



**ALLIANCEBERNSTEIN**<sup>®</sup>

Second Quarter 2020

# CAPITAL MARKETS OUTLOOK

The information herein reflects prevailing market conditions and our judgments, which are subject to change, as of the date of this document. In preparing this document, we have relied upon and assumed, without independent verification, the accuracy and completeness of all information available from public sources. Opinions and estimates may be changed without notice and involve a number of assumptions that may not prove valid. There is no guarantee that any forecasts or opinions in this material will be realized. Information should not be construed as investment advice.

Investment Products Offered:

- Are Not FDIC Insured
- May Lose Value
- Are Not Bank Guaranteed

# Global Economic Environment

The shape of the economic recovery will depend upon the path of the virus, and related medical developments

In equities, blend high-quality cyclicals with profitable growers, focusing on sound balance sheets and strong free cash flow

It's extremely hard to time the market bottom, but current valuations suggest significant opportunities for long-term investors

In fixed income, investors need to identify a blend between credit/risk and liquidity across sectors



**Historical analysis and current forecasts do not guarantee future results.**

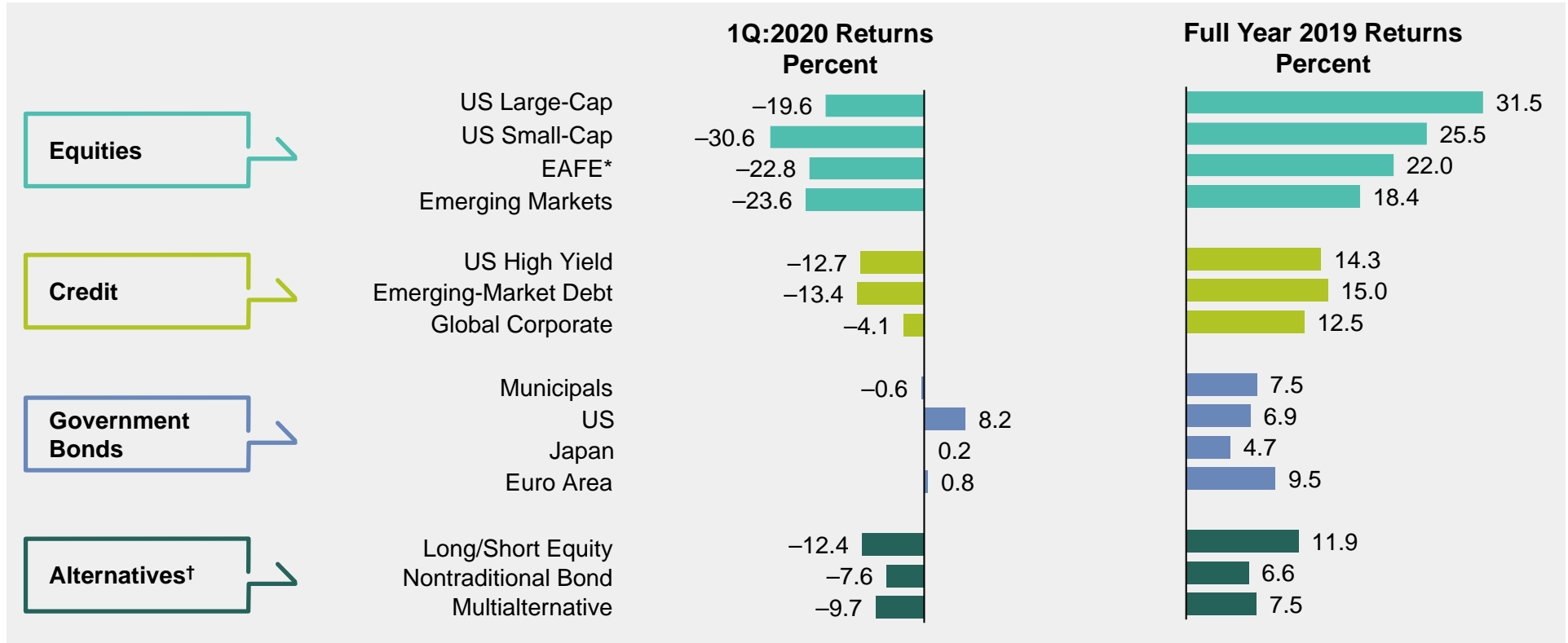
As of March 31, 2020

Source: AB



# 1Q 2020 Returns Recap: Coronavirus Ends the 11-Year US Bull Market

Returns in US Dollars



## Past performance does not guarantee future results.

Global corporates and Japan and euro-area government bonds in hedged USD terms. All other non-US returns in unhedged USD terms. An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect the fees and expenses associated with the active management of a portfolio.

\*Europe, Australasia and the Far East

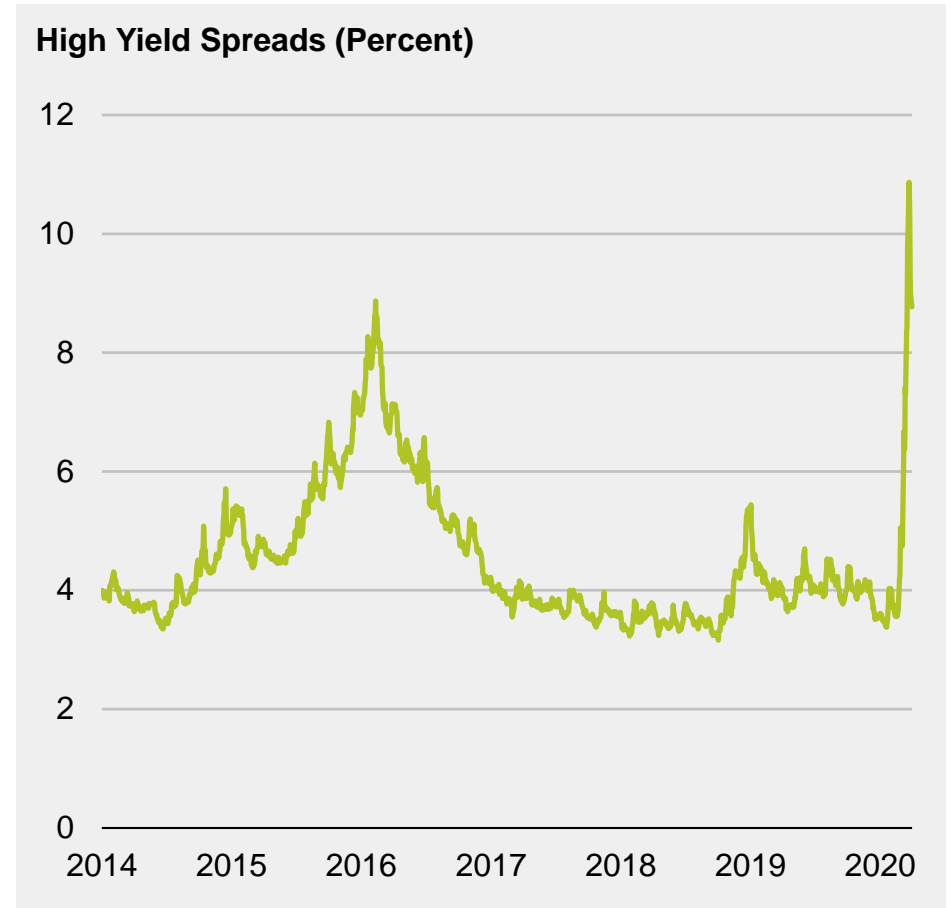
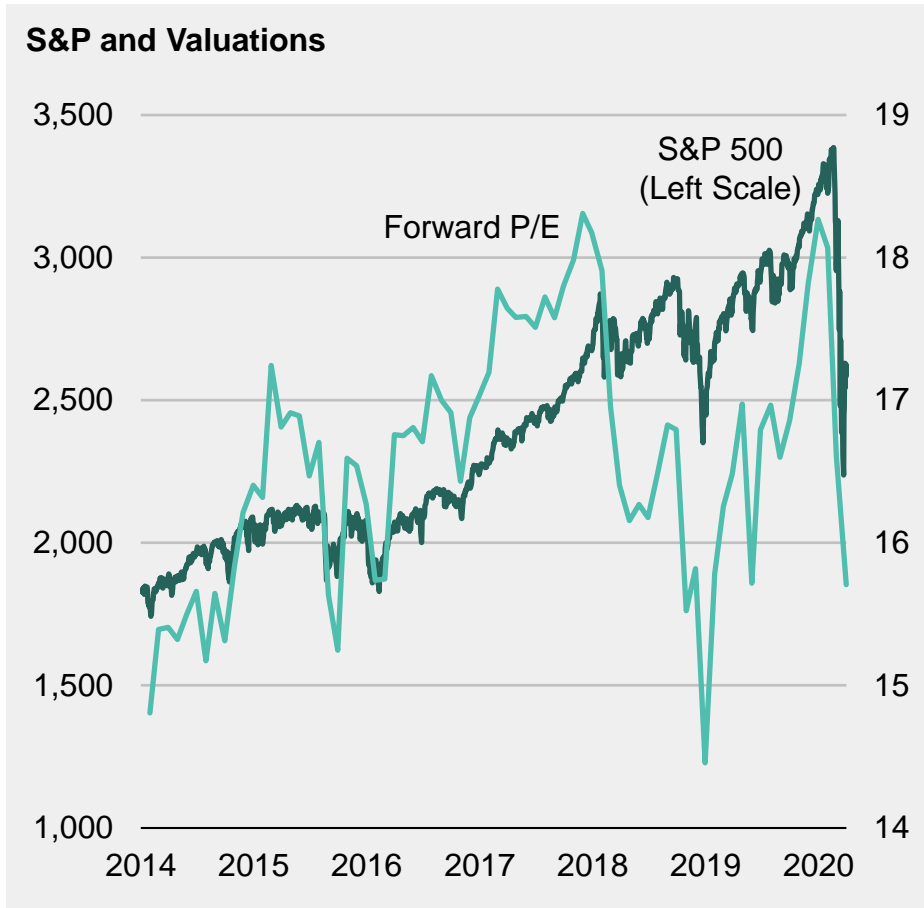
†Returns reflect Morningstar US open-end fund category averages.

As of March 31, 2020

Source: Bloomberg Barclays, Morningstar Direct, S&P and AB



# All-Time Equity Market Highs in Mid-February, Followed by Historic Declines



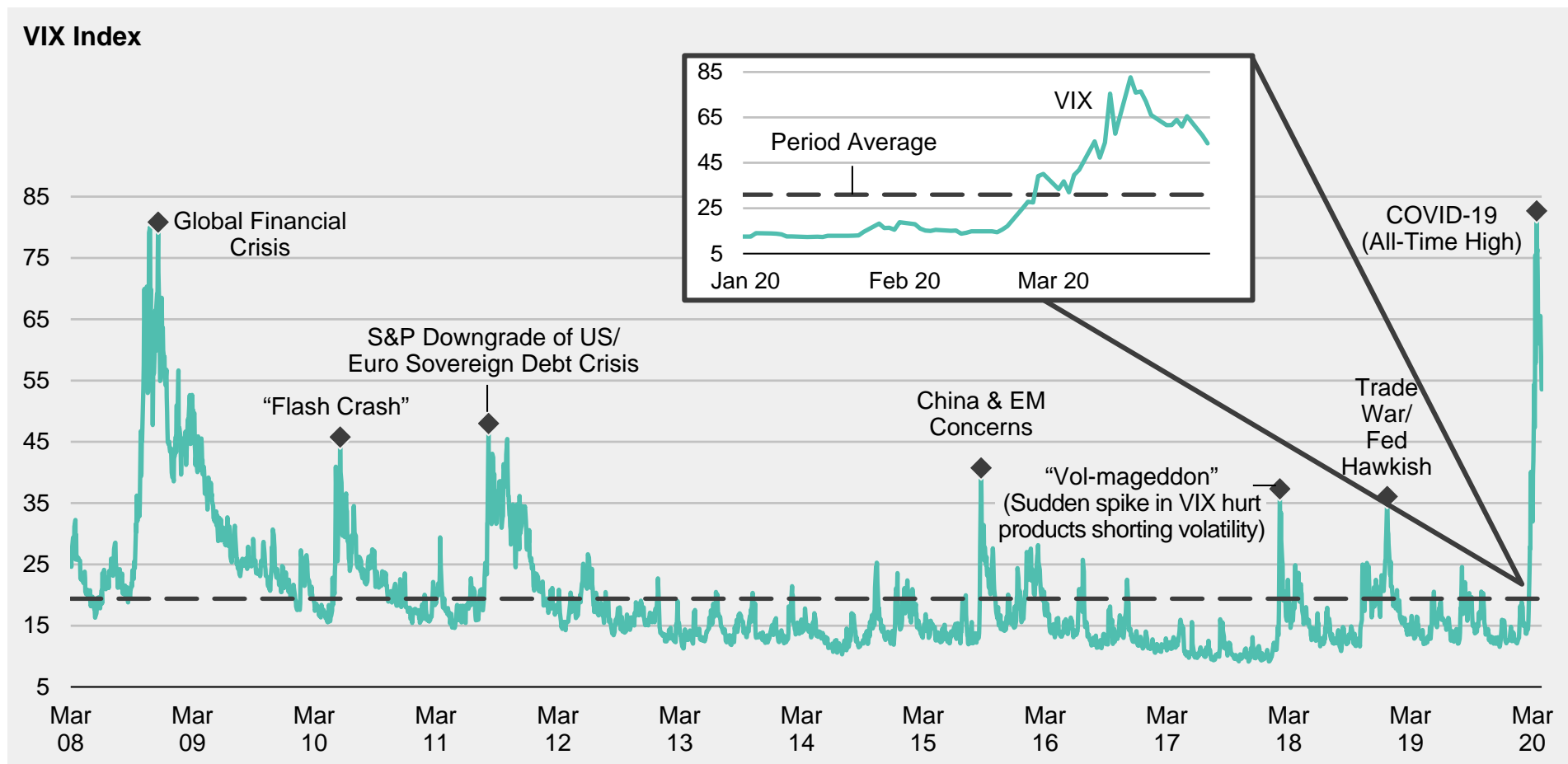
**Historical analysis and current forecasts do not guarantee future results.**

Through March 31, 2020

Source: Bloomberg, Federal Reserve Bank of St. Louis and AB



# The VIX Attains a New High-Water Mark



**Historical analysis and current forecasts do not guarantee future results.**

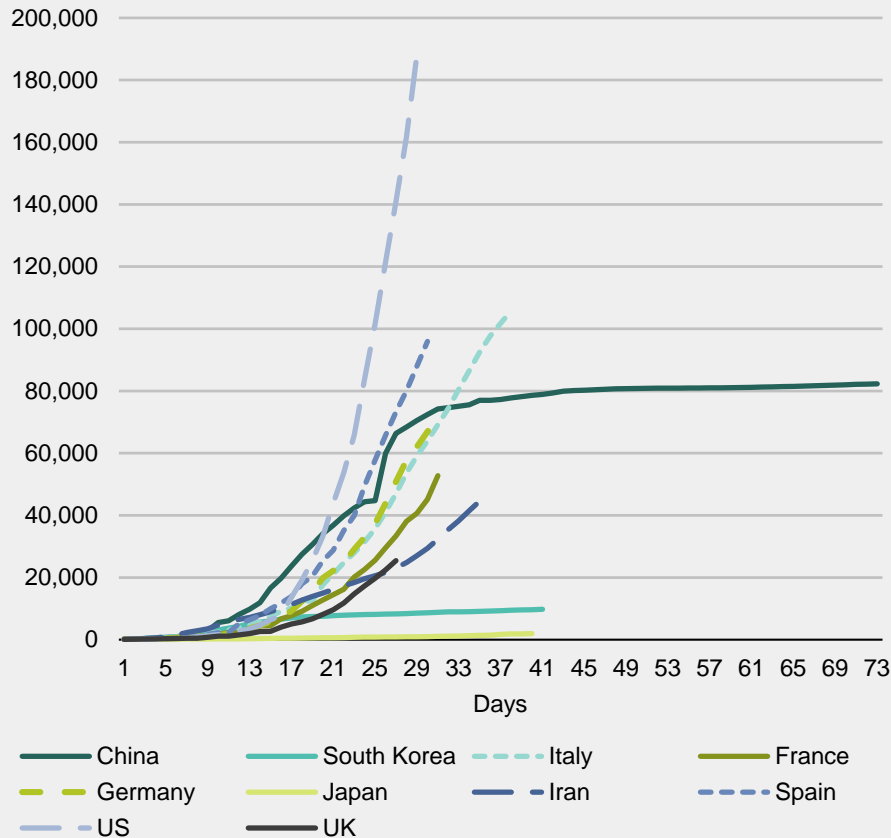
From March 1, 2008, through March 31, 2020

Source: Bloomberg, CBOE and AB

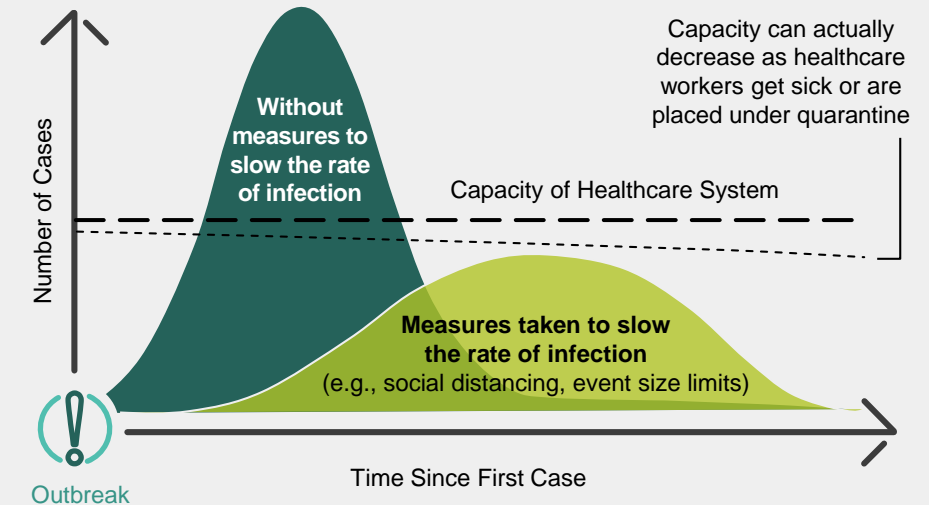


# The Race to Flatten the Curve

COVID-19 Confirmed Cases by Country



Flattening the COVID-19 Case Curve



If it looks like you're overreacting, you're probably doing the right thing."

**Dr. Fauci**

**Analysis provided for illustrative purposes only and is subject to revision.**

The data track cumulative cases by country for select countries/regions. Day 0 is the day of case 100.

As of March 31, 2020

Source: Centers for Disease Control and Prevention (CDC), Drew Harris, Johns Hopkins University and AB



# The Viral Prescription: Stimulus Measures Target Critical Needs

## Flatten the Curve Part 1: Slow the Spread & Arm the Frontlines

- + **Social distancing**
  - + Avoid discretionary travel
  - + Avoid large gatherings
  - + Work/engage in schooling at home
  - + Shutdown nonessential businesses
- + **Fiscal policy + medical**
  - + Vaccine R&D (**Phases 1 & 3**)
  - + Aid to state & local governments (**Phases 1 & 3**)
  - + Free COVID-19 testing (**Phase 2**)
  - + Over \$100 billion to hospitals and healthcare providers (**Phase 3**)
  - + \$16 billion to stockpile nation's medical supplies (**Phase 3**)
- + **Private sector + equipment/testing**
  - + Ventilators and masks (General Motors, Ford Motor, 3M)
  - + Test kits (Roche, Abbott Laboratories)
  - + Screening website (Alphabet Inc./Verily)
  - + Drive-thru testing (CVS Health, Walmart Stores)
- + **Treatment & vaccines**
  - + Experimental treatment (Gilead Sciences)
  - + Vaccine clinical trials (Moderna)

## Flatten the Curve Part 2: Backstop "Victims" of Social Distancing

- + **Backstop businesses**
  - + \$350 billion in small business loans (**Phase 3**)
  - + \$500 billion in corporate aid and loans—administered by US Department of the Treasury (**Phase 3**)
  - + \$25 billion in grants for airlines, along with \$25 billion in loans (**Phase 3**)
  - + \$17 billion in loans to companies (e.g., Boeing) deemed critical to national security (**Phase 3**)
- + **Backstop incomes**
  - + Direct payments of \$1,200 per individual, \$500 per child (**Phase 3**)
  - + Tax and interest relief, including from mortgages and student loans (**Phase 3**)
- + **Employees**
  - + Paid sick leave (**Phase 2**)
  - + Expanded unemployment insurance (**Phases 2 & 3**)

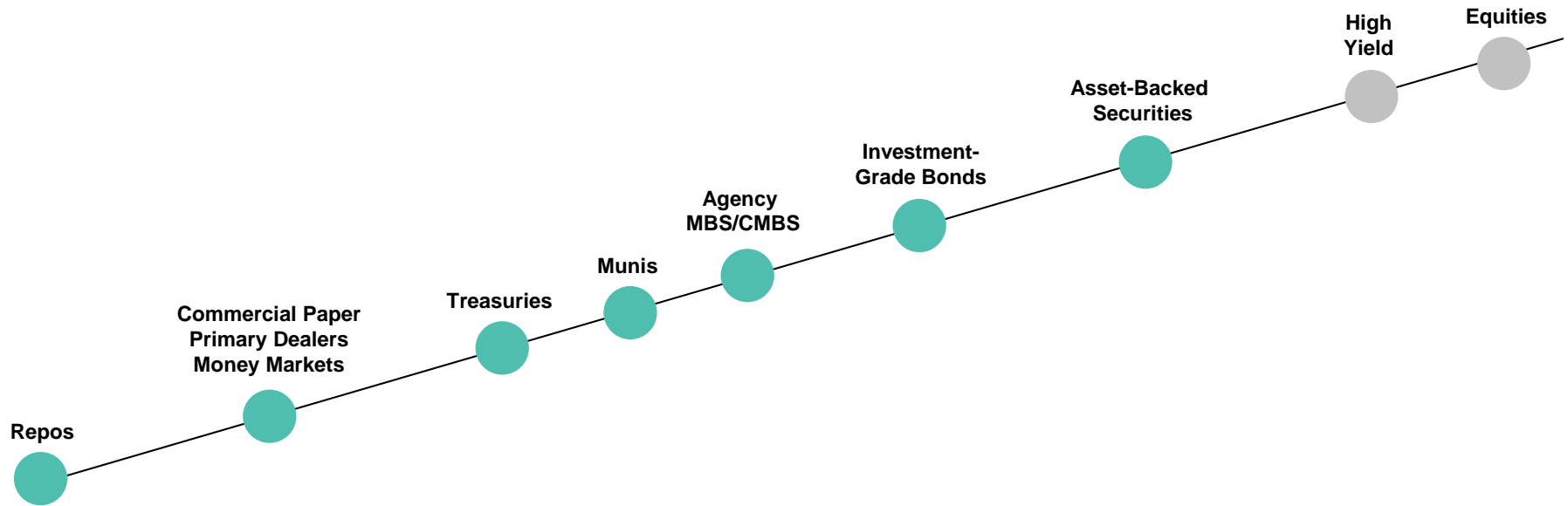
## Flatten the Curve Part 3: Dust Off '08 Playbook + Provide Liquidity

- + **Two emergency rate cuts by the Fed**
  - + Rate cuts of 50 b.p. and 100 b.p. leave rates at the zero bound
- + **Unlimited quantitative easing**
  - + Fed's initial pledge to purchase \$700 billion in US Treasuries and agency mortgage-backed securities (MBS) is changed to unlimited amounts—including commercial mortgage-backed securities (CMBS)
- + **Fed's emergency powers to create facilities to expand liquidity\***
  - + Primary Dealer Credit Facility (PDCF)
  - + Commercial Paper Funding Facility (CPFF)
  - + Money Market Mutual Fund Liquidity Facility (MMLF)
  - + Primary Market Corporate Credit Facility (PMCCF)
  - + Secondary Market Corporate Credit Facility (SMCCF)
  - + Term Asset-Backed Securities Loan Facility (TALF)
  - + Main Street Lending Facility (MSLF)
  - + FIMA Repo Lending Facility

**Analysis provided for illustrative purposes only and is subject to revision.**

\*The Fed has "emergency powers" through Section 13(3) of the Federal Reserve Act. These powers allow the Fed to create programs or facilities to get liquidity into distressed areas of the economy. As of March 31, 2020. Source: Bloomberg, CNBC, US Federal Reserve, *Wall Street Journal* and AB

# Fed Programs Supporting Liquidity Across Capital Market Spectrum...



FIMA Repo Facility	CPFF PDCF MMLF	QE	QE MMLF2	QE	PMCCF SMCCF	TALF	(?)	(?)
Help foreign central banks meet demand for dollars overseas	<p><b>CPFF:</b> Expand liquidity to commercial paper market to support flow of credit to households and businesses</p> <p><b>PDCF:</b> Expand short-term loans to primary dealers to support households and businesses</p> <p><b>MMLF:</b> Expand liquidity to money market funds</p>	Initially pledged to purchase \$500 billion in US Treasuries—but now unlimited	<p><b>MMLF2:</b> Expand liquidity to money market funds—including munis</p>	Initially pledged to purchase \$200 billion in MBS—but now unlimited and includes CMBS	<p><b>PMCCF:</b> Supports credit through new corporate bond issuance (including ETFs)</p> <p><b>SMCCF:</b> Provide liquidity to outstanding corporate bonds (including ETFs)</p>	<p><b>TALF:</b> Enhance the issuance of asset-backed securities backed by student loans, auto loans, and credit card loans</p>	(?)	(?)

Analysis provided for illustrative purposes only and is subject to revision. As of March 31, 2020. Source: US Federal Reserve and AB



# ...and a Historically Rapid Monetary and Fiscal Response

+ Monetary Stimulus    + Liquidity Operation and Funding    + Fiscal Stimulus

## Canada

- + Cut overnight interest rate by 150 b.p. to 0.25%; minimum of \$3.5 billion/week QE
- + Expanded repo operations weekly
- + Lowered bank reserve requirement, releasing \$214 billion
- + \$35 billion purchase of insured mortgages
- + \$7 billion credit support program for businesses
- + A \$58 billion package, including tax deferrals for businesses and families, and income support for workers

## US

- + 150 b.p. cut in fed funds rates (0%–0.25%) and unlimited QE
- + Multiple programs and facilities to ease bank lending, support capital markets and provide liquidity to distressed areas of the economy
- + Three “phases” totaling roughly \$2.2 trillion, including broad-based support to individuals, small businesses, state & local governments, and key industries impacted by COVID-19

## UK

- + Cut rates by 65 b.p. to 0.10%; \$248 billion QE
- + Introduced a new program for cheap credits and reduced capital buffer to help banks lend
- + Purchase commercial paper from businesses
- + Three packages totaling ~\$582 billion, supporting businesses and the unemployed/renters/workers. Offered to pay 80% wages (max. \$3,098/month) to displaced workers



## Eurozone

- + \$1.2 trillion QE for this year; eliminated the cap on bond-buying from each country
- + Cut the interest rate on targeted longer-term refinancing operations by 25 b.p. to -0.75%
- + Suspended limits on EU government borrowing and considering allowing credit line (2% of GDP) from European Stability Mechanism bailout fund
- + Country-level programs in Germany (\$820 billion), France (\$377 billion), Italy (\$27 billion), Spain (\$220 billion)

## India

- + Cut benchmark repo rate by 75 b.p. to 4.4%
- + Cut reverse repo rate by 90 b.p. to 4%
- + Cut cash reserve ratio by 100 b.p. to 3%
- + A \$22 billion plan, providing direct cash transfers and food security measures

## Australia

- + Cut cash rate by 50 b.p. to 0.25%; QE targeting 0.25% for bond yield
- + Started new types of repo operations
- + \$55 billion facility to ease bank lending
- + \$9.1 billion purchase of residential mortgage-backed securities/asset-backed securities
- + Three packages totaling ~\$144 billion, including cash and loans to support small businesses, and a \$79 billion wage subsidy

## China

- + Cut one-year and five-year prime rates by 10 b.p. and 5 b.p. to 4.05% and 4.75%, respectively
- + Cut one-year medium-term lending facility rate by 10 b.p. to 4.05%
- + Expanded reverse repo operations by \$245 billion; cut seven-day reverse repo rate by 20 b.p. to 2.20%
- + Cut reserve requirement ratio, releasing \$134 billion
- + Offered easier funding for small and medium businesses
- + Business loan term extension, rent reduction and spending voucher distribution

## South Korea

- + Cut interest rate by 50 b.p. to 0.75%
- + Relaxed FX liquidity coverage ratio for banks to 70% from 80% until late May to supply more dollars
- + \$9.5 billion initial supplementary budget
- + \$82 billion support package for businesses
- + \$7.4 billion emergency cash payments

## Japan

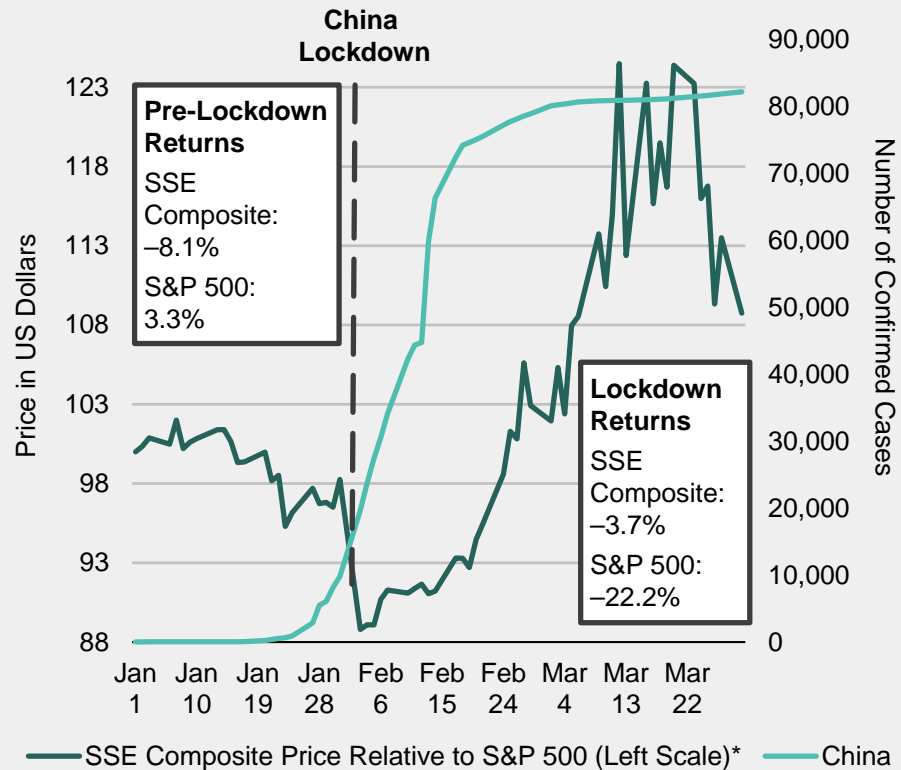
- + Ramped up QE, doubling ETF purchasing to \$112 billion a year
- + One-year, zero-rate loans to financial institutions
- + Two packages of small business loans totaling \$19.6 billion
- + A \$1 trillion package, featuring \$55 billion cash handouts, tax breaks and zero-interest loans

In US dollars  
As of March 31, 2020  
Source: AB

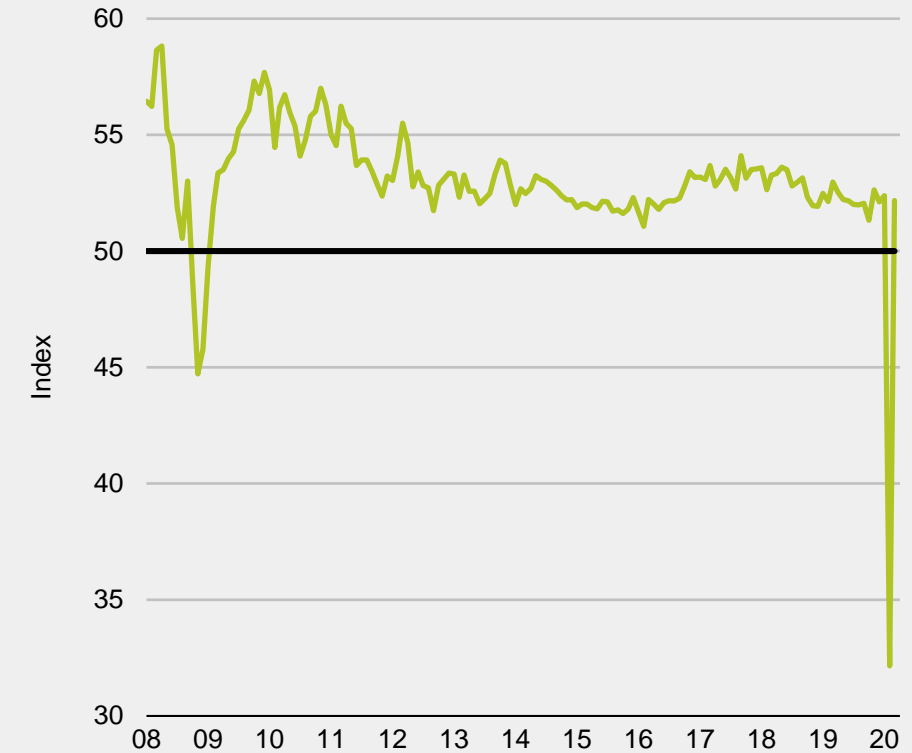


# Chinese Greenshoots: A Glimmer of Post-COVID-19 Recovery?

## China's COVID-19 "Curve" vs. Relative Equity Performance



## China Composite PMI<sup>†</sup> Snaps Back



### Past performance does not guarantee future results.

SSE: Shanghai stock exchange

\*Relative price performance of the SSE and S&P 500 with a starting value of US\$100

†Weighted by the share of manufacturing and services in GDP

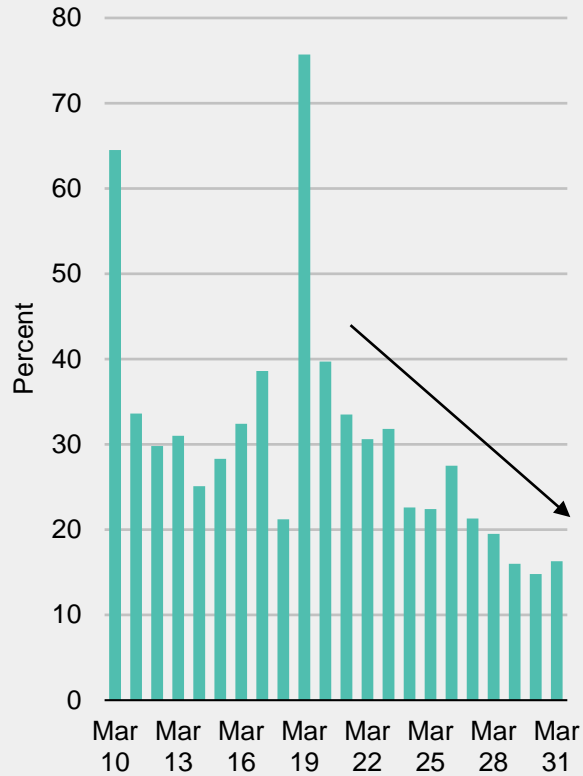
Through March 31, 2020

Source: Haver Analytics, Johns Hopkins University and AB

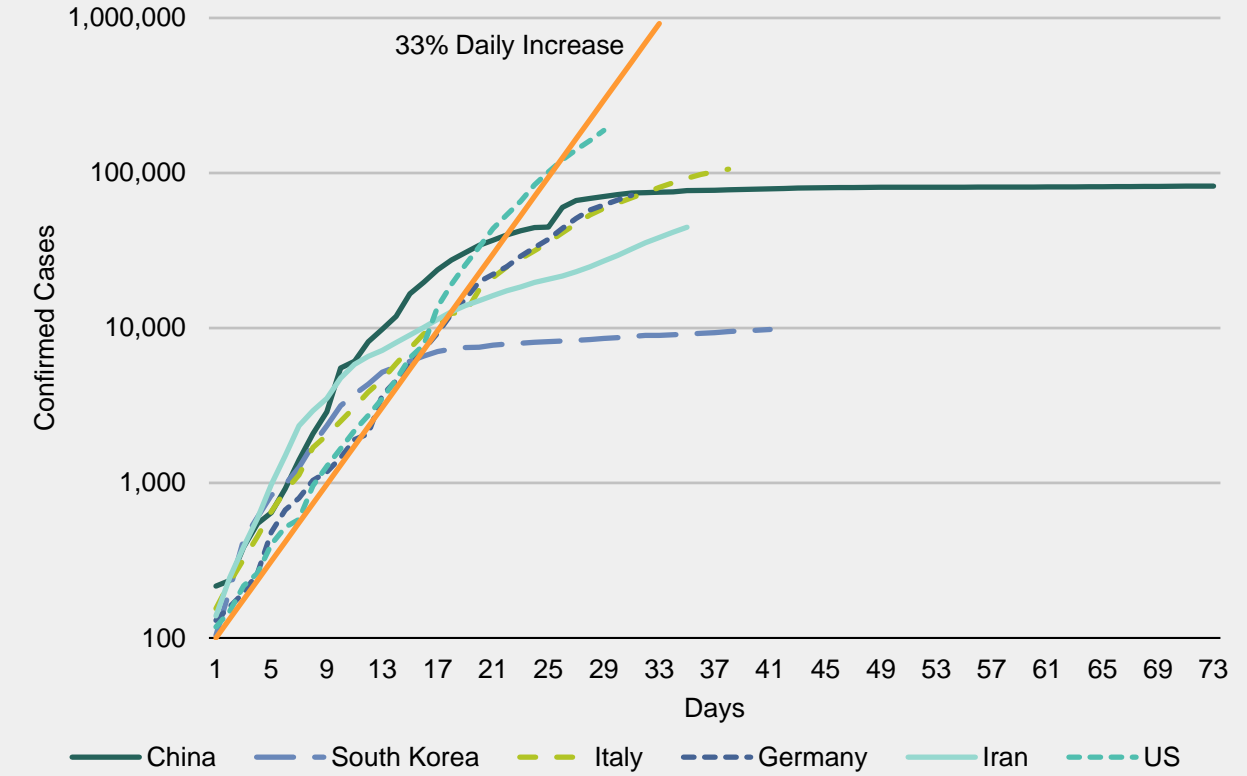


# Canaries in the Coal Mine: Curve Signposts to Watch For

Daily Percentage Increase (US)



The Race to Flatten the Curve



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The data track cumulative cases by country for select countries/regions. Day 0 is the day of case 100.

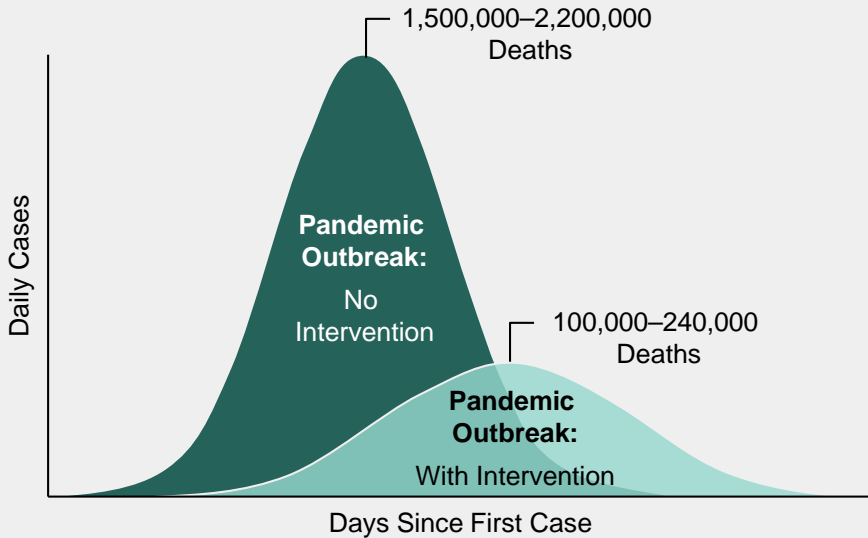
As of March 31, 2020

Source: Johns Hopkins University and AB



# US Modeling of the Length, Scope and Impact of the Virus Takes Shape

## Goals of Community Mitigation



1. Delay outbreak peak
2. Decompress peak burden on hospitals/infrastructure
3. Diminish overall cases and health impacts
4. Decreases fatalities

	Reported Cases	Projected Date of Peak Resource Use*	Projected Date of Zero Daily Deaths*
US	374,329	April 15, 2020	June 19, 2020
New York	141,100	April 8, 2020	May 8, 2020
New Jersey	41,090	April 15, 2020	May 12, 2020
Michigan	17,221	April 8, 2020	April 29, 2020
Louisiana	14,867	April 1, 2020	April 24, 2020
California	14,336	April 14, 2020	May 20, 2020
Massachusetts	13,837	April 18, 2020	May 31, 2020
Florida	13,214	April 21, 2020	June 14, 2020
Pennsylvania	12,980	April 11, 2020	May 13, 2020
Illinois	12,262	April 16, 2020	May 6, 2020

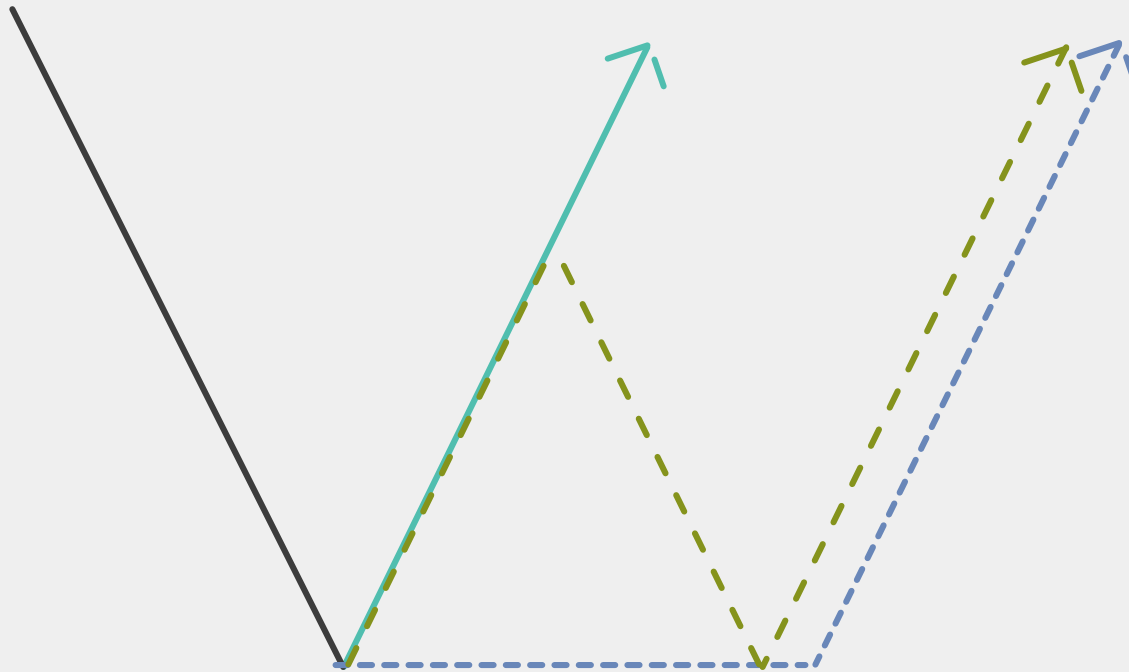
**Analysis provided for illustrative purposes only and is subject to revision.**

\*The IHME model is updated daily to account for new data and information, so the estimates may change as a result. The model includes the effects of social distancing measures implemented at the “first administrative level” (in the US this generally means the state level) and assumes continued social distancing through the end of the modeled period (August 4, 2020). The model also assumes the implementation and adherence to these measures is complete. “Peak Resource Use is when the estimates predict the greatest need for hospital beds, ICU beds, ventilators and other related hospital resources. Forecast daily deaths only cover the next four months and do not predict how many deaths there may be if there is a resurgence at a later point or if social distancing is not fully implemented and maintained.

As of April 7, 2020. Source: CDC, Institute for Health Metrics and Evaluation (IHME), The White House and AB

# Which Recovery Letter: V, U, W (or L...or Nike Swoosh)?

The Viral Progression/Behavior Will Determine the Shape of the Recovery



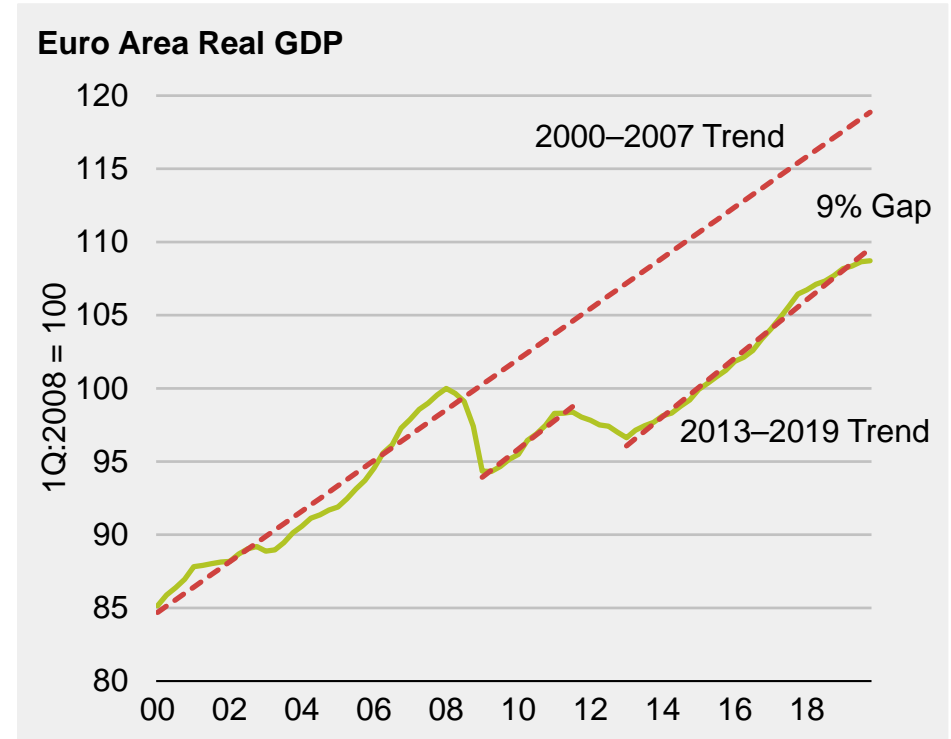
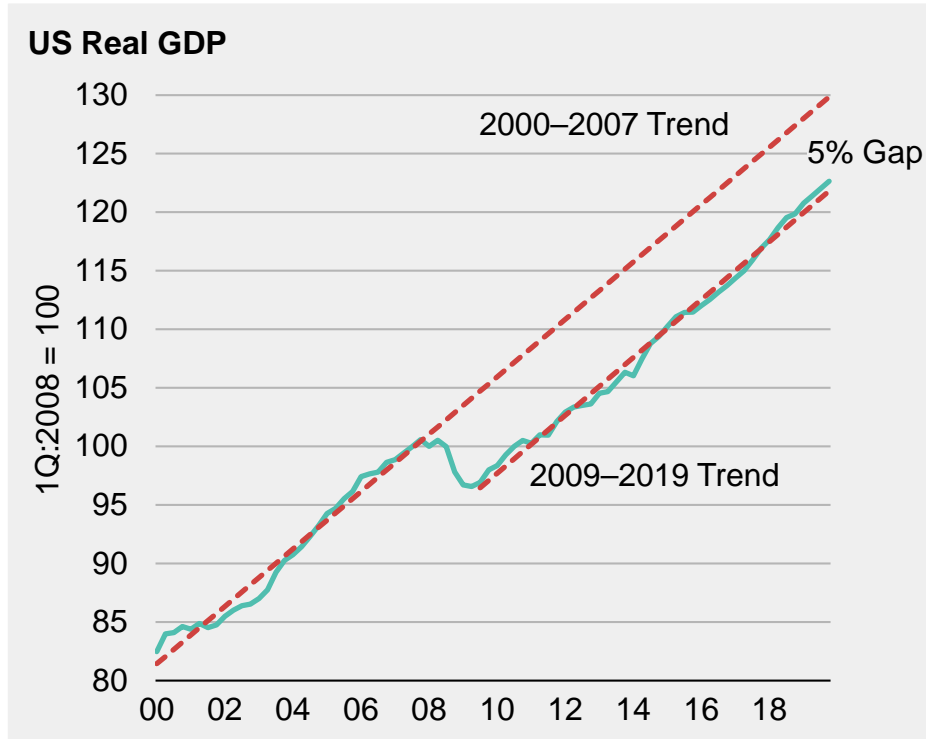
## Virus Considerations:

- + Curve flattening/peak
- + “Dies in the heat”?
- + Duration of immunity
- + Start/stop social distancing
- + Testing kits/access/results timing
- + Other medical equipment supply
- + Vaccine timing

Analysis provided for illustrative purposes only and is subject to revision.  
Source: AB

# The Lasting Impact of Deep Recessions

Mind the Gap; Policy Response Critical



**Past performance does not guarantee future results.**

Through March 31, 2020

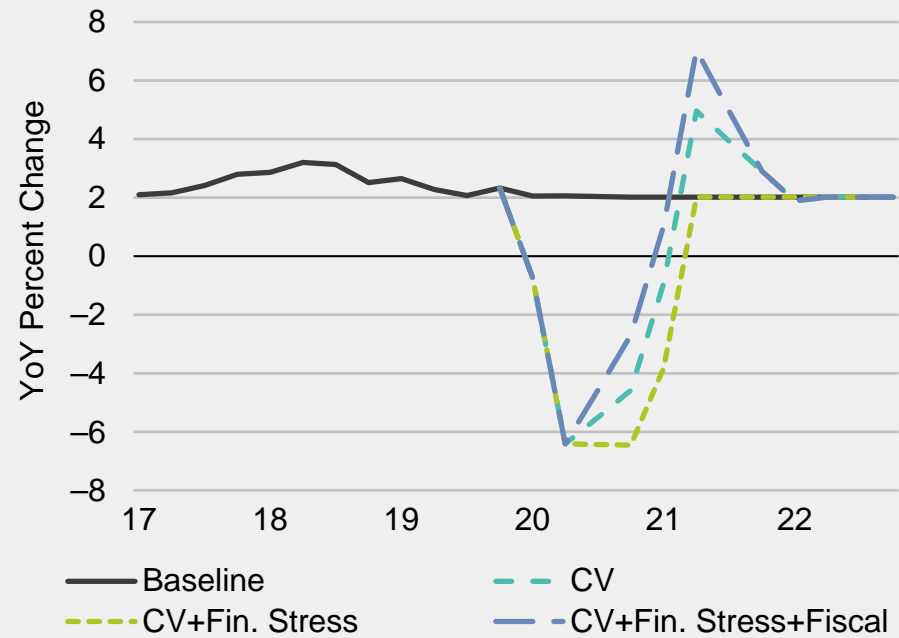
Source: Haver Analytics and AB



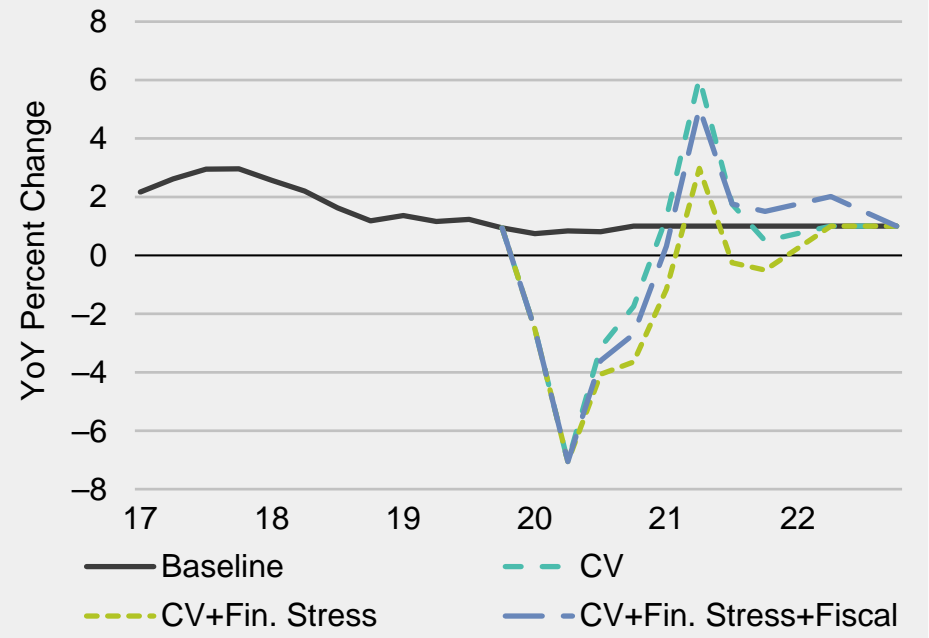
# How Long and How Deep?

Largely, the Viral Progression/Behavior Will Determine This...as Will Policy

## US Real GDP Scenarios



## Euro Area Real GDP Scenarios



**Past performance does not guarantee future results.**

CV: coronavirus; Fin. Stress: financial stress

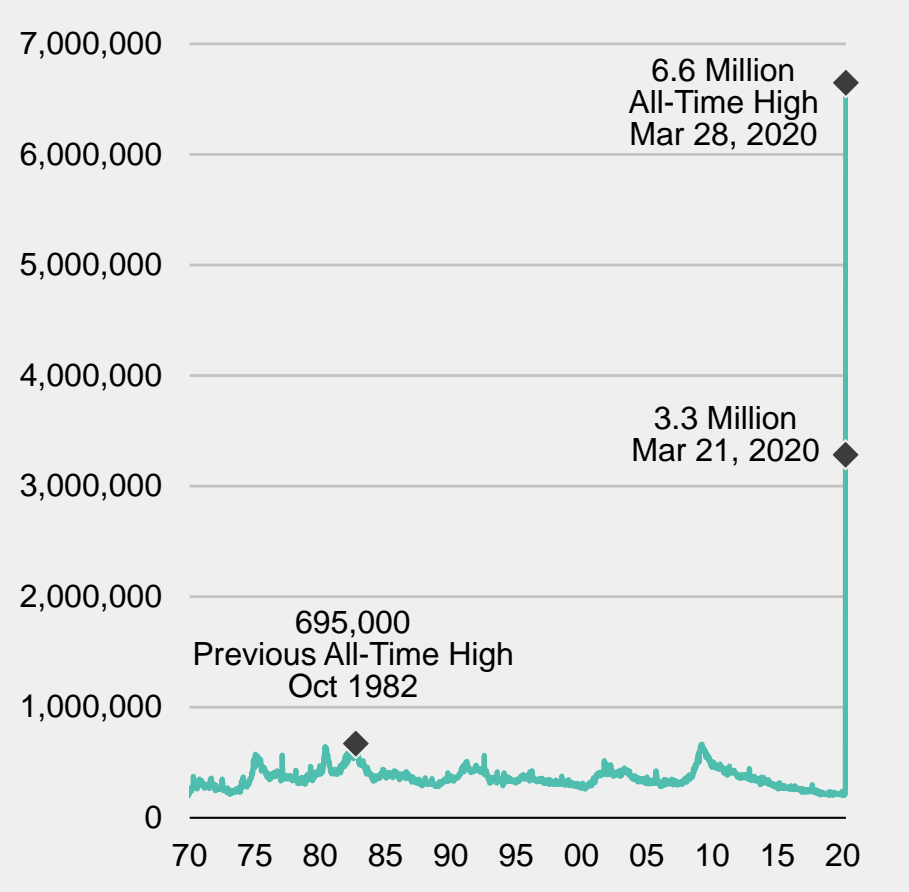
As of March 31, 2020

Source: Haver Analytics and AB

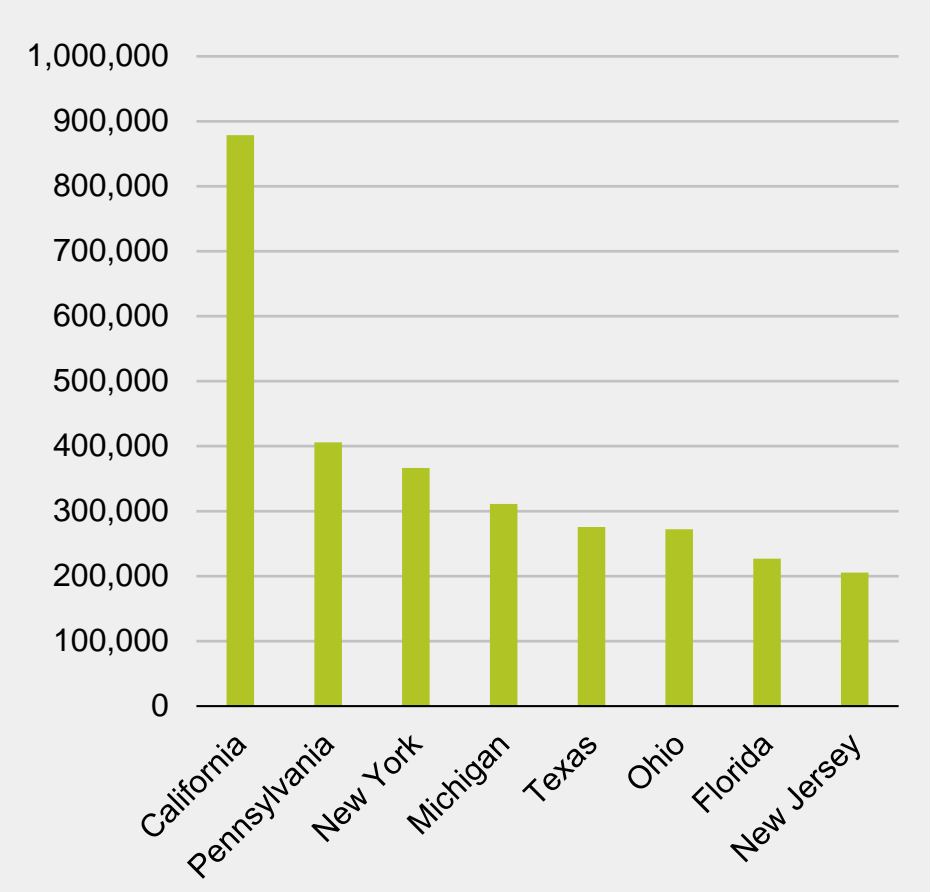


# US Jobless Claims Near 10 Million over the Past Two Weeks

US Weekly Jobless Claims (Week Ended March 28)



Weekly Jobless Claims by State (Week Ended March 28)



Historical analysis and current forecasts do not guarantee future results.

As of March 28, 2020

Source: US Department of Labor and AB

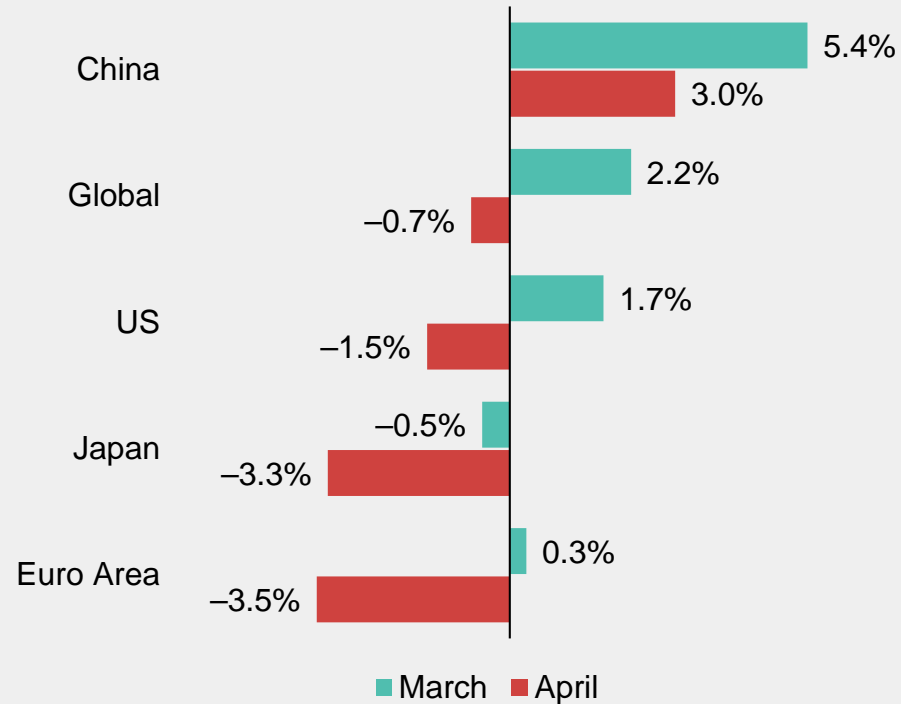




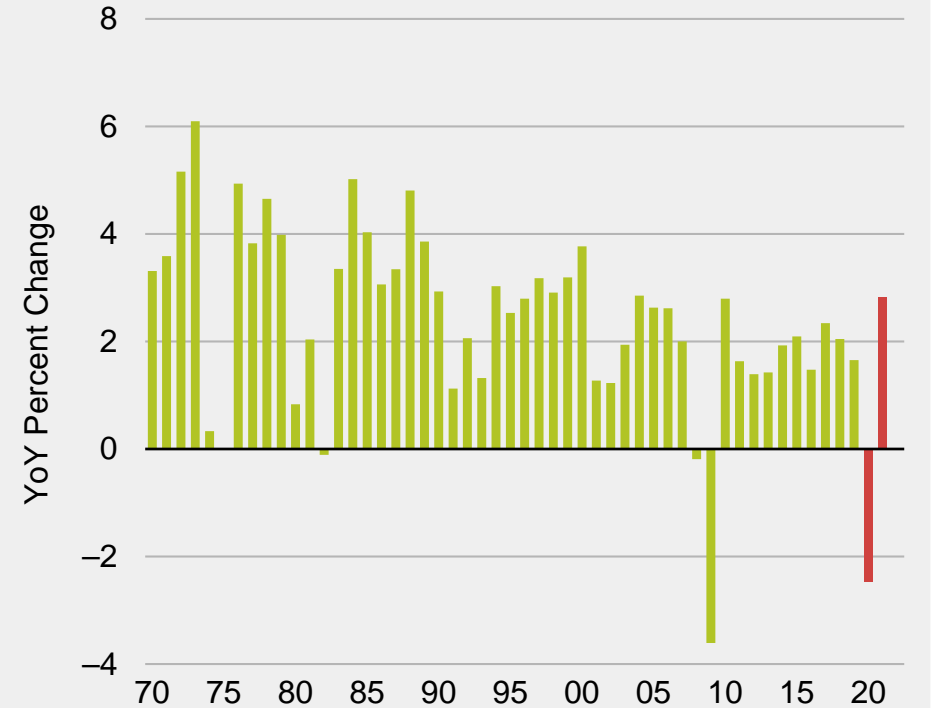
# Global Macro Outlook: Global Growth Revised Sharply Lower

Risks Still Skewed to the Downside

### AB 2020 Real GDP Growth Forecasts



### G7 Real GDP Growth



**Past performance does not guarantee future results.**

As of March 31, 2020

Source: Haver Analytics and AB



# Macro Summary: Global Growth Revised Sharply Lower

## AB Global Economic Forecast: April 2020

	Real Growth (Percent)		Inflation (Percent)		Official Rates (Percent)		Long Rates (Percent)	
	20F	21F	20F	21F	20F	21F	20F	21F
Global	-0.7	3.3	2.3	2.6	1.64	1.57	1.83	1.81
Industrial Countries	-2.2	2.9	0.9	1.5	-0.09	-0.08	0.22	0.43
Emerging Countries	1.9	4.1	4.5	4.4	4.88	4.59	4.89	4.38
<b>US</b>	<b>-1.5</b>	<b>3.5</b>	<b>1.5</b>	<b>2.0</b>	<b>0.13</b>	<b>0.13</b>	<b>0.50</b>	<b>0.75</b>
Euro Area	-3.5	2.5	0.5	1.2	-0.65	-0.65	-0.50	-0.25
UK	-3.0	2.5	1.0	1.8	0.10	0.10	0.35	0.75
Japan	-3.3	2.2	-0.2	0.5	-0.10	-0.10	0.00	0.00
China	3.0	5.0	2.8	3.0	4.35	4.10	3.20	2.60

### Historical analysis and current forecasts do not guarantee future results.

Growth and inflation forecasts are calendar-year averages. Interest rates are year-end forecasts. Real growth aggregates represent 48 country forecasts, not all of which are shown. Long rates are 10-year yields.

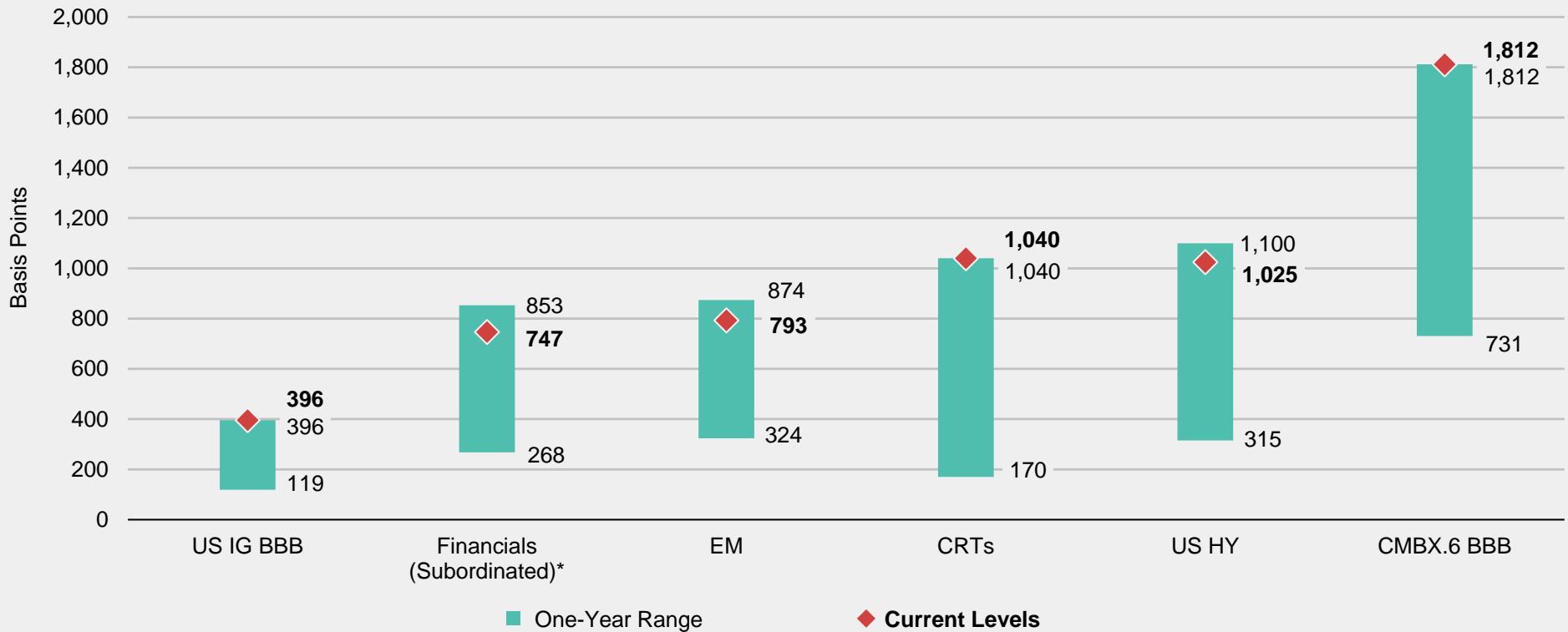
As of April 1, 2020

Source: AB



# Spreads Widened Significantly Across the Credit Landscape

Current Spread vs. Past 12 Months



**Current analysis and forecasts do not guarantee future results.**

US investment grade (IG) represented by Bloomberg Barclays US Corporate Investment-Grade BBB; emerging markets (EM) by Bloomberg Barclays USD Emerging Markets Sovereign; credit risk-transfer (CRT) securities by a representative set of bonds; US high yield (HY) by Bloomberg Barclays US High-Yield. \*Subordinated Financials is the Tier 1 component of Bloomberg Barclays Global Capital Securities Index.

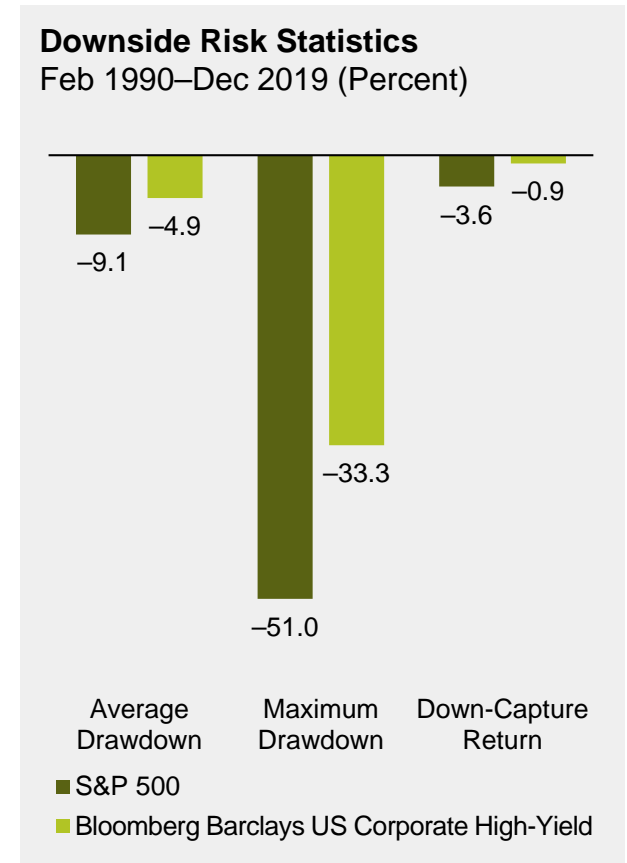
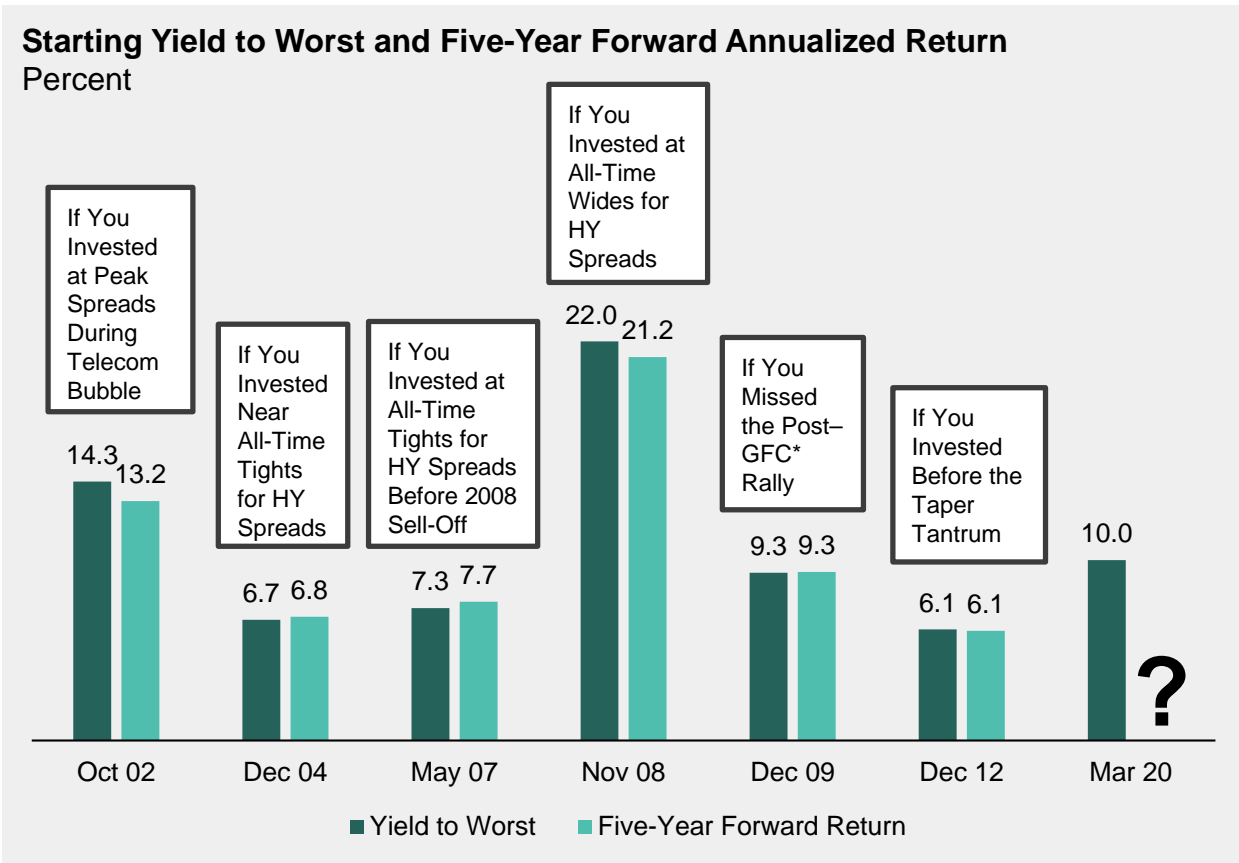
As of March 25, 2020

Source: Bloomberg Barclays and AB



# Better Beta: Using High Yield to De-Risk Equities

Yield to Worst, Historically a Strong Predictor of Future Returns, Is Near Current Equity Expectations



**Historical and current analyses and current forecasts do not guarantee future results.**

US corporate high yield is represented by Bloomberg Barclays US Corporate High-Yield (USD Hedged). Any benchmark or index cited herein is used for comparison purposes only. An investor cannot invest directly in an index. The unmanaged index performance does not reflect any fees and expenses associated with the active management of an AB portfolio. Down-capture return is shown using S&P 500 as the calculation benchmark.

\*Global financial crisis

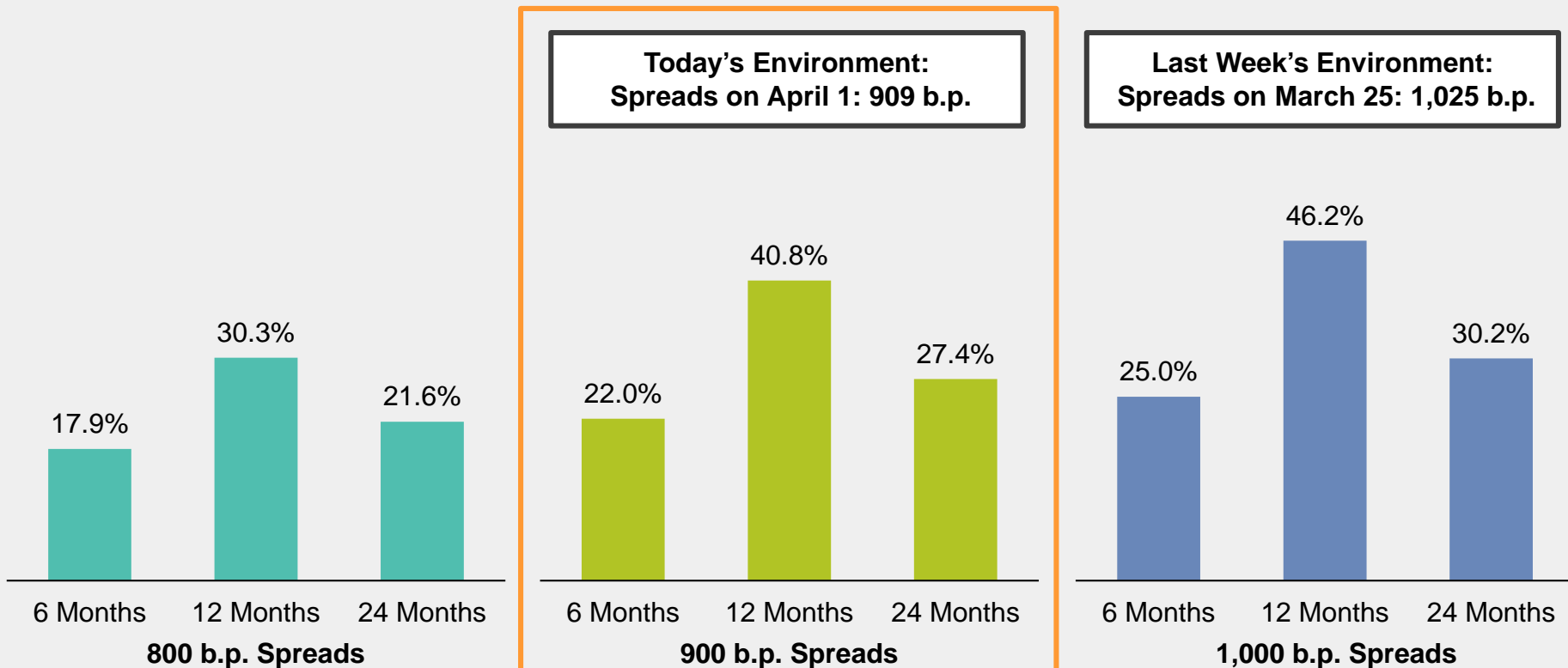
Left display as of April 3, 2020; right display as of December 31, 2019

Source: Bloomberg Barclays, Morningstar and AB



# Credit Investing 101: High Yield Recovers Quickly

Average Forward Returns at Different Spread Levels



**Past performance is not a guarantee of future results.**

The above returns are calculated based on month-end option-adjusted spread levels that are equal to or greater than the levels indicated.

US high yield is represented by Bloomberg Barclays US Corporate High-Yield.

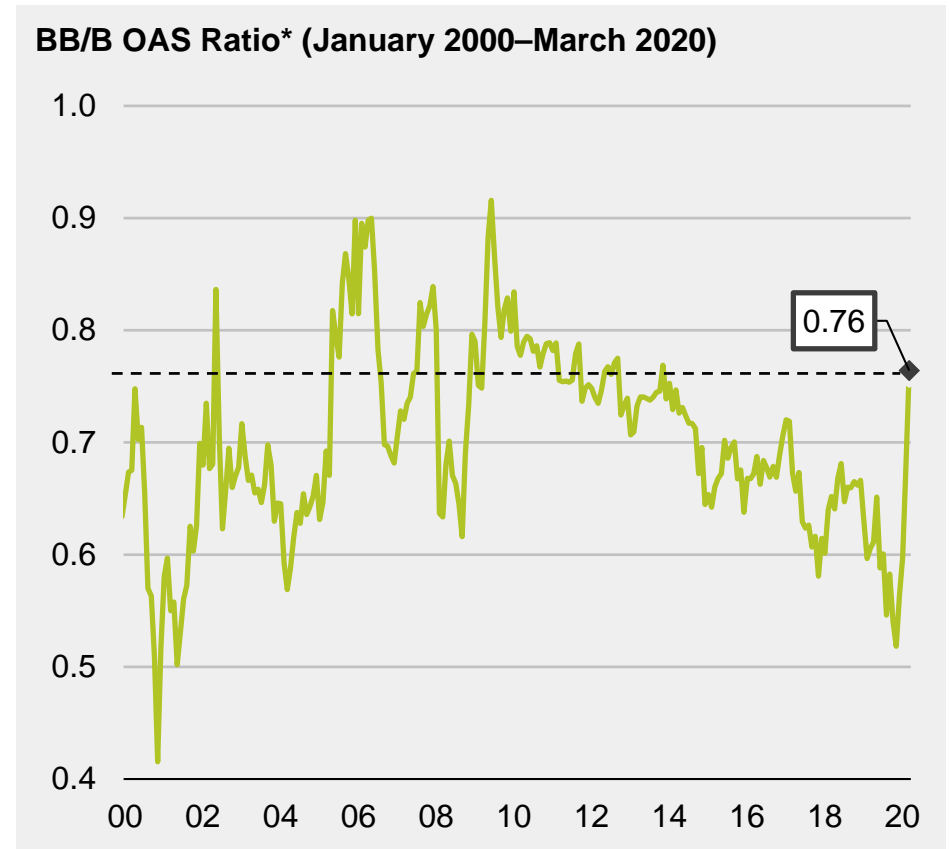
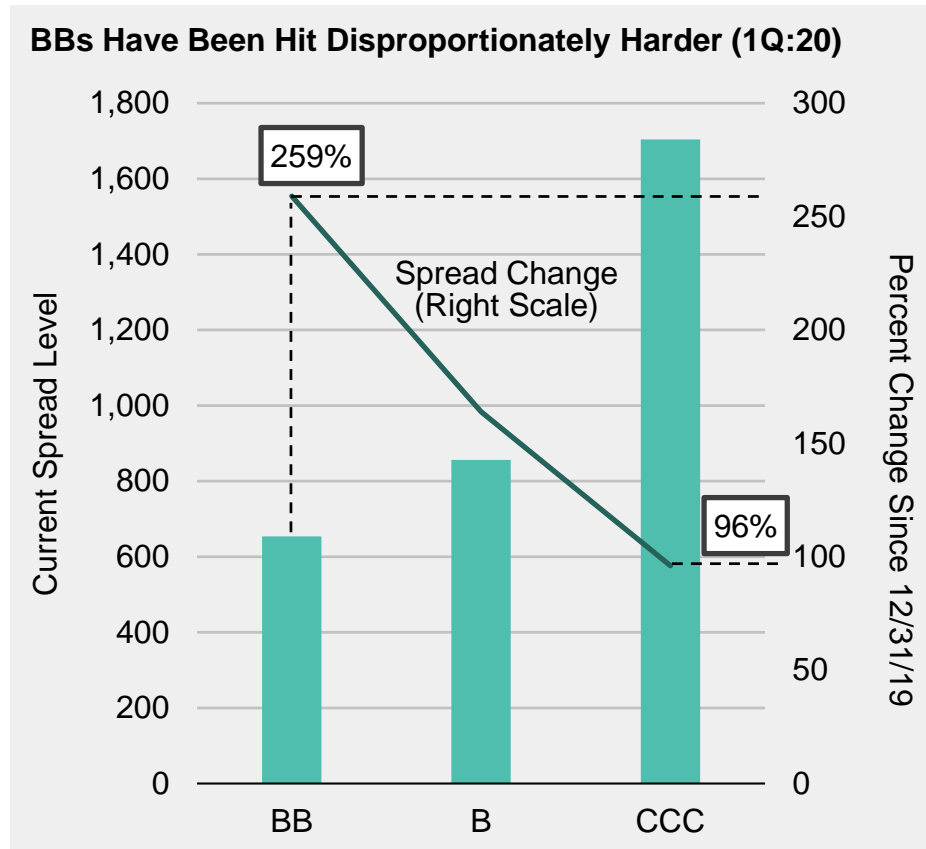
From January 1994 through December 2019

Source: Bloomberg Barclays, Morningstar Direct and AB



# Liquidity Crisis Has Led to Dramatic Underperformance of Higher-Quality High Yield

BB-Rated Paper Widened 259% over the Quarter, While CCCs Are Only 96% Wider



**Analysis provided for illustrative purposes only and is subject to revision.**

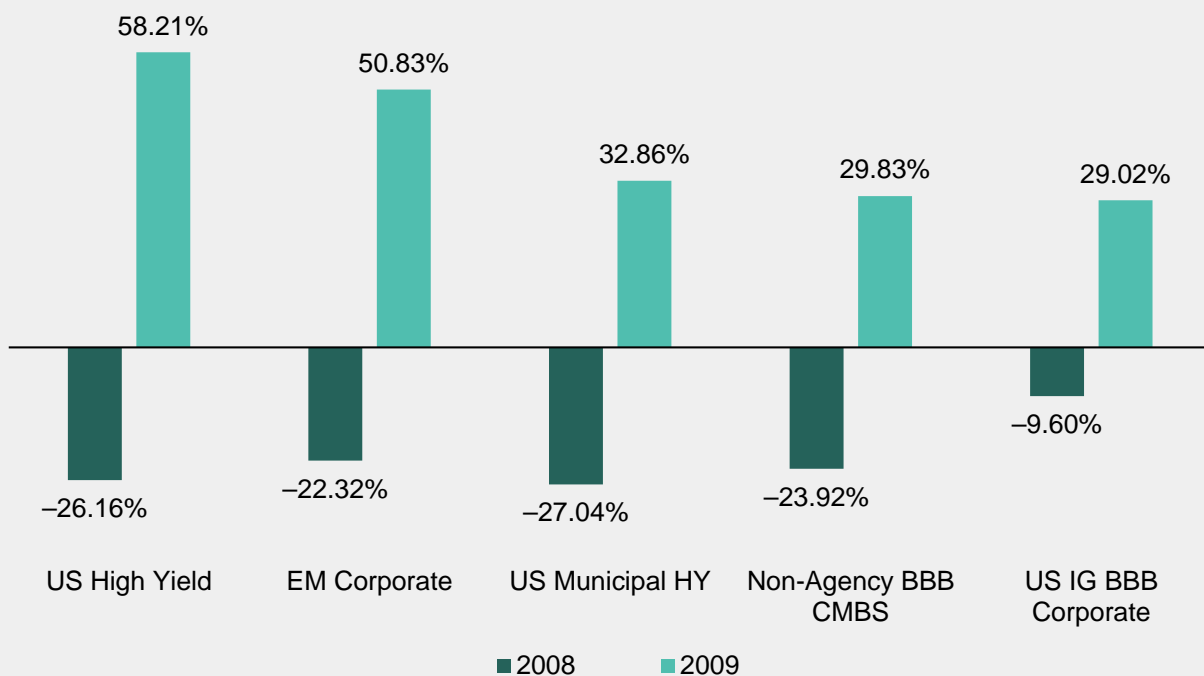
\*The BB/B Option-Adjusted Spread (OAS) Ratio shows the average OAS of BB-rated bonds in the Barclays US High Yield Index divided by the average OAS of B-rated bonds in the index. As of March 31, 2020. Source: Bloomberg Barclays and AB



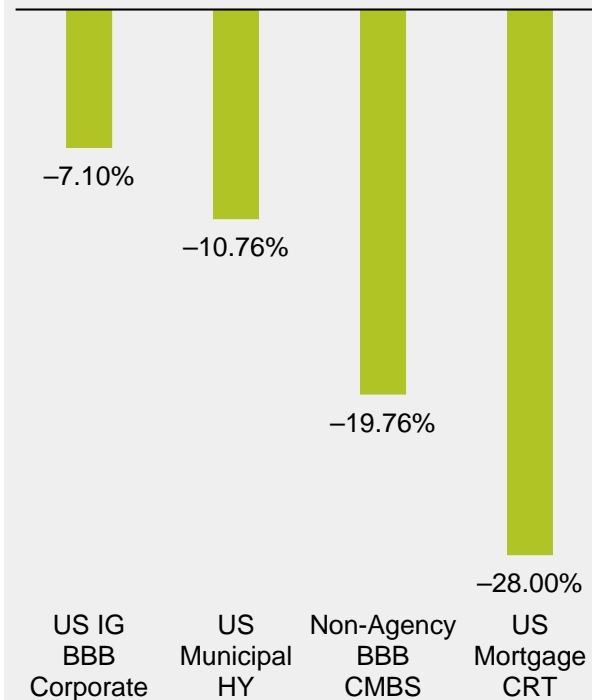
# A Look Back to 2008–2009

Stay the Course and Don't Give Up on Potential Rebound

Index Returns 2008 and 2009



1Q:2020 Edition



**Historical analysis does not guarantee future results.**

US high yield (HY) represented by Bloomberg Barclays US High-Yield; emerging-market (EM) corporate by Bloomberg Barclays USD Emerging Markets Corporate; US municipal HY by Bloomberg Barclays Municipal High-Yield; non-agency BBB CMBS by Bloomberg Barclays Non-Agency BBB CMBS; US investment-grade (IG) BBB Corporate by Bloomberg Barclays US Corporate Investment-Grade BBB; CRT 2015 Last Cash Flow/High Loan to Value

Source: Bloomberg Barclays and AB



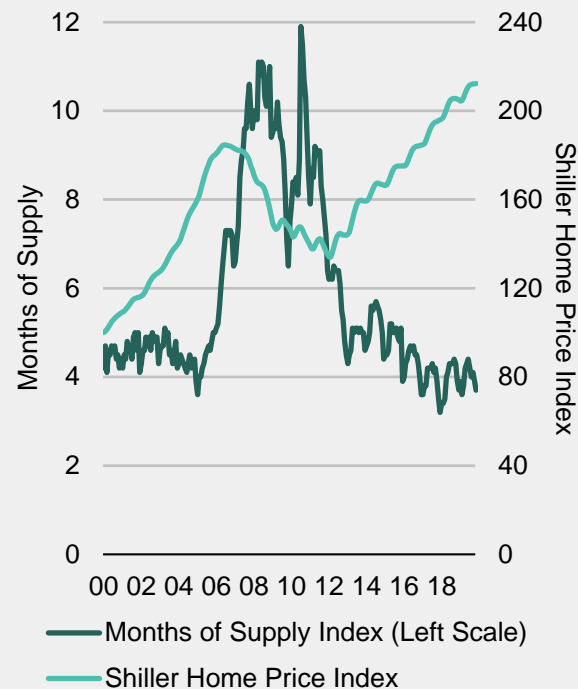
# CRTs: Forbearance Impacts Timing of Returns, Not Level of Returns

Higher-Quality Borrowers and Strong Housing Fundamentals Mitigate Potential Loss Severity

## Forbearance

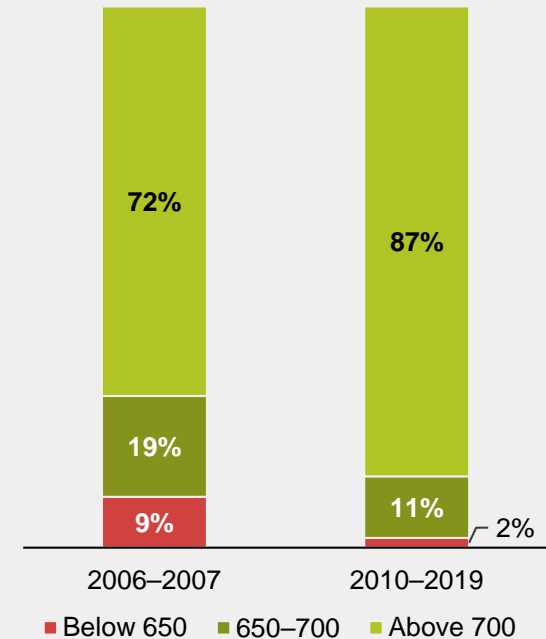
- + The government-sponsored enterprises have announced a forbearance program
- + Forbearance allows borrowers undergoing economic hardship to delay mortgage payments without it counting as a default or having a negative impact on their credit score
- + Forbearance will **increase delinquencies** in the near term, but should **prevent defaults**
- + **Delinquencies impact timing (but not level) of returns.** Delinquencies *slow* cash flows to CRT tranches, increasing their average weighted life, but cash flows will ultimately be received, assuming the borrowers become current after the forbearance period
- + **Defaults and loss severity impact level of returns.** With forbearance likely resulting in lower default rates for borrowers, the program should ultimately benefit CRT investors

## Increased Home Prices and Lower Supply Should Help Cushion Loss Severity



## Higher Creditworthiness Supports Borrowers Becoming Current After Forbearance

Credit Score (FICO) Dist. on Purchase\*



**Historical and current analyses do not guarantee future results.**

\*At time of purchase

Months of supply of new and existing homes as of November 30, 2019

Source: Bloomberg, Federal Reserve Bank of St. Louis, Haver Analytics, US Census Bureau, Wells Fargo and AB



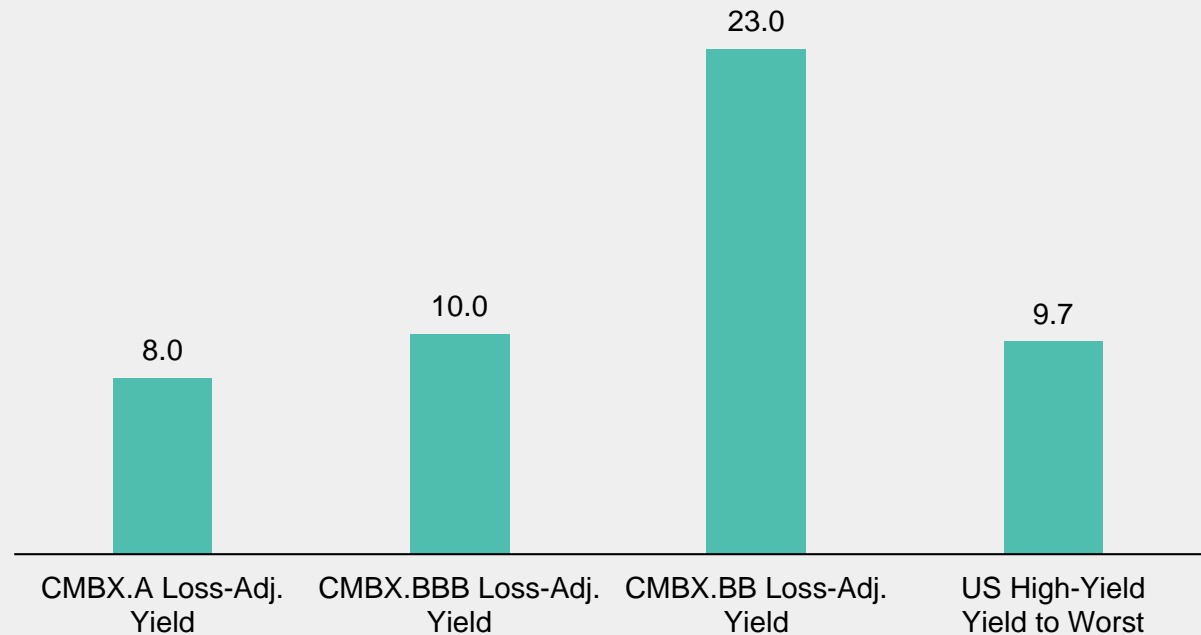


# CMBX.6 Spreads Have Reached All-Time Highs

## CMBX.6 Updated Base Case Assumptions

- + Decline in the net operating income margins that is more severe than that experienced in 2008–2009, for all properties including nonretail
- + 20% reduction in sales
- + Reduction in occupancy (rent as a percentage of sales) costs to 10% or lower
- + Decline in occupancy rates to 80% (from low 90s today) for all malls, including those of the highest quality

## CMBX.6 Yields Attractive After Adjusting for Losses April 2015–March 2020 (Percent)



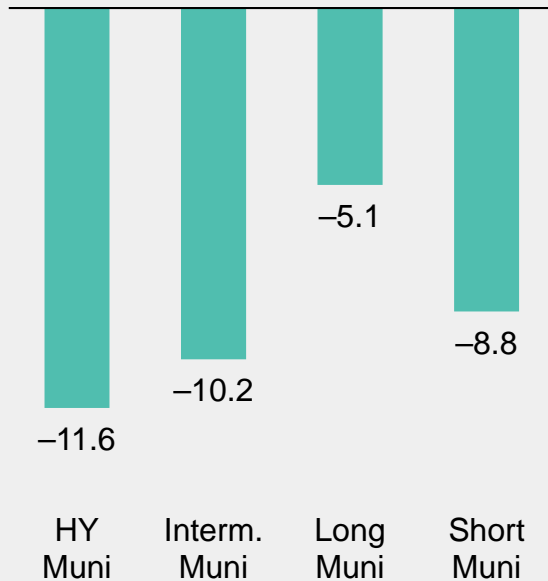
As of March 27, 2020  
Source: Bloomberg Barclays and AB



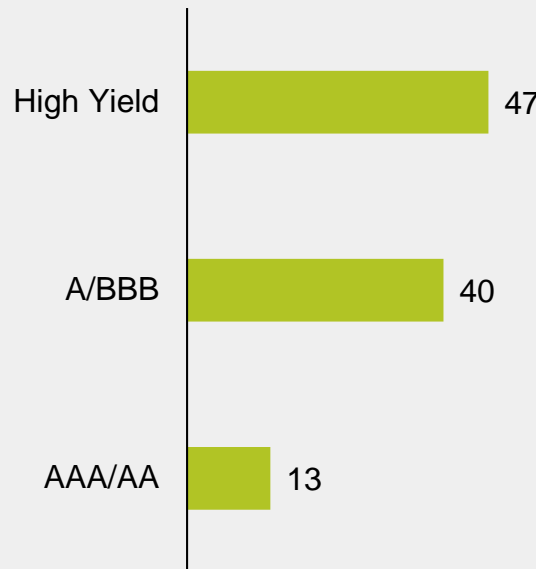
# Municipal Technicals Weakened Amidst Record Outflows

Selling Pressure Rippled Through to the High-Grade Market

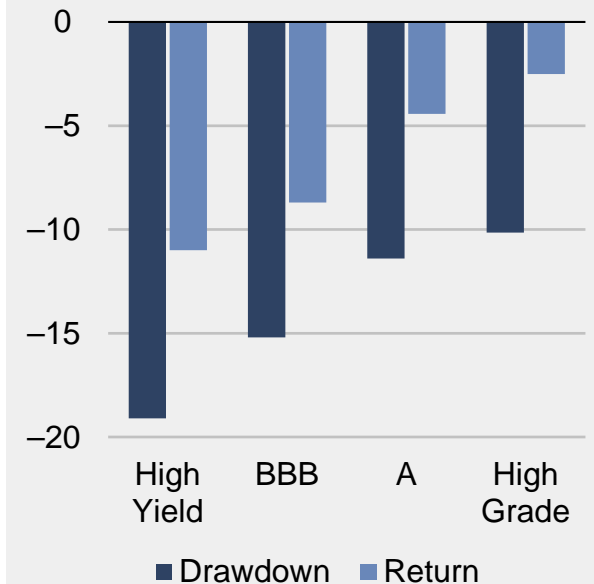
**Outflows Dominated by HY Funds**  
March Net Outflows (USD Billions)



**Average Credit Breakdown of HY Funds (Percent)**



**March Returns and Drawdowns**  
Percent



**Current analysis does not guarantee future results.**

As of March 31, 2020

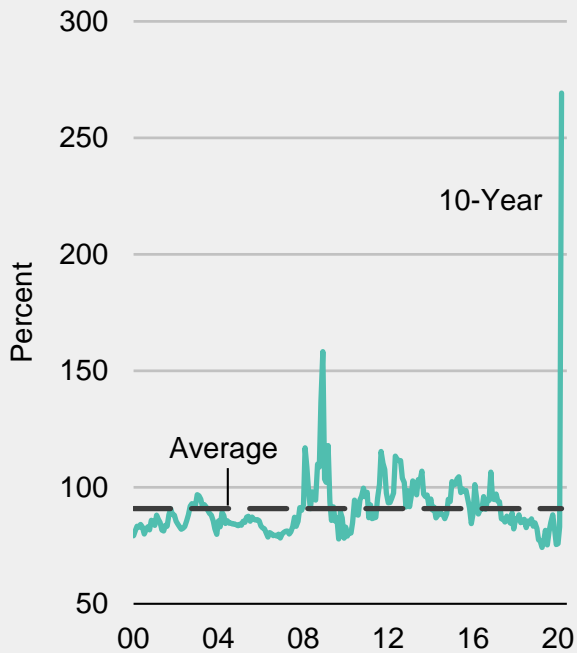
Source: Barclays, Morningstar and AB



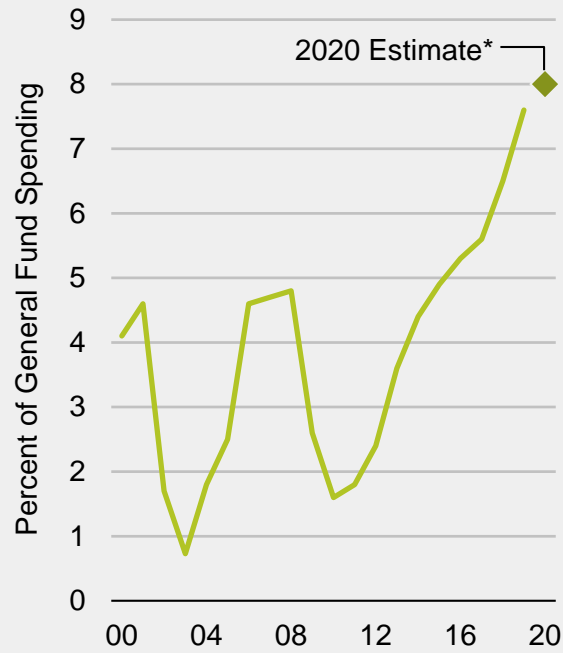
# Relative Valuations Favor Municipals

Liquidity and Stimulus Package Will Keep Fundamentals Intact

### Muni/Treasury Ratio



### State Rainy-Day Funds at Highs



### Stimulus Directed Towards Municipalities

- + \$150 billion in direct aid to state and local municipalities
- + \$130 billion in aid directly to hospitals
- + 75% emergency expense reimbursement from FEMA
- + Fed willing to provide liquidity
- + High likelihood of more stimulus in the near future

**Current analysis does not guarantee future results**

\*Figures for fiscal 2020 are projected based on states' enacted budgets.

As of March 31, 2020

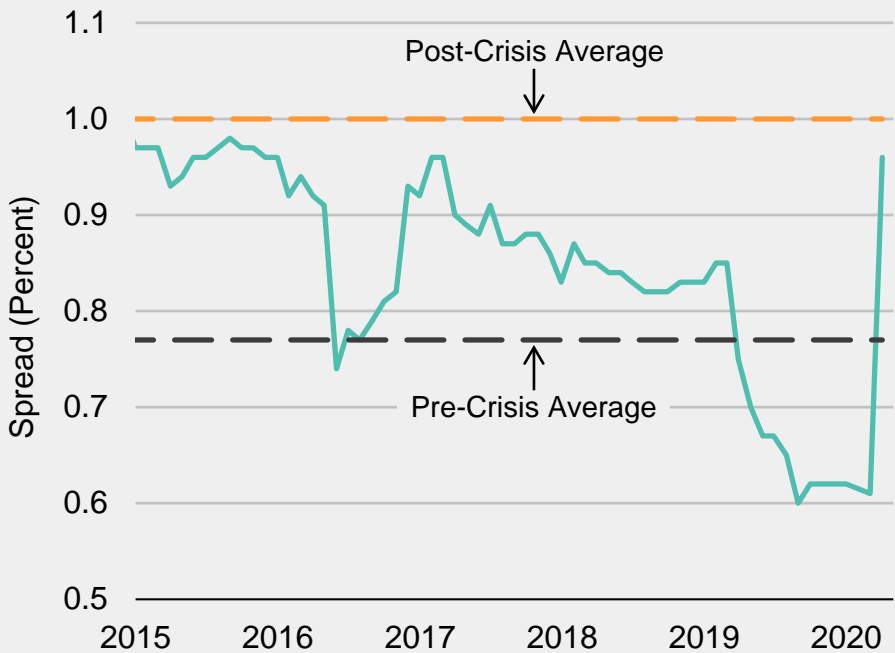
Source: Municipal Market Data, National Association of State Budget Officers and AB



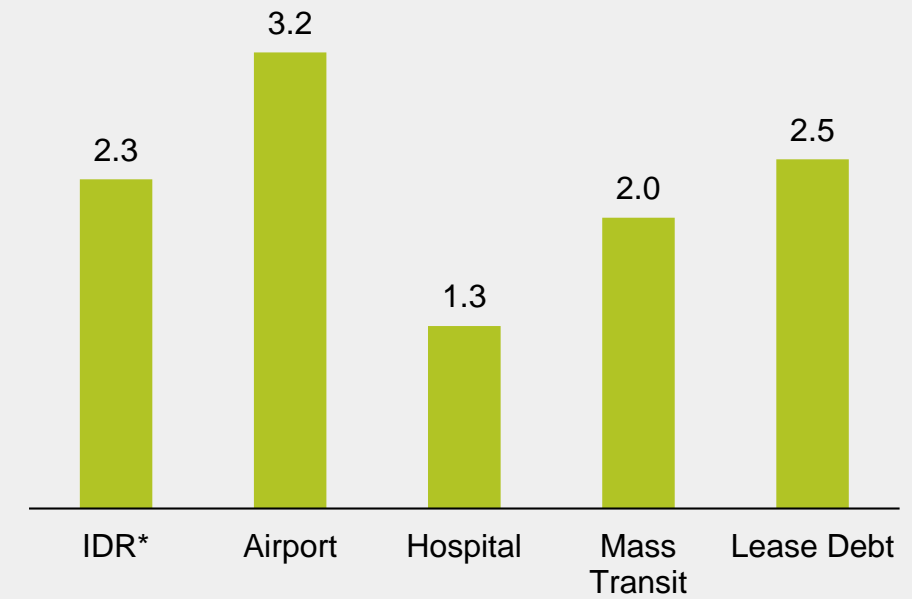
# Spreads Widening Presents Active Opportunity

## Tactical Shift to Mid-Grade Credit

### BBB-Rated Municipal Spread



### Certain Sectors Present More Opportunity BBB Spreads (Percent)



### Current analysis does not guarantee future results.

Credit rating is a measure of the quality and safety of a bond or portfolio, based on an issuer's financial condition. AAA is the highest (best) and D is the lowest (worst). Investment-grade securities are those rated BBB and above. Ratings are subject to change. \*Industrial development revenue

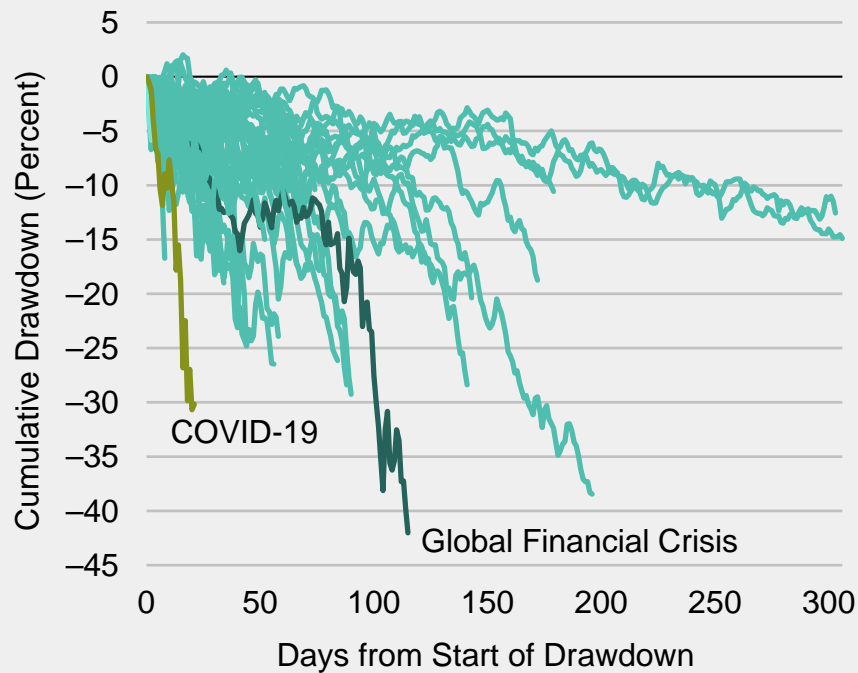
As of March 31, 2020

Source: Bloomberg, Municipal Market Data and AB

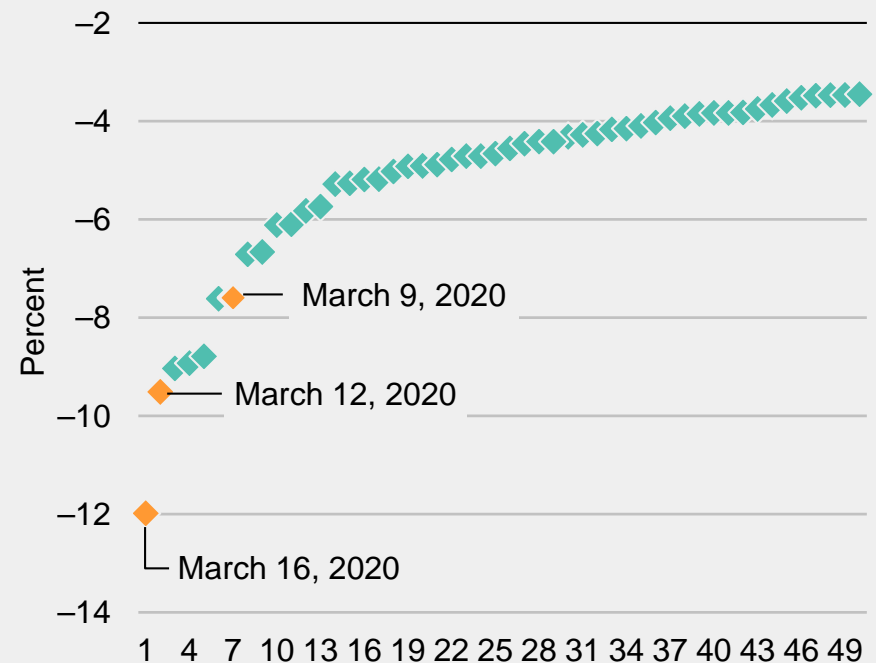


# Rapidity of Equity Market Sell-Offs Was Unprecedented

**Surge in COVID-19 Outside of China Shocks Markets**  
Global Equities Have Seen Their Fastest Correction in 55 Years\*



**50 Largest One-Day Declines in S&P 500: Cue Ides of March?**  
2000–Present



**Historical analysis and current forecasts do not guarantee future results.**

\*Chart shows all drawdowns greater than 5% since 1965. Global equities are represented by MSCI World (USD).

Left display as of March 9, 2020; right display as of March 19, 2020

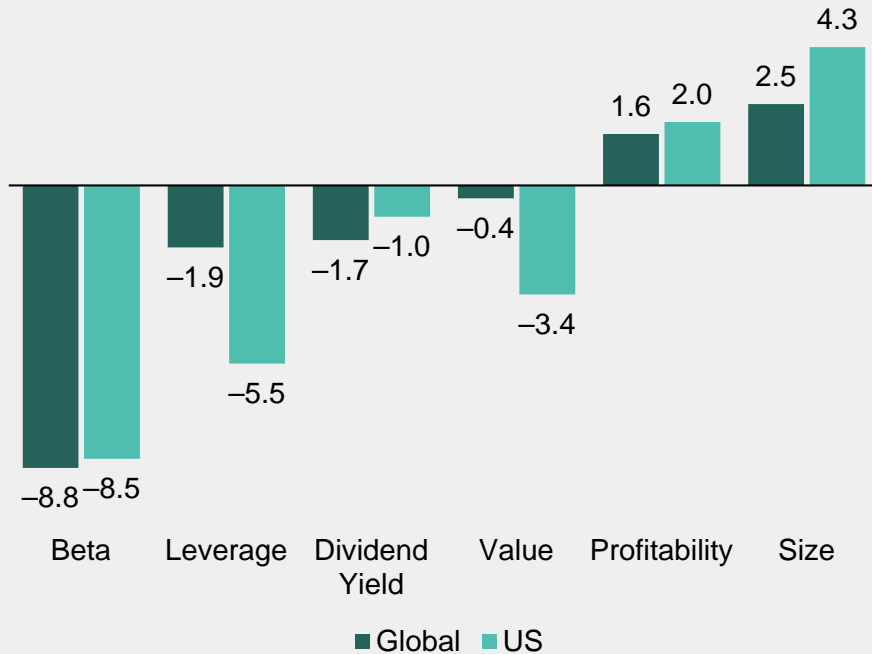
Source: Bloomberg, FactSet, Morningstar, S&P and AB



# Factor Volatility Reflects Investor Uncertainty

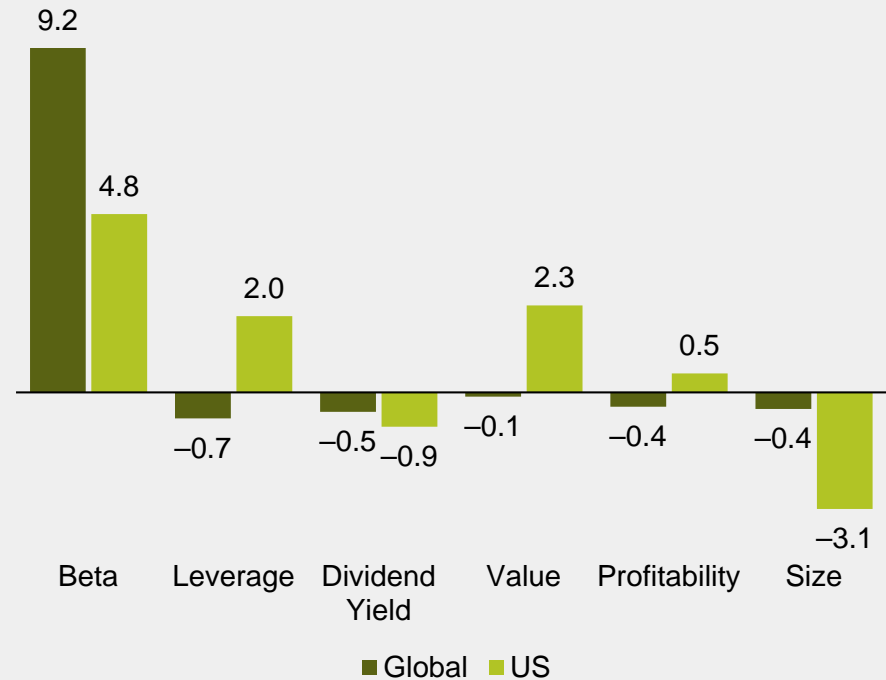
## High-Beta, Levered and Value Stocks Lag High-Profit and Large-Cap Stocks...

Factor Returns: February 20, 2020–March 17, 2020 (Percent)



## ...High-Beta, Levered and Value Stocks Improve vs. High-Profit and Large-Cap Stocks

Factor Returns: March 18, 2020–March 31, 2020 (Percent)



### Historical analysis and current forecasts do not guarantee future results.

Global factor returns from GEMLT risk model, US returns from USSLOWL Model, and Emerging returns from EMM1 model. In US, book/price returns are proxied by the Barra Value factor. Factor returns represent a one-standard-deviation exposure to the factor in hedged equity returns. Profitability is not a factor in the Emerging Markets model from Barra. Source: MSCI Barra and AB

# Severe Drawdowns and Recessions: Timing Bottoms Not Advised

## A Historical Look at the 10 Largest Monthly Drawdowns Since the 1930s (Percent)\*

	Drawdown	Next Quarter's Return	Next Year's Return	Next Three Years Return (Annualized)	Next Five Years Return (Annualized)
Jun 1932	-86.0	82.4	146.3	32.2	28.3
Feb 2009	-52.6	25.0	50.3	22.9	20.4
Sep 2002	-46.3	7.9	22.2	14.7	13.4
Sep 1974	-46.2	7.9	32.0	15.0	11.5
Jun 1970	-32.9	15.8	37.1	12.8	5.5
Nov 1987	-30.2	16.3	18.8	11.8	13.4
Jul 1982	-23.8	24.9	51.8	21.3	24.4
Jun 1962	-23.5	2.8	26.7	15.4	10.6
Dec 1957	-19.0	5.3	38.1	15.7	11.1
Oct 1990	-15.8	13.1	29.1	15.5	13.9
<b>Average</b>	<b>-37.6</b>	<b>20.1</b>	<b>45.2</b>	<b>17.7</b>	<b>15.2</b>

## Stocks Tend to Rebound Before Recessions End

Recession Start†	Market Bottom†	Recession End†	Stock Market Rebound‡
May 1937	Mar 1938	Jun 1938	36.0%
Nov 1948	Jun 1949	Oct 1949	13.3
Jul 1953	Sep 1953	May 1954	25.0
Aug 1957	Oct 1957	Apr 1958	5.8
Apr 1960	Oct 1960	Feb 1961	18.8
Dec 1969	May 1970	Nov 1970	13.9
Nov 1973	Oct 1974	Mar 1975	12.8
Jan 1980	Mar 1980	Jul 1980	19.2
Jul 1981	Aug 1982	Nov 1982	15.9
Jul 1990	Oct 1990	Mar 1991	23.4
Mar 2001	Sep 2001	Nov 2001	9.5
Dec 2007	Mar 2009	Jun 2009	15.2
		<b>Average</b>	<b>17.4%</b>

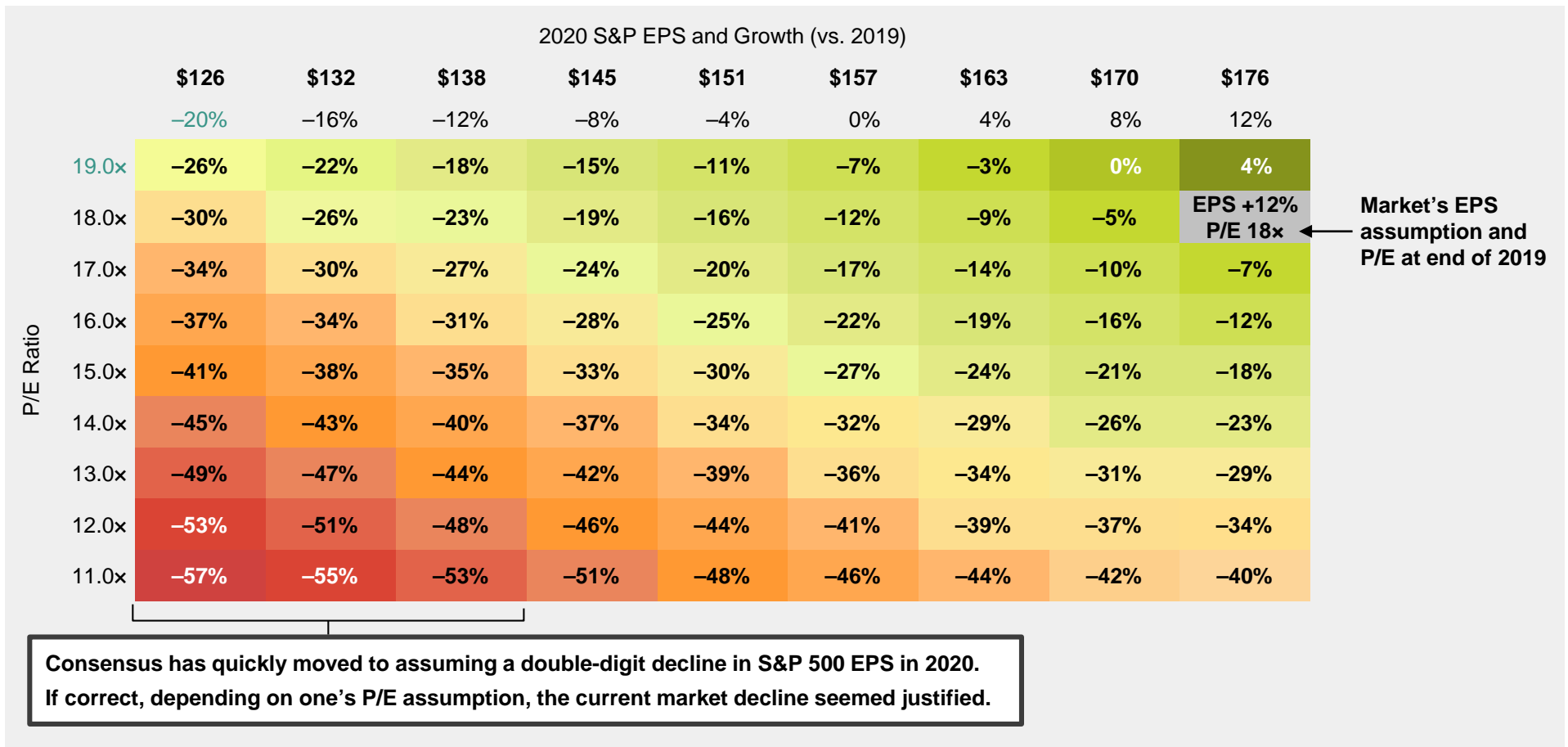
**Historical analysis and current forecasts do not guarantee future results.**

\*Returns are S&P 500 price returns starting at the end of the listed month; drawdowns are calculated using monthly data. †S&P 500 low during each period ‡S&P 500 price returns from equity market trough to end of recession

Source: National Bureau of Economic Research, S&P and AB



# What's Priced In? An Attempt at Quantification



Historical analysis and current forecasts do not guarantee future results.

As of March 31, 2020

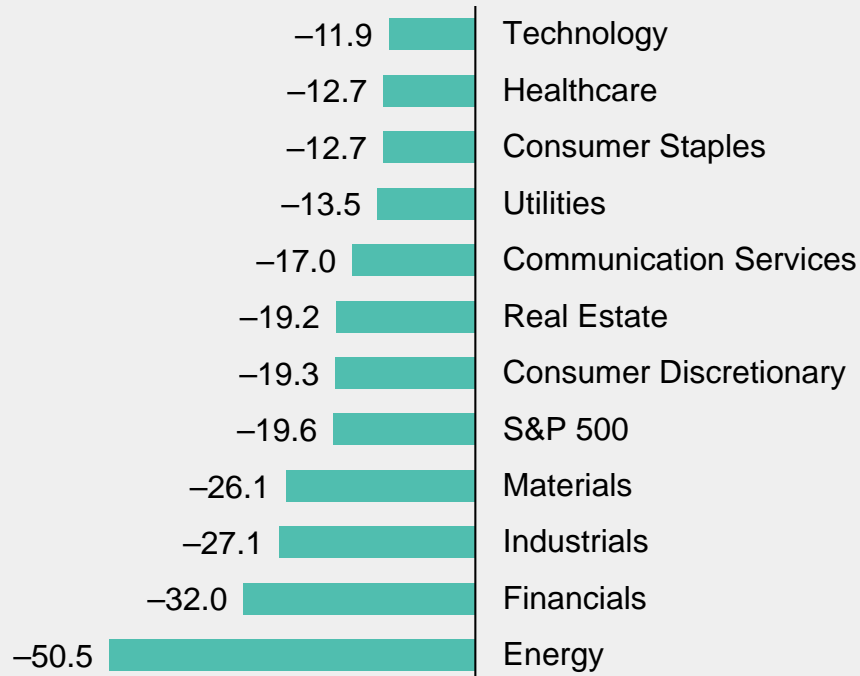
Source: S&P Index Earnings Data and AB



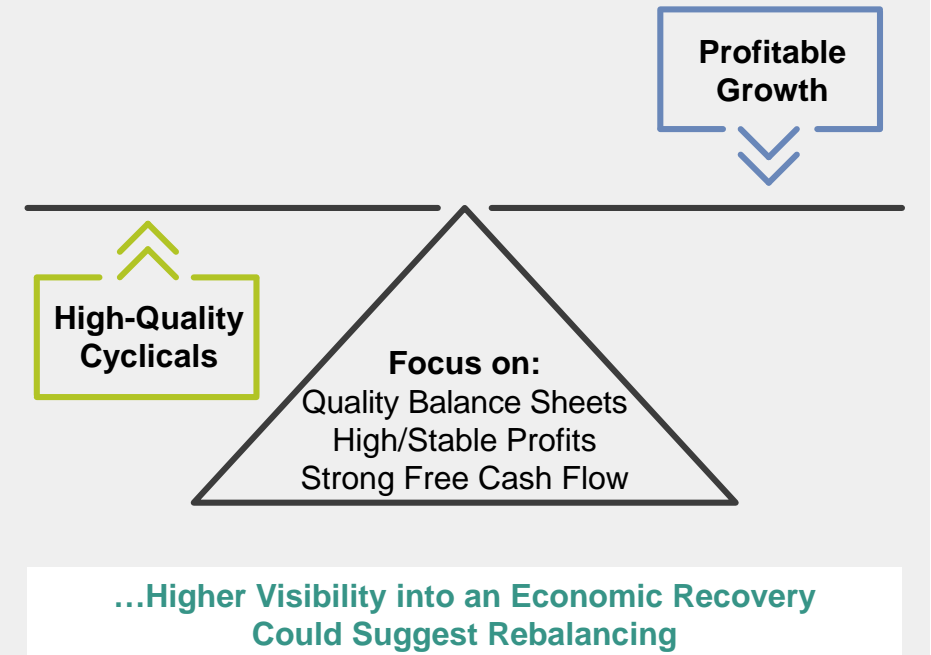


# A Difficult Quarter Fosters Limited Visibility: Maintain a Balance

**Not a One Spared: S&P 500 and Sector Total Returns 1Q:2020**



**Low Economic and Earnings Certainty Suggests Overexposure to Strong Business Models, While...**



**Historical analysis and current forecasts do not guarantee future results.**

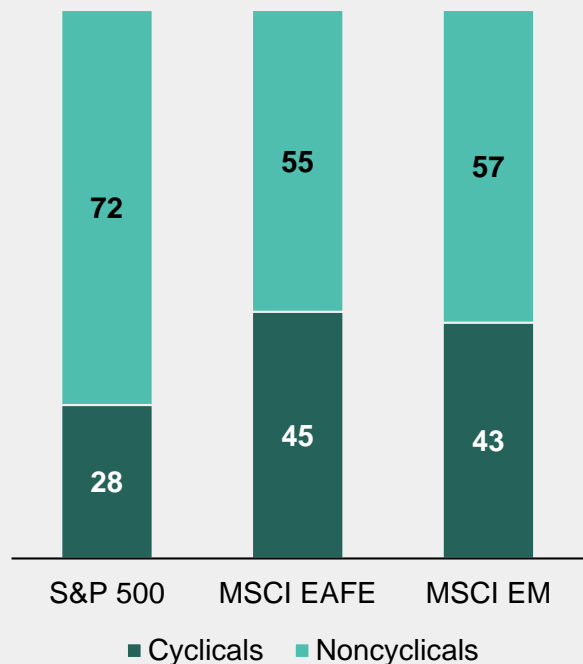
As of March 31, 2020

Source: Bloomberg, S&P and AB

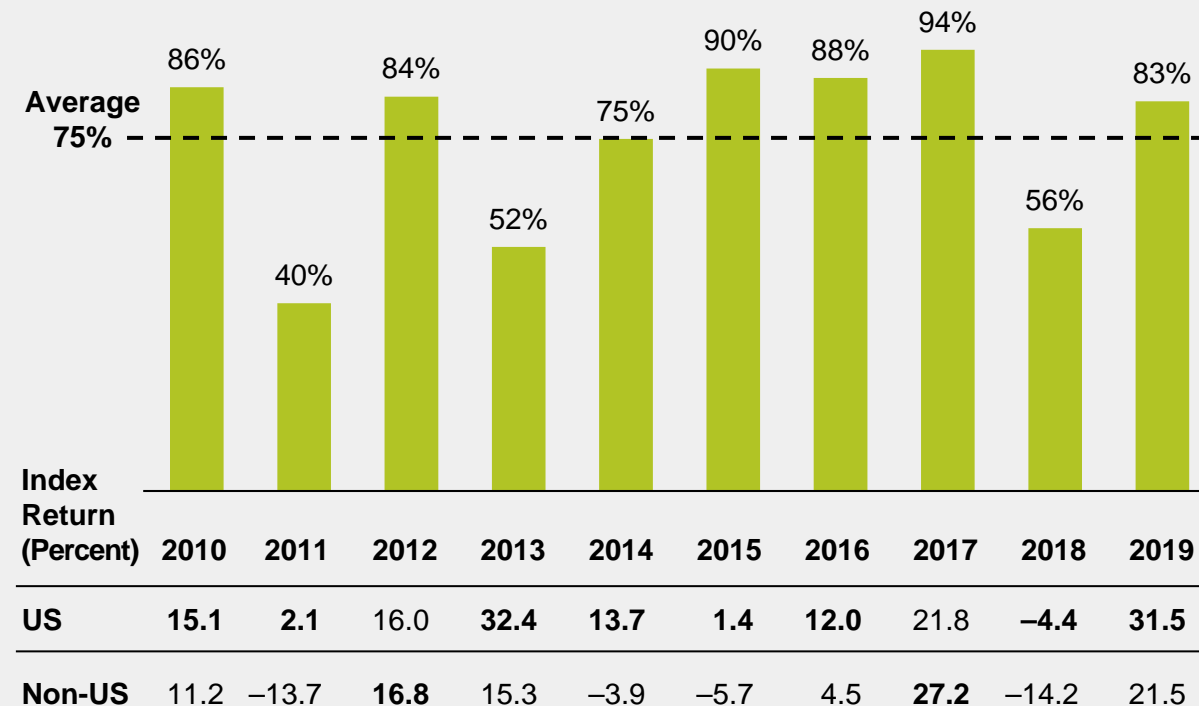
# International Equities More Cyclical, but Exceptional Performers Exist

## Non-US Indices

Higher Cyclical Content (Percent)\*



## Annual Percentage of the Top 50 Stocks That Were Non-US†



### Historical analysis and current forecasts do not guarantee future results.

\*Cyclicals includes energy, financials, industrials and materials. Noncyclicals includes communication services, consumer discretionary, consumer staples, healthcare, technology, real estate and utilities.

†Top 50 stocks are the companies with the highest total returns in the MSCI ACWI each year. Returns table uses S&P 500 and MSCI ACWI ex US in USD for US and Non-US, respectively.

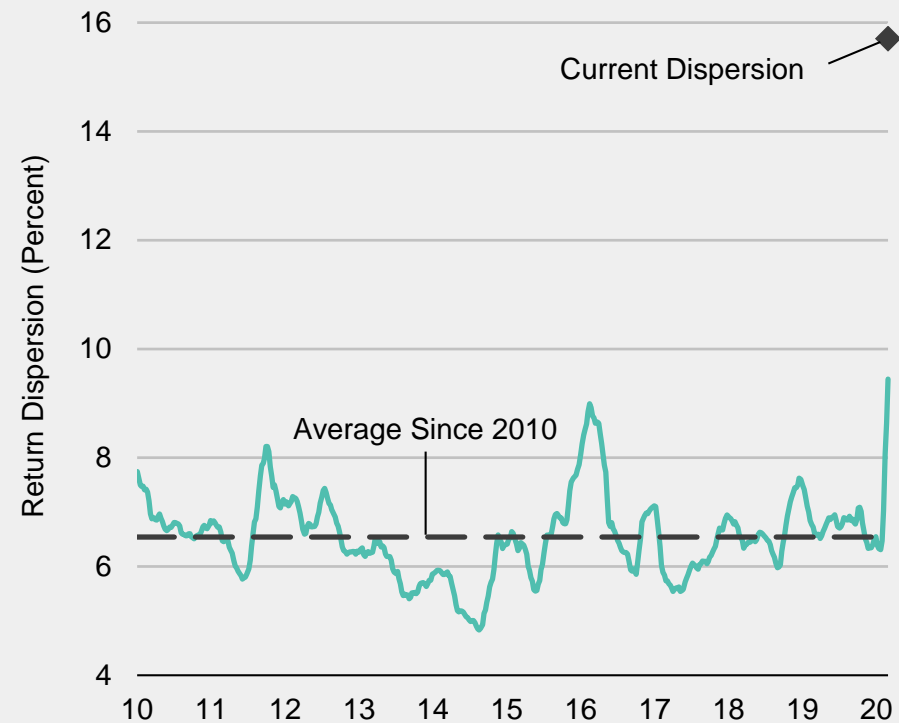
Left display as of March 31, 2020; right display through December 31, 2019

Source: Bloomberg, MSCI, S&P and AB

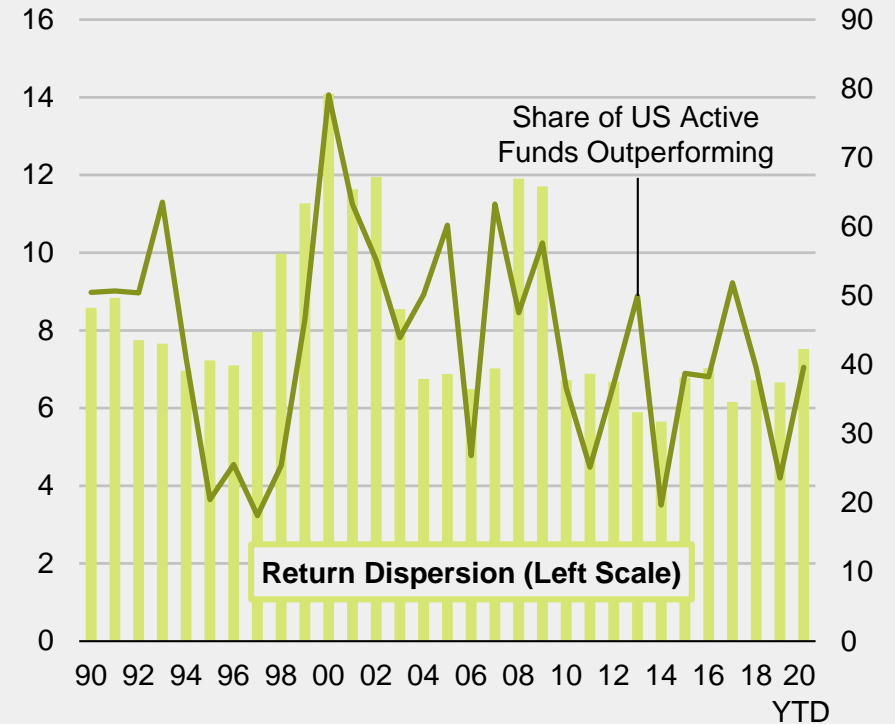
# Rising Dispersion Creates Enhanced Security Selection Opportunities

## US Market Return Dispersion over Time

Three-Month Trailing Average Historical Monthly Return Dispersion\*



## Percent of Active US Large-Cap Funds Outperforming Benchmarks vs. US Market Dispersion (Percent)



**Historical analysis and current forecasts do not guarantee future results.**

\*S&P 500 stock universe

Through March 31, 2020

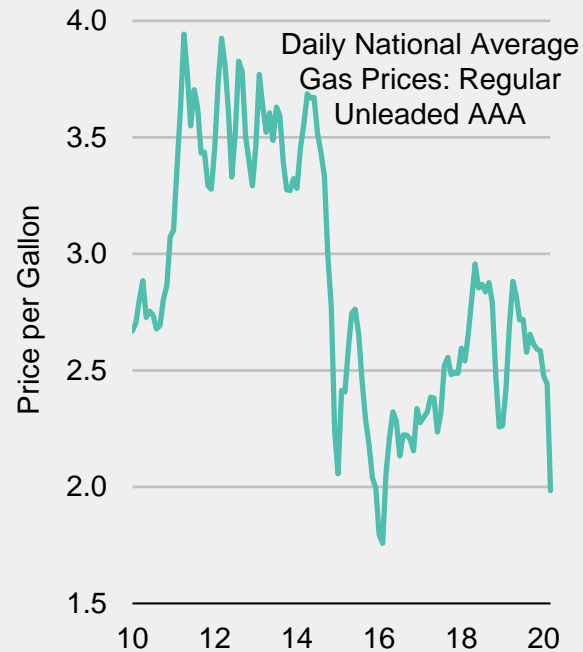
Source: Center for Research in Security Prices, eVestment, FactSet, Morningstar and Bernstein Analysis



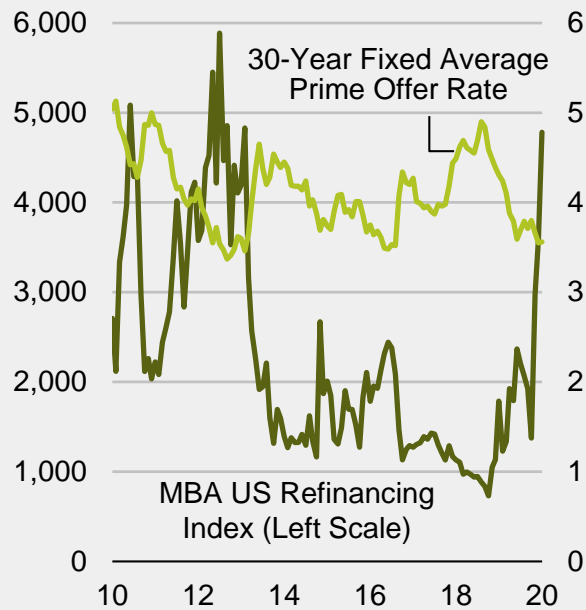
# Consumer Relief

## Lower Prices at the Pump and Mortgage Rates

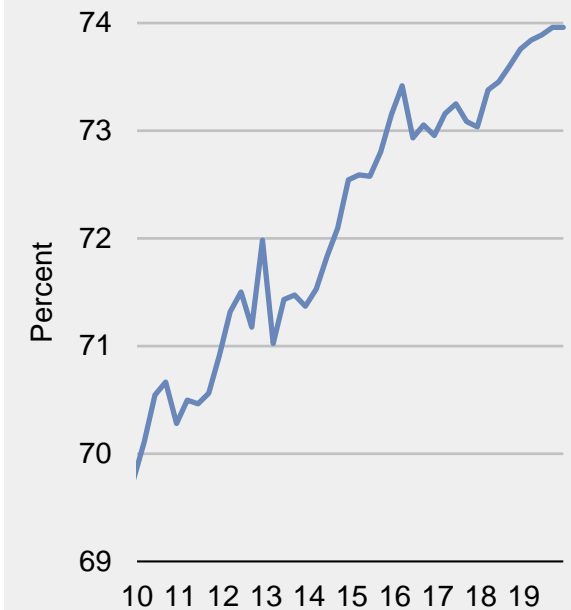
**Gasoline Prices Plummet**



**Mortgage Refinancing Soars as Lending Rates Fall**



**Consumers' Free Cash Flow Enhanced\***



**Historical analysis and current forecasts do not guarantee future results.**

AAA: American Automobile Association; MBA: Mortgage Bankers Association

\*Consumer Free Cash Flow = PCE% Core Index (what consumers have after paying taxes, food and energy) – Federal Reserve US Financial Obligations Ratio (consumer debt service as a percent of income)

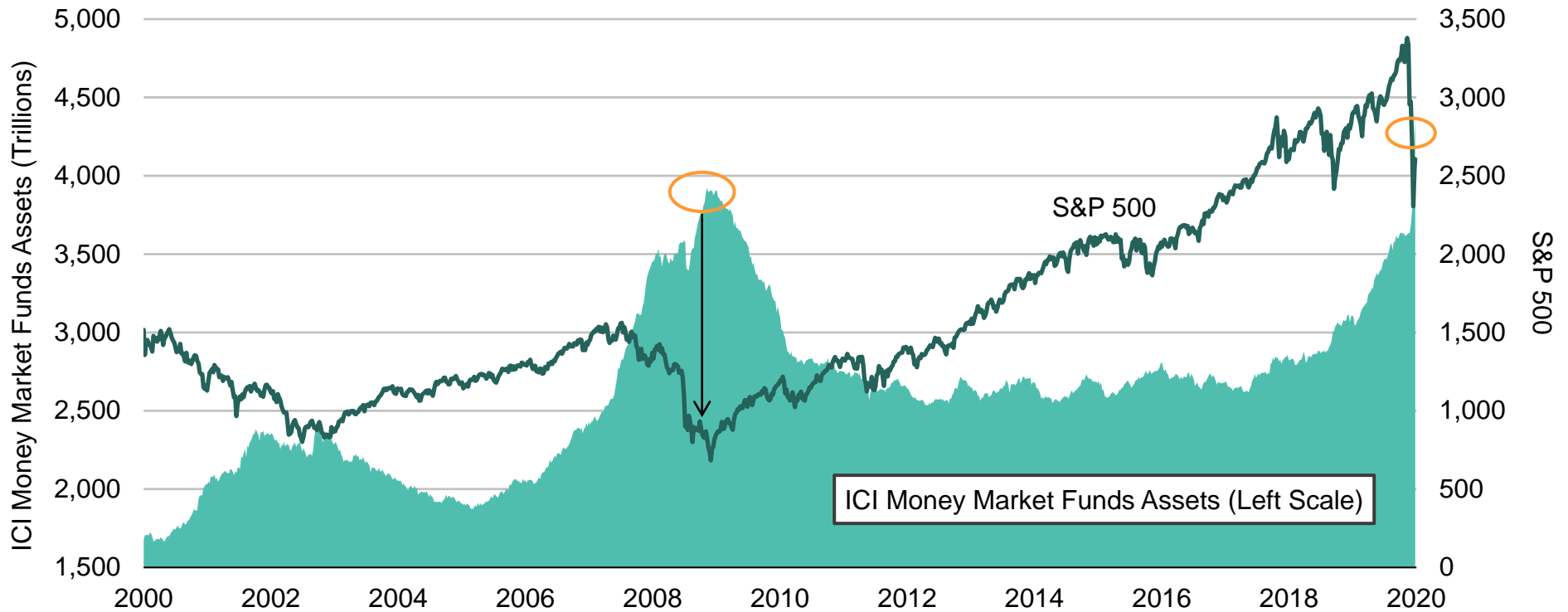
Left display through March 31, 2020; middle display: 30-year fixed average prime offer rate through March 30, 2020, and MBA US refinancing index as of March 27, 2020; right display through December 31, 2019

Source: Bloomberg, Cornerstone Macro and AB



# Cash in Money Market Funds at a Modern-Day High

Added Buying Power when Confidence Returns



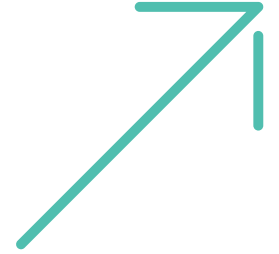
**Historical analysis and current forecasts do not guarantee future results.**

ICI Money Market Funds Assets (MMFA): total assets in money market funds for the week. Figure is a total of taxable and tax-exempt funds that report to Investment Company Institute.

S&P through March 31, 2020; MMFA through April 1, 2020

Source: Bloomberg and AB





# APPENDIX

# Appendix: Economic Policy Summary—North America

Summary	Monetary Stimulus	Liquidity Operations and Funding	Fiscal Stimulus
<b>US</b>	<ol style="list-style-type: none"> <li>1. The Federal Reserve cut interest rates by a total of 150 b.p. in two emergency meetings on March 3 (50 b.p.) and March 15 (100 b.p.), taking the federal funds rate to 0%–0.25%, along with \$700 billion in asset purchases</li> <li>2. The Fed also cut the discount window rate by 150 b.p. to 0.25% on March 16</li> <li>3. The Fed followed on March 23 with unlimited and open-ended QE (including CMBS), planned purchases of corporate, municipal government bonds</li> </ol>	<ol style="list-style-type: none"> <li>1. Trillions of dollars in repurchase agreements, flooding the markets with cash</li> <li>2. Swap lines with other major central banks to provide dollar funding</li> <li>3. Facility to support money market funds</li> <li>4. Easing of bank capital buffers, including reducing reserve requirement for banks to zero</li> <li>5. Funding backstop for businesses to provide bridging loans of up to four years</li> <li>6. Funding to help credit flow in asset-backed securities markets</li> <li>7. Plans to extend credit to small- and medium-sized businesses</li> <li>8. Broadened the ability of foreign central banks to access US dollars by allowing them to exchange holdings of US Treasury securities for overnight dollar loans (min. of six months)</li> </ol>	<ol style="list-style-type: none"> <li>1. On March 13, President Trump declared a national emergency, freeing up \$50 billion in federal aid to combat the virus</li> <li>2. Passed “Phase 1” package on March 6: \$8.3 billion</li> <li>3. Passed “Phase 2” package on March 18: \$100 billion for unemployment benefits, paid sick leave, free virus testing</li> <li>4. Passed “Phase 3” package on March 27: over \$2 trillion for economic support. Listed below are major elements of the plan. Cost estimates are provided by the Committee for a Responsible Federal Budget: <ol style="list-style-type: none"> <li>a) \$532 billion in big business and local government loans &amp; financial assistance (including \$61 billion for airlines)</li> <li>b) \$377 billion in small-business loans &amp; grants</li> <li>c) \$290 billion in direct payments to Americans (\$1,200 per individual and \$500 per child)</li> <li>d) \$290 billion in tax cuts</li> <li>e) \$260 billion for expanding unemployment insurance</li> <li>f) \$150 billion in state and local stimulus funds</li> <li>g) \$385 billion in miscellaneous support (\$126 billion for hospital, veteran &amp; other healthcare; \$26 billion for vaccines &amp; stockpiles)</li> </ol> </li> </ol>
<b>Canada</b>	<ol style="list-style-type: none"> <li>1. The Bank of Canada (BOC) cut rates by 150 b.p. in three emergency meetings on March 4 (50 b.p.), March 13 (50 b.p.) and March 27 (50 b.p.), taking the overnight interest rate to 0.25%</li> <li>2. The BOC also said on March 27 that it plans to start buying a minimum of \$3.5 billion a week in government securities as well as short-term debt issued by companies</li> </ol>	<ol style="list-style-type: none"> <li>1. The BOC announced on March 12 to expand the term repo operations to weekly, from bi-weekly, and widen the terms to include six-month and twelve-month operations</li> <li>2. The BOC announced a \$35 billion insured mortgage purchase program and the expansion of eligible collateral for term repo operations on March 16</li> <li>3. The Office of the Superintendent of Financial Institutions (OSFI) lowered bank reserve requirements, allowing banks to lend an additional \$214 billion</li> <li>4. The government introduced a \$7 billion credit support program for businesses on March 13</li> </ol>	<ol style="list-style-type: none"> <li>1. The government unveiled a sweeping emergency-aid package on March 18, containing <ol style="list-style-type: none"> <li>a) \$39 billion in tax deferrals for businesses and families</li> <li>b) \$19 billion aid package for workers and low-income households</li> </ol> </li> </ol>

In US dollars



# Appendix: Economic Policy Summary—Europe

Summary	Monetary Stimulus	Liquidity Operations and Funding	Fiscal Stimulus
<b>Eurozone</b>	<ol style="list-style-type: none"> <li>1. On March 12, the European Central Bank (ECB) added \$131 billion to its existing asset purchase program of \$22 billion a month</li> <li>2. On March 19, the ECB added another \$820 billion in QE, taking the total to about \$1.2 trillion this year, and added Greece to the portfolio of bonds it would purchase</li> <li>3. On March 26, it eliminated the cap on how many bonds it can buy from any single eurozone country</li> </ol>	<ol style="list-style-type: none"> <li>1. The ECB cut the interest rate on its Targeted Long-Term Refinancing Operations (TLTROs), cheap loans to banks, by 25 b.p., to -0.75% on March 12</li> <li>2. The ECB also provided additional TLTROs to bridge bank funding through June and relaxed capital rules</li> </ol>	<ol style="list-style-type: none"> <li>1. EU suspended limits on EU government borrowing</li> <li>2. EU is considering allowing a precautionary credit line worth 2% of national GDP from the European Stability Mechanism (ESM) bailout fund</li> </ol>
<b>France</b>	—	—	<ol style="list-style-type: none"> <li>1. The French government announced on March 16 that it will guarantee up to \$328 billion of corporate borrowing from commercial banks</li> <li>2. The government announced its \$49 billion crisis measures on March 17 to help companies and workers               <ol style="list-style-type: none"> <li>a) Reduced social security contributions for an amount of \$38 billion</li> <li>b) Unemployment benefits linked to forced part-time employment that cost \$9 billion</li> <li>c) Solidarity fund for the self-employed that requires at least \$2 billion</li> </ol> </li> </ol>
<b>Germany</b>	—	—	<ol style="list-style-type: none"> <li>1. Germany agreed to package worth more than \$820 billion on March 23, including               <ol style="list-style-type: none"> <li>a) \$170 billion in debt, or about 4.5% of GDP, to finance higher social spending and a \$55 billion liquidity fund for self-employed</li> <li>b) \$657 billion rescue fund which contains \$110 billion earmarked for equity stakes in companies, \$110 billion in loans through KfW and roughly \$440 billion in loan guarantees</li> </ol> </li> </ol>

In US dollars





# Appendix: Economic Policy Summary—Europe (cont.)

Summary	Monetary Stimulus	Liquidity Operations and Funding	Fiscal Stimulus
<b>Italy</b>	—	—	<ol style="list-style-type: none"> <li>Italy adopted an emergency decree worth \$27 billion on March 16, suspending loan and mortgage repayments for companies and families and increasing funds to help firms pay temporarily laid-off workers. According to the minister, the decree provides \$3.9 billion to help the hard-pressed health service and \$11 billion to support families and workers</li> </ol>
<b>Spain</b>	—	—	<ol style="list-style-type: none"> <li>Spain announced a \$219 billion package on March 17; half of the economic assistance in state-backed credit guarantees for companies and the rest include loans and aid for vulnerable people</li> <li>The government approved on March 31 a \$761 million aid package, including a measure to suspend evictions of vulnerable households for six months after the state of emergency is lifted</li> </ol>
<b>UK</b>	<ol style="list-style-type: none"> <li>The Bank of England (BoE) cut interest rates by 65 b.p. in two emergency meetings on March 11 (50 b.p.) and March 19 (15 b.p.), which took the rates to a record low of 0.10%</li> <li>The BoE also announced on March 19 that it was buying \$248 billion worth of UK government bonds and corporate bonds</li> </ol>	<ol style="list-style-type: none"> <li>The BoE introduced a new program for cheap credit and reduced a capital buffer to help banks lend</li> <li>A BoE corporate financing facility will buy commercial paper with a maturity of up to 12 months from businesses that had an investment-grade credit rating or similar pre-crisis</li> </ol>	<ol style="list-style-type: none"> <li>On March 11, a \$37 billion stimulus was announced by the UK government. Among other things, it includes a tax cut for retailers, cash grants to small businesses, a mandate to provide sick pay for people who need to self-isolate, a subsidy to cover the costs of sick pay for small businesses and expanded access to government benefits for the self-employed and unemployed</li> <li>On March 17, the government unveiled a larger stimulus package which includes \$379 billion in business loan guarantees and \$23 billion in business tax cuts and grant funding to businesses hit worst by the virus, such as retail and hotel businesses</li> <li>On March 20, a third round of measures was announced, including               <ol style="list-style-type: none"> <li>A program offered to pay 80% of wage bills if staff put on leave up to a maximum of \$3,098 a month each which expected to cost \$96 billion</li> <li>An increase in safety-net tax credits for people who are out of work by \$1,200 a year, with spending worth \$8.5 billion</li> <li>\$1.2 billion to support renters</li> <li>Businesses also allowed to temporarily hold on to \$37 billion in value-added tax (VAT)</li> </ol> </li> </ol>

In US dollars



# Appendix: Economic Policy Summary—Australasia

Summary	Monetary Stimulus	Liquidity Operations and Funding	Fiscal Stimulus
<b>Australia</b>	<ol style="list-style-type: none"> <li>1. The Reserve Bank of Australia (RBA) cut rates by 50 b.p. in two decisions (25 b.p. on March 3 and another 25 b.p. on March 19), taking the cash rate to 0.25%</li> <li>2. The RBA introduced the first use of quantitative easing on March 19, setting a target of around 0.25% for bond yields</li> </ol>	<ol style="list-style-type: none"> <li>1. The RBA announced the start of new types of repo operations on March 18</li> <li>2. Announced plans to start a \$55 billion funding facility to banks at a fixed rate of 0.25% on March 19</li> <li>3. The RBA also introduced a \$9.1 billion purchase program of residential mortgage-backed and other asset-backed securities</li> </ol>	<ol style="list-style-type: none"> <li>1. On March 12, an \$11 billion stimulus package was announced, including payments to small businesses to encourage hiring, one-time payment to people collecting government benefits and business subsidies to industries such as tourism, which have been hit hardest by the coronavirus</li> <li>2. On March 22, a second stimulus package worth \$54 billion was announced, including, among other things, \$15 billion in cash payments equal to payroll withholdings for small businesses, up to \$60,000 each, and \$24 billion in small-business loans</li> <li>3. On March 30, a six-month wage subsidy package of \$79 billion was announced. The package is estimated to benefit 6 million people</li> </ol>
<b>China</b>	<ol style="list-style-type: none"> <li>1. The People's Bank of China (PBOC) cut the one-year medium-term lending facility rate by 10 b.p. to 4.05% on February 16, followed by cutting its one-year and five-year prime rates by 10 b.p. and 5 b.p. to 4.05% and 4.75%, respectively</li> </ol>	<ol style="list-style-type: none"> <li>1. The PBOC expanded reverse repo operations by \$174 billion on February 3 and added another \$71 billion on February 4, totaling \$245 billion. It cut the seven-day reverse repo rate to 2.20% from 2.40% on March 30</li> <li>2. The PBOC cut the requirement of cash that banks must hold as reserves for the second time this year on March 13, releasing \$78 billion</li> <li>3. On April 3, the PBOC announced that it will cut the reserve requirement ratio (RRR) by 100 b.p. to 6% for mid-sized and small banks, releasing around \$56 billion. The first cut of 50 b.p. will be effective as of April 15, and the second cut of another 50 b.p. will be effective as of May 15</li> <li>4. In addition, the interest rate on financial institutions' excess reserves with the central bank would be reduced by 37 b.p. to 0.35%, effective April 7</li> <li>5. China offered easier funding for small- and medium-sized businesses, increasing yuan re-lending and re-discount quotas by \$70 billion on February 25. China also increased policy banks' loan quota by \$49 billion to make loans targeting these businesses</li> </ol>	<ol style="list-style-type: none"> <li>1. As of mid-March, many local governments in China have been giving out prepaid spending vouchers to boost consumer spending, but the amounts are relatively small</li> <li>2. The Chinese government has asked banks to extend the terms of business loans and commercial landlords to reduce rents</li> </ol>

In US dollars



# Appendix: Economic Policy Summary—Australasia (cont.)

Summary	Monetary Stimulus	Liquidity Operations and Funding	Fiscal Stimulus
<b>Japan</b>	1. The Bank of Japan (BOJ) announced a significant increase in QE on March 16. It said it would be doubling the rate at which it was purchasing ETFs from \$56 billion a year to \$112 billion, and also increasing purchases of corporate bonds and commercial paper	1. The BOJ also created a new loan program to extend one-year, zero-rate loans to financial institutions, which was announced on March 16	<ol style="list-style-type: none"> <li>1. Passed two packages of small business loans, a \$4.6 billion package in February, and a \$15 billion one on March 11. The most recent spending bill also included \$4 billion for a number of programs, including boosting mask production and stopping the virus from spreading to nursing homes</li> <li>2. The government approved on April 7 an unprecedented economic stimulus package equal to 20% of economic output. The package totals \$1 trillion and includes cash payouts worth more than \$55 billion to households and small and midsize firms. The package also features tax breaks and zero-interest loans</li> </ol>
<b>India</b>	—	<ol style="list-style-type: none"> <li>1. The Reserve Bank of India slashed its benchmark repo rate by 75 b.p. to 4.40% in an emergency meeting on March 27</li> <li>2. The central bank also cut the cash reserve ratio (CRR) by 100 b.p. to 3% with effect from March 28. The reverse repo rate, too, was lowered by 90 b.p. to 4%</li> </ol>	<ol style="list-style-type: none"> <li>1. On March 26, India announced a \$22 billion stimulus plan providing direct cash transfers and food security measures, including               <ol style="list-style-type: none"> <li>a) Free grain and other staples for families for three months</li> <li>b) Expanded insurance for healthcare workers</li> <li>c) One-time cash payment to 30 million senior citizens</li> <li>d) Front-loading cash payments to 87 million farmers as part of an existing program</li> <li>e) Free cooking gas to rural areas for three months</li> <li>f) Establishing a fund to help construction workers affected by the quarantine</li> </ol> </li> </ol>
<b>South Korea</b>	1. The Bank of Korea cut interest rates by 50 b.p. to 0.75% on March 16	1. South Korea relaxed the foreign exchange liquidity coverage ratio (LCR) to 70% from 80% for banks until late May to encourage them to supply more dollars into local markets	<ol style="list-style-type: none"> <li>1. South Korea announced an initial supplementary budget worth \$9.5 billion on March 3</li> <li>2. President Moon Jae-in pledged \$41 billion in emergency financing for small businesses and later doubled the size of the package to \$82 billion on March 24. The package would also cover conglomerates and other major companies</li> <li>3. The government will be making emergency cash payments to all but the richest families, totaling \$7.4 billion, according to the president on March 21</li> </ol>

In US dollars

# The Fed's Liquidity Program Thus Far

Program	Target	Description	Size	Tenure
<b>Primary Dealer Credit Facility</b>	Primary Dealers	Expand short-term loans to primary dealers to support households and businesses	Open-Ended	At least six months
<b>Commercial Paper Funding Facility</b>	Commercial Paper	Expand liquidity to commercial paper market to support flow of credit to households and businesses	\$100 Billion	At least six months
<b>Money Market Mutual Fund Liquidity Facility</b>	Money Market Mutual Funds	Expand liquidity to money market funds	\$100 Billion	At least six months
<b>Money Market Mutual Fund Liquidity Facility (2)</b>	Munis	Expand liquidity to money market funds (including munis)	\$100 Billion	At least six months
<b>Primary Market Corporate Credit Facility</b>	Primary Credit Issuance	Supports credit through new corporate bond issuance (including ETFs)	\$100 Billion	At least six months
<b>Secondary Market Corporate Credit Facility</b>	Secondary Credit Issuance	Stabilize and provide liquidity for outstanding corporate bond (including ETFs)	\$100 Billion	At least six months
<b>Term Asset-Backed Securities Loan Facility</b>	Asset-Backed Bonds	Enhance the issuance of asset-backed securities backed by student loans, auto loans, and credit card loans.	\$100 Billion	At least six months
<b>FIMA Repo Facility</b>	International Liquidity	Help foreign central banks meet demand for dollars overseas	Open-Ended	At least six months
<b>Main Street Business Lending Facility</b>	Main Street	Support lending to eligible small and midsize businesses	<\$4.25 Trillion	???

**Historical analysis and current forecasts do not guarantee future results.**

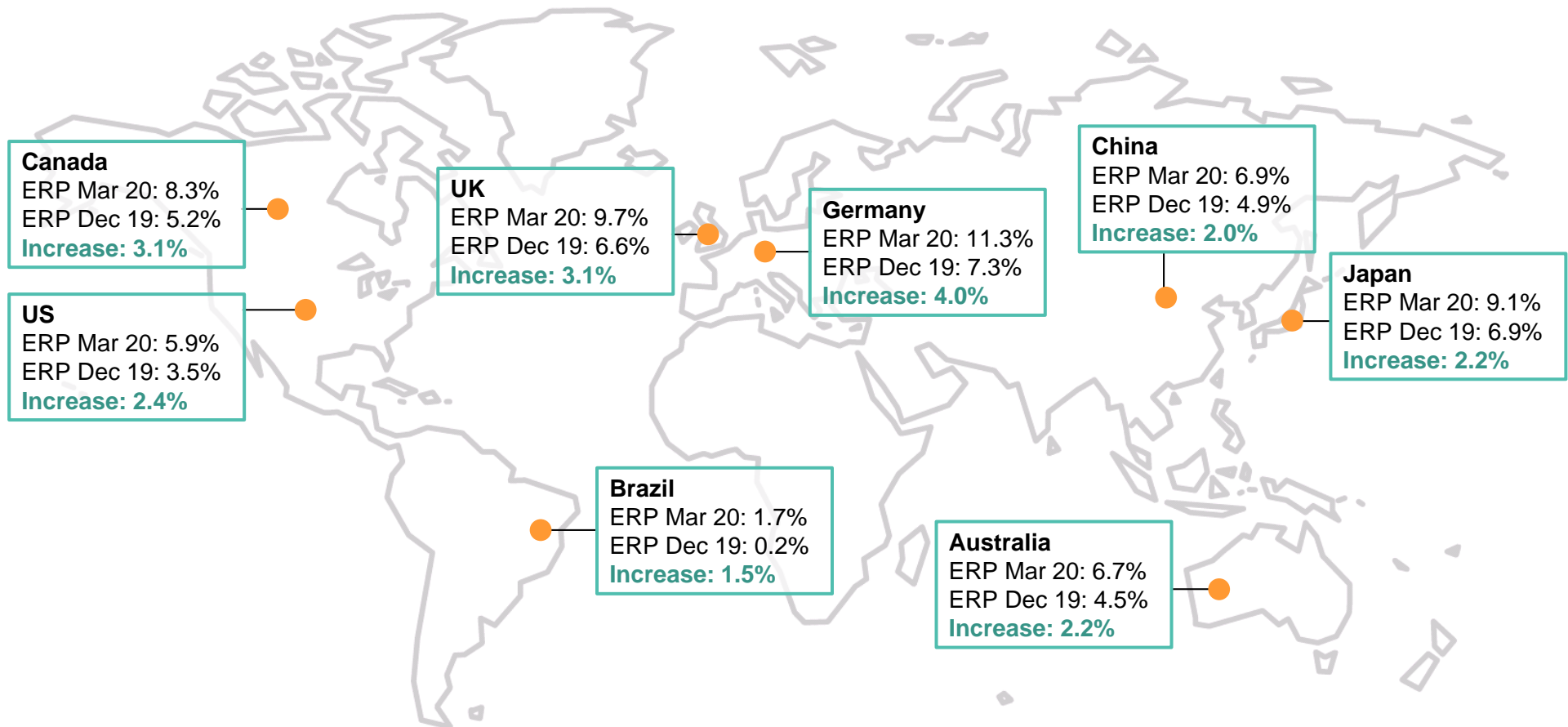
As of March 31, 2020

Source: US Federal Reserve and AB



# Lower Interest Rates Supportive of Equities

Equity Risk Premiums (ERP) Have Risen Globally vs. Year-Ago Levels



**Historical analysis and current forecasts do not guarantee future results.**

Numbers may not sum due to rounding.

As of March 18, 2020

Source: FactSet, MSCI and AB



# Geopolitical Events Rarely Have a Lasting Market Impact

## Select Geopolitical Events Since 1970 and S&P 500 Returns (Percent)

Event	First Trading Day	One Week	One Month	One Quarter	One Year
Watergate	6/19/1972	-0.1	-1.4	0.4	-3.0
Yom Kippur War*	10/8/1973	1.4	-3.9	-10.0	-43.2
Three Mile Island Accident	3/28/1979	-0.1	-0.7	0.2	-4.2
Iran Hostage Crisis*	11/5/1979	-1.0	3.6	12.3	24.3
Reagan Assassination Attempt*	3/30/1981	0.6	0.6	-1.6	-16.9
Challenger Space Shuttle	1/28/1986	3.2	9.3	16.8	32.0
Iran-Contra Affair	11/3/1986	0.7	2.1	12.3	3.2
Iraq Invades Kuwait*	8/2/1990	-4.7	-8.9	-12.8	12.8
Desert Storm/First Gulf War*	1/17/1991	4.5	17.2	23.6	36.6
LA Riots	4/29/1992	2.0	2.3	2.8	10.2
WTC Bombing (1993)	2/26/1993	1.2	2.1	2.2	8.3
Oklahoma City Bombing	4/19/1995	1.4	3.1	11.3	30.5
Centennial Park Olympic Bombing	7/29/1996	4.3	4.6	10.8	50.6
Kenya/Tanzania Embassy Bombings	8/7/1998	-1.3	-10.5	5.1	21.0
USS Cole Bombing*	10/12/2000	-1.6	0.2	-2.5	-18.5
Bush-Gore Hanging Chad*	11/7/2000	-5.6	-5.5	-5.3	-20.9
9/11*	9/17/2001	-4.9	-0.9	4.7	-15.5
War in Afghanistan*	10/8/2001	1.9	3.0	9.8	-24.2

Event	First Trading Day	One Week	One Month	One Quarter	One Year
SARS†	2/11/2003	-0.1	-3.2	12.2	39.5
Second Gulf War	3/20/2003	-0.5	2.4	14.3	29.2
Madrid Train Bombings	3/11/2004	0.0	1.5	1.5	9.5
Orange Revolution-Ukraine	11/22/2004	1.1	2.2	3.1	8.6
Asian Tsunami	12/27/2004	0.3	-3.4	-2.7	6.8
London Bombings	7/7/2005	2.4	2.7	0.2	8.6
Hurricane Katrina	8/29/2005	1.1	1.0	5.7	9.5
Arab Spring	12/17/2010	1.2	4.2	1.6	0.2
Hurricane Sandy	10/29/2012	1.1	-0.0	7.0	27.3
Boston Marathon Bombing	4/15/2013	-2.1	3.0	6.3	16.7
Russia/Ukraine/Crimea	2/27/2014	1.6	0.5	3.5	16.8
Greek Referendum	11/5/2015	-1.2	-0.3	-8.4	1.4
Brexit	6/24/2016	-0.7	3.1	3.0	17.8
Trump Surprise Election Win	11/8/2016	1.6	5.4	8.1	24.0
Hurricane Harvey/Irma/Maria	8/25/2017	1.4	2.8	7.2	20.2
US-China Trade War‡	1/22/2018	2.2	-2.6	-3.7	-3.1
Coronavirus Outbreak	2/20/2020	-7.9	N/A	N/A	N/A

+ **Key Takeaway:** Stocks have generally shrugged off geopolitical events, since they rarely have a lasting impact on the business cycle

Summary	One Week	One Month	One Quarter	One Year
Average	0.1	1.0	4.1	9.3
Percent of Events Negative	40	37	29	29
Conflict/War Average	0.7	1.7	4.7	4.7
Terrorism Average	-0.1	0.7	4.4	12.4
Political Average	-0.2	1.1	2.4	5.3
Environmental Average	0.8	-0.1	3.4	11.9
Social Average	-0.5	2.3	7.6	16.2

**Historical analysis and current forecasts do not guarantee future results.**

\*Denotes the geopolitical event occurred during a recession or six months prior to the start of a recession

†Date that China officially notified the WHO of the outbreak

‡Tariffs on imports of solar panels and washing machines imposed

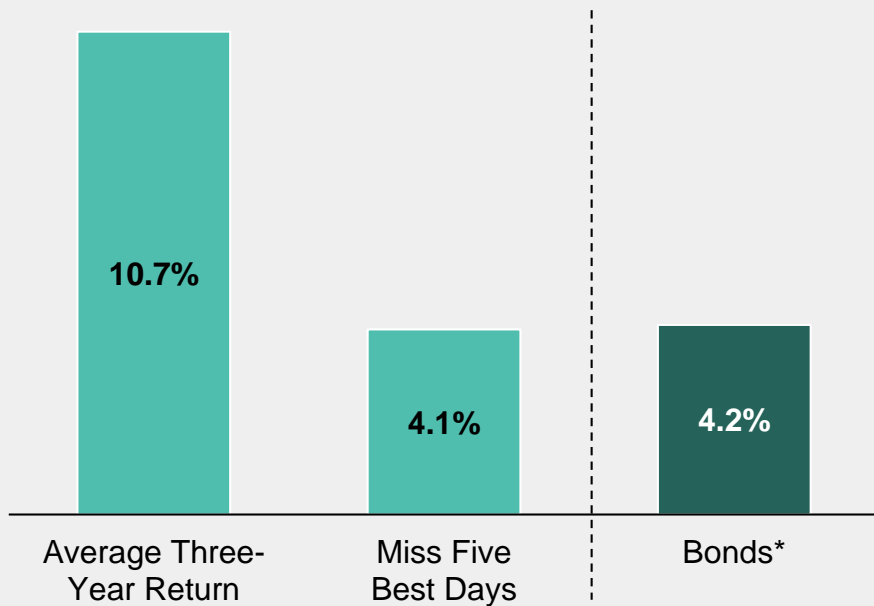
As of March 12, 2020

Source: FactSet, National Bureau of Economic Research, S&P, World Health Organization and AB



# Timing the Market Means Getting Out and Getting Back In

**S&P 500 Rolling Three-Year Returns**  
Annualized from 1988 through 2019



**The Cost of Missing Out: S&P 500 Return in 2020**  
Percent



**Historical analysis and current forecasts do not guarantee future results.**

\*Bonds represented by Lipper Short/Intermediate Municipal Bond Fund Average

Left display through December 31, 2019; right display as of March 31, 2020

Source: Bloomberg, Lipper, Morningstar, S&P and AB



# A Word About Risk

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All investments involve risk. Equity securities may rise and decline in value due to both real and perceived market and economic factors as well as general industry conditions.

A short strategy may not always be able to close out a short position on favorable terms. Short sales involve the risk of loss by subsequently buying a security at a higher price than the price at which it sold the security short. The amount of such loss is theoretically unlimited (since it is limited only by the increase in value of the security sold short). In contrast, the risk of loss from a long position is limited to the investment in the long position, since its value cannot fall below zero. Short selling is a form of leverage. To mitigate leverage risk, a strategy will always hold liquid assets (including its long positions) at least equal to its short position exposure, marked to market daily.

## **Important Risk Information Related to Investing in Emerging Markets and Foreign Currencies**

Investing in emerging-market debt poses risks, including those generally associated with fixed-income investments. Fixed-income securities may lose value due to market fluctuations or changes in interest rates. Longer-maturity bonds are more vulnerable to rising interest rates. A bond issuer's credit rating may be lowered due to deteriorating financial condition; this may result in losses and potentially default, or failure to meet payment obligations. The default probability is higher in bonds with lower, noninvestment-grade ratings (commonly known as "junk bonds").

There are other potential risks when investing in emerging-market debt. Non-US securities may be more volatile because of the associated political, regulatory, market and economic uncertainties; these risks can be magnified in emerging-market securities. Emerging-market bonds may also be exposed to fluctuating currency values. If a bond's currency weakens against the US dollar, this can negatively affect its value when translated back into US-dollar terms.

## **Bond Ratings Definition**

A measure of the quality and safety of a bond or portfolio, based on the issuer's financial condition, and not based on the financial condition of the fund itself. AAA is highest (best) and D is lowest (worst). Ratings are subject to change. Investment-grade securities are those rated BBB and above. If applicable, the Pre-Refunded category includes bonds which are secured by US government securities and therefore are deemed high-quality investment grade by the advisor.



# Index Definitions

Following are definitions of the indices referred to in this presentation. It is important to recognize that all indices are unmanaged and do not reflect fees and expenses associated with the active management of a mutual fund portfolio. Investors cannot invest directly in an index, and its performance does not reflect the performance of any AB mutual fund.

- + **Bloomberg Barclays Global Aggregate Corporate Bond Index:** Tracks the performance of investment-grade corporate bonds publicly issued in the global market and found in the Global Aggregate. (Represents global corporate on slide 2.)
- + **Bloomberg Barclays Global High-Yield Bond Index:** Provides a broad-based measure of the global high-yield fixed-income markets. It represents the union of the US High-Yield, Pan-European High Yield, US Emerging Markets High-Yield, CMBS High Yield and Pan-European Emerging Markets High-Yield indices.
- + **Bloomberg Barclays Global Treasury Index:** Tracks fixed-rate local currency government debt of investment-grade countries. The index represents the Treasury sector of the Global Aggregate Bond Index.
- + **Bloomberg Barclays Global Treasury: Euro Bond Index:** Includes fixed-rate, local-currency sovereign debt that makes up the Euro Area Treasury sector of the Global Aggregate Bond Index. (Represents euro-area government bonds on slide 2.)
- + **Bloomberg Barclays Global Treasury: Japan Bond Index:** Includes fixed-rate, local-currency sovereign debt that makes up the Japanese Treasury sector of the Global Aggregate Bond Index. (Represents Japan government bonds on slide 2.)
- + **Bloomberg Barclays Municipal Bond Index:** A rules-based, market value-weighted index engineered for the long-term tax-exempt bond market. (Represents municipals on slide 2.)
- + **Bloomberg Barclays US Aggregate Bond Index:** A broad-based benchmark that measures the investment-grade, US dollar-denominated, fixed-rate, taxable bond market, including US Treasuries, government-related and corporate securities, mortgage-backed securities (MBS [agency fixed-rate and hybrid ARM pass-throughs]), asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS).
- + **Bloomberg Barclays US Corporate High-Yield Bond Index:** Represents the corporate component of the Bloomberg Barclays US High-Yield Index. (Represents US high yield on slide 2.)
- + **Bloomberg Barclays US Treasury Index:** Includes fixed-rate, local-currency sovereign debt that makes up the US Treasury sector of the Global Aggregate Index. (Represents US government bonds on slide 2.)
- + **Credit Suisse Leveraged Loan Index:** Tracks the investable market of the US dollar-denominated leveraged loan market. It consists of issues rated 5B or lower, meaning that the highest-rated issues included in this index are Moody's/S&P ratings of Baa1/BB+ or Ba1/BBB+. All loans are funded term loans with a tenor of at least one year and are made by issuers domiciled in developed countries.

# Index Definitions (cont.)

- + **HFRI Equity Hedge Index:** Investment managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.
- + **J.P. Morgan Emerging Market Bond Index Global:** A benchmark index for measuring the total return performance of government bonds issued by emerging-market countries that are considered sovereign (issued in something other than local currency) and that meet specific liquidity and structural requirements. In order to qualify for index membership, the debt must be more than one year to maturity, have more than \$500 million outstanding, and meet stringent trading guidelines to ensure that pricing inefficiencies don't affect the index. (Represents emerging-market debt on slide 2.)
- + **MSCI EAFE Index:** A free float-adjusted, market capitalization-weighted index designed to measure developed-market equity performance, excluding the US and Canada. It consists of 22 developed-market country indices. (Represents EAFE on slide 2.)
- + **MSCI Emerging Markets Index:** A free float-adjusted, market capitalization-weighted index designed to measure equity market performance in the global emerging markets. It consists of 21 emerging-market country indices. (Represents emerging markets on slide 2.)
- + **MSCI Europe ex UK Index:** Captures large- and mid-cap representation across 14 developed markets countries in Europe. With 345 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across European developed markets, excluding the UK.
- + **MSCI Japan Index:** Designed to measure the performance of the large- and mid-cap segments of the Japanese market. With 321 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.
- + **MSCI United Kingdom Index:** Designed to measure the performance of the large- and mid-cap segments of the UK market. With 97 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.
- + **MSCI World Index:** A market capitalization-weighted index that measures the performance of stock markets in 24 countries.
- + **Russell 1000 Index:** A stock market index that represents the highest-ranking 1,000 stocks in the Russell 3000 Index, representing about 90% of the total market capitalization of that index.
- + **Russell 2000 Index:** Measures the performance of the small-cap segment of the US equity universe. It is a subset of the Russell 3000 Index, representing approximately 8% of the total market capitalization of that index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. (Represents US small-cap on slide 2.)

# Index Definitions (cont.)

+ **S&P 500 Index:** Includes a representative sample of 500 leading companies in leading industries of the US economy. (Represents US large-cap on slide 2.)

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