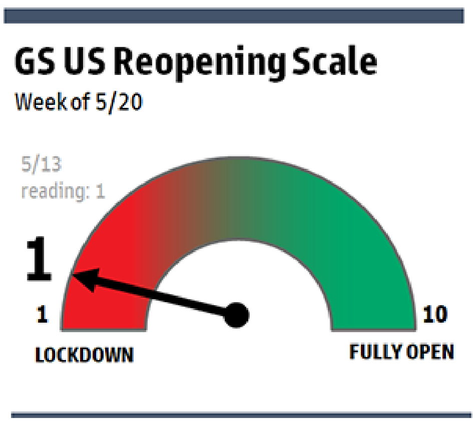
Goldman Sachs | Equity Research

20 May 2020 | 7:26AM EDT

Note: The following is a redacted version of the original report published May 20, 2020 [22 pgs].

Measuring the Reopening of America

The GS US Reopening Scale: Signs of progress, but remain at 1 (Week of May 20)



Following our first two weeks in the series, we continue to monitor the reopening of America, as cities and states across the U.S. begin to reopen at different paces and with different processes in place. In this series, we attempt to provide tools to measure the pace at which this reopening is happening by looking at a wide range of data from "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). While there is economic data being used for this purpose (see *Measuring the Impact of Lockdowns and Social Distancing on Global GDP*), we continue to look to a broader set of high frequency sources (app downloads, point of sale, restaurant reservations, etc). We have added a few new data series this week and expect to continue to expand and refine the analysis over the course of the coming weeks as more data becomes available and the profile of the reopening evolves.

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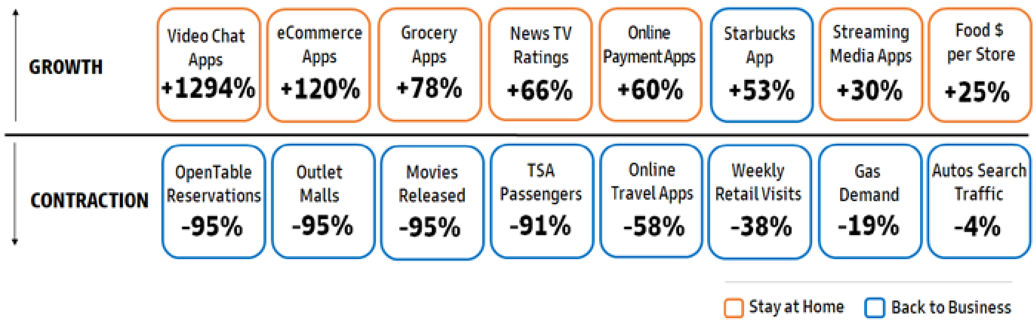
Exhibit 1: Reopening at a glance: Back-to-business segments still deep in contraction, stay at home growing strong

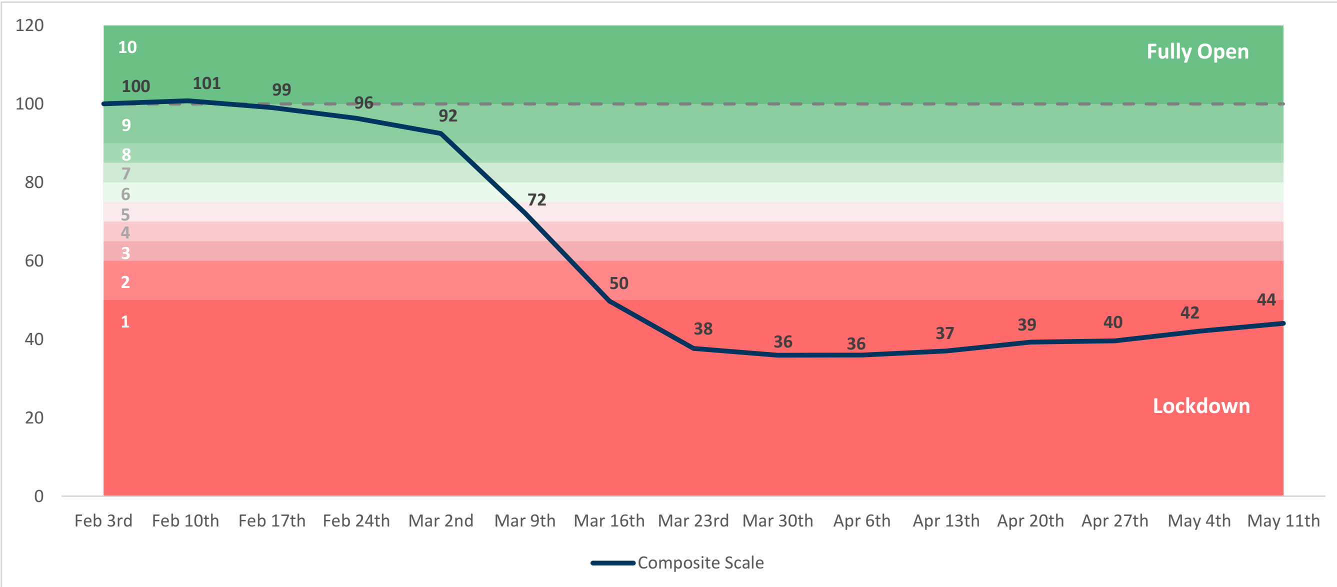
% change yoy for week ending May 15



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 "Back to Normal", remains at "1" through the week of 5/20 as we have not seen ample aggregate reversal in trends to date to warrant an improvement in our Reopening score. However, the Composite Score that the Reopening Scale is based on (Exhibit 2) improved modestly for the fifth straight week to 44 (vs. 42 and 40 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 14). From there, we assign a Reopening score reflecting these quantitative inputs (Exhibit 13). As progress toward reopening begins, we expect that will show up in the Reopening Scale moving higher and we plan to continue monitoring that progress.

Exhibit 2: Our Composite Scale shows a modest rebound in recent weeks, though we remain below 50
Date on x-axis represents first day of week measured



Source: Goldman Sachs Global Investment Research

Key Findings

Our read across 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 commuting, travel, and trips to the store. While that picture remains very one sided in the data (Exhibit 4), with 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 highlight industrial trends from our 2020 Industrials and Materials Virtual Conference, where our analysts saw emerging green shoots and signs of recovery from various industries including Transportation, Machinery, Autos, Housing and Airlines.

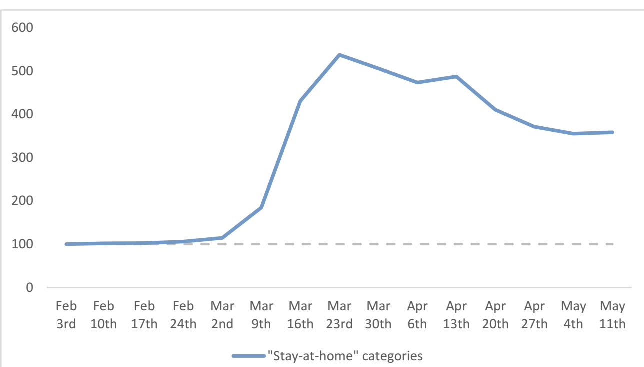
Highlights

- **Utilization of healthcare services is beginning to pick up in early May off of April troughs.** Hospital surgery volumes improved from -50% in the first two weeks of April per HCA to -20% in the first week of May. New prescriptions dispensed, which trended down 10-25% in April, grew sequentially in the low-single digits as in-person and virtual doctor office visits increased vs. prior weeks. Dental practices, which have largely been limited to emergencies only, are showing early signs of reopening, with 15% of practices now reporting volumes 50%+ of normal as of early May vs. only 5% of practices seeing 50%+ volumes in April.

- **We were surprised by the relative strength of consumer demand for newly opened theaters,** though the sample set remains small and nationwide reported box office figures remain down 100% y/y. There is a lot of debate about what box office demand will look like once stay-at-home restrictions are lifted and movie theaters re-open. The recent re-opening of theaters in San Antonio, Texas provided a small glimpse into this question. While it is hard to argue that a few theaters in San Antonio are truly representative of the entire nation, The Hollywood Reporter noted that the Santikos theaters that re-opened on the May 2-3 weekend had aggregate box office of nearly $16k and attendance of nearly 3k, with a discounted ticket price of $5.41. At the same time, the ~300 drive-in theaters in the country are seeing a surge in popularity as an option for socially distanced outdoor entertainment despite the lack of new releases.

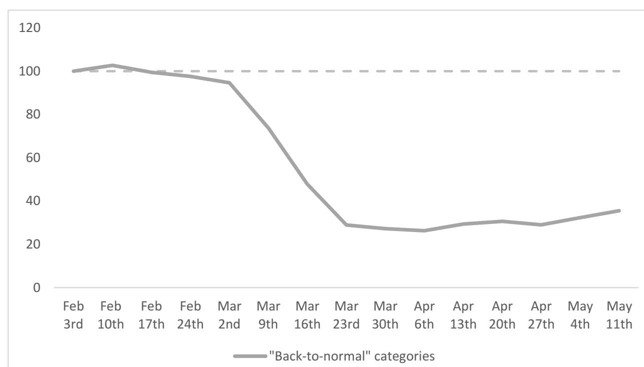
- **While a number of "Back to Normal" categories showed modest signs of recovery, a number of "Stay at Home" categories reaccelerated.** Moderating declines in app downloads for Gyms like Planet Fitness, Crunch, and Anytime Fitness (-17% y/y on average vs. -44% last week) as well as Sports TV viewership (-58% on average vs. -63% last week) and dining reservations (-95% y/y vs. -98% last week) were key contributors to a normalizing Composite Scale this week, as social distancing measures have been relaxed in a number of states, some Sports begin to be broadcast live (e.g. Golf), and more cities continue to see recovery in restaurant traffic (e.g. Phoenix, Scottsdale, Tampa, Houston, Orlando). However, combating normalization were reacceleration in online media app downloads across Netflix, Hulu, and Amazon Prime Video (+30% y/y on average vs. +17% last week) as well as an acceleration in News TV ratings across CNN, Fox News, and MSNBC (+66% y/y on average vs. +42% last week), among other factors.

Exhibit 3: Stay Home categories stabilize vs. last week after receding in prior weeks
Date on x-axis represents first day of week measured



Source: Goldman Sachs Global Investment Research

Exhibit 4: Back to Normal categories on average down 64% from February levels, but up 10pts from trough
Date on x-axis represents first day of week measured



Source: Goldman Sachs Global Investment Research

Weekly Trends

Stay Home

While it is no surprise that companies 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.

Most categories in our "Stay at Home" scale are still experiencing demand surges, and eCommerce in particular where app downloads have continued to accelerate at +119% y/y in the most recent two weeks, compared to +114% y/y in the two weeks prior. The online payments space is also experiencing increased adoption as all the major digital wallets saw app downloads grow at least 20% y/y each week since the latter half of March. In contrast, groceries app downloads have moderated significantly, decelerating from +119% in the week of May 4 to +78% y/y in the week of May 11.

Stay home category updates

- Citigroup noted on Wednesday May 13 that it had opened more than 1,000 corporate accounts digitally during the widespread lockdowns, a 300% increase from a year earlier as clients increased adoption of their digital offerings.
- The online media apps are seeing a reacceleration in app downloads across Netflix, Hulu, and Amazon Prime Video, at +30% y/y in the most recent week after decelerating for three continuous weeks (+17%, +27% and +30% in the three weeks prior).

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.

Rideshare companies are continuing to see upticks in usage as several states open, with rideshare app downloads -53% y/y in the most recent week, compared to -71% y/y at the trough of impacts. This week, we added Mastercard US Switched Volume, which was down -26% y/y from April 13-19 when card usage declined as states implemented mobility restrictions. In comparison, in the week of May 7, the same metric was down only -6% y/y as the consumer recovery continues. Live events remains to be one of the most impacted sectors at -88% y/y decline for app downloads. According to Catalina, $ spend/store for back-to-normal items, including beauty aids and deodorants, are still down -9% y/y on average (-3% and -15% y/y in the two weeks prior).

Back to normal category updates

- In Convenience Store retail, overall sales growth continues to accelerate (+8.6% y/y for the week ending 5/10) an acceleration vs. up +3.2% the week prior (and down -1.8% the week before that), suggesting consumers are driving more as several states lift restrictions and the consumer starts to fully benefit from government stimulus.
- In the lodging space, there were continued initial signs of recovery in leisure. For example, DiamondRock noted their Huntington Beach hotel saw occupancy move from 30% to 60% last weekend on Saturday alone driven solely by walk-ins. Condor Hospitality, which has hotels in Florida, Texas and Georgia cited occupancy ramping from 13% at the end of March to over 32% in May.

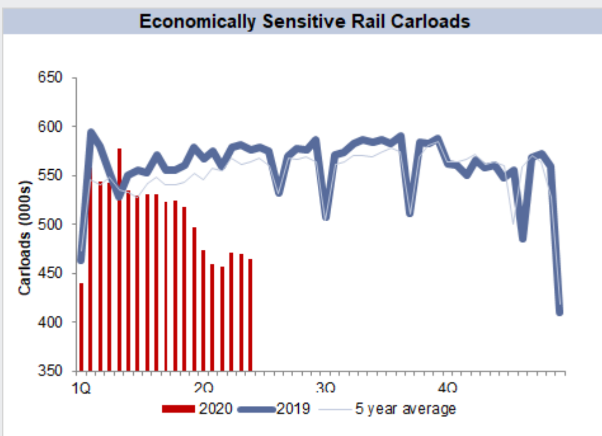
Industrials: emerging green shoots from our 2020 Conference

Last week we hosted the 2020 Industrials & Materials Virtual Conference, where we heard evidence of emerging green shoots in certain verticals within Industrials, including: Transportation, Machinery, Autos, Housing, and Airlines.

Transportation: signs of volume and pricing improvement

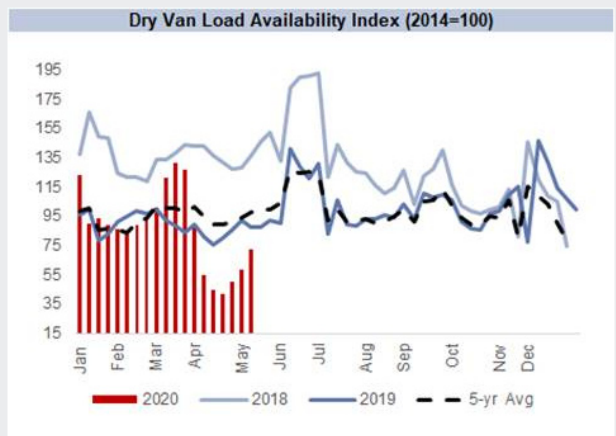
Transport greenshoots tend to center around volumes and price. From a volumetric standpoint our view is the prevalent greenshoot is one of stabilization – in other words, volume data (e.g. weekly rail carloads) is generally not getting worse (Exhibit 7). We would also suggest transports are entering what we call "anticipatory" greenshoots based on the premise that we go from "zero" manufacturing to "something" even if not full capacity (e.g. Auto production re-start; KSU suggested at conference that 75% of available capacity possibly back online by end of May). Further supporting this anticipatory greenshoots thesis is spot load availability (shipper load postings) and spot truck prices – Spot postings are up 45% since end April, while truck spot rates are up 10% (ex fuel surcharge).

Exhibit 5: Economically Sensitive Rail Carloads



Source: AAR

Exhibit 6: Dry Van Load Availability Index

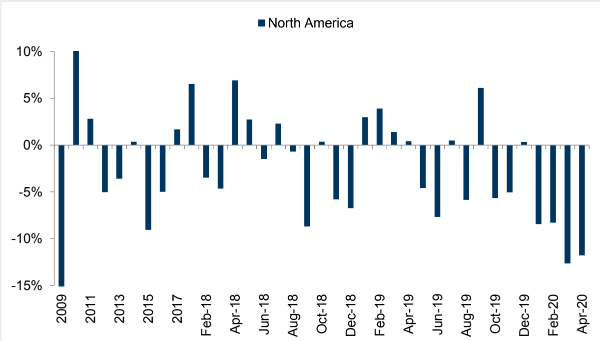


Source: Truckstop

Machinery: better capacity utilization

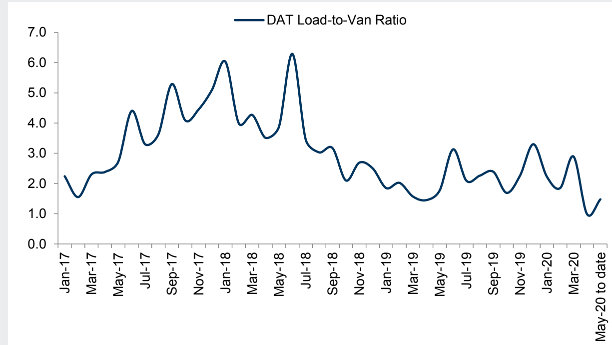
Machinery capacity utilization is recovering in May, inflecting off a bottom in early April, as reinforced by a broad range of participants in our Industrials conference. For construction machinery, (i) Komatsu operating hours were down 12% yoy in April, a surprisingly resilient result compared to -13% in March, and (ii) HRI, OSK, TEX, and TRMB pointed to sustained seasonal improvement in operating hours in recent weeks, including reactivated machines that had been idled on customer sites. In Truck, capacity utilization has continued to improve in May, with the DAT load-to-truck ratio up 83% over the past month and 16% from last week.

Exhibit 7: Komtrax North America operating hours



Source: Company data

Exhibit 8: DAT Load-to-Van Ratio

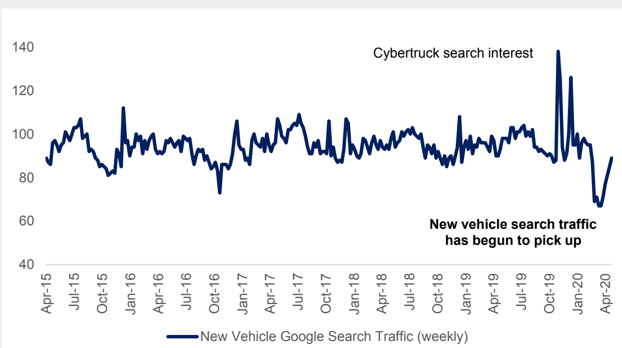


Source: DAT

Autos: signs of improvement in used pricing and recent retail sales

General Motors commented at our conference that it has seen some positive signs in its 1H May retail sales, and that used car pricing data had recently improved, which could be a sign that used car pricing has bottomed. This is consistent with other recent datapoints including the Manheim index for used car pricing moderating to -5% yoy in Mid May from -9% yoy in April, and Google search traffic related to new car buying moderating to down mid single digits yoy in May from down more than 20% yoy in 2H April.

Exhibit 9: New Vehicle Google Search Traffic

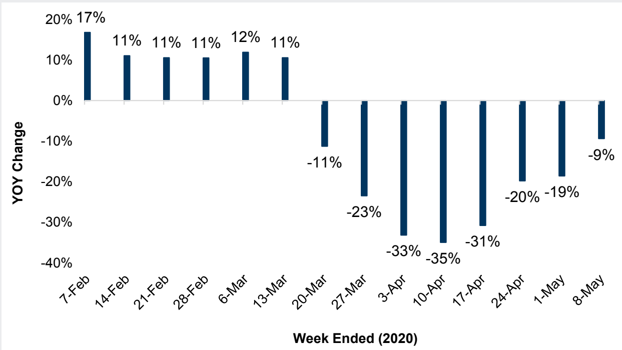


Source: Google Trends

Homebuilders: evidence early April was a sales low-point

Pulte noted the week ended April 3rd was the low point for sales, reflecting the impact of stay-at-home orders. Traffic to its websites have improved weekly, with a notable rise three weeks ago. Although it is still early, management commented it is beginning to see demand from people migrating from denser, urban areas to less dense cities and suburbs. Jeld-Wen commented that its standard stock SKUs at home improvement retailers have been less impacted by COVID-19. This is consistent with channel checks that point to strength in residential repair and remodel activity as the pandemic set-in. Geographically, the weakest areas have been the Northeast and California, where there have been greater construction delays and some pushout of specialty orders.

Exhibit 10: YOY Change in Weekly Mortgage Applications

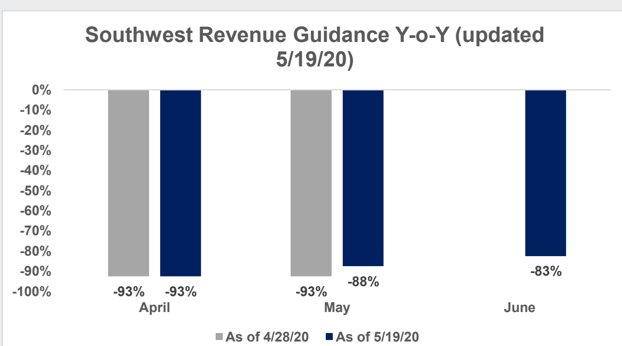


Source: Mortgage Bankers Association

Airlines: positive second derivatives in seat miles and load factors

Last week at the conference, American and Delta both noted a small lift off the mid-April bottom in demand for air travel. This along with capacity cuts has driven some improvement in load factor from levels seen in March and April. Looking ahead, airlines are seeing modest improvements in demand, with (i) American commenting last week at our conference that there is an improvement in markets that had begun to re-open and (ii) United and Southwest noting this week that demand and cancellation rates are improving through June. Furthermore, Southwest is now seeing positive net bookings (i.e. bookings outpacing cancellations), an improvement from negative net bookings for the majority of March and April, and expect this to drive small sequential improvements in revenue through the second quarter (April revenue expected to be down 90% to 95% year-over-year vs. June revenue down 80% to 85%).

Exhibit 11: Southwest Revenue Guidance year-on-year



Source: Company data

Business Activities

Business activities, though still heavily impacted by COVID-19, are starting to see signs of recovery. As indicated above in the section outlining the Industrials conference, we have seen the potential early start of positive second derivative in some of the data out of machinery, transportation, auto, housing, and airlines. Housing metrics appear more positive as mortgage applications recovered to -9% y/y during May 4-10, after being down -35% in early April. Similarly, purchase loan rate lock activity has returned to flat growth compared to 2019 this past week, and Redfin reported positive growth in home buying demand for the first time since the virus began widely impacting purchase plans. We added personal health as a category this week, including dental offices with over 50% of normal visit volumes, which was 15% in the most recent survey, compared to 4% in the prior survey. As peoples' mobility continues to be restricted across a number of states, most industrials trade metrics are still down y/y, though we expect more signs of recovery as restrictions begin to be lifted and consumer demand recovers.

Exhibit 12: Business Activity metrics are also falling to reflect the economic impact of the crisis

Basket	Sector	Company/App	Metric	y/y % change, unless otherwise noted															Source
				Feb 3 - Feb 9	Feb 10 - Feb 16	Feb 17 - Feb 23	Feb 24 - Mar 1	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	
Business Activity	Industrial consumer		TSA passenger throughput					-12%	-29%	-69%	-90%	-94%	-96%	-96%	-95%	-94%	-93%	-91%	TSA
			N.A. Airline forward schedules (1 month out)	-1%				-27%				-65%				-81%	-61%	-66%	OAG
			Actual air traffic growth	-14%				-53%											IATA
			Passenger aircraft in service	-2%	-4%	-4%	-5%	-7%	-10%	-33%	-53%	-59%	-61%	-61%	-59%	-49%	-48%	-54%	Cirium
		3M	Monthly sales									down mid-teens							Company data
			US Refinery Utilization %	-6%	-2%	1%	0%	-1%	-4%	-6%	-5%	-12%	-19%	-25%	-26%	-24%	-22%		EIA
	Autos		Auto SAAR	1%				-34%				-48%							Wards
			Domestic ethanol blending	0%	1%	2%	0%	0%	1%	-5%	-34%	-45%	-45%	-44%	-37%	-35%	-30%		EIA
			Google Search Traffic	-3%	7.7%	1%	1%	-3%	-9%	-28%	-26%	-29%	-27%	-28%	-21%	-10%	-6%	-4%	Google
	Industrial housing		Mortgage Applications	17%	11%	11%	11%	12%	11%	-11%	-23%	-33%	-35%	-31%	-20%	-19%	-9%		Mortgage Bankers Association
			Single-Family Housing Permits (NSA)	23%				13%				-17%							Census Bureau
			New Home For-Sale Inventory (Months of Supply, SAAR)	-15%				10%											Census Bureau
			Existing Home For-Sale Inventory (Months of Supply, SAAR)	-14%				-13%											National Association of Realtors (NAR)
			New Home Prices (Median)	3%				3%											Census Bureau
			Existing Home Prices (Median)	8%				8%											NAR
			New Home Sales (Units, SAAR)	11%				-10%											Census Bureau
			Existing Home Sales (Units, SAAR)	7%				1%											NAR
			Purchase Loan Rate Lock Activity									-18%	-16%	-16%	-17%	-15%	-8%	0%	AEI
			Texas cement shipments	8%				3%											
		Redfin	Home-buying demand	13%	4%	7%	0%	14%	-2%	8%	-27%	-12%	-21%	-20%	-15%		6%		Redfin
	Online Real Estate	Thumbtack	Customer Projects on Home Construction					3%	0%	-27%	-36%	-28%	-22%						Thumbtack
		Thumbtack	Customer Projects on Moving					-5%	-13%	-22%	-34%	-40%	-43%						Thumbtack
	Industrial equipment	Caterpillar	Retail sales	-11%				-17%				-22%							Company data
		Boeing	New aircraft orders	(28)				(137)				(108)							Company data
			US industrial distributor sales (avg.)	2%				1%											Company data
		Komtrax	Komtrax operating hours	-11%				-8%				-6%							Komtrax
		Michelin	North America replacement tire volumes	-6%				1%											Company data
	Industrial trade		Weekly rail economically sensitive carloads (US rails)	-6%	-6%	-3%	-9%	-8%	-6%	-9%	-15%	-16%	-21%	-21%	-20%	-18%	-19%		AAR
			Weekly rail intermodal carloads (US rails)	-9%	-8%	-6%	-12%	-14%	-9%	-11%	-14%	-16%	-20%	-19%	-16%	-14%	-16%		AAR
			Truck spot pricing	-8%	-7%	-6%	-6%	0%	9%	10%	4%	-9%	-14%	-18%					Truckstop
			DAT load to van ratio	1.85				2.89				0.99				1.23	1.48	1.72	DAT
			Truck Load Availability Index (2014=100)	86	85	89	92	101	122	131	127	87	55	44	42	50	59	73	Truckstop
			Cass freight index	-8%				-9%				-23%							CASS
			"Big 3" west coast ports inbound loaded containers	-19%				-16%				-7%							Port data
	Multi- Industry	FAST	Daily sales	5%				0%				7%							Company data
		MSM	Daily sales	-5%				-6%				-11%							Company data
		GWW	Daily sales	7%				9%											Company data
	Personal Heath		Dental offices at 50%+ of normal								6%		5%		4%		15%		ADA
			Branded NRx volumes (mn)	3.6	3.5	3.4	3.5	3.7	3.8	3.8	3.3	3.0	2.9	2.8	2.7	2.7	2.8		IQVIA
			Generic NRx volumes (mn)	46	45	44	44	46	46	46	40	37	36	35	35	35	36		IQVIA

Source: Sources in exhibit, Goldman Sachs Global Investment Research

The GS Reopening Scale

To look at all 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 13), where values less than or equal to 50 represent a 1 and a return to Feb 3rd levels would represent a 10.

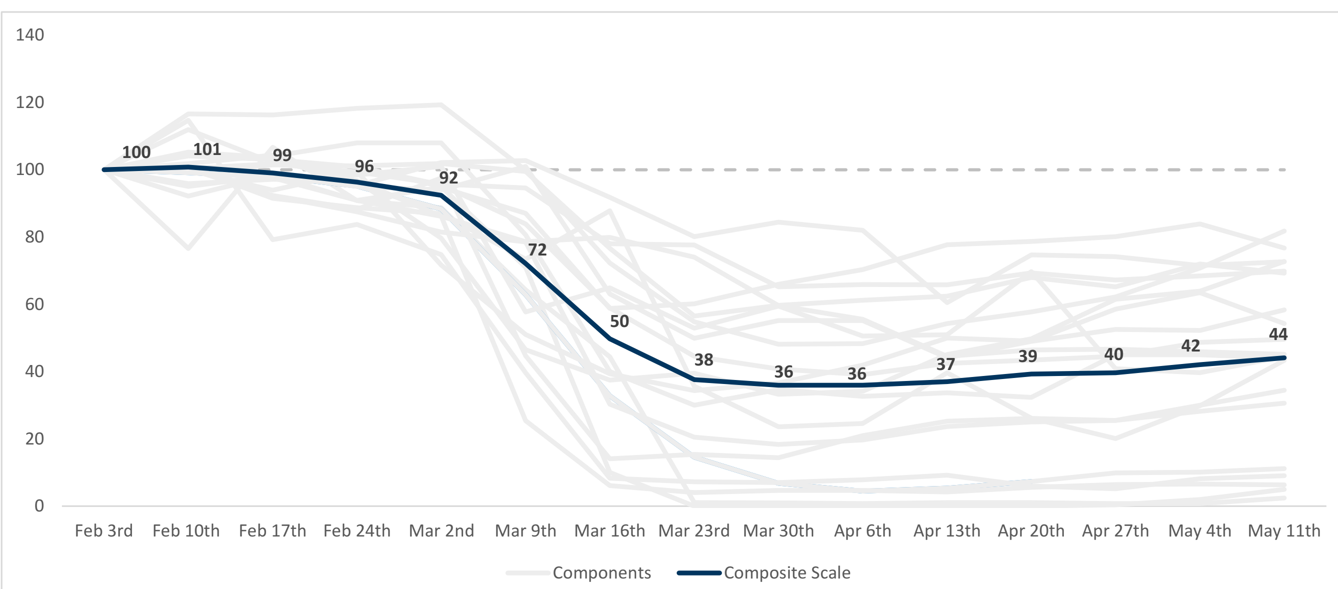
The GS reopening scale, based on the trajectory of the Composite Scale (Exhibit 14), first reached 1 in the week of March 16th, where it has remained for the 8 weeks since, indicating that consumers are still at the trough of impacts from COVID-19. However, despite the Reopening Scale remaining at 1, we've seen the composite scale begin to recover slightly 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 to 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 13: 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 14: Composite Scale, Feb. 3 - May 17th
Date on x-axis represents first day of week measured



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.

Disclosure Appendix

Reg AC

We, Heath P. Terry, CFA, Noah Poponak, CFA and Jason English, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

GS Factor Profile

The Goldman Sachs Factor Profile provides investment context for a stock by comparing key attributes to the market (i.e. our coverage universe) and its sector peers. The four key attributes depicted are: Growth, Financial Returns, Multiple (e.g. valuation) and Integrated (a composite of Growth, Financial Returns and Multiple). Growth, Financial Returns and Multiple are calculated by using normalized ranks for specific metrics for each stock. The normalized ranks for the metrics are then averaged and converted into percentiles for the relevant attribute. The precise calculation of each metric may vary depending on the fiscal year, industry and region, but the standard approach is as follows:

Growth is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

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

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