



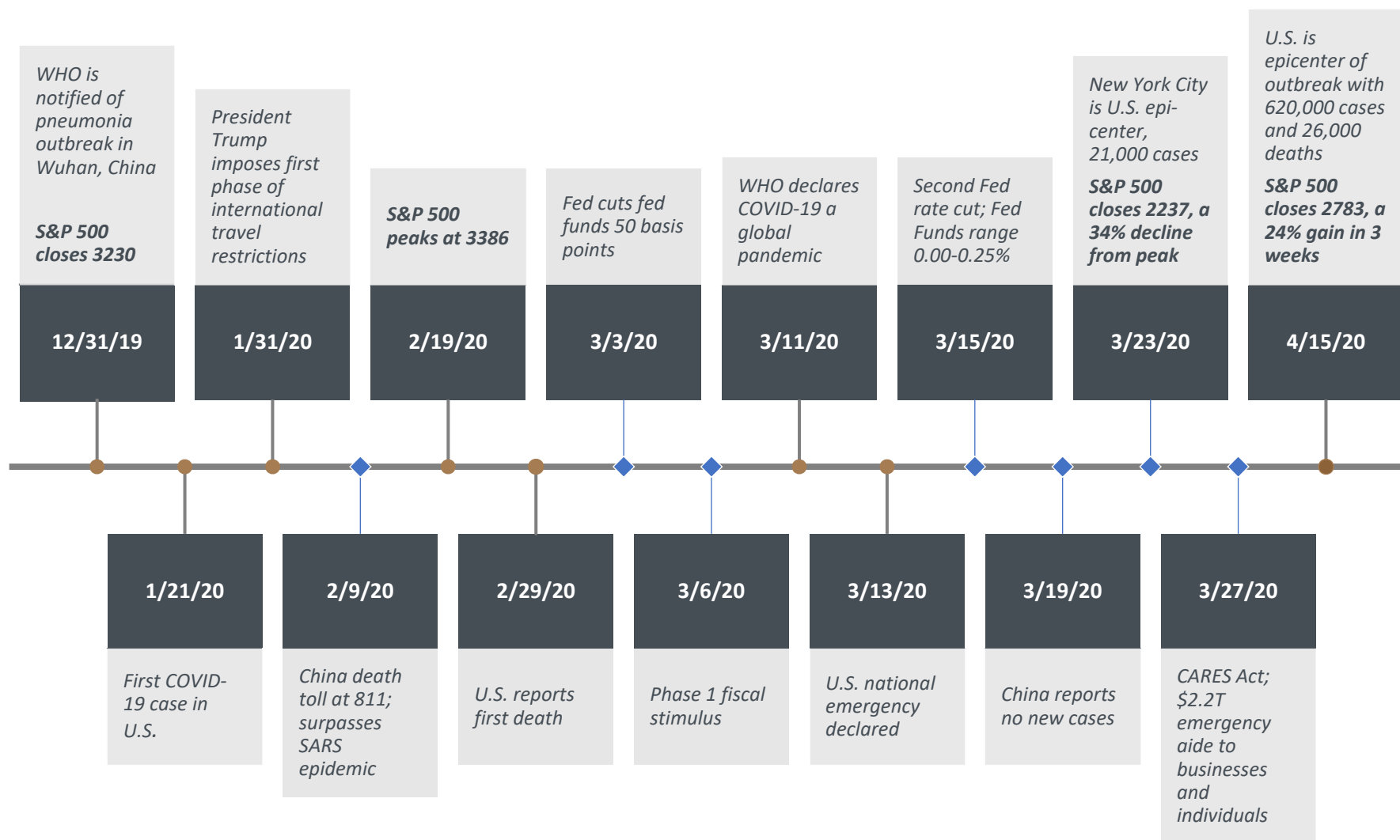
Economic Review and Outlook

1Q20

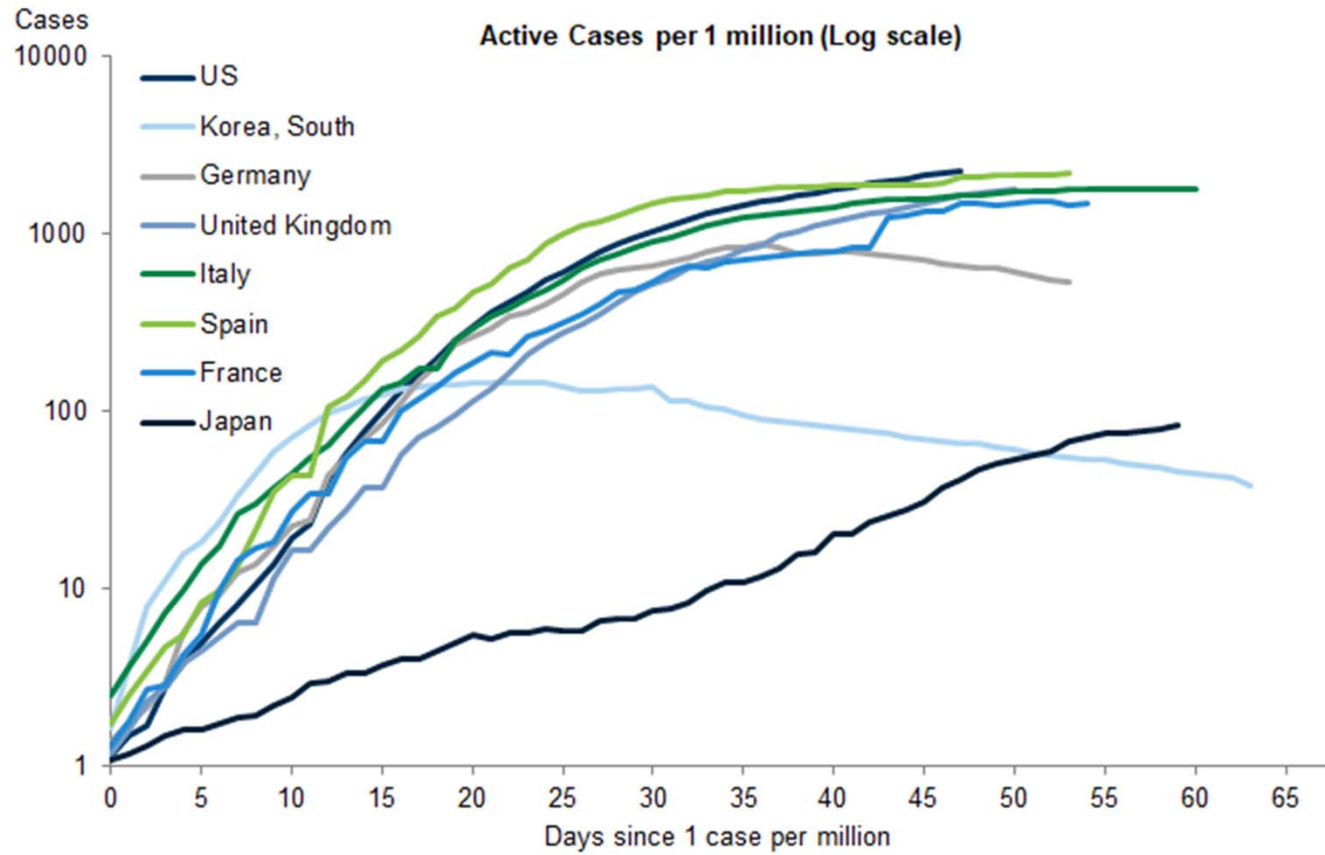
Marcia Peters, CFA
Chief Investment Officer

Every effort has been made to provide accurate and authoritative information regarding the subject matter in this report; however, accuracy and completeness cannot be guaranteed and is not warranted as such. Many statements and sources were used in compiling the data for this report. PEI does not assume responsibility for the accuracy or completeness of such information. In addition, certain information contained in this report may be obtained from multiple sources. PEI does not warrant that such information is accurate, correct, complete or timely. This information is provided with the understanding that PEI is not engaged in rendering legal, accounting, or actuarial advice. If such advice is required, the services of a competent professional of this kind should be sought. The information contained in this alert does not constitute the recommendation of any investment advisor or their services nor does PEI assume responsibility for the conduct of any investment manager, including the investment performance or compliance with the laws and regulations to which they are subject. This report has been prepared exclusively, and confidentially, for the informational use of the recipient, and any other use, including the reproduction of this report in any form, is strictly prohibited without the prior express written permission of Portfolio Evaluations, Inc.

Unprecedented, Extraordinary, Extreme



The Global Spread of Covid-19



*Sources: Goldman Sachs, Johns Hopkins University CSSE



The Tradeoff

- For every difficult decision, there is always a tradeoff. Occasionally it is too horrific to contemplate, and the decision is put off to another time. Unfortunately, that time has come. Stopping a devastating, rapidly spreading virus, or choosing economic growth and prosperity? Governments picked the former, leaving the global economy in ruins. Soon they could be forced to reconsider.
- The Fed, the Administration and Congress acted swiftly to develop extensive programs to support financial market stability and provide economic relief for businesses and individuals. More policy action on both fronts is anticipated. Only in the end will we know if it was too little or too much.
- Similar policy actions were implemented around the globe, although programs varied and were generally to a lesser extent.
- The decline in financial markets was swift; the S&P 500 was down 35% from peak to trough in about five weeks. At the very end of the quarter, the hope of a vaccine or a therapeutic calmed financial markets, as did the flattening of the infection curve.
- Early economic indicators were disastrous. Layoffs were swift. Last quarter, analysts delayed their recession forecasts for another year. Now it is here.
- Analysts generally agree that the recession will be deep, but the shape of the recovery is uncertain. Most anticipate a “U”; after the dramatic decline, economic growth will stall in the second and possibly part of the third quarter. Growth is expected to strongly rebound from pent up demand as consumers and businesses return to more normal spending patterns. The risk to the forecast is the longer the virus is not contained, the more prolonged the recession.
- What does that “normal” look like? We are left with more questions than answers. However, the sooner economies can restart, the less likely that many of the changes become structural, with fewer long-term ramifications.

	1Q20 Return
S&P 500	-19.60%
Russell 2000	-30.61%
MSCI EAFE	-22.83%
MSCI EM	-23.60%
BBgBarc US Aggregate	3.15%
FTSE NAREIT	-27.30%
S&P GSCI	-42.34%



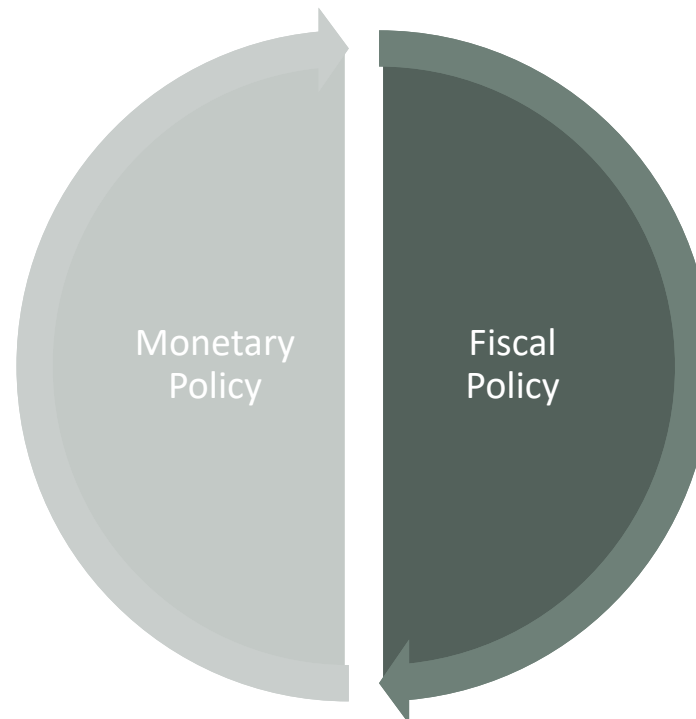
Unprecedented Support to Cushion Economic Disruption

Fed programs include:

- Unlimited Treasury/Agency purchases
- Expanded funding and loan facilities (CPFF/MMLF/TALF) to include municipal/HY/CD's/student loans
- Bridge support to corporate bond market and secondary market liquidity measures
- Expansion of the Exchange Stabilization Fund (ESF) to provide credit to businesses and consumers
- Main Street Lending Program to provide loans to small/mid-sized businesses
- Reactivation of dollar swap lines with global central banks

→To ensure credit to businesses and households

→To ensure financial market stability and liquidity



Three phases and counting:

- \$8.3B to vaccine R&D
- \$1B + to provide sick leave benefits, unemployment benefits/student loan relief
- \$2.2T CARES Act to provide funding for hospitals, healthcare organizations, impacted industries, state and local governments, and small businesses, in the form of loans and direct grants.
- Also includes direct support to individuals and families, based on income and additional weekly unemployment insurance.
- Waiver of 401K minimum distributions rules, withdrawal penalty

→An expansive bridge to economic recovery

*Note: Similar programs have been enacted by the ECB, BOE, BOJ, PBoC, RBA, and others and governments around the globe.

Date	As of:	Indicator	Level	Previous	Notes
3/27/20	March	Consumer Spending	0.2%	0.2%	Core inflation rose modestly, as did income
3/30/20	March	Dallas Fed Production Index	-35.3	16.4	Forward looking orders look very weak
3/31/20	March	Consumer Confidence	120	132.6	Better than expected but data was mid-March; indications consumption will slow
4/1/20	March	PMI Manufacturing Index	48.5	50.7	Large drop in production and new orders (ISM Index not as weak but similar story; Global numbers reflect China restart). Prepare for worse numbers.
4/2/20	Week of 3/28	Initial Jobless Claims	6,867,000	3,283,000	Catastrophic expectations continue in service industries
4/3/20	March	Unemployment	4.4%	3.5%	Sampled data mid-March so not fully reflective
4/9/20	Week of 4/4	Initial Jobless Claims	6,606,000	6,687,000	Job destruction continues
4/9/20	April	Consumer Sentiment	71.0	89.1	Largest decline on record, from 95.6 in February; indicates about 13% unemployment at this point
4/10/20	March	CPI	1.5%	2.3%	Price declines in energy and travel/lodging offset by increases in medical services
4/15/20	March	Retail Sales	-8.7%	-0.5%	Headline sales plunged, but data behind the topline number suggest futures sales could bounce back strongly.
4/15/20	March	Industrial Production	-5.4%	0.6%	Extreme decline across all sectors, including consumer goods, autos and durables; food had smaller decline
4/15/20	April	Empire State Manufacturing Survey	-78.2	-21.5	Record lows in manufacturing, new orders, but outlook is more positive than in March
4/16/20	April	Phila Fed Bus. Outlook	-56.6	-12.7	Reflect abrupt manufacturing closures, large drop in orders
4/16/20	Week of 4/11	Initial Jobless Claims	5,245,000	6,867,000	Total claims exceed 22MM; rate of claims is slowing, but data indicates unemployment rate could climb to 15-20%
4/21/20	March	Existing Home Sales	-8.5%	+6.5%	CV-19 keeps buyers away; more deterioration expected



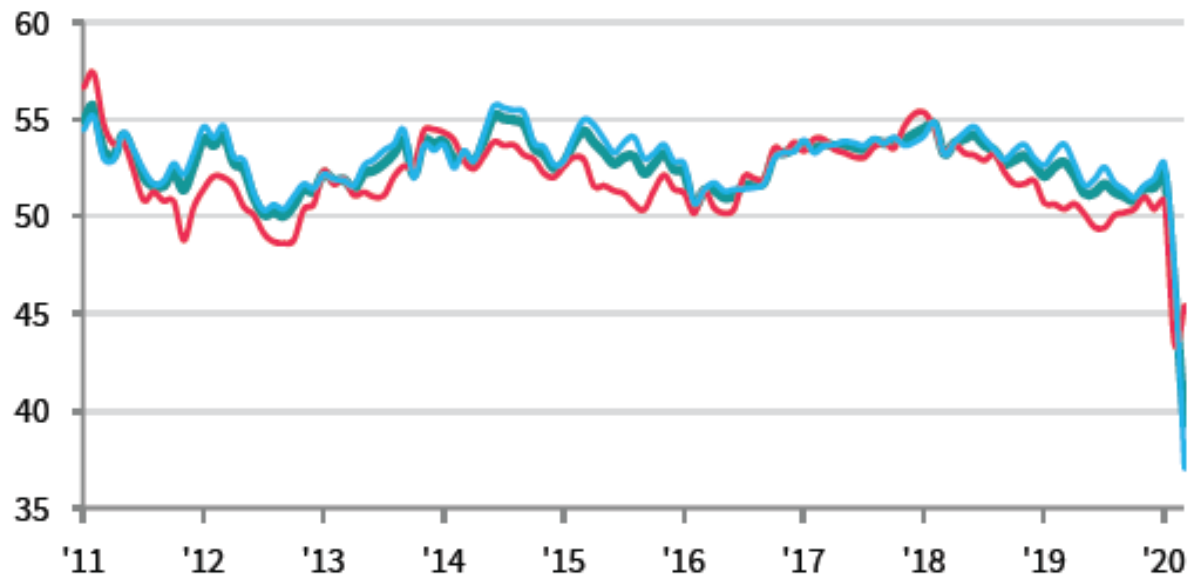
Global Production/Output

- Steepest decline in the manufacturing and services sectors since 2009 as the coronavirus pandemic lead to global business closures and layoffs, and social distancing reduced consumption

Global Output Index

Composite / Manufacturing / Services (Business Activity)

sa, >50 = growth since previous month

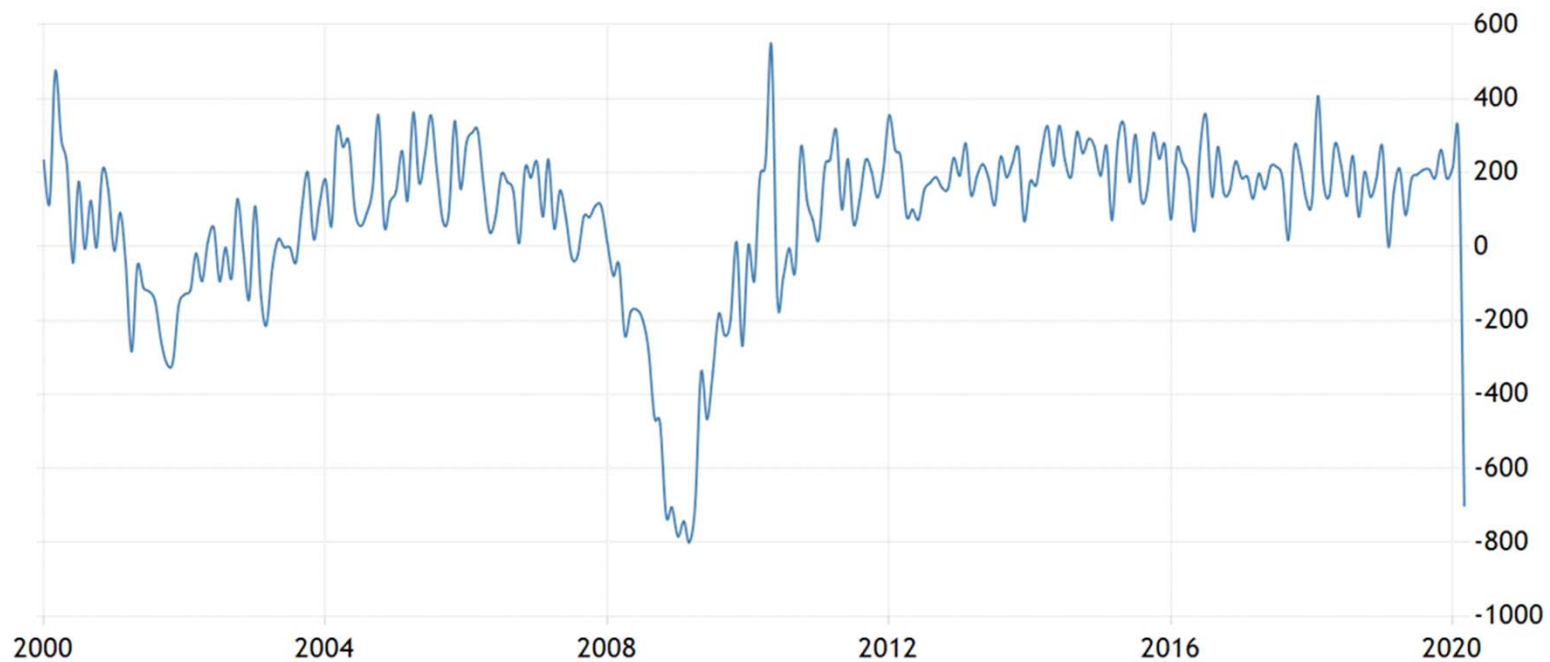


Sources: J.P. Morgan and Markit Economics



U.S. Non-Farm Payrolls

- Shocking decline as business react quickly to social distancing
- Unemployment forecasted to reach 15 to 25% in the second quarter

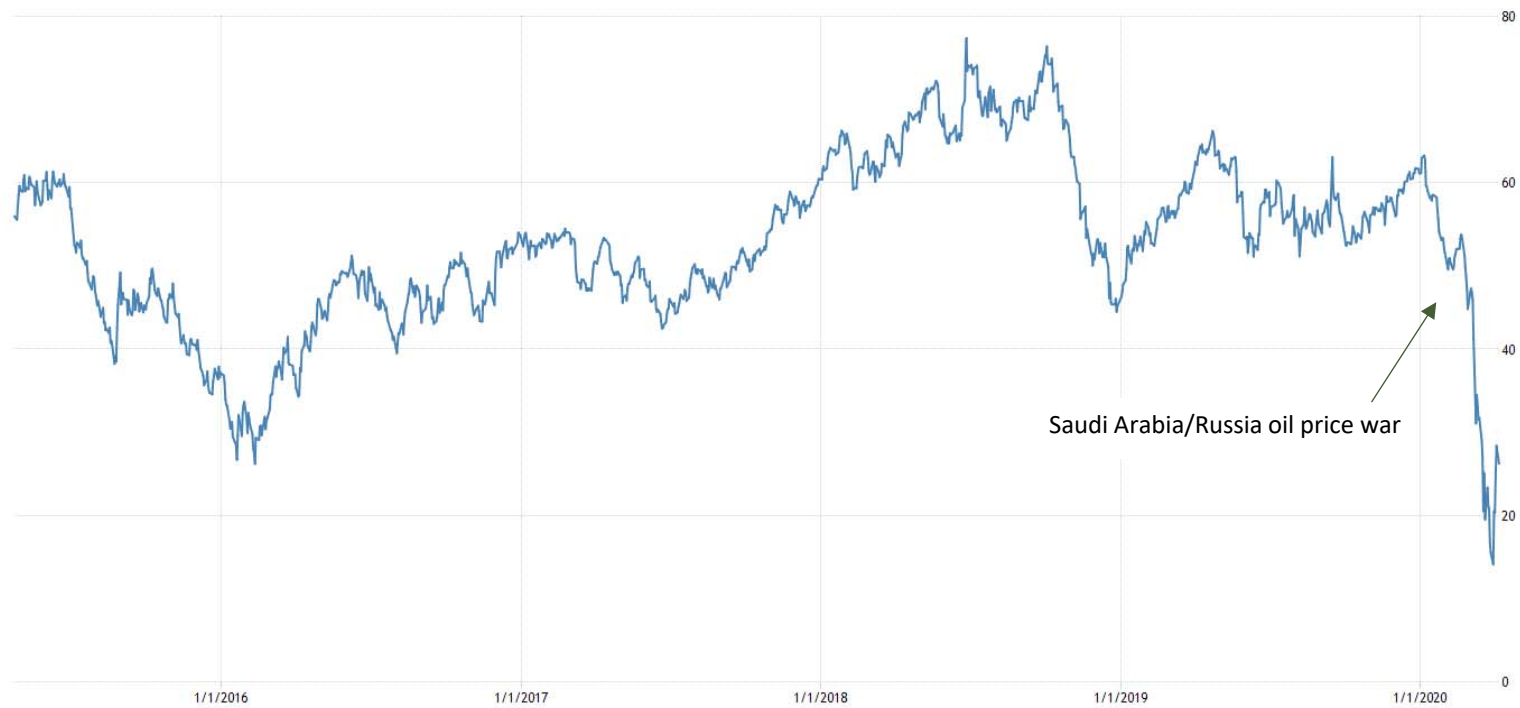


Sources: Trading Economics and U.S. Department of Statistics



WTI Oil Price

- Lower demand as economies slam on the brakes and a production war between Saudi Arabia and Russia left too much oil with no place to go.



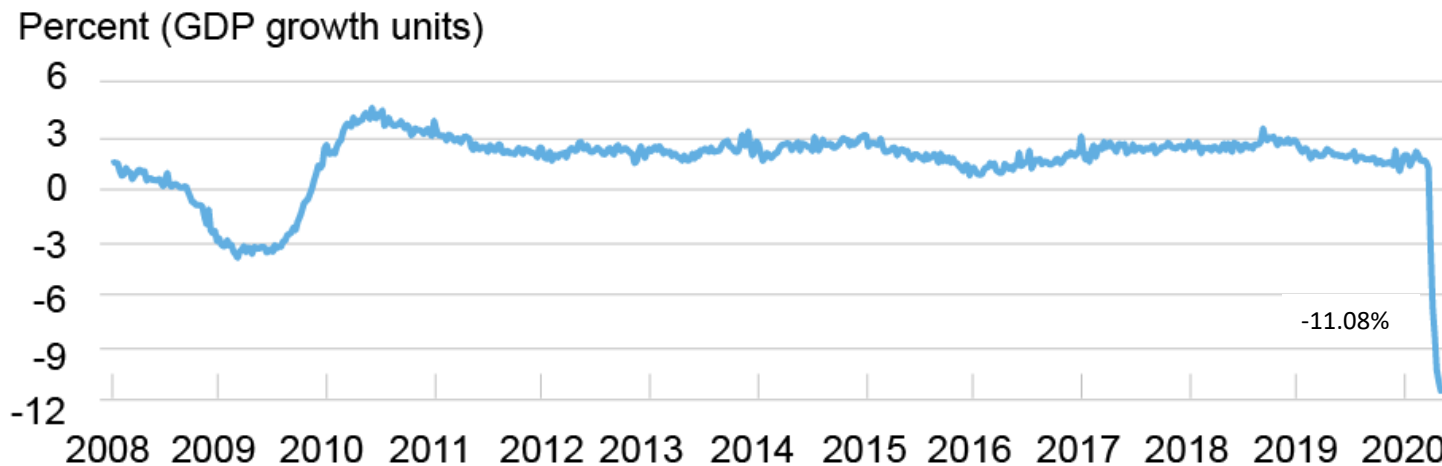
Source: Trading Economics



*The New York Fed’s Weekly Economic Index (WEI)**

- Sharp decline in second quarter U.S. economic activity is forecasted based on high-frequency data

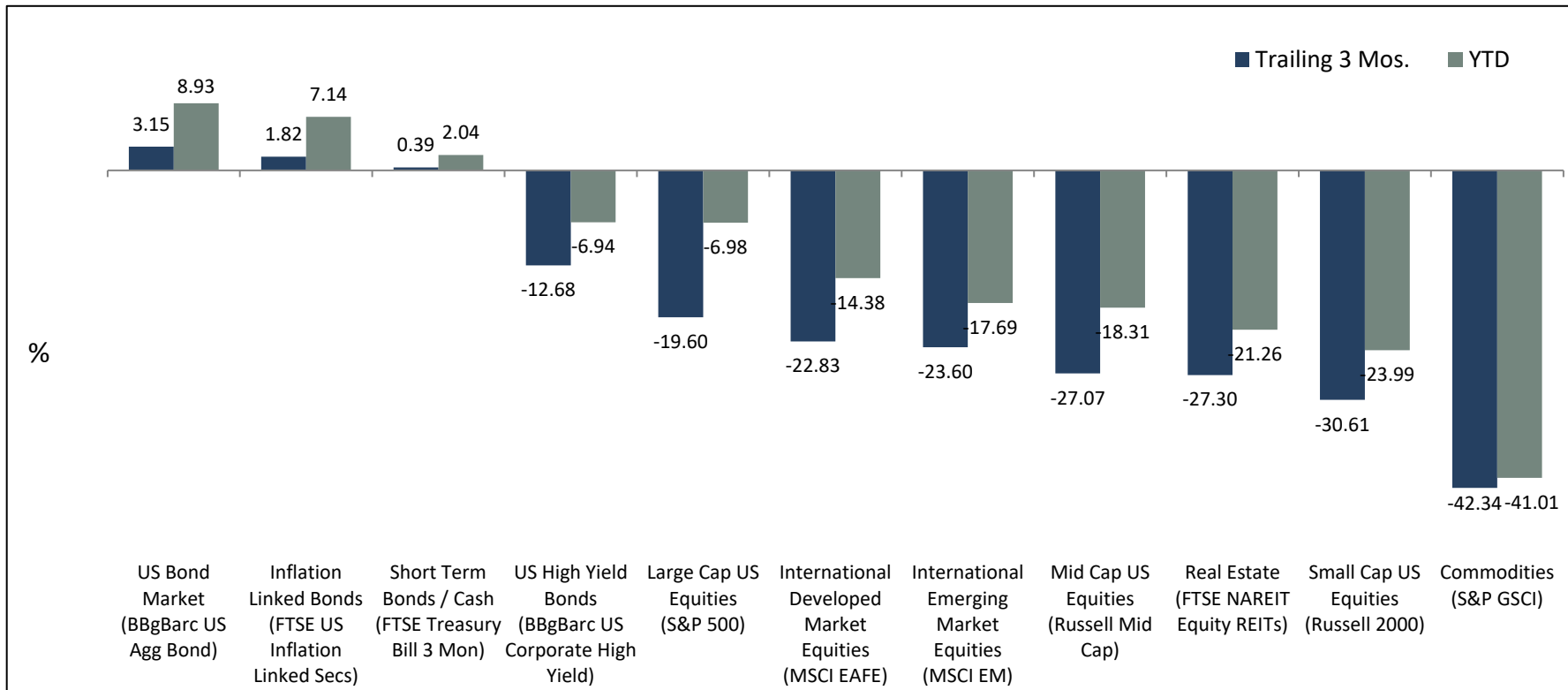
Date	GDP Index Level (annualized)
2/29/2020	1.58%
3/28/2020	-6.75%
4/4/2020	-8.41%
4/11/20	-10.4%
4/18/20	-11.08%



**The WEI is a new index created to reflect more immediate changes in the U.S. economy. The index includes ten weekly indicators of real economic activity that reflect consumption, employment, and consumer confidence data. The index is scaled to have the units of four-quarter percent change of real GDP. This data series differs from the N.Y. Fed’s Nowcast, which reflects low-frequency data.*



Asset Class Return Data, as of 3/31/2020



Source: Morningstar



Asset Class Return Data (%) as of 3/31/2020

DOMESTIC EQUITY

	Index	3 Mos.	YTD	1 Year	3 Year	5 Year	10 Year
Broad Market	DJ Industrial Average	-22.73	-22.73	-13.38	4.42	6.86	10.00
	S&P 500	-19.60	-19.60	-6.98	5.10	6.73	10.53
	NASDAQ Composite	-13.95	-13.95	0.70	10.39	10.70	13.67
	Wilshire 5000 Total Market	-20.70	-20.70	-8.94	4.09	5.99	10.19
Large Cap	Russell 1000	-20.22	-20.22	-8.03	4.64	6.22	10.39
	Russell 1000 Growth	-14.10	-14.10	0.91	11.32	10.36	12.97
	Russell 1000 Value	-26.73	-26.73	-17.17	-2.18	1.90	7.67
Mid Cap	Russell Mid Cap	-27.07	-27.07	-18.31	-0.81	1.85	8.77
	Russell Mid Cap Growth	-20.04	-20.04	-9.45	6.53	5.61	10.89
	Russell Mid Cap Value	-31.71	-31.71	-24.13	-5.97	-0.76	7.22
Small Cap	Russell 2000	-30.61	-30.61	-23.99	-4.64	-0.25	6.90
	Russell 2000 Growth	-25.76	-25.76	-18.58	0.10	1.70	8.89
	Russell 2000 Value	-35.66	-35.66	-29.64	-9.51	-2.42	4.79

Source: Morningstar

INTERNATIONAL EQUITY

	Index	3 Mos.	YTD	1 Year	3 Year	5 Year	10 Year
Developed	MSCI ACWI	-21.37	-21.37	-11.26	1.50	2.85	5.88
	MSCI ACWI Ex USA	-23.36	-23.36	-15.57	-1.96	-0.64	2.05
	MSCI EAFE	-22.83	-22.83	-14.38	-1.82	-0.62	2.72
	MSCI EAFE Growth	-17.51	-17.51	-5.84	2.98	2.47	4.71
	MSCI EAFE Value	-28.20	-28.20	-22.76	-6.65	-3.83	0.62
	MSCI EAFE Small Cap	-27.52	-27.52	-18.15	-2.88	0.97	4.81
	MSCI Europe	-24.33	-24.33	-15.50	-2.34	-1.31	2.46
	MSCI Europe Ex UK	-22.76	-22.76	-12.72	-1.46	-0.58	2.72
	MSCI Pacific Free	-20.30	-20.30	-12.42	-0.85	0.77	3.31
	MSCI Pacific Free Ex Japan	-27.60	-27.60	-23.65	-4.69	-1.52	2.14
	MSCI Japan	-16.79	-16.79	-6.69	0.95	1.82	3.83
Emerging	MSCI EM	-23.60	-23.60	-17.69	-1.62	-0.37	0.68
	MSCI BRIC	-20.93	-20.93	-14.81	2.22	2.23	0.38
	MSCI EM Latin America	-45.62	-45.62	-40.77	-12.98	-5.90	-6.67
	MSCI EM Europe	-36.47	-36.47	-21.87	-4.15	-1.28	-3.97
	MSCI EM Asia	-18.09	-18.09	-12.10	1.32	1.42	3.53

Source: Morningstar

FIXED INCOME

	Index	3 Mos.	YTD	1 Year	3 Year	5 Year	10 Year
	BBgBarc US Agg Bond	3.15	3.15	8.93	4.82	3.36	3.88
	BBgBarc US Government	8.08	8.08	13.08	5.78	3.63	3.72
	BBgBarc US Credit	-3.14	-3.14	5.10	4.19	3.28	4.75
	BBgBarc US Govt/Credit Interm	2.40	2.40	6.88	3.79	2.76	3.14
	BBgBarc US Govt/Credit Long	6.21	6.21	19.32	9.68	5.99	8.07
	FTSE US Inflation Linked Secs	1.82	1.82	7.14	3.60	2.72	3.61
	BBgBarc EM USD Aggregate	-9.48	-9.48	-2.89	1.51	3.28	5.09
	BBgBarc ABS	-0.21	-0.21	2.79	2.35	1.99	2.47
	BBgBarc US MBS	2.82	2.82	7.03	4.04	2.94	3.28
	FTSE Treasury Bill 3 Mon	0.39	0.39	2.04	1.74	1.12	0.60
	ICE BofAML 1-3Y US Trsy	2.81	2.81	5.42	2.70	1.85	1.43
	BBgBarc US Corp Aaa	4.74	4.74	14.45	8.03	5.26	5.54
	BBgBarc US Corp A	-0.67	-0.67	7.38	4.77	3.65	4.94
	BBgBarc US Corp Baa	-7.10	-7.10	2.15	3.45	2.97	5.09
	BBgBarc US Corporate High Yield	-12.68	-12.68	-6.94	0.77	2.78	5.64
	BBgBarc US HY Caa	-20.55	-20.55	-18.80	-4.08	0.90	4.75

Source: Morningstar

STABLE VALUE & MONEY MARKET

	Index	3 Mos.	YTD	1 Year	3 Year	5 Year	10 Year
	Median Taxable Money Market Fund	0.36	0.36	2.00	1.73	1.11	0.64
	Median Stable Value Fund	0.63	2.51	2.51	2.23	2.05	2.18
	Consumer Price Index	0.53	0.53	1.75	1.91	1.79	1.72

Source: PEI

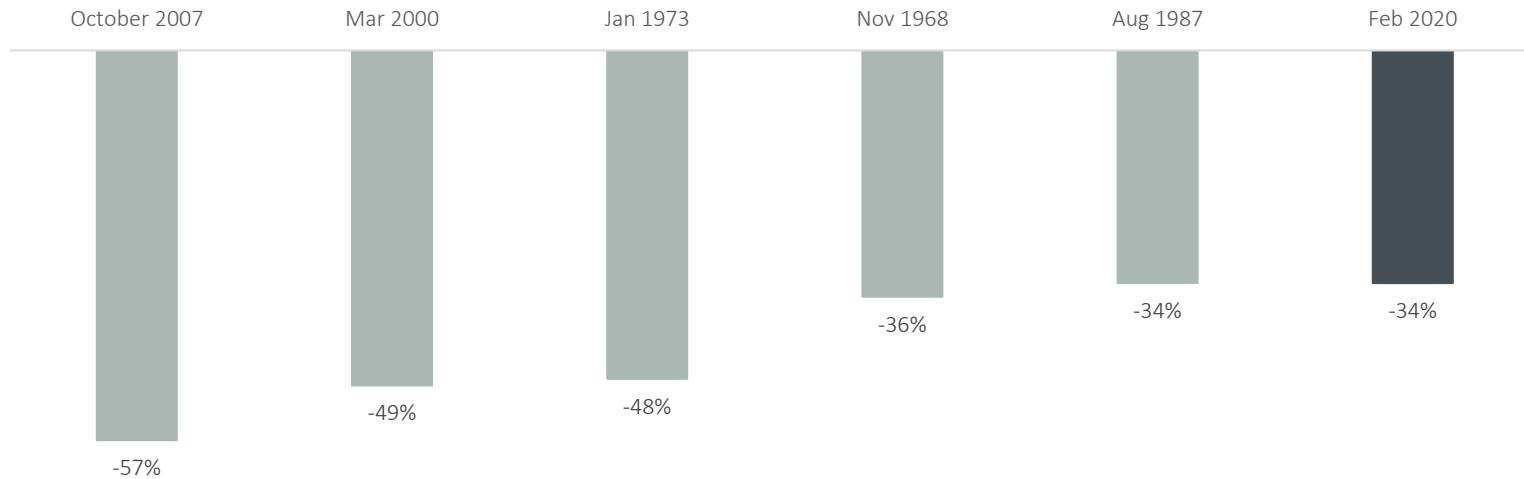
REAL ASSETS

	Index	3 Mos.	YTD	1 Year	3 Year	5 Year	10 Year
	FTSE NAREIT Equity REITs	-27.30	-27.30	-21.26	-3.14	-0.35	7.40
	Bloomberg Commodity	-23.29	-23.29	-22.31	-8.61	-7.76	-6.74
	S&P GSCI	-42.34	-42.34	-41.01	-13.33	-12.82	-10.43

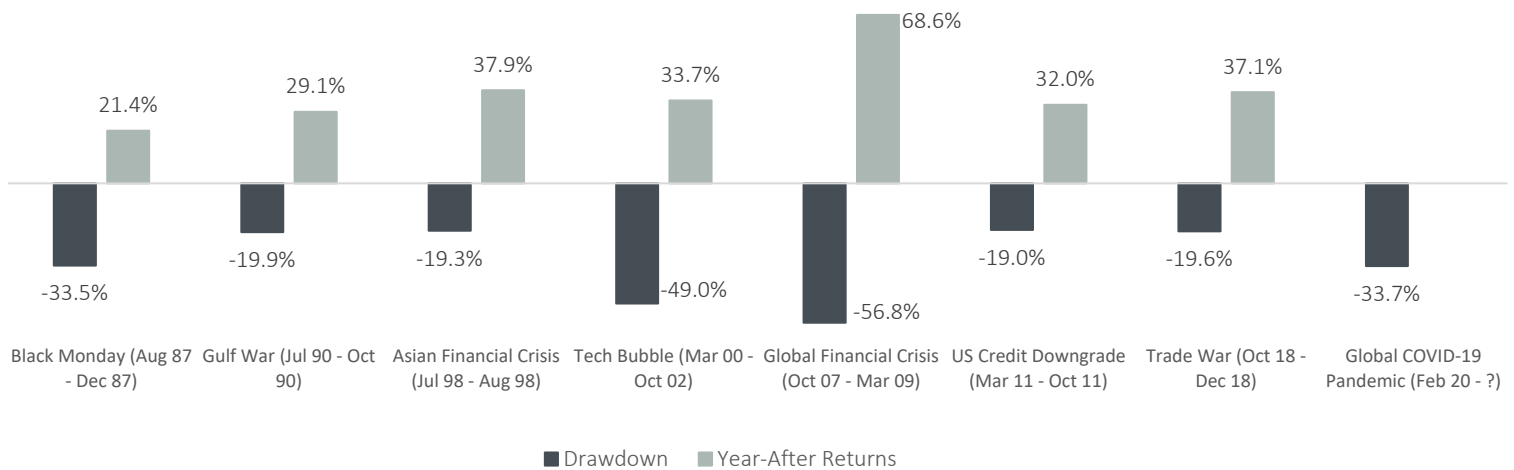
Source: Morningstar



Largest Drawdowns from Market Peak Date



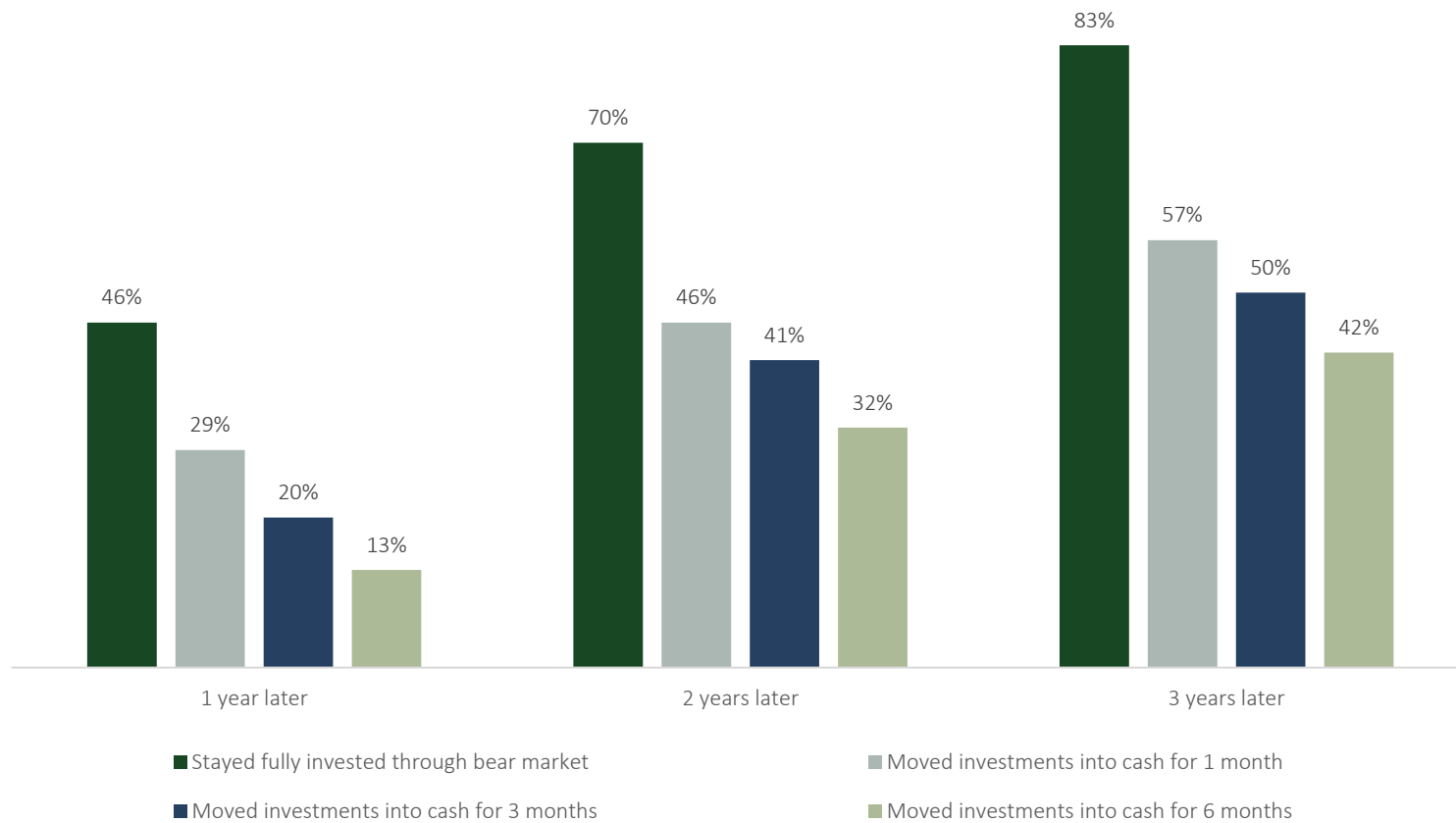
Recent Drawdowns and Following Recoveries



Sources: BlackRock, Bloomberg, MassMutual Investment Strategy Group, and Morningstar, Inc.



Cumulative Returns Following Market Bottoms



Source: Charles Schwab

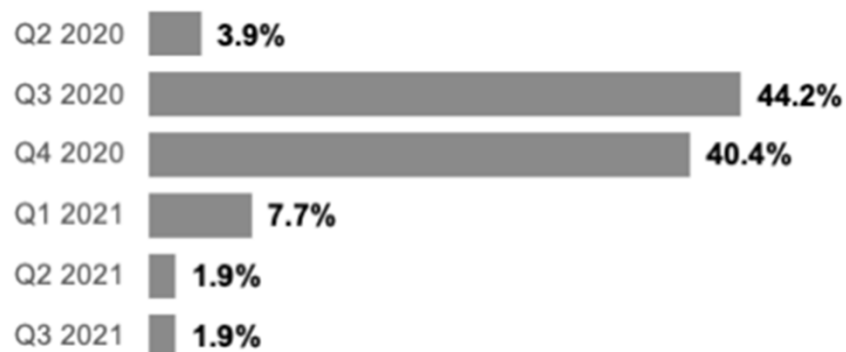


Economic Outlook for 2020, Part 1

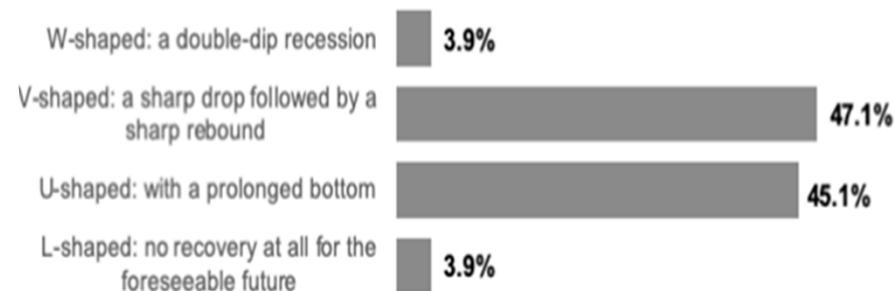
Short-term Economic Outlook is Bleak; Recovery Anticipated the Second Half of 2020

	First Quarter 2020*	Second Quarter 2020*	Third Quarter 2020*	Fourth Quarter 2020*
U.S. GDP	-3.29% (actual; -4.8%)	-25.29%	6.2%	6.64%
Unemployment	-	12.55%	-	9.66%
CPI	-	0.70%	-	0.50%
Fed Funds	-	0.00-0.25%	-	0.00-0.25%
Probability of Recession	96%			

When do you expect the economic recovery to start?*



What will the economic recovery look like?*



*Source: The Wall Street Journal, April 1, 2020; survey average of 75 economists



Economic Outlook for 2020, Part 2

2020 Contraction Could be Followed by Above Trend Recovery in 2021

Date	Estimator*	1Q Real GDP	2Q Real GDP	Factors
4/17/20	New York Fed Nowcast	-0.39%	-7.87%	Weak showing in surveys, housing, retail, and large declines in manufacturing data
4/16/20	Atlanta Fed GDP Now	-1.0%	-	Large decline in consumer spending and private investment
4/29/20	BEA Official Announcement	-4.8%	-	Sharp decline in consumer spending (-7.60%) and business investment (-8.60%) for 1Q20

International Monetary Fund Real GDP Forecast April 14, 2020 (annualized)	2020	2021
Global	-3.00%	+5.80%
U.S.	-5.90%	+4.70%
EU	-7.50%	+4.70%
EM	+1.00%	+8.50%

* Does not capture the impact or anticipate the future impact of CV-19 beyond its impact on currently released data and economic reports that are the source of GDP calculations in the relevant models. BEA Official Announcement is the first estimate for 1Q20.



The Tradeoff, Part 2

- There is no question that the social and economic impact of the Coronavirus has been great. Many of us are fortunately adjusting to life working from home and will hopefully experience little long-term economic impact. However, for people and businesses that have been devastated, life may never be the same. Governments now must confront the ramifications and address how to move forward.

