17	May 18 - May 24	May 25 - May 31					
Stay at Home	eCommerce		US App Downloads	0%	25%	34%	67%	79%	124%	114%	113%	117%	129%	149%	99%		Sensor Tower			
			US App Downloads	48%	317%	384%	496%	494%	389%	266%	181%	162%	124%	110%	71%					
	Groceries	Household cleaning compounds	S/store	Flour	-2%	247%	143%	142%	125%	42%	141%	114%	99%	89%	79%	56%		Catalina		
				Alcohol	4%	158%	92%	81%	70%	62%	87%	54%	52%	49%	46%	26%				
				Staples	3%	74%	30%	42%	45%	17%	40%	36%	44%	35%	29%	26%				
				Food	0%	79%	19%	22%	28%	1%	28%	15%	18%	14%	14%	12%				
					1%	114%	38%	40%	47%	9%	51%	32%	31%	26%	25%	21%				
	Online Media		US App Downloads (m/m change)	-46%	103%	74%	65%	32%	-35%	-42%	-35%	-26%	-23%	-12%	-13%		Sensor Tower			
			US App Downloads	1%	34%	40%	25%	25%	31%	32%	27%	17%	33%	37%	19%					
	News TV	CNN	Fox News Channel	Ratings	-5%	204%	285%	250%	207%	137%	135%	97%	84%	110%	64%	217%		Nielsen		
				MSNBC	46%	116%	100%	120%	88%	68%	60%	44%	27%	41%	26%	86%				
	Online Gaming	Twitch Streams	Steam	Total Hours Watched	-16%	68%	104%	69%	51%	37%	58%	22%	16%	48%	25%	72%		Sully/Gnome		
				Users	11%		29%		102%					30%						
				IOS app downloads	9%	38%	48%	55%	52%	53%	54%	50%	46%	47%	46%	40%				
	Food Delivery	At-home Fitness		Consumer Spend	24%	57%	62%	50%	39%	30%	35%	25%	28%	16%	3%		Sensor Tower			
				US App Downloads	11%	63%	51%	95%	102%	111%	70%	96%	81%	93%	95%					
	Video Chat Apps			Users	-27%	15%	45%	32%	32%	64%	48%	38%	28%	13%	-3%		Facteus			
				US App Downloads	-1%	805%	546%	590%	374%	293%	281%	289%	231%	177%	169%	114%				
Online Payment Apps			US App Downloads	-12%	1333%	2074%	1768%	1765%	1952%	1485%	1277%	1234%	1253%	938%	815%		Sensor Tower			
			US App Downloads	16%	27%	45%	38%	42%	92%	56%	57%	62%	58%	71%	66%					

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

Stay home category updates

- Yesterday Zynga raised guidance for 2Q20 and now expects the best quarter ever for revenue and bookings. Specifically, Zynga continues to experience elevated levels of player engagement that started in late March and have continued throughout the course of April and May. Currently, Zynga assumes normalization of shelter in place tailwinds for Q3, although if these effects are extended it could be means for further positive guidance revisions for the full year.
- Despite some signs of app download moderation in eCommerce, Visa reported that Card Not Present volumes (ex-Travel) in the U.S. accelerated to nearly 40% y/y in the week ending May 31, the highest y/y % growth since at least March 8th.

This week, our Retail analysts Alexandra Walvis and Kate McShane share datapoints from the retail store re-opening process which has taken place through May and into early June.

Non-essential stores have been re-opening across the U.S. throughout May, and the majority of states are now permitting retailers to operate. While traffic has returned faster than feared, we note a potential impact from pent-up demand and also highlight significant divergence across retailer formats and categories. In particular, value formats such as off-price have been particularly strong, while at-home categories have notably outperformed.

Most states now permit nonessential retail to reopen. States across the US have gradually eased restrictions on nonessential retail throughout the month of May, with GS research estimating 88% of states now permitting shops to reopen (albeit with some restrictions). States with restrictions still in place

largely center on those hardest hit by COVID-19, including New York, New Jersey, Massachusetts, and Washington D.C. Our analysis of the retail footprint of select hardlines and apparel softlines indicates that, on average, ~85% or more of our covered companies store base could now reopen at management’s discretion, up from ~60% on May 18. We thus believe investor focus will now shift to store productivity metrics and profitability.

Exhibit 6: The Retail Reopening Tracker

We track state announcements regarding nonessential retail business restrictions and sort by case count incidence rate

State	Week Ending											Case Count per 100k
	4/26/2020	5/3/2020	5/10/2020	5/17/2020	5/24/2020	5/31/2020	6/7/2020	6/14/2020	6/21/2020	6/28/2020	7/5/2020	
New York												1,906
New Jersey												1,806
Rhode Island												1,499
Massachusetts												1,407
D. C.												1,247
Connecticut												1,184
Delaware												975
Illinois												949
Maryland												873
Louisiana												859
Nebraska												729
Iowa												620
Pennsylvania												595
Michigan												575
South Dakota												564
Virginia												523
Mississippi												522
Indiana												514
Colorado												458
Georgia												443
Minnesota												441
New Mexico												367
Alabama												366
New Hampshire												342
North Dakota												338
Kansas												333
Tennessee												330
Wisconsin												316
Utah												306
Ohio												304
Washington												285
California												283
Nevada												280
North Carolina												274
Arizona												274
Florida												261
Arkansas												240
South Carolina												230
Texas												223
Missouri												219
Kentucky												217
Maine												173
Oklahoma												162
Idaho												159
Vermont												157
Wyoming												156
West Virginia												112
Oregon												101
Alaska												63
Montana												48
Hawaii												46

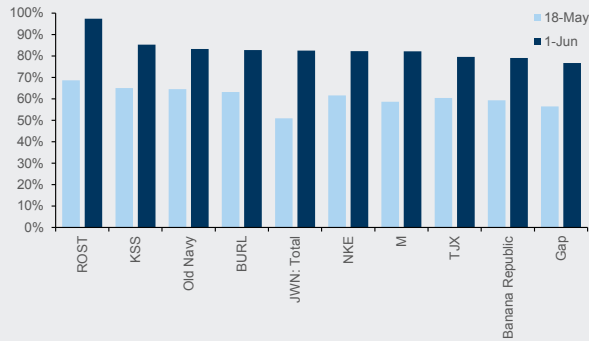
*Note: States are sorted by COVID-19 cases per 100k population (highest to lowest), as per Johns Hopkins data

Note: Updated June 1. Blue highlights denote where non-essential retail is permitted to open.

Source: Government websites, Johns Hopkins University Center for Systems Science and Engineering, Goldman Sachs Global Investment Research

Exhibit 7: The vast majority of states have now permitted nonessential retail stores to reopen; within apparel and softlines discretionary retail, ROST, KSS, and Old Navy have the highest exposure to states permitting reopening

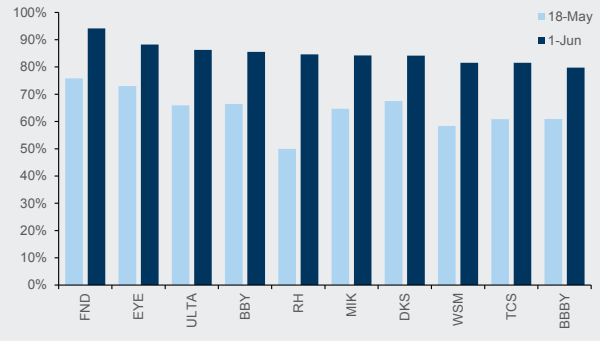
Percent overlap of store footprint with states permitting nonessential retail by May 18 and June 1



Source: Government websites, Company data, Goldman Sachs Global Investment Research

Exhibit 8: For specialty hardlines, state guidelines now permit ~80% or more of a retailer’s footprint to reopen; FND, EYE, and ULTA have the highest exposure to states permitting reopening

Percent overlap of store footprint with states permitting nonessential retail by May 18 and June 1



Source: Government websites, Company data, Goldman Sachs Global Investment Research

Reopening Productivity: Better than feared but bifurcated

As stores reopen, a few key trends emerge. Non-essential retailers across the apparel, softlines, and specialty hardlines sectors have been gradually reopening stores since early May. Initial commentary from retailers indicates a wide divergence in store productivity, where off-price retailers such as Burlington Stores and TJX Companies have seen Y/Y sales growth in reopened stores while department stores have pointed to only 50-60% initial productivity. While commentary regarding sales trends is encouraging vs. our initial expectations (we note Macy’s had warned of ~20% productivity expectations in late April before providing its ~50% commentary in late May), several retailers have pointed to pent up demand, inventory clearance sales, and strength of stay-at-home categories such as home and loungewear as drivers of the strength.

Expect off-mall to outperform, but keep a close eye on productivity. While we acknowledge room for productivity trends to fluctuate as store reopenings normalize, we expect retailers with off-mall formats and value offerings to outperform. We believe investor focus will continue to center on emerging store productivity datapoints as the summer progresses.

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.

Most back to normal categories are seeing steady and largely linear recovery rates, improving 2-3pts on a y/y basis each week. Uber, Lyft and Waze app downloads are on average still down ~50% y/y in the most recent week while OpenTable seated diners are at -83% y/y. Notably, all these metrics are skewed towards some large cities that have yet to reopen including San Francisco and New York. According to Facticeus, department store consumer spend saw a sharp improvement to -15% y/y from May 18-24, compared to -30% and -42% in prior weeks. Weekly retail visits have also recovered to -33% y/y last week (-36% and -38% in the two weeks prior). In the travel space, lodging and airline metrics remain on track for a slow and steady recovery as people stay cautious against traveling long distances in this environment.

Exhibit 12: “Back to Normal” metrics are down significantly, although seeing signs of recovery
 Feb 9 - Mar 15 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	Mar 16 - Mar 22	Mar 23 - Mar 29	Mar 30 - Apr 5	Apr 6 - Apr 12	Apr 13 - Apr 19	Apr 20 - Apr 26	Apr 27 - May 3	May 4 - May 10	May 11 - May 17	May 18 - May 24	May 25 - May 31						
Gym Attendance			US App Downloads	42%	-1%	-35%	-57%	-70%	-81%	-83%	-85%	-85%	-85%	-85%	-85%	-85%	-85%	-85%	Sensor Tower		
			US App Downloads	-18%	-50%	-63%	-77%	-68%	-59%	-56%	-52%	-39%	-23%	-23%	-23%	-25%	-25%	-25%	EJA		
Commuting	Google COVID-19 Community Mobility Reports	Transit % change from baseline	Gas Demand	1%	-3%	-27%	-48%	-46%	-44%	-36%	-32%	-19%	-28%	-23%	-23%	-23%	-23%	Google			
			Workplaces % change from baseline		-33%	-48%	-50%	-52%	-50%	-48%	-43%	-42%	-40%	-37%	-37%	-37%	-37%	-37%	Google		
Box Office			US Top 10 Gross	27%	-29%	-42%	-46%	-49%	-45%	-44%	-42%	-41%	-39%	-36%	-36%	-36%	-36%	Box Office Mojo			
			Movies Released	-22%	-68%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	Box Office Mojo		
Sports TV			ESPN	-5%	-42%	-98%	-98%	-98%	-98%	-98%	-98%	-98%	-95%	-98%	-95%	-98%	-95%	Nielsen			
			NBCSN	-28%	-25%	-45%	-51%	-66%	-45%	19%	-51%	-54%	-64%	-61%	-67%	-67%	-67%	-67%	Nielsen		
Dining	OpenTable		Ratings	15%	-39%	-70%	-36%	-80%	-87%	-89%	-89%	-92%	-89%	-92%	-76%	-90%	-90%	OpenTable			
			FB1		-53%	-28%	-46%	-11%	-25%	34%	-43%	-48%	-25%	31%	33%	33%	33%	OpenTable			
Retail			Seated diners	-3%	-90%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	-98%	-95%	-88%	-83%	-83%	ShopperTrak RCT Corporation			
			Weekly Visits	-3%	-33%	-49%	-49%	-49%	-48%	-45%	-43%	-40%	-38%	-38%	-33%	-33%	-33%	ShopperTrak RCT Corporation			
			Outlet Malls Weekly Visits	-3%	-82%	-89%	-100%	-100%	-100%	-100%	-100%	-99%	-95%	-90%	-82%	-82%	-82%	ShopperTrak RCT Corporation			
			Beauty Aids \$/store	0%	-28%	-40%	-29%	-21%	-24%	-19%	-21%	-2%	-2%	-9%	-9%	-11%	-11%	-11%	Catalina		
Retail and Recreation			Shaving \$/store	-5%	11%	-10%	-2%	-4%	-8%	6%	-5%	5%	-3%	-1%	-3%	-3%	-3%	Catalina			
			Deodorants \$/store	2%	38%	-10%	-13%	-13%	-19%	-10%	-18%	-12%	-15%	-11%	-9%	-9%	-9%	Catalina			
			Department stores	Consumer spend		-66%	-67%	-64%	-61%	-42%	-47%	-39%	-42%	-30%	-15%	-15%	-15%	-15%	Facticeus		
			Google COVID-19 Community Mobility Reports	% change from baseline		-28%	-42%	-42%	-46%	-42%	-40%	-34%	-30%	-29%	-24%	-24%	-24%	-24%	Google		
Airlines			Amusement Parks		-82%	-85%	-81%	-83%	-71%	-87%	-80%	-82%	-83%	-86%	-86%	-86%	-86%	Facticeus			
			Tourist Attractions	Consumer Spend		-70%	-83%	-73%	-73%	-86%	-76%	-51%	-56%	-59%	-53%	-53%	-53%	-53%	Facticeus		
Lodging	Hilton Marriott		TSA checkpoints		-69%	-90%	-94%	-96%	-96%	-95%	-94%	-93%	-91%	-89%	-87%	-87%	-87%	TSA			
			Consumer spend		-79%	-88%	-92%	-94%	-89%	-88%	-84%	-82%	-79%	-76%	-76%	-76%	-76%	-76%	Facticeus		
Online Travel			Top 5 US Airports (Int Passenger Arrival)	-1%	-41%	-76%	-95%	-98%	-99%	-99%	-99%	-99%	-99%	-99%	-99%	-99%	-99%	GS Economics Team			
			US Occupancy	-1%	-56%	-67%	-69%	-70%	-64%	-62%	-59%	-56%	-54%	-50%	-50%	-50%	-50%	-50%	STR		
Card Payments	Mastercard		US ADR	1%	-30%	-39%	-42%	-46%	-42%	-43%	-44%	-42%	-42%	-40%	-40%	-40%	-40%	STR			
			Google Search Traffic	-7%	-38%	-55%	-60%	-60%	-56%	-55%	-51%	-43%	-45%	-47%	-40%	-40%	-40%	Google			
Live Events			US App Downloads	37%	-51%	-69%	-74%	-76%	-75%	-74%	-74%	-74%	-69%	-68%	-63%	-61%	-61%	Google			
			US Switched Volume	32%	-58%	-72%	-75%	-73%	-67%	-66%	-65%	-61%	-55%	-50%	-48%	-48%	-48%	-48%	Sensor Tower		
Card Payments			US App Downloads		-89%	-90%	-91%	-90%	-88%	-82%	-93%	-89%	-88%	-80%	-81%	-81%	-81%	Company data			
			US Switched Volume					-22%	-26%	-15%	-12%	-6%	-6%	-6%	-6%	-6%	-6%	-6%	Company data		

source for Google Community Mobility data: Google LLC “Google COVID-19 Community Mobility Reports”. <https://www.google.com/covid19/mobility/> Accessed: <25th May 2020>; Google search data from Google Trends.

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

Back to normal category updates

- Restaurant dining rooms continue to re-open across the country (at varying capacity restrictions), and our bottom-up analysis suggests ~35% of larger, chain dining room capacity is now back online (up from 30% last week). Most recent data points from our Casual Diners imply trends down mid-teens (for the large chains), but still down closer to 50% or more for fine dining and steakhouses, while Opentable seated-diner data (which skews more towards Independent operators) is still down 80-85% in the last week. Consumers continue to engage with largely off-premise restaurant brands with Domino’s reporting SSS of >+20% from mid-April to mid-May, and app downloads for Starbucks and Domino’s are +42%/+25% yoy (7-day moving avg) as of June 1.
- San Francisco last week announced an opening date for theaters in mid-August, which is later than currently planned release dates of Tenet and Mulan in mid and

late July respectively. Chains including AMC Entertainment and Regal had been anticipating a late June- early July reopening date.

Business Activities

Business activities are seeing more greenshoots, including passenger aircraft volumes, which were -51% y/y in the most recent week, compared to -55% in the two weeks prior. TSA passenger count was -87% y/y from May 25-31, continuing in the trend of a steady 2pt improvement per week for the 4th consecutive week. The Mortgage Bankers Association reported that mortgage applications were +8% y/y from May 18-24, and purchase loan rate lock activity recovered to +19% y/y in the same week, both turning positive for the first time since mid February. Domestic ethanol blending volumes were recovering on par with commute metrics, and were still down -28% y/y in the first half of May, off of lows of -45% y/y in early April.

Exhibit 13: Business Activity metrics are still down but recovering to reflect the economic impact of the crisis
Feb 3 - Mar 1 excluded for presentation purposes; see prior notes for data

Basket	Sector	Company/App	Metric	y/y % change, unless otherwise noted													Source				
				Mar 2 - Mar 8	Mar 9 - Mar 15	Mar 16 - Mar 22	Mar 23 - Mar 29	Mar 30 - Apr 5	Apr 6 - Apr 12	Apr 13 - Apr 19	Apr 20 - Apr 26	Apr 27 - May 3	May 4 - May 10	May 11 - May 17	May 18 - May 24	May 25 - May 31					
Business Activity	Industrial consumer	TSA	TSA passenger throughput	-12%	-29%	-69%	-90%	-94%	-96%	-96%	-96%	-94%	-93%	-91%	-89%	-87%	TSA				
			N.A. Airline forward schedules (1 month out)	-27%											-65%	-81%	-61%	-66%	-72%	-75%	OAG
			Actual air traffic growth	-53%																	IATA
		Passenger aircraft in service	-7%	-10%	-33%	-53%	-59%	-61%	-61%	-59%	-59%	-57%	-55%	-55%	-51%	Cirium					
	Autos	3M	Monthly sales	-1%	-4%	6%	-5%	-12%	-19%	-26%	-26%	-24%	-22%	-26%	-22%	Company data					
			US Railway Utilization %	down mid-teens												EIA					
		Auto SAAR	-34%											-48%						Wards	
		Domestic ethanol blending	0%	1%	-5%	-34%	-45%	-45%	-44%	-37%	-35%	-30%	-28%			EIA					
	Industrial housing	Google	Google Search Traffic	-3%	-9%	-28%	-26%	-26%	-27%	-28%	-21%	-10%	-6%	-4%	-5%	Google					
			Mortgage Applications	12%	11%	-11%	-23%	-33%	-35%	-31%	-20%	-19%	-9%	-2%	8%	Mortgage Bankers Association					
		NSA	Single-Family Housing Permits	13%											-16%						Census Bureau
			New Home For-Sale Inventory	10%											3%						Census Bureau
			Months of Supply, SAAR	-13%											-5%						National Association of Realtors (NAR)
			Existing Home For-Sale Inventory	8%											7%						Census Bureau
			Months of Supply, SAAR	-12%											-6%						NAR
			New Home Prices (Median)	5%											-9%						Census Bureau
			Existing Home Prices (Median)	-12%											-6%						Census Bureau
			New Home Sales (Units, SAAR)	1%											-17%						NAR
	Online Real Estate	Redfin	Existing Home Sales (Units, SAAR)	3%																NAR	
			Purchase Loan Rate Lock Activity					-18%	-16%	-16%	-17%	-15%	-8%	0%	19%	AEI					
		Texas cement shipments	14%	-2%	8%	-27%	-12%	-21%	-20%	-15%		6%	17%			Texas Comptroller					
		Home-buying demand	3%	0%	-27%	-36%	-26%	-22%	-4%	21%						Redfin					
	Industrial equipment	Thumbtack	Customer Projects on Home Construction	-5%	-13%	-22%	-34%	-40%	-43%	-39%	-29%					Thumbtack					
			Customer Projects on Moving	-17%											-22%						Company data
		Caterpillar	Retail sales	(137)											(108)						Company data
Boeing		New aircraft orders	1%																	Company data	
Industrial trade	Komtrax	US industrial distributor sales (avg.)	-8%											-6%						Komtrax	
		Komtrax operating hours	-8%											-7%						Company data	
	Michelin	North America replacement tire volumes	1%																	Company data	
		Weekly rail economically sensitive carloads (US rails)	-8%	-6%	-9%	-15%	-16%	-21%	-21%	-20%	-18%	-19%	-19%	-16%	AAR						
Multi-Industry	FAST	Weekly rail intermodal carloads (US rails)	-14%	-9%	-11%	-14%	-16%	-20%	-19%	-16%	-14%	-16%	-14%	-11%	AAR						
		Truck spot pricing	0%	9%	10%	4%	-9%	-14%	-18%	-12%	-16%	-13%	-8%	-9%	Truckstop						
	MSM	DAT load to van ratio	2.89											0.99	1.23	1.48	1.72	2.03	2.81	DAT	
		Truck Load Availability Index (2014=100)	101	122	131	127	87	55	44	42	50	59	73	90	Truckstop						
	GWW	Cass freight index	-9%											-23%						CASS	
		"Big 3" west coast ports inbound loaded containers	-16%											-7%						Port data	
Personal Health	FAST	Daily sales	0%											7%						Company data	
		Dental offices at 50%+ of normal	-6%											-11%						Company data	
Advertising	Facebook / Instagram	Branded Nrx volumes (mm)	3.7	3.8	3.8	3.3	3.0	2.9	2.8	2.7	2.7	2.8	2.8	2.8	ADA						
		Generic Nrx volumes (mm)	48	46	46	40	37	36	35	35	35	36	36	36	IQVIA						
		Cost per 1,000 Impressions	32%	4%	-23%	-33%	-41%	-39%	-35%	-35%	-24%	-24%	-22%	-16%	-2%	Gupta Media					

Google search data from Google Trends

Source: Sources in exhibit, Goldman Sachs Global Investment Research

Business Activities category updates

- Transportation key trends are either generally stable or improved sequentially especially vis-à-vis the lows of April. Rail carloads declines while still sharp, are the least negative in at least the last 6-7 weeks. Truck pricing is holding at down 9%, while load availability eased somewhat, but still up sharply off the bottom.
- US construction equipment utilization rates were modestly weaker in the past week based on Komatsu disclosures. In Truck machinery, capacity utilization has continued to improve in May, with the DAT load-to-truck ratio up +36% from last week and

+128% over the last month. In addition, spot rates grew 5% from last week.

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 36. We then translate the composite scale onto a GS reopening scale of 1-10 ([Exhibit 14](#)), where values less than or equal to 50 represent a 1 and a return to Feb 3rd levels would represent a 10.

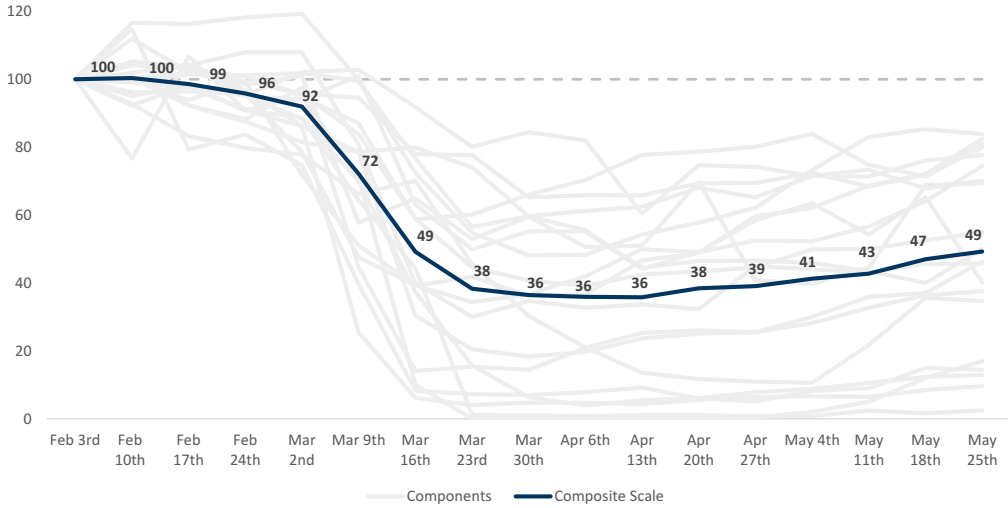
The GS reopening scale, based on the trajectory of the Composite Scale ([Exhibit 15](#)), first reached 1 in the week of March 16th, where it has remained for the 10 weeks since, indicating that consumers are still at the trough of impacts from COVID-19. However, despite the Reopening Scale remaining at 1, we’ve seen the composite scale continue to recover from troughs we saw at the end of March and in early April, indicating that consumer behavior is heading in the right direction. We expect that as states begin to reopen for business these metrics will slowly begin to recover more meaningfully, bringing the scale back up. However, we would expect the recovery to a 10 to take at least 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 14: 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 15: Composite Scale, Feb. 3 - May 31st
Date on x-axis represents first day of week measured



This exhibit summarizes data from sources listed in Exhibits 5, 12 and 13.

Source: Goldman Sachs Global Investment Research.

Disclosure Appendix

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