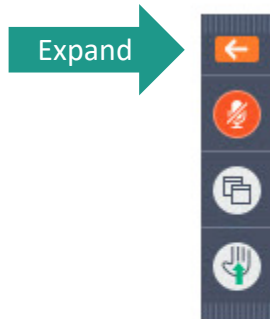




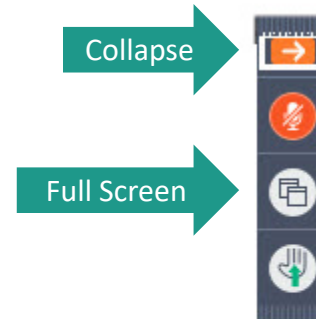
**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

APRIL 9, 2020
Market Update Webinar

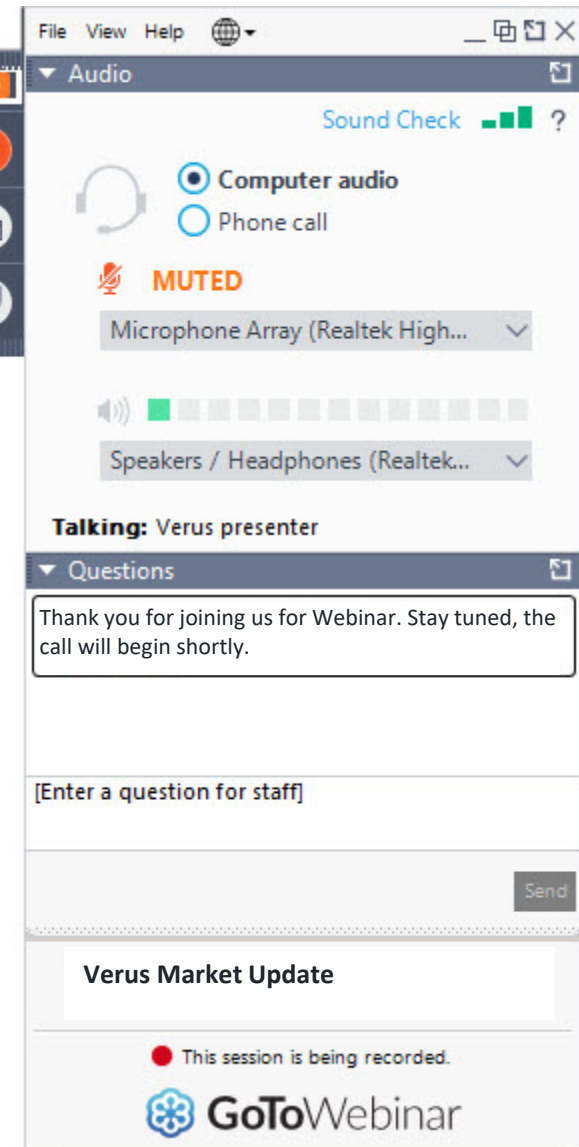
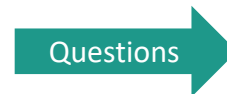
Call instructions



Use the orange arrow to expand or collapse the control panel



Ask questions here



Verus market update



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

IMPORTANT INFORMATION

Dial in: 1 (877) 309-2074 U.S. & Canada

Access Code: 475-620-010

Playback Info: Will be available on the website after the call www.verusinvestments.com

Audio Options: You may choose to listen through the webcast on your computer *or* dial in.

Introduction by: Jeffrey MacLean, Chief Executive Officer

Presented by: Ian Toner, CFA, Chief Investment Officer



Jeffrey J. MacLean
Chief Executive Officer

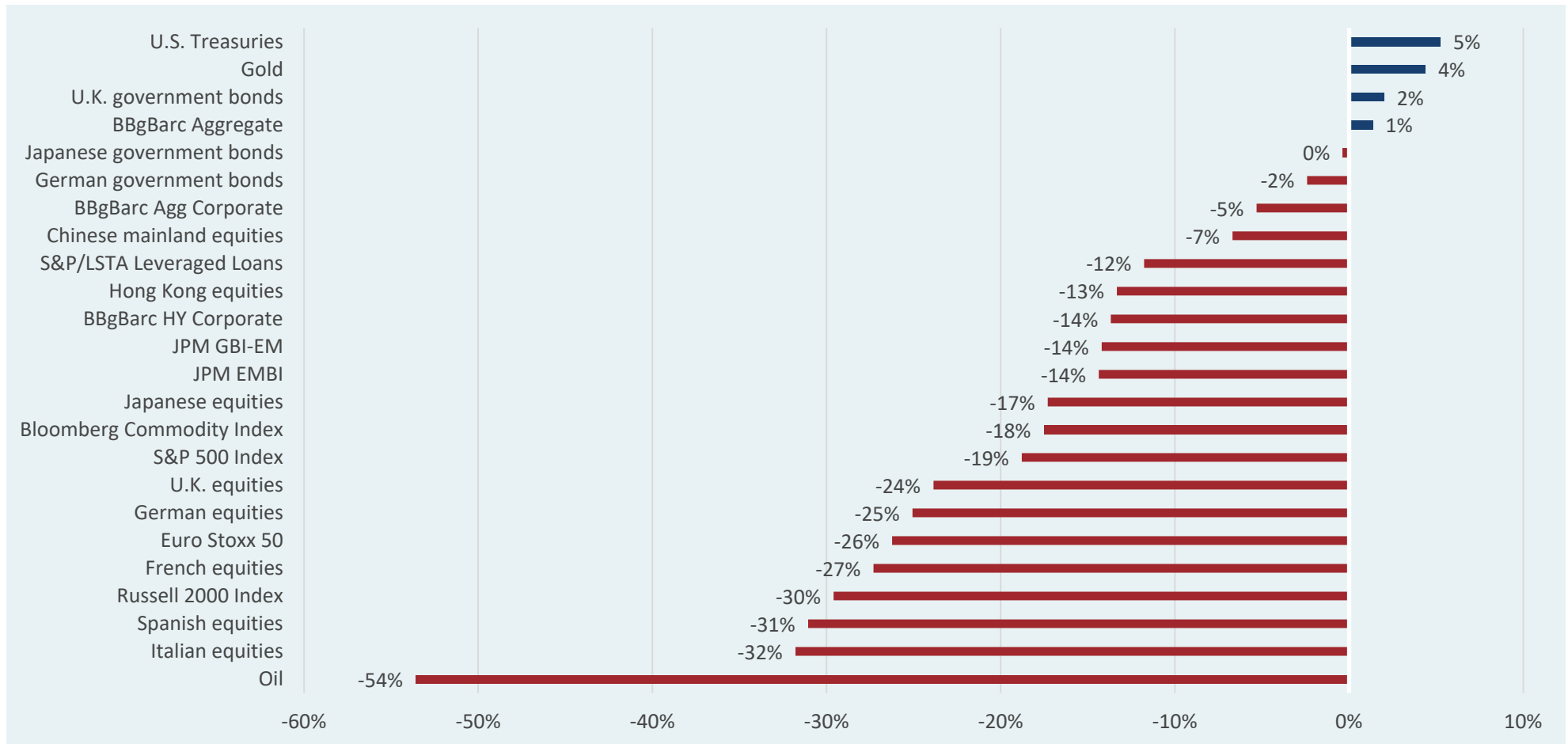


Ian Toner, CFA
Chief Investment Officer

Where are we?

What have asset classes done?

ASSET CLASS PERFORMANCE SINCE THE S&P 500 PEAK ON FEBRUARY 19TH



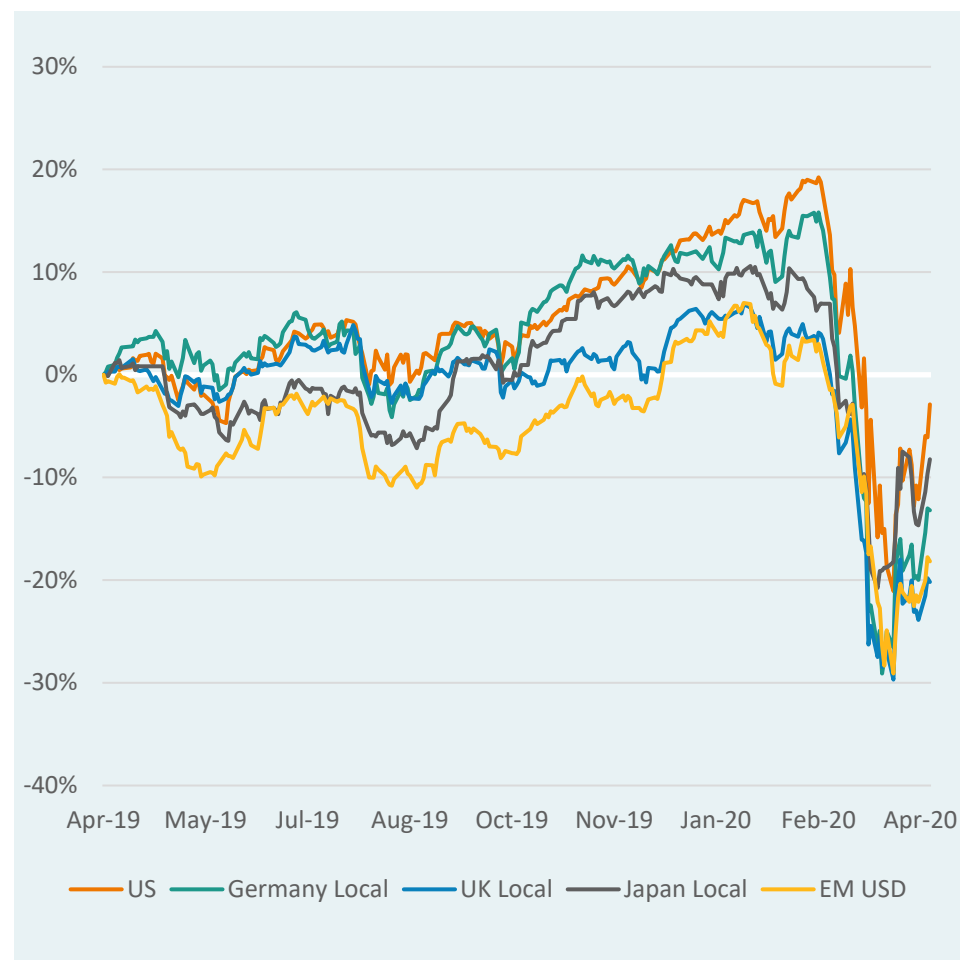
Source: Bloomberg, as of 4/8/20

Equity performance

DOLLAR STRENGTH PRESENTED HEADWINDS FOR UNHEDGED US INVESTORS

	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Local						
ACWI	-1.4	-17.3	-16.2	-7.5	3.5	3.8
World	-1.0	-17.7	-16.6	-8.6	1.7	2.0
World Ex US	-2.6	-20.4	-19.5	-15.1	-3.8	-3.0
US	0.3	-15.6	-14.4	-2.5	7.4	7.8
UK	-4.9	-24.5	-24.0	-20.2	-4.3	-0.1
Japan	2.8	-16.1	-15.7	-8.9	1.0	-0.5
Germany	-3.6	-23.9	-22.4	-14.4	-6.3	-4.0
EM	-5.5	-17.7	-16.5	-12.9	2.1	1.8
USD						
ACWI	-3.2	-18.6	-17.8	-9.0	3.1	3.3
World	-2.8	-18.5	-17.7	-9.5	1.7	1.8
World Ex US	-7.4	-22.6	-22.6	-17.5	-4.0	-3.6
UK	-10.1	-29.1	-29.6	-27.4	-8.3	-7.4
Japan	-3.0	-15.5	-15.7	-6.9	1.7	1.5
Germany	-8.3	-25.5	-24.9	-17.5	-5.5	-3.7
EM	-7.6	-22.3	-21.3	-18.0	-0.8	-0.9

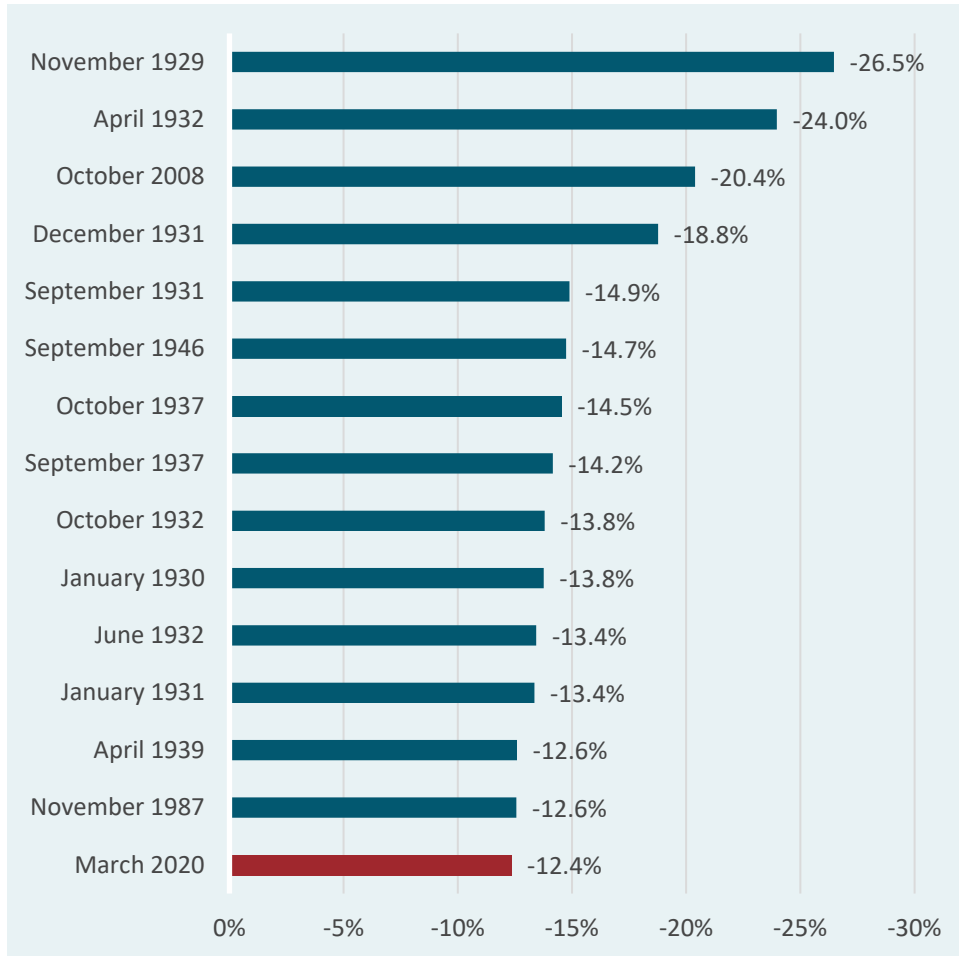
EQUITY 1-YEAR CUMULATIVE RETURN



Source: Bloomberg, as of 4/8/20

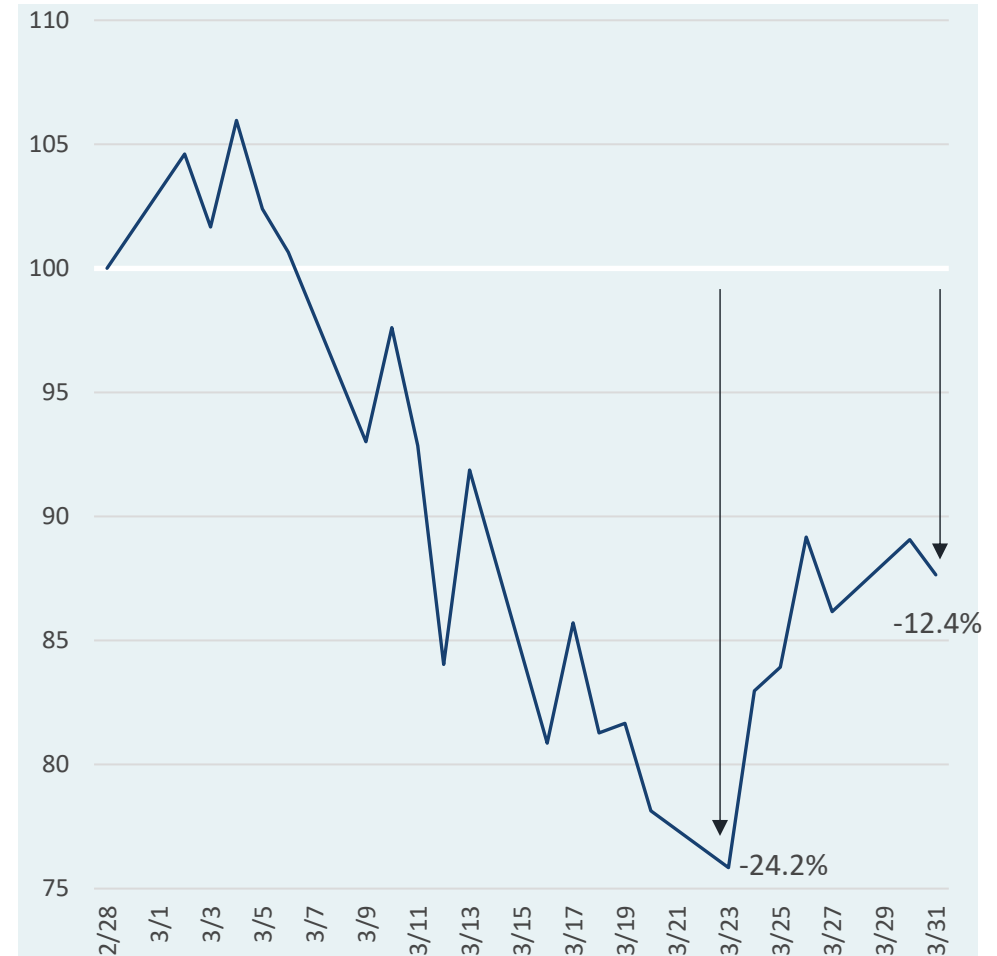
Losses in March were historic

WORST MONTHLY S&P 500 INDEX DECLINES SINCE 1871



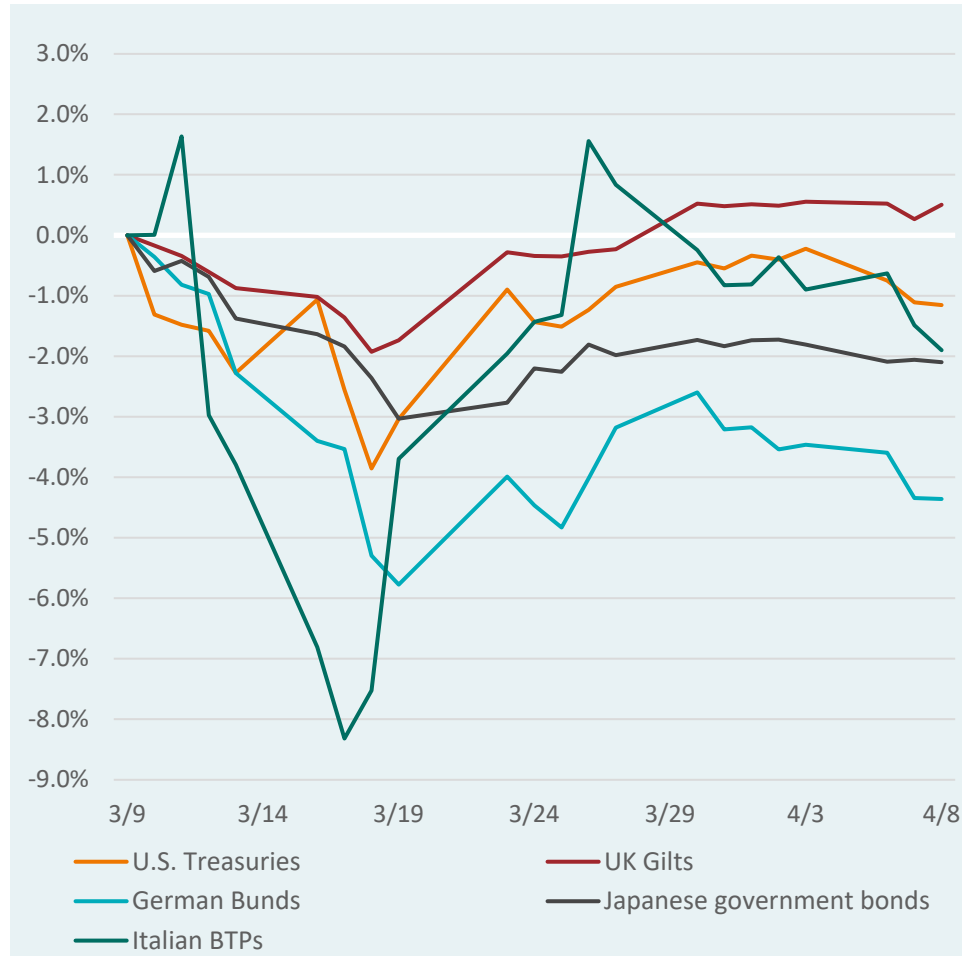
Source: Shiller data

S&P 500 TOTAL RETURN INDEX – MARCH CUMULATIVE PERFORMANCE



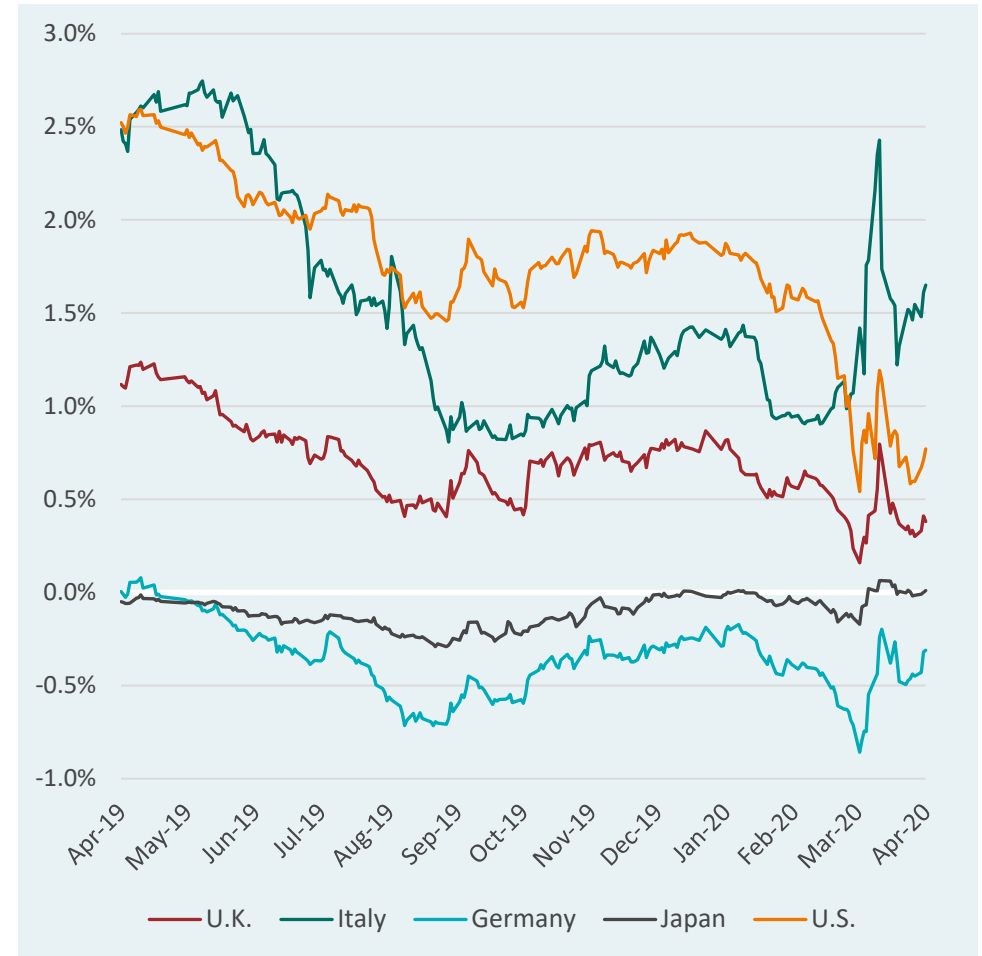
Rates performance

RATES 1-MONTH CUMULATIVE RETURN



Source: Bloomberg, as of 4/8/20

TEN-YEAR SOVEREIGN YIELDS



Credit

INVESTMENT GRADE CORPORATE CREDIT SPREADS



HIGH YIELD CORPORATE CREDIT SPREADS

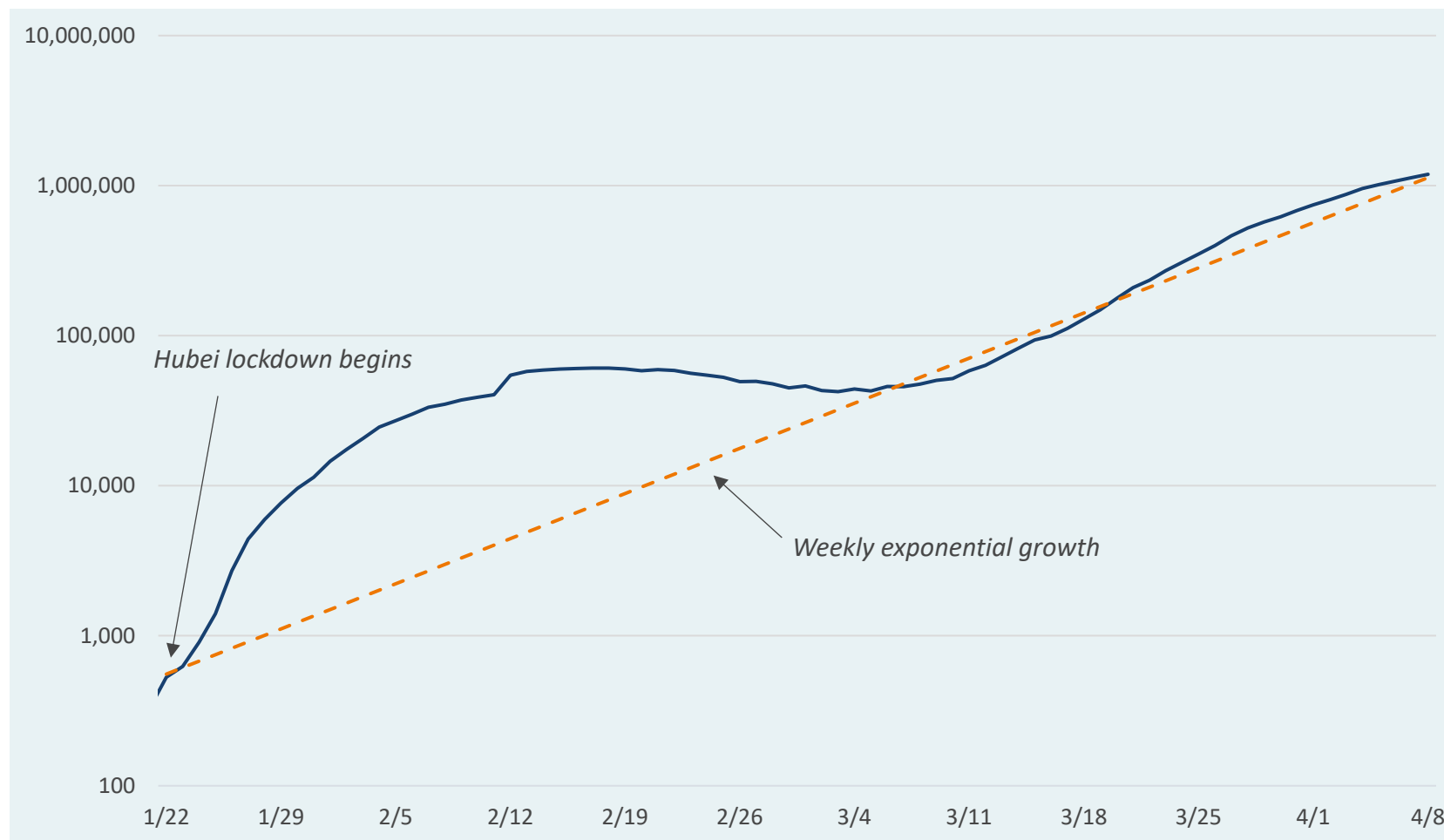


Source: Bloomberg, as of 4/8/20

COVID-19 situation

Global active cases (log scale)

GLOBAL - ACTIVE CASES (LOG SCALE)



Confirmed active cases have doubled every week since late January

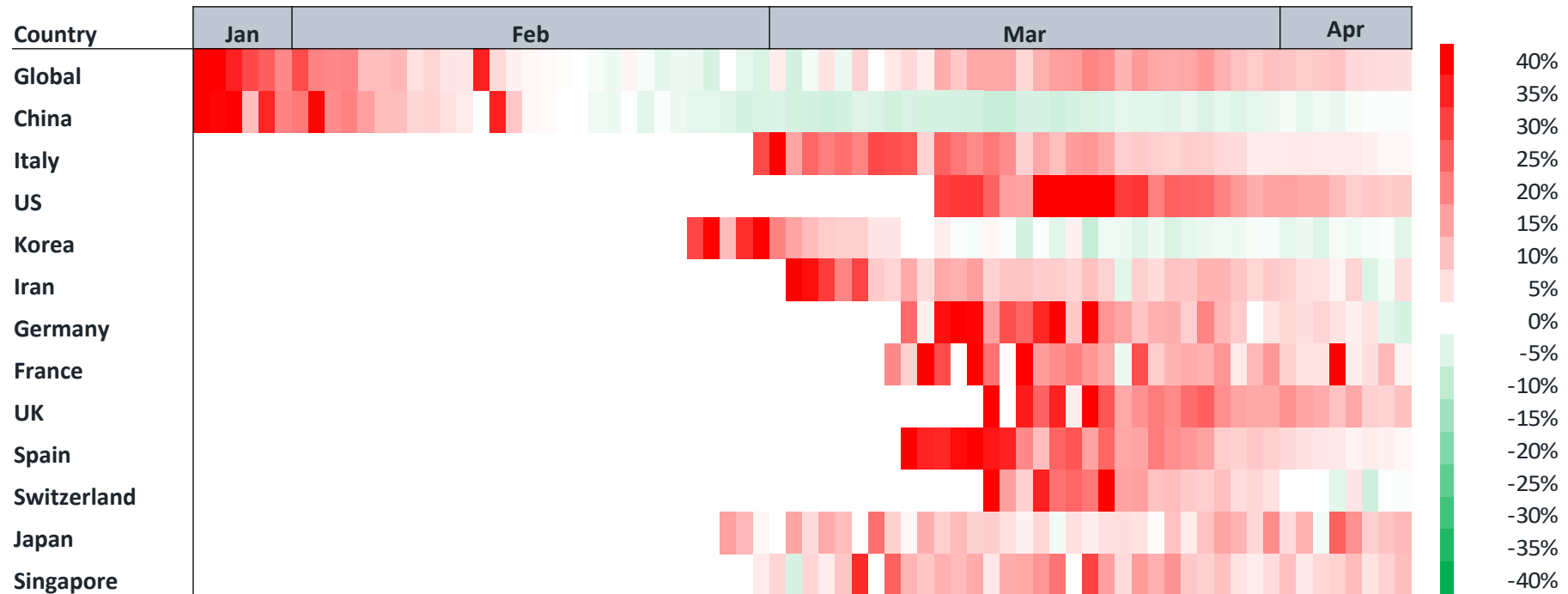
Source: Bloomberg, as of 4/8/20

Country summary

Country	Total	Recovered	Active Cases	Deaths	Death Rate	Date of 100 Cases	Daily Growth Past Week - Cases	Daily Growth Past Week - Deaths
China	82,867	77,639	5,228	3,339	4.0%	1/19	-1.8%	0.1%
Hubei	67,803	64,073	3,730	3,212	4.7%	1/19		
Italy	139,422	26,491	112,931	17,669	12.7%	2/23	2.7%	4.3%
Iran	67,286	29,812	37,474	4,003	5.9%	2/26	2.2%	4.0%
Korea	10,423	6,973	3,450	204	2.0%	2/20	-2.6%	2.7%
US	432,132	23,906	408,226	14,817	3.4%	3/2	10.1%	16.4%
Germany	113,296	46,300	66,996	2,349	2.1%	3/1	1.8%	14.1%
France	113,982	21,461	92,521	10,887	9.6%	2/29	10.3%	15.2%
UK	61,474	345	61,129	7,111	11.6%	3/5	10.9%	17.1%
Switzerland	23,280	9,800	13,480	895	3.8%	3/6	-1.3%	9.1%
Japan	4,667	632	4,035	94	2.0%	2/21	11.3%	7.4%
Singapore	1,623	406	1,217	6	0.4%	2/29	7.1%	6.0%
Global	1,518,647	329,931	1,188,716	88,550	5.8%	1/19	6.9%	9.4%

Source: Bloomberg, aggregated official country statistics, as of 4/8/20

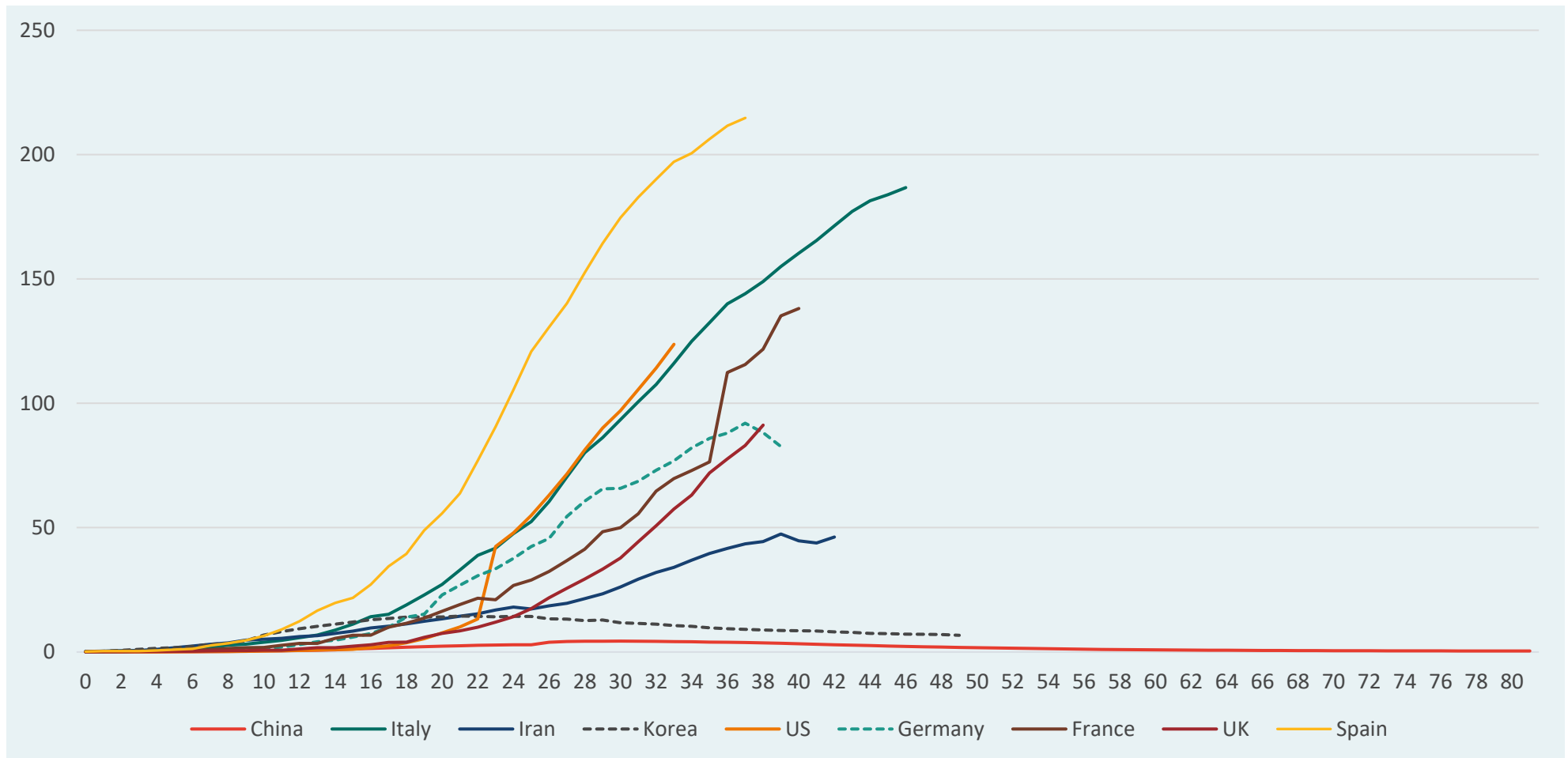
Daily percentage growth in active cases



Source: Bloomberg, as of 4/8/20

Active cases by country

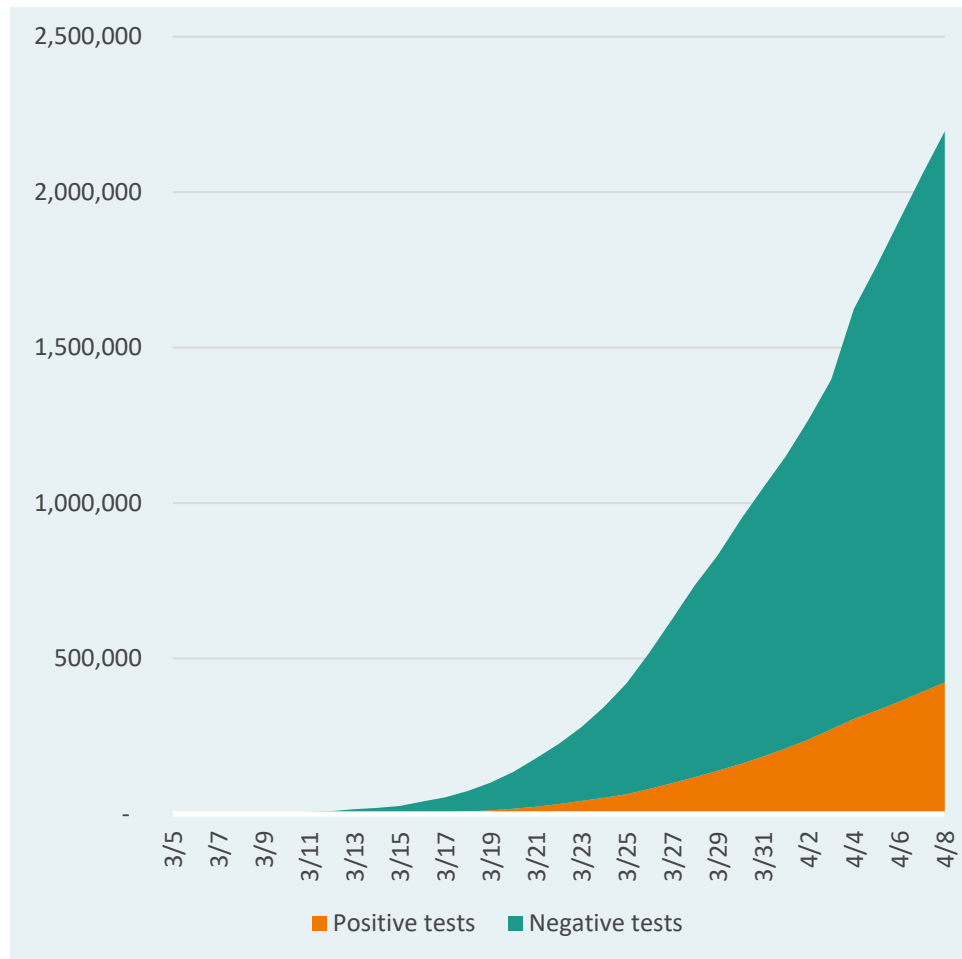
ACTIVE CASES PER 100,000 PEOPLE



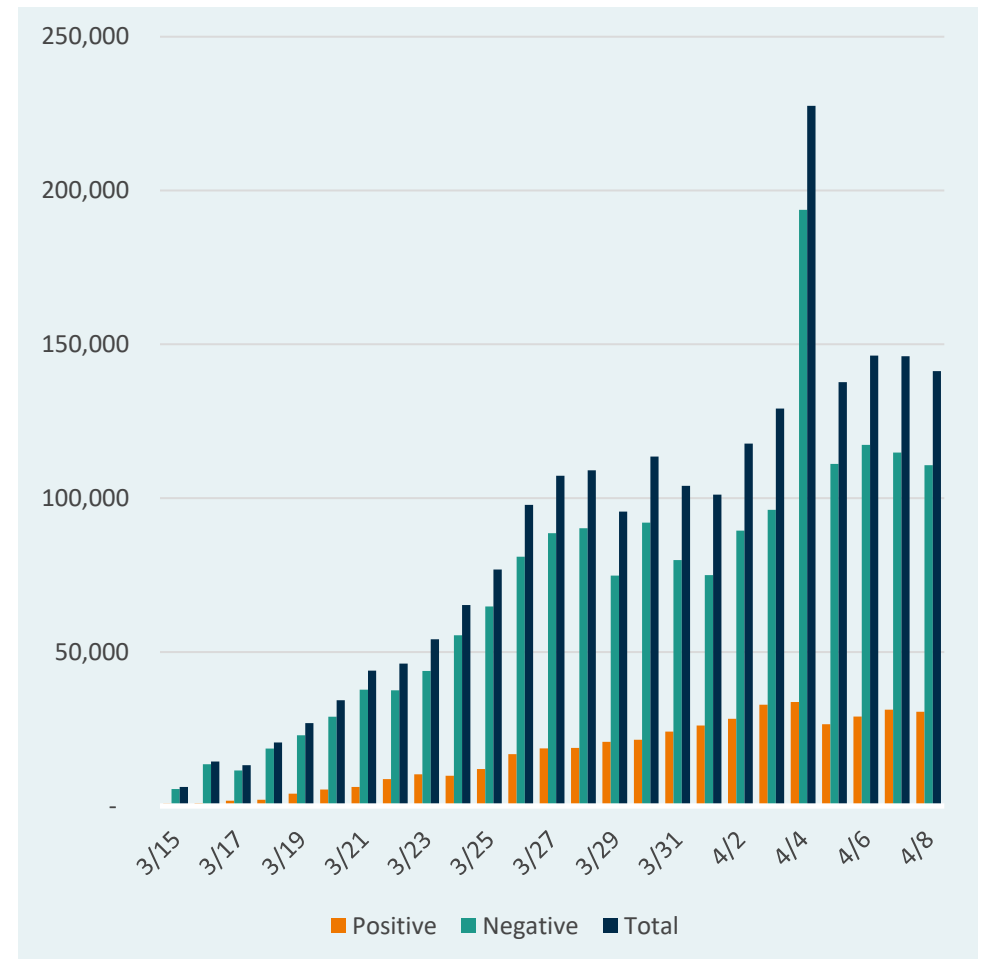
Source: Bloomberg, aggregated official country statistics, x-axis indexed to when the country first reached 100 cases, as of 4/8/20

U.S. testing capacity eclipsed 100k in April

TOTAL TESTS CONDUCTED IN THE UNITED STATES



NEW TESTS PER DAY



Source: The COVID-19 Tracking Project, as of 4/8/20

Hospital resource use – Admissions & beds

Hospital admissions per day

Daily nation-wide hospital admissions are projected to peak on April 11th at 19,850 and then fall to zero by June 19th.

COVID-19 beds per day

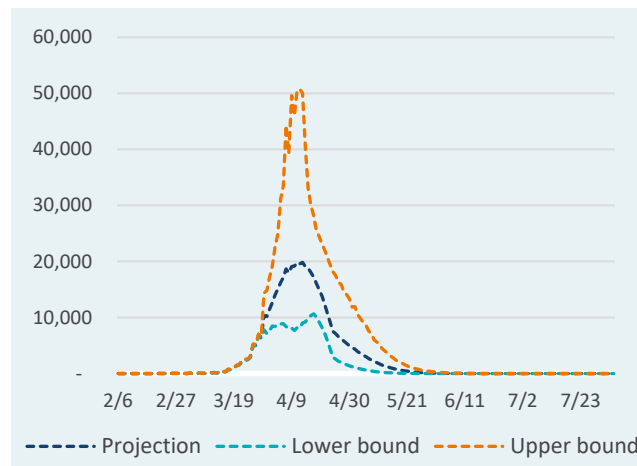
The number of beds needed per day for COVID-19 patients is projected to peak on April 15th at 140,823 and then fall to zero by July 3rd.

COVID-19 bed deficit

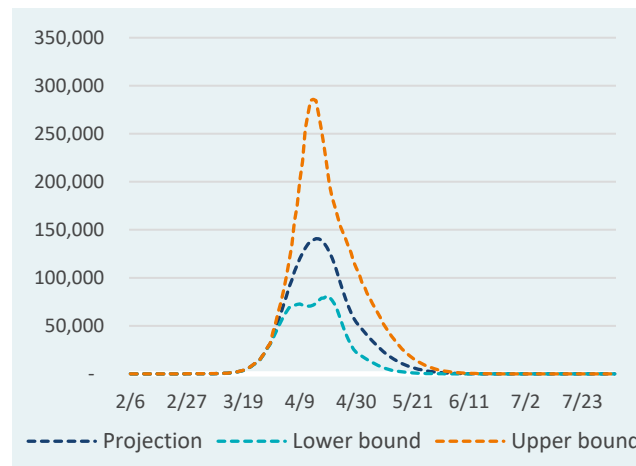
The amount by which beds projected to be needed for COVID-19 patients will exceed total available bed capacity will peak at 37,130 on April 13th and then fall to zero (all needing a bed have one) by May 18th.

Nationwide hospital bed capacity will remain strained over the next few weeks

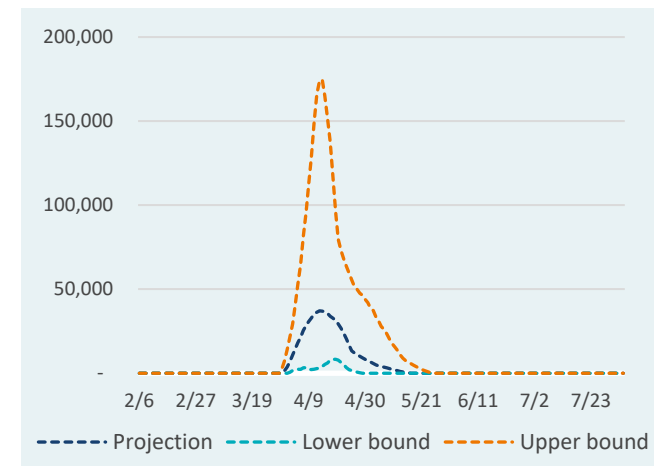
HOSPITAL ADMISSIONS PER DAY



COVID-19 BEDS NEEDED PER DAY



COVID-19 BED DEFICIT



Source: University of Washington Institute for Health Metrics and Evaluation (IHME), as of 4/5/20

Hospital resource use – ICU resources

Intensive care unit admissions per day

Daily nation-wide new ICU admissions are projected to peak on April 13th at 4,093 and then fall to zero by June 16th.

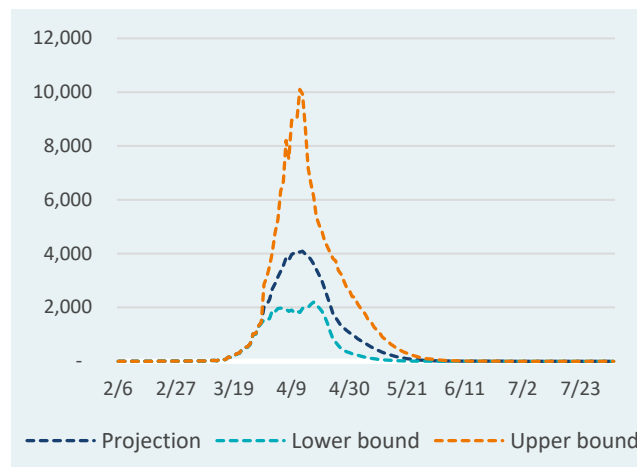
Number of ICU beds needed per day for COVID-19 patients

The number of ICU beds needed per day for COVID-19 patients is projected to peak on April 16th at 29,417 and then fall to zero by June 29th.

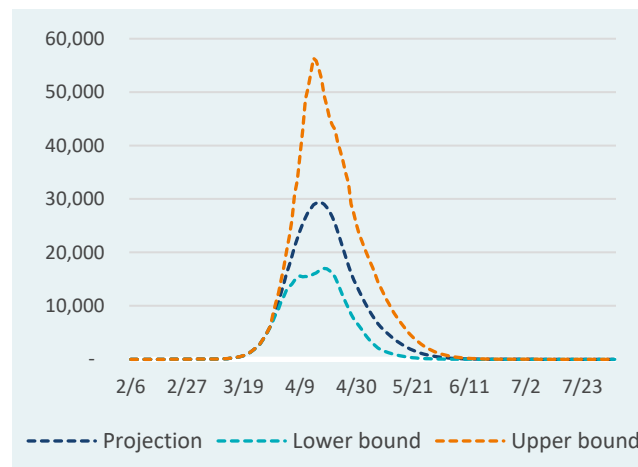
ICU bed deficit

The amount by which ICU beds projected to be needed for COVID-19 patients will exceed total available ICU bed capacity will peak at 16,433 on April 16th and then fall to zero (all needing an ICU bed have one) by May 28th.

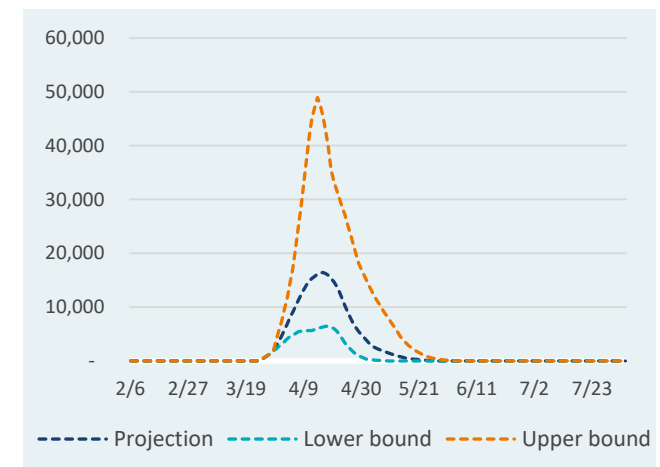
NUMBER OF NEW PEOPLE GOING TO THE ICU



NUMBER OF ICU COVID-19 BEDS NEEDED



COVID-19 ICU BED DEFICIT



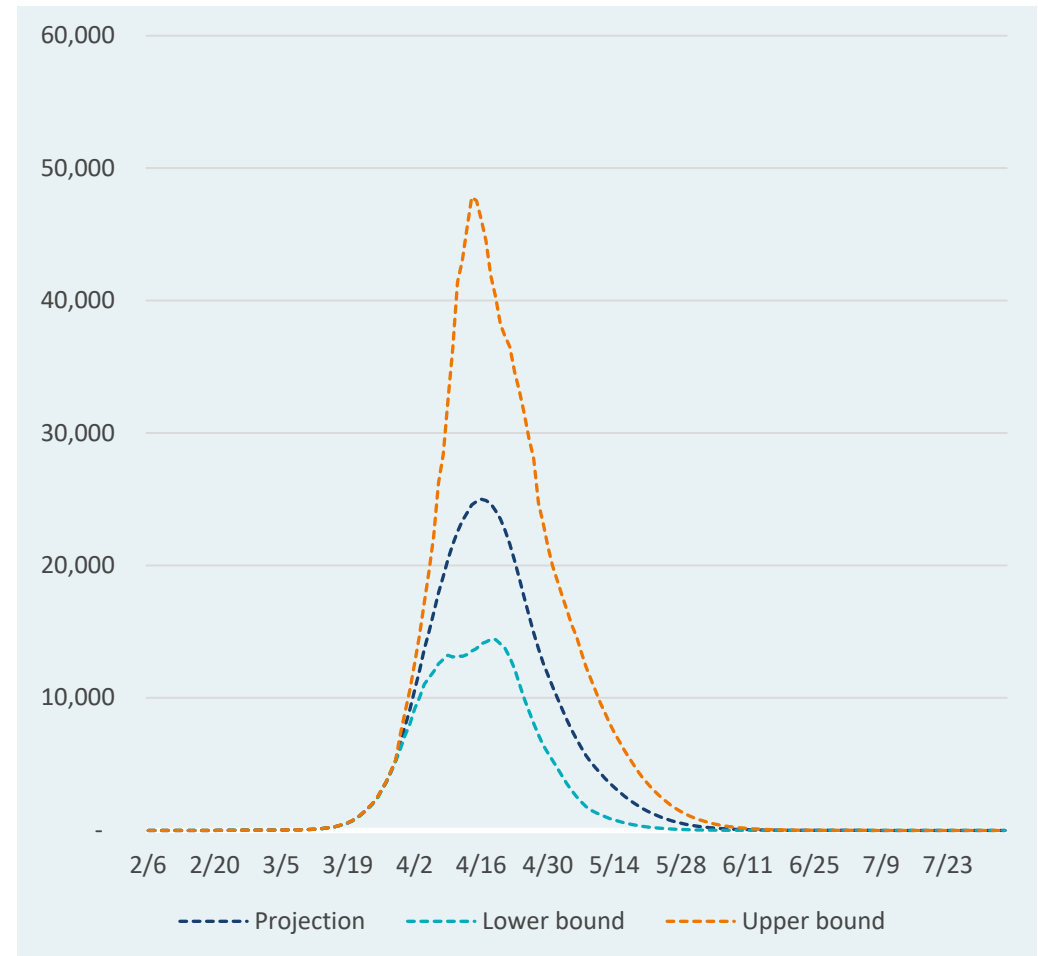
Source: University of Washington Institute for Health Metrics and Evaluation (IHME), as of 4/5/20

Hospital resource use – Invasive ventilators

Ventilator needs

Nationwide need for invasive ventilation is expected to peak at 25,004 on April 16th and subsequently fall to zero by June 29th.

INVASIVE VENTILATION NEEDED BY DAY



Source: University of Washington Institute for Health Metrics and Evaluation (IHME), as of 4/5/20

Projected deaths

Deaths per day:

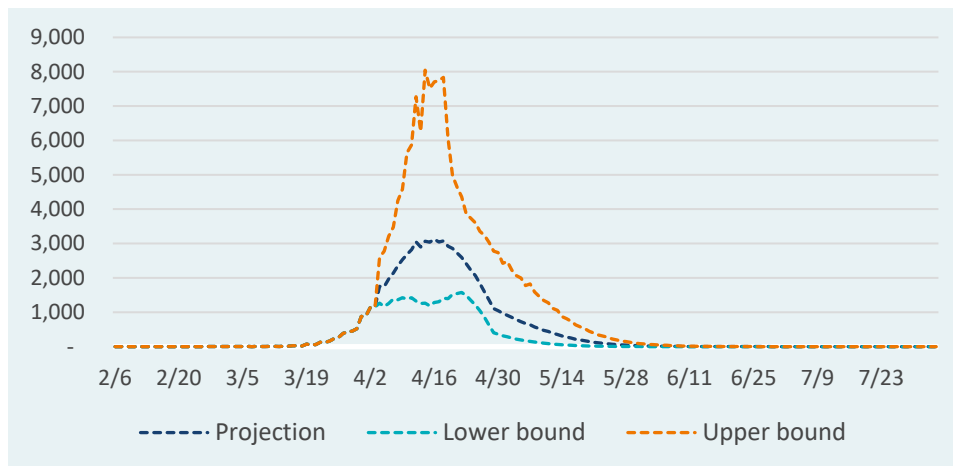
The daily death toll in the U.S. is expected to peak at 3,130 on April 16th, fall into the twenties by June 1st, and fall to zero by July 1st.

Total deaths:

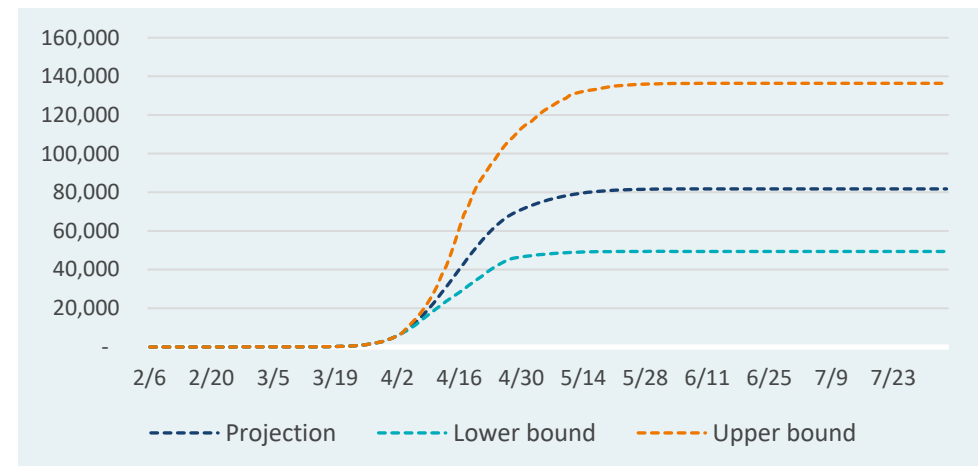
The total number of deaths in the U.S. relating to COVID-19 complications is expected to plateau at around 82,000 in early June, with an upper bound of around 136,000 and a lower bound near 50,000.

Though total expected deaths remain high, recent projections of the “worst case” have improved slightly

DEATHS PER DAY



TOTAL DEATHS



Source: University of Washington Institute for Health Metrics and Evaluation (IHME), as of 4/5/20

Social distancing

What's in place and for how long?

Summary | Estimated timings of country lockdown

As of March 25th

	Currently in full lock-down?	1 Potential lockdown start date	2 Peak new cases date	3 Short potential lockdown end date	4 Long potential lockdown end date	Factors influencing lockdown duration		
						In-patient beds per 100k pop.	Respiratory diseases per 100k pop.	Ability to manage epidemic
USA	✗	W1 April (latest states)	W1 May	W2 June (earliest states)	W3 July (earliest states)	↓	→	↑
UK	✓	March 24 th	W3 May	W3 June	W4 July	↓	↓	→
Brazil	✗	W4 March	W3 May	W1 July	W2 August	↓	→	↓
France	✓	March 17 th	W3 May	W2 June	W4 July	↑	↑	→
Russia	✗	W4 March	W1 May	W4 June	W4 July	↑	↑	↓
India	✓	March 24 th	W3 June	W4 June	W2 September	↓	↑	↓
Argentina	✓	March 20 th	W4 May	W4 June	W4 August	↓	↓	↓
China (Hubei)	✓	January 23 rd	February 13 th	March 25 th	April 8 th	↑	→	↑
Germany	✗	W4 March	W1 May	W2 June	W1 July	↑	→	↑
Australia	✗	W1 April	W2 May	W4 June	W4 July	→	↑	↑
Canada	✗	W4 March	W1 May	W4 June	W3 July	↓	↑	↑
Spain	✓	March 14 th	W4 April	W1 June	W3 July	→	↓	→
Mexico	✗	W1 April	W3 April	W1 July	W3 July	↓	↑	↓
Poland	✓	March 24 th	W4 April	W3 June	W1 July	↑	↑	→
Belgium	✓	March 17 th	W3 May	W2 June	W4 July	↑	↓	↑
Norway	✓	March 12 th	W4 March	W1 June	W3 June	→	↑	↑
South Africa	✓	March 26 th	W1 June	W4 June	W4 August	↓	↓	→
Italy	✓	March 10 th	W3 April	W2 June	W1 July	→	→	→
Sweden	✗	W4 March	W4 March	W1 June	W3 June	↓	↓	→
Colombia	✓	March 24 th	W1 May	W4 June	W4 July	↓	→	↓

↑ Good → Medium ↓ Poor

Potential | Actual

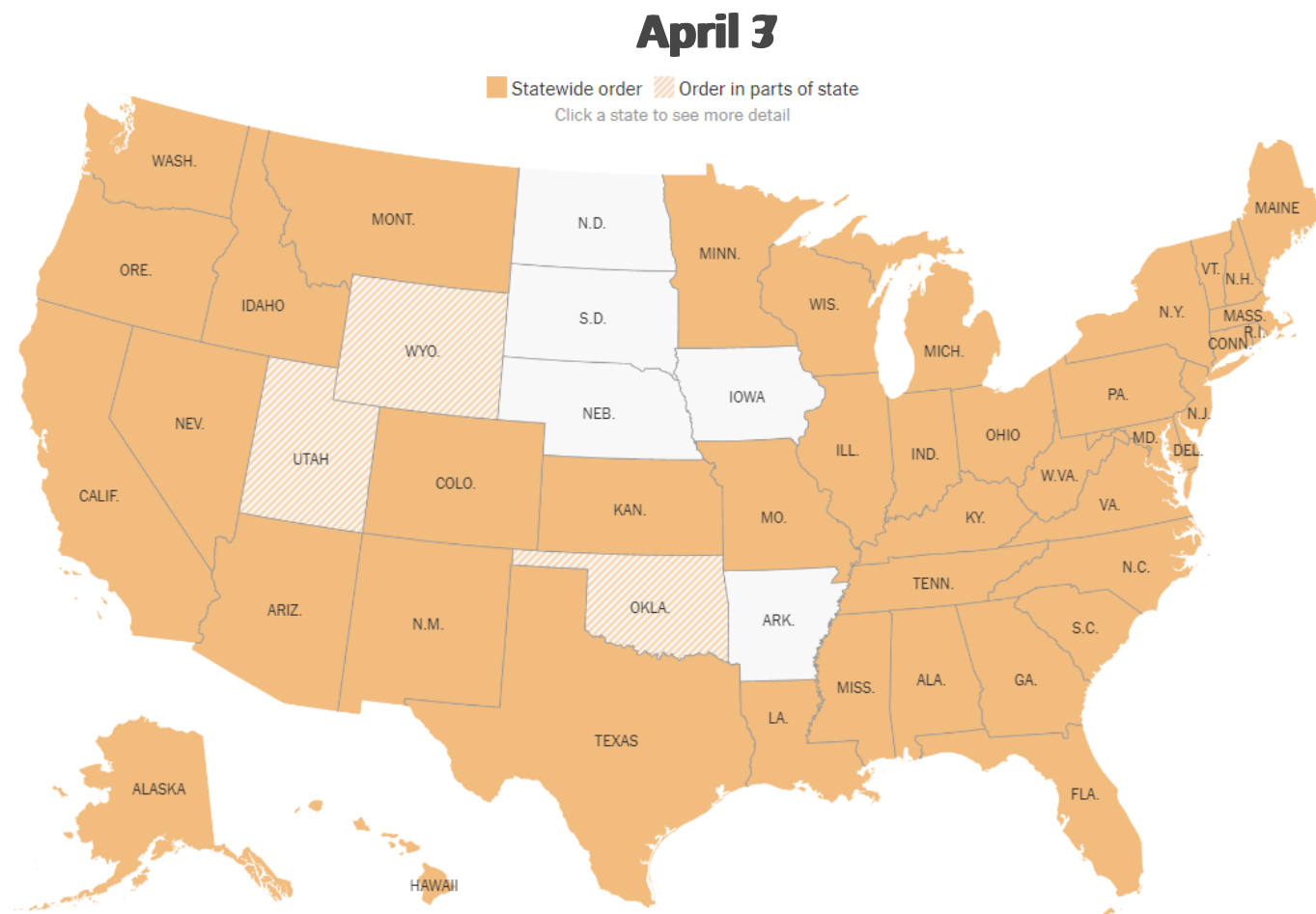
Score based on factors such as government effectiveness, political stability

Copyright © 2020 by Boston Consulting Group. All rights reserved.

Source: John Hopkins University (Coronavirus Resource Center), Euromonitor, BCG Analysis

Source: John Hopkins University (Coronavirus Resource Center), Euromonitor, Boston Consulting Group Analysis, as of 3/25/20

U.S. shelter-in-place directives



Roughly 316 million people in at least 42 states, 3 counties, 9 cities, the District of Columbia, and Puerto Rico are being urged to stay home.

This equates to about 95% of the population.

Source: New York Times, as of 4/3/20

Global hot spots – Activity

Location	Retail & recreation	Grocery & pharmacy	Parks	Transit stations	Workplace	Residential
King County, WA, USA	-57%	-30%	0%	-66%	-47%	15%
New York County, NY, USA	-86%	-51%	-79%	-78%	-57%	19%
Lombardy, Italy	-95%	-81%	-91%	-89%	-65%	24%
Community of Madrid, Spain	-94%	-72%	-92%	-89%	-65%	22%

Key:	Retail & recreation	Grocery & pharmacy	Parks	Transit stations	Workplace	Residential
Description	Mobility trends for places like restaurants, cafes, shopping centers, theme parks, museums, libraries,	Mobility trends for places like grocery markets, food warehouses, farmers markets, specialty food	Mobility trends for places like national parks, public beaches, marinas, dog parks, plazas, and public gardens.	Mobility trends for places like public transport hubs such as subway, bus, and train stations.	Mobility trends for places of work.	Mobility trends for places of residence.

Source: Google, Bing, as of 3/29/20

Hot spot activity – King County, USA

King County

Retail & recreation

-57% compared to baseline



Grocery & pharmacy

-30% compared to baseline



Parks

+0% compared to baseline



Transit stations

-66% compared to baseline



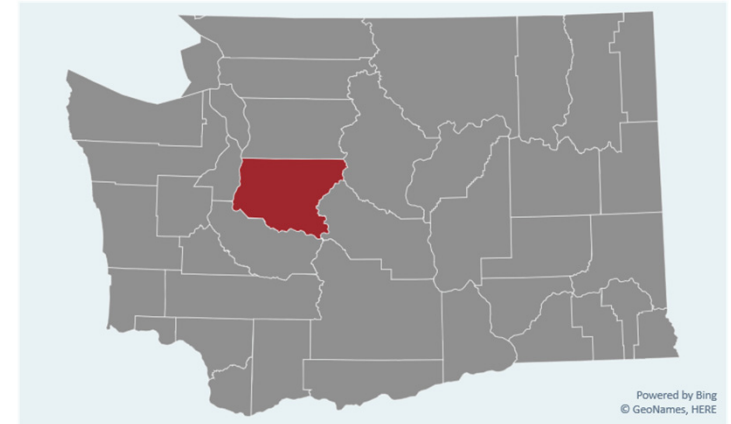
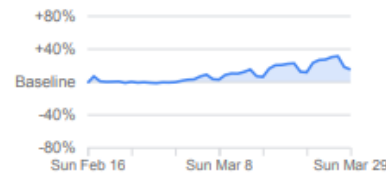
Workplace

-47% compared to baseline



Residential

+15% compared to baseline



Source: Google, Bing, as of 3/29/20

Hot spot activity – New York County, USA

New York County

Retail & recreation

-86% compared to baseline



Grocery & pharmacy

-51% compared to baseline



Parks

-79% compared to baseline



Transit stations

-78% compared to baseline



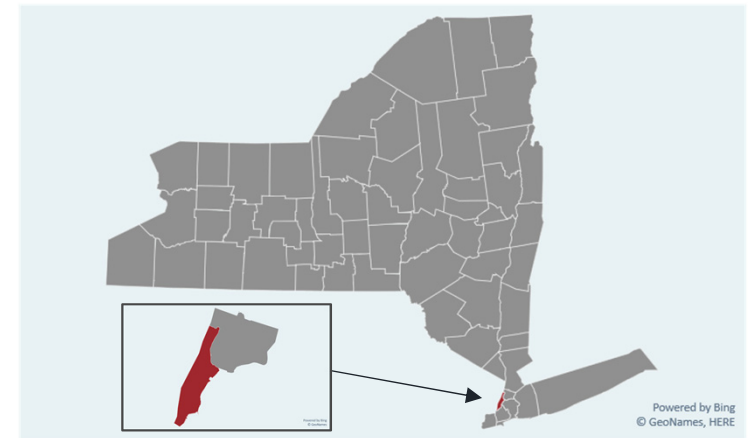
Workplace

-57% compared to baseline



Residential

+19% compared to baseline



Source: Google, Bing, as of 3/29/20

Hot spot activity – Lombardy, Italy

Lombardy

Retail & recreation

-95% compared to baseline



Grocery & pharmacy

-81% compared to baseline



Parks

-91% compared to baseline



Transit stations

-89% compared to baseline



Workplace

-65% compared to baseline



Residential

+24% compared to baseline



Source: Google, Bing, as of 3/29/20

Hot spot activity – Madrid, Spain

Community of Madrid

Retail & recreation

-94% compared to baseline



Grocery & pharmacy

-72% compared to baseline



Parks

-92% compared to baseline



Transit stations

-89% compared to baseline



Workplace

-65% compared to baseline



Residential

+22% compared to baseline

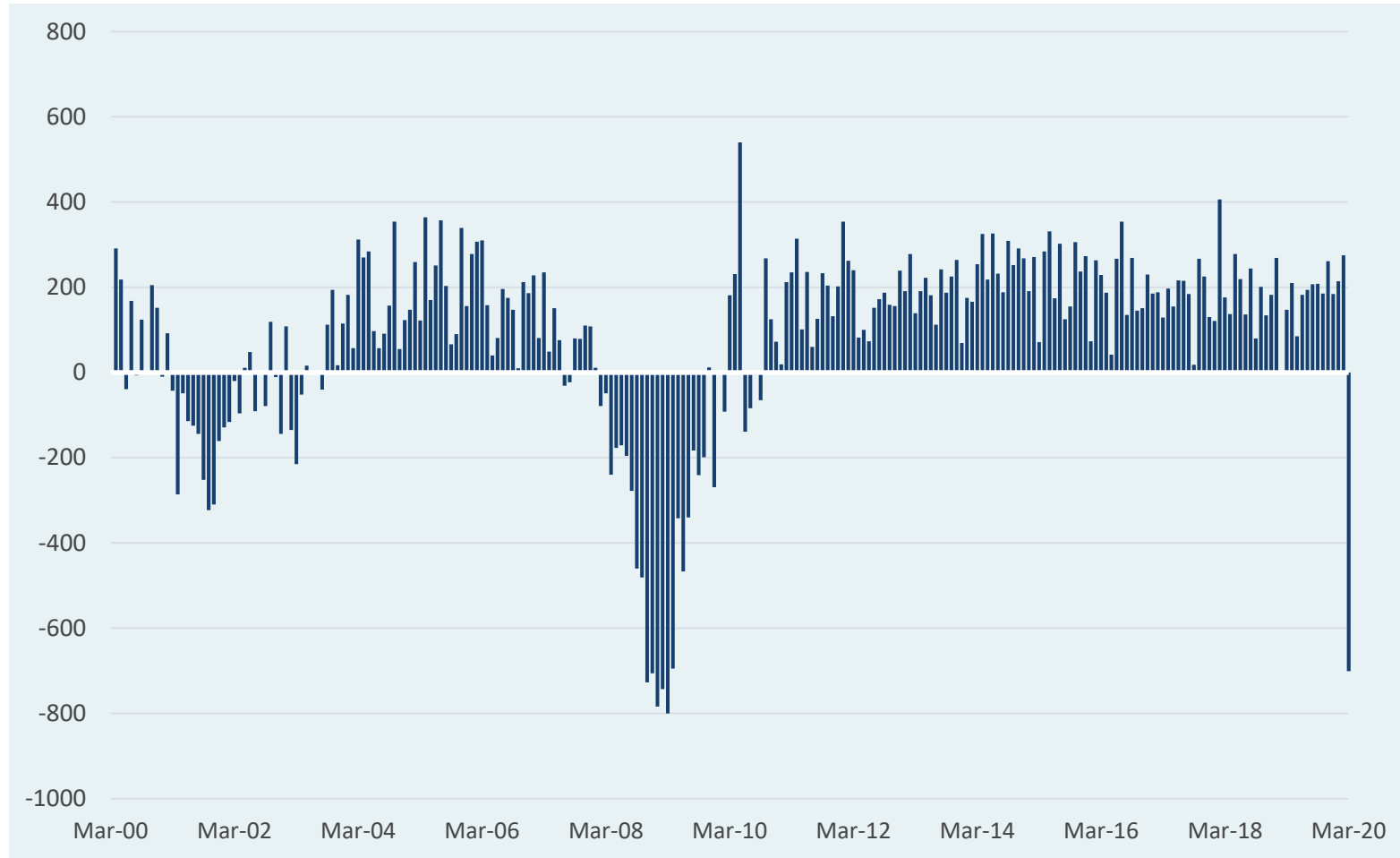


Source: Google, Bing, as of 3/29/20

Labor market

Non-farm payroll additions

MONTHLY CHANGE IN U.S. NON-FARM PAYROLLS (THOUSANDS)



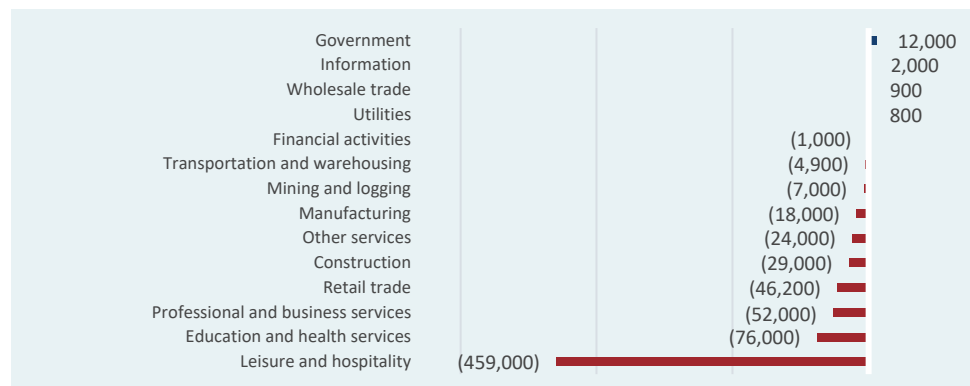
Non-farm payrolls (-701k) contracted for the first time in 114 months in March

Source: Bureau of Labor Statistics, as of 3/31/20

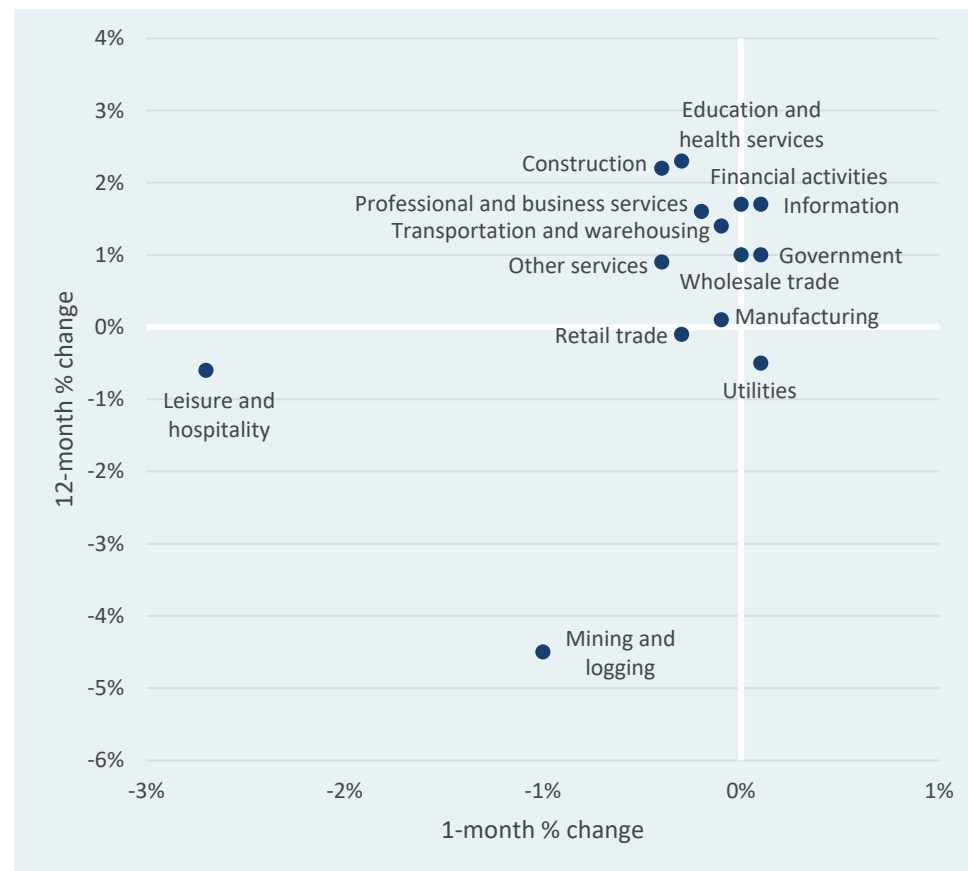
March 2020 jobs report

-701k (exp. -100k) - net revisions to prior two months = -57k

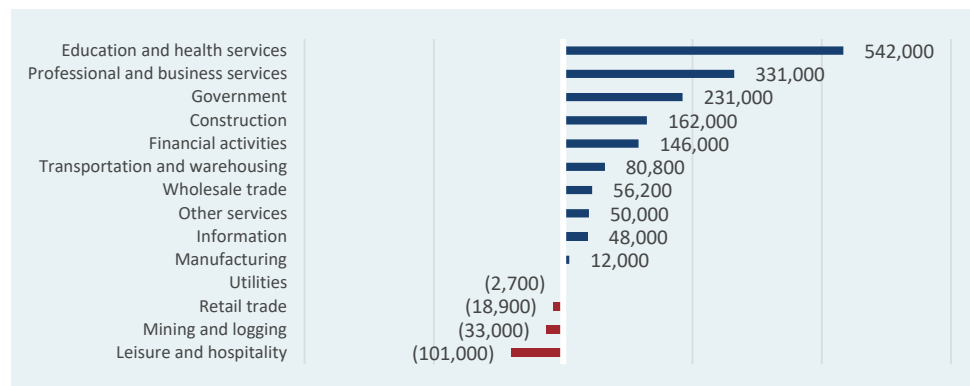
1-MONTH CHANGE



TRAILING % CHANGE



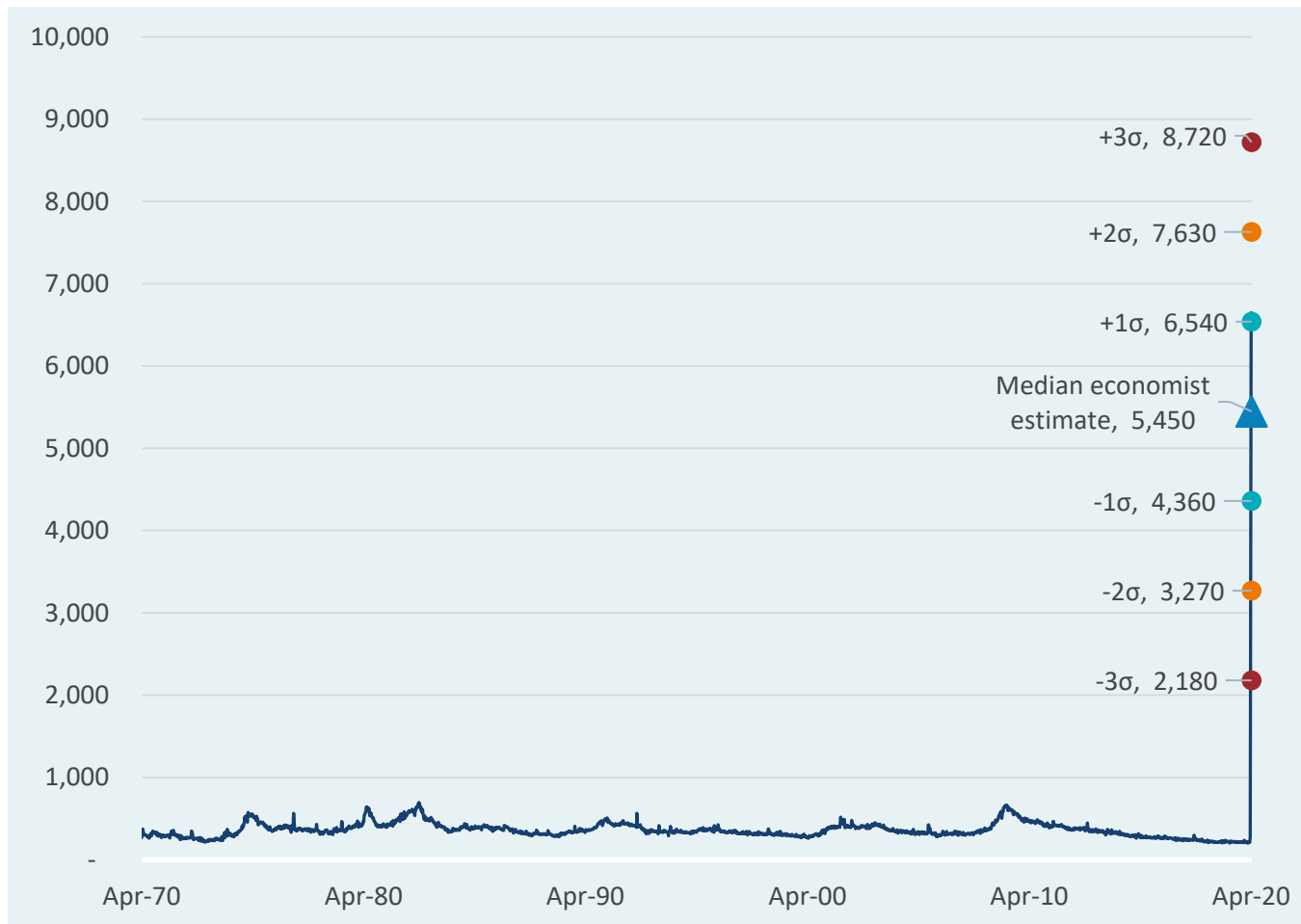
12-MONTH CHANGE



Source: BLS, as of 3/31/20

Initial jobless claims

WEEKLY INITIAL JOBLESS CLAIMS (THOUSANDS)



Source: Department of Labor, Bloomberg, as of 4/8/20

Initial jobless claims soared far above previous all-time high levels in the final two weeks of March and are expected to stay at extremely elevated levels for the next few weeks.

Initial claims for the week ended April 4th could come in three standard deviations below the average economist estimate, and still register a figure three times higher than the peak level experienced during the Global Financial Crisis.

Unemployment

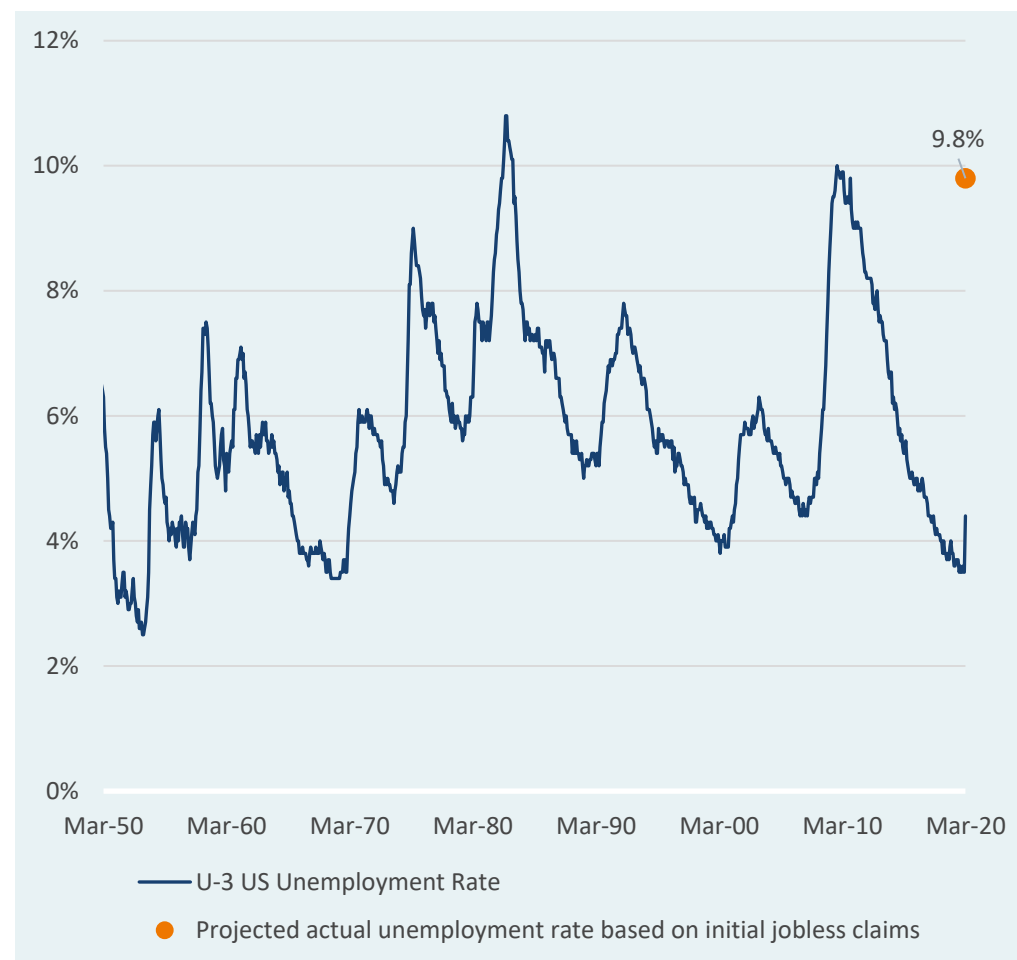
About ten million Americans filed for unemployment in the last two weeks of March, which represents roughly 6.3% of the labor force.

Adding that 6.3% of recently unemployed Americans to the 3.5% unemployment rate from February brings the likely unemployment rate at the beginning of April to just under 10%.

If initial jobless claims remain elevated above 3 million for the next several weeks, unemployment in April could very well move up near 15-20%, which would be 50-100% higher than the peak unemployment rate experienced during the Global Financial Crisis.

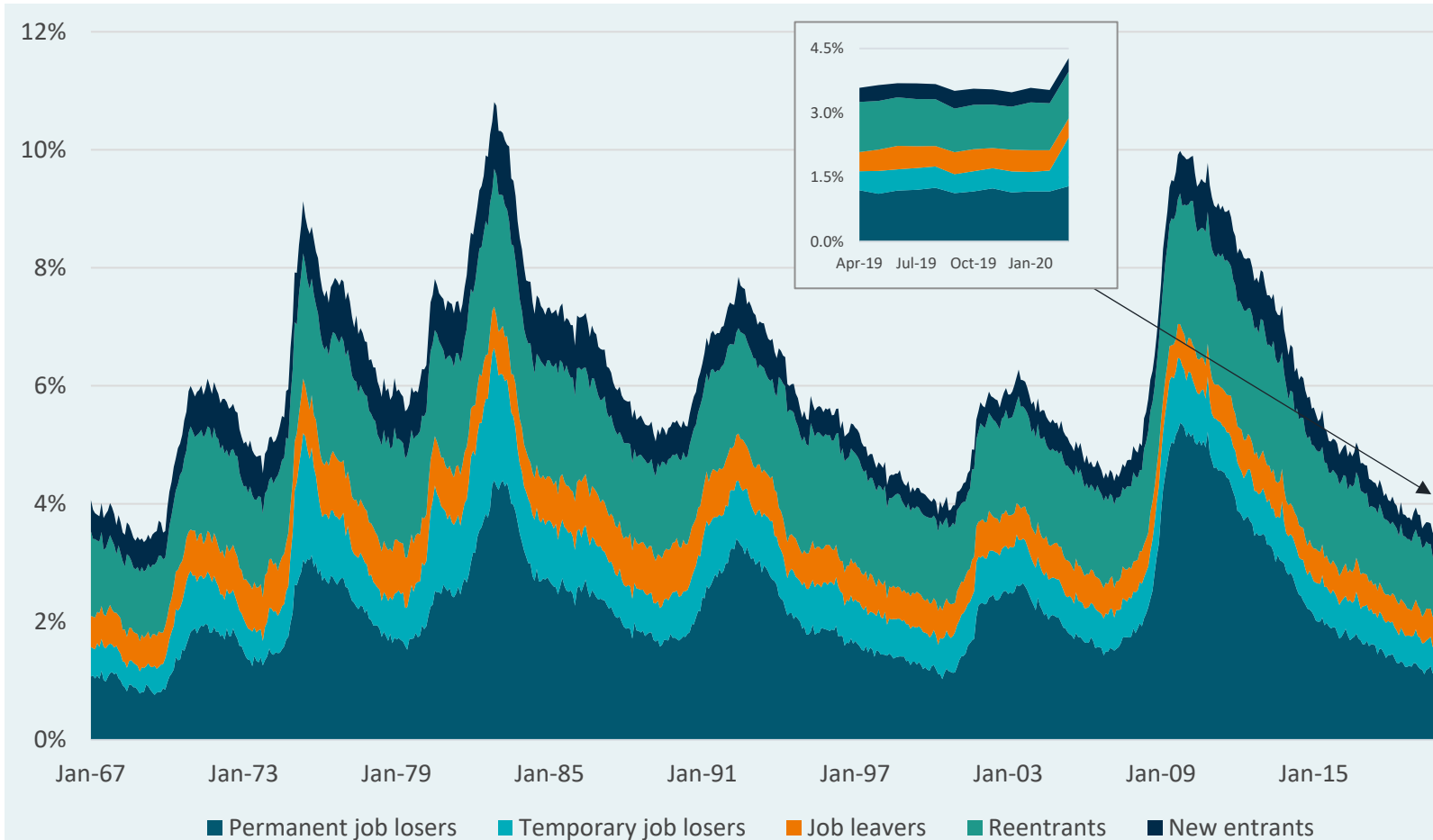
Source: Bureau of Labor Statistics, as of 3/31/20

U-3 UNEMPLOYMENT RATE



Unemployment

U-3 UNEMPLOYMENT RATE



In March, the number of unemployed people on temporary layoff more than doubled to 1.8 million

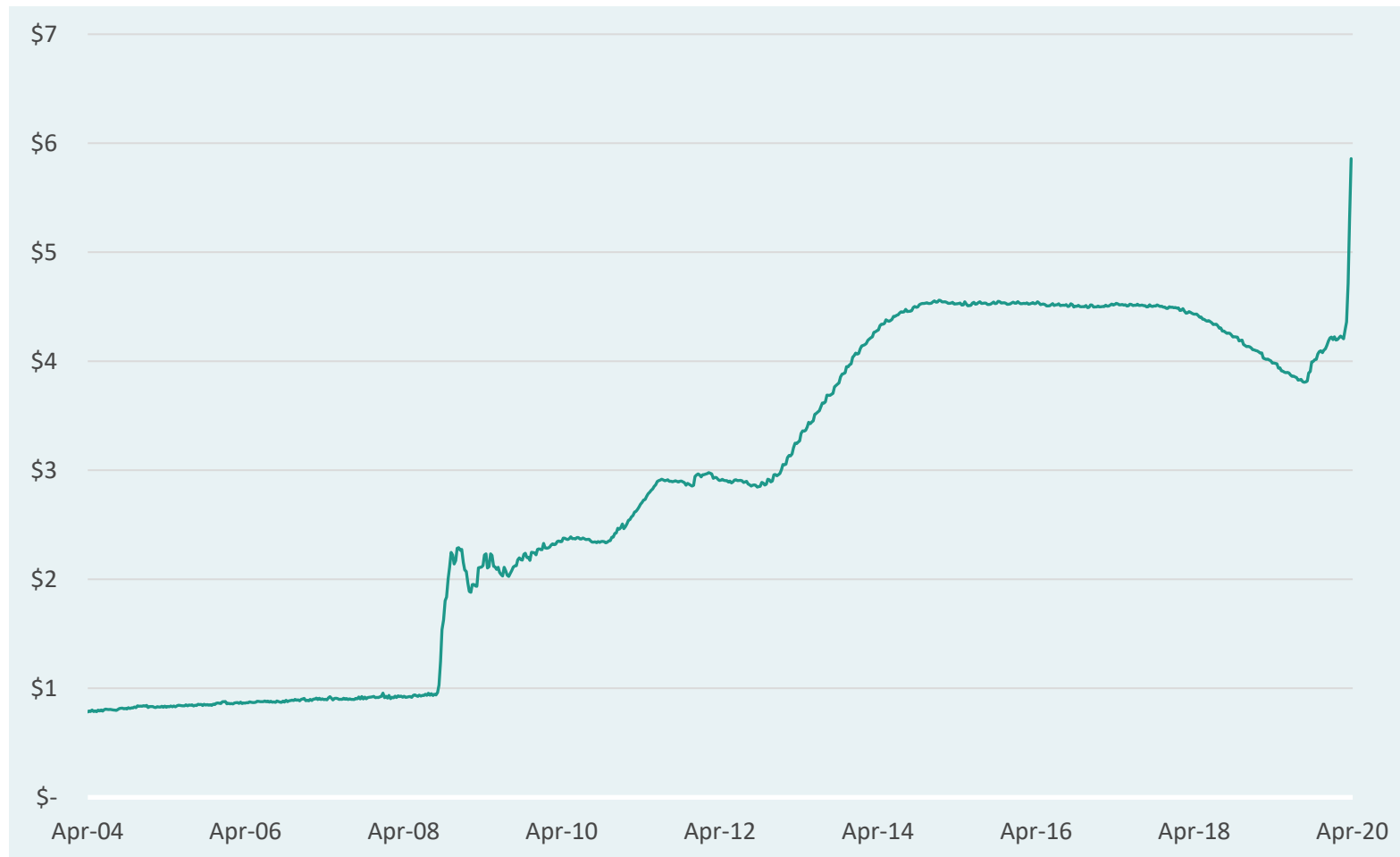
The number of permanent job losers increased by 177,000 to 1.5 million

Source: BLS, as of 3/31/20

Monetary response

QE infinity?

FEDERAL RESERVE BALANCE SHEET (USD TRILLIONS)



Source: Federal Reserve, as of 4/1/20

Fed liquidity programs

Liquidity Program	Week 0*	Week 1	Week 2	Weekly Change	Cumulative Change
QE: Treasuries	\$2,641	\$2,978	\$3,341	\$362	\$700
QE: MBS	\$1,367	\$1,385	\$1,458	\$73	\$91
Repurchase Agreements	\$442	\$352	\$263	-\$89	-\$179
Primary Dealer Credit Facility (PDCF)	\$0	\$28	\$33	\$5	\$33
Money Market MF Liquidity Facility (MMLF)	\$0	\$31	\$53	\$22	\$53
Commercial Paper Funding Facility (CPFF)	\$0	\$0	\$0	\$0	\$0
Discount Window Borrowing	\$7	\$61	\$130	\$69	\$124
Primary Market Corp Credit Facility (PMCCF)	\$28	\$51	\$44	-\$7	\$16
Secondary Market Corp Credit Facility (SMCCF)	\$0	\$0	\$0	\$0	\$0
Term Asset-Backed Securities Loan Facility (TALF)	\$0	\$0	\$0	\$0	\$0
International USD Swap Lines	\$0	\$206	\$349	\$142	\$348
Foreign and International Monetary Authorities (FIMA)	\$0	\$0	\$0	\$0	\$0
Total Fed Balance Sheet	\$4,716	\$5,303	\$5,860	\$557	\$1,143

*3/18/20

Source: Federal Reserve, as of 4/1/20

Fed liquidity programs in operation: Quantitative easing (QE)

March 15th

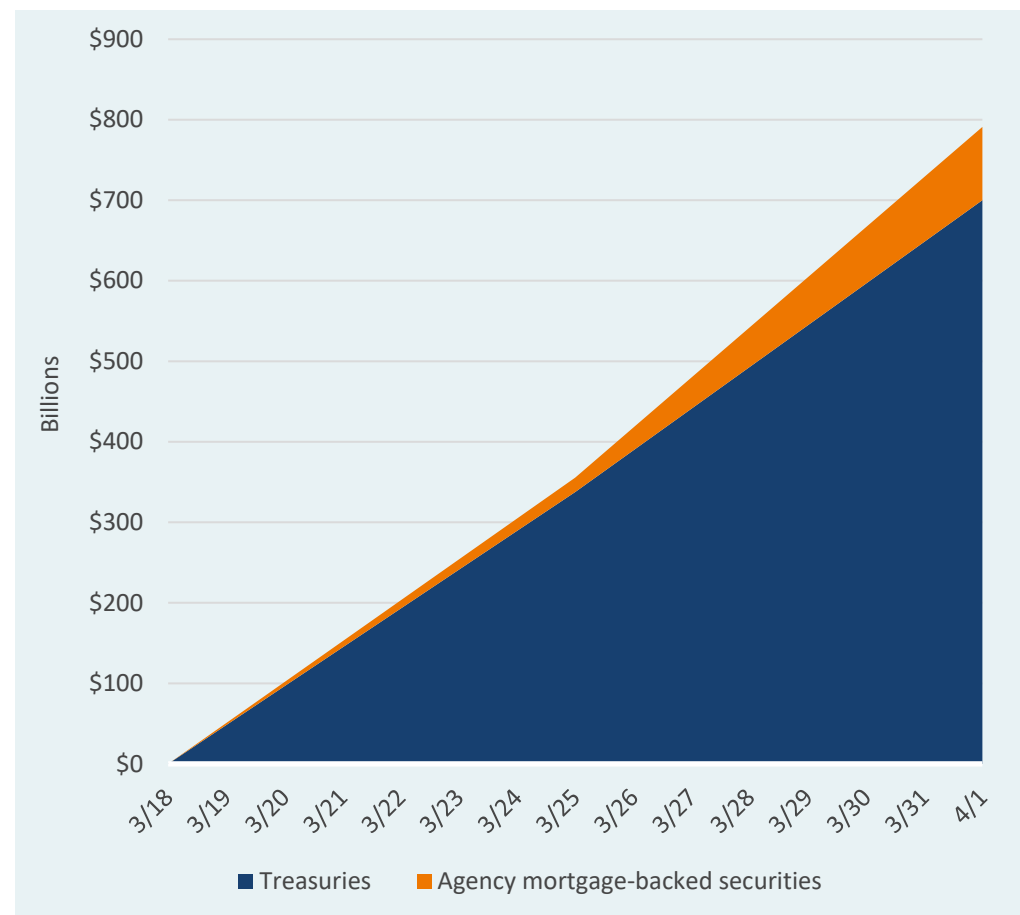
“To support the smooth functioning of markets for Treasury securities and agency mortgage-backed securities that are central to the flow of credit to households and businesses, over coming months **the Committee will increase its holdings of Treasury securities by at least \$500 billion and its holdings of agency mortgage-backed securities by at least \$200 billion.** The Committee will also reinvest all principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities.”

March 23rd

“**The Federal Open Market Committee (FOMC) will purchase Treasury securities and agency mortgage-backed securities in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy.** The FOMC had previously announced it would purchase at least \$500 billion of Treasury securities and at least \$200 billion of mortgage-backed securities. In addition, the FOMC will include purchases of agency commercial mortgage-backed securities in its agency mortgage-backed security purchases.”

Source: Federal Reserve, Bloomberg, as of 4/1/20

FED TREASURY & AGENCY MBS HOLDINGS (INDEXED TO 3/18/20)



Fed liquidity programs in operation: Central bank dollar swaps

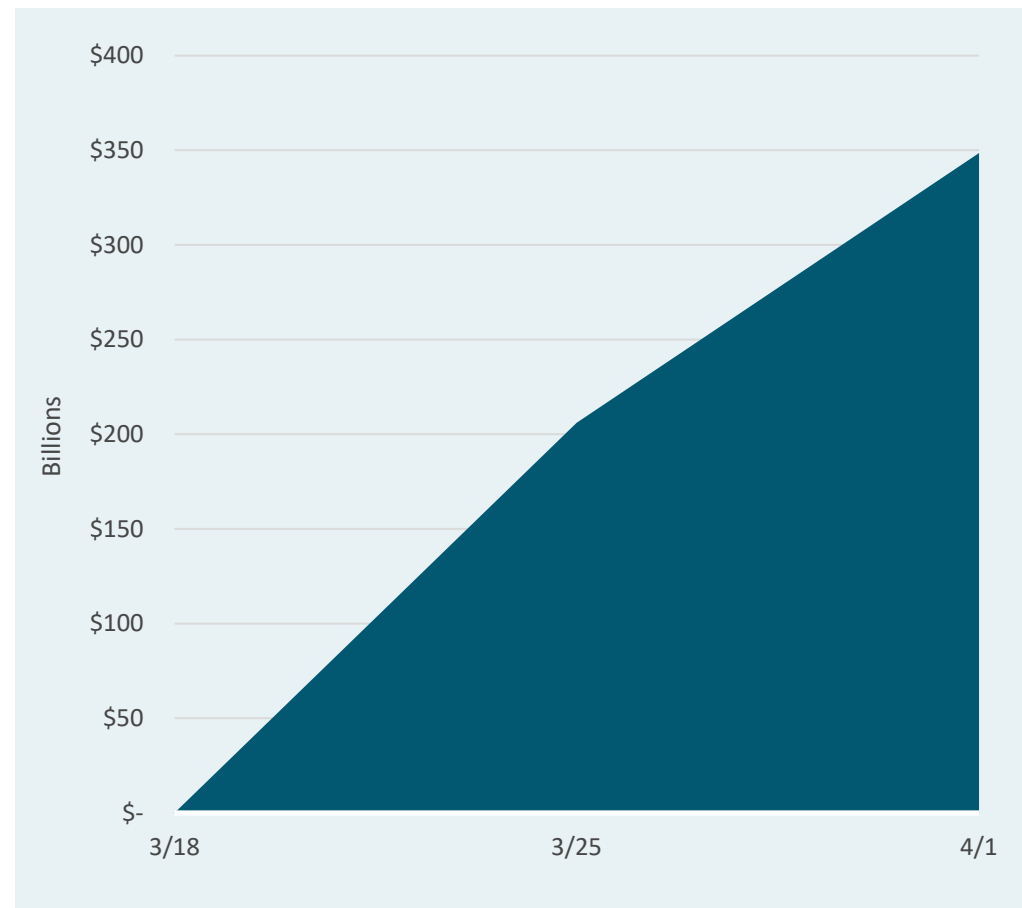
Originally, the Fed only had open swap lines with the major G7 central banks (European Central Bank, Bank of Japan, Bank of Canada, Bank of England) as well as the Swiss National Bank.

A few weeks ago, the Fed expanded the swap lines, extending \$60B in U.S. dollar liquidity to the central banks of Australia, Brazil, South Korea, Mexico, Singapore, and Sweden.

Further, \$30B dollar liquidity swap lines were opened up with the central banks of Denmark, New Zealand, and Norway.

The swap lines are set to last at least six months and should work to help alleviate strains in the global dollar funding markets.

FOREIGN CENTRAL BANK DOLLAR LIQUIDITY SWAPS

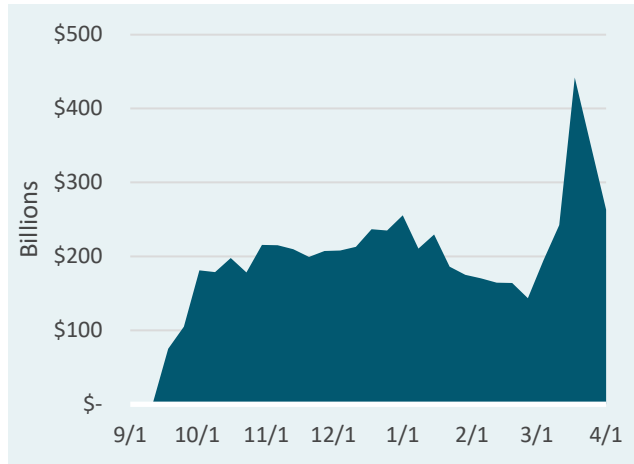


Source: Federal Reserve, Bloomberg, as of 4/1/20

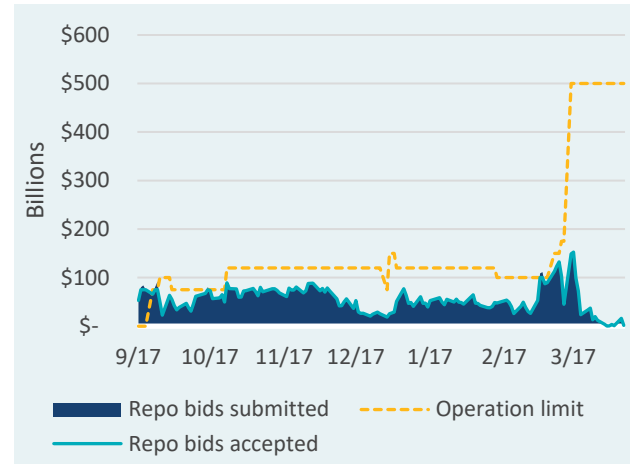
Fed liquidity programs in operation: Repurchase agreements

- After a period of persistent oversubscriptions in term repurchase agreement operations in February and early March, the Federal Reserve scheduled a series of \$500B term repo operations toward the end of March.
 - The length of the terms ranged from 28- and 31-days to 84-days.
- Additionally, effective Monday, March 16th, the Fed upped the overnight repo operation limit from \$175B to \$500B, and bids have not yet come close to that level.

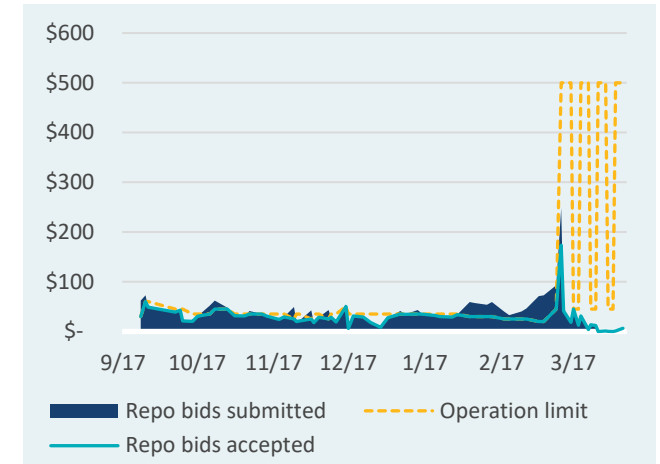
FED BALANCE SHEET: REPURCHASE AGREEMENTS



NEW YORK FED: OVERNIGHT REPO OPERATIONS



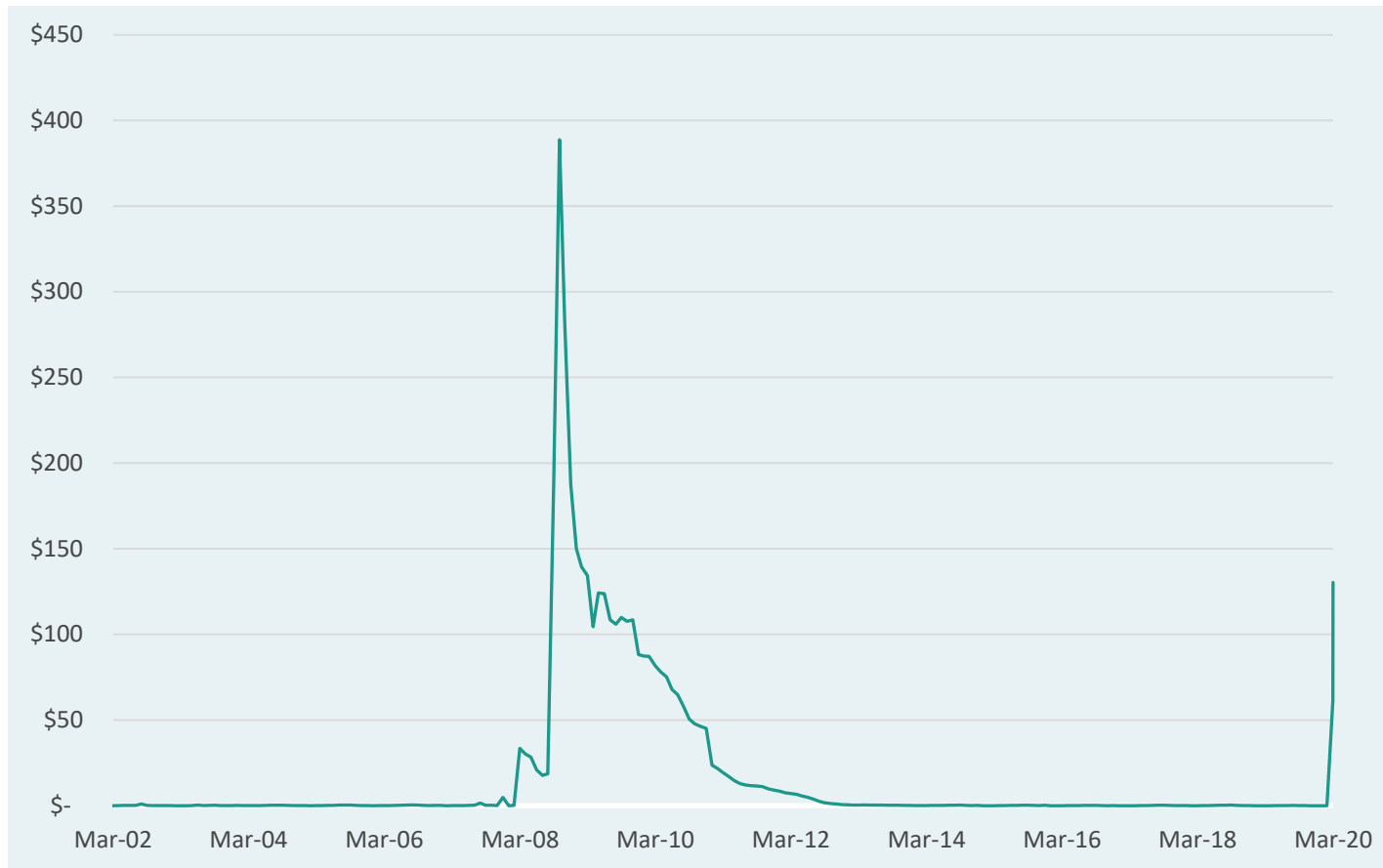
NEW YORK FED: TERM REPO OPERATIONS



Source: Federal Reserve, New York Fed, Bloomberg, as of 4/7/20

Fed liquidity programs in operation: Discount window borrowing

DISCOUNT WINDOW BORROWING (BILLIONS)



Source: Federal Reserve, Bloomberg, as of 4/1/20

The current primary credit interest rate within the discount window is 0.25%, in line with the upper band of the fed funds range

Typically, depository institutions prefer not to access the discount window due in part to signaling implications, but borrowing has picked up in the last few weeks as liquidity has been strained

Fed liquidity programs ramping up

Primary Dealer Credit Facility (PDCF) – announced 3/17/20

Only primary dealers can participate. Collateral eligible for pledge under the PDCF includes all collateral eligible for pledge in open market operations, as well as IG corporate debt, commercial paper, municipal securities, MBS, ABS, and equity securities, and eligible collateral may be further expanded at the Fed's discretion.

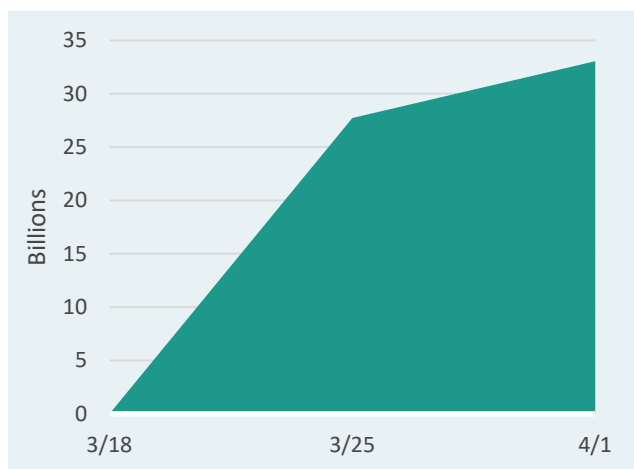
Money Market Mutual Fund Liquidity Facility (MMLF) – announced 3/18/20

The FRB of Boston will make loans available to eligible financial institutions secured by high-quality assets purchased by the financial institution from money market mutual funds. The MMLF will assist money market funds in meeting demands for redemptions from investors.

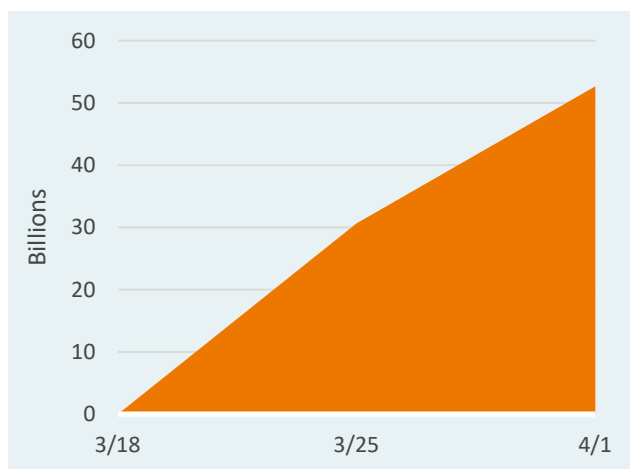
Primary Market Corporate Credit Facility (PMCCF) – announced 3/23/20

The PMCCF will allow companies access to credit so that they are better able to maintain business operations and capacity during the period of dislocations related to the pandemic. This facility is open to investment grade companies and will provide bridge financing for up to four years. Borrowers may elect to defer interest and principal payments during the first six months of the loan, extendable at the Federal Reserve's discretion, to preserve cash to pay employees and suppliers.

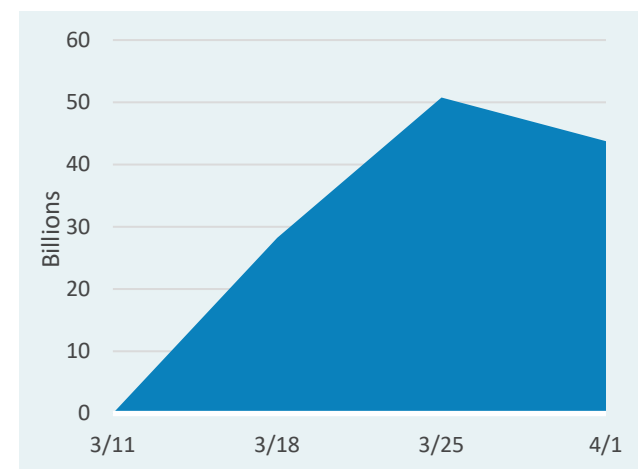
PRIMARY DEALER CREDIT FACILITY (PDCF)



MONEY MARKET LIQUIDITY FACILITY (MMLF)



PRIMARY MKT. CORP. CRED. FACILITY (PMCCF)



Source: Federal Reserve, as of 4/1/20

Fed liquidity programs not yet operational

Commercial Paper Funding Facility (CPFF) – announced 3/17

- CPFF is structured as a credit facility to an SPV which backstops term commercial paper issuance, to support the flow of credit to households and businesses
- The Fed will lend to this special purpose vehicle, and the Treasury will provide \$10B in credit protection using the Exchange Stabilization Fund
- The interest rate will equal to current option-adjusted spread +2%
- The special purpose vehicle is set to expire in March 2021 barring further extension

Secondary Market Corporate Credit Facility (SMCCF) – announced 3/23

- Will support credit to employers by providing liquidity to the market for outstanding corporate bonds.
- The SMCCF will purchase in the secondary market corporate bonds issued by investment grade U.S. companies and U.S.-listed exchange traded funds whose investment objectives is to provide broad exposure to the market for U.S. investment grade corporate bonds.
- The Treasury Department, using the Exchange Stabilization Fund (ESF), will make an equity investment in the special purpose vehicle (SPV) established by the Federal Reserve for this facility.

Term Asset-Backed Securities Loan Facility (TALF) – announced 3/23

- TALF will enable the issuance of asset-backed securities (ABS) backed by student loans, auto loans, loans guaranteed by the Small Business Administration (SBA) and certain other assets
- Under the TALF, the Fed will lend on a non-recourse basis to holders of certain AAA ABS backed by newly and recently originated consumer and business loans
- The Fed will lend an amount equal to the market value of the ABS less a haircut (approximately the same as the schedule used in 2008) and will be secured at all times by the ABS.
- The Treasury, through the Exchange Stabilization Fund (ESF) will make an equity investment in the SPV established by the Federal Reserve for this facility.

Foreign & International Monetary Authorities (FIMA) – announced 3/31

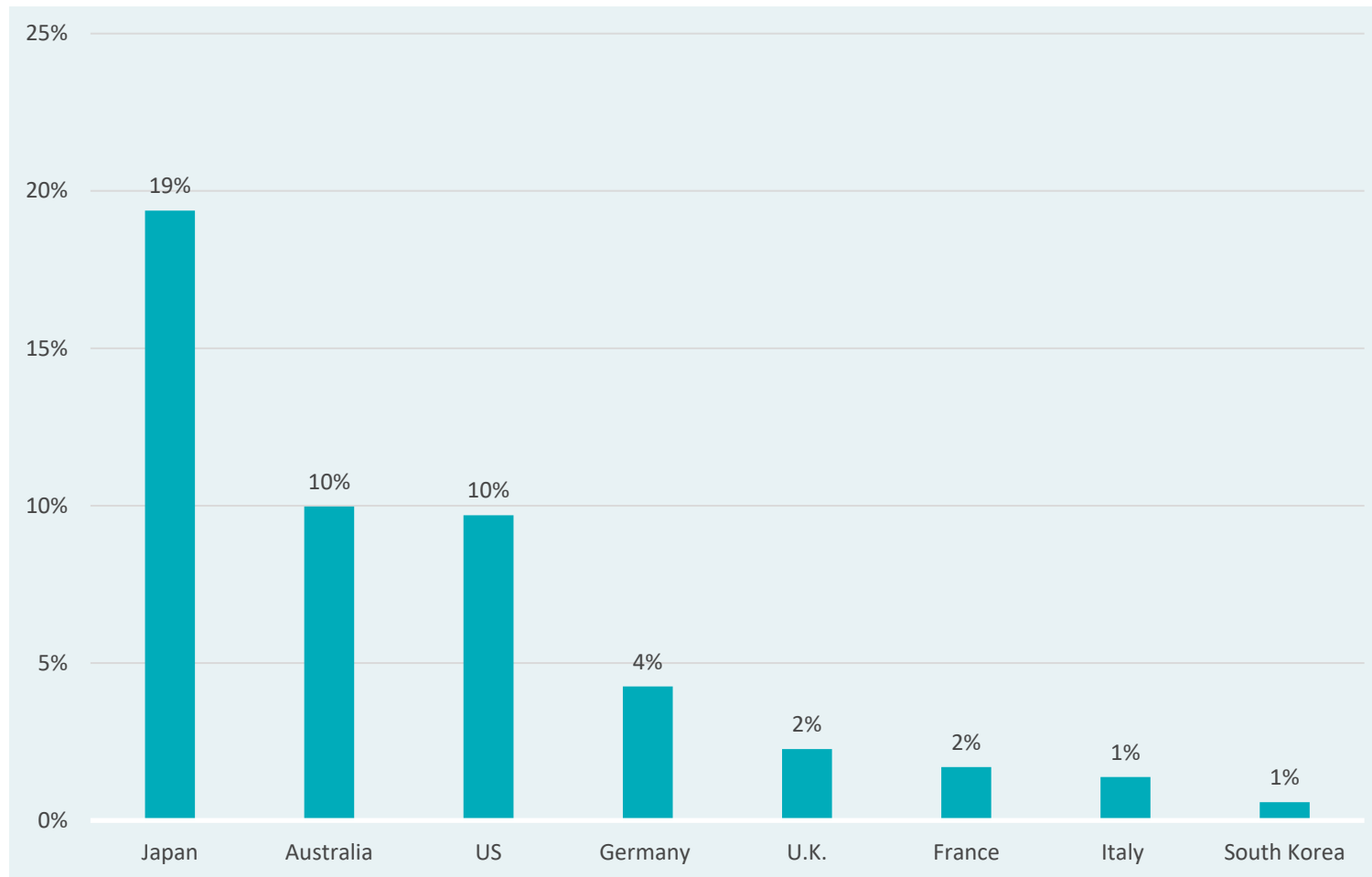
- The Fed announced the establishment of a temporary repurchase agreement facility for foreign & international monetary authorities to help support the smooth functioning of financial markets, including the U.S. Treasury market, and thus maintain the supply of credit to U.S. households and businesses.
- The FIMA repo facility will allow central banks and monetary authorities with accounts at the NY Fed to enter repo agreements with the Fed (exchanging Treasuries for U.S. dollars), thereby providing an alternative source of U.S. dollars outside of selling securities, and ease strains in global dollar funding markets.

Source: Federal Reserve, as of 4/7/20

Fiscal response

Global fiscal action

PLEDGED FISCAL SUPPORT (% OF GDP)



Following a resurgence of the outbreak in Tokyo, Japan pushed forward with an unprecedented \$990B fiscal package worth nearly 20% of gross domestic product

Source: Bloomberg, as of 4/7/20

U.S. fiscal response

Families First Coronavirus Response Act

- 10 sick days to full-time workers, prorated for part-time workers. This legislation applies to most U.S. workers, though some restrictions exist.
- Food support for low-income families increased through programs such as: increased SNAP coverage for jobless and lower-income Americans, emergency food allotments, and guaranteed school lunches.

Family and Medical Leave Act

- This existing act has been amended to provide paid leave for employees of businesses with fewer than 500 staff in size.
- For workers who still require time off after the first two weeks, this act will cover these employees for up to 14 weeks.

\$2.2 Trillion Coronavirus Relief Package

- \$1200 checks to every American, which begin to be phased out for Americans with more than \$75,000 in income and fully phased out for Americans with more than \$99,000 in income. These checks will be issued within weeks. Non-taxable.
- Weekly unemployment benefits are increased by \$600 per week for up to 4 months, and will be available to many who previously did not qualify, such as freelance workers and furloughed employees.
- \$350 Billion in loans to small businesses.
- Companies with fewer than 500 employees could be eligible for up to \$10 Million in forgivable loans to meet payroll needs.
- \$500 Billion in aid to corporations, \$100 Billion in aid to hospitals, \$150 Billion for state and local governments .
- 60-day delays in home foreclosures. Optional 6-month student loan deferrals.

U.S. CARES act decomposition



A little more than a quarter of the fiscal stimulus bill will be allocated to consumers through cash payments or additional unemployment benefits

Most American adults will receive a \$1,200 check

Amounts displayed represent billions of U.S. dollars.

Source: Verus, as of 4/8/20

Private markets insights

Private equity

- Impact of market movements on plan values necessitates revisiting private markets pricing studies
- **Likely portfolio impacts**
 - Pause in exit and investment activity in Buyout, Venture Capital, Growth Equity
 - Accelerated capital calls from Distressed and Special Situations funds
 - Gradual change in valuations of unrealized holdings, likely over multiple quarters
 - Mixed impacts on performance depending on company size, sector, and working capital / cash profile
- **Noteworthy themes shared by managers**
 - Most companies “in the eye of the storm” adjusting to demand shock
 - Cash is king – need to preserve cash while doing right by employees and customers
 - Supply chains expected to be impacted as late payment works its way through the chain
 - Company-level leverage not as much of a concern as fund-level leverage beyond 2x
 - Distressed GP: opportunity to buy company at 40% of its value just a month ago

Real estate

- Transaction activity has come to a halt. Public securities were hit hard initially and have rebounded a bit along with the broader equity market. Sector dispersion has been very high.
- 1Q valuations will likely only see a slight hit as appraisals typically lag public markets and most 1Q appraisals were already complete pre coronavirus impact. We expect the true impact to play out over several quarters. Open end funds are likely to gate redemption requests as valuations will be difficult to feel confident in and transaction levels will remain low.
- **Retail** is likely to feel the biggest impact in the near-term. The sector was already under pressure from shifting trends in consumer purchasing so this will only hasten the downturn.
- **Hotels** will see a large short-term impact though they are a small component of the commercial real estate market.
- Depending on how long and deep the downturn goes, **Office** will be affected in the normal course of a recession. Energy-related companies in Houston will be hurt so there will be fallout in the office market in and around Houston. One long-term trend that may emerge from the need to work from home is that companies realize they don't need to staff offices full-time. We may see companies downsizing office footprint as working from home becomes a viable option.
- **Multi-family** typically holds up best during a downturn. It's been a hot sector with a lot of new capacity built in the last decade. Whether or not we see fewer renters in the market, it's hard to say. Right now, we'd assume multi-family holds up the best among the key real estate sectors but there is likely to be areas that were overbuilt in hot markets.
- **Industrial** should perform well as consumers are forced to do more shopping online which will increase usage among the network of industrial warehouses for online shopping.

Real assets

Infrastructure

— Transportation Infrastructure

- Transportation infrastructure (airports, ports, toll roads, rail) are likely to be the most sensitive to an economic downturn. Core infrastructure funds tend to own transportation assets and have been riding rich valuations for many years. We will likely see a repricing of these assets and hopefully a decent buying opportunity for clients that have been avoiding the expensive core market.

— Energy Midstream

- We released our views on energy midstream recently. We believe there is significant pain ahead for midstream and have advised clients to avoid the sector until we see oil markets stabilize. Sub-\$40 oil will devastate the US energy market.

— Data/Telecom

- On a relative basis, we'd expect data storage and telecom to hold up well and, in some cases, thrive from growing internet usage. The major corporate users of data should weather the downturn pretty well (Amazon, Netflix, Google, etc.).

— Utilities

- Regulated utilities may see some repricing due to higher risk premiums but aren't likely to be directly impacted by Covid-19. Lower interest rates does expose regulated utilities to lower rate payments from regulators so we would be cautious about pricing assets based on today's base rate.

— Social Infrastructure

- Senior living, student housing, hospitals, etc. are typically included in social infrastructure. This is a very niche and small market within the broader infrastructure landscape. Senior Living facilities may see some coronavirus impacts but we don't believe that will eliminate the need for senior housing in the future. Hospitals are seeing a surge in patients so any exposure to healthcare is likely to be attractive.

Real assets

Natural Resources

— Energy (upstream / downstream)

- Recent news that both demand falling and supply rising have devastated the already weak energy market. We expect things to get considerably worse for energy producers. Energy private equity will see more bankruptcies for mature portfolios and fundraising is likely to be even more challenging. Someone will make money from the carnage but we are avoiding energy for the time-being.

— Mining

- Still bullish on the mining sector though industrial metals are likely to be weak in the interim as economic activity falls. Gold and precious metals have rallied. Long-term trends still intact and we would expect demand growth to pick up once economic activity stabilizes.

— Agriculture

- Ag crops that have a material export market are likely to see an impact first. Nut crops, soybeans, some citrus will be hurt as supply chains and trade are disrupted. On a relative basis, the Ag sector is likely to hold-up better than more GDP sensitive markets. End customers are also important. Crop producers that sell most of their product to restaurants have seen their sales plummet while those that support grocery stores are thriving.

What could be next?

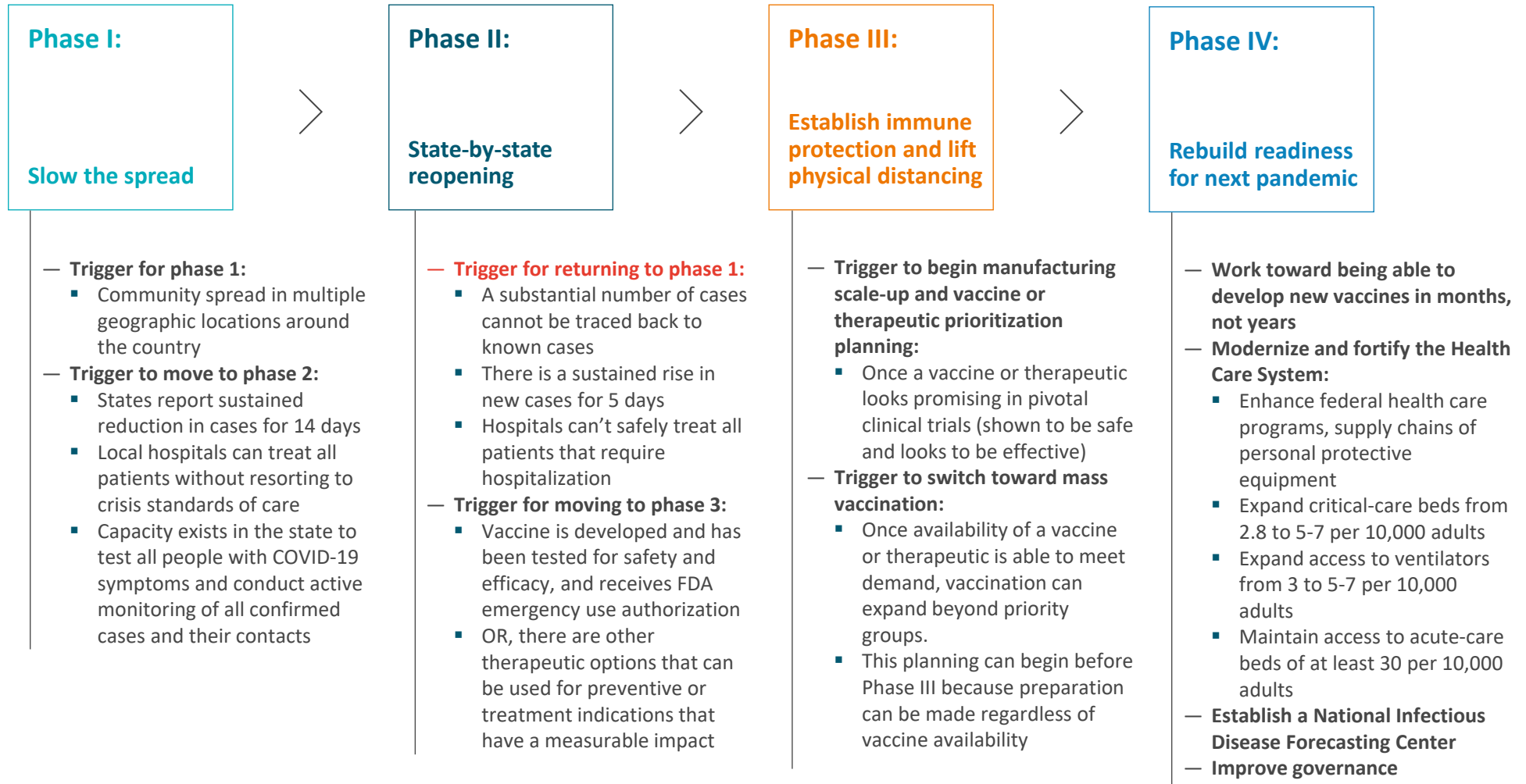
“A roadmap to reopening”

American Enterprise Institute

- **Phase 1: Slow the spread** *(triggered by the existence of community spread in multiple geographic locations around the country)*
 - Keep schools closed, work from home if possible, close malls/gyms/restaurants
- **Phase 2: State-by-state reopening** *(triggered by a state reporting a sustained reduction in cases for at least 14 days [1 incubation period], AND the jurisdiction is able to test everyone seeking care for COVID-19 symptoms [750k per week nationally is probably sufficient])*
 - On the table when states can safely diagnose, treat, and isolate COVID-19 cases and their contacts
 - Schools and businesses can begin to resume in a phased approach; limitations on gatherings likely to remain in place
 - Public hygiene sharply improved; deep cleanings on shared spaces should become more routine
 - Public will initially be asked to limit gatherings, wear fabric, non-medical masks while in the community to lower the risk of asymptomatic spread
- **Phase 3: Establish immune protection and lift physical distancing**
 - Physical distancing restrictions and other measures from phase II are lifted when safe and effective tools for mitigating COVID-19 risk are available
 - Tools may include broad surveillance, therapeutics that can prevent serious illness in those most at-risk, or a safe and effective vaccine
- **Phase 4: Rebuild our readiness for the next pandemic**
 - Invest into R&D initiatives, expand public health and health care infrastructure and workforce, establish clear governance structures to execute strong preparedness plans

Source: American Enterprise Institute

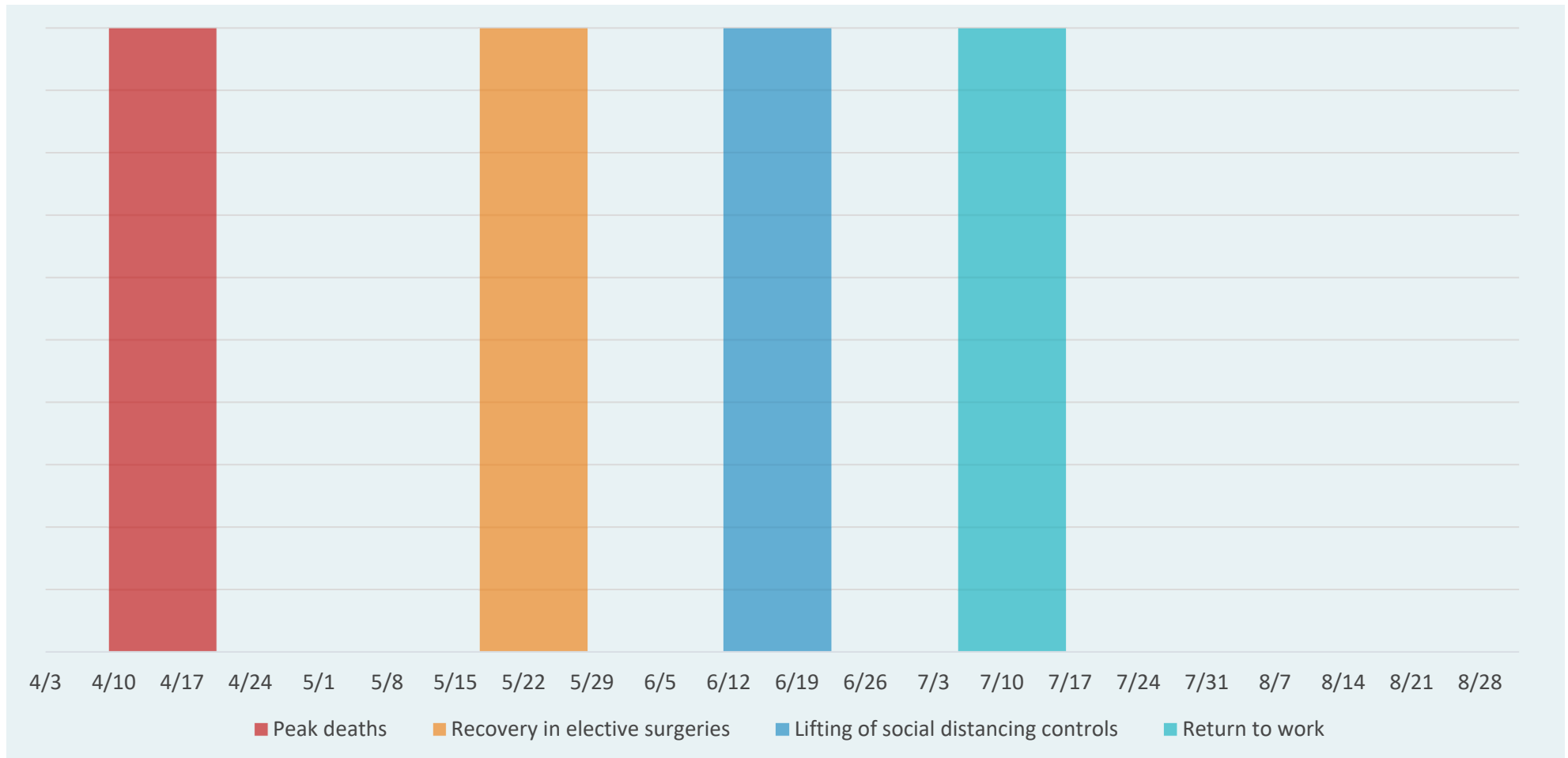
Roadmap to reopening



Source: American Enterprise Institute

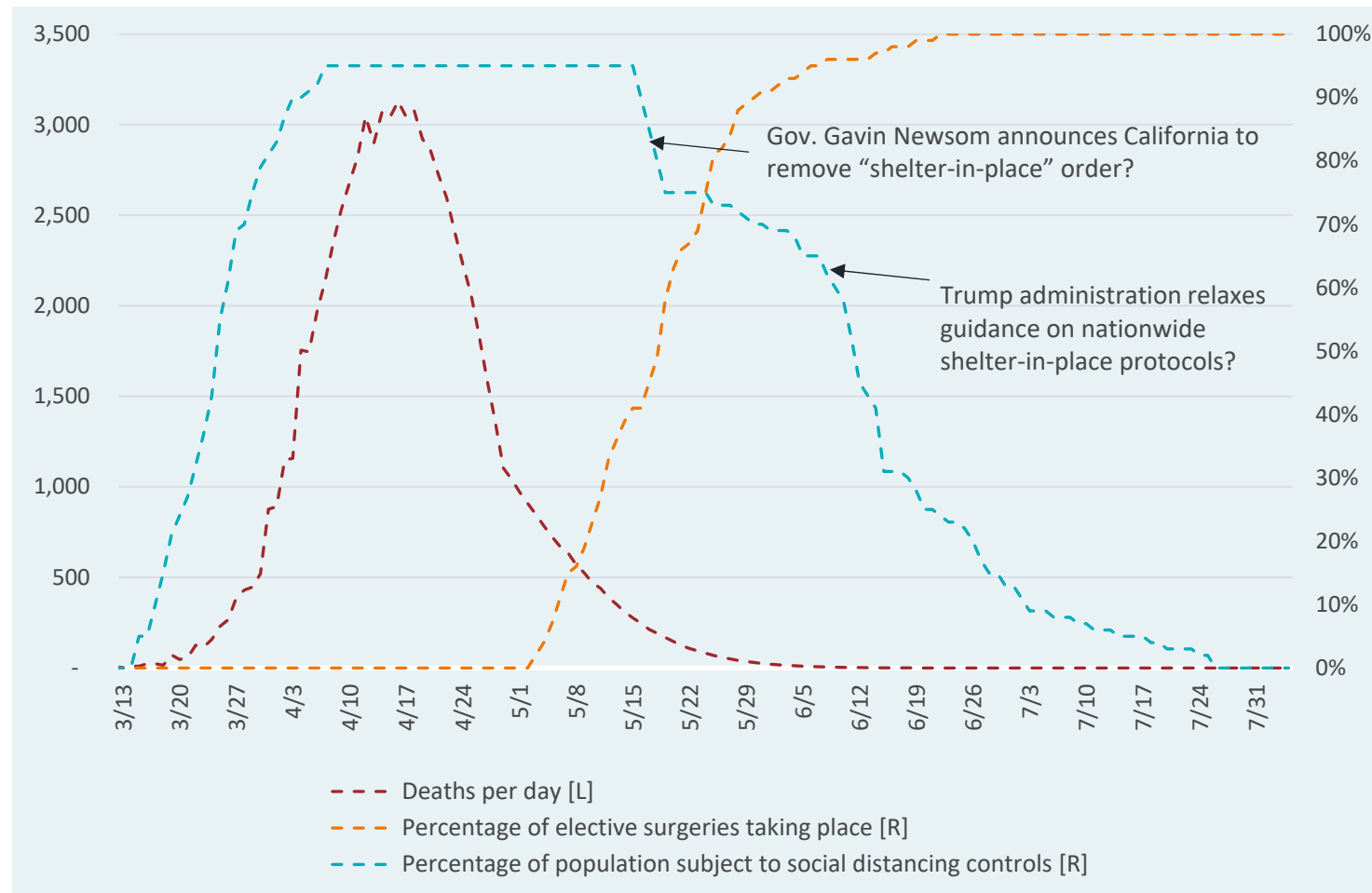
Framework for recovery

THEORETICAL GOAL POSTS



Thought experiment

POTENTIAL VECTORS OF RECOVERY



Source: IMHE (deaths) as of 4/5/20, Verus thought experiment, as of 4/8/20

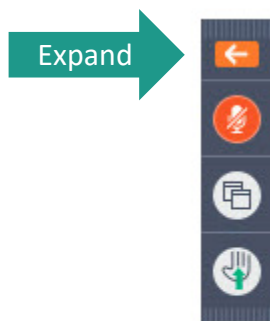
The Institute for Health Metrics and Evaluation is projecting peak daily deaths next week

Perhaps elective surgery participation can start to recover a few weeks later, reaching 100% by early July

As deaths start slowing toward zero, some states may begin relaxing controls, eventually leading a preference cascade toward easier guidance on social controls, of course assuming the health data reinforce that approach

Final thoughts

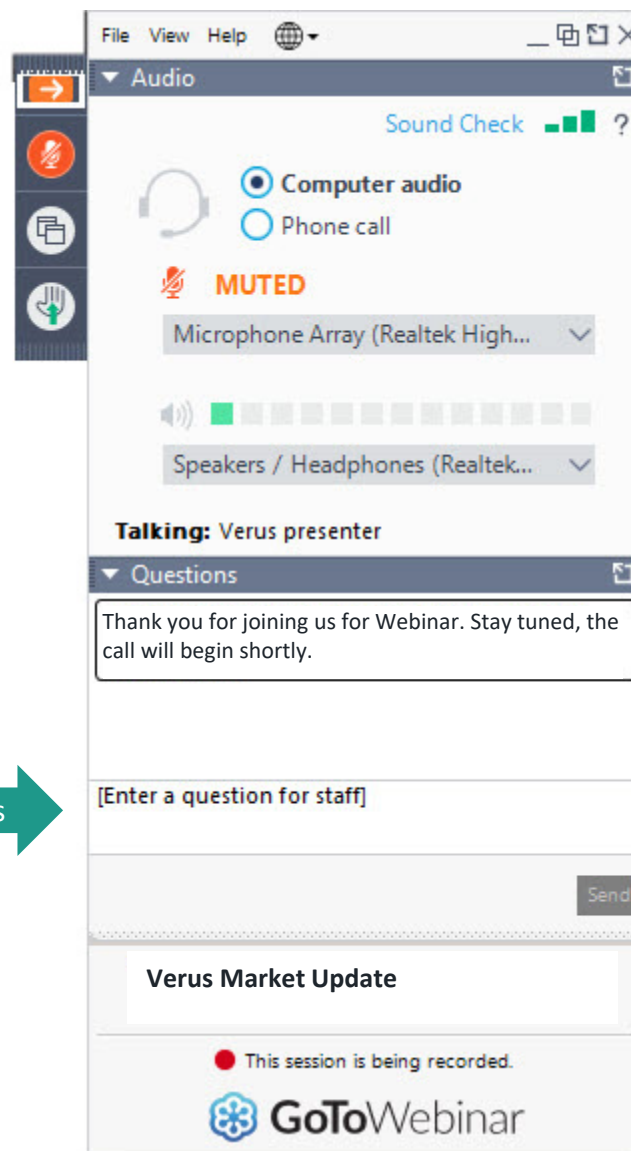
Q&A



Use the orange arrow to expand the control panel

Ask questions here

Questions





Thank you

Appendix

Performance

	1 Day	5 Day	MTD	1M	3M	YTD	1 Year	3 Year	5 Year	Above/Belo w 250 DMA	Vol. Adj. Trend	Below 52 Daily RSI	90 Day Week	Volatility
Equity														
MSCI ACWI Local	2.0	7.2	4.7	-1.4	-17.3	-16.2	-7.5	3.5	3.8	-5%		52	-19%	40%
MSCI ACWI USD	2.0	7.2	4.5	-3.2	-18.6	-17.8	-9.0	3.1	3.3	-10%		52	-20%	41%
MSCI World ex US Local	0.3	5.1	2.0	-2.2	-19.8	-18.9	-12.7	-1.2	-0.3	-13%		50	-21%	32%
MSCI World ex US USD	0.4	5.1	1.7	-7.0	-22.0	-22.0	-15.2	-1.3	-1.0	-15%		49	-23%	34%
S&P 500	3.4	8.9	6.5	0.3	-15.6	-14.4	-2.5	7.4	7.8	-6%		53	-19%	51%
FTSE 100 Local	-0.5	3.8	-0.2	-4.9	-24.5	-24.0	-20.2	-4.3	-0.1	-17%		47	-25%	39%
FTSE 100 USD	0.2	3.4	-0.3	-10.1	-28.4	-29.0	-24.4	-4.4	-3.6	-20%		47	-29%	45%
MSCI Japan Local	1.6	7.4	2.0	2.8	-16.1	-15.7	-8.9	1.0	-0.5	-5%		53	-17%	29%
MSCI Japan USD	1.8	6.6	1.3	-3.0	-15.5	-15.7	-6.9	1.7	1.5	-9%		53	-16%	28%
MSCI Germany Local	0.0	7.4	4.0	-3.6	-23.9	-22.4	-14.4	-6.3	-4.0	-15%		51	-25%	42%
MSCI Germany USD	-0.2	7.4	2.9	-8.3	-25.7	-25.0	-19.3	-7.5	-5.7	-18%		50	-26%	43%
MSCI EM Local	-0.5	3.9	3.1	-5.5	-17.7	-16.5	-12.9	2.1	1.8	-10%		50	-19%	29%
MSCI EM USD	-0.5	4.2	3.0	-7.6	-22.3	-21.3	-18.0	-0.8	-0.9	-14%		48	-24%	33%
Rates														
BBgBarc US Treasury	-0.1	-0.6	-0.1	-1.3	7.8	8.1	13.6	5.7	3.6	7%		58	-1%	9%
BBgBarc UK Gilts	0.7	0.2	0.7	-3.0	7.4	7.6	12.5	5.0	5.1	6%		55	-3%	15%
BBgBarc Japan Treasury	0.0	-0.4	0.0	-2.8	-0.4	-0.6	0.7	1.8	2.7	-1%		43	-4%	5%
BBgBarc Germany Treasury	-0.1	-0.8	-0.8	-4.2	1.1	1.3	2.6	1.7	1.2	0%		42	-4%	7%
Credit														
BBgBarc Aggregate	0.1	0.1	0.2	-2.5	3.2	3.4	9.5	4.9	3.4	4%		56	-3%	7%
BBgBarc Agg Corporate	0.5	1.1	0.9	-7.3	-3.0	-2.8	6.0	4.4	3.5	0%		49	-8%	13%
BBgBarc HY Corporate	0.5	1.5	0.1	-8.1	-12.9	-12.6	-7.4	0.7	2.6	-8%		43	-14%	15%
S&P/LSTA Leveraged Loans	0.6	2.2	2.2	-7.0	-11.6	-11.1	-7.9	-0.1	1.5	-8%		56	-12%	16%
JPM EMBI	-0.1	0.8	-0.4	-14.2	-12.4	-12.1	-5.8	0.1	2.4	-8%		40	-15%	19%
JPM GBI-EM	0.3	1.5	0.0	-12.5	-15.0	-15.2	-7.6	-0.7	-0.3	-10%		42	-15%	17%
Commodity														
Bloomberg Commodity	0.3	3.0	2.4	-6.6	-21.0	-21.4	-21.9	-8.0	-7.4	-16%		42	-23%	21%
Bloomberg WTI Crude Oil	1.3	-0.3	23.3	-19.7	-57.8	-58.7	-59.9	-21.0	-21.2	-51%		41	-61%	104%
Bloomberg Gold	0.0	2.8	5.5	0.3	8.0	10.2	27.9	9.4	6.4	12%		59	-2%	25%
Bloomberg Natural Gas	1.1	17.0	10.7	-0.1	-19.3	-19.7	-46.0	-27.7	-24.3	-27%		53	-47%	46%
Bloomberg Copper	0.5	2.5	2.0	-9.4	-18.9	-18.7	-22.1	-5.6	-4.5	-13%		45	-24%	24%
Bloomberg Corn	0.3	-0.8	-2.9	-11.2	-14.5	-15.5	-15.3	-12.5	-12.1	-15%		30	-32%	19%
Bloomberg Soybean	0.4	0.0	-3.1	-1.3	-10.0	-11.1	-11.2	-8.3	-5.4	-7%		41	-13%	15%
Currency														
EUR	0.1	0.1	-1.5	-5.1	-2.2	-3.1	-3.5	0.9	0.4	-2%		45	-5%	9%
JPY	-0.1	-1.0	-1.3	-6.1	0.5	-0.3	2.0	0.6	2.0	0%		48	-7%	13%
GBP	0.0	-0.1	-0.3	-5.6	-5.2	-6.6	-5.1	0.0	-3.4	-3%		51	-8%	14%
EM	0.0	1.1	0.1	-6.3	-12.8	-13.0	-15.4	-7.7	-6.7	-11%		38	-16%	10%
MSCI Currency Factor Mix USD	0.1	-0.3	-0.2	1.5	0.7	1.0	3.1	0.2	0.8	1%		47	-2%	4%
ACWI ex US Embedded Currency	-0.1	-0.2	-0.4	-3.6	-1.6	-2.1	-2.9	-1.4	-1.6	--		0	--	--
Other														
MSCI US REIT	6.1	13.5	5.4	-13.3	-22.2	-23.3	-17.5	-2.9	-0.2	-18%		45	-28%	63%
Alerian MLP Index	2.9	11.1	8.3	-12.6	-54.9	-53.6	-57.7	-27.2	-19.6	-49%		42	-59%	95%

As of 4/8/20

Asset class performance

	5D	MTD	1M	3M	YTD	1 Year	3 Year	5 Year	12 M Trend	Vol. Adj. Trend	Daily RSI	Below 52 Week High	90 Day Volatility
Equity													
S&P 500	8.9	6.5	0.3	-15.6	-14.4	-2.5	7.4	7.8	-6%		53	-19%	51%
Russell 2000	11.2	3.4	-9.1	-28.1	-28.3	-22.4	-3.1	0.3	-20%		45	-30%	59%
MSCI EAFE Hedged	4.9	1.9	-1.4	-19.2	-18.4	-10.3	1.1	1.2	-11%		50	-20%	31%
MSCI EAFE USD	5.0	1.4	-7.1	-21.7	-21.8	-14.9	-1.2	-0.9	-14%		49	-23%	32%
MSCI EAFE Small Cap	6.5	2.0	-10.5	-25.6	-26.1	-18.1	-2.1	0.8	-17%		49	-27%	33%
MSCI EM Hedged	3.9	3.1	-5.0	-17.1	-16.0	-12.6	1.8	0.8	-9%		51	-19%	28%
MSCI EM USD	4.2	3.0	-7.6	-22.3	-21.3	-18.0	-0.8	-0.9	-14%		48	-24%	33%
MSCI ACWI Hedged	7.2	4.7	-1.0	-17.0	-15.9	-6.7	4.2	--	-9%		50	-19%	40%
MSCI ACWI USD	7.2	4.5	-3.2	-18.6	-17.8	-9.0	3.1	3.3	-10%		52	-20%	41%
Fixed Income													
BBgBarc 1-3 Month Treasury Bills	0.0	0.0	0.0	0.4	0.5	2.0	1.7	1.1	0%		0	0%	0%
BBgBarc US TIPS 5-10 Year	0.5	2.0	-0.2	3.2	3.5	8.9	4.2	3.1	4%		60	-1%	11%
BBgBarc US Treasury 7-10 Year	-0.9	-0.5	-1.4	9.1	9.6	16.3	6.8	4.3	9%		57	-1%	11%
BBgBarc Global Treasuries ex US Hedged	-0.4	-0.2	-2.7	1.0	1.1	5.8	4.6	3.7	1%		44	-3%	4%
BBgBarc Global Treasuries ex US USD	-0.5	-0.8	-7.8	-1.6	-2.4	1.4	2.6	2.3	-1%		44	-8%	11%
BBgBarc US Aggregate	0.1	0.2	-2.5	3.2	3.4	9.5	4.9	3.4	4%		56	-3%	7%
BBgBarc US Corp IG	1.1	0.9	-7.3	-3.0	-2.8	6.0	4.4	3.5	0%		49	-8%	13%
BBgBarc US Long Corporate	1.3	0.8	-11.9	-4.2	-3.9	10.1	6.7	4.8	0%		49	-13%	23%
BBgBarc HY Corporate	1.5	0.1	-8.1	-12.9	-12.6	-7.4	0.7	2.6	-8%		43	-14%	15%
S&P/LSTA Leveraged Loans	2.2	2.2	-7.0	-11.6	-11.1	-7.9	-0.1	1.5	-8%		56	-12%	16%
BBgBarc Global Credit Hedged	0.8	0.7	-6.6	-3.6	-3.4	3.9	3.9	3.4	-1%		45	-7%	9%
BBgBarc Global Credit USD	0.9	0.5	-8.2	-4.7	-4.9	1.7	3.1	2.6	-2%		45	-9%	11%
JPM EMBI	0.8	-0.4	-14.2	-12.4	-12.1	-5.8	0.1	2.4	-8%		40	-15%	19%
JPM GBI-EM	1.5	0.0	-12.5	-15.0	-15.2	-7.6	-0.7	-0.3	-10%		42	-15%	17%
Other													
Bloomberg Commodity	3.0	2.4	-6.6	-21.0	-21.4	-21.9	-8.0	-7.4	-16%		42	-23%	21%
HFRX Global	0.6	0.3	-5.4	-6.7	-6.6	-1.3	-0.5	-0.7	-4%		41	-8%	7%
MSCI US REIT	13.5	5.4	-13.3	-22.2	-23.3	-17.5	-2.9	-0.2	-18%		45	-28%	63%
MSCI Currency Factor Mix USD	-0.3	-0.2	1.5	0.7	1.0	3.1	0.2	0.8	1%		47	-2%	4%
ACWI ex US Embedded Currency	-0.2	-0.4	-3.6	-1.6	-2.1	-2.9	-1.4	-1.6	--		--	--	--

As of 4/8/20

Notices & disclosures

Past performance is no guarantee of future results. This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Additional information about Verus Advisory, Inc. is available on the SEC’s website at www.adviserinfo.sec.gov.

Verus⁷⁷ is a registered trademark of Verus Advisory, Inc.