



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



APRIL 2020

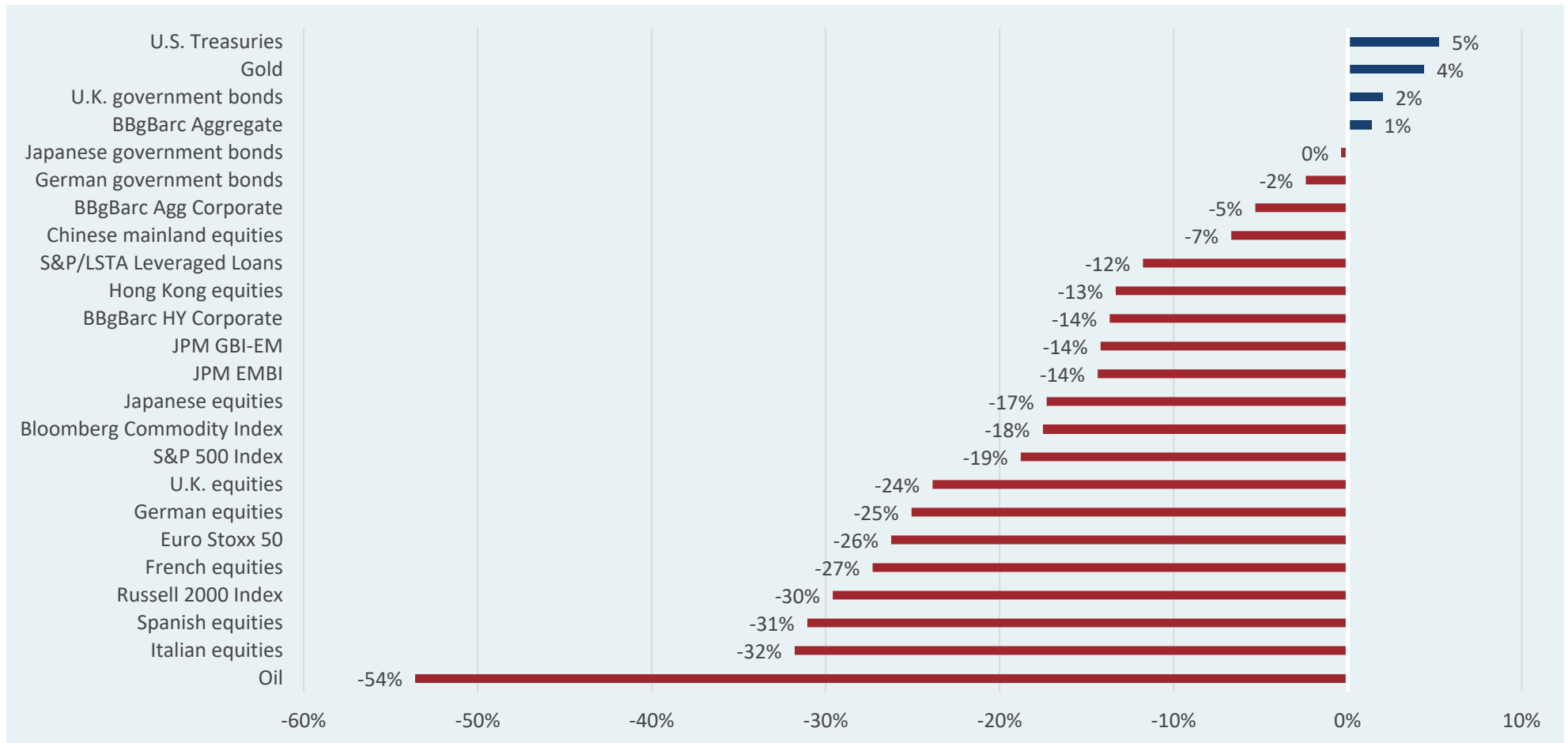
Verus Market Update

**ACERA**

# Where are we?

# What have asset classes done?

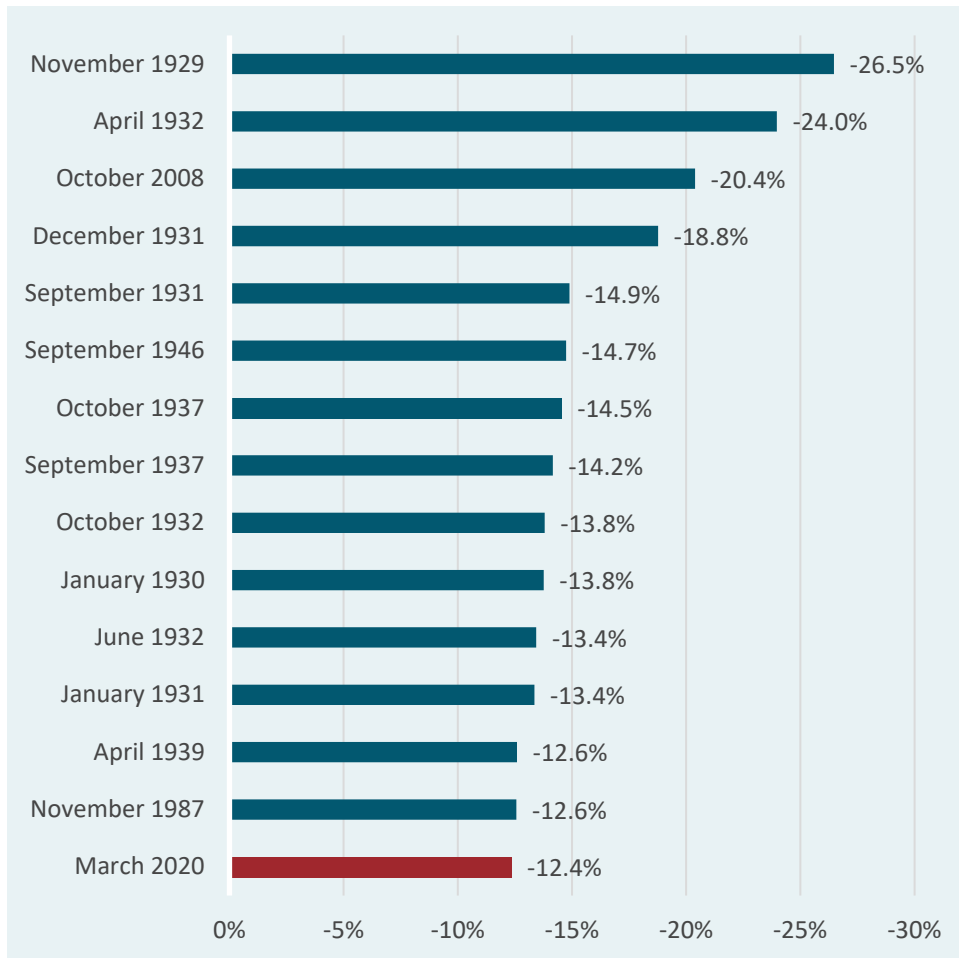
ASSET CLASS PERFORMANCE SINCE THE S&P 500 PEAK ON FEBRUARY 19TH



Source: Bloomberg, as of 4/8/20

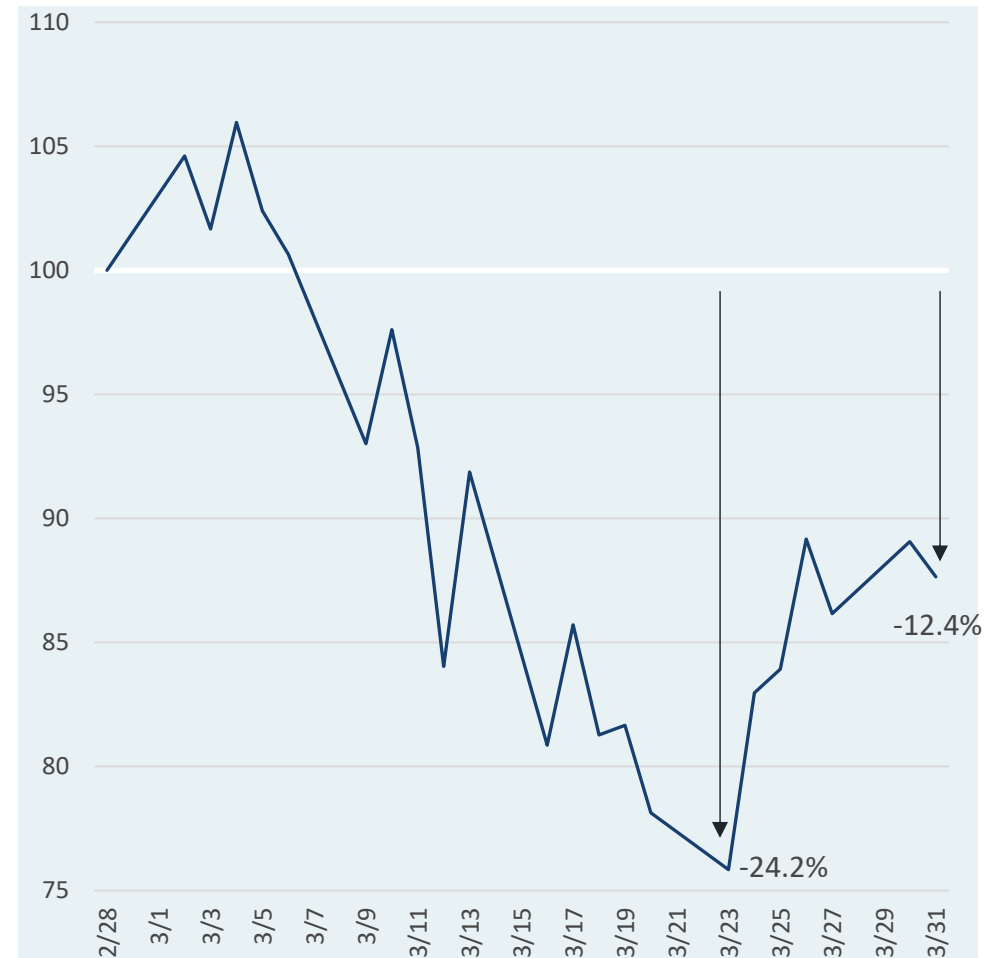
# Losses in March were historic

WORST MONTHLY S&P 500 INDEX DECLINES SINCE 1871



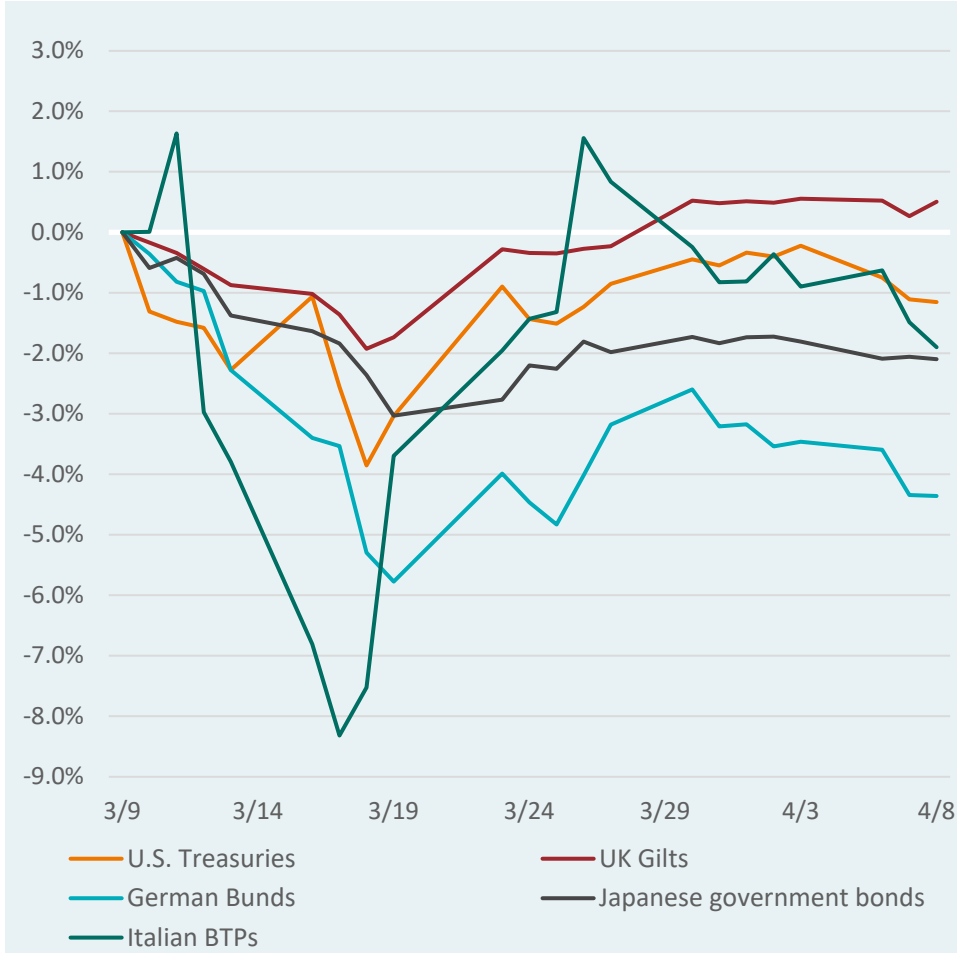
Source: Shiller data

S&P 500 TOTAL RETURN INDEX – MARCH CUMULATIVE PERFORMANCE



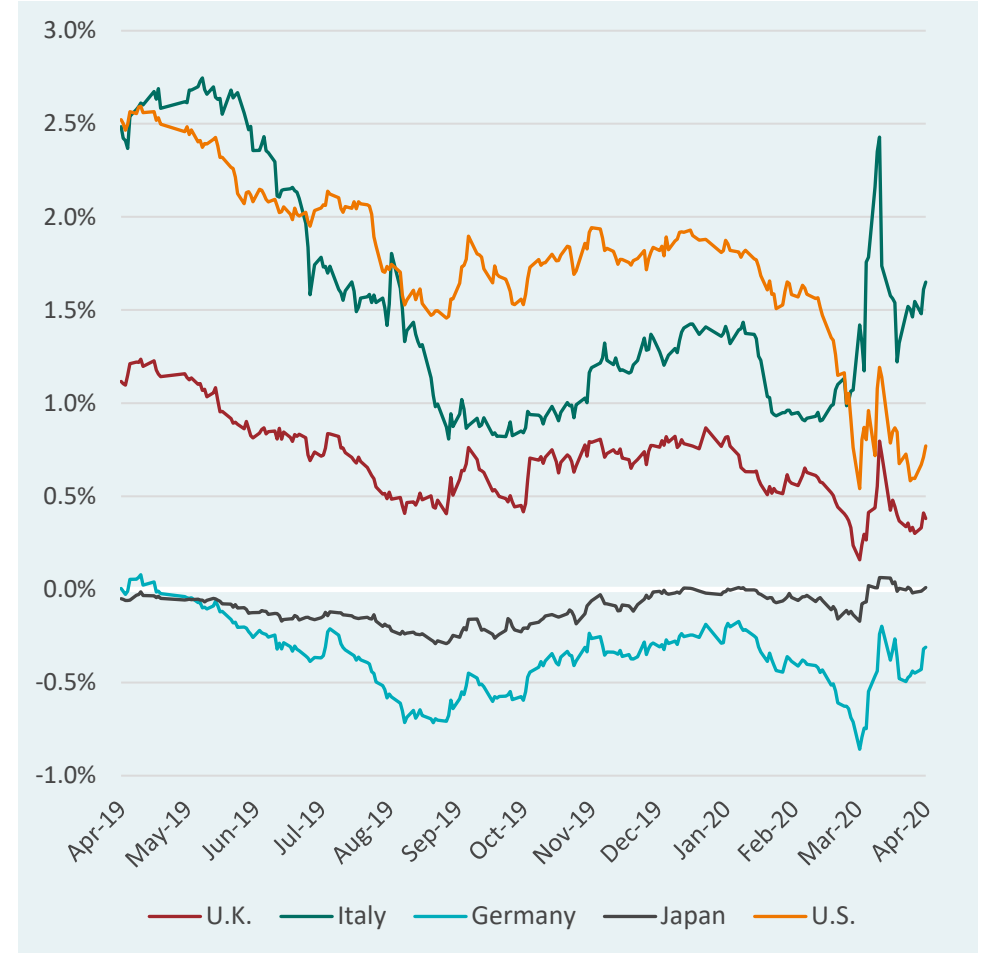
# Rates performance

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

# Country summary

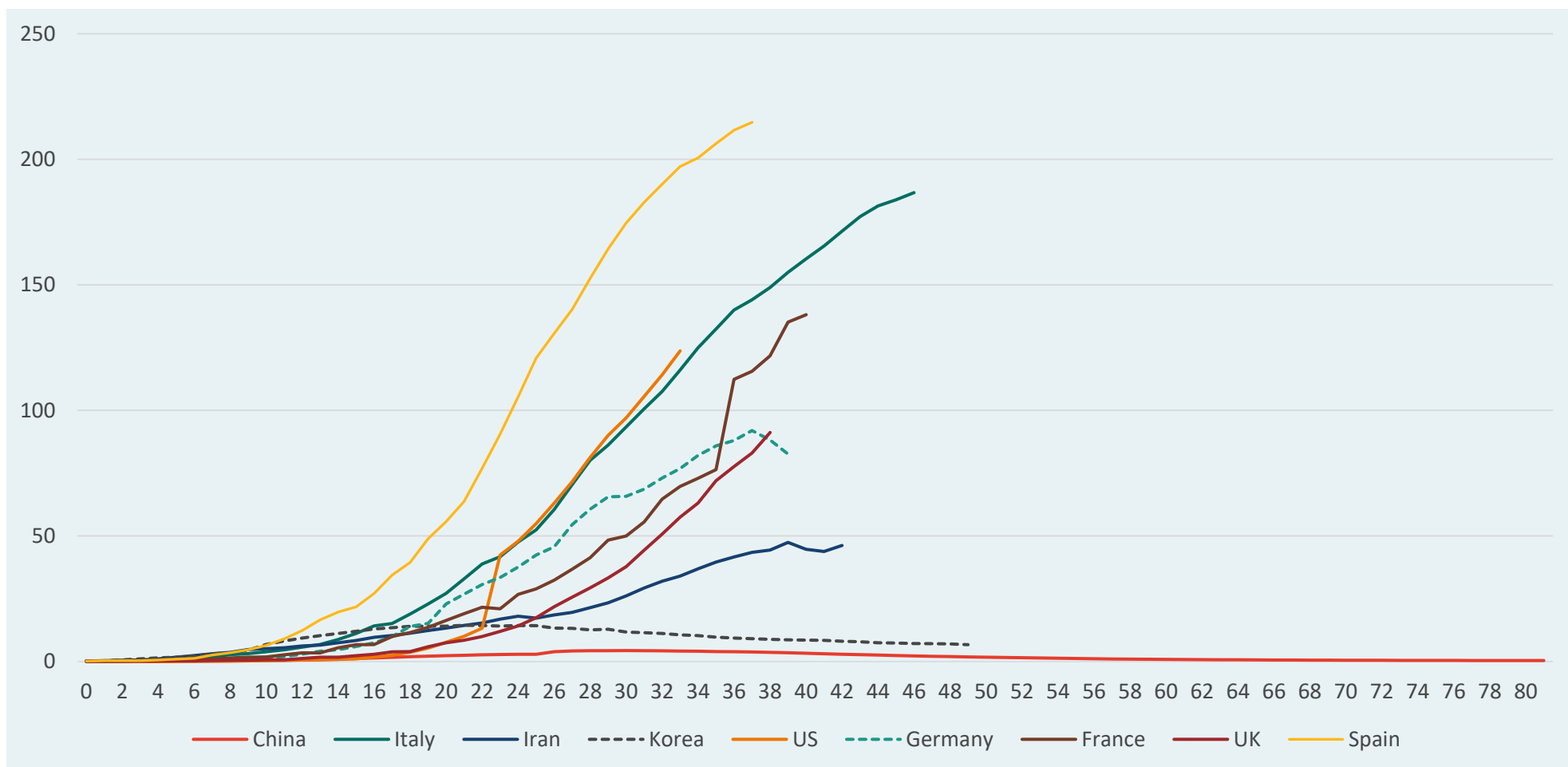
Country	Total	Recovered	Active Cases	Deaths	Death Rate	Date of 100 Cases	Daily Growth Past Week - Cases	Daily Growth Past Week - Deaths
China	82,867	77,639	5,228	3,339	4.0%	1/19	-1.8%	0.1%
Hubei	67,803	64,073	3,730	3,212	4.7%	1/19		
Italy	139,422	26,491	112,931	17,669	12.7%	2/23	2.7%	4.3%
Iran	67,286	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%
<b>Global</b>	<b>1,518,647</b>	<b>329,931</b>	<b>1,188,716</b>	<b>88,550</b>	<b>5.8%</b>	<b>1/19</b>	<b>6.9%</b>	<b>9.4%</b>

Source: Bloomberg, aggregated official country statistics, 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

# Projected deaths

## Deaths per day:

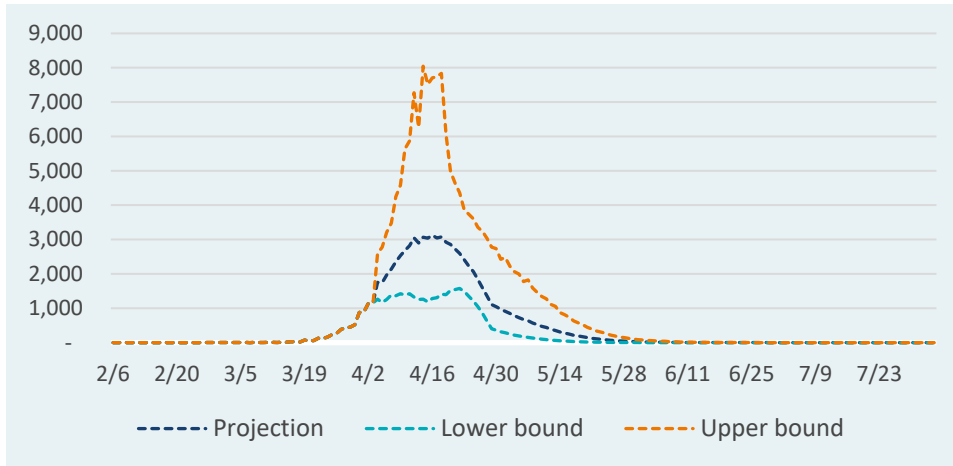
The daily death toll in the U.S. is expected to peak at 3,130 on April 16<sup>th</sup>, fall into the twenties by June 1<sup>st</sup>, and fall to zero by July 1<sup>st</sup>.

## Total deaths:

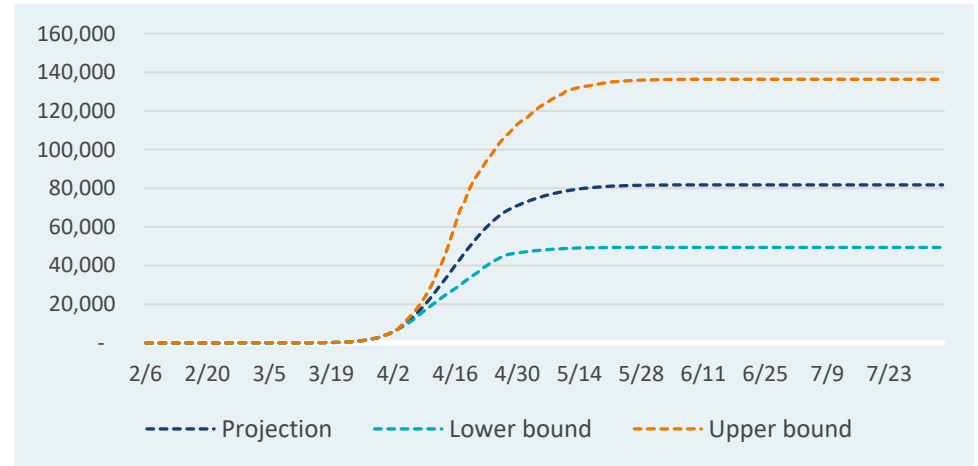
The total number of deaths in the U.S. relating to COVID-19 complications is expected to plateau at around 82,000 in early June, with an upper bound of around 136,000 and a lower bound near 50,000.

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

DEATHS PER DAY

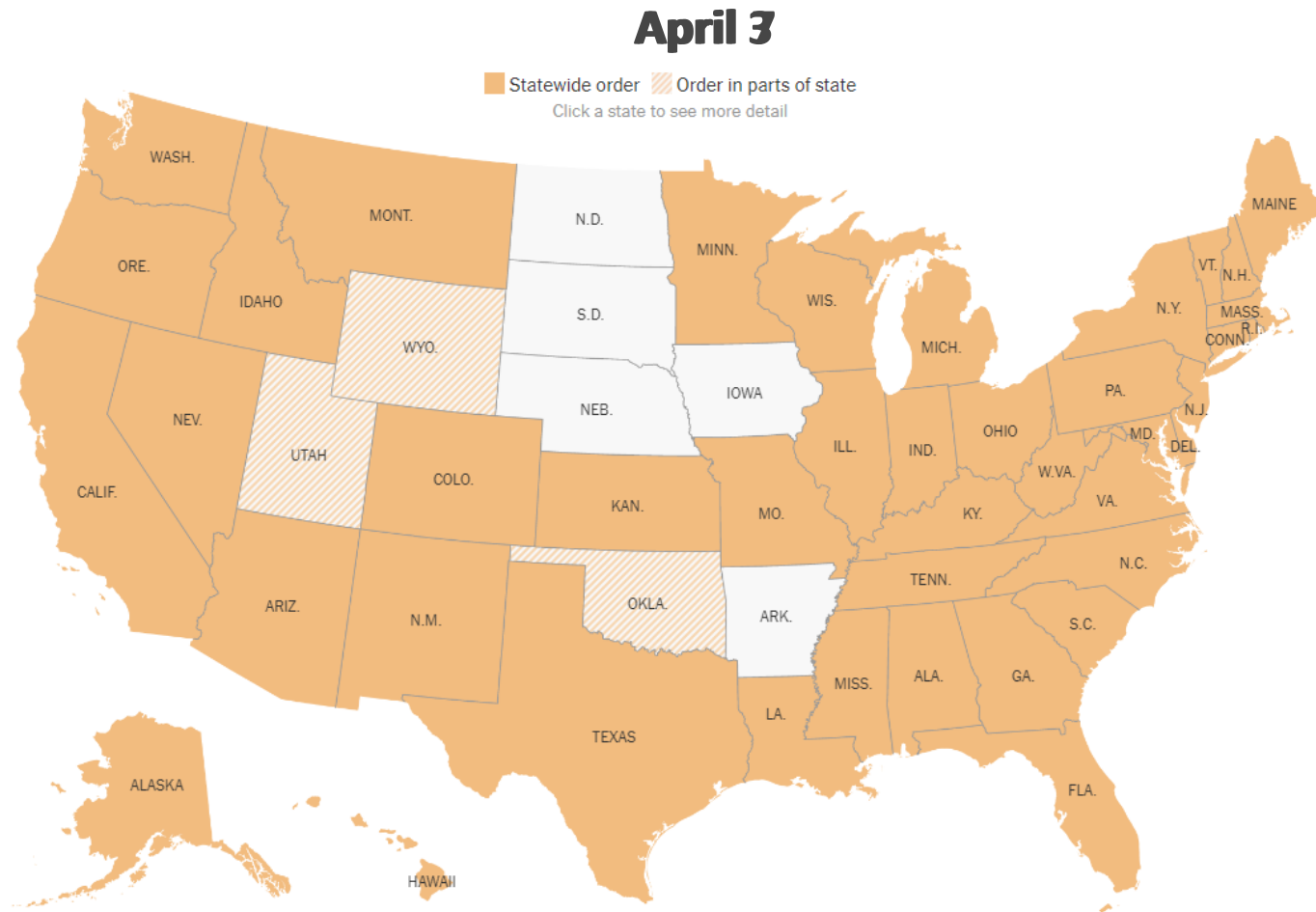


TOTAL DEATHS



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

# 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.

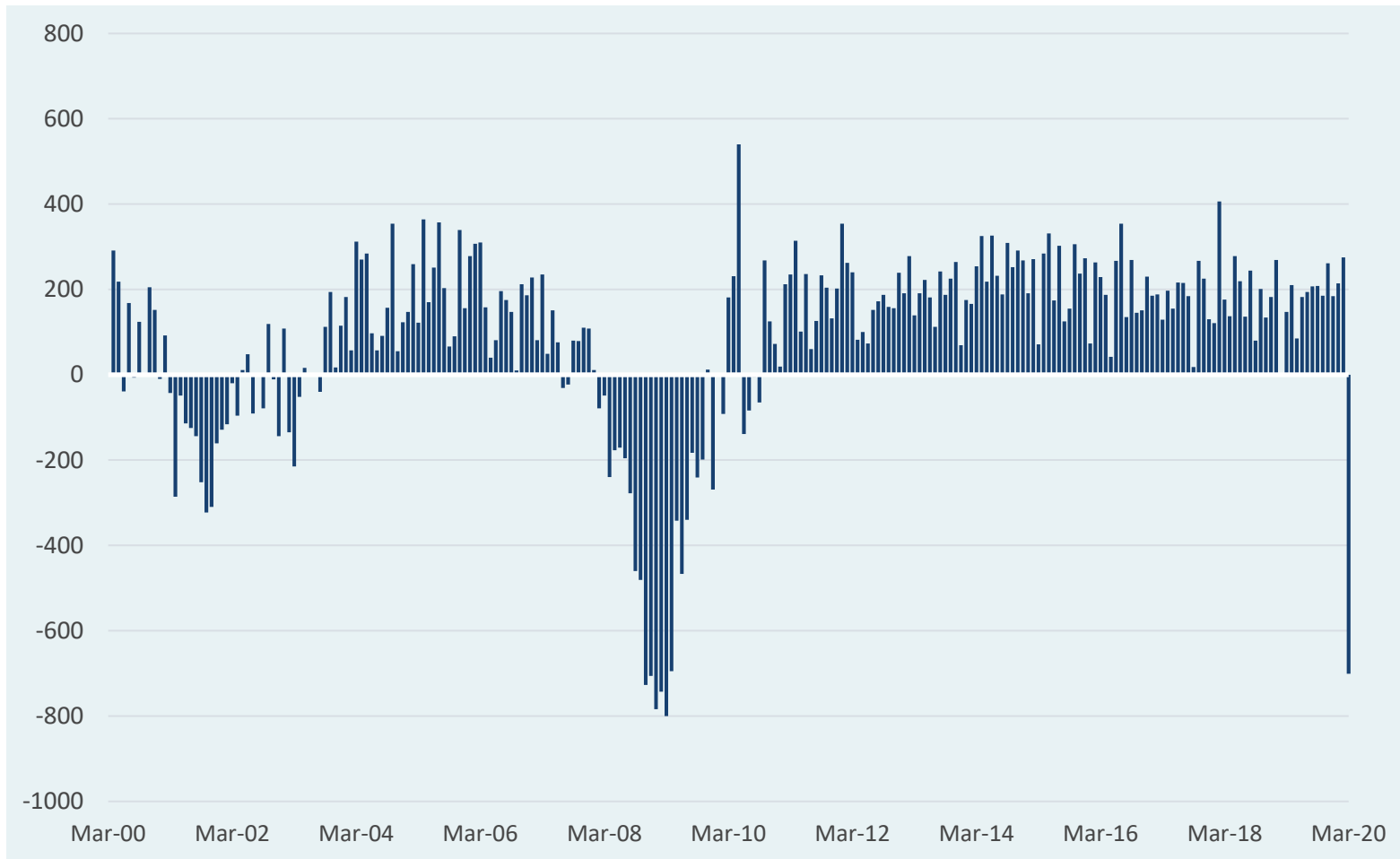
This equates to about 95% of the population.

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

# Labor market

# Non-farm payroll additions

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



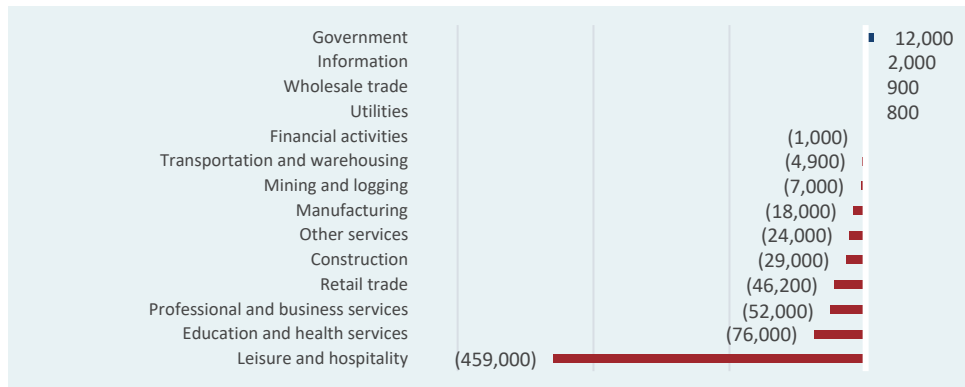
Non-farm payrolls (-701k) contracted for the first time in 114 months in March

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

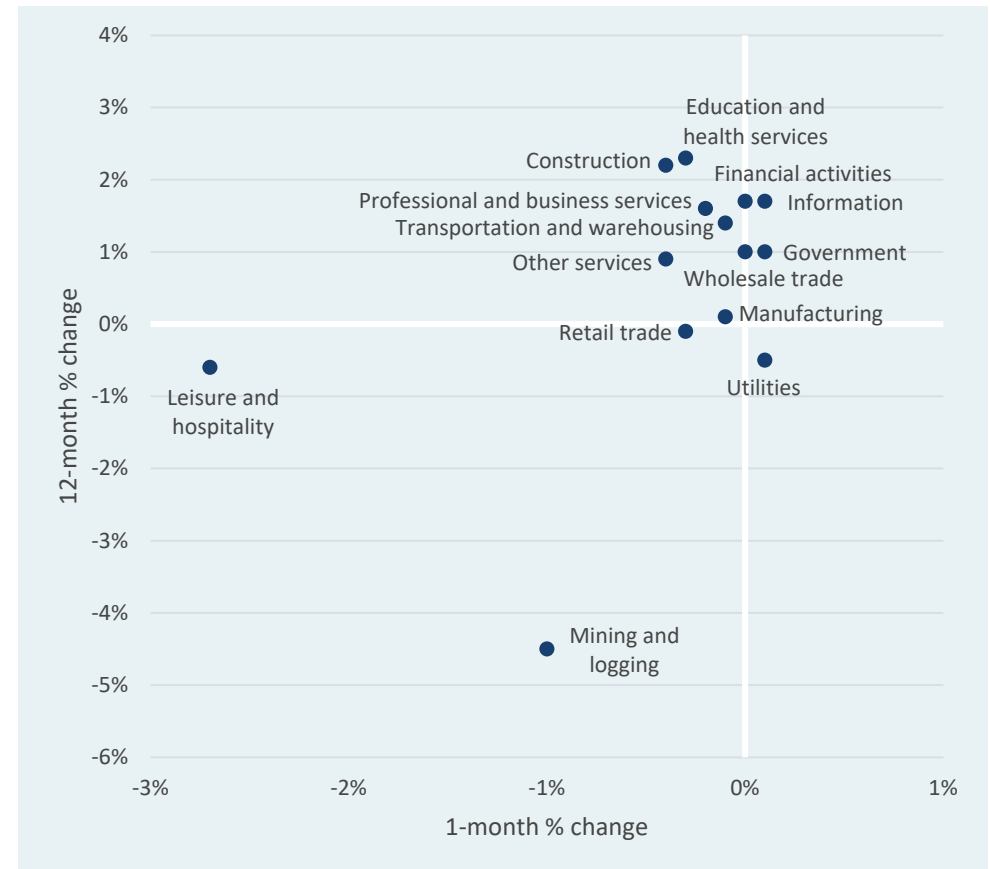
# March 2020 jobs report

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

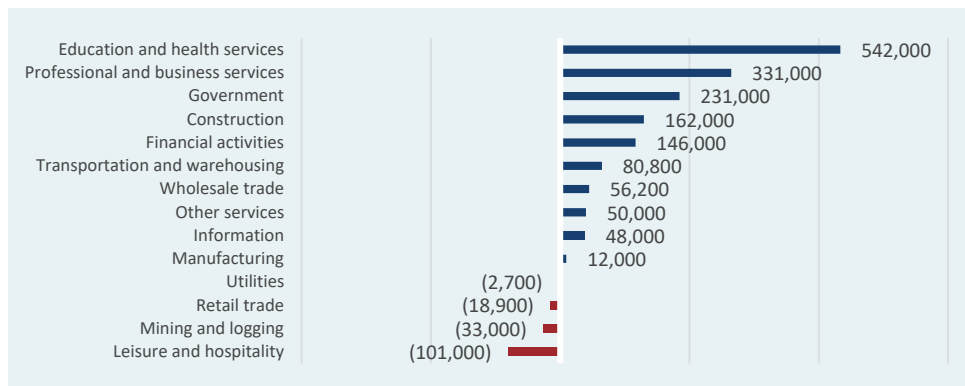
## 1-MONTH CHANGE



## TRAILING % CHANGE



## 12-MONTH CHANGE



Source: BLS, as of 3/31/20

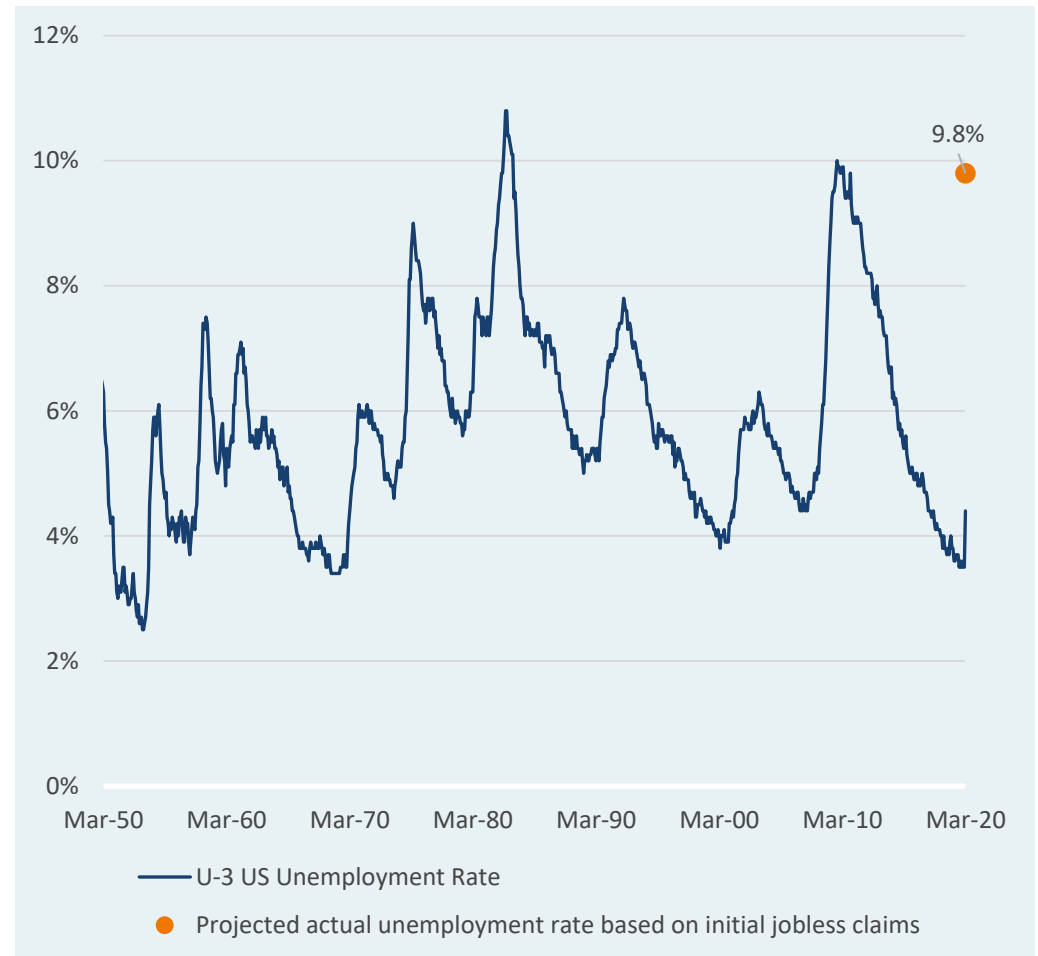
# Unemployment

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.

U-3 UNEMPLOYMENT RATE



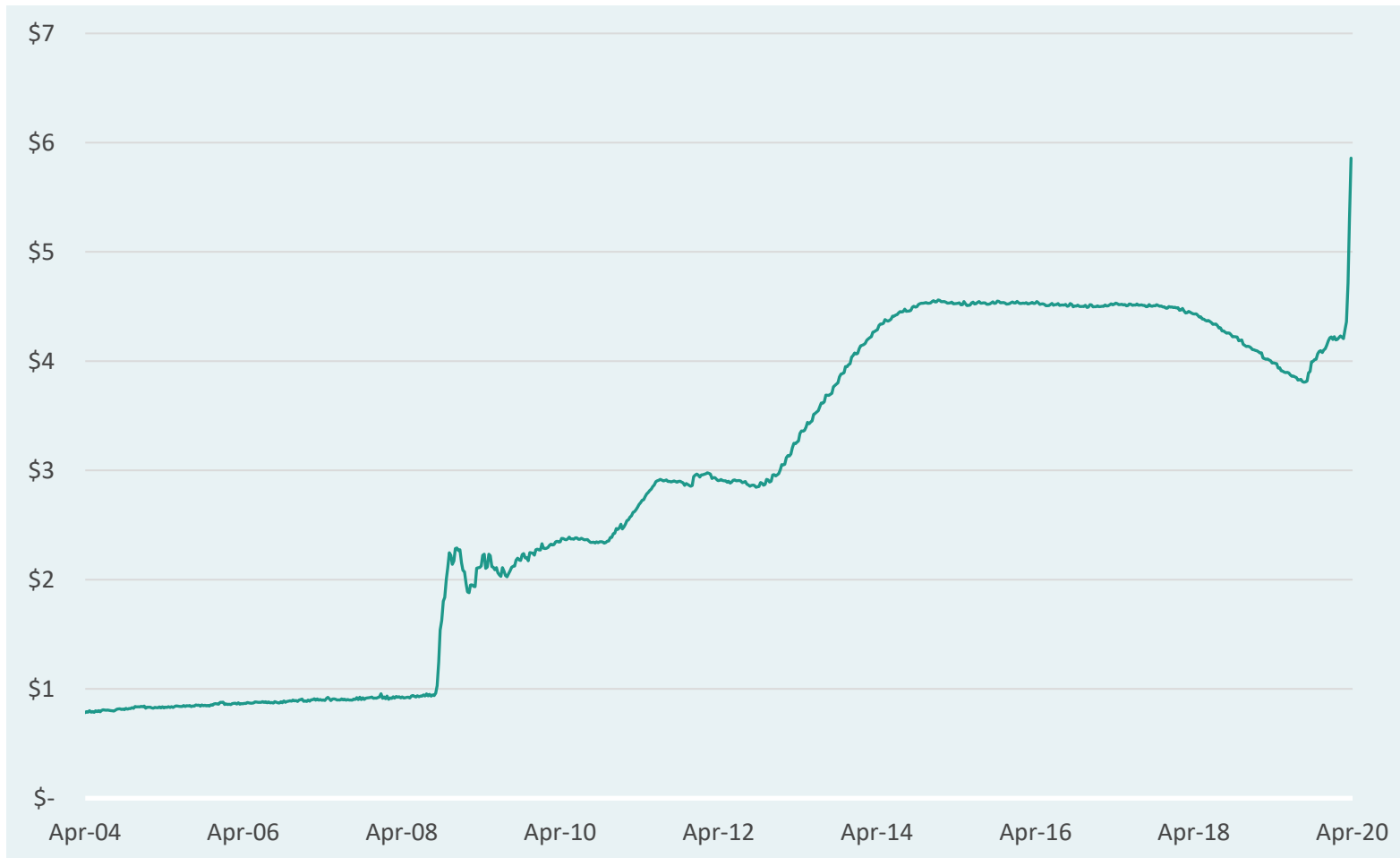
Source: Bureau of Labor Statistics, as of 3/31/20

# 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
<b>Total Fed Balance Sheet</b>	<b>\$4,716</b>	<b>\$5,303</b>	<b>\$5,860</b>	<b>\$557</b>	<b>\$1,143</b>

\*3/18/20

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

# Fed liquidity programs in operation: Quantitative easing (QE)

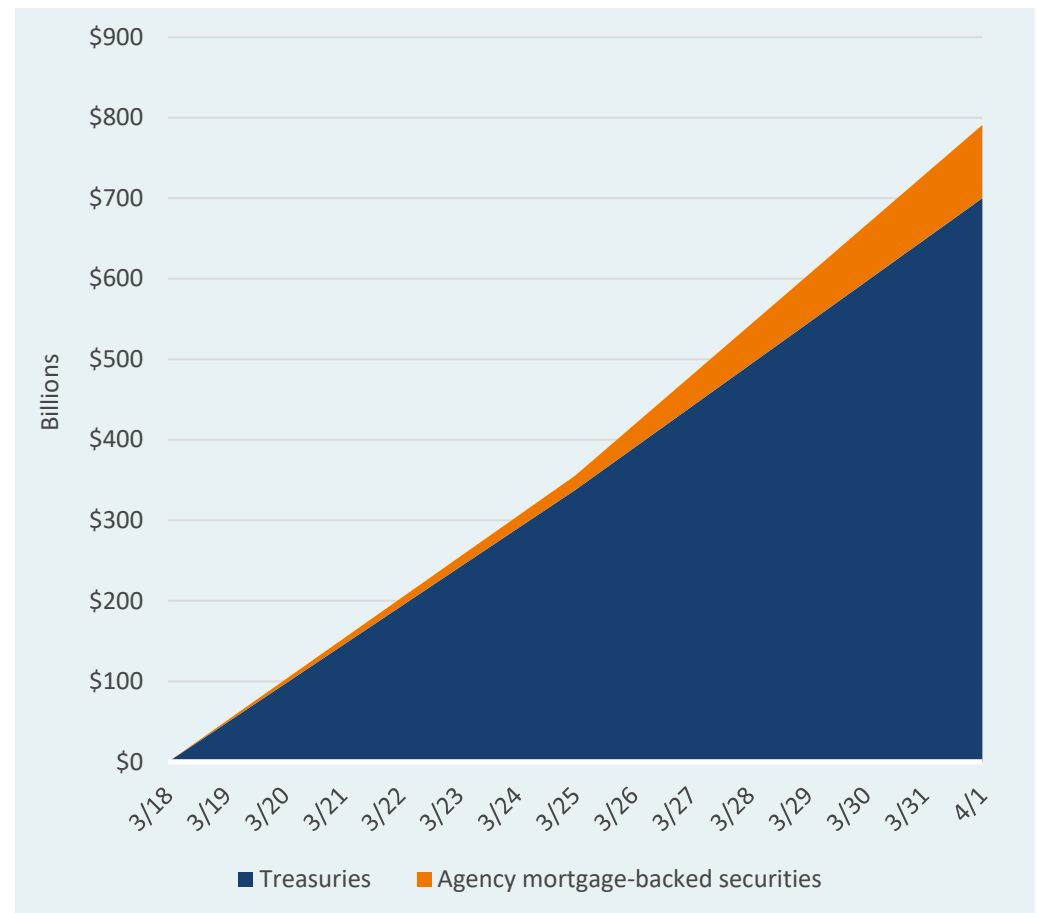
## March 15<sup>th</sup>

“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 23<sup>rd</sup>

“**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.”

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



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

# 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.

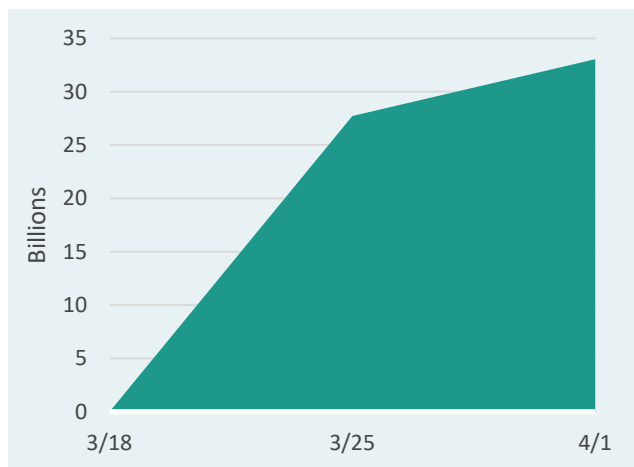
## Money Market Mutual Fund Liquidity Facility (MMLF) – announced 3/18/20

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.

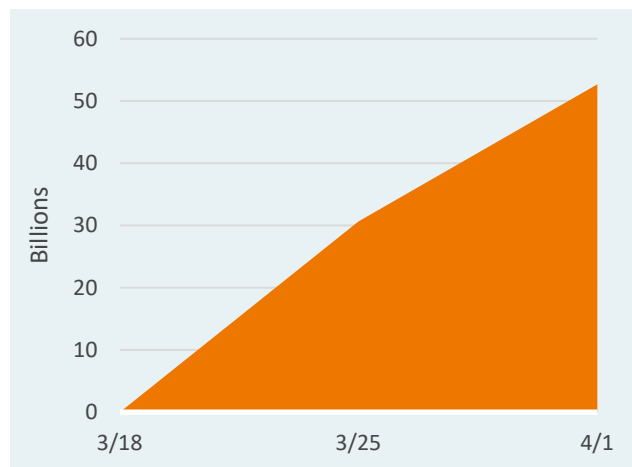
## Primary Market Corporate Credit Facility (PMCCF) – announced 3/23/20

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.

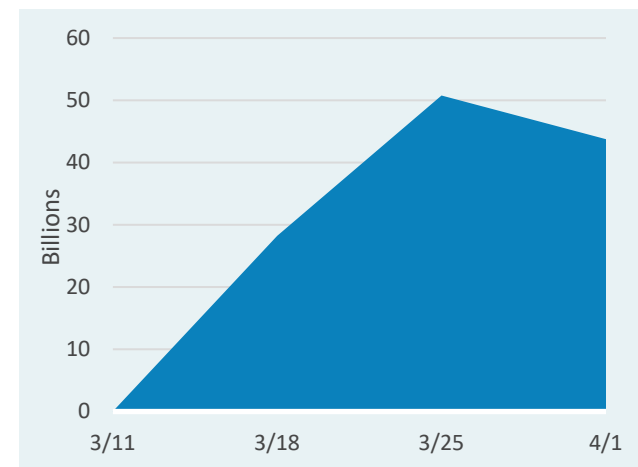
PRIMARY DEALER CREDIT FACILITY (PDCF)



MONEY MARKET LIQUIDITY FACILITY (MMLF)



PRIMARY MKT. CORP. CRED. FACILITY (PMCCF)

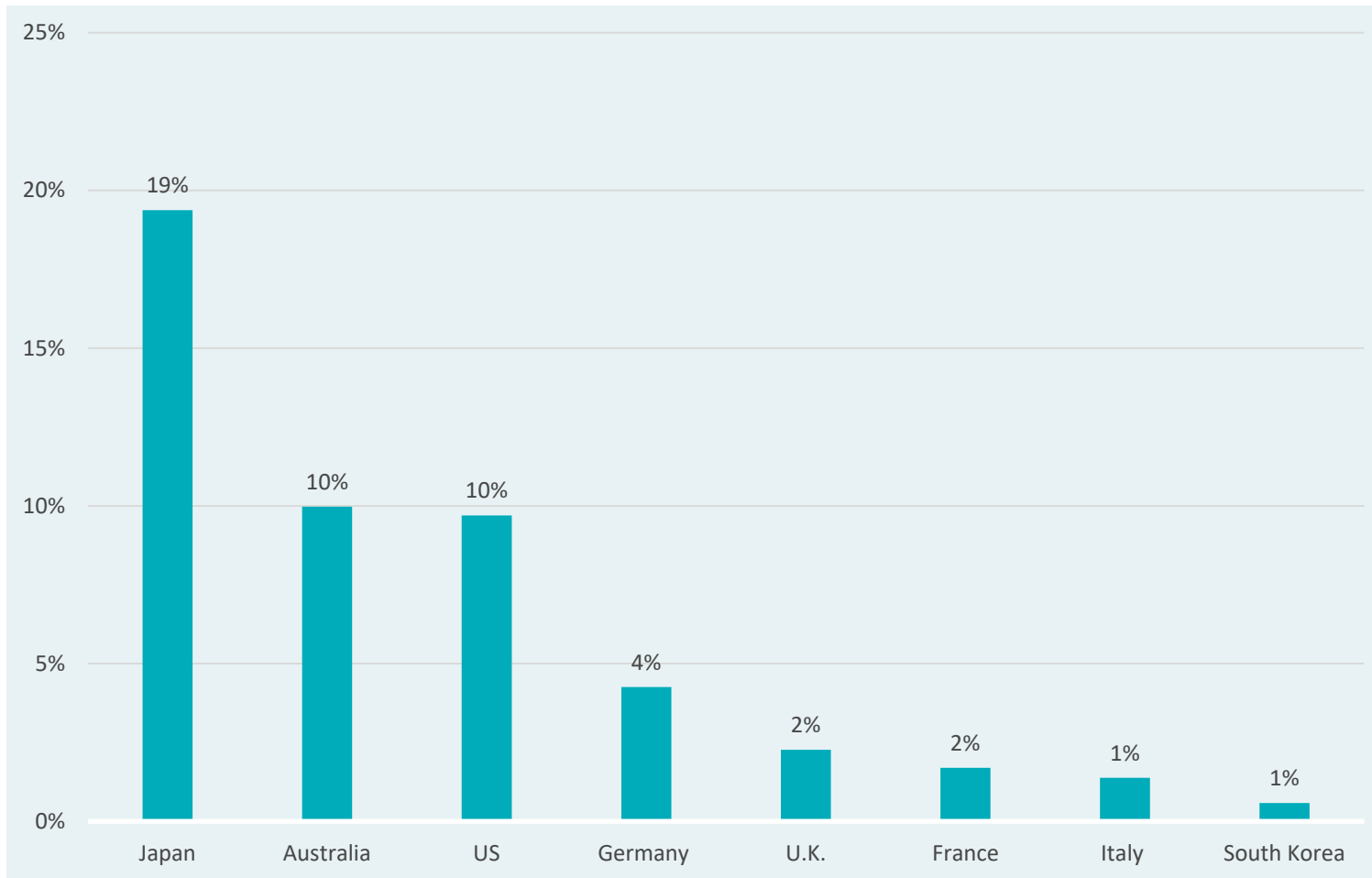


Source: Federal Reserve, as of 4/1/20

# Fiscal response

# Global fiscal action

PLEGGED 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



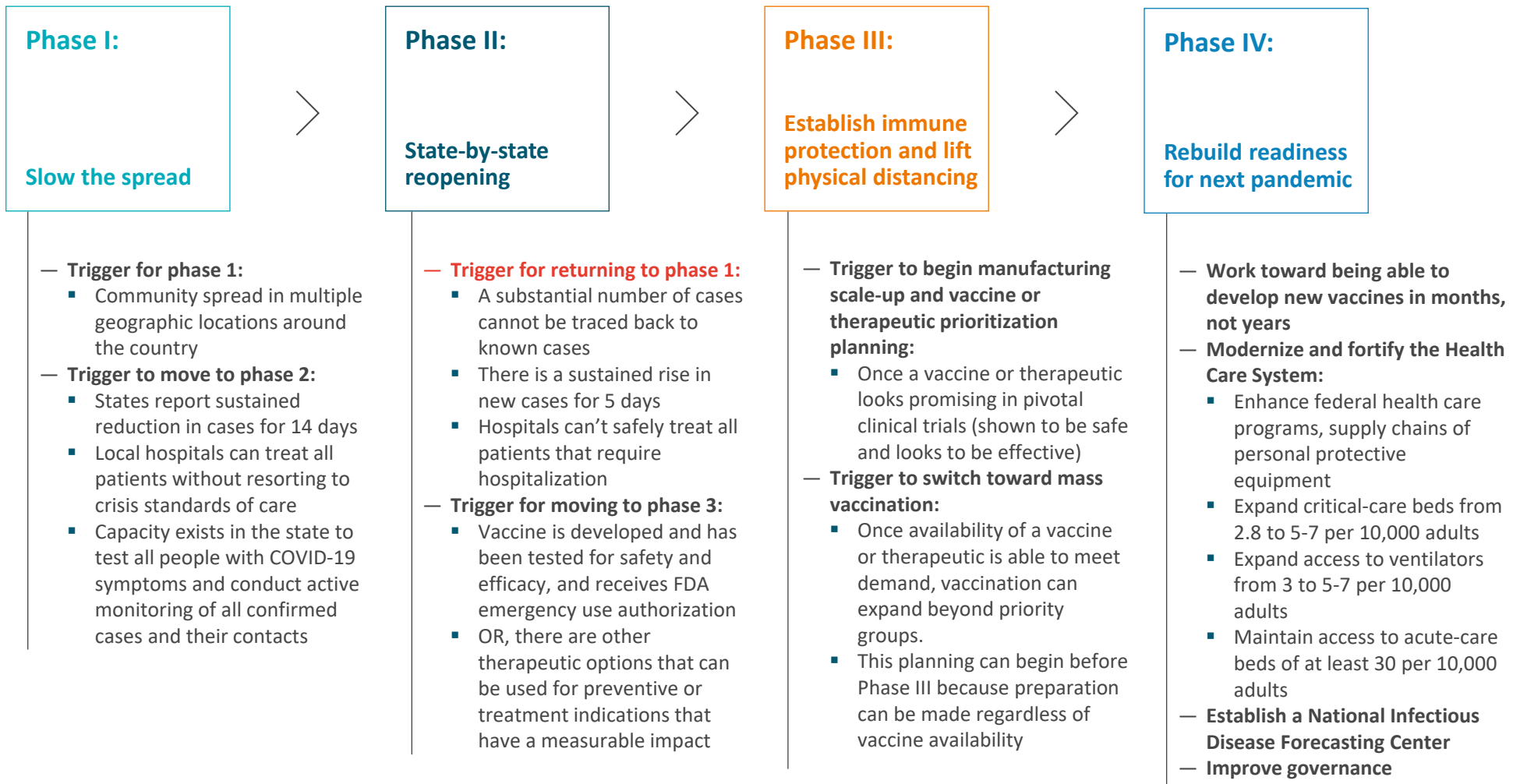
# Private markets insights

# 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

# What could be next?

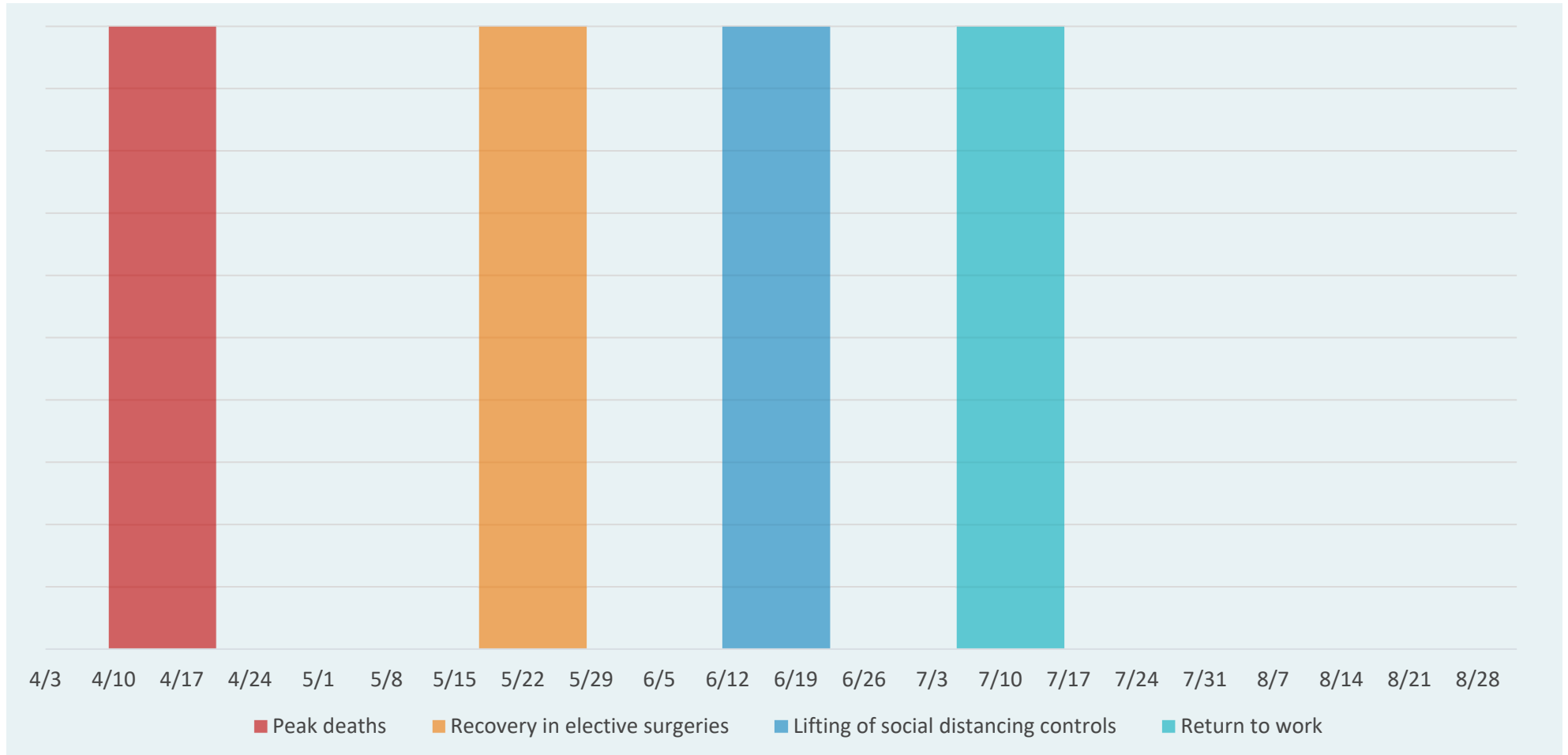
# Roadmap to reopening



Source: American Enterprise Institute

# Framework for recovery

## THEORETICAL GOAL POSTS



# Final thoughts

# Current market assessment

## Coronavirus and its impacts

- The spread of COVID-19 has disrupted global markets meaningfully.
- Governments worldwide have taken significant measures to stop the spread of the virus (“flatten the curve”) and to support their economies in the interim.
- Since monetary and fiscal stimulus has been introduced, markets have again functioned properly.
  - General snapback in performance for risk assets
  - Burgeoning credit opportunities with spread widening
- V versus U (or L) to be determined...volatility likely in all scenarios

## ACERA portfolio

- Reduced public equities as part of 2019 ALM study
- Maintain strategic asset allocation, while carefully planning for liquidity needs
- Use “dry powder” to proactively take advantage of credit opportunities

# Appendix



# 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
<b>Equity</b>													
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%
<b>Fixed Income</b>													
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%
<b>Other</b>													
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

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