



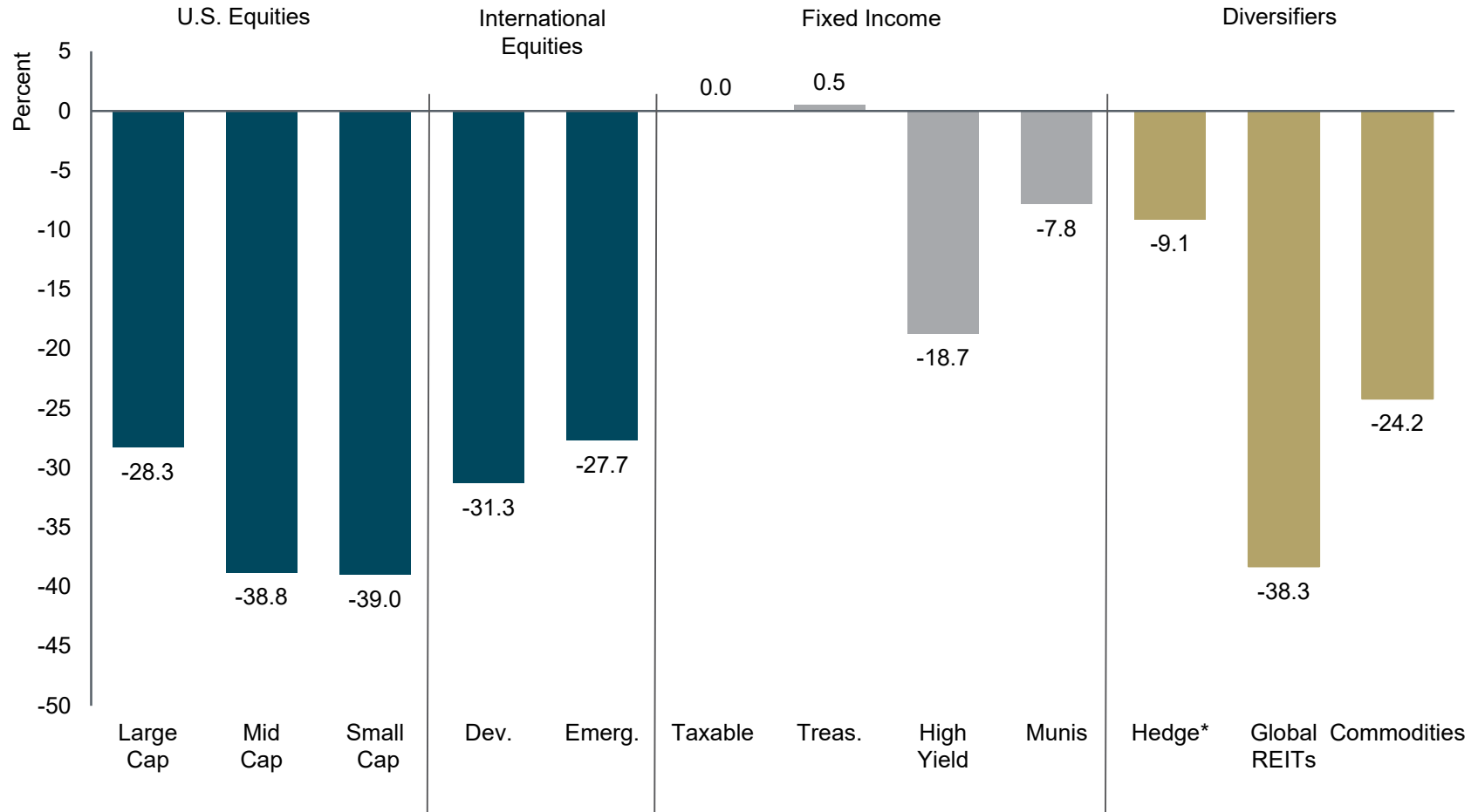
BNY MELLON  
WEALTH MANAGEMENT

March 23, 2020

# Weekly COVID-19 Market Webinar

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# Market Performance Year to Date



Returns as of 3/20/20 unless otherwise noted \*Returns as of 03/19/20.

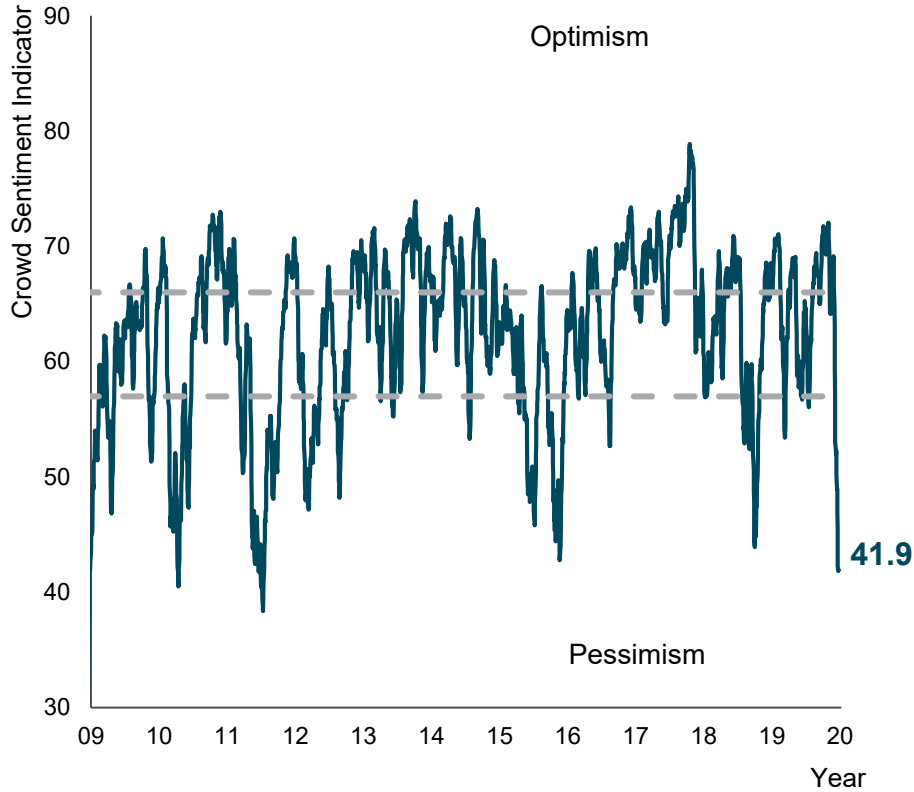
Indices used: Large Cap: S&P 500; Mid Cap: S&P 400; Small Cap: Russell 2000; Developed International: MSCI EAFE (Net); Emerging Markets: MSCI EMF; Taxable Fixed Income: Barclays U.S. Aggregate; High Yield Fixed Income: BofA US HY TR; Treasuries: BofAML 3 Mo U.S. Treasury; Muni: S&P Intermediate High Quality; Hedge: HFRX Equity Hedge Index; Global Real Estate: FTSE EPRA/NAREIT; Commodities: Bloomberg Commodity. TR USD.

# Markets Rebound Before the Economy

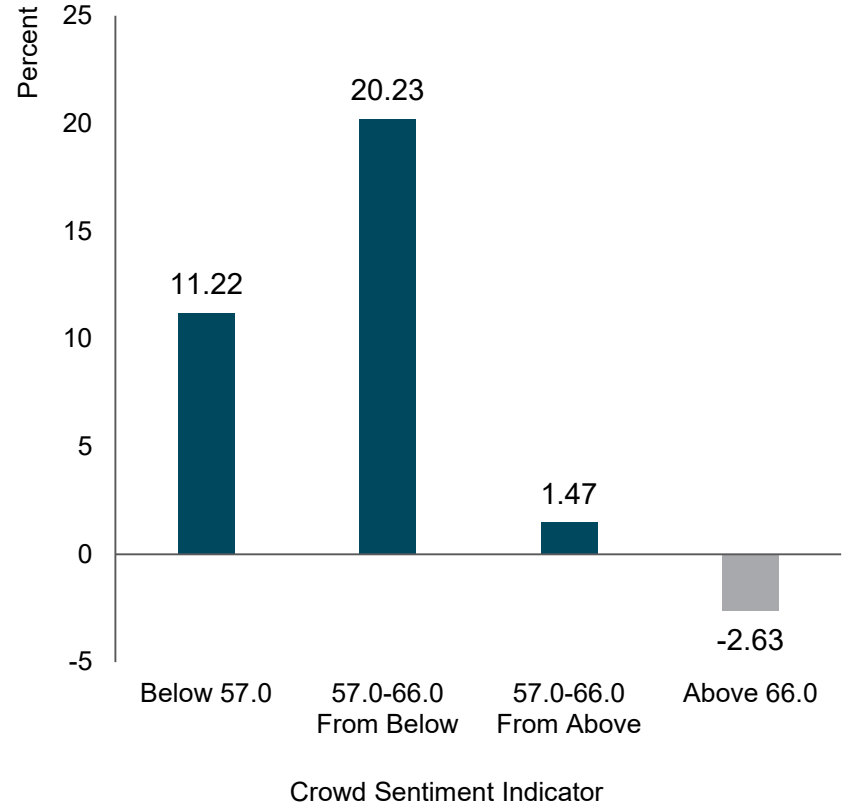
Recession Start	Market Low	Recession End	Market Bottomed
August 1929	June 1932	March 1933	9 months prior
February 1945	March 1945	October 1945	7 months prior
November 1948	June 1949	October 1949	4 months prior
July 1953	September 1953	May 1954	8 months prior
August 1957	October 1957	April 1958	6 months prior
April 1960	October 1960	February 1961	4 months prior
December 1969	May 1970	November 1970	6 months prior
November 1973	October 1974	March 1975	5 months prior
January 1980	March 1980	July 1980	4 months prior
July 1981	August 1982	November 1982	3 months prior
July 1990	October 1990	March 1991	5 months prior
March 2001	October 2002	November 2001	11 months after
December 2007	March 2009	June 2009	3 months prior
		<b>Average</b>	<b>4 months prior</b>

# Investor Sentiment

NDR Crowd Sentiment Poll



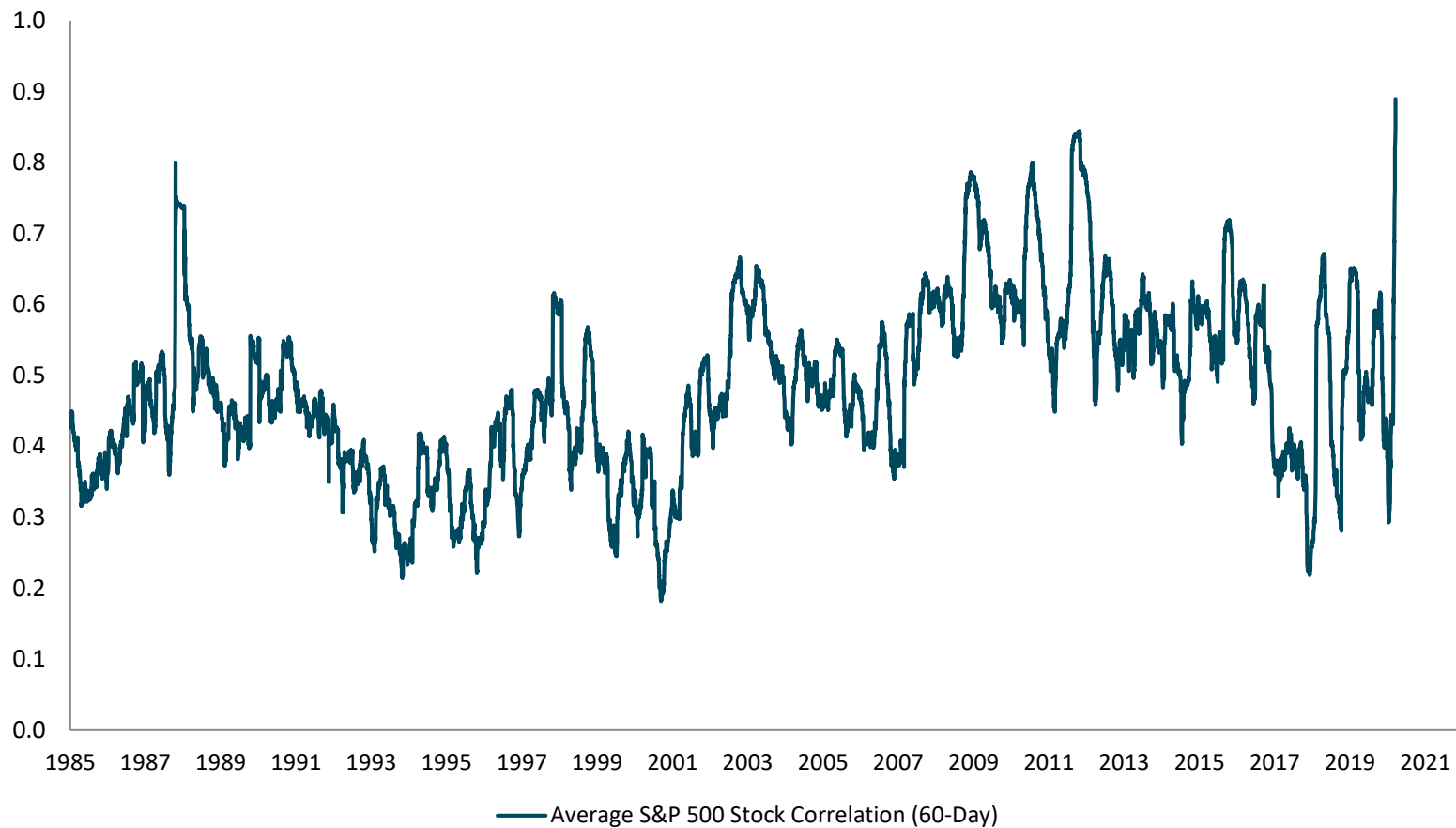
S&P 500 % Gain per Annum\*



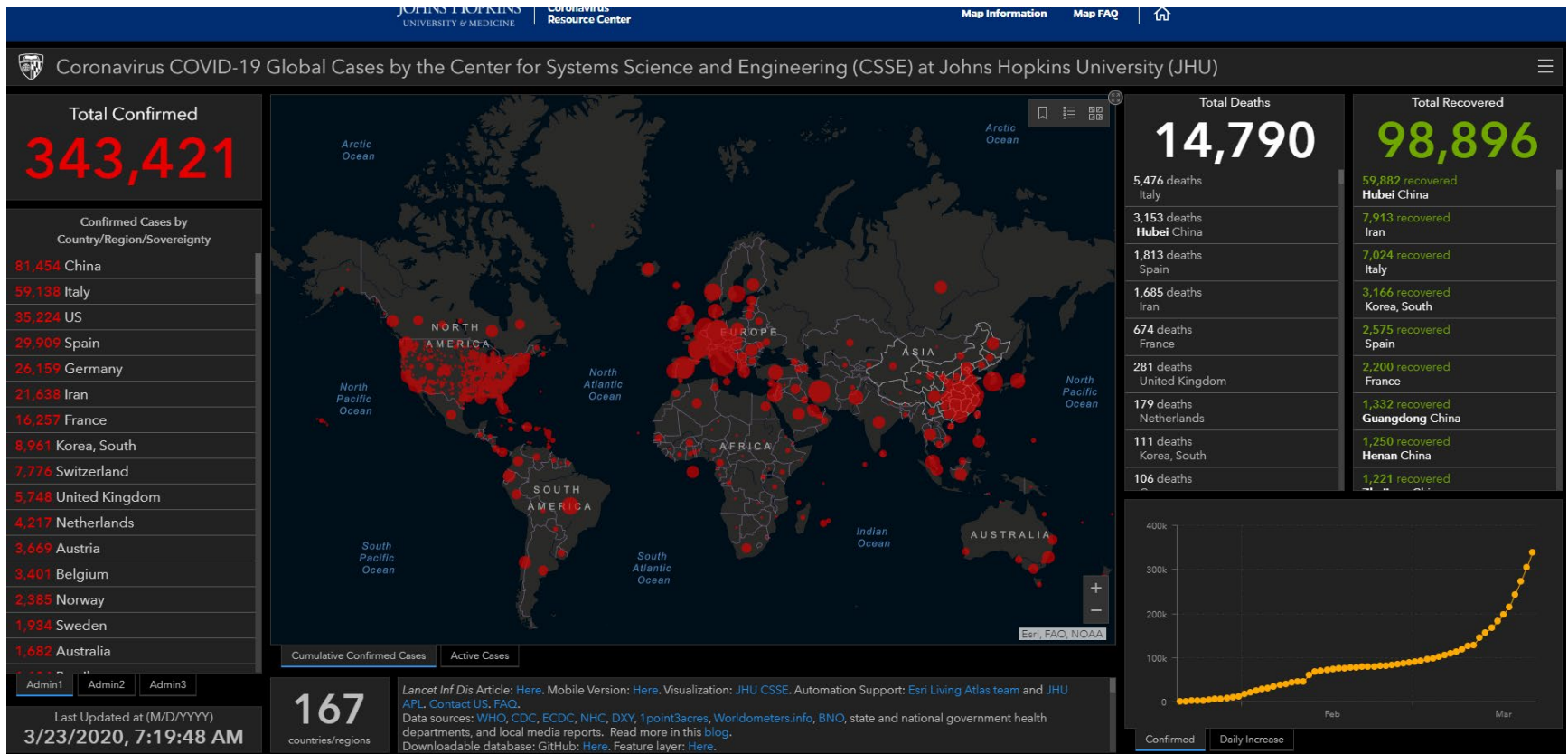
As of 03/17/20. Source: Ned Davis Research

# Market Dislocations Providing Opportunities

Correlations among S&P 500 stocks hit an all-time high



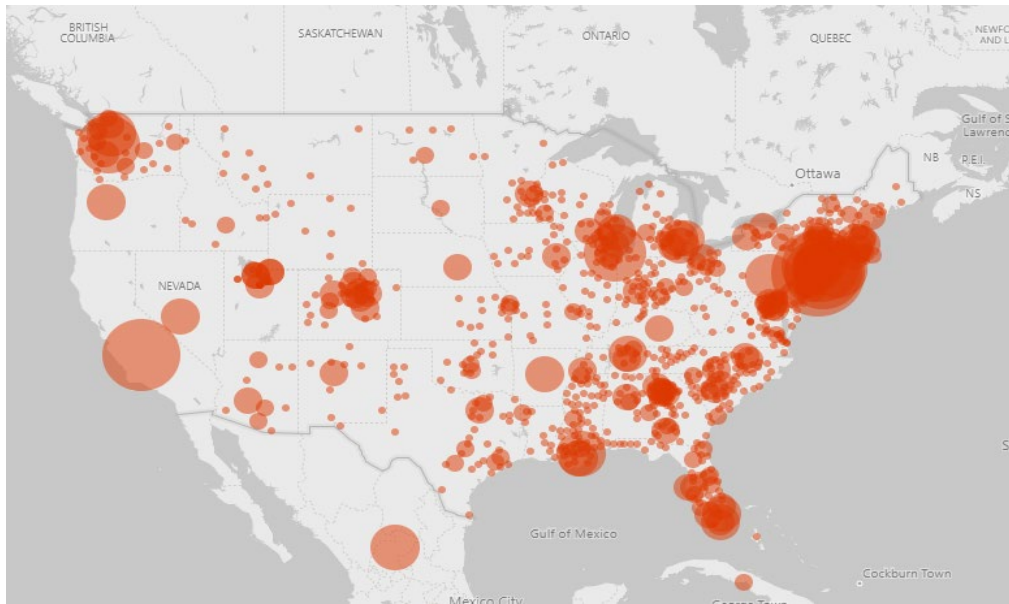
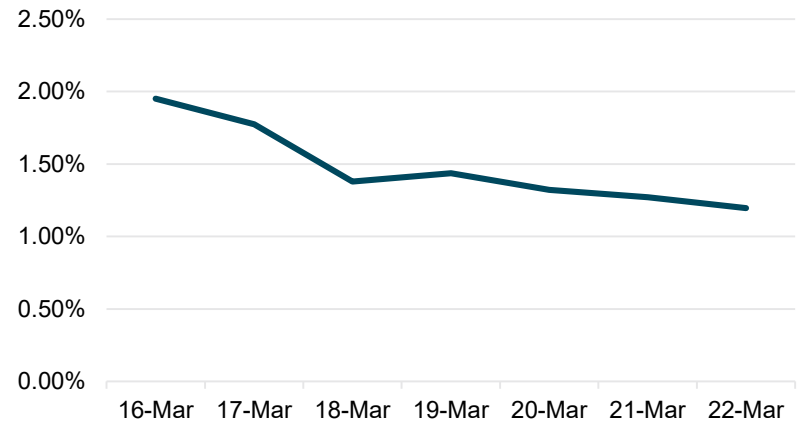
# Worldwide COVID-19 Cases



# United States COVID-19 Cases

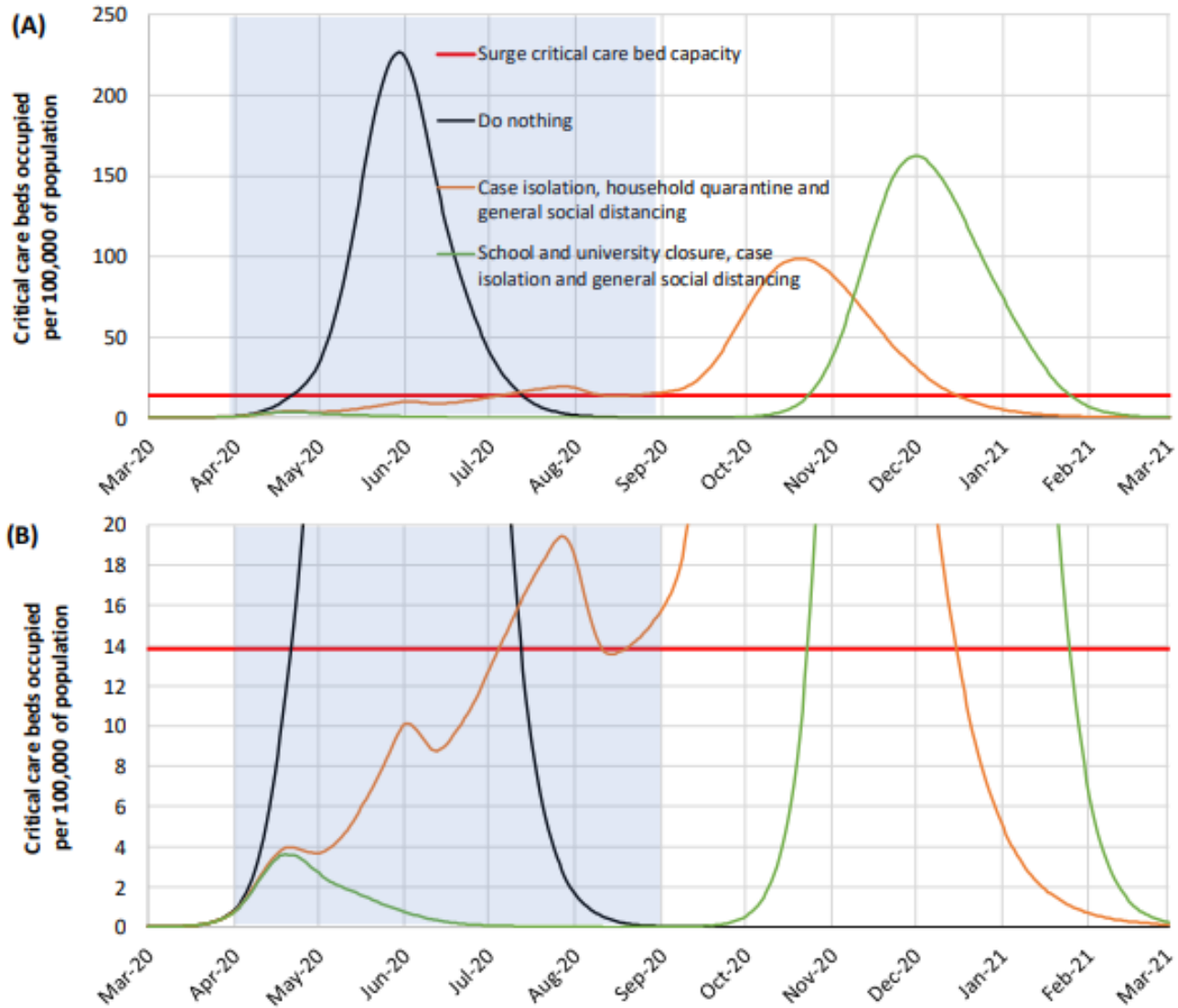
Total U.S. Cases: 35,224  
Total U.S. Deaths: 471

U.S. Death Rate



Age-group (years)	% symptomatic cases requiring hospitalisation	% hospitalised cases requiring critical care	Infection Fatality Ratio
0 to 9	0.1%	5.0%	0.002%
10 to 19	0.3%	5.0%	0.006%
20 to 29	1.2%	5.0%	0.03%
30 to 39	3.2%	5.0%	0.08%
40 to 49	4.9%	6.3%	0.15%
50 to 59	10.2%	12.2%	0.60%
60 to 69	16.6%	27.4%	2.2%
70 to 79	24.3%	43.2%	5.1%
80+	27.3%	70.9%	9.3%

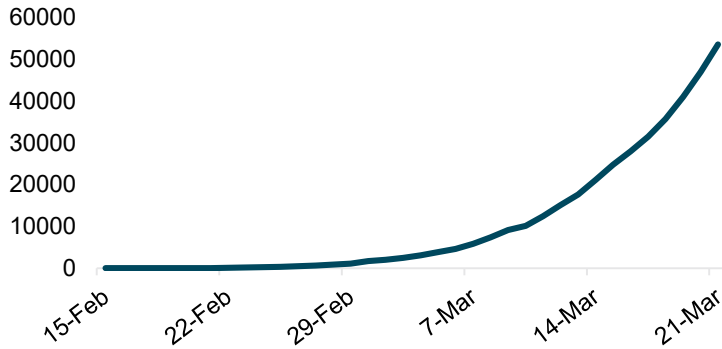
# Imperial College London Publication Predictions



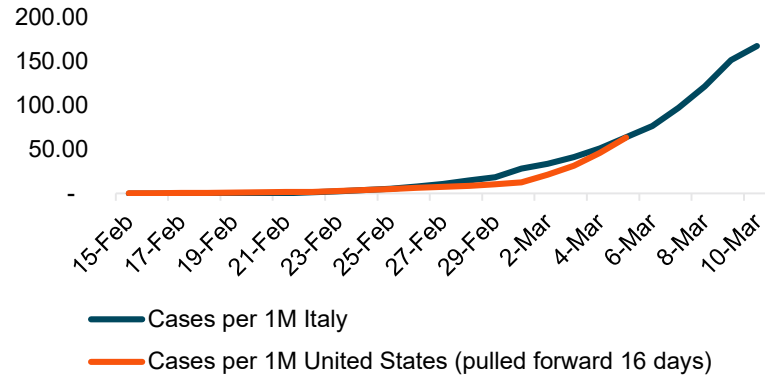


# Italy as a Proxy

### Total Cases in Italy



### Cases per 1M People



### Day over Day % Increase COVID-19 Cases in Italy



### By the Numbers

	Total Cases	Total Deaths	Deaths per Case
<b>United States</b>	31,057	396	1.28%
<b>Italy</b>	59,138	5,476	9.26%

# Biopharma Response: Fast and Furious

## ANTIVIRALS

Goal: Help the patient fight the infection by dampening the viral load

Use: Admitted patients, potentially healthcare workers

- Target: Polymerase needed for viral replication
  - Remdesivir (IV) Gilead
  - Favipiravir (aka Avigan, Oral)
- Target: Protease needed for viral processing
  - Chloroquine & Hydroxychloroquine

## VACCINES

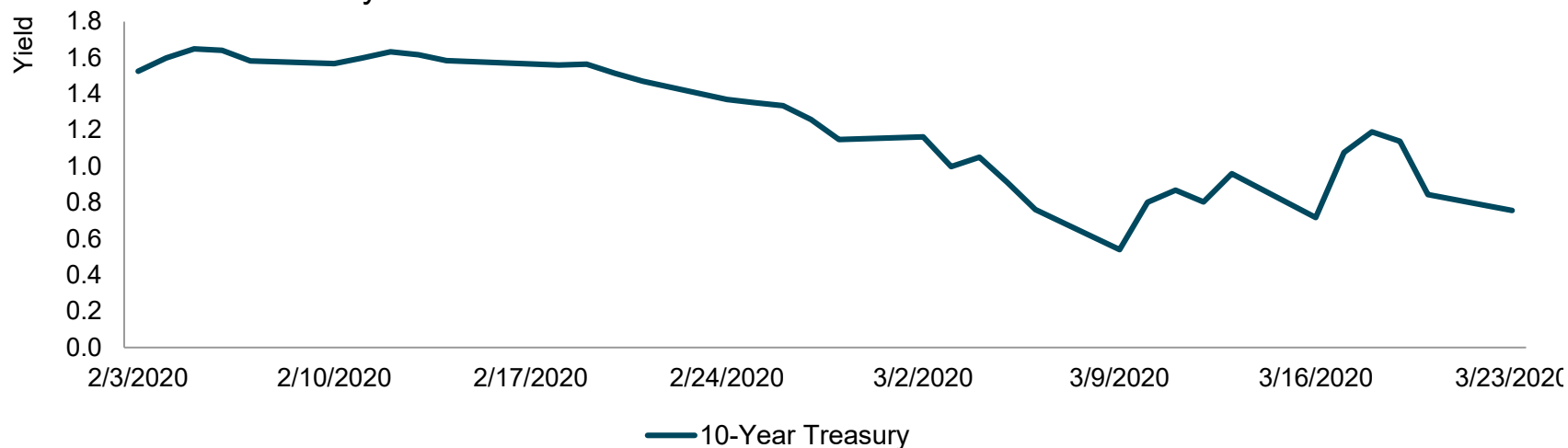
Goal: Prevent the infection from occurring

Use: Healthcare workers, high risk populations, then lower risk

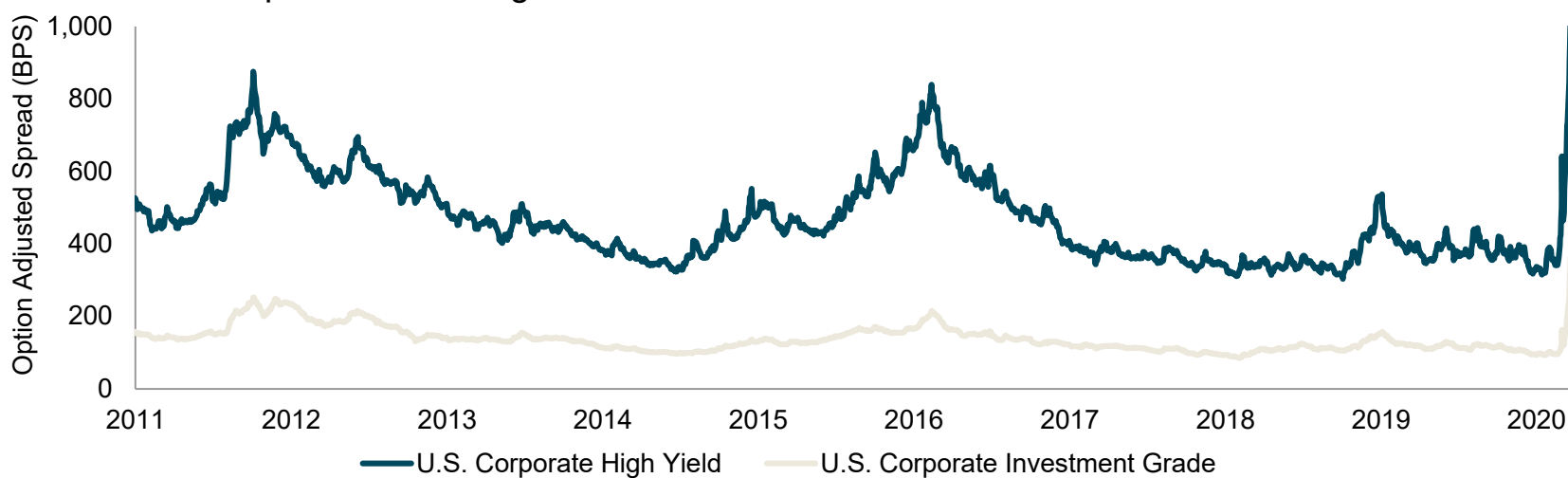
- Traditional vaccine strategy: Stimulate immune response to virus
  - mRNA: Moderna, BioNTech/Pfizer
  - DNA: Inovio
  - Recombinant proteins: Novavax
- Passive vaccine strategy: Provide virus neutralizing antibodies
  - Regeneron
  - Plasma based approaches

# What is the Bond Market Signaling?

## 10-Year Treasury Yields at Historic Lows



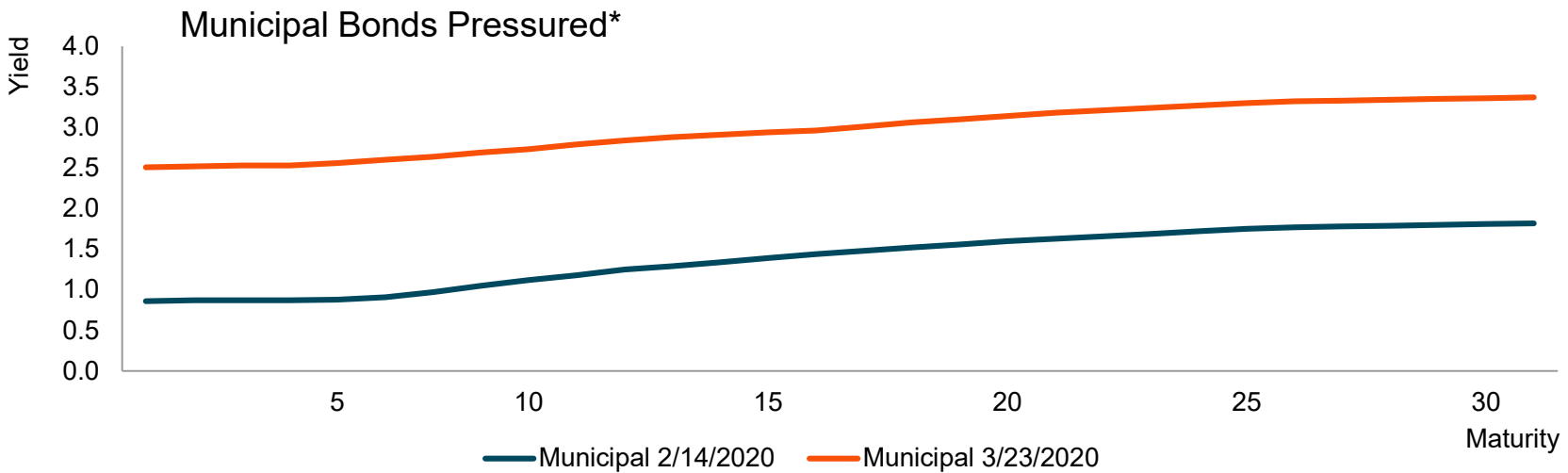
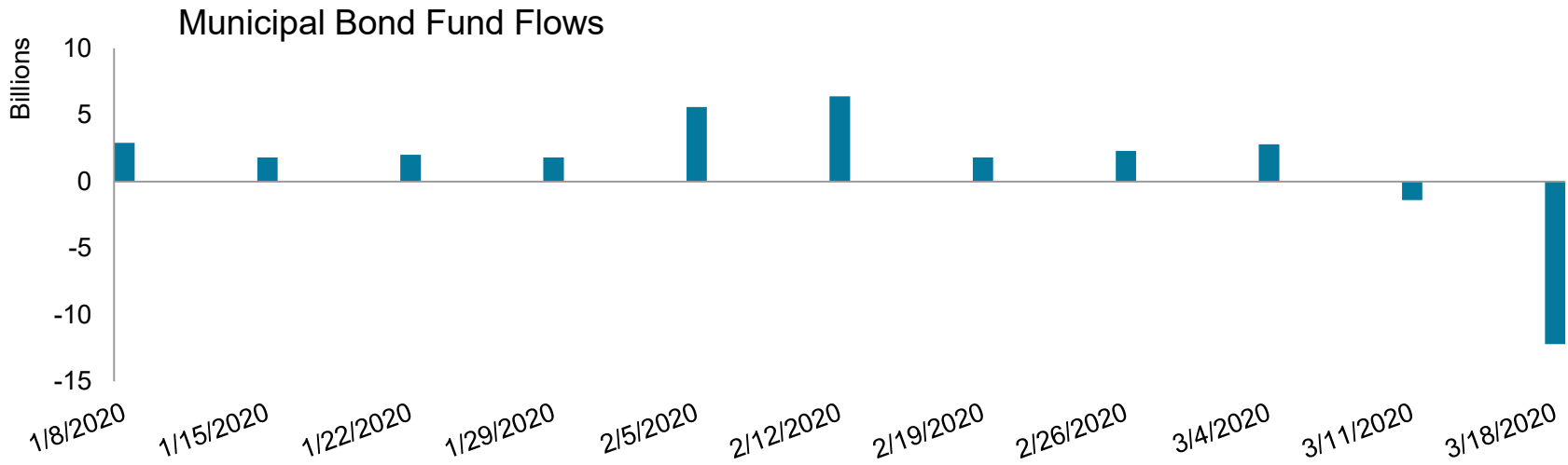
## Credit Spreads Widening\*



As of 3/23/2020. Source: Bloomberg

11 \*As of 3/20/2020. Source: Bloomberg/Barclays Live

# Municipal Bond Market Volatility Creating Opportunities



As of 3/19/2020. Source Investment Company Institute and Lipper

12 \*As of 3/23/2020. Source: AAA MMD

# Federal Reserve's Initiatives to Help Fixed Income Markets

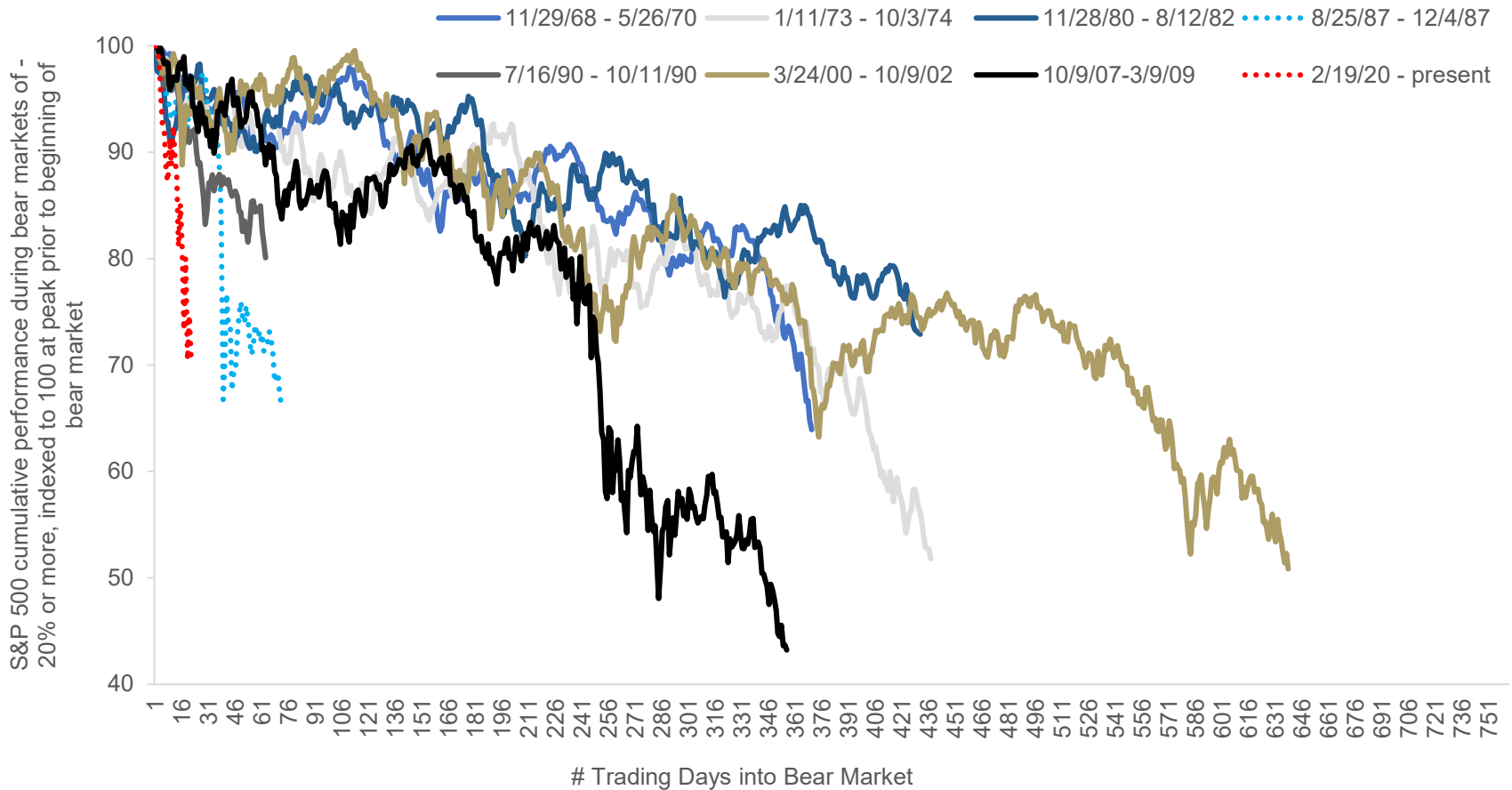
Name	Start Date	Amount
Open Market Purchases: Treasuries	March 15, 2020	\$500 billion
Open Market Purchases: Mortgage Backed Securities	March 15, 2020	\$200 billion
Commercial Paper Funding Facility (CPFF)	March 17, 2020	\$100 billion+*
Primary Dealer Credit Facility (PDCF)	March 17, 2020	-No specified size -Primary dealers only -Overnight to 90 days
Money Market Mutual Fund Liquidity Facility (MMMFLF)	March 18, 2020	\$100 billion+**
Primary Market Corporate Credit Facility (PMCCF)	March 23, 2020	\$100 billion+*
Secondary Market Corporate Credit Facility (SMCCF)	March 23, 2020	\$100 billion+*
Term Asset-Backed Securities Loan Facility (TALF)	March 23, 2020	\$100 billion+*

As of 3/23/2020. Source: The Federal Reserve

\*Initial \$10 billion equity investment in the Special Purpose Vehicle (SPV)

13 \*\*Credit protection

# History of Bear Markets



\*Dashed lines correspond to non-recessionary bear markets, all others correspond with recessions.

# What We are Recommending

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1. Remain Disciplined
2. Implement Our Best Thinking
3. Incorporate Additional Downside Protection
4. Take Advantage of Dislocations in the Municipal Market
5. Bottom-Up Opportunities Being Created

# Asset Class Positioning: Investment Strategy Committee Recommendations

	Underweight	Small Underweight	Neutral	Small Overweight	Overweight
<b>Equity</b>			◆		
Large Cap					◆
Mid Cap			◆		
Small Cap			◆		
International Developed Large Cap	◆				
International Developed Small Cap			◆		
Emerging Markets		◆			
Private Equity			◆		
Private Equity-Real Estate			◆		
<b>Fixed Income</b>		◆			
Treasuries	◆				
Investment-grade Corporate			◆		
Tax-exempt		◆			
High Yield			◆		
<b>Diversifiers</b>				◆	
Real Estate (REITs)		◆			
Long/Short Hedge				◆	
Absolute Return Hedge				◆	
Managed Futures			◆		
Commodities	◆				



# Key Takeaways

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Flattening the COVID-19 Curve Remains Key

Markets Will Rebound Before the Economy

Extraordinary Fiscal and Monetary Policy Underway

Fixed Income Dislocations Will Prove Temporary, Creating Opportunities

Focus on Time, Not Timing; Implement Our Best Thinking

Active Wealth Critical in a Volatile,  
More Challenging Return Environment

# Q&A

Thank You

# Disclosure Appendix

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